

- GENERAL NOTES:**
- All material and workmanship shall be in accordance with "Standard Specifications for Roads and Structures," North Carolina State Highway Commission, except as noted herein, elsewhere on the plans, or in the "Special Provisions."
 - Structural Steel: See Dwg. No. D-1005.6
 - Aluminum Paving: See Dwg. No. D-1005.9
 - Reinforced Concrete: All concrete shall be Class "A" Air-entrained throughout except in piles. Concrete shall be compacted by mechanical vibration (See N. C. State Highway Specifications). Reinforcing Steel shall be new billet steel, intermediate grade, according to A.S.T.M. designation A-15 with deformations according to A.S.T.M. designation A-36. All dimensions relating to reinforcing bar spacing are to bar centers, unless noted. Surface finish for concrete is to be in accordance with the "Specifications." Exposed surfaces are to have Class I finish. See Dwg. D-1005.2 for additional concrete notes.
 - Expansion Joint Material: to be either bituminous fiber or cork conforming with AASHTO Specifications M-153-52, except as shown on the plans or in the "Special Provisions." Cellular and Bulb Type waterstops, and rubber joint compounds shall be as shown on the plans and in the "Special Provisions."
 - Corrugated Metal drains shall be provided on each end of the structure and in ballast trough of bridge. Grades for pipe drains to be set by the Engineer. Details of drainage system shall be submitted to the Chief Engineer, M.W. & E. Eastern Lines, Sou. Ry. Co., Charlotte, North Carolina, for approval.
 - Non-Pay Items: Only items shown in the proposal as pay items will be paid for. Compensation for all labor, materials, tools, equipment and incidentals for the entire contract shall be included in the unit price bid for pay items.
 - Control of Work: All work involved in the construction of the underpass shall be performed under the supervision of, and satisfactory to the Consulting Engineer and/or the Southern Railway Company. All methods of handling work affecting the safety of railway operation must be approved by the Southern Railway Company before proceeding with that portion of the work. Railway Traffic shall, at all times, be maintained and protected. The contractor shall at no time delay or interfere with railway operations.
 - All construction joints shown on these plans shall be required unless shown optional. Construction joints shall not be permitted, except as shown on the plans.
 - Excavation and Foundation Data: Foundation data and all elevations of ground lines given are believed to be correct and are furnished for the convenience of the Bidders; but neither the Consulting Engineer nor the Southern Railway Company guarantees as correct any of the information given. Compensation for the one-foot deep excavation of the abutments shall be included in the unit bid for other items.
 - Waterproofing: Tops of Pier Footings and columns to ground line, together with Abutment heel and backs of Backwall and wings, shall be damp-proofed with Method "E" damp-proofing, using two coats of EC-2. In addition, all construction joints and any shrinkage cracks which will be covered by fill shall be waterproofed with Method "A" waterproofing. Strips of fabric shall be two feet wide placed symmetrically over joints or cracks.
 - Coarse Aggregate: Use No. 3 for Concrete Slabs, Abutments, and Pier Footings; Use No. 4 coarse aggregate for Pier Columns and Pier Caps.
 - Dimensions for bending reinforcing bars are out to out. Fabrication to be in accordance with manual of Standard practice. A.C.I. 313-51.

- LIST OF DRAWINGS**
- D-1005.1 GENERAL PLAN & ELEVATION (THIS SHEET)
 - D-1005.2 DETAIL OF ABUTMENTS A & B
 - D-1005.3 DETAIL OF PIERS 1 & 2
 - D-1005.4 DETAIL OF STRUCTURAL STEEL (SPANS A & C)
 - D-1005.5 DETAIL OF STRUCTURAL STEEL (SPAN B)
 - D-1005.6 DETAILS OF STRUCTURAL STEEL
 - D-1005.7 DETAIL OF CONCRETE DECK SLAB
 - D-1005.8 DETAIL OF CONCRETE DECK SLAB
 - D-1005.9 DETAIL OF ALUMINUM PAVING
 - D-1005.10 DETAIL OF PRESTRESSED PILES & BRONZE LETTERING

DESIGN DATA:

Specifications: AREA (Current)

Live Load: Coopers E72 with Diesel Impact for beam spans and $\frac{1}{4}$ for concrete slab and piers.

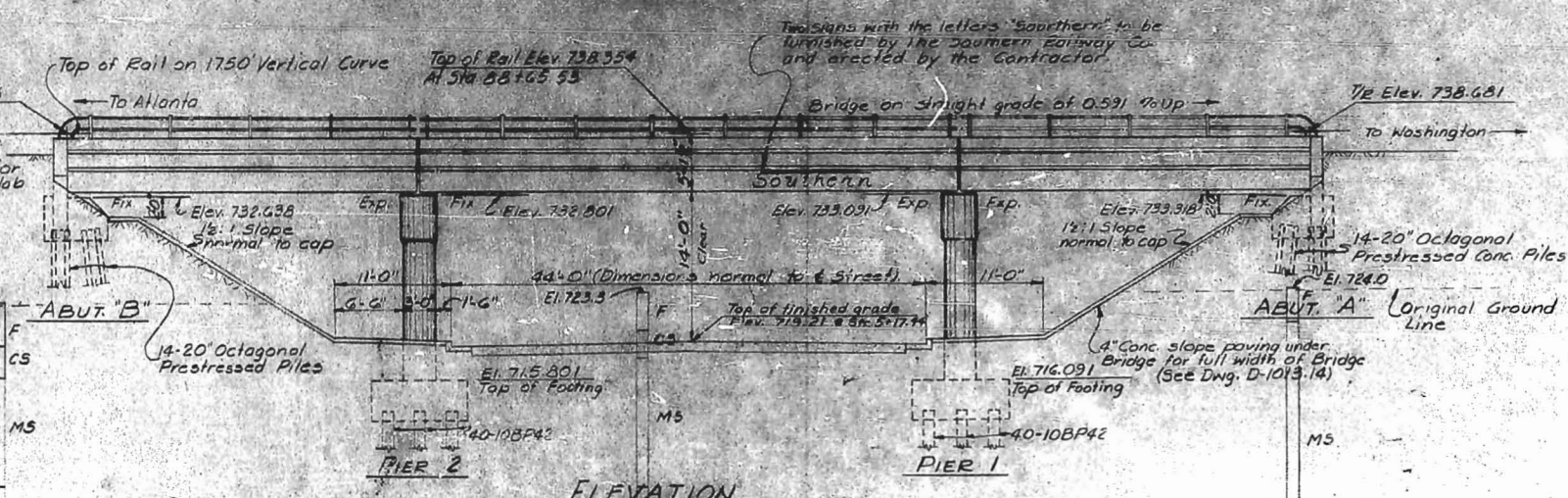
Structural Steel: $f_s = 20,000$ psi for A-36 steel

Reinforced Concrete: $f_c = 20,000$ psi for Rein steel (Intermediate Grade) except piles. $f_c = 3,000$ psi, $f_c = 13,500$, $n = 10$.

LEGEND FOR SOIL BORING

F—Fill
CS—Clayey Silt
SS—Sandy Silt
MS—Microaceous silt
DG—Decomposed Granite
WG—Weathered Granite

B/F—Blows per Foot (in Standard Penetration Test)



- DIVISION OF WORK**
- The contractor shall furnish all equipment, material and labor necessary to:
- Grade to subgrade for Detour Tracks, including necessary drainage and place sub-ballast for Detour Track.
 - Place compacted embankment of each end of Bridge up to one foot above Bottom of Abutments prior to Driving piles.
 - Furnish and drive all piles
 - Construct underpass complete except for placing Ballast, ties and Rails.

SUMMARY OF QUANTITIES (ESTIMATED)

	Concrete		Reinforcing Steel		Aluminum Paving	Drainage System		Waterproofing S.Y.		Damp-proofing		Prestressed Concrete Piles		Steel "H" Piles		4" Pneumatic Tube	Classified Strike Excav	
	C.Y.	Lbs	Lbs	Lbs		L.F.	Lump Sum	Meth. "A" Extra Ply	Meth. "A"	Asphalt Plank	Membrane Protection	S.Y.	No.	L.F.	No.			L.F.
Abutment A	50.3	6,507									55	14	700			142		
Abutment B	50.3	6,507									55	14	630			142		
Pier 1	104.7	21,775									114		40	1600			170	
Pier 2	104.7	21,775									114		40	1600			170	
Superstructure	231.5	31,012	360,300	235.29		742		136	505									
Total	541.5	73,576	360,300	235.29	Lump Sum	742	21	136	505	338	28	1330	80	3200	284		340	

* Includes 802 lbs sheet lead, 1428 lbs wrought iron, 816 lbs High strength bolts, 321,042 lbs A-36 Steel.
The Above Concrete Quantity Includes 23.6 c.y. in Pier Columns & Caps With No. 4 Coarse Aggregate

APPROVED BY: *[Signature]* CHIEF ENGR. DATE: AUG 21, 1962
M.W. & E. EASTERN LINES, SOUTHERN RAILWAY COMPANY

MARK	DATE	BY	DESCRIPTION
			AS CONSTRUCTED

REVISIONS

WHITEHEAD & ZICKEL
CONSULTING ENGINEERS
221 SOUTH CHURCH ST.
CHARLOTTE, NORTH CAROLINA

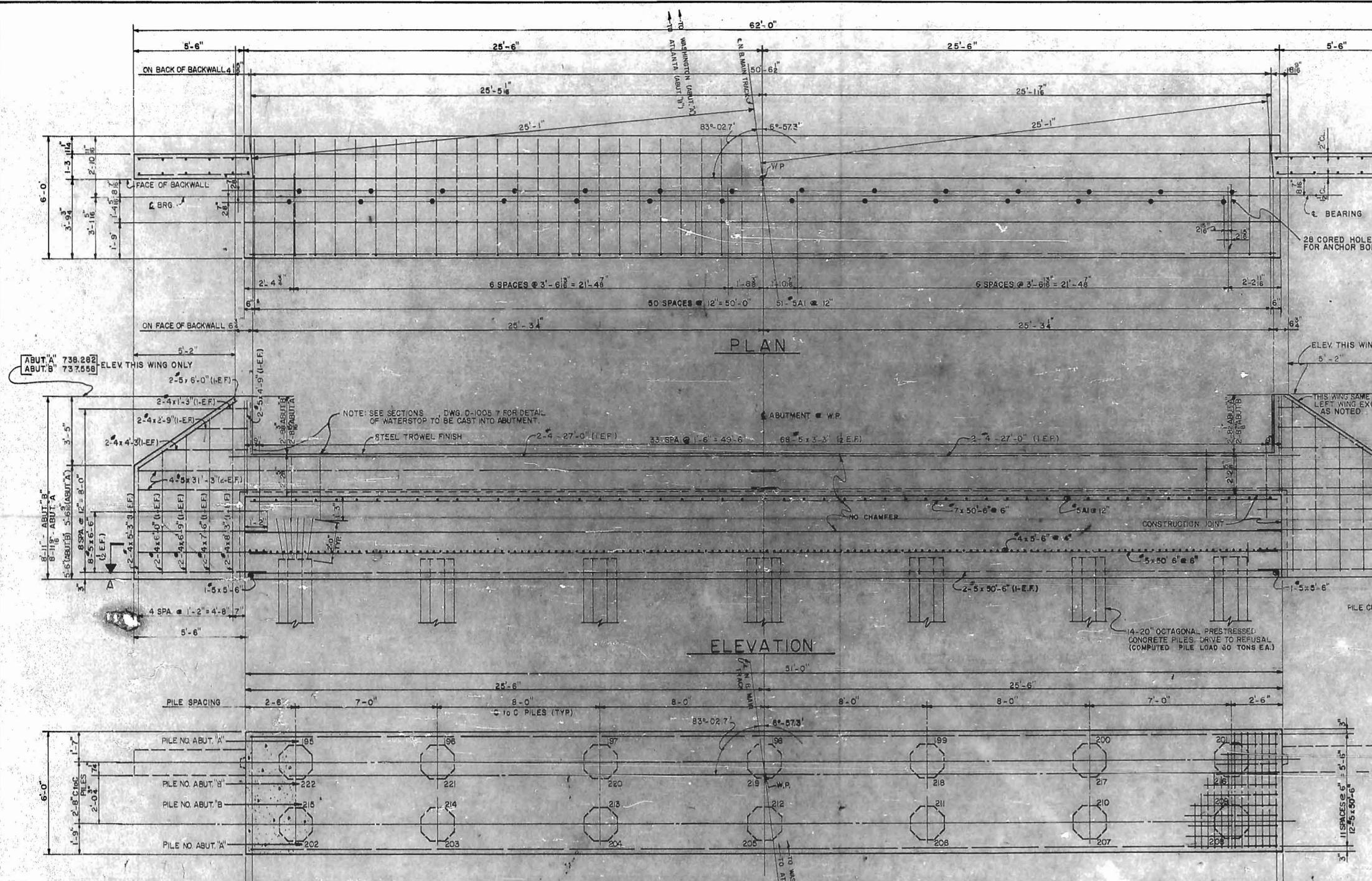
CITY OF CHARLOTTE
WEST FOURTH STREET UNDERPASS
GENERAL PLAN & ELEVATION
WEST SIDE GRADE CROSSING ELIMINATION CHARLOTTE, N.C.

DES. BY MEG
DRN. BY JHB
CKD. BY MEG

SOUTHERN RAILWAY
M.P. 377.74

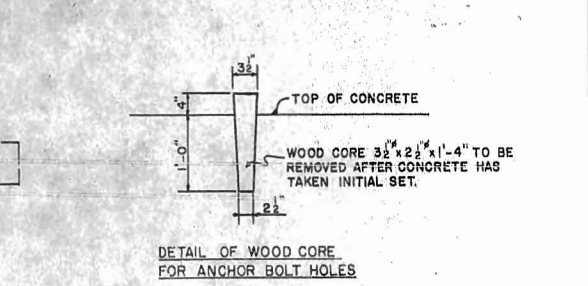
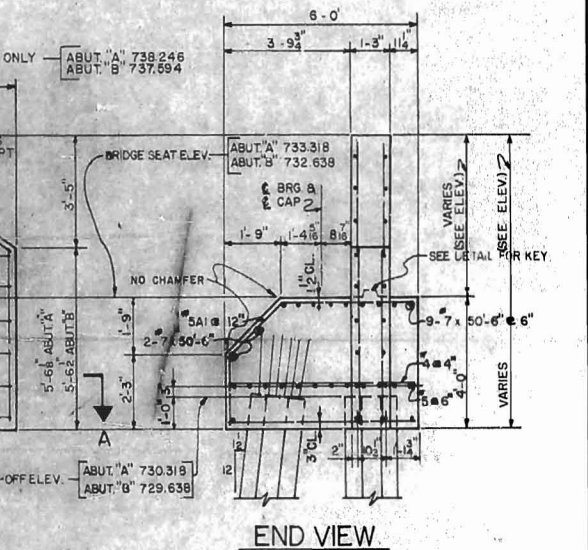
SCALE: 1" = 10'
DATE: JUNE 11, 1962
JOB NO. C-132
DWG NO. D-1005.1

NORTH CAROLINA REGISTERED ENGINEER
1978
WALTON L. WHITEHEAD



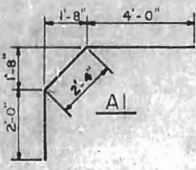
ADDITIONAL CONCRETE NOTES

- FOR GENERAL NOTES, SEE DRAWING NO. D-1005A
- CHAMFER ALL EXPOSED CORNERS AND EDGES $\frac{1}{4}$ " EXCEPT AS NOTED.
- CONCRETE PILES TO BE 20" OCTAGONAL PRESTRESSED PRECAST CONCRETE ACCORDING TO NORTH CAROLINA STATE HIGHWAY DEPARTMENT SPECIFICATIONS. ALL PILES MUST HAVE A MINIMUM PENETRATION OF 15 FEET AND MUST BE DRIVEN TO REFUSAL. THE CONTRACTOR WILL BE REQUIRED TO DRIVE ONE 50 FOOT TEST PILE IN PLACE AT ABUTMENTS A & B. THE TEST PILES TO BE PAID FOR AS LINEAR FEET OF 20" PRESTRESSED CONCRETE PILING. THE ORDER LENGTHS FOR THE REMAINDER OF THE PILES SHALL BE DETERMINED AFTER THE TWO TEST PILES HAVE BEEN DRIVEN.
- IF THE PILES ARE DRIVEN BELOW THE POINT AT WHICH THE REINFORCING DOES NOT EXTEND APPROXIMATELY 2 FEET INTO ABUTMENT, 8" 7 DOWELS WILL BE SET 2 FEET INTO PILE AND EXTENDED 2 FEET INTO CAP. IF TOP OF PILE IS LESS THAN 4" INCHES ABOVE THE BOTTOM OF ABUTMENT, PILE MUST BE SPLICED STRIP CONCRETE FROM EXISTING REINFORCING STEEL SO AS TO EXPOSE 2'-6" OF THE VERTICAL REINFORCING STEEL. PLACE VERTICAL SPLICE BARS AS SHOWN FOR PILE BUILT UP ON DRG. D-1005.10 AND EXTEND APPROXIMATELY 3'-0" ABOVE BOTTOM OF CAP. VERTICAL STEEL IN PILE EXTENSION TO BE WRAPPED AT INTERVALS NOT EXCEEDING 6" CENTERS WITH SAME SIZE WIRE AS THOSE IN THE PILE. PLACE FORM AND POUR PILE TO AN ELEVATION OF APPROXIMATELY 1'-0" ABOVE BOTTOM OF CAP. CONCRETE TO HAVE A MINIMUM STRENGTH OF $f_c = 4,000$ LBS. PER SQ. IN.
- DIMENSIONS FOR BENDING REINFORCING BARS ARE OUT TO OUT FABRICATION TO BE IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE. ACI 315-51.

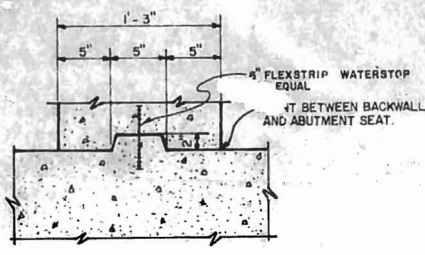


BILL OF REINFORCING STEEL - ABUTMENTS 'A' & 'B'

ABUT. A	ABUT. B	TOTAL REQD	SIZE	LENGTH	MARK	TYPE
51	51	102	#5	8'-4"	A1	BENT
14	14	28	#5	50'-6"		STR.
8	8	16	#5	31'-3"		
16	16	32	#5	6'-6"		
2	2	4	#5	5'-6"		
4	4	8	#5	4'-9"		
68	68	136	#5	3'-3"		
4	4	8	#5	6'-0"		
4	4	8	#4	8'-3"		
4	4	8	#4	7'-6"		
4	4	8	#4	6'-9"		
4	4	8	#4	6'-0"		
152	152	304	#5	5'-6"		
4	4	8	#4	5'-3"		
4	4	8	#4	4'-3"		
4	4	8	#4	2'-9"		
4	4	8	#4	1'-3"		STR.



SECTION A-A
ABUTMENTS A&B
SCALE: $\frac{1}{8}'' = 1'-0''$

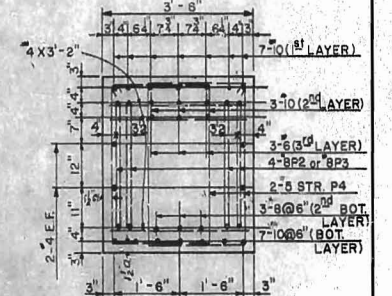
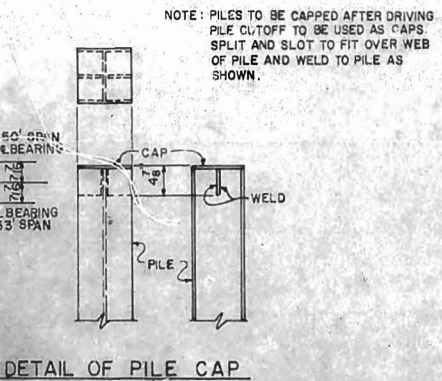
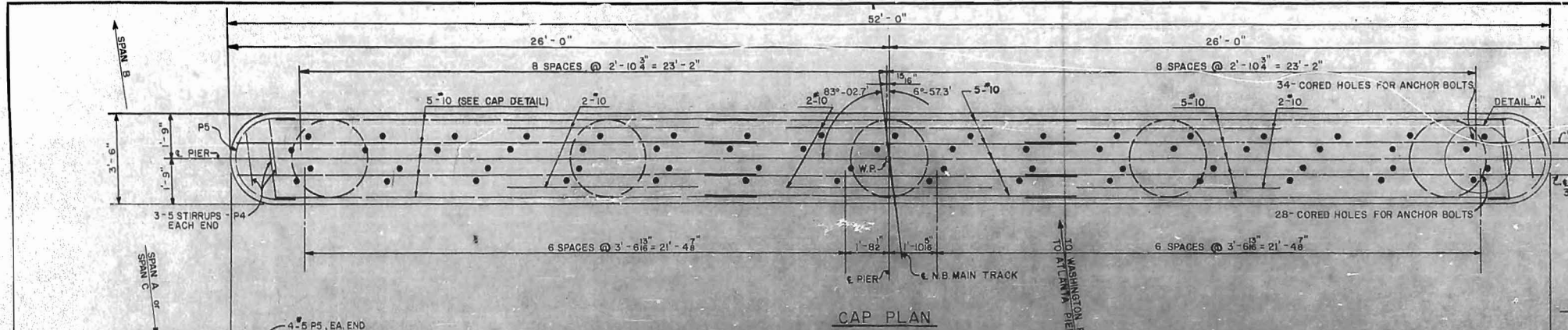


