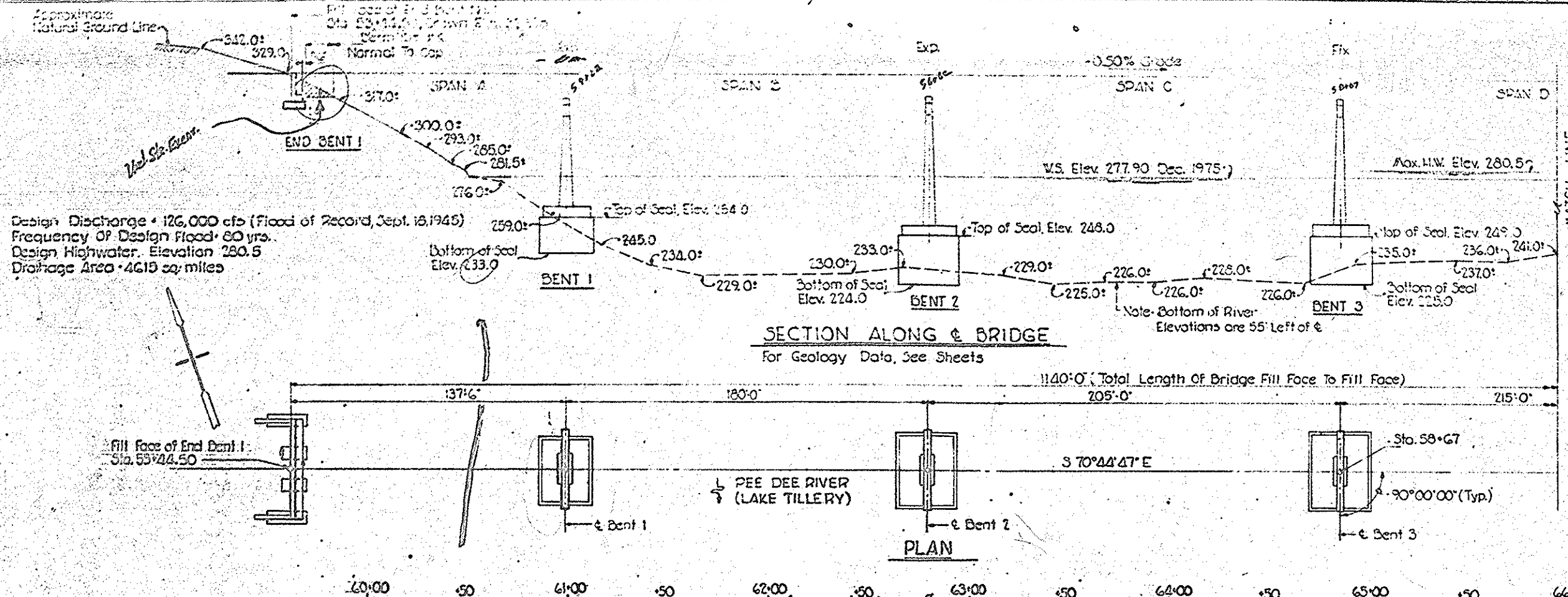


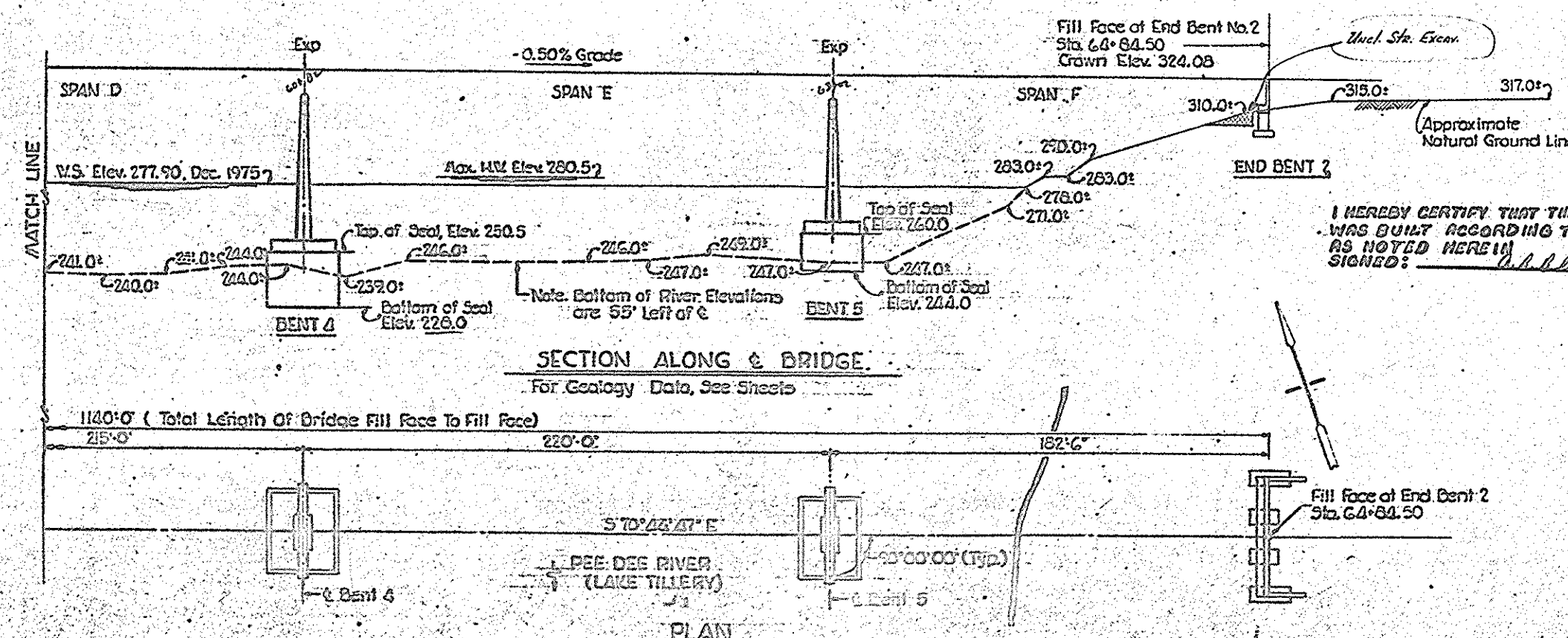
STANLY
24-68-70 E



228
233
45
+ 9
242

228
233
45
+ 9
242

228
233
45
+ 9
242



I HEREBY CERTIFY THAT THIS STRUCTURE
WAS BUILT ACCORDING TO PLANS EXCEPT
AS NOTED HEREIN
SIGNED: Stanly DATE 4-1-79

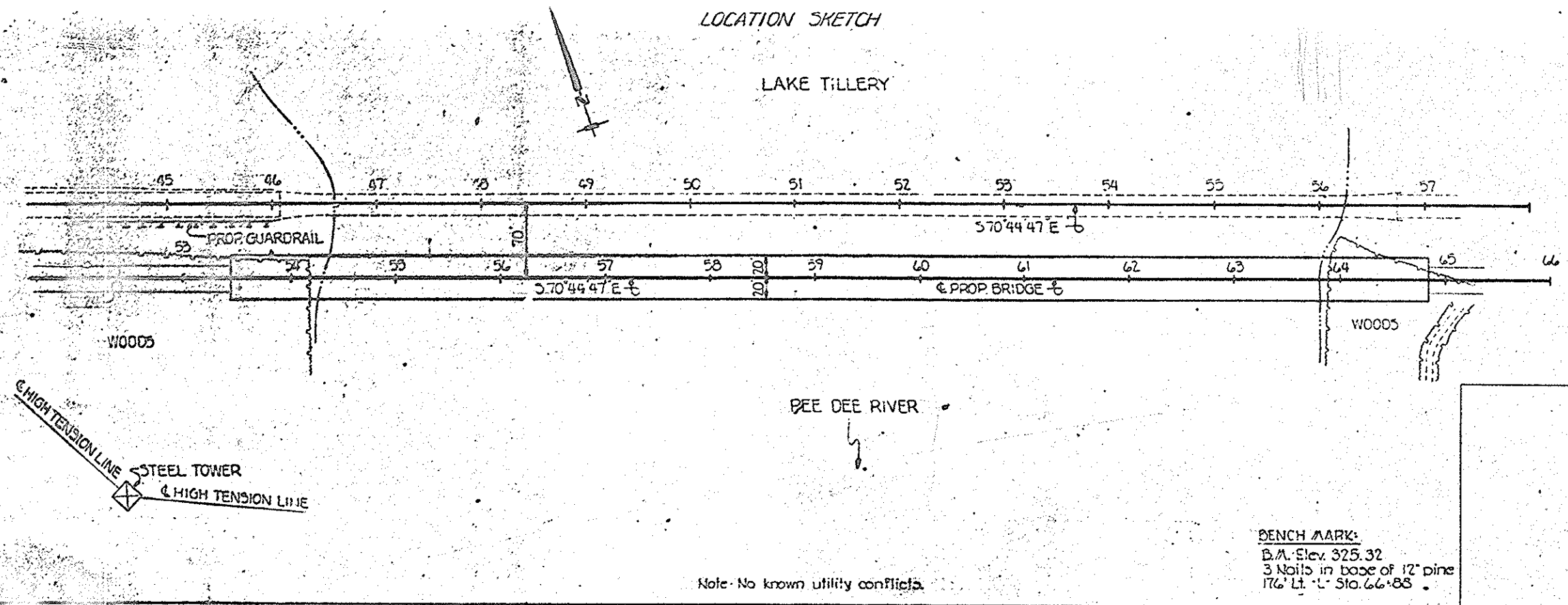
PROJECT No. 6.804135
STANLY-MONTGOMERY COUNTY
STATION 58+67.0-L
SHEET 1 OF 2
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
GENERAL DRAWING
BRIDGE OVER PEE DEE RIVER
ON NC 24/27
BETWEEN ADERVAARLE AND TROY

NO.	BY	DATE	NO.	BY	DATE
1	G.L.	5-2-77	2		
3			4		

Rev 21-Desired To Change Top of Seal Elev. For Bent #1 By G.L. & E.M.D.

LOCATION SKETCH

LAKE TILLERY



Note: No known utility conflicts.

BENCH MARK:

B.M. Elev. 325.32
3 Nails in base of 12\"/>

NOTES

Assumed Live Load - HS 20-44 or Alternate Loading. For other design data and general notes see sheet S-N. Computed foundation load for Bent 1, 2, 4 & 5 equals 3 1/4 tons per sq. ft.

Computed foundation load for Bent 3 equals 3 3/4 tons per sq. ft.

Work is not to be started on End Bent 1 until roadway section has been excavated by the roadway Contractor, unless permitted by the Engineer. The material shown in crosshatched area End Bent 1 shall be excavated for a distance of 26 ft. each side of roadway as directed by the Engineer. This work to be measured and paid for as Unclassified Structure Excavation.

Computed foundation load for End Bents 1 & 5 equals 4 tons per sq. ft.

For Soil Concrete, see Special Provisions. For protection of substructure, see Special Provisions. For surface preparation and protection of unclassified steel, see Special Provisions. Cofferdams shall not be dewatered where water is above Elev. 280.5.

Falsework and forms for caps of Bents 1 & 5 shall be submitted; See Sheet S-N.

For Texture on Bridge Deck, See Special Provisions.

* Bearings may be Pot Bearings or Rocker. The same type of bearings shall be used thru out the structure. For Pot Bearings and Rocker Bearings, see Special Provisions.

TOTAL BILL OF MATERIAL

	Unclassified Structure Excavation	Class AA Concrete	Class A Concrete	Reinforcing Steel	Structural Steel	Linseed Oil Concrete Protection	Bridge Approach Slabs & Station	Expansion Joint Seal	Class AA Concrete (Seal)	Foundation Excavation For End Bt. 1	Foundation Excavation For Bent 1	Foundation Excavation For Bent 2	Foundation Excavation For Bent 3	Foundation Excavation For Bent 4	Foundation Excavation For Bent 5	Foundation Excavation For End Bt. 2	Concrete Barrier Rail	* Bearings
	Cu. Yds.	Δ Cu. Yds.	Cu. Yds.	Lbs.	Approx. Lbs.	Gals.	Lump Sum	Lump Sum	Cu. Yds.	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lin. Ft.	Lump Sum
Superstructure		1,220.70		437,218.0	1,997,000	240-120.0		LUMP SUM									2,273.52	Lump Sum
End Bent 1	335.170	35.60	610.0	9,327.0			LUMP SUM			LUMP SUM								
Bent 1			300.3	3,000.0					714.0		LUMP SUM							
Bent 2			270.0	2,700.0					581.7			LUMP SUM						
Bent 3			270.0	2,700.0					581.7				LUMP SUM					
Bent 4			270.0	2,700.0					581.7					LUMP SUM				
Bent 5			327.5	3,275.0					581.7						LUMP SUM			
End Bent 2	59.400	39.40	75.00	14,948.0			LUMP SUM									LUMP SUM		
Curved End Blocks		2.20		207.0														
Totals	394.570	450.90	2,124.3	12,000.0	1,997,000	240-120.0	LUMP SUM	LUMP SUM	4,244.4	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	2,273.52	LUMP SUM

100% L.S.

Δ Error in Plan Quantity; Confirmed by Structure Design Unit; See B.G. Jenkins' letter dated 4-22-00 to D.B. Roberts. gkr

* See Sta. Pay Record Book #1, page 672 for explanation of this change. gkr

* Note: See General Notes in Sta. Pay Record Book #1 for explanation of changes in Class "A" Concrete, Class "AA" Concrete, & Linseed Oil. gkr

STRUCTURE SUPP. AGREEMENTS

S.A. # 1 = 100% L.S.

S.A. # 2 = 100% L.S.

S.A. # 3 = 2273.52 L.F. Reduced Price Barrier Rail

PROJECT No. L604135

STANLY-MONTGOMERY COUNTY

STATION 58+67.0-L

SHEET NO. 2 OF 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

GENERAL DRAWING
BRIDGE OVER PEE DEE RIVER
ON NC 24/27
BETWEEN ABERNATHY AND TOLSON

NO.	BY	DATE	NO.	BY	DATE
1	J.C.C.	3-12-77	2	G.L.	5-3-77

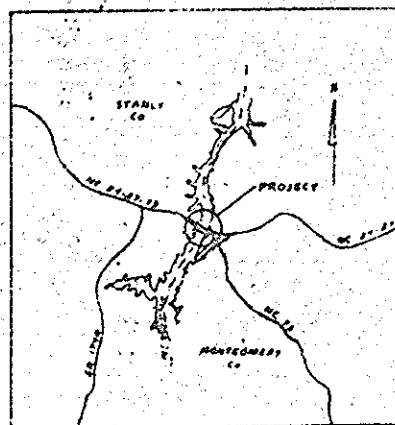
Rev. #2 - Revised To Change Total Bill Of Material Quantities For Bent #1 & Bent #2 By G.L. By E.W.A.
Rev. #1 - Revised to accommodate Exp. Sta. Seal as submitted by the contractor. By J.C.C. By A.R.S.

PREPARED BY
THE WILSON & BALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND

DRAWN BY R.V.C.
CHECKED BY J.L.C.

DATE APPROVED
BY

VICINITY MAP



STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
DEPARTMENT OF LOCATIONS AND SURVEYS

SUBSURFACE INVESTIGATION

STATE PROJECT 6.804135
F.A. PROJECT _____
COUNTY: STANLY - MONTGOMERY
DESCRIPTION: BRIDGE ON
NC 24-27-73 OVER PEE DEE
RIVER (LAKE TILLERY)

ABBREVIATIONS

ALU.	ALUMINUM	MOT.	MOTTLED
BRN.	BROWN	N.	BLOWS PER FOOT.
BLD.	BLODDER	ORG.	ORGANIC
CLY.	CLAYEY	PL. I.	PLASTICITY INDEX
CSF.	COARSE	RES.	RESIDUAL
F.	FINE	SAT.	SATURATED
FRAC.	FRACTURED	SD	SAND
GNVL.	GRAVEL	SDY.	SANDY
GRVLY.	GRAVELLY	SLI.	SLIGHTLY
Gs.	SPECIFIC GRAVITY	V.	VERY
GW.	GROUND WATER	W/	WITH
L.L.	LIQUID LIMIT	YEL.	YELLOW
LYD.	LAYERED	W	MOISTURE
MED.	MEDIUM	W	VOID RATIO
MICAS.	MICACEOUS	Y	UNIT WEIGHT
SAP.	SAPROPE		
SP.	SPIT		
ACCL.	ACCLIMATE		

CONTENTS

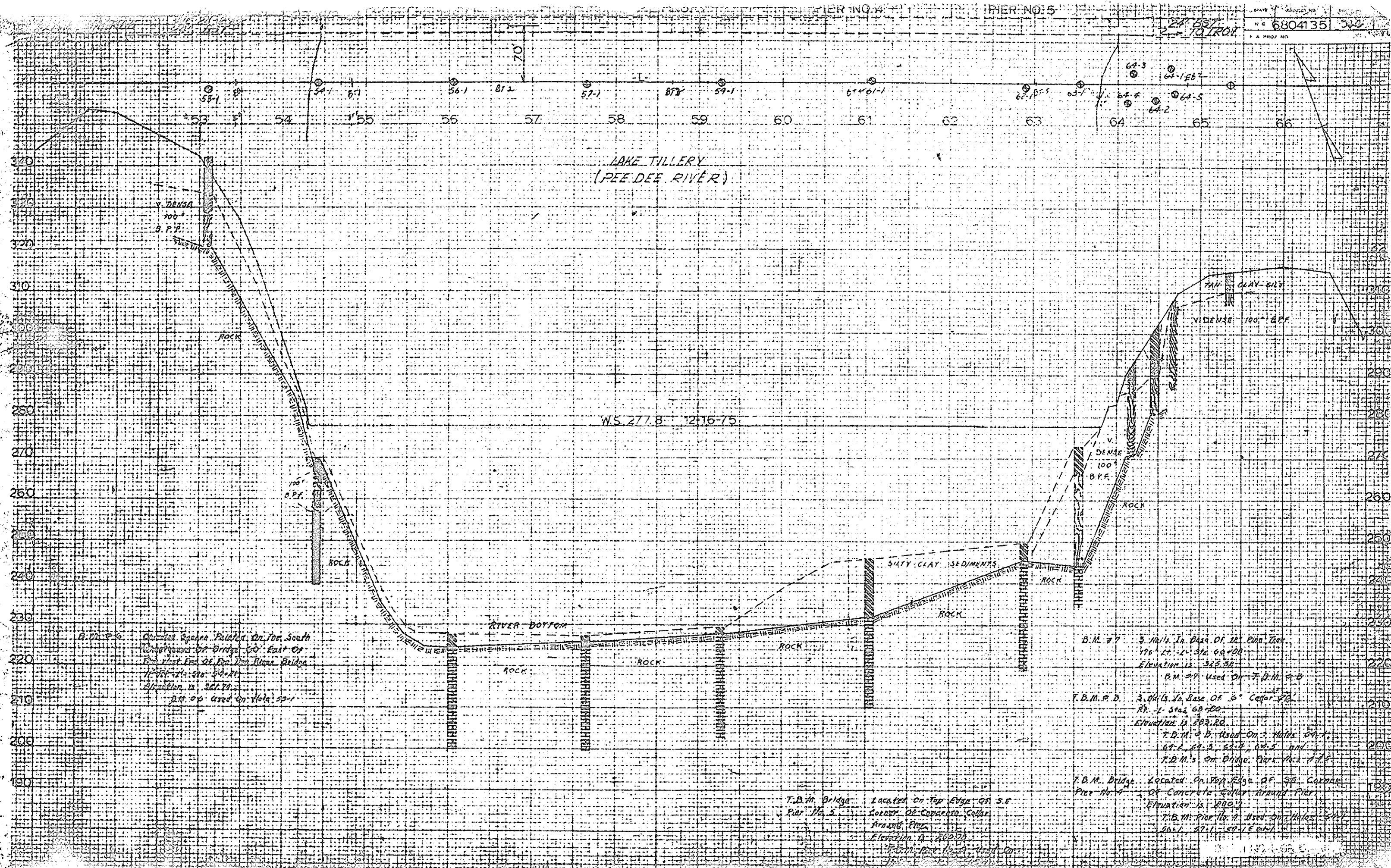
BORING PLAN & PROFILE SHEET NO. 1
BORING LOG SHEET NOS 2-5

SURVEYED BY W.L. MOORE III
CHECKED BY J.L. HEARNE JR
SUBMITTED BY W.D. BINGHAM
DATE FEB. 13, 1976

W.C. MOORE
F.D. MCKINLEY
N.G. RIBELIN

SOIL AND ROCK LEGEND

SYMBOL	AASHTO CLASS	DESCRIPTION OF TYPICAL MATERIALS	APPROX. UNIF. SOILS CLASS	SYMBOL	AASHTO CLASS	DESCRIPTION OF TYPICAL MATERIALS	APPROX. UNIF. SOILS CLASS	ADDITIONAL SYMBOL	DESCRIPTION OF TYPICAL MATERIAL
SOILS (INORGANIC)				SOILS (INORGANIC)				ROCKS	
A-1	US 5% Finer # 200 sieve	Well-graded gravels and gravel-sand mixtures (A-1-a) Poorly-graded gravel and sand mixtures or silty and clayey gravel-sand mixtures with fines. $P_{200} \leq 6$ (A-1-b)	GW, GP, GM, SW, SP, SM	A-6	More than 5% passing # 200 sieve	Gravelly, sandy or silty, plastic clays $PI \geq 11, LL \leq 40$	ML, MH, CL	RR	Material of such consistency as to require ripping. (Blast rock) Exhibiting crusty, blocky characteristics w/ 100-B.P.E.
A-3		Poorly-graded sands without binder; No PI (e.g. beach and dune sands)	SP	A-7-5		Clays of moderate to high plasticity with elastic properties and/or subject to high volume change $PI \geq 11, LL \geq 41$ A-7-5 if $PI \leq LL-30$	CL, ML, MH, CH	RS	Hard sedimentary rock (Blast rock)
A-2-4		Well-graded gravelly, silty, or clayey sands $PI \leq 10, LL \leq 40$ (A-2-4)	GM	A-7-6		$PI \geq 11, LL \geq 41$ A-7-6 if $PI \geq LL-30$		RX	Hard Crystalline rock (Blast rock)
A-2-5		$PI \leq 10, LL \geq 41$ (A-2-5)	SM	SOILS (ORGANIC)				MISCELLANEOUS	
A-2-6		Clayey sands and sand clay mixtures. $PI \leq 11, LL \leq 40$ (A-2-6)	GC, GM, SM, SC	Incl. A-1, A-2, A-3 Soils		Granular soils with little or moderate amounts organic matter	NONE		
A-2-7		$PI \leq 11, LL \geq 41$ (A-2-7)		Incl. A-4, A-5, A-6, A-7 Soils		Silt-clay soils with little or moderate amounts organic matter	OH, OL		Concealed or inferred boundaries of soil or rock
A-4	More than 5% passing # 200 sieve	Silty and silty or clayey fine sand or clayey silt $PI \leq 10, LL \leq 40$	CL, ML	(A-8)		Peat, muck, highly organic soils	PT		Soil-Hard rock contact
A-5		Miscellaneous silty or sandy soils with elastic properties $PI \leq 10, LL \geq 41$	ML, MH						Ground water level immediately after completion of boring.
									Ground water level observed in drill hole after a time lapse of 24 Hours
									Unsuitable materials - for details refer to profiles and recommendations.
									Material which may require Special Handling (Marginal) for details refer to profiles and recommendations



BORING NO. 56-1 BENT NO.		COLLAR ELEV. 227.6	
BORING LOC. (STA) 56+05		TOTAL DEPTH 282	
ELEV.	SOIL COUNT	NOTES & REMARKS	SOIL DESCRIPTION
277.6		WATER SURFACE	
270			
260			
250			
240			
230			
227.6		WATER BOTTOM	
222		CASING SEATED 56.1	
222	RUN 1	11%	SOFT SLT. CL. SEDIMENT. RECOVER FRAGMENTS OF SOFT SLATY ROCK W/ HIGH CL. CLAVAGE. ROCK GAVE EVEN RESISTANCE IN CORE DRILLING NOYDID
222	RUN 2	10%	AS ABOVE
222	RUN 3	24%	AS ABOVE
222	RUN 4	26%	AS ABOVE
222	RUN 5	11%	AS ABOVE
222			

SEE SHEET NO. 1

STATE PROJECT NO. 6.804135 F.A. NO. _____
COUNTY STANLY-MONT ROUTE NC 24
BRIDGE ON NC 24-27
OVER PEE DEE RIVER
INVESTIGATED BY WLM DRAWN BY WLM
CHECKED BY JLH SUBMITTED BY JLH
DATE FEB. 1976

SEE SHEET NO. 1

TOTAL 1									
DEPTH	ELEV.	BLW. COUNT	NOTES & REMARKS	W	D	SOIL DESCRIPTION	W	D	SOIL DESCRIPTION
00	292.50								
22	292.50					TAN BLOCKY CLY-SI (FILL)			
72	310	0.12				Y. TUGH @ 0.7'			
122	300					TAN BLOCKY CLY-SI SAP R R			
222	290								

BORING LOC. (STA) 64-25 -1- TOTAL DEPTH 222									
DEPTH	ELEV.	BLW. COUNT	NOTES & REMARKS	W	D	SOIL DESCRIPTION	W	D	SOIL DESCRIPTION
00	302.20								
26	300	2.16				RED-TAN SI-CL			
76	290	9.55				TAN CLY-SI SAP			
126	280					GRY-TAN BLOCKY CRUSTY SAP R R			
226	270								

BORING LOC. (STA) 64-17 -1- TOTAL DEPTH 220									
DEPTH	ELEV.	BLW. COUNT	NOTES & REMARKS	W	D	SOIL DESCRIPTION	W	D	SOIL DESCRIPTION
00	292.11								
22	290	1.12				TAN CLY-SI SAP			
52	280	4.12				GRY-TAN CRUSTY BLOCKY SAP R R			
102	270	9.12				163-77 TAN CLY-SI SAP CRUSTY SAP R R			
202	260								

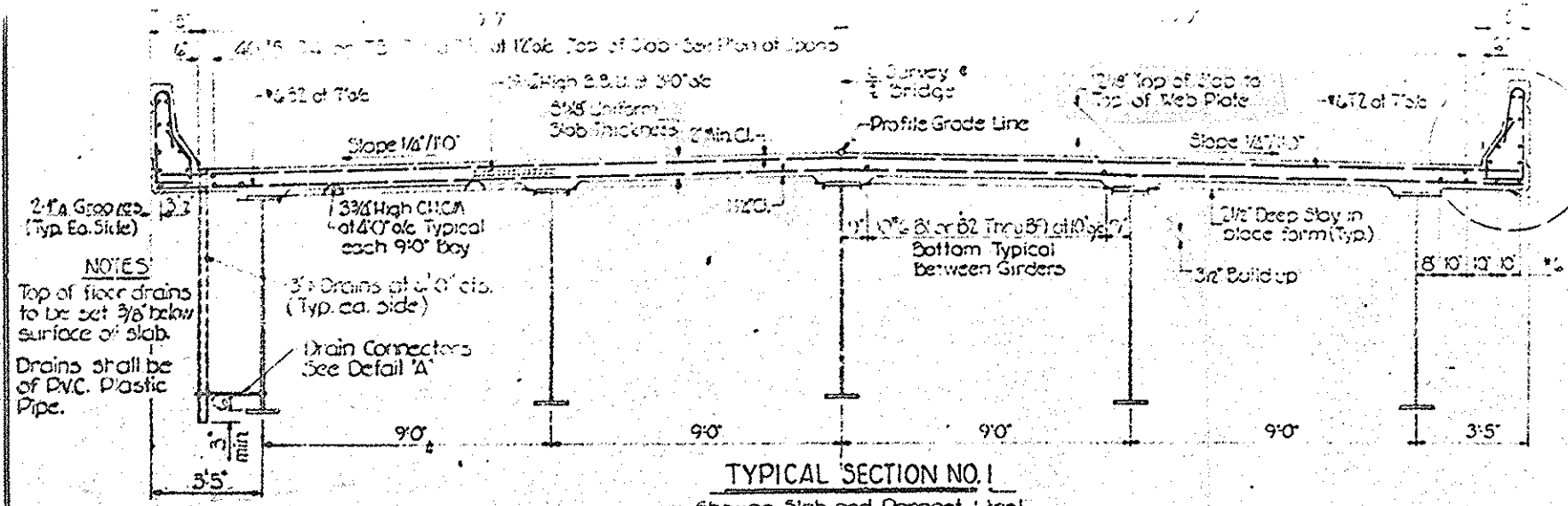
BORING NO. 64-4 BENT NO. COLLAR ELEV. 293.55									
BORING LOC. (STA) 64-12 -1- TOTAL DEPTH 135									
DEPTH	ELEV.	BLW. COUNT	NOTES & REMARKS	W	D	SOIL DESCRIPTION	W	D	SOIL DESCRIPTION
00	293.55								
22	290					TAN CLY-SI SAP			
122	280					SINTER SEAM 67-82 TAN CRUSTY RR			

BORING NO. 64-5 BENT NO. COLLAR ELEV. 309.28									
BORING LOC. (STA) 64-18 -1- TOTAL DEPTH 222									
DEPTH	ELEV.	BLW. COUNT	NOTES & REMARKS	W	D	SOIL DESCRIPTION	W	D	SOIL DESCRIPTION
00	309.28								
19	300					TAN CLY-SI			
69	290					TAN CRUSTY SAP R R			
119	280					TAN CLY-SI SAP			
219	270					TAN SAP R R			

BORING NO. BENT NO. COLLAR ELEV.									
BORING LOC. (STA) TOTAL DEPTH									
DEPTH	ELEV.	BLW. COUNT	NOTES & REMARKS	W	D	SOIL DESCRIPTION	W	D	SOIL DESCRIPTION
00									
100									
200									

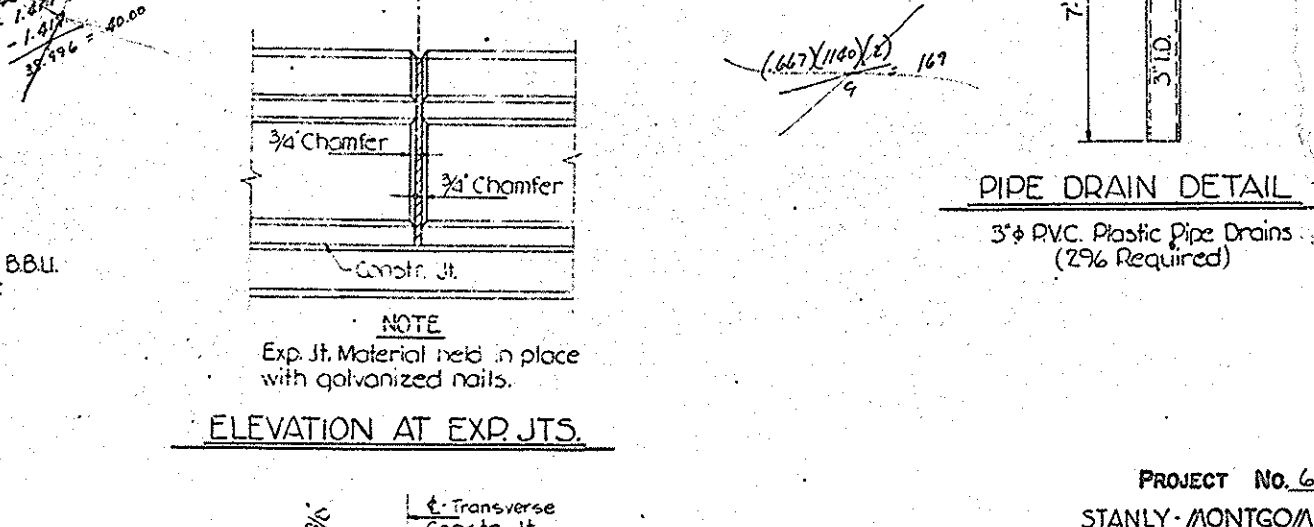
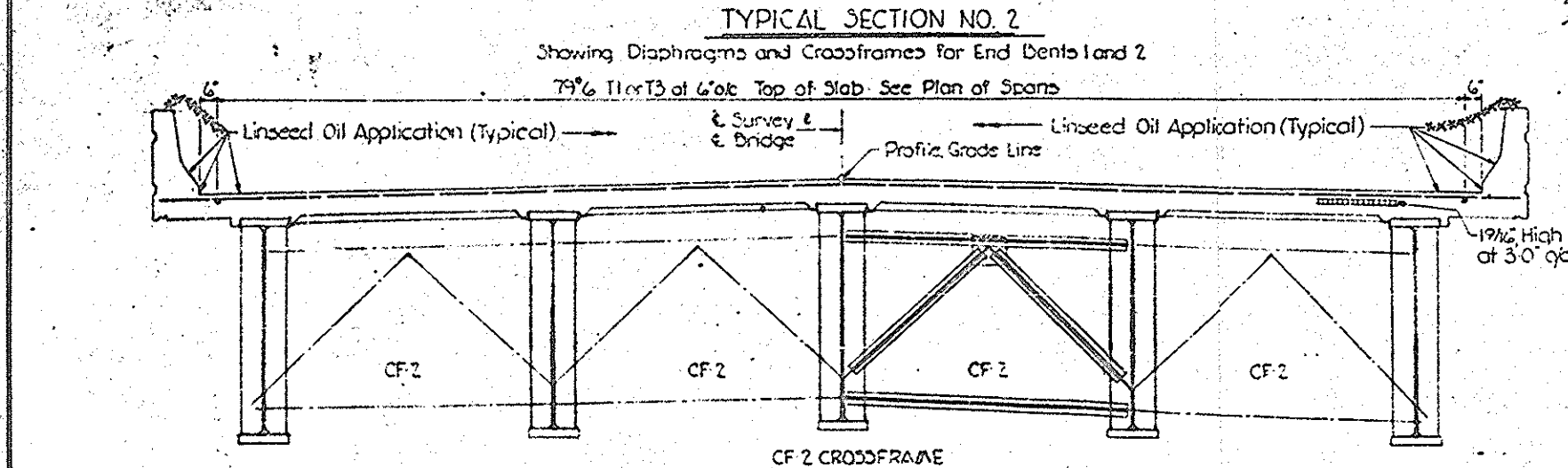
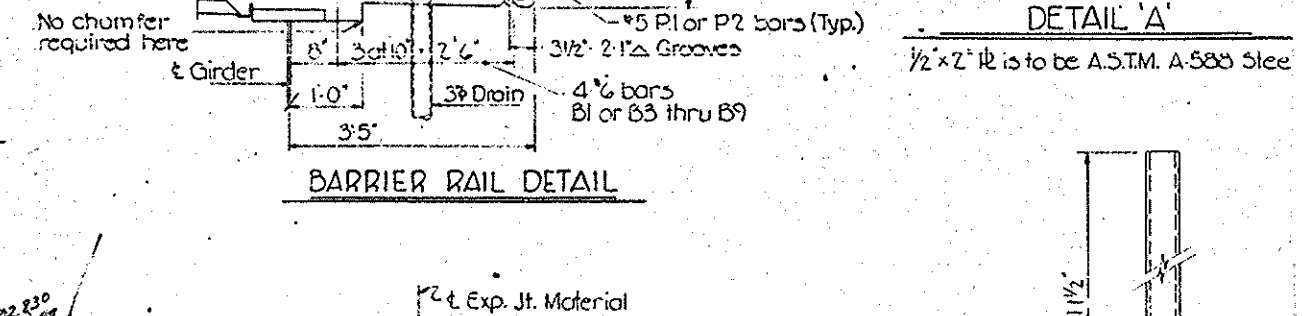
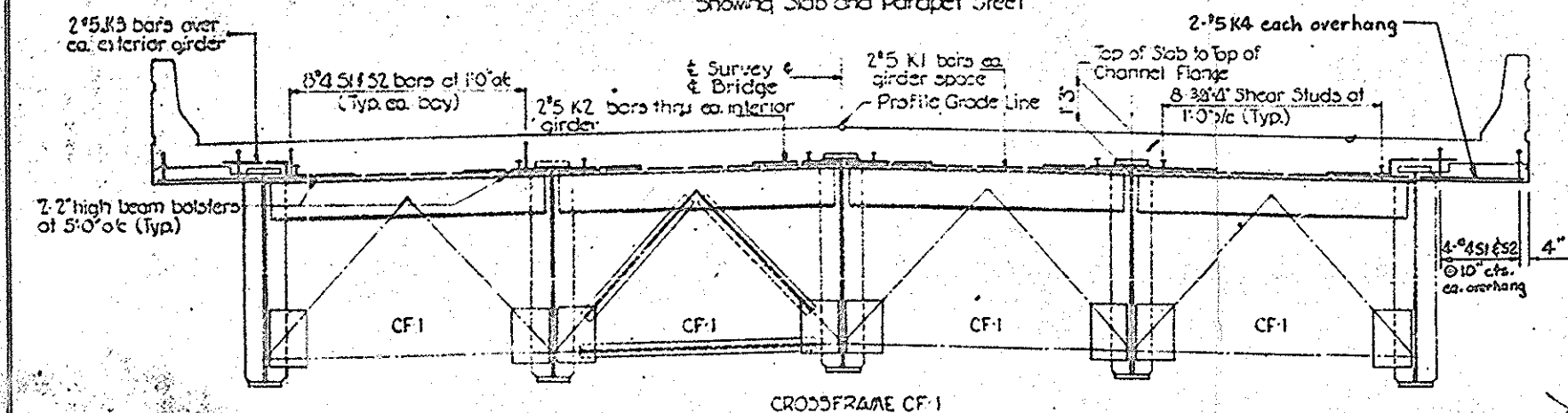
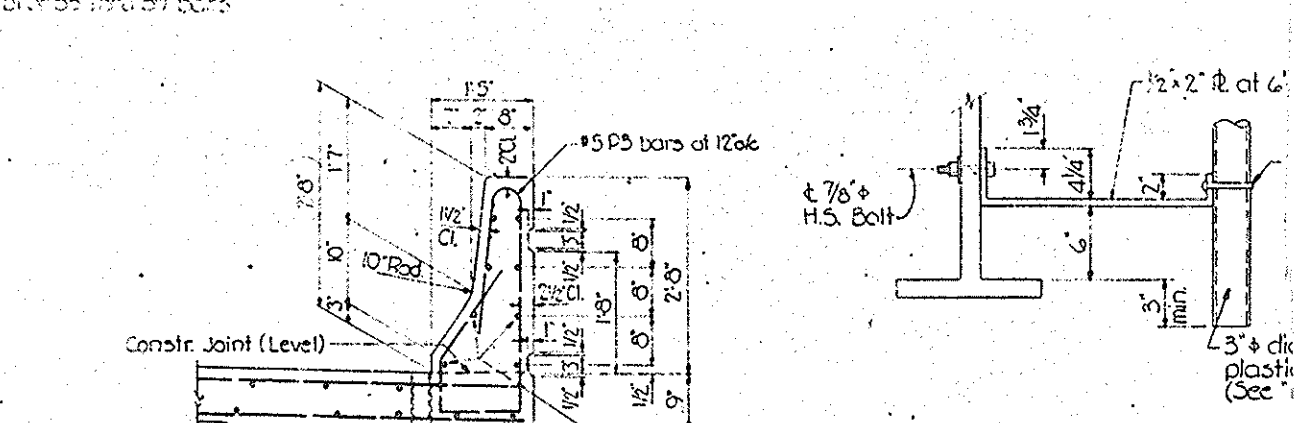
SAMP	LOCATION	DEPTH	AASHTO	N	W	%	SAND	SILT	CLAY	L.L.	P.L.I.	G _s	VOL.	WET WT.
1	64-1	12.5	A-4(6)	40			27	58	15	23	6			
2	64-1	12.5	A-4(6)	100			22	58	20	35	5			
1	64-2	24.41	A-7.5(10)	10			6	50	54	58	27			
2	64-2	12.4-13.1	A-4(8)	100			22	60	18	39	6			
1	64-3	27.42	A-4(8)	42			21	56	23	37	7			
2	64-3	24.67	A-4(5)	100			44	40	16	36	7			
3	64-3	17.7-19.2	A-4(8)	69			19	55	26	39	8			

