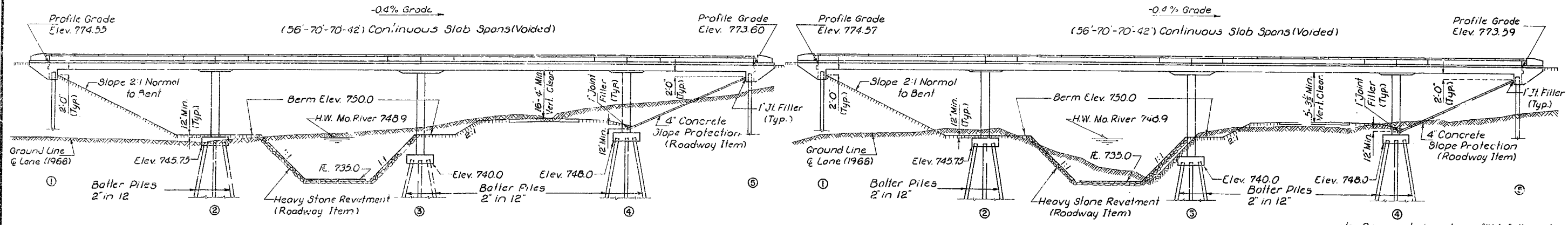


MISSOURI STATE HIGHWAY DEPARTMENT

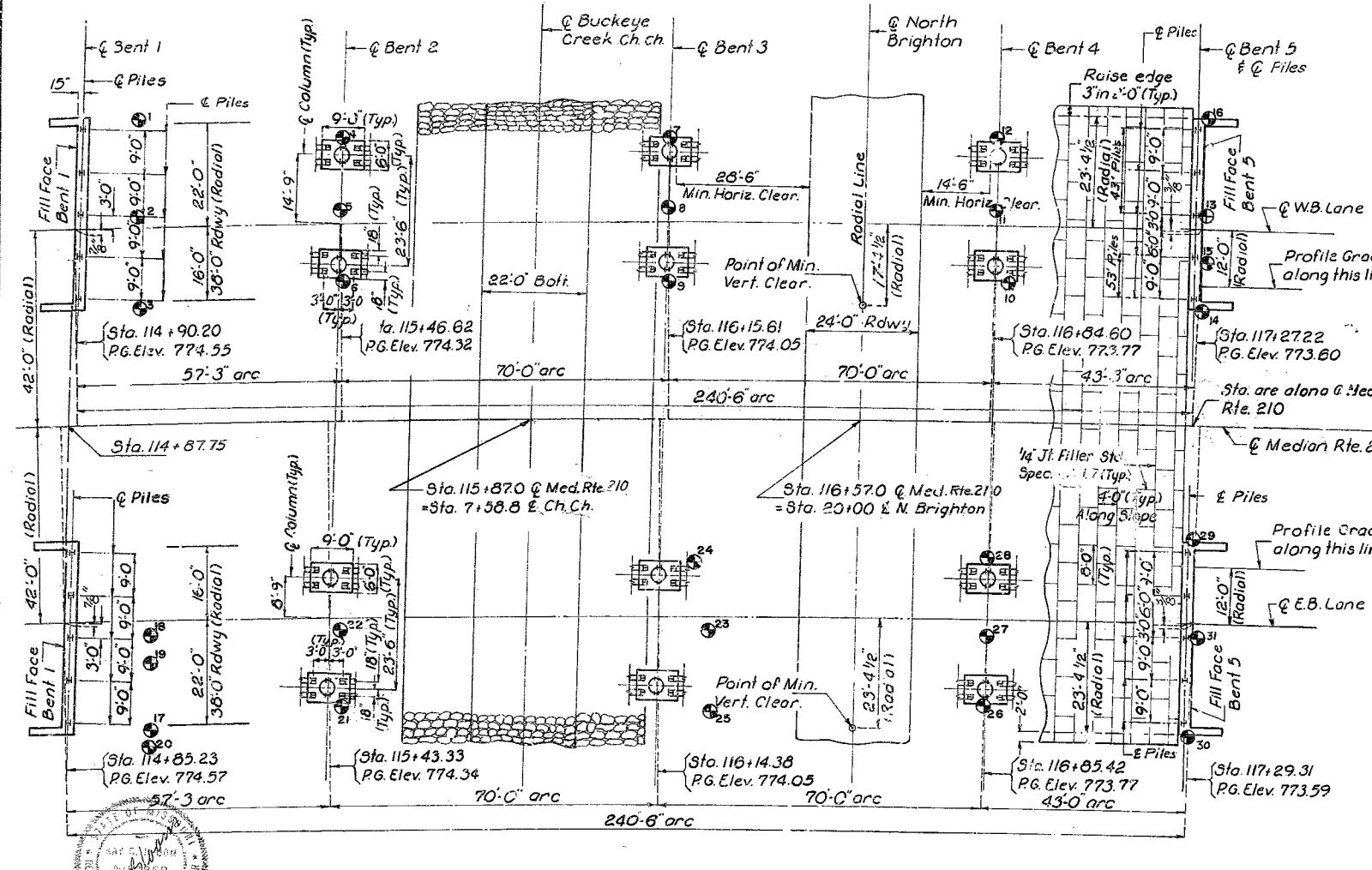
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	109	



GENERAL ELEVATION W.B. LANE

GENERAL ELEVATION E.B. LANE

Note: Compacted roadway fill (full roadway width) shall be placed up to elevation of bottom of concrete beam in front of and not less than 25'0" in back of end bents No. 1 and 5 before steel piles are driven.



PLAN

Note: For Boring Data see Sheet No. 2 of 10. Ⓞ Indicates location of boring.

Note: For Substructure Layout see Sheet No. 3 of 10.

BENT NO.	1	2	3	4	5
Type and Size	10BP42	10BP42	10BP42	10BP42	10BP42
Number EBL	5	12	12	12	5
Approximate Length Ft. EBL	50'	39'	33'	40'	62'
Number WBL	5	12	12	12	5
Approximate Length Ft. WBL	59'	38'	32'	33'	43'
Design Bearing Tons	54	55	55	55	54
Hammer Energy Req'd. Ft.-Lbs.	12200	13000	13000	13000	12200

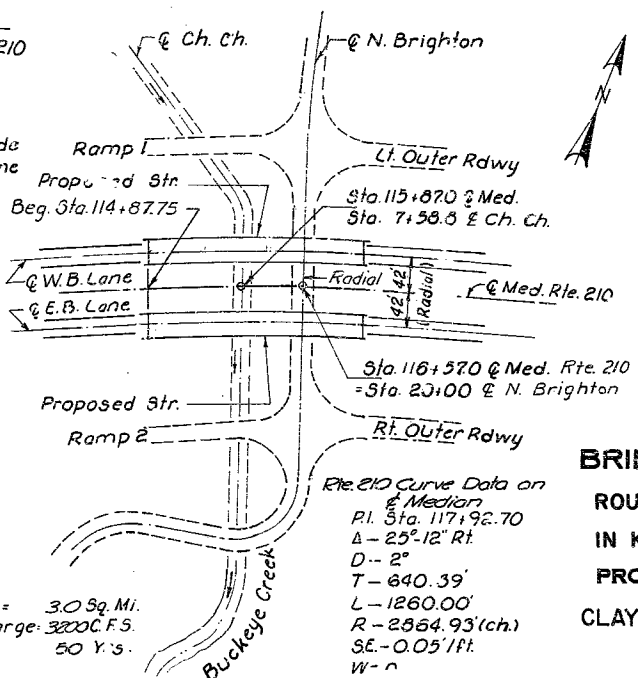
Note: Minimum energy requirement of hammer based on pile length and design bearing value of piles. Increase by the factor $(W_r/W_p)^2$ when the weight of the ram (W_r) is less than the weight of the pile (W_p) .
All piles shall be driven to practical refusal.

ITEM	SUBSTR.	SUPERSTR.	TOTAL
Class I Excavation for Structures	Cu.Yd. 280		280
Steel Piles in Place (10")	Lin. Ft. 3700		3700
Class B Concrete	Cu.Yd. 78.0		78.0
Class BI Concrete	Cu.Yd. 1478.3		1478.3
Reinforcing Steel	Lb. 4260	43610	44150
Bridge Rail (Single Tube Type)	Lin. Ft. 972		972

Note: No payment for excavation will be allowed at End Bents No. 1 and 5.
All concrete and reinforcement above footings in intermediate bents is included in superstructure quantities.

GENERAL NOTES:

- Design Specifications: A.A.S.H.O. - 1965
- Design Loading: HS20-44 15#/sq ft. Future Wearing Surface; Earth 120# Equivalent Fluid Pressure 30#
- Design Unit Stresses:
 - Class B Concrete (substructure): $f_c = 1200$ p.s.i.
 - Class BI Concrete (superstructure): $f_c = 1600$ p.s.i.
 - Reinforcing Steel: $f_s = 20,000$ p.s.i.
 - Steel Pile (A.S.T.M. A36-66): $f_p = 9,000$ p.s.i.
- Surface Seal: Superstructure deck to be surface sealed.



BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK

ROUTE 210
IN KANSAS CITY
PROJECT NO. C024-210(11) (RTE. 210) STA. 114+87.75 E. MED.
CLAY COUNTY

Drainage Area = 3.0 Sq. Mi.
 Design Discharge = 3200 C.F.S.
 Frequency = 50 Yrs.

LOCATION SKETCH

SUBMITTED BY: *W.A. Caney* BRIDGE ENGINEER DATE: 3-5-69
 APPROVED BY: *M.J. Sides* CHIEF ENGINEER DATE: 3-5-69

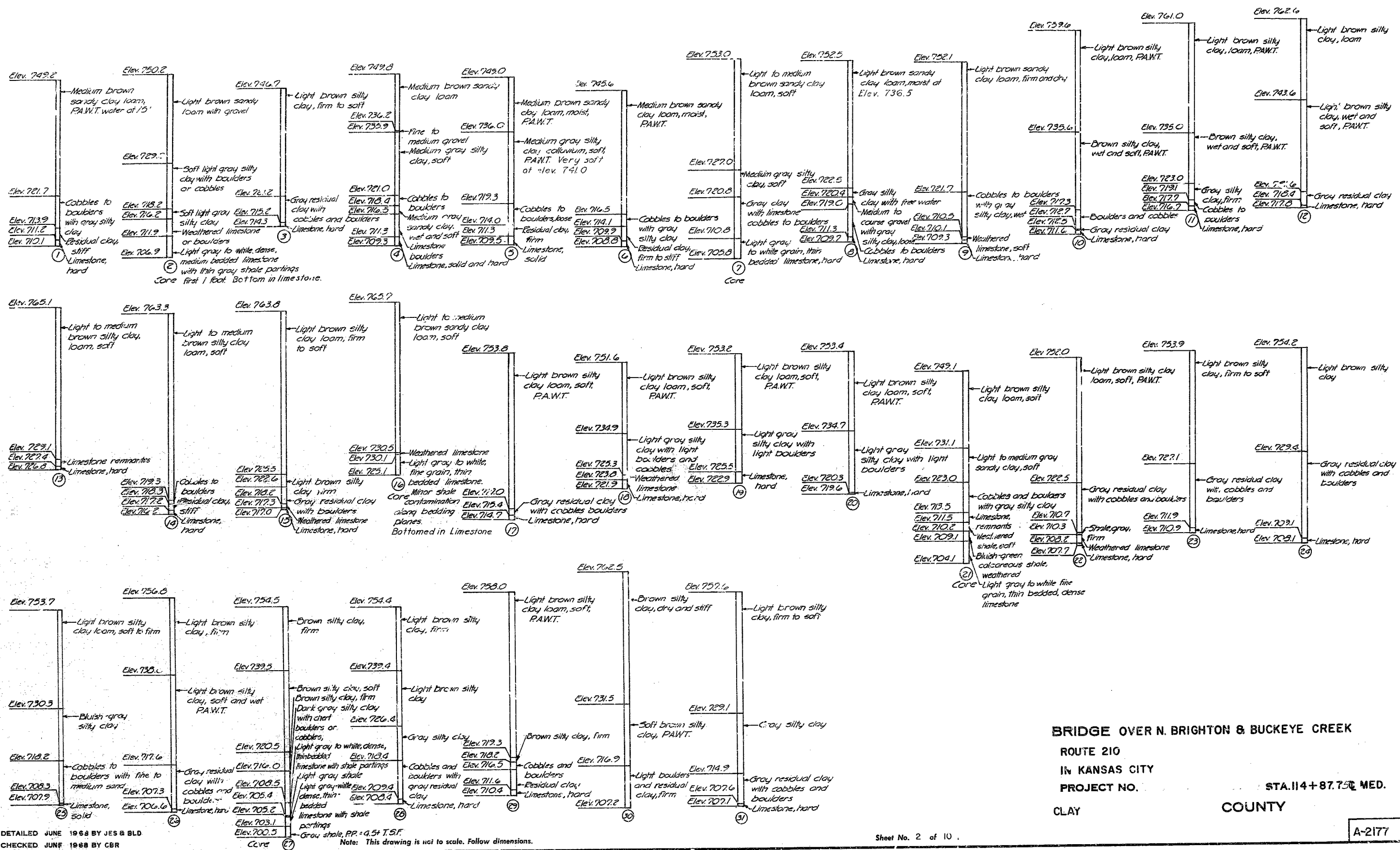
STD-706.30

A-2177

Note: This drawing is not to scale. Follow dimensions.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	110	



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BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK
 ROUTE 210
 IN KANSAS CITY
 PROJECT NO. STA. 114+87.75 MED.
 CLAY COUNTY

DETAILED JUNE 1968 BY JES & BLD
 CHECKED JUNE 1968 BY CBR

Sheet No. 2 of 10

A-2177

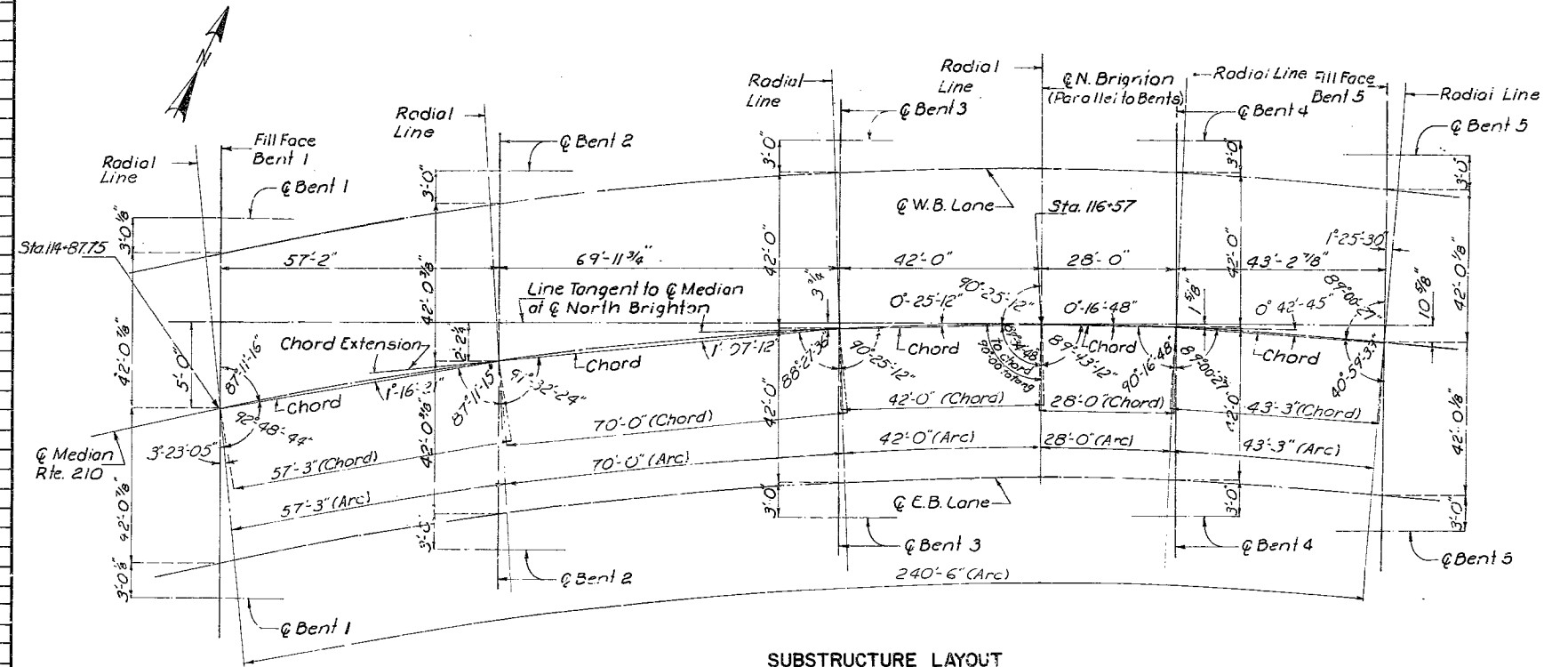
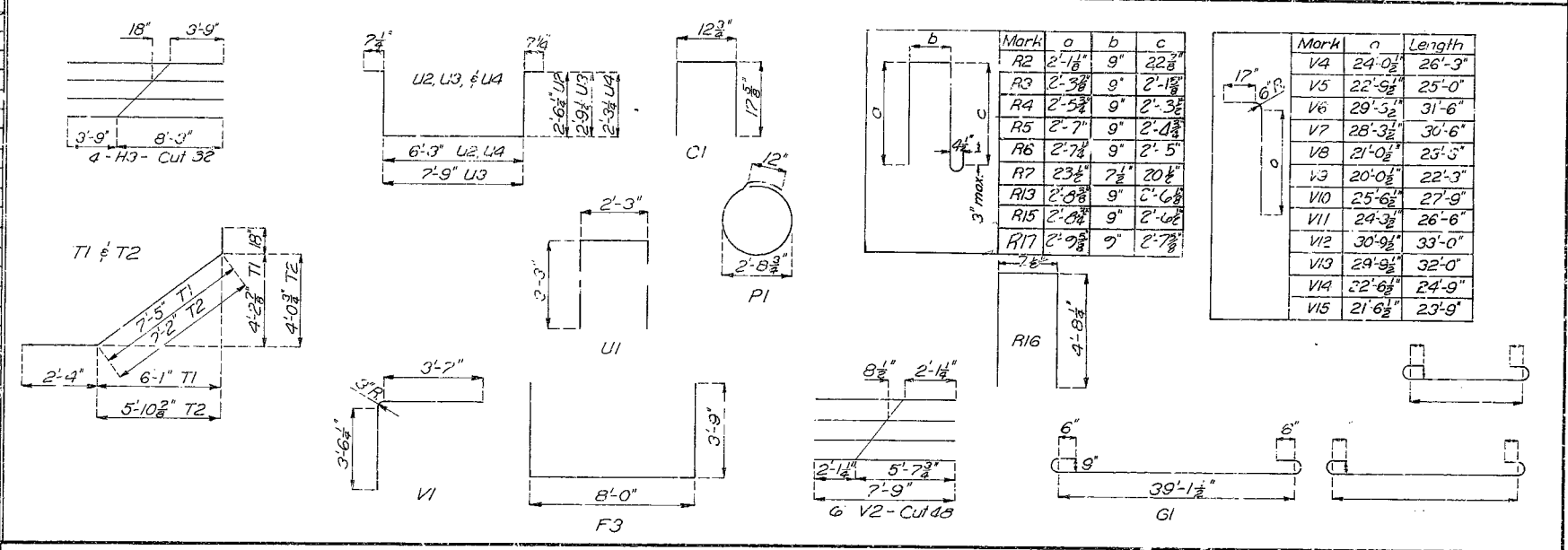
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	111	