Shear Key At Construction Joint

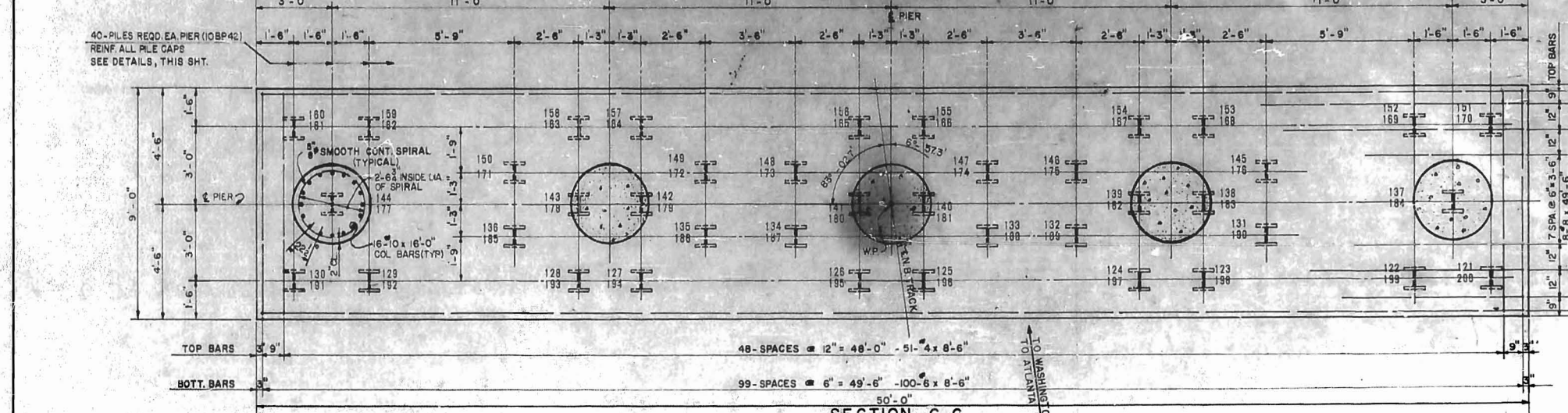
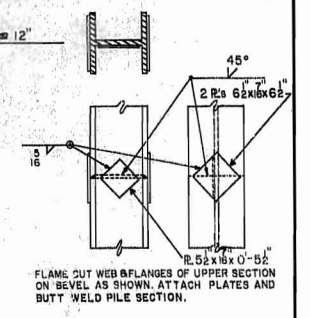
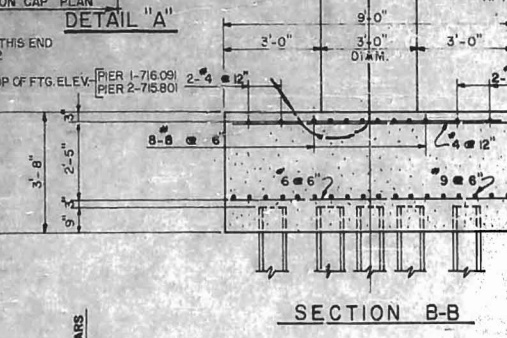
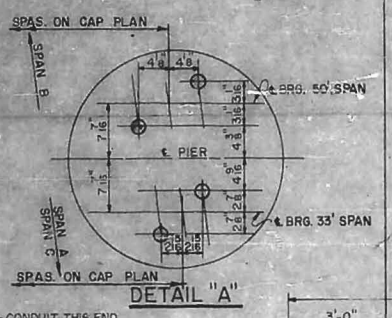
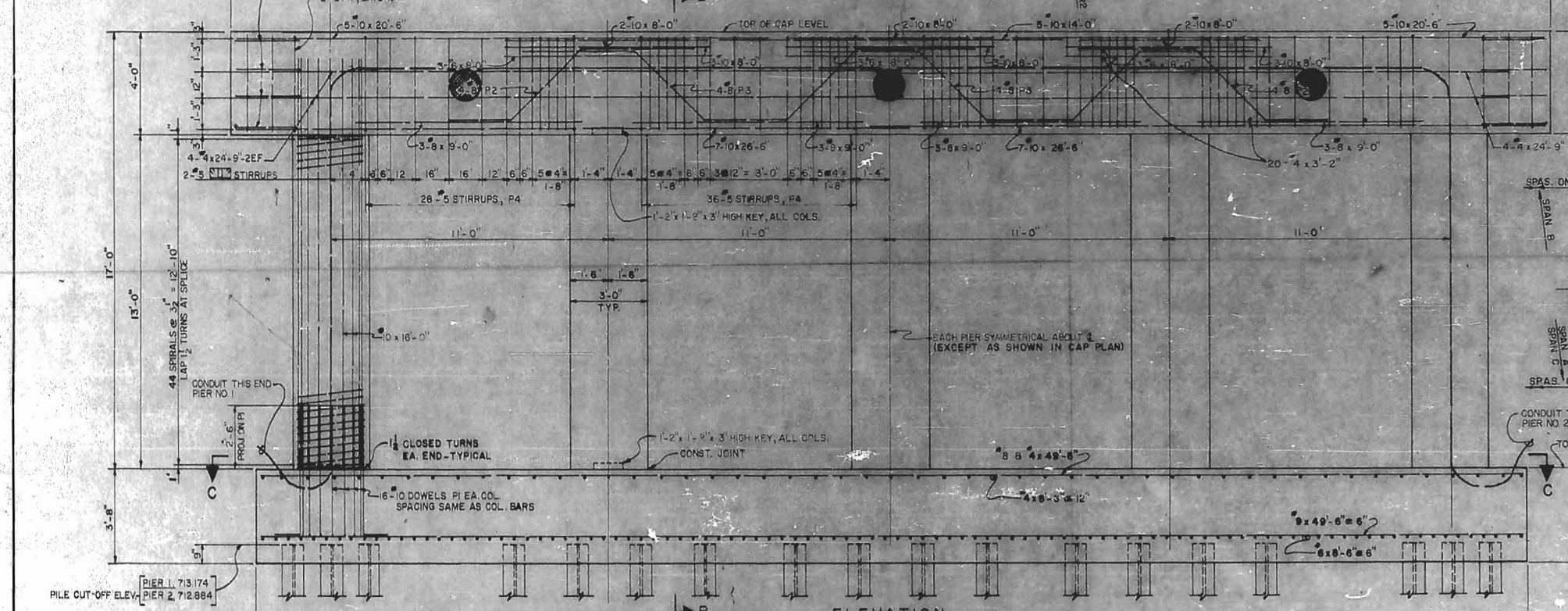
APPROVED BY: *[Signature]* CHIEF ENGR. DATE: AUG 21, 1962
M.W.B. EASTERN LINES, SOUTHERN RAILWAY COMPANY

MARK	DATE	BY	DESCRIPTION
			AS CONSTRUCTED
REVISIONS			
WHITEHEAD & ZICKEL CONSULTING ENGINEERS 221 SOUTH CHURCH ST. CHARLOTTE, NORTH CAROLINA			
CITY OF CHARLOTTE WEST FOURTH STREET UNDERPASS DETAIL OF ABUTMENTS 'A' & 'B'			
WEST SIDE GRADE CROSSING ELIMINATION		CHARLOTTE, N.C.	
DES. BY M.E.G.	SOUTHERN RAILWAY	SCALE: AS SHOWN	JOB NO. C-132
DRN BY W.T.J.	M.P. 377.74		
CHK. BY J.H.B.		DATE: JUNE 11, 1962	DWG NO. D-1005.2





- NOTE:**
- FOR GENERAL NOTES, SEE DWG. D-1005.1
 - CHAMFER ALL EXPOSED CORNERS AND EDGES 3/4"
 - ALL STEEL PILES SHALL BE DRIVEN TO REFUSAL COMPUTED PILE LOAD = 36 TONS.
 - SEE DWG. D-1005.10 FOR REINFORCING BAR LIST
 - MAXIMUM SIZE COARSE AGGREGATE TO BE 1" IN COLUMNS AND PIER CAPS.
 - THE CONTRACTOR SHALL BE REQUIRED TO DRIVE ONE 45 FT. TEST PILE IN PLACE AT PIER 1 AND PIER 2. THE TEST PILES TO BE PAID FOR AS LINEAR FEET OF STEEL H PILES. THE ORDER LENGTHS FOR THE REMAINDER OF THE PILES SHALL BE DETERMINED AFTER THE TEST PILES HAVE BEEN DRIVEN.
 - SEE DWG. D-1005.2 FOR DETAIL OF WOOD CORE FOR ANCHOR BOLT HOLES.



PILE NUMBERS
121-160 PIER 1
161-200 PIER 2

APPROVED BY: *[Signature]* CHIEF ENGR. DATE: AUG 21, 1962
M.W. & S. EASTERN LINES, SOUTHERN RAILWAY COMPANY

AS CONSTRUCTED			
MARK	DATE	BY	DESCRIPTION
REVISIONS			
WHITEHEAD & ZICKEL CONSULTING ENGINEERS 221 SOUTH CHURCH ST. CHARLOTTE, NORTH CAROLINA			
CITY OF CHARLOTTE WEST FOURTH STREET UNDERPASS DETAIL OF PIERS 1 & 2 WEST SIDE GRADE CROSSING ELIMINATION CHARLOTTE, N.C.			
DES. BY M.E.G.	SOUTHERN RAILWAY	SCALE: AS SHOWN	JOB NO. C-132
DRN BY W.T.J.	M.P. 377.74		
CKD BY J.H.B.		DATE: JUNE 1, 1962	DWG NO. D 1005.3



NOTE:
PILE FOUNDATION IS DESIGNED FOR END BEARING PILES. IF SATISFACTORY END BEARING IS NOT OBTAINED THE PILE FOUNDATION WILL BE REDESIGNED.

SECTION C-C
PIERS 1&2
SCALE 1" = 8'-0"

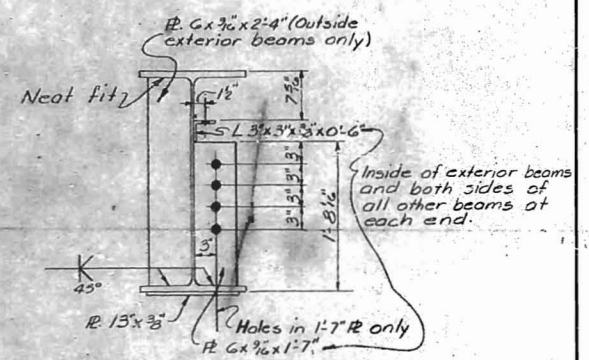
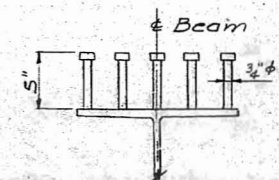
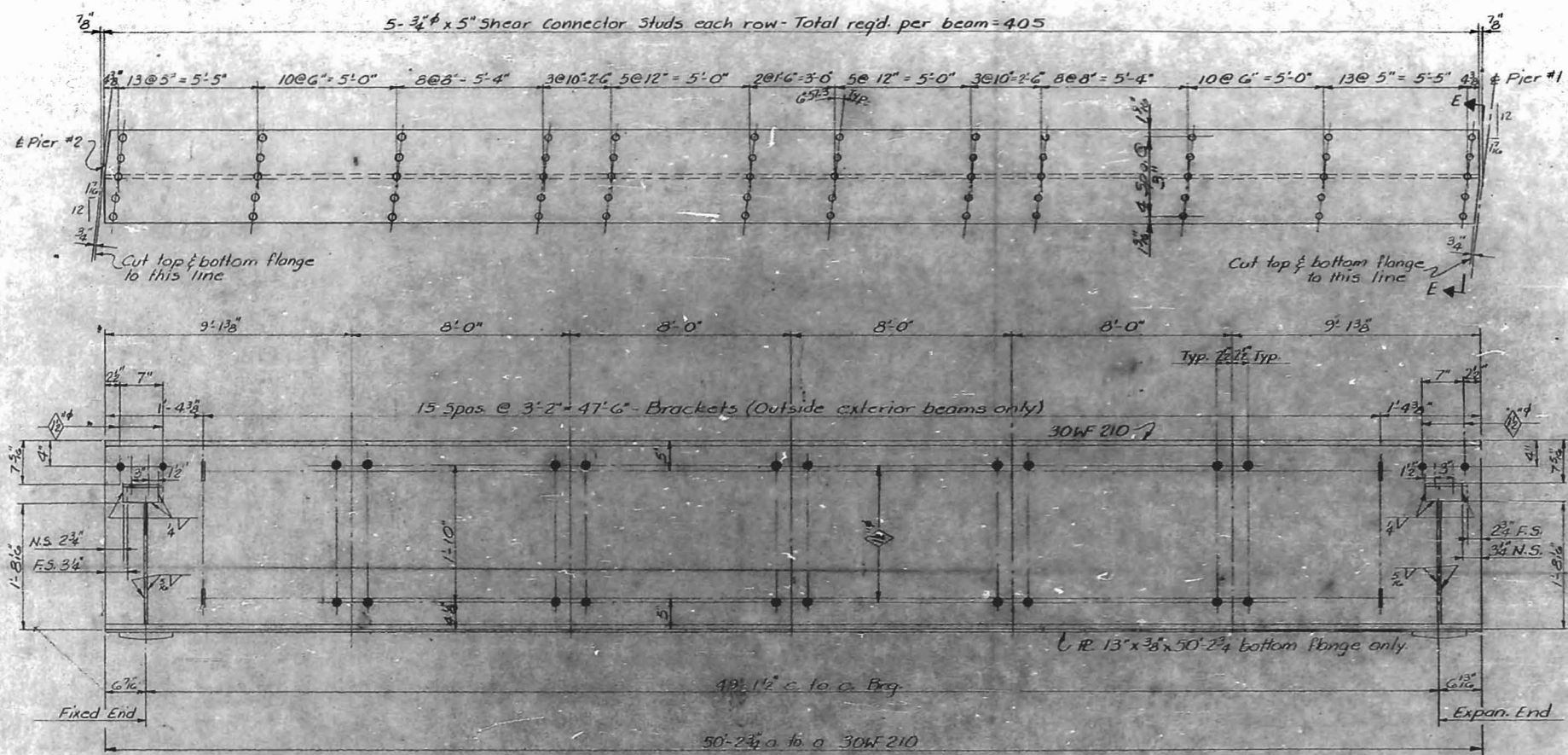
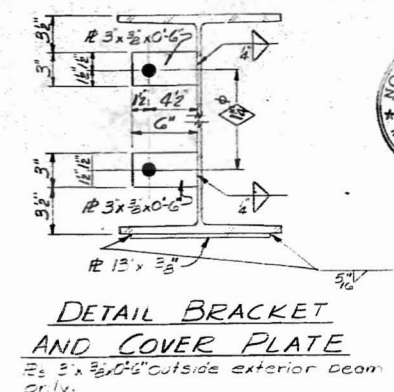
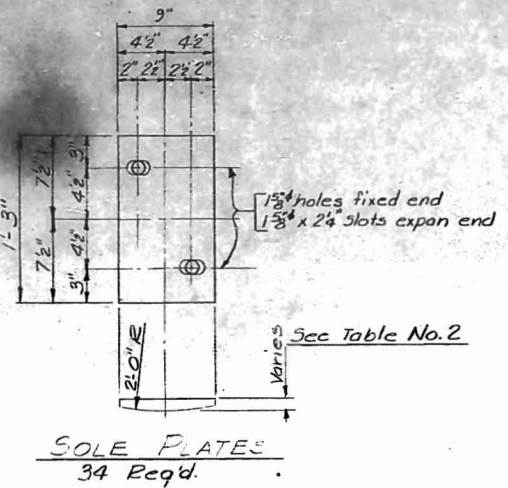
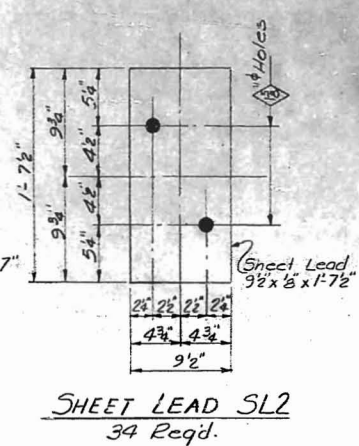
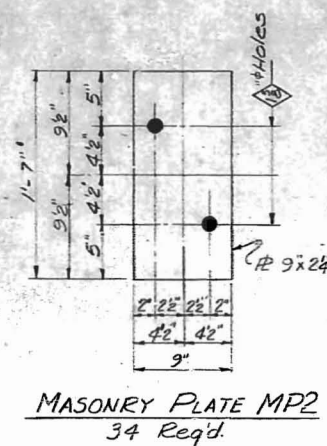
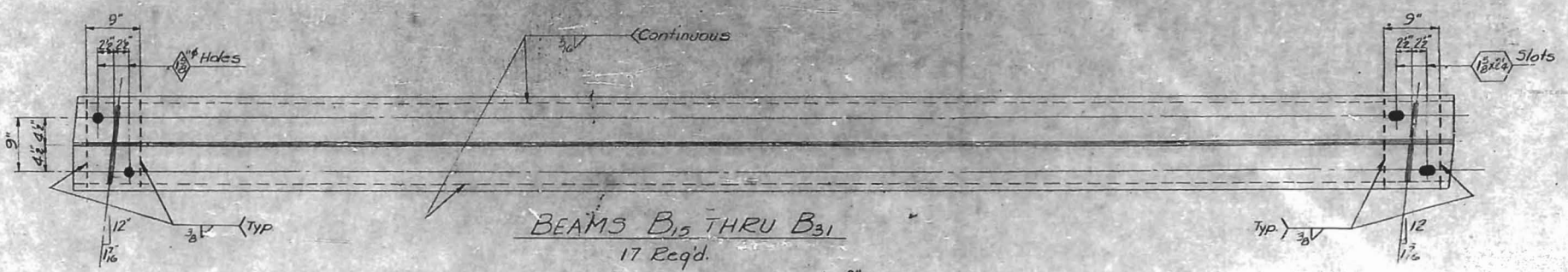


TABLE NO. 2
9" x 1'-3" SOLE PLATES

No. Reqd	Thickness	Shape Hole	Location
			Fixed End Expan. End
2	1 1/2"	Round	B15, B16
2	1 1/2"		B17, B18
3	1 1/2"		B19, B20, B21
3	1 1/2"		B22, B23, B24
3	1 1/2"		B25, B26, B27
2	1 1/2"		B28, B29
2	1"	Round	B30, B31
2	1 1/2"	Slot	B15, B16
2	1 1/2"		B17, B18
3	1 1/2"		B19, B20, B21
3	1 1/2"		B22, B23, B24
3	1 1/2"		B25, B26, B27
2	1 1/2"		B28, B29
2	1"	Slot	B30, B31



APPROVED BY: *[Signature]* CHIEF ENGR. DATE: AUG 21, 1962
M.W.B. EASTERN LINES, SOUTHERN RAILWAY COMPANY



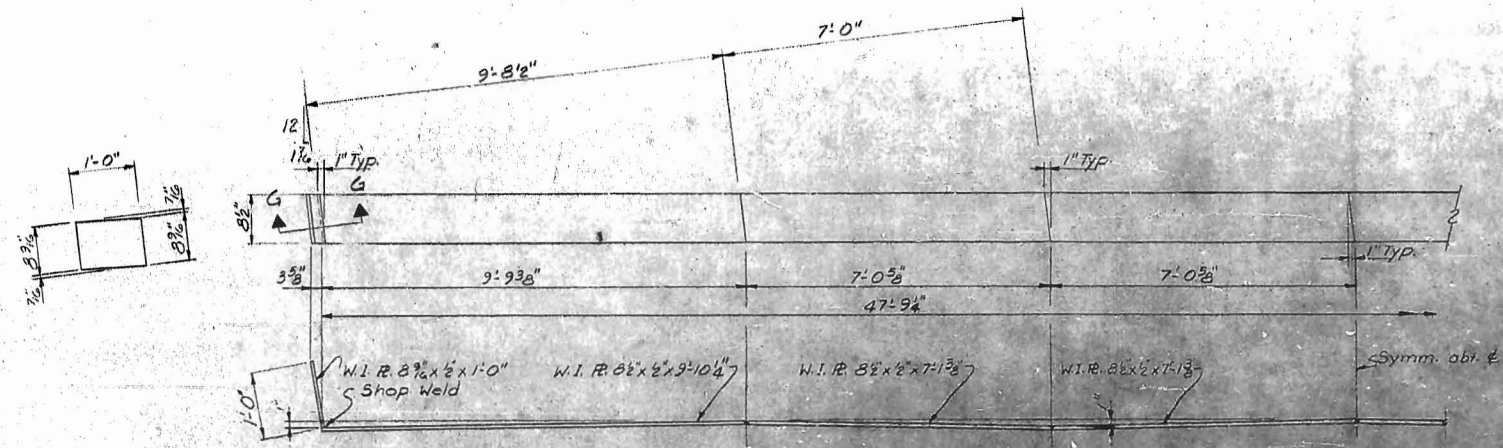
As Constructed

MARK	DATE	BY	DESCRIPTION
REVISIONS			

WHITEHEAD & ZICKEL
CONSULTING ENGINEERS
221 SOUTH CHURCH ST.
CHARLOTTE, NORTH CAROLINA

CITY OF CHARLOTTE
WEST FOURTH STREET UNDERPASS
DETAILS OF STRUCTURAL STEEL-SPAN B
WEST SIDE GRADE CROSSING ELIMINATION CHARLOTTE, N.C.

DES. BY MEG. SOUTHERN RAILWAY M.P. 377.74 SCALE: NONE JOB NO. C-132
DRN BY JHB. DATE: JUNE 1, 1962 DWG NO. D-1005.5
CKD BY MEG.



EXPANSION PLATE EPI

NOTES FOR STRUCTURAL STEEL

MATERIAL: O.H. structural steel except as noted. Wide flange beams and stiffeners to be A-36 steel. Expansion plates to be wrought iron. Steel piling to be A-7 steel except that it shall contain not less than 0.20 per cent copper.

SPECIFICATIONS: Current A.E.A. "Specifications for Steel Railway Bridges" Welding to be AWS, High strength bolts, nuts and washers to be ASTM-Spec. A-325

HOLES: open holes 1/8" dia. unless noted.

SHEAR CONNECTORS: 3/4" x 5" long solid fluxed or granular flux-filled studs shall be furnished and placed as structural steel, and they are included in the weight shown on plans.

INSPECTION: Mill & shop inspection by inspection organization approved by Sou. Railway Co.

FOR GENERAL NOTES: See Dwg. D-1005.1

SHOP PAINT: One coat of Red Lead according to North Carolina State Highway Commission Specifications. Do not paint surfaces which will be in contact with concrete or contact surfaces of field connections and areas under bolt connections.

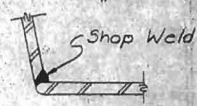
FIELD PAINT: One coat same as shop paint and two coats aluminum paint to N.C. State Highway Commission Spec.

SHOP DRAWINGS shall be submitted by the contractor to the Engineer for approval before work is begun.

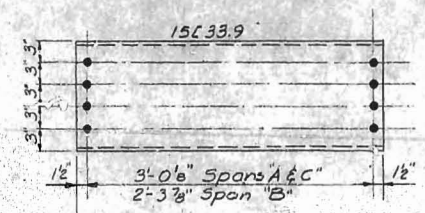
CONNECTIONS of end diaphragms to beams shall be bolted, using 5/8" high strength bolts in accordance with the specifications and the Special Provisions.

Bottom Flange of beams shall be straightened true 90° to web for a distance of 2'-0" from each end of beam.

