

BAR LIST PFK BENT

MARK	SIZE	NO. PER BENT		LENGTH	
		END	INT		
B1	#6	4	4	19'-9"	
B1a	#6	4	1	26'-3"	
B2	#6	4	4	18'-2"	
B2a	#6	4	4	28'-2"	
B3	#6	8	8	22'-4"	
B4	#4	10	10	8'-9"	
B5	#6	21	21	6'-2"	
B6	#4	-	-	2'-6"	
B7	#4	12	-	4'-6"	
B8	#6	12	-	1'-8"	
B9	#4	8	-	4'-7"	

Dimensions are to centers of bars

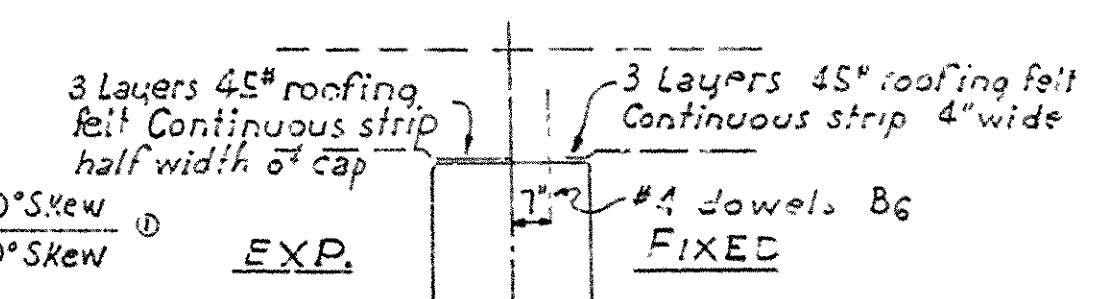
Revisions  
Title Std Spec. 4-1-60 H.A.  
Pile Splice note 2-23-62 J.D.  
Title to include 25' spans 4-24-62 J.A.S.  
For 1"00' Curve & Al-rati, Raised wingwall height  
and changed WW bars. 8-28-62 A.J.

DETAILS OF  
STANDARD PILE BENTS  
FOR STD. 25'-30' R.C. SLAB SPANS (WITH VOIDS)

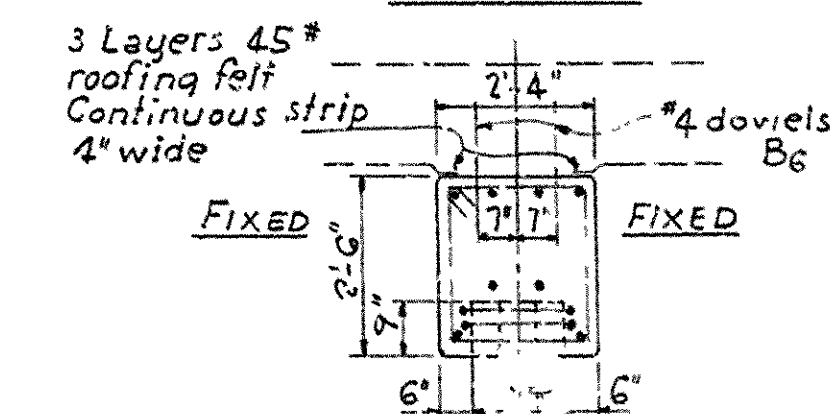
40'-0" CLEAR ROADWAY      1'-0" OR 1'-1/2" CURBS  
ROUTE      SEC

ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: A.T. DATE: 8-26-62  
 TRACED BY: DATE SCALE: 7/8" = 1'-0"  
 CHECKED BY: DATE Except as noted  
 BRIDGE NO. DRAWING NO. 5431A1



SECTION  
INT. BENT



SECTION  
INT. BENT

GENERAL NOTES:

All concrete to be Class S and shall be poured in the dry. All exposed corners to be chamfered  $\frac{3}{4}$  unless otherwise noted.

Reinforcing steel to be deformed bars of intermediate or hard grade.

Shop lists and bending diagrams are to be submitted for approval.

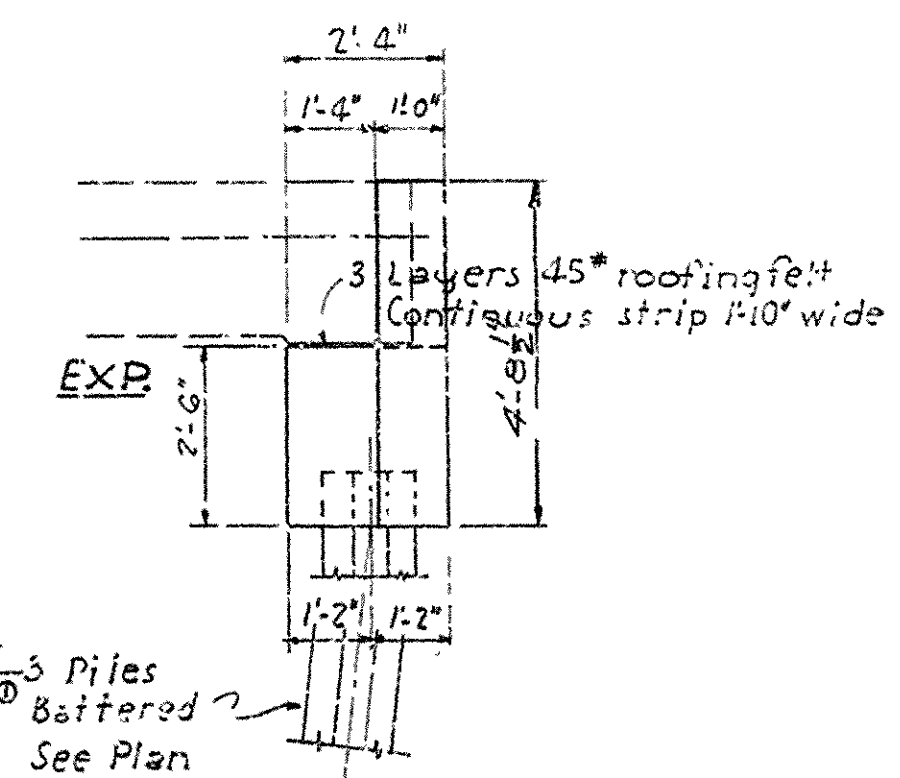
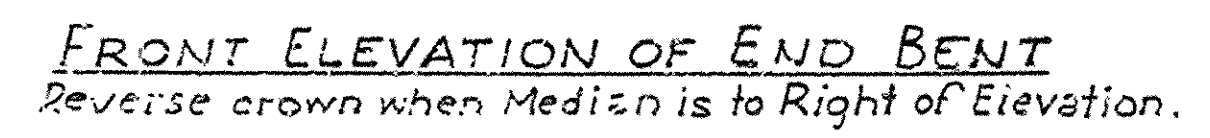
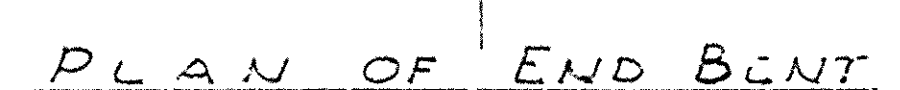
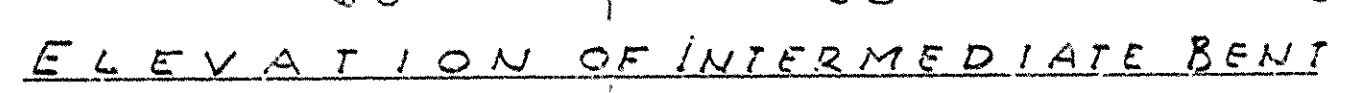
All piling shall be driven to a minimum capacity of 35 tons per pile.

Piling shall be 18" octagonal precast concrete.

Volume occupied by embedded pile heads will not be included in the total quantities of concrete caps.

For Details of Standard 25'-0" R.C. Slab Spans see Drawing No. 5432-03

SPECIFICATIONS: Arkansas State Highway Commission, Standard Specifications for Highway Construction, Edition of 1959.