COMPLETE BILL OF REINFORCING STEEL

NO.	SIZE	LENGTH	MARK	LOCATION	NO.	SIZE	LENGTH	MARK	LOCATION	NO.	SIZE	LENGTH	MARK	LOCATION
End Bents #1 and #5 E.B. and W.B. Lanes														
48	#6	40'-3"	H1	Beam	18	#11	42'-6"	G1	Beam	180	#11	30'-0"	S16	Slab
16	#6	8'-6"	H2	Wing	18	#11	39'-9"	G2	Beam	80	#11	40'-0"	S18	Slab
32	#6	12'-0"	H3	Wing	39	#3	9'-9"	P1	Column	90	#8	55'-0"	S19	Slab
8	#6	11'-3"	T1	Wing(#1)	82	#5	12'-0"	U4	Beam	88	#8	33'-0"	S20	Slab
8	#6	11'-0"	T2	Wing(#5)										
Int. Bent #2 (Superstructure) E.B.L.														
32	#5	8'-9"	U1	Beam	8	#10	23'-3"	V3	Lt. Column					
					8	#10	22'-3"	V9	Rt. Column					
216	#6	7'-6"	V1	Beam										
48	#4	7'-9"	V2	Wing										
15	#4	5'-9"	V3	Wing										
Int. Bent #4 (Superstructure) W.B.L.														
18	#11	42'-6"	G1	Beam	18	#11	39'-9"	G2	Beam	72	#9	5'-6"	F1	Footing
18	#11	39'-9"	G2	Beam	82	#5	12'-0"	U4	Beam	48	#10	8'-6"	F2	Footing
45	#3	9'-9"	P1	Column	8	#10	24'-9"	V14	Lt. Column	24	#10	15'-6"	F3	Footing
82	#5	13'-6"	U2	Beam										
8	#10	26'-3"	V4	Lt. Column										
8	#10	25'-0"	V5	Rt. Column										
Superstructure (E.B. & W.B. Lanes)														
1032	#5	4'-0"	C1	Curb	16	#5	29'-0"	C2	Curb					
16	#5	29'-0"	C2	Curb	32	#5	35'-6"	C3	Curb					
16	#5	22'-0"	C4	Curb	16	#6	6'-9"	C5	Curb					
47	#3	9'-9"	P1	Column	16	#5	4'-9"	R1	End Post					
82	#5	13'-6"	U2	Beam	8	#5	5'-6"	R2	End Post					
8	#5	6'-0"	R3	End Post	8	#5	6'-3"	R4	End Post					
8	#5	6'-6"	R5	End Post	8	#5	6'-6"	R6	End Post					
8	#5	6'-6"	R6	End Post	984	#5	5'-3"	R7	Parapet					
32	#5	25'-0"	R8	Parapet	32	#5	25'-0"	R8	Parapet					
64	#5	7'-9"	R9	Parapet	64	#5	7'-9"	R9	Parapet					
64	#5	26'-6"	R10	Parapet	64	#5	26'-6"	R10	Parapet					
18	#11	42'-6"	G1	Beam	32	#5	9'-9"	H11	Parapet					
18	#11	39'-9"	G2	Beam	16	#5	35'-0"	R12	Parapet					
8	#5	6'-9"	R13	End Post	8	#5	6'-9"	R13	End Post					
32	#5	2'-9"	R14	Parapet	8	#5	6'-9"	R15	End Post					
8	#5	6'-9"	R15	End Post	64	#5	7'-0"	R17	End Post					
64	#5	7'-0"	R17	End Post	1088	#5	40'-6"	S1	Slab					
98	#5	32'-0"	S2	Slab	98	#5	32'-0"	S2	Slab					
98	#11	48'-0"	S3	Slab	98	#11	48'-0"	S3	Slab					
96	#11	30'-0"	S4	Slab	96	#11	30'-0"	S4	Slab					
98	#5	25'-0"	S5	Slab	98	#5	25'-0"	S5	Slab					
98	#11	54'-0"	S6	Slab	98	#11	54'-0"	S6	Slab					
96	#11	38'-0"	S7	Slab	96	#11	38'-0"	S7	Slab					
98	#5	26'-0"	S8	Slab	98	#5	26'-0"	S8	Slab					
98	#11	46'-0"	S9	Slab	98	#11	46'-0"	S9	Slab					
96	#11	29'-0"	S10	Slab	96	#11	29'-0"	S10	Slab					
98	#5	17'-9"	S11	Slab	98	#5	17'-9"	S11	Slab					
90	#11	49'-0"	S12	Slab	88	#11	44'-0"	S13	Slab					
88	#11	44'-0"	S13	Slab	90	#8	22'-0"	S14	Slab					
8	#10	33'-0"	V12	Lt. Column	88	#11	38'-0"	S15	Slab					
8	#10	32'-0"	V13	Rt. Column										

BENDING SKETCHES & CUTTING DIAGRAMS



Note:
 All dimensions are horizontal.
 Bents cannot be accurately located from the reference point on the tangent by conventional survey methods based on 100' chords. (All bents are parallel)

BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK
 ROUTE 210
 IN KANSAS CITY
 PROJECT NO. STA. 114+87.75 @ MED.
 CLAY COUNTY

196

No. 90.5 Revised
 AUG. 1963

DETAILED JUNE 1968 BY JES & BLD
 CHECKED JUNE 1968 BY CBR

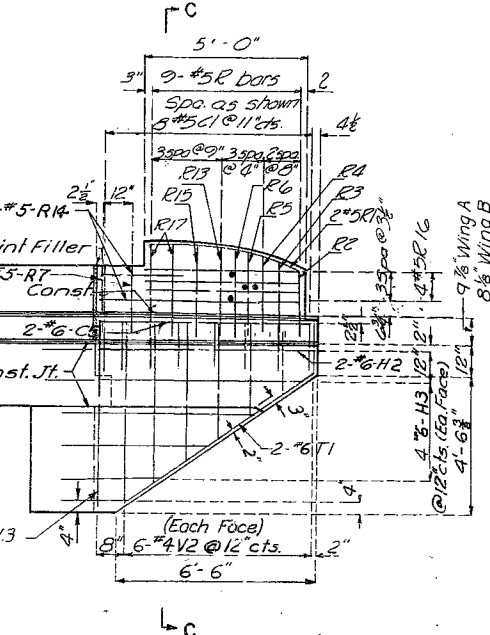
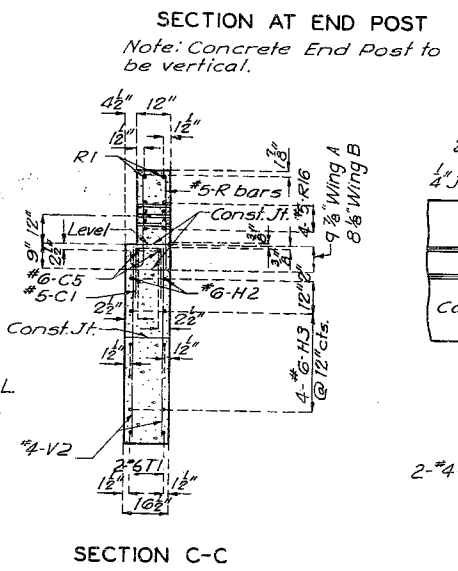
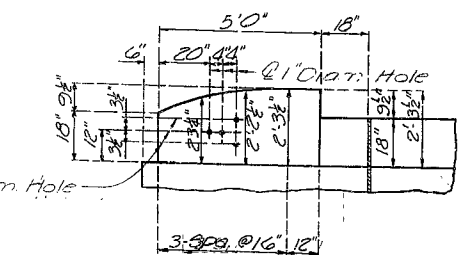
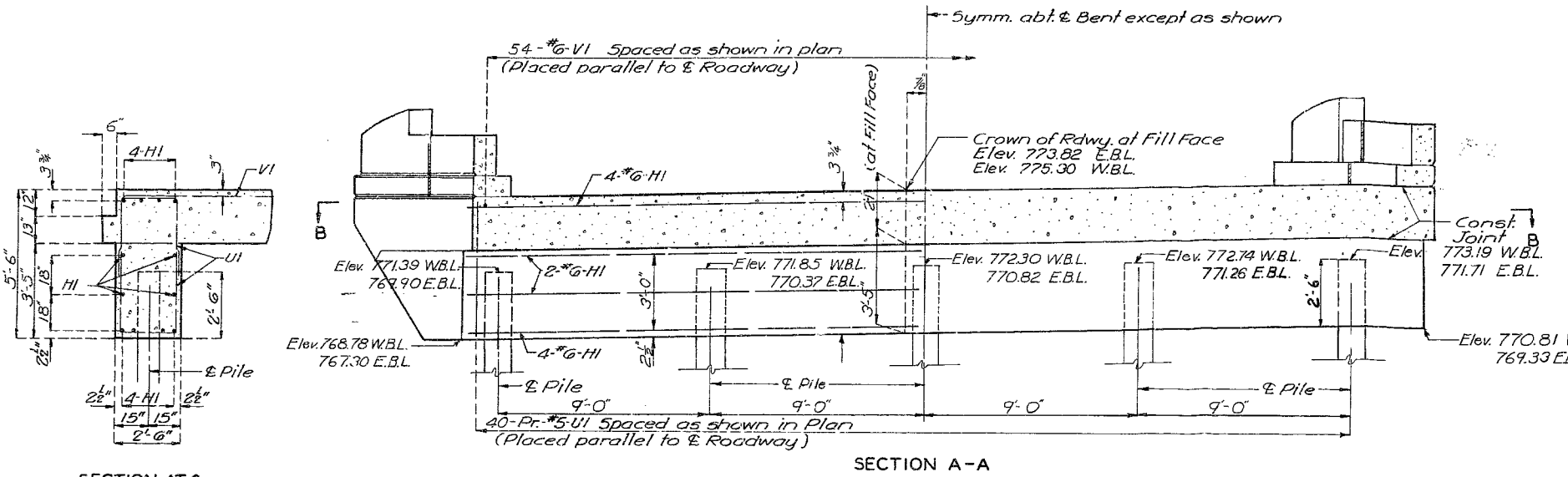
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 10

A-2177

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	112	

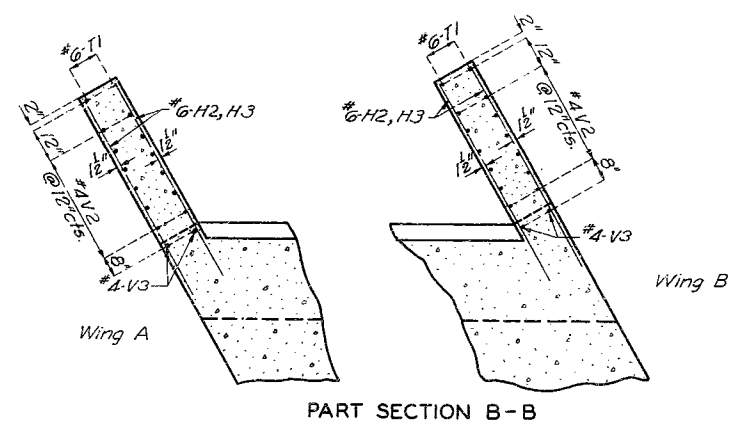
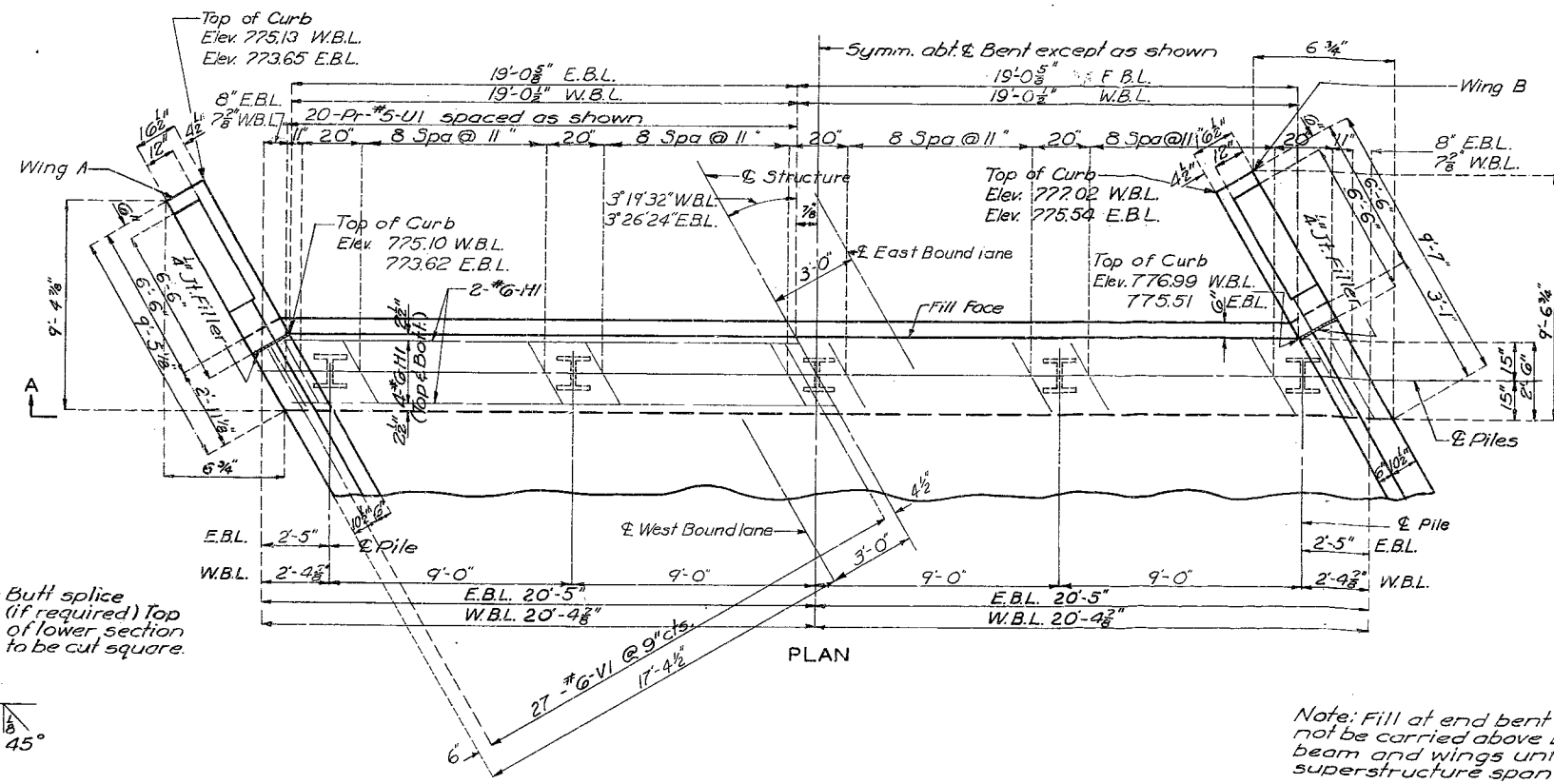


SECTION AT E

SECTION A-A

SECTION C-C

ELEVATION OF WING



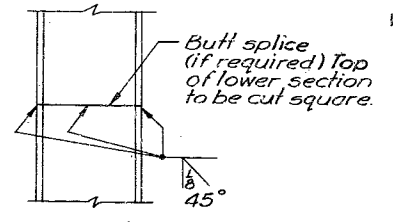
PART SECTION B-B

DETAILS OF END BENT NO. 1

Note: Fill at end bent No. 1 shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.

Note: This drawing is not to scale. Follow dimensions.

BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK
 ROUTE 210
 IN KANSAS CITY
 PROJECT NO. CLAY COUNTY
 STA. 114+87.70 MED.