CAMBER: Spans "A" & "C" 1/4" Hot Camber
 Span "B" 1/2" Hot Camber



SECTION G-G

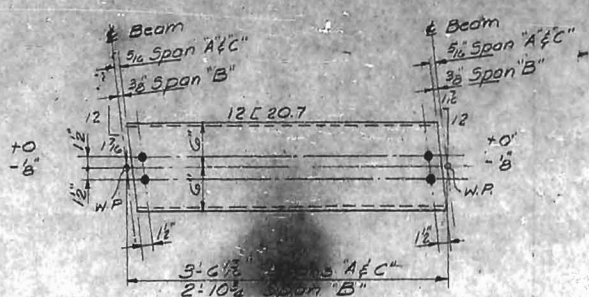


END DIAPHRAGMS

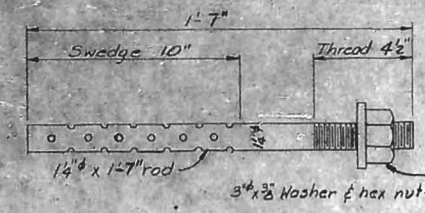


Round exposed edges and ends to 1/4" radius.

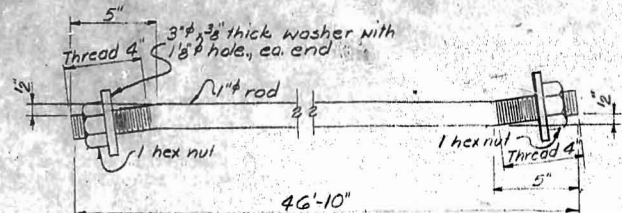
SECTION THRU W.I.R.



SUPPORT CHANNEL

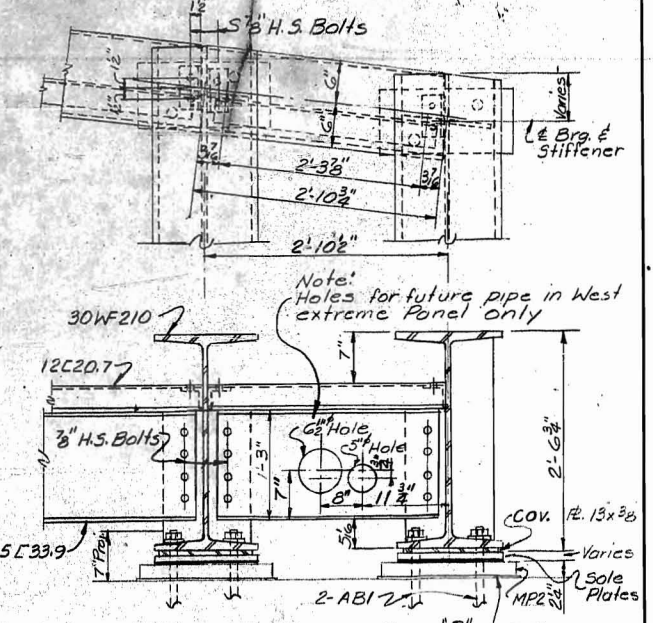


ANCHOR BOLT ABI
 130 Req'd.



TIE RODS TRI
 56 Req'd.

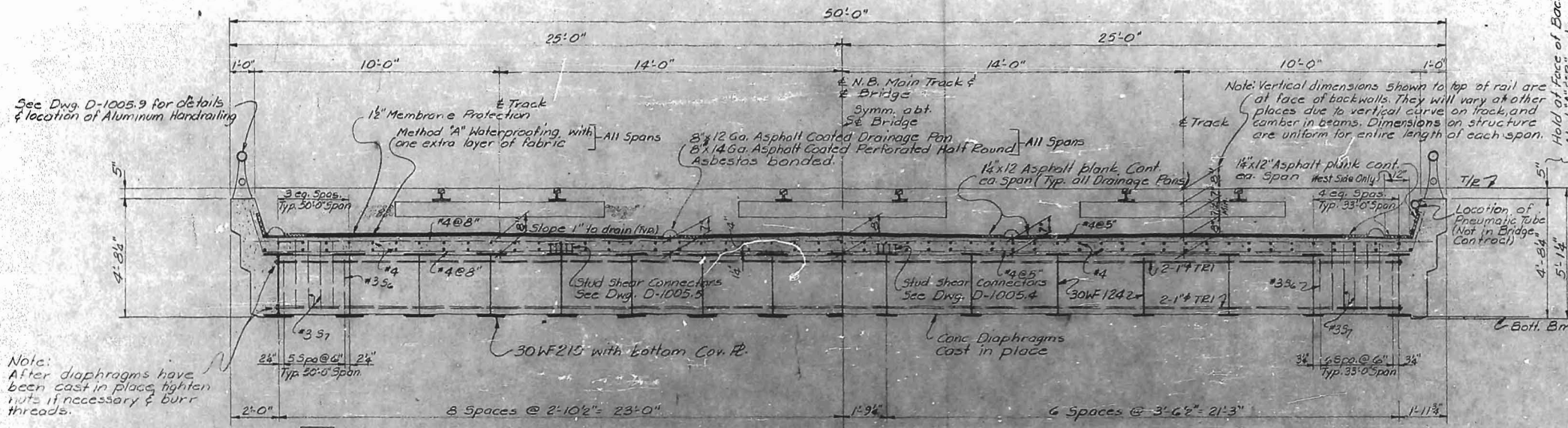
Note: Anchor bolt nuts to be tightened, then backed off 1/8" and bolt threads burred.



ERECTION DETAILS - SPAN "B"
 APPROVED BY: [Signature] CHIEF ENGR. DATE AUG. 21, 1962
 M.W. & S. EASTERN LINES, SOUTHERN RAILWAY COMPANY

MARK	DATE	BY	DESCRIPTION
			As Constructed
REVISIONS			
WHITEHEAD & ZICKEL CONSULTING ENGINEERS 221 SOUTH CHURCH ST. CHARLOTTE, NORTH CAROLINA			
CITY OF CHARLOTTE WEST FOURTH STREET UNDERPASS DETAILS OF STRUCTURAL STEEL WEST SIDE GRADE CROSSING ELIMINATION CHARLOTTE, N.C.			
DES. BY MEG	SOUTHERN RAILWAY	SCALE: NONE	JOB NO. C-152
DRN. BY JHB	M.P. 377.74	DATE: JUNE 1, 1962	DWG NO. D-1005.6
CHKD. BY MEG			





Note:
After diaphragms have been cast in place tighten nuts if necessary & burr threads.

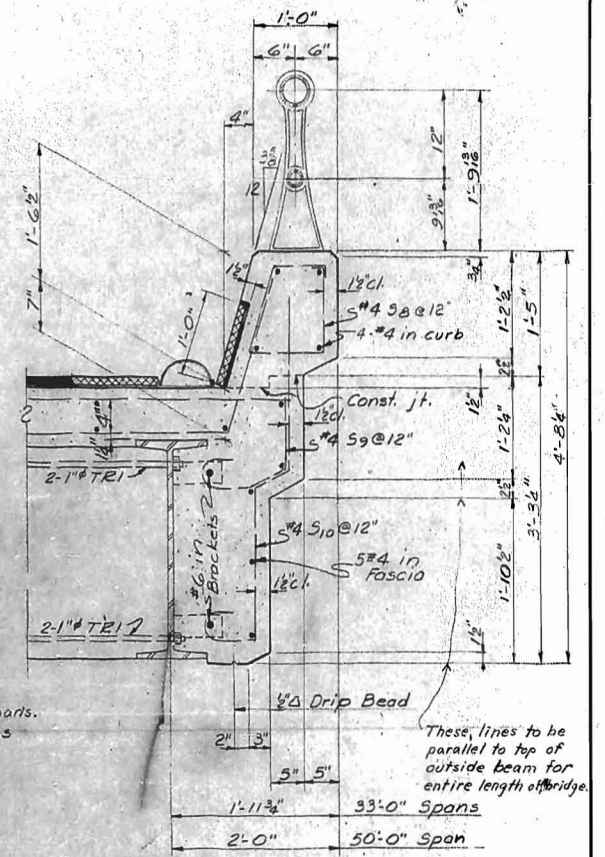
Note: Vertical dimensions shown to top of rail are of face of backwalls. They will vary at other places due to vertical curve on track, and camber in beams. Dimensions on structure are uniform for entire length of each span.

Hold of Face of Backwall Abut. A & B only

HALF SECTION 50'-0" SPAN

HALF SECTION 33'-0" SPANS

SECTION - DECK SLAB
Scale: 3/8" = 1'-0"

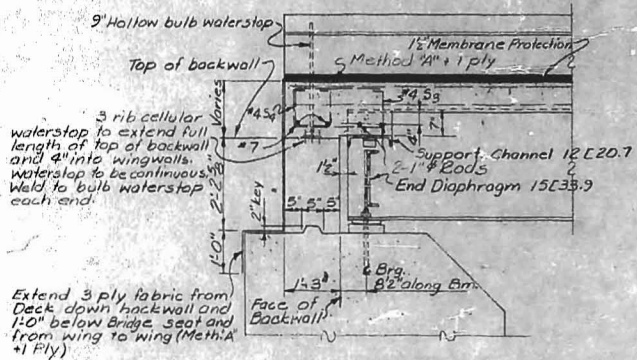


Notes:
Fibre Tubes to be in West extreme panel only, all spans. Remove tubes when forms are stripped.

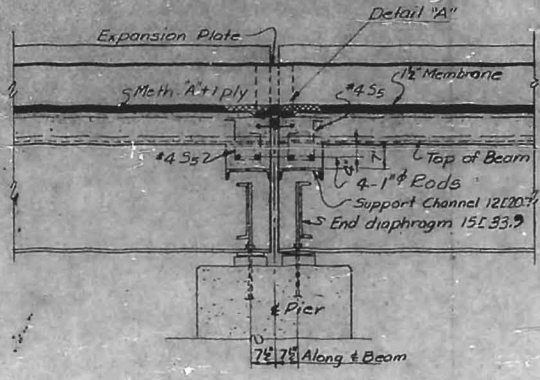
Note: No chamfer on fascia except at top of curb.

DETAIL SECTION
THRU CURB
Scale: 1" = 1'-0"

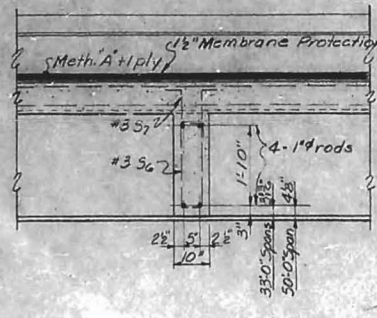
SECTION SHOWING
END DIAPHRAGMS 15 E 33.9
Scale: 1/2" = 1'-0"



SECTION H-H
Scale: 1/2" = 1'-0"

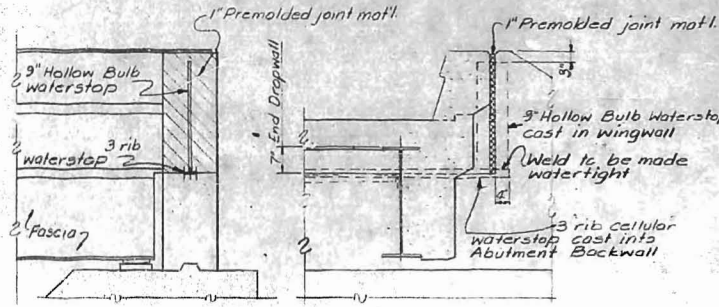


SECTION L-L
Scale: 1/2" = 1'-0"
12" Min.



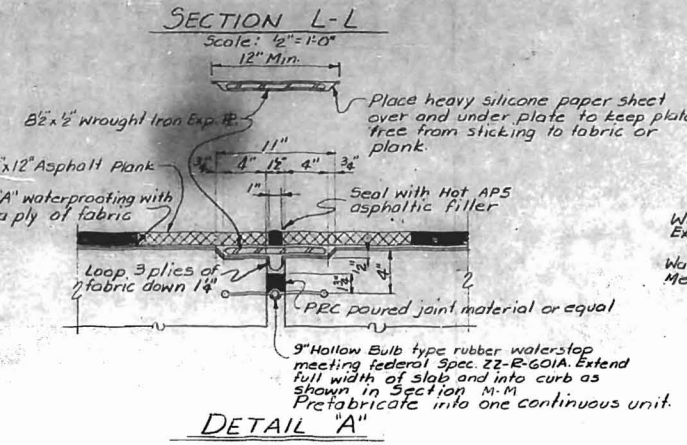
SECTION K-K
Scale: 1/2" = 1'-0"

Notes:
For General notes see Dwg. D-1005.1
Chamfer all exposed edges & corners 3/8"
Work this sheet with Dwg. D-1005.8

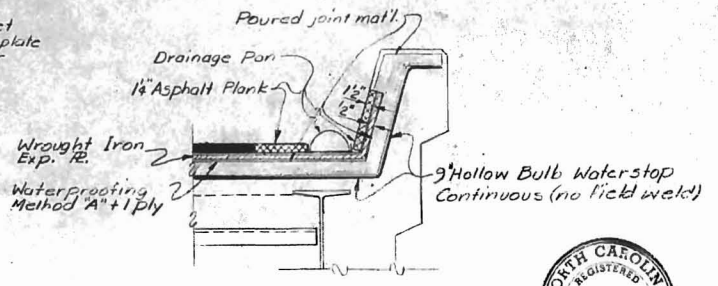


SECTION I-I
Scale: 1/2" = 1'-0"

SECTION J-J
Scale: 1/2" = 1'-0"



DETAIL "A"



SECTION M-M
Scale: 1/2" = 1'-0"



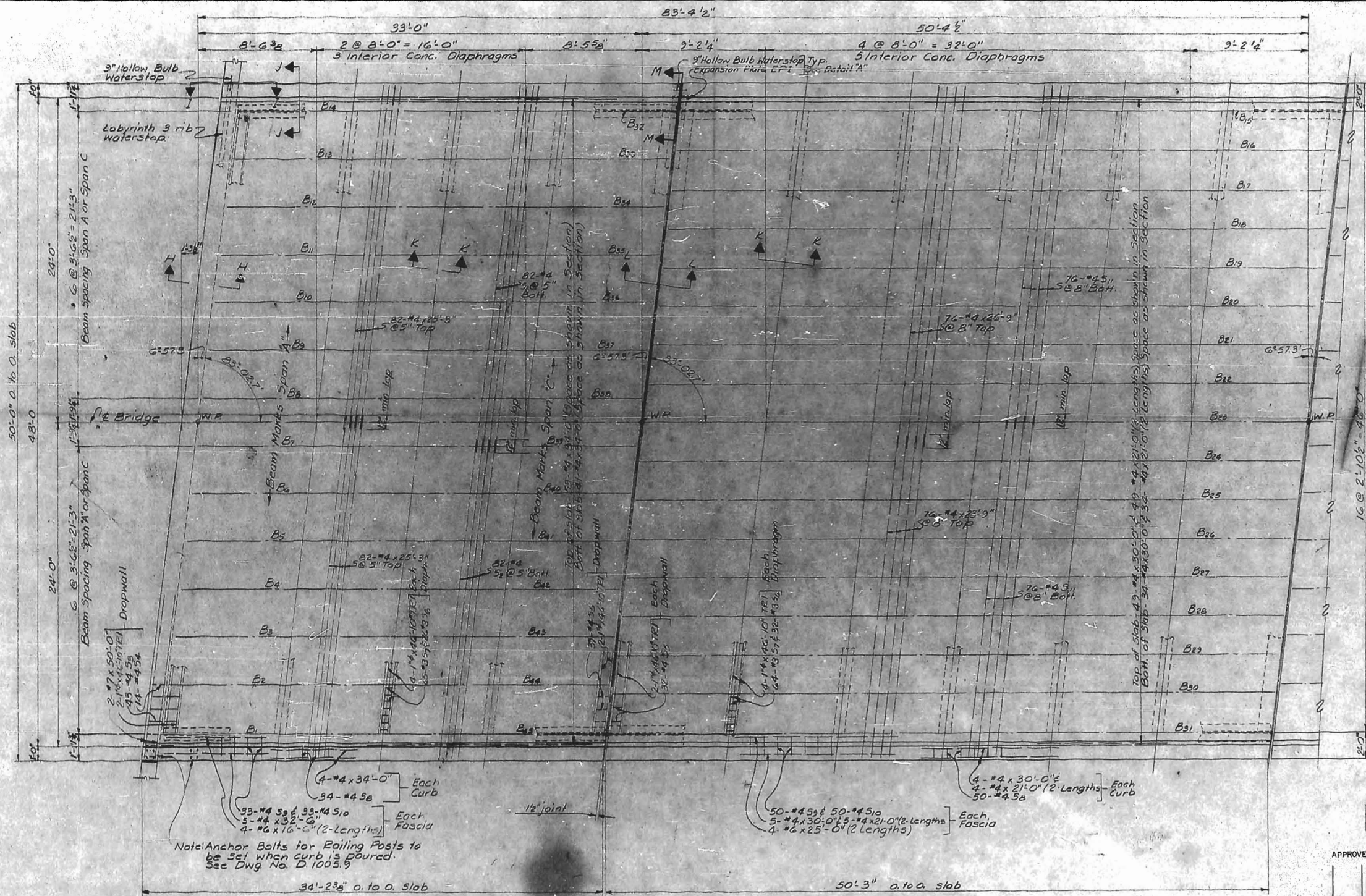
APPROVED BY: [Signature] CHIEF ENGR. DATE: AUG. 21, 1962
M.W.B. & EASTERN LINES, SOUTHERN RAILWAY COMPANY

REVISIONS			
MARK	DATE	BY	DESCRIPTION
			As Constructed

WHITEHEAD & ZICKEL
CONSULTING ENGINEERS
221 SOUTH CHURCH ST.
CHARLOTTE, NORTH CAROLINA

CITY OF CHARLOTTE
WEST FOURTH STREET UNDERPASS
DETAIL OF CONCRETE DECK SLAB
WEST SIDE GRADE CROSSING ELIMINATION CHARLOTTE, N.C.

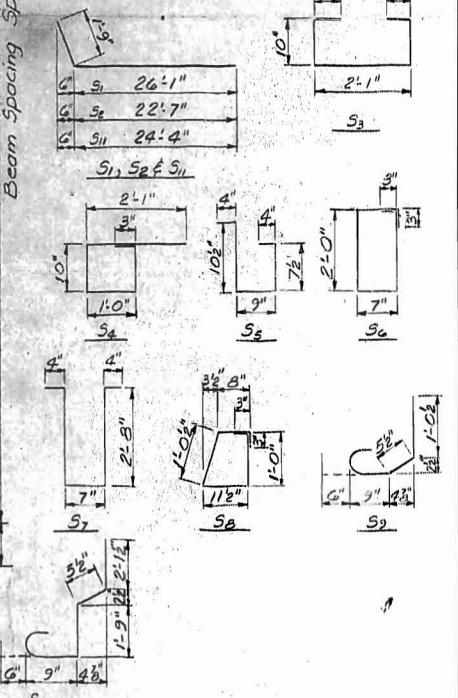
DES. BY MEG	SOUTHERN RAILWAY	SCALE: AS SHOWN	JOB NO. C-132
DRN BY JHB	M.P. 37/74	DATE: JUNE 1, 1962	DWG NO. D-1005.7
CKD. BY MEG			



BILL OF REINFORCING STEEL FOR DECK SLABS A,B,C

Span	Span A	Span B	Span C	Total	Size	Length	Mark	Type
82		82	164	246	#4	27'-10"	S ₁	Bent
82		82	164	328	#4	27'-10"	S ₁	Bent
43		43	86	129	#4	4'-5"	S ₂	
14		14	28	42	#4	3'-0"	S ₃	
39	32	39	110	149	#4	2'-11"	S ₄	
78	160	78	316	394	#4	5'-8"	S ₅	
195	320	195	710	905	#4	6'-7"	S ₆	
68	100	68	236	304	#4	4'-2"	S ₇	
66	100	66	232	298	#4	2'-9"	S ₈	
66	100	66	232	298	#4	5'-7"	S ₉	
		152	152	304	#4	26'-1"	S ₁₁	Bent

164		164	328	#4	25'-3"	S ₁₀	Str.
76		76	152	#4	26'-9"	S ₁₀	
76		76	152	#4	23'-9"	S ₁₀	
101		101	202	#4	30'-0"	S ₁₀	
10		10	20	#4	32'-6"	S ₁₀	
102		102	204	#4	34'-0"	S ₁₀	
		101	202	#4	21'-0"	S ₁₀	
2		2	4	#7	50'-0"	S ₁₀	
8		8	16	#6	16'-6"	S ₁₀	
8		8	16	#6	25'-0"	S ₁₀	Str.



SPAN C-AS SHOWN
SPAN A-ROTATE 180°

SPAN B-AS SHOWN

PLAN-DECK SLAB



APPROVED BY: *[Signature]* CHIEF ENGR. DATE: AUG 21, 1962
M.W.B. EASTERN LINES, SOUTHERN RAILWAY COMPANY

MARK	DATE	BY	DESCRIPTION
			As Constructed

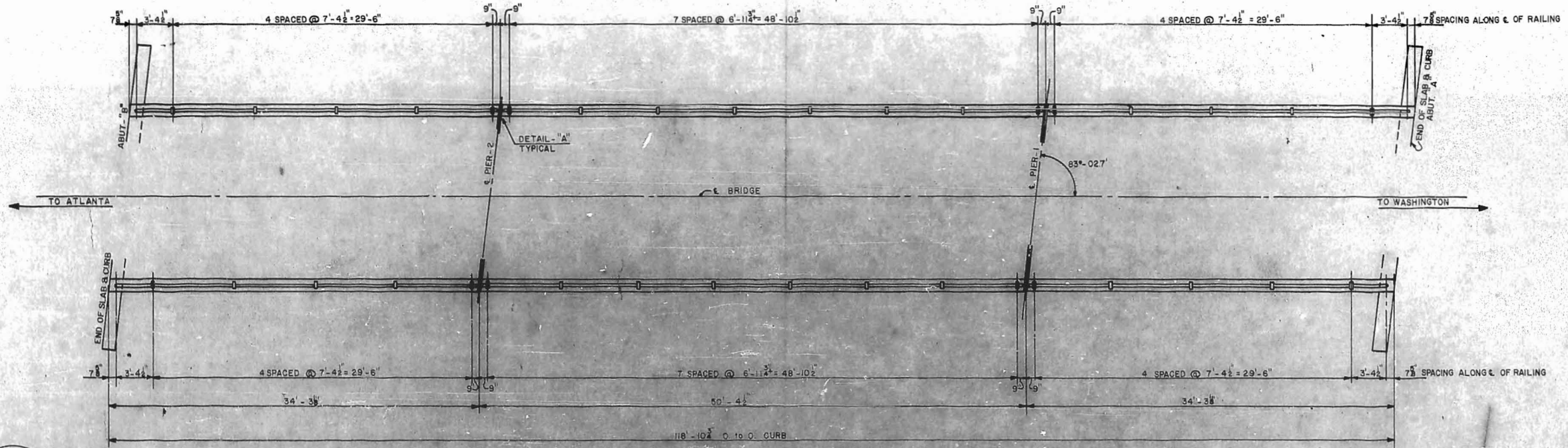
REVISIONS

WHITEHEAD & ZICKEL
CONSULTING ENGINEERS
221 SOUTH CHURCH ST.
CHARLOTTE, NORTH CAROLINA

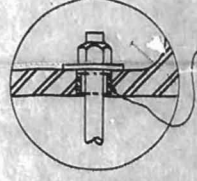
CITY OF CHARLOTTE
WEST FOURTH STREET UNDERPASS
DETAIL OF CONCRETE DECK SLAB
WEST SIDE GRADE CROSSING ELIMINATION CHARLOTTE, N.C.