SYMBOLS		SOIL & ROCK LEGEND		SYMBOLS		SOIL & ROCK LEGEND	
CLASS		SOILS (INORGANIC)		CLASS		SOILS (INORGANIC)	
A-1	LESS THAN 15% PASSING 200 SIEVE	A-1 Well-sorted, uniform, fine to medium sand, 15 to 25% passing No. 40 sieve.		A-6	60 to 70% PASSING 200 SIEVE	A-6 Clayey, silty sand to silty clayey sand.	
		A-2 Well-sorted, uniform, medium to coarse sand, 25 to 35% passing No. 40 sieve.				A-7 Clayey, silty sand to silty clayey sand.	
		A-3 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-8 Clayey, silty sand to silty clayey sand.	
A-2-4 A-2-5	15 to 25% PASSING 200 SIEVE	A-2-4 Well-sorted, uniform, fine to medium sand, 15 to 25% passing No. 40 sieve.		A-1 A-2 A-3 A-4 A-5 A-6 A-7 A-8	70 to 85% PASSING 200 SIEVE	SOILS (ORGANIC)	
		A-2-5 Well-sorted, uniform, medium to coarse sand, 25 to 35% passing No. 40 sieve.				A-9 Clayey, silty sand to silty clayey sand.	
A-2-6 A-2-7	25 to 35% PASSING 200 SIEVE	A-2-6 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-9 A-10 A-11 A-12 A-13 A-14 A-15 A-16 A-17 A-18 A-19 A-20 A-21 A-22 A-23 A-24 A-25 A-26 A-27 A-28 A-29 A-30 A-31 A-32 A-33 A-34 A-35 A-36 A-37 A-38 A-39 A-40 A-41 A-42 A-43 A-44 A-45 A-46 A-47 A-48 A-49 A-50 A-51 A-52 A-53 A-54 A-55 A-56 A-57 A-58 A-59 A-60 A-61 A-62 A-63 A-64 A-65 A-66 A-67 A-68 A-69 A-70 A-71 A-72 A-73 A-74 A-75 A-76 A-77 A-78 A-79 A-80 A-81 A-82 A-83 A-84 A-85 A-86 A-87 A-88 A-89 A-90 A-91 A-92 A-93 A-94 A-95 A-96 A-97 A-98 A-99 A-100	85 to 100% PASSING 200 SIEVE	A-10 Clayey, silty sand to silty clayey sand.	
		A-2-7 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-11 Clayey, silty sand to silty clayey sand.	
A-4	35 to 45% PASSING 200 SIEVE	A-4 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-16 A-17 A-18 A-19 A-20 A-21 A-22 A-23 A-24 A-25 A-26 A-27 A-28 A-29 A-30 A-31 A-32 A-33 A-34 A-35 A-36 A-37 A-38 A-39 A-40 A-41 A-42 A-43 A-44 A-45 A-46 A-47 A-48 A-49 A-50 A-51 A-52 A-53 A-54 A-55 A-56 A-57 A-58 A-59 A-60 A-61 A-62 A-63 A-64 A-65 A-66 A-67 A-68 A-69 A-70 A-71 A-72 A-73 A-74 A-75 A-76 A-77 A-78 A-79 A-80 A-81 A-82 A-83 A-84 A-85 A-86 A-87 A-88 A-89 A-90 A-91 A-92 A-93 A-94 A-95 A-96 A-97 A-98 A-99 A-100	100% PASSING 200 SIEVE	A-12 Clayey, silty sand to silty clayey sand.	
		A-5 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-13 Clayey, silty sand to silty clayey sand.	
A-5	45 to 55% PASSING 200 SIEVE	A-5 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-24 A-25 A-26 A-27 A-28 A-29 A-30 A-31 A-32 A-33 A-34 A-35 A-36 A-37 A-38 A-39 A-40 A-41 A-42 A-43 A-44 A-45 A-46 A-47 A-48 A-49 A-50 A-51 A-52 A-53 A-54 A-55 A-56 A-57 A-58 A-59 A-60 A-61 A-62 A-63 A-64 A-65 A-66 A-67 A-68 A-69 A-70 A-71 A-72 A-73 A-74 A-75 A-76 A-77 A-78 A-79 A-80 A-81 A-82 A-83 A-84 A-85 A-86 A-87 A-88 A-89 A-90 A-91 A-92 A-93 A-94 A-95 A-96 A-97 A-98 A-99 A-100	100% PASSING 200 SIEVE	A-14 Clayey, silty sand to silty clayey sand.	
		A-6 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-15 Clayey, silty sand to silty clayey sand.	
A-6	55 to 65% PASSING 200 SIEVE	A-6 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-31 A-32 A-33 A-34 A-35 A-36 A-37 A-38 A-39 A-40 A-41 A-42 A-43 A-44 A-45 A-46 A-47 A-48 A-49 A-50 A-51 A-52 A-53 A-54 A-55 A-56 A-57 A-58 A-59 A-60 A-61 A-62 A-63 A-64 A-65 A-66 A-67 A-68 A-69 A-70 A-71 A-72 A-73 A-74 A-75 A-76 A-77 A-78 A-79 A-80 A-81 A-82 A-83 A-84 A-85 A-86 A-87 A-88 A-89 A-90 A-91 A-92 A-93 A-94 A-95 A-96 A-97 A-98 A-99 A-100	100% PASSING 200 SIEVE	A-16 Clayey, silty sand to silty clayey sand.	
		A-7 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-17 Clayey, silty sand to silty clayey sand.	
A-7	65 to 75% PASSING 200 SIEVE	A-7 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-41 A-42 A-43 A-44 A-45 A-46 A-47 A-48 A-49 A-50 A-51 A-52 A-53 A-54 A-55 A-56 A-57 A-58 A-59 A-60 A-61 A-62 A-63 A-64 A-65 A-66 A-67 A-68 A-69 A-70 A-71 A-72 A-73 A-74 A-75 A-76 A-77 A-78 A-79 A-80 A-81 A-82 A-83 A-84 A-85 A-86 A-87 A-88 A-89 A-90 A-91 A-92 A-93 A-94 A-95 A-96 A-97 A-98 A-99 A-100	100% PASSING 200 SIEVE	A-18 Clayey, silty sand to silty clayey sand.	
		A-8 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-19 Clayey, silty sand to silty clayey sand.	
A-8	75 to 85% PASSING 200 SIEVE	A-8 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-81 A-82 A-83 A-84 A-85 A-86 A-87 A-88 A-89 A-90 A-91 A-92 A-93 A-94 A-95 A-96 A-97 A-98 A-99 A-100	100% PASSING 200 SIEVE	A-20 Clayey, silty sand to silty clayey sand.	
		A-9 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-21 Clayey, silty sand to silty clayey sand.	
A-9	85 to 95% PASSING 200 SIEVE	A-9 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-101 A-102 A-103 A-104 A-105 A-106 A-107 A-108 A-109 A-110 A-111 A-112 A-113 A-114 A-115 A-116 A-117 A-118 A-119 A-120 A-121 A-122 A-123 A-124 A-125 A-126 A-127 A-128 A-129 A-130 A-131 A-132 A-133 A-134 A-135 A-136 A-137 A-138 A-139 A-140 A-141 A-142 A-143 A-144 A-145 A-146 A-147 A-148 A-149 A-150 A-151 A-152 A-153 A-154 A-155 A-156 A-157 A-158 A-159 A-160 A-161 A-162 A-163 A-164 A-165 A-166 A-167 A-168 A-169 A-170 A-171 A-172 A-173 A-174 A-175 A-176 A-177 A-178 A-179 A-180 A-181 A-182 A-183 A-184 A-185 A-186 A-187 A-188 A-189 A-190 A-191 A-192 A-193 A-194 A-195 A-196 A-197 A-198 A-199 A-200	100% PASSING 200 SIEVE	A-22 Clayey, silty sand to silty clayey sand.	
		A-10 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-23 Clayey, silty sand to silty clayey sand.	
A-10	95 to 100% PASSING 200 SIEVE	A-10 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-201 A-202 A-203 A-204 A-205 A-206 A-207 A-208 A-209 A-210 A-211 A-212 A-213 A-214 A-215 A-216 A-217 A-218 A-219 A-220 A-221 A-222 A-223 A-224 A-225 A-226 A-227 A-228 A-229 A-230 A-231 A-232 A-233 A-234 A-235 A-236 A-237 A-238 A-239 A-240 A-241 A-242 A-243 A-244 A-245 A-246 A-247 A-248 A-249 A-250 A-251 A-252 A-253 A-254 A-255 A-256 A-257 A-258 A-259 A-260 A-261 A-262 A-263 A-264 A-265 A-266 A-267 A-268 A-269 A-270 A-271 A-272 A-273 A-274 A-275 A-276 A-277 A-278 A-279 A-280 A-281 A-282 A-283 A-284 A-285 A-286 A-287 A-288 A-289 A-290 A-291 A-292 A-293 A-294 A-295 A-296 A-297 A-298 A-299 A-300	100% PASSING 200 SIEVE	A-24 Clayey, silty sand to silty clayey sand.	
		A-11 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-25 Clayey, silty sand to silty clayey sand.	
A-11	100% PASSING 200 SIEVE	A-11 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-301 A-302 A-303 A-304 A-305 A-306 A-307 A-308 A-309 A-310 A-311 A-312 A-313 A-314 A-315 A-316 A-317 A-318 A-319 A-320 A-321 A-322 A-323 A-324 A-325 A-326 A-327 A-328 A-329 A-330 A-331 A-332 A-333 A-334 A-335 A-336 A-337 A-338 A-339 A-340 A-341 A-342 A-343 A-344 A-345 A-346 A-347 A-348 A-349 A-350 A-351 A-352 A-353 A-354 A-355 A-356 A-357 A-358 A-359 A-360 A-361 A-362 A-363 A-364 A-365 A-366 A-367 A-368 A-369 A-370 A-371 A-372 A-373 A-374 A-375 A-376 A-377 A-378 A-379 A-380 A-381 A-382 A-383 A-384 A-385 A-386 A-387 A-388 A-389 A-390 A-391 A-392 A-393 A-394 A-395 A-396 A-397 A-398 A-399 A-400	100% PASSING 200 SIEVE	A-26 Clayey, silty sand to silty clayey sand.	
		A-12 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-27 Clayey, silty sand to silty clayey sand.	
A-12	100% PASSING 200 SIEVE	A-12 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-401 A-402 A-403 A-404 A-405 A-406 A-407 A-408 A-409 A-410 A-411 A-412 A-413 A-414 A-415 A-416 A-417 A-418 A-419 A-420 A-421 A-422 A-423 A-424 A-425 A-426 A-427 A-428 A-429 A-430 A-431 A-432 A-433 A-434 A-435 A-436 A-437 A-438 A-439 A-440 A-441 A-442 A-443 A-444 A-445 A-446 A-447 A-448 A-449 A-450 A-451 A-452 A-453 A-454 A-455 A-456 A-457 A-458 A-459 A-460 A-461 A-462 A-463 A-464 A-465 A-466 A-467 A-468 A-469 A-470 A-471 A-472 A-473 A-474 A-475 A-476 A-477 A-478 A-479 A-480 A-481 A-482 A-483 A-484 A-485 A-486 A-487 A-488 A-489 A-490 A-491 A-492 A-493 A-494 A-495 A-496 A-497 A-498 A-499 A-500	100% PASSING 200 SIEVE	A-28 Clayey, silty sand to silty clayey sand.	
		A-13 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-29 Clayey, silty sand to silty clayey sand.	
A-13	100% PASSING 200 SIEVE	A-13 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-501 A-502 A-503 A-504 A-505 A-506 A-507 A-508 A-509 A-510 A-511 A-512 A-513 A-514 A-515 A-516 A-517 A-518 A-519 A-520 A-521 A-522 A-523 A-524 A-525 A-526 A-527 A-528 A-529 A-530 A-531 A-532 A-533 A-534 A-535 A-536 A-537 A-538 A-539 A-540 A-541 A-542 A-543 A-544 A-545 A-546 A-547 A-548 A-549 A-550 A-551 A-552 A-553 A-554 A-555 A-556 A-557 A-558 A-559 A-560 A-561 A-562 A-563 A-564 A-565 A-566 A-567 A-568 A-569 A-570 A-571 A-572 A-573 A-574 A-575 A-576 A-577 A-578 A-579 A-580 A-581 A-582 A-583 A-584 A-585 A-586 A-587 A-588 A-589 A-590 A-591 A-592 A-593 A-594 A-595 A-596 A-597 A-598 A-599 A-600	100% PASSING 200 SIEVE	A-30 Clayey, silty sand to silty clayey sand.	
		A-14 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-31 Clayey, silty sand to silty clayey sand.	
A-14	100% PASSING 200 SIEVE	A-14 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-601 A-602 A-603 A-604 A-605 A-606 A-607 A-608 A-609 A-610 A-611 A-612 A-613 A-614 A-615 A-616 A-617 A-618 A-619 A-620 A-621 A-622 A-623 A-624 A-625 A-626 A-627 A-628 A-629 A-630 A-631 A-632 A-633 A-634 A-635 A-636 A-637 A-638 A-639 A-640 A-641 A-642 A-643 A-644 A-645 A-646 A-647 A-648 A-649 A-650 A-651 A-652 A-653 A-654 A-655 A-656 A-657 A-658 A-659 A-660 A-661 A-662 A-663 A-664 A-665 A-666 A-667 A-668 A-669 A-670 A-671 A-672 A-673 A-674 A-675 A-676 A-677 A-678 A-679 A-680 A-681 A-682 A-683 A-684 A-685 A-686 A-687 A-688 A-689 A-690 A-691 A-692 A-693 A-694 A-695 A-696 A-697 A-698 A-699 A-700	100% PASSING 200 SIEVE	A-32 Clayey, silty sand to silty clayey sand.	
		A-15 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-33 Clayey, silty sand to silty clayey sand.	
A-15	100% PASSING 200 SIEVE	A-15 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-701 A-702 A-703 A-704 A-705 A-706 A-707 A-708 A-709 A-710 A-711 A-712 A-713 A-714 A-715 A-716 A-717 A-718 A-719 A-720 A-721 A-722 A-723 A-724 A-725 A-726 A-727 A-728 A-729 A-730 A-731 A-732 A-733 A-734 A-735 A-736 A-737 A-738 A-739 A-740 A-741 A-742 A-743 A-744 A-745 A-746 A-747 A-748 A-749 A-750 A-751 A-752 A-753 A-754 A-755 A-756 A-757 A-758 A-759 A-760 A-761 A-762 A-763 A-764 A-765 A-766 A-767 A-768 A-769 A-770 A-771 A-772 A-773 A-774 A-775 A-776 A-777 A-778 A-779 A-780 A-781 A-782 A-783 A-784 A-785 A-786 A-787 A-788 A-789 A-790 A-791 A-792 A-793 A-794 A-795 A-796 A-797 A-798 A-799 A-800	100% PASSING 200 SIEVE	A-34 Clayey, silty sand to silty clayey sand.	
		A-16 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-35 Clayey, silty sand to silty clayey sand.	
A-16	100% PASSING 200 SIEVE	A-16 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-801 A-802 A-803 A-804 A-805 A-806 A-807 A-808 A-809 A-810 A-811 A-812 A-813 A-814 A-815 A-816 A-817 A-818 A-819 A-820 A-821 A-822 A-823 A-824 A-825 A-826 A-827 A-828 A-829 A-830 A-831 A-832 A-833 A-834 A-835 A-836 A-837 A-838 A-839 A-840 A-841 A-842 A-843 A-844 A-845 A-846 A-847 A-848 A-849 A-850 A-851 A-852 A-853 A-854 A-855 A-856 A-857 A-858 A-859 A-860 A-861 A-862 A-863 A-864 A-865 A-866 A-867 A-868 A-869 A-870 A-871 A-872 A-873 A-874 A-875 A-876 A-877 A-878 A-879 A-880 A-881 A-882 A-883 A-884 A-885 A-886 A-887 A-888 A-889 A-890 A-891 A-892 A-893 A-894 A-895 A-896 A-897 A-898 A-899 A-900	100% PASSING 200 SIEVE	A-36 Clayey, silty sand to silty clayey sand.	
		A-17 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-37 Clayey, silty sand to silty clayey sand.	
A-17	100% PASSING 200 SIEVE	A-17 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.		A-901 A-902 A-903 A-904 A-905 A-906 A-907 A-908 A-909 A-910 A-911 A-912 A-913 A-914 A-915 A-916 A-917 A-918 A-919 A-920 A-921 A-922 A-923 A-924 A-925 A-926 A-927 A-928 A-929 A-930 A-931 A-932 A-933 A-934 A-935 A-936 A-937 A-938 A-939 A-940 A-941 A-942 A-943 A-944 A-945 A-946 A-947 A-948 A-949 A-950 A-951 A-952 A-953 A-954 A-955 A-956 A-957 A-958 A-959 A-960 A-961 A-962 A-963 A-964 A-965 A-966 A-967 A-968 A-969 A-970 A-971 A-972 A-973 A-974 A-975 A-976 A-977 A-978 A-979 A-980 A-981 A-982 A-983 A-984 A-985 A-986 A-987 A-988 A-989 A-990 A-991 A-992 A-993 A-994 A-995 A-996 A-997 A-998 A-999 A-1000	100% PASSING 200 SIEVE	A-38 Clayey, silty sand to silty clayey sand.	
		A-18 Well-sorted, uniform, coarse sand, 35 to 45% passing No. 40 sieve.				A-39 Clayey, silty sand to silty clayey sand.	
A-18	100% PASSING 200						



Notes:
Top of floor drains to be set 3/8\"/>

For bars indicated and no bar mark shown, see Superstructure
slab in place forms shall have closed tapered ends.



NOTE: LINSEED OIL WAS NOT APPLIED TO TOP OF BARRIER RAIL AS SHOWN ON THE RAIL. ITS DISPOSED BY THE CONTRACTOR.
B.F. STICKLAND

PREPARED BY
THE WILSON T. DALLARD CO.
CONSULTING ENGINEERS
GUTHRIE HILLS, MARYLAND

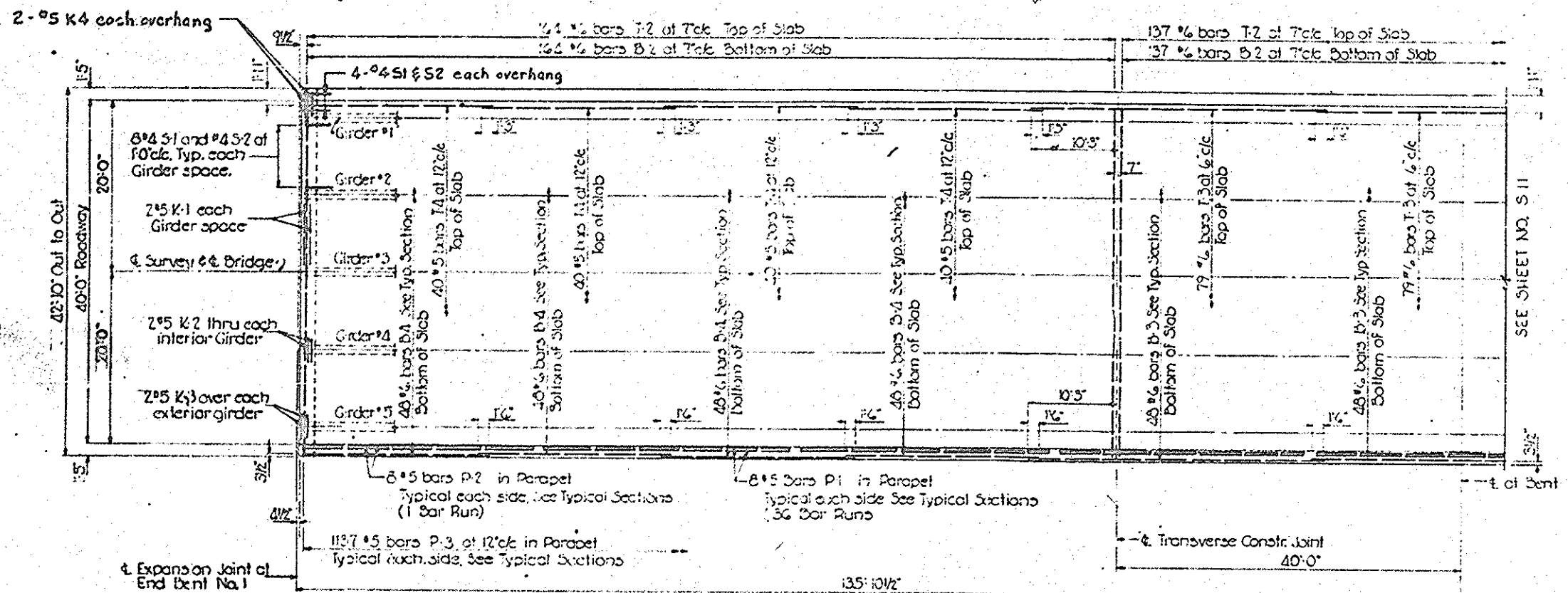
DRAWN BY J. WILSON
CHECKED BY J. WILSON

PROJECT No. 6.
STANLY-MONTGOMERY
STATION 58+67.0

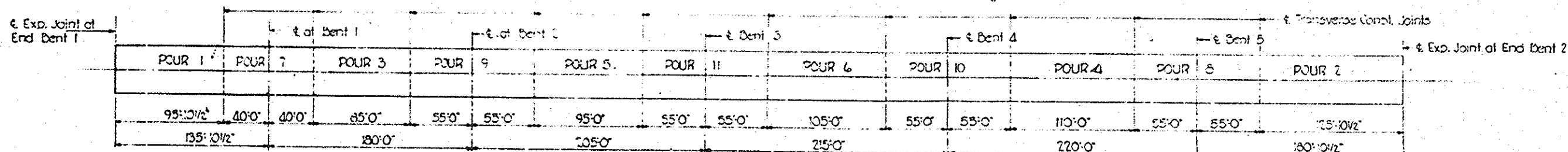
STATE OF NORTH
CAROLINA
SUPERSTRUC
TURAL DIVISION
TYPICAL SECTIONS
L.H.S. 20-44, C
5 STEEL GIRDERS, 6 SP
BARRIER RAIL, S
A-58B UNPAINTED

REVISIONS			
NO.	BY	DATE	NO.
1	J.C.C.	3-14-77	3
2			4

Rev. #1 - Revised to accommodate Exp. Jt. Seal as submitted by the contractor by J.C.C. by A.R.S.



PLAN OF SPAN A



ORDER OF POURING

NOTES

Structural Steel Erection in a Continuous Unit shall be Complete Before Falsework or Forms are Paced on the Unit.

Previously Cast Concrete in a Continuous Unit shall Have Attained a Minimum Compressive Strength of 3000 p.s.i. Before Additional Concrete is Cast in the Unit, unless otherwise directed by the Engineer. Barrier Rails in a continuous unit shall not be cast until all slab concrete in the unit has been cast and reached a minimum compressive strength of 3000 p.s.i.

Rev. #1 Revised to accommodate Exp. Jt. Seal as submitted by the contractor by J.C.C. ✓ by A.R.S

PREPARED BY
THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND

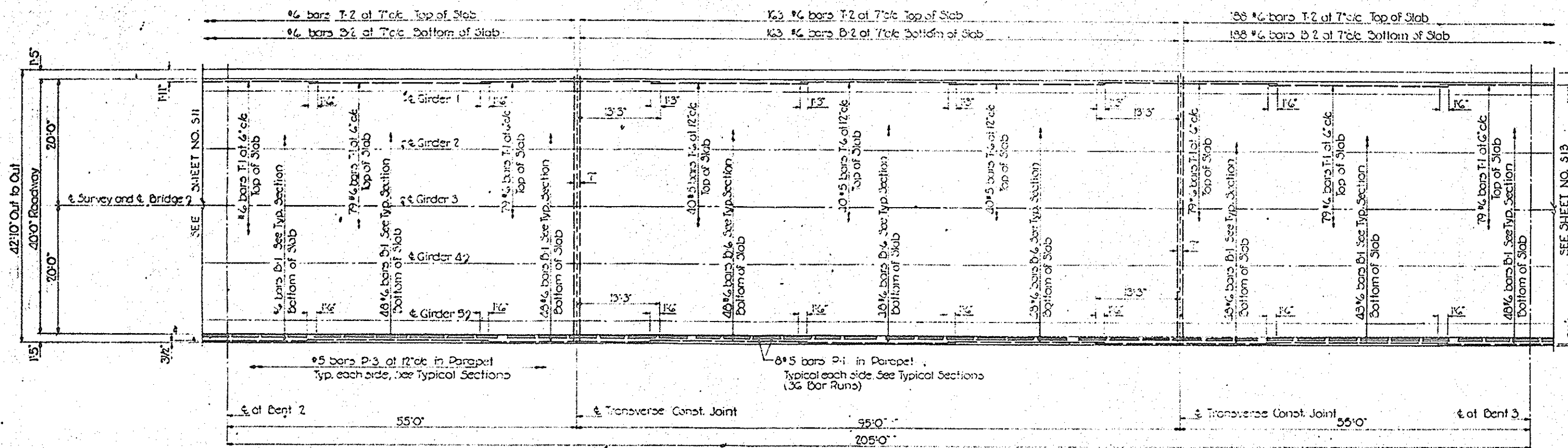
DRAWN BY A. VICKERS DATE APR 1976
CHECKED BY M. KELLY DATE APR 1976

PROJECT No. 6.804135
STANLY-MONTGOMERY COUNTY
STATION 58+67.0-L
SHEET NO. 1 OF 6

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
PLAN OF SPAN A AND
ORDER OF POURING

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	J.C.C.	3-14-77	3			TOTAL SHEETS
2			4			



PLAN OF SPAN C

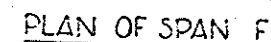
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 STANLY MONTGOMERY COUN
 STATION 58+67.0-L
 SHEET NO. 3 OF 6

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH

SUPERSTRUCTURE
 PLAN OF SPAN C

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
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2			4		

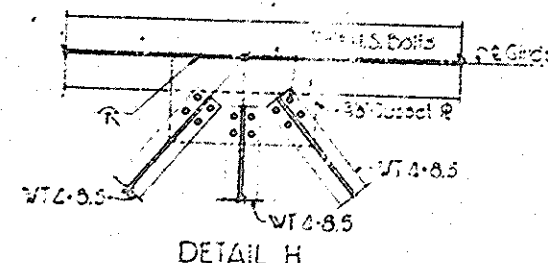
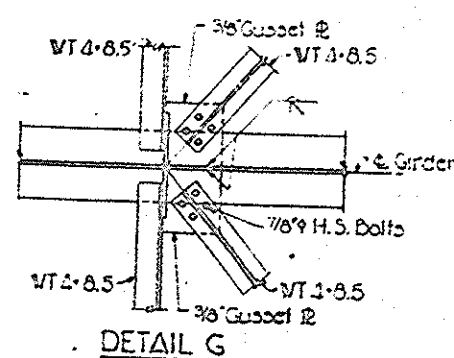
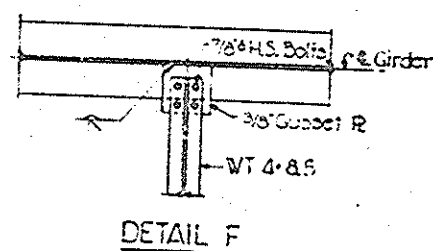
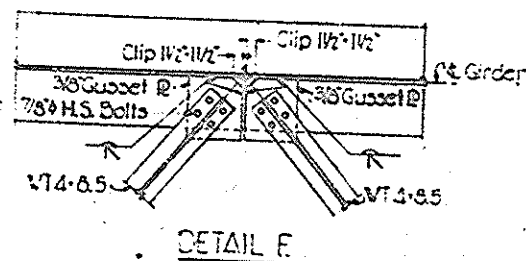
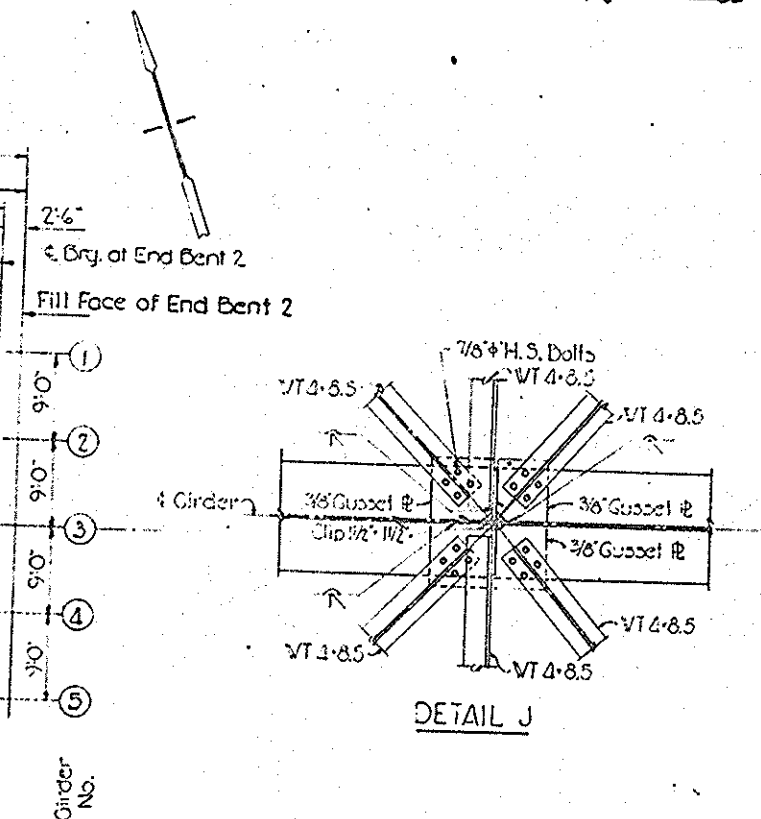
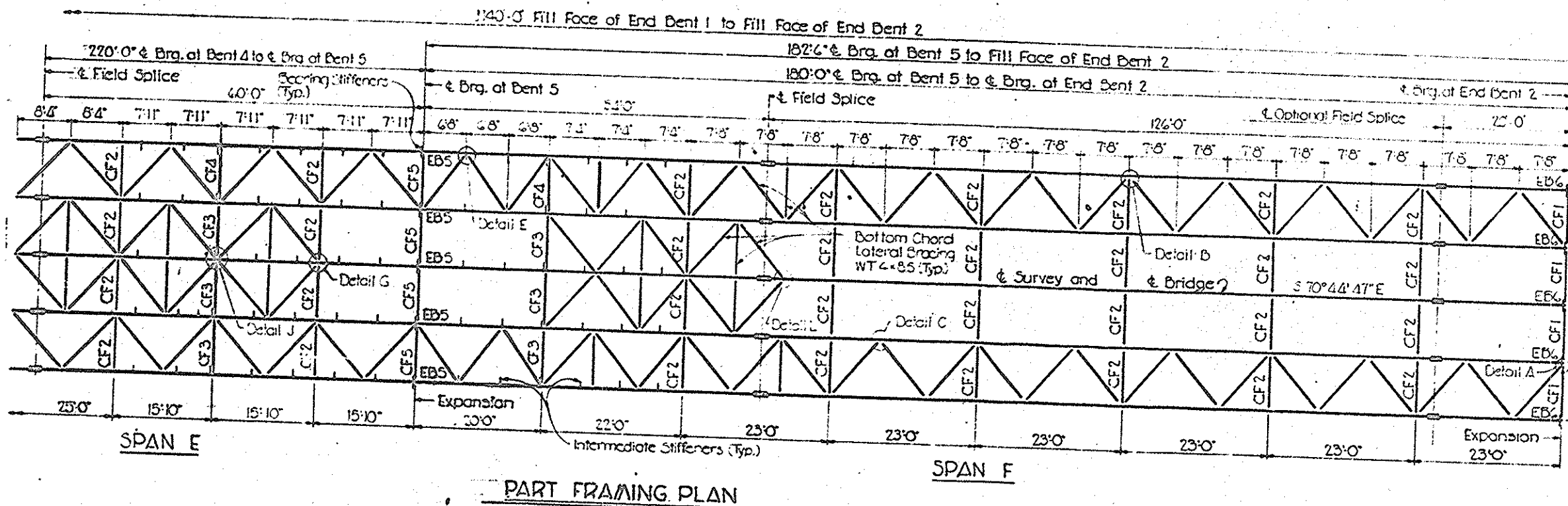
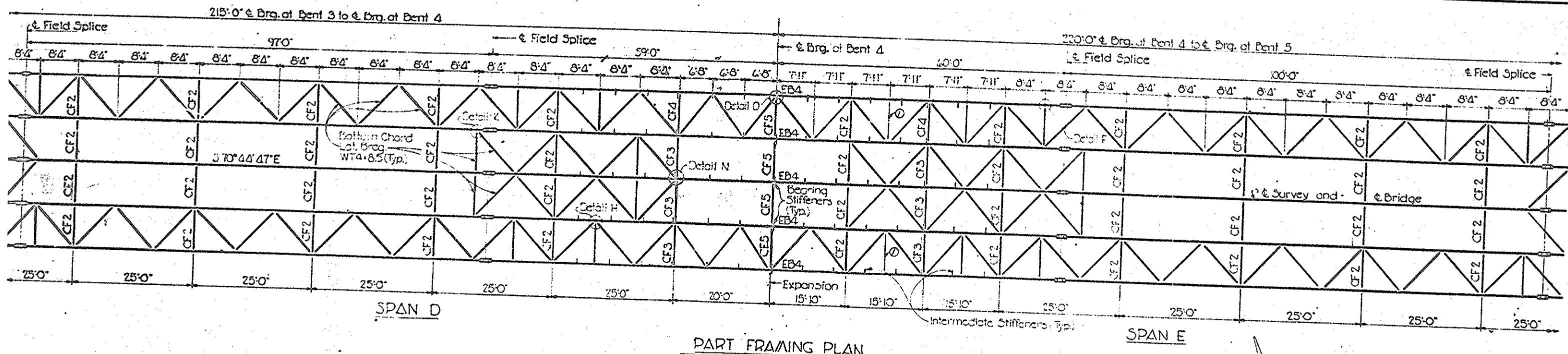
PREPARED BY
 THE WILSON T. GALLARD CO.
 CONSULTING ENGINEERS
 OWINGS MILLS, MARYLAND
 DRAWN BY: R. VIGGERS DATE: APR 1976
 CHECKED BY: M. KELLY DATE: APR 1976



STATE OF NORTH
STATE HIGHWAY
RALEIGH
SUPERSTRUI
PLAN OF SP

Span F.

