

DESIGN DESIGNATION

A.A.D.T. - 2011 = 1630
A.A.D.T. - 2032 = 2608
V = 65 M.P.H.

FUNCTIONAL CLASSIFICATION - MAJOR

NO R/W WAS ACQUIRED FOR THIS PROJECT

CONVENTIONAL SYMBOLS
(USED IN PLANS)

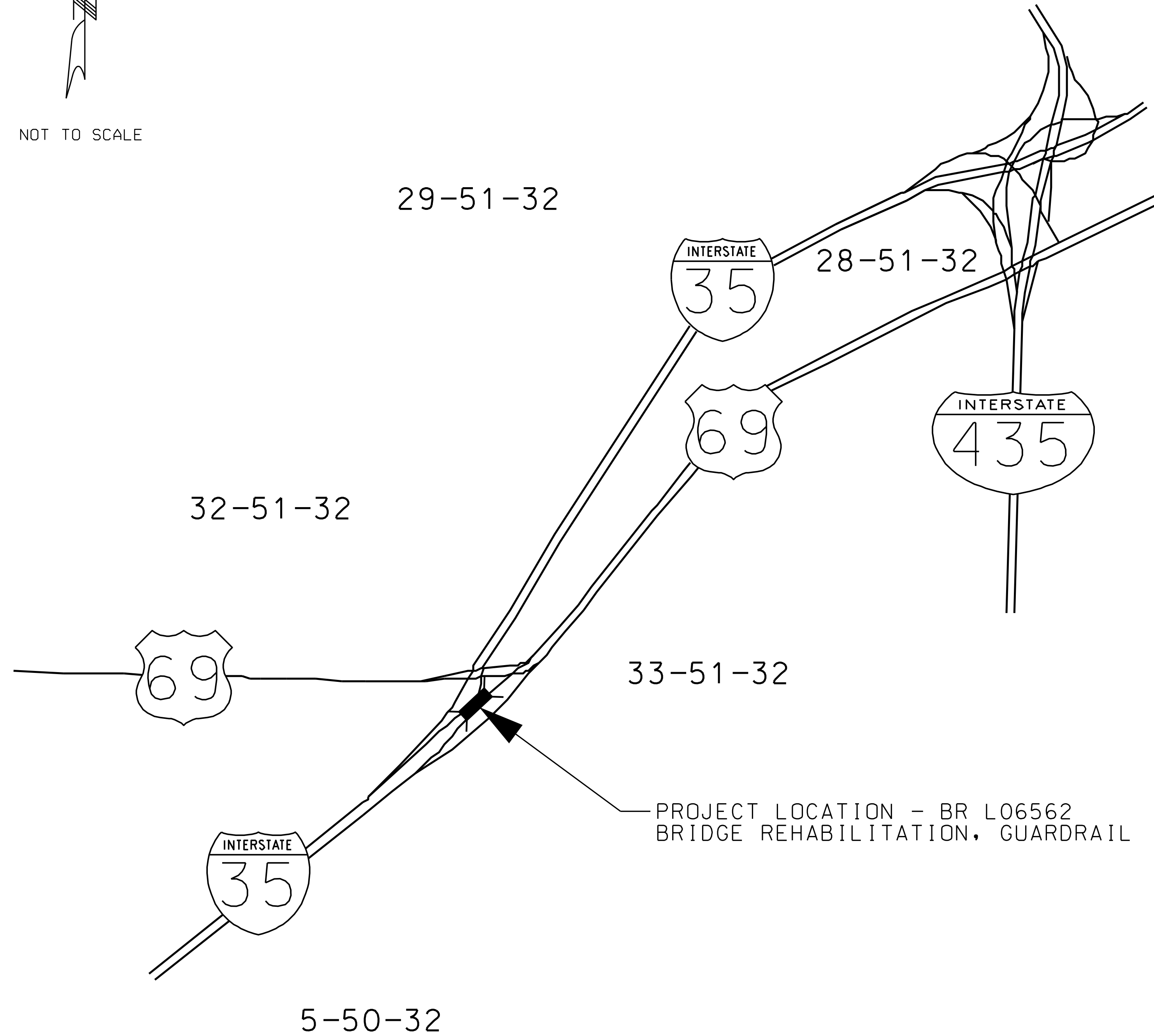
	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS		
OVERHEAD TELEPHONE		
UNDERGROUND TELEPHONE		
OVERHEAD POWER		
UNDERGROUND POWER		
GAS		
WATER		
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		
T.C.E.		TEMPORARY CONSTRUCTION EASEMENT
PERM. D.E.		PERMANENT DRAINAGE EASEMENT

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
CLAY COUNTY



NOT TO SCALE



INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (01 SHEETS)	2
QUANTITIES (QU) (02 SHEETS)	3
PLAN (PL) (X SHEETS)	N/A
PROFILE (PR) (XX SHEETS)	N/A
RIGHT OF WAY (RW) (XX SHEETS)	N/A
REFERENCE POINTS (RP)	N/A
COORDINATE POINTS (CP)	N/A
SPECIAL SHEETS (SS) (XX SHEETS)	N/A
TRAFFIC CONTROL SHEETS (TC) (7 SHEETS)	4-10
EROSION CONTROL SHEETS (EC)	N/A
LIGHTING (LT)	N/A
SIGNALS (SG)	N/A
SIGNING (SN)	11
PAVEMENT MARKING (PM)	N/A
CULVERT SECTIONS (CS) (XX SHEETS)	N/A
BRIDGE DRAWINGS (B)	
L06562	1-9
CROSS SECTIONS (XS)	N/A

LENGTH OF PROJECT

BEGINNING OF PROJECT	VARIOUS BRIDGES
APPARENT BRIDGE LENGTHS	
L06562 = 406'	
TOTAL BRIDGE LENGTHS:	406 FEET

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED
12/17/2012

ROUTE 69 STATE MO
DISTRICT KC SHEET NO. 1

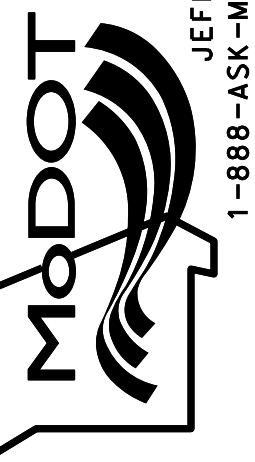
COUNTY
CLAY
JOB NO.
J412384
CONTRACT ID.

PROJECT NO.

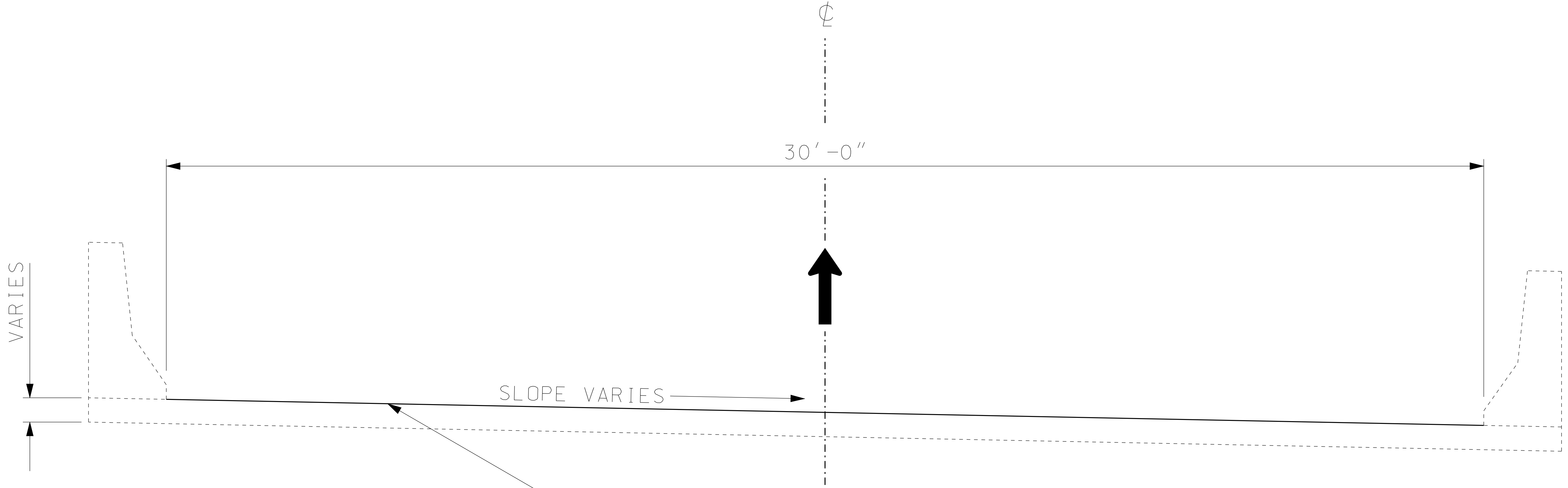
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)



REMOVE EXISTING 1 3/4" ASPHALT OVERLAY
 REPLACE WITH 1 3/4" SP125BSM WITH PG76-22


L06562 EXISTING
 ROUTE 69 SB RAMP ONTO SB I-35
 TYPICAL SECTION
 SHEET 1 OF 1

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED
 12/13/2012
 ROUTE 69 STATE MO
 DISTRICT KC SHEET NO. 2
 COUNTY CLAY
 JOB NO. J412384
 CONTRACT ID.
 PROJECT NO.
 BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-273-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
SUMMARY OF QUANTITIES

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED
1/14/2013

ROUTE 69 STATE MO
 DISTRICT KC SHEET NO. 3

COUNTY CLAY
 JOB NO. J412384
 CONTRACT ID.

PROJECT NO.

BRIDGE NO.

GUARDRAIL					
LOCATION	TYPE A	TRANSITION SECTION	CRASHWORTHY END TERMINAL TYPE A	BRIDGE ANCHOR SECTION	REMARKS
	LF	EA	EA	EA	
NB ROUTE 35 INSIDE LANE	250	1	1	1	PROTECT THE PAVED DITCH
NB ROUTE 35 OUTSIDE LANE	125	1	1	1	
SB ROUTE 69 RAMP INSIDE LANE	125	1	1	1	
SB ROUTE 69 RAMP OUTSIDE LANE	125	1	1	1	
PAY TOTALS	625	4	4	4	

REMOVALS		
	UNITS	REMARKS
GUARDRAIL	500 LF	ESTIMATED LENGTH NOT FIELD MEASURED
PAY TOTAL	1 LUMP SUM	


MOBILIZATION = 1 LUMP SUM

PREFORMED REMOVABLE MARKING TAPE		
LOCATION	4" YELLOW LF	REMARKS
NB ROUTE 69	750	
PAY TOTAL	750	

ASHPALTIC CONCRETE MIXTURE PG 76-22 (SP125BSM MIX)		
LOCATION	1 3/4" ASPHALT TONS	REMARKS
BRIDGE L0656	151	REPLACE EXISTING BRIDGE OVERLAY
PAY TOTAL	151	EST. FACTOR = 2.301 TONS/CY

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-273-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED. REV.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

EFFECTIVE: 05-01-2012

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	TOTAL QTY	TOTAL RELOC AREA	DESCRIPTION
WARNING SIGNS							
W01-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00					REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00					REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	48X48	16.00					REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4R	48X48	16.00					REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-6	60X30	12.50					HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00					HORIZONTAL ARROW (SYMBOL ON BARRICADE)
W01-7	60X30	12.50					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON BARRICADE)
W01-8	18X24	3.00					CHEVRON (SYMBOL)
W01-8a	30X36	7.50					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X49	16.00					STOP AHEAD (SYMBOL)
W03-2	48X48	16.00					YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00					SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00					BE PREPARED TO STOP
W03-5	48X48	16.00					SPEED LIMIT AHEAD
W04-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00					MERGE (SYMBOL FROM RIGHT)
W05-1	48X48	16.00	1	16			ROAD/BRIDGE/RAMP NARROWS
W05-3	48X48	16.00					ONE LANE BRIDGE
W05-5	48X48	16.00					NARROW LANES
W06-1	48X48	16.00					DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00					DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00					TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00					NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00					BUMP
W08-2	48X48	16.00					DIP
W08-3	48X48	16.00					PAVEMENT ENDS
W08-4	48X48	16.00					SOFT SHOULDER
W08-5	48X48	16.00					SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00					TRUCK CROSSING
W08-6c	48X48	16.00					TRUCK ENTRANCE
W08-7	36X36	9.00					LOOSE GRAVEL
W08-9	48X48	16.00					LOW SHOULDER
W08-9a	48X48	16.00					SHOULDER DROP-OFF
W08-11	48X48	16.00					UNEVEN LANES
W08-12	48X48	16.00					NO CENTER LINE
W08-15	48X48	16.00					GROOVED PAVEMENT
W08-15p	30X24	5.00					MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00					SHOULDER DROP OFF (SYMBOL)
W08-17p	30X24	5.00					SHOULDER DROP OFF (PLAQUE)
W10-1	42 RND.	9.62					RAILROAD CROSSING
W012-1	24X24	4.00					DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00					LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00					LOW CLEARANCE (PLAQUE)
W012-2A	84X24	14.00					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
SPECIAL	120X60	50.00					LOW CLEARANCE XX FT XX IN XX MILES AHEAD
SPECIAL	120X60	50.00					WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25					ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00					500 FEET/1000 FEET (PLAQUE)
W016-3	30X24	5.00					X MILE (PLAQUE)
W020-1	48X48	16.00	10	160			ROAD/BRIDGE/RAMP WORK AHEAD
W020-2	48X48	16.00	2	32			DETOUR AHEAD
W020-3	48X48	16.00	1	16			ROAD CLOSED AHEAD
W020-4	48X48	16.00					ONE LANE ROAD AHEAD
W020-5	48X48	16.00	3	48			RIGHT/CENTER/LEFT LANE CLOSED AHEAD

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	TOTAL QTY	TOTAL RELOC AREA	DESCRIPTION	
W020-5a	48X48	16.00	2	32			2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	
W020-6a	48X48	16.00	5	80			RIGHT/CENTER/LEFT LANE CLOSED	
W020-7a	48X48	16.00					FLAGGER (SYMBOL)	
W021-2	36X36	9.00					FRESH OIL	
W021-5b	48X48	16.00					SHOULDER WORK AHEAD	
W022-1	48X48	16.00					BLASTING ZONE AHEAD	
W022-2	42X36	10.50					TURN OFF 2-WAY RADIO AND PHONE	
W022-3	42X36	10.50					END BLASTING ZONE	
W022-6e	21X15	2.19					WET PAINT (ARROW PIVOTS)	
GUIDE SIGNS								
SPECIAL	36X36	9.00					FRESH OIL / LOOSE GRAVEL	
E05-1	36X48	12.00	1	12			GORE EXIT	
E05-2	48X36	12.00					EXIT OPEN	
E05-2a	48X36	12.00					EXIT CLOSED	
G020-1	60X24	10.00					ROAD WORK NEXT XX MILES	
G020-2	48X24	8.00	6	48			END ROAD WORK	
G020-4	36X18	4.50					PILOT CAR FOLLOW ME	
SPECIAL	42X30	8.75					PLEASE WAIT FOR PILOT CAR	
G020-5aP	36X24	6.00	4	24			WORK ZONE (PLAQUE)	
M04-8a	24X18	3.00	2	6			END DETOUR	
M04-9L	48X36	12.00					DETOUR (LEFT ARROW)	
M04-9R	48X36	12.00					DETOUR (RIGHT ARROW)	
M04-10L	48X18	6.00					DETOUR (ARROW LEFT)	
M04-10R	48X18	6.00					DETOUR (ARROW RIGHT)	
REGULATORY SIGNS								
R1-1	48X48	13.25					STOP	
R1-2	48 TR1.	6.93					YIELD	
R1-2a	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)	
R1-3	30X9	1.25					X-WAY (PLAQUE)	
R2-1	36X48	12.00	6	72			SPEED LIMIT 2-55, 2-65, 1-45, 1-35	
R3-1	48X48	16.00					NO RIGHT TURN (SYMBOL)	
R3-2	48X48	16.00					NO LEFT TURN (SYMBOL)	
R3-3	36X36	9.00					NO TURNS	
R3-4	48X48	16.00					NO U-TURN (SYMBOL)	
R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT	
R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT	
R4-1	36X48	12.00					DO NOT PASS	
R4-2	36X48	12.00					PASS WITH CARE	
R4-7aL	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)	
R4-7a	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)	
R5-1	30X30	6.25					DO NOT ENTER	
R5-1a	36X24	6.00					WRONG WAY	
R6-1L	48X18	6.00					ONE WAY ARROW (LEFT)	
R6-1R	48X18	6.00					ONE WAY ARROW (RIGHT)	
R6-2L	24X30	5.00					ONE WAY (LEFT)	
R6-2R	24X30	5.00					ONE WAY (RIGHT)	
R10-6	24X36	6.00					STOP HERE ON RED (45° ARROW)	
R11-2	48X30	10.00	3	30			ROAD CLOSED	
R11-3a	60X30	12.50					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	
R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC	
S4-4	36X15	3.75					WHEN FLASHING	
CONST-3A	60X48	20.00					FINE SIGN	
CONST-3X	57X12	4.67					SPEEDING/PASSING (PLATE)	
MISCELLANEOUS SIGNS								
CONST-5-96	96X48	32.00	2	64			POINT OF PRESENCE	
CONST-7-72	72X36	18.00	2	36			RATE OUR WORK ZONE	
DETOUR	36X72	18.00	6	108			ROUTE ASSEMBLY (NUMBERED ROUTE)	
DETOUR	24x12	2.00	3	6			DETOUR SIGN ABOVE EX. ROUTE ASSEMBLIES	
DETOUR	42x12	3.5	3	10.5			"CLOSED" SIGN ON TRUSS SIGNS	
DETOUR	72X18	9.00	1	9			"CLOSED" SIGN ON TRUSS SIGNS	
616-10.05				CONSTRUCTION SIGNS TOTAL				774
616-10.10				RELOCATED SIGNS TOTAL				

ITEM NUMBER	TOTAL QTY	DESCRIPTION
612-20.08		IMPACT ATTENUATOR (8 SAND BARRELS)
612-20.09		IMPACT ATTENUATOR (9 SAND BARRELS)
612-20.10		IMPACT ATTENUATOR (10 SAND BARRELS)
612-20.12		IMPACT ATTENUATOR (12 SAND BARRELS)
612-20.14		IMPACT ATTENUATOR (14 SAND BARRELS)
612-20.17		IMPACT ATTENUATOR (17 SAND BARRELS)
612-20.19	1	IMPACT ATTENUATOR (19 SAND BARRELS)
612-20.20	19	REPLACEMENT SAND BARREL
612-20.30	1	IMPACT ATTENUATOR ARRAY (RELOCATION)
612-30.00A		TRUCK MOUNTED ATTENUATOR (TMA)
616-10.07		SPEED LIMIT & STROBE LIGHT ASSEMBLY
616-10.08		ADVANCED WARNING RAIL SYSTEM
616-10.09	37	FLAG ASSEMBLY
612-10.20		CHANNELIZER (DRUM-LIKE)
616-10.22		CHANNELIZER (CONES)
616-10.24		CHANNELIZER (TRIM-LINE) WITH LIGHT
616-10.25	150	CHANNELIZER (TRIM-LINE)
616-10.26		CHANNELIZER (VERTICAL PANEL)
616-10.27		CHANNELIZER (VERTICAL PANEL) WITH LIGHT
616-10.28		CHANNELIZER
616-10.30	6	TYPE III MOVEABLE BARRICADE
616-10.31		TYPE III MOVEABLE BARRICADE WITH LIGHT
616-10.33	30	DIRECTION INDICATOR BARRICADE
616-10.34		DIRECTION INDICATOR BARRICADE, WITH LIGHT
616-10.40	2	FLASHING ARROW PANEL
616-10.47		TYPE III OBJECT MARKER
616-10.51		WARNING LIGHT, TYPE A
616-10.52		WARNING LIGHT, TYPE B
616-10.53		WARNING LIGHT, TYPE C
616-10.70		TUBULAR MARKER
616-10.95		RADAR SPEED ADVISORY SYSTEM
616-10.96		CHANGEABLE MESSAGE SIGN, COMMISSION
		FURNISHED/RETAINED
616-10.98	2	CHANGEABLE MESSAGE SIGN, CONTRACTOR
		FURNISHED/RETAINED *
616-11.00		CHANGEABLE MESSAGE SIGN, CONTRACTOR
		FURNISHED/COMMISSION RETAINED
616-20.10	1	WORK ZONE LIGHTING
616-10.55	30	SEQUENTIAL FLASHING WARNING LIGHTS
617-36.00D	390	CONTRACTOR FURNISHED/RETAINED TEMPORARY CONCRETE TRAFFIC BARRIER, TYPE F
617-36.02B		CONTRACTOR FURNISHED/COMMISSION RETAINED TEMPORARY CONCRETE TRAFFIC BARRIER, TYPE F
617-40.00A		TEMPORARY CONCRETE BARRIER HEIGHT TRANSITION
617-50.10A	360	RELOCATING TEMPORARY CONCRETE TRAFFIC BARRIER
617-60.00B		COMMISSION FURNISHED/RETAINED TEMPORARY CONCRETE TRAFFIC BARRIER, TYPE F
617-70.00B		COMMISSION FURNISHED/RETAINED PRECAST BARRIER HEIGHT TRANSITION
620-80.65		TEMPORARY RAISED PAVEMENT MARKER
901-94.00		TEMPORARY LIGHTING
902-94.00		TEMPORARY TRAFFIC SIGNALS
902-94.01		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

* USE AS DIRECTED BY THE ENGINEER

SUMMARY SHEET
SHEET 2 OF 2

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

Sign Spacing, Device Spacing, Channelizing Taper Lengths And Recommended Maximum Speed Reductions

TAPER LENGTHS AND SPACING OF CHANNELIZING DEVICES						
SPEED (P) MPH	MINIMUM TAPER LENGTHS (L) FOR LANE WIDTHS (W)			MINIMUM TAPER SHOULDER (T1)	MAXIMUM CHANNELIZER SPACING	
	10 FT	11 FT	12 FT		THROUGH TAPER	THROUGH WORK AREA
0-35	205 FT	225 FT	245 FT	70	35 FT	50 FT
40-45	450 FT	495 FT	540 FT	150	40 FT	100 FT
50-55	550 FT	605 FT	660 FT	185	50 FT	100 FT
60-70	700 FT	770 FT	840 FT	235	60 FT	100 FT

LONGITUDINAL BUFFER SPACE	
SPEED (P) MPH	BUFFER SPACE (FEET)
0-35	250
40-45	360
50-55	495
60-70	730

TAPER LENGTH (L)
 L = W X P FOR 40 MPH OR MORE
 L = $\frac{WP^2}{60}$ FOR 35 MPH OR LESS
 L = TAPER LENGTH IN FEET
 W = LATERAL SHIFT IN FEET
 P = POSTED SPEED PRIOR TO ROAD WORK IN MPH

SIGN SPACING FOR ADVANCE SIGN SERIES (1) (2)		
SPEED (P) MPH	NON-DIVIDED HIGHWAYS (S)	
	DIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (S)
0-35	200 FT	200 FT
40-45	350 FT	500 FT
50-55	500 FT	1000 FT
60-70	SA-1000 FT, SB-1500 FT, SC-2640 FT **	

** THE SA DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN.
 THE SB DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS.
 THE SC DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS.
 (THE "FIRST SIGN" IS THE SIGN IN A THREE-SIGN SERIES THAT IS CLOSEST TO THE TEMPORARY TRAFFIC CONTROL ZONE. THE "THIRD SIGN" IS THE SIGN THAT IS FURTHEST UPSTREAM FROM THE TEMPORARY TRAFFIC CONTROL ZONE)

NOTES: DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.

- (1) SPACING BETWEEN SIGNS AND SPACING BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER, OR SIGNED CONDITION
- (2) SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS
- (3) TAPER LENGTHS SHOWN INCLUDE LENGTH REQUIRED FOR LANE AND 10' SHOULDER.
- (4) CONCRETE BARRIER MAY BE INSTALLED AT AN 8:1 FLARE RATE FROM THE SHOULDER POINT TO THE LIMITS OF THE CLEAR ZONE WHERE THEY SIDE SLOPE IS 6:1 OR FLATTER.

TAPER LENGTHS AND END TREATMENTS FOR CONCRETE BARRIER				
SPEED (P) MPH	MINIMUM TAPER LENGTHS FOR LANE WIDTHS (3)			END TREATMENT (4)
	10 FT	11 FT	12 FT	
<40	160 FT	168 FT	176 FT	BARRIER HEIGHT TRANSITION
≥40	160 FT	168 FT	176 FT	APPROVED CRASH CUSHION

EPG TABLE 616.29 RECOMMENDED MAXIMUM SPEED REDUCTIONS	
ACTIVITY (I.E. WORKERS, EQUIPMENT OR MATERIAL) LOCATION	RECOMMENDED WORK ZONE SPEED REDUCTION (WHEN APPLICABLE)
10 FT. BEYOND EDGE OF TRAVELWAY TO EDGE OF RIGHT OF WAY	NO SPEED REDUCTION
IN TRAFFIC LANE OR WITHIN 10FT. OF THE TRAFFIC LANE	10 MPH
HEAD-TO-HEAD ON MULTILANE	10 MPH
SPECIAL CIRCUMSTANCES WITHIN A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY WARRANT A LOWER SPEED LIMIT THAN RECOMMENDED ABOVE. ALL SPEED LIMIT REDUCTIONS GREATER THAN 10 MPH SHALL BE DOCUMENTED, SUBMITTED TO AND APPROVED BY THE DISTRICT WORK ZONE COORDINATOR.	

GENERAL NOTES:

1. SEE STANDARD PLAN 616.10 FOR DETAILS AND ITEMS NOT SHOWN
2. EXISTING SIGNS SHALL BE COVERED DURING WORKING HOURS ONLY IF IN CONFLICT WITH TRAFFIC CONTROL PLANS.
3. NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING OR REMOVING SIGNS.
4. LOCATE FLASHING ARROW PANEL AT BEGINNING OF TAPER WHEN FEASIBLE. ARROW PANELS ARE ALWAYS LOCATED BEHIND CHANNELIZERS.

DEVICE
SPACING
TEMPORARY
TRAFFIC CONTROL
SHEET 1 OF 7

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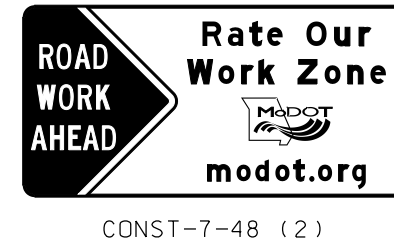
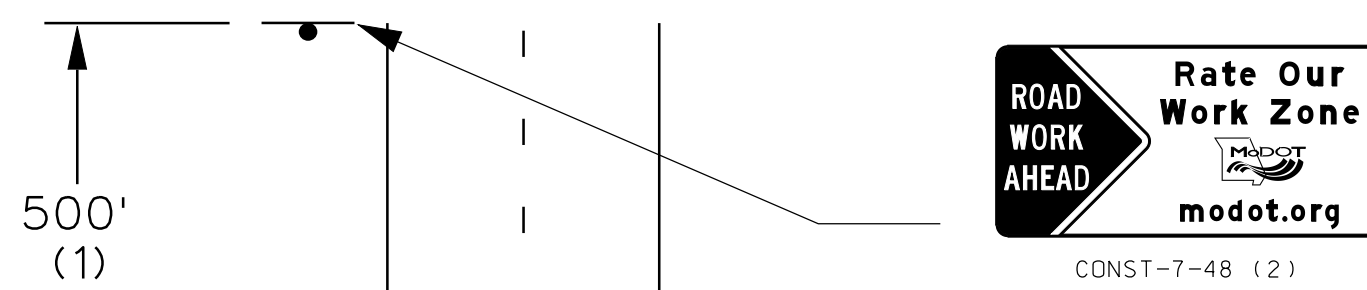
DATE PREPARED
12/13/2012
ROUTE 69 STATE MO
DISTRICT KC SHEET NO. 4
COUNTY CLAY
JOB NO. J412384
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

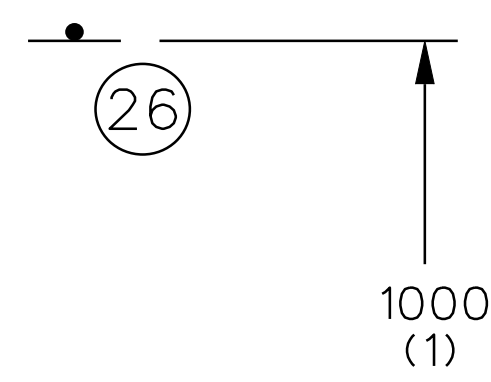
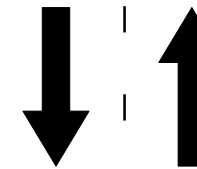
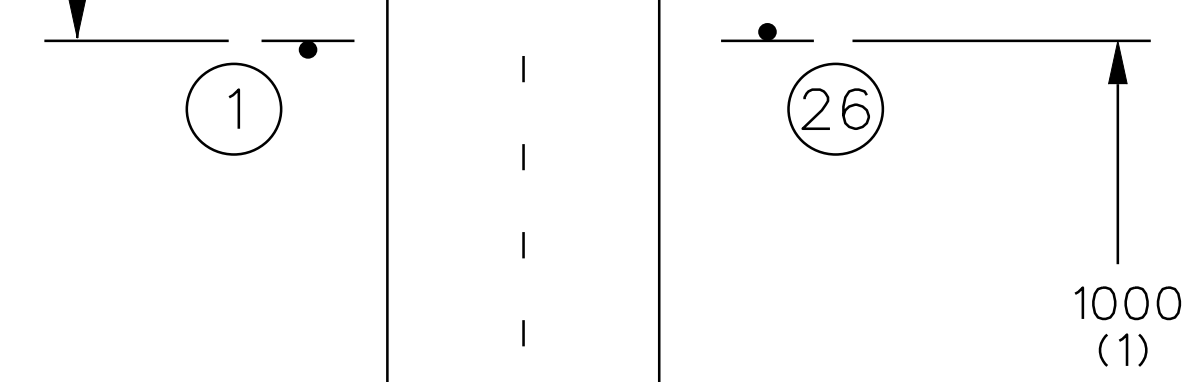
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



CONST-7-48 (2)



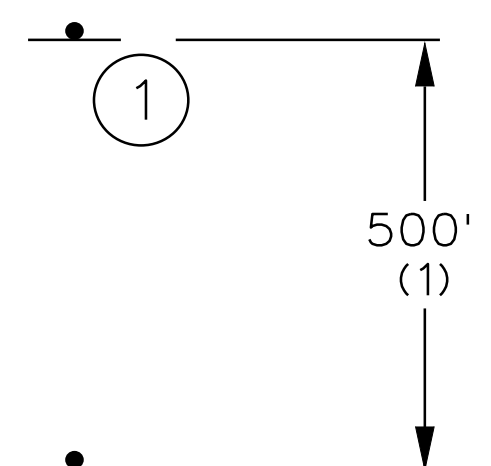
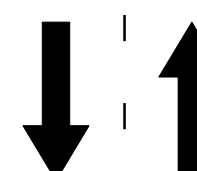
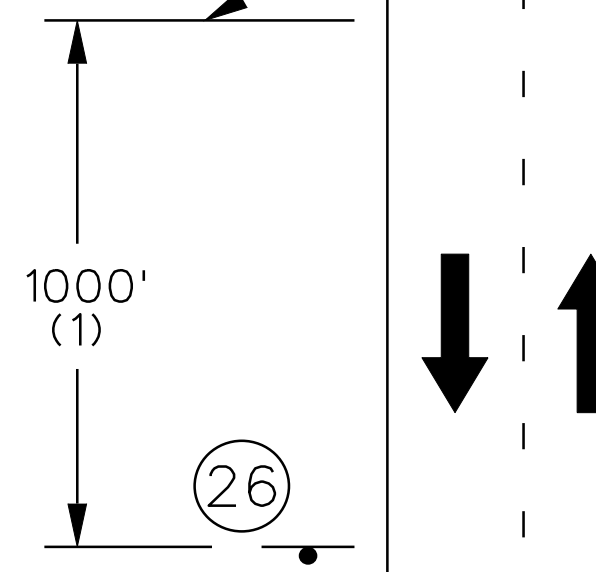
1000'
(1)

END OF PROJECT LIMITS; END OF WORK ZONE TERMINATION AREA, IF LOCATED BEYOND END OF PROJECT; OR LAST WORK ZONE SIGN, IF LOCATED OUTSIDE PROJECT LIMITS.

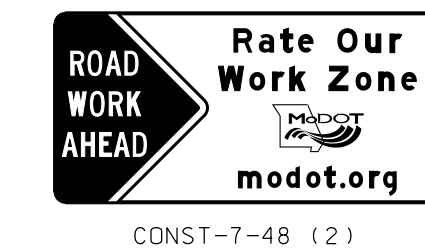


CONST-5-96 (3)

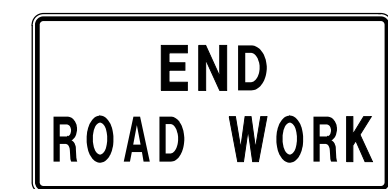
BEGINNING OF PROJECT LIMITS; OR INITIAL WORK ZONE SIGN, IF LOCATED OUTSIDE PROJECT LIMITS.



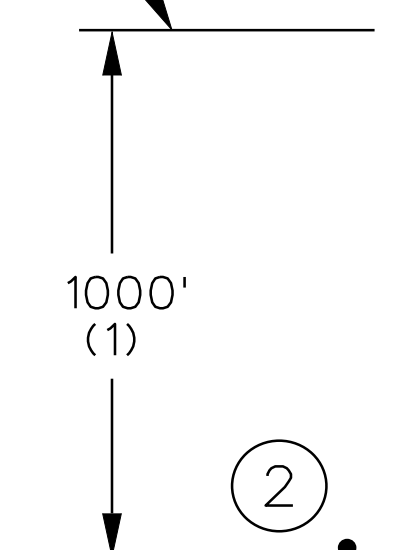
500'
(1)



CONST-7-48 (2)



G020-2
(26)



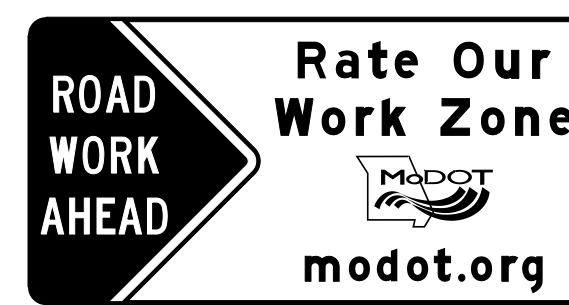
1000'
(1)

(2)



1000'
(1)

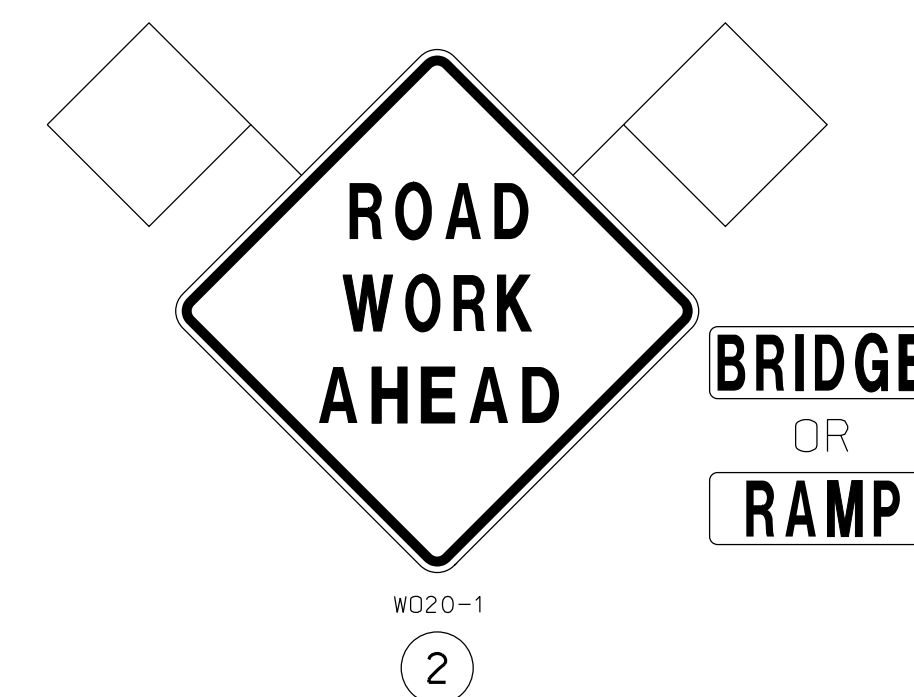
500'
(1)



CONST-7-72 (2)



CONST-5-96 (3)



W020-1
(2)

NOTES:

- SIGN ① IS REQUIRED PER EPG 616.2.3.
- SIGN ②⑥ IS USED ON ALL PROJECTS WHERE SIGN ① IS USED.
- OTHER SIGNS SUCH AS DETOUR OR ALTERNATE ROUTE SIGNING MAY BE USED OUTSIDE THE PROJECT LIMITS.
- ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
- (1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.
- (2) SIGN CONST-6-48 IS PLACED 500 FEET BEFORE THE BEGINNING OF PROJECT LIMITS OR THE ROAD WORK AHEAD SIGN OR ROAD WORK NEXT XX MILES SIGN, IF USED, WHEN THESE SIGNS ARE LOCATED OUTSIDE THE PROJECT LIMITS.
- (3) SIGN CONST-5-96 IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-6-48.

TWO-LANE UNDIVIDED

BEGIN/END OF PROJECT SIGNING
(FOR USE ON ALL PROJECTS)

MULTI-LANE DIVIDED

BEGIN/END
TEMPORARY
TRAFFIC CONTROL
SHEET 2 OF 7

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED
12/13/2012

ROUTE 69 STATE MO
DISTRICT KC SHEET NO. 5

COUNTY
CLAY

JOB NO.
J412384

CONTRACT ID.

PROJECT NO.

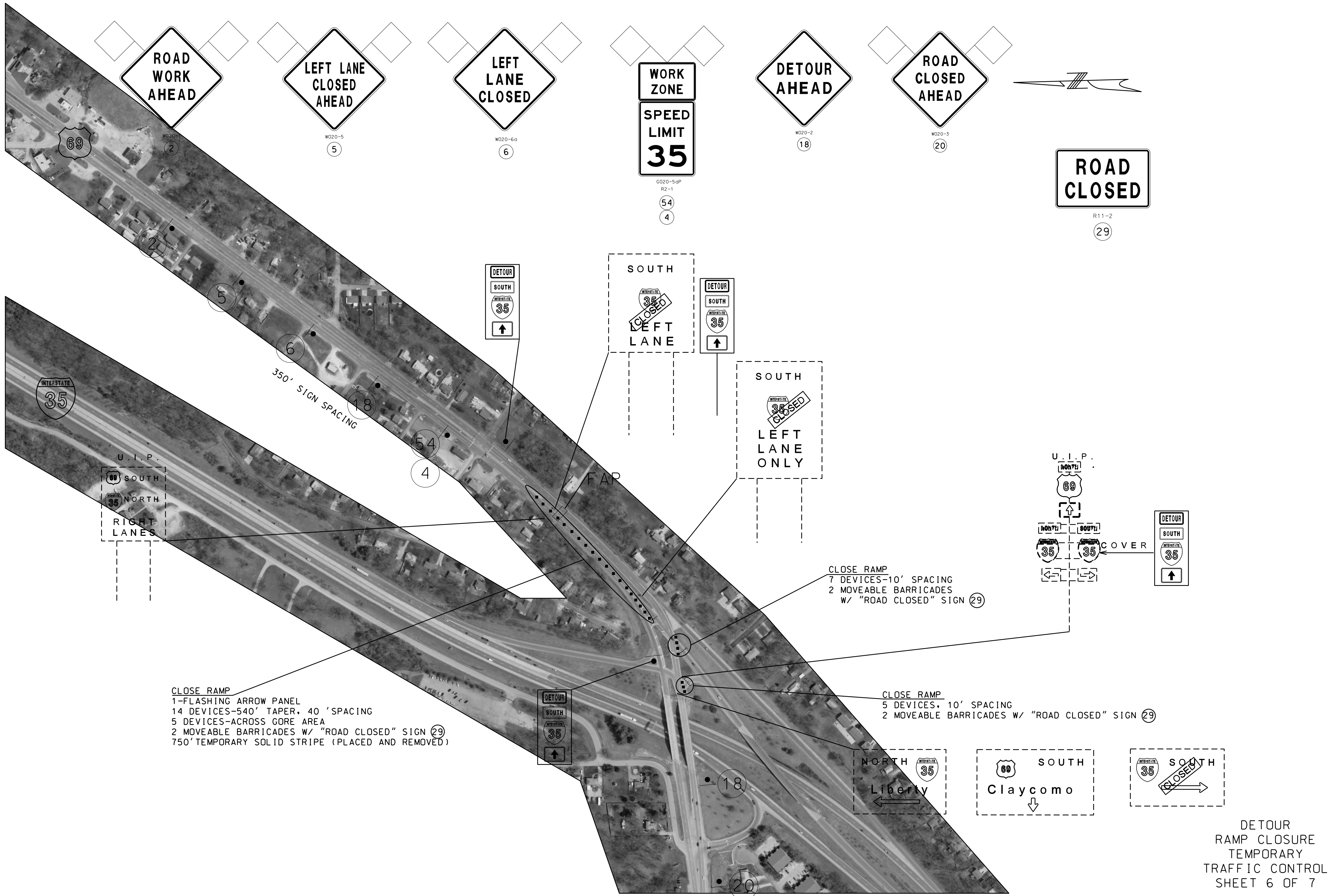
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

 105 WEST CAPITOL JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-273-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



CLOSE RAMP
 1-FLASHING ARROW PANEL
 14 DEVICES-540' TAPER, 40' SPACING
 5 DEVICES-ACROSS GORE AREA
 2 MOVEABLE BARRICADES W/ "ROAD CLOSED" SIGN (29)
 750' TEMPORARY SOLID STRIPE (PLACED AND REMOVED)

CLOSE RAMP
 7 DEVICES-10' SPACING
 2 MOVEABLE BARRICADES
 W/ "ROAD CLOSED" SIGN (29)

CLOSE RAMP
 5 DEVICES, 10' SPACING
 2 MOVEABLE BARRICADES W/ "ROAD CLOSED" SIGN (29)

DETOUR
 RAMP CLOSURE
 TEMPORARY
 TRAFFIC CONTROL
 SHEET 6 OF 7

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

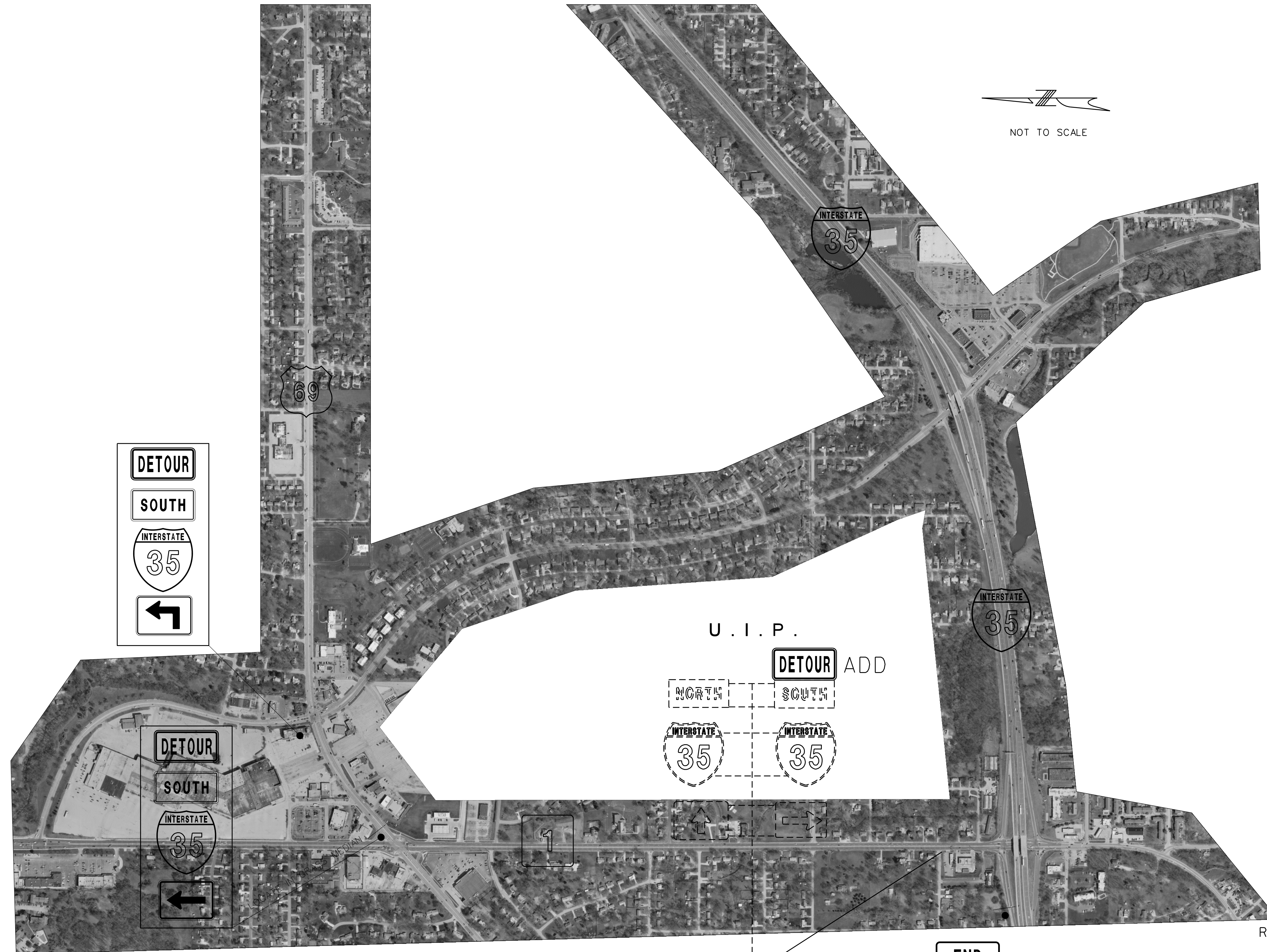
DATE PREPARED 12/13/2012	
ROUTE 69	STATE MO
DISTRICT KC	SHEET NO. 9
COUNTY CLAY	
JOB NO. J412384	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-273-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



DETOUR
SOUTH
INTERSTATE 35
←

DETOUR
SOUTH
INTERSTATE 35
←

U. I. P.
DETOUR ADD
NORTH SOUTH
INTERSTATE 35 INTERSTATE 35

END
DETOUR

DETOUR
RAMP CLOSURE
TEMPORARY
TRAFFIC CONTROL
SHEET 7 OF 7

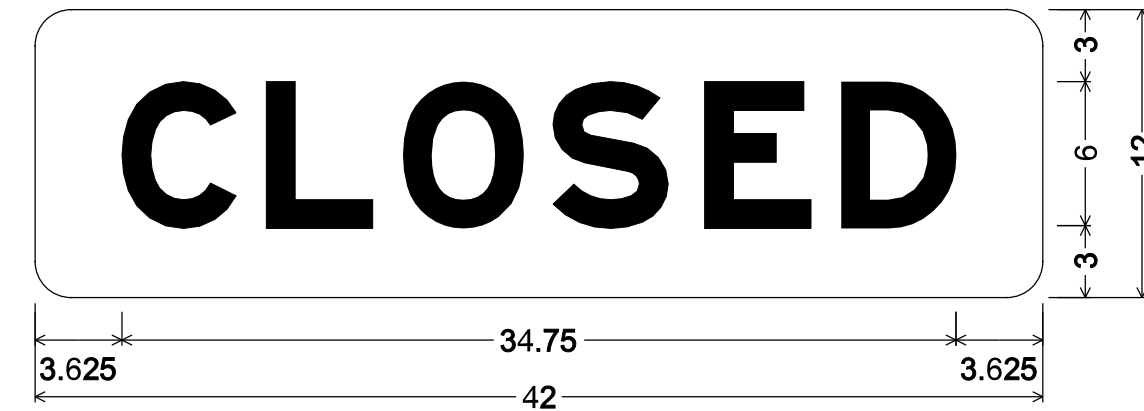
"THIS MEDIA SHOULD
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A CERTIFIED
DOCUMENT."