DES. BY MEG	SOUTHERN RAILWAY	SCALE: 1/8" = 1'-0"	JOB NO. C-132
DRN BY JHB	M.P. 377.74	DATE: JUNE 1, 1962	DWG NO. D-1005.8
CKD. BY MEG			

Work this sheet with Dwg. D-1005.7

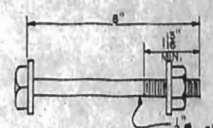


ERECTION PLAN FOR ALUMINUM RAILING



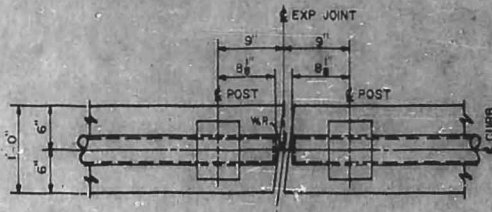
STAINLESS STEEL RING SLIGHTLY SMALLER THAN HOLE IN POST BASE AND SLIGHTLY THINNER THAN THICKNESS OF POST BASE TO BE FURNISHED FOR EACH ANCHOR BOLT.

INSERT - "B"

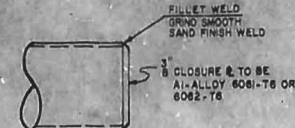


3/4" O.D. x 8" STAINLESS STEEL BOLT WITH HEX NUT AND WASHERS.

ANCHOR BOLT DETAIL



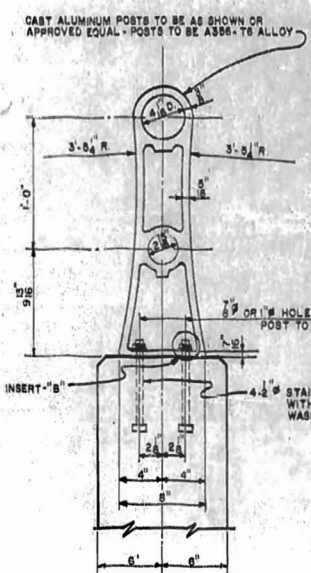
DETAIL "A"



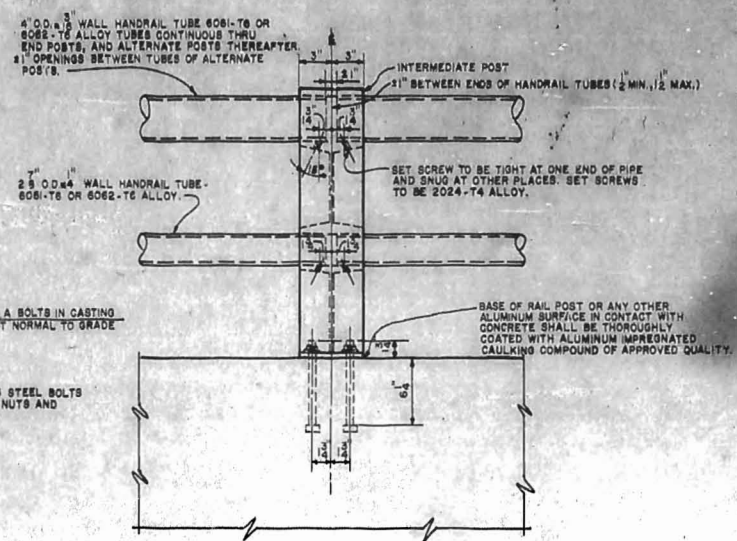
DETAIL END CLOSURE

NOTES FOR RAILING

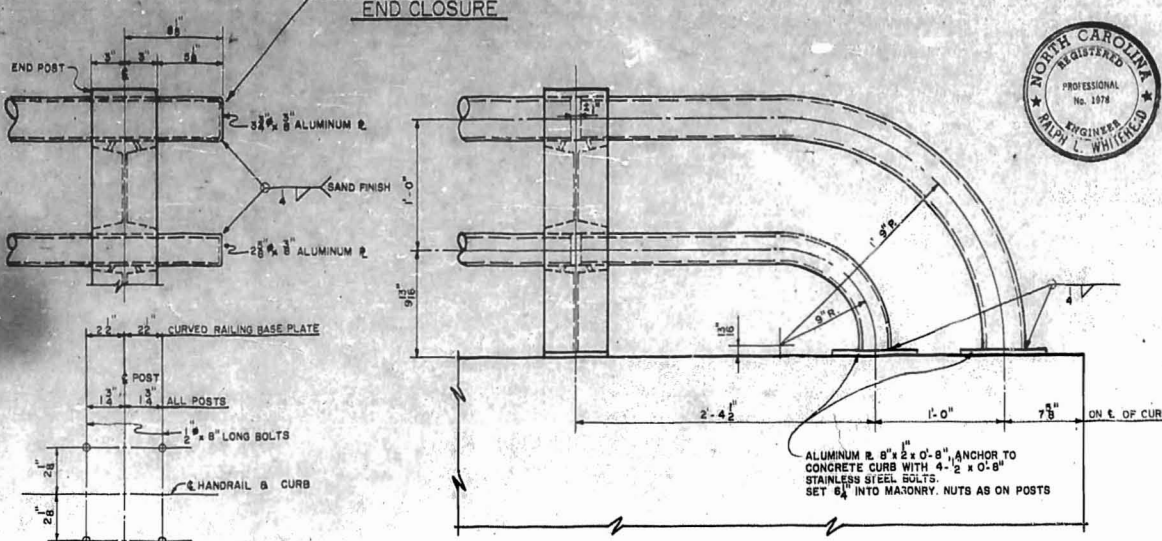
- 1- ROUND TUBULAR RAIL TO BE OF SIZE AND THICKNESS INDICATED.
 - 2- MAXIMUM LENGTH OF RAIL SECTION TO BE TWO PANELS.
 - 3- CAST ALUMINUM POST TO BE AS SHOWN OR AN APPROVED EQUAL.
 - 4- CERTIFIED MILL REPORTS FOR RAILS AND POSTS ARE REQUIRED.
 - 5- METHOD OF MEASUREMENT FOR ALUMINUM: UNLESS OTHERWISE STATED, THE LENGTH OF ALUMINUM RAILS TO BE PAID FOR SHALL BE CONTINUOUS LENGTH MEASURED FROM END TO END OF RAIL, BUT WITHOUT DEDUCTIONS FOR SPACES BETWEEN RAIL SECTIONS.
- TOTAL LENGTH OF DOUBLE BAR RAILING = 235.29



ALUMINUM HANDRAIL AND POSTS



LOCATION SKETCH FOR ANCHOR BOLTS

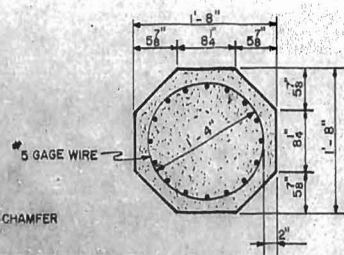
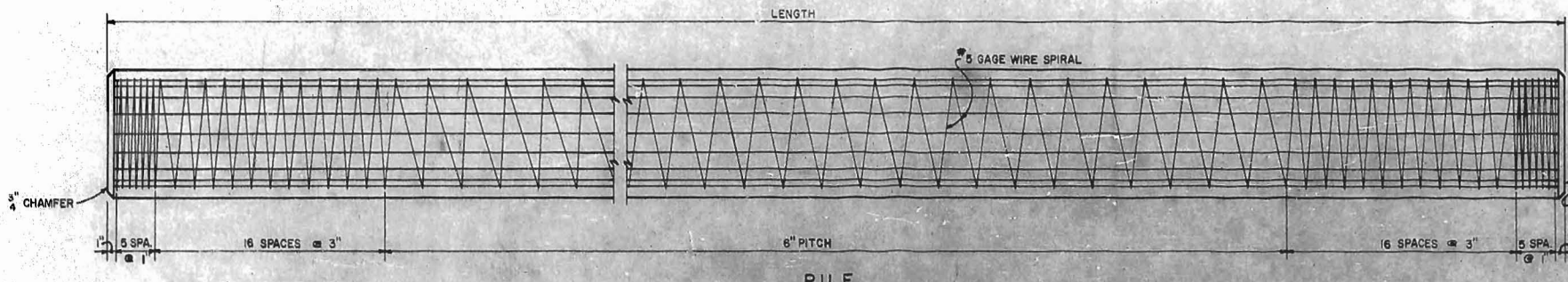


CURVED RAILING DETAIL

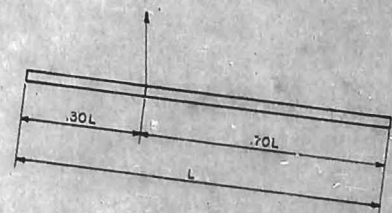


APPROVED BY: *[Signature]* CHIEF ENGR. DATE: 11/13/62
M.W.B.E. EASTERN LINES, SOUTHERN RAILWAY COMPANY

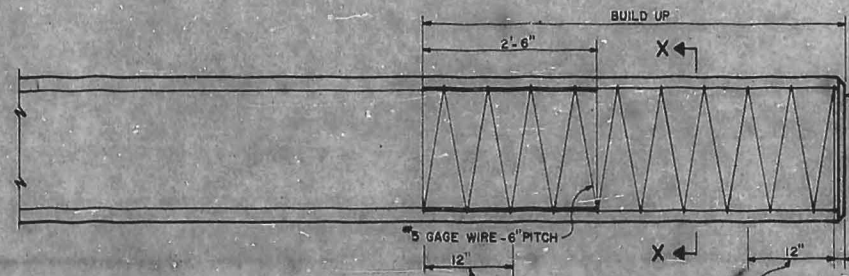
MARK	DATE	BY	DESCRIPTION
			As Constructed
REVISIONS			
WHITEHEAD & ZICKEL CONSULTING ENGINEERS 221 SOUTH CHURCH ST. CHARLOTTE, NORTH CAROLINA			
CITY OF CHARLOTTE WEST FOURTH STREET UNDERPASS DETAIL OF ALUMINUM RAILING WEST SIDE GRADE CROSSING ELIMINATION CHARLOTTE, N.C.			
DES. BY J.H.B.	SOUTHERN RAILWAY	SCALE: NONE	JOB NO. C-152
DRN BY W.T.J.	M.P. 377.74	DATE: JUNE 1, 1962	DWG NO. D-1005.9
CKD. BY M.E.G.			



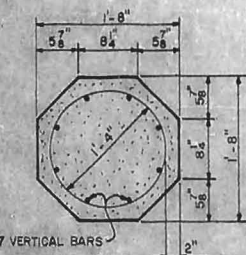
TYPICAL SECTION
USING 16-7/16 CABLES FOR LENGTHS THRU 50 FEET



METHOD OF PICKING UP PILES
UP TO 55 FEET
1- PICK UP POINT



PILE BUILD-UP



SECTION X-X

DESIGN DATA:

CONCRETE: $f'_c = 5000$ LBS. PER SQ. INCH. (AIR-ENTRAINED)
 $f'_c = 2000$ LBS. PER SQ. INCH.
 TENSION = NONE
 CABLES: TENSILE (ULTIMATE) = 250,000 LBS. PER SQ. INCH.
 (APPLIED) = 175,000 LBS. PER SQ. INCH.
 (DESIGN) = 140,000 LBS. PER SQ. INCH.
 IMPACT IN HANDLING = 100%

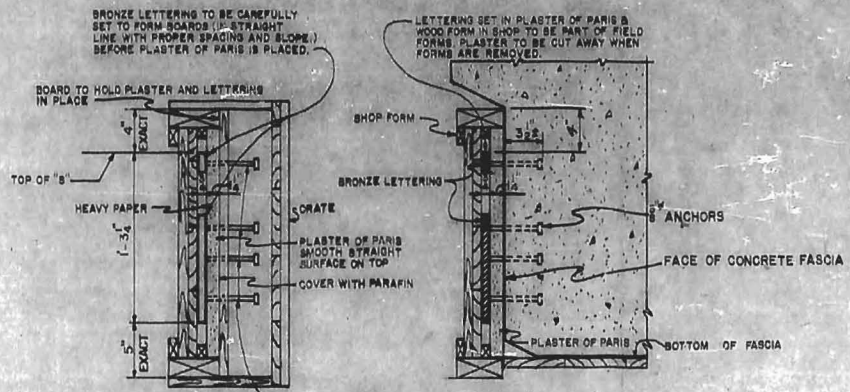
NOTES FOR PRESTRESSED PILES

IN DRIVING PILES, A METHOD APPROVED BY THE ENGINEER SHALL BE USED, WHEREBY THE HEAD OF THE PILE IS NOT DAMAGED.
 BUILD-UP, WHERE NECESSARY, SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS EXCEPT THAT THE REINFORCING STEEL REQUIRED IN THE BUILD-UPS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR THE PILE AND WILL NOT BE PAID FOR AS REINFORCING STEEL.
 ALL MATERIAL AND WORKMANSHIP AS PER THE SPECIFICATIONS OF THE NORTH CAROLINA STATE HIGHWAY COMMISSION AND THE SPECIAL PROVISIONS.
 DEVICES FOR THE LIFTING OF THE PILES FROM THE CASTING BEDS SHALL BE APPROVED BY THE ENGINEER. THESE DEVICES SHALL CONSIST OF INSERTS SET IN THE PILES TO RECEIVE THREADED EYE-BOLTS, OR SIMILAR APPROVED DEVICES. THE USE OF LOOPS OF CABLE CAST IN THE PILES FOR USE AS LIFTING DEVICES WILL NOT BE PERMITTED. THE USE OF SATISFACTORY CLAMPS OR SLINGS WILL BE PERMITTED WHERE THIS IS PRACTICABLE WITHOUT THE USE OF LIFTING DEVICES CAST IN THE PILES. AFTER EYE-BOLTS OR OTHER ATTACHMENTS HAVE BEEN REMOVED THE OPENINGS SHALL BE REPAIRED IN A SATISFACTORY MANNER BEFORE DELIVERY TO THE BRIDGE SITE IN ORDER TO OBTAIN A UNIFORM APPEARANCE.
 FOR NOTE & TYPICAL PATTERN FOR BURNING CABLES SEE TRADE STREET UNDERPASS DWG. D-1003.9

PILES REQUIRED				
LOCATION	NO.	SIZE	LENGTH	LINEAL FT.
ABUT. A	14	20	50'	700'
ABUT. B	14	20	45'	630'
TOTAL				1330

NOTE: LENGTH OF PILES ESTIMATED FOR BIDDING PURPOSES ONLY.
 SEE PILE LOG FOR ORDER LENGTHS & PILE PENETRATION.

PIER	PIER 2	TOTAL REQD	SIZE	LENGTH	MARK	TYPE
80	80	160	10	5'-8"	P1	BENT
8	8	16	8	11'-3"	P2	
8	8	16	8	20'-5"	P3	
138	138	276	5	13'-0"	P4	
8	8	16	5	7'-6"	P5	
5	5	10	5	393'-9"	SPIRAL BENT	
14	14	28	10	26'-6"		STR.
10	10	20	10	20'-6"		
80	80	160	10	16'-0"		
5	5	10	10	14'-0"		
15	15	30	10	8'-0"		
18	18	36	9	49'-6"		
8	8	16	8	49'-6"		
12	12	24	8	9'-0"		
100	100	200	6	8'-6"		
9	9	18	6	8'-0"		
4	4	8	4	49'-6"		
8	8	16	4	24'-9"		
51	51	102	4	8'-6"		STR.
20	20	40	4	3'-2"		



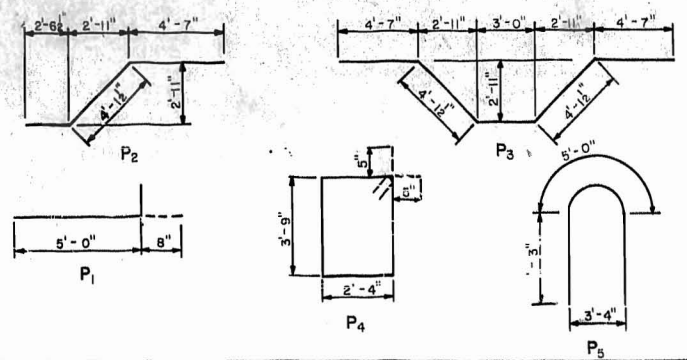
TYPICAL SECTION SHOWING FORMS FOR LETTERING
 TYPICAL SECTION SHOWING METHOD FOR PLACING LETTERS



ELEVATION SHOWING POSITION OF LETTERING FROM C OF PIER
 2-SETS OF LETTERS SPELLING "SOUTHERN" REQUIRED

- NOTES FOR BRONZE LETTERING:
- SET OF LETTERS TO BE SECURELY CRATED SO THAT IT WILL NOT MOVE DURING SHIPMENT.
 - THE SET OF LETTERING SPELLING THE WORD "SOUTHERN" SHALL BE OF RECTANGULAR SECTION 3/4" THICK, AND OF CAST BRONZE IN DARK STATUARY BROWN COLOR WITH SAND TEXTURE.
 - LETTERS SHALL BE FREE FROM WARPS AND OTHER DEFECTS, CORNERS TO BE SHARP, LINES STRAIGHT, AND CURVES FAIR.
 - THE STYLE OF LETTERING SHALL BE IN GENERAL AS SHOWN AND LOCATED IN "ELEVATION" ON THIS SHEET.
 - LETTERING TO BE FURNISHED BY THE SOUTHERN RAILWAY COMPANY AND PLACED BY THE STRUCTURAL CONTRACTOR.

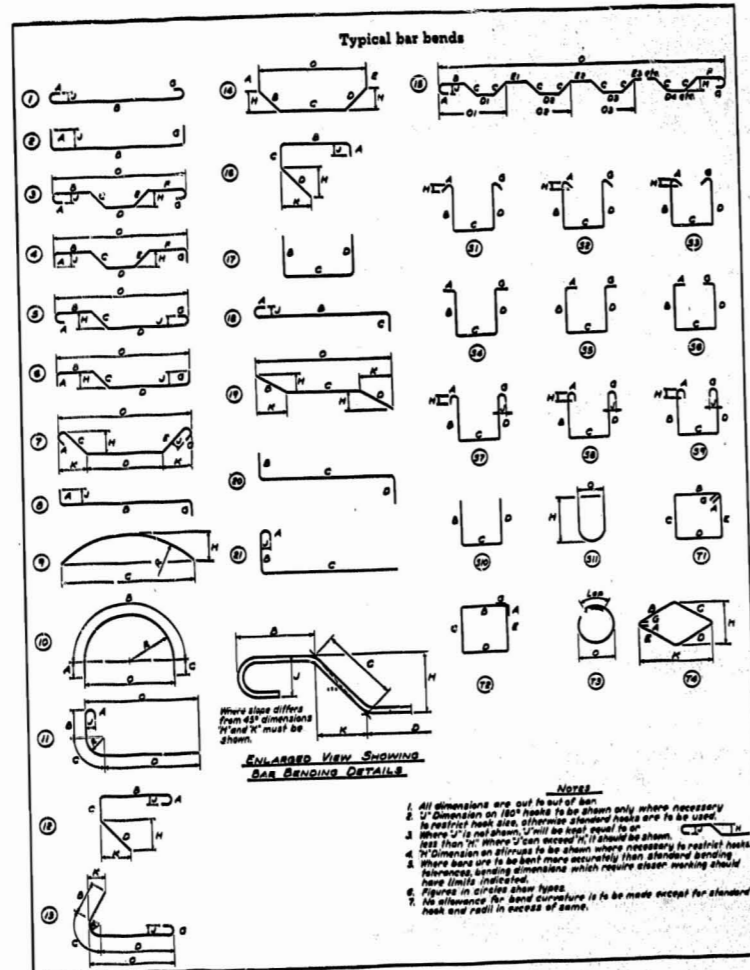
DETAILS FOR BRONZE LETTERING



APPROVED BY: *[Signature]* CHIEF ENGR. DATE: JUN 21, 1962
 M.W. & S. EASTERN LINES, SOUTHERN RAILWAY COMPANY

MARK	DATE	BY	DESCRIPTION
			AS CONSTRUCTED
REVISIONS			
WHITEHEAD & ZICKEL CONSULTING ENGINEERS 221 SOUTH CHURCH ST. CHARLOTTE, NORTH CAROLINA			
CITY OF CHARLOTTE WEST FOURTH STREET UNDERPASS DETAIL FOR CONCRETE PILES & BRONZE LETTERING WEST SIDE GRADE CROSSING ELIMINATION CHARLOTTE, N.C.			
DES. BY M.E.G.	SOUTHERN RAILWAY	SCALE: AS SHOWN	JOB NO. C-132
DRN BY W.T.A.	M.P. 377.74		
CKD BY M.E.G.	DATE: JUNE 1, 1962	DWG NO D-1005.10	

REFABCO, INC.



REFABCO, INC.
CHARLOTTE, N. C.