REVISIONS				
NO.	BY	DATE	NO	BY
1	J.C.C.	3-14-77	3	
2			4	



BY
THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND

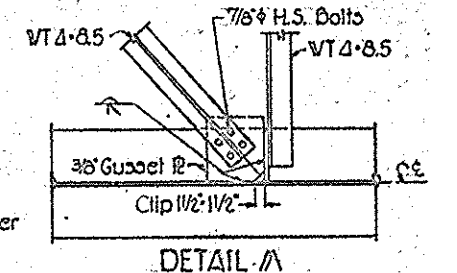
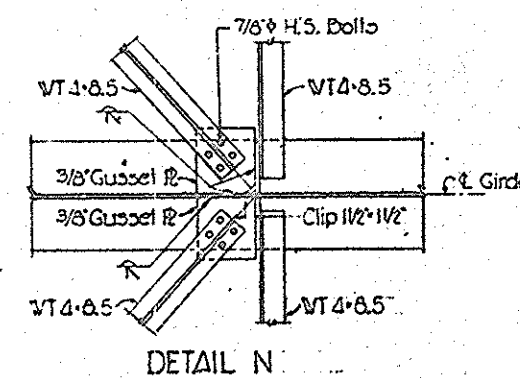
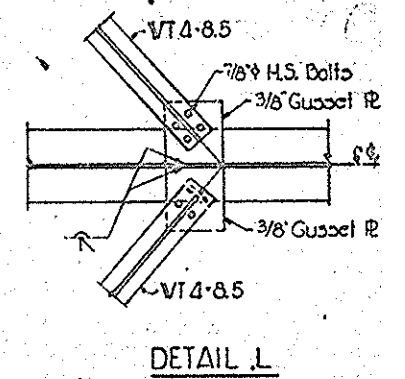
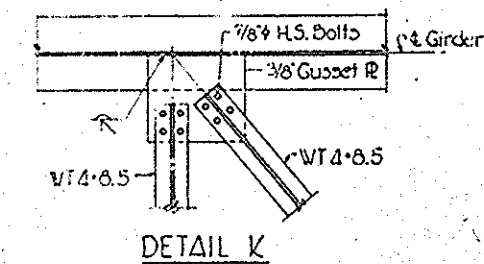
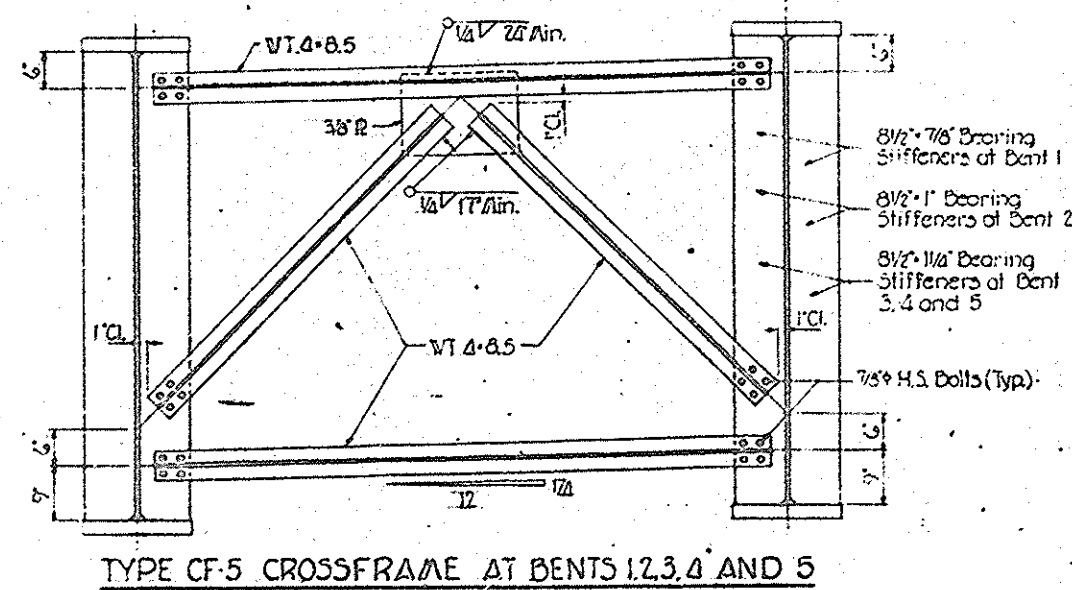
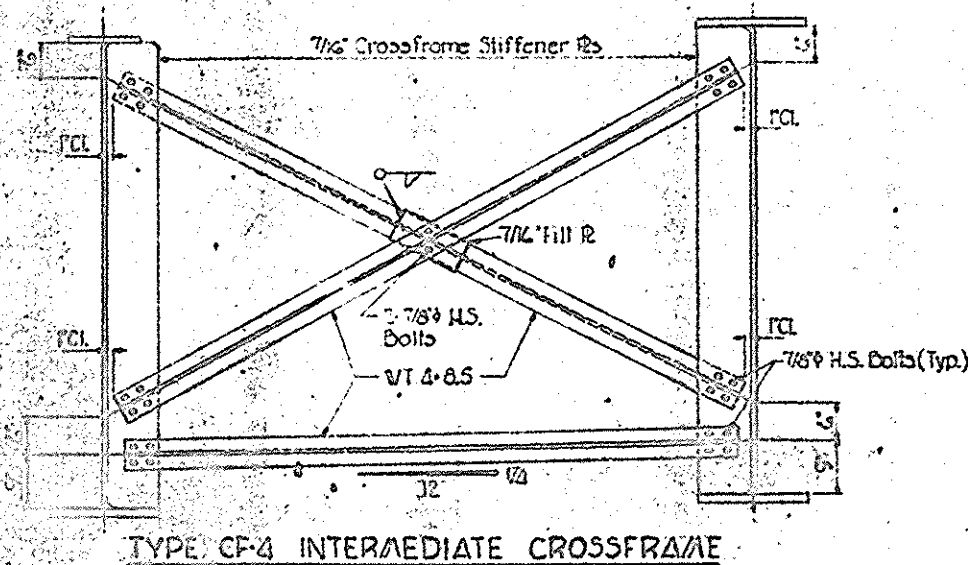
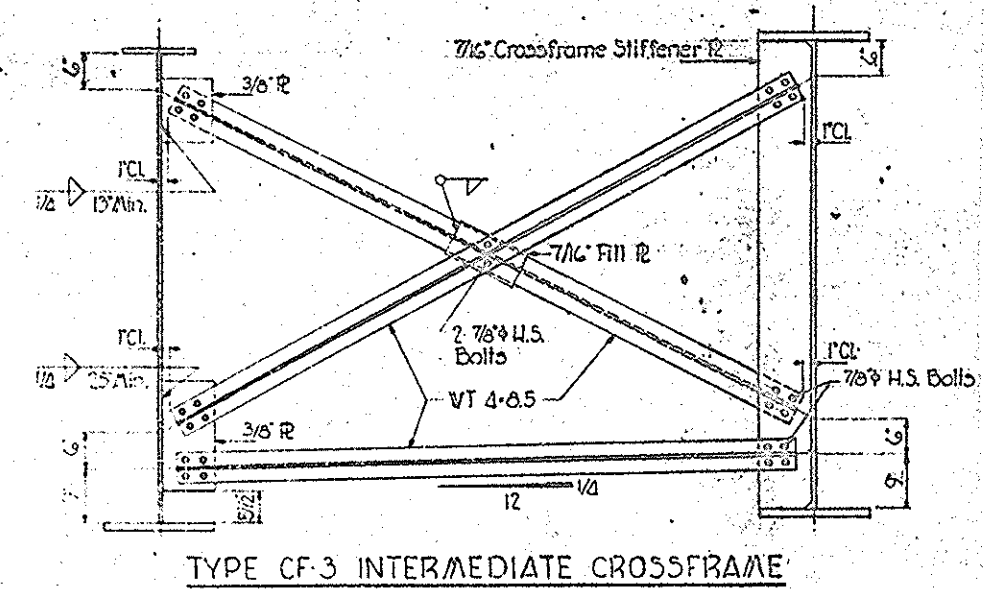
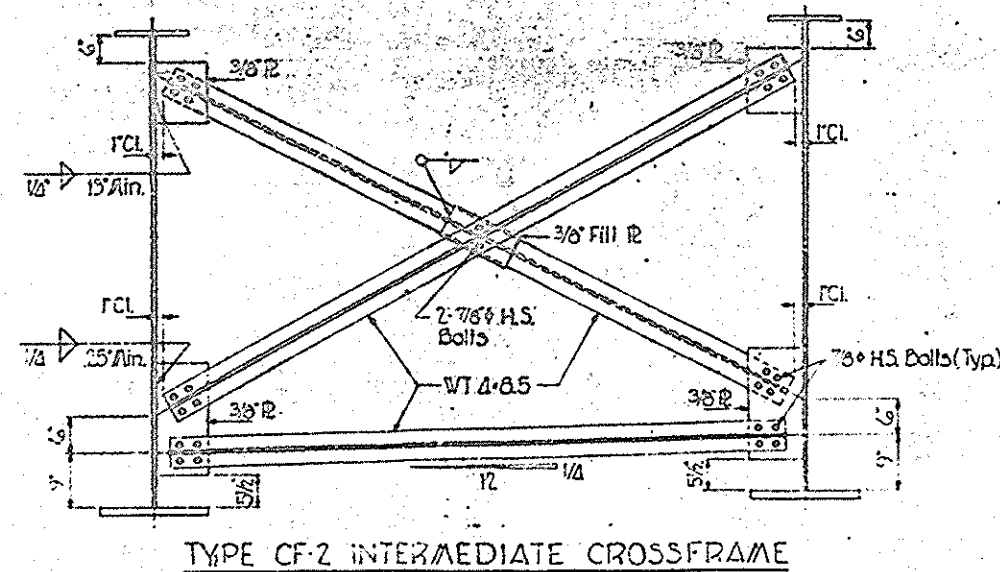
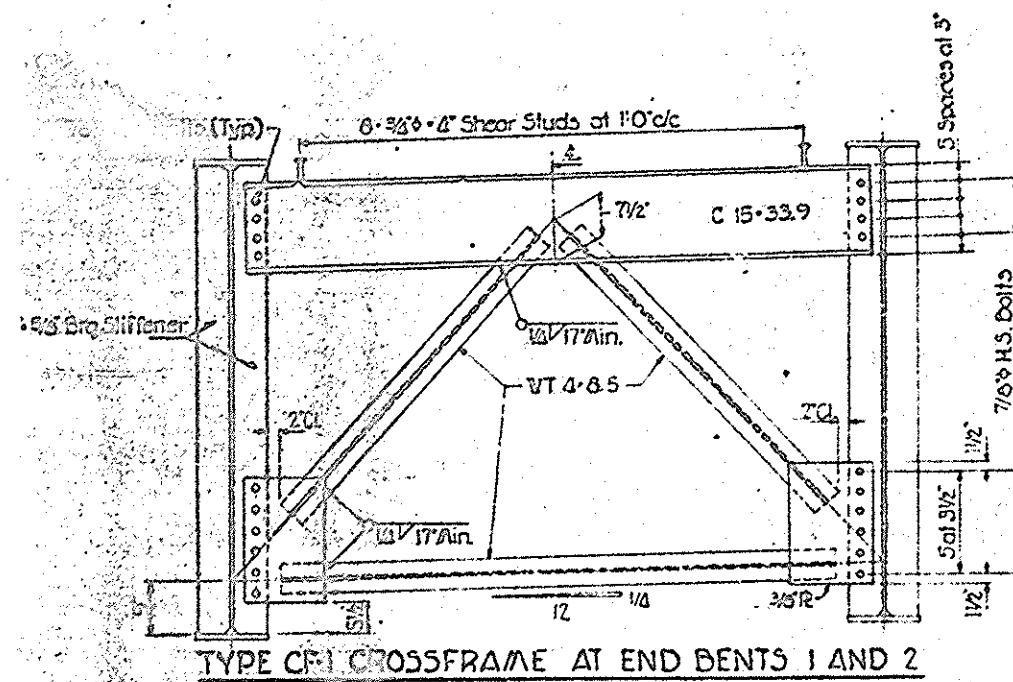
VICKERS DATE FEB 1976
KELLY DATE FEB 1976

PROJECT No. 4.804135
STANLY-MONTGOMERY COUNTY
STATION 58+67.0-L
SHEET NO. 2 OF 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE
DETAILS
FRAMING PLAN

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
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2			4			TOTAL SHEETS

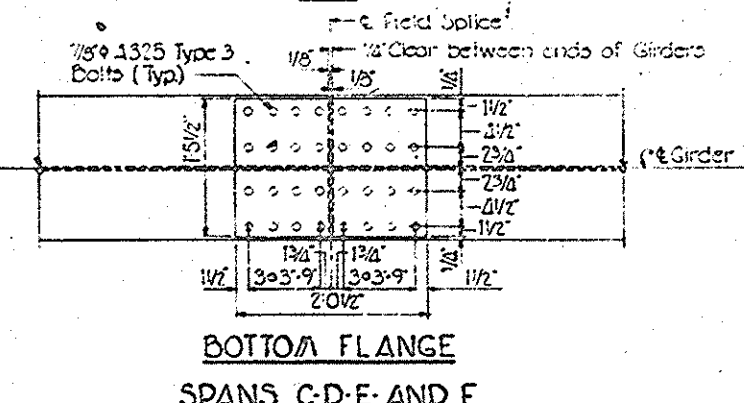
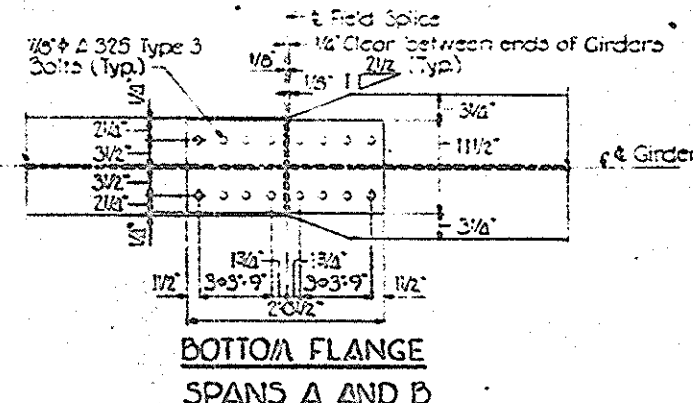
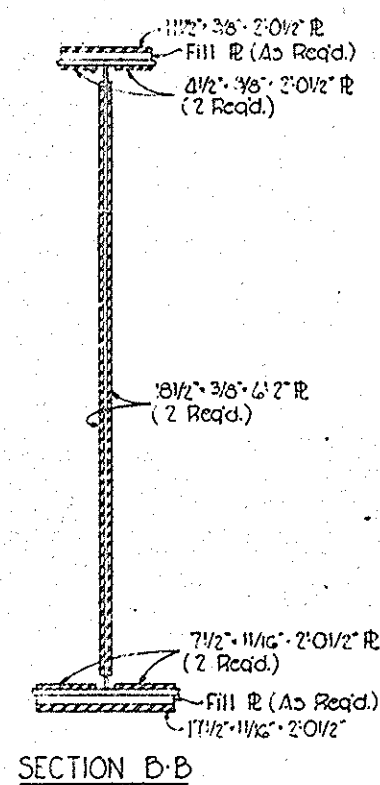
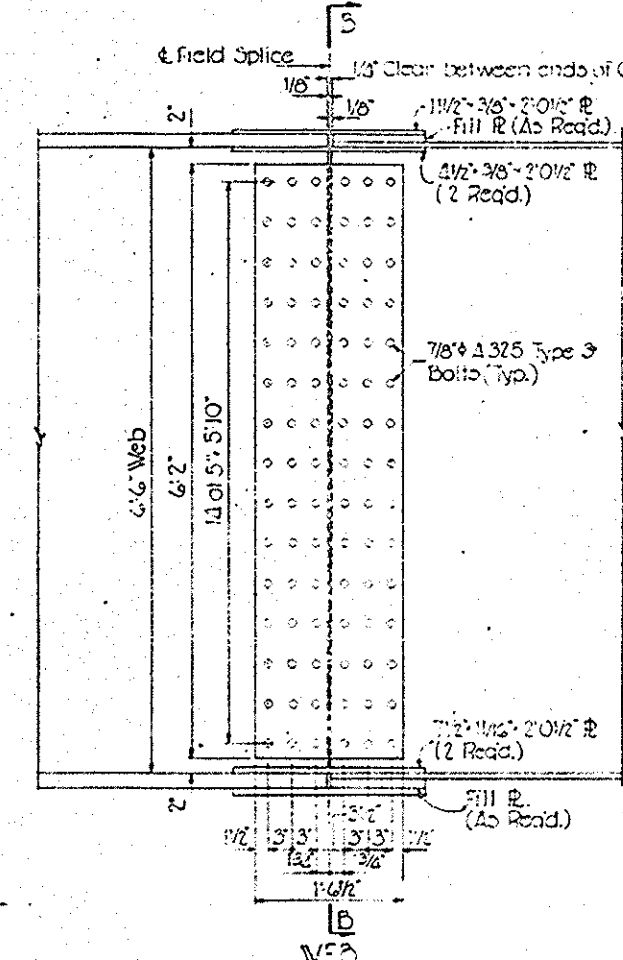
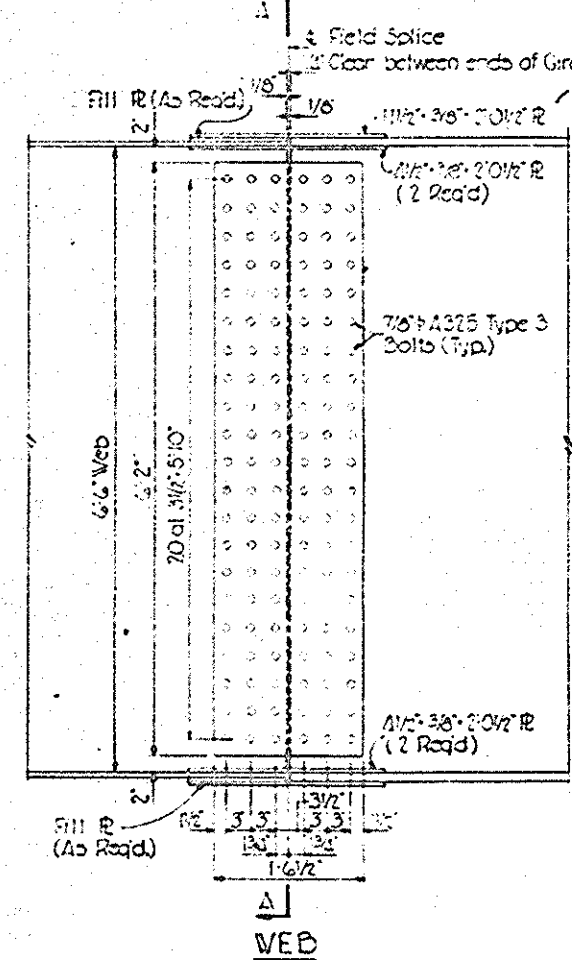
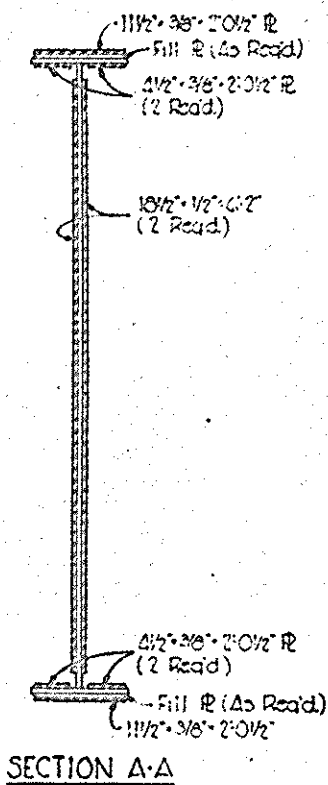
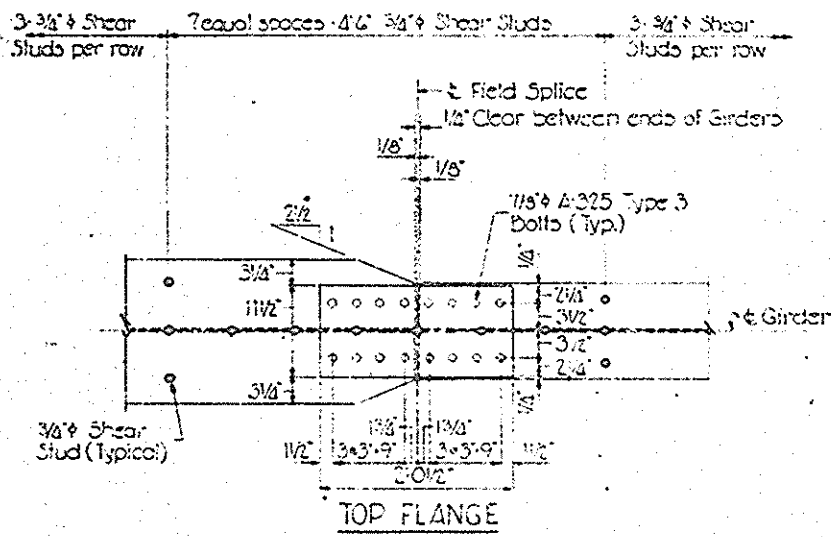
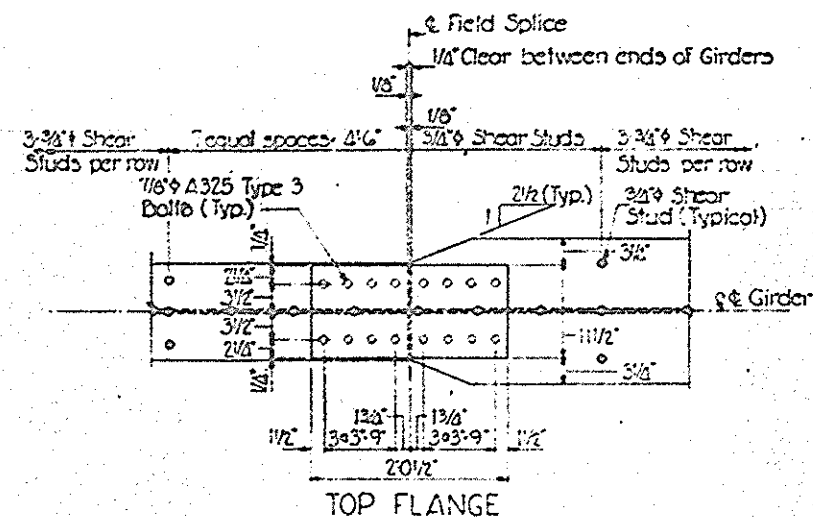
Rev. 11: Revised to add 2-WT4-8.5 Bottom Chord Laterals
Indicated 10. By NCS. VB, SEP. 11/22/1976



PROJECT No. 6.804135
STANLEY MONTGOMERY COUL
STATION 58+67.0-L

PREPARED BY
THE WILSON & BALLARD CO.
CONSULTING ENGINEERS
BETHESDA, MARYLAND

STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION RALEIGH					
SUPERSTRUCTURE DETAILS					
CROSS FRAMES AND BOTTOM CHORD BRAC					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
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PREPARED BY
THE WILSON T. GALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND

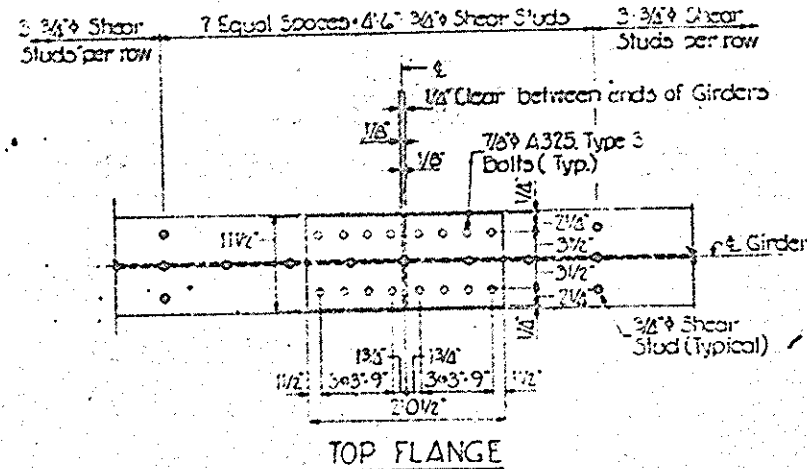
DRAWN BY B. VICKERS DATE MAR 1976
CHECKED BY M. KELLY DATE APR 1976

PROJECT No. 6.804135
STANLY-MONTGOMERY COUNTY
STATION 58+67.0-L
SHEET NO. 1 OF 2

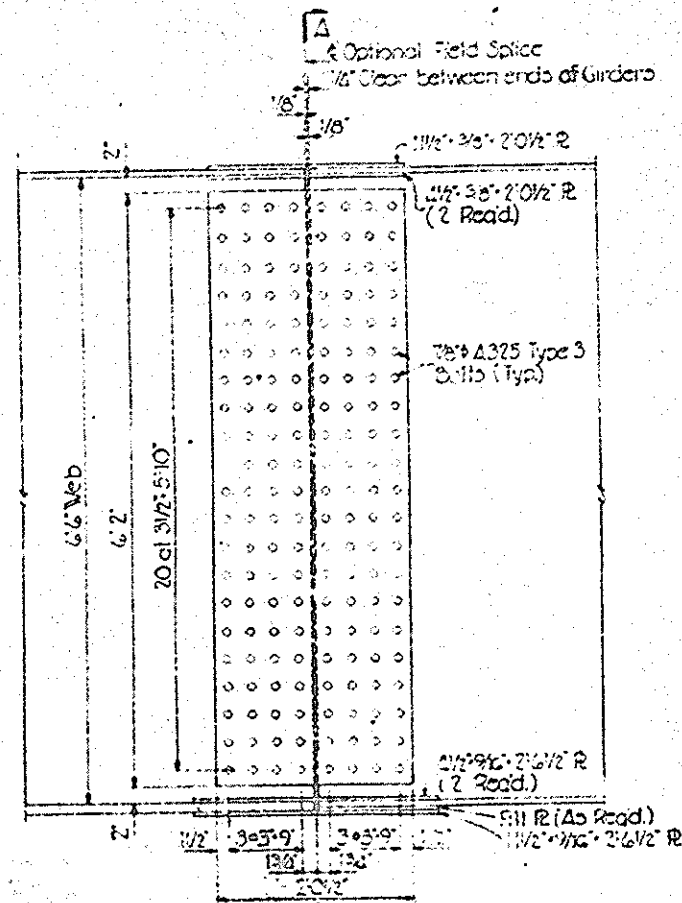
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
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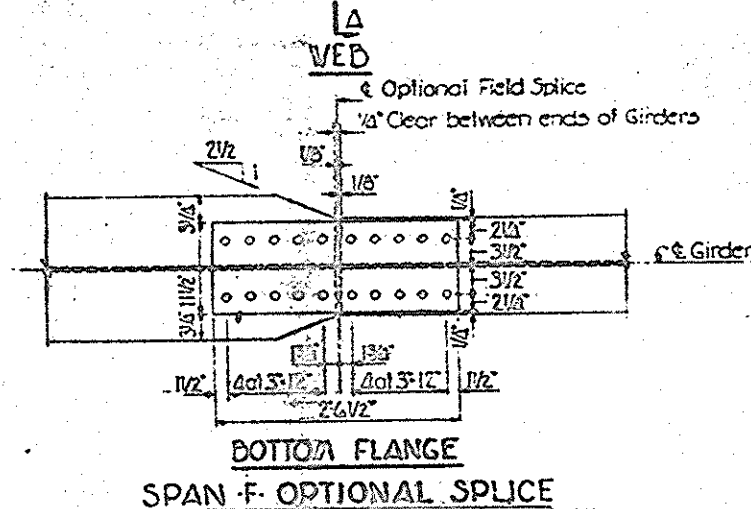
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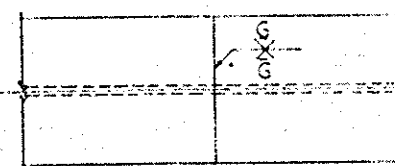
TOP FLANGE



SECTION A-A



BOTTOM FLANGE
SPAN F- OPTIONAL SPLICE



PLAN

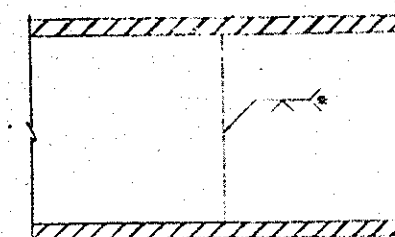
NOTE:

All shop splices in flange and web plates shall be made prior to welding flange plates to web plates. The location of these splices shall be shown on the shop plans.



SECTION THRU FLANGE

OPTIONAL FLANGE SPLICE DETAIL



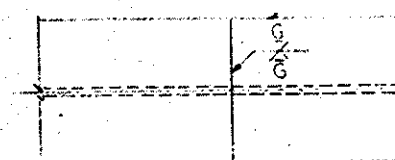
ELEVATION

* Grind flush on outside of exterior girders

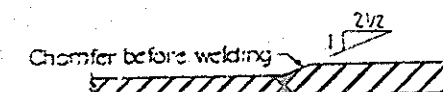


SECTION THRU WEB

PERMITTED WEB SPLICE DETAIL



PLAN



SECTION THRU FLANGE

FLANGE SPLICE DETAIL

WELDING DETAILS

NOTES:

Two additional shop flange splices will be permitted in the top or bottom flange plate, which exceeds 60 feet in each span. These splices or not to be located within the middle half of the flange plate. Two additional shop web splices will be permitted between the end of the girder and the nearest field splice and two between each pair of field splices except no web splice will be permitted in the region extending 20 feet each side of the centerline of bearing of interior bents and no web splice will be permitted in the region extending 2 feet each side of a shop flange splice.

Shipping details for girders shall be submitted for approval indicating the top flange location during shipment, and in all cases showing the vertical. The method of shipment, position on the vehicle, and attachment to the girders of any shipping restraints shall be clearly detailed.

The atmospheric corrosion resistance and coloring characteristics of A.S.T.A. A-588 steel are required for the high strength bolts, nuts, washers and the weld filler metal for this structure.

All structural steel shall be unpainted A.S.T.A. 588 (Minimum yield strength of 50,000 p.s.i.)

Combered girder lengths shall be adjusted and bearings are to be placed on the combered girder so as to be aligned with anchors after the dead load deflection has occurred. Shop plans shall be prepared accordingly.