END VIEW  
END BENT

Revised wing for 9' above  
gutter 7'-3" to 5'-3" JWG

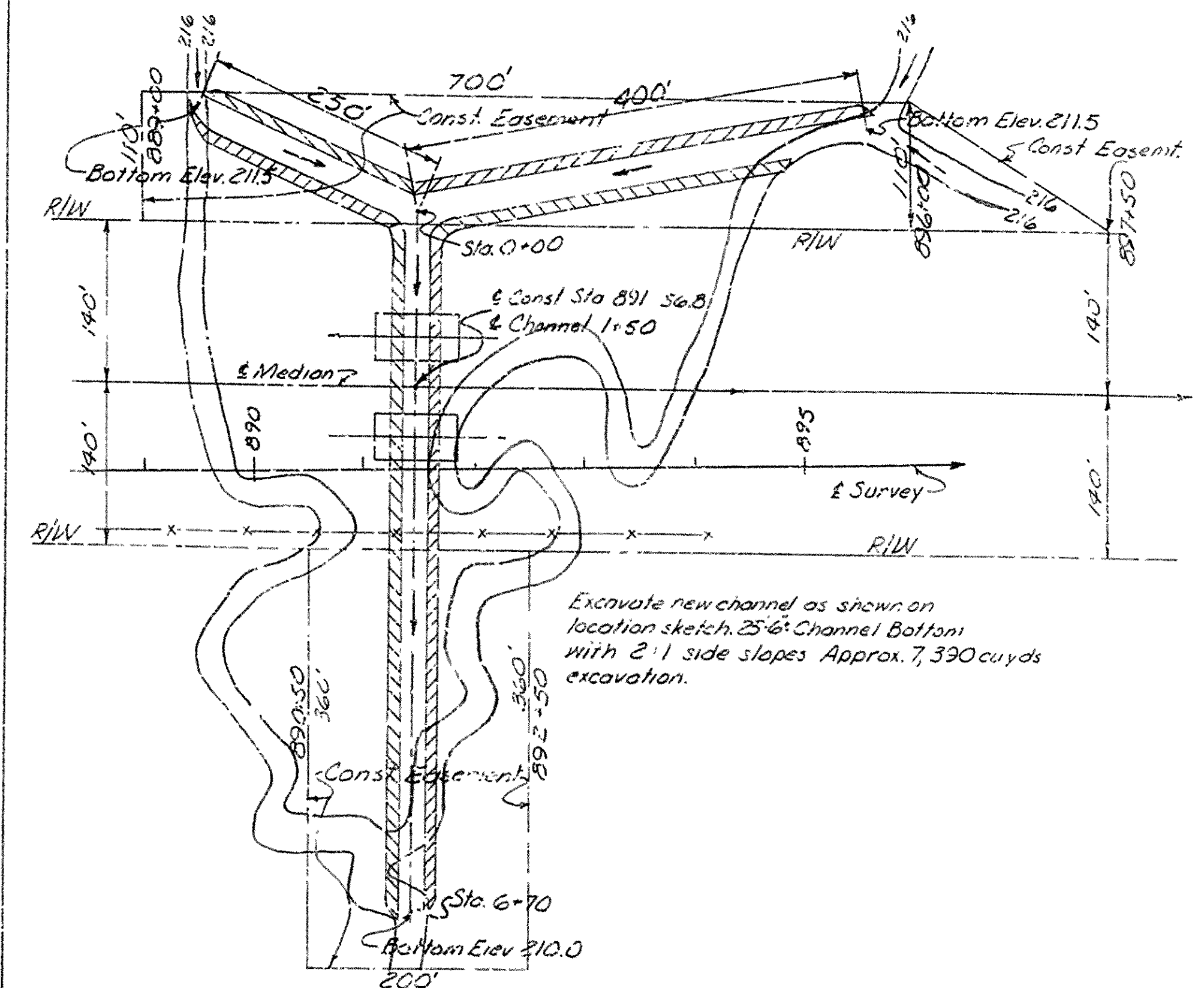
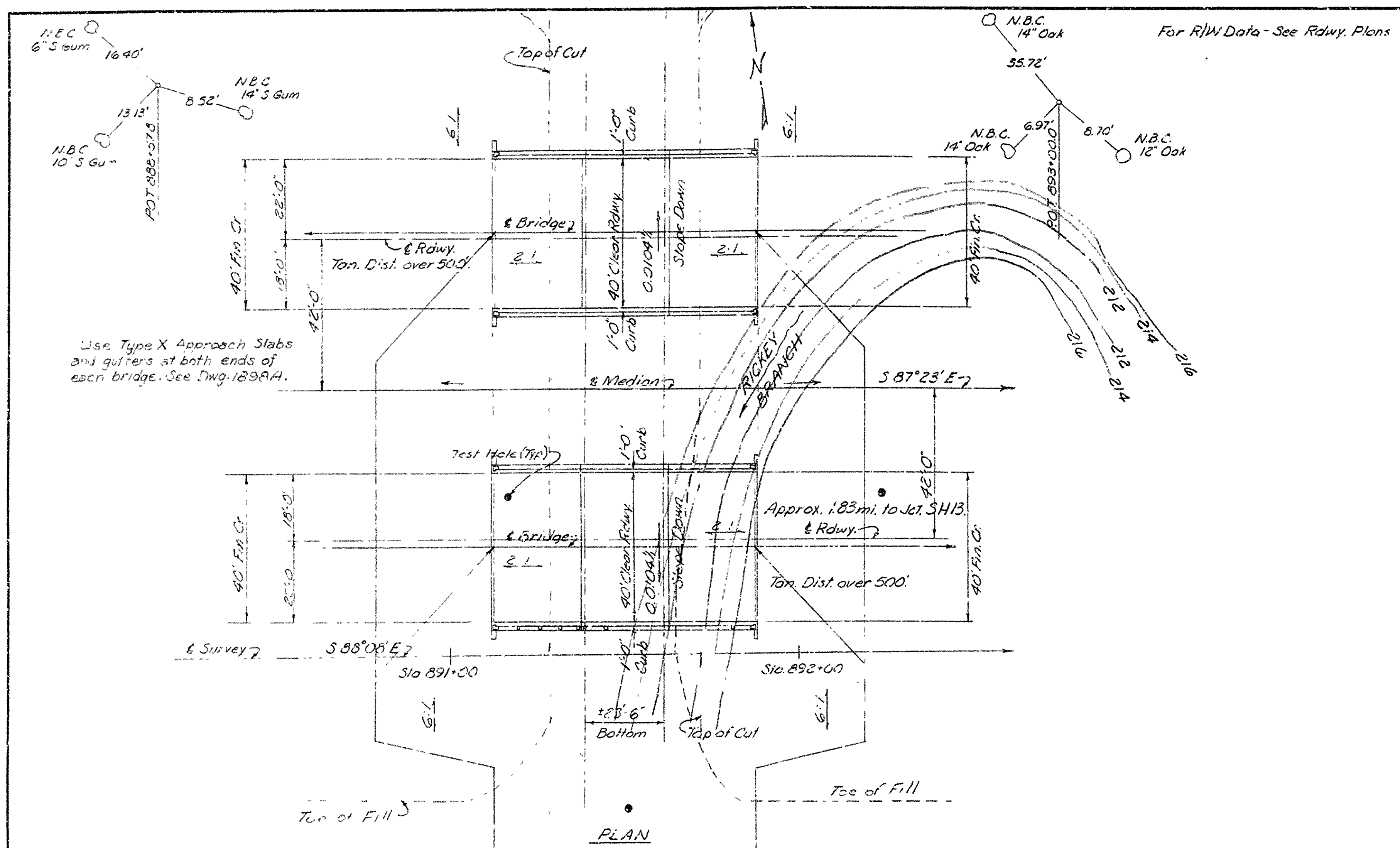
Notes: Revised to include 25' - 30' spans

①. Revised to include 10" S&W A.N 2-26-63 Chk. W.E.W. 3-5-63

*L.P. Carlsson*  
BRIDGE DESIGN ENGINEER

DETAILS OF  
# STANDARD PILE BENTS  
FOR STD. 25'-0" - 30'-0" RC SLAB SPANS  
10' or 20' SKEW LEFT FORWARD  
40'-0" CLEAR ROADWAY 2 CURBS 1'-0"  
ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK  
DRAWN BY: EAN DATE: 8-21-57  
TRACED BY: DATE:  
CHECKED BY: gch DATE: 6-28-57  
SCALE: 3/8" = 1'-0"  
BRIDGE NO. DRAWING NO. 54322C