DATE PREPARED
12/13/2012
ROUTE STATE
69 MO
DISTRICT SHEET NO.
KC 10
COUNTY
CLAY
JOB NO.
J412384
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

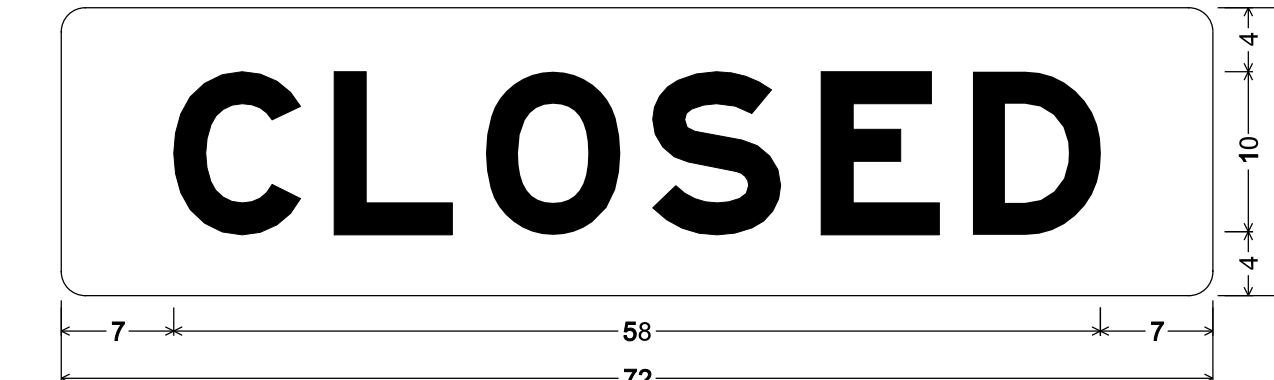
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

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SHR4L1; 1.500" Radius, No border, Orange;
 [CLOSED] Black E Mod;
 Table of letter and object lefts.

C	L	O	S	E	D
3.625	9.625	15.375	21.625	27.875	33.625



SPECIAL SHR4L1; 1.500" Radius, No border, Orange;
 [CLOSED] Black E Mod;
 Table of letter and object lefts.

C	L	O	S	E	D
7.000	17.125	26.500	37.000	47.500	57.000

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DATE PREPARED
12/13/2012

ROUTE 69	STATE MO
DISTRICT KC	SHEET NO. 11

COUNTY
CLAY

JOB NO.
J412384

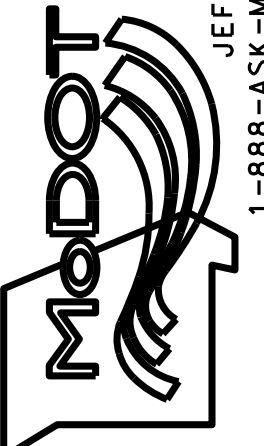
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

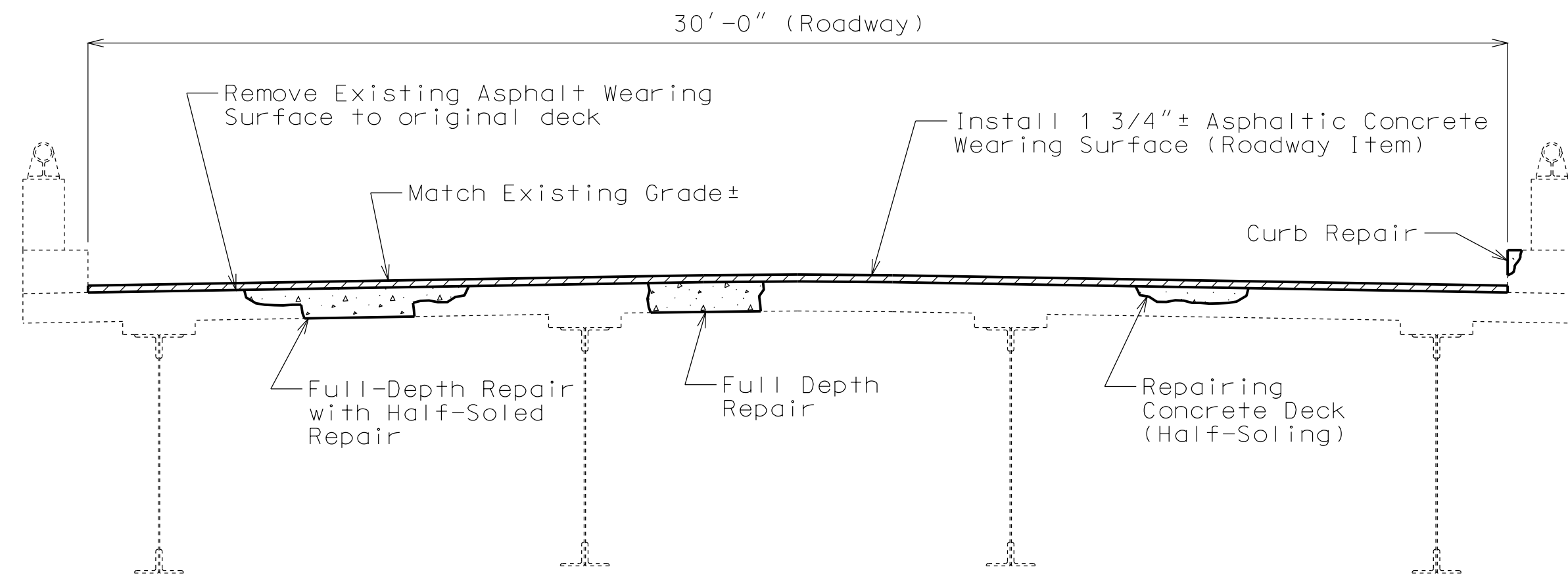
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
U.I.P. & REHAB. EXISTING (70') (100'-120'-100') BUILT-UP PLATE GIRDER SPANS



TYPICAL SECTION THRU EXISTING DECK

GENERAL NOTES:

Design Specifications:
 2002 - AASHTO 17th Edition (New Construction)
 Load Factor Design
 Seismic Performance Category A
 Bridge Deck Rating = 5

Design Loading:
 HS20-44 (New Construction)

Design Unit Stresses:
 Class B-1 Concrete (Curb & Parapet) $f'c = 4,000$ psi
 Class B-2 Concrete (Superstructure, except Curb & Parapet) $f'c = 4,000$ psi
 Reinforcing Steel (Grade 60) $fy = 60,000$ psi

Reinforcing Steel:
 Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Concrete Protective Coatings:
 Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.

Structural Steel Protective Coatings:
 Protective Coating: System G in accordance with Sec 1081.

Coating Limits: All existing structural steel and bearings within 10 feet of ϕ exp. joint at End Bents No. 1 & 5 and at Int. Bent No. 2. Within these limits, items to be coated shall include girders, diaphragms, stiffeners, bearings and miscellaneous structural steel items.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for "Recoating of Structural Steel (System G, H or I)". The cost of surface preparation will be considered completely covered by the contract unit price per sq. foot for "Surface Preparation for Recoating Structural Steel".

Prime Coat: The cost of the prime coat for existing steel will be considered completely covered by the contract unit price per sq. foot for "Field Application of Inorganic Zinc Primer". Tint of the prime coat for System G shall be similar to the color of the field coat to be used.

Field Coats: The color of the field coats shall be Gray (Federal Standard #26373). The cost of the intermediate field coat will be considered completely covered by the contract unit price per sq. foot for "Intermediate Field Coat (System G)". The cost of the finish field coat will be considered completely covered by the contract unit price per sq. foot for "Finish Field Coat (System G)".

GENERAL NOTES (CONT.):

Miscellaneous:
 Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

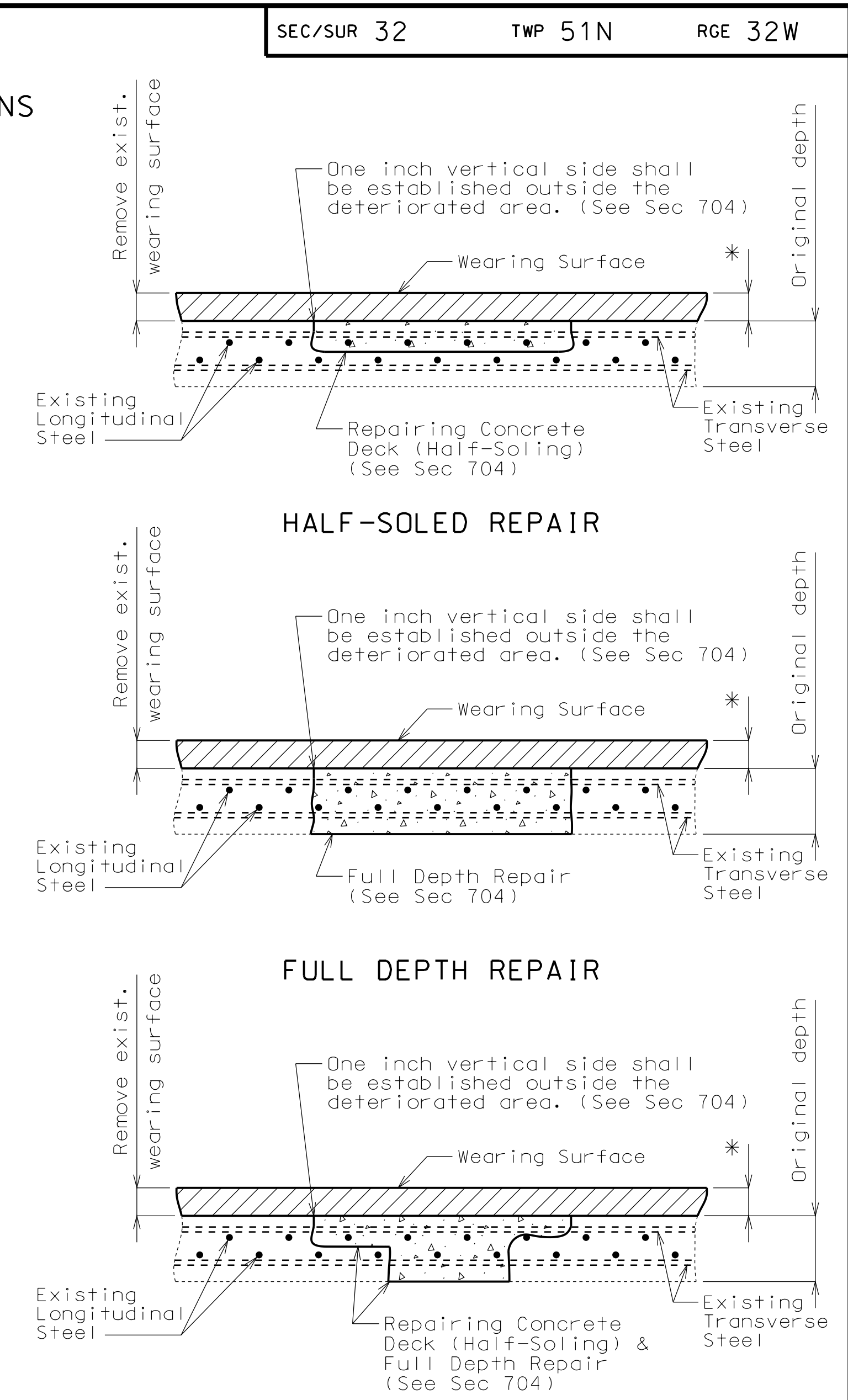
Roadway surfacing adjacent to bridge ends to match top of new bridge wearing surface (Roadway Item).

Areas of slab removal, as shown in plans, are not included in the Estimated Quantities for Removal of Asphalt Wearing Surface.

Traffic Handling:
 Structure to be closed during construction. See Roadway Plans for traffic control.

Estimated Quantities		
Item		Total
Removal of Asphalt Wearing Surface	sq. foot	12,191
Removal of Existing Expansion Joints & Adjacent Concrete	linear foot	176
Remove and Replace Curb and Parapet	linear foot	69
* Curb Repair	linear foot	128
Class B-2 Concrete (Superstructure on Steel)	cu. yard	26.1
Substructure Repair (Formed)	sq. foot	510
Substructure Repair (Unformed)	sq. foot	170
Repairing Concrete Deck (Half-Soling)	sq. foot	1000
Full Depth Repair	sq. foot	600
Fiber Reinforced Polymer Wrap	each	3
Reinforcing Steel (Bridges)	pound	5670
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Expansion Device (Flat Plate)	linear foot	176
Surface Preparation for Recoating Structural Steel	sq. foot	3900
Field Application of Inorganic Zinc Primer	sq. foot	3900
Intermediate Field Coat (System G)	sq. foot	3900
Finish Field Coat (System G)	sq. foot	3900

* Curb repair shall be made to the roadway face of curb in accordance with the requirements for Slab Edge Repair (see Sec 704). Repair may extend to the roadway face of parapet.



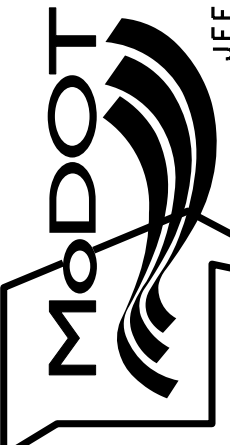
DECK REPAIR DETAILS

REPAIRS TO BRIDGE: RTE. 69 SB OVER I-35 NB

STATE ROAD FROM VIVION ROAD SOUTH TO I-35
 ABOUT 4 MILES NE OF NORTH KANSAS CITY

STA. 430+23.84± (Rte. 69 SB) (Match Exist.)

STD. 617.10
STD. 706.35

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT." DATE PREPARED: 12/10/2012 ROUTE: I-35 STATE: MO DISTRICT: BR SHEET NO.: 1 COUNTY: CLAY JOB NO.: J412384 CONTRACT ID.: PROJECT NO.: BRIDGE NO.: L06562	
DESCRIPTION	
DATE	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	

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DATE PREPARED

12/10/2012

ROUTE STATE

I-35 MO

DISTRICT SHEET NO.

BR 2

COUNTY

CLAY

JOB NO.

J412384

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

L06562

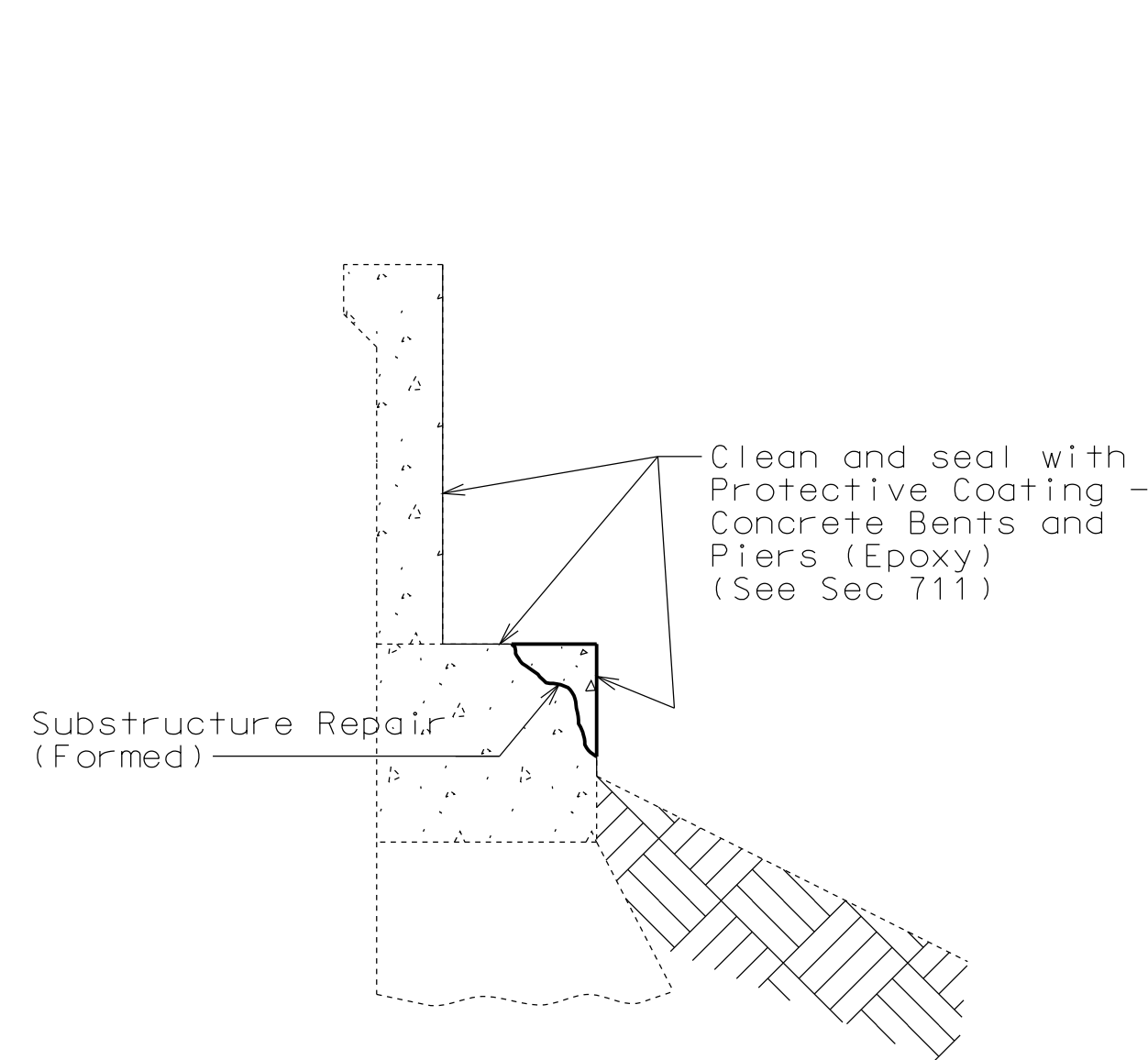
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

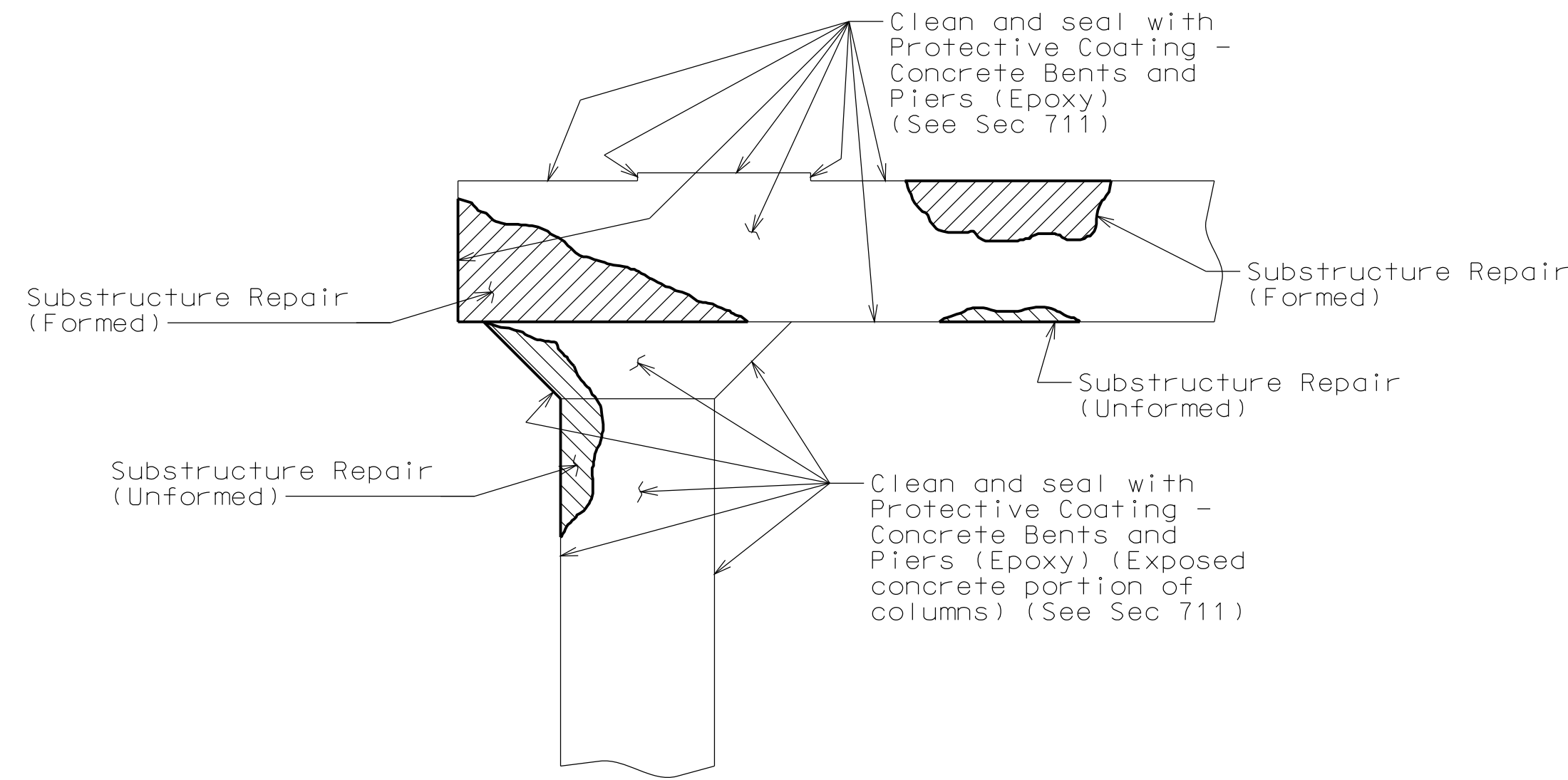
MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

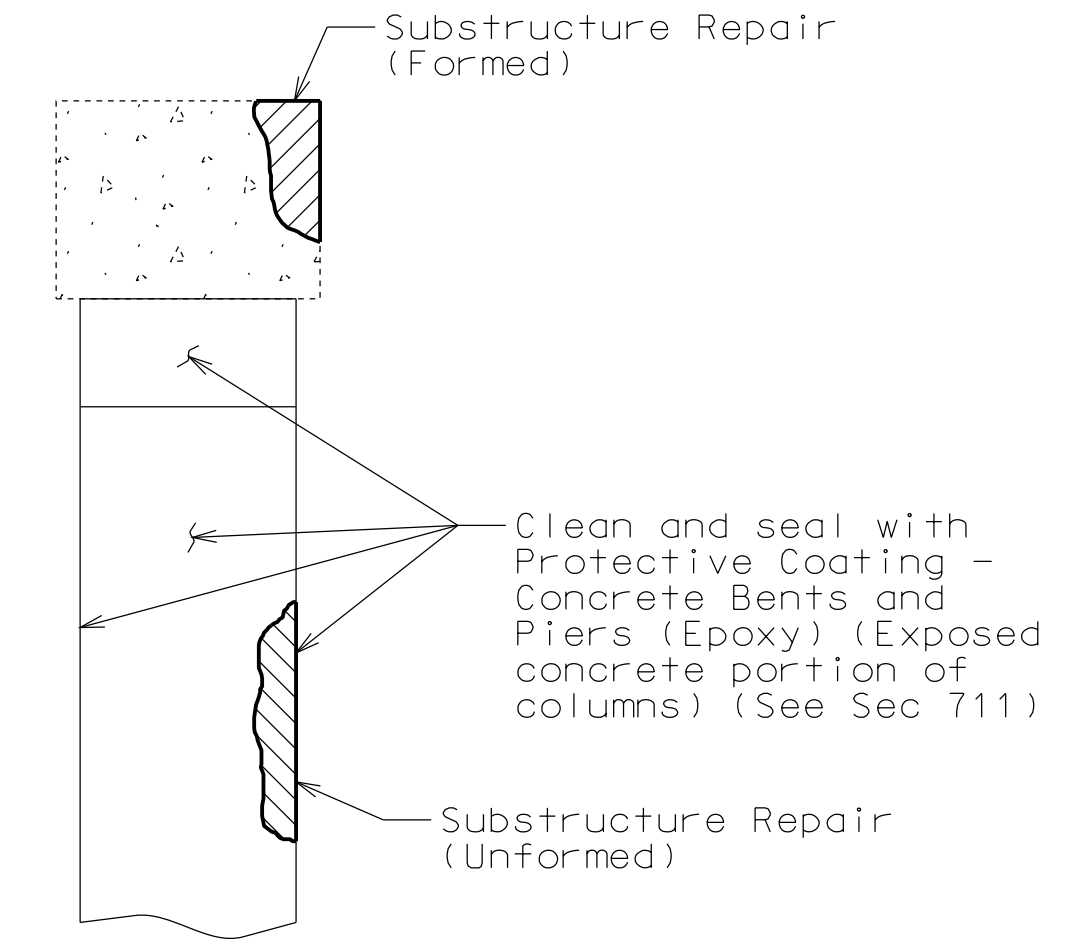
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



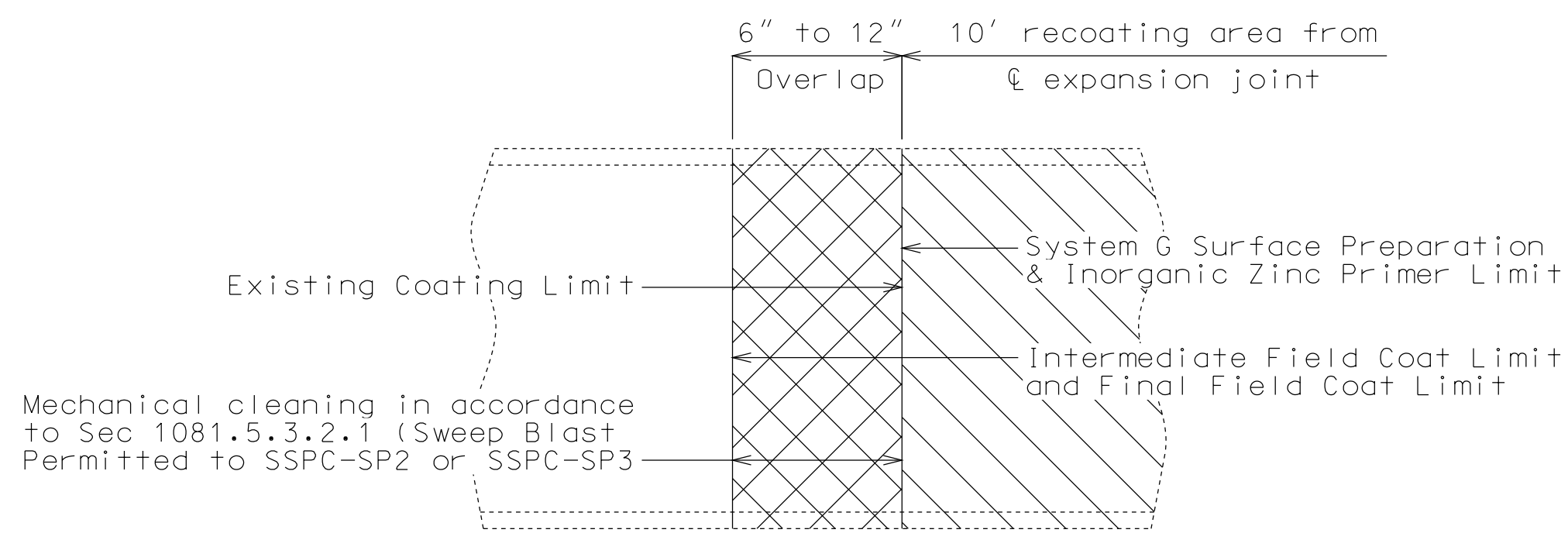
TYPICAL SECTION THRU END BENTS NO. 1 & 5 SHOWING PROTECTIVE COATING AND SUBSTRUCTURE REPAIR



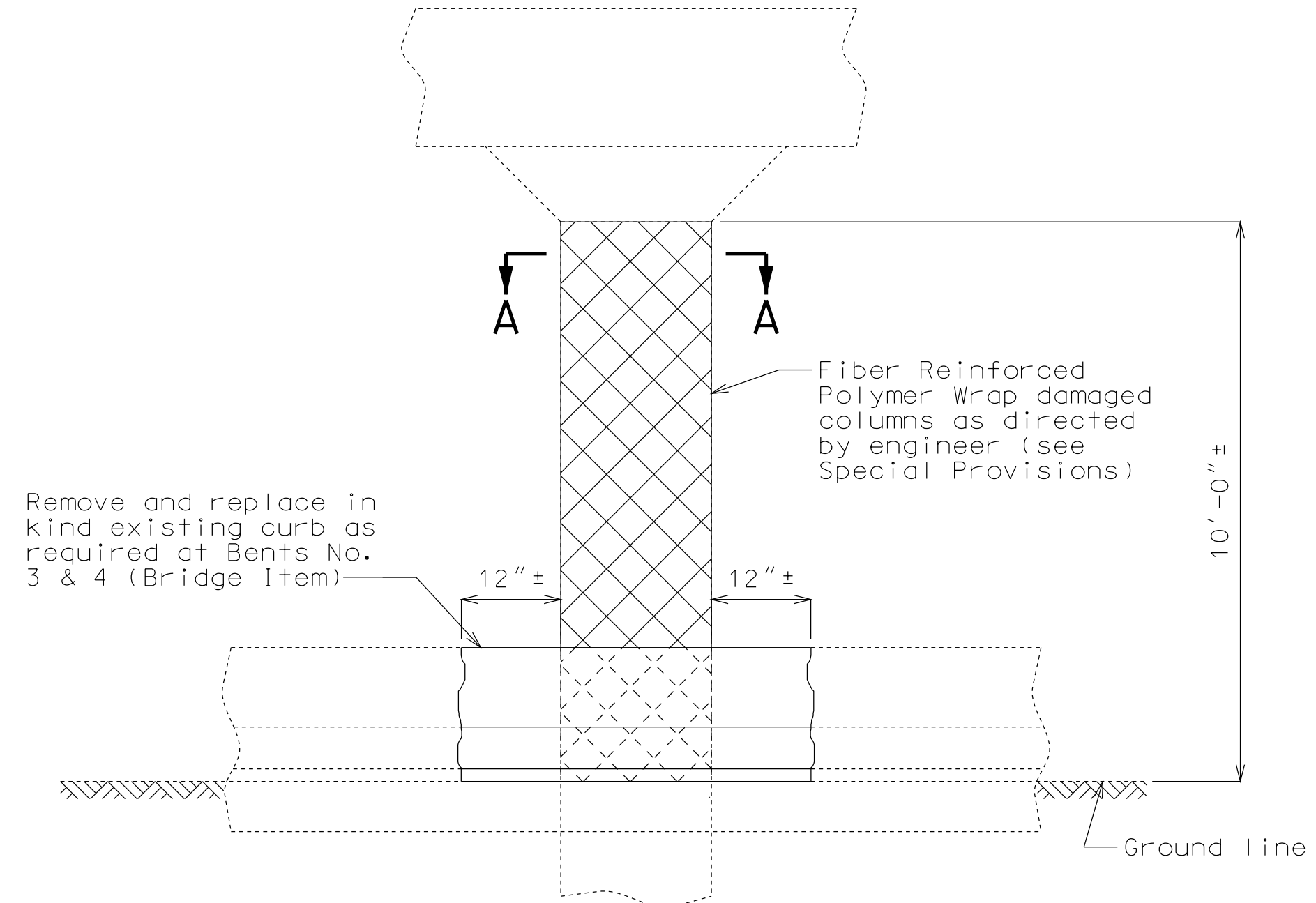
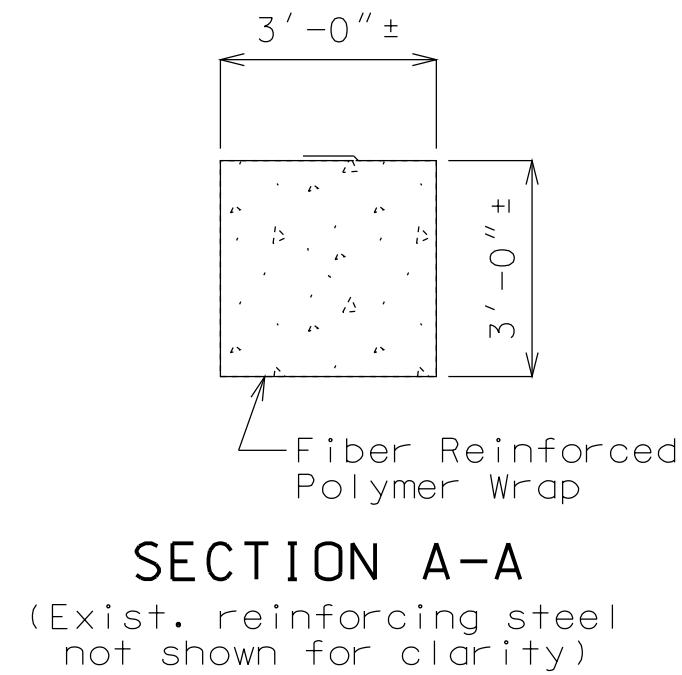
PART ELEVATION OF INT. BENT NO. 2 SHOWING PROTECTIVE COATING AND SUBSTRUCTURE REPAIR



TYPICAL SECTION THRU INT. BENTS NO. 3 & 4 SHOWING PROTECTIVE COATING AND SUBSTRUCTURE REPAIR



PART ELEVATION SHOWING LIMITS OF PAINT OVERLAP (Vertical or horizontal paint limit. Horizontal limit shown)



PART ELEVATION OF INT. BENTS NO. 3 & 4 SHOWING FIBER WRAP ON COLUMNS

Notes:

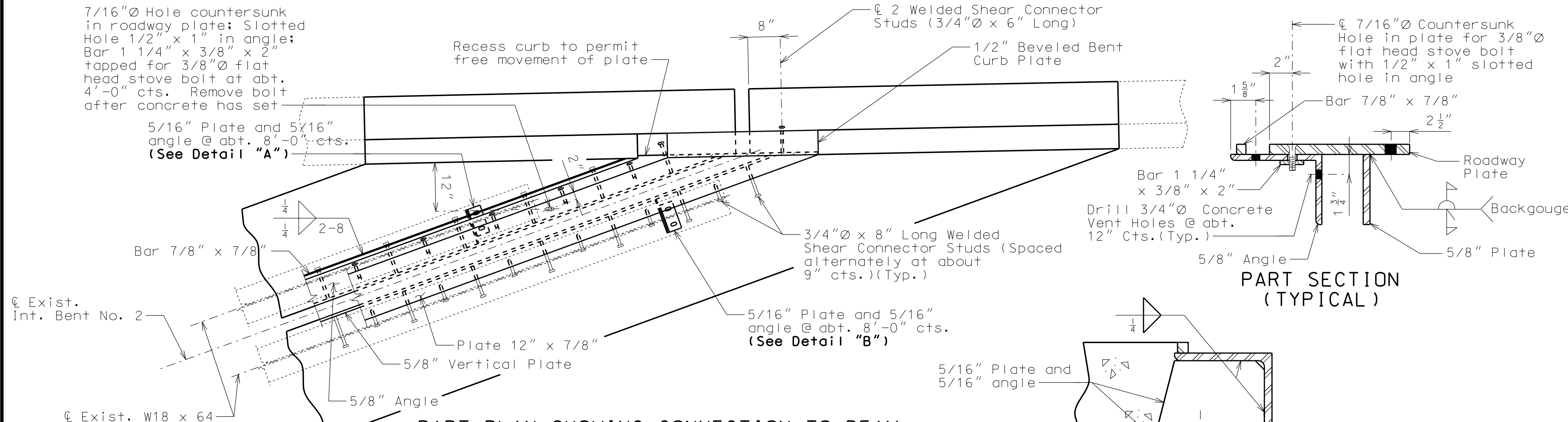
Fiber Reinforced Polymer Wrap installation is anticipated at three column locations. Number and location of installations may vary, but the contract unit price shall prevail regardless of the variation.

Each column location will be considered one repair for Fiber Reinforced Polymer Wrap.

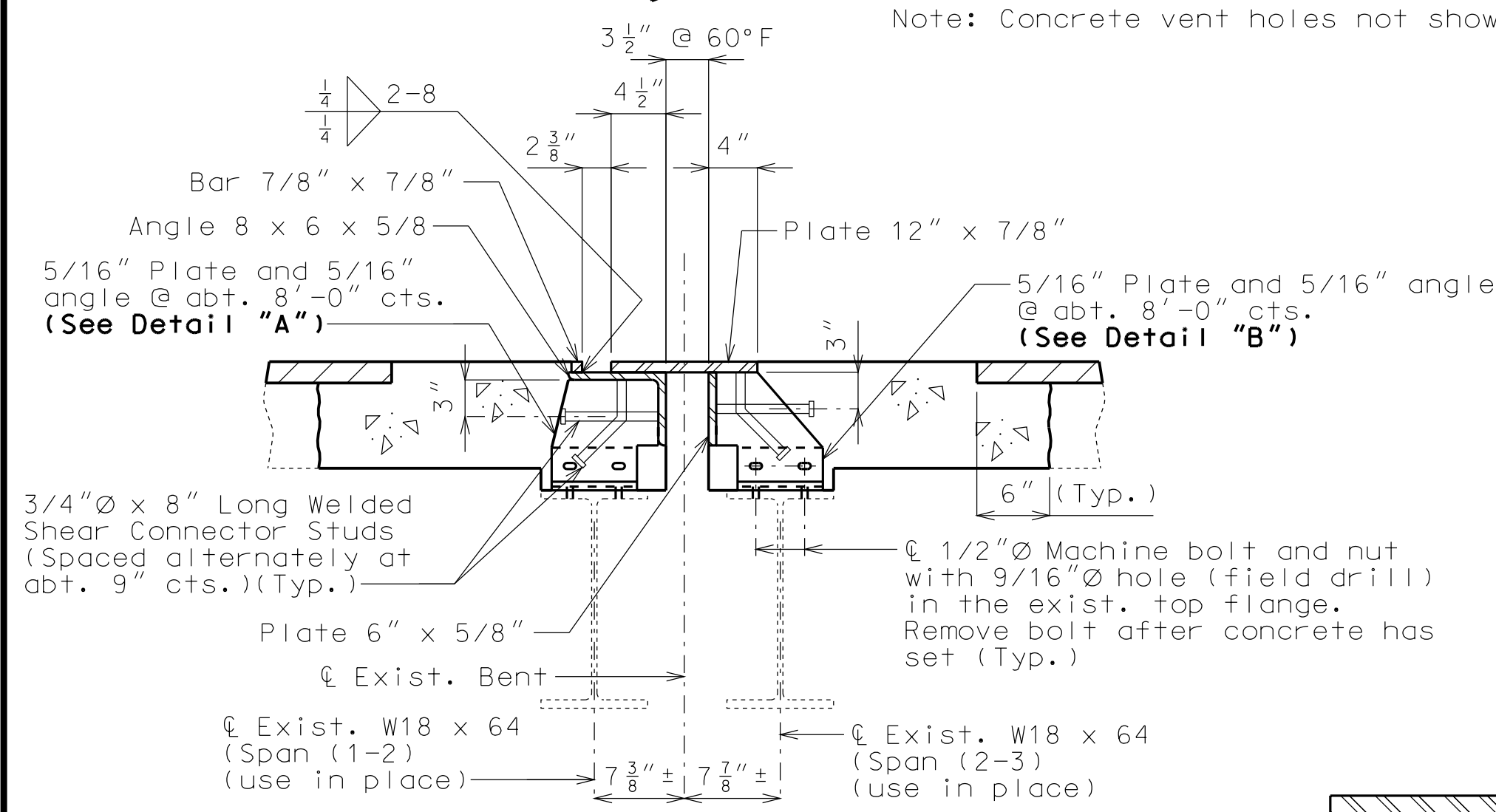
Furnishing and installing Fiber Reinforced Polymer Wrap, complete-in-place, will be considered completely covered by the contract unit price per each (See Special Provisions).

Payment for removal and replacement of existing curb, complete-in-place, will be considered completely covered by the contract unit price for Remove and Replace Curb and Parapet.