DETAIL OF STEEL PILE SPLICE

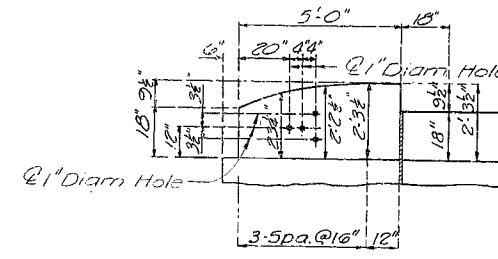
197

STD. 52.21 L.A. REVISED
 SEPT. 1965
 FEB. 1968

DETAILED JUNE 1969 BY J.E.S.
 CHECKED JUNE 1968 BY CBR

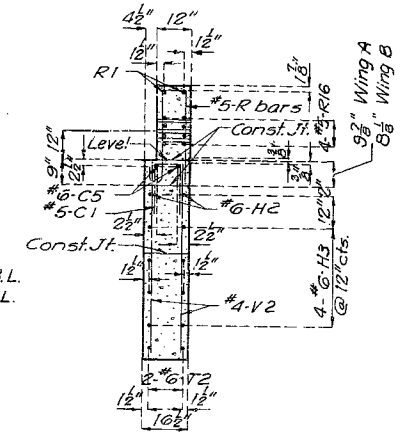
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	113	

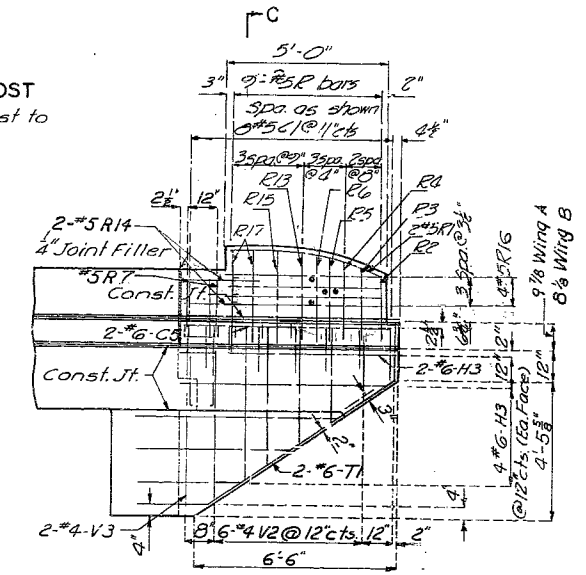


SECTION AT END POST

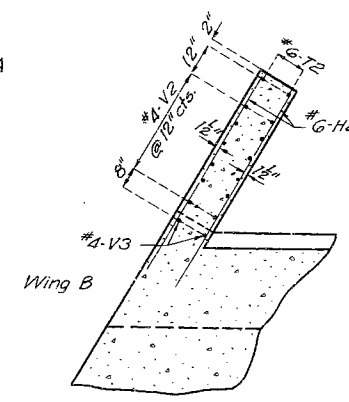
Note: Concrete End Post to be vertical.



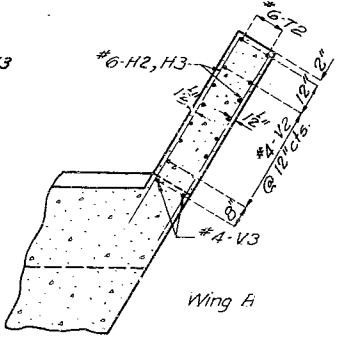
SECTION C-C



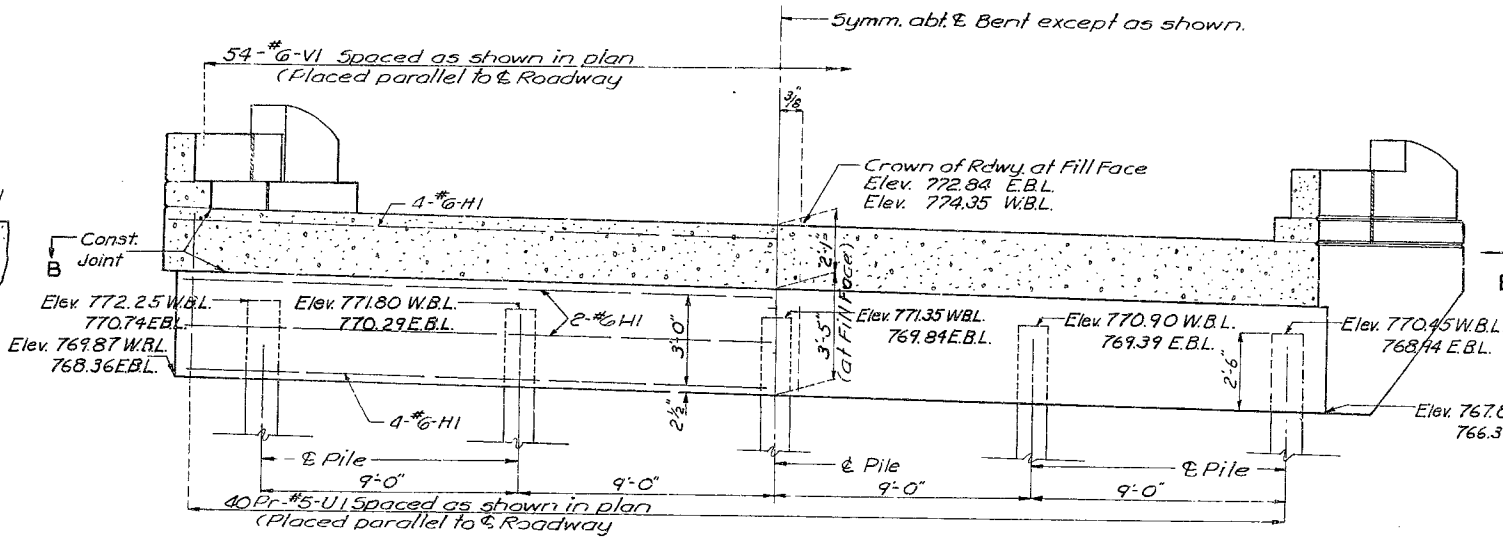
ELEVATION OF WING



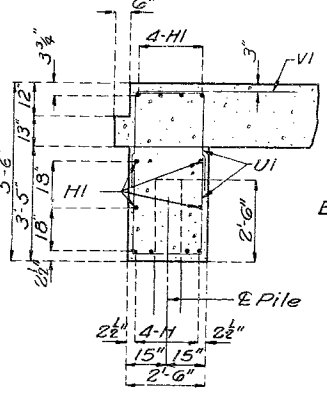
PART SECTION B-B



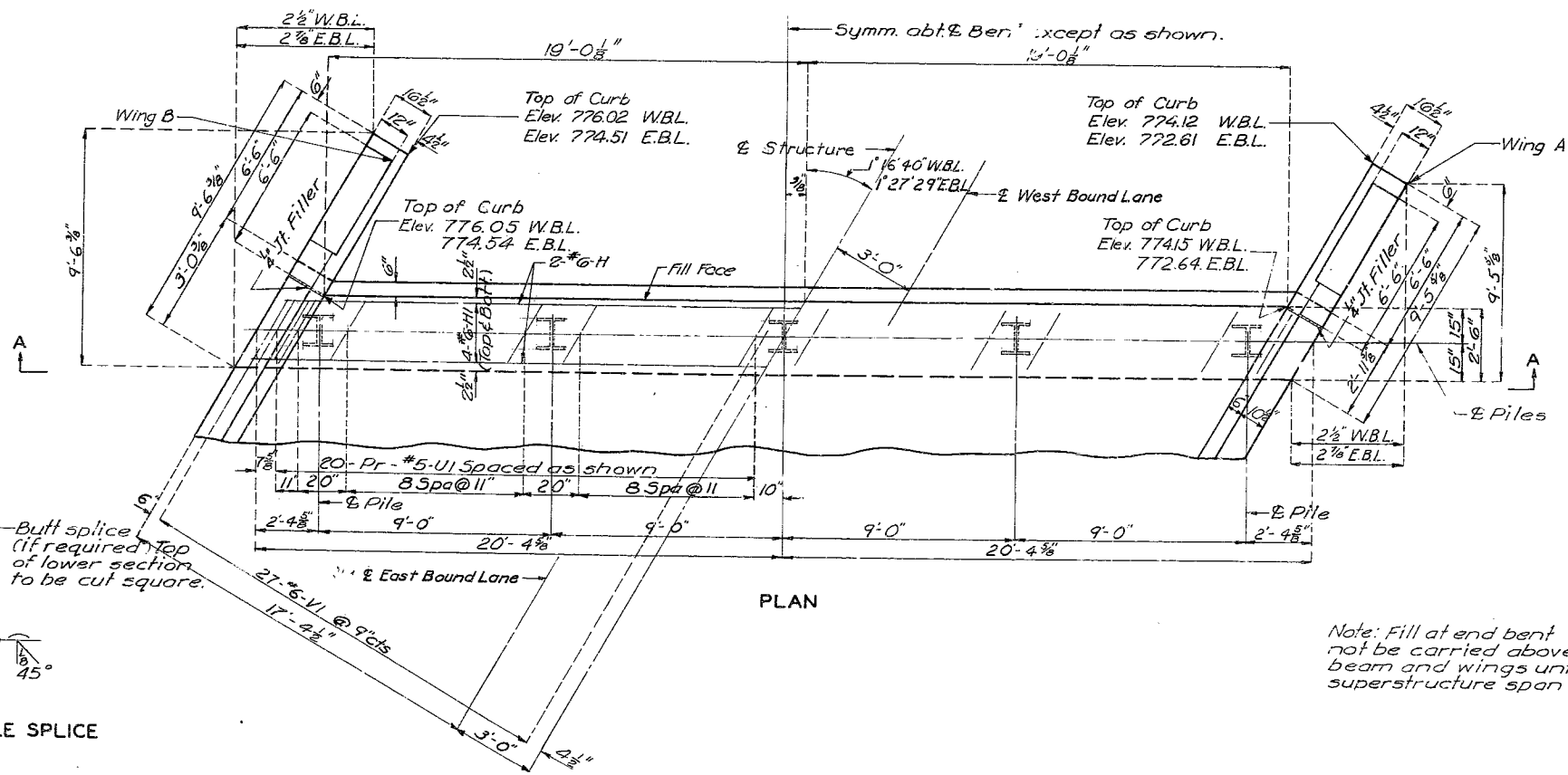
Wing A



SECTION A-A



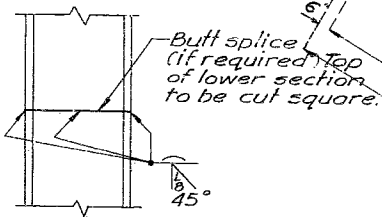
SECTION AT E



PLAN

Note: Fill at end bent No. 5 shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.

DETAILS OF END BENT NO. 5



DETAIL OF STEEL PILE SPLICE

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 10

BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK

ROUTE 210
IN KANSAS CITY

PROJECT NO.

STA. 114+87.70 C. MED.

CLAY

COUNTY

A-2177

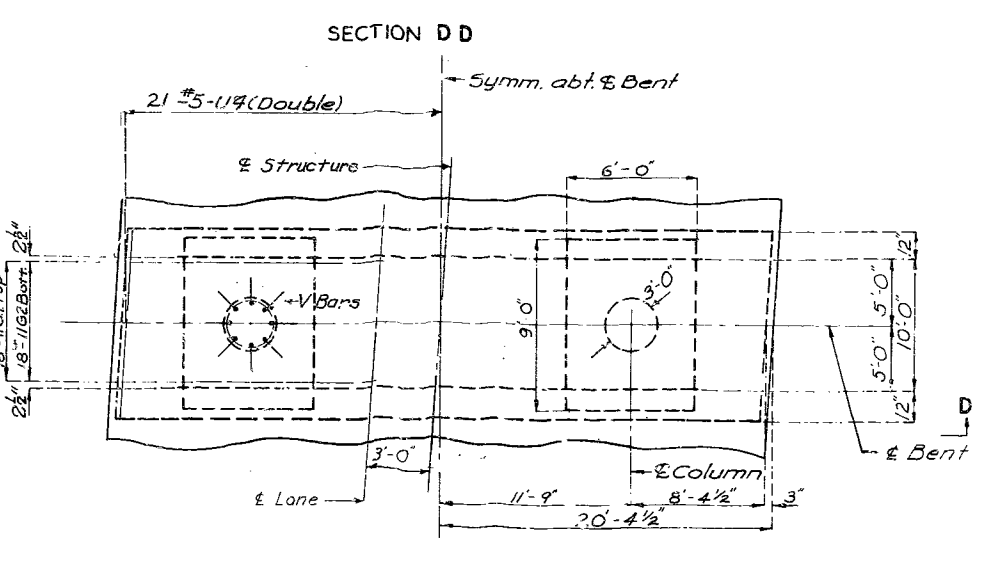
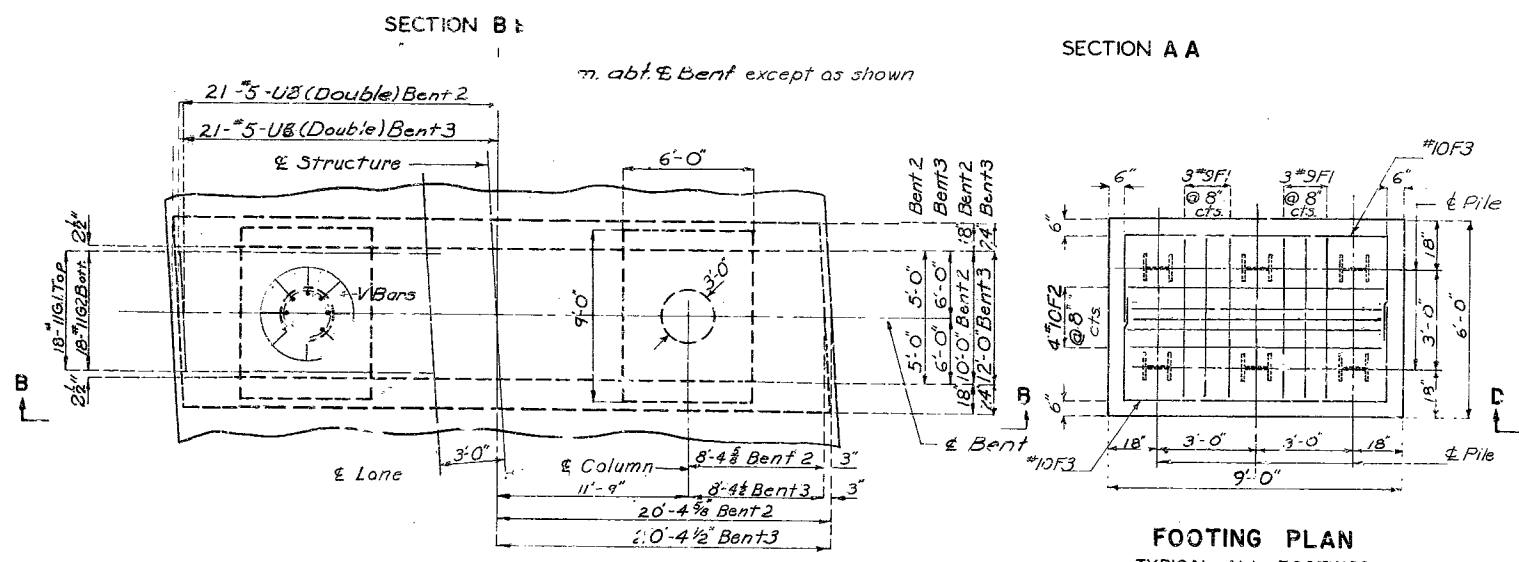
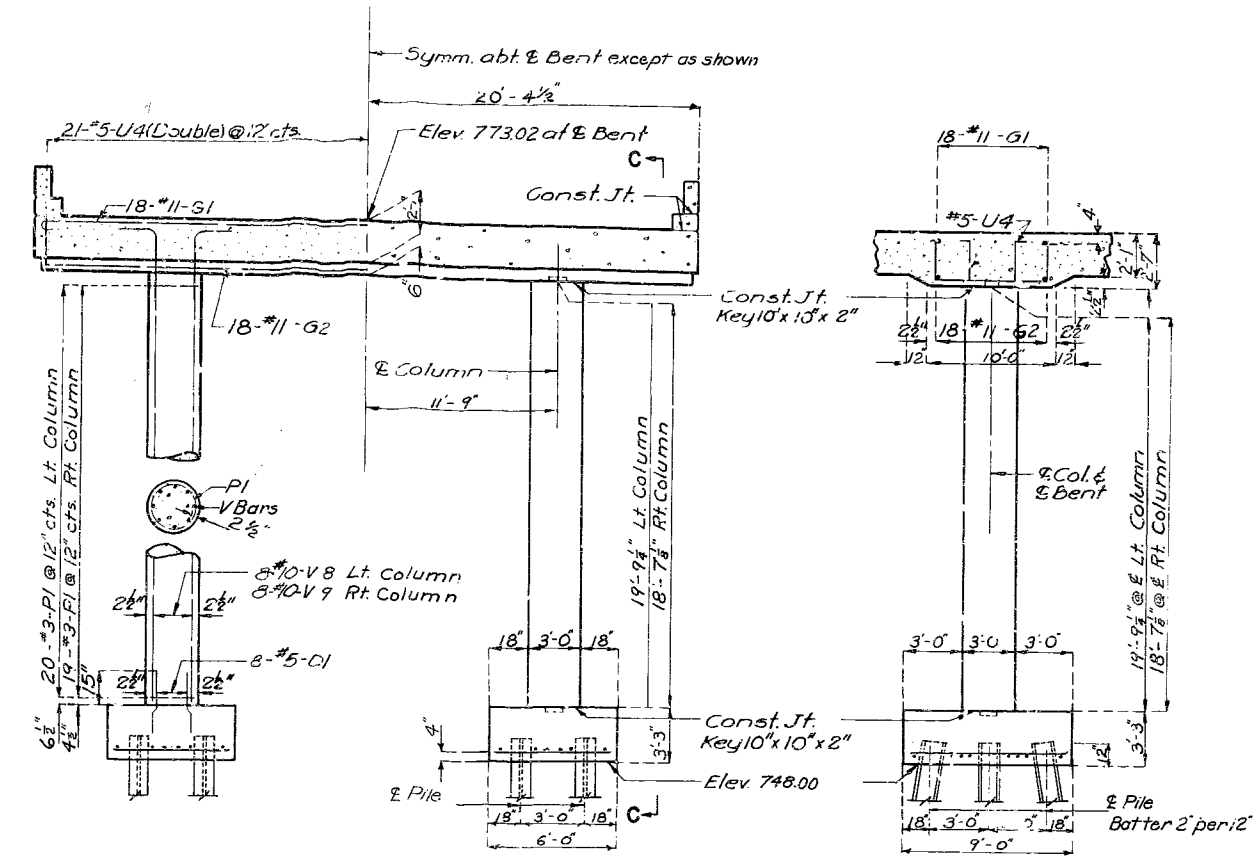
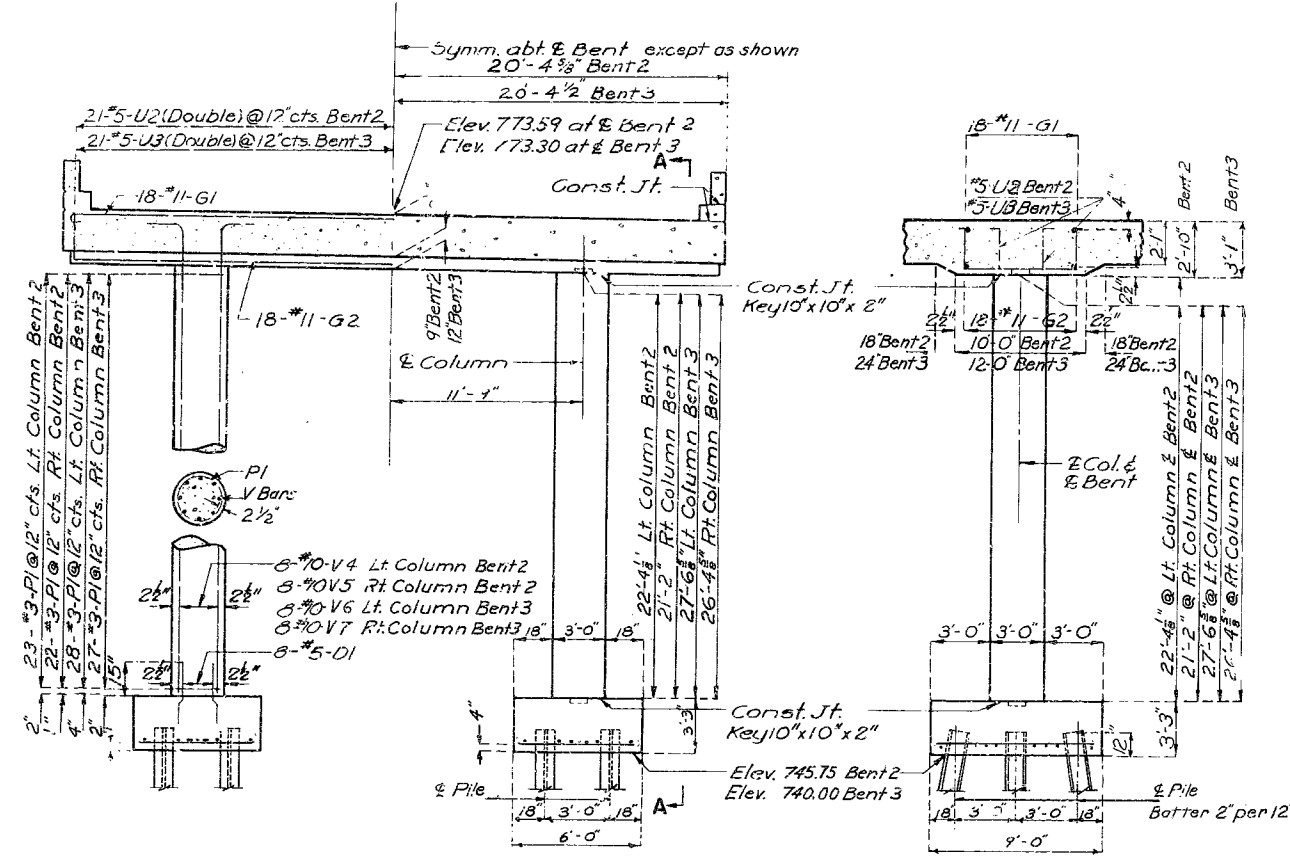
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STD. 52.1 R.A. REVISED
SEPT. 1965
FEB. 1968