LOCATION SKETCH No Scale

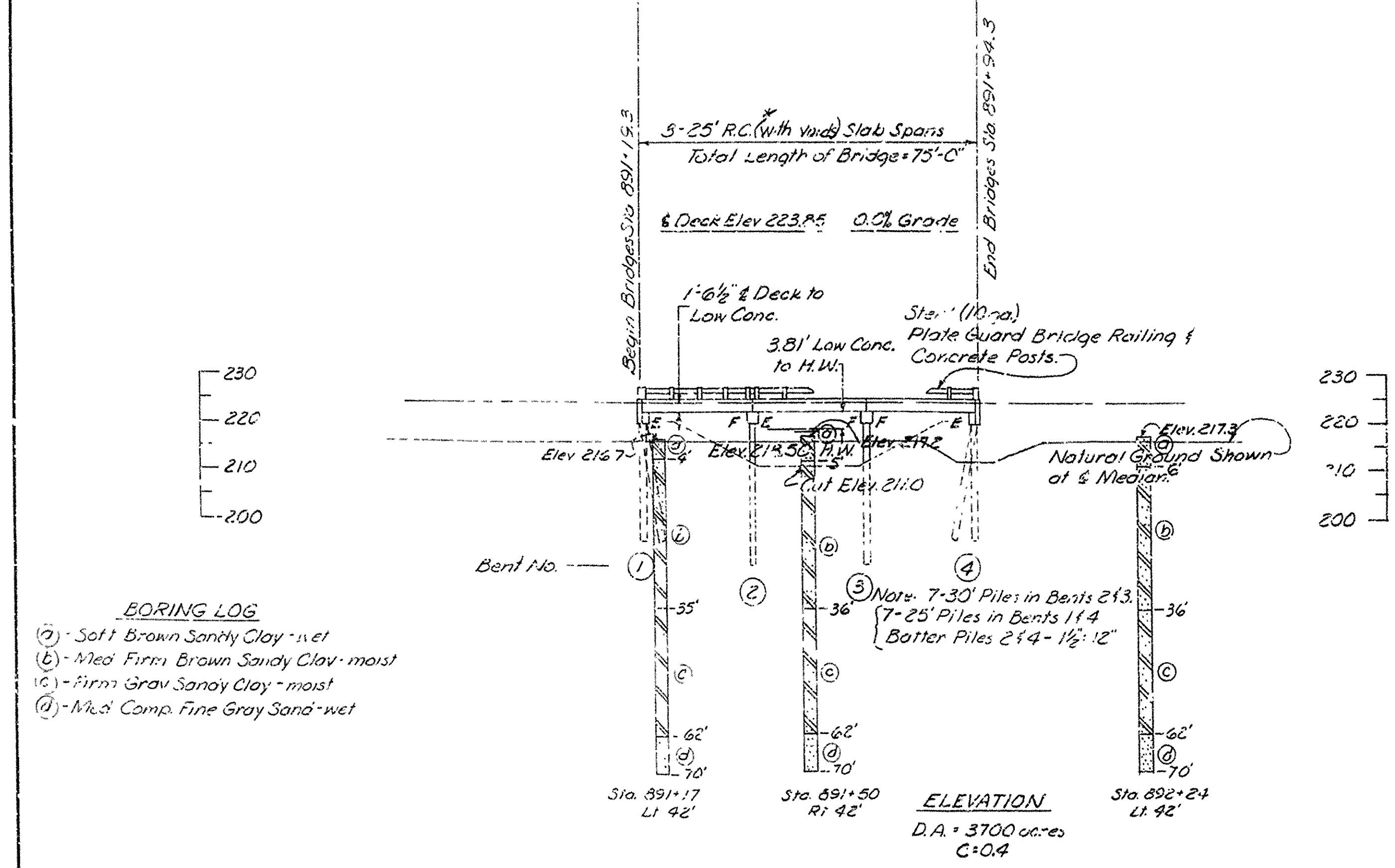
GENERAL NOTES

Bench Mark - Nail in Side of 16" White Oak 32' Lt., Sta. 691+00. Elev. 217.64.  
All piling shall be 16" octagonal precast concrete and shall be driven with an approved air, steam or diesel hammer to a minimum bearing capacity of 30 tons per pile, and to a minimum penetration of 20 feet.  
Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. Drive one 30' test pile in Bent No. 2. Piles in end bents shall be driven after embankment is in place.  
For details of substructure see P.C. No. 5431-A.  
For details of superstructure see Dwg. No. 5432-B2.  
For details of concrete pile see Dwg. No. 2382.

Loading: H20-S16 and Special Interstate Loading of 2 - 24,000 lbs axles spaced 4'0" on centers AASHTO 1961  
Stresses: Class S Concrete (n=10) 1,200 psi  
Reinforcing Steel (A-36) 20,000 psi  
SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959.

LAYOUT OF BRIDGE OVER  
RICKEY BRANCH  
HWY. 31 - PRAIRIE COUNTY LINE  
LONOKE COUNTY  
INT. ROUTE 40 SEC. 4  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: RMM DATE: 3-20-62  
TRACED BY: DATE: 3-24-62  
CHECKED BY: F.E. DATE: 3-24-62  
BRIDGE NO. 3654 A&B DRAWING NO. 11993



\*Revision: Tube Note. 5-10-62, DFL

Note: For R/W Data & Guard Rails  
see Roadway plans.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1-11-90	1-16-90			6	ARK.			
						JOB NO. R6004A	29	57
						3654 AR4BR LAYOUT	30712	

#### GENERAL NOTES

BENCH MARK: Elevations shown are based on existing plans.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1988 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1983 with current interim specifications.

LIVE LOADING: HS20 and Military Loading of two 24,000 Lb. Axles

METHOD OF DESIGN: Load Factor

MATERIALS AND STRENGTHS:  
Class S(AE) Concrete (superstructure)  $f'_c = 4,000$  psi  
Reinforcing Steel (A615 or A617, GR, 60)  $F_y = 60,000$  psi

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in subsection 803.20 for Class 5 Bridge Roadway Surface Finish.

BOILED LINSEED OIL: Boiled linseed oil treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

DETAIL DRAWINGS: DRAWING NO.

25' R.C. Slab Spans 30713 & 30714  
Approach Slabs and Gutters 30715

REMOVAL AND SALVAGE: The existing bridge (superstructure only) shall be removed in accordance with sections 205 & 821 of the Standard Specifications. All material from the existing bridge shall become the property of the contractor.

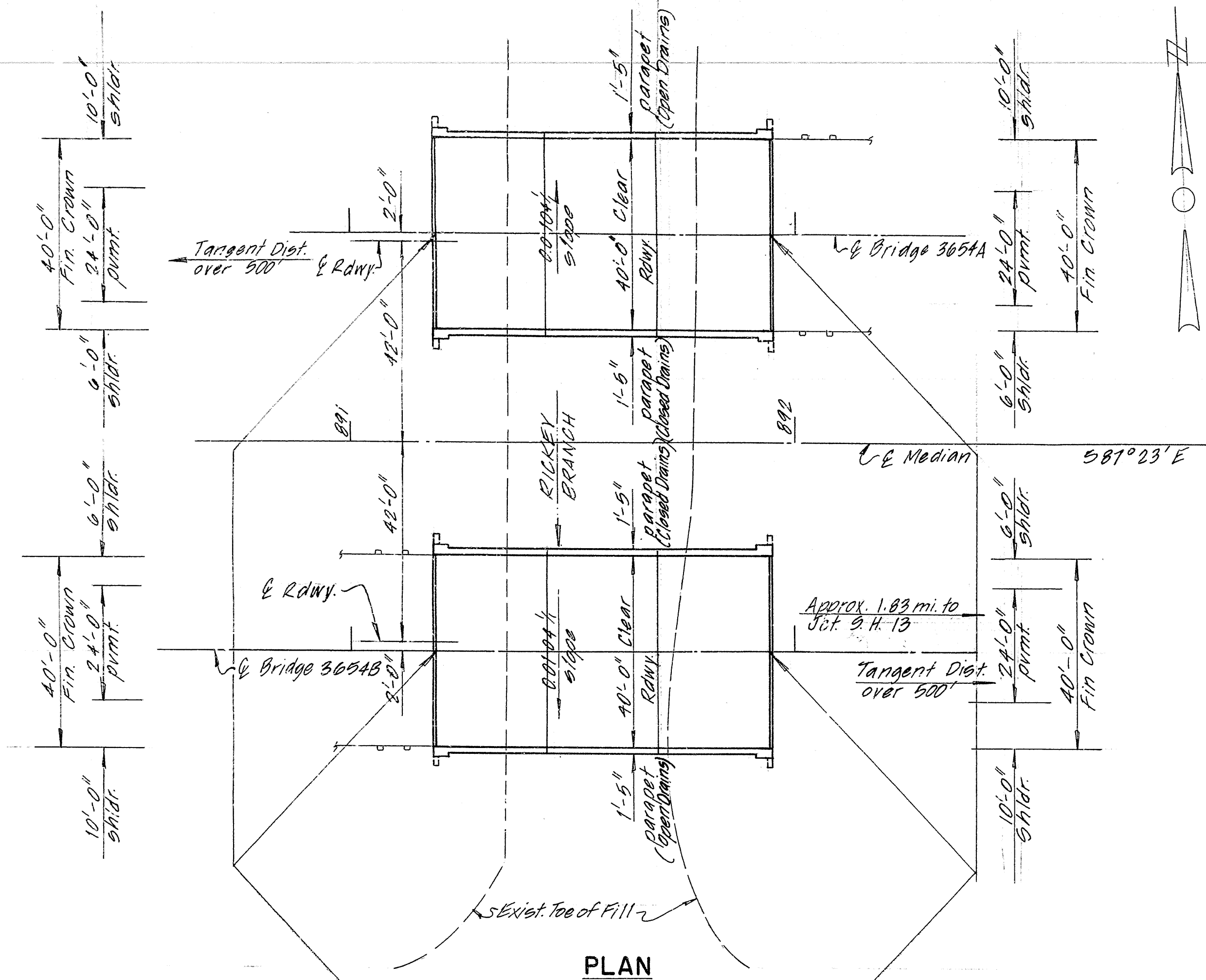
MAINTENANCE OF TRAFFIC: See Roadway Plans.

The work proposed consists of removing the existing R.C. Slab Superstructure and replacing it with a new R.C. Slab Superstructure.