PREPARED BY
THE WILSON & BALLARD CO.
CONSULTING ENGINEERS
CHICAGO, ILL., MARYLAND

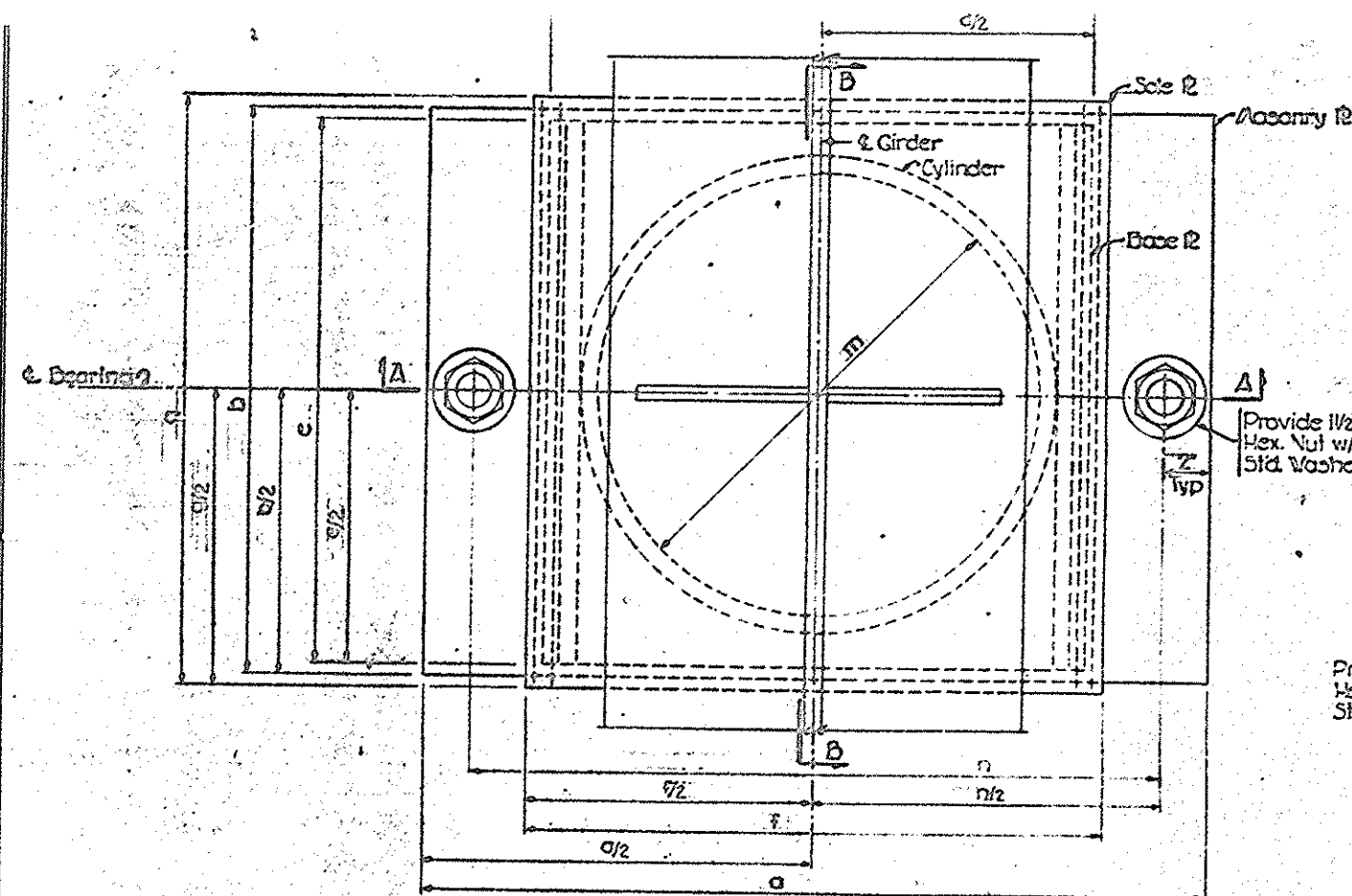
DRAWN BY J. J. WILSON
CHECKED BY J. J. WILSON

PROJECT No. 6.8041
STANLEY-MONTGOMERY
STATION 58+67.0-L
SHEET NO. 2 OF 2

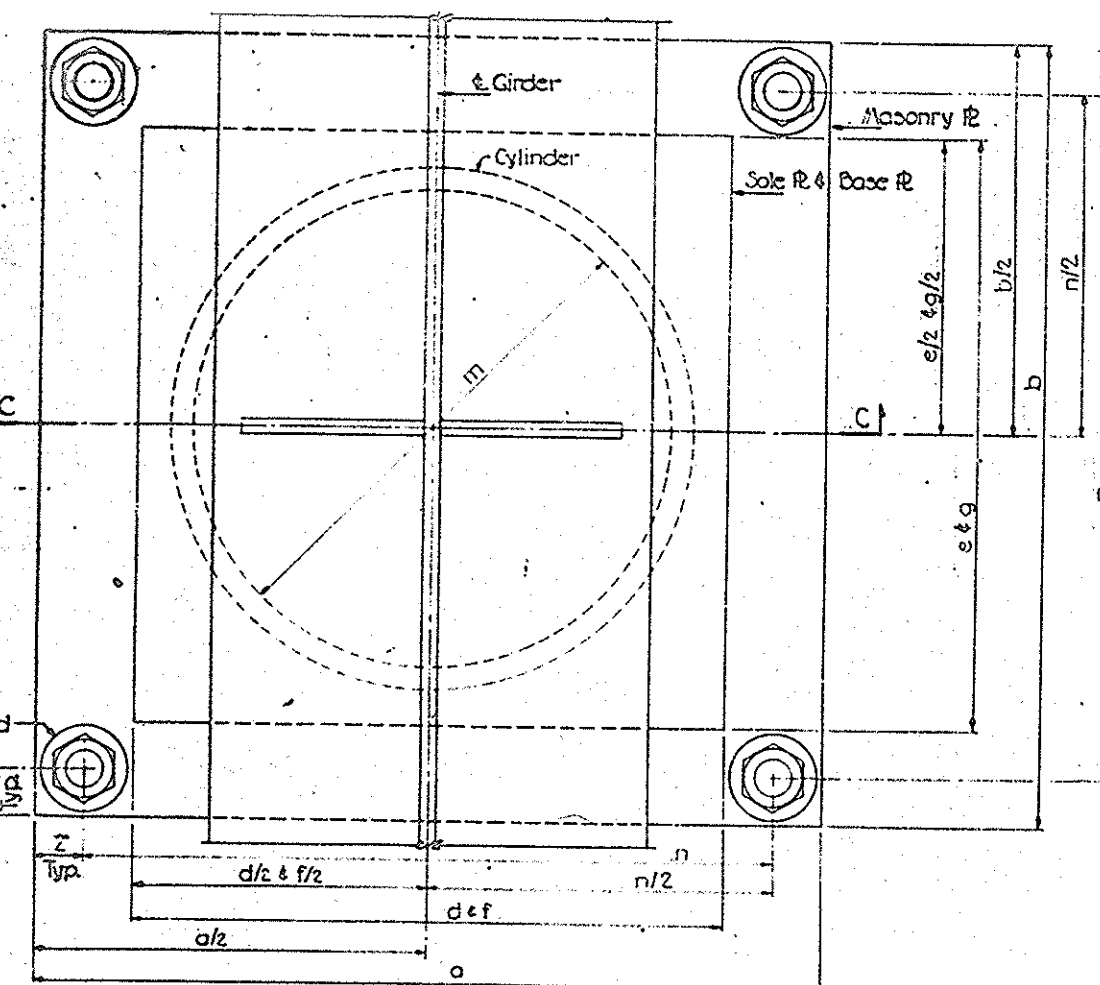
STATE OF NORTH CARO
STATE HIGHWAY COMM
RALEIGH

SUPERSTRUCTU
SPLICE DETAIL

REVISIONS				
NO.	BY	DATE	NO.	BY
1			3	
2			4	

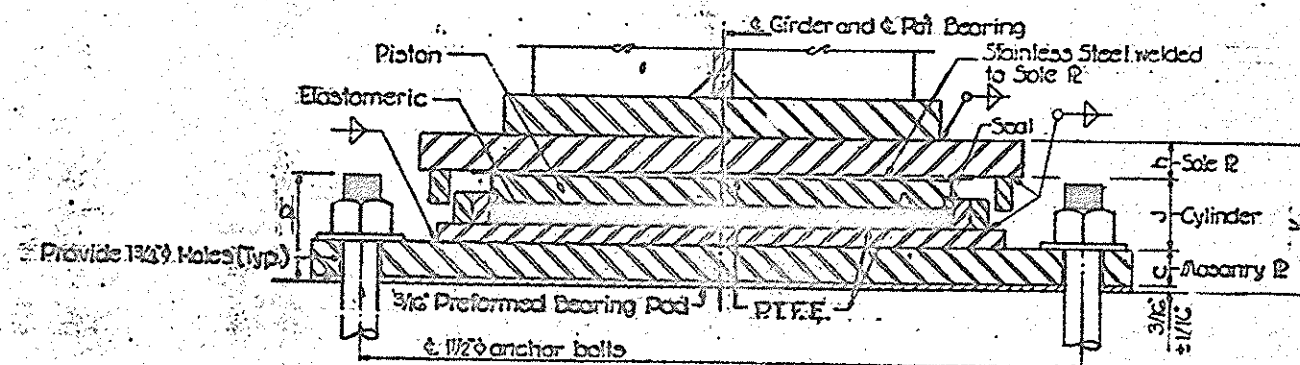
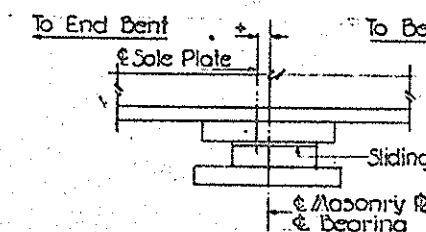


PLAN

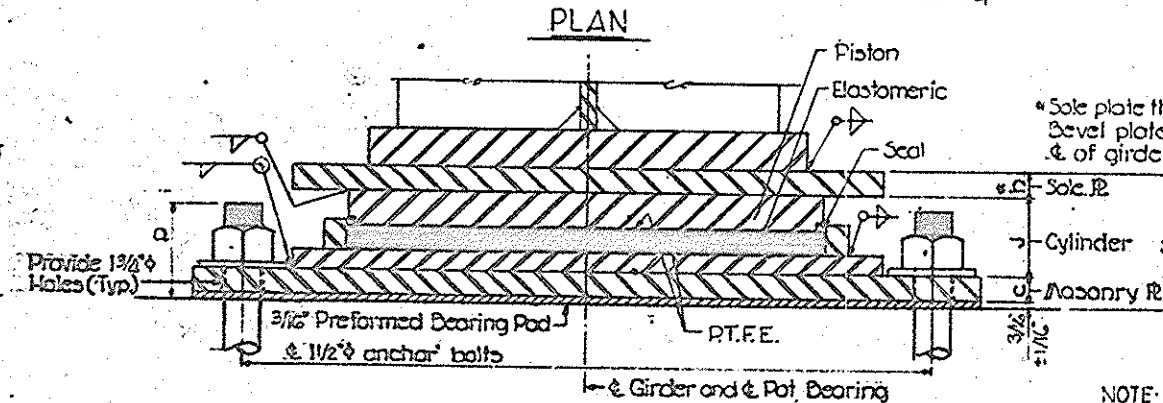


PLAN

PLATE SETTING DATA		
Temperature of time of Setting	30° F	60° F
End Bent 1	-13/16"	0
Bent 1	-7/8"	0
Bent 2	-1/2"	0
Bent 3	0	0
Bent 4	-1/2"	0
Bent 5	-1"	0
End Bent 2	-17/16"	0

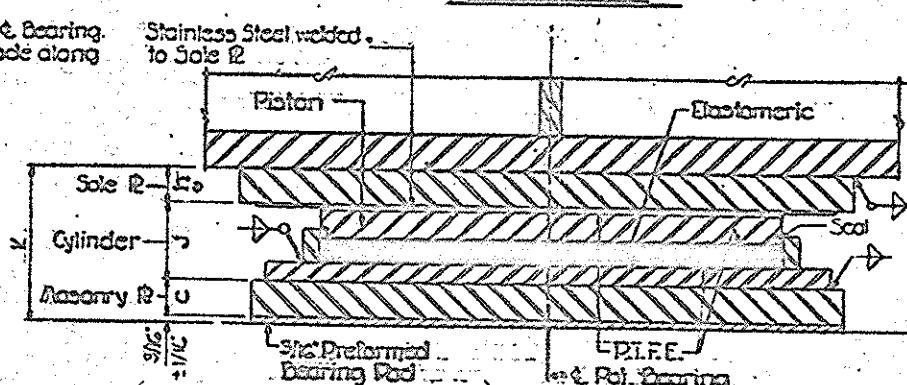


SECTION A-A



SECTION C-C
FIXED BEARING

• Sole plate thickness at & Bearing. Bevel plate on 0.5% grade along & of girder.



SECTION B-B
EXPANSION BEARING

NOTE:
For anchor bolt assembly, see Sheet No. 3-26. For bolt lengths, see Anchor Bolt Assembly. For bolt projection, see chart below.

BEARING	LOCATION	LOAD IN KIIPS		TOTAL MOVEMENT IN	ROTATION RADIUS	MASONRY R			BASE R			SOLE R			CYL. HEIGHT	BRS. HEIGHT	PISTON DIA	BOLTS		
		DEAD	LIVE			a	b	c	d	e	f	g	h	i				j	k	l
EB-1	END BENT 1	100	75	4.86"	0.015	24"	14 1/4"	1 1/2"	13 3/8"	13 1/4"	14 7/8"	18 3/8"	1 1/2"		2 1/8"	4.82"	11"	20"	3 1/2"	
EB-2	BENT 1	325	150	3.40"	0.015	32 1/2"	23"	1 1/2"	21 7/8"	21 7/8"	23 3/8"	25 1/2"	1 1/2"		2 3/8"	5.94"	17 1/2"	28 1/2"	3 7/8"	
EB-3	BENT 2	375	175	1.92"	0.015	34"	24 1/2"	1 1/2"	23 1/2"	23 1/2"	25"	25 1/2"	1 1/2"		3 1/8"	6.32"	19"	30"	4"	
EB-4	BENT 4	420	180	2.00"	0.015	35"	25 1/2"	1 1/2"	24 1/2"	24 1/2"	26 1/8"	26 1/2"	1 1/2"		3 1/8"	6.32"	19 3/4"	31"	4"	
EB-5	BENT 5	450	175	4.08"	0.015	36"	26 1/2"	1 1/2"	25 1/2"	25 1/2"	27 1/8"	29 3/8"	1 1/2"		3 1/8"	6.32"	20 1/2"	32"	4"	
EB-6	END BENT 2	120	80	5.76"	0.015	25"	15 1/4"	1 1/2"	18 3/8"	18 1/4"	15 7/8"	20"	1 1/2"		2 1/8"	4.94"	11 1/2"	21"	3 5/8"	
EB-7	BENT 3	425	175		0.015	32 1/2"	23 1/2"	1"	24 1/2"	24 1/2"	26 1/2"	26 1/2"	1"		3 1/8"	5.32"	19 3/4"	28 1/2"	3 1/2"	

PREPARED BY
THE WILSON & BALLARD CO.
CONSULTING ENGINEERS
CHICAGO, ILL., U.S.A.
CHECKED BY
C. L. BUCHHEIT
C. L. BUCHHEIT

PROJECT No. 6.804135
STANLY-MONTGOMERY COUNT
STATION 58+67.0-L

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

POT BEARING
DETAILS

REVISIONS				
NO.	BY	DATE	NO.	BY
1			2	
2			3	



ALTERNATE FIXED BEARING ASSEMBLY (FB-1)

(Al Bent 3)



ALTERNATE EXPANSION BEARING ASSEMBLY (EB-1 AND EB-6)

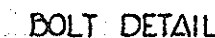
(At End. Cont. Vol 2)



NOTE: After anchor bolts have been finally positioned, pipe shall be filled with non-shrink, non-metallic grout as approved by the Engineer.



SECTION B-E



PREPARED BY
THE WILSON T. BALLARD CO
CONSULTING ENGINEERS
CHICAGO, ILL., U.S.A.

DRAWN BY RAVINDER DATE 22.11.2011
 CHECKED BY ANIL DATE 22.11.2011

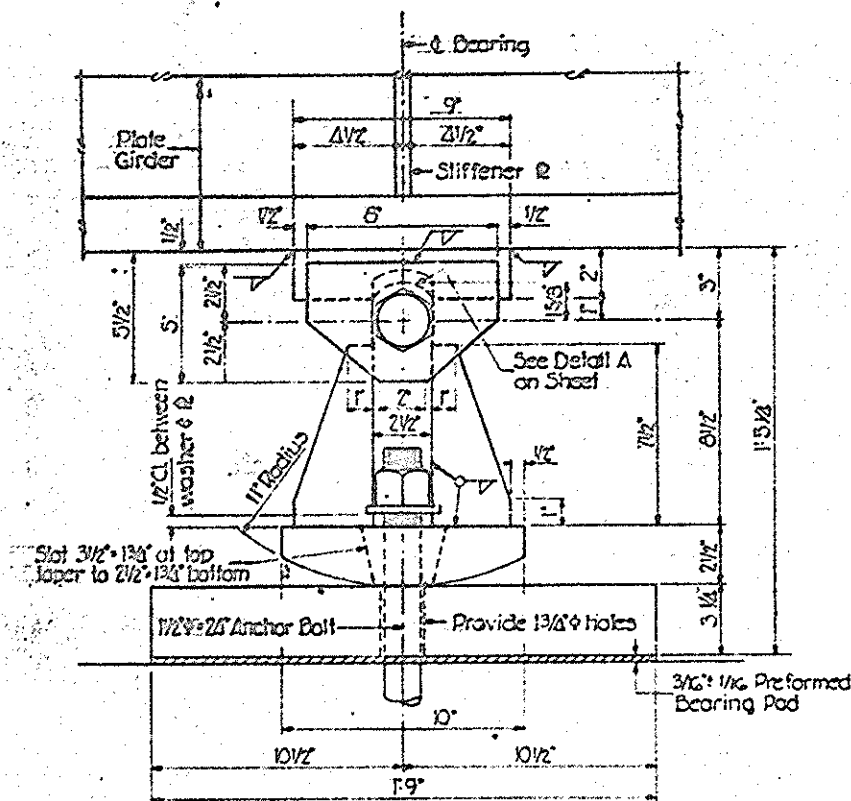
PROJECT No. 6.804135
STANLEY MONTGOMERY COUNTY
STATION 58+67.0-L¹
SHEET NO. 1 OF 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

DETAILS OF ALTERNATE BEARING ASSEMBLIES FOR PLATE GIRDERS

REVISIONS						SYMBOL
NO.	BY	DATE	NO.	BY	DATE	
1	HCS	9-9-76	3			
2			4			

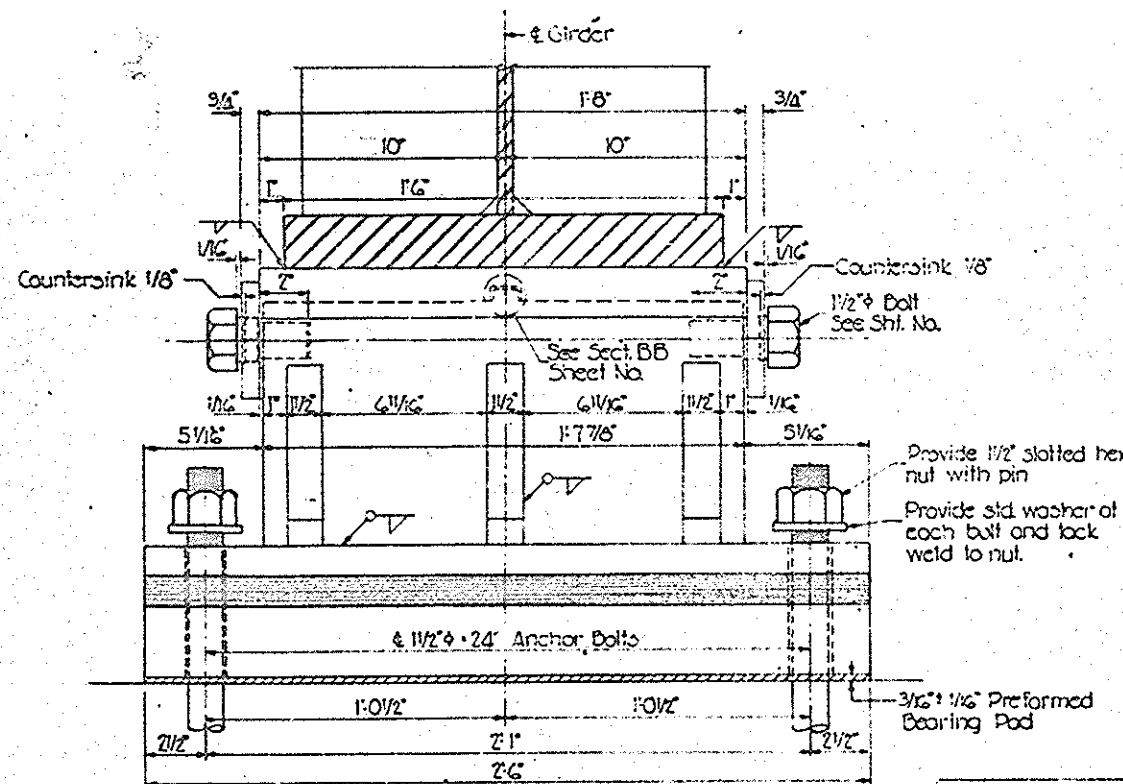
Revised: Revised to change length of C.S. pipe from 1'-6" to 1'-9". 7-7-76 NCS



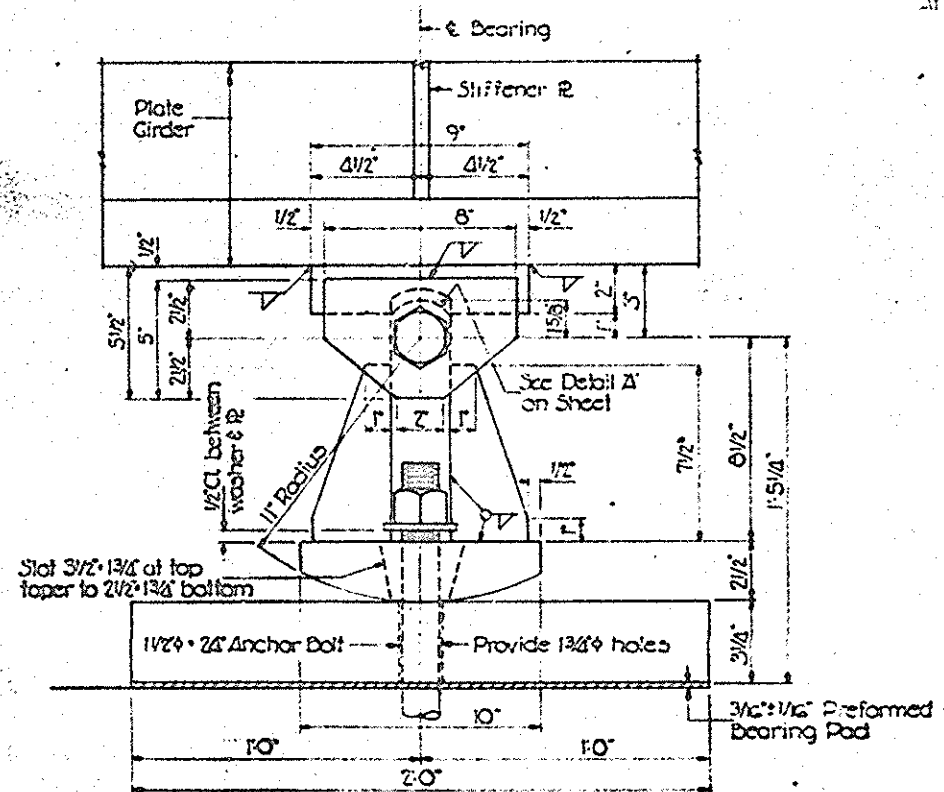
SIDE VIEW

ALTERNATE EXPANSION BEARING ASSEMBLY (EB-2 AND EB-3)

At Bents 1 and 2



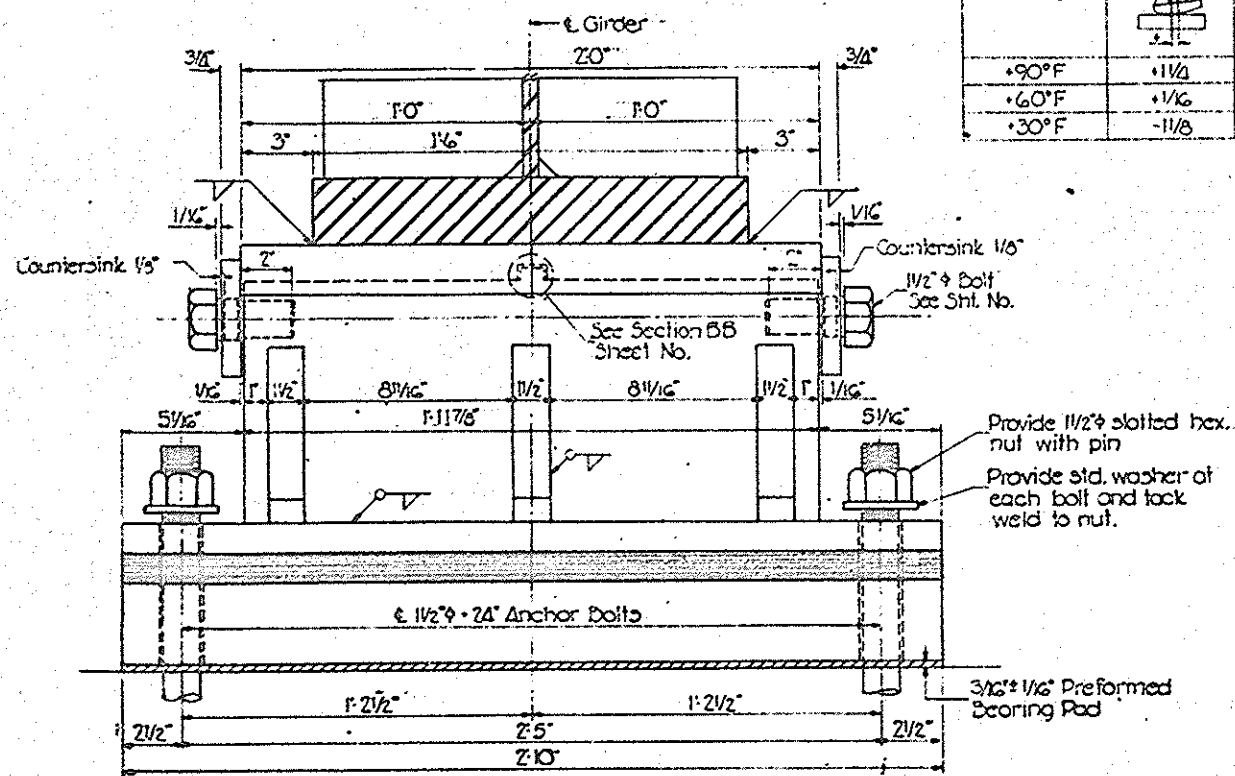
END VIEW



SIDE VIEW

ALTERNATE EXPANSION BEARING ASSEMBLY (EB-4 AND EB-5)

At Bents 4 and 5



END VIEW

NOTES

1. Weld sizes not shown, to be in accordance with Specifications.
2. Welded Joints in Bearing Assemblies to be welded in accordance with the AWS Specifications.
3. All Bearing Assemblies shall be constructed of Structural Steel, except bolts, nuts and washers in accordance with the Specifications.
4. All weldments to be stress relieved by heat treatment after all welding is complete.
5. Masonry Plates are to be smooth and straight but no surface finish is required.
6. All Rocker Bearing Assemblies including bolts, nuts and washers shall be galvanized in accordance with the Specifications.

ROCKER SETTING DATA

	END BENT 1	BENT 1	BENT 2	BENT 3	BENT 4	BENT 5
Temperature at time of Setting						
+90°F	+1 1/4	+7/8	+1/2	0	+1/2	+1
+60°F	+1/4	0	0	0	0	0
+30°F	-1 1/8	-7/8	-1/2	0	-1/2	-1

* The rocker setting dimensions are for rocker pool steel dead load corrected for temperature and girder rotation due to slab dead load.

PROJECT NO. 6.
STANLY MONTGOMERY
STATION 55+67.0

SHEET NO. 2 OF 2

STATE OF NORTH
CAROLINA
RALEIGH

DETAILS OF AL
BEARING ASS
FOR PLATE C

PREPARED BY
THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
OWING MILLS, MARYLAND

DRAWN BY R. VICKERS DATE 10/1/55
CHECKED BY J. R. VICKERS DATE 10/1/55

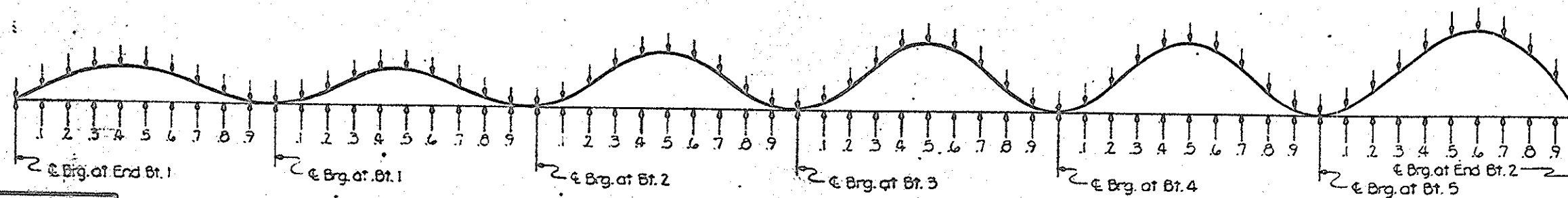
REVISIONS				
NO.	BY	DATE	NO.	BY
1			3	
2			4	

EXTERIOR GIRDERS	SPAN A										SPAN B										SPAN C										
	BRG. BT. 1	1	2	3	4	5	6	7	8	9	BRG. BT. 1	1	2	3	4	5	6	7	8	9	BRG. BT. 2	1	2	3	4	5	6	7	8	9	BR. BT.
DEFL. DUE TO WEIGHT OF STEEL	0.000	0.017	0.031	0.039	0.042	0.039	0.030	0.020	0.009	0.002	0.000	0.007	0.021	0.038	0.048	0.050	0.041	0.026	0.010	0.000	0.000	0.016	0.042	0.071	0.091	0.095	0.082	0.056	0.028	0.007	0.00
DEFL. DUE TO SLAB	0.000	0.004	0.008	0.012	0.015	0.018	0.020	0.020	0.016	0.011	0.000	0.014	0.051	0.095	0.128	0.156	0.17	0.073	0.036	0.006	0.000	0.031	0.090	0.156	0.205	0.218	0.191	0.134	0.069	0.019	0.00
DEFL. DUE TO BARRIER RAIL & W.S.	0.000	0.011	0.019	0.025	0.028	0.026	0.022	0.015	0.007	0.002	0.000	0.006	0.017	0.029	0.037	0.038	0.034	0.024	0.012	0.003	0.000	0.008	0.024	0.040	0.052	0.055	0.049	0.036	0.019	0.005	0.00
TOTAL DEAD LOAD DEFLECTION	0.000	0.032	0.058	0.091	0.107	0.093	0.055	0.035	0.016	0.005	0.000	0.027	0.089	0.162	0.213	0.224	0.192	0.118	0.058	0.009	0.000	0.055	0.154	0.267	0.348	0.368	0.322	0.226	0.116	0.031	0.00
TOTAL CAMBER	0.000	0	1-3/4	2-1/2	2-1/2	2-5/8	1-7/8	1-1/4	5/8	3/16	0	5/16	1-11/16	1-15/16	2-9/16	2-11/16	2-5/16	1-9/16	1/16	1/8	0	11/16	1-7/8	3-3/16	4-3/16	4-7/16	3-7/8	2-11/16	1-3/8	3/8	0

INTERIOR GIRDERS	SPAN A										SPAN B										SPAN C										
	EBRG END BT.1	1	2	3	4	5	6	7	8	9	EBRG BT.1	1	2	3	4	5	6	7	8	9	EBRG BT.2	1	2	3	4	5	6	7	8	9	EBRG BT.
DEFL. DUE TO WEIGHT OF STEEL	0.000	0.018	0.033	0.042	0.045	0.041	0.033	0.021	0.010	0.002	0.000	0.007	0.023	0.040	0.051	0.053	0.043	0.027	0.011	0.000	0.000	0.016	0.044	0.074	0.095	0.100	0.086	0.059	0.029	0.007	0.000
DEFL. DUE TO SLAB	0.000	0.003	0.005	0.008	0.010	0.012	0.012	0.009	0.004	0.002	0.000	0.007	0.020	0.031	0.037	0.039	0.037	0.029	0.014	0.007	0.000	0.003	0.005	0.008	0.010	0.009	0.008	0.007	0.006	0.005	0.004
DEFL. DUE TO BARRIER RAIL & W.S.	0.000	0.010	0.019	0.025	0.027	0.026	0.021	0.014	0.007	0.002	0.000	0.006	0.017	0.029	0.036	0.038	0.035	0.024	0.012	0.003	0.000	0.008	0.024	0.040	0.051	0.054	0.048	0.036	0.019	0.005	0.000
TOTAL DEAD LOAD DEFLECTION	0.000	0.031	0.057	0.075	0.081	0.079	0.070	0.046	0.021	0.004	0.000	0.010	0.050	0.100	0.124	0.125	0.115	0.070	0.035	0.014	0.000	0.020	0.073	0.136	0.185	0.204	0.193	0.165	0.104	0.034	0.000
TOTAL CAMBER	0	1-1/16	2	2-3/16	2-3/4	2-9/16	2-1/16	1-3/8	11/16	3/16	0	3/8	1-3/16	2-1/4	2-13/16	3	2-9/16	1-11/16	3/4	1/8	0	3/4	2-1/16	3-9/16	4-5/8	4-7/8	4-1/4	3	1-9/16	7/16	0

EXTERIOR GIRDERS	SPAN D										SPAN E										SPAN F											
	BRG ^g BT.3	1	2	3	4	5	6	7	8	9	BRG ^g BT.4	1	2	3	4	5	6	7	8	9	BRG ^g BT.5	1	2	3	4	5	6	7	8	9	BR ^g ENDE	
DEFL. DUE TO WEIGHT OF STEEL	0.000	0.013	0.043	0.073	0.100	0.109	0.098	0.079	0.054	0.030	0.000	0.011	0.038	0.072	0.100	0.110	0.099	0.070	0.036	0.009	0.000	0.009	0.031	0.061	0.092	0.115	0.124	0.116	0.091	0.051	0.00	
DEFL. DUE TO SLAB	0.000	0.004	0.008	0.012	0.015	0.017	0.017	0.015	0.012	0.009	0.000	0.007	0.020	0.031	0.037	0.039	0.037	0.029	0.014	0.007	0.000	0.003	0.005	0.008	0.010	0.009	0.008	0.007	0.006	0.005	0.00	
DEFL. DUE TO BARRIER RAIL & W.S.	0.000	0.007	0.023	0.041	0.054	0.059	0.053	0.039	0.021	0.006	0.000	0.008	0.025	0.044	0.059	0.064	0.058	0.043	0.023	0.007	0.000	0.005	0.018	0.035	0.050	0.060	0.063	0.058	0.044	0.024	0.00	
TOTAL DEAD LOAD DEFLECTION	0.000	0.024	0.074	0.126	0.134	0.126	0.110	0.083	0.056	0.035	0.000	0.026	0.077	0.146	0.203	0.221	0.194	0.132	0.062	0.011	0.000	0.014	0.054	0.106	0.161	0.235	0.289	0.309	0.288	0.224	0.124	0.00
TOTAL CAMBER	0	1/2	1-3/4	3-3/16	4-3/8	4-13/16	4-5/16	3-1/8	1-5/8	7/16	0	1/2	1-11/16	3-1/8	4-5/16	4-3/4	4-3/16	2-13/16	1-7/16	5/16	0	1/2	1-5/8	3-11/16	4-1/2	5-9/16	5-15/16	5-9/16	4-5/16	2-3/8	0	

INTERIOR GIRDERS	SPAN D										SPAN E										SPAN F										
	BRG. BT.3	1	2	3	4	5	6	7	8	9	BRG. BT.4	1	2	3	4	5	6	7	8	9	BRG. BT.5	1	2	3	4	5	6	7	8	9	BR. ENDE
DEFL. DUE TO WEIGHT OF STEEL	0.000	0.013	0.042	0.077	0.105	0.114	0.102	0.073	0.038	0.011	0.000	0.011	0.040	0.075	0.104	0.115	0.103	0.073	0.037	0.009	0.000	0.010	0.033	0.064	0.097	0.121	0.131	0.123	0.096	0.053	0.00
DEFL. DUE TO SLAB	0.000	0.008	0.005	0.017	0.043	0.070	0.043	0.017	0.002	0.000	0.000	0.005	0.009	0.017	0.026	0.028	0.022	0.014	0.007	0.003	0.000	0.003	0.010	0.018	0.027	0.037	0.036	0.033	0.026	0.014	0.00
DEFL. DUE TO BARRIER RAIL & W.S.	0.000	0.007	0.023	0.040	0.053	0.058	0.052	0.039	0.021	0.006	0.000	0.008	0.025	0.044	0.058	0.063	0.058	0.043	0.023	0.007	0.000	0.005	0.018	0.034	0.048	0.058	0.061	0.056	0.043	0.024	0.00
TOTAL DEAD LOAD DEFLECTION	0.000	0.028	0.100	0.294	0.403	0.442	0.397	0.286	0.151	0.044	0.000	0.044	0.155	0.290	0.398	0.436	0.387	0.270	0.132	0.029	0.000	0.049	0.152	0.285	0.418	0.516	0.553	0.514	0.400	0.222	0.00
TOTAL CAMBER	0	9/16	1-15/16	3-1/2	4-13/16	5-5/16	4-3/4	3-7/16	1-13/16	1/2	0	1/2	1-7/8	3-1/2	4-3/4	5-1/4	4-5/8	3-1/4	1-9/16	3/8	0	9/16	1-13/16	3-7/16	5	6-3/16	6-5/8	6-3/16	4-13/16	2-11/16	0



SCHEMATIC CAMBER ORDINATES

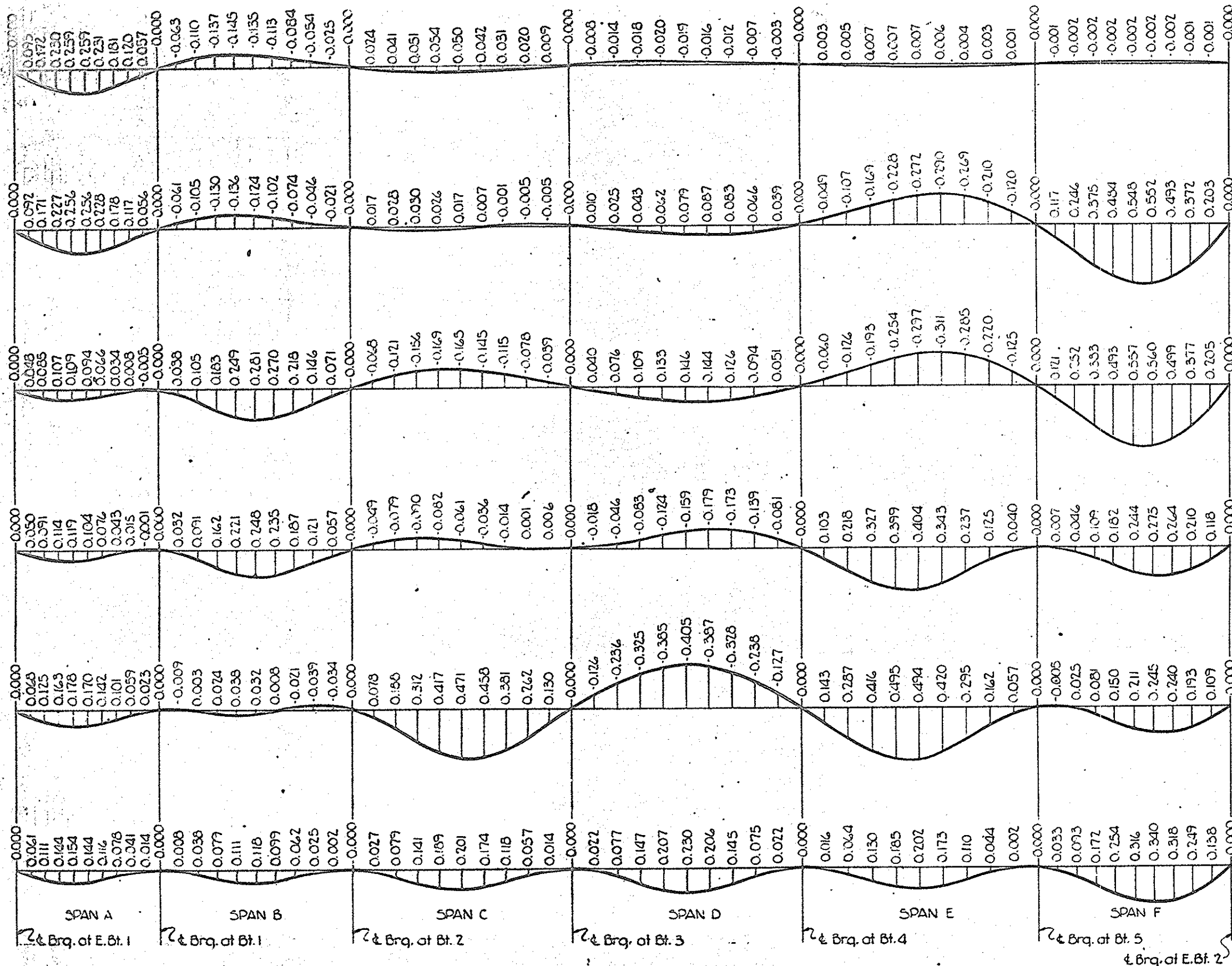
PREPARED BY
THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
GAINESVILLE, FLORIDA
DRAWN BY D. SPITTEL DATE 12/21/77

PROJECT No. 6.1
STANLY MONTGOMERY
STATION 58+67.0
SHEET NO.