DETAILED JUNE 1968 BY JES
CHECKED JUNE 1968 BY CBR

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PRJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO		19	114	



PLAN
DETAILS OF INT. BENTS NO. 2 & 3

PLAN
DETAILS OF INT. BENT NO. 4

EAST BOUND LANE

EAST BOUND LANE

BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK
ROUTE 210
IN KANSAS CITY
PROJECT NO. ... STA. 114+87.75 @ MED.
CLAY COUNTY

199
STD. 52.5
JAN. 1966
REVISED
AUG. 1966

DETAILED JUNE 1968 BY JES & BLD
CHECKED JUNE 1968 BY CBR

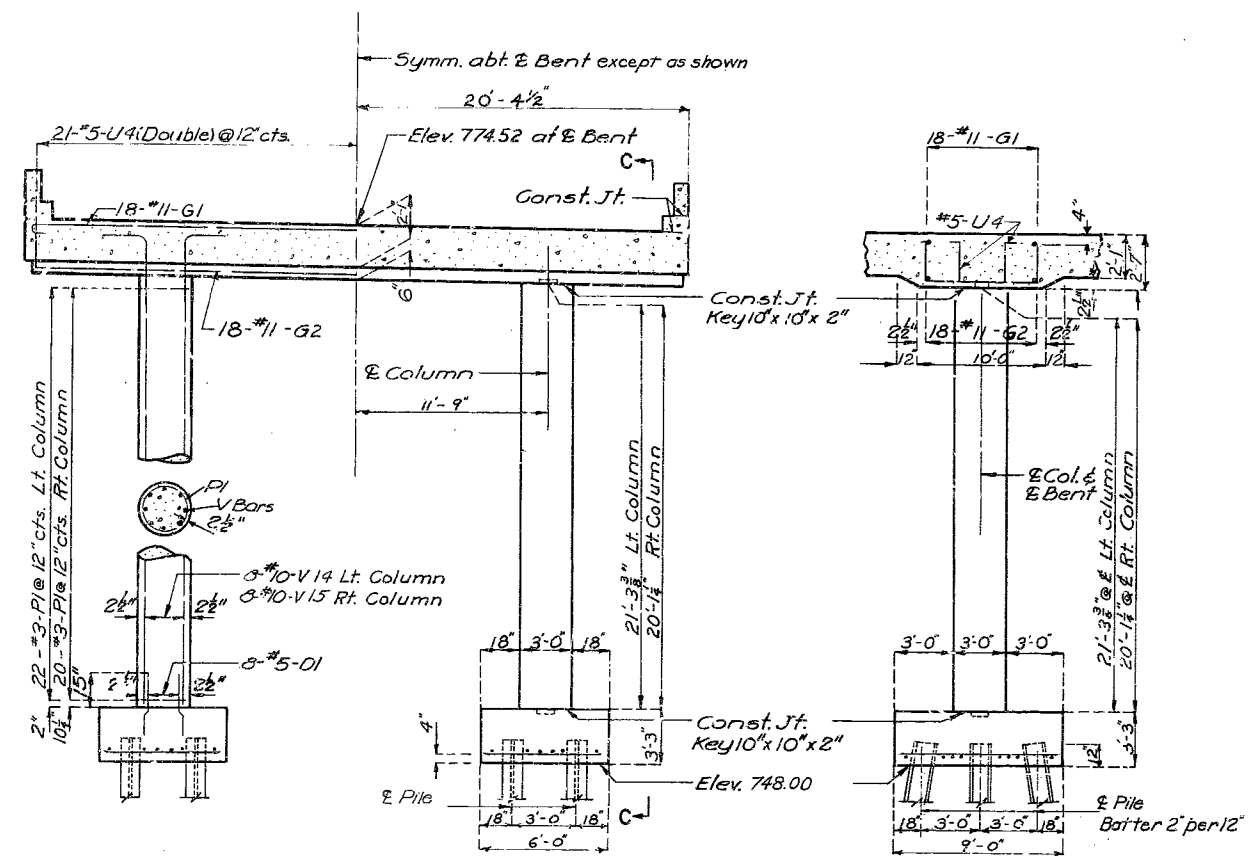
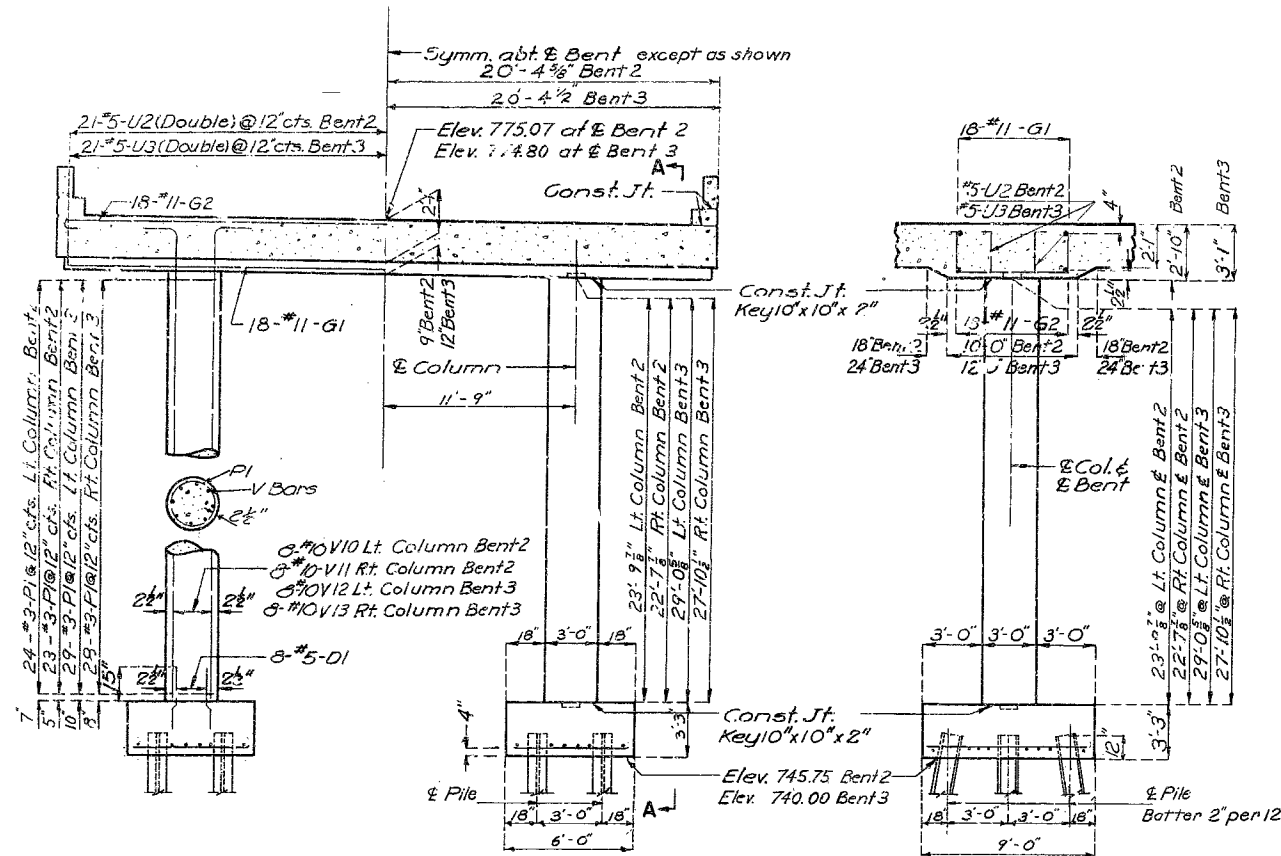
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 10.

A-2177

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	115	

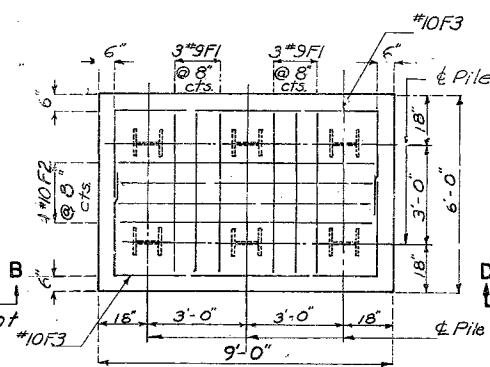
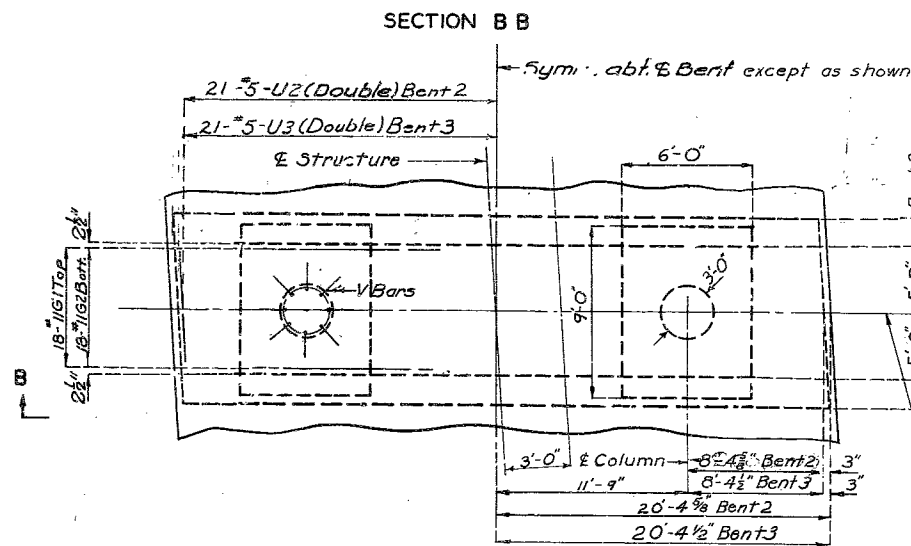


SECTION B B

SECTION A A

SECTION D D

SECTION C C



FOOTING PLAN
TYPICAL ALL FOOTINGS

PLAN
DETAILS OF INT. BENTS NO. 2&3

PLAN
DETAILS OF INT. BENT NO. 4

WEST BOUND LANE

WEST BOUND LANE

BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK
ROUTE 210
IN KANSAS CITY
PROJECT NO.
CLAY COUNTY

STA. 114+87.75 @ MED.

STD. 52.5
JAN 1966

REVISED
AUG. 1966

DETAILED JUNE 1966 BY JES & BLD
CHECKED JUNE 1966 BY CBR

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 10

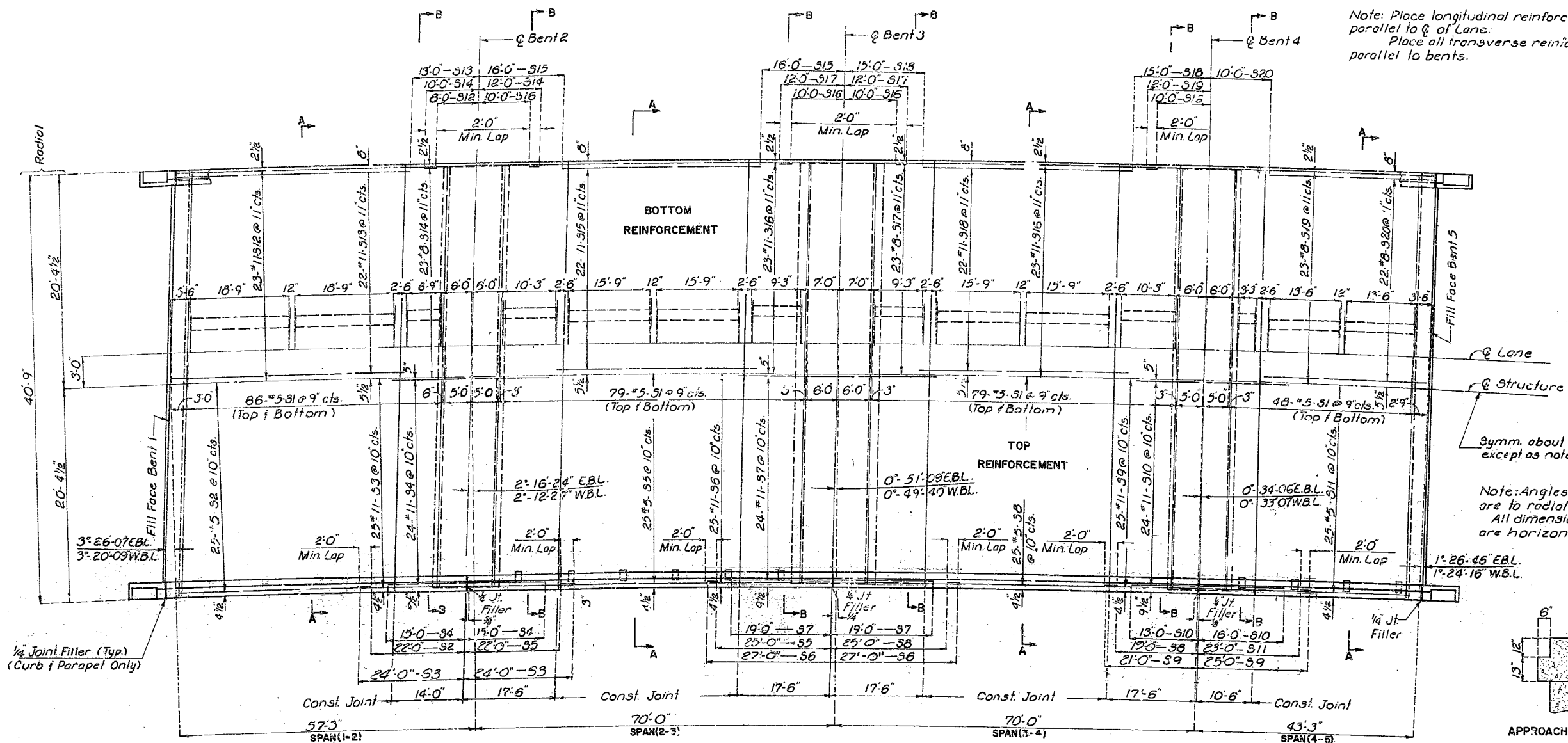
A-2177

200

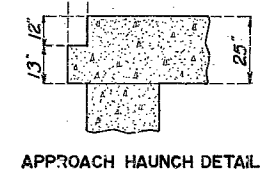
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	11 1/2	

Note: Place longitudinal reinforcing parallel to ϕ of Lane.
Place all transverse reinforcing parallel to bents.