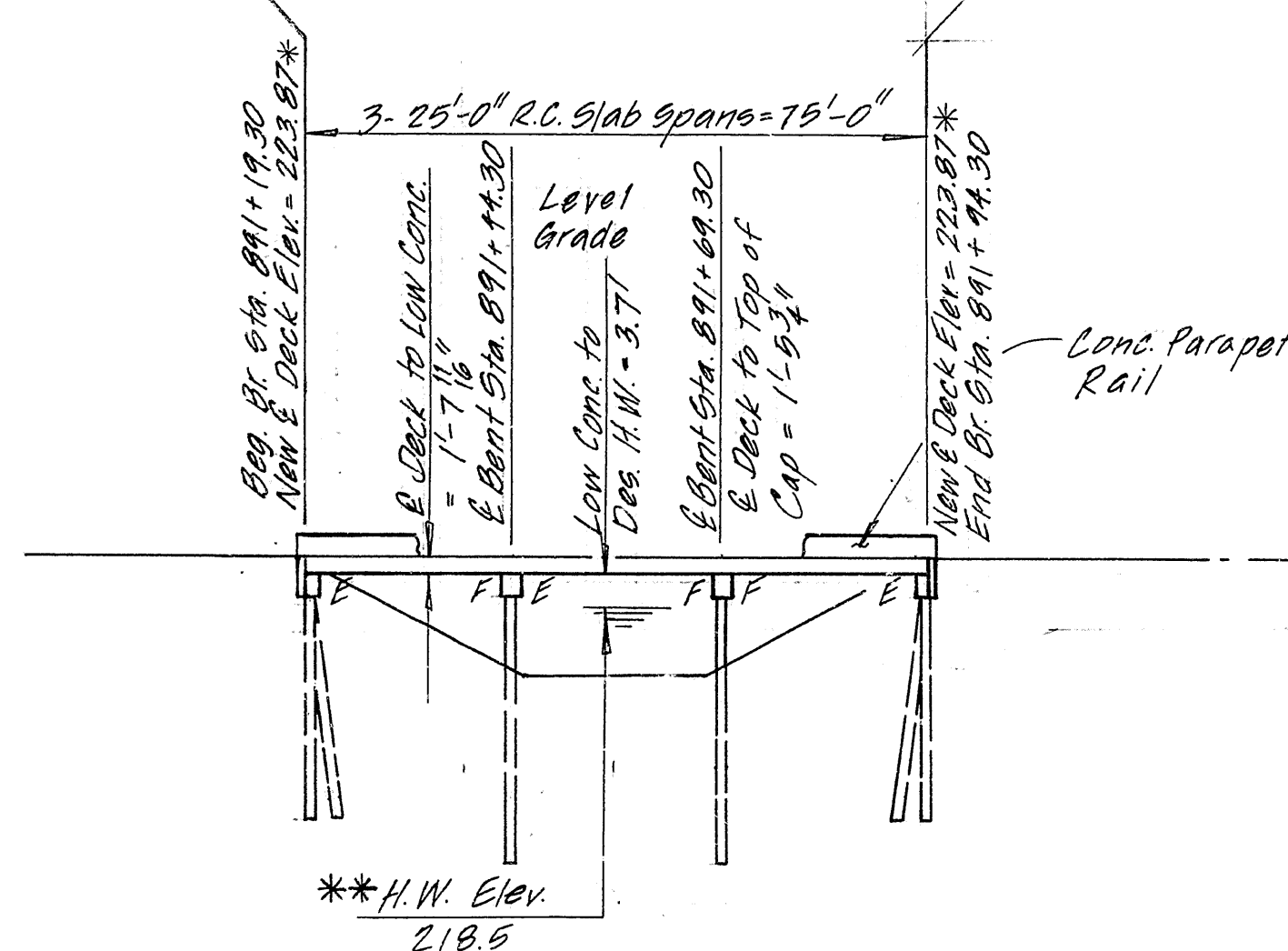
Remove and replace all existing approach slabs and gutters. All material from existing approach slabs and gutters shall become property of the contractor. Use Type special approach gutters at all end berths. Use 24" approach slabs at each end of both bridges.

Half-size detail sheets of the existing bridges may be obtained from the Arkansas State Highway and Transportation Dept. upon request.

The contractor shall be responsible for making check measurements of the existing bridge and making necessary adjustments to the new work.



PLAN



\* Exist. & Deck Elev. = 223.85  
\*\* Information obtained from Exist. Plans

BENT NO.

1 2 3 4

#### BASE FLOOD

$Q_{100} = 1,000$  c.f.s.  
N.W.S. Elev. = 216.6  
W.S. with Brkr. = 217.5

#### ELEVATION

D.A. = 5.8 Sq. Mi.

#### EXTREME FLOOD

$Q_{500} = 1,300$  c.f.s.  
N.W.S. = 216.8  
W.S. with Brkr. = 218.0

△ Revised Hydraulic Data; EJK; 1-11-90

LAYOUT OF BRIDGE OVER  
RICKEY BRANCH  
PRAIRIE CO. LINE - WEST  
LONOKE COUNTY  
INT. ROUTE 40 SEC. 41  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

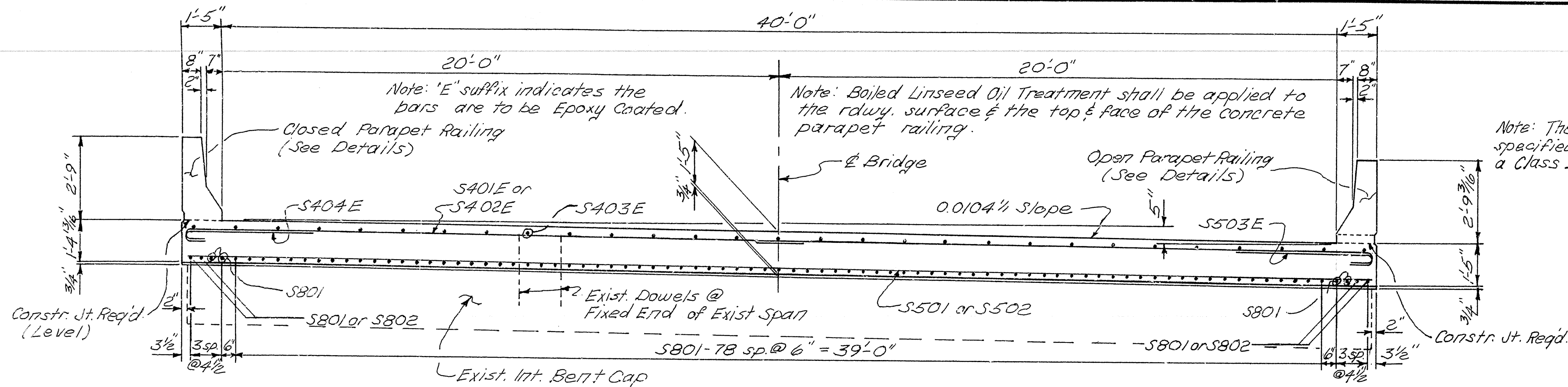
DRAWN BY: EJK DATE: 8-1-89  
CHECKED BY: GVA DATE: 8-7-89  
DESIGNED BY: ARW DATE: 5-17-89  
SCALE: 1" = 20'-0"

BRIDGE ENGINEER

BRIDGE NO. 3654 AR4BR DRAWING NO. 30712



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		30	57
				JOB NO. R60044 3654 AR 8BR SPAN DTL'S 30713				



### ROADWAY SECTION

Looking Forward Bridge BR  
Looking Back Bridge AR

Note: Existing Dowel Bars projecting from Existing Bent Caps shall be stripped, cleaned, straightened, and incorporated into the new construction. Existing Dowel Bars broken in the concrete removal or bar straightening process, or deemed unsuitable for reuse by the Engineer shall be replaced. Payment will be considered included in the Item Modification of Existing Bridge Structure.

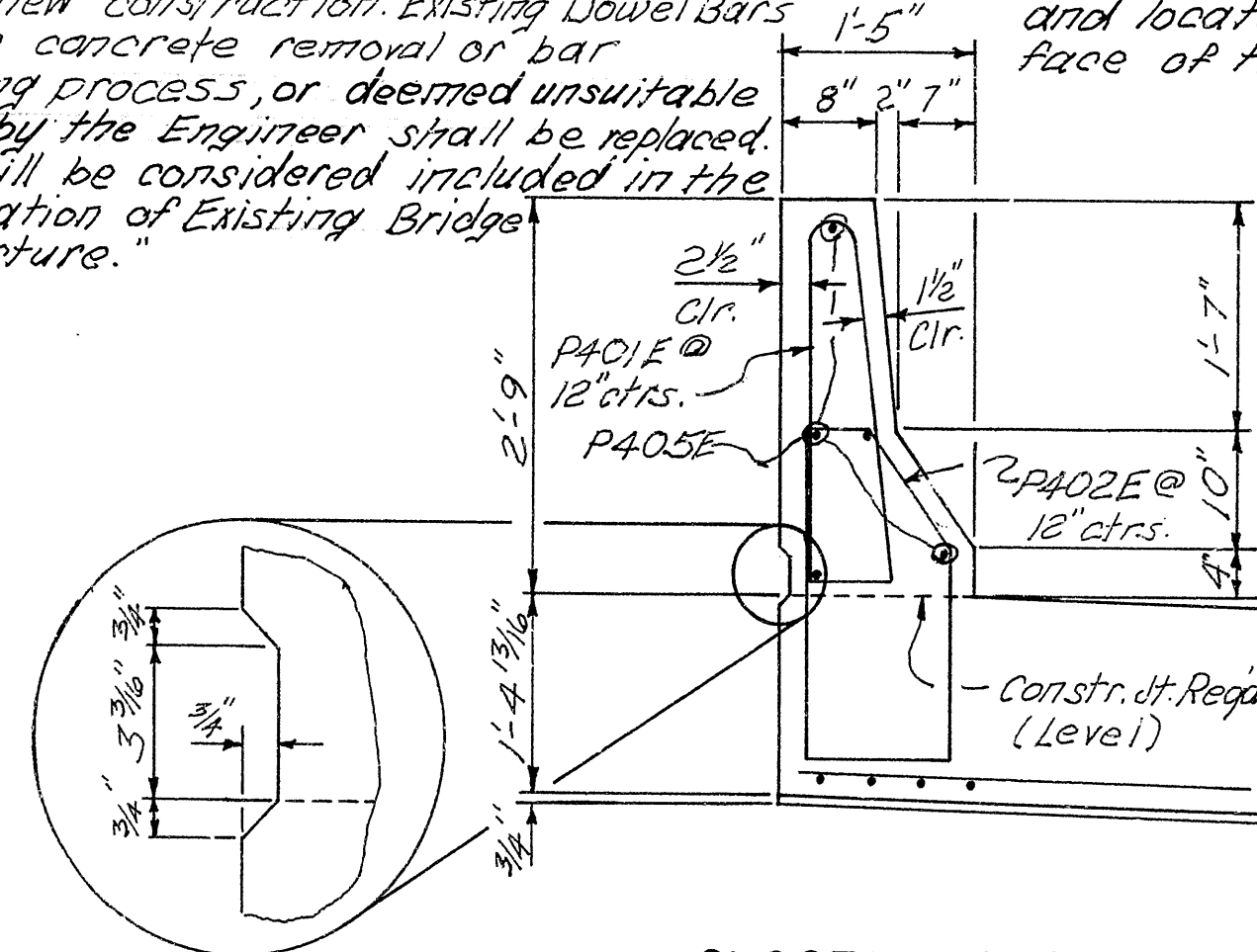
Note: Replacement Dowel Bars shall be No. 4 Bars x 2'-0" grouted into 1'x12" holes drilled into the Existing Cap and located a min. of 6" from the face of the Existing Cap.