STATE OF NORTH
CAROLINA
STATE HIGHWAY 6
RALEIGH

SUPERSTRUC
DEAD LOAD DEF

REVISIONS
NO. BY DATE NO. BY



RELATIVE MOVEMENT OF GIRDERS FROM POURS 1 THRU 6
 Values are given at tenth points between bearings. Ordinates given in feet (decimal form)

PREPARED BY
 THE WILSON T. BALLARD CO.
 CONSULTING ENGINEERS
 CUMMIS (MILLS, MARYLAND)

DRAWN BY D. S. FRYER
 CHECKED BY G. H. FRYER

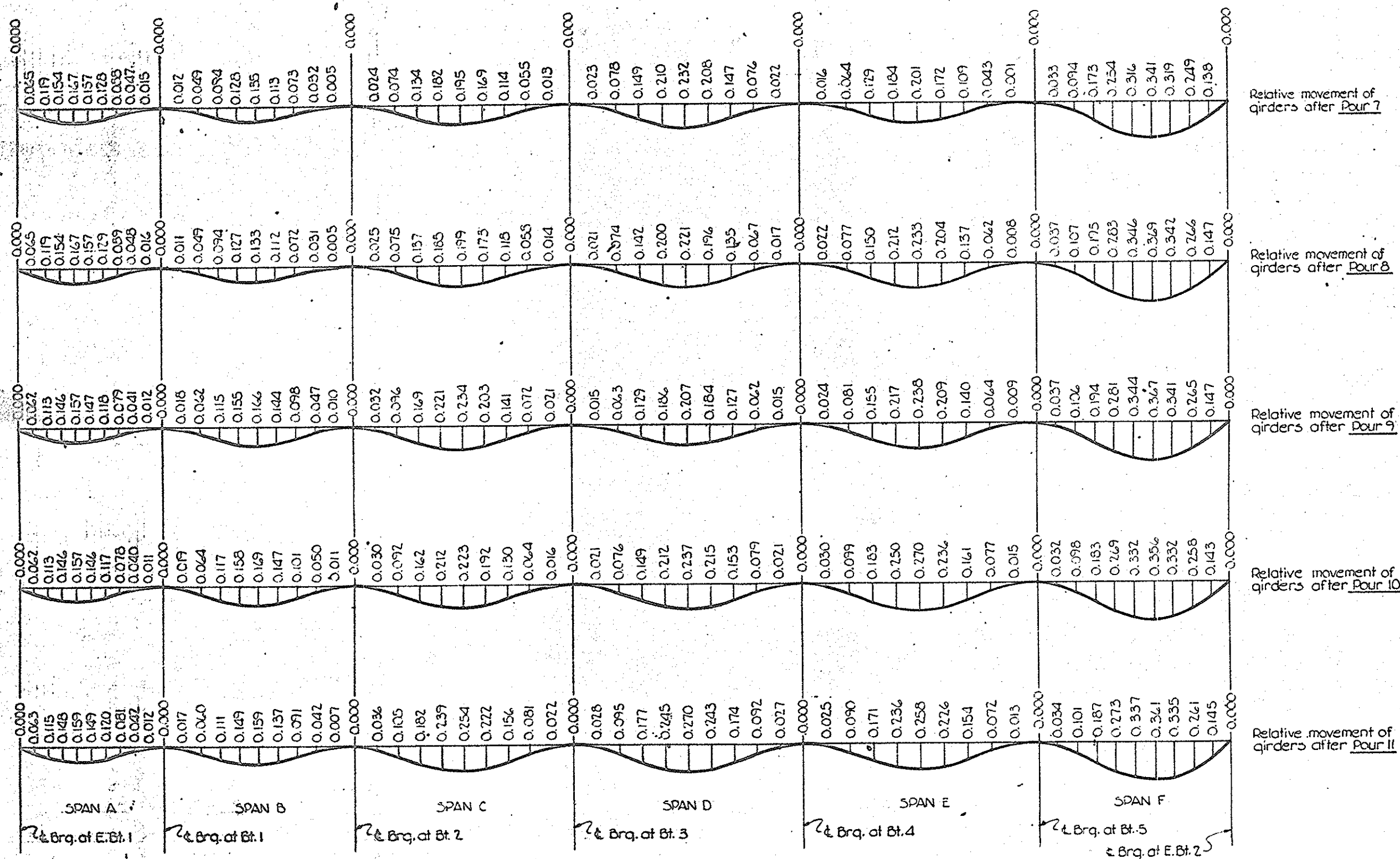
ABCDEF

PROJECT No. 6.8041
 STANLEY-MONTGOMERY
 STATION 58+67.0-L-
 SHEET NO. 1 OF 2

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH

RELATIVE MOVEMENT
 GIRDERS DUE
 CONCRETE POURS
 FOR SPANS A,B,C.

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		



RELATIVE MOVEMENT OF GIRDERS FROM POURS 7 THRU 11
Values are given at tenth points between bearings Ordinates given in feet (decimal form)

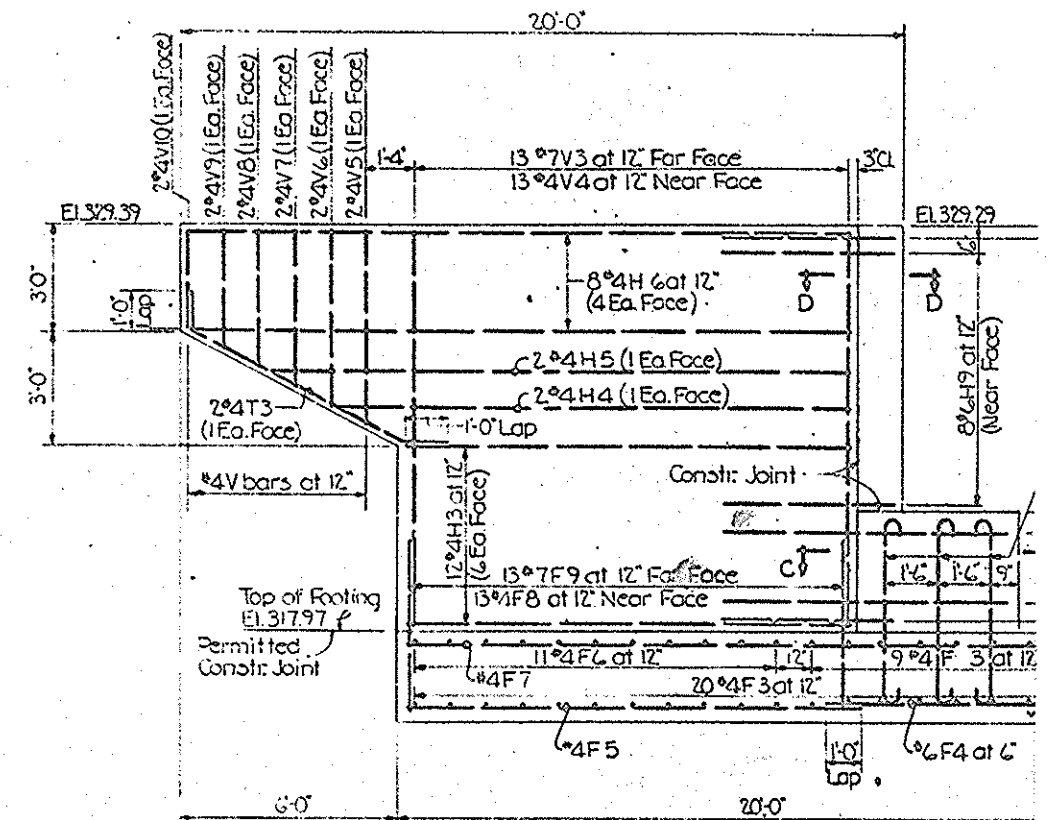
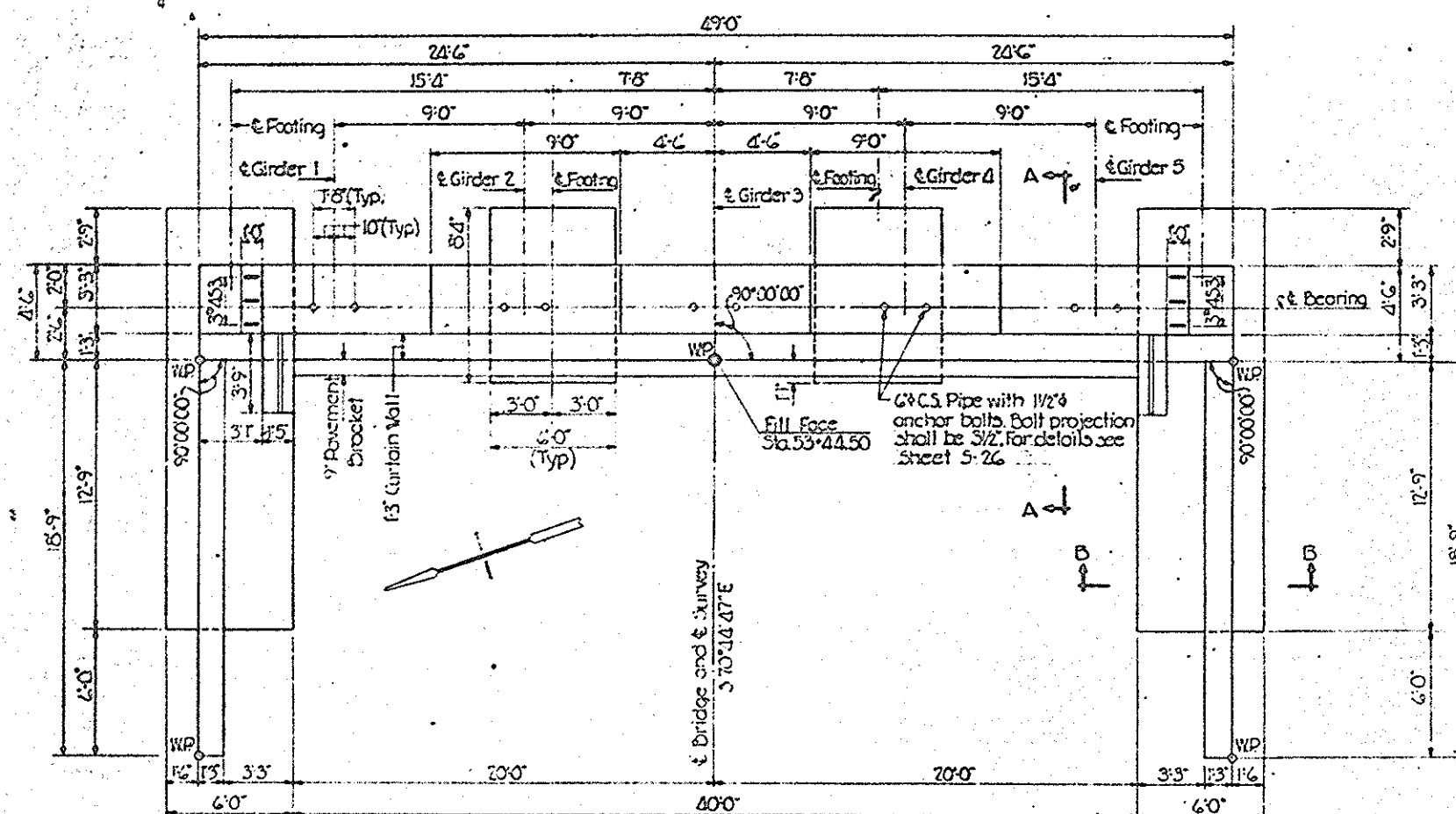
PREPARED BY
THE WILSON & GALLARD CO.
CONSULTING ENGINEERS
GREEN BELT, MARYLAND

DRAWN BY D. S. [illegible] DATE [illegible]
CHECKED BY G. [illegible] DATE [illegible]

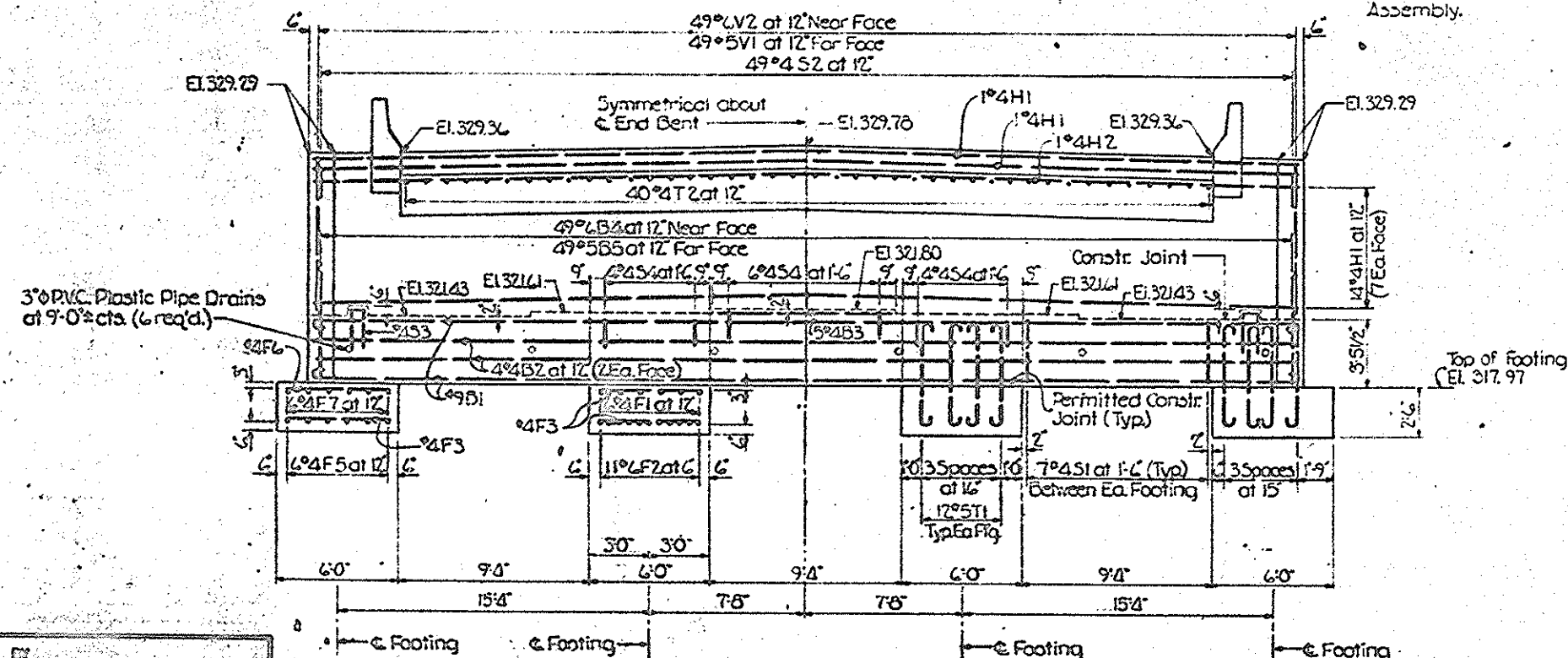
PROJECT NO. 6.
STANLEY MONTGOMERY
STATION 58+67.0
SHEET NO. 2 OF 2

STATE OF NORTH CAROLINA STATE HIGHWAY 6 RALEIGH					
RELATIVE MOVE GIRDERS DL CONCRETE POUR FOR SPANS A,B					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

A B C D E F



TYPICAL WINGWALL ELEVATION



Note: See Standard Guard Rail Anchorage sheet for location of 'C' bars for curved end blocks and Guard Rail Anchorage Assembly.

NOTE:

Beam seat elevations have been set and reinforcing detailed for the use of pot bearings. If alternate rocker bearings are used, the contractor shall lower the beam seat elevations and hold the top of footing elevations, thus decreasing the depth of the cap. Top and bottom of cap longitudinal reinforcing shall be unchanged.

PREPARED BY
THE WILLIAM E. BALLARD CO.
CONSULTING ENGINEERS
CHICAGO, ILL., U.S.A.

CHECKED BY D. S. DAVIS DATE APRIL 1976
CASHED BY W. J. HARRIS DATE APRIL 1976

PROJECT No. _____
STANLY-MONTGOMERY
STATION 58+

SHEET 1 OF 2

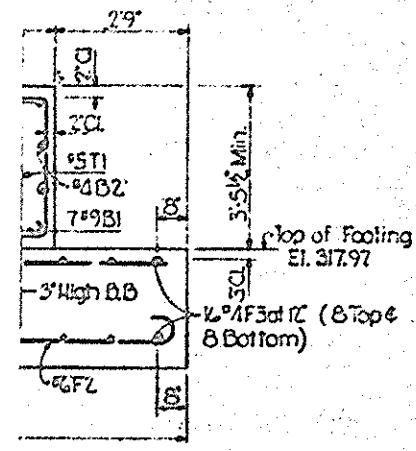
STATE OF NORTHERN
STATE HIGHWAY
RALE

EB1 SUBSTR
END BE

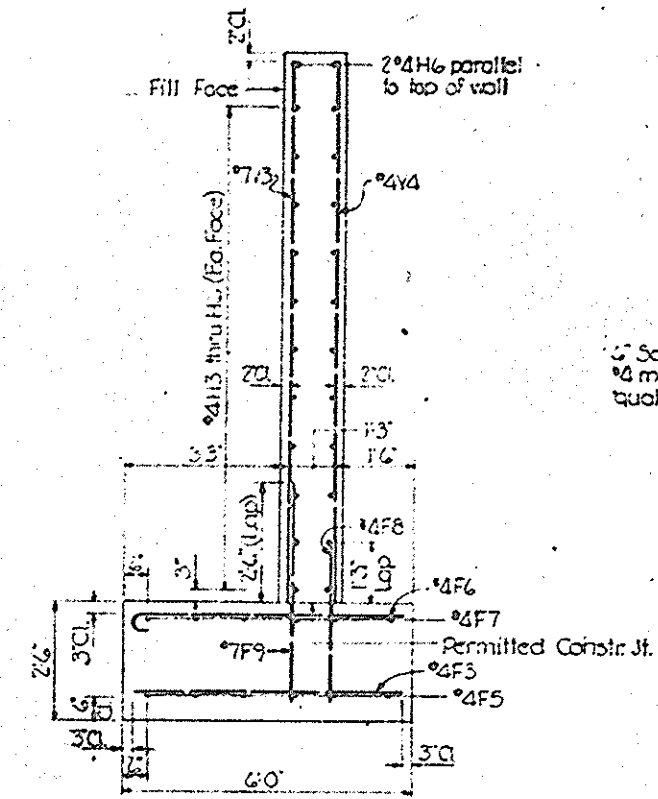
REVISIONS			
NO.	BY	DATE	NO.
1			3
2			4

See Sheet S-17 for expansion joint details.

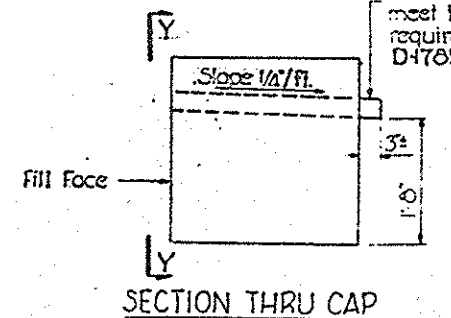
Drains. This pipe shall meet the minimum requirements of A.S.T.M. D-1785



A-A

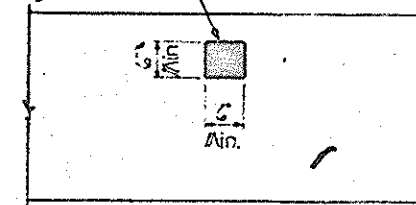


SECTION B-B



SECTION THRU CAP

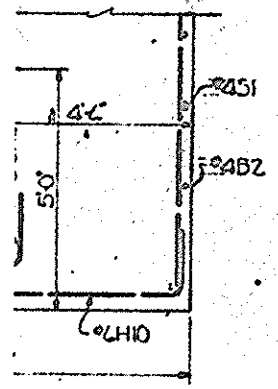
5 Square aluminum or galv. steel wire #4 mesh hardware cloth of commercial quality. Anchor firmly to fill face.



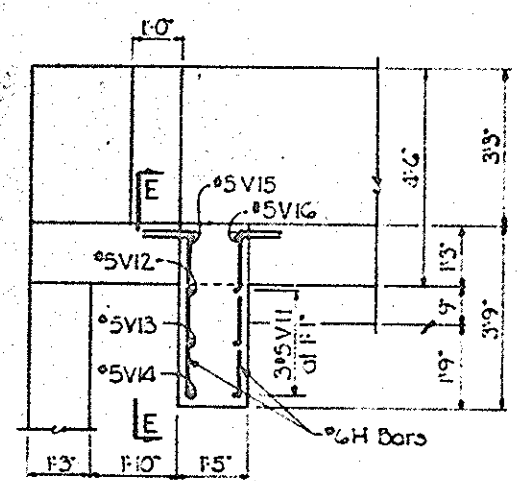
VIEW Y-Y

Note: No separate payment will be made for furnishing and installing the P.V.C. plastic pipe drains, hardware cloth and fasteners. The entire cost of this work shall be included in the unit contract price bid for the several pay items.

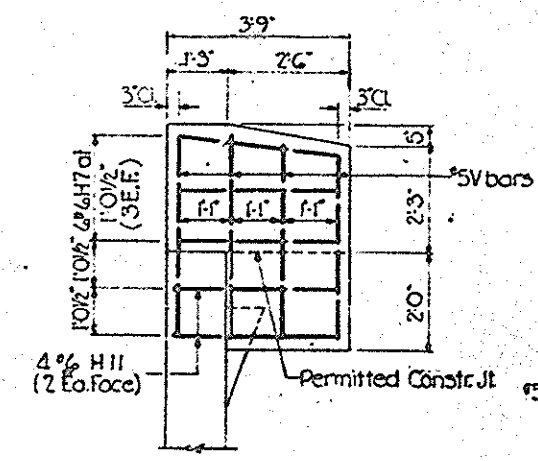
PIPE DRAIN DETAILS



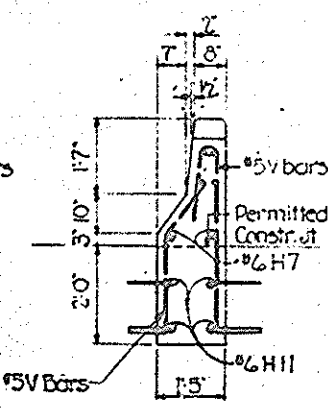
C-C



PLAN

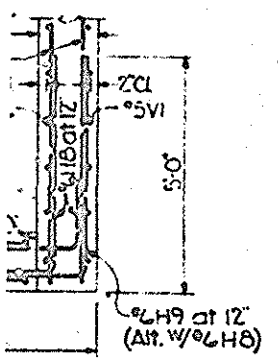


SECTION E-E



END VIEW

END POST DETAILS



D-D

BAR TYPES				BILL OF MATERIAL FOR END BENT 1				
BAR	SIZE	TYPE	LENGTH	NO.	WEIGHT			
B1	#9	1	51'-4"	13	224.9			
B2	#4	STR	48'-8"	4	130			
B3	#4	STR	8'-8"	5	29			
B4	#6	STR	5'-8"	49	417			
B5	#5	STR	5'-4"	49	272			
F1	#4	STR	7'-10"	12	63			
F2	#6	1	9'-2"	22	303			
F3	#4	STR	5'-6"	90	331			
F4	#6	8	8'-6"	22	281			
F5	#4	STR	12'-8"	12	102			
F6	#4	8	6'-0"	22	88			
F7	#4	STR	19'-6"	12	156			
F8	#4	STR	3'-6"	22	61			
F9	#7	STR	4'-9"	22	252			
T1	#5	1	6'-5"	48	321			
T2	#4	2	2'-4"	40	62			
T3	#4	7	8'-9"	4	23			
H1	#6	9	4'-5"	8	51			
S1	#4	3	15'-1"	21	212			
S2	#4	4	3'-11"	49	128			
S3	#4	4	4'-8"	6	19			
S4	#4	4	6'-8"	14	62			
H1	#4	STR	48'-8"	16	520			
H2	#4	STR	39'-8"	1	27			
H3	#4	STR	12'-4"	24	198			
H4	#4	STR	14'-4"	4	38			
H5	#4	STR	16'-4"	4	44			
H6	#4	STR	18'-4"	16	196			
H7	#6	STR	3'-3"	12	59			
H8	#6	9	6'-4"	48	457			
H9	#6	9	9'-8"	16	232			
H10	#6	9	9'-7"	6	86			
V1	#5	STR	6'-6"	49	332			
V2	#6	STR	7'-6"	49	552			
V3	#7	STR	11'-1"	22	588			
V4	#4	STR	11'-1"	22	192			
V5	#4	STR	5'-2"	4	14			
V6	#4	STR	4'-8"	4	13			
V7	#4	STR	4'-2"	4	11			
V8	#4	STR	3'-8"	4	10			
V9	#4	STR	3'-2"	4	9			
V10	#4	STR	2'-8"	4	7			
V11	#5	5	3'-3"	6	20			
V12	#5	6	6'-10"	2	14			
V13	#5	6	6'-4"	2	15			
V14	#5	6	6'-0"	2	13			
V15	#5	6	7'-10"	2	16			
V16	#5	5	4'-3"	2	9			
TOTAL					9302			
CLASS 'A' CONC.					61.0 CY			
CLASS 'AA' CONC.					356 CY			

PROJECT No. 6804135
STANLY-MONTGOMERY COUNTY
STATION 58+67.0-L

SHEET 2 OF 2
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

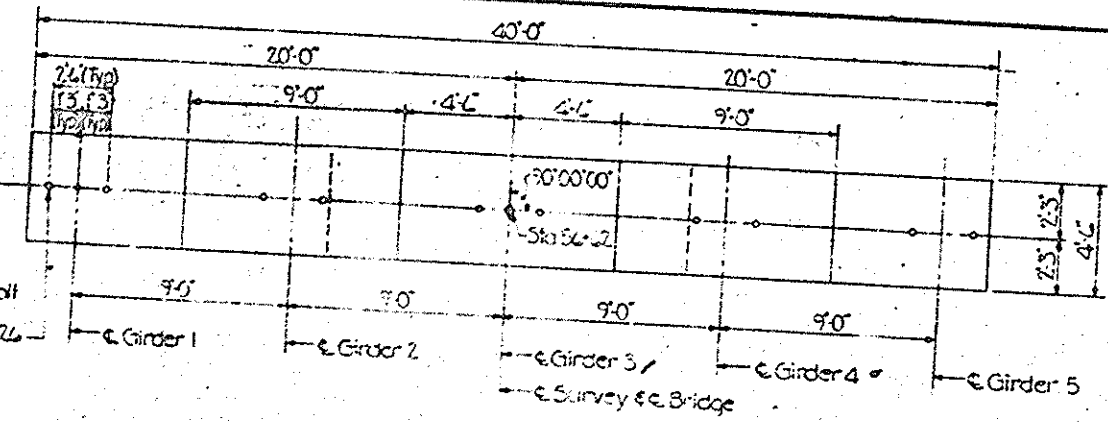
SUBSTRUCTURE
END BENT 1

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	J.C.C.	3-10-77	3			8227
2			4			TOTAL SHEETS

Rev. #1 - Revised to accommodate Exp. Jt. Seal as submitted by the contractor by J.C.C. & by A.R.S.

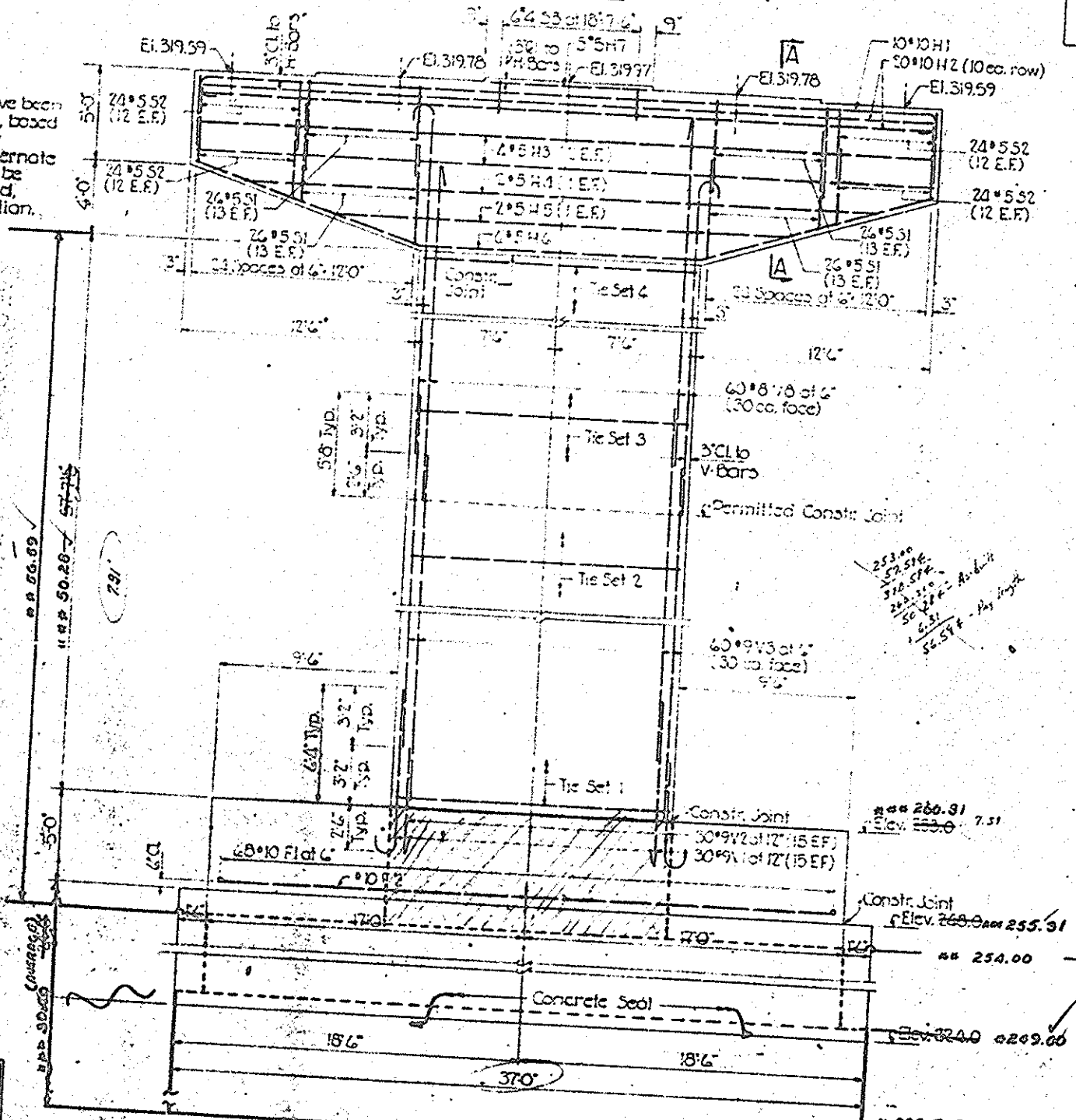


6" x 3" Pipe with 1 1/2" anchor bolts and 4" bolt projection. For details see Shfs. 5-25 and 5-26



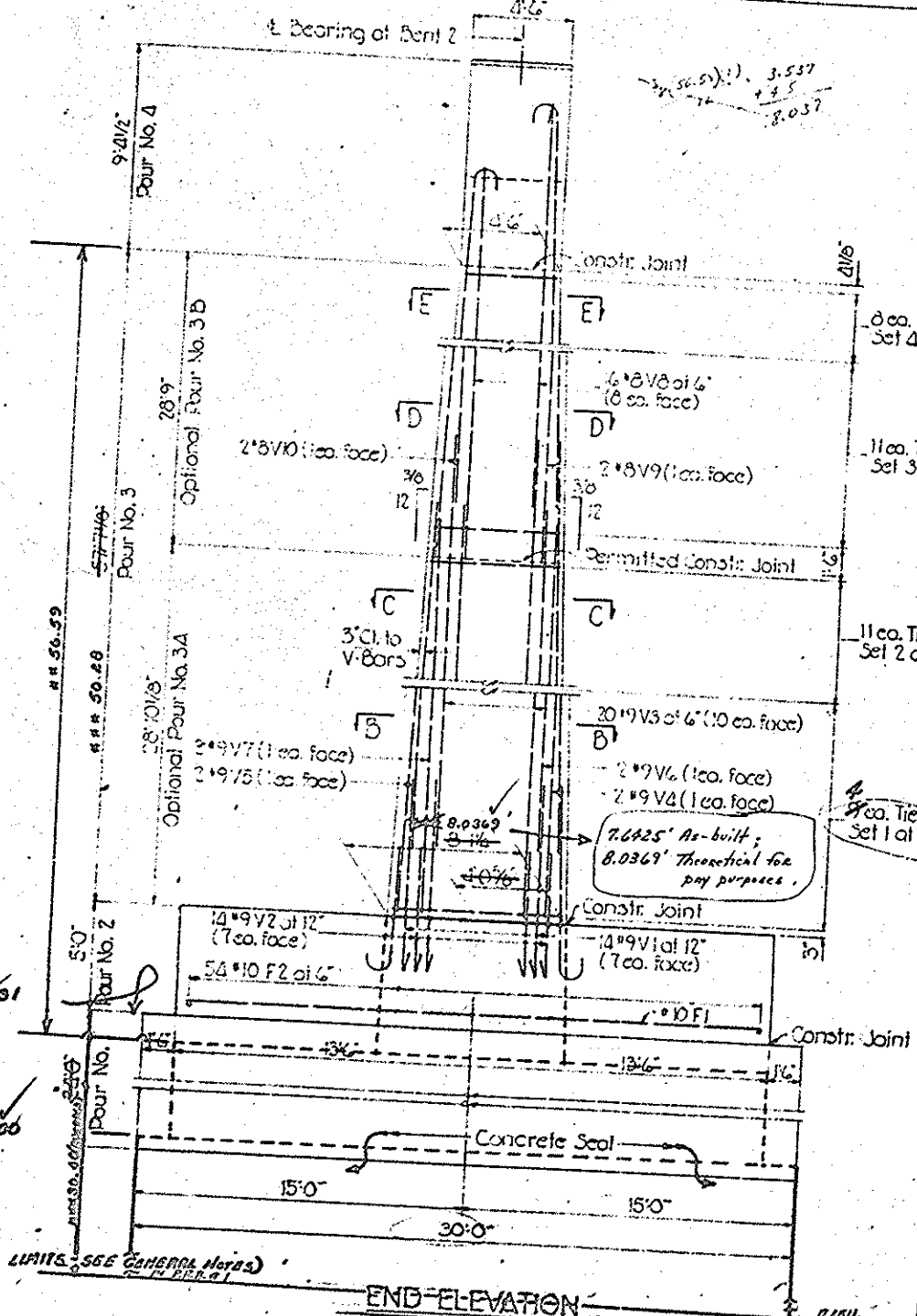
PLAN

Final elevations have been determined based on bearing details, based on bearing details. If the contractor chooses to use the alternate bearings, the cap shall be adjusted, the stem shortened, and the top of footing elevation.