RETAINING WALLS

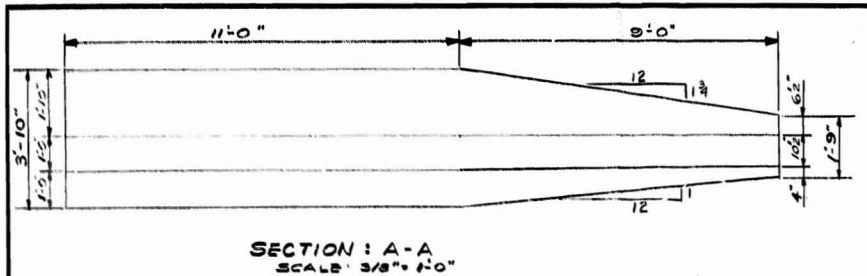
ITEM NO.	PCB.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	O	WEIGHTS
1		3	3.4	300	17		1.7	1.9									
2			5.6	301	17		1.3	4.3									
3			4.9	302	17		10	3.11									
4			4.7	303	17		1.6	3.1									
5			4.4	304	17		1.6	2.10									
6			4.1	305	17		1.6	2.7									
7			3.10	306	17		1.6	2.4									
8		3	1.11	307	17		8	1.3									
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
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20																	
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22																	
23																	
24																	
25																	
26																	
27																	
28																	

APPROVED NOT APPROVED
 APPROVED AS CORRECTED
 REVISE AND RESUBMIT

Checked by _____
 Date 5-20-63

WHITEHEAD & ZICKEL
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

STRUCTURE WEST SIDE GRADE CROSSING SHIP _____ DATE 3-8-63
 SHIP TO BLYTHE BROS. Co. ROUTE _____ CONT. NO. CY8855
 ADDRESS CHARLOTTE, N.C. MADE BY M.C. SHEET NO. D.1 OF _____
 FORM 100-100

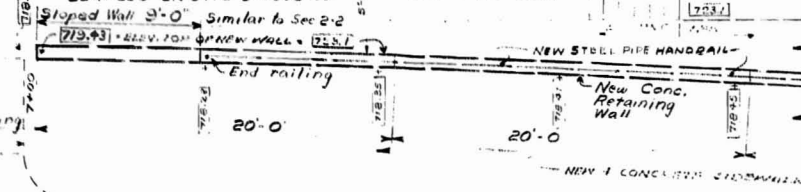


SECTION A-A
SCALE 3/8" = 1'-0"

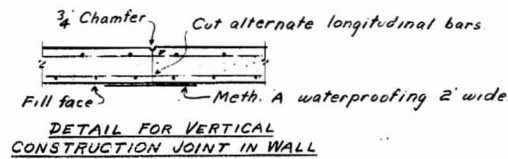
SOUTHERN RAILWAY COMPANY
FRAUGHT DEPOT BUILDING

SEE DWG. D-1004.11 FOR
DETAILS OF WORK IN THIS AREA

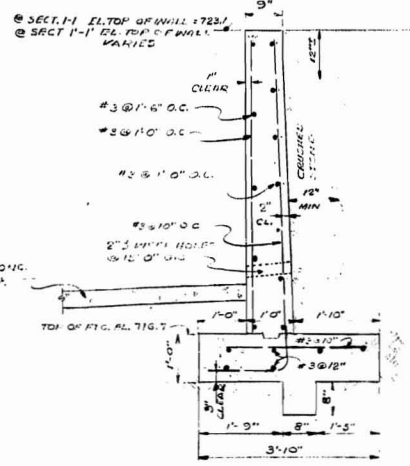
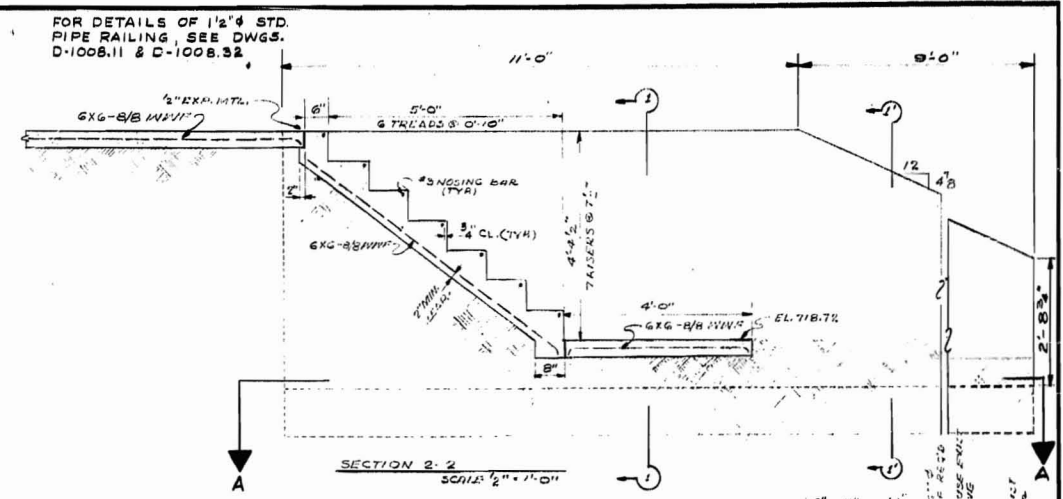
NOTE:
USE 1 1/2" STANDARD STEEL PIPE
HANDRAILING ON RETAINING
WALL, SIMILAR TO RAILING
DETAILED ON DWG D-1008.32



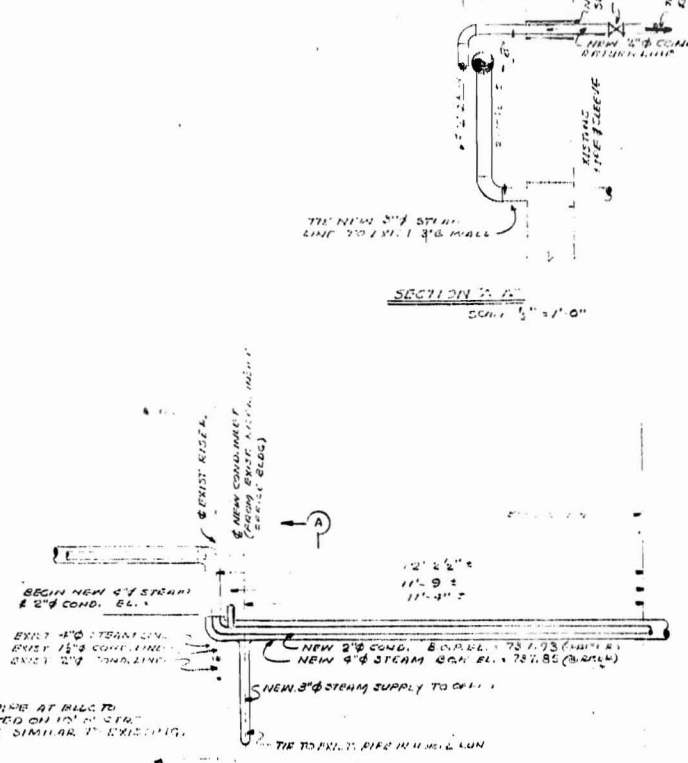
ENLARGED PLAN @ RETAINING WALL
FRONT OF SOUTHERN RAILWAY FRAUGHT DEPOT
SCALE 1/8" = 1'-0"



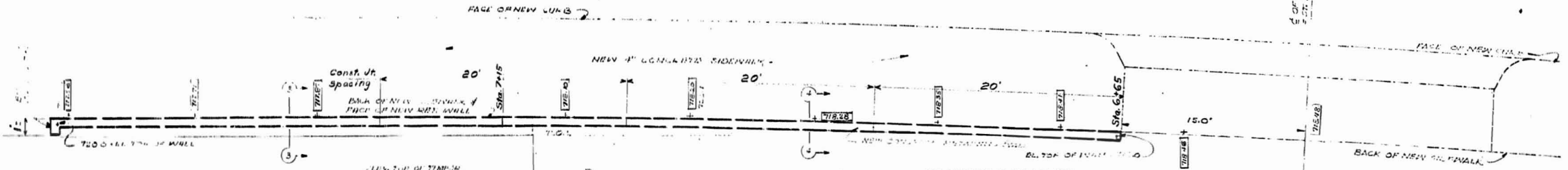
NOTE: SEE DWG. D-1004.11 FOR
DETAILS OF WORK IN THIS AREA



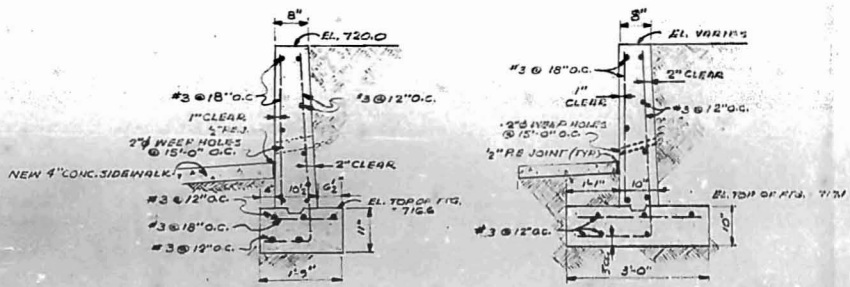
SECTION 1-1
SCALE 5/8" = 1'-0"



SECTION 3-3 (STR. 7+15 TO 7+51.5)
SCALE 1/2" = 1'-0"



ENLARGED PLAN @ RETAINING WALL
FRONT OF SOUTHERN RAILWAY FRAUGHT DEPOT
SCALE 3/8" = 1'-0"



SECTION 3-3 (STR. 7+15 TO 7+51.5)
SCALE 1/2" = 1'-0"

SECTION 4-4 (STR. 6+65 TO 7+15)
SCALE 1/2" = 1'-0"

Prints rec'd with letter 5-20-63
Correspondence file No. 8-100

5-6-63 MEG	Added Construction Joints & detail		
5-6-63 MEG	Changed wall detail, elevation & hand rail length		
MARK	DATE	BY	DESCRIPTION
REVISIONS			
WHITEHEAD & ZICKEL CONSULTING ENGINEERS			
221 SOUTH CHURCH ST. CHARLOTTE, NORTH CAROLINA			
CITY OF CHARLOTTE			
RETAINING WALLS AND STEPS AT FREIGHT STATION			
WEST SIDE GRADE CROSSING ELIMINATION		CHARLOTTE, N.C.	
DES. BY H.C.A.	SOUTHERN RAILWAY	SCALE: AS SHOWN	JOB NO. C-132
DRN. BY H.C.A.	M.P. 377.74	DATE: JUNE 1, 1962	DWG NO. D-1004.12
CHKD. BY R.L.W.			

Material Req	
8" 14 Ga AZC CMP FAC Perf 1 pc @ 12'-3", 1 @ 11'-3", 1 @ 11', 5 @ 10'	845'
8" 14 Ga AZC CMP FAC Unperf 9 pcs @ 10', 1 @ 6', 2 @ 3'	102'
2 Std 90° Elbows 2 Special Elbows (See plans for various sizes) 4 Special Tees	
12 Ga Standard Deck Pans FAC Perf 44 Pans @ 10" 4 Pans @ 10" with end cap one end on 4 Pans @ 10" with end cap 1" stub B one end	440' 40' 40' 520'
8" 12 1/2 Ga AZC CMP FAC 1/2 Round Deck Pan Covers 232 pcs @ 2' 6 pcs @ 2' with end cap one end on	464' 16' 180'
30 Connecting Bands FAC	

Elevations & Grade shall be set in field by Engineer

CMP = Corrugated Metal Pipe All pipe is perforated unless otherwise noted.
 AZC = Asbestos Zinc Cload
 FAC = Fully Asphalt Coated
 P = Perforated UR = Unperforated
 Unperforated pipe is paved unless otherwise noted.
 CMP is 8" 14 Ga unless otherwise noted.
 Connecting Bands are FAC.
 CMP shall conform to specs of AASHTO M136 & NC State Hwy Comm 412-5.16j.
 Paving shall form a smooth invert and shall have a min. thickness of 6" above the crests of the corrugations.
 Lay pipe on 1% grade or more with perforations down.
 Deformations must not be filled with asphalt.
 For details of Pans & Covers see Std Deck Drain drawings

NO.	DATE	BY	REVISION
1	10/4/63	TSC	

SCALE: No. 1" = 10'-0"

CHIEF ENGINEER: TSC DATE: 9-11-63

DRAWN: TSC DATE: 9-11-63

CHECKED: TSC DATE: 9-11-63

APPROVED: TSC DATE: 9-11-63

BY: M.B.C. DATE: 10-21-63

RALPH WHITEHEAD & ASSOCIATES
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

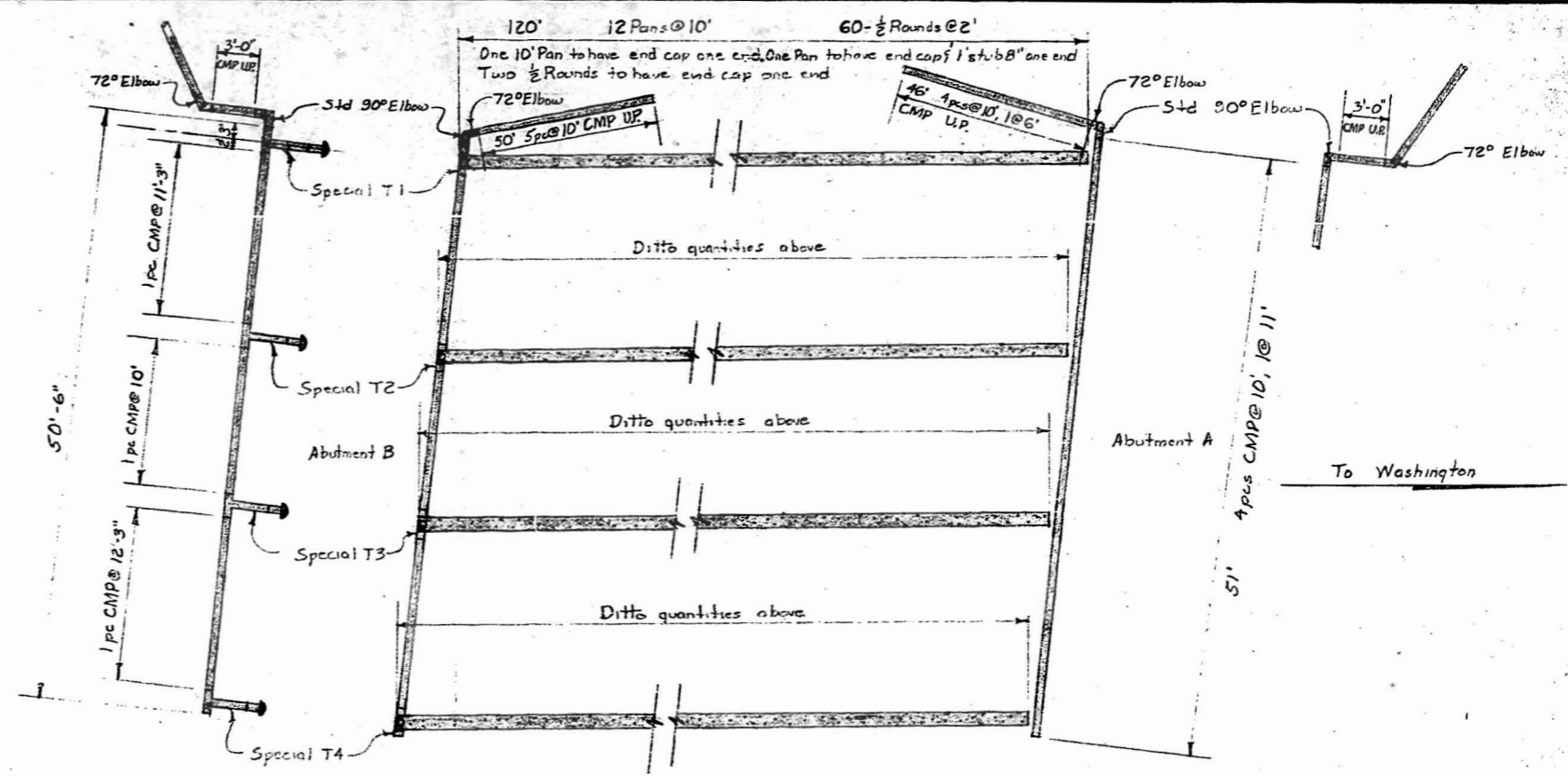
ORDER NO. 09-8724 Rel. 1

REPUBLIC STEEL CORPORATION
 CULVERT DIVISION

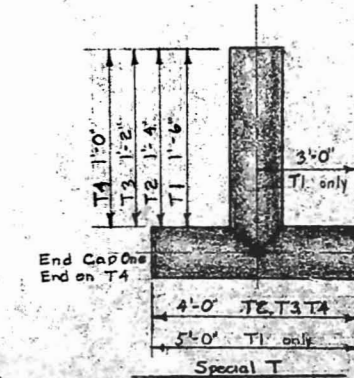
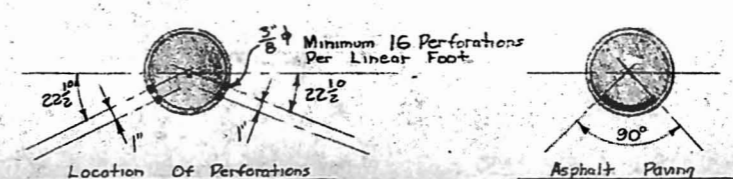
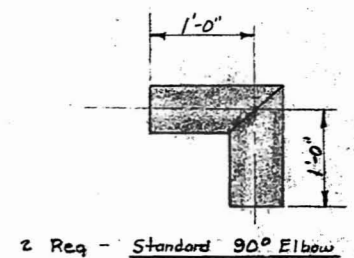
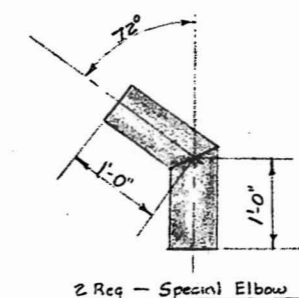
West Side Grade Crossing Elimination CMP
 Drainage Layout of:
 Abutment A & B W/ Fourth St. Bridge

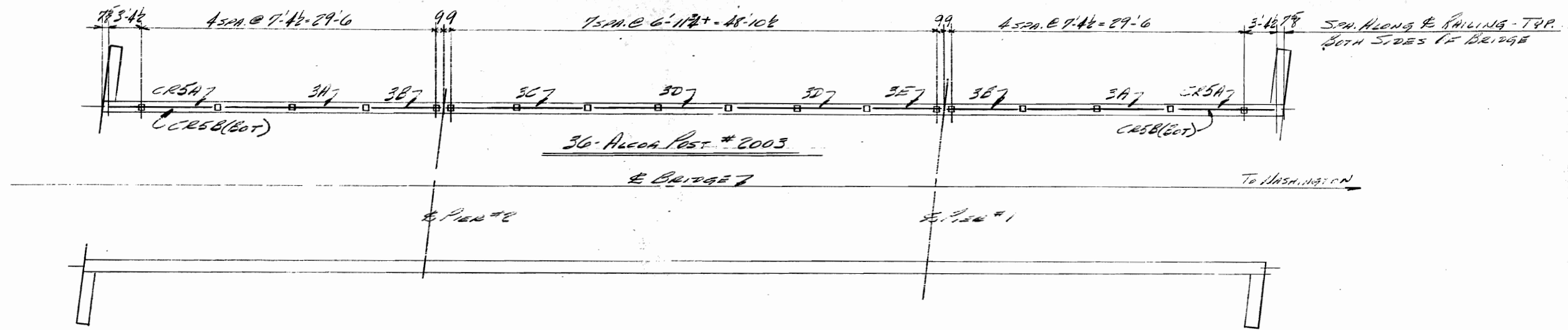
APPROVED NOT APPROVED

APPROVED AS CORRECTED REVISE AND RESUBMIT



Elevation
 Plan
 Abutment A & B CMP Drainage Layout
 (See Draw D-1005.1)





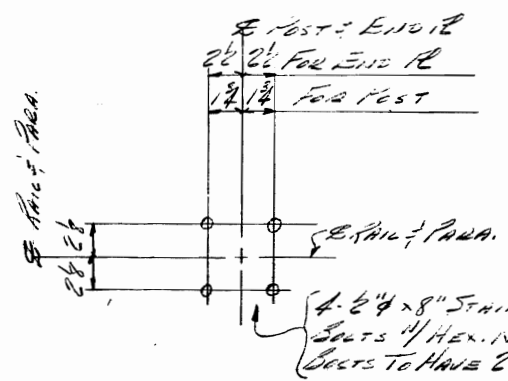
PLAN
POST SET NORMAL TO GRADE

MATERIAL LIST

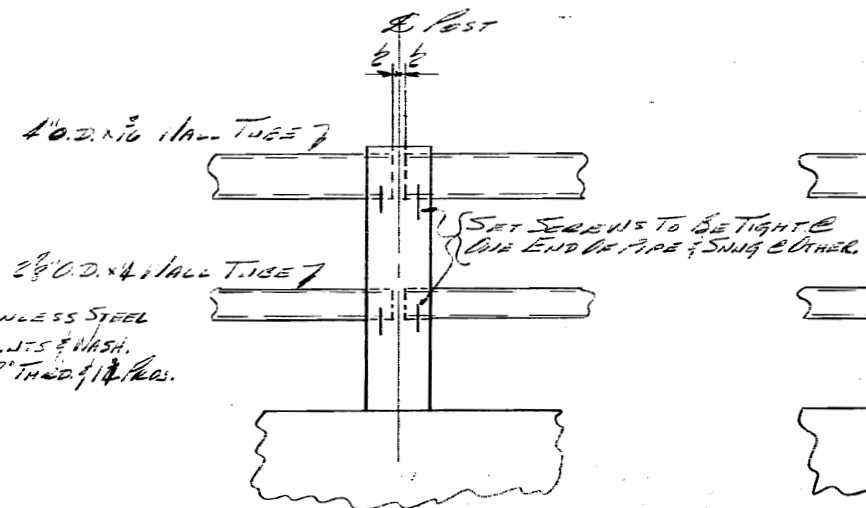
- 4 - 4" O.D. x 3/16" WALL TUBE x 14'-8" NR. 3A
- 4 - 4" O.D. x 3/16" WALL TUBE x 7'-11 1/2" NR. 3B
- 2 - 4" O.D. x 3/16" WALL TUBE x 14'-0 1/2" NR. 3C
- 4 - 4" O.D. x 3/16" WALL TUBE x 13'-10 1/2" NR. 3D
- 2 - 4" O.D. x 3/16" WALL TUBE x 7'-7" NR. 3E

- 4 - 2 1/2" O.D. x 4" WALL TUBE x 14'-8" NR. 3A
- 4 - 2 1/2" O.D. x 4" do do x 7'-11 1/2" NR. 3B
- 2 - 2 1/2" O.D. x 4" do do x 14'-0 1/2" NR. 3C
- 4 - 2 1/2" O.D. x 4" do do x 13'-10 1/2" NR. 3D
- 2 - 2 1/2" O.D. x 4" do do x 7'-7" NR. 3E

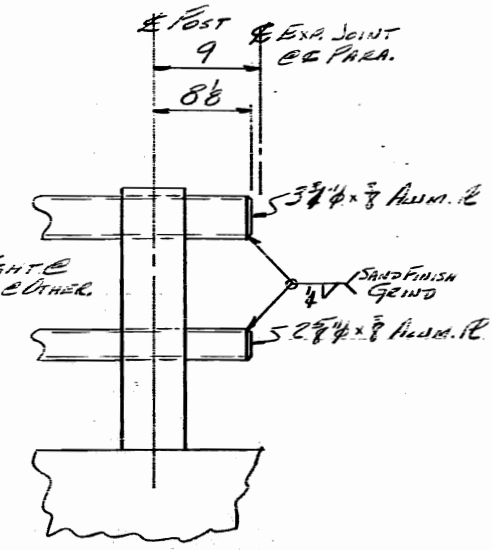
APPROVED NOT APPROVED
 REVISE AND RESUBMIT
 Checking is only for conformance with the design details of the project and compliance with the information given in the Contract Documents. Contractor is responsible for conditions to be met and conditions at the job site for information and for verification of the fabrication processes or to techniques of construction and for verification of the work of all trades.
 BY: M.E.B.
 DATE: 10-21-63
 RALPH WHITEHEAD & ASSOCIATES
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA



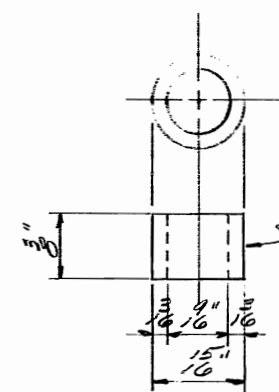
ANG. BOLT LOCATION DETAIL



TOP DETAIL @ RAIL JOINT



TOP DETAIL @ EXP. JOINT



POST ANCHOR BOLT HOLE INSERT

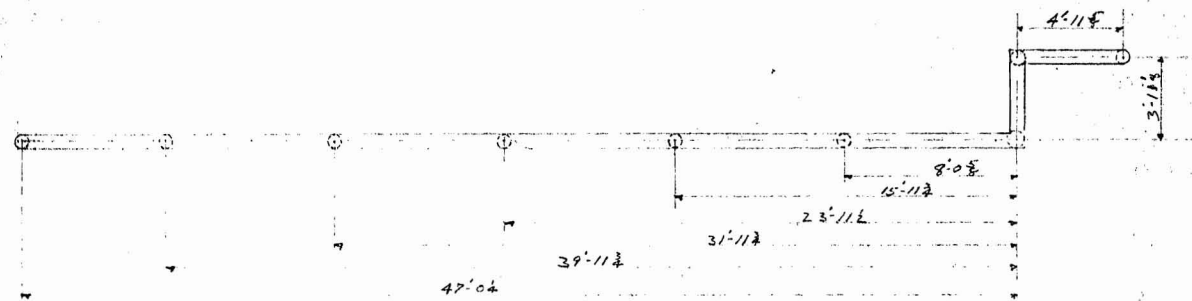
STAINLESS STEEL

- 36 - ALCOA POST #2003
- 176 - 2 1/2" x 4" STAIN. STEEL ANCS. 1/2" STAIN.
- STEEL HEX. NUTS & 2" STAIN. WASH. EACH.
- 144 - STAINLESS STEEL INSERTS (SEE DETAIL)
- 8 - 3 3/4" x 3/8" ALUM. LB. } END CAPS
- 8 - 2 1/2" x 3/8" ALUM. LB. }

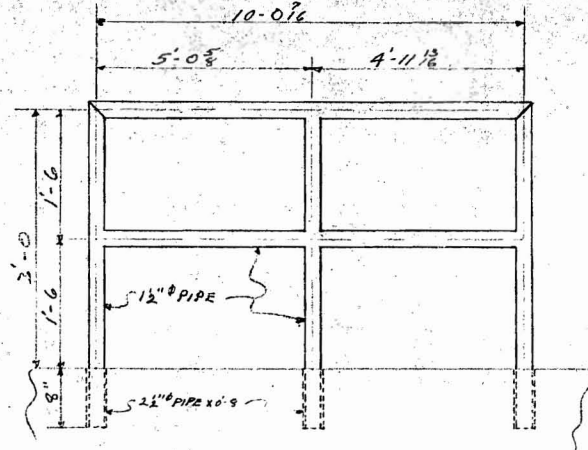
NOTE:

FOR GEN. NOTES SEE DET. SHEET (5139A)
 FOR END BEND DET. SEE SHEET CR5.