### BAR LIST - PER SPAN

Mark	No. Reqd	Length	Pin Dia.	Bending Diagrams
S401E	30	22'-7"	3"	22'-1"
S402E	4	23'-6"	3"	
S403E	29	24'-8"	3"	
S404E	17	5'-6"	3"	
S405	2	3'-2"	3"	
S501	22	42'-6"	3"	23'-0"
S502	3	4'-2"	3"	
S503E	25	6'-7"	3 3/4"	
S801	83	24'-8"	3"	5'-0"
S802	4	25'-2"	3"	
PA01E	21	42	6'-4"	6'-0"
PA02E	21	42	6'-9"	
PA03E	8	16	5'-10"	
PA04E	8	16	3'-3"	5"
PA05E	9	18	12'-1"	
PA06E	5	10	12'-1"	For Bending Diagrams not shown, see dwg. no. 30714
RA01E	8		7'-2"	
RA02E	14		7'-4"	
RA03E	22		2'-11"	
RA04E	12		12'-8"	
RA05E	6		3'-2"	
RA06E	12		8'-6"	Dimensions are out to out of bars.
RA07E	6		5'-0"	

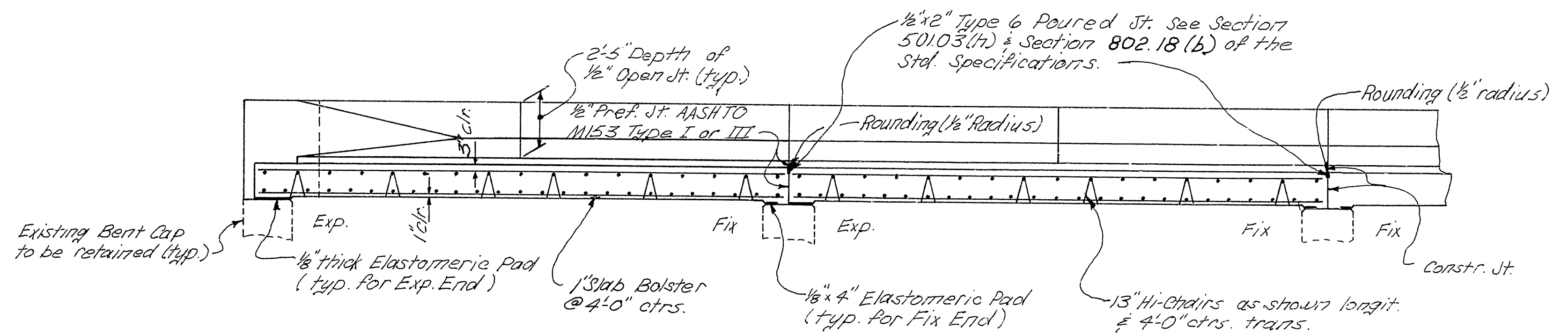
### CLOSED PARAPET RAILING SECTION

Scale: 3/4" = 1'-0"



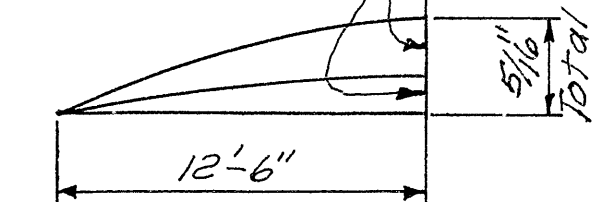
### LONGITUDINAL SECTION AT C BRIDGE

Scale: 1/4" = 1'-0"



Long Term Deflect = 1/4"  
Immediate Deflect = 1/8"