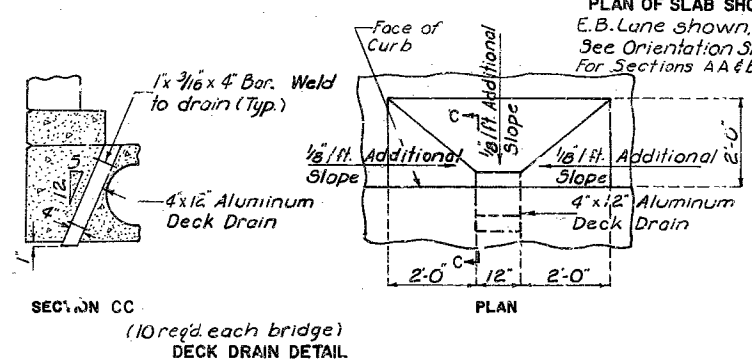
Symm. about ϕ except as noted
Note: Angles shown are to radial lines. All dimensions are horizontal



201

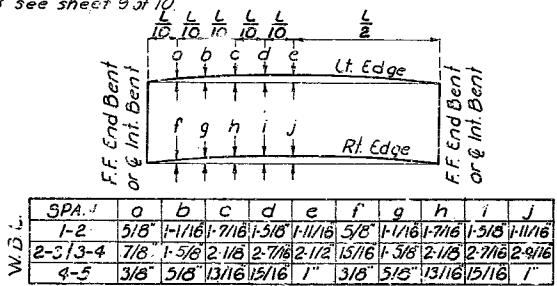
Note: The contractor shall use a finishing machine and shall pour and satisfactorily finish the roadway slab at a rate of not less than 46 cubic yards per hour. He shall observe the transverse construction joints shown on plans unless he can demonstrate to the satisfaction of the engineer that he is equipped to pour and satisfactorily finish the roadway slab at a rate which will permit a continuous pouring through all or some of these joints.

Note: For details of curb and parapet not shown see Sheet 10 of 10.
For details of timber header see Sheet 10 of 10.
For spacing of Deck Drains see Sheet 10 of 10.



Note: Cut or shift transverse reinforcing steel in field to clear drains. Shift longitudinal reinforcing steel to clear drains. Deck drains shall be welded 3/16" Aluminum sheets, A.S.T.M. B209 alloy 3003-H14 or 6061-T6. Payment for furnishing and placing 4x12 Aluminum Deck Drains shall be included in price bid for Class B1 concrete.
Note: This drawing is not to scale. Follow dimensions.

PLAN OF SLAB SHOWING REINFORCEMENT
E.B. Lane shown, W.B. Lane similar
See Orientation Sketch Sheet 9 of 10.
For Sections AA & BB see sheet 9 of 10.



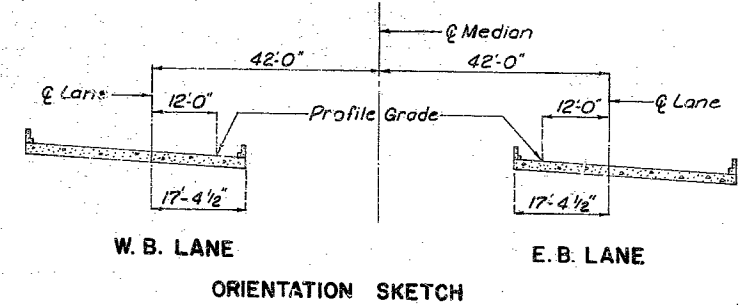
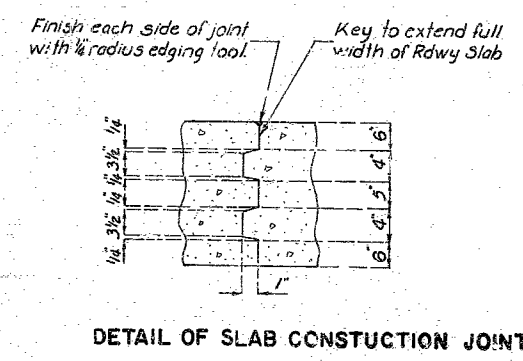
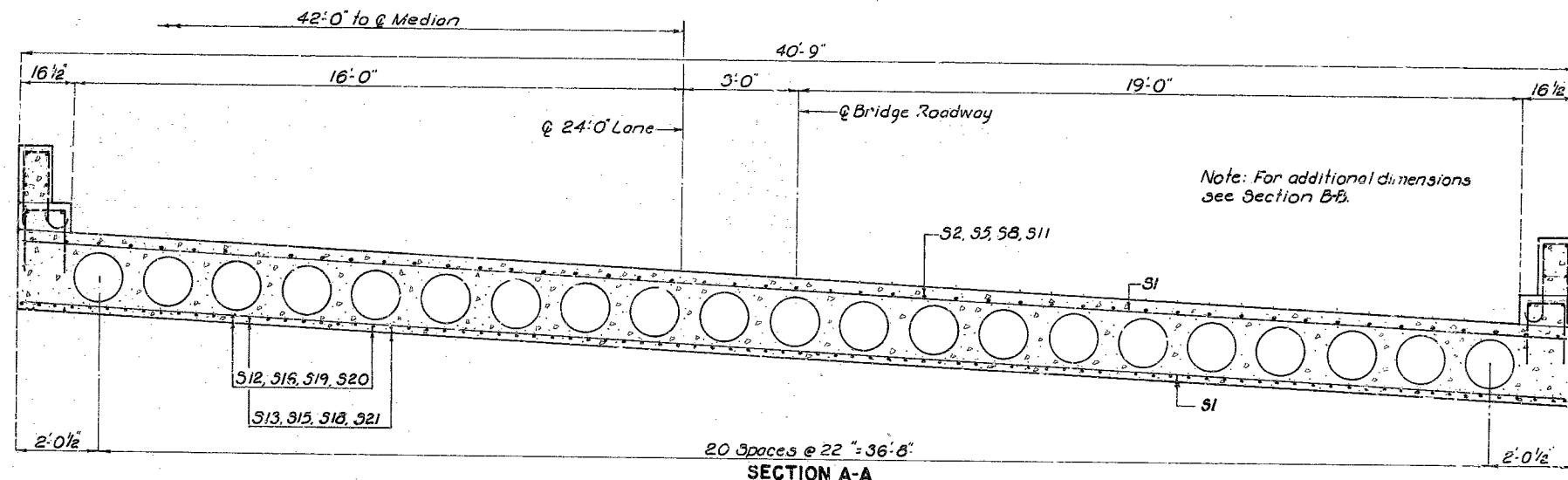
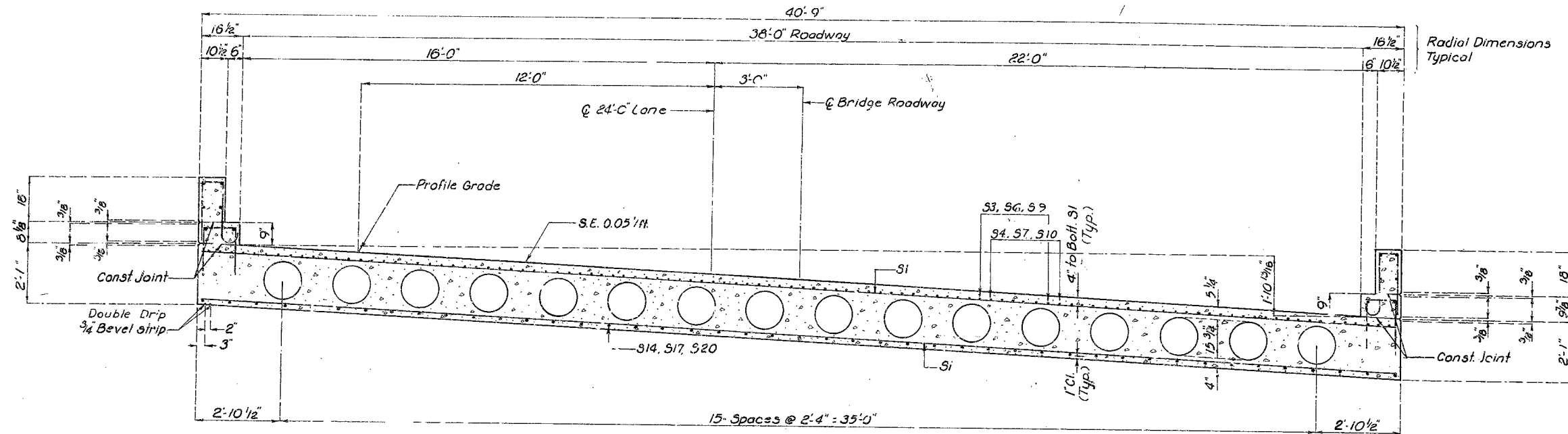
SPAN	a	b	c	d	e	f	g	h	i	j
1-2	5/8"	1-1/8"	1-7/16"	1-11/16"	1-3/4"	5/8"	1-1/8"	1-1/2"	1-11/16"	1-3/4"
2-3	7/8"	1-5/8"	2-1/8"	2-7/16"	2-1/2"	15/16"	1-3/8"	2-1/8"	2-7/16"	2-9/16"
3-4	3/8"	5/8"	13/16"	15/16"	1"	3/8"	5/8"	13/16"	15/16"	1"
4-5	3/8"	5/8"	13/16"	15/16"	1"	3/8"	5/8"	13/16"	15/16"	1"

SLAB DIMENSIONS
Sheet No. 8 of 10

BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK
ROUTE 210
IN KANSAS CITY
PROJECT NO. STA. 114+87.75C MED.
CLAY COUNTY

MISSOURI STATE HIGHWAY DEPARTMENT

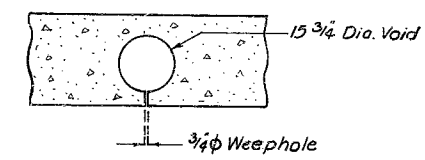
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	117	



Note: One 3/4" weep hole shall be provided near each end of each void. Weep holes shall be placed in straight lines parallel to bents.

Note: Fiber tubes for producing voids shall have an outside diameter of 15.7" and a wall thickness of .300" and shall be anchored to joists carrying the floor form of not more than 3'-0" centers.

For location of Sections A-A and B-B see Sheet No. 8 of 10.
For curb, parapet, and handrail details see Sheet No. 10 of 10.



BRIDGE OVER N. BRIGHTON & BUSKEYE CREEK
ROUTE 210
IN KANSAS CITY
PROJECT NO. STA. 114+87.70 MED
CLAY COUNTY

DETAILED MAY 1968 BY CBR
CHECKED JUNE 1968 BY JCD

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 10

A-2177

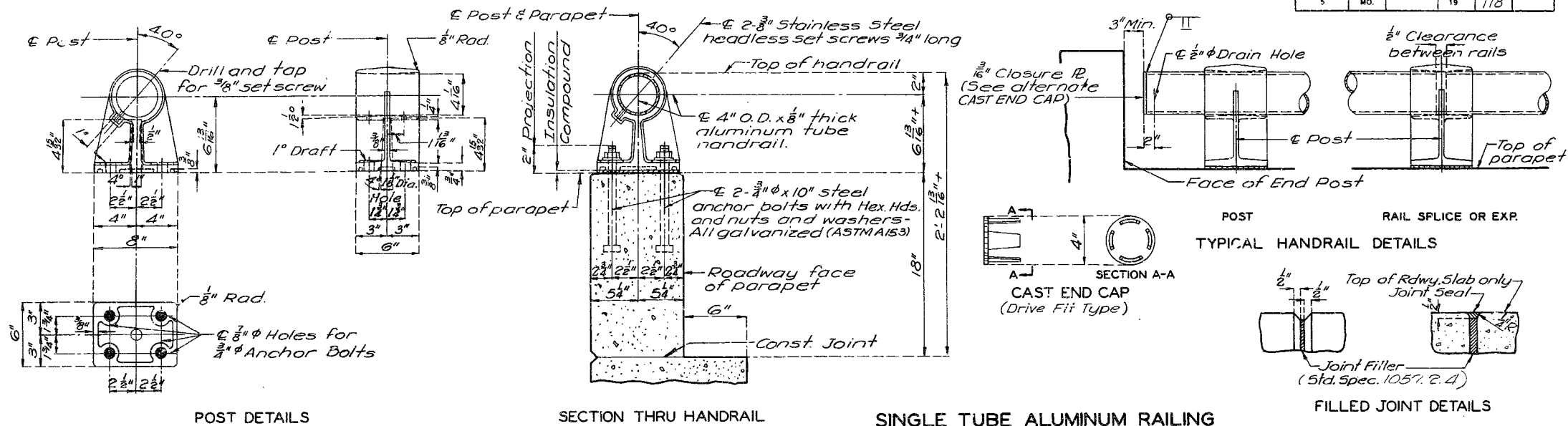
202

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	118	

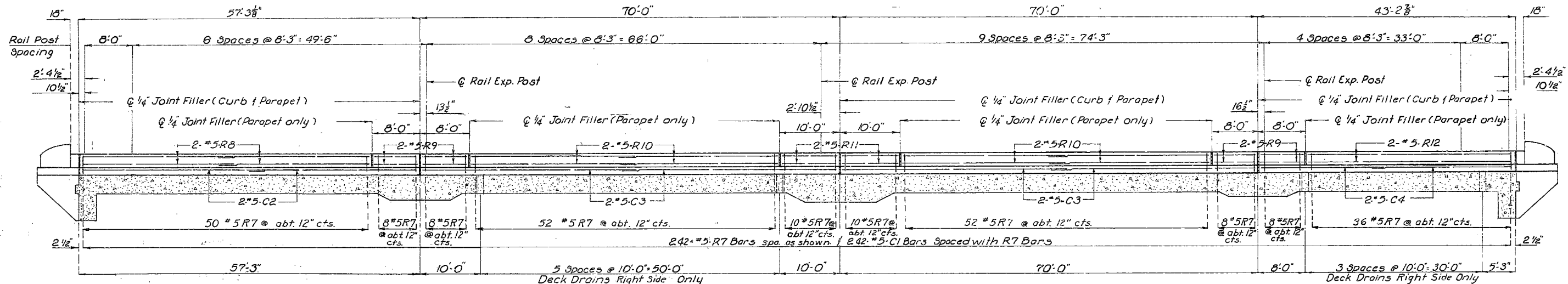
GENERAL HANDRAIL NOTES:

All handrail posts shall be set normal to grade.
 Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet.
 Aluminum washer shims between top of parapet and post base may be used for adjusting handrail alignment. Maximum thickness of shims to be 1/8". Where more tilting of post is required for proper alignment, concrete bearing areas shall be ground down.
 All parts of handrail, except anchor bolts, nuts, washers, and set screws are to be of aluminum material.
 The contract unit price per linear foot of "Bridge Rail" shall include furnishing and erecting the handrail complete with anchor bolts, shims and insulating compound.
 All fillets 1/4" except as noted.
 All drafts 3° except as noted.
 Pipe rail to be fabricated in a minimum of 2 panel lengths.
 Omit set screw in side of rail posts adjacent to filled joints in curb and parapet at rail expansion points. Omit set screw in each side of rail post on end bents except where a gap is shown in rail over an expansion device.
 Top of curbs and parapets to be built parallel to grade with curb and parapet joints (except at end bents) normal to grade.
 Concrete end posts to be vertical.
 All exposed edges of end posts shall have 1/2" bevel.
 All exposed edges of curbs and parapets shall have 1/2" radius or 3/8" bevel unless otherwise noted.
 If the contractor desires, he may use drive fit cast aluminum end caps in lieu of welded aluminum closure plates.

MISSOURI STATE HIGHWAY DEPARTMENT

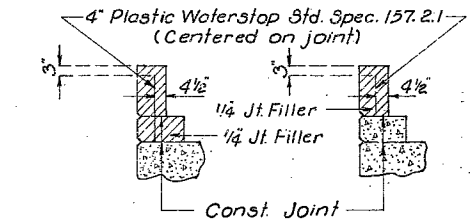


Note: Dimensions for handrail post spacing are parallel to grade along top of parapet.

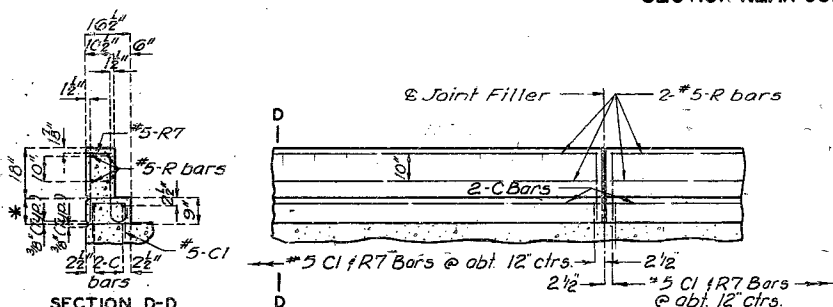


Note: Minimum Bar Lap is 24 bar diameters.

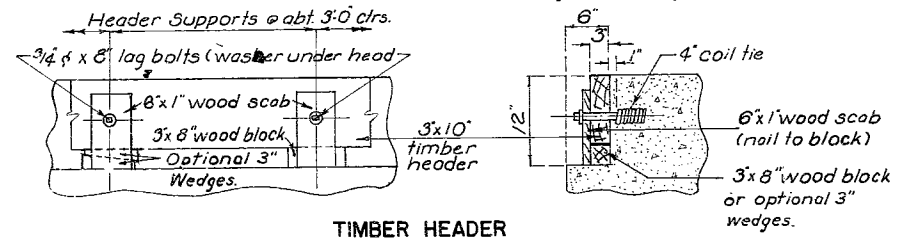
Note: Cost of timber headers complete in place to be included in price bid for concrete.



Note: Plastic waterstop shall be placed in all parapet and curb filled joints except on high side of superelevated structures. Cost of plastic waterstop complete in place to be included in unit price bid for concrete.