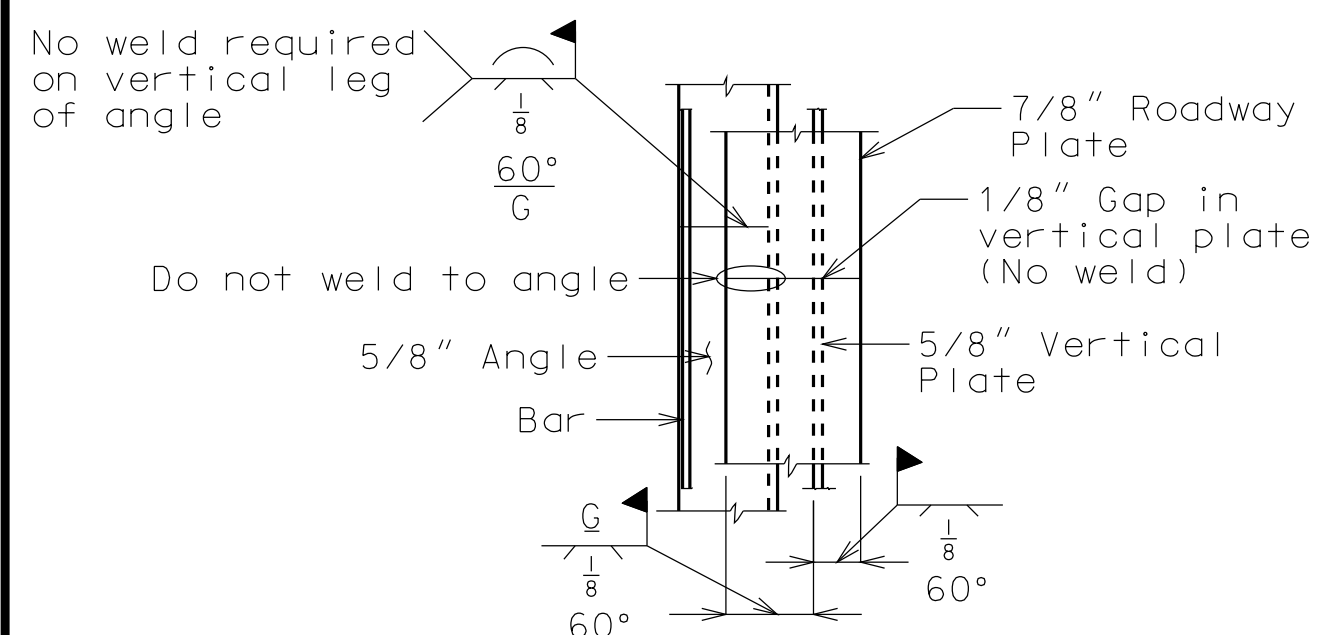
7/16"Ø Hole countersunk in roadway plate; Slotted Hole 1/2" x 1" in angle; Bar 1 1/4" x 3/8" x 2" tapped for 3/8"Ø flat head stove bolt at abt. 4'-0" cts. Remove bolt after concrete has set



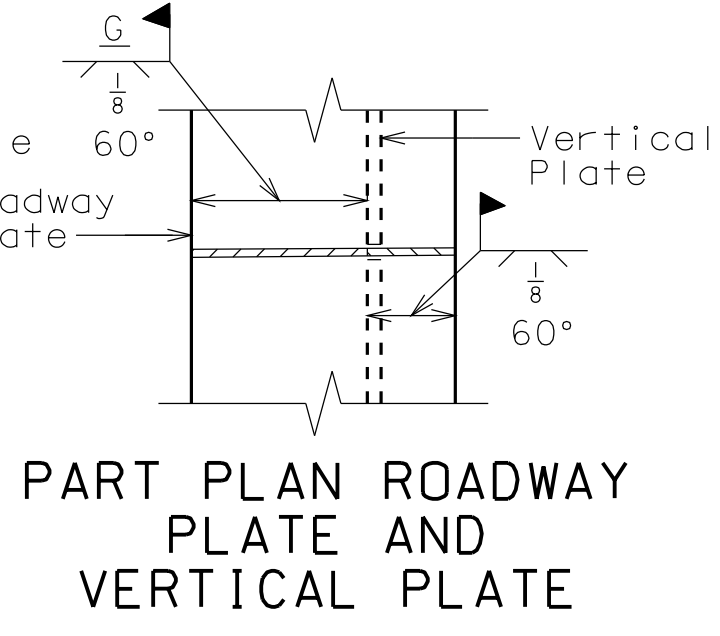
PART PLAN SHOWING CONNECTION TO BEAM
Note: Concrete vent holes not shown for clarity.



PART SECTION THRU FLAT PLATE EXPANSION JOINT

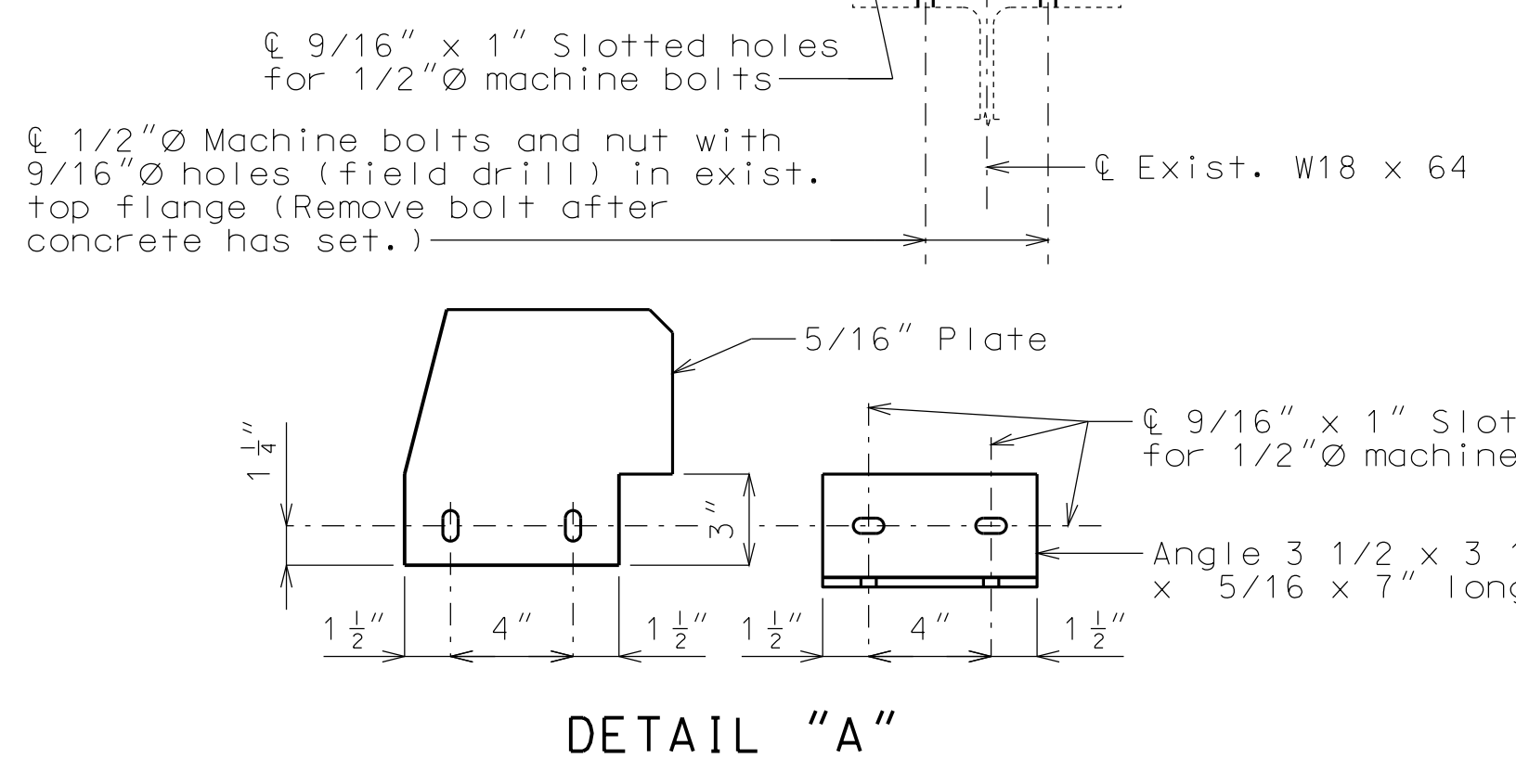


PART PLAN OF ANGLE AND BAR

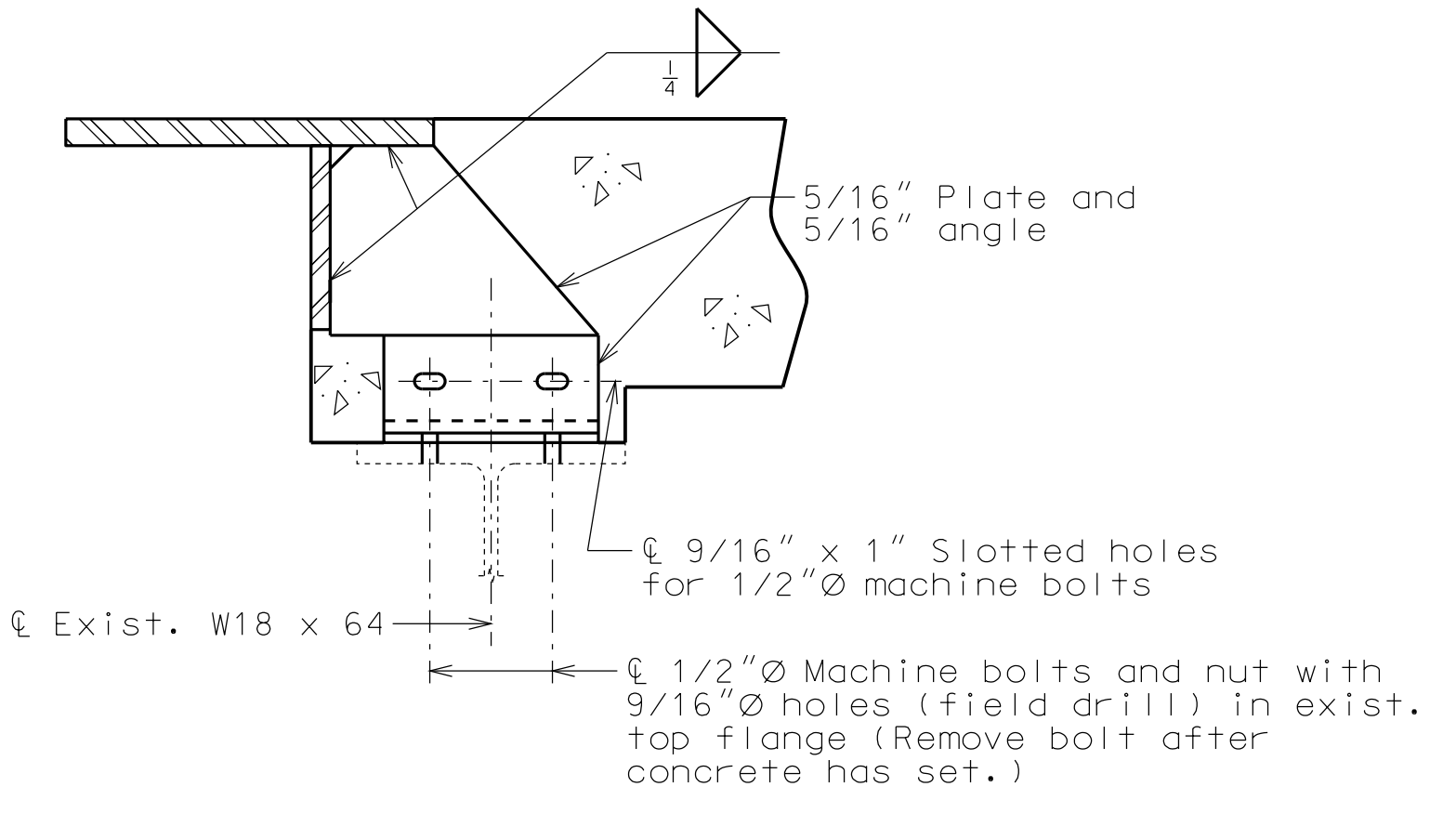


PART PLAN ROADWAY PLATE AND VERTICAL PLATE

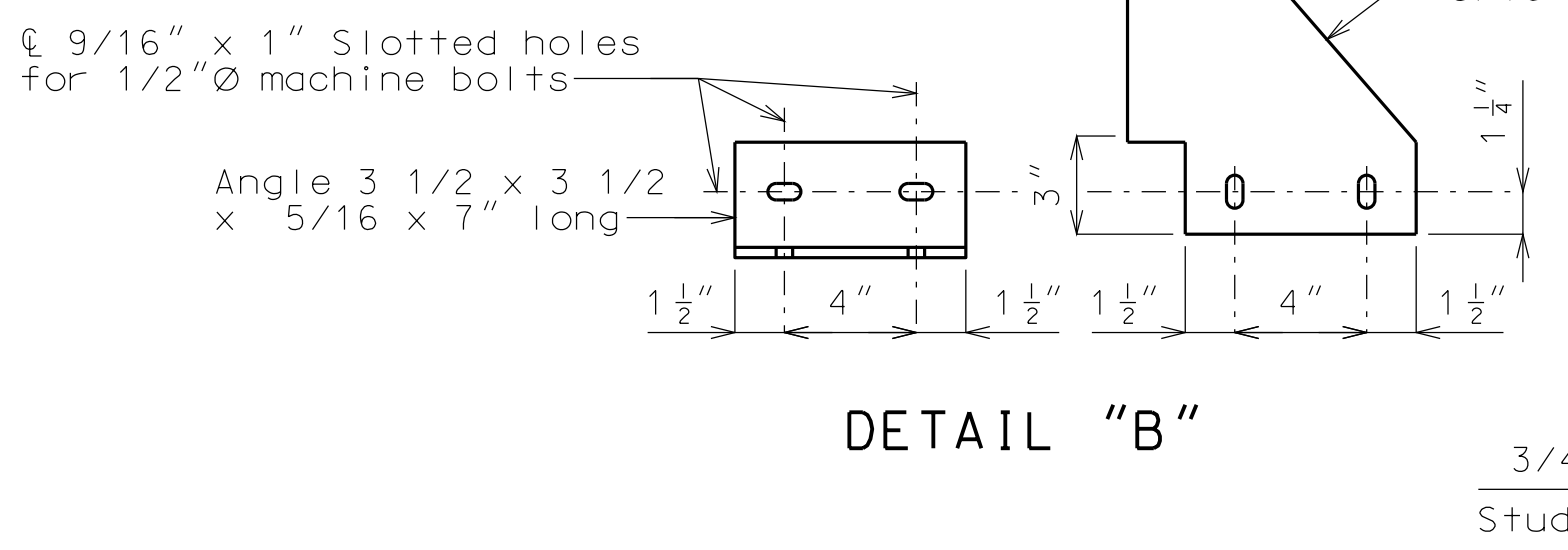
Detailed Sep. 2012
Checked Oct. 2012



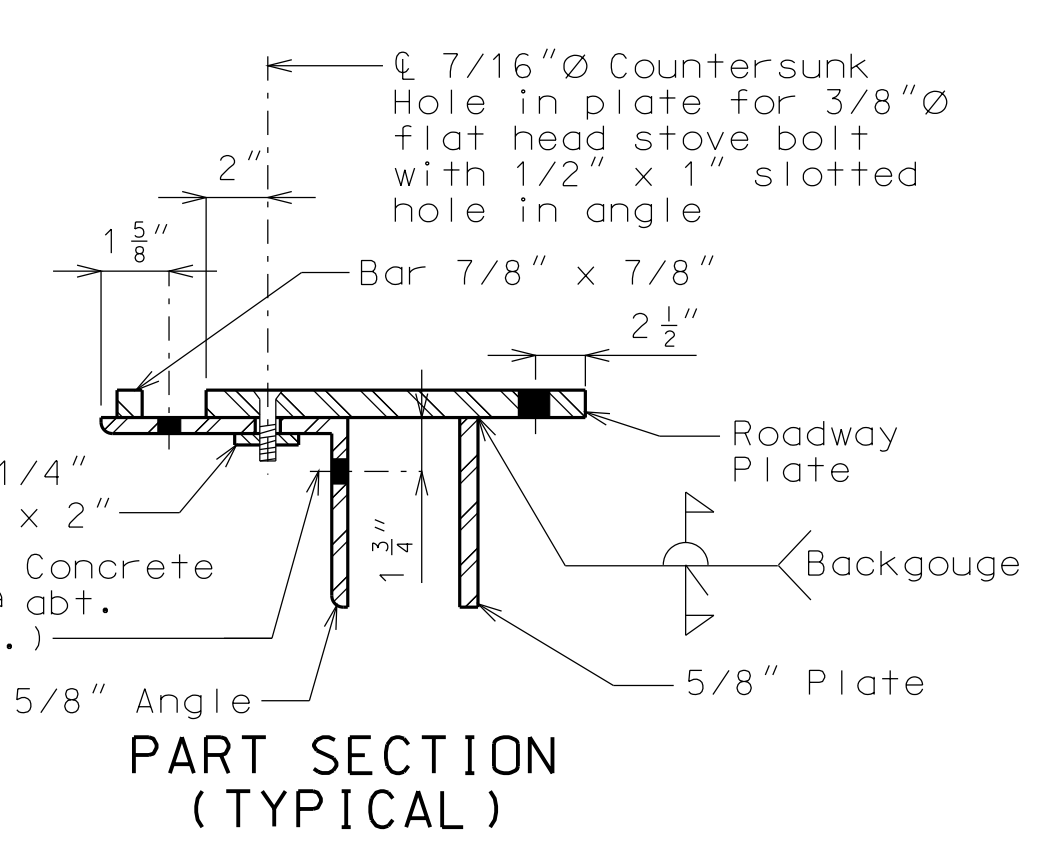
DETAIL "A"



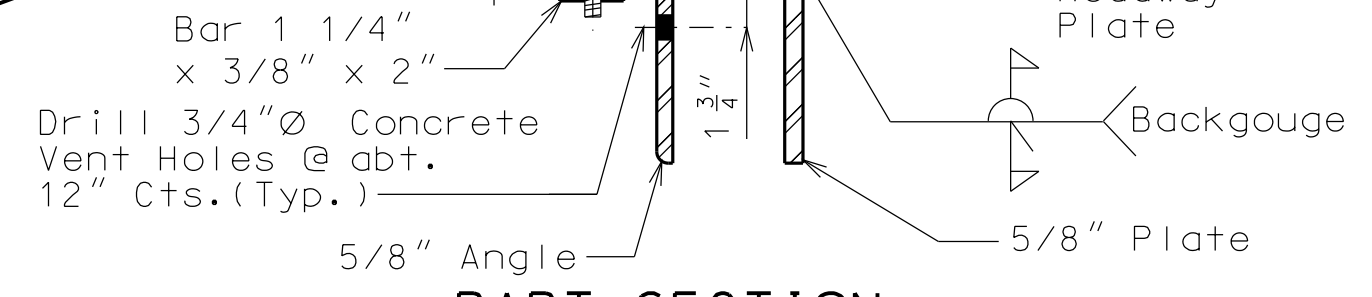
DETAIL "B"



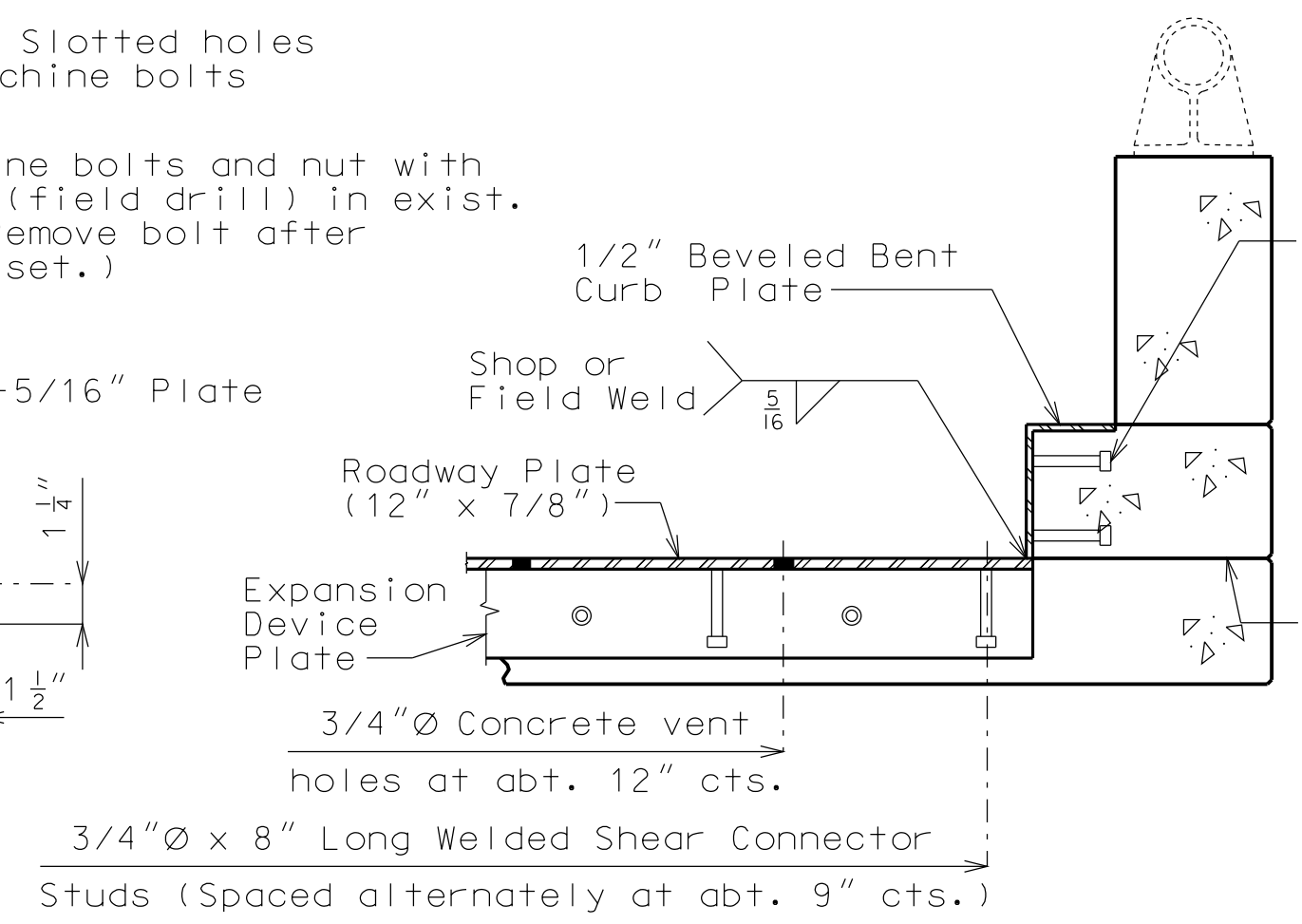
PART SECTION A-A



PART SECTION (TYPICAL)



PART SECTION B-B



PART SECTION A-A

GENERAL NOTES:

Expansion device shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove weld splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion device shall be fabricated and installed to the crown and grade of the roadway.

Plan dimensions are based on installation at 60°F. The expansion gap and other dimensions shall be increased or decreased 1/8" (along & Bridge) for each 10° fall or rise in temperature at installation.

Material for the expansion device shall be ASTM A709 Grade 36 structural steel. Anchors for the expansion device shall be in accordance with Sec 1037.

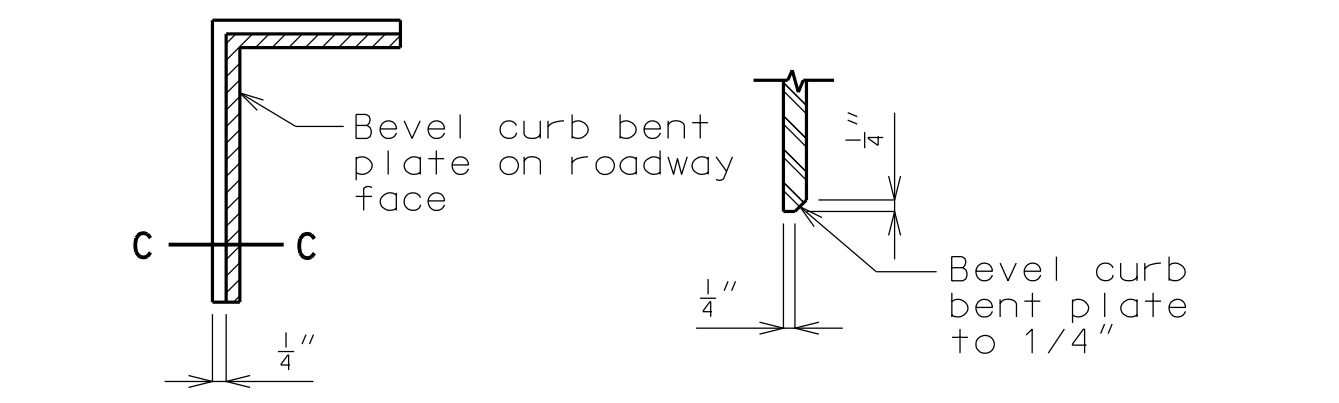
Structural steel for the expansion device and curb plate shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Payment for furnishing, coating or galvanizing and installing the structural steel for the expansion device will be considered completely covered by the contract unit price for Expansion Device (Flat Plate) per linear foot.

Concrete shall be forced under and around flat plate, anchors and angles. Proper consolidation shall be achieved by localized internal vibration. Finishing of the concrete shall be achieved by hand finishing within one foot of the expansion device. The vertical and horizontal concrete vent holes shall be offset from each other. Do not alternate holes at the 12" spacing.

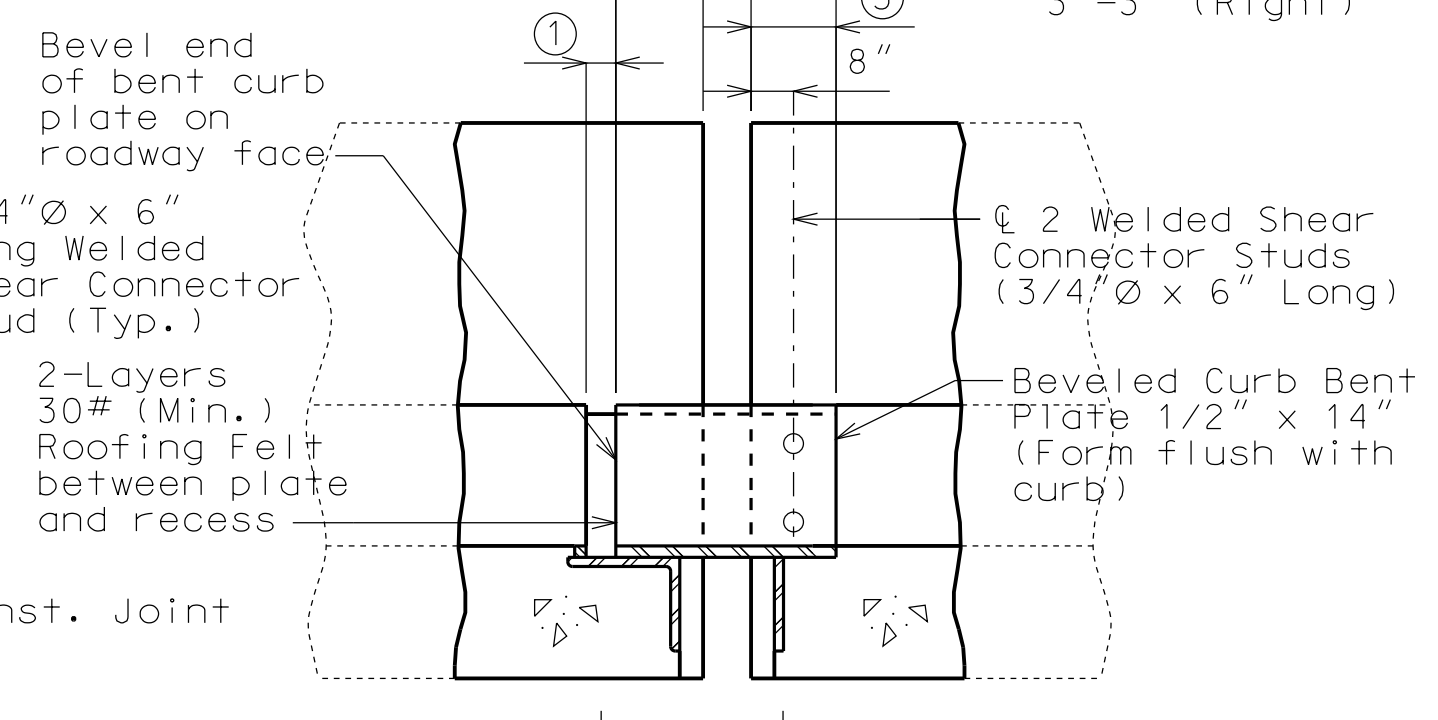
Longitudinal reinforcing steel shall be cut so that ends shall not be more than ±1" from vertical plate and the vertical leg of the angle at the expansion device.

Complete joint penetration welds utilized in the fabrication of the expansion device shall be nondestructively tested by an approved method.



PART ELEVATION AT END OF BEVELED CURB BENT PLATE

- ① 7 3/8" (Left)
7 3/4" (Right)
- ② 16 7/8" (Left)
17 3/4" (Right)
- ③ 16 3/4" (Left)
17 3/4" (Right)
- ④ 3'-1 1/8" (Left)
3'-3" (Right)



ELEVATION OF CURB AND PARAPET
(Rail not shown for clarity)

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DATE PREPARED 12/10/2012	
ROUTE 1-35	STATE MO
DISTRICT BR	SHEET NO. 3
COUNTY CLAY	
JOB NO. J412384	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. L06562	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

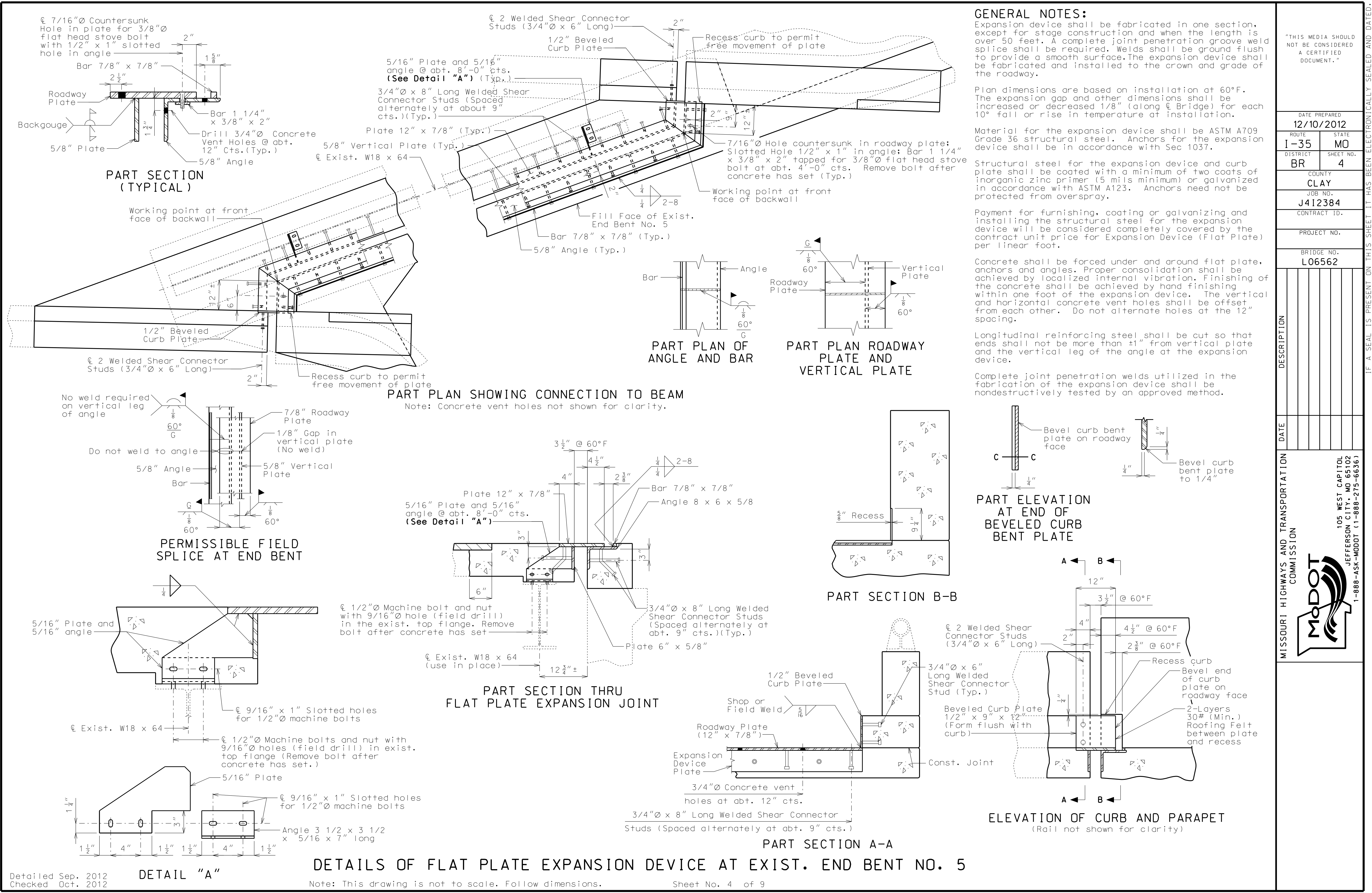
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

DETAILS OF FLAT PLATE EXPANSION DEVICE AT EXIST. INT. BENT NO. 2

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

Sheet No. 3 of 9

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GENERAL NOTES:
 Expansion device shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove weld splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion device shall be fabricated and installed to the crown and grade of the roadway.

Plan dimensions are based on installation at 60°F. The expansion gap and other dimensions shall be increased or decreased 1/8" (along & Bridge) for each 10° fall or rise in temperature at installation.

Material for the expansion device shall be ASTM A709 Grade 36 structural steel. Anchors for the expansion device shall be in accordance with Sec 1037.


Structural steel for the expansion device and curb plate shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Payment for furnishing, coating or galvanizing and installing the structural steel for the expansion device will be considered completely covered by the contract unit price for Expansion Device (Flat Plate) per linear foot.

Concrete shall be forced under and around flat plate, anchors and angles. Proper consolidation shall be achieved by localized internal vibration. Finishing of the concrete shall be achieved by hand finishing within one foot of the expansion device. The vertical and horizontal concrete vent holes shall be offset from each other. Do not alternate holes at the 12" spacing.

Longitudinal reinforcing steel shall be cut so that ends shall not be more than ±1" from vertical plate and the vertical leg of the angle at the expansion device.

Complete joint penetration welds utilized in the fabrication of the expansion device shall be nondestructively tested by an approved method.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."	
DATE PREPARED 12/10/2012	
ROUTE I-35	STATE MO
DISTRICT BR	SHEET NO. 4
COUNTY CLAY	
JOB NO. J412384	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. L06562	
DESCRIPTION	
DATE	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-273-6636)	

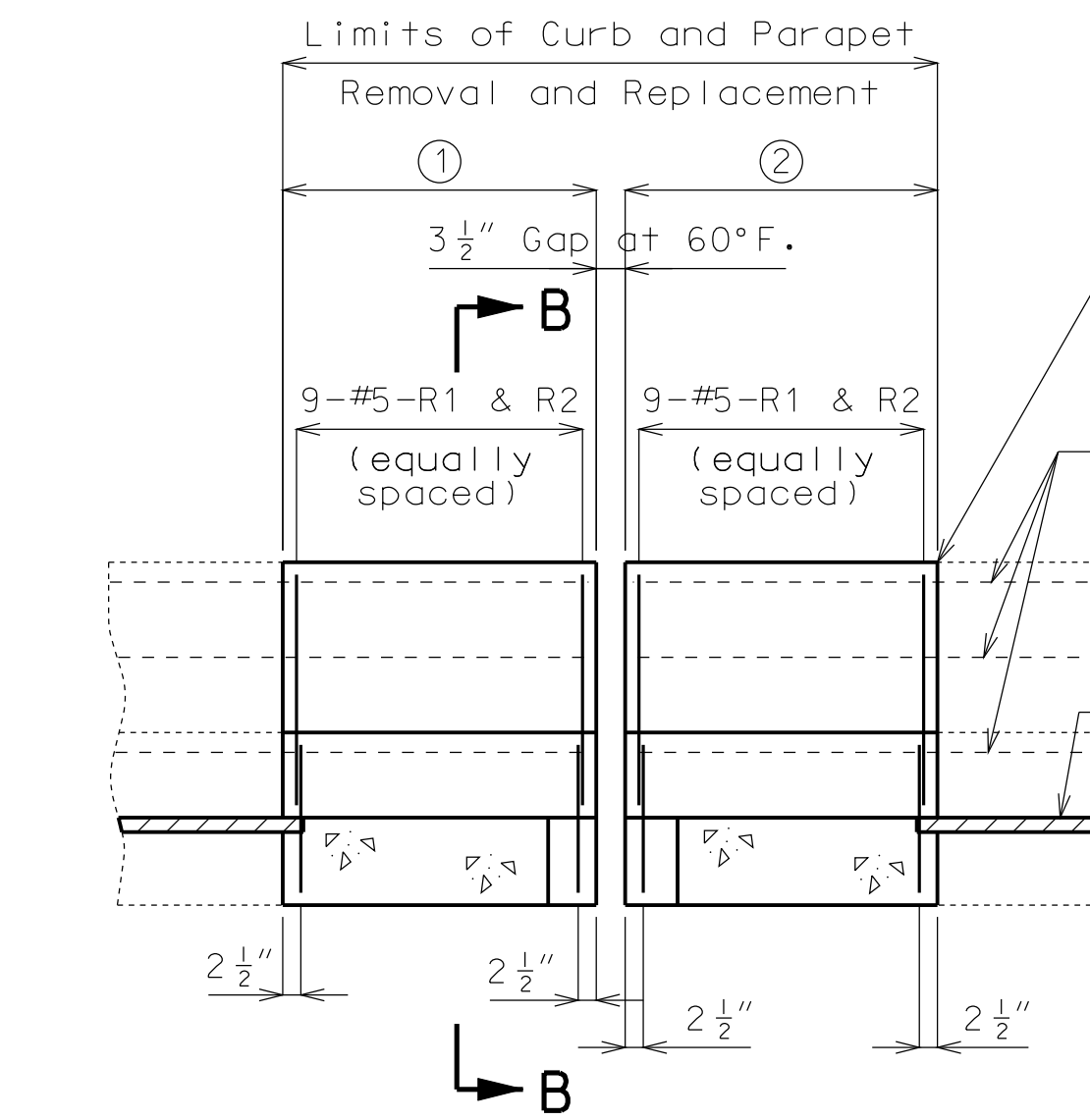
Detailed Sep. 2012
 Checked Oct. 2012

DETAIL "A"

DETAILS OF FLAT PLATE EXPANSION DEVICE AT EXIST. END BENT NO. 5

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

Sheet No. 4 of 9

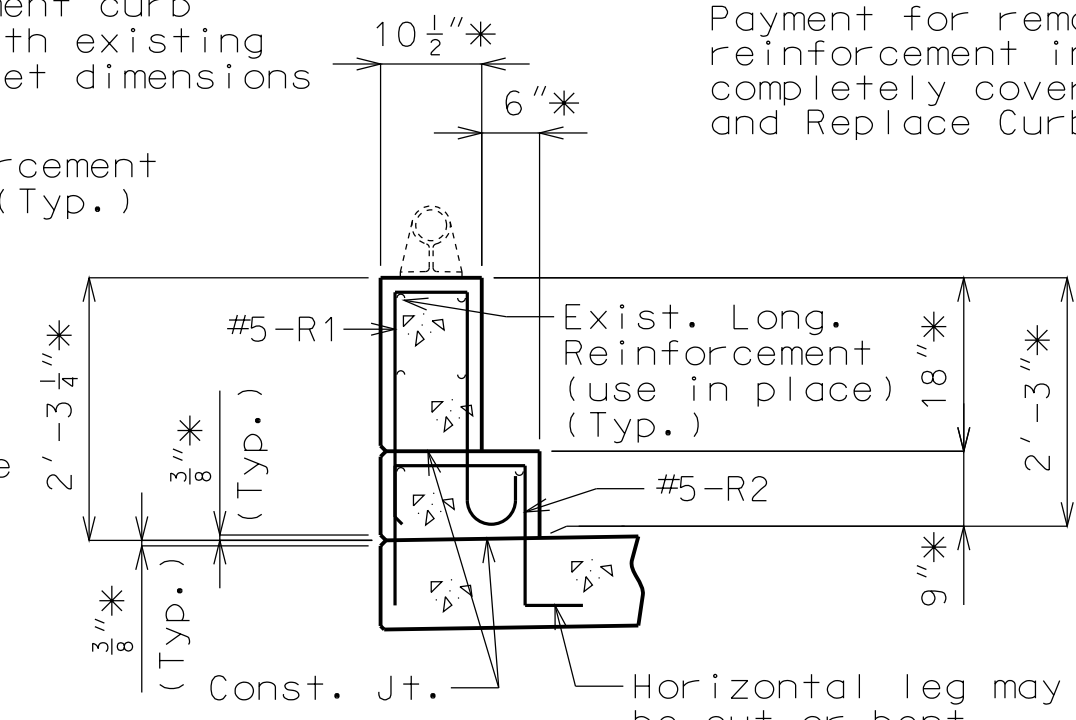


PART ELEVATION SHOWING CURB AND PARAPET REINFORCEMENT
(Rail not shown for clarity)

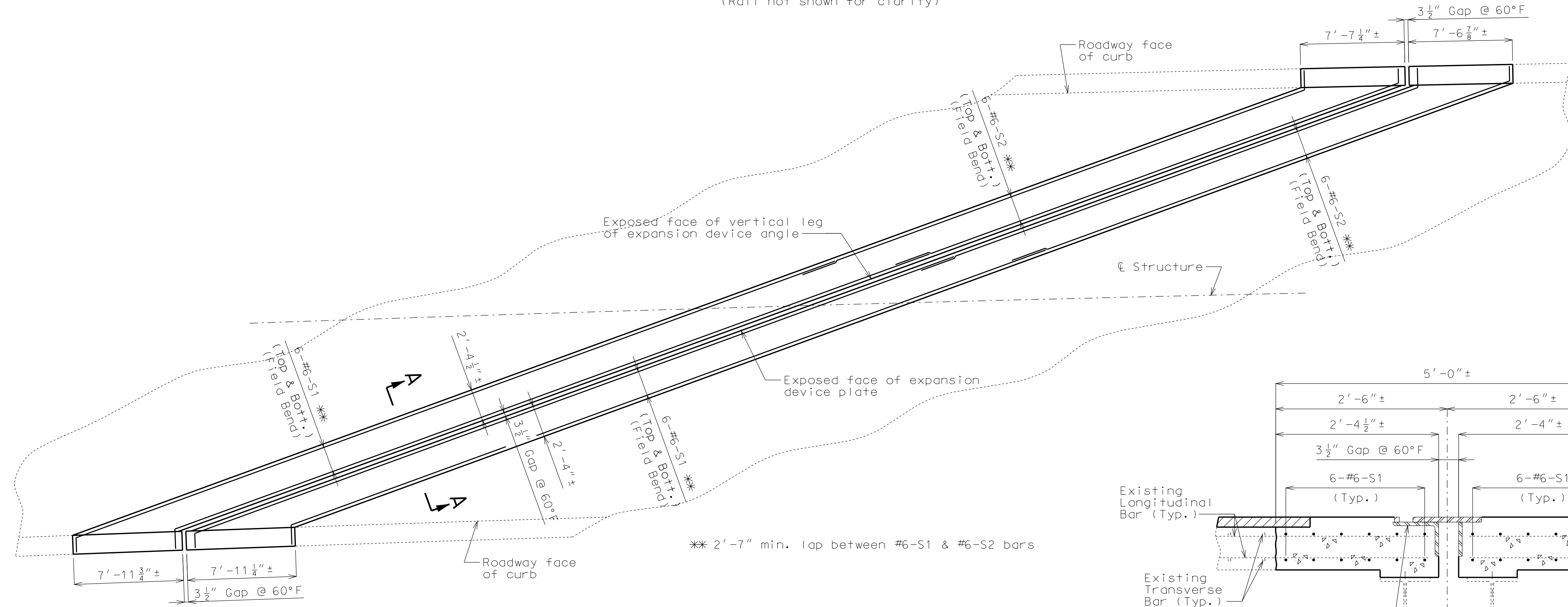
- ① 7'-7 1/4" ± (Left)
7'-11 3/4" ± (Right)
- ② 7'-6 7/8" ± (Left)
7'-11 1/4" ± (Right)

Notes:
Existing rail posts that fall within the area of curb and parapet removal at exp. jt. shall be reinstalled in the replacement curb and parapet. Clean & reuse existing anchor bolts or replace with new anchor bolts of like kind. Payment for this work will be considered completely covered by the contract unit price for Remove and Replace Curb and Parapet.