### D.L. DEFLECTION DIAGRAM

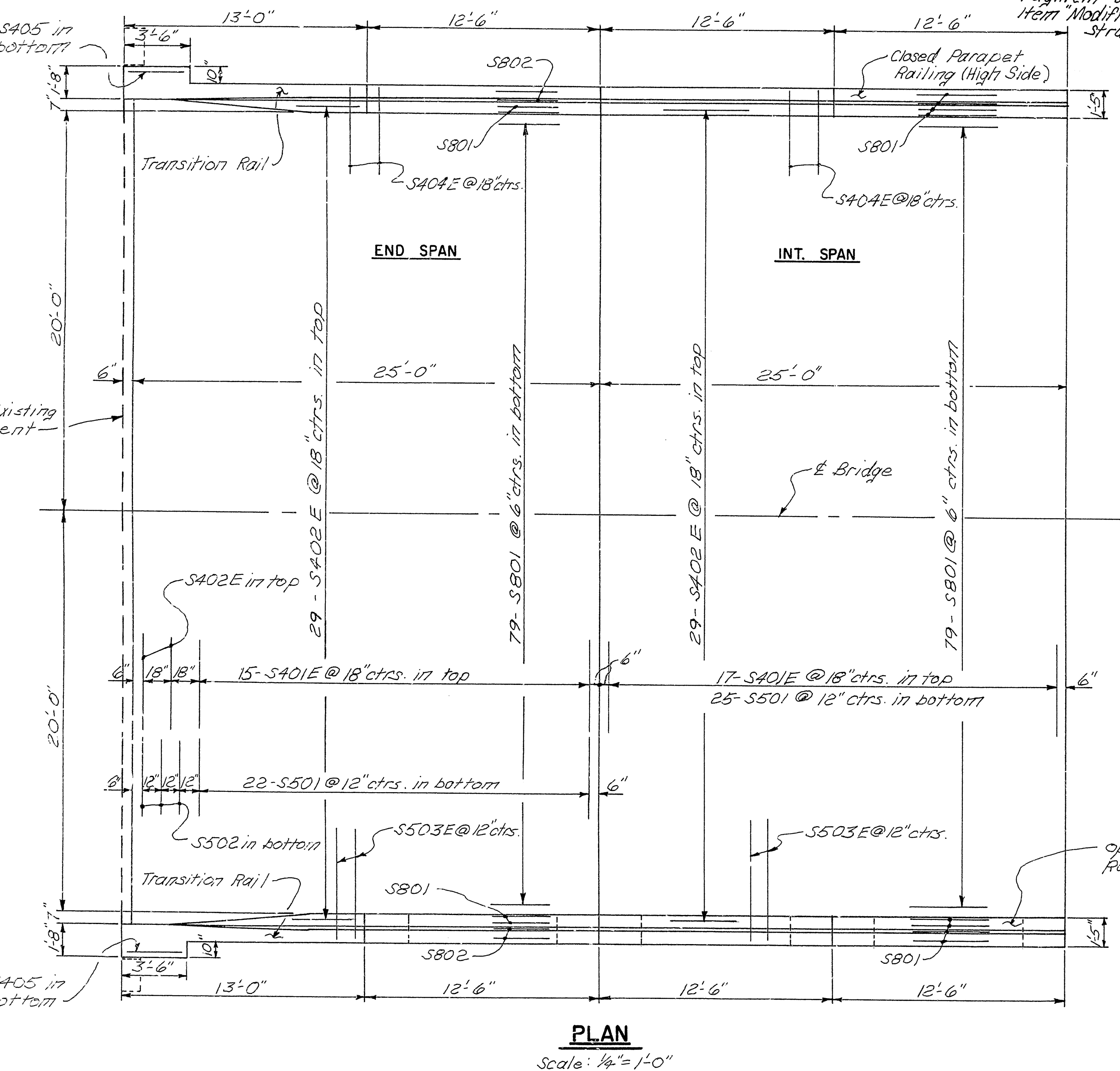


### SHEET 1 OF 2 DETAILS OF 25'-0" R.C. SLAB SPAN RICKEY BRANCH

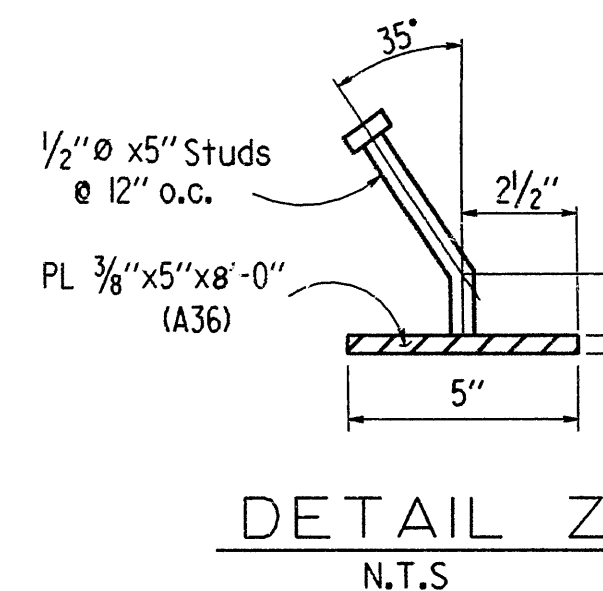
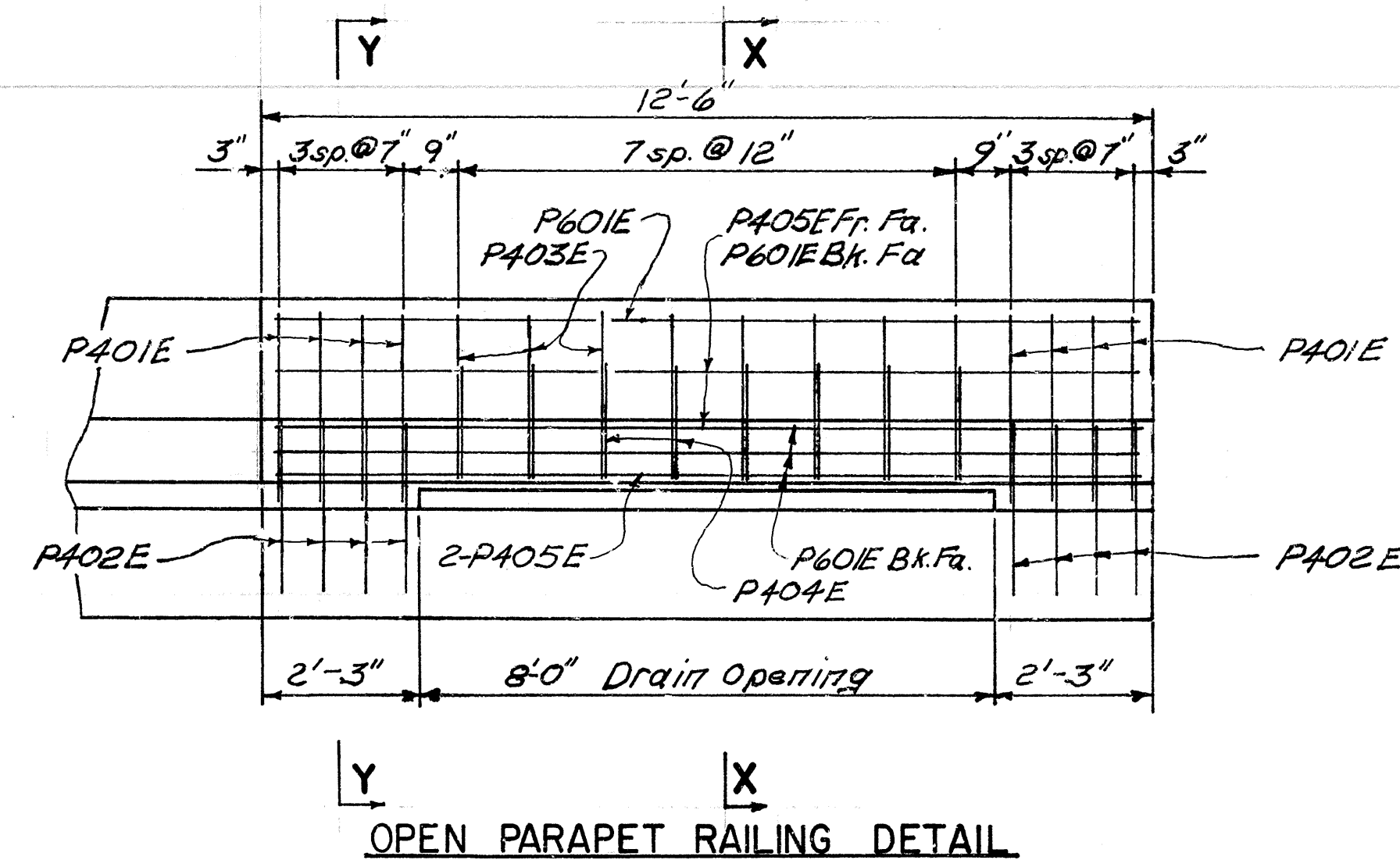
ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: ARW DATE: 8-9-89  
CHECKED BY: GVA DATE: 8-14-89  
DESIGNED BY: ARW DATE: April-89  
SCALE: 3/8" = 1'-0" or as noted  
BRIDGE NO. 3654 AR 8BR DRAWING NO. 30713