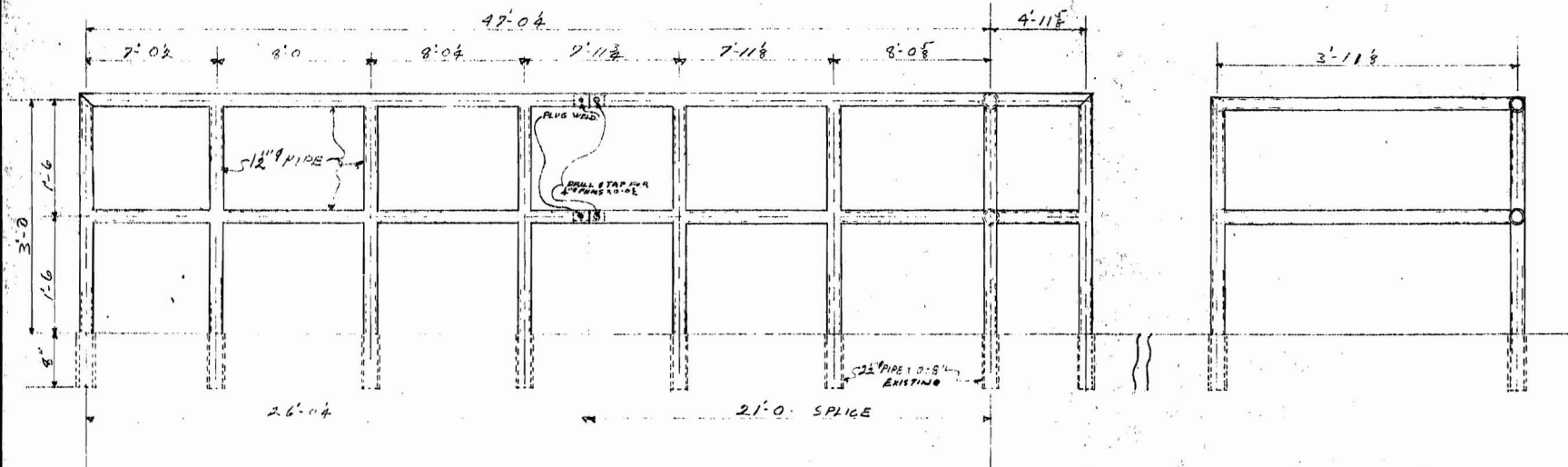
CITY OF CHARLOTTE, N.C.		
WEST GARTH STREET UNDERPASS		
SCALE	APPROVED BY	DRAWN BY
DATE	REVISION	
SHANDERS OIL CO.		
SHANDERS OIL CO. NO. 5139A 3 OF 3		



PLAN



ONE PIPE RAIL - R2



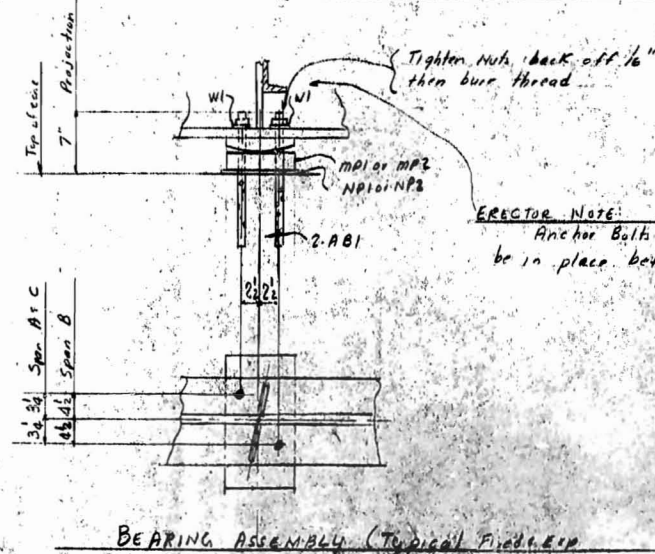
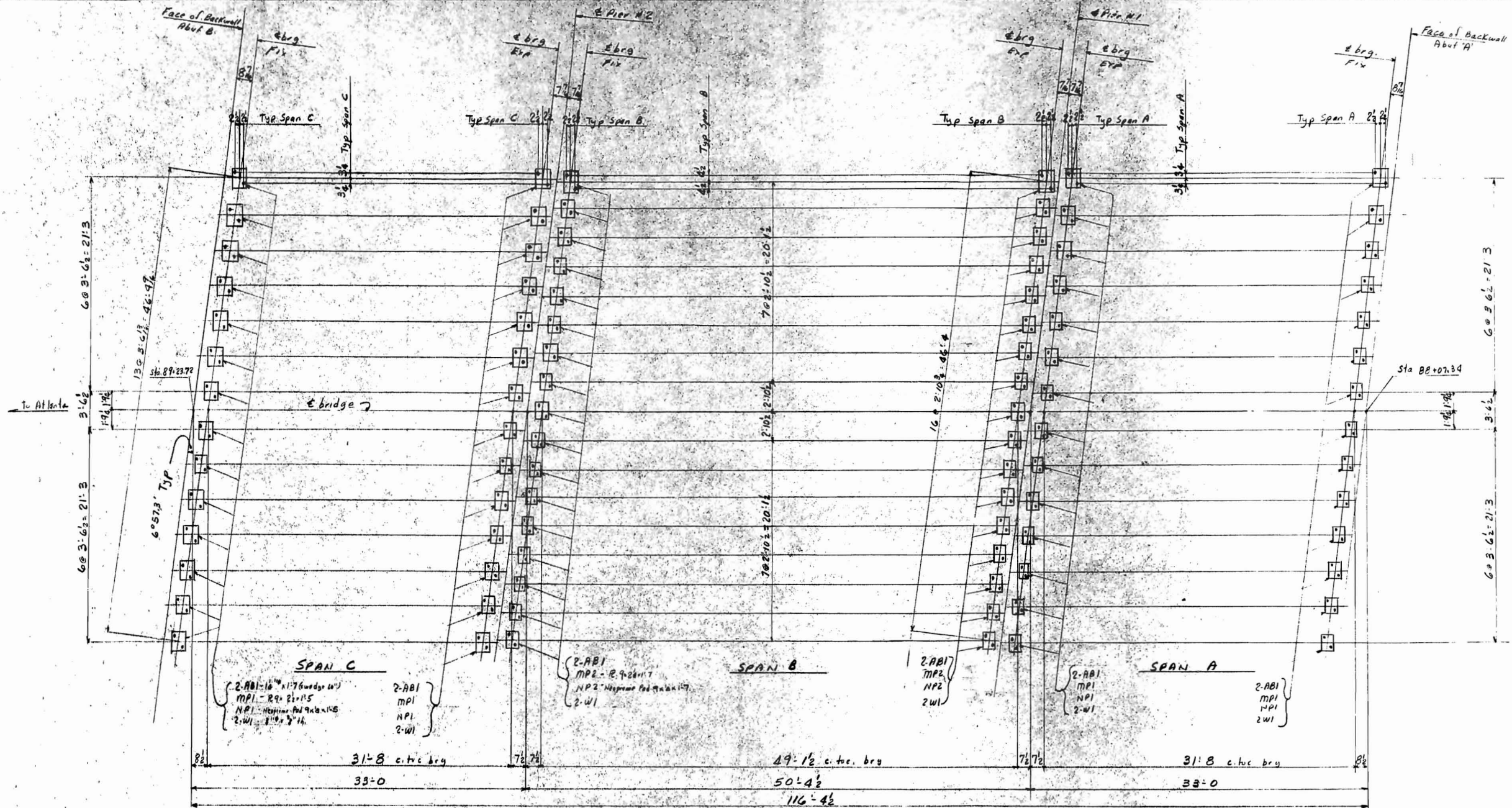
ONE PIPE RAIL - R1

NOTE:
 Vic flush type joints welded & ground smooth.
 Caulk posts with molten lead.
 Field paint with black Spooderamel, Glidden No 4500.

APPROVED NOT APPROVED
 APPROVED AS CORRECTED
 REVISE AND RESUBMIT
 Checking is only for conformance with the design concept of the project and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and corrected at the job site for discrepancies that surface solely in the fabrication process or in techniques of construction; and for coordination of the work of all trades.
 BY: MCE
 DATE: 9-27-63
 RALPH WHITEHEAD & ASSOCIATES
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

BILL OF MATERIAL						
NO. PCS.	MATERIAL	LENGTH (FT. INCH)	MARK	NOTES	CUT FROM	STATUS
ONE PIPE RAIL R1						
2	12" PIPE	3 92 R1				
2	DO	3 82 Y				
2	DO	21 07				
1	DO	6 04				
1	DO	7 02				
1	DO	8 02				
1	DO	8 02				
1	DO	4 23				
1	DO	3 33				
1	DO	7 18				
1	DO	8 05				
1	DO	4 02				
1	DO	3 18				
1	DO	5 12				
1	DO	4 12				
2	12" PIPE	0 6				
4	1/2" PINS	0 02				
ONE PIPE RAIL R2						
2	12" PIPE	3 92 R2				
1	DO	3 82 Y				
1	DO	10 2				
1	DO	5 02				
1	DO	4 18				

PRINTS				SINCE MIW 1940	MECKLENBURG IRON WORKS CHARLOTTE, N. C. STEEL FABRICATORS ENGINEERS ERECTORS
BY	APPROVAL	ERECTION	SHOP INQUIRY		
HOLES: _____ UNLESS NOTED RIVETS: _____ UNLESS NOTED SHOP PAINT: <u>DRY-BLONDE</u> Glidden No 4570 FIELD CONNECTIONS: <u>BOLTS</u> ERECTION BY: <u>M.I.W.</u> INSPECTION BY: <u>M.I.W.</u>					RETAINING WALL RAILS W. 4 TH ST. AT SOUTHERN RAILWAY OFFICE WALL - CHARLOTTE, N.C. CONTRACTORS: <u>CROWDER CONST. CO.</u> ARCHITECT: <u>OWHELS</u> MADE BY: <u>DL5</u> CHECKED BY: _____ DATE: <u>9-16-63</u> CONT. NO. <u>R-1227</u> SHEET <u>R1</u> OF <u>1</u>



NOTE: All shipping marks are suffixed by letter © thus MPI©, MP2©, AB1©

APPROVED NOT APPROVED
 APPROVED AS CORRECTED
 REVISE AND RESUBMIT

Checking is only for conformance with the design concept of the project and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and corrected at the job site for information that pertains safety to the fabrication process or to techniques of construction and for coordination of the work of all trades.

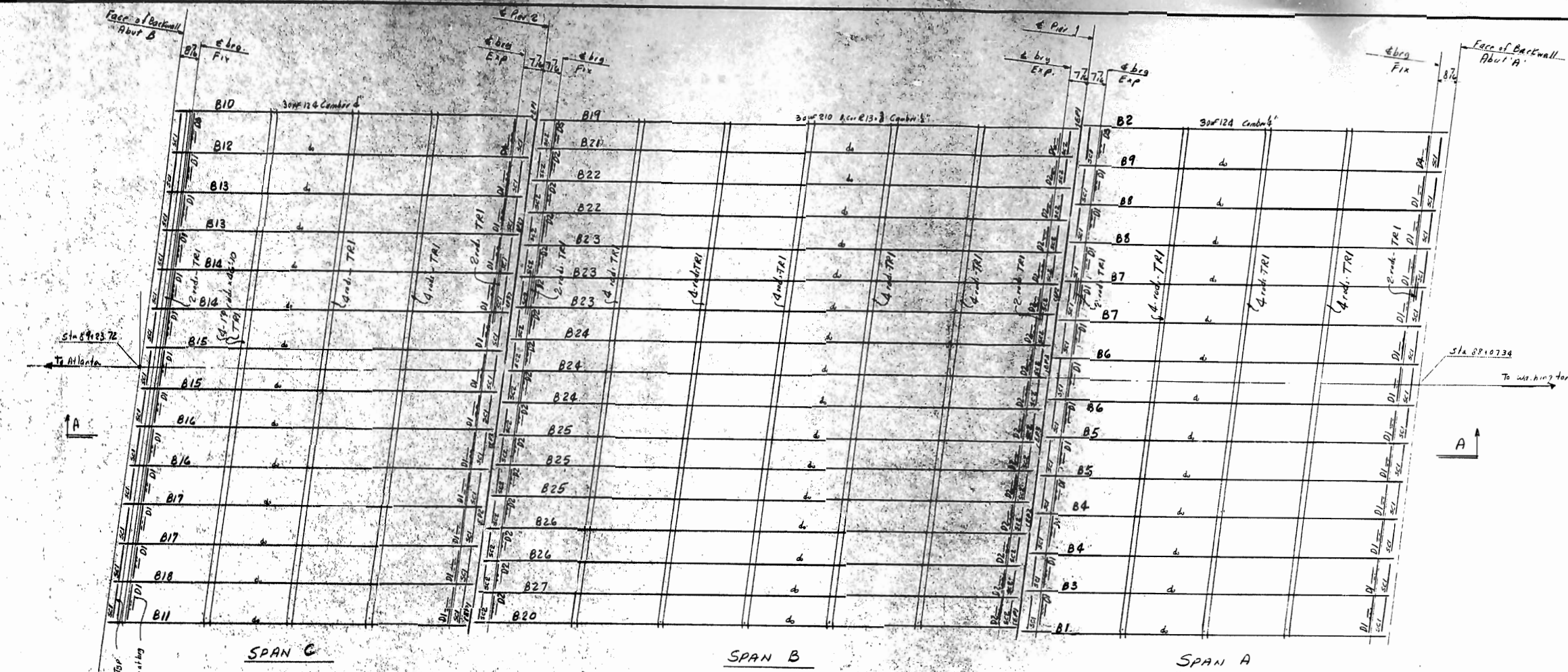
BY: M.S.D.
 DATE: 6-20-67

WHITE, J. J. & ASSOCIATES
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

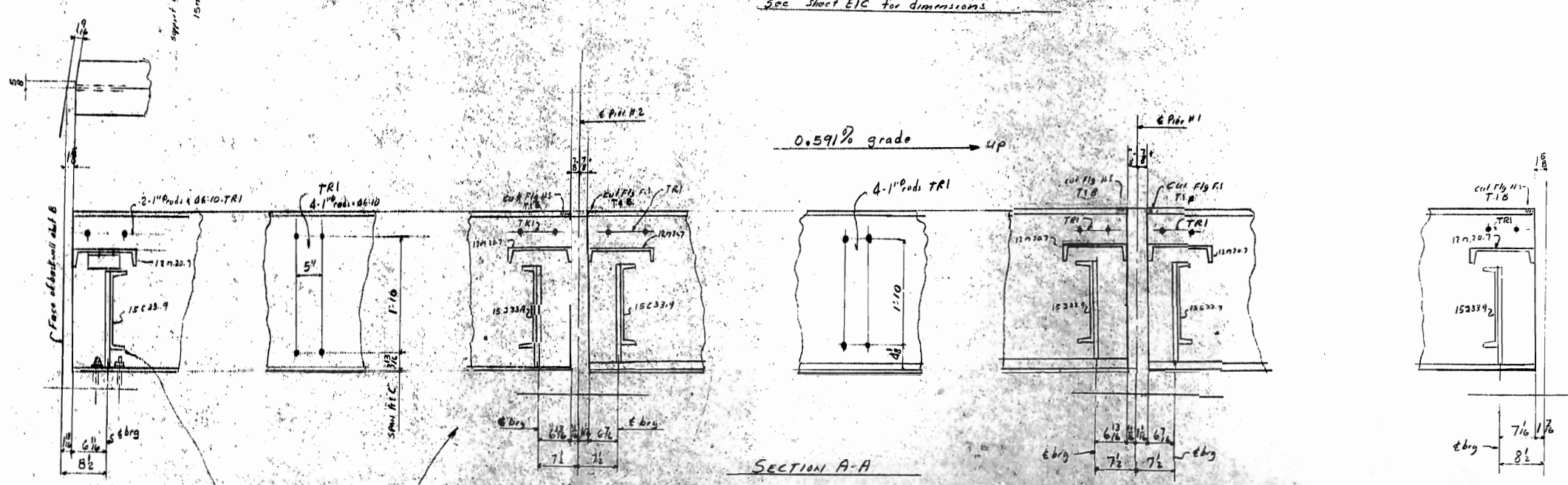
SHOP BILLED.....
 By..... Chkd By.....

PRINTS				JOB: <u>WEST FORK: STEEL JOINT</u>
BY	APPROVAL	ERECTION	SHOP	
LA	3-12-67			LOCATION: <u>CHERRY 76, N.C.</u>
LA		6-6-67		CONTRACTOR: <u>Blythe Brothers Const. Co.</u>
				ARCHITECT: <u>Whitehead & Zickel</u>
HOLES: UNLESS NOTED RIVETS UNLESS NOTED SHOP PAINT: UNLESS NOTED FIELD CONNECTIONS: UNLESS NOTED INSPECTION BY:				MADE BY: <u>J.C.G.</u>
REVISIONS				CHECKED BY: <u>ELW</u> DATE: _____
DATE	NO.	BY	DESCRIPTION	CONTRACT: <u>62-387</u> SHEET: <u>E1C</u> OF _____
	1			
	2			
	3			

Approved Set for Southern Ry. Co.



STEEL FRAMING PLAN
See sheet EIC for dimensions



SECTION A-A

NOTE TO ERECTOR
ANCHOR BOLTS MUST BE IN PLACE BEFORE ERECTING ISE DIAPHRAGMS

NOTE
All shipping marks are suitably lettered thus B1^c, D1^s, T1^b etc.

FIELD CONNECTIONS: 7/8" HEAVY HEXAGON BOLTS SHALL BE USED WITH ONE HARDENED WASHER UNDER EACH NUT ONLY. ERECT SUPPORT CHANNELS AT THE END OF THE BEAMS ARE ERECTED.