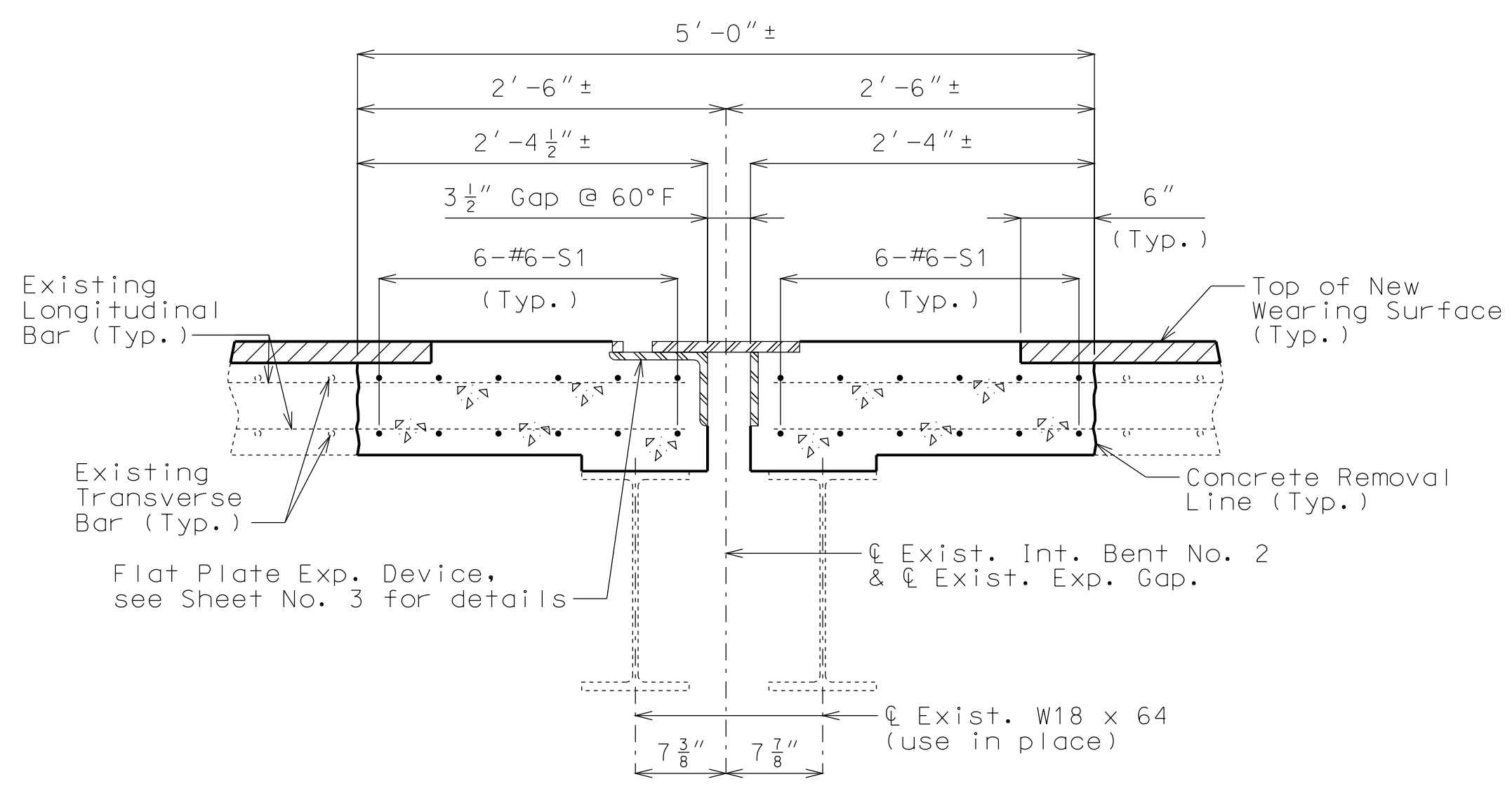
Payment for removal and replacement of all concrete and reinforcement in Curb and Parapet shall be considered completely covered by the contract unit price for Remove and Replace Curb and Parapet.



PART SECTION B-B
* Match existing.



PART PLAN OF SLAB AT EXIST. INT. BENT NO. 2 SHOWING REINFORCEMENT



SECTION A-A

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

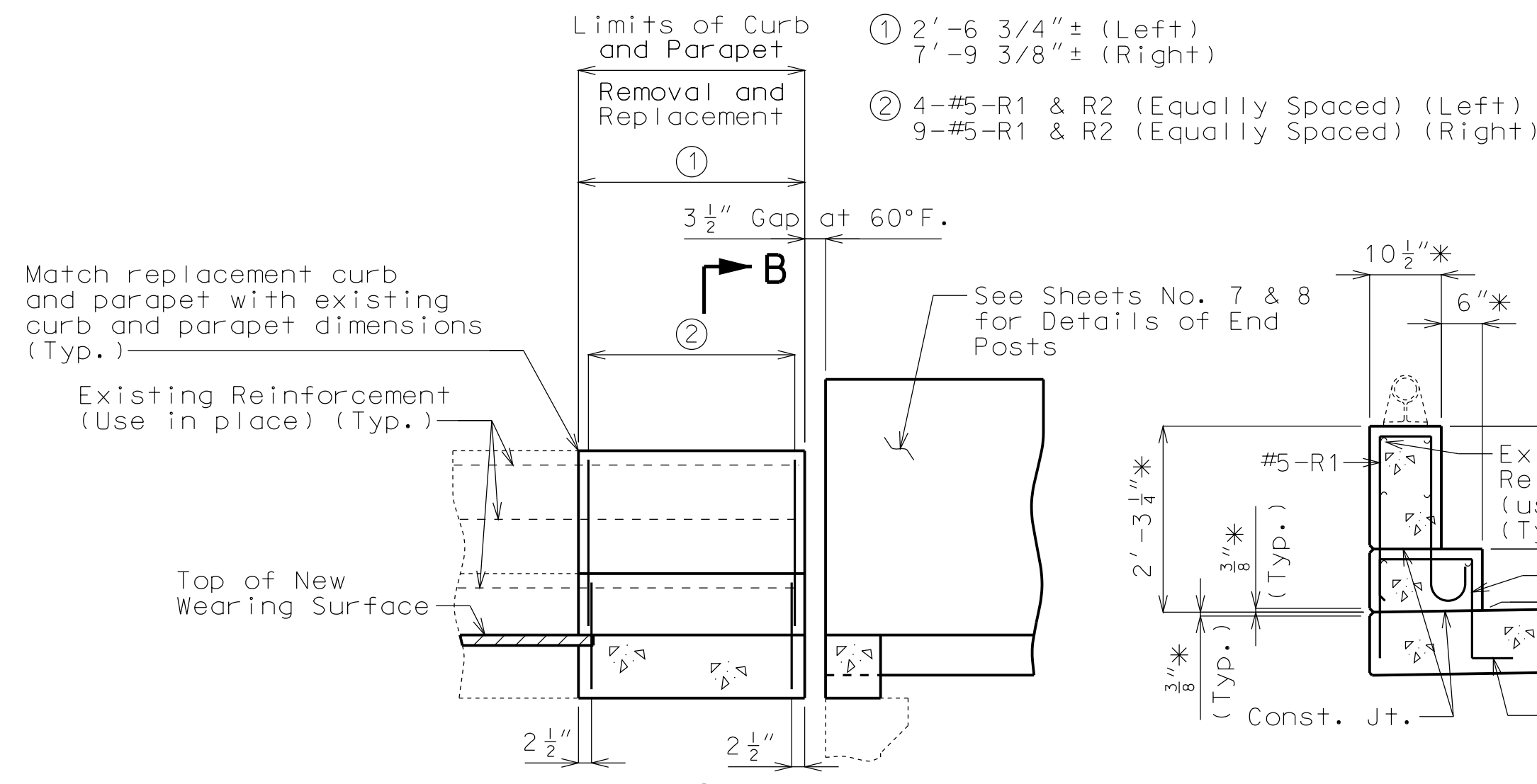
DATE PREPARED 12/10/2012	
ROUTE I-35	STATE MO
DISTRICT BR	SHEET NO. 5
COUNTY CLAY	
JOB NO. J412384	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. L06562	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

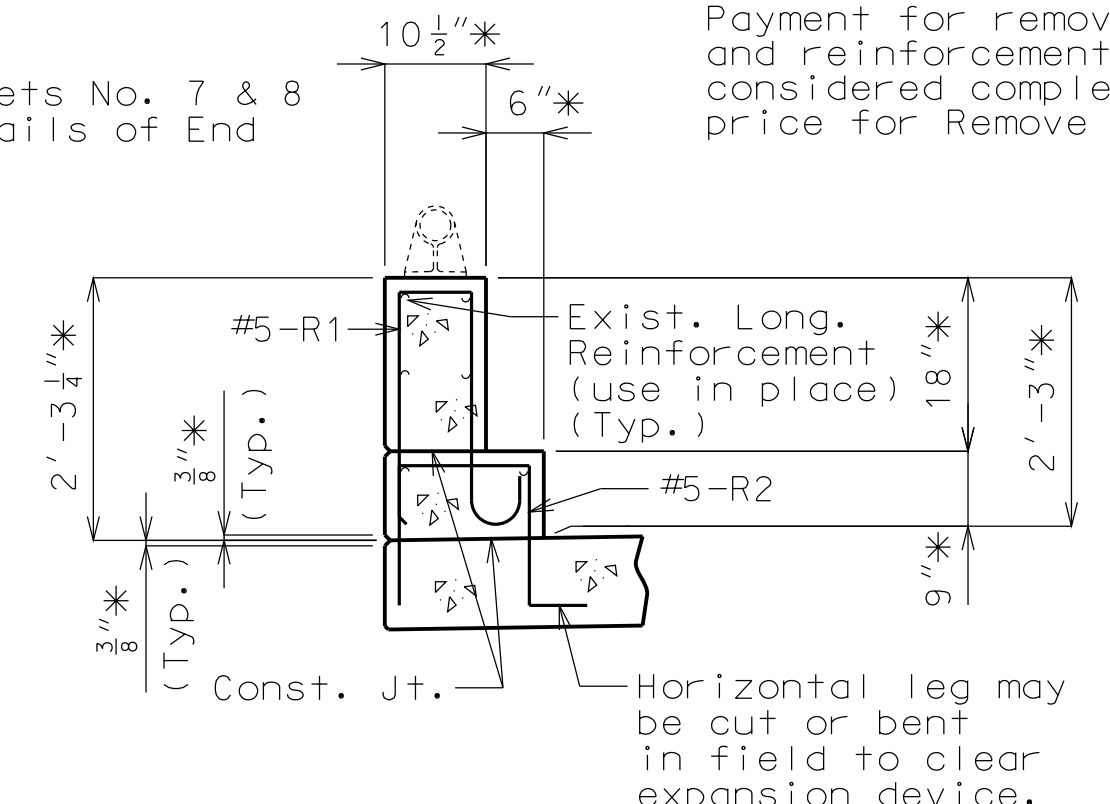
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



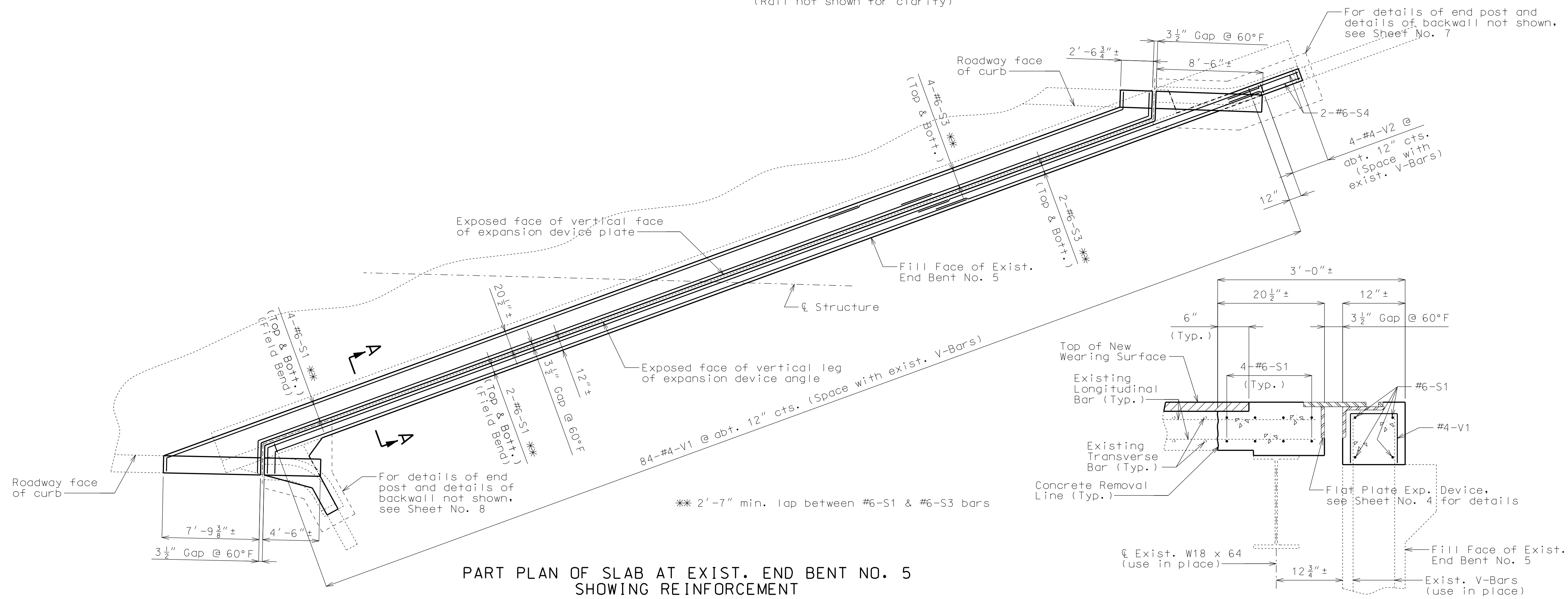
Notes:
 Existing rail posts that fall within the area of curb and parapet removal at exp. jt. shall be reinstalled in the replacement curb and parapet. Clean & reuse existing anchor bolts or replace with new anchor bolts of like kind. Payment for this work will be considered completely covered by the contract unit price for Remove and Replace Curb and Parapet.

Payment for removal and replacement of all concrete and reinforcement in Curb and Parapet shall be considered completely covered by the contract unit price for Remove and Replace Curb and Parapet.



PART ELEVATION SHOWING CURB AND PARAPET REINFORCEMENT
 (Rail not shown for clarity)

PART SECTION B-B
 * Match existing.



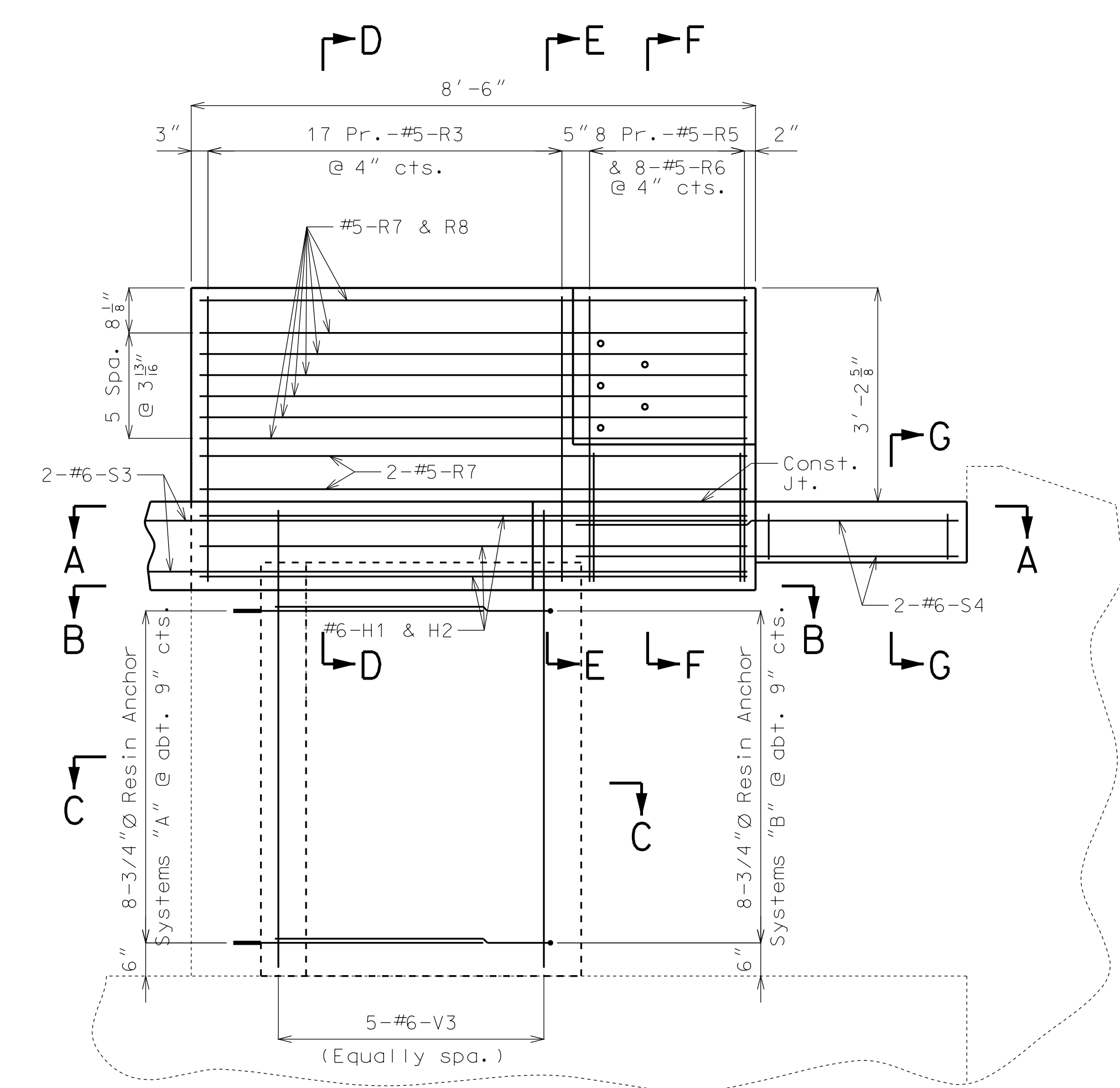
PART PLAN OF SLAB AT EXIST. END BENT NO. 5 SHOWING REINFORCEMENT

SECTION A-A

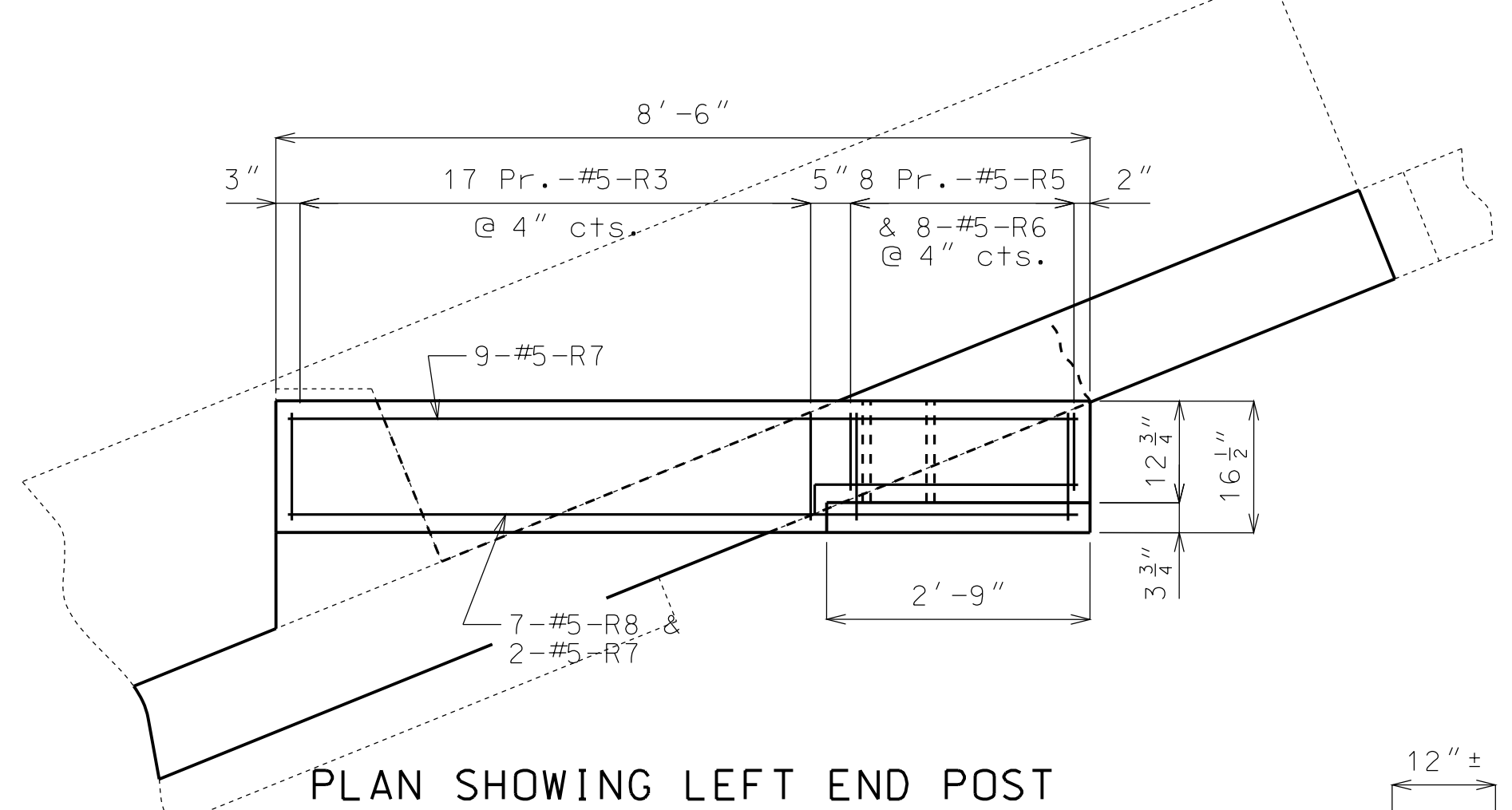
"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 12/10/2012	
ROUTE I-35	STATE MO
DISTRICT BR	SHEET NO. 6
COUNTY CLAY	
JOB NO. J412384	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. L06562	
DESCRIPTION	DATE
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



ELEVATION SHOWING LEFT END POST



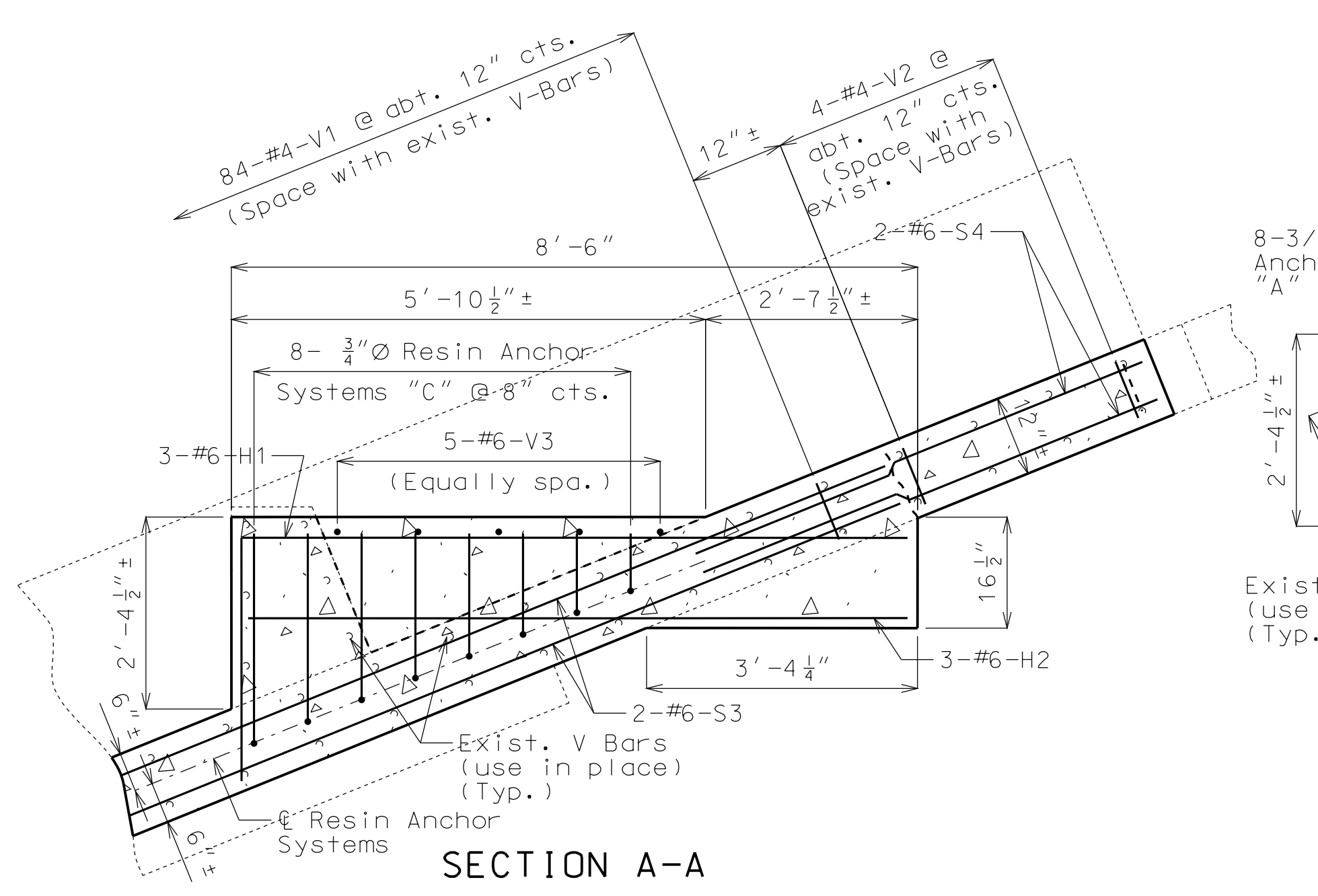
PLAN SHOWING LEFT END POST

Notes:
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

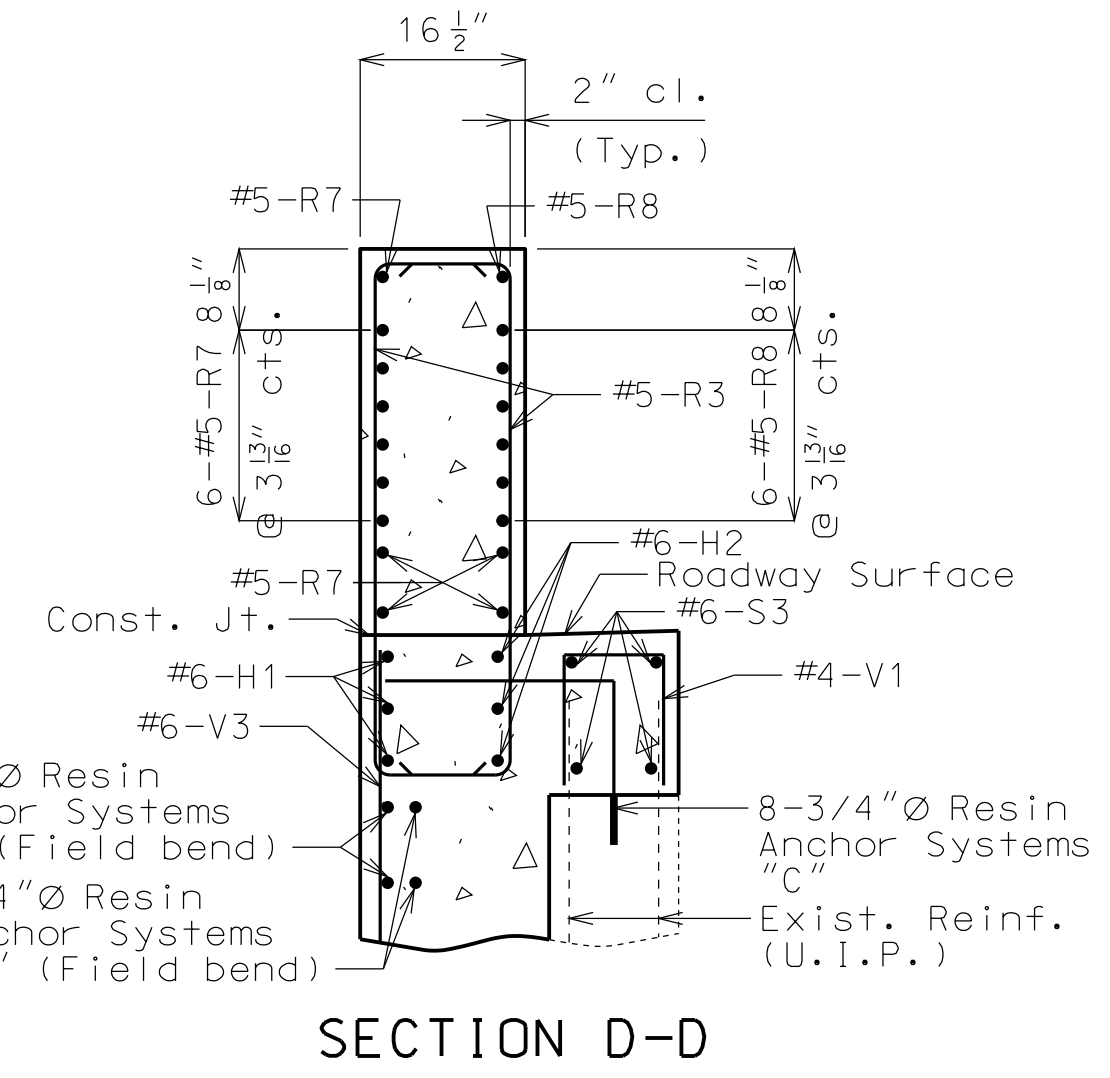
The minimum embedment depth in concrete with $f'c = 4,000$ psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

A #6 Grade 60 reinforcing bar shall be substituted for the 3/4"Ø threaded rod.

Cost of resin anchors, excavation, Class B-1 Concrete and reinforcing steel for rehabilitation of left wing will be considered completely covered by the contract unit price for Remove and Replace Curb and Parapet.