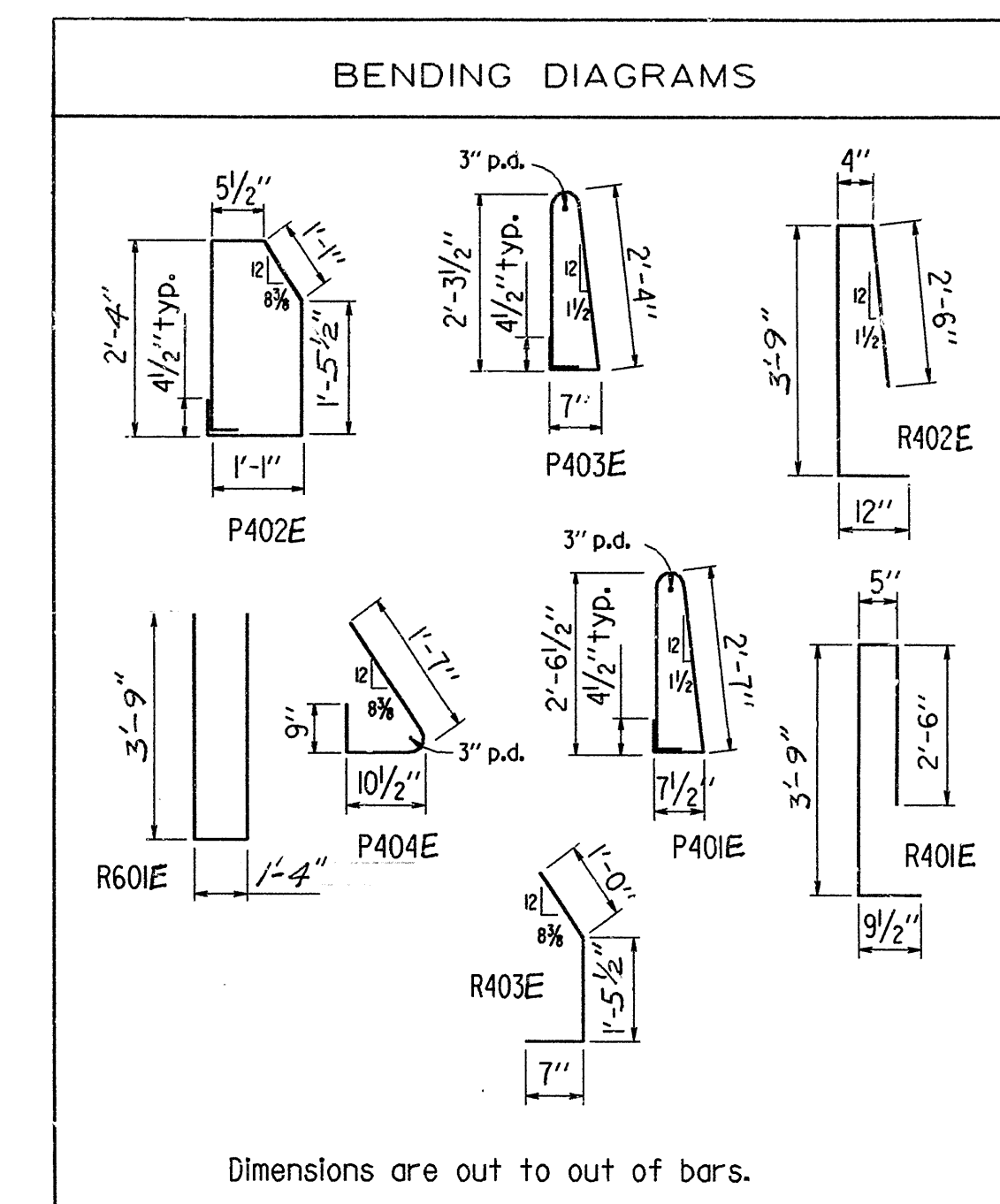
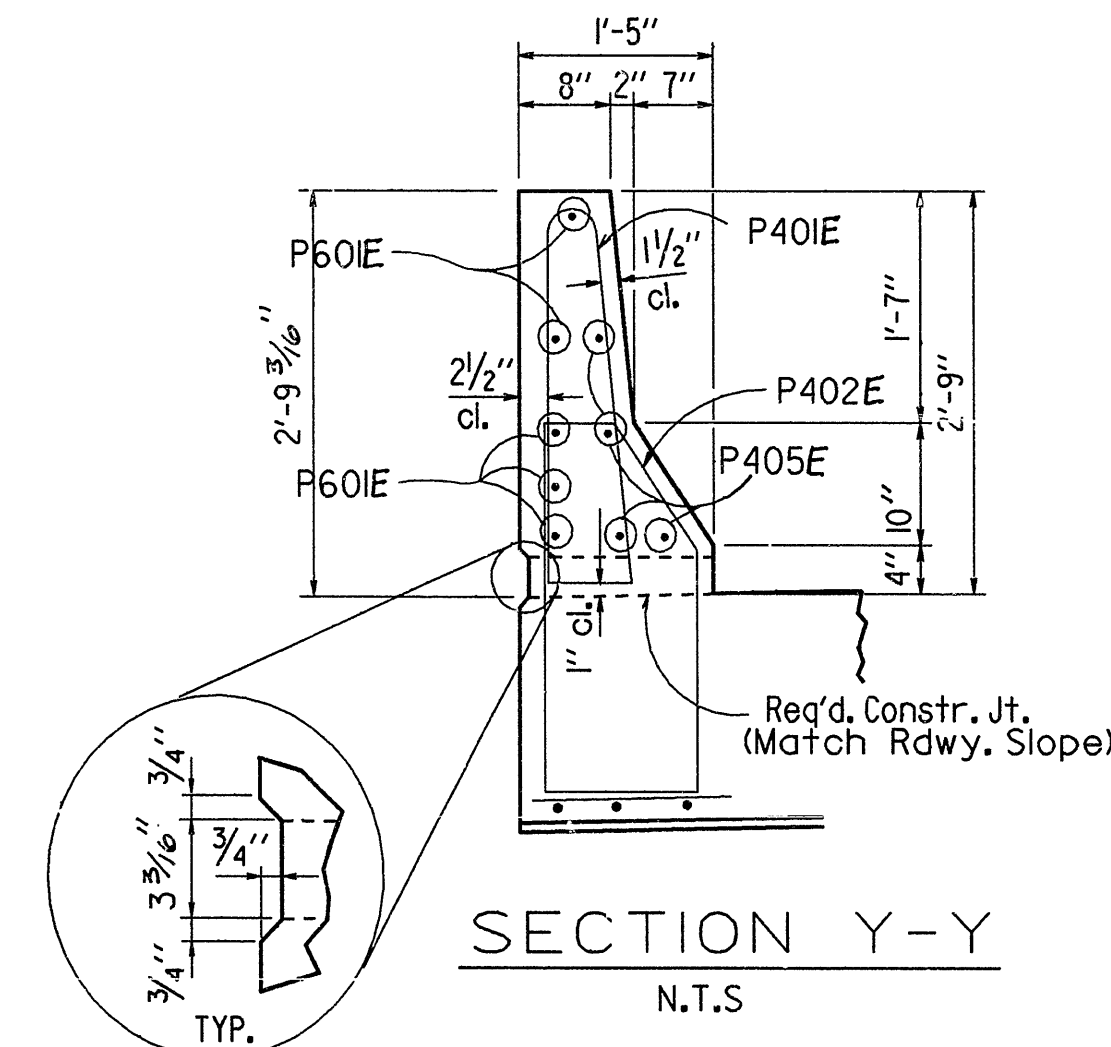
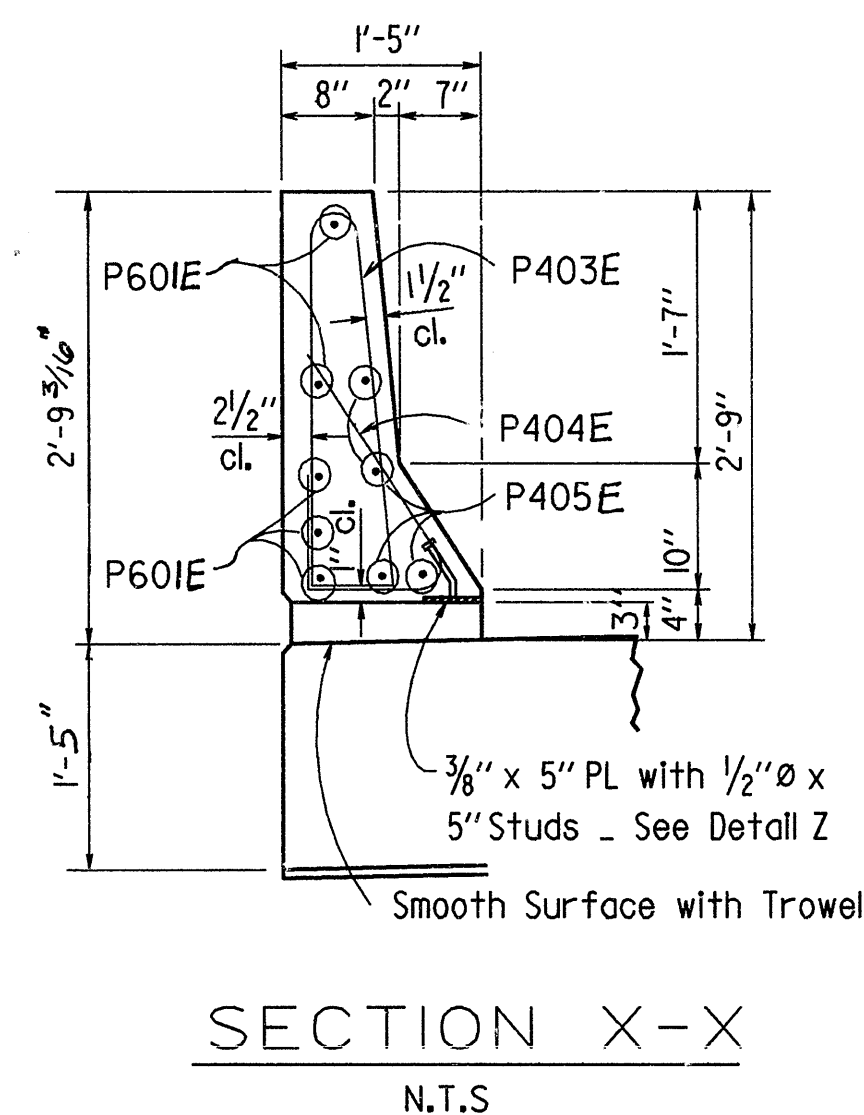
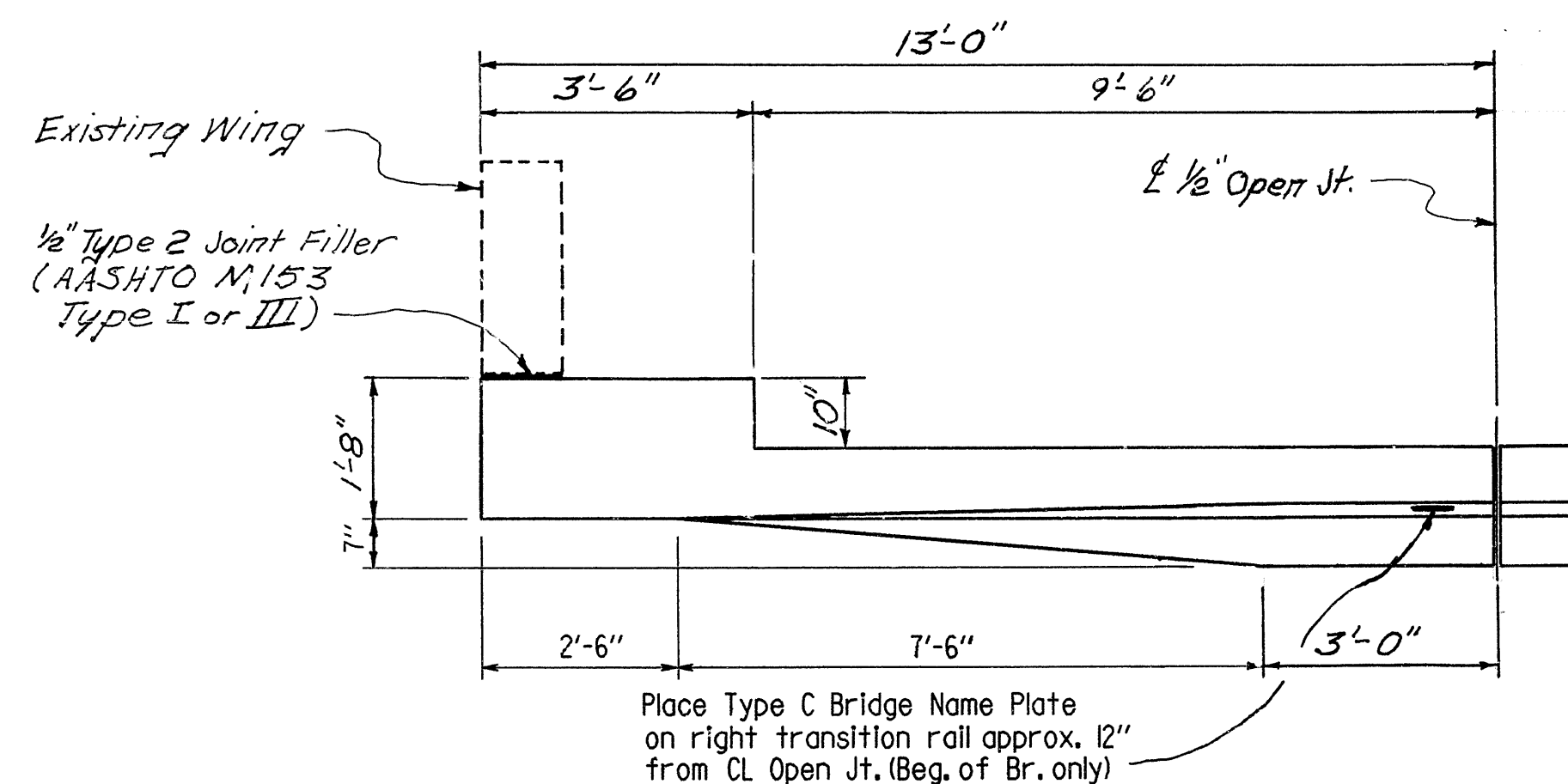
BRIDGE ENGINEER



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		R60044	31	57
				① 3654 AR & BR	SPAN		30714	



**Note:**  
Parapet Studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as Class S(AE) Concrete.  
The surfaces of the 3/8" Plates which will not be in contact with concrete shall receive two coats of paint in the shop. These coats shall be those specified as Shop Prime Coat and Finish Coat in Subsection 807.59. Painting will not be paid for directly, but will be included in the item of Class S(AE) Concrete.