ELEVATION

BAR TYPE 5		BILL OF MATERIAL FOR BEN			
BAR	SIZE	TYPE	LENGTH	NO	
F1	10	STR	26'6"	48	
F2	10	STR	33'6"	54	
H1	10	1	42'4"	10	
H2	10	STR	39'6"	20	
H3	5	STR	39'6"	4	
H4	5	STR	34'8"	2	
H5	5	STR	25'4"	2	
H6	5	4	40'9"	6	
H7	5	STR	8'6"	5	
T1	4	2	15'4"	37.02	
T2	4	6	32'3"	2.82	
T3	4	3	10'8"	30.10	
T4	4	3	11'2"	30.10	
T5	4	3	12'2"	102.00	
T6	4	3	9'0"	38	
T7	4	3	9'6"	38	
T8	4	3	10'6"	228	
S1	5	3	13'0"	104	
S2	5	3	11'0"	96	
S3	4	3	6'10"	6	
V1	9	5	10'1"	44	
V2	9	5	6'11"	44	
V3	9	STR	31'4"	21.80	
V4	9	STR	10'11"	21	
V5	9	STR	11'0"	21	
V6	9	STR	39'9"	21	
V7	9	STR	30'11"	21	
V8	8	5	35'2"	76	
V9	8	STR	18'1"	2	
V10	8	STR	15'7"	2	
TOTAL 41					
CLASS 'A' CONCRETE					
POUR 2 (FOOTING) 171					
POUR 3 (STEM) 192					
POUR 3A 112					
POUR 3B 8					
POUR 4 (CAP) 5					
TOTAL 41					
CLASS 'AA' SEAL					
POUR 1 98					



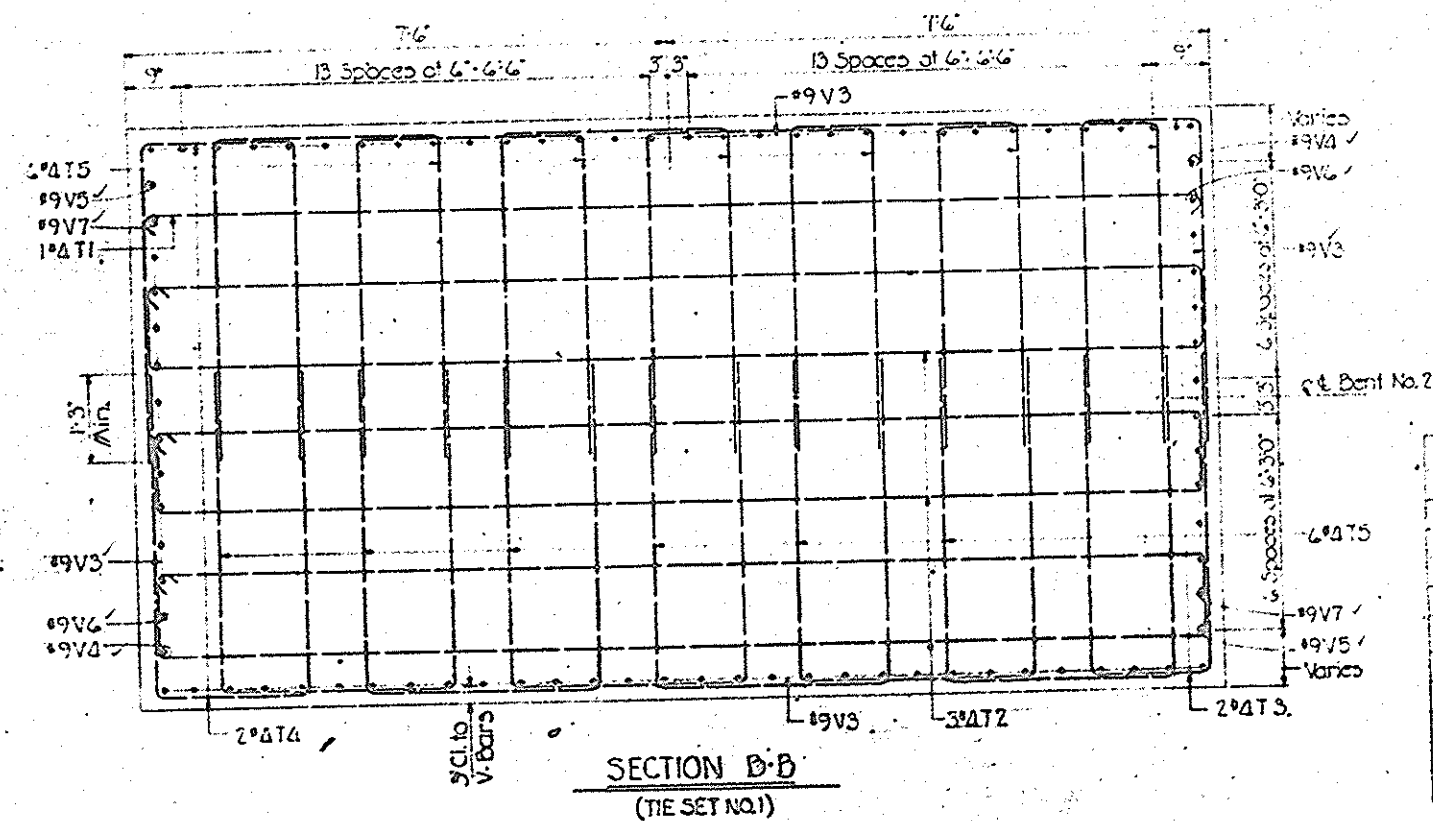
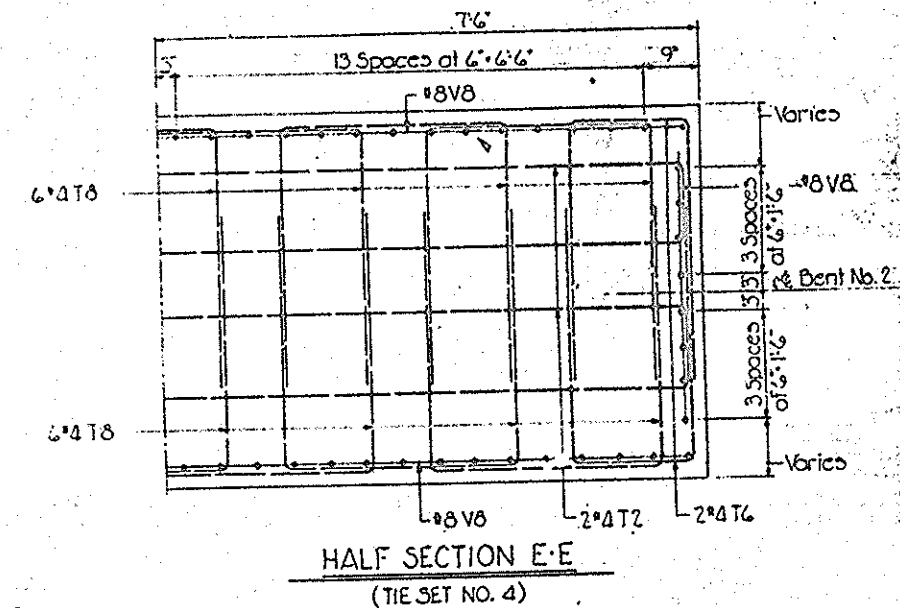
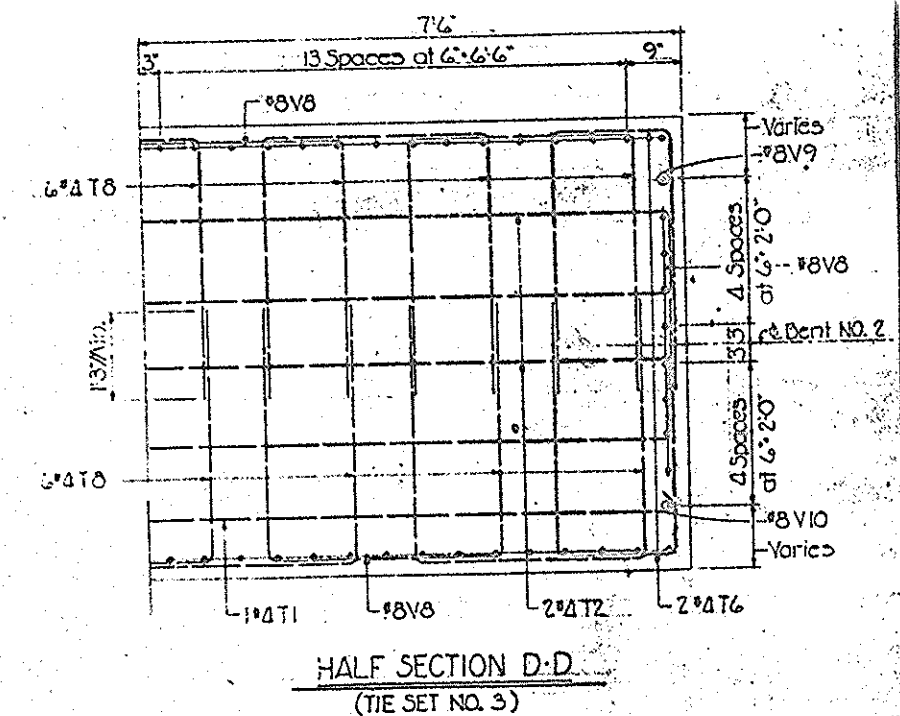
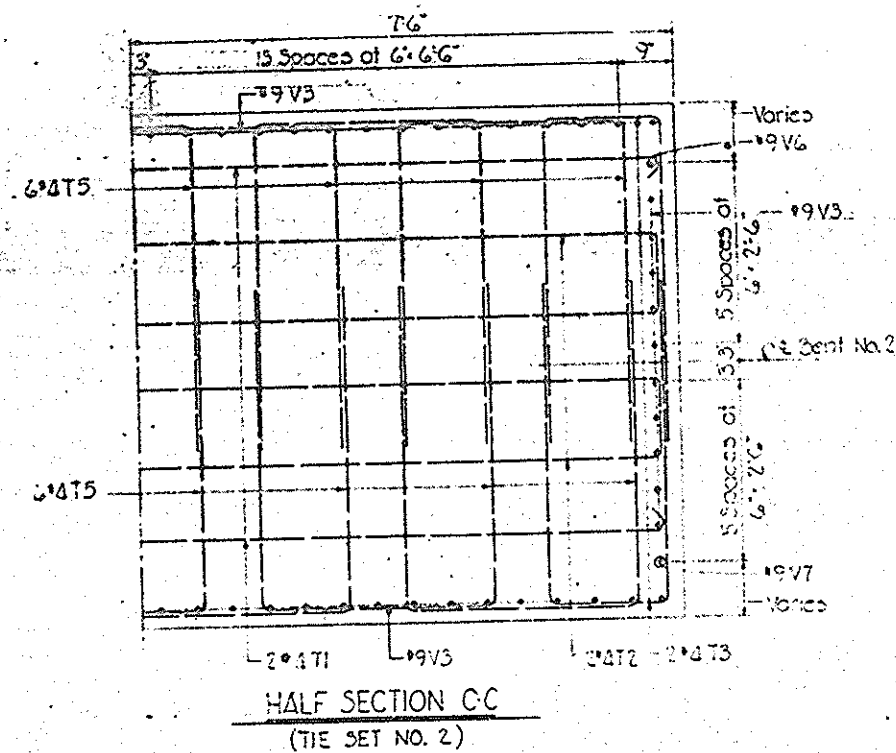
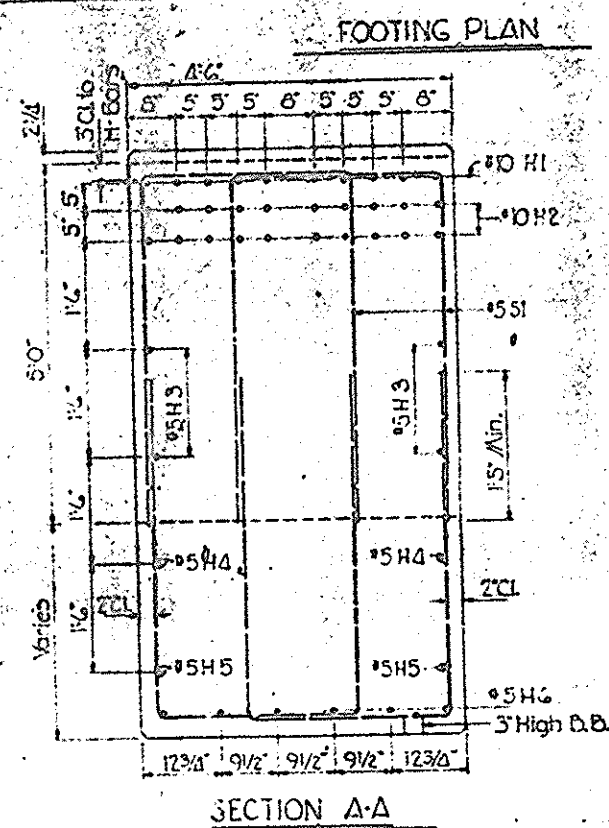
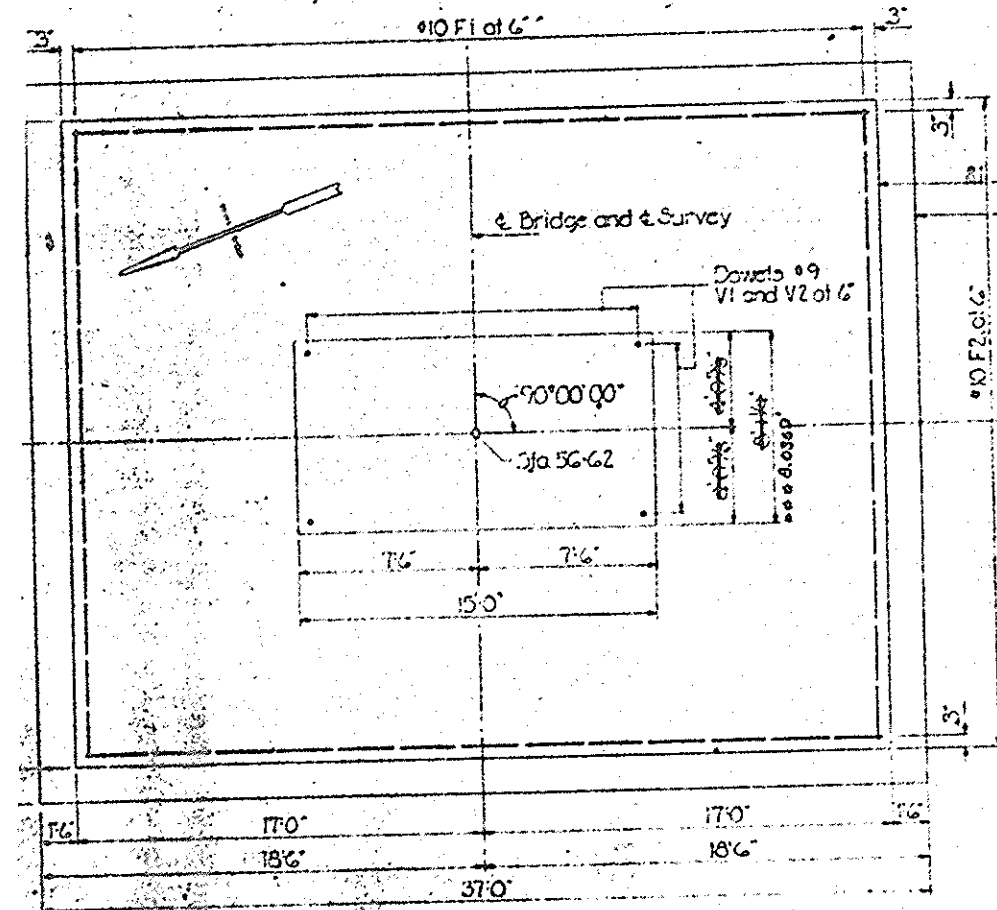
END-ELEVATION

CLASS 'A' CONCRETE	
POUR 2 (FOOTING)	171
POUR 3 (STEM)	192
POUR 3A	112
POUR 3B	8
POUR 4 (CAP)	5
TOTAL	41

* SEE STR. PAY RECORD BOOK #1, P. 8 for explanation of changes.

PROJECT No. 6.804135
STANLY MONTGOMERY COUNTY
STATION 58+67.0-L
SHEET 1 OF 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUBSTRUCTURE
BENT NO. 2



TIE SET 1	TIE SET 3
1-T1	1-T1
3-T2	2-T2
2-T3	2-T6
2-T4	2-T7
12-T5	12-T8
TIE SET 2	TIE SET 4
2-T1	2-T2
2-T2	2-T6
2-T3	2-T7
2-T4	12-T8
12-T5	

TIE SET 3
1-T1
2-T2
2-T6
2-T7
12-T8
TIE SET 4
2-T2
2-T6
2-T7
12-T8

TIE SET 2
2-T1
2-T2
2-T3
2-T4
12-T5

TIE SET 4
2-T2
2-T6
2-T7
12-T8

PROJECT No. 6.804135
STANLEY-MONTGOMERY COUNTY
STATION 58+67.0-L
SHEET 2 OF 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

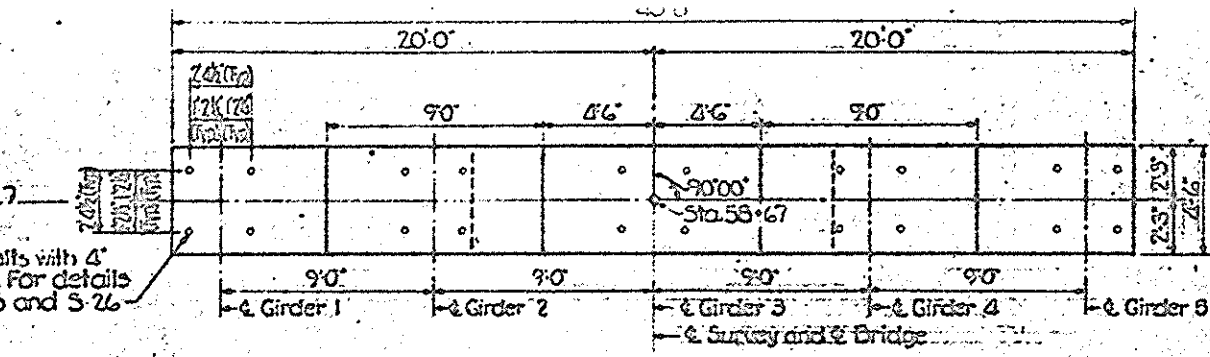
SUBSTRUCTURE
BENT NO. 2

REVISIONS						ENGR S
NO.	BY	DATE	NO.	BY	DATE	
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2			4			10/1/81

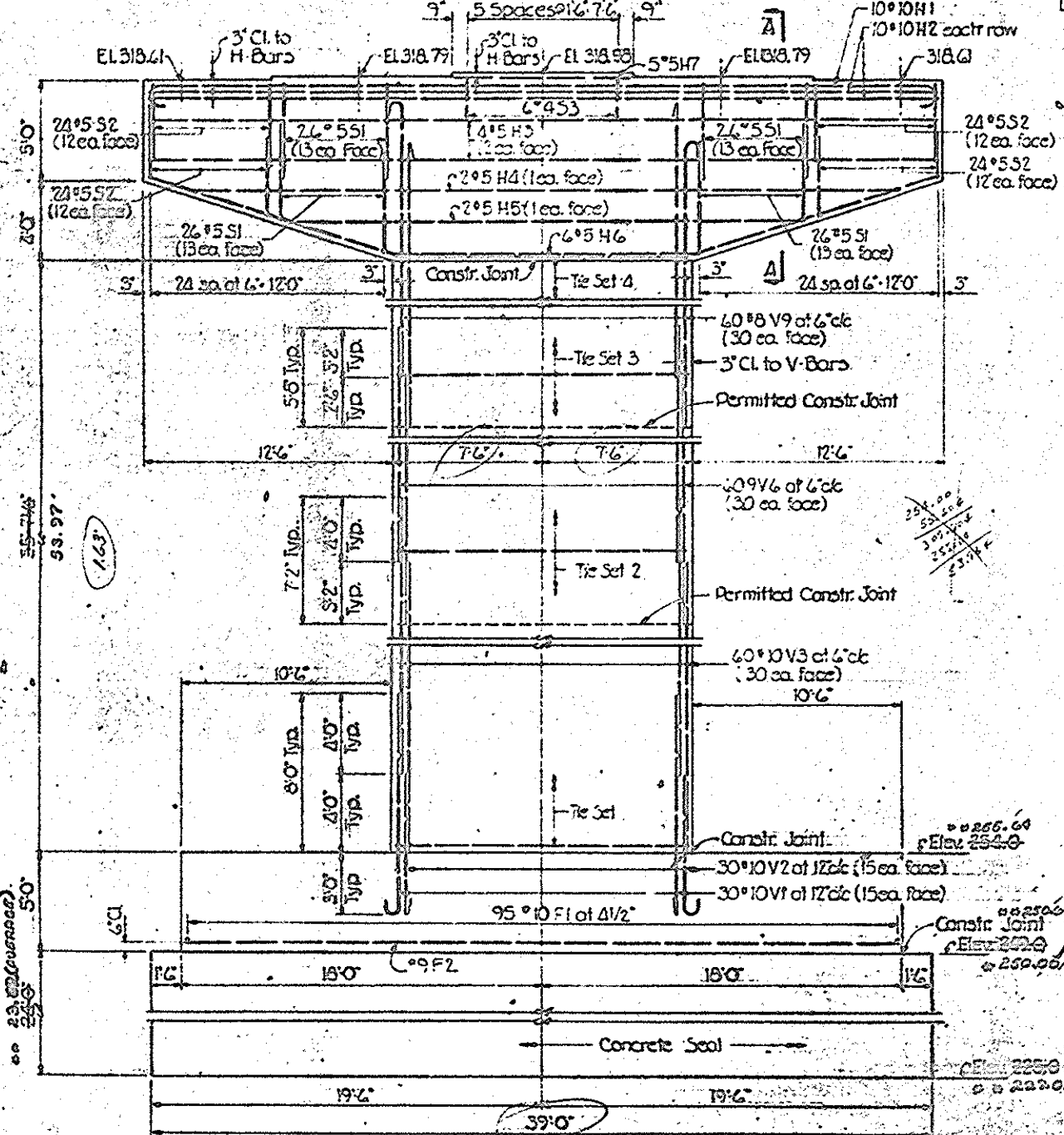
LEON T. BALLARD CO.
HYDRO ENGINEERS
3 MILLS, MARYLAND

3. DATE 12/21/81
Y. EXT 442.1

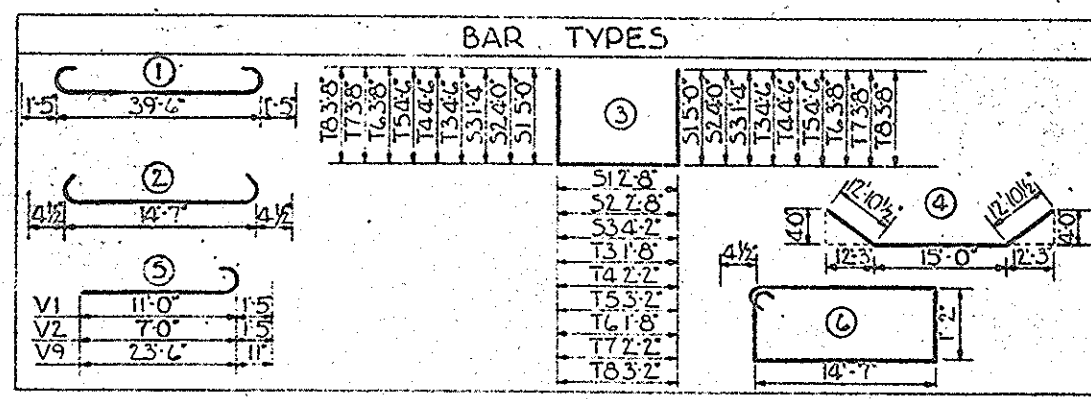
1/2" V anchor bolts with 4" bolt projection. For details see sub. S-25 and S-26



PLAN

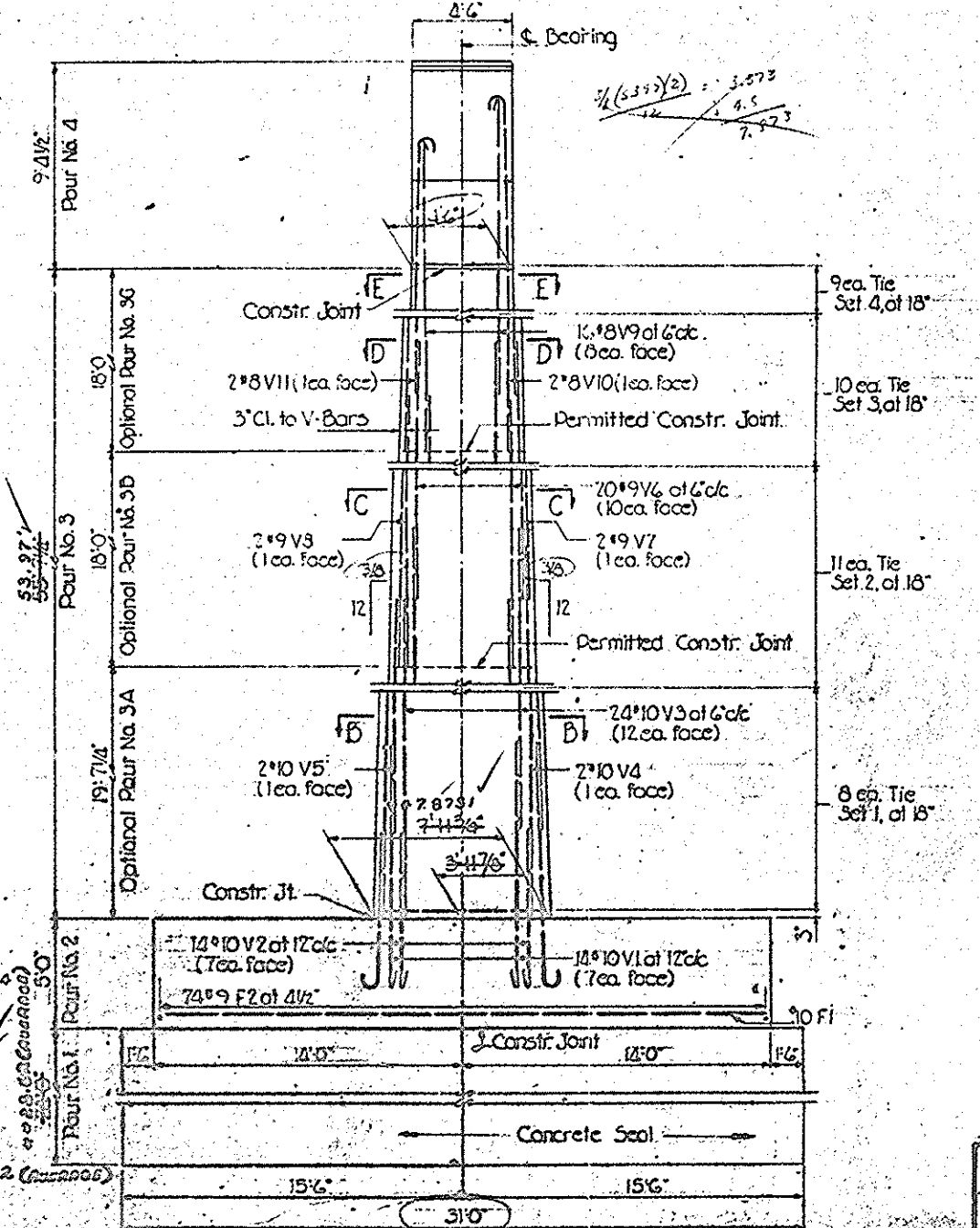


ELEVATION



BILL OF MATERIAL FOR BENT

BAR	SIZE	TYPE	LENGTH	NO.	WE
F1	10	STR	27'-6"	95	11
F2	9	STR	35'-6"	74	8
H1	10	STR	42'-4"	10	18
H2	10	STR	39'-6"	20	3
H3	5	STR	39'-6"	4	10
H4	5	STR	34'-8"	2	7
H5	5	STR	25'-4"	2	5
H6	5	STR	40'-9"	6	2
H7	5	STR	8'-6"	5	4
S1	5	STR	12'-8"	104	13
S2	5	STR	10'-8"	96	10
S3	4	STR	6'-10"	6	4
T1	4	STR	15'-4"	40	4
T2	4	STR	32'-3"	84	18
T3	4	STR	10'-8"	38	7
T4	4	STR	11'-2"	38	7
T5	4	STR	12'-2"	228	18
T6	4	STR	9'-0"	38	7
T7	4	STR	9'-6"	38	7
T8	4	STR	10'-6"	228	18
V1	10	STR	12'-5"	44	2
V2	10	STR	8'-5"	44	18
V3	10	STR	22'-9"	84	6
V4	10	STR	12'-11"	2	1
V5	10	STR	8'-11"	2	1
V6	9	STR	20'-6"	80	5
V7	9	STR	2'-2"	2	2
V8	9	STR	9'-4"	2	7
V9	8	STR	24'-5"	76	4
V10	8	STR	7'-4"	2	7
V11	8	STR	4'-10"	2	7
TOTAL					102
CLASS 'A' CONCRETE					CU
POUR 2 (FOOTING)					18
POUR 3 (STEM)					102
POUR 3A					6
POUR 3B					4
POUR 3C					5
POUR 4 (CAP)					5
TOTAL					135
CLASS 'AA' SEAL					102
POUR 1					102



END ELEVATION

PROJECT No. 6.804135
STANLEY MONTGOMERY COUNT
STATION 58+67.0-L

Sheet 1 of 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

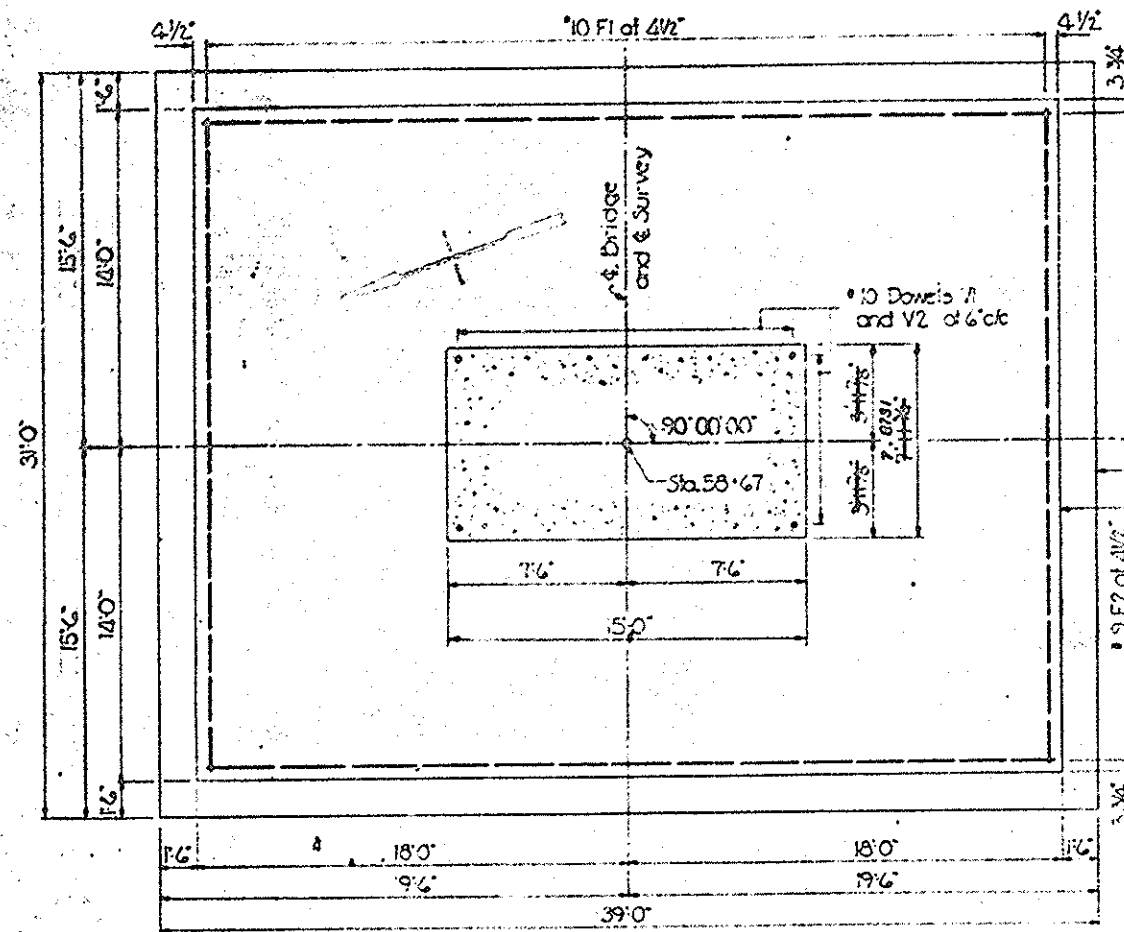
SUBSTRUCTURE
BENT NO. 3

NO.	BY	DATE	NO.	BY	DATE
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2			4		

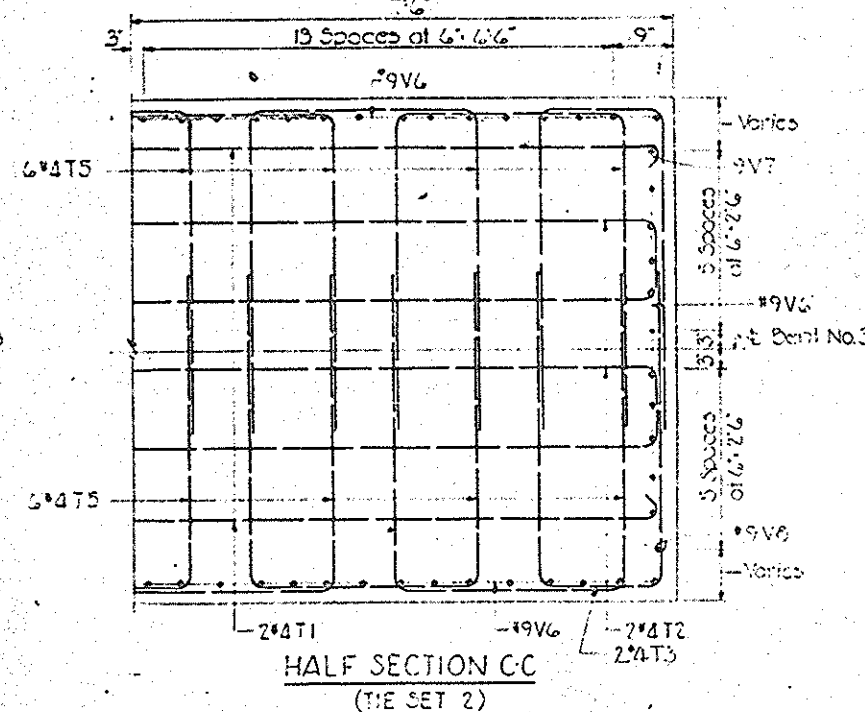
PREPARED BY
THE WILSON & BALLARD CO.
CONSULTING ENGINEERS
CUMMIS MILLS, CAROLINA