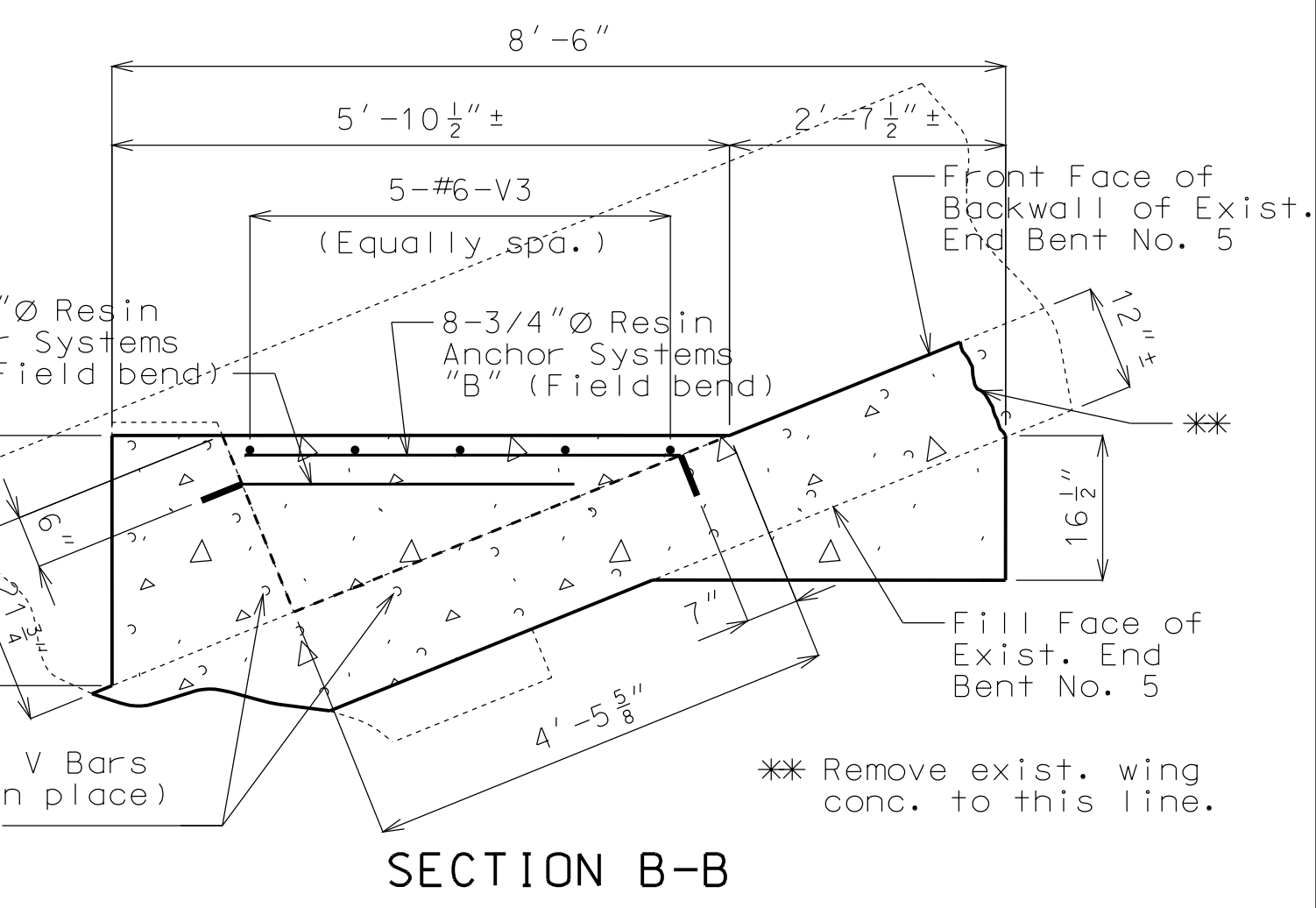


SECTION A-A

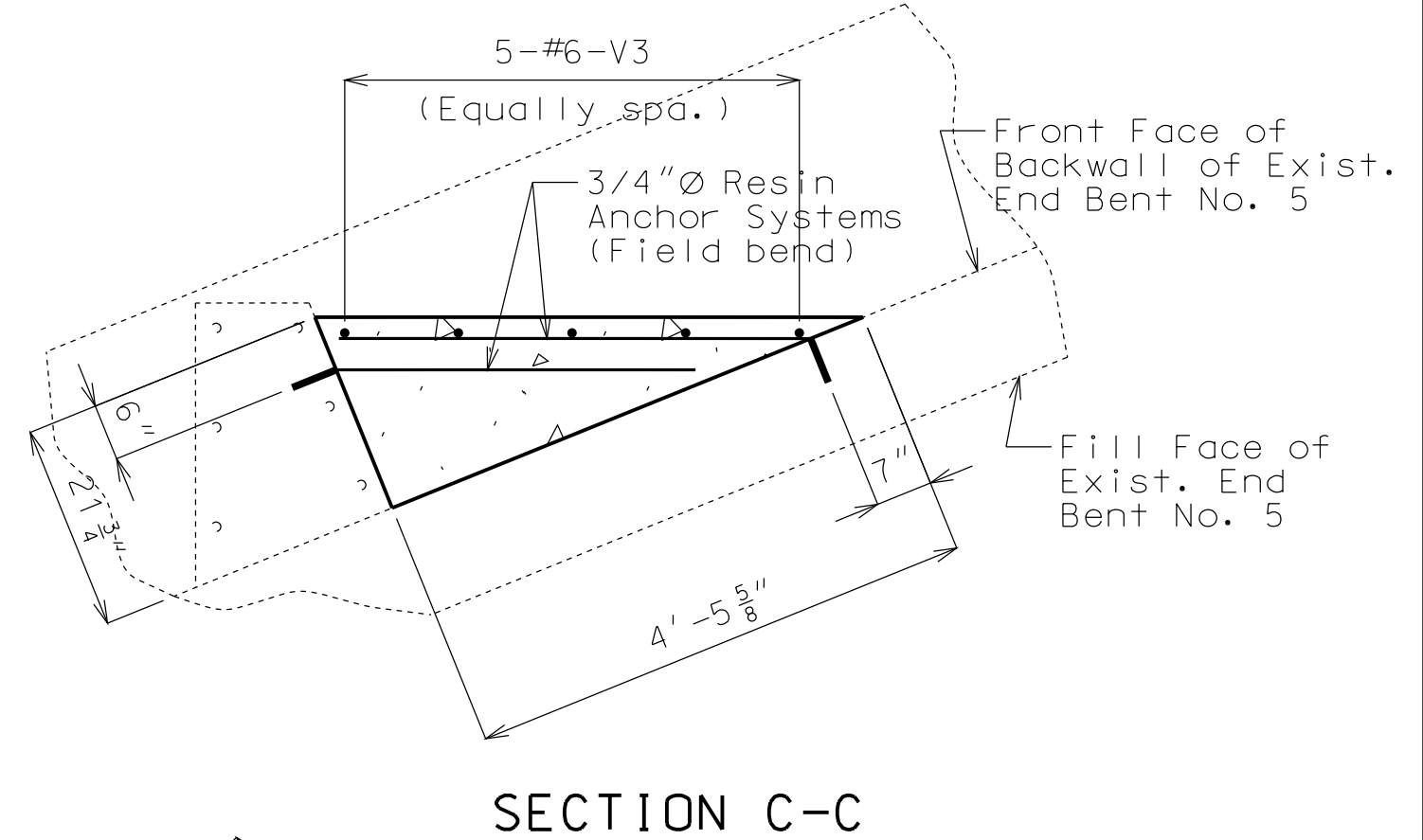


SECTION D-D

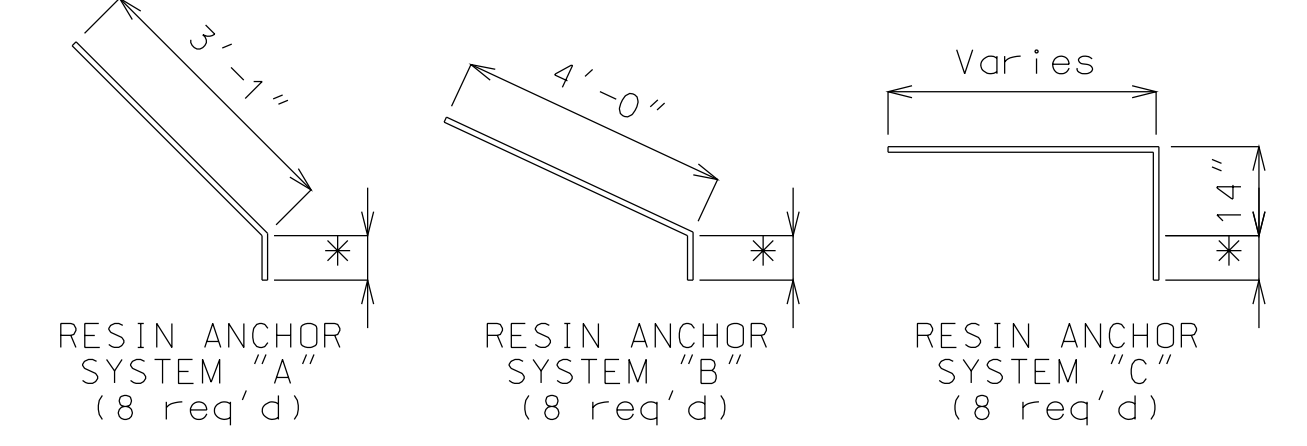
SECTION E-E



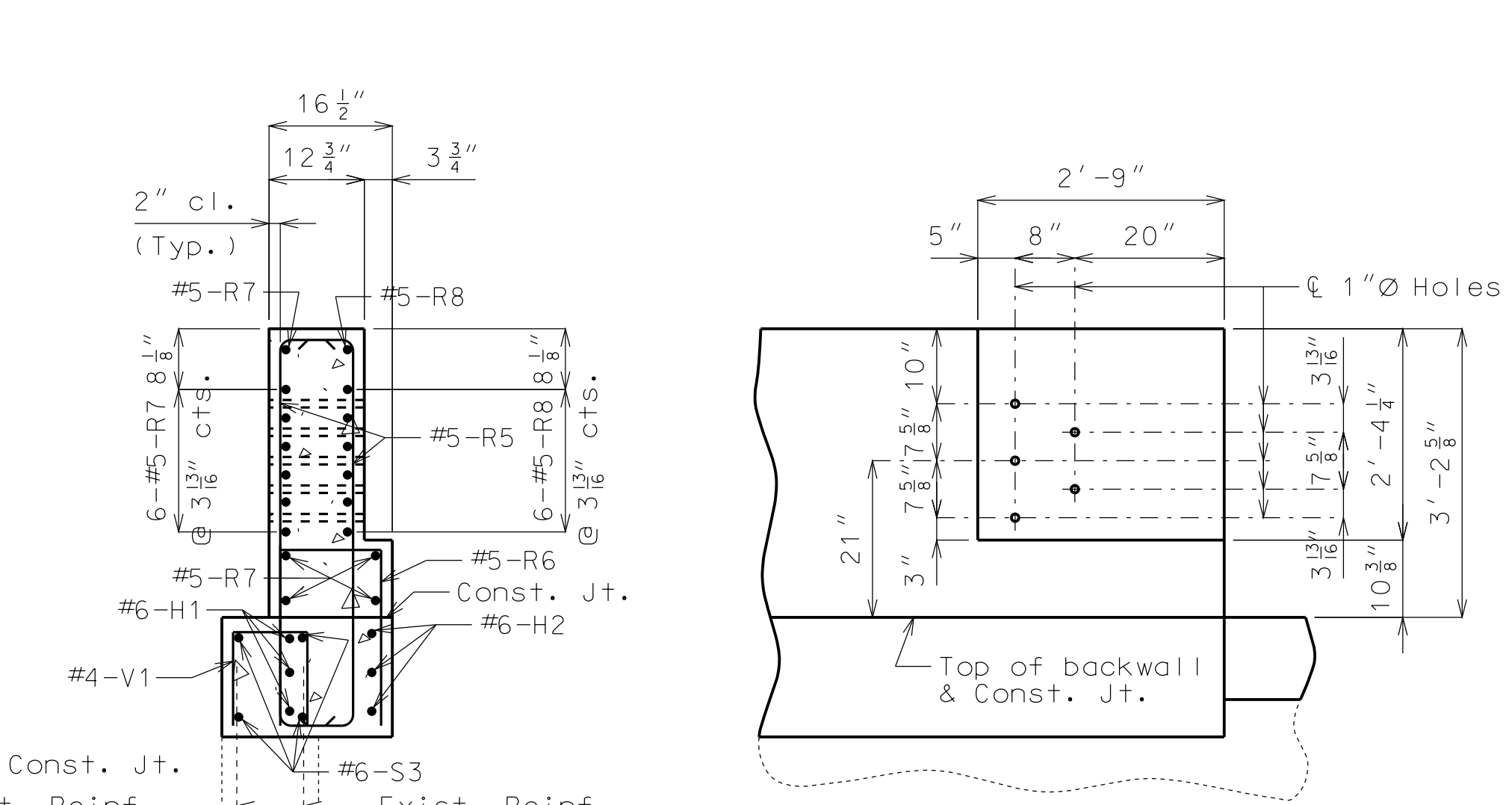
SECTION B-B



SECTION C-C

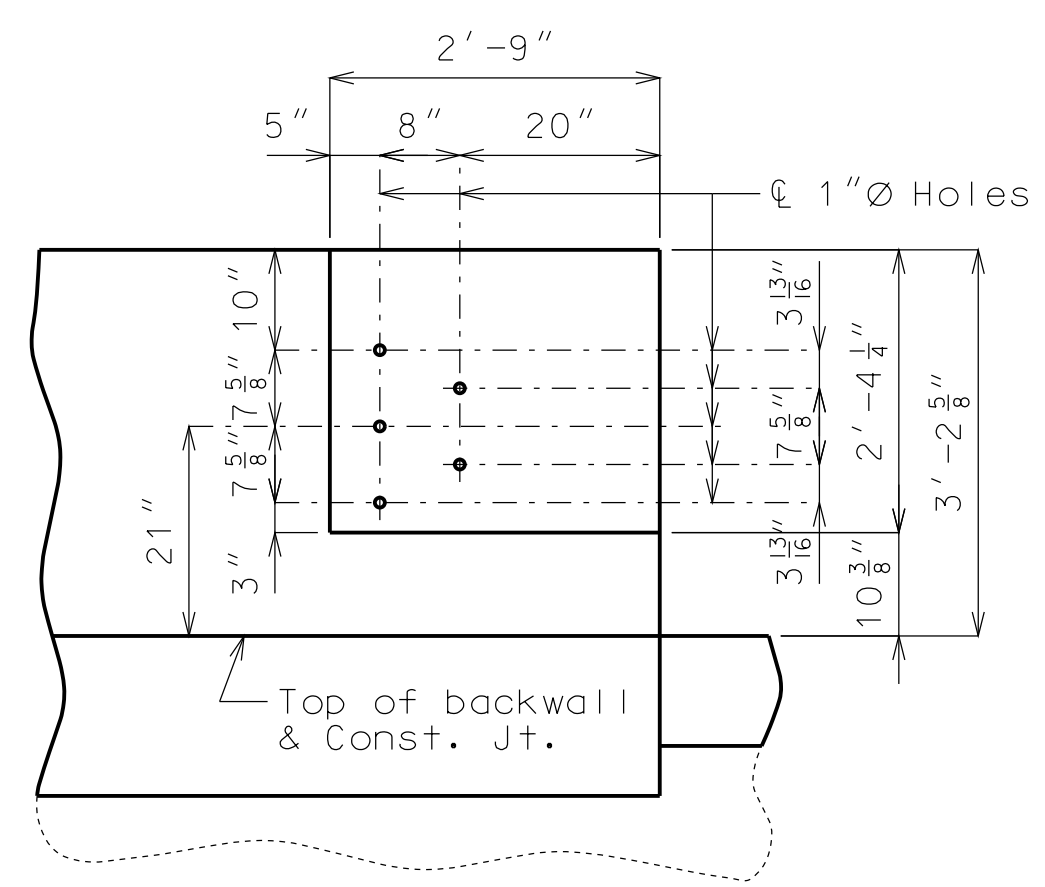


DETAILS OF RESIN ANCHORS

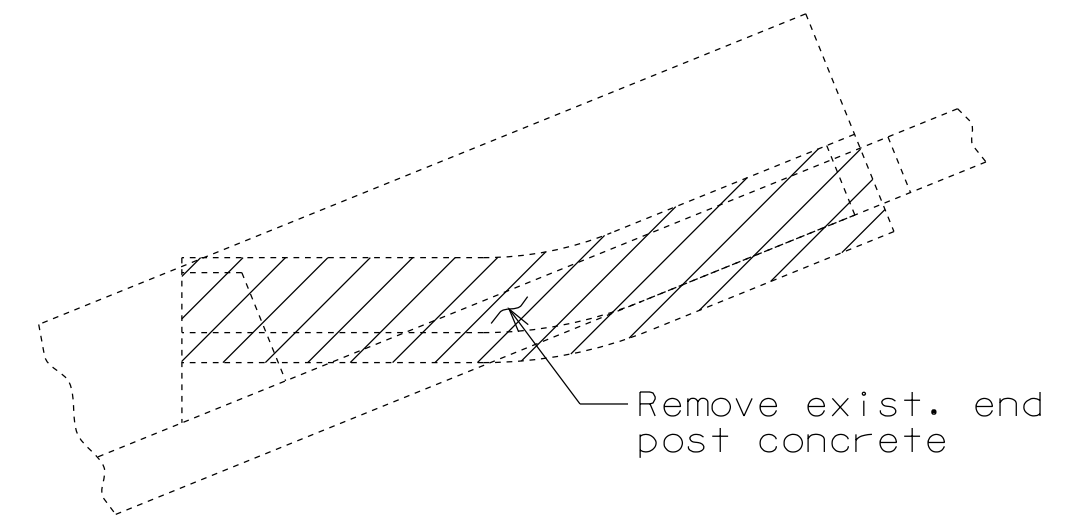


SECTION G-G

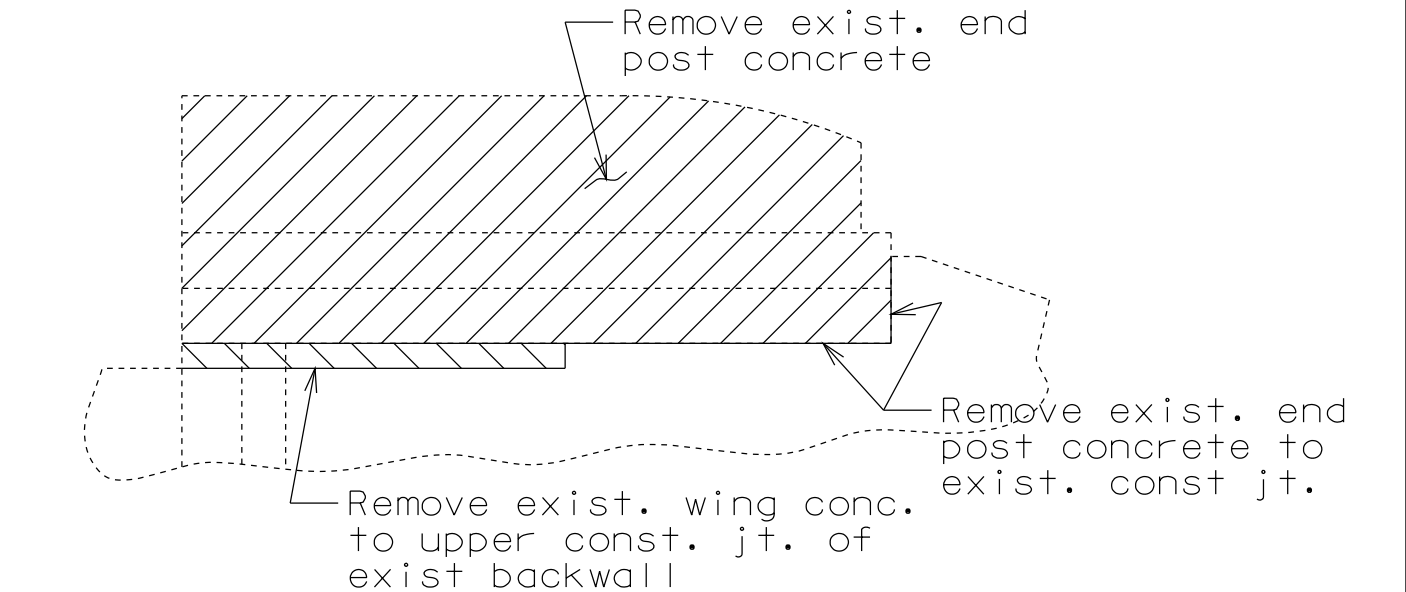
SECTION F-F



DETAILS OF GUARDRAIL ATTACHMENT



PLAN SHOWING END POST REMOVAL



ELEVATION SHOWING END POST REMOVAL

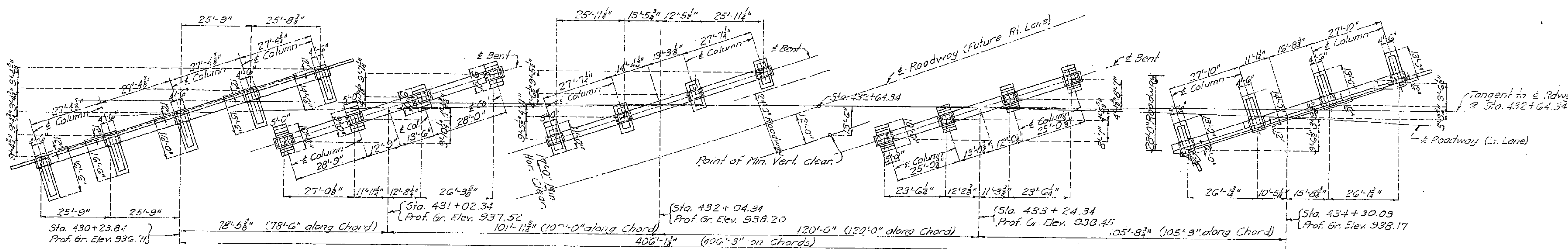
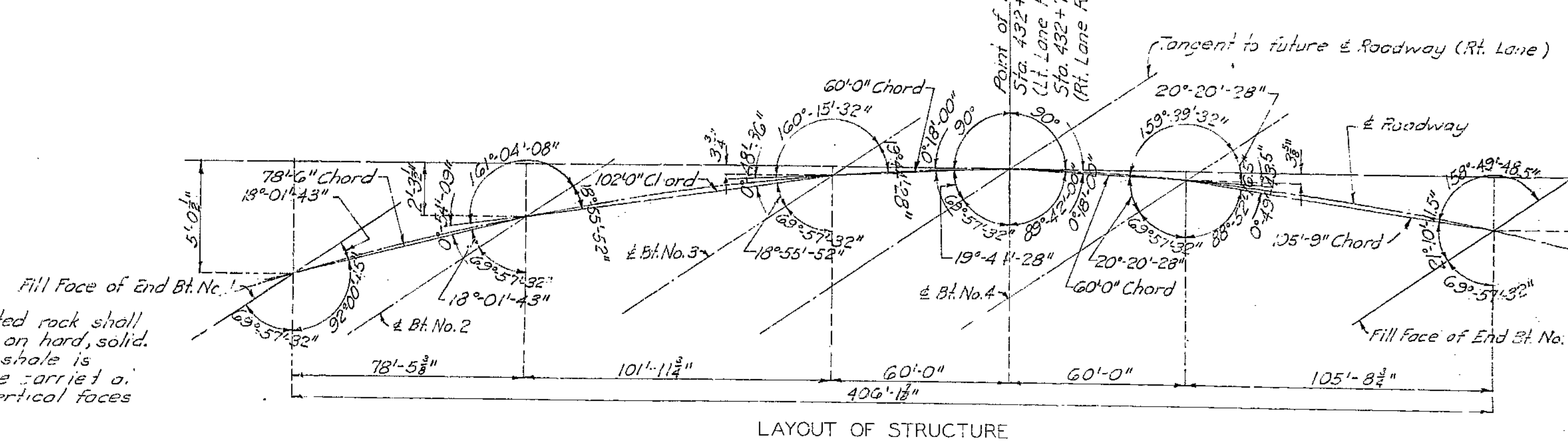
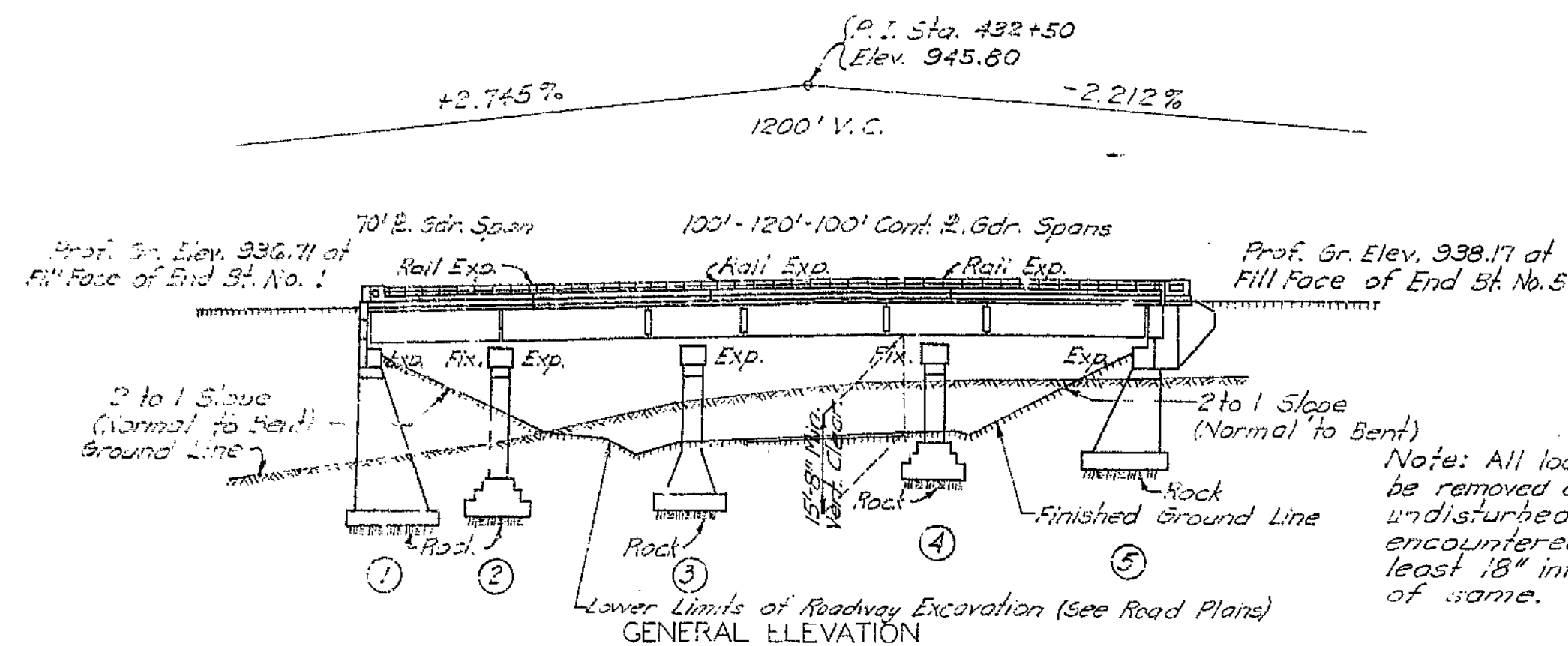
DETAILS OF LEFT END POST AND END BENT NO. 5

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."	
DATE PREPARED	12/10/2012
ROUTE	1-35
STATE	MO
DISTRICT	BR
SHEET NO.	7
COUNTY	CLAY
JOB NO.	J412384
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	L06562
DATE	
DESCRIPTION	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U.I. 99(7) (11.22)	19		



Note: Bents cannot be accurately located from the reference point on the tangent by conventional survey methods based on 100' chords.

GENERAL NOTES:

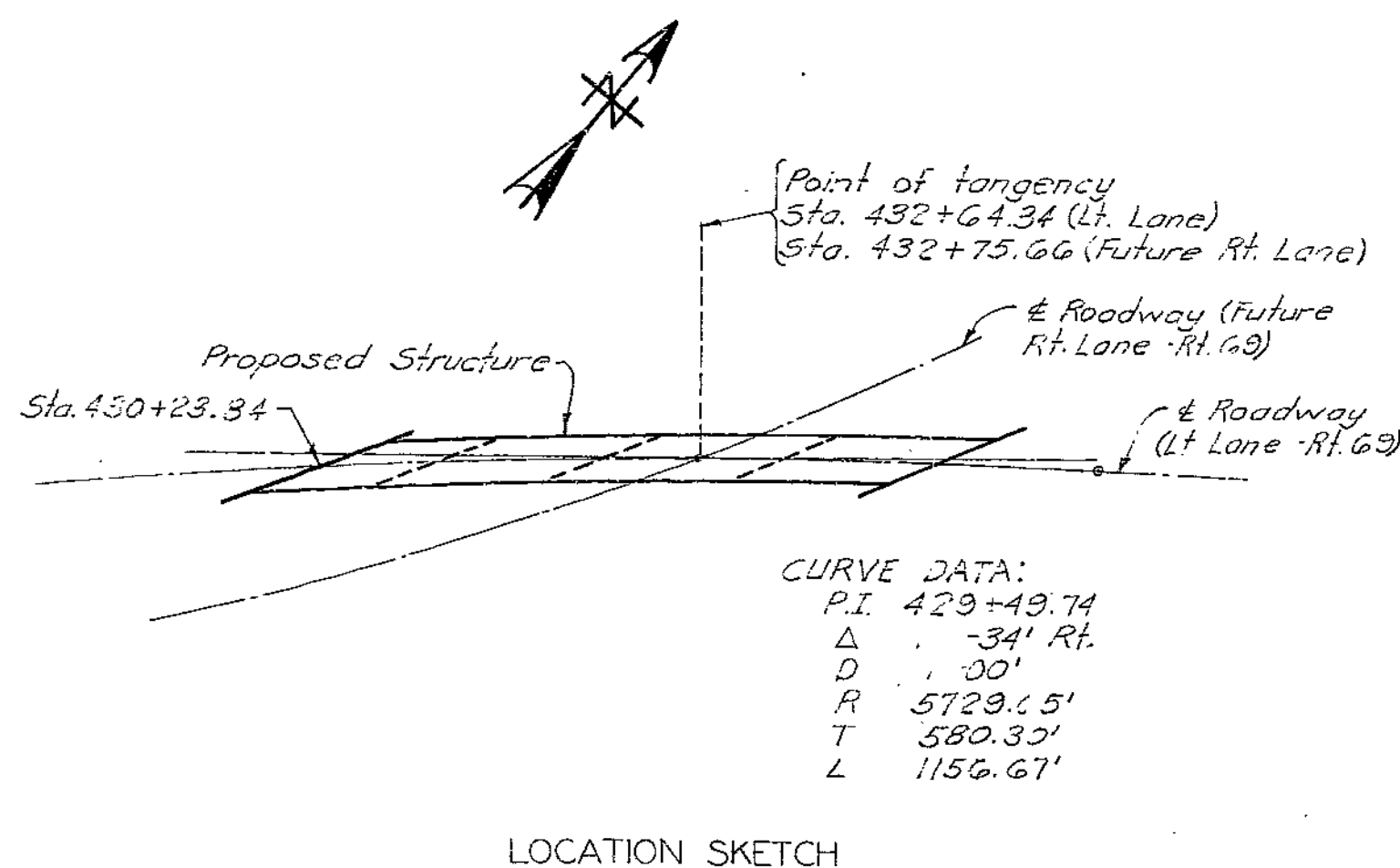
Design Specifications: A.A.S.H.O. -1953
 Loading: H20-S16-44
 Structural Steel Stress: 18,000 ψ / ψ
 Reinforcing Steel Stress: 18,000 ψ / ψ
 Concrete, Class "B" stress: 1,000 ψ / ψ
 All concrete shall be Class "B". (Air-Entrained)
 Rivets $\frac{3}{4}$ " holes $\frac{1}{2}$ " except as noted.
 Field connections shall be riveted or if the Contractor desires, he may use high tensile steel bolts with carburized washers in place of rivets. (See Special Provisions) for requirements on welding electrodes see Special Provisions. Qualification of welding operators will be required.
 All girders over 55 feet in length shall be shipped by rail to the specified shipping point.
 Where joint filler is specified on the plans it shall conform with the requirements for Gray Rubber Compound Joints as given in Section 38-19.8(2) of the Standard Specifications.
 A rubbed surface finish will be required on all exposed surfaces of concrete and posts above top of curbs.
 Point: Shop, none; Field, contact surfaces of bolted field connections, except where high tensile bolts are used, one coat of red lead and surfaces inaccessible after erection three coats of red lead. All other exposed surfaces first coat red lead, second coat brown, third coat aluminum. Payment for cleaning and painting such surfaces will be included in price bid for items painted.

Item	ESTIMATED QUANTITIES		
	Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yds. 870		870
Class "B" Concrete	Cu. Yds. 583.9	403.5	987.3
Fabricated Structural Steel	Lbs.	467,250	467,250
Aluminum Alloy Handrail	Lin. Ft.	793	793
Steel Castings	Lbs.	9,520	9,520
Reinforcing Steel	Lbs.	65,880	94,310

Note: Concrete in end posts at Bent No. 1 is included with superstructure concrete. Concrete in end posts at Bent No. 5 is included with substructure concrete.
 All excavation for bridge will be paid for as Class 1 Excavation for Structures.
 Estimated quantities of Class 1 Excavation for Structures includes only amount of excavation below Roadway Excavation (See Special Provisions).
 B.M. Elev. 929.50 - R.R. Spike in side of P.P. 12' Lt. Sta. 435+93 (Lt. Lane).

BRIDGE OVER FUTURE RT. 69 (RT. LANE)

STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E. ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. UI-99(7) (RT. 69) STA. 430+23.34
 CLAY COUNTY



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

Designed Oct. 1954 by J.E.L.
 Drawn Sept. 1954 by M.H.P.
 Checked Sept. 1954 by R.H.L. & H.J.K.

Sheet No. 1 of 19

FINISHED

FINISHED

FINISHED

STD. C-110R3

L-656

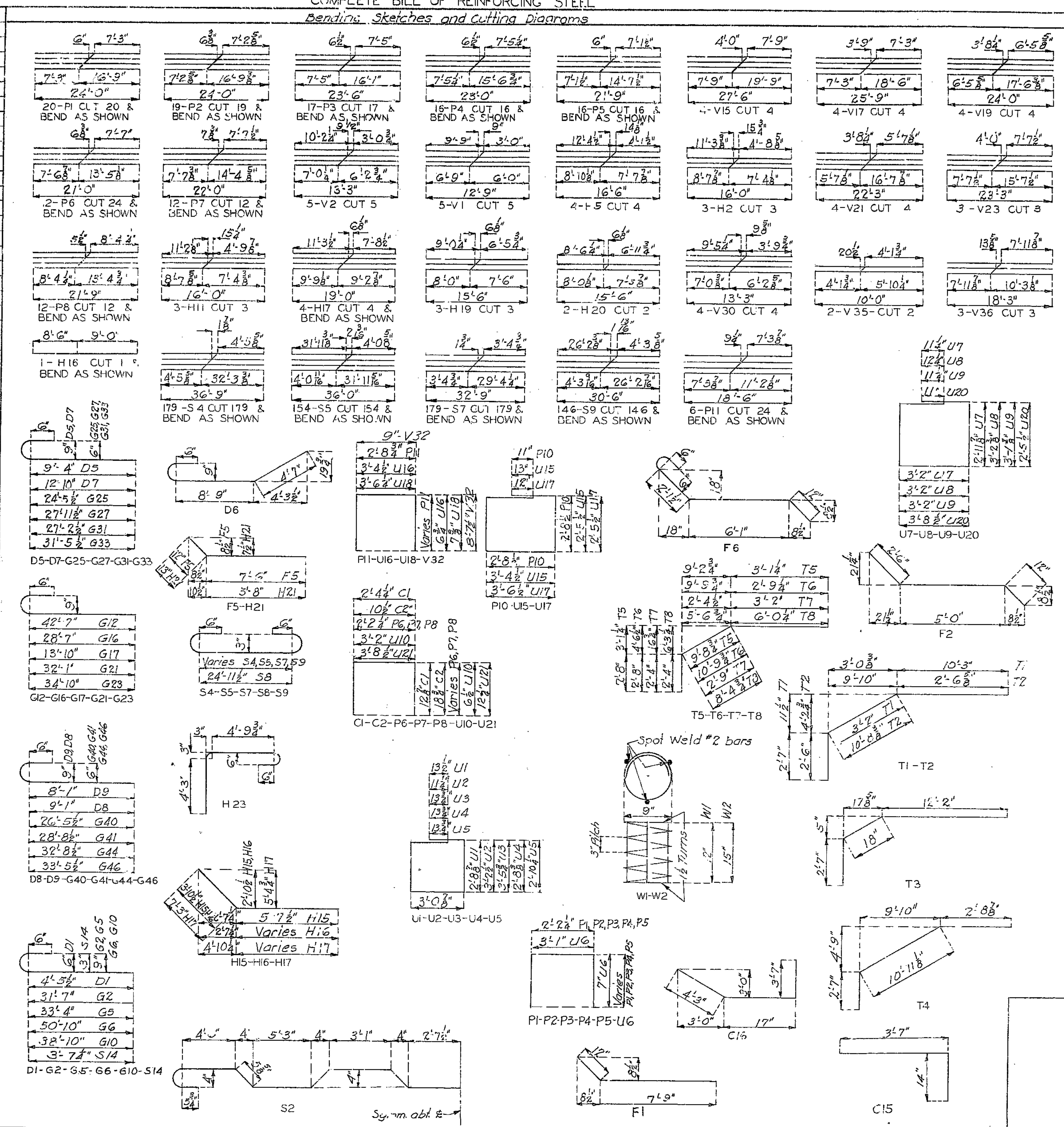
SEE FINAL PLANS BROWN LINES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	27-3977 (11.52)	19		

COMPLETE BILL OF REINFORCING STEEL

No.	Size	Length	Mark	Location
50	#6	5'-9"	D1	Footling
32	#6	8'-6"	F1	Col. Hch.
8	#6	8'-6"	F2	Col. Hch.
8	#6	9'-3"	F3	Col. Hch.
16	#6	31'-0"	G1	Beam
8	#11	23'-3"	G2	Beam
7	#10	30'-9"	G3	Beam
8	#8	31'-9"	G4	Beam
7	#11	35'-0"	G5	Beam
4	#11	52'-6"	G6	Beam
11	#11	18'-6"	G8	Beam
3	#11	32'-0"	G9	Beam
4	#11	40'-6"	G10	Beam
4	#6	9'-6"	G11	Beam
11	#6	12'-3"	H1	Wing
3	#6	16'-0"	H2	Wing
16	#4	30'-0"	H3	Bkwall
2	#6	24'-6"	H4	Bkwall
4	#6	16'-6"	H5	Wing
4	#6	30'-0"	H6	Bkwall
2	#6	37'-0"	H7	Bkwall
20	#3	24'-0"	P1	Column
19	#3	24'-0"	P2	Column
17	#3	23'-6"	P3	Column
16	#3	23'-0"	P4	Column
16	#3	21'-9"	P5	Column
2	#6	16'-0"	T1	Wing
2	#6	15'-9"	T2	Wing
2	#6	16'-3"	T3	Wing
2	#6	16'-3"	T4	Wing
48	#4	12'-9"	U1	Beam
27	#4	13'-6"	U2	Beam
13	#4	14'-3"	U3	Beam
17	#4	12'-9"	U4	Beam
12	#4	13'-0"	U5	Beam
8	#4	4'-3"	U6	Beam
5	#5	12'-9"	V1	Wing
5	#5	13'-3"	V2	Wing
115	#6	7'-6"	V3	Bkwall
6	#6	24'-3"	V4	Column
6	#6	23'-3"	V5	Column
6	#6	21'-3"	V6	Column
6	#6	20'-3"	V7	Column
6	#6	20'-0"	V8	Column
4	#6	26'-9"	V9	Column
4	#6	26'-0"	V10	Column
4	#6	33'-3"	V11	Column
4	#6	22'-9"	V12	Column
4	#6	22'-9"	V13	Column
2	#4	21'-3"	V14	Column
4	#4	27'-6"	V15	Column
7	#4	20'-0"	V16	Column
4	#4	25'-9"	V17	Column
2	#4	18'-9"	V18	Column
4	#4	24'-0"	V19	Column
2	#4	17'-9"	V20	Column
4	#4	22'-3"	V21	Column
2	#4	17'-6"	V22	Column
3	#4	23'-3"	V23	Column
7	#6	4'-6"	V24	Bkwall
8	#4	19'-9"	W1	A.B. Wells
32	#10	14'-6"	V40	Column
32	#10	6'-3"	V41	Column
8	#2	23'-0"	W2	A.B. Wells



No.	Size	Length	Mark	Location
40	#6	5'-9"	D1	Footling
34	#4	3'-6"	V33	Bkwall
28	#6	8'-9"	F1	Col. Hch.
4	#6	8'-6"	F2	Col. Hch.
8	#6	8'-0"	F4	Col. Hch.
4	#11	44'-3"	G12	Beam
4	#11	18'-6"	G13	Beam
4	#10	28'-0"	G14	Beam
4	#10	18'-0"	G15	Beam
4	#10	30'-3"	G16	Beam
3	#10	15'-6"	G17	Beam
4	#6	31'-9"	G18	Beam
4	#6	30'-3"	G19	Beam
4	#6	34'-6"	G20	Beam
9	#11	33'-9"	G21	Beam
5	#10	32'-0"	G22	Beam
5	#10	36'-6"	G23	Beam
6	#6	29'-3"	H8	Bkwall
24	#4	31'-3"	H9	Bkwall
2	#5	5'-9"	H10	Bkwall
3	#6	16'-0"	H11	Lt. Wing
6	#6	12'-6"	H12	Lt. Wing
2	#6	11'-0"	H13	Lt. Wing
1	#6	6'-9"	H14	Lt. Wing
5	#5	9'-6"	H15	Rt. Wing
1	#5	17'-6"	H16	Rt. Wing
4	#5	19'-0"	H17	Rt. Wing
5	#6	9'-9"	H18	Rt. Wing
3	#6	15'-6"	H19	Rt. Wing
2	#6	15'-6"	H20	Rt. Wing
10	#6	6'-9"	H21	Rt. Wing
5	#6	6'-9"	H22	Rt. Wing
4	#6	10'-9"	H23	Rt. Wing
20	#5	26'-6"	C6	Curb
25	#5	26'-6"	C7	Curb
25	#5	28'-9"	C8	Curb
12	#3	21'-0"	P6	Column
12	#3	22'-0"	P7	Column
12	#3	21'-9"	P8	Column
2	#5	18'-6"	C11	Curb
38	#6	3'-9"	R1	End Post
3	#4	11'-3"	R2	Lt. Post
3	#4	11'-6"	R3	Lt. Post
3	#4	6'-0"	R4	Rt. Post
3	#4	6'-9"	R5	Rt. Post
536	#5	33'-3"	S1	Slab
268	#5	35'-9"	S2	Slab
744	#5	29'-6"	S3	Slab
179	#5	36'-9"	S4	Slab
154	#5	36'-0"	S5	Slab
44	#5	24'-0"	S6	Slab
179	#5	32'-9"	S7	Slab
28	#4	13'-3"	U8	Beam
25	#4	13'-6"	U9	Beam
12	#4	4'-3"	U10	Beam
9	#5	31'-0"	S11	Slab
9	#5	25'-6"	S12	Slab
8	#6	17'-9"	V26	Column
8	#5	29'-0"	S13	Slab
4	#6	18'-3"	V27	Column
24	#6	3'-9"	R1	End Post
6	#6	22'-0"	V28	Column
12	#4	4'-9"	R6	End Post
4	#6	17'-3"	V29	Column
20	#5	4'-6"	S14	Light Std. Wing
4	#4	13'-3"	V30	Lt. Wing
6	#5	4'-3"	C15	Light Std. Wing
24	#5	9'-9"	V3	Bkwall
4	#5	9'-3"	C16	Light Std. Wing
79	#5	13'-0"	V32	Bkwall

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIPOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U.I.-29K7 (RT. 69) STA. +30+23.84
 CLAY COUNTY FINISHED

Drawn SEPT. 1954 by K.R.W.
 Checked Sept. 1954 by H.J.K. & R.H.L.

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

Sheet No. 2 of 19 FINISHED

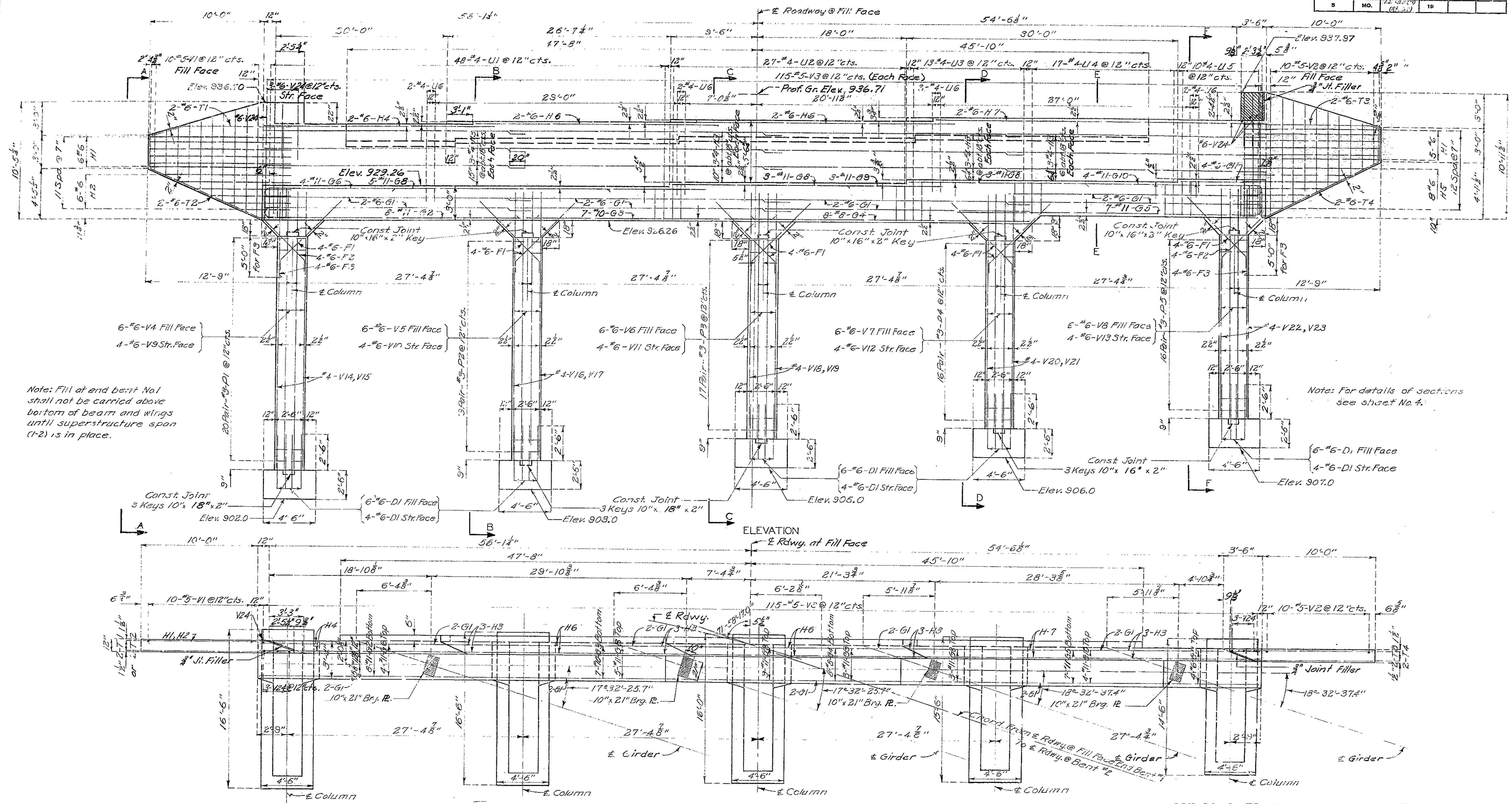
FINISHED

L-656

CONSTRUCTION CHANGES NOTED HEREON

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	71-3-779 (Rt. 69)	19		



Note: Fill at end bent. No fill shall not be carried above bottom of beam and wings until superstructure span (1-2) is in place.

Note: For details of sections see sheet No. 4.

52

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIDCH ROAD IN NORTH KANSAS CITY NE
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U.I-30(7) (RT. 69) STA. 430+23.34

CLAY COUNTY FINISHED

Drawn Aug. 1954 by D.J.G.
 Checked Sept. 1954 by H.J.K.

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

Sheet No. 3 of 19 FINISHED

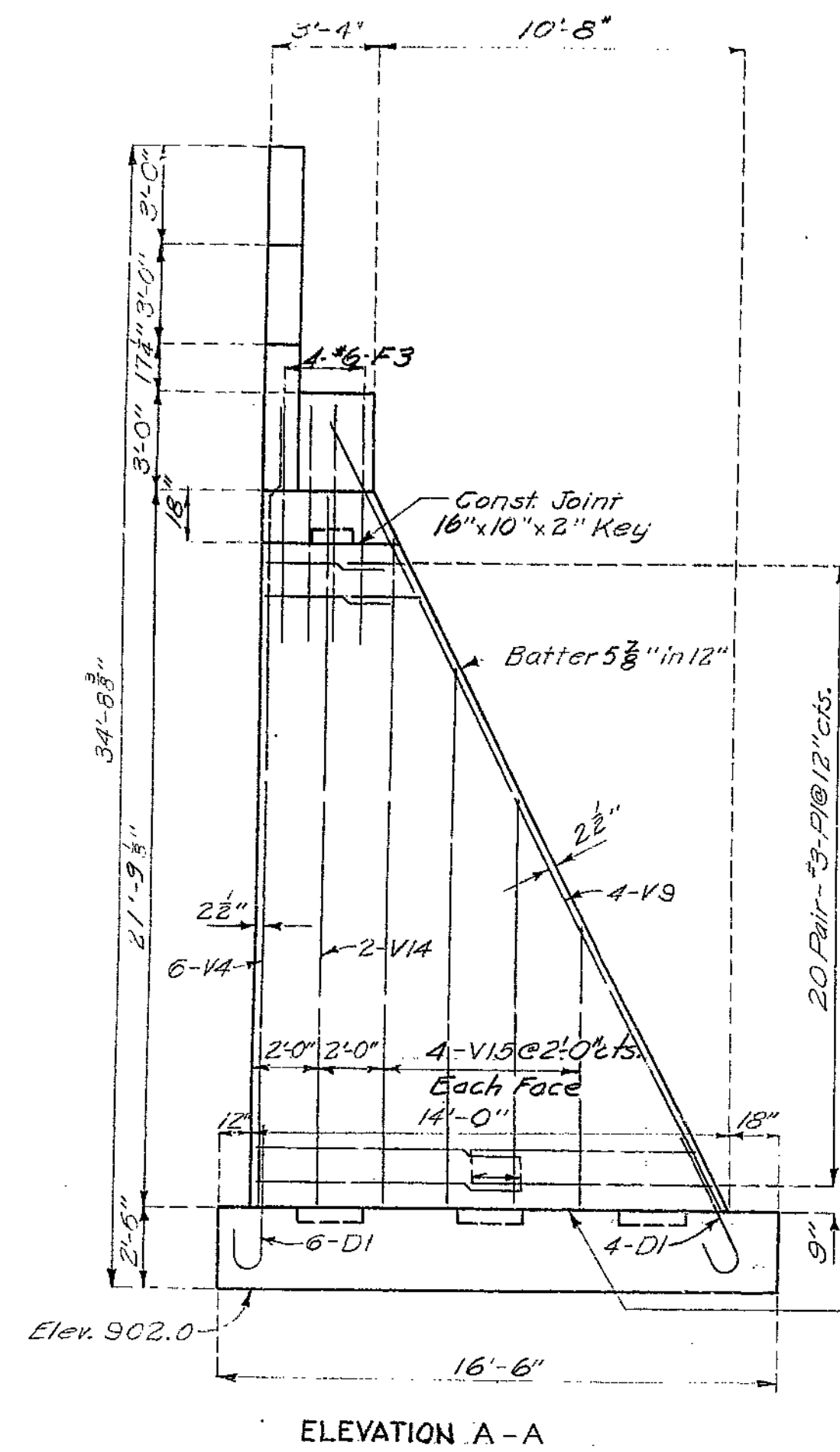
FINISHED

L-656

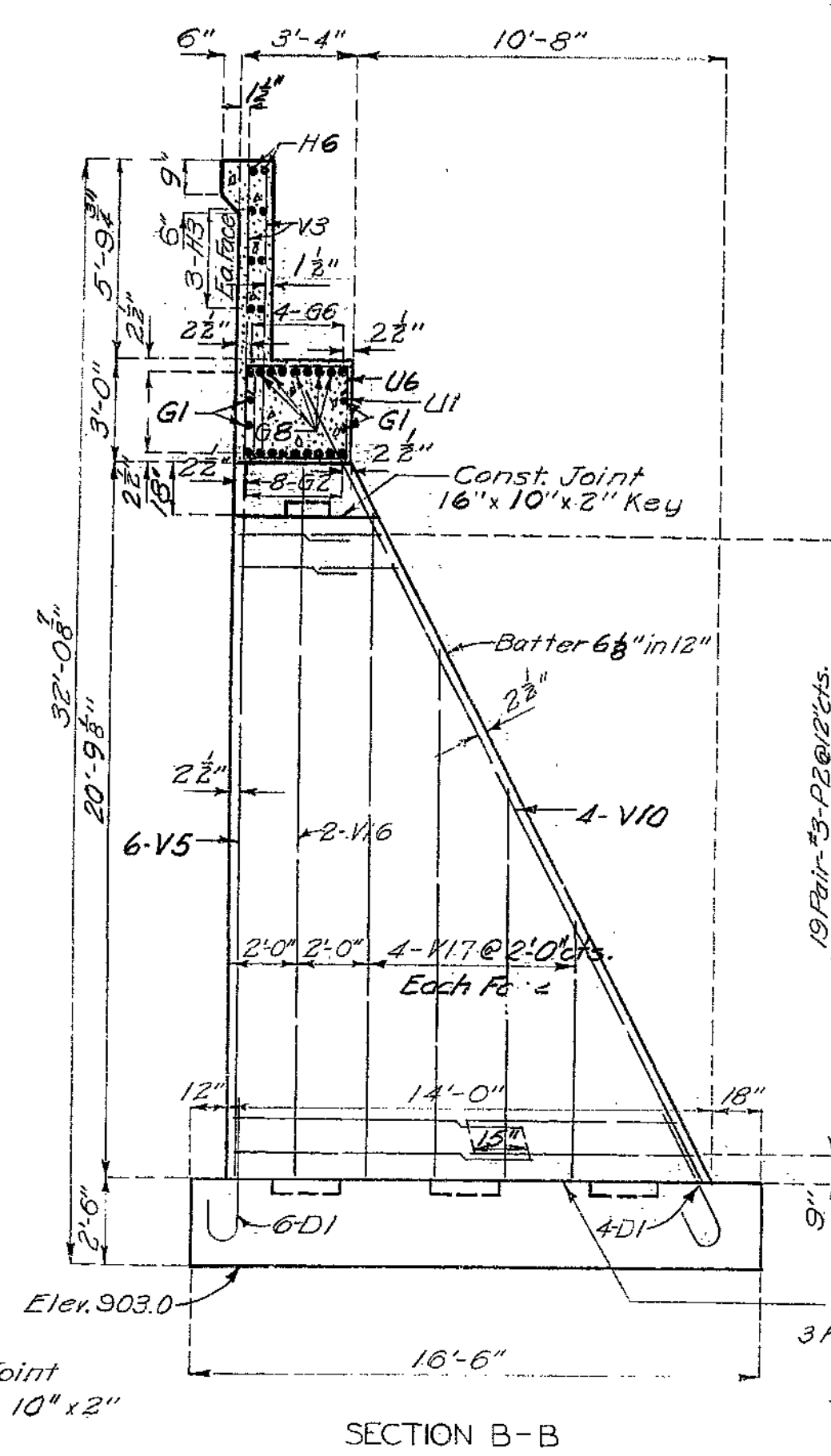
SEE FINAL PLANS BROWN-LINES

MISSOURI STATE HIGHWAY DEPARTMENT

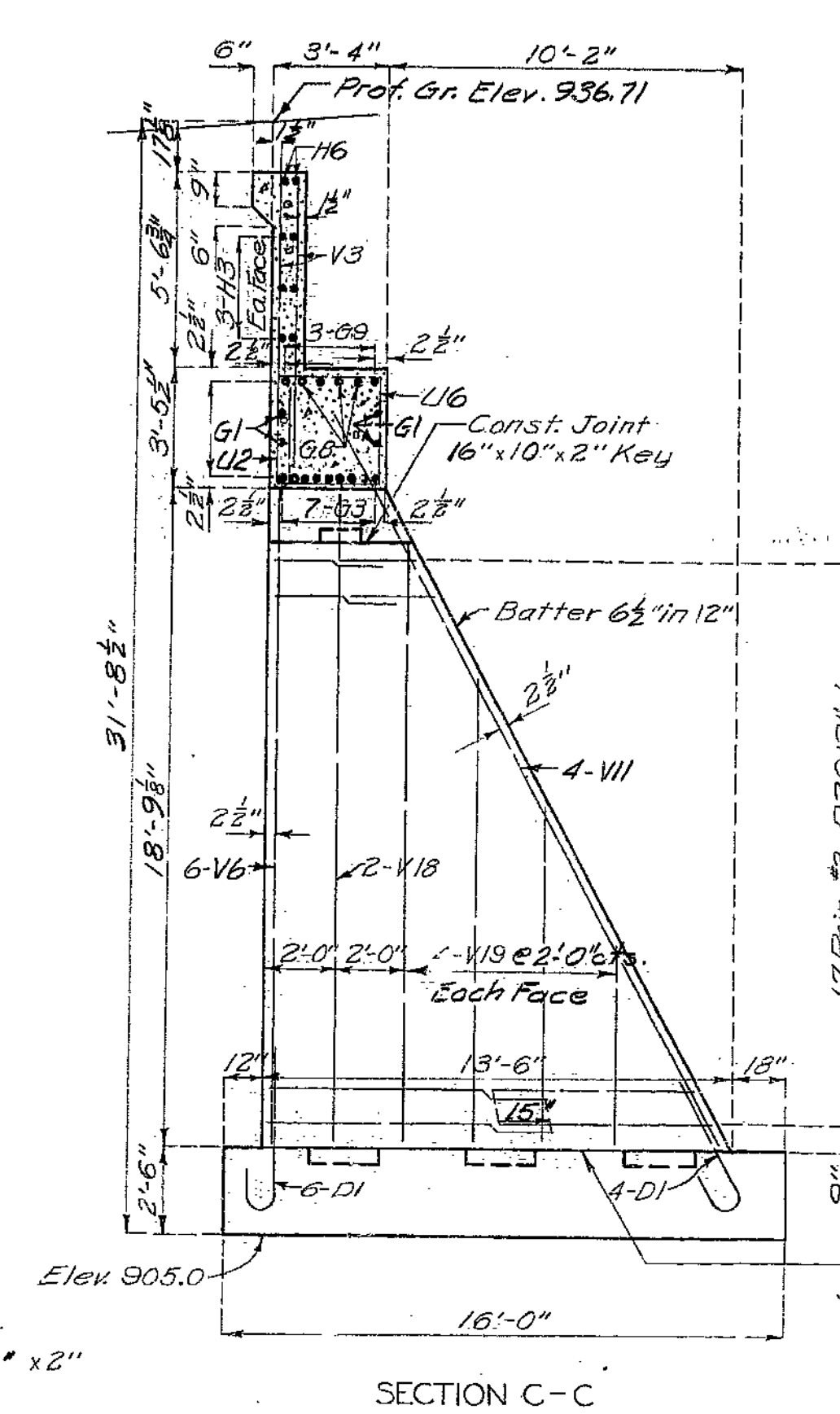
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U.I.-99(7) (RT.69)	19		