**GENERAL NOTES**  
All concrete shall be Class S(AE). All exposed corners to be chamfered 3/4" unless otherwise noted. 28 day compressive strength of Class S(AE) Concrete = 4000 psi.

Reinforcing Steel to be ASTM A615 or A617, Grade 60.

Bar supports for reinforcing bars will not be paid for directly, but will be considered subsidiary to the item 'Reinforcing Steel'.

Structural Steel shall be measured and paid for as Class S(AE) Concrete.

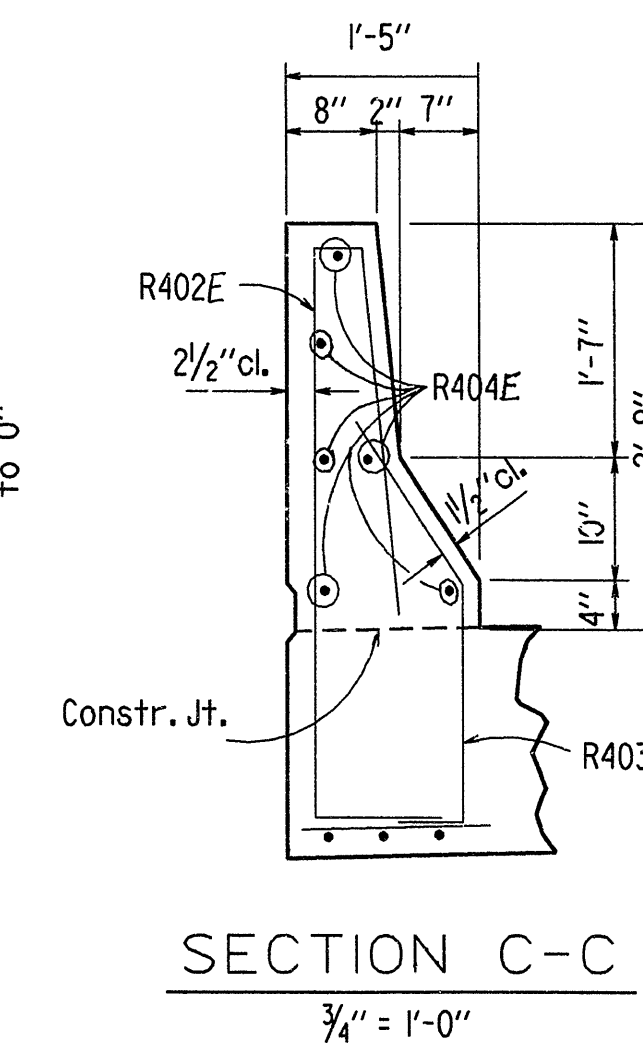
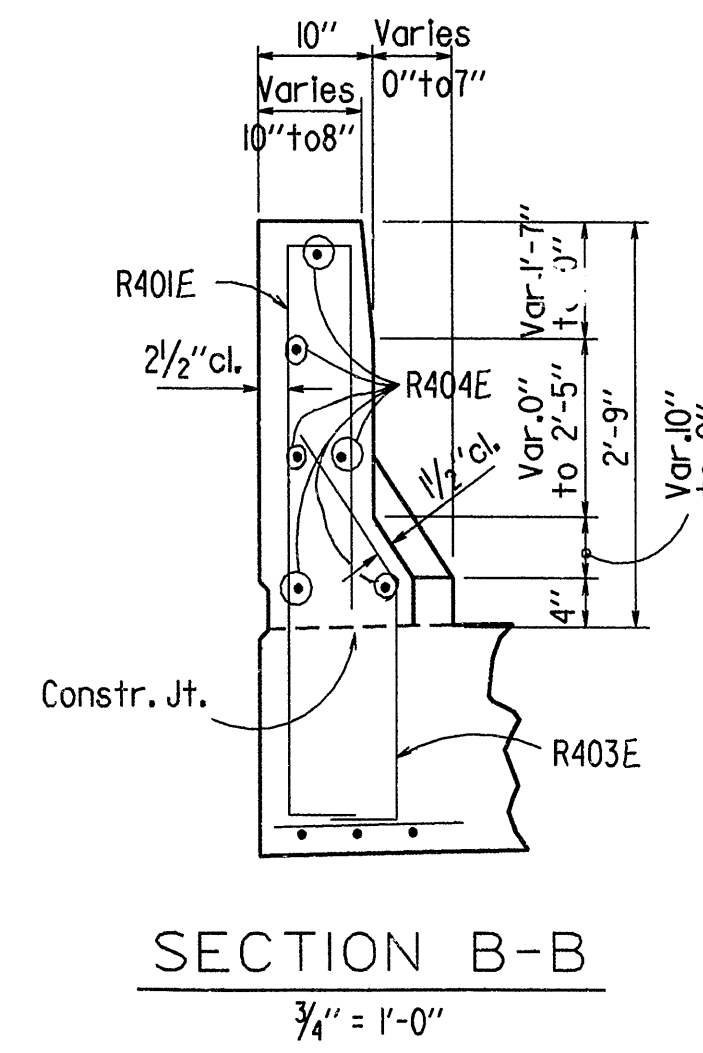
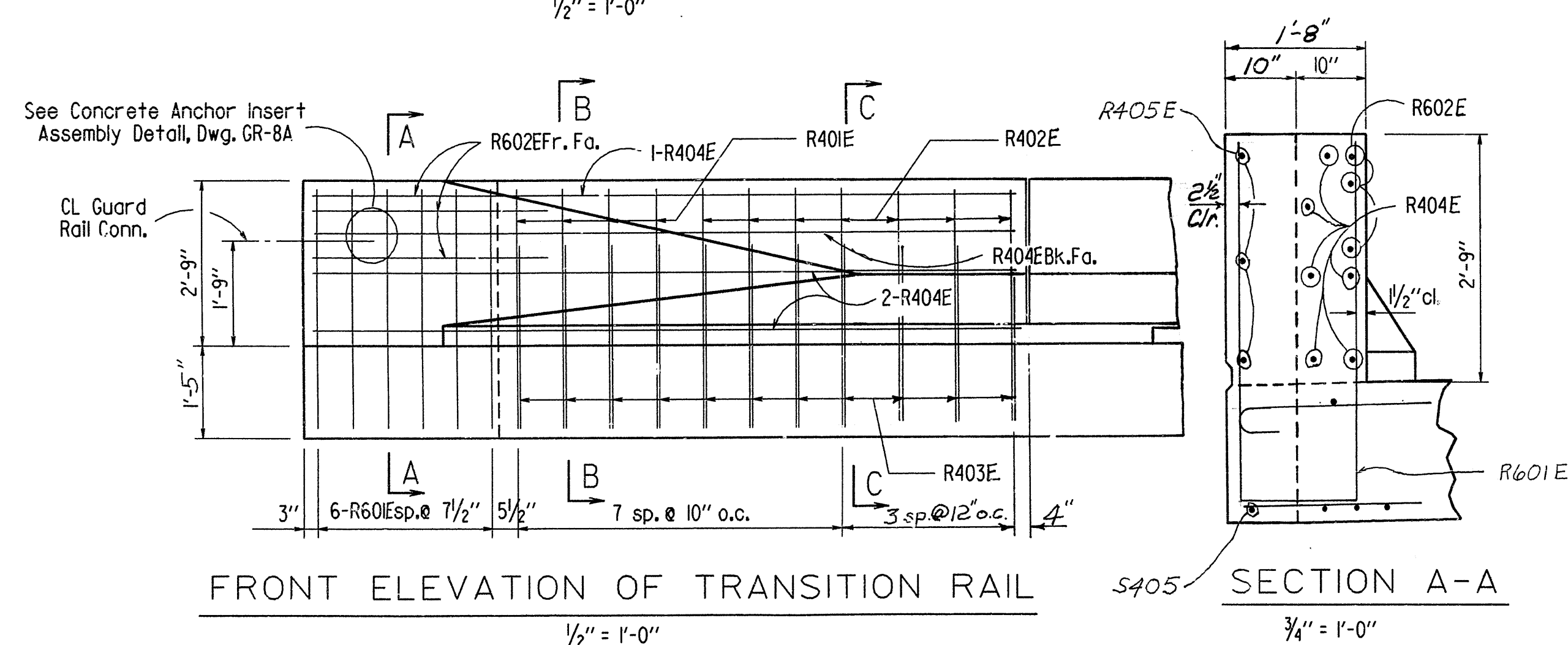
Elastomeric Pad Joint Material shall be measured and paid for as Class S(AE) Concrete. Elastomeric material shall meet the requirements of Section 808.02 of the Standard Specifications and shall be in one piece for the full width and length of the bearing.

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1988 edition, with applicable supplemental specifications.

Design Specifications: AASHTO Standard Specifications for Highway Bridges, 1983 edition, with current interim specifications.

Design Live Loading: HS20 + Military Method of Design: Load Factor

Dead Load: 255\*/sf (Includes 24 \*/sf future surface).  
Live Load: 184 Wheels/ft. + Impact



SHEET 2 OF 2  
DETAILS OF 25'-0" R.C. SLAB SPANS  
RICKEY BRANCH  
ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: ARW DATE: 8-10-89  
CHECKED BY: GVA DATE: 8-19-89  
DESIGNED BY: ARW DATE: April-89  
BRIDGE NO. 3654 AR & BR DRAWING NO. 30714

*Wesley Pinkert*  
BRIDGE ENGINEER