Note: For horizontal curb and parapet bars use a minimum lap of 15" for #5 and 18" for #6.
 Note: For detail of End Post reinforcing see Sheet 4 of 10 for End Bent No. 1 and Sheet 5 of 10 for End Bent No. 5.
 Note: This drawing is not to scale. Follow dimensions.



BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK
 ROUTE 210
 IN KANSAS CITY
 PROJECT NO. CLAY COUNTY
 STA. 114+87.75 @ MED.

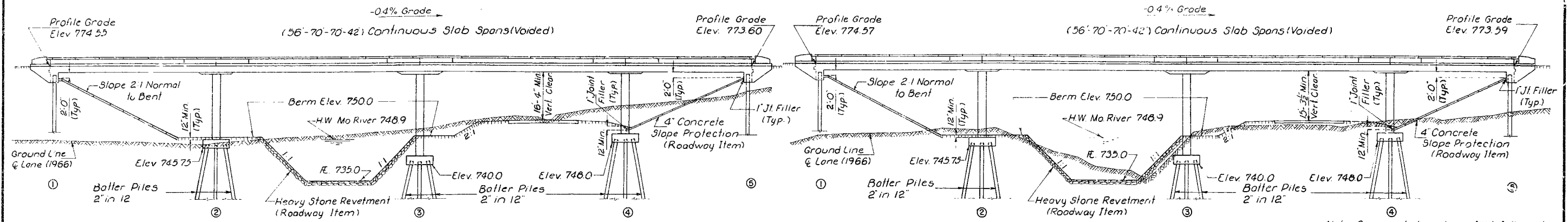
REVISED MAR. 1964
 FEB. 1968

DETAILED JUNE 1968 BY CBR
 CHECKED JUNE 1968 BY JCD

MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

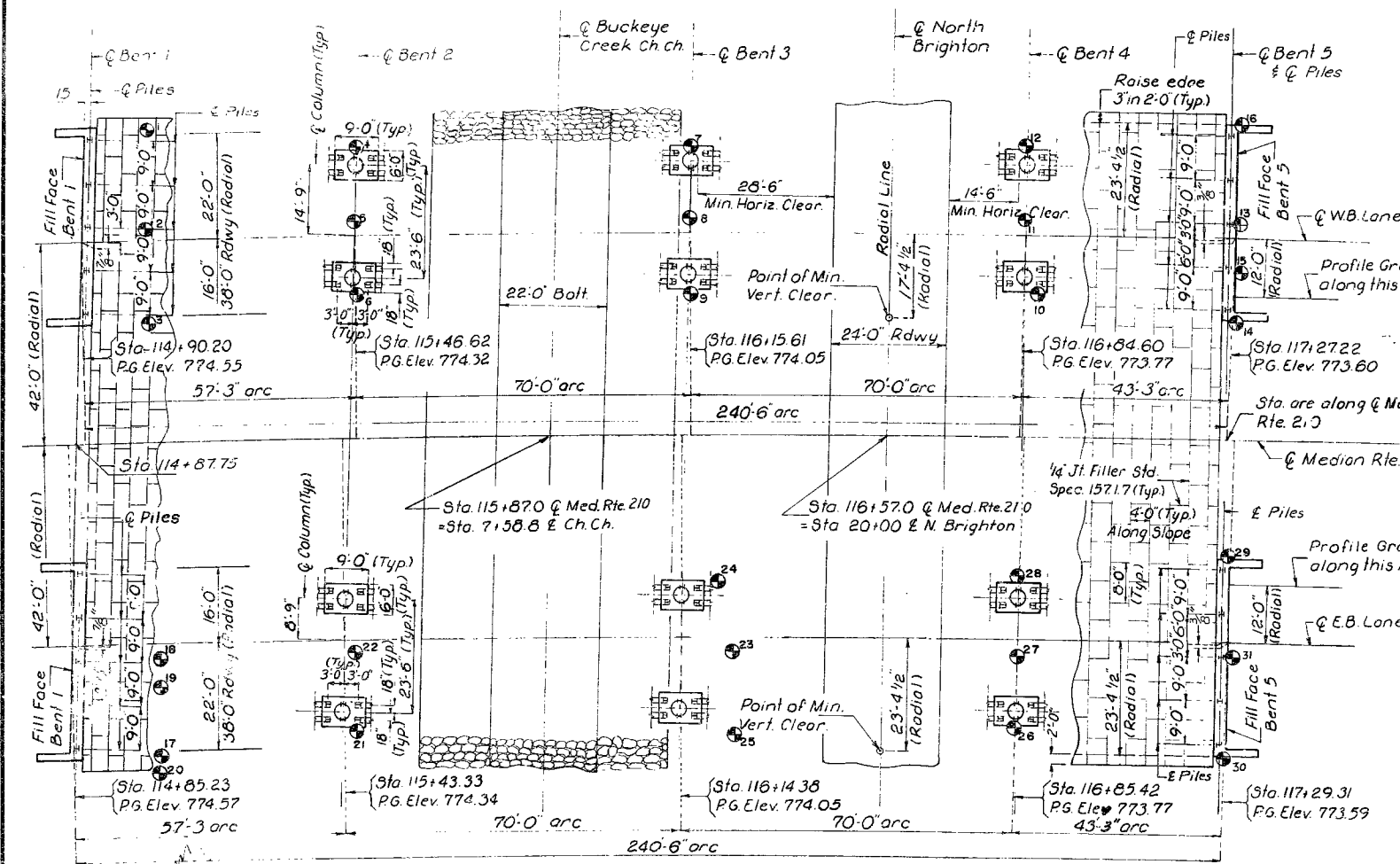
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	102	



GENERAL ELEVATION W.B. LANE

GENERAL ELEVATION E.B. LANE

Note: Compacted roadway fill (full roadway width) placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bents No 1 and 5 before steel piles were driven.



PLAN

Note: For Boring Data see Sheet No. 2 of 10.
 * Indicates location of boring.

Note: For Substructure Layout see Sheet No. 3 of 10.

BENT NO.	PILE DATA				
	1	2	3	4	5
Type and Size	10BP42	10BP42	10BP42	10BP42	10BP42
Number EBL	5	12	12	12	5
Approximate Length Ft. EBL	49-56	33-36	30-31	40-41	60-62
Number WBL	5	12	12	12	5
Approximate Length Ft. WBL	58-60	35-36	30-31	31-37	43-53
Design Bearing Tons	54	55	55	55	54
Hammer Energy Req'd Ft-Lbs	12200	13000	13000	13000	12200

ITEM	FINAL QUANTITIES		
	SUBSTR.	SUPERSTR.	TOTAL
Class I Excavation for Structures Cu.Yd	239.0		239.0
Steel Piles in Place (10') Lin.Ft	3593		3593
Class B Concrete Cu.Yd	78.0		78.0
Class B1 Concrete Cu.Yd		1478.3	1478.3
Reinforcing Steel Lb	4960	436,190	441,150
Bridge Rail (Single Tube Type) Lin.Ft		972	972

Note: Minimum energy requirement of hammer based on plan length and design bearing value of piles. Increase by the factor (W_{iw})/2W when the weight of the ram (W) is less than the weight of the pile (w).
 All piles driven to practical refusal.

Note: No payment for excavation allowed at End Bents No. 1 and 5.
 All concrete and reinforcement above footings in intermediate bents included in superstructure quantities.

GENERAL NOTES:

Design Specifications: AASHTO - 1965
 Design Loading: H320-44 15 #/sq ft. Future Wearing Surface Earth 120# Equivalent Fluid Pressure 30#
 Design Unit Stresses:
 Class B Concrete (substructure) R = 1200 ps.i.
 Class B1 Concrete (superstructure) R = 1600 ps.i.
 Reinforcing Steel R = 20,000 ps.i.
 Steel Pile (A.S.T.M. A36-66) R = 9,000 ps.i.
 Surface Seal: Superstructure deck was surface sealed.

B.M. #8: 8' at Northeast Corner, North headwall of reinforced concrete box 38' H. Sta. 23+28 N. Brighton. Elevation - 746.61.

BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK

ROUTE 210

IN KANSAS CITY

PROJECT NO. C024-210(U) (RTE. 210) STA. 114+87.75 E. MED.

CLAY

COUNTY

SUBMITTED BY: [Signature] DATE: []
 BRIDGE ENGINEER

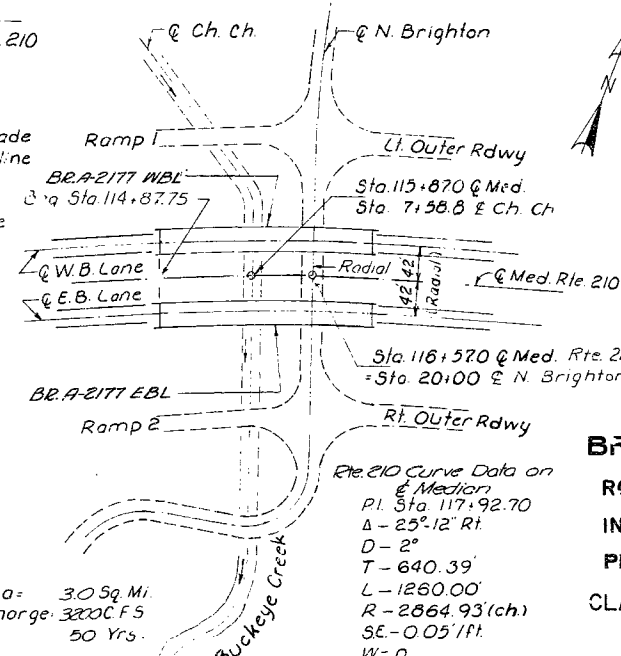
APPROVED BY: [Signature] DATE: []
 CHIEF ENGINEER

BUCHER & WILLIS
 CONSULTING ENGINEERS-PLANNERS-ARCHITECTS
 KANSAS CITY, MISSOURI

DESIGNED MAY 1968 BY KNW
 DETAILED JUNE 1968 BY CBR
 CHECKED JUNE 1968 BY JCD

Note: This drawing is not to scale. Follow dimensions.

Drainage Area = 30 Sq. Mi.
 Design Discharge = 3200 CFS
 Frequency = 50 Yrs.



LOCATION SKETCH

Sheet No. 1A of 18A

FINAL PLANS

STD. 7-6-64

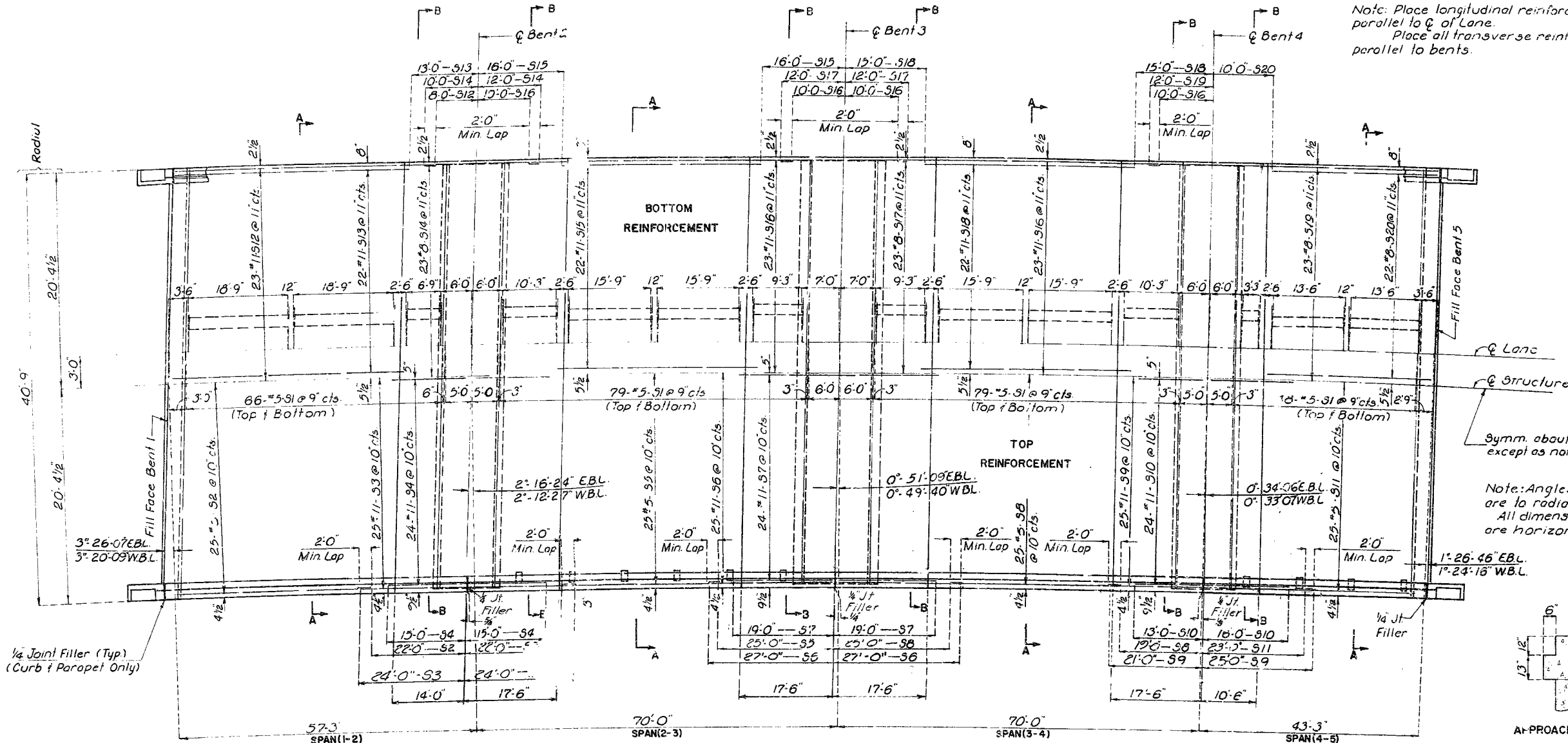
A-2177

MISSOURI STATE HIGHWAY DEPARTMENT

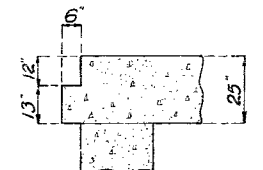
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. N.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO			115	

Note: Place longitudinal reinforcing parallel to ϕ of Lane.
Place all transverse reinforcing parallel to bents.

FINAL PLANS

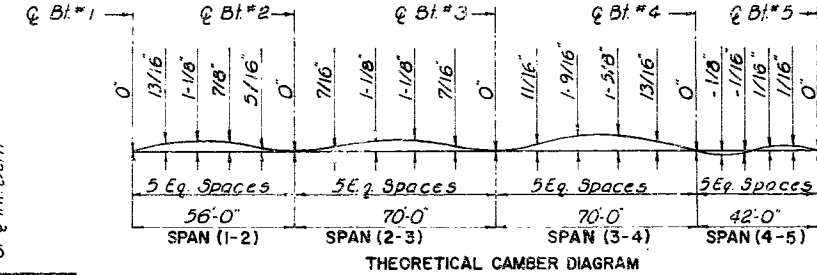


Symm about ϕ except as noted
Note: Angles shown are to radial lines. All dimensions are horizontal



A-PROACH HAUNCH DETAIL

PLAN OF SLAB SHOWING REINFORCEMENT
E.B. Lane shown, W.B. Lane similar
See Orientation Sketch Sheet 9 of 10.
For Sections AA & BB see sheet 9 of 10



BRIDGE OVER N. BRIGHTON & BUCKEYTM CREEK
ROUTE 210
IN KANSAS CITY
PROJECT NO. CLAY COUNTY
STA. 114+87.25_C MED.

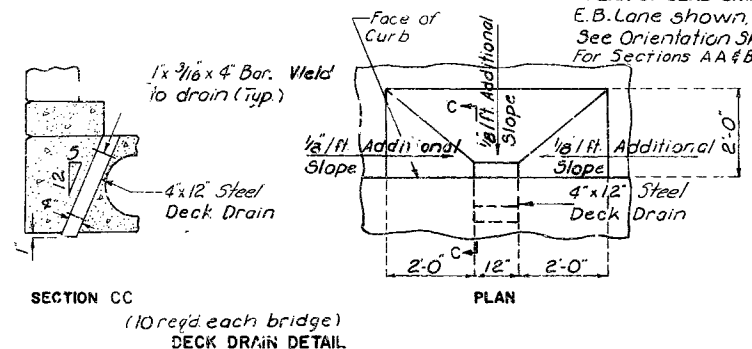
SPAN	W.B.L.									
	a	b	c	d	e	f	g	h	i	j
1-2	5/8"	1-1/16"	7/16"	1-3/8"	1-1/16"	5/8"	7/16"	1-1/16"	5/8"	1-1/16"
2-3	7/8"	1-5/8"	2-1/8"	2-7/16"	2-1/2"	1-7/16"	1-3/8"	2-1/8"	7/16"	2-9/16"
4-5	3/8"	5/8"	13/16"	15/16"	1"	3/8"	5/8"	13/16"	15/16"	1"

SPAN	E.B.L.									
	a	b	c	d	e	f	g	h	i	j
1-2	5/8"	1-1/8"	7/16"	1-1/8"	1-3/4"	5/8"	1-1/8"	1-1/2"	1-1/16"	1-3/4"
2-3	1-1/16"	1-1/16"	2-3/16"	2-1/2"	2-9/16"	1-1/16"	2-3/16"	2-1/2"	2-3/16"	2-3/16"
4-5	3/8"	5/8"	13/16"	15/16"	1"	3/8"	5/8"	13/16"	15/16"	1"

SLAB DIMENSIONS
Sheet No. 8A of 10-A

Note: The contractor shall use a finishing machine and shall pour and satisfactorily finish the roadway slab at a rate of not less than 40 cubic yards per hour. He shall observe the transverse construction joints shown on plans unless he can demonstrate to the satisfaction of the engineer that he is equipped to pour and satisfactorily finish the roadway slab at a rate which will permit a continuous pouring through all or some of these joints.
All construction joints were omitted.

Note: For details of curb and parapet not shown see Sheet 10 of 10.
For details of timber header see Sheet 10 of 10.
For spacing of Deck Drains see Sheet 10 of 10.