DESIGNED BY
CHECKED BY

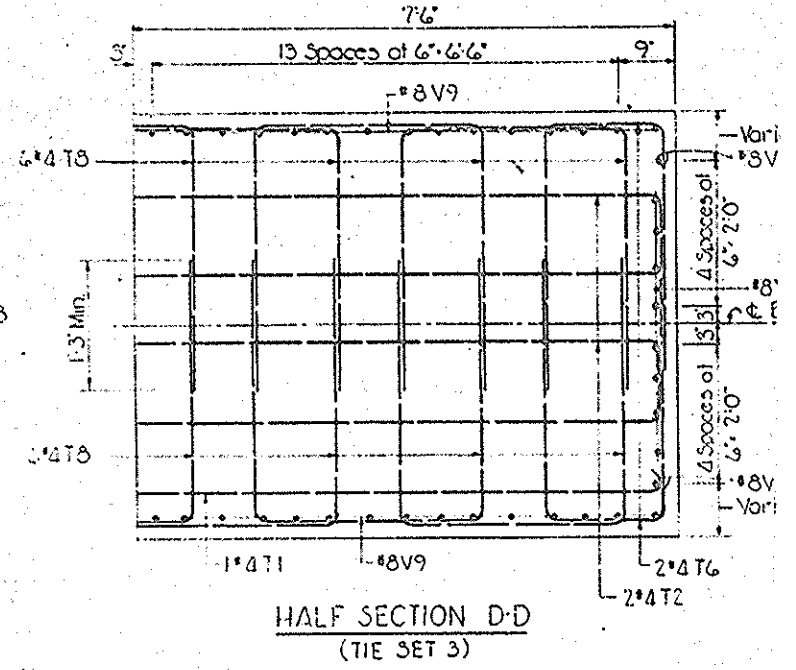
± DDJ. Top of Seal
± ± RS. Built



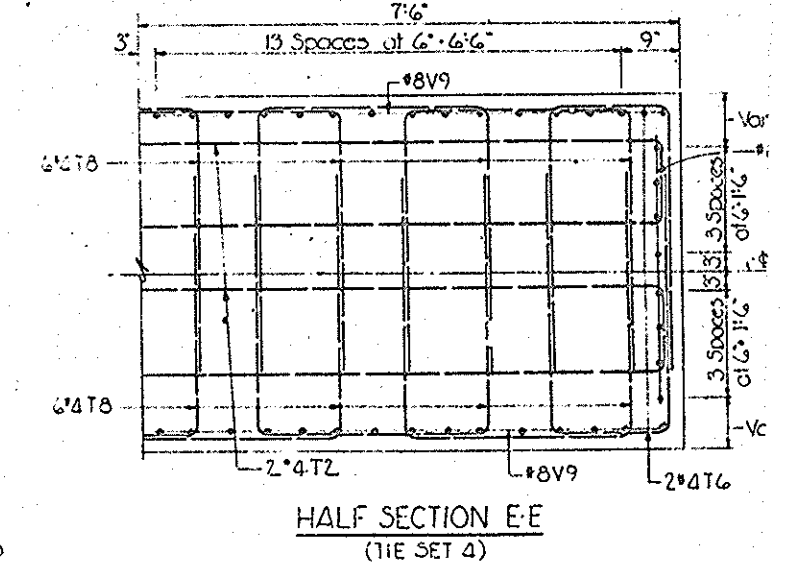
FOOTING PLAN



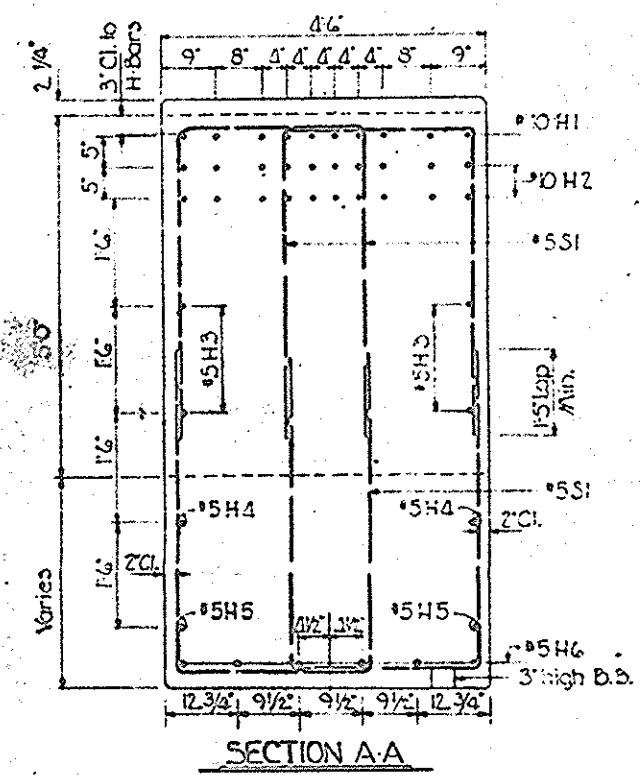
HALF SECTION C-C
(TIE SET 2)



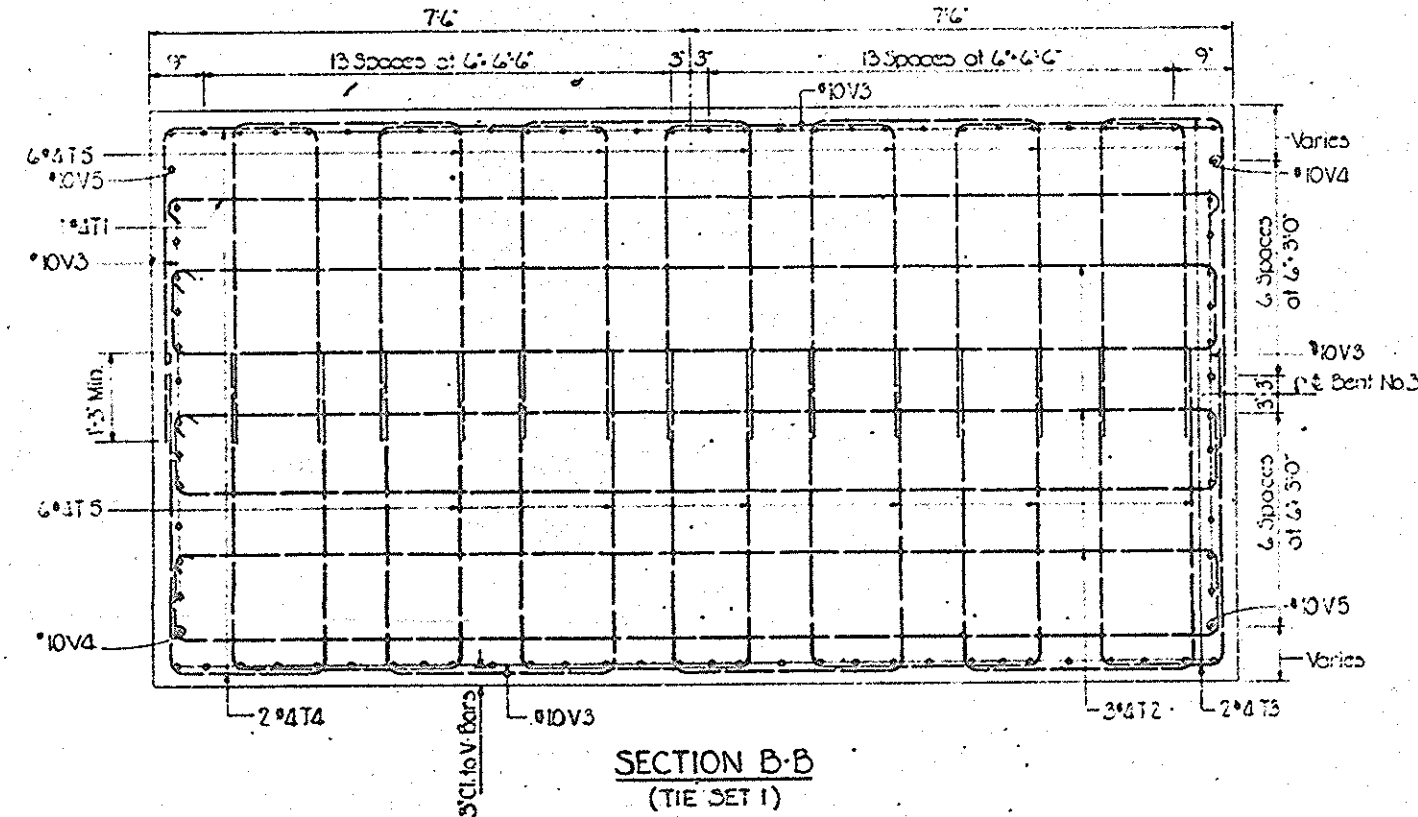
HALF SECTION D-D
(TIE SET 3)



HALF SECTION E-E
(TIE SET 4)



SECTION A-A



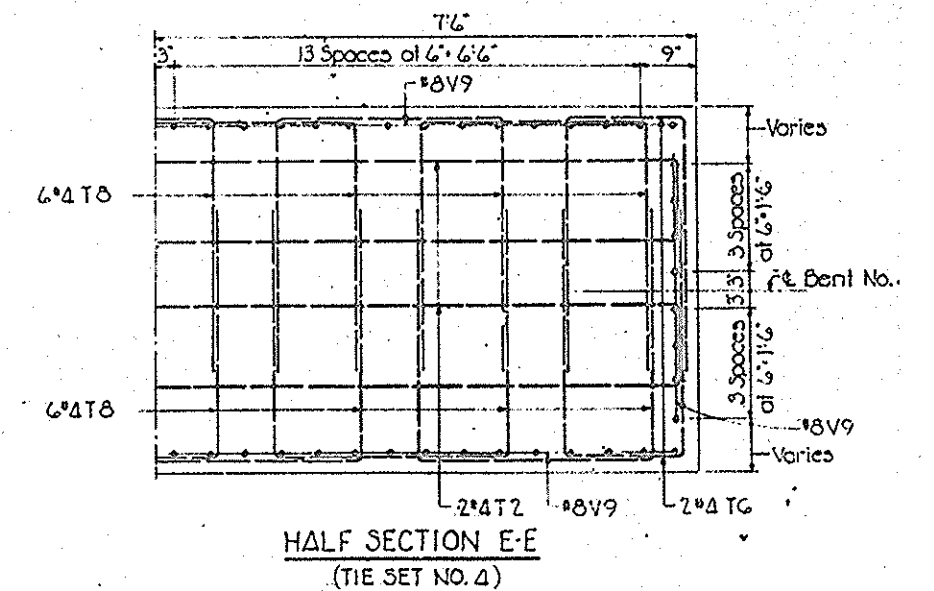
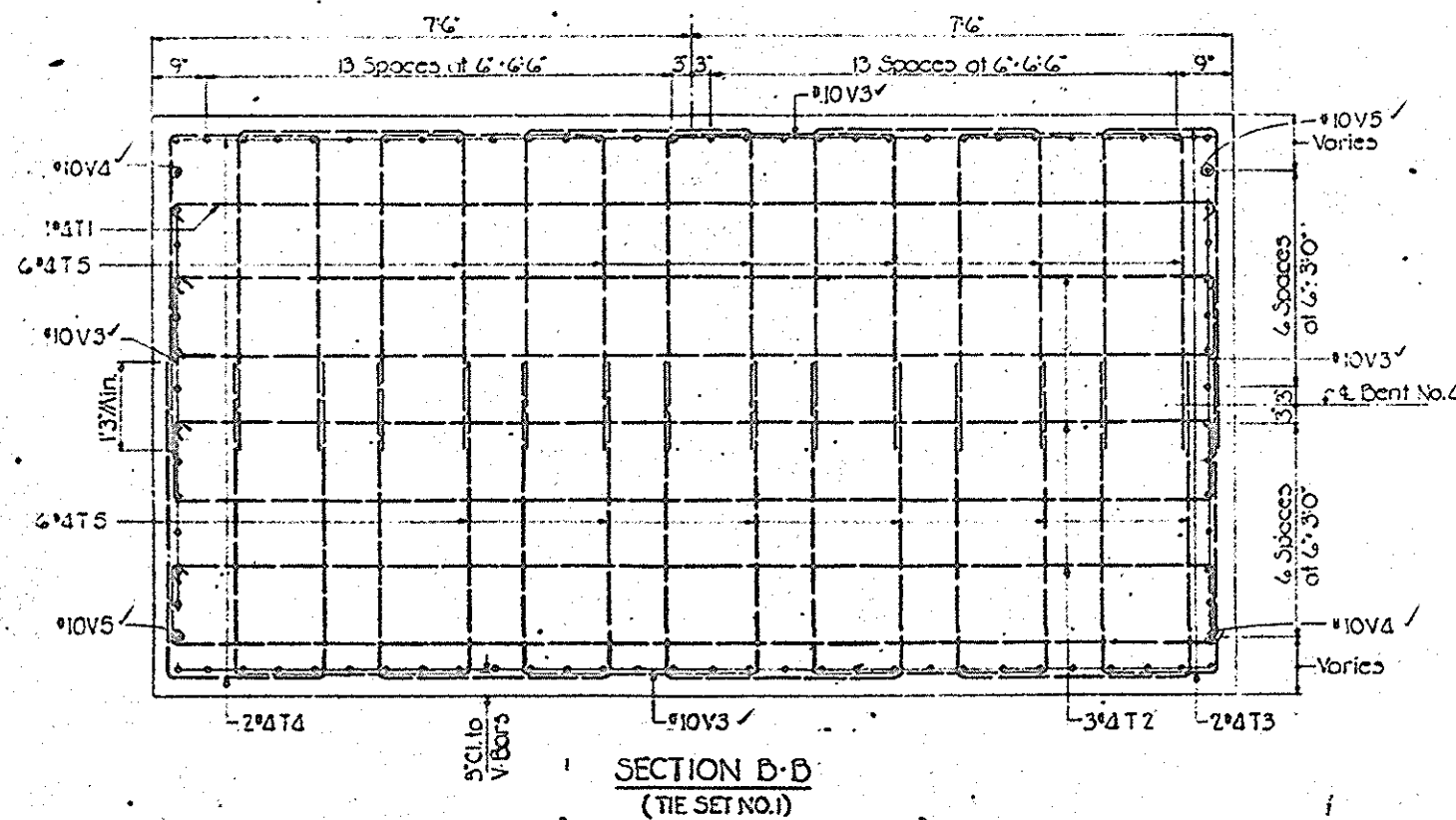
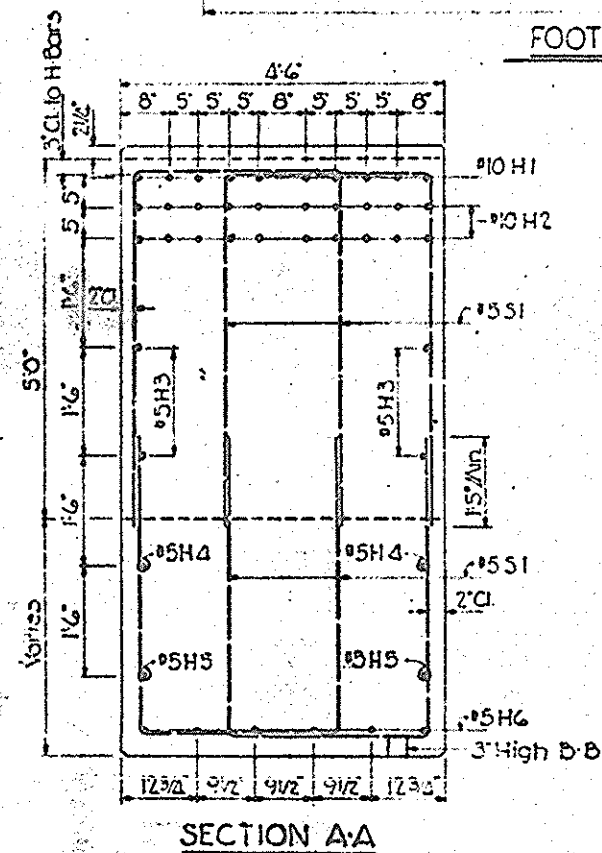
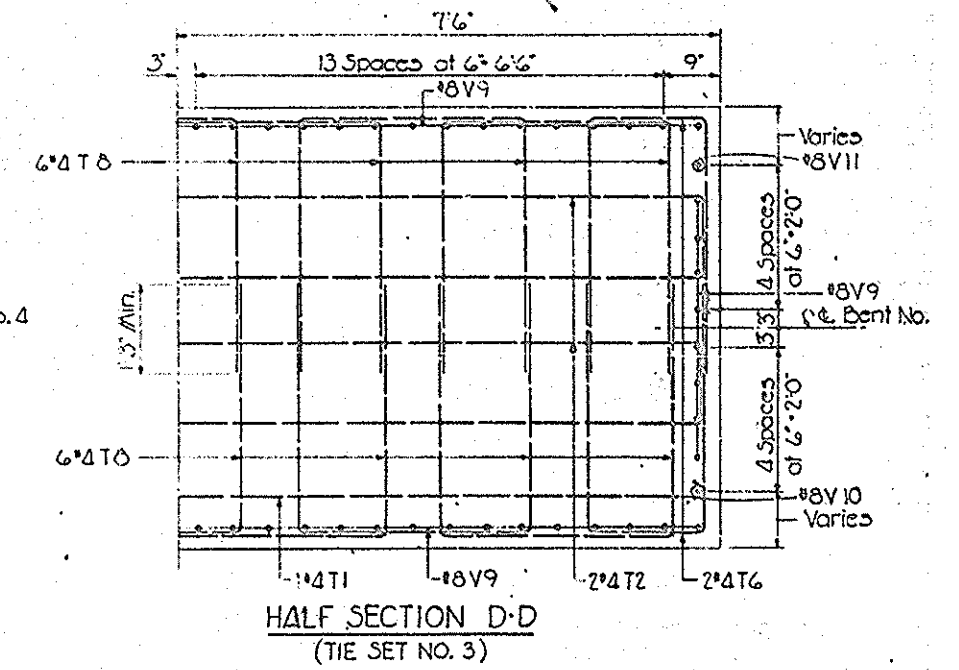
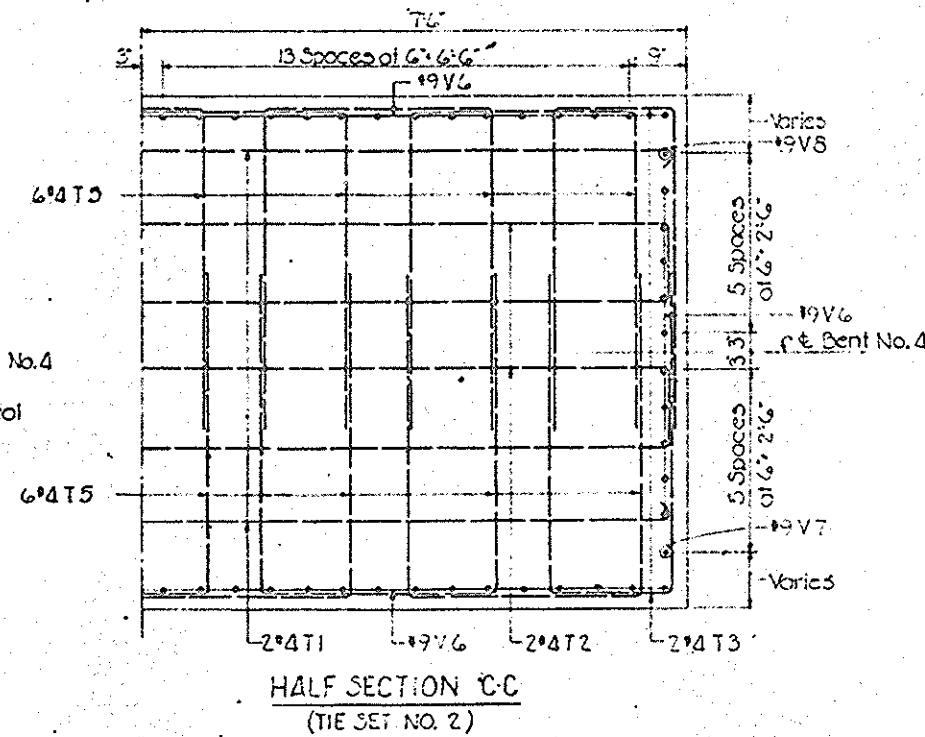
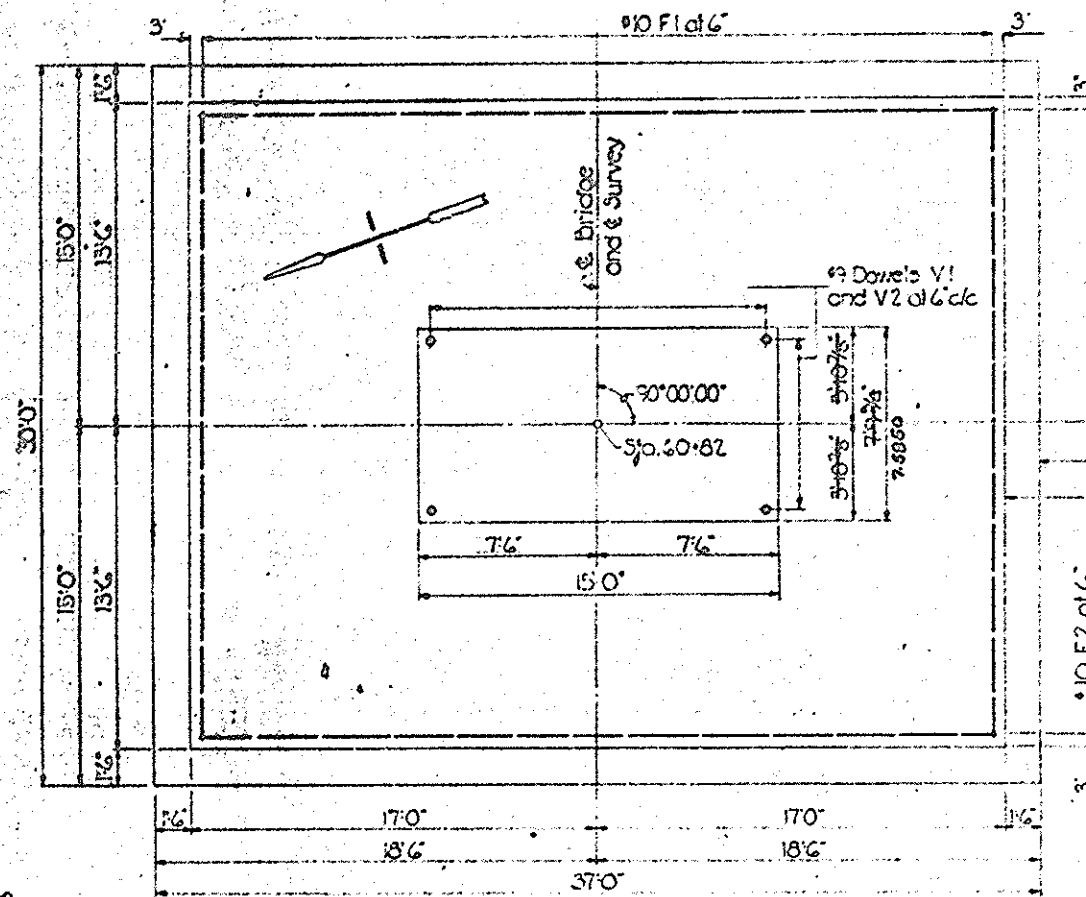
SECTION B-B
(TIE SET 1)

TIE SET 1	TIE SET 3
1-T1	1-T1
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4-T4	4-T4
5-T5	5-T5
6-T6	6-T6
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PROJECT NO. 6.1
STANLY MONTGOMERY
STATION 58+67.0
Sheet 2 of 2
STATE OF NORTH
STATE HIGHWAY 1
RALEIGH
SUBSTRUCTURE
BENT NO. 3

REVISIONS				
NO.	BY	DATE	NO.	BY
1			3	
2			4	

PREPARED BY
THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
QUINCY HILLS, MARYLAND
DRAWN BY: R. WICKERS
CHECKED BY: R. KELLY
DATE: MAR 1976
DATE: MAR 1976



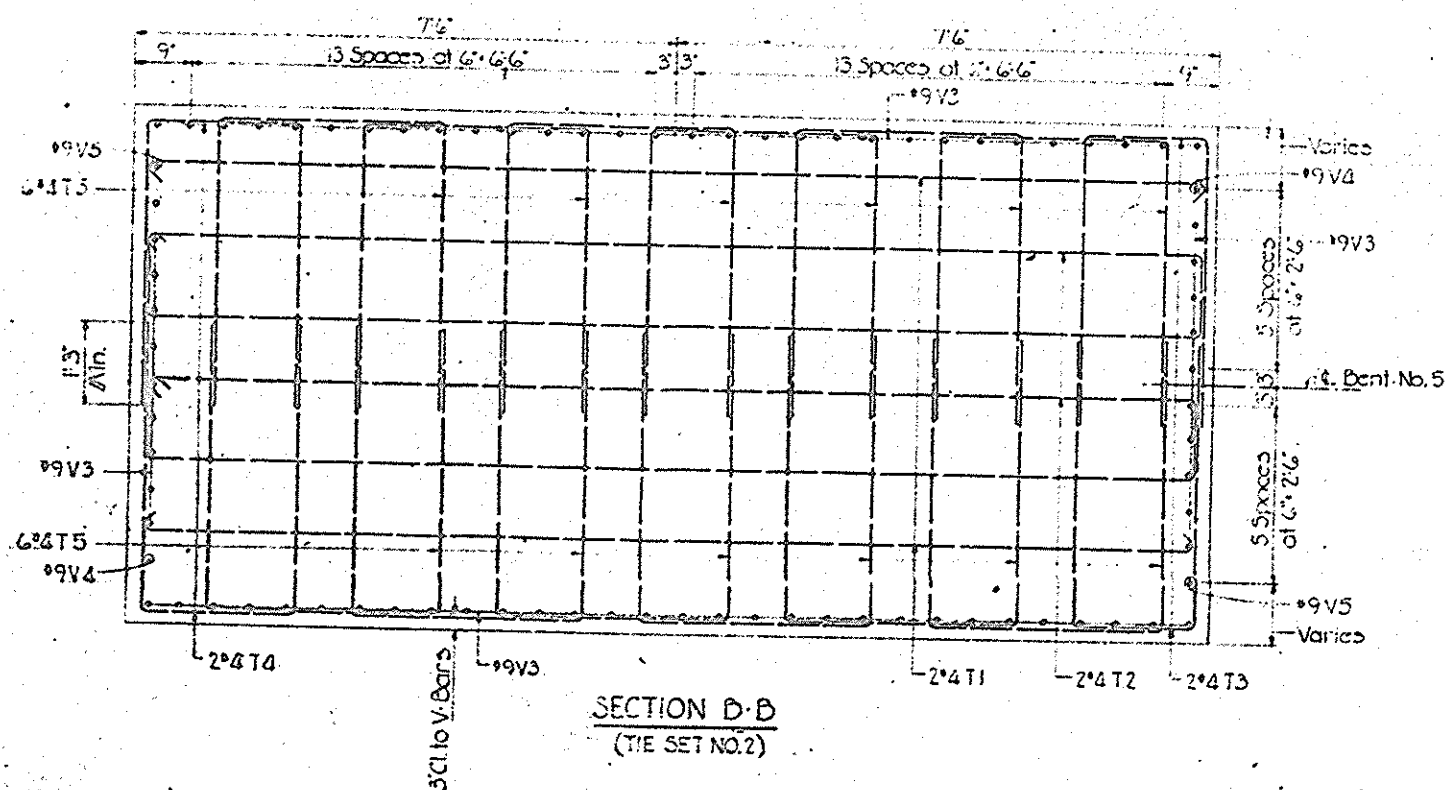
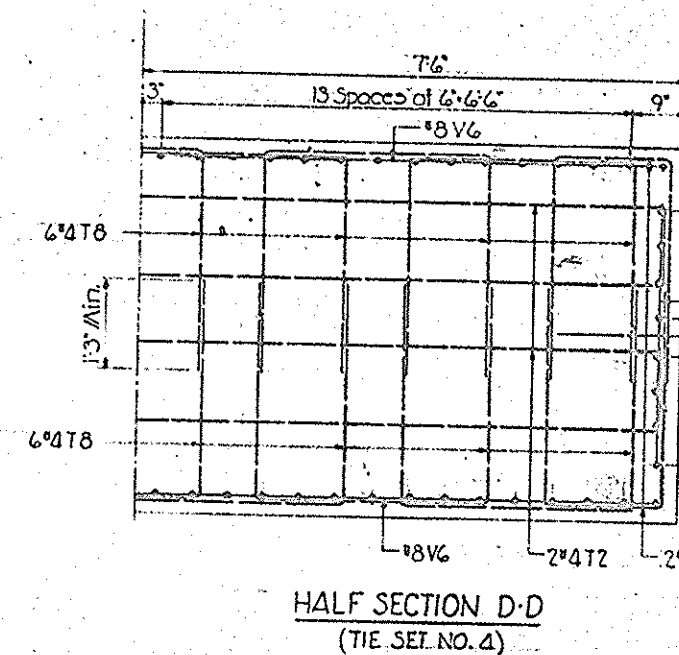
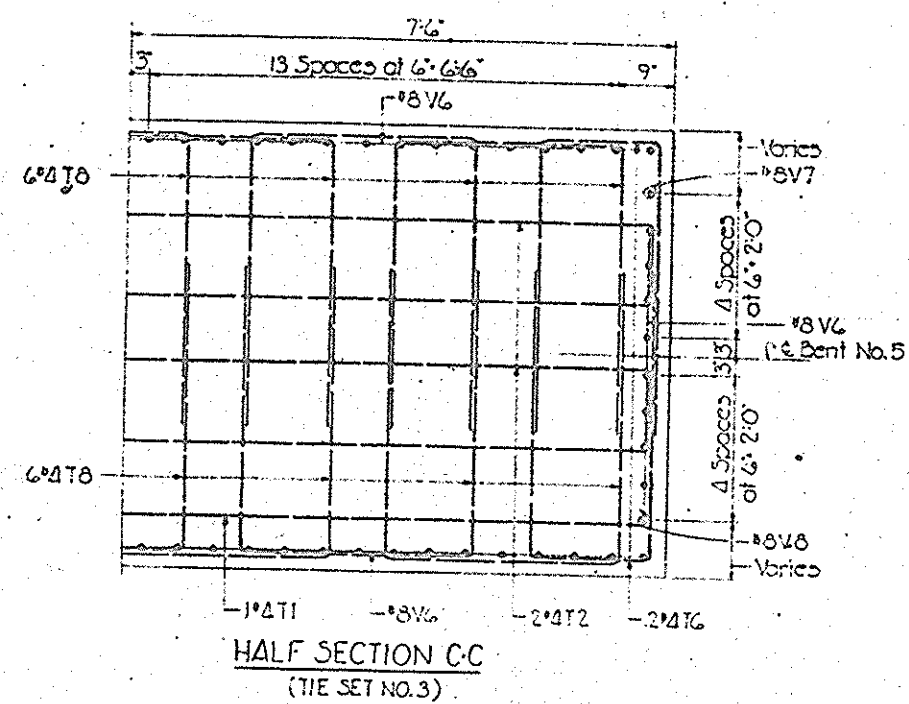
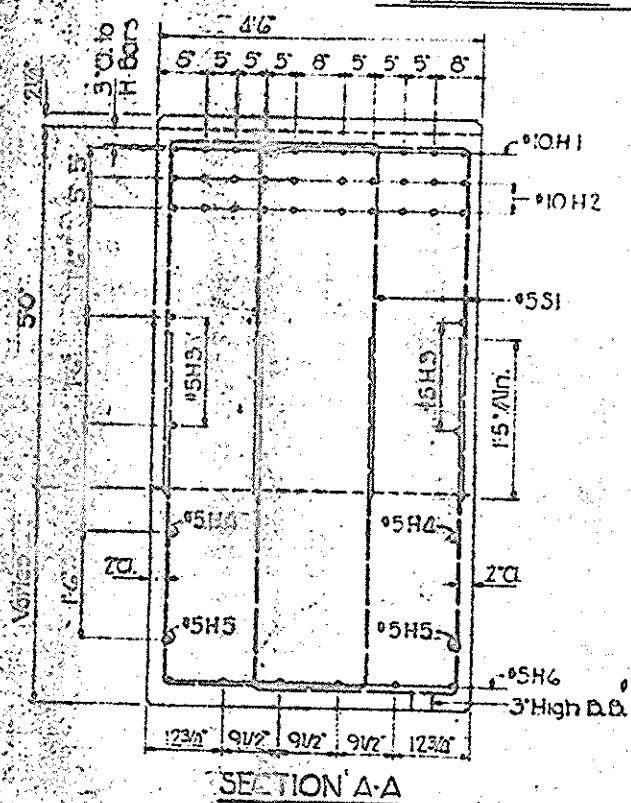
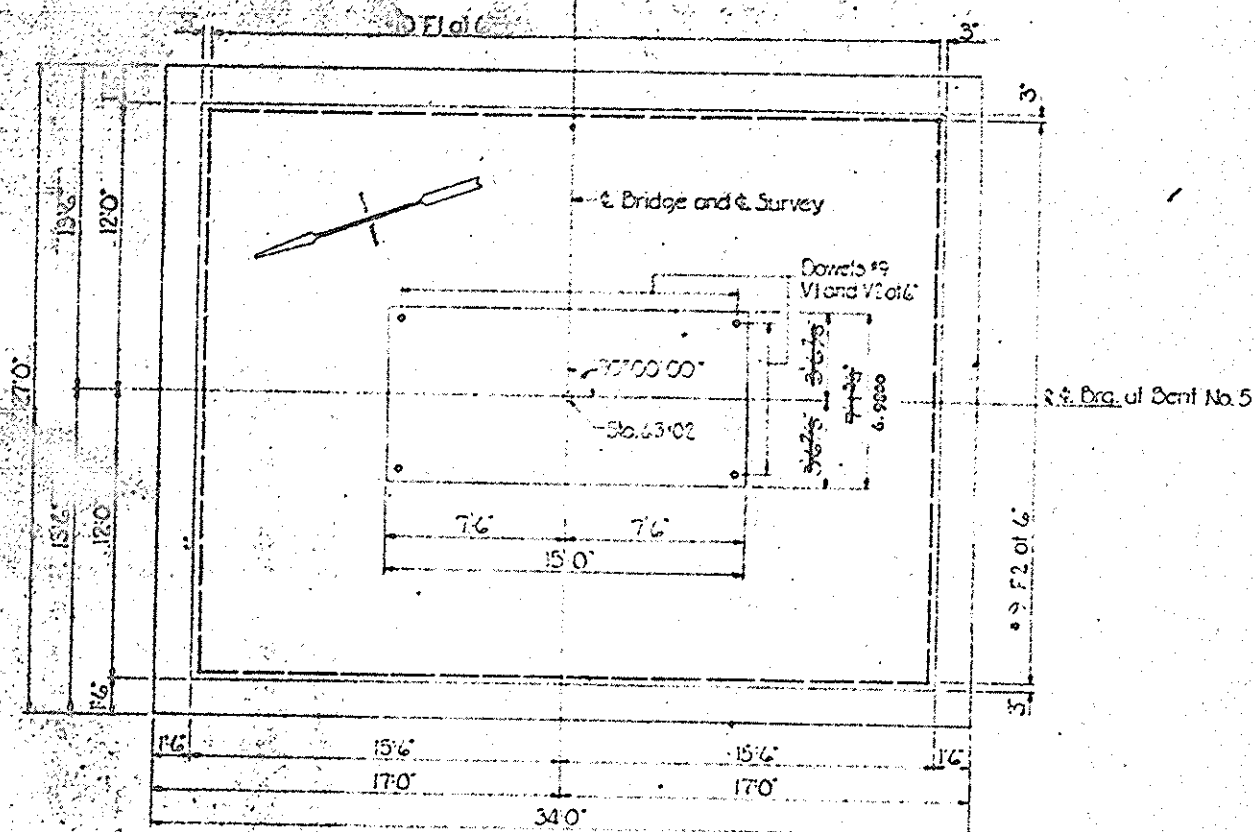
TIE SET 1	TIE SET 3
1-T1	1-T1
3-T2	2-T2
2-T3	2-T6
2-T4	2-T7
12-T5	12-T8
TIE SET 2	TIE SET 4
2-T1	2-T2
2-T2	2-T6
2-T3	2-T7
2-T4	12-T8
12-T5	

PROJECT No. 6.804135
 STANLY-MONTGOMERY COUNTY
 STATION 58+67.0-L
 SHEET 2 OF 2
 STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
 SUBSTRUCTURE
 BENT NO. 4