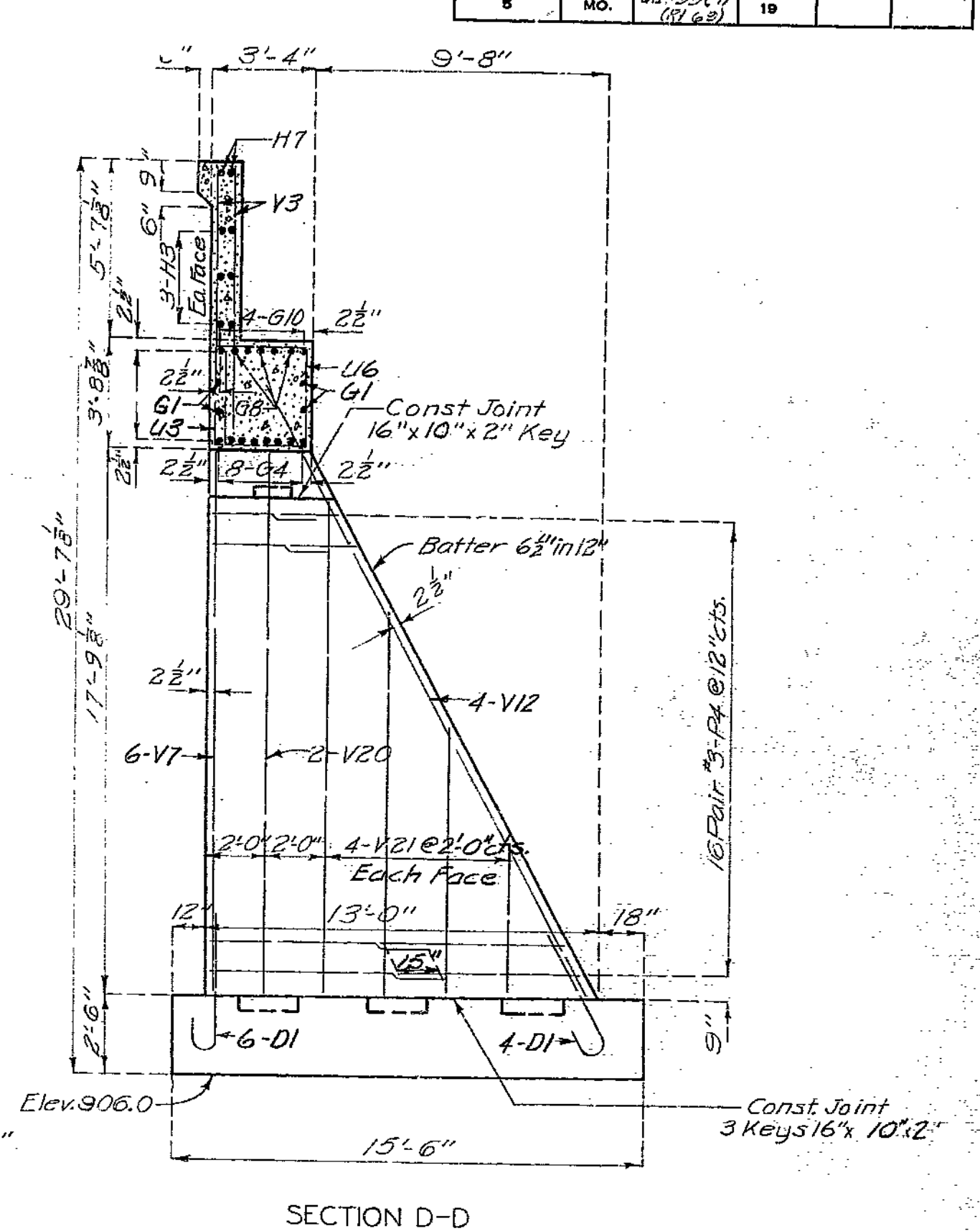
ELEVATION A-A



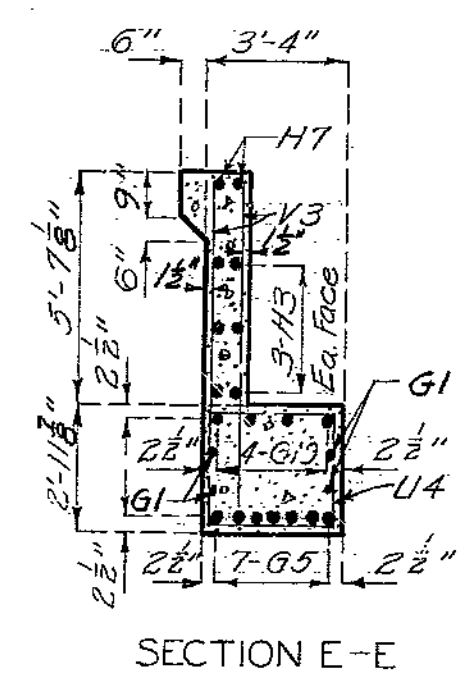
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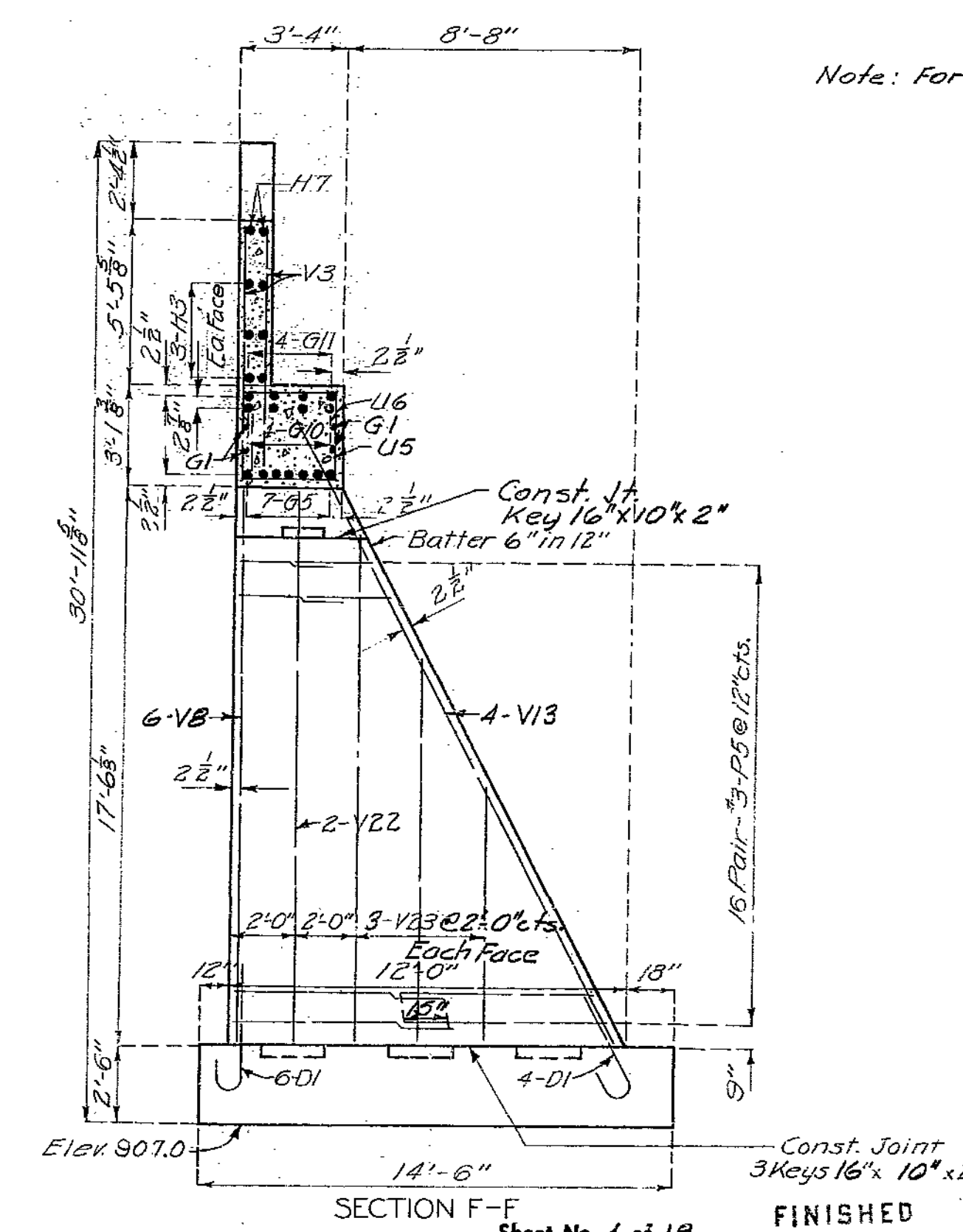
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

Sheet No. 4 of 19.

FINISHED

Note: For location of Elevation & Sections see Sheet No. 3

DETAILS OF END BENT NO. 1

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

BRIDGE OVER FUTURE RT.69 (RT. LANE)

STATE ROAD FROM ANTIUCH ROAD IN NORTH KANSAS CITY N.E.

ABOUT 5 MILES N.E. OF NORTH KANSAS CITY

PROJECT NO. U.I.-99(7) (RT. 69) STA. 430+23.34

CLAY COUNTY

FINISHED

FINISHED

L-656

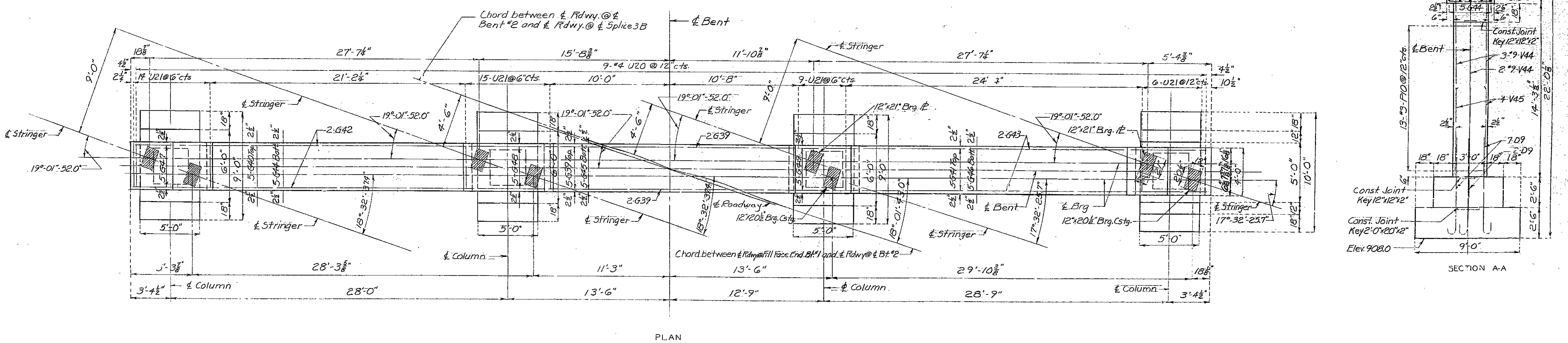
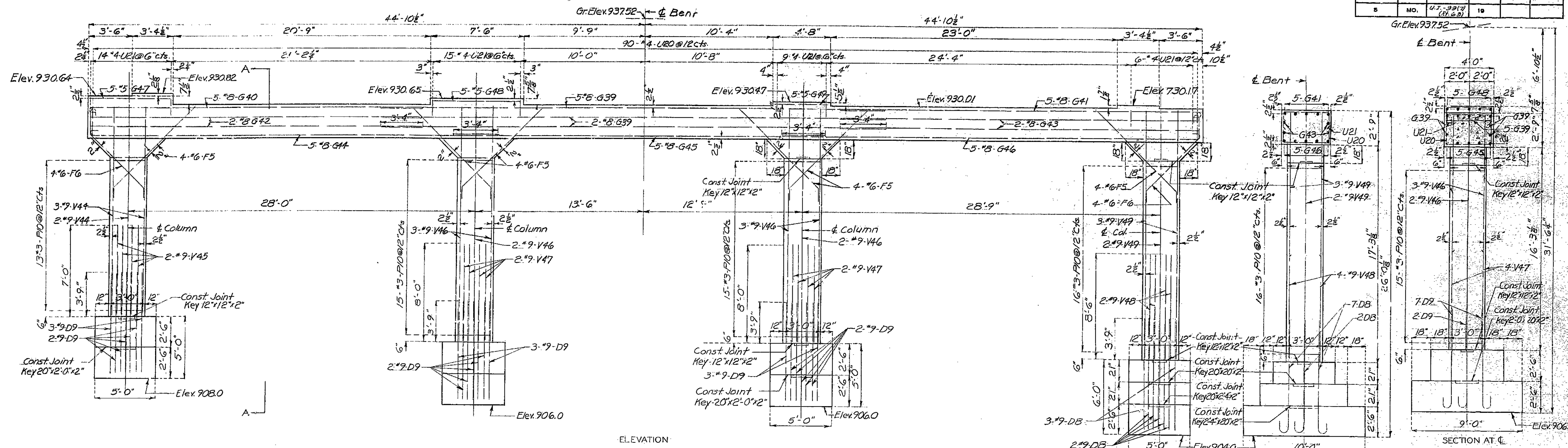
SEE FINAL PLANS BROWN-LINES

Drawn Sept. 1954 by D.J.G.
Checked Sept. 1954 by H.J.K.

76

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	17-997 (Rt. 69)	19		



DETAILS OF INTERMEDIATE BENT NO. 2

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U.I.-997 (RT. 69) STA. 430+23.84

CLAY COUNTY FINISHED

Drawn Sep. 1954 by H.G.M.
 Checked Sept. 1954 by H.J.K.

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

Sheet No. 5 of 19

FINISHED

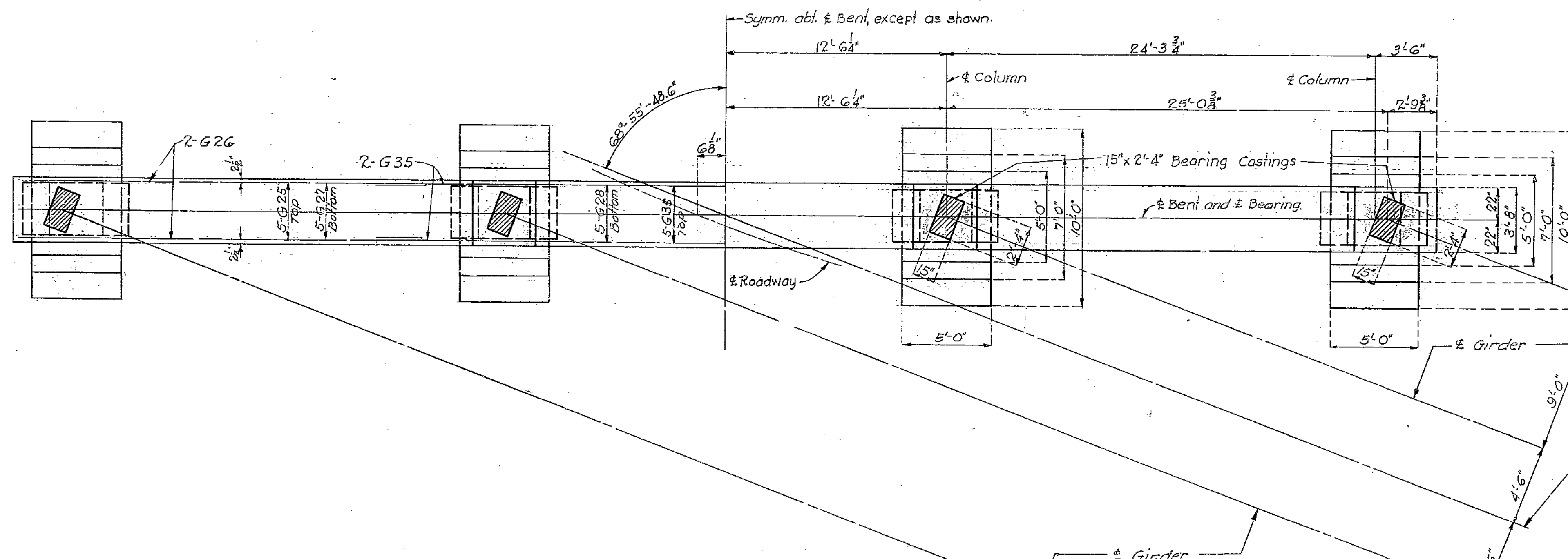
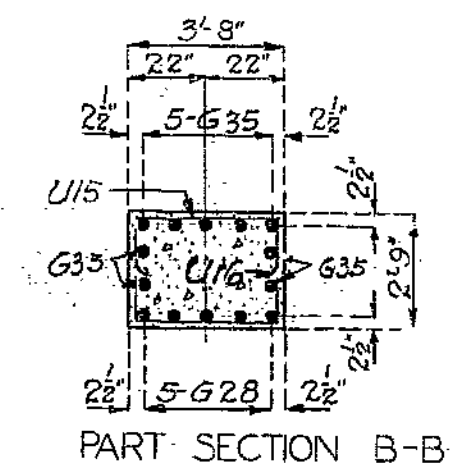
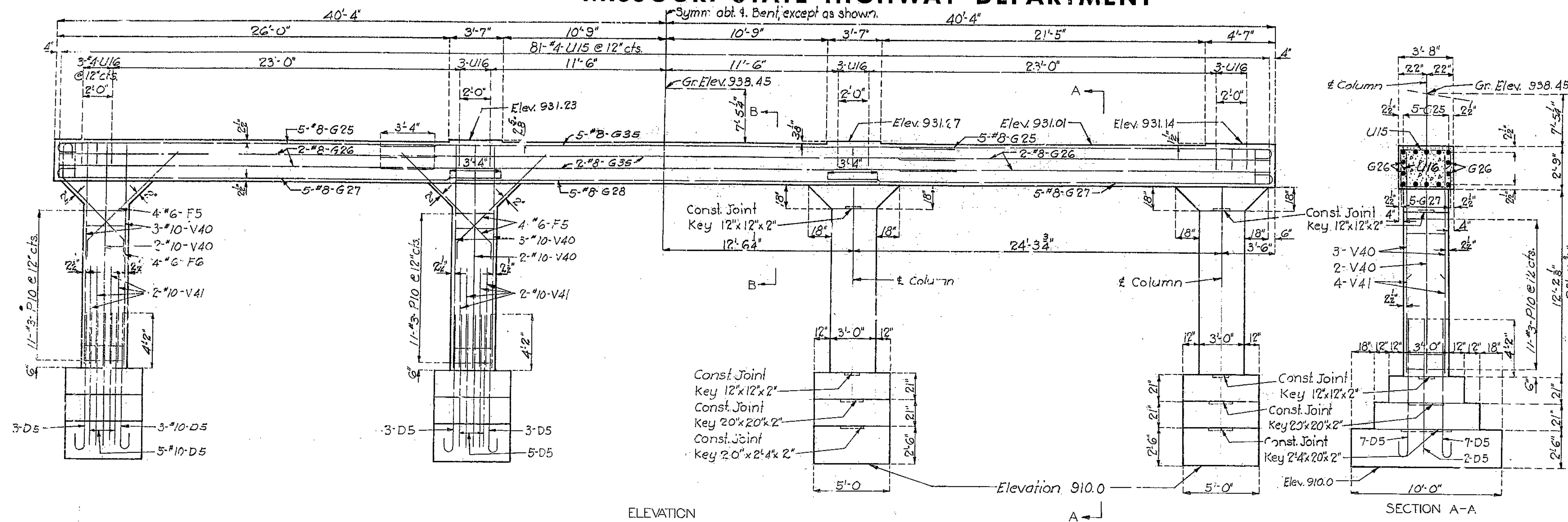
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SEE FINAL PLANS BROWN-LINES

L-656

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
E	MO.	11-99(7) (A.69)	19		



79

Drawn SEPT. 1954 by K.R.W.
Checked Sept. 1954 by H.J.K.

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

Sheet No. 7 of 19

SEE FINAL PLANS BROWN-LINES

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
PROJECT NO. U.I.-99(7) (RT. 69) STA. 430+23.84
CLAY COUNTY

FINISHED

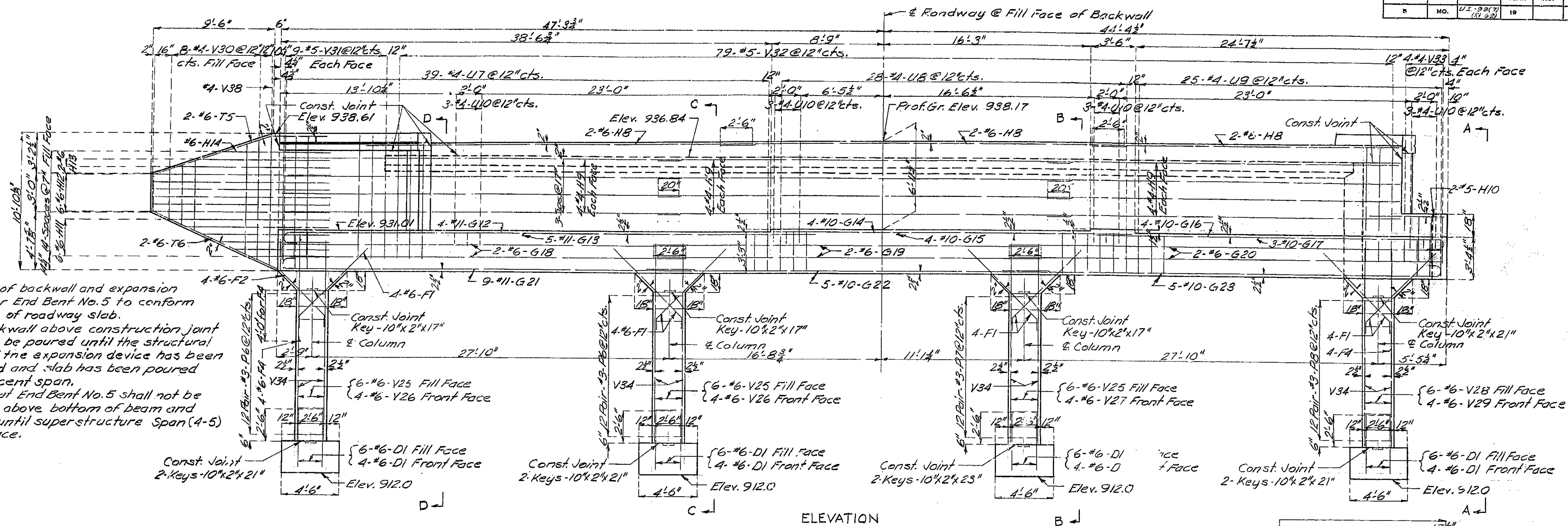
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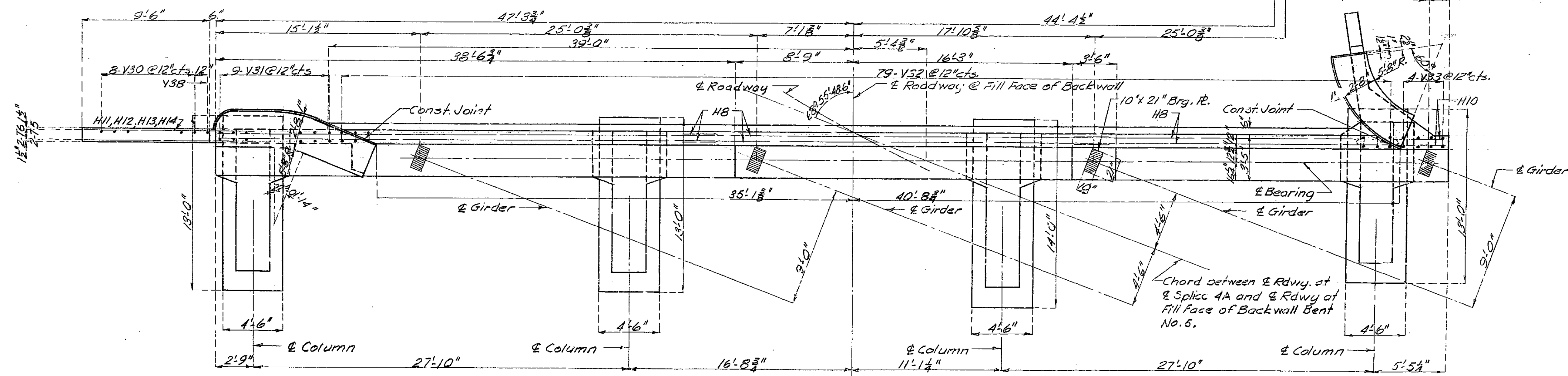
L-656

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U.I.-39(7) (R. 22)	19		



Note: Top of backwall and expansion device for End Bent No. 5 to conform to crown of roadway slab.
 Backwall above construction joint shall not be poured until the structural steel of the expansion device has been installed and slab has been poured in adjacent span.
 Fill at End Bent No. 5 shall not be carried above bottom of beam and wings until superstructure Span(4-5) is in place.



Note: See Sheet No. 9 for Elevation A-A, Section B-B, Section C-C, and Section D-D.

DETAILS OF END BENT NO. 5

Note: See Sheet No. 9 of 19 for plan of wings and details of End post.

BRIDGE OVER FUTURE RT.69 (RT. LANE)

STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.

ABOUT 5 MILES N.E. OF NORTH KANSAS CITY

PROJECT NO. U.I.-39(7) (RT.69) S1A. 4-30+23.84

CLAY COUNTY

FINISHED

L-656

80

Drawn Aug. 1954 by H. R. B.
 Checked Sept. 1954 by H. K.

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

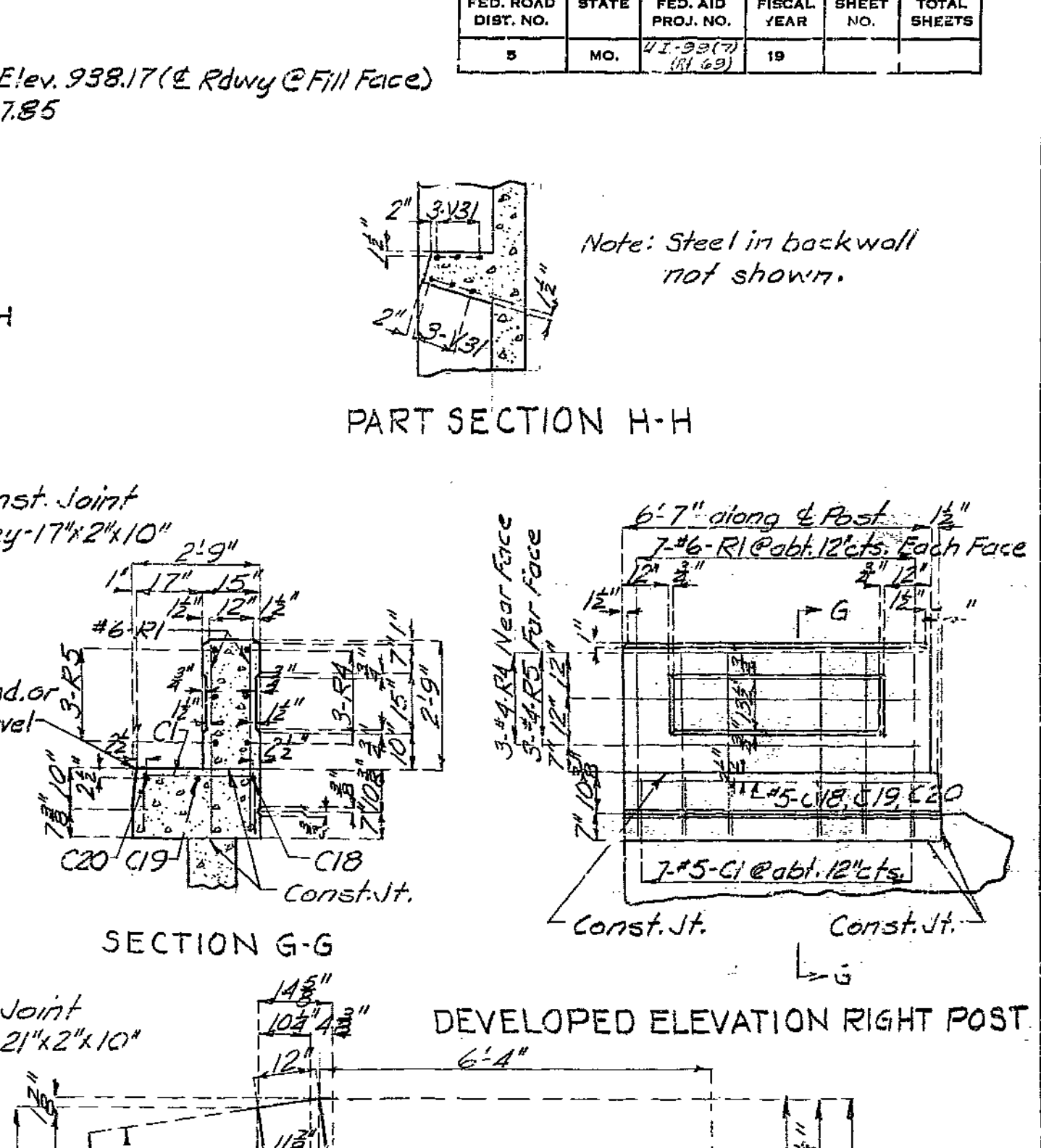
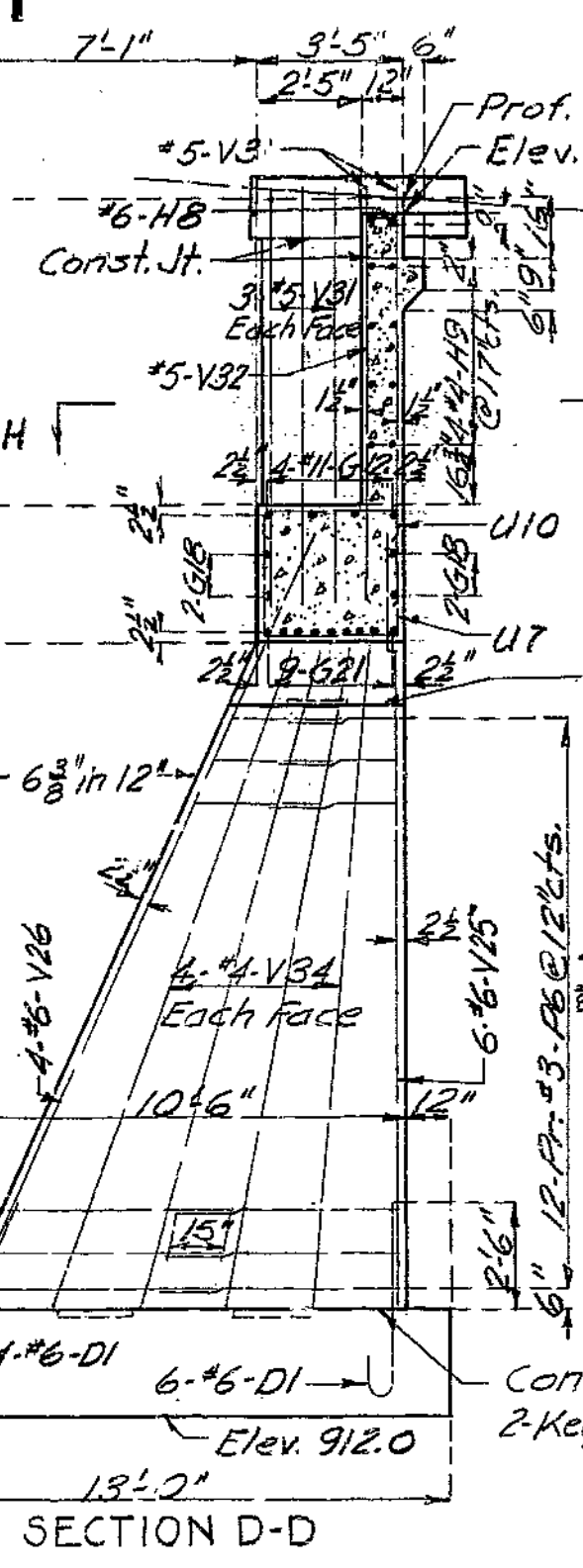
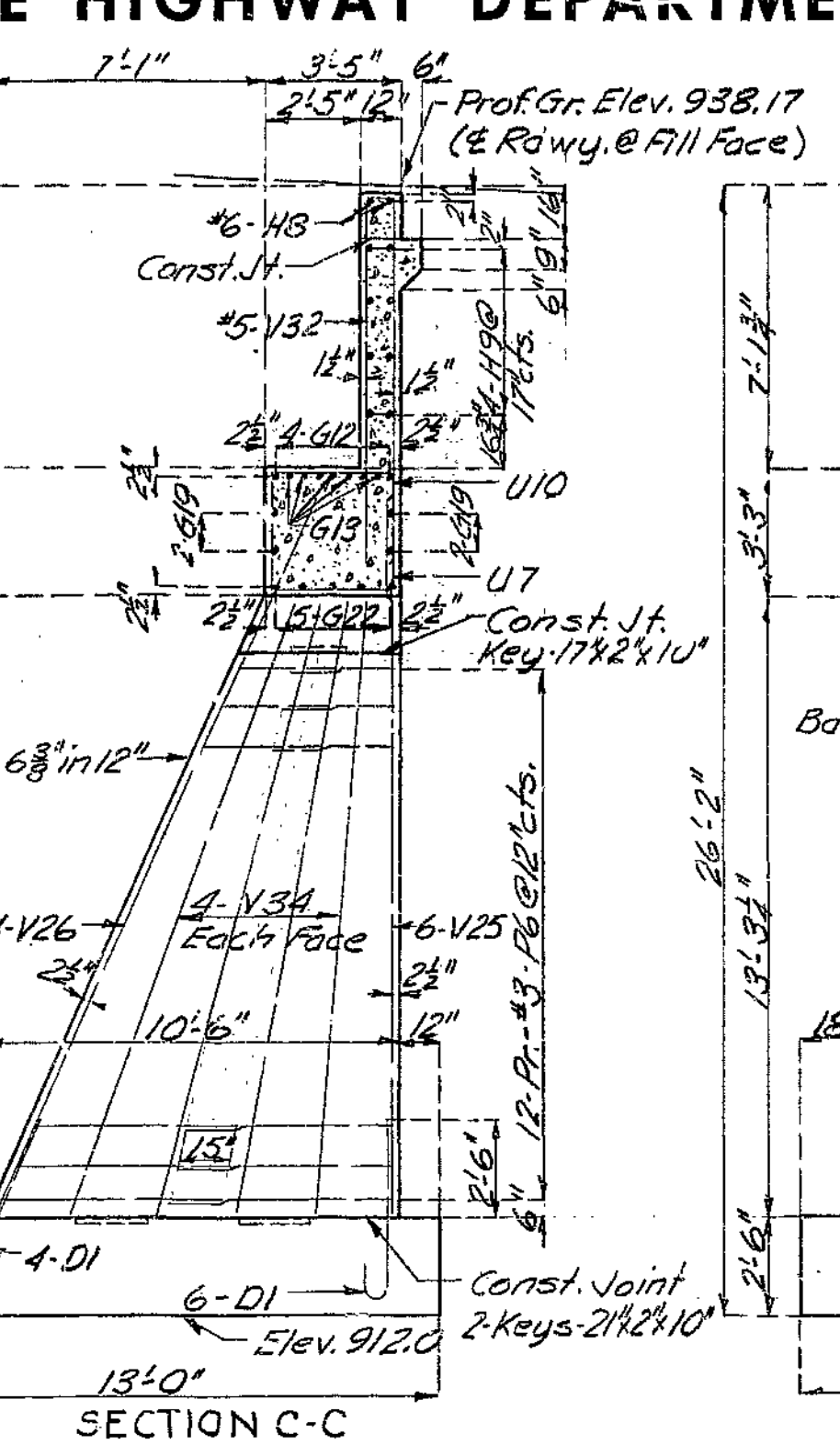
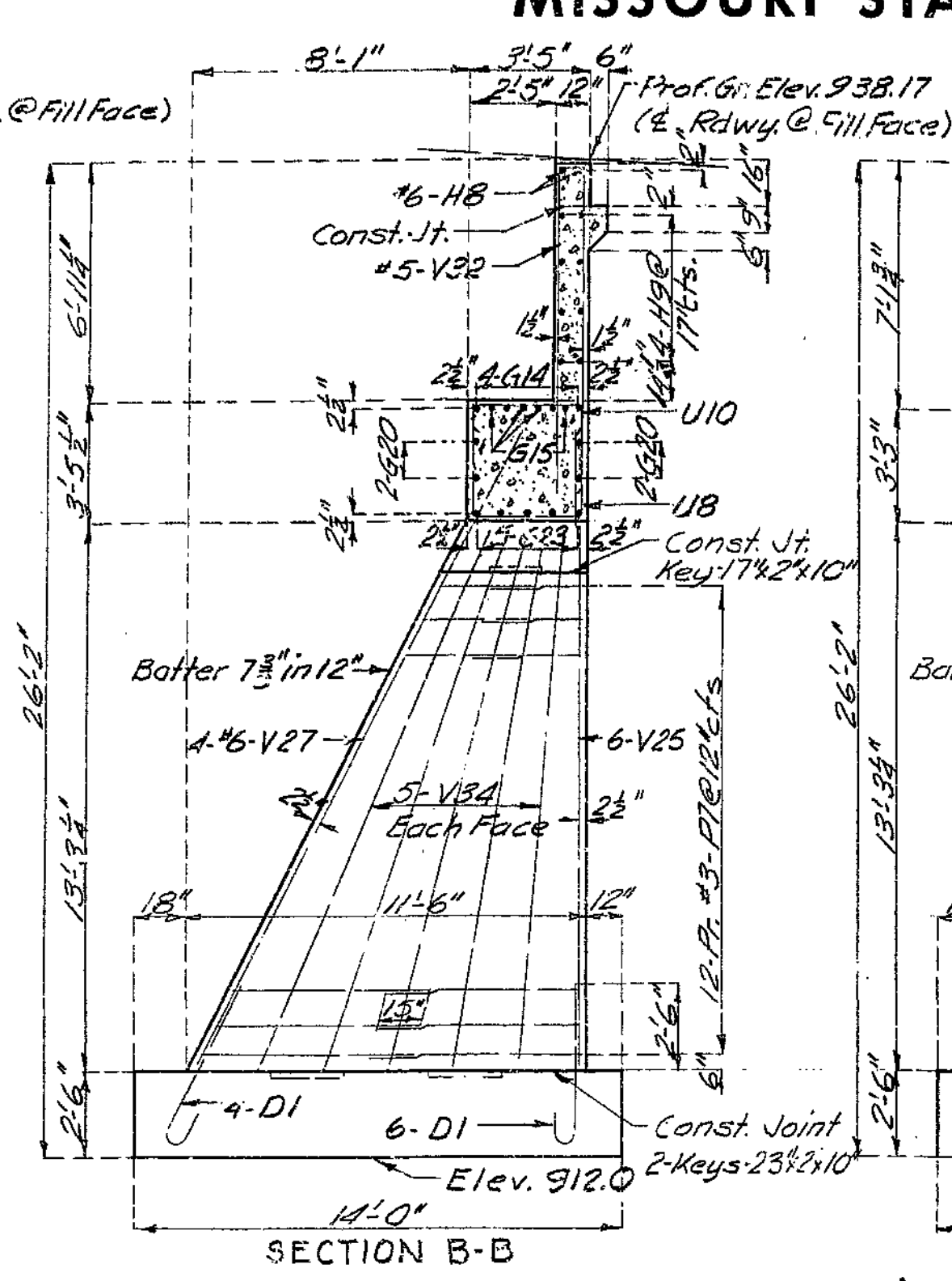
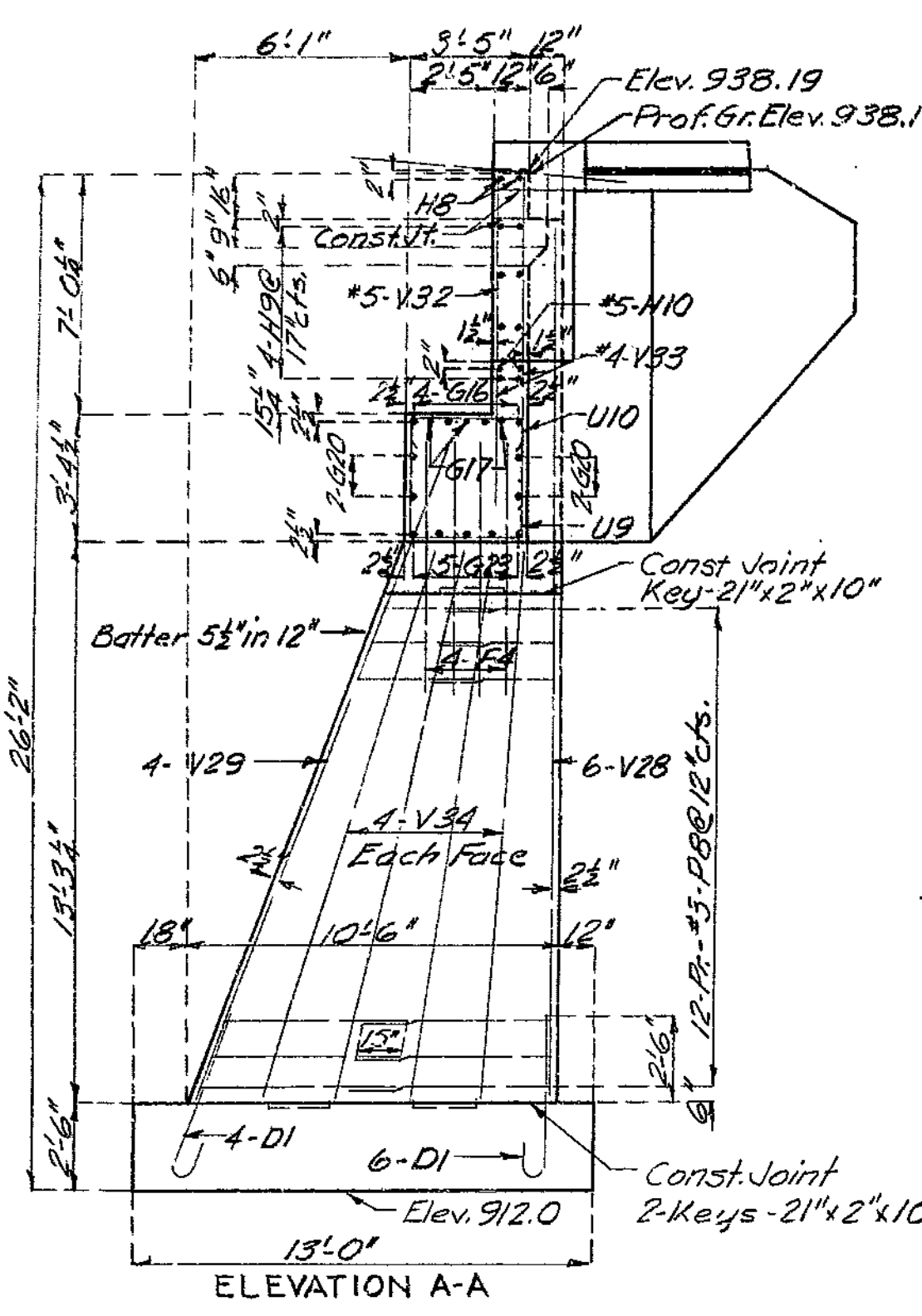
Sheet No. 8 of 19. FINISHED