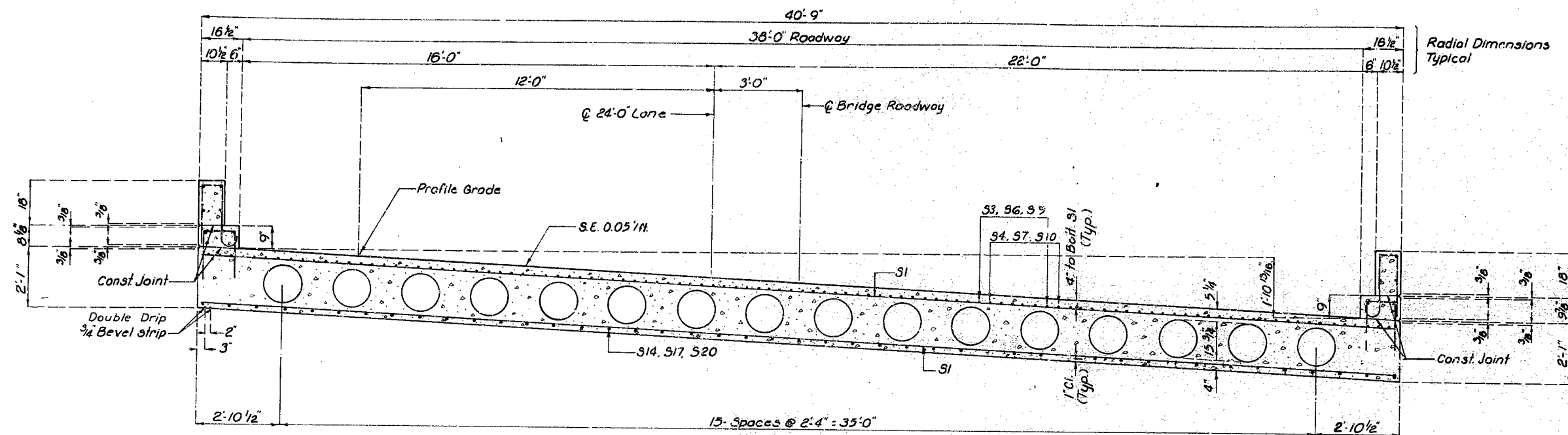
Note: Cut or shift transverse reinforcing steel in field to clear drains. Shift longitudinal reinforcing steel to clear drains. Deck drains were fabricated from 5/16 sheets of A-588 steel and hot dip galvanized after fabrication. Payment for furnishing and placing 4x12 Steel Deck Drains shall be included in price bid for Class B1 concrete.
Note: This drawing is not to scale. Follow dimensions.

205

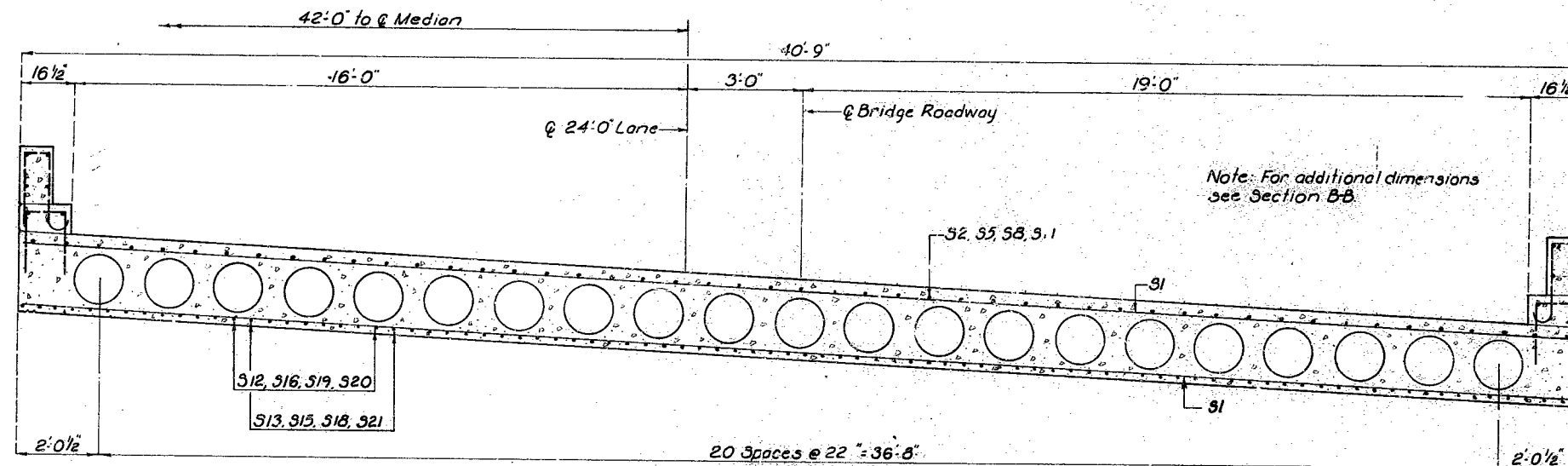
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	117	

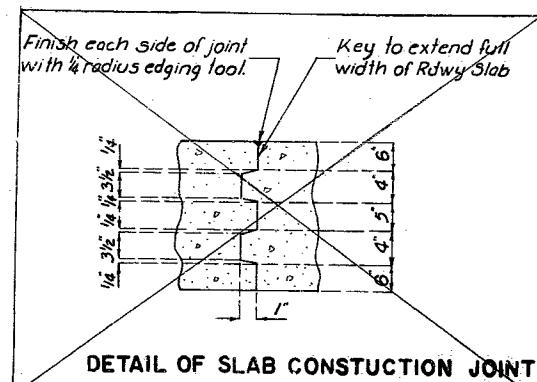
FINAL PLANS



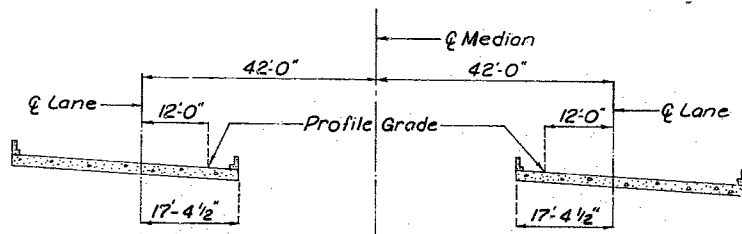
SECTION B-B
East Bound Lane shown. West Bound Lane similar except transverse dimensions opposite hand. See orientation sketch.



SECTION A-A

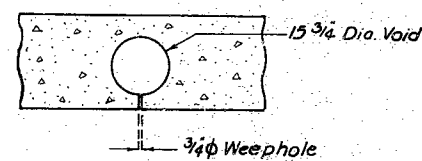


DETAIL OF SLAB CONSTRUCTION JOINT
All construction joints were omitted



ORIENTATION SKETCH

Note: One 3/4" weephole shall be provided near each end of each void. Weepholes shall be placed in straight lines parallel to bents.



DETAIL OF WEEPHOLES IN VOIDS

Note: Fiber tubes for producing voids shall have an outside diameter of 15 3/4" and a wall thickness of .300" and shall be anchored to joists carrying the floor form at not more than 3'-0" centers.

For location of Sections A-A and B-B see Sheet No. 8 of 10.
For curb, parapet, and handrail details see Sheet No. 10 of 10.

BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK

ROUTE 210

IN KANSAS CITY

PROJECT NO.

STA. 114+87.7 @ MED

CLAY

COUNTY

DETAILED MAY 1968 BY CBR
CHECKED JUNE 1968 BY JCD

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9A of 124

FINAL PLANS

A-2177

206

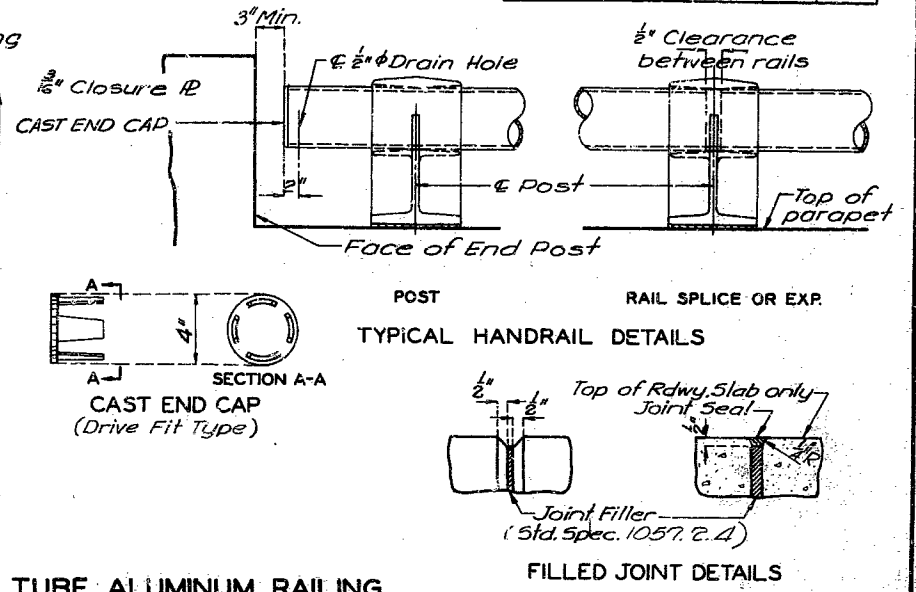
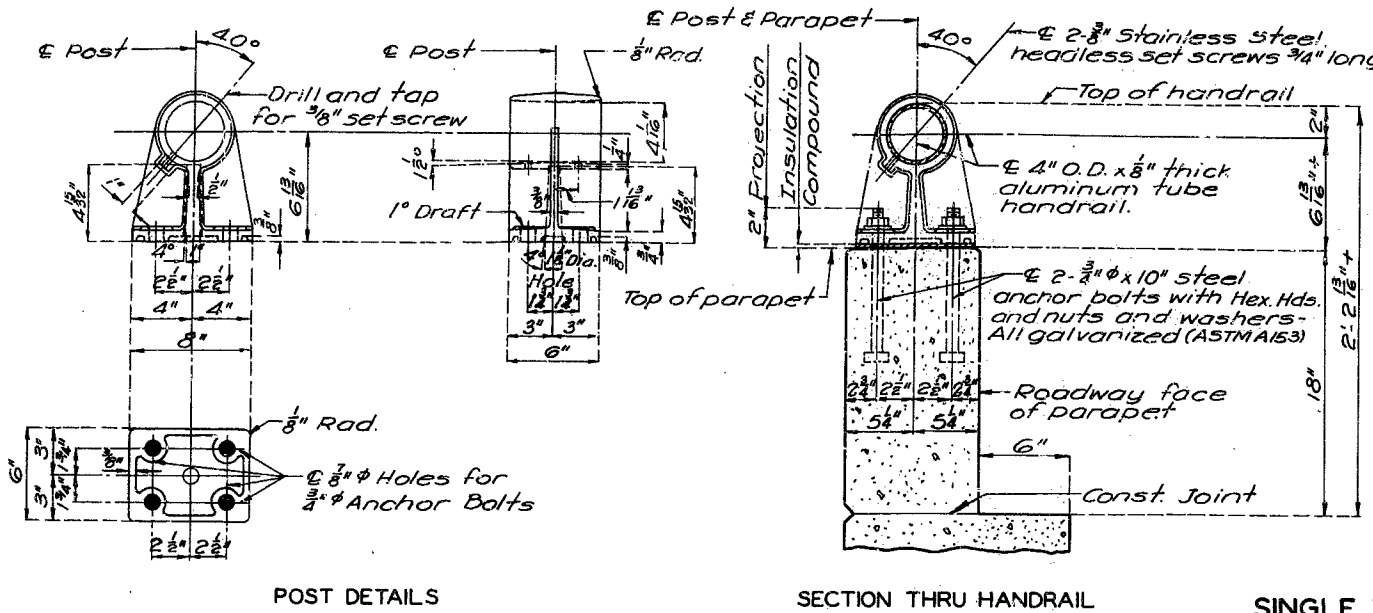
GENERAL HANDRAIL NOTES:

All handrail posts shall be set normal to grade.
 Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet.
 Aluminum washer shims between top of parapet and post base may be used for adjusting handrail alignment. Maximum thickness of shims to be 1/8". Where more tilting of post is required for proper alignment, concrete bearing area shall be ground down.
 All parts of handrail, except anchor bolts, nuts, washers, and set screws are to be of aluminum material.
 The contract unit price per linear foot of "Bridge Rail" shall include furnishing and erecting the handrail complete with anchor bolts, shims and insulating compound.
 All fillets 1/4" except as noted.
 All drafts 3° except as noted.
 Pipe rail to be fabricated in a minimum of 2 panel lengths.
 Omit set screw in side of rail posts adjacent to filled joints in curb and parapet at rail expansion points. Omit set screw in each side of rail post on end bents except where a gap is shown in rail over an expansion device.
 Top of curbs and parapets to be built parallel to grade with curb and parapet joints (except at end bents) normal to grade.
 Concrete end posts to be vertical.
 All exposed edges of end posts shall have 1/2" bevel.
 All exposed edges of curbs and parapets shall have 1/2" radius or 3/8" bevel unless otherwise noted.
 If the contractor desires, he may use drive fit cast aluminum end caps in lieu of welded aluminum closure plates.

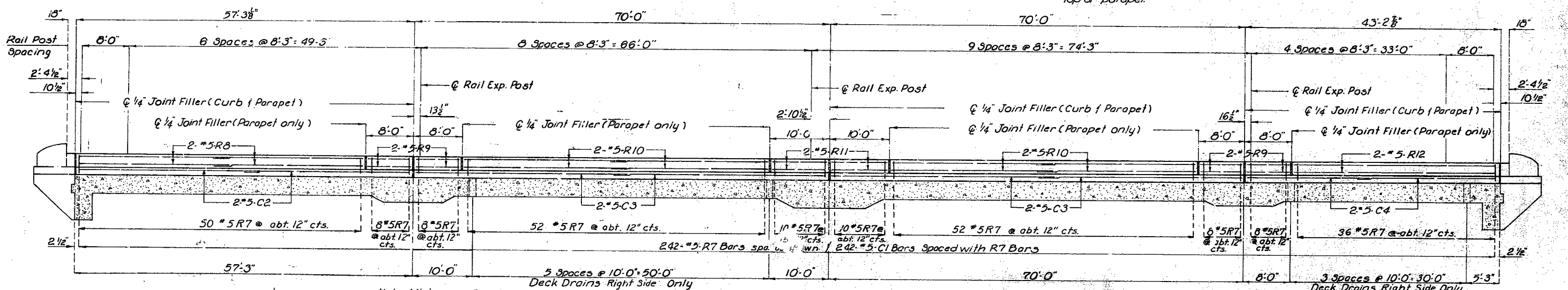
MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	118	

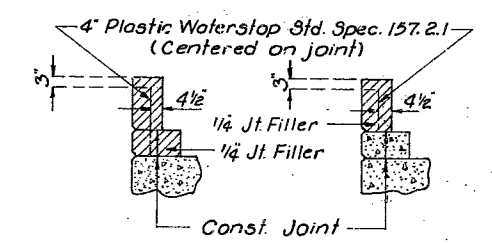


Note: Dimensions for handrail post spacing are parallel to grade along top of parapet.



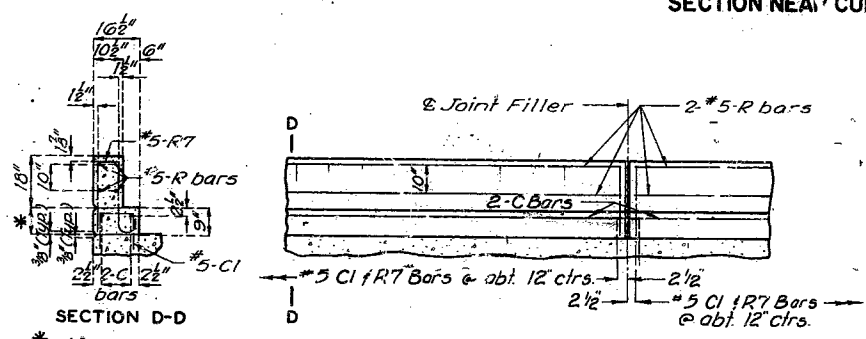
Note: Minimum Bar Lap is 24 bar diameters.

Note: Cost of timber headers complete in place to be included in price bid for concrete.



Note: Plastic waterstop shall be placed in all parapet and curb filled joints except on high side of superelevated structures. Cost of plastic waterstop complete in place to be included in unit price bid for concrete.

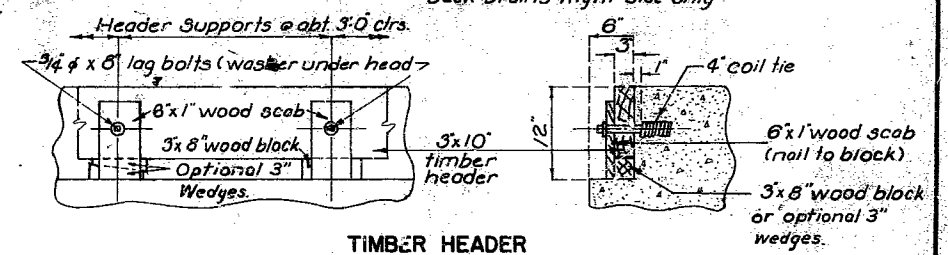
DETAILS OF PLASTIC WATERSTOP



Note: For horizontal curb and parapet bars use a minimum lap of 15" for #5 and 18" for #6

Note: For detail of End Post reinforcing see Sheet 4 of 10 for End Bent No. 1 and Sheet 5 of 10 for End Bent No. 5

Note: This drawing is not to scale. Follow dimensions.



BRIDGE OVER N. BRIGHTON & BUCKEYE CREEK
 ROUTE 210
 IN KANSAS CITY
 PROJECT NO. STA. 114+87.66 @ MED.
 CLAY COUNTY

207

REVISED FEB. 1968
 MAR. 1964
 STD. 15.2

DETAILED JUNE 1968 BY CBR
 CHECKED JUNE 1968 BY JCD

Sheet No. 10.9 of 10.4.