NO	BY	DATE	NO	BY	DATE
1			3		
2			4		

PREPARED BY
 THE WILSON & DALLARD CO.
 CONSULTING ENGINEERS
 CHICAGO, ILLINOIS
 DRAWN BY
 CHECKED BY

PREPARED BY _____
CHECKED BY _____
DATE _____



TIE SET 2	TIE SET 4
2-T1	2-T2
2-T2	2-TG
2-T3	2-T7
2-T4	12-T8
12-T5	
TIE SET 3	
1-T1	
2-T2	
2-TG	
2-T7	
12-T8	

Note: Tie Set 1 is not used on this Bent No. 5

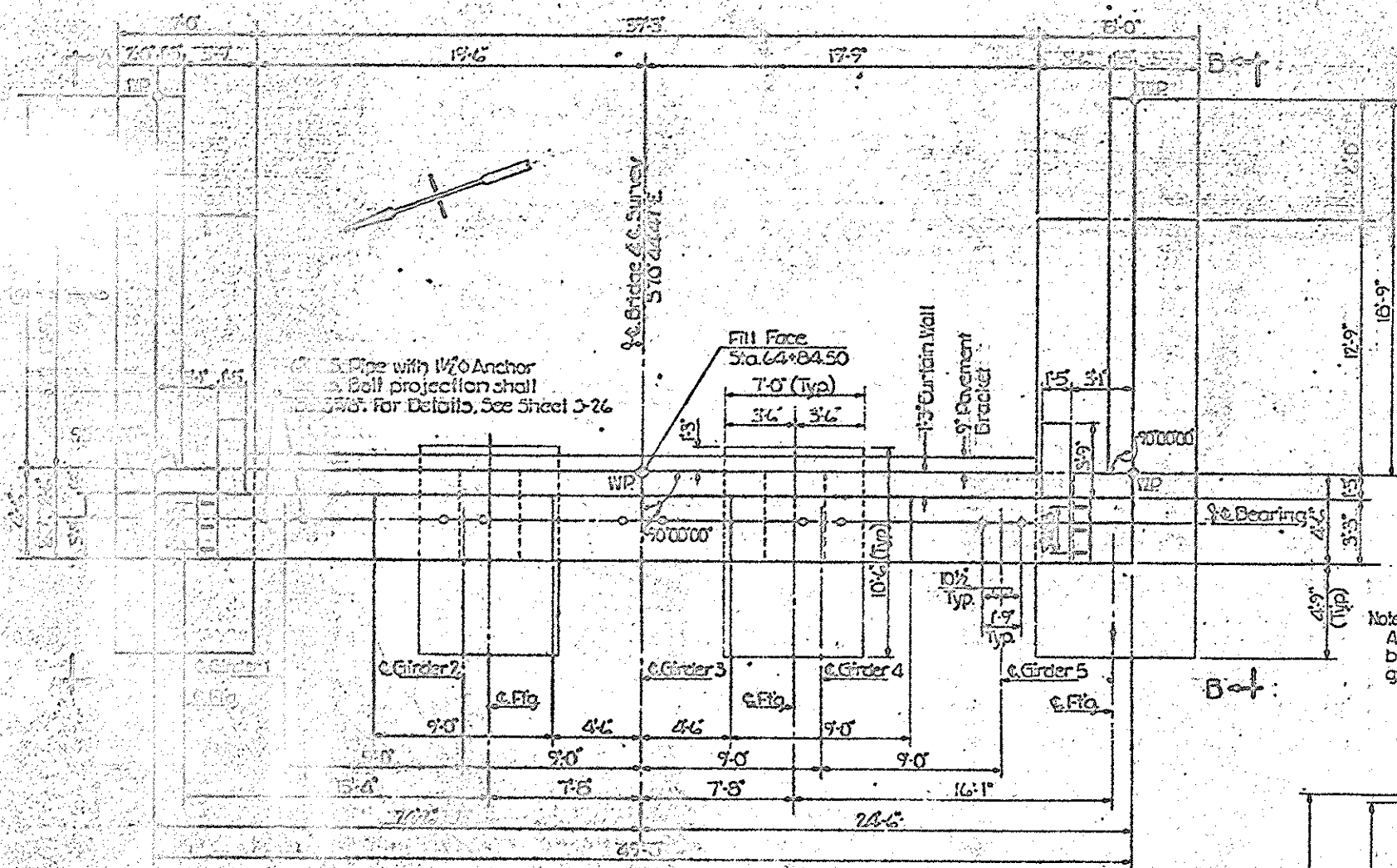
PROJECT A
STANLY MONTG
STATION 58
SHEET 2 OF 2

STATE OF A
STATE HIGHWAY

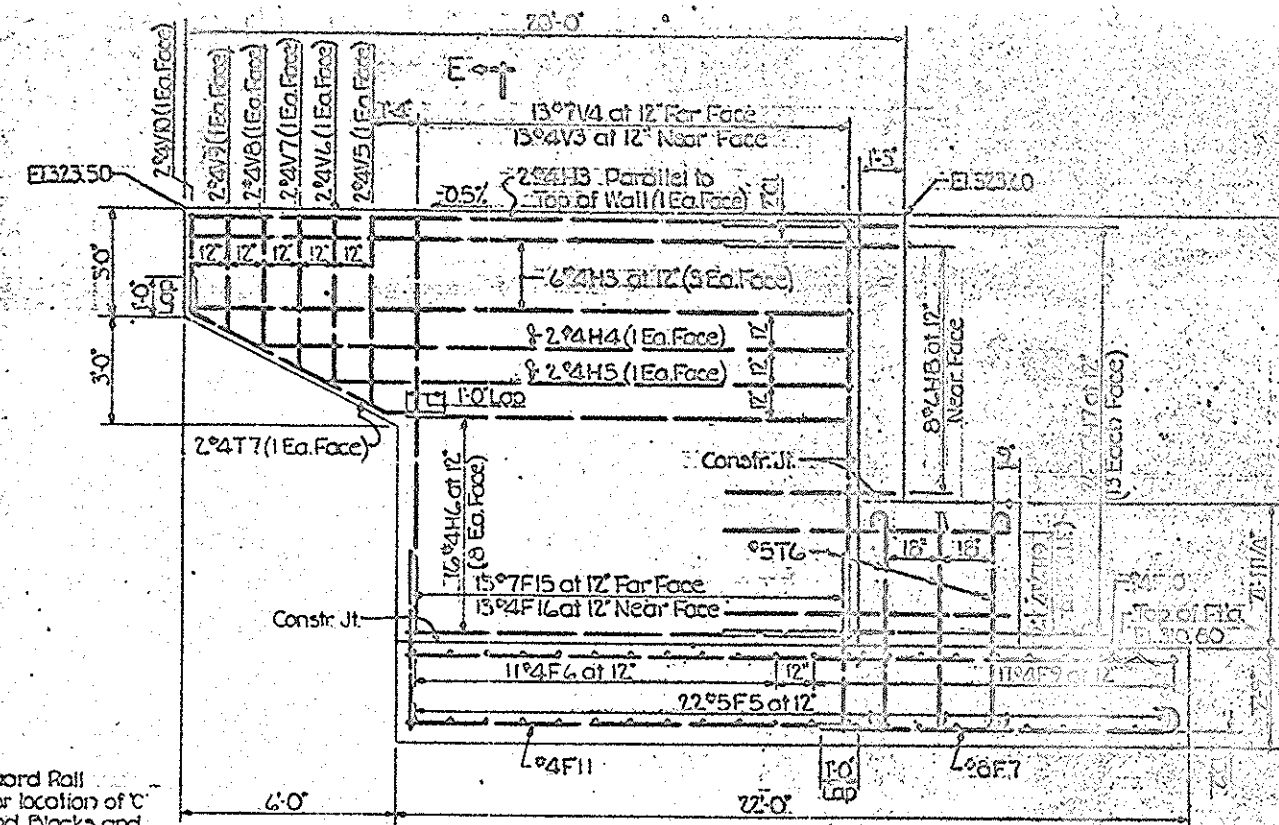
SUBST
BEN

5

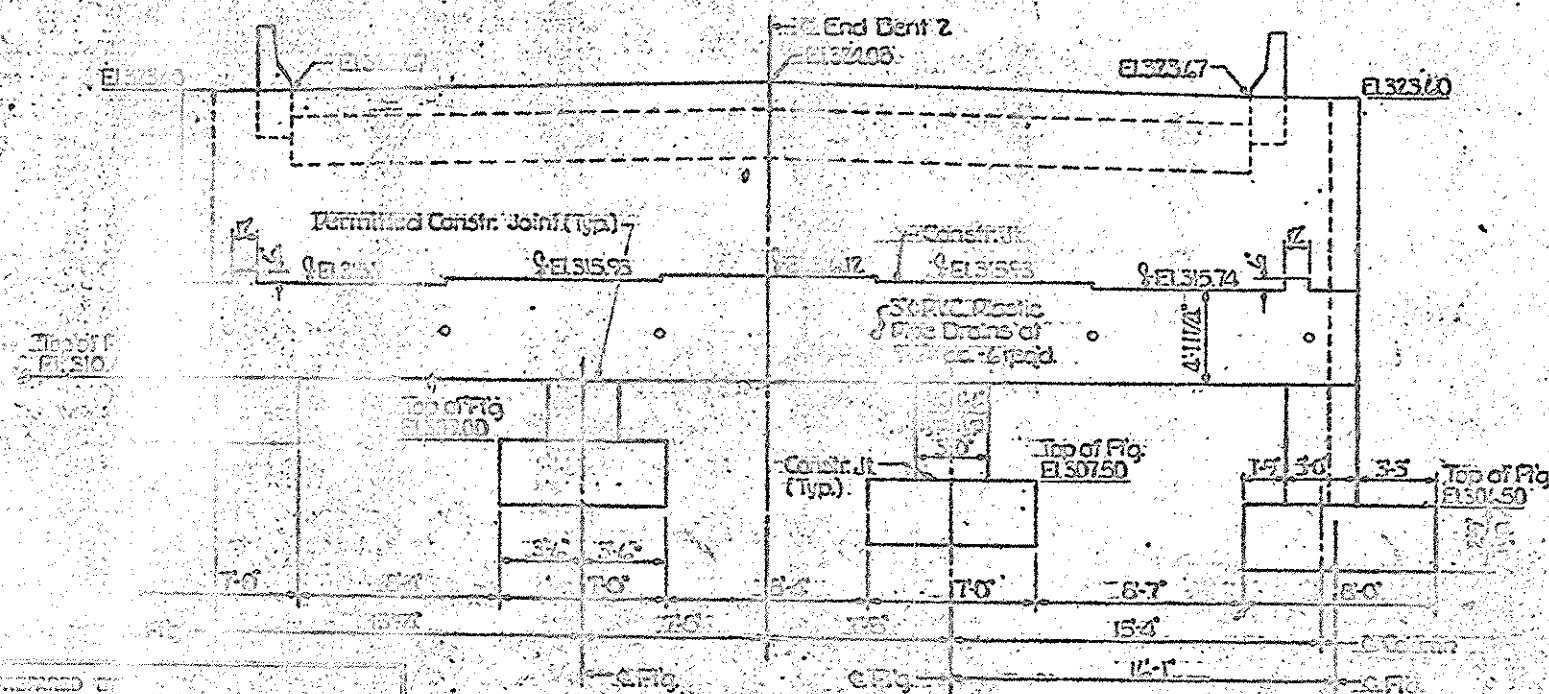
		REVISION	
NO.	BY	DATE	
1			
2			



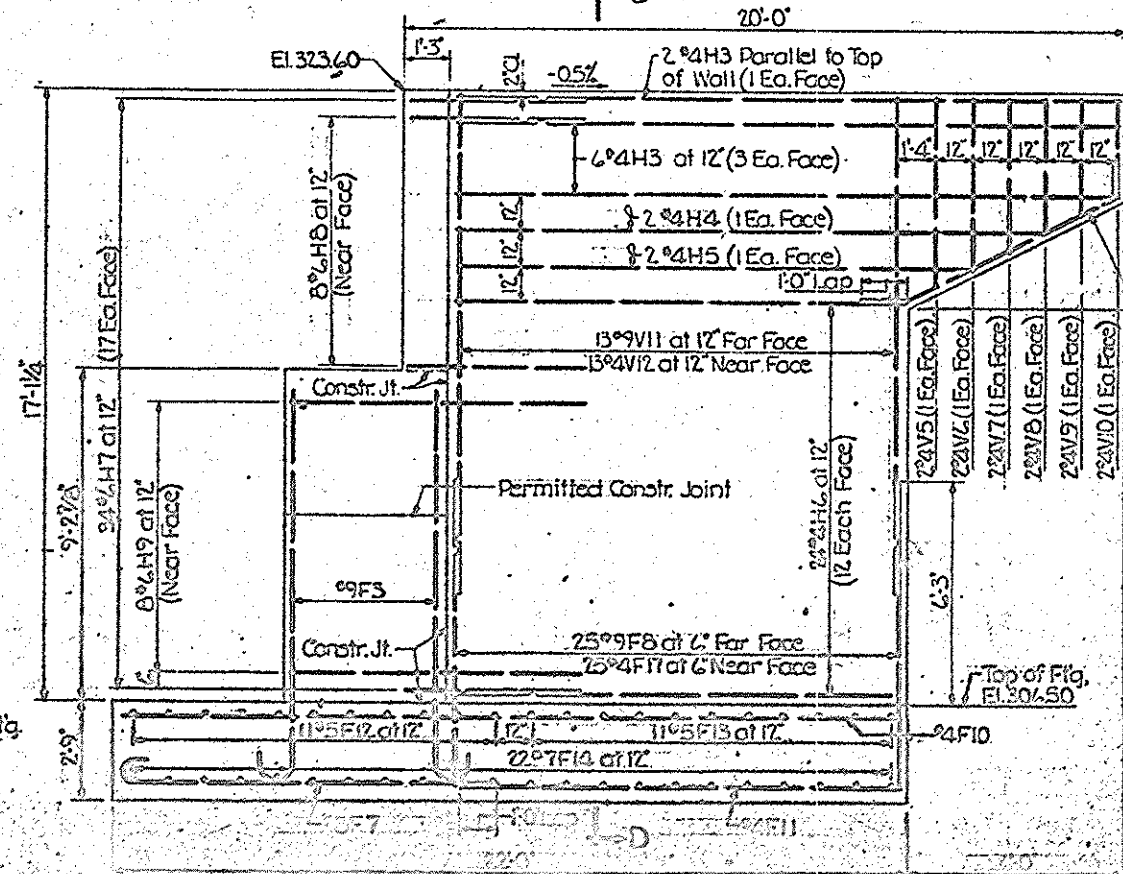
Note: See Standard Guard Rail Anchorage Sheet for location of C bars for curved End Blocks and guard rail Anchorage Assembly.



ELEVATION A-A



ELEVATION B-B



ELEVATION C-C

NOTE: Beam seat elevations have been shown reinforcing detailed for the use of bearings. If alternate rocker bearings are used, the contractor shall let beam seat elevations and hold the the north footing and top of column elevation thus decreasing the depth of longitudinal reinforcing and bottom of cap shall be unchanged.

PROJECT No. 680413
STANLY-MONTGOMERY CO.
STATION 58+67.0-L

SHEET 1 OF 3
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

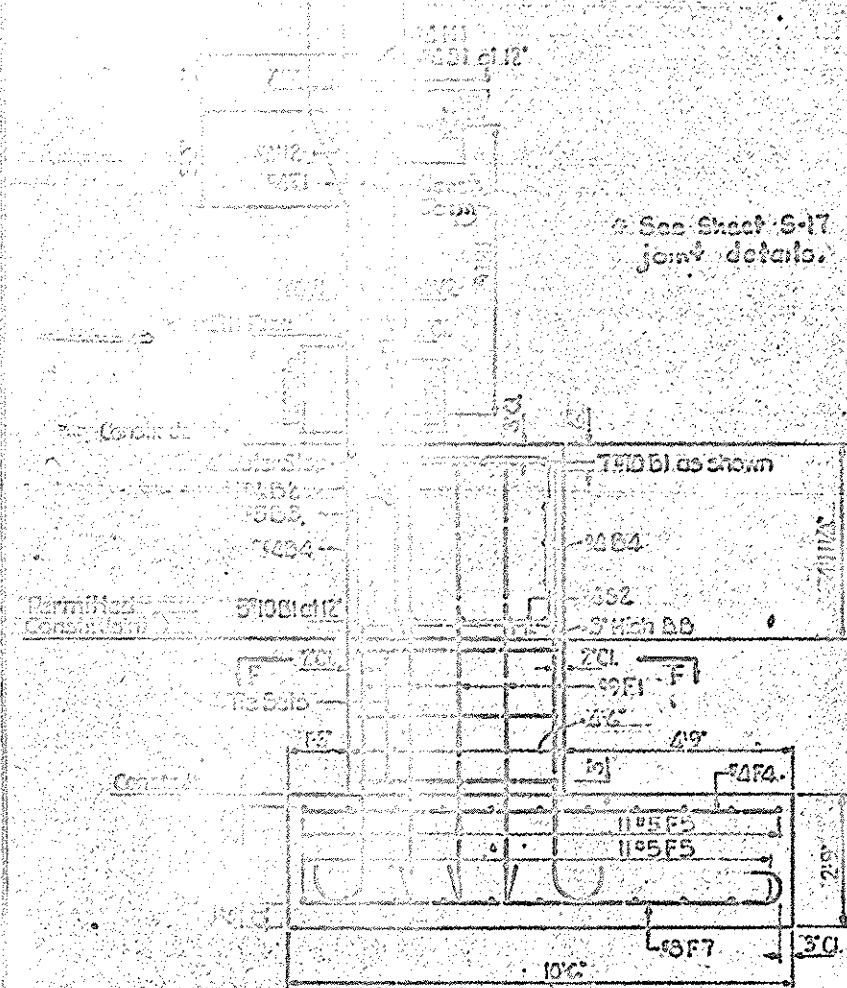
SUBSTRUCTURE
END BENT 2

PREPARED BY
THE ENGINEERING DIVISION
OF THE NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

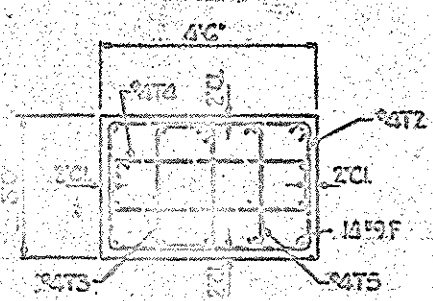


REVISIONS				
NO.	BY	DATE	NO.	BY
1	H.S.	6-9-77	0	
2			0	

Rebar: Changed Total Reinforcing wt from 169780 to 169407, and Class AA Concrete from 12.6 cy to 39.6 cy. No other changes. 6-9-77 HCS

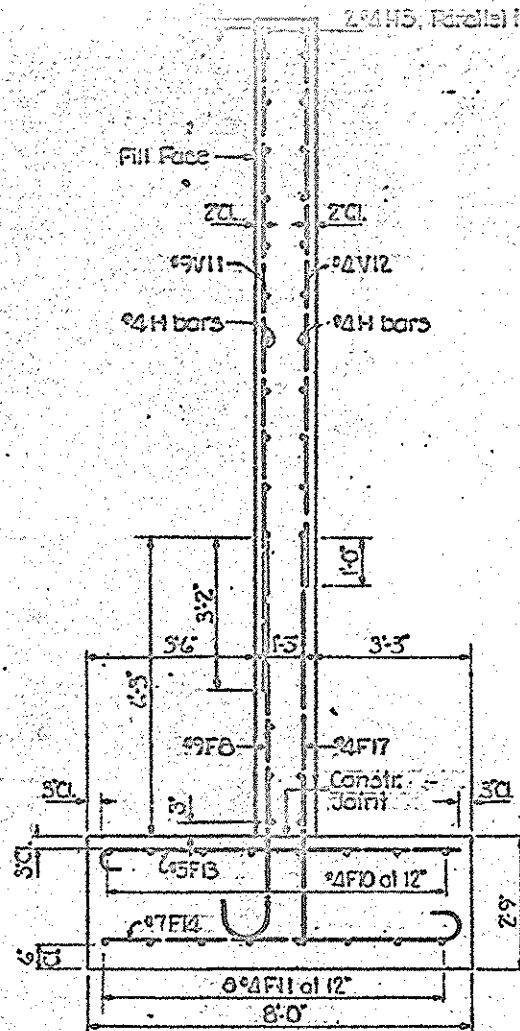


SECTION C-C

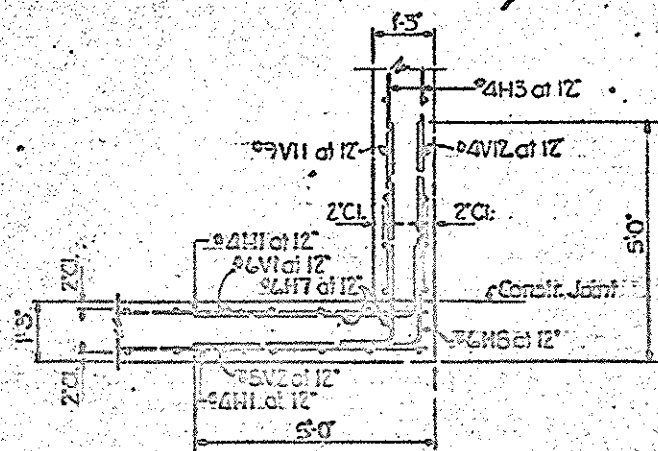


SECTION F-F

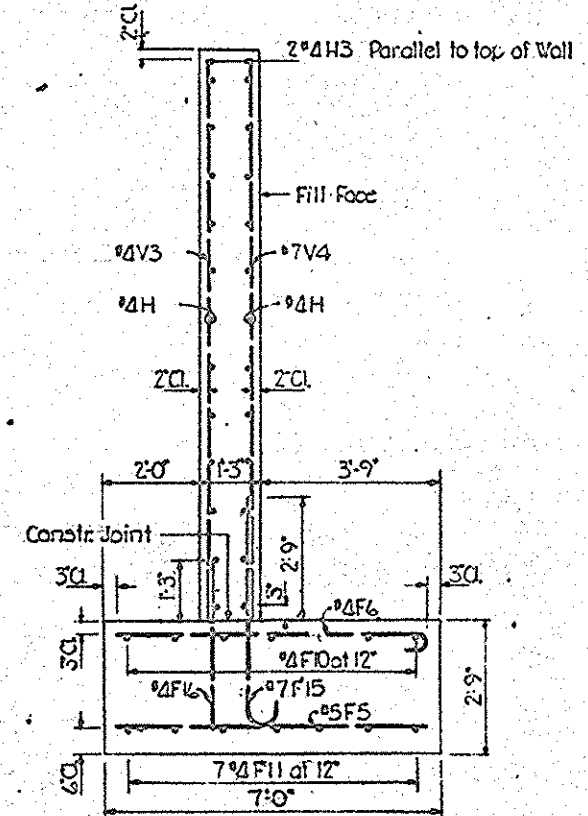
See Sheet S-17 for expansion joint details.



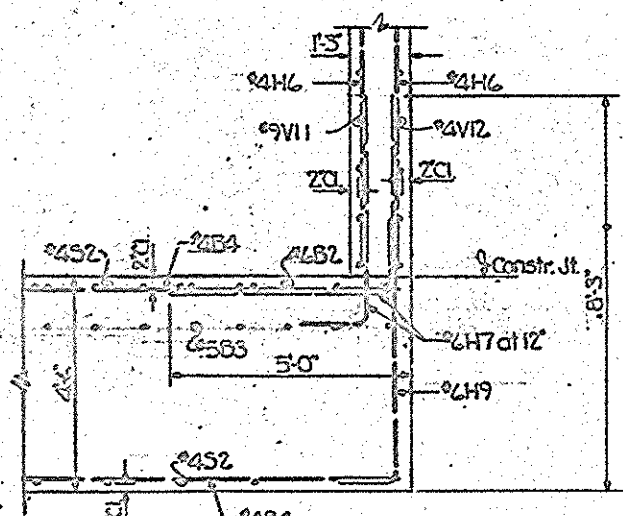
SECTION D-D



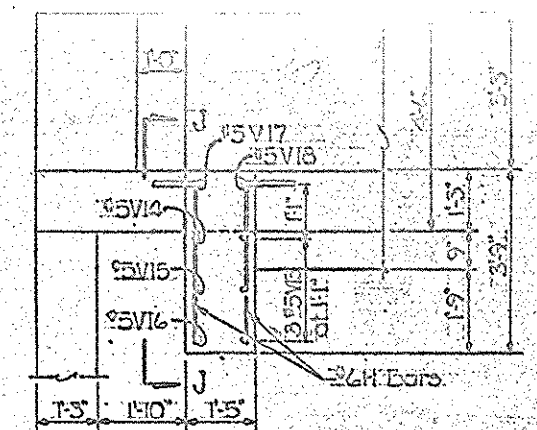
SECTION G-G



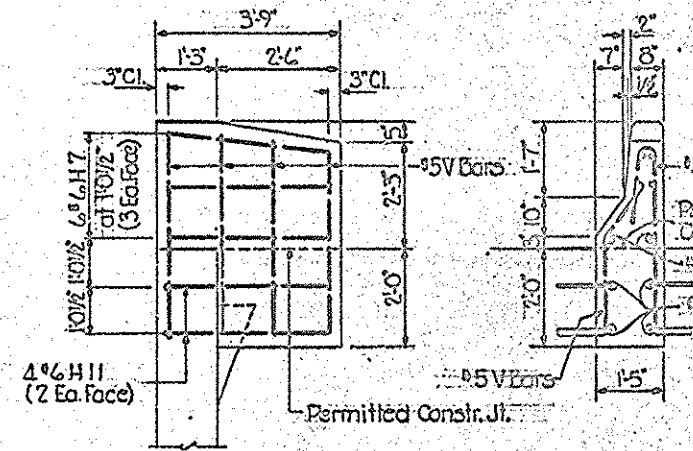
SECTION E-E



SECTION H-H



PLAN



SECTION J-J

END VIEW

END POST DETAILS

NOTE:
For Pipe Drain Details, see Substructure
End Bent 1, Sheet No. 532.

PROJECT No. 68041
STANLEY MONTGOMERY
STATION 58+67.0-1

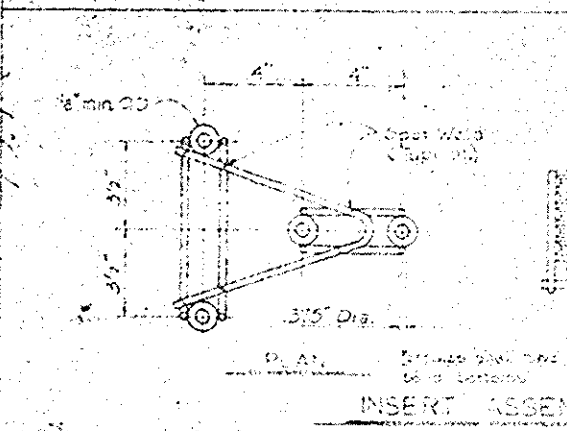
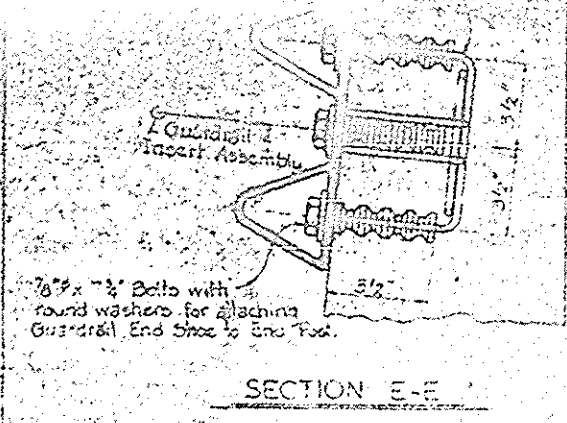
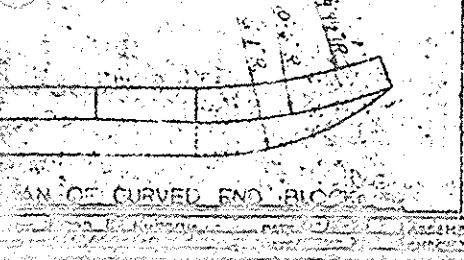
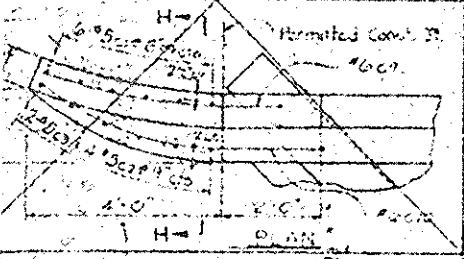
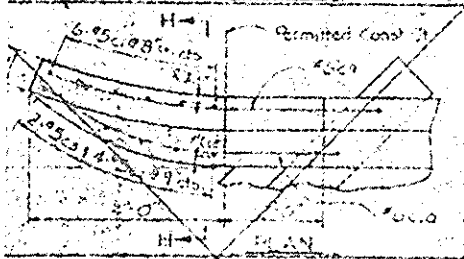
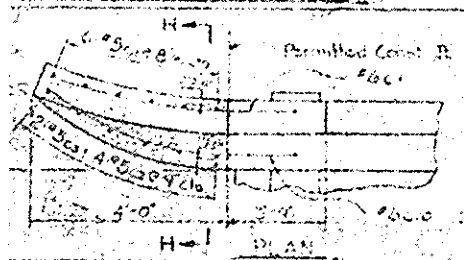
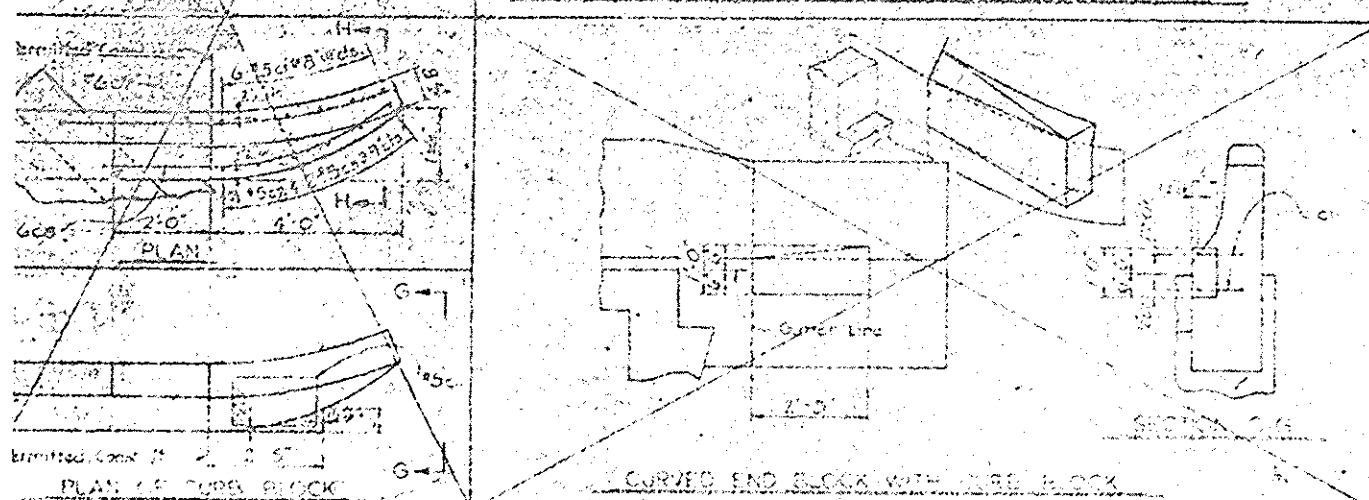
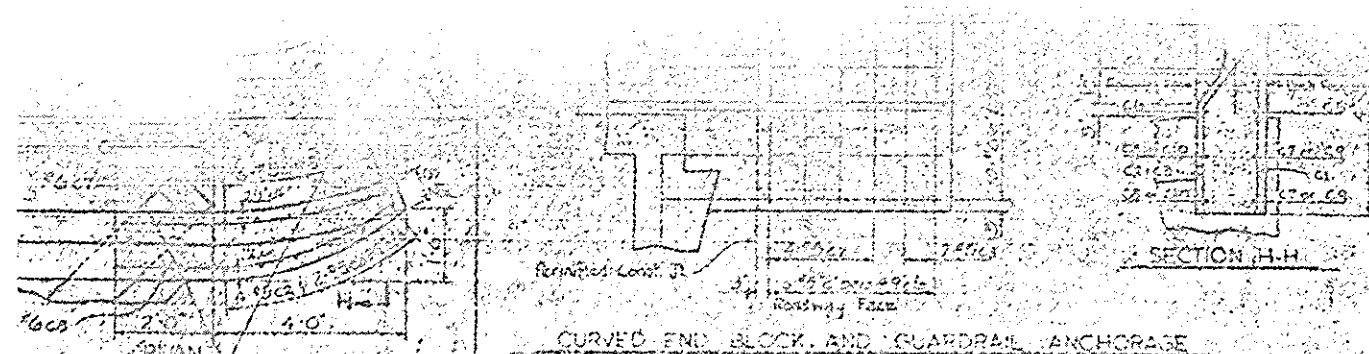
SHEET 3 OF 3
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUBSTRUCTURE
END BENT 2

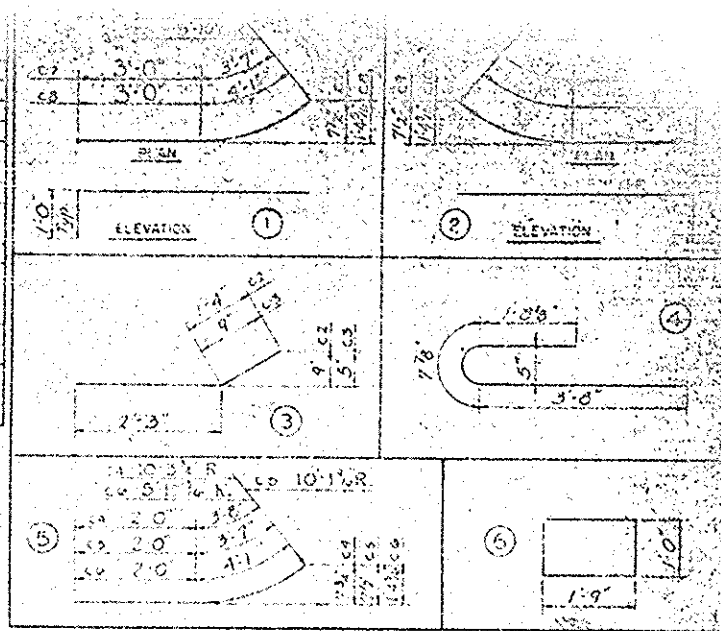
REVISIONS				
NO.	BY	DATE	NO.	BY
1	J.C.C.	2-10-71	3	
2			4	

PREPARED BY
THE WILSON & BARNARD CO.
CONSULTING ENGINEERS
COLUMBIA, MISSOURI

Rev. 1 - Revised to accommodate Exp. Jt. Seal as submitted by the contractor by J.C.C. & by A.R.S.



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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BILL OF MATERIAL FOR CURB BLOCK			
Item	Quantity	Unit	Weight
1. Block	1	cu yd	11
2. Blocks	1	cu yd	23
3. Blocks	1	cu yd	34
4. Blocks	1	cu yd	46

NOTES:

- Materials shall conform to the requirements of A.S.T.M. A108, grade 12 L14.
- The 1/2" x 2 1/2" bolts shall conform to the requirements of A.S.T.M. A307. Bolts and washers shall be galvanized.
- As an alternative option, stainless steel bolts and washers may be used in an alternate for the 1/2" x 2 1/2" galvanized bolts and washers. They shall conform to or exceed the mechanical requirements of A.S.T.M. A307. The use of this alternate shall be approved by the engineer.
- The bolts shown in the Insert Assembly detail are minimum allowable size and they have a minimum tensile strength of 100,000 p.s.i.
- The insert assembly with bolt shall be assembled in the shop. Bolt threads may be re-cut as necessary to insure fit.
- The cost of the excavation and backfill for the Curved End Blocks shall be included in the unit contract price for Class AA concrete.
- The cost of the Insert Assembly and connecting of the insert assembly and 1/2" x 2 1/2" bolts with washers, complete in place shall be included in the unit contract price for Class AA concrete.
- Curved End Blocks are required at all end-points.
- The anchor bolt Insert Assembly is required at all points where approach guardrail is to be attached to the end posts. For points of attachment, see Plans.

PROJECT No. 604135
STANLEY MOUNTAIN COUNTY
STATION: 50+00.00

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD

TOTAL BILL OF MATERIAL	
Reinforcing Steel	607
Class AA Concrete	2.21

REVISIONS					
NO.	BY	DATE	FOR	BY	DATE
1					

PLAN VIEW

SECTION THRU SLAB

REINFORCING STEEL 52%
CLASS 'A' CONCRETE 25%
100%

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
KALILICH
BRIDGE APPROACH SLAB
FOR FLEXIBLE PAVEMENT

REV. NO. 3 - CHANGE DIMENSION OF ADJACATE SITE BY CCN 104 N.Y.R. 57.75
REV. NO. 2 - TO OMIT MAXIMUM FURCH DASH - MOST OF WHICH IS 1975 1/2
REV. NO. 5 - TO CHANGE HOT. GROUND RUBBER ADHESIVE JOINT LINES TO 1/2 INCH
REV. NO. 4 - TO CHANGE DIMENSION OF ADJACATE SITE BY CCN 104 N.Y.R. 57.75
REV. NO. 3 - TO CHANGE DIMENSION OF ADJACATE SITE BY CCN 104 N.Y.R. 57.75