FINISHED

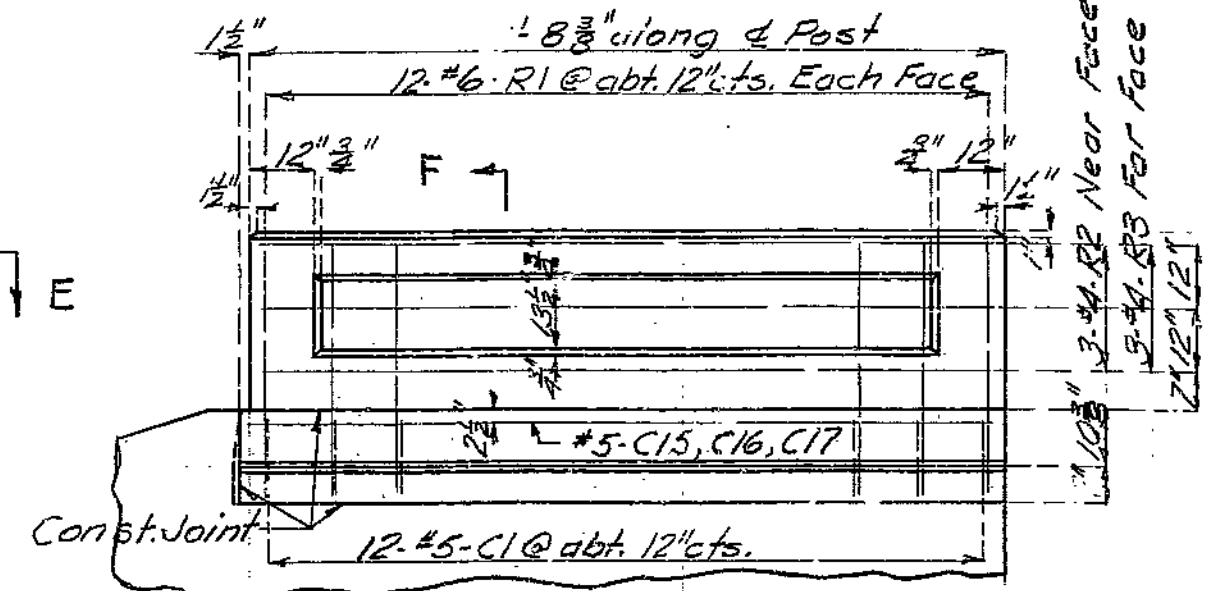
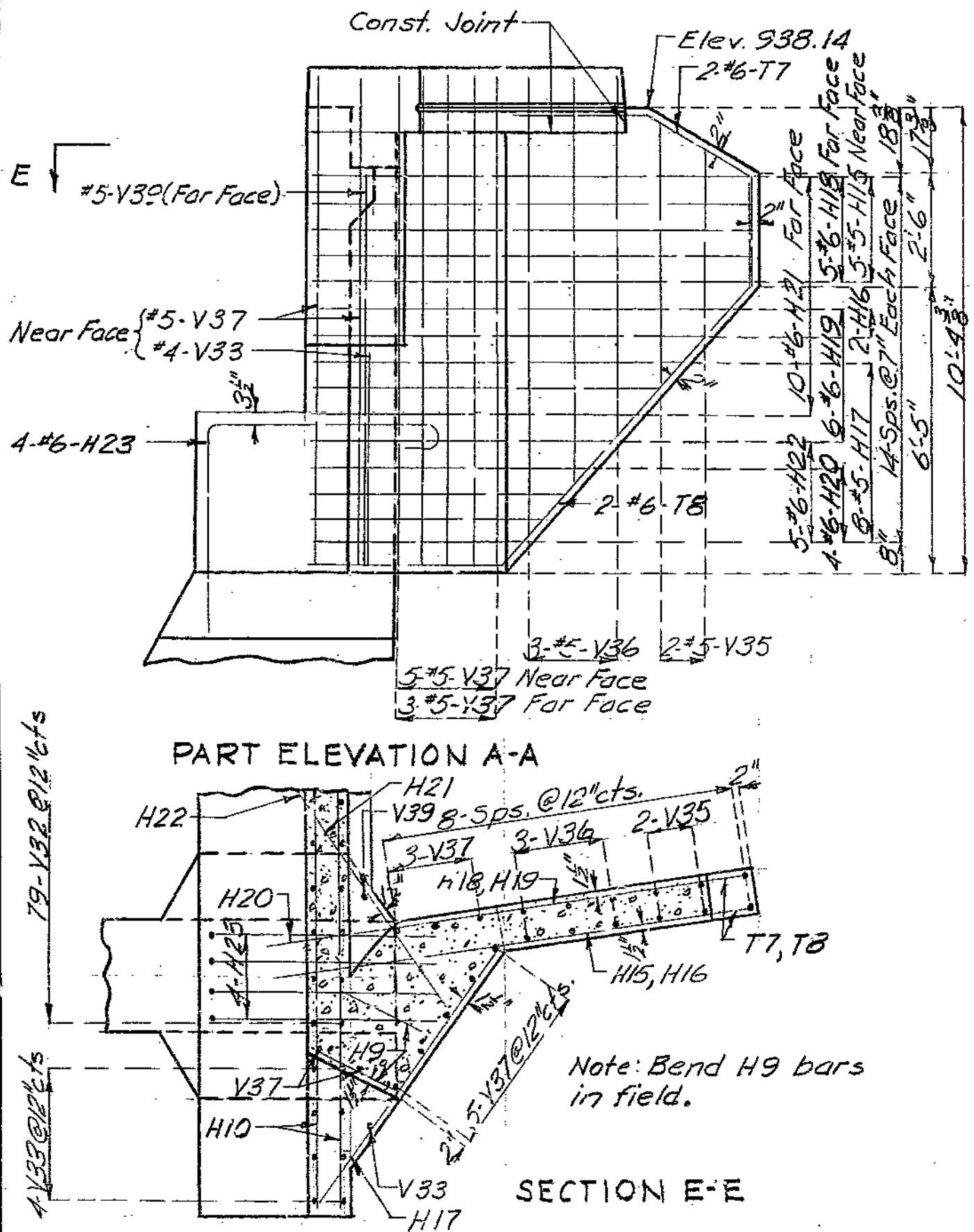
SEE FINAL PLANS BROWN-LINES

MISSOURI STATE HIGHWAY DEPARTMENT

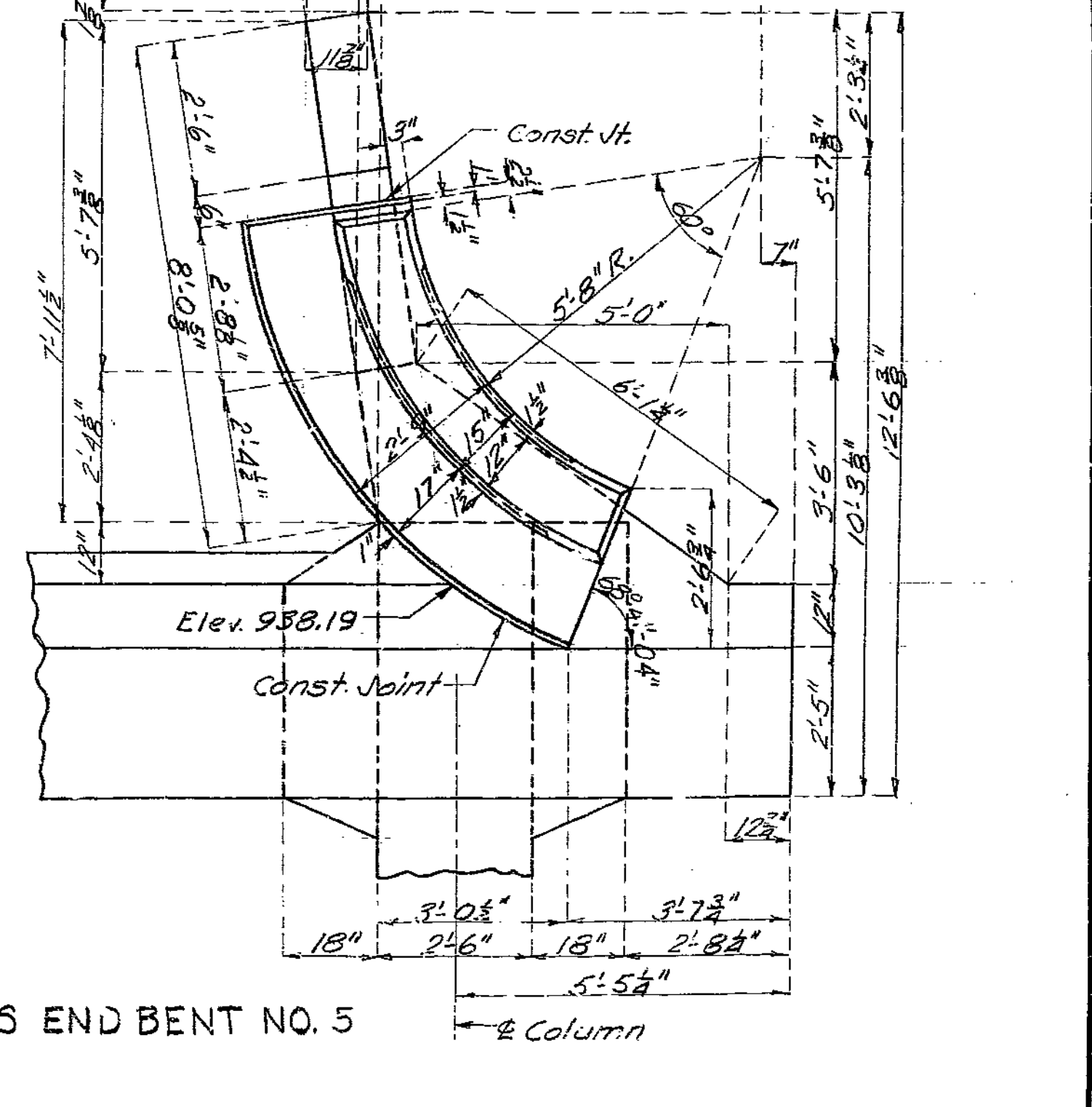
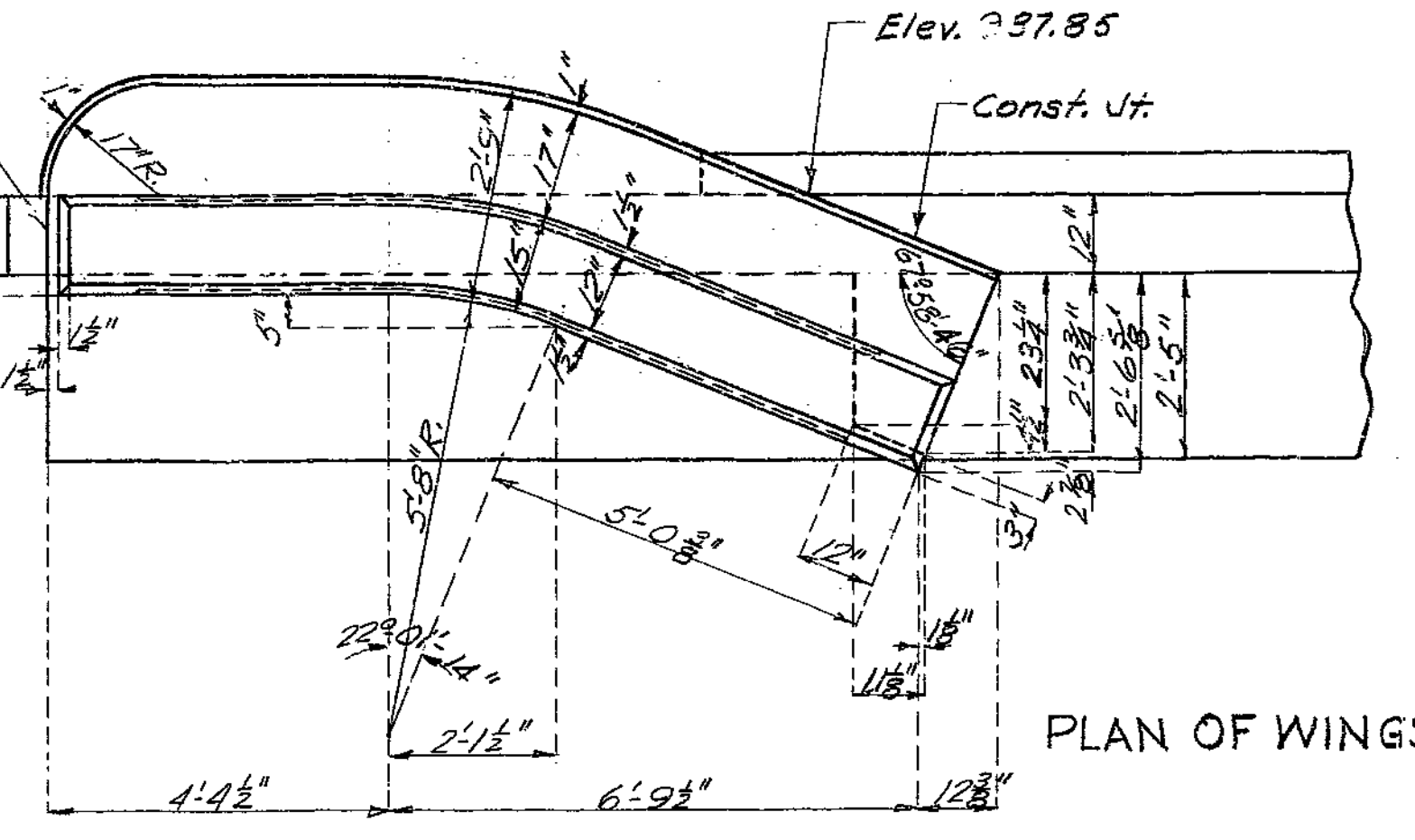
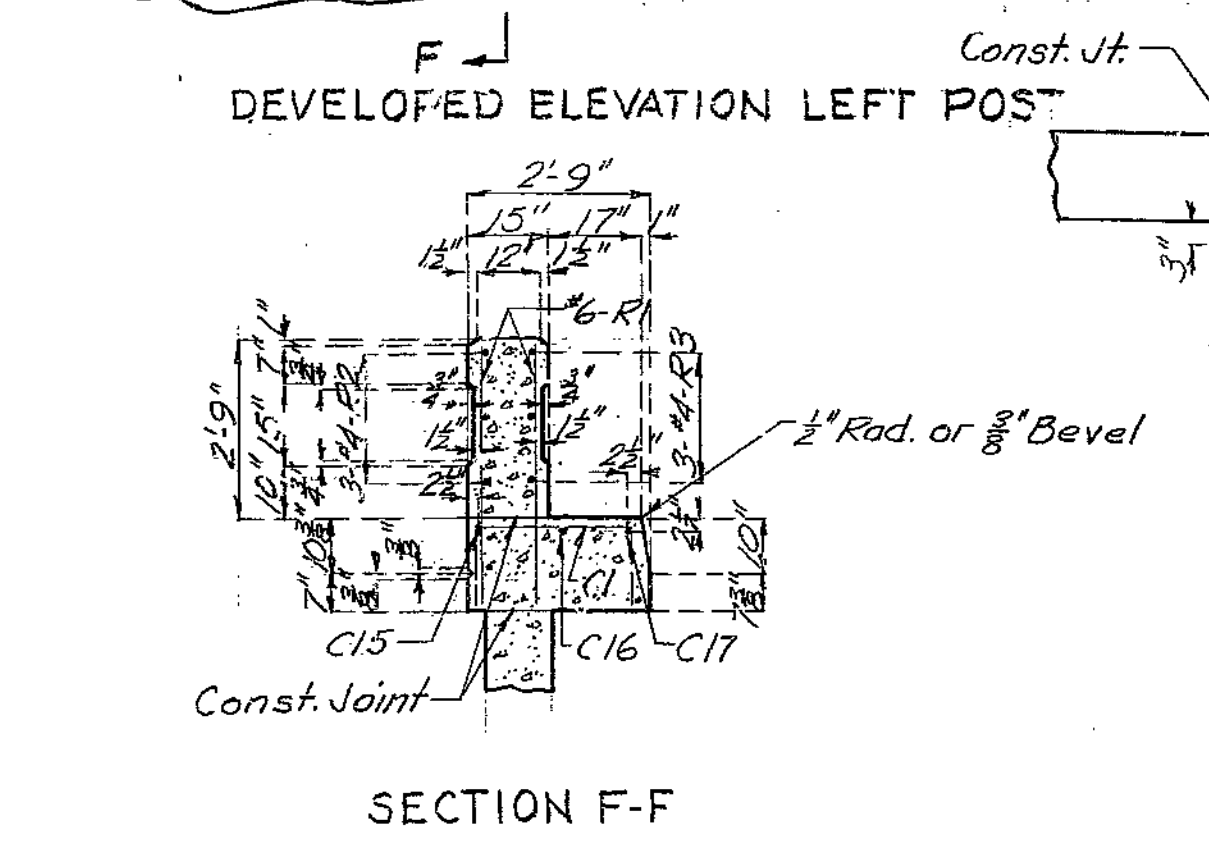
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U-1-99(7) (RT. 69)	19		



Note: Steel in back wall not shown.



Note: For location of Elev. A-A, Sec. B-B, Sec. C-C, and Sec. D-D see Sheet No. B.



DETAILS OF END BENT NO. 5

BRIDGE OVER FUTURE RT 69 (RT. LANE)
STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
PROJECT NO. U-1-99(7) (RT. 69) STA. 43+23.34
CLAY COUNTY FINISHED

Drawn Sept. 1954 by H.R.B.
Checked Sept. 1954 by H.J.K.

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

Sheet No. 9 of 19.

FINISHED

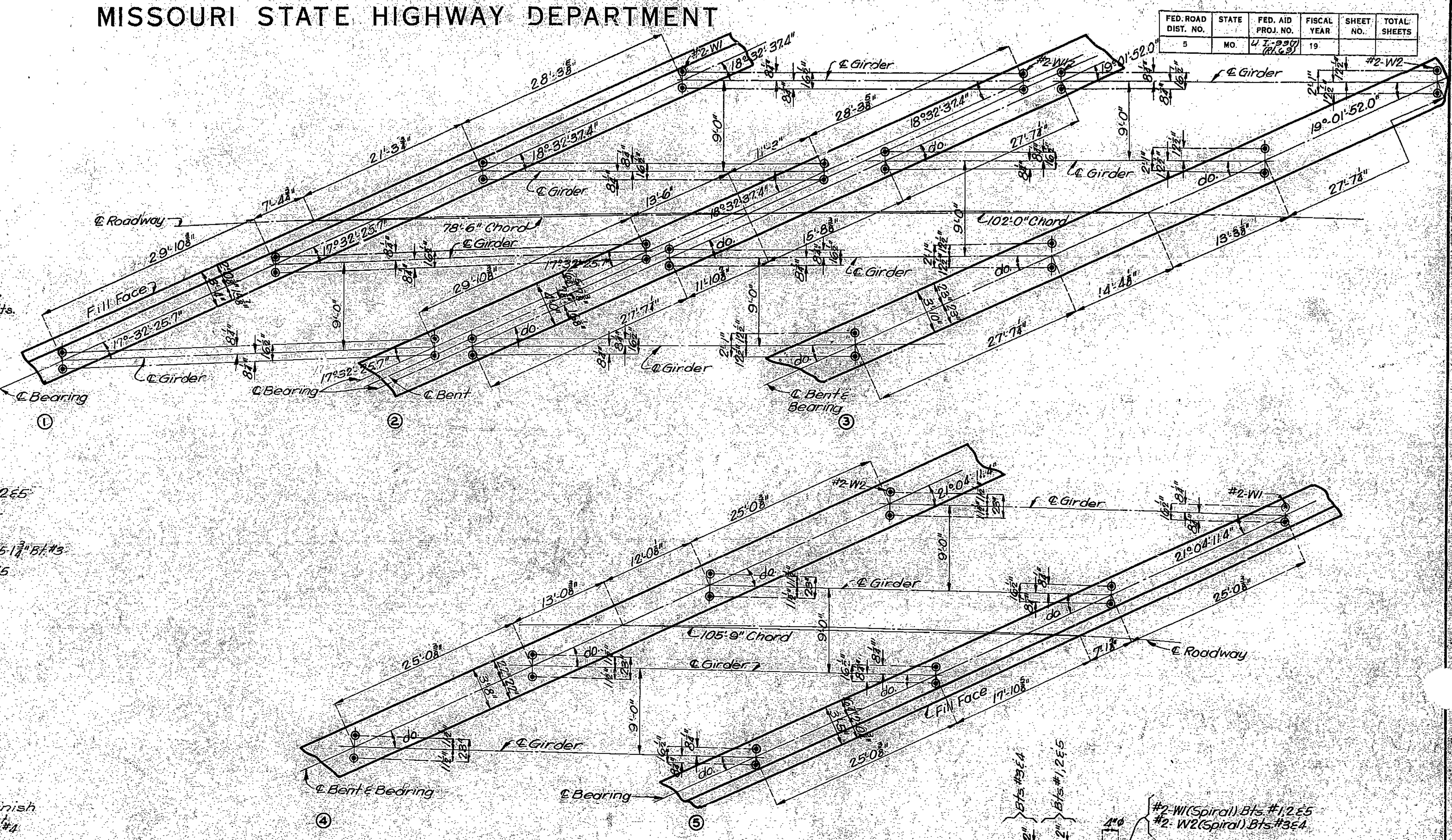
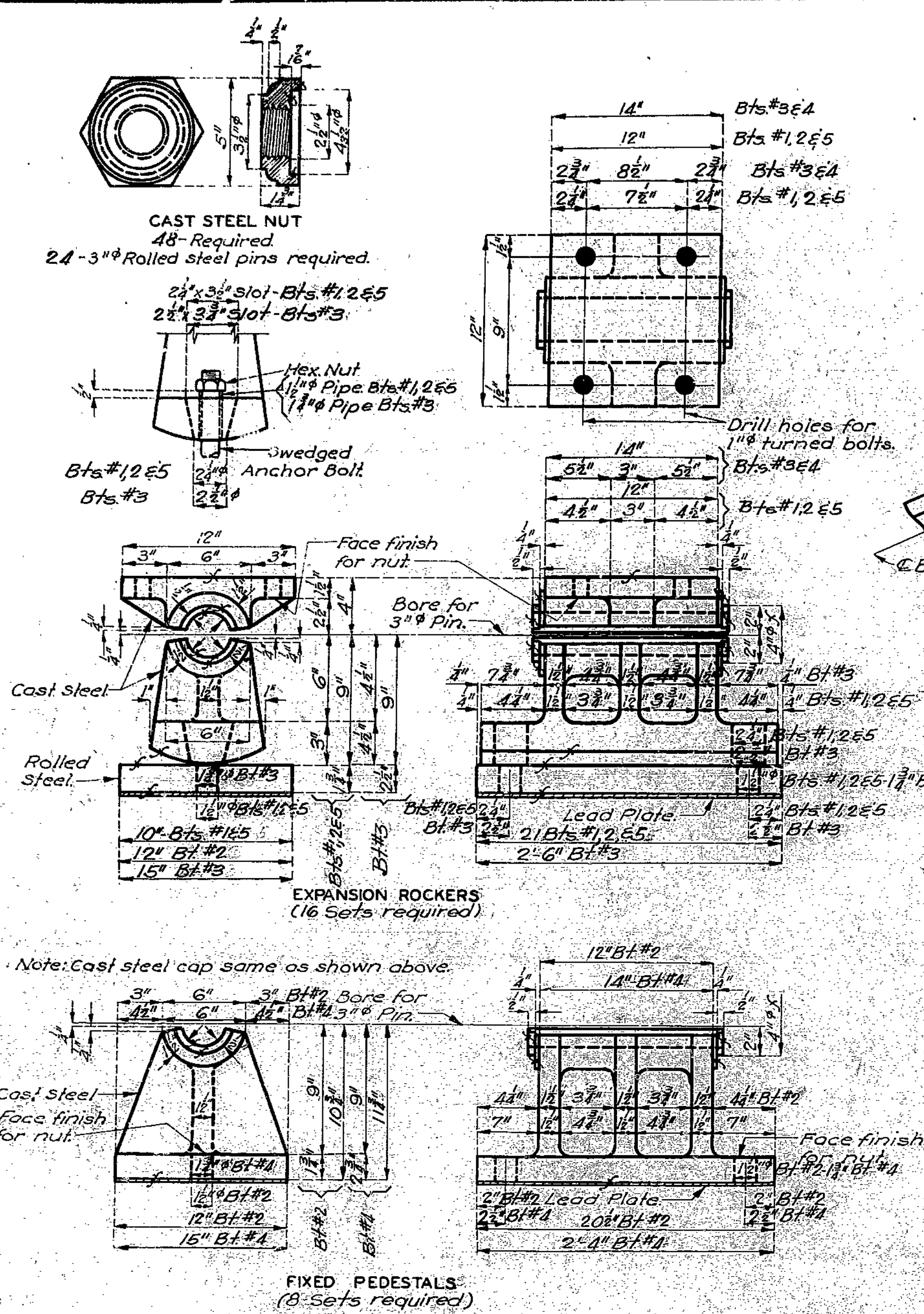
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L-656

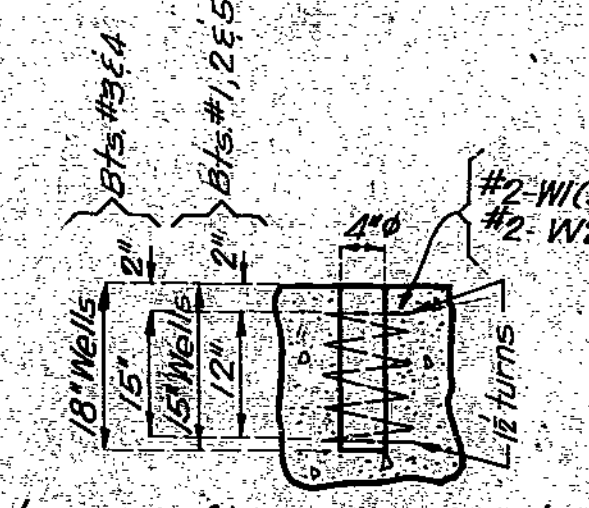
SEE FINAL PLANS BROWN-LINES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	2-23-57	19	#2-W2	



ANCHOR BOLT PLAN



Note: Holes for all anchor bolts shall be formed in substructure by placing and setting with template 4" wells of depth shown.
Grout for anchor bolt wells shall contain Iron Oxide (Embeco or an approved equivalent).

PART SECTION SHOWING ANCHOR BOLT WELLS

BRIDGE OVER FUTURE RT. 69 (RT. LANE)

STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
PROJECT NO. UI-99(7) (RT. 69) STA. 430+23.84

CLAY COUNTY

FINISHED

FINISHED

FINISHED

L-656

GENERAL NOTES:
Finish all surfaces marked *f*.
All fillets shall have 1/4" radius.
All material for castings shall be Cast Steel except as noted.
All pins, bolts, nuts, pipe sleeves and rolled steel shall be paid for as structural steel.
Anchor bolts for castings of Bents No. 1,2E5 shall be 1 1/2" swedged bolts with Hex nuts and shall extend 12" into concrete. Anchor bolts for castings of Bents No. 3E4 shall be 1 1/2" swedged bolts with Hex nuts and shall extend 15" into concrete.
Lead Plates under bearings shall be approximately 3/8" thickness and weigh 8#/Sq. Ft. Cost of lead plates shall be included in price bid for other items.

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

Sheet No. 10 of 19

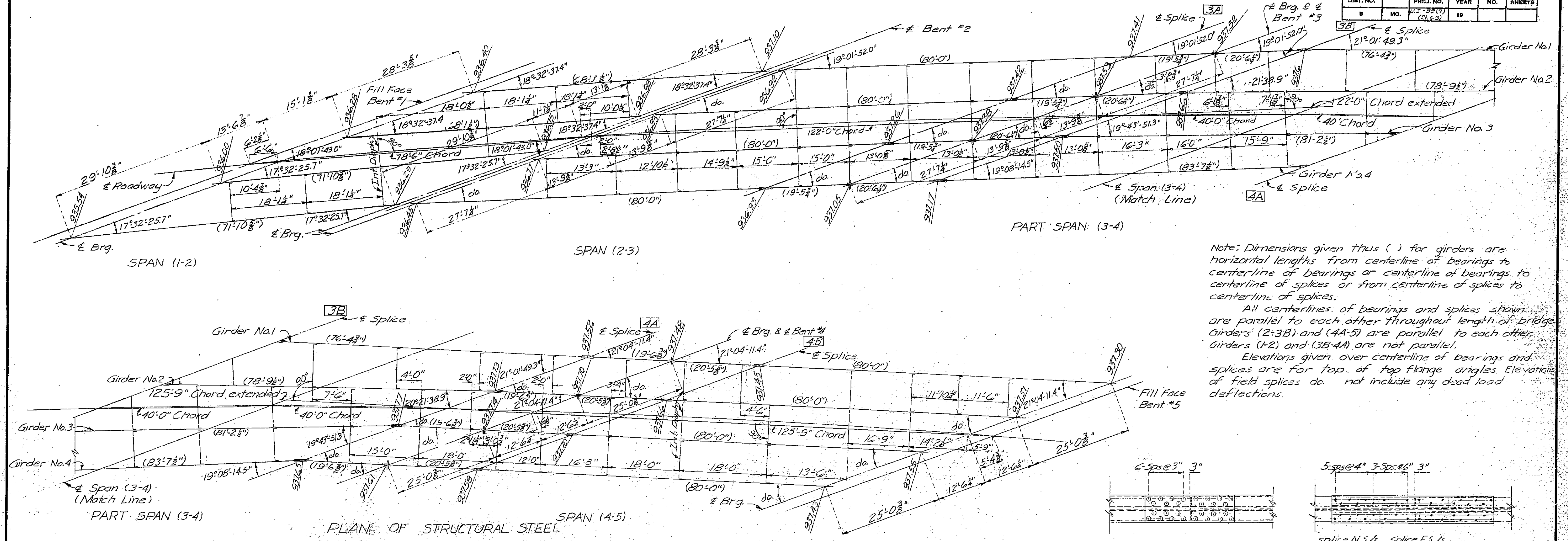
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82

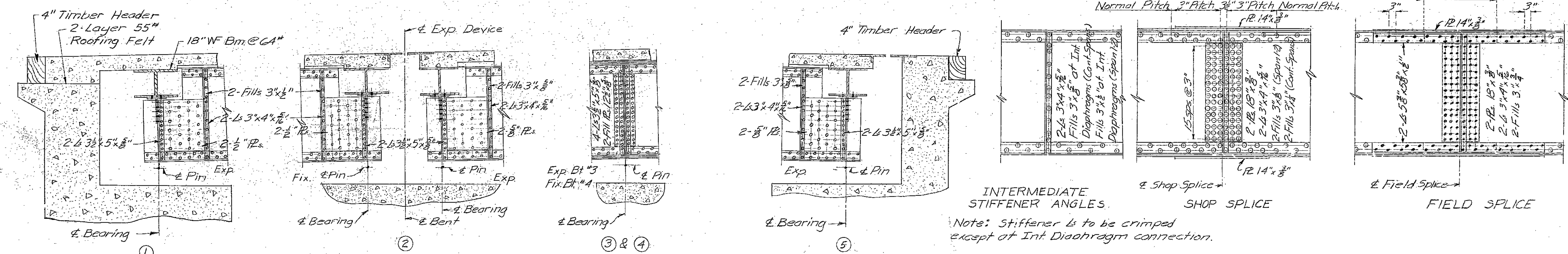
Assembled Sept. 1954 by J.E.L.W.G.S.
Checked Sept. 1954 by R.H.L.

MISSOURI STATE HIGHWAY DEPARTMENT

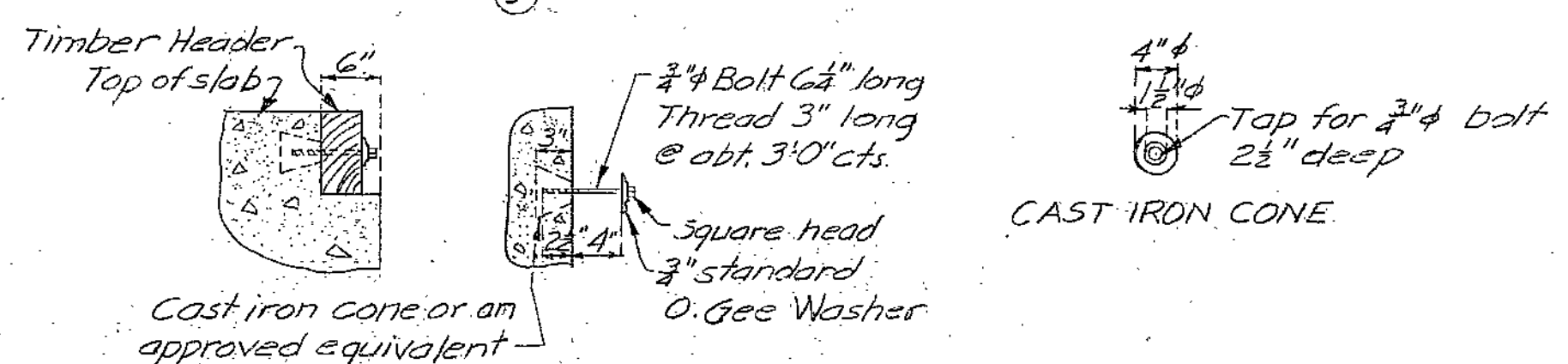
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	MO.	21-33(2) (81.69)	19		



Note: Dimensions given thus () for girders are horizontal lengths from centerline of bearings to centerline of bearings or centerline of bearings to centerline of splices or from centerline of splices to centerline of splices.
 All centerlines of bearings and splices shown are parallel to each other throughout length of bridge. Girders (2-3B) and (4A-5) are parallel to each other. Girders (1-2) and (3B-4A) are not parallel.
 Elevations given over centerline of bearings and splices are for top of top flange angles. Elevations of field splices do not include any dead load deflections.



PART LONGITUDINAL SECTION NEAR ROADWAY
 Note: Connection of 18" WF Bm. @ CA" to girders at Bt. No. 1 to be made similar to connection used at expansion device. For additional details of expansion device see sheet No. 12 of 19.



DETAILS OF TIMBER HEADER
 Note: Cost of timber header complete in place to be included in price bid for concrete.

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U.I-99(7) (RT. 69) STA. 430+23.84
 CLAY COUNTY FINISHED
 FINISHED FINISHED
 L-656

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

Sheet No. 11 of 19

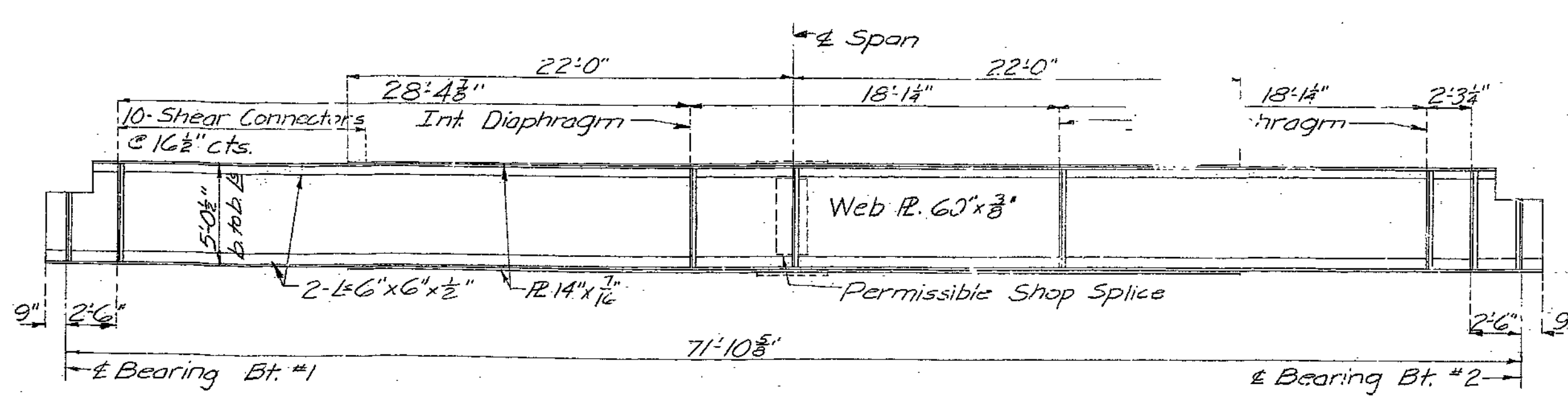
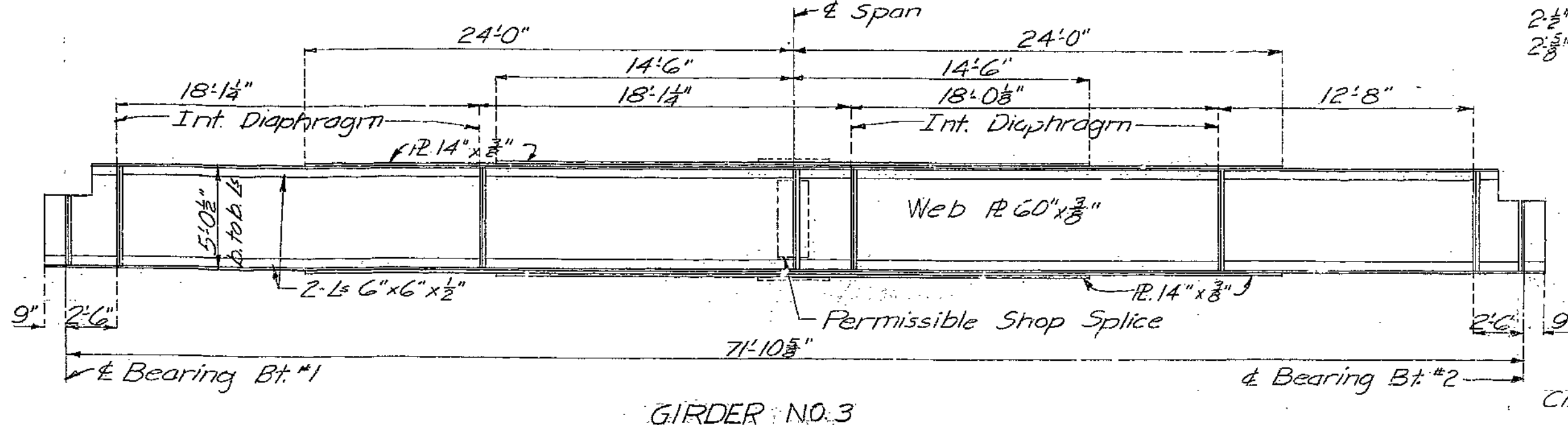
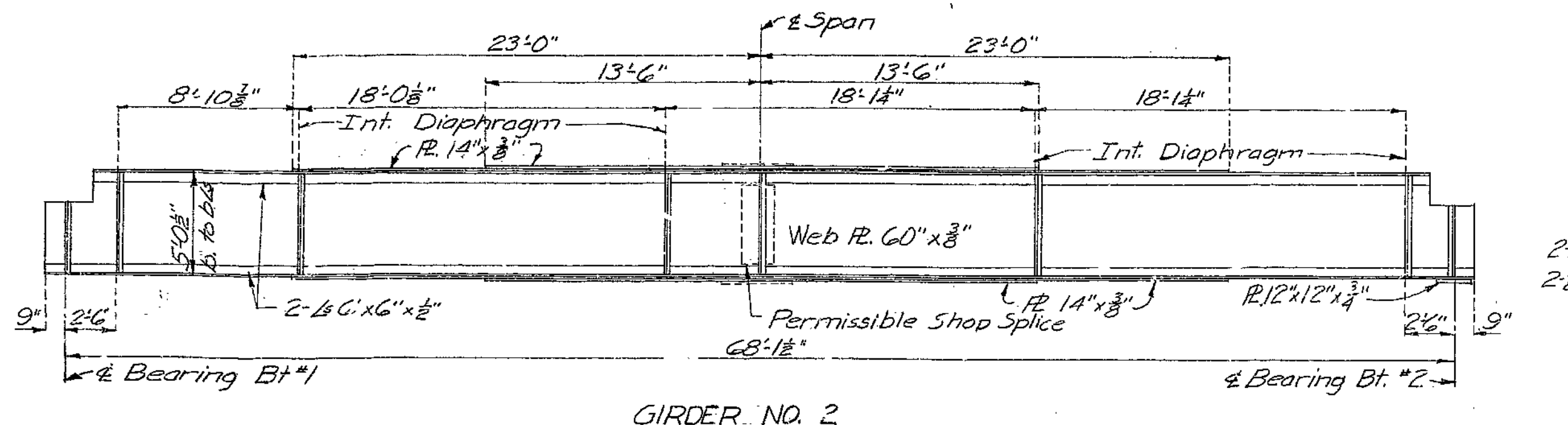
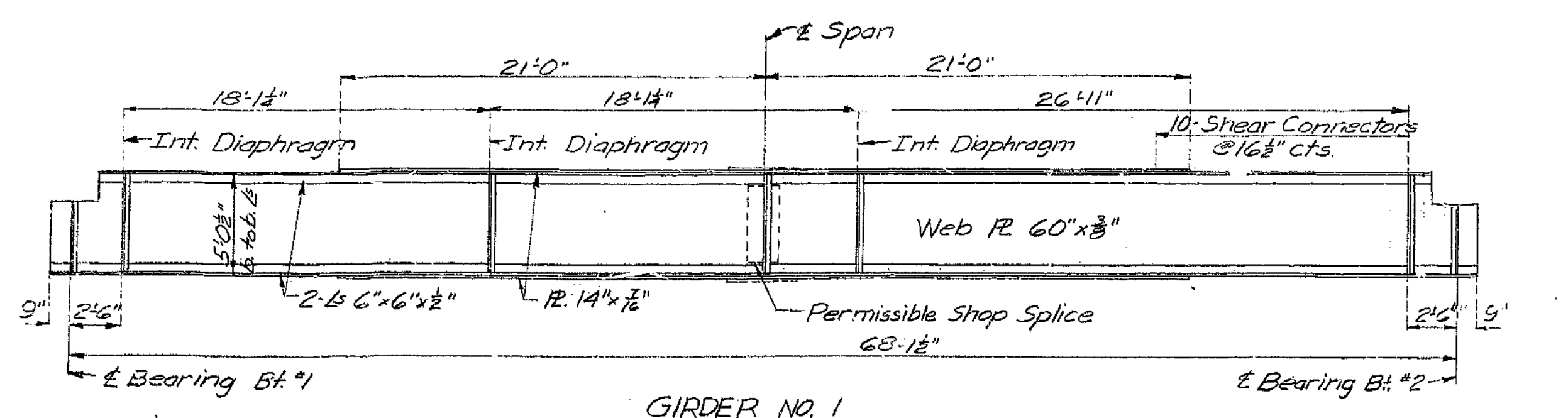
NO CONSTRUCTION CHANGES

82

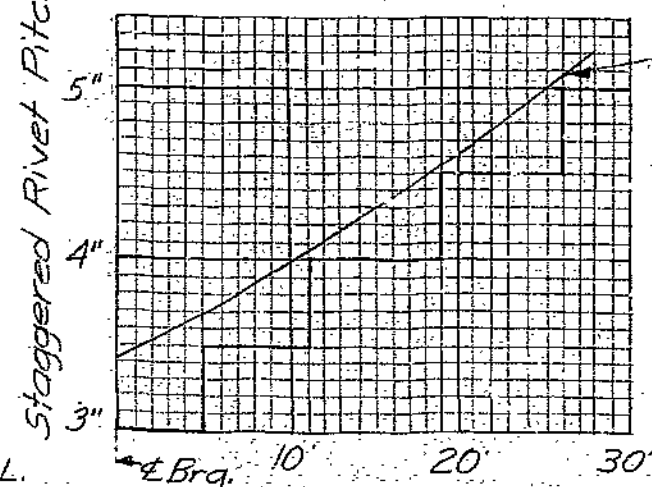
Drawn Aug. 1954 by J.E.L.
 Checked Sept. 1954 by R.H.L.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
0	MO.	U.I.-99(7) (R.T.69)	19		