FINAL PLANS

A-2177

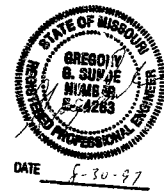
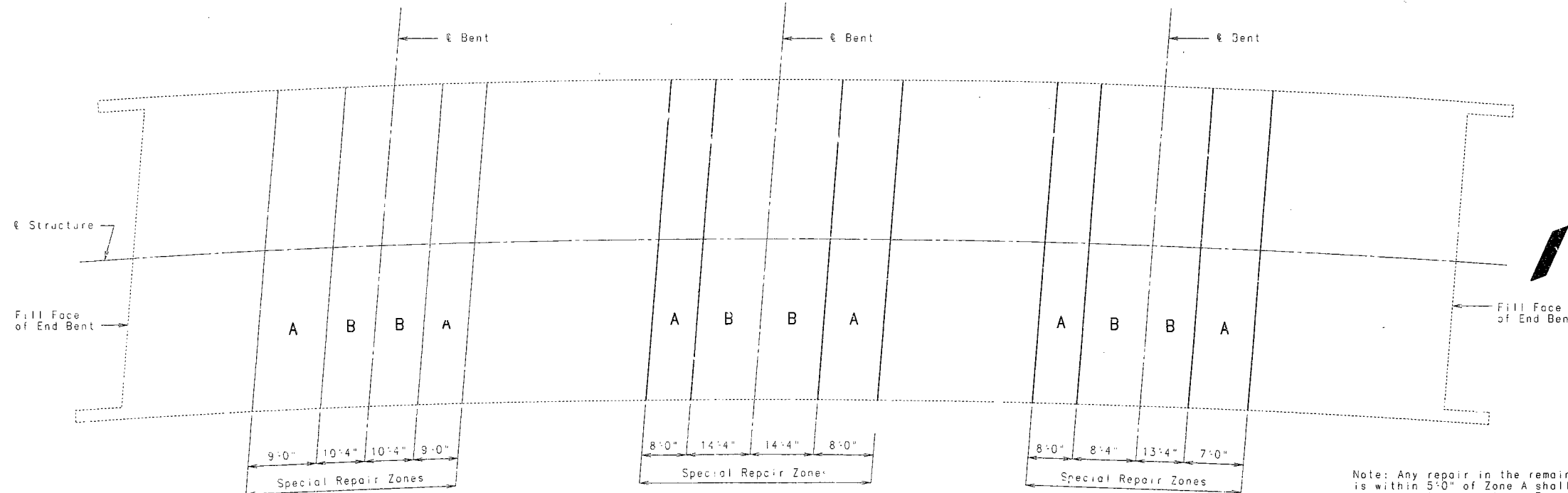
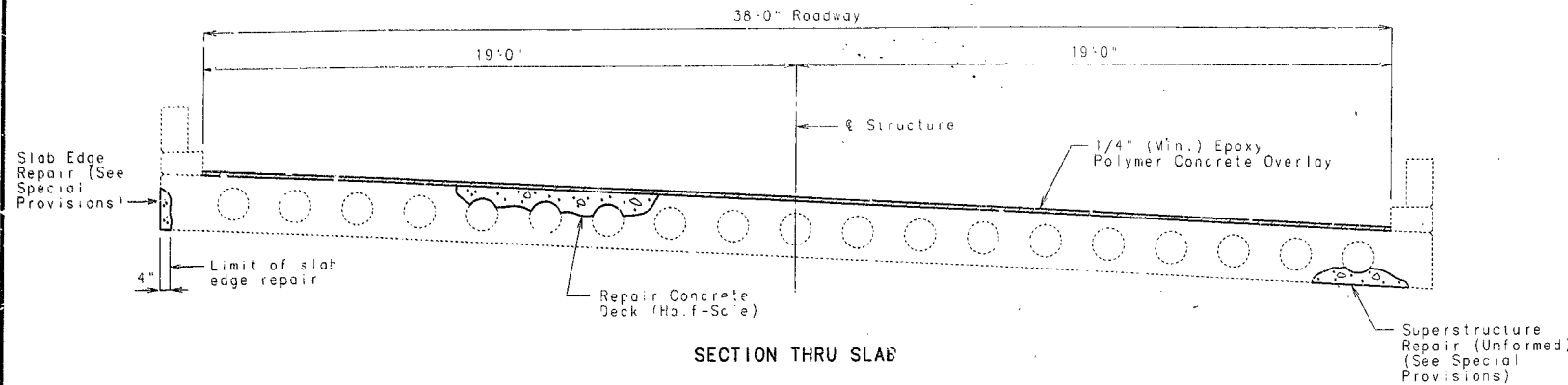
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	ACSTP-304(8)	PROJ. NO.		SHEET NO.	
MO.	J4U1241				68
SEC./SUR.	8	TWP.	50N	RGE.	32W
*980130-04-07A					

GENERAL NOTES:

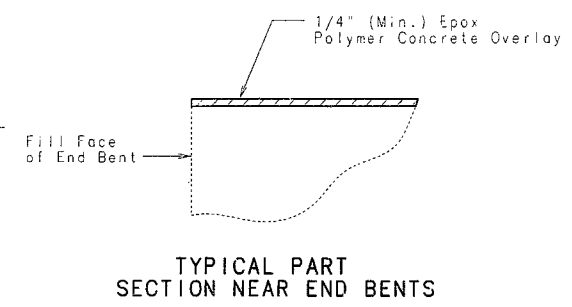
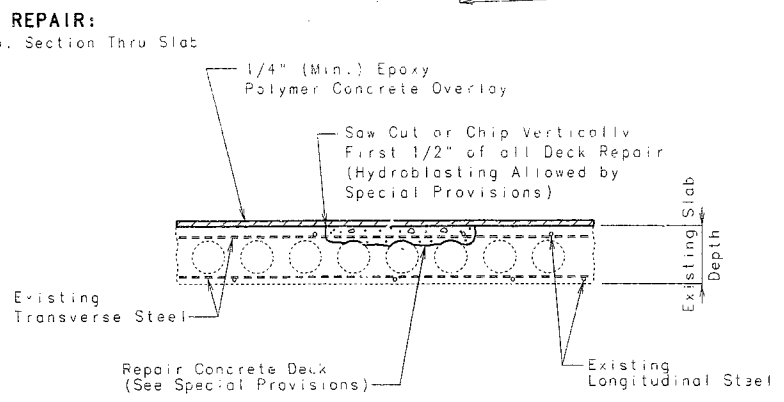
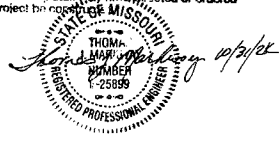
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.
 In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. No payment will be allowed for additional labor, materials or equipment for variations in thickness of overlay.
 Roadway surfacing adjacent to bridge ends to match bridge overlay. (See Rdwy. Plans).
 See Roadway plans for traffic control during construction.
 The contractor shall exercise care to insure spillage over joint edges is prevented and that a neat line is obtained along any terminating edge of the epoxy polymer concrete.

FINAL QUANTITIES	
ITEM	TOTAL
Superstructure Repair (Unformed)	Sq. Ft. 213.5
Repairing Concrete Deck (Half-sole)	Sq. Ft. 409.3
Slab Edge Repair (Bridges)	Lin. Ft. 101.5
Epoxy Polymer Concrete Overlay	Sq. Yd. 1016



Note: Any repair in the remainder of the bridge that is within 5'-0" of Zone A shall be completed before removing old concrete in Zone A.
 Zones with the same letter designation may be repaired at the same time.
 Zones A are to be repaired before Zones B.

FINAL PLANS
 I certify that this plan sheet accurately depicts the configuration and location of the roadway and all its appurtenant features, to the best of my knowledge, as I and my staff have observed the contractor's construction of this project. I specifically disclaim any responsibility for the design of this project, except as I and my staff may have modified or authorized the modification of the project design during its construction; and I disclaim responsibility for the contractor's actual construction of the project, except as I and my staff may have directed or ordered that the project be constructed.



REPAIRS TO BRIDGE OVER N. BRIGHTON AND BUCKEYE CREEK

STATE ROAD FROM RTE. 1-435 TO RTE 269
 IN KANSAS CITY
 PROJECT NO. STA. 114+85.23 (MATCH EXISTING)
 JOB NO. J4U1241 RTE. 210 E.B.L.
 CLAY COUNTY
 DATE 07/15/97

STD.	
STD.	
A21771	

DESIGNED DEC. 1996
 DETAILED DEC. 1996
 CHECKED JULY 1997

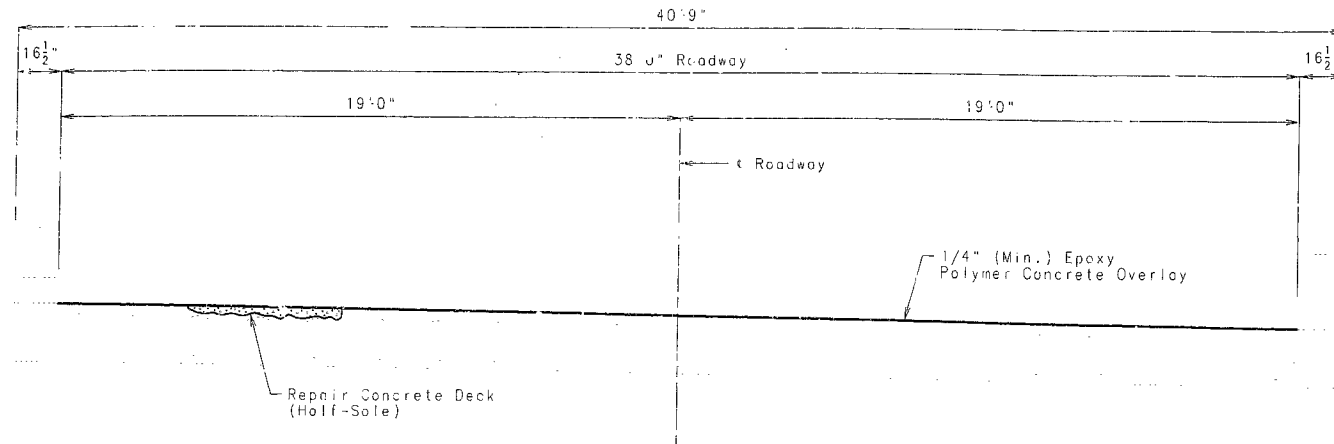
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 1 OF 1.

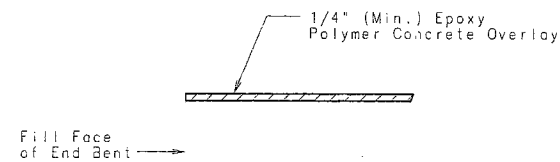
346

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ. NO.	SHEET NO.
MO.	ACSTP-304 (18)	69
SEC./SR.	8 TWP. 50N RGE. 32W	
*980130-04-OTA		



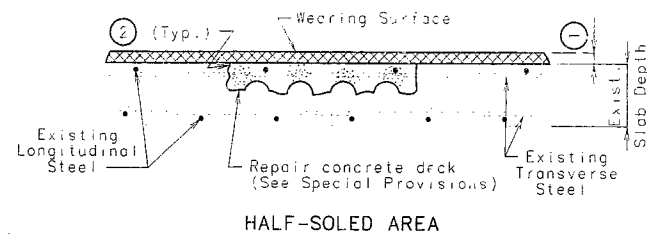
SECTION THRU ROADWAY



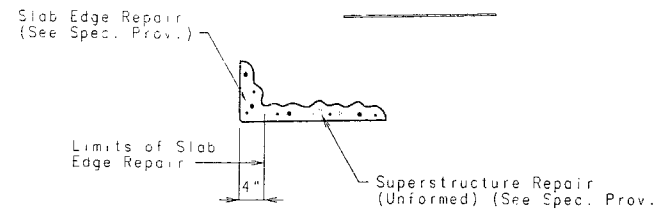
TYPICAL PART SECTION NEAR END BENTS

DECK REPAIR

TYP. SECTION THRU SLAB

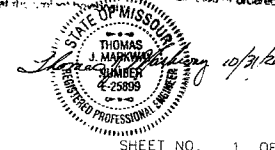


- ① 1/4" (Min.) Polymer Concrete Overlay
- ② Saw cut or chip vertically first 1/2" of all deck repair (Hydroblasting allowed by Special Provisions)



CONCRETE EDGE REPAIR

FINAL PLANS
I certify that this plan sheet accurately depicts the configuration and location of the roadway and all its appurtenant features, to the best of my knowledge, as I and my staff have observed the contractor's construction of this project. I specifically disclaim any responsibility for the design of this project, except as I and my staff may have modified or authorized the modification of the project design during its construction, and I disclaim responsibility for the contractor's actual construction of the project, except as I and my staff may have directed or ordered that the contractor perform.



GENERAL NOTES:

- Existing Work:**
Outline of old work is indicated by light dashed lines, heavy lines indicate new work.
- Traffic Maintained:**
See roadway plans for traffic control during construction
- Approaches:**
Roadway surfacing adjacent to bridge ends to match bridge overlay. (See Rdwy. Plans)
- Maintain Grade:**
In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. No payment will be allowed for additional labor, materials or equipment for variations in thickness of overlay.
- Overlay:**
The contractor shall exercise care to ensure spillage over joint edges is prevented and that a neat line is obtained along any termination edge of the epoxy polymer concrete

FINAL QUANTITIES		
ITEM		TOTAL
Superstructure Repair (Unformed)	Sq. Ft.	239.6
Repairing Concrete Deck (Half-Soling)	Sq. Ft.	177.9
Slab Edge Repair (Bridges)	Lin. Ft.	188.5
Epoxy Polymer Concrete Overlay	Sq. Yd.	1016



DATE 8-30-97

REPAIRS TO BRIDGE OVER NORTH BRIGHTON & BUCKEYE CREEK

STATE ROAD FROM RTE. 1-435 TO RTE. 269

IN KANSAS CITY
PROJECT NO. J4U1241
JOB NO. J4U1241

STA. 114+90.20 (MATCH EXIST.)
RTE. 210 W.B.L.

CLAY

COUNTY

STD.
STD.
A21772

DATE 09/13/97

DETAILED DEC. 1996
CHECKED JULY 1997

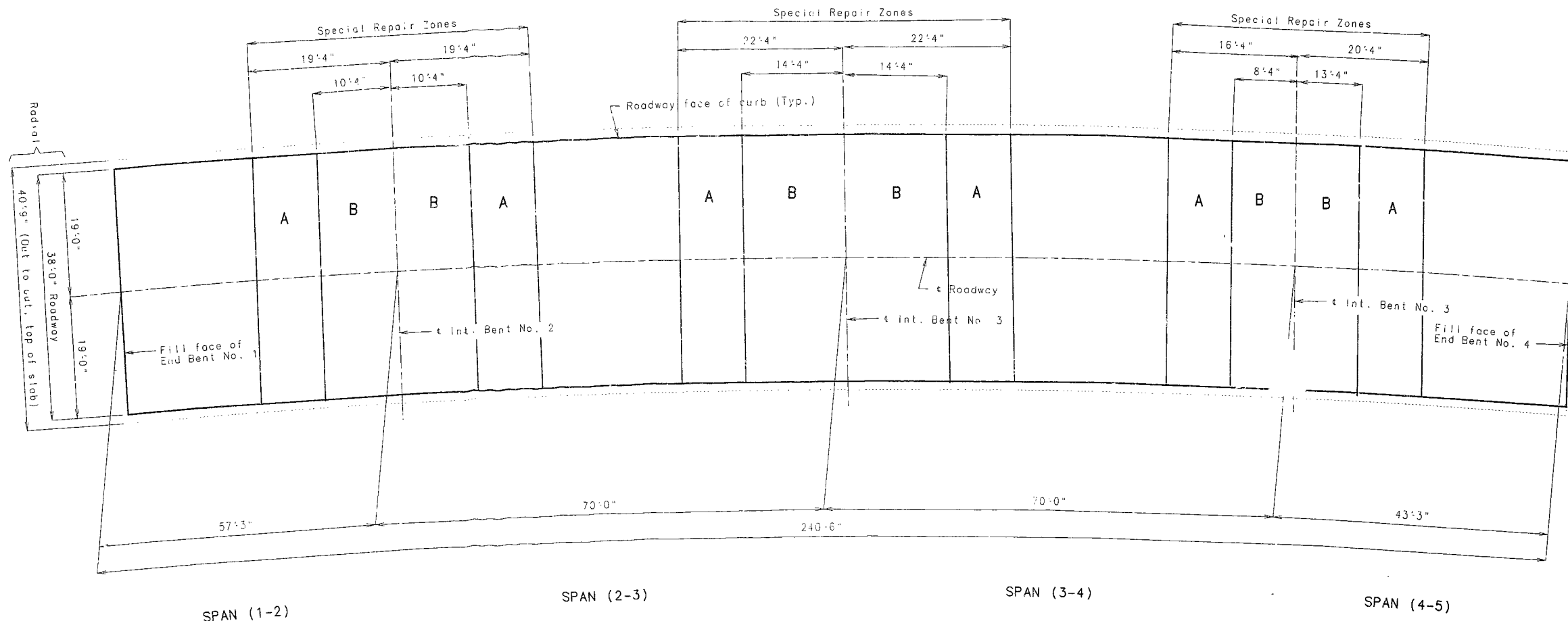
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SHEET NO. 1 OF 2

347

24 to 1

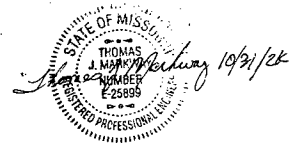
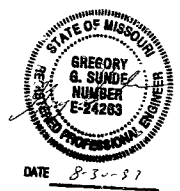
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SPAN (1-2) SPAN (2-3) SPAN (3-4) SPAN (4-5)

PART PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

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NOTES:

Any repair in the remainder of the bridge that is within 5'-0" of zone A shall be completed before removing old concrete in zones A.

Zones with the same letter designation may be repaired at the same time.

Zone A to be repaired before of Zone B.

DETAILED DEC. 1996
CHECKED JULY 1997

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 2 OF 2

CLAY

COUNTY

A21772

24 to 1