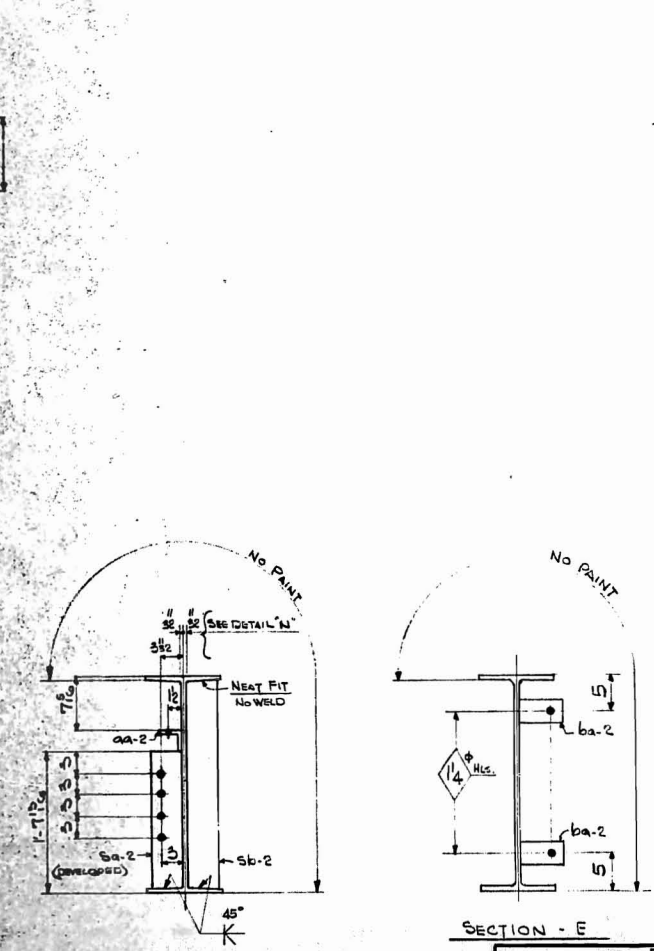
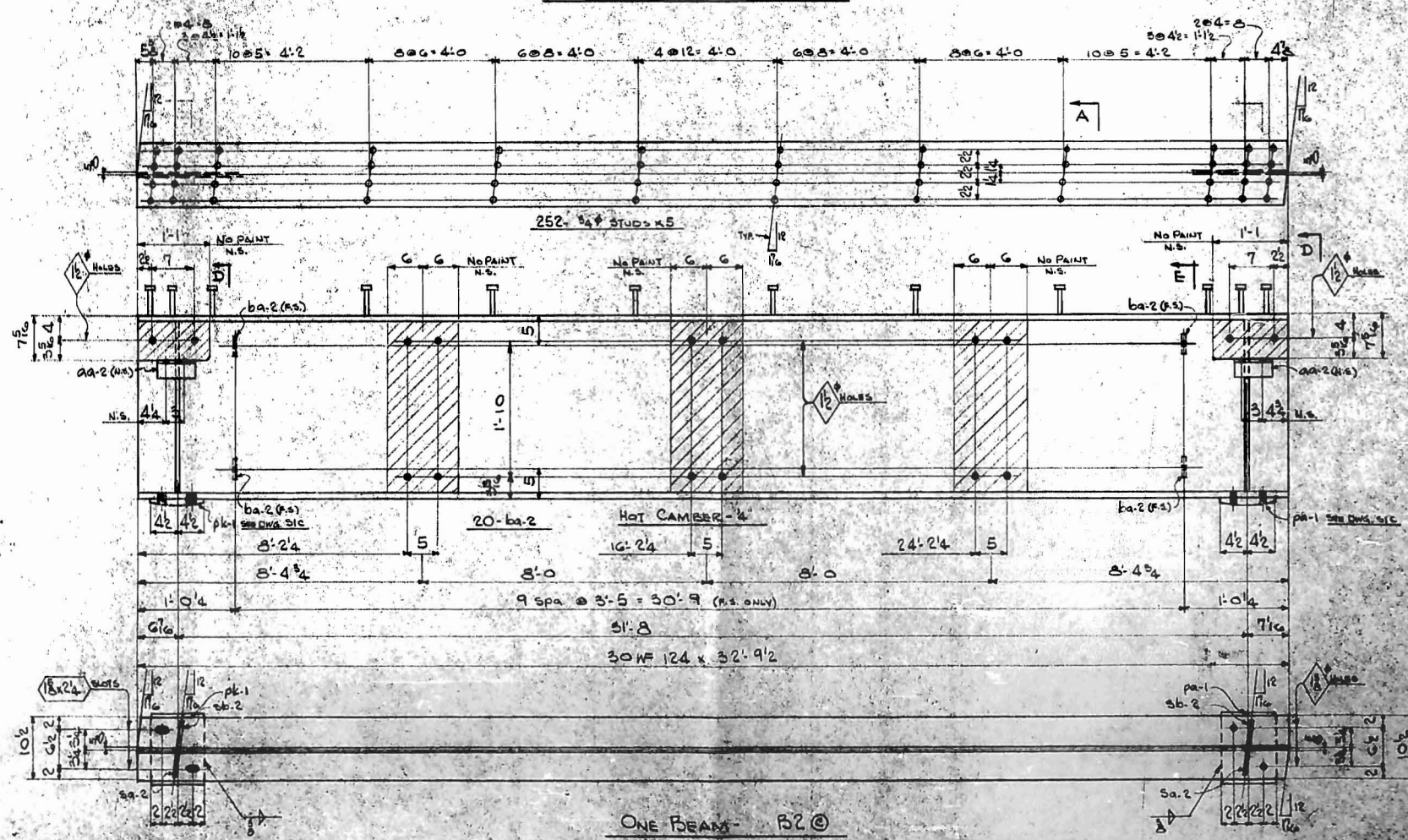
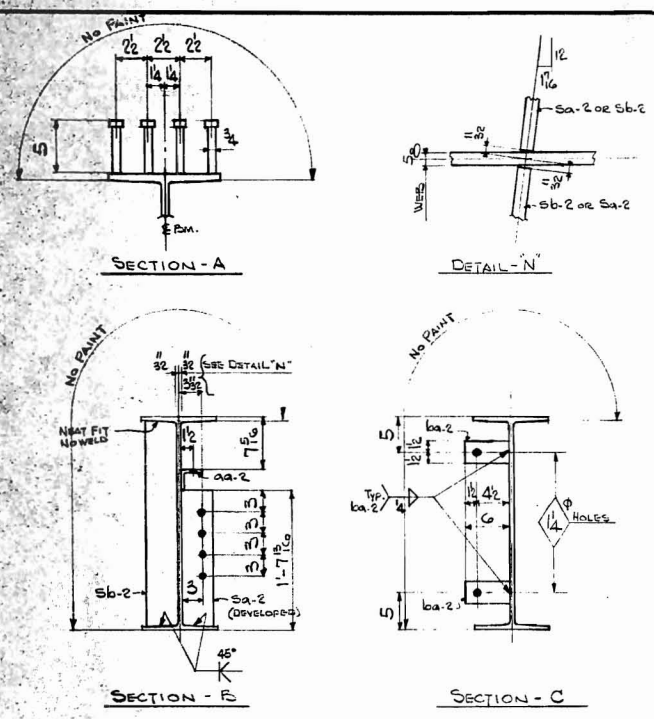
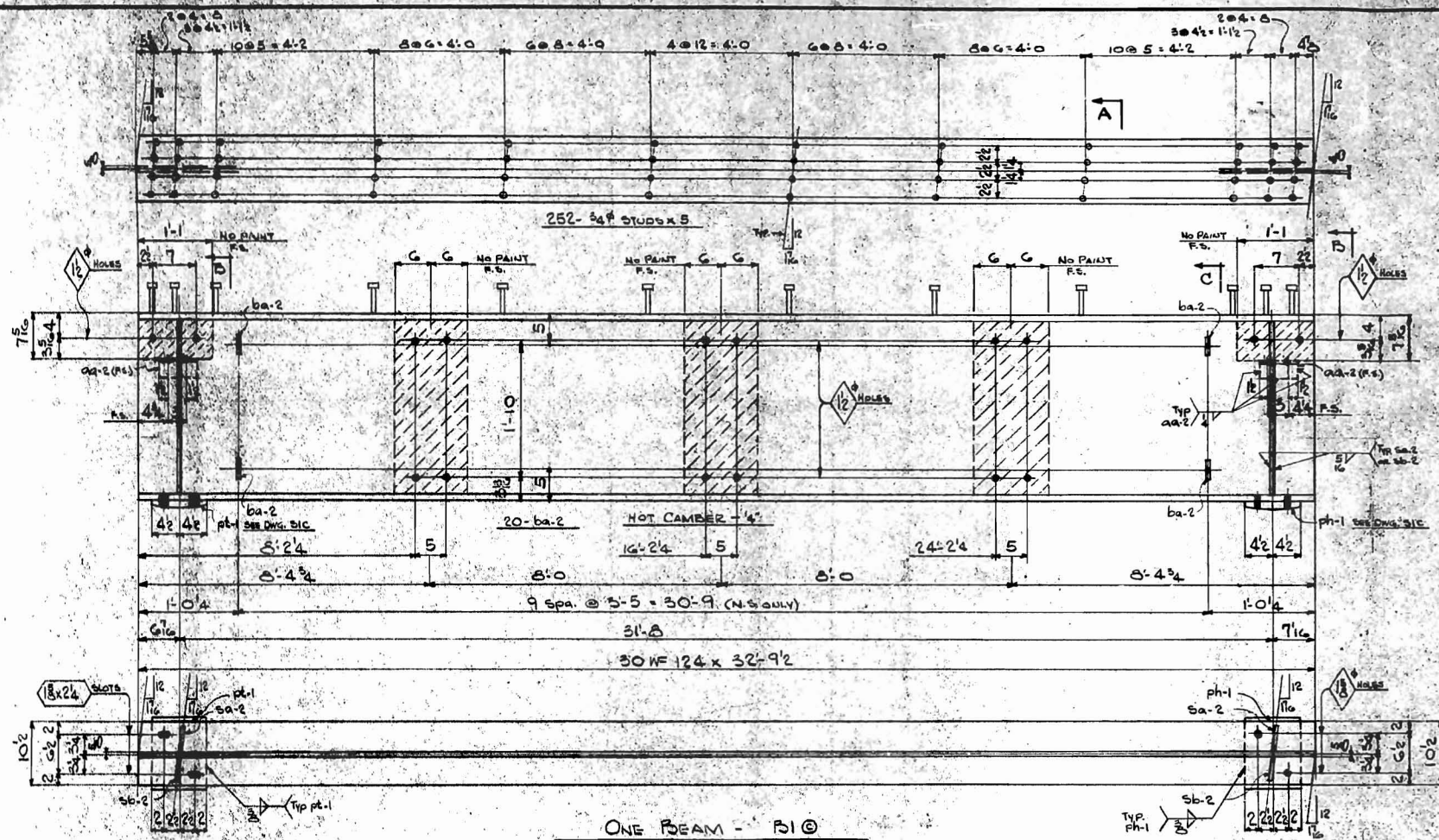
APPROVED NOT APPROVED
 APPROVED AS CORRECTED
 REVISE AND RESUBMIT
 Checking is only for conformance with the design concept of the project and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and corrected at the job site for information that pertains solely to the fabrication processes or to techniques of construction, and for coordination of the work of all trades.

SHOP DATED
By CHH: B

DATE 6-20-63
 WHITEHEAD & ZICKEL
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

PRINTS				JOB WEST FOURTH ST. W. LITTLE PITTSBURGH, N.C.
BY	APPROVAL	ERECTION	SHOP	
EA	3-13-63			LOCATION CHARLOTTE, N.C.
LA		6-26-63		CONTRACTOR Rhyler Brothers Const Co
				ARCHITECT Whitehead & Zickel
HOLES UNLESS NOTED RIVETS UNLESS NOTED SHOP PAINT FIELD CONNECTIONS ERECTION BY INSPECTION BY				Southern ENGINEERING COMPANY LITTLE PITTSBURGH CHARLOTTE, N.C. MADE BY JCC CHECKED BY RLD DATE CONTRACT 62-387 SHEET EIC OF
REVISIONS DATE NO. BY DESCRIPTION				

62-387		MATERIAL - ASTM-A36		S.C				
NO. PCS.	MATERIAL	LENGTH FT. IN.	MARK	NOTES	ITEM	CUT FROM	STUD	WEIGHT
ONE	30WF124	32' 9 1/2"	R10	CAMBER	2-4	1/2" x 1/2"		41.0
2	R 4 1/2 x 5/8	1' 7 1/2"	Sa-2	FITTED	2-6	X		3.9
2	R 4 1/2 x 5/8	2' 4 1/2"	Sa-2	FITTED	2-5	X		4.6
2	L 3 x 3 x 5/8	0' 6"	aa-2		2-7	X		7.1
20	R 3 x 3	0' 6"	ba-2		2-8	X		26.0
ONE	R		ph-1	SEE DWS. S/C				3.1
ONE	R		pa-1	SEE DWS. S/C				3.5
252	3/4" STUDS	17' 5"			2-11			11.0
TYPICAL CONNECTION								
ONE	30WF124	32' 9 1/2"	R20	CAMBER	2-4	1/2" x 1/2"		41.0
2	R		Sa-2		2-6	X		3.9
2	R		Sa-2		2-5	X		4.6
2	L		aa-2		2-7	X		7.1
20	R		ba-2		2-8	X		26.0
ONE	R		ph-1	SEE DWS. S/C				3.1
ONE	R		pa-1	SEE DWS. S/C				3.5
252	3/4" STUDS	17' 5"			2-11			11.0



APPROVED
 NOT APPROVED
 APPROVED AS CORRECTED
 REVISE AND RESUBMIT
 Changing is only for amendments with the design concept of the product and compliance with the information given in the Contract Documents. Contractor is responsible for obtaining the necessary permits and coordination of the job site for installation and for the safety of the laborer and the public.

BY: *[Signature]*
 DATE: 6-20-63
 WHITEHEAD & LICKEL
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

SHOP NOTES: ONE COAT OF LEAD PAINT FOR ALL STEEL SURFACES. DO NOT PAINT WITHIN 2 INCHES OF BOLTS OR WELDS. DO NOT PAINT SHOP CONNECTIONS UNLESS PLANNED OR FINISHED SURFACES TO RECEIVE A HOT MATT OF WHITE LEAD, TALLOW & LINSEED OIL. BOTTOM FLANGE OF BEAM TO BE STRAIGHTENED TO WEL FOR A DISTANCE OF 2'-0" FROM END. SHOP INSPECTION REQUIRED.

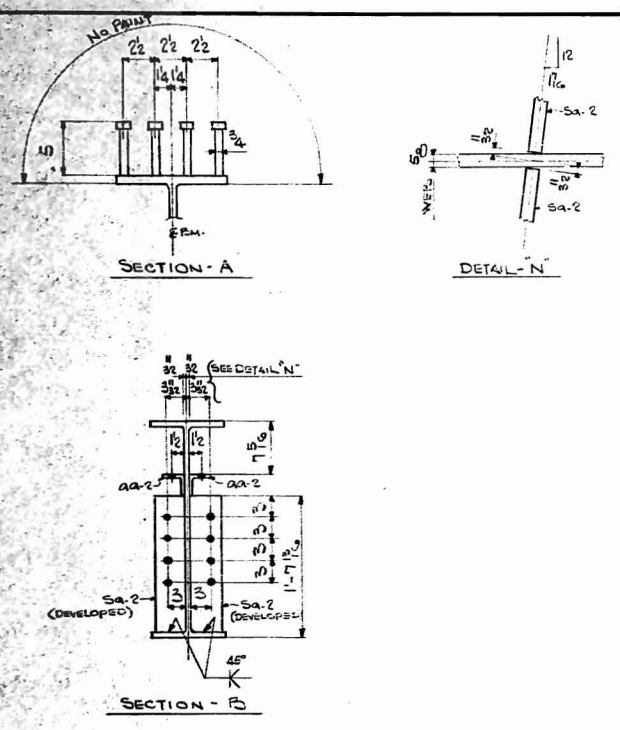
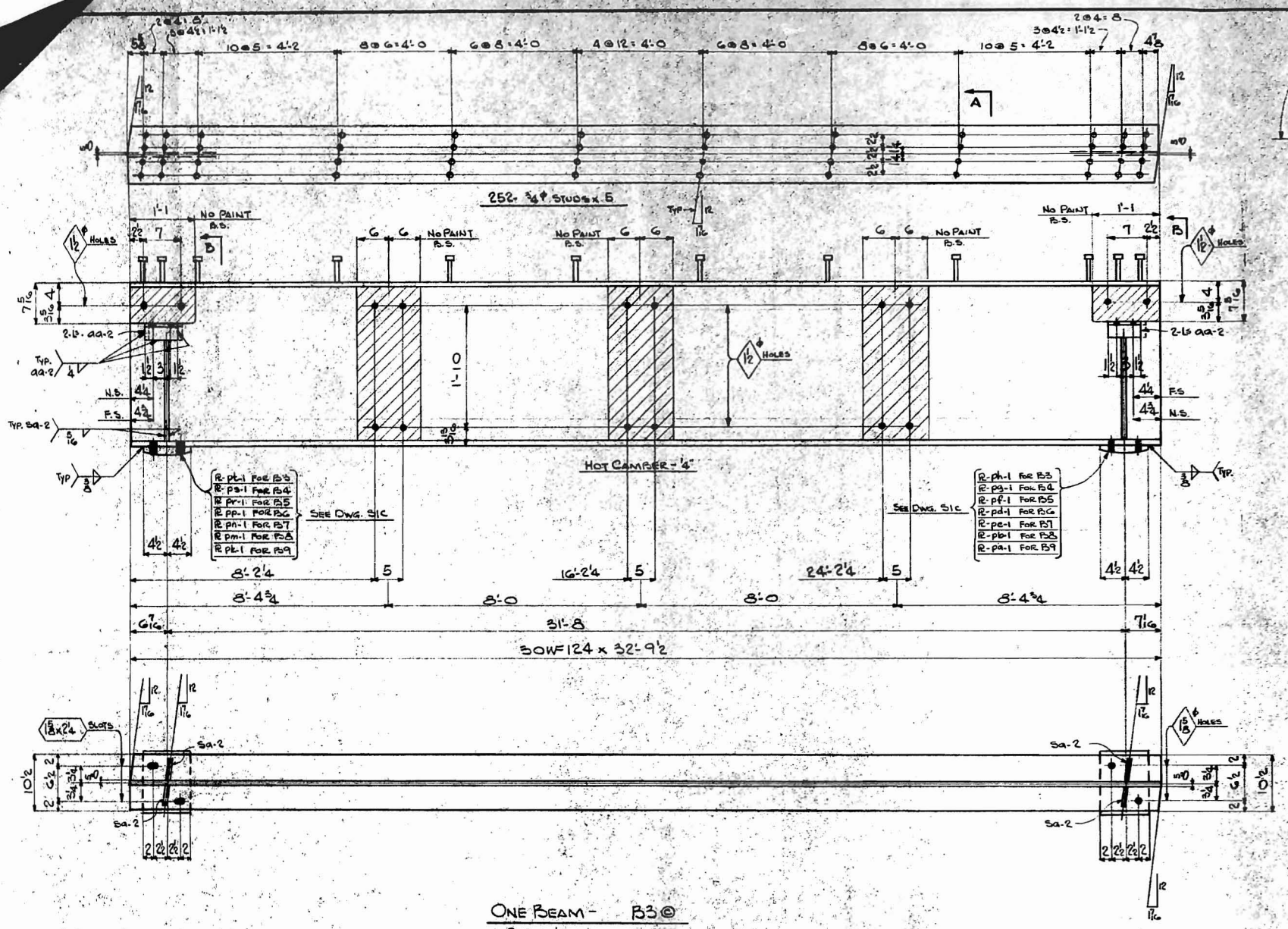
PRINTS			
BY	APPROVAL	ERECTION	SHOP INQUIRY
LA	3-12-63	6-9-63	6-9-63
LA			

REVISIONS			
DATE	NO.	BY	DESCRIPTION
	1		
	2		
	3		

JOB: WEST FOURTH STREET UNDERPASS
 LOCATION: CHARLOTTE, N.C.
 CONTRACTOR: RLYNNE BROTHERS CONST. CO.
 ARCHITECT: WHITEHEAD & LICKEL

Southern ENGINEERING COMPANY
 LITTLE PITTSBURGH CHARLOTTE, N.C.

MADE BY: WJC
 CHECKED BY: RWJ DATE: _____
 CONTRACT: 62-387 SHEET: S2C OF _____



- ONE BEAM - B3@
- 2 do - B4@
- 2 do - B5@
- 2 do - B6@
- 2 do - B7@
- 2 do - B8@
- ONE do - B9@

NO. PCS.	MATERIAL	LENGTH FT. INCH.	MARK	NOTES	ITEM	CUT FROM	STUB	WEIGHT
ONE	30WF124	32' 9 1/2"	B3@	CON. 2-4	2-4			4420
2	30WF124	32' 9 1/2"	B4@	CON. 2-4	2-4			8840
2	30WF124	32' 9 1/2"	B5@	CON. 2-4	2-4			8840
2	30WF124	32' 9 1/2"	B6@	CON. 2-4	2-4			8840
2	30WF124	32' 9 1/2"	B7@	CON. 2-4	2-4			8840
2	30WF124	32' 9 1/2"	B8@	CON. 2-4	2-4			8840
ONE	30WF124	32' 9 1/2"	B9@	CON. 2-4	2-4			4420
48	R4x2x5	1' 7 1/2"	Sa-2	FITTED	2-6			175
48	L3x2x3	0' 6"	aa-2		2-7			175
3024	3/4\"/>							

SHOP NOTES: ONE COAT OF PAINT TO BE APPLIED TO ALL EXPOSED SURFACES. DO NOT PAINT WITHIN 2 INCHES OF FIELD CONNECTIONS OR DETAILS. DO NOT PAINT UNTIL SURFACES ARE CLEANED OR FINISHED. SURFACES TO BE COATED WITH MIXTURE OF WHITE LEAD TALLOW & LINSEED OIL. BOTTOM FLANGE OF BEAM TO BE STRENGTHENED WITH 1\"/>

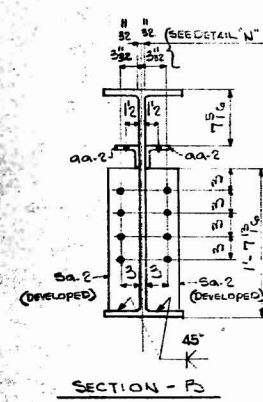
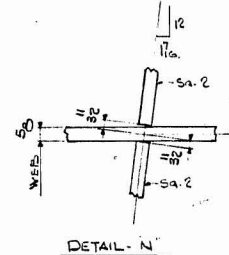
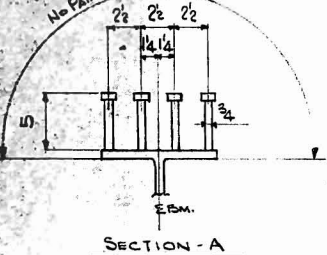
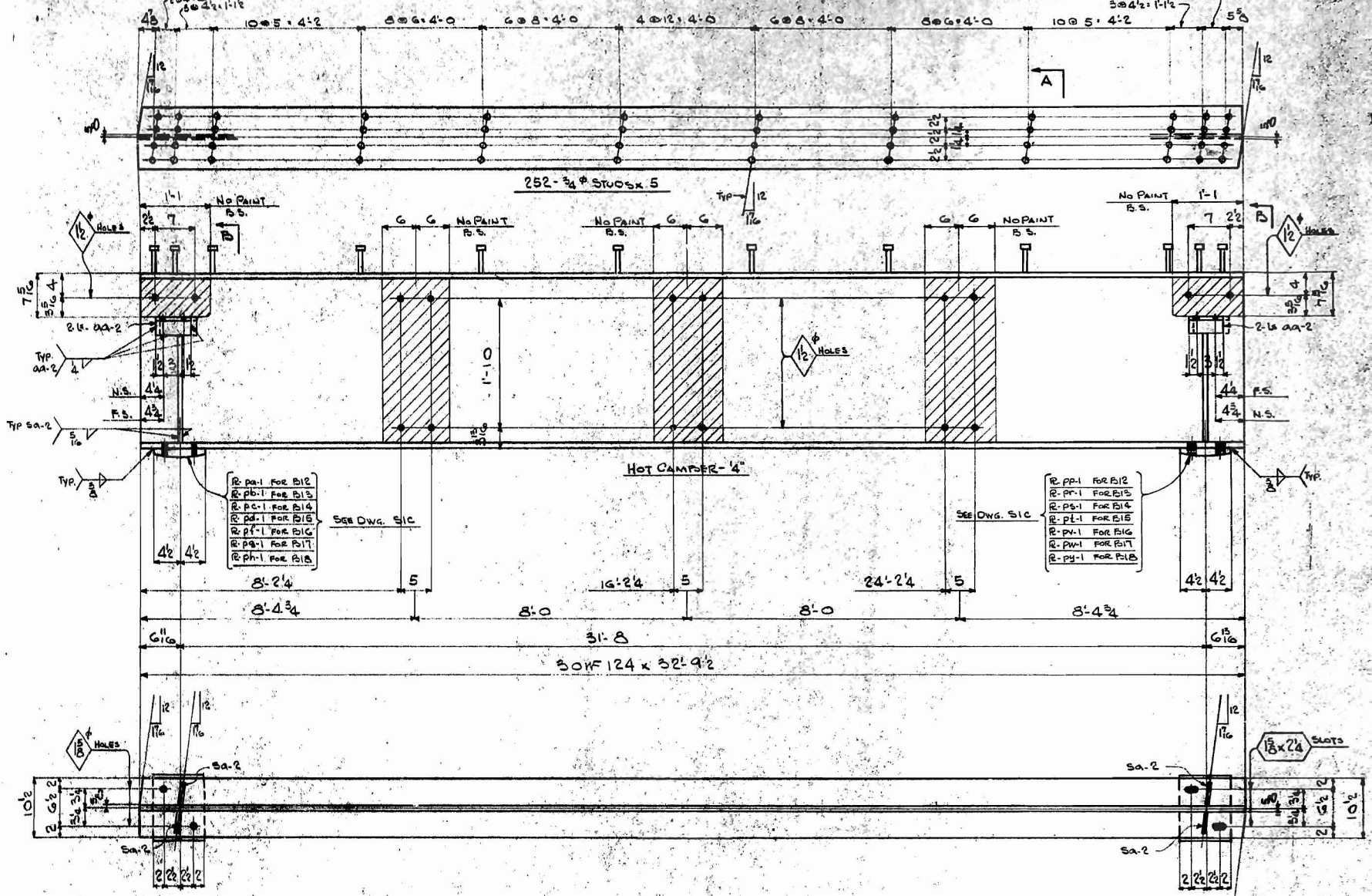
APPROVED
 NOT APPROVED
 APPROVED AS CORRECTED
 REVISE AND RESUBMIT
 Checking is only for conformance with the design content of the contract documents. Contractor is responsible for dimensions to be confirmed and completed at the job site; for information that pertains solely to the fabrication process or to techniques of construction; and for the completion of the work of all trades.
 BY: *[Signature]*
 DATE: 6-20-63
 WHITEHEAD & JONES
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