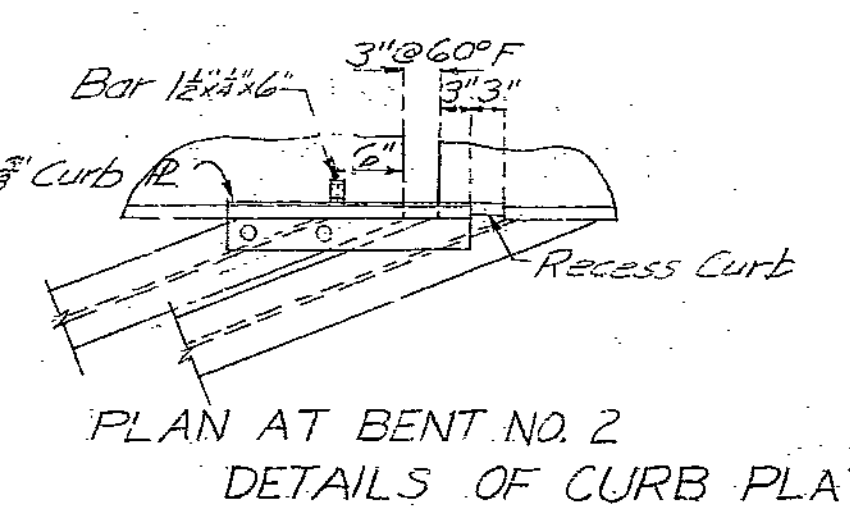
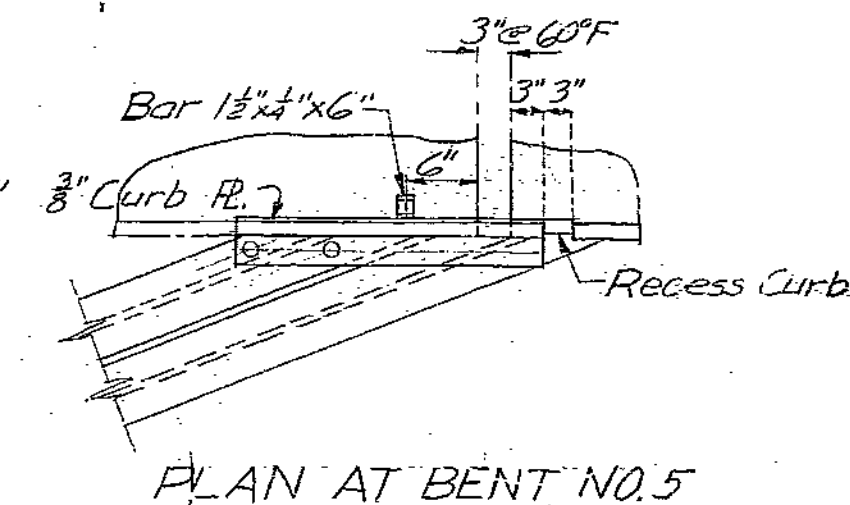
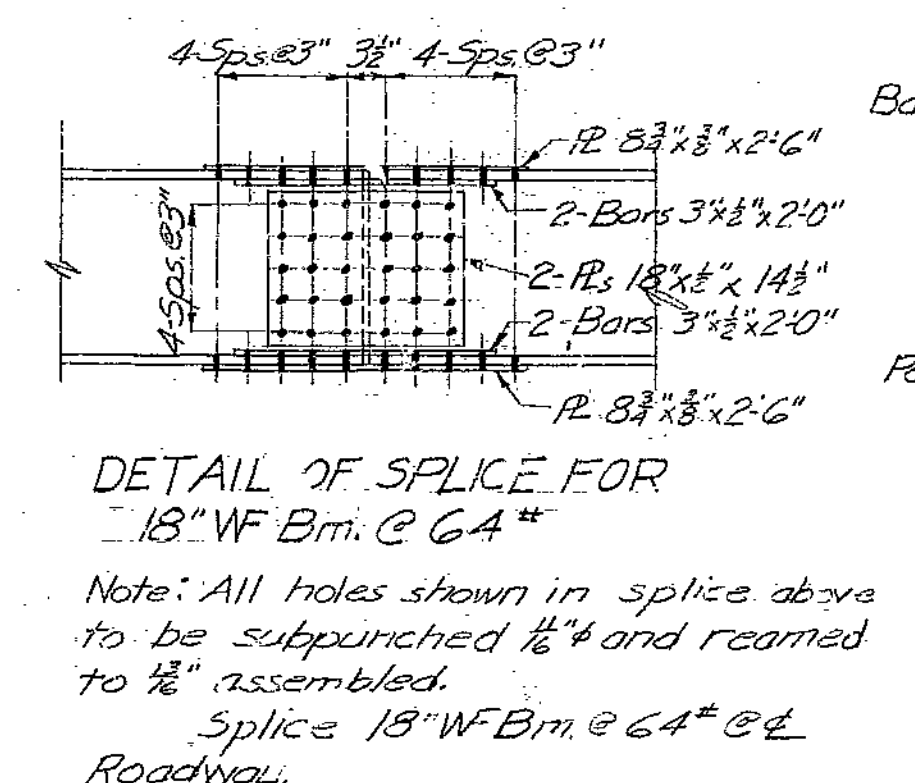
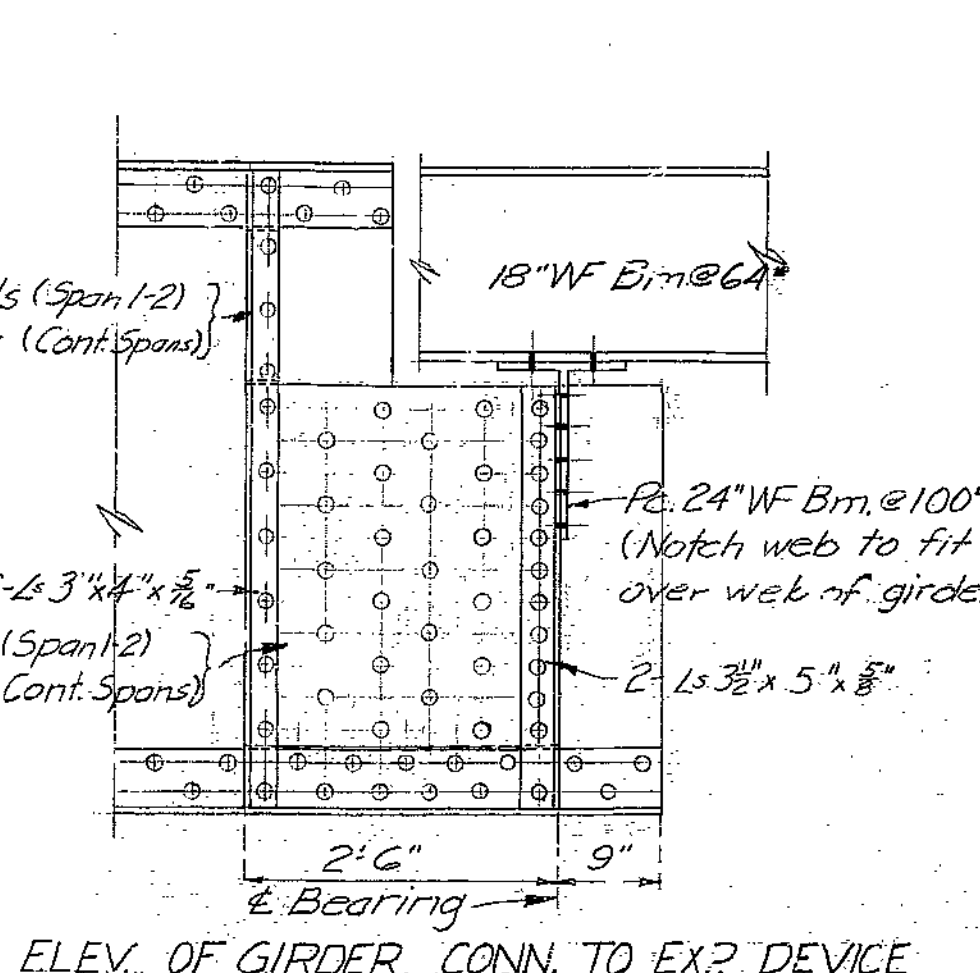
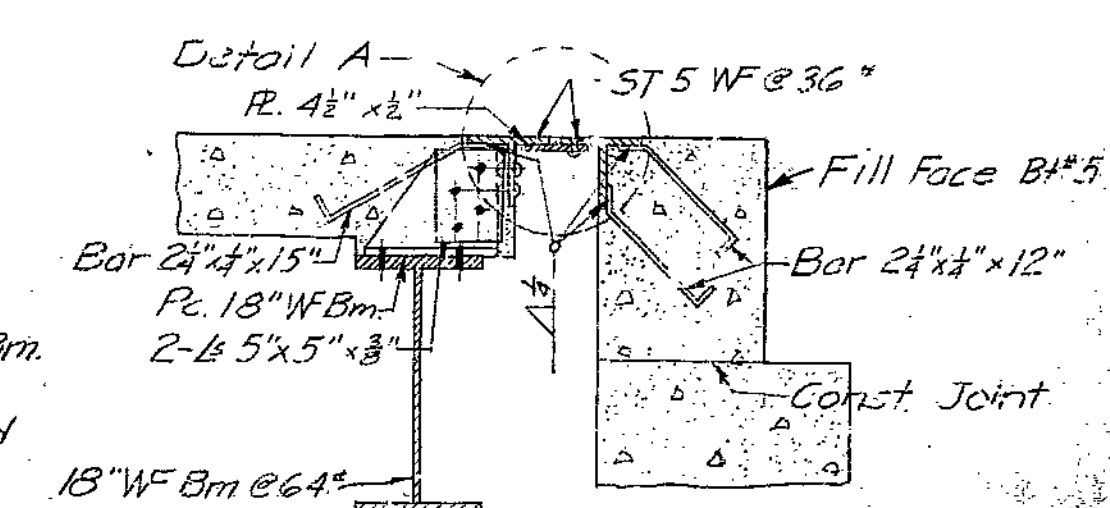
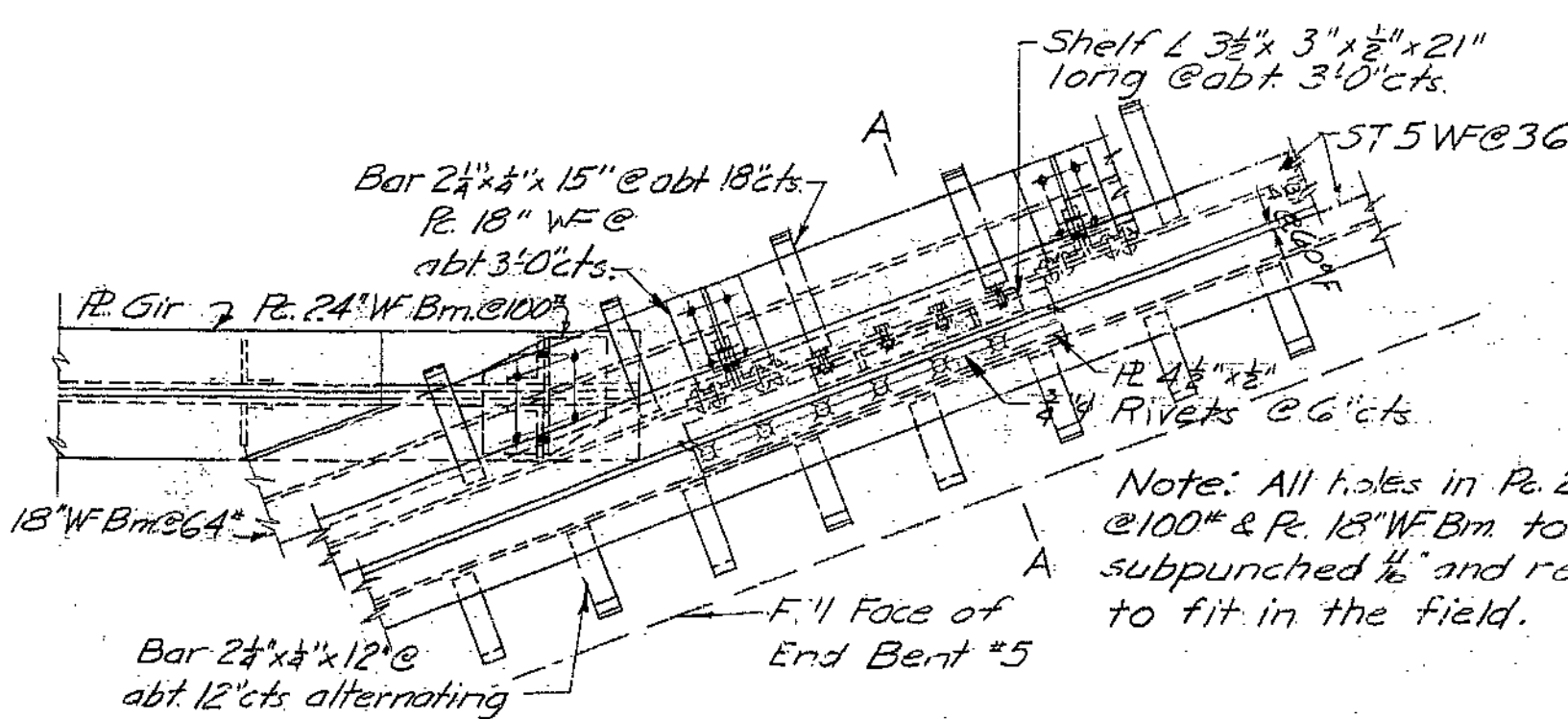


ELEVATION OF GIRDERS, SPAN (1-2)

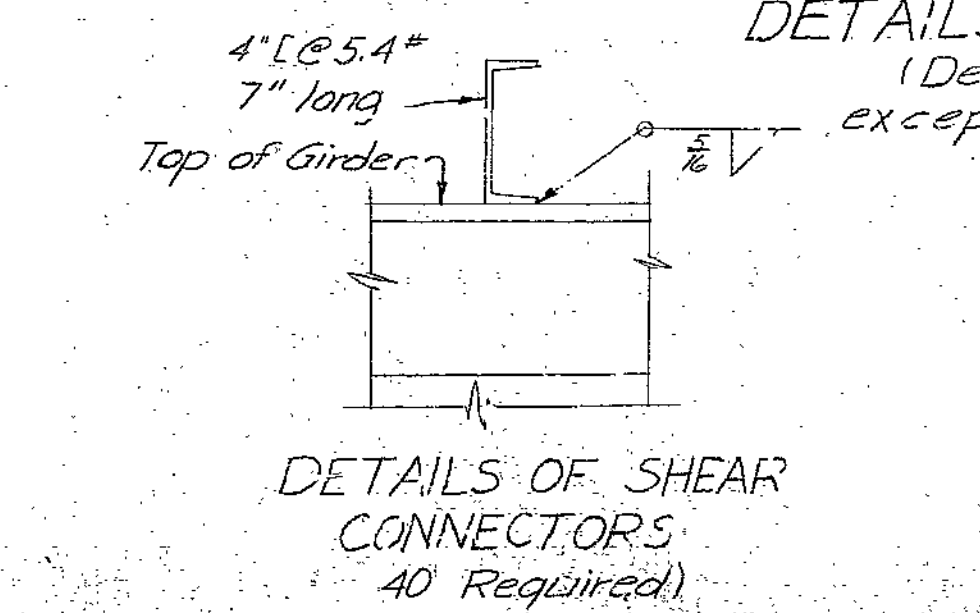


Note: Pitch of flange rivets shall not fall above heavy line.
Stagger pitch at ends of cover plates is not to exceed 3" for a distance of at least 21". Maximum staggered pitch in cover plates not to exceed 5".

Note: Intermediate stiffener angles are to be spaced at not more than 4'-3 1/2" cts. throughout all girders in span (1-2).
For details of intermediate stiffener angles and shop splice see sheet No. 11 of 19.



DETAILS OF EXPANSION DEVICE AT END BENT NO. 5 (Details of expansion device at Bent No. 2 similar except both sides are to be connected to girders.)



BRIDGE OVER FUTURE RT. 69 (RT. LANE)
STATE ROAD FROM ANTIPOCH ROAD IN NORTH KANSAS CITY N.E.
ABOUT 5 MILE N.E. OF NORTH KANSAS CITY
PROJECT NO. U.I.-99(7) (RT. 69) STA. 430+23.84
CLAY COUNTY

Drawn Aug. 1954 by J.E.L.
Checked Sept. 1954 by R.H.L.

FLANGE RIVET PITCH SPAN (1-2)

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

Sheet No. 12 of 19 FINISHED

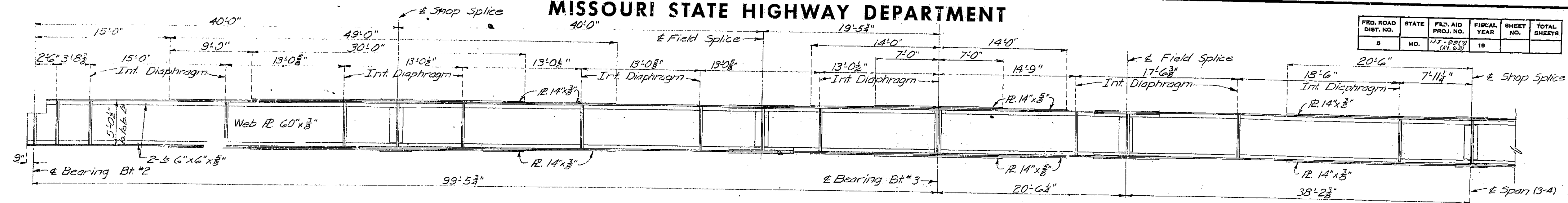
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L-656

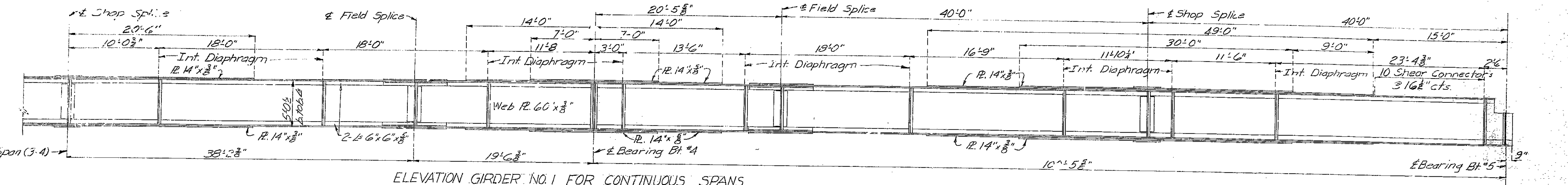
NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

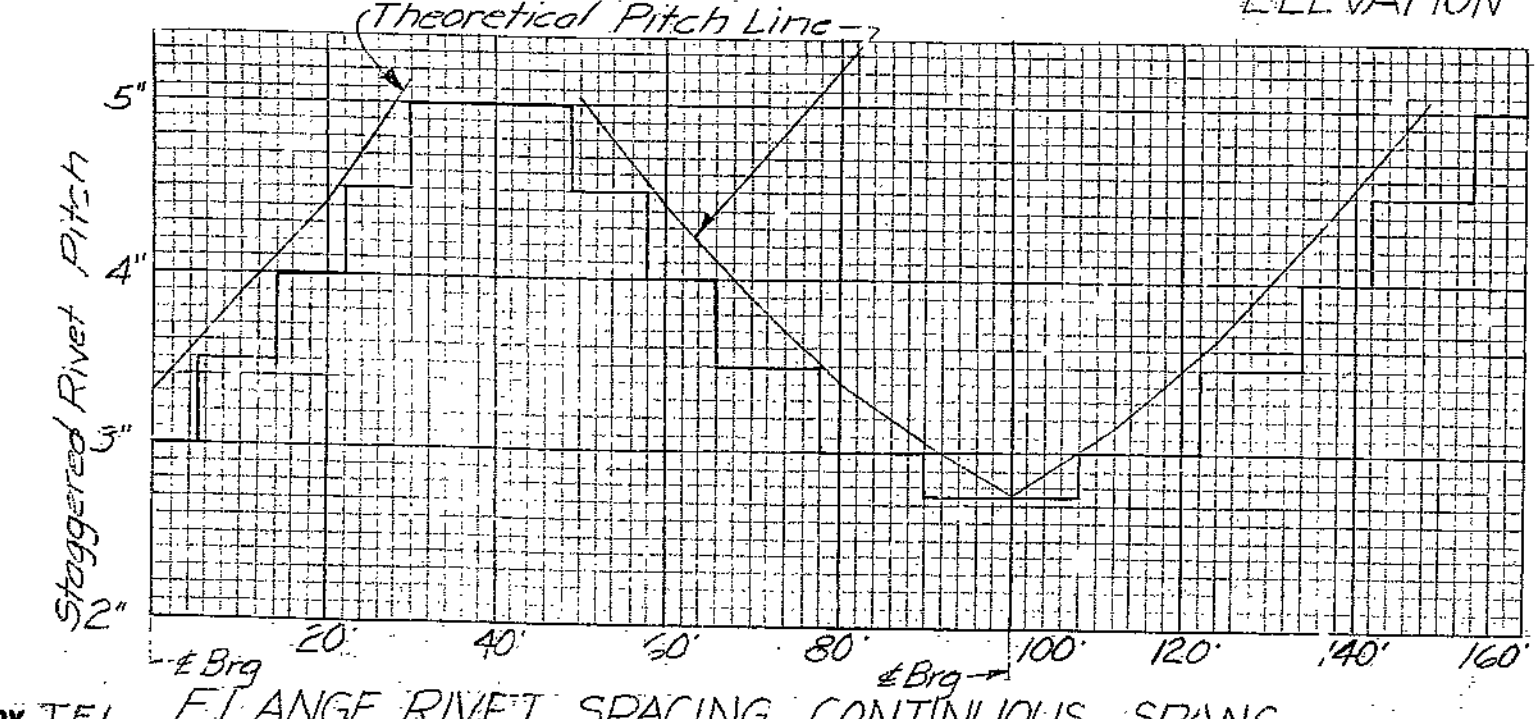
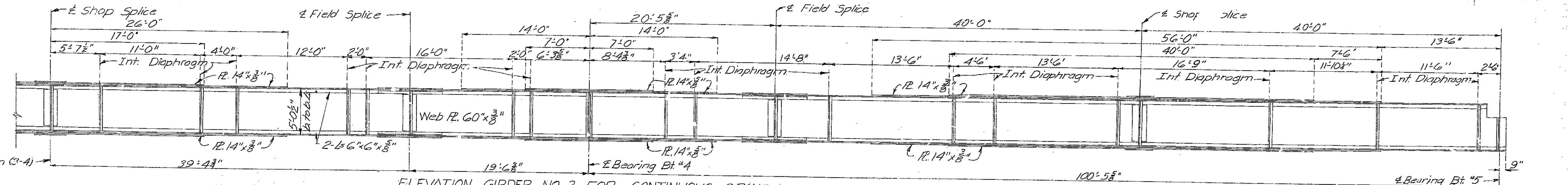
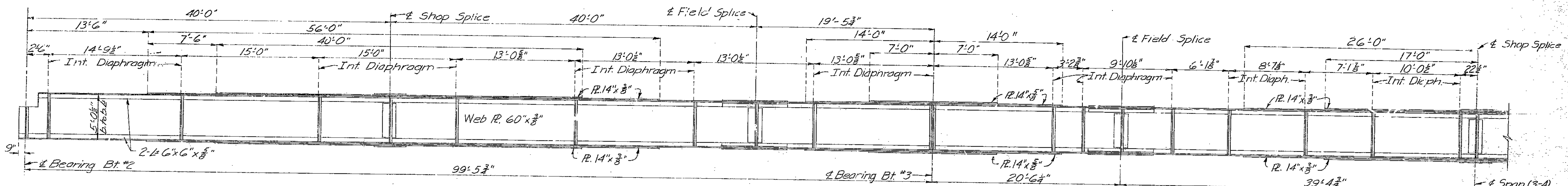
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8	MO.	117-99(7) 01-69	19		



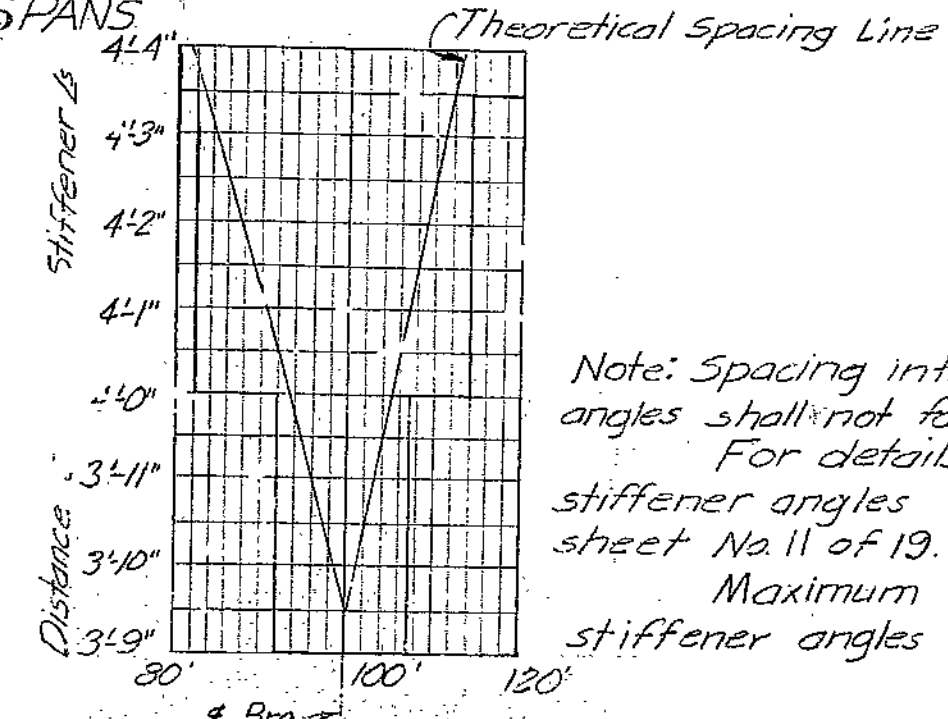
ELEVATION GIRDER NO. 1 FOR CONTINUOUS SPANS



ELEVATION GIRDER NO. 2 FOR CONTINUOUS SPANS



Note: Pitch of flange rivets shall not fall above heavy line. Stagger pitch at ends of cover plates is not to exceed 3" for a distance of at least 21".



Note: Spacing intermediate stiffener angles shall not fall above heavy line. For details of intermediate stiffener angles and splices see sheet No. 11 of 19. Maximum spacing of intermediate stiffener angles not to exceed 4'3 1/2".

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U.I-99(7) (RT. 69) STA. 430+23.84
 CLAY COUNTY

Drawn Aug. 1954 by J.E.L.
 Checked Sept. 1954 by R.H.L.

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

Sheet No. 13 of 19

FINISHED

FINISHED

FINISHED

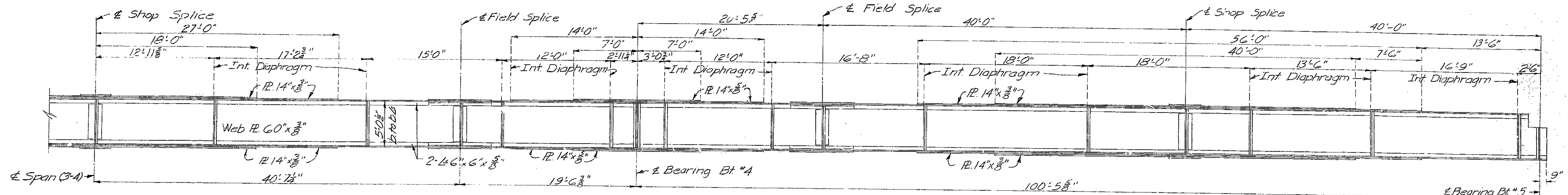
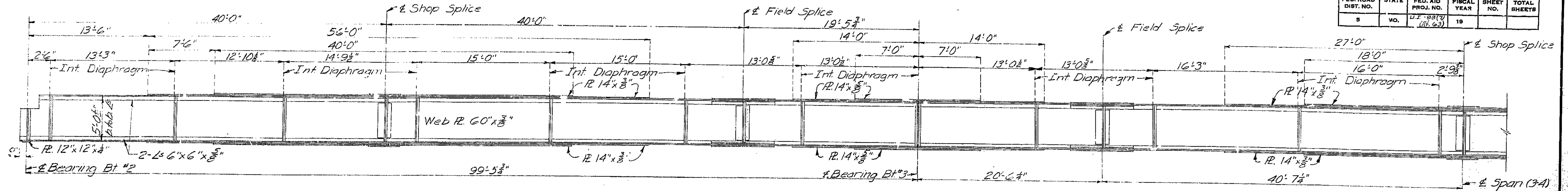
L-656

NO CONSTRUCTION CHANGES

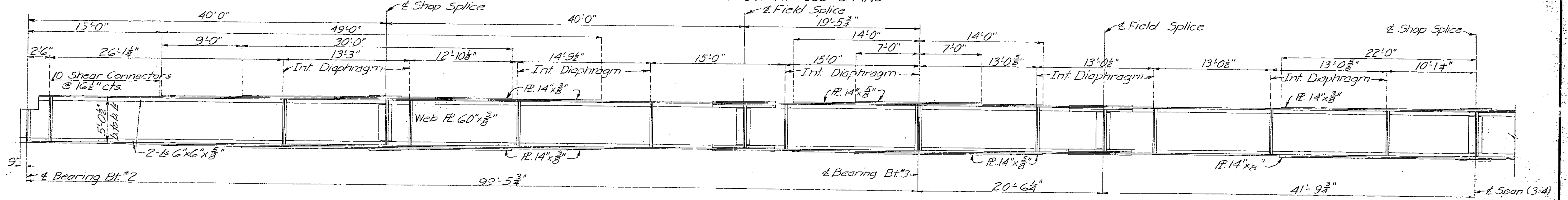
85

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	MO.	U.I.-99(7) (R.T. 69)	19		



ELEVATION GIRDER NO. 3 FOR CONTINUOUS SPANS



ELEVATION GIRDER NO. 4 FOR CONTINUOUS SPANS

Note: For flange rivet pitch and intermediate stiffener angle spacing see Sheet No. 13 of 19.

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILE N.E. OF NORTH KANSAS CITY
 PROJECT NO. J.I.-99(7) (RT. 69) STA. 430+23.84
 CLAY COUNTY FINISHED

Drawn Aug. 1954 by J.E.L.
 Checked Sept. 1954 by R.H.L.

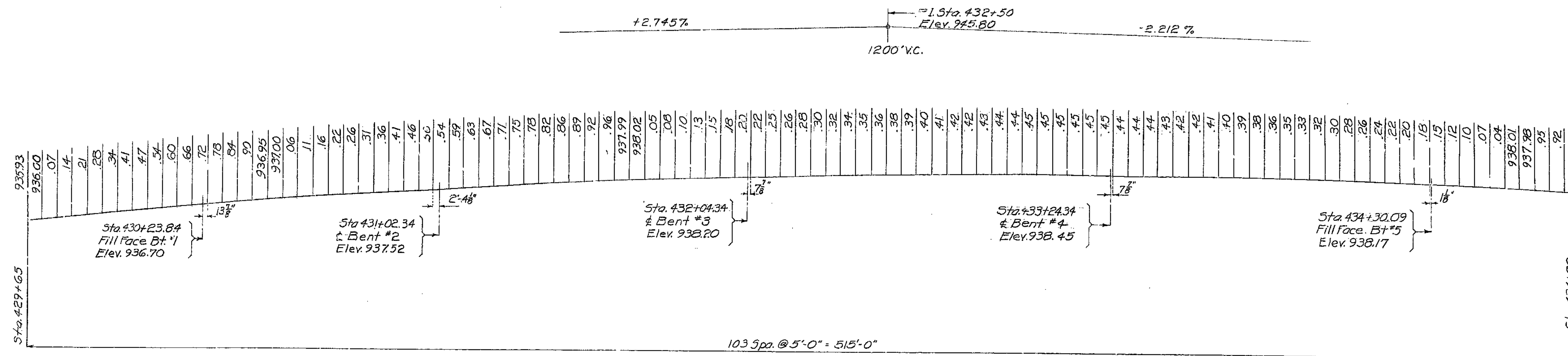
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 14 of 19 FINISHED
 NO CONSTRUCTION CHANGES

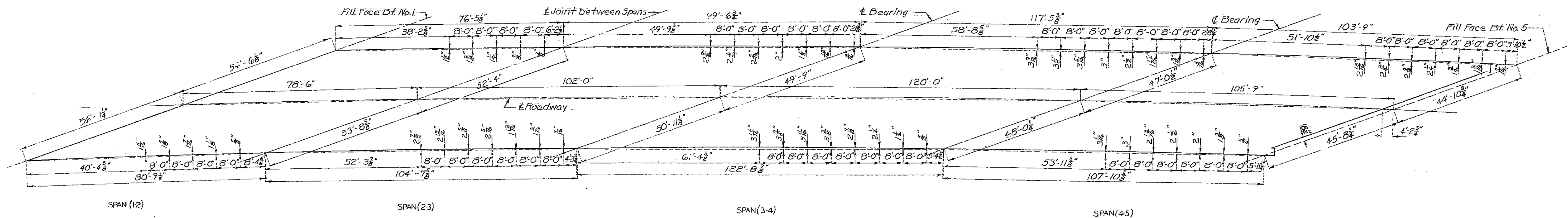
L-656

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U.I.-39(7) (12.63)	19		



GRADE ELEVATIONS ALONG C ROADWAY



Note: All dimensions shown are parallel to grade at top surface of Roadway Slab.

PLAN OF SLAB SHOWING ORDINATE DIMENSIONS

87

Drawn Sept. 1954 by H.G.M.
Checked Sept. 1954 by R.H.L.

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

Sheet No. 15 of 19

FINISHED

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
STATE ROAD FROM ANTIQC ROAD IN NORTH KANSAS CITY N.E.
ABOUT 5 MILE N.E. OF NORTH KANSAS CITY
PROJECT NO. U.I.-99(7) (RT. 69) STA. 430+23.84

CLAY COUNTY

FINISHED

FINISHED

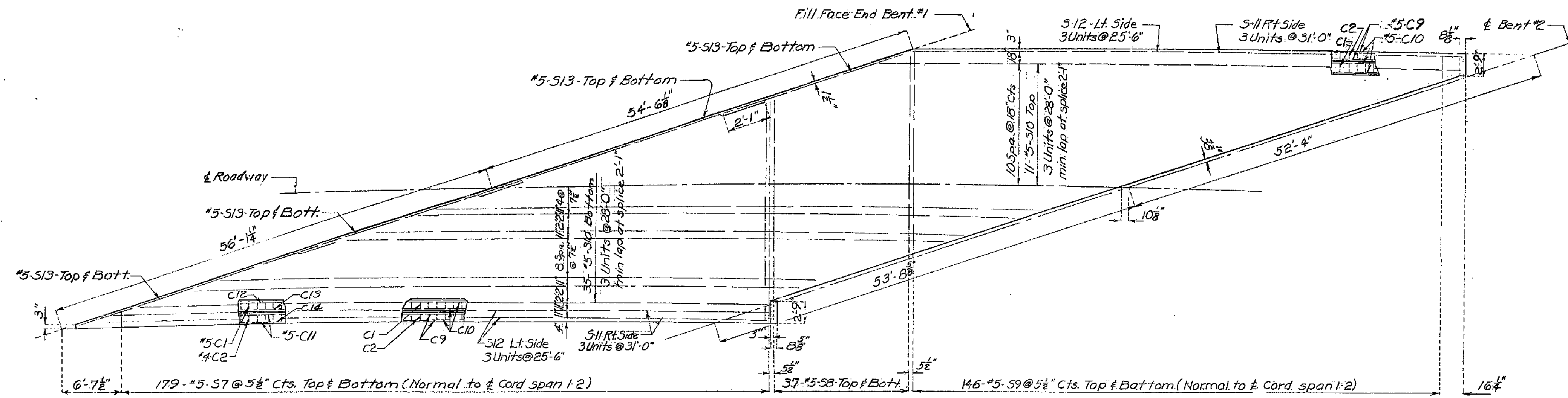
L-656

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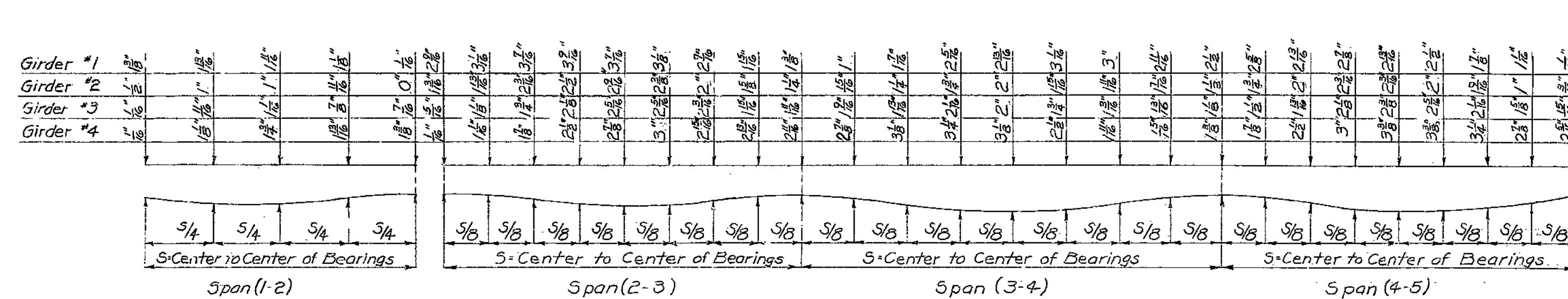
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U.S. 38(7) (R. 69)	19		

Note: See Sheet 18 of 19 for curb and end Post details.

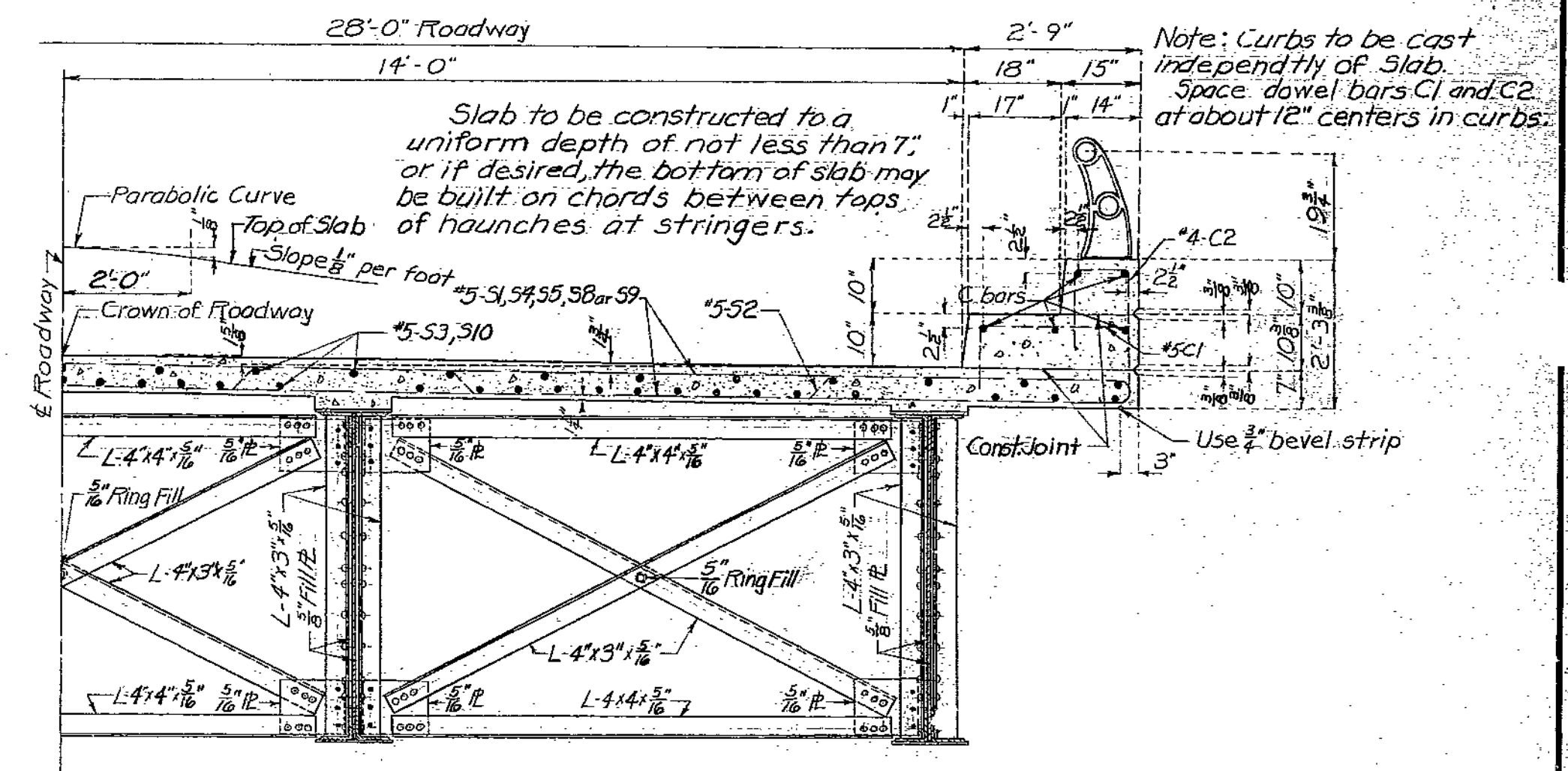


PART PLAN OF SLAB SHOWING REINFORCEMENT SPAN (1-2)

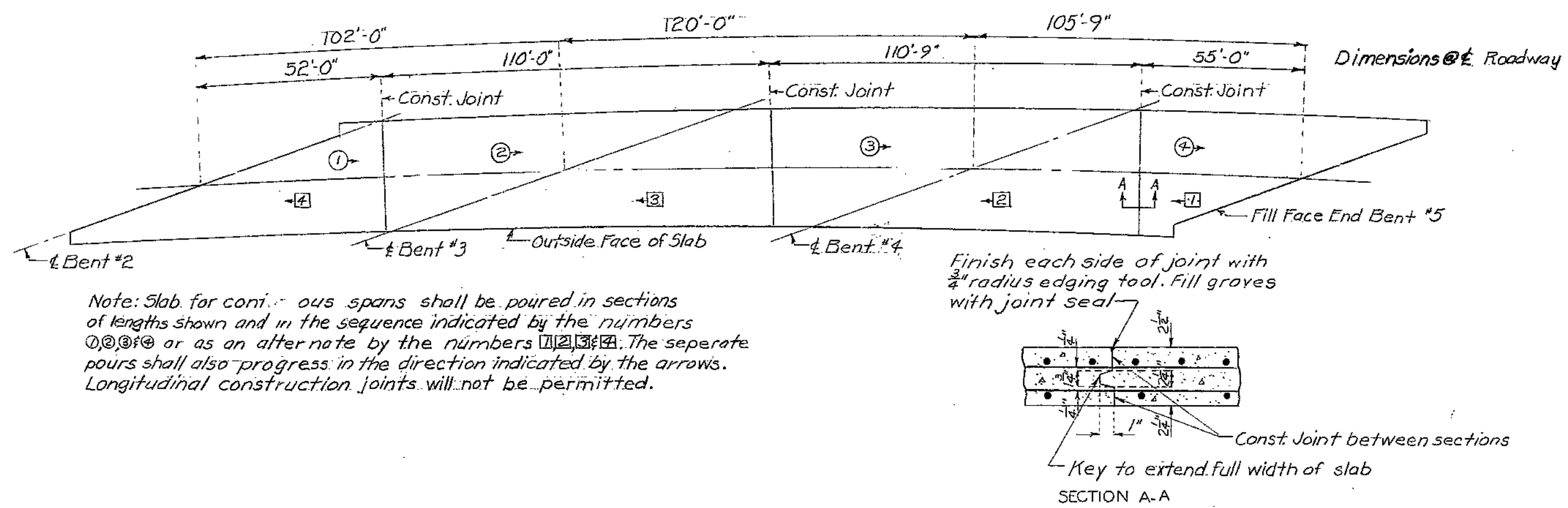


Note: Slab shall be built parallel to grade and to a uniform thickness of 7". Dead load deflection, crown, and vertical curve shall be taken care of by haunching to girders by the amounts shown above. Depth of haunches shown above are to back of angles of girders. This additional concrete is included in Estimated Quantities.
 After all structural steel has been erected and riveted and before forming for slab, elevations shall be taken at top of all girders and checked against theoretical elevations as given on sheet No. 11. Any discrepancies in theoretical elevations of tops of girders shall be corrected for by increasing or decreasing slab haunches in diagram.

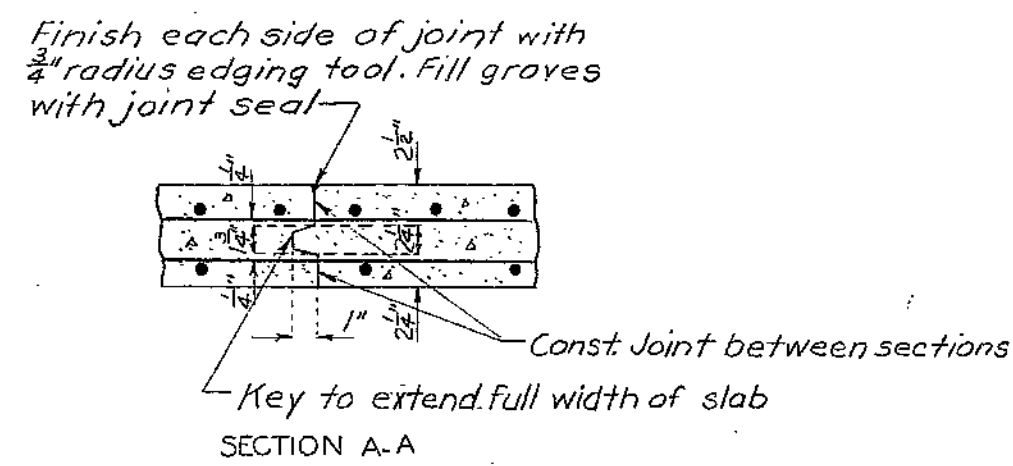
SLAB HAUNCHING DIAGRAM



TYPICAL RADIAL HALF SECTION THRU SPANS



Note: Slab for continuous spans shall be poured in sections of lengths shown and in the sequence indicated by the numbers ①, ②, ③, ④ or as an alternate by the numbers ①, ②, ③, ④. The separate pours shall also progress in the direction indicated by the arrows. Longitudinal construction joints will not be permitted.



CONTINUOUS SLAB POURING SEQUENCE

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

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U.I.-99(7) (RT. 69) STA. 430+23.84
 CLAY COUNTY FINISHED

Drawn Aug. 1954 by H.G.M.
 Checked Sept 1954 by R.H.L.

Sheet No. 16 of 19

FINISHED

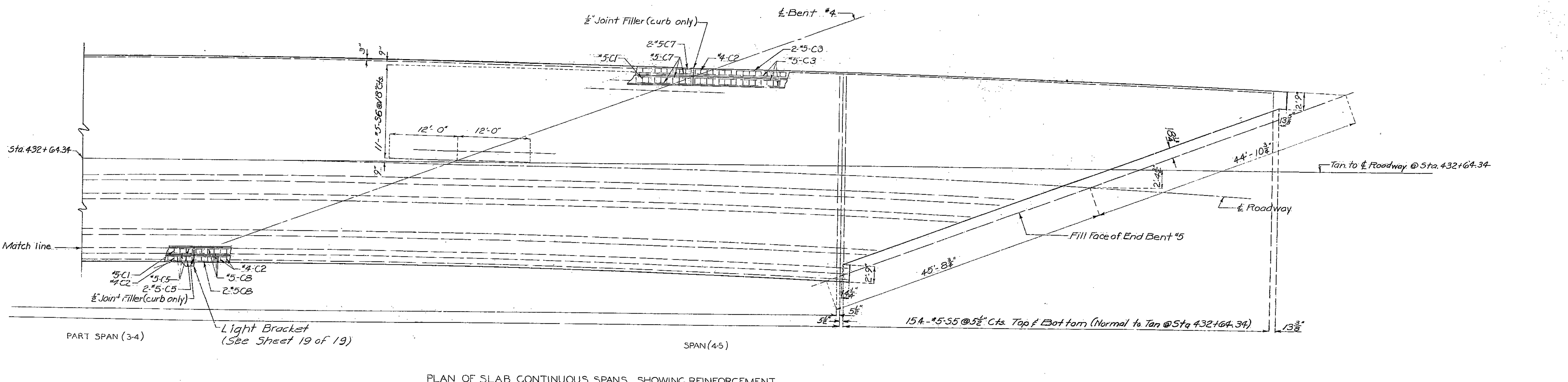