PRINTS			
BY	APPROVAL	ERECTOR	SHOP
2/2	B/3	G	
2/2			6-20-63

Holes: 1/2" ϕ UNLESS NOTED
 Rivets: UNLESS NOTED
 Shop Paint: SEE NOTE
 Field Connections: 3/4" HIGH STRENGTH BOLTS
 Inspection By: *[Signature]*

REVISIONS			
DATE	NO.	BY	DESCRIPTION
	1		
	2		
	3		

CHECKED BY: *[Signature]* DATE: *[Date]*
 CONTRACT: 62-387 SHEET: 53C OF 53C



ONE BEAM -	B12 @
2 do -	B13 @
2 do -	B14 @
2 do -	B15 @
2 do -	B16 @
2 do -	B17 @
ONE do -	B18 @

62-287		SEC						
NO. PCS.	MATERIAL	LENGTH FT. INCH	MARK	NOTES	ITEM	CUT FROM	STUB	WEIGHT
ONE	30W124	32 9/2	B12 @		2-4			406.0
2	30W124	32 9/2	B13 @		2-4			813.2
2	30W124	32 9/2	B14 @		2-4			813.2
2	30W124	32 9/2	B15 @	CAMLOCK	2-4			813.2
2	30W124	32 9/2	B16 @		2-4			813.2
2	30W124	32 9/2	B17 @		2-4			813.2
ONE	30W124	32 9/2	B18 @		2-4			406.0
48	R4 1/2 x 5/8	1 7/8	SA-2	FITTED	2-6	X		11.2
48	L5 x 3 x 5/8	0 6	SA-2		2-7	X		11.2
24	2\"/>							

4916
88-
82-
82-
83-
4417

SHOP NOTES: ONE COAT REGRIND #20 PER N.C. SPEC. L.P.
DO NOT PAINT WITHIN 2 INCHES OF HOLES OR CONNECTIONS UNLESS SHOWN ON DETAILS. DO NOT PAINT SURFACES TO BE PAINTED WITH PRIMER OR FINISHED SURFACES TO BE PAINTED WITH PRIMER OF WHITE LEAD, TALLOW & LUBRIC OIL.
BOTTOM FLANGE OF BEAM TO BE STRAIGHTENED TO FIT TO WORK FOR A DISTANCE OF 2'-0\"/>

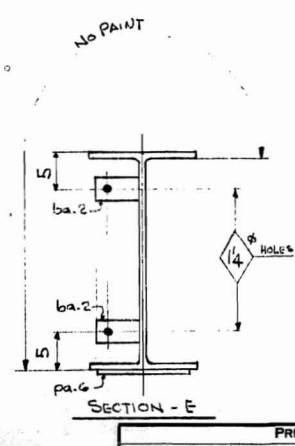
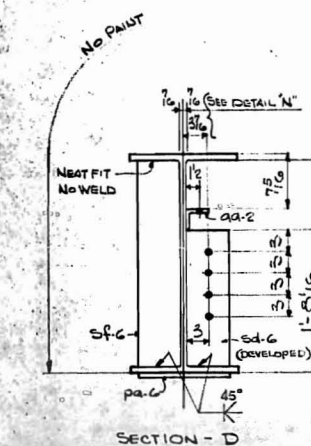
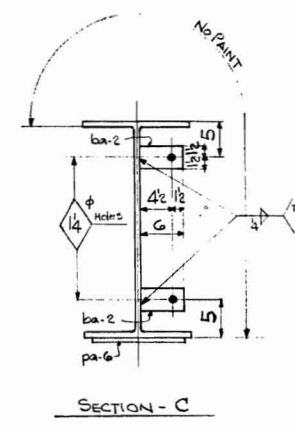
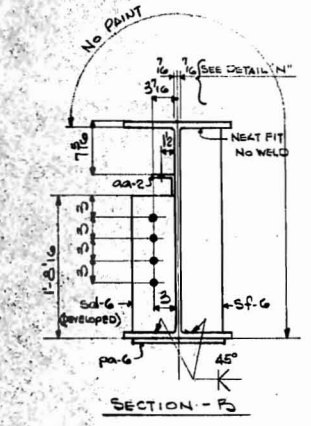
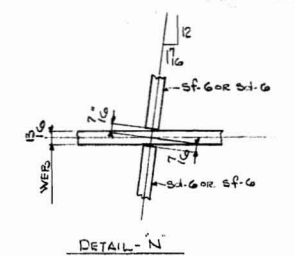
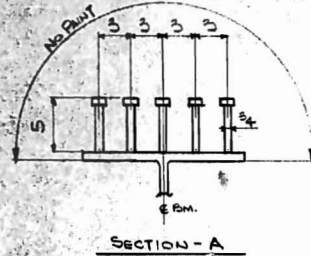
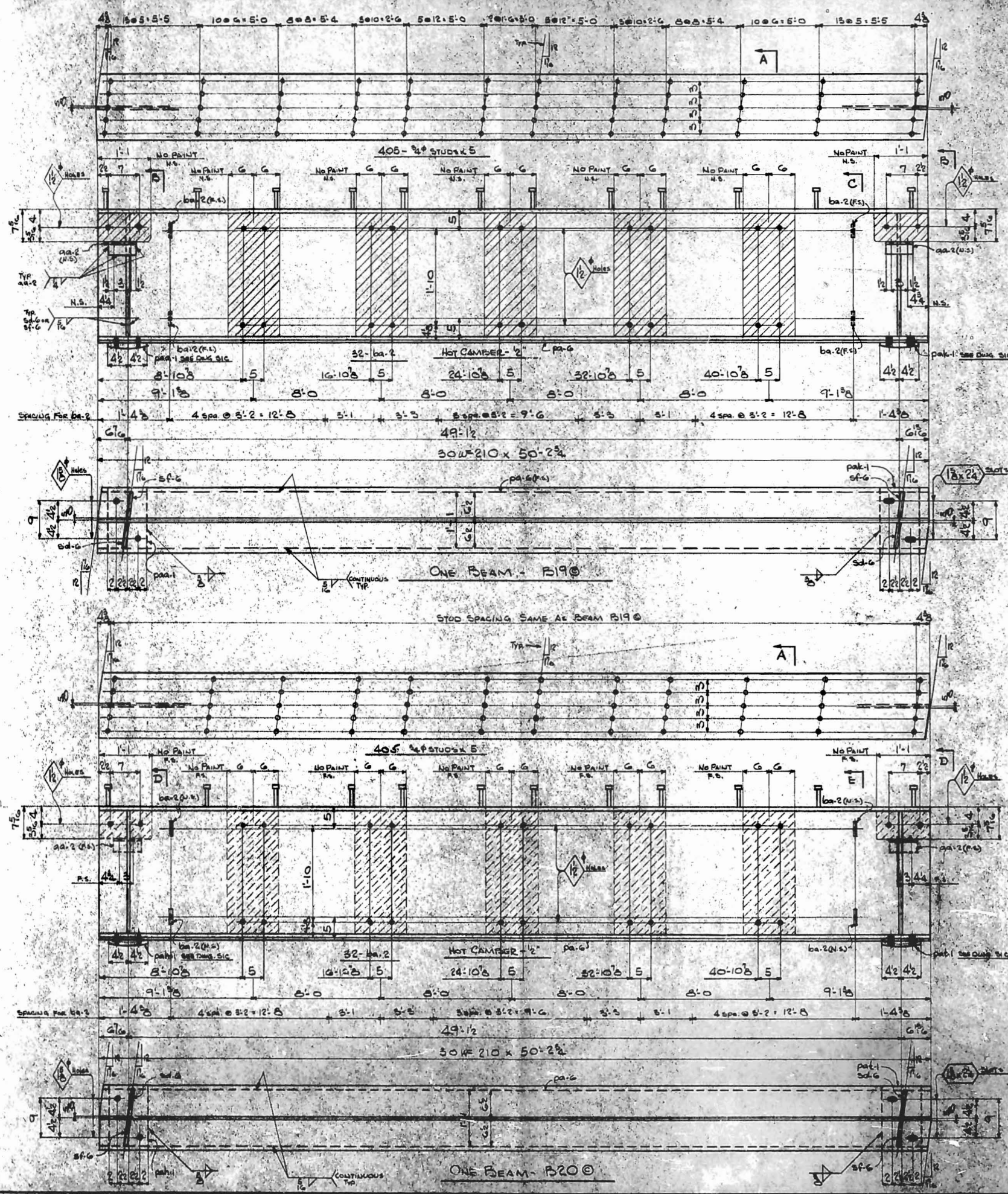
APPROVED NOT APPROVED
 APPROVED AS CORRECTED
 REVISE AND RESUBMIT
 Checked by only for conformance with the design concept of the project and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and corrected at the job site for information that pertains solely to the fabrication process or to techniques of construction and for coordination of the work of all trades.
 BY: *m.e.b.*
 DATE: 6-20-63
 WHITEHEAD & ZICKEL
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

PRINTS			
BY	APPROVAL	ERECTION	SHOP

JOB WEST FOURTH STREET CONCRETE
 LOCATION CHARLOTTE, N.C.
 CONTRACTOR RYAN'S REINFORCEMENT CO., CH.
 ARCHITECT WHITEHEAD & ZICKEL

MADE BY W.C.
 CHECKED BY R.W. DATE
 CONTRACT 62-287 SHEET SEC OF

UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 HOLES 1/16" UNLESS NOTED OTHERWISE.
 RIVETS UNLESS NOTED OTHERWISE.
 BOLTS UNLESS NOTED OTHERWISE.
 SHOP PAINT SEE NOTE
 FIELD CONNECTIONS 3/4" HIGH STRENGTH BOLTS
 INSPECTION BY



APPROVED NOT APPROVED
 APPROVED AS CORRECTED
 REVISE AND RESUBMIT
 Checked by only for accordance with the design intent of the product and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and corrected at the job site for tolerances that deviate from the fabrication process or to tolerances of construction and for completion of the work of all trades.
 BY *M.C.H.*
 DATE 6-20-63
 WHITEHEAD & ZICKEL
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

62-287 56C

NO. PCS.	MATERIAL	LENGTH	MARK	NOTES	ITEM	CUT FROM	STUB	WEIGHT
ONE	30WF210	50 2 1/2	B190	CON-001	2-15	1-50-44		105 1/2
2	RG x 1/2	1 7/8	sf-6	FITED	2-18			3 1/2
2	RG x 1/2	2 4/8	sf-6	FITED	2-17			3 1/2
2	RG x 1/2	0 6	aa-2		2-19			7 1/2
32	R2 x 3/8	0 6	ba-2		2-20	1-50-55		6 1/2
ONE	R		pa-1	SEE DIM. SIC				5 1/2
ONE	R		pa-1					5 1/2
405	#4 STUDS	0 5			2-22	1-50-44		3 1/2
ONE	R13 x 3/8	50 2 1/2	pa-6		2-16	1-50-44		2 1/2
ONE	30WF210	50 2 1/2	B200	CON-001	2-15	1-50-44		105 1/2
2	R		sf-6		2-18			3 1/2
2	R		sf-6		2-17			3 1/2
2	R		aa-2		2-19			7 1/2
32	R		ba-2		2-20			6 1/2
ONE	R		pa-1	SEE DIM. SIC				5 1/2
ONE	R		pa-1					5 1/2
405	#4 STUDS	0 5			2-22	1-50-44		3 1/2
ONE	R		pa-6		2-16	1-50-44		2 1/2

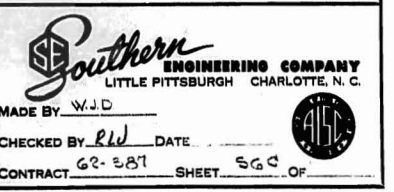
MATERIAL = A.S.T.M. - A36

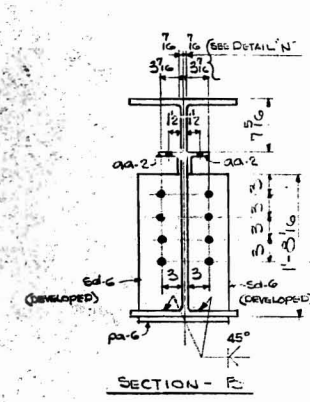
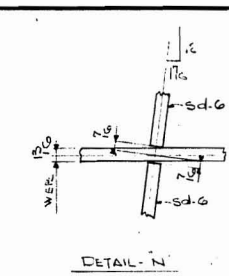
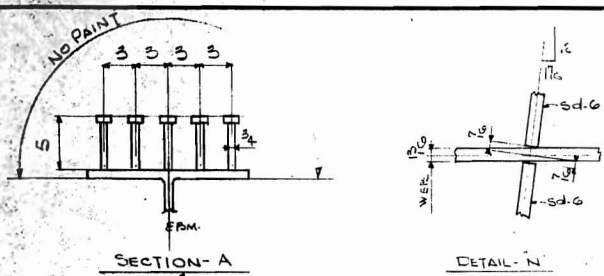
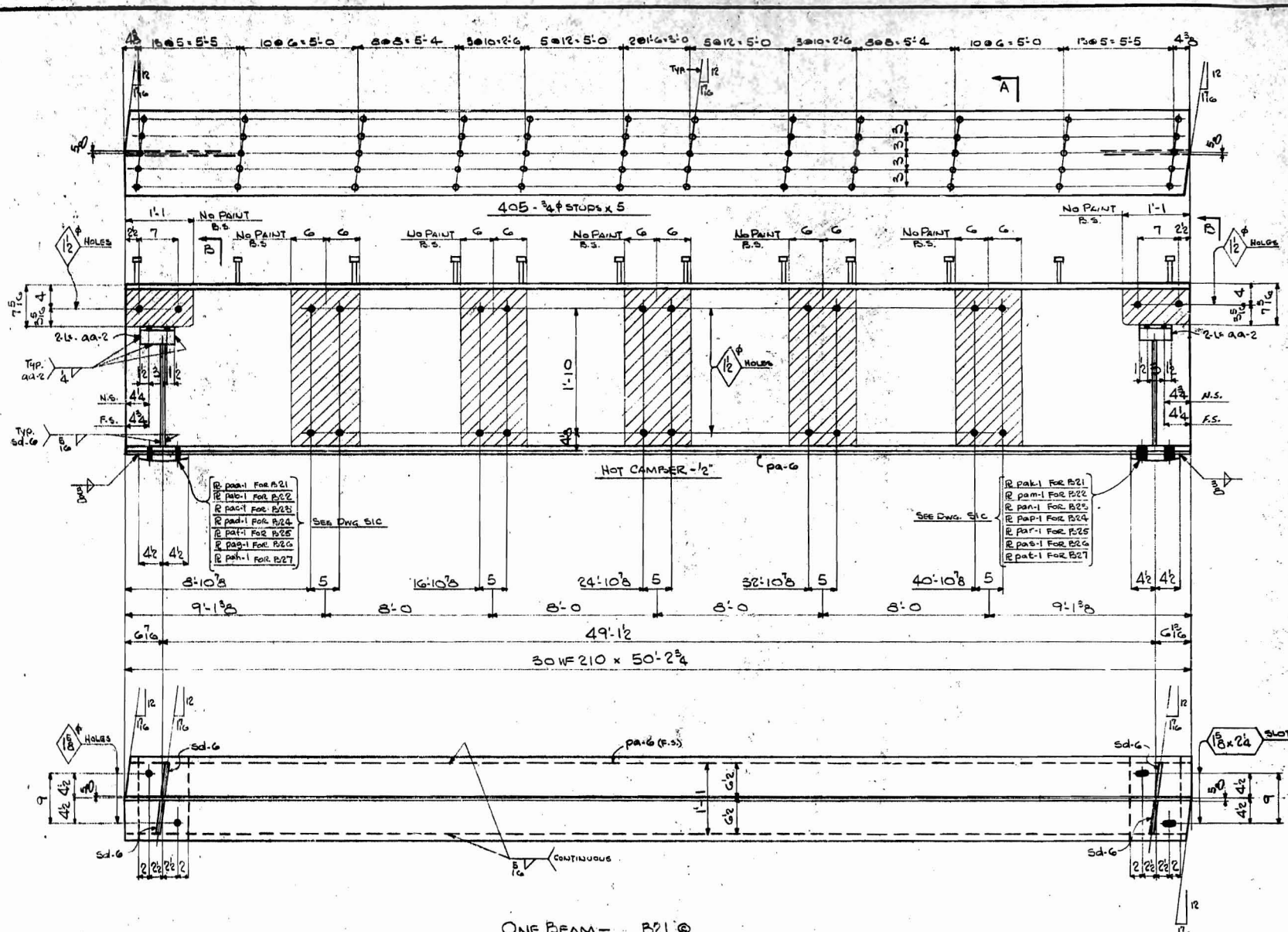
SHOP NOTES: ONE COAT ZEP LAC FOR ALL SURFACES.
 DO NOT PAINT WITHIN 2 INCHES OF 1/2" HOLES OR AT CORNERS ON DETAILS. DO NOT PAINT SURF CONTACTING SURFACES ON PLATES OR FINISHED SURFACES TO REMAIN AND THE MOUNTING OF WHITE LEAD TALLOW & LINSEED OIL.
 BOTTOM FLANGE OF BEAM TO BE STRAIGHTENED TO 1/4" TO WEBB FOR A DISTANCE OF 2'-0" FROM END OF BEAM.
 SHOP INSPECTION REQUIRED.

PRINTS				JOB WEST FOURTH ST. SET UNDERPASS
BY	APPROVAL	ERECTION	SHOP	
6/20	5/13/63			CHARLOTTE, N.C.
6/20		6-3-63	6-3-63	CONTRACTOR ELYNE LEATHERS CONST. CO.
				ARCHITECT WHITEHEAD & ZICKEL

REVISIONS			
DATE	NO.	BY	DESCRIPTION

MADE BY WJD
 CHECKED BY RLD DATE
 CONTRACT 62-287 SHEET 56C OF





ONE BEAM -	B21 @
2 do -	B22 @
3 do -	B23 @
3 do -	B24 @
3 do -	B25 @
2 do -	B26 @
ONE do -	B27 @

NO. PCS.	MATERIAL	LENGTH FT. INCH.	MARK	NOTES	ITEM	CUT FROM	STUB	WEIGHT
ONE	30 WF 210	50'-0"	B21 @					125.0
2	30 WF 210	50'-0"	B22 @					250.0
3	30 WF 210	50'-0"	B23 @					375.0
3	30 WF 210	50'-0"	B24 @					375.0
3	30 WF 210	50'-0"	B25 @					375.0
2	30 WF 210	50'-0"	B26 @					250.0
ONE	30 WF 210	50'-0"	B27 @					125.0
60	RG x 1/2"	1'-7"	S-1 G	FITING				16.0
60	1/2 x 3/8"	0'-6"	aa-2					1.8
6075	3/4" STUDS	0'-5"						4.5
ONE	R		PA-1	FOR B21				5.0
2	R		PA-1	FOR B22				10.0
3	R		PA-1	FOR B23				15.0
3	R		PA-1	FOR B24				15.0
3	R		PA-1	FOR B25				15.0
2	R		PA-1	FOR B26				10.0
ONE	R		PA-1	FOR B27				5.0
2	R		PA-1	FOR B28				10.0
3	R		PA-1	FOR B29				15.0
3	R		PA-1	FOR B30				15.0
2	R		PA-1	FOR B31				10.0
ONE	R		PA-1	FOR B32				5.0
15	R 1/2 x 3/8"	50'-0"	F-1 G					12.5

MATERIAL ASTM-A36

SHOP NOTES: ONE SHIP REBAR FOR THE N...
DO NOT PAINT WITHIN 2 INCHES OF THE...
DO NOT PAINT END CONTACT...
PLANES OR FINISHED SURFACES...
OF W/ TO LEAD, FOLLOW...
BOTTOM FLANGE OF BEAM...
TO W/ FOR A DISTANCE OF 24 IN...
SHOP INSPECTION REQUIRED

APPROVED NOT APPROVED
 REVISED AND RESUBMIT
 Checking is only for conformance with the design concept of the...
 BY: *meb*
 DATE: 6-20-63
 WHITEHEAD & GUNDEL
 CONSULTING ENGINEERS
 CHARLOTTE, NORTH CAROLINA

PRINTS			
BY	APPROVAL	ERECTION	SHOP
meb			
meb		6-25-63	6-25-63

REVISIONS			
DATE	NO.	BY	DESCRIPTION
	1		
	2		

JOB: WEST FOURTH STREET OVERPASS
 LOCATION: CHARLOTTE, N.C.
 CONTRACTOR: POLYMER FIBER...
 ARCHITECT: WHITEHEAD & GUNDEL
 MADE BY: W.J.D.
 CHECKED BY: R.L.D. DATE: ...
 CONTRACT: 62-287 SHEET: STC OF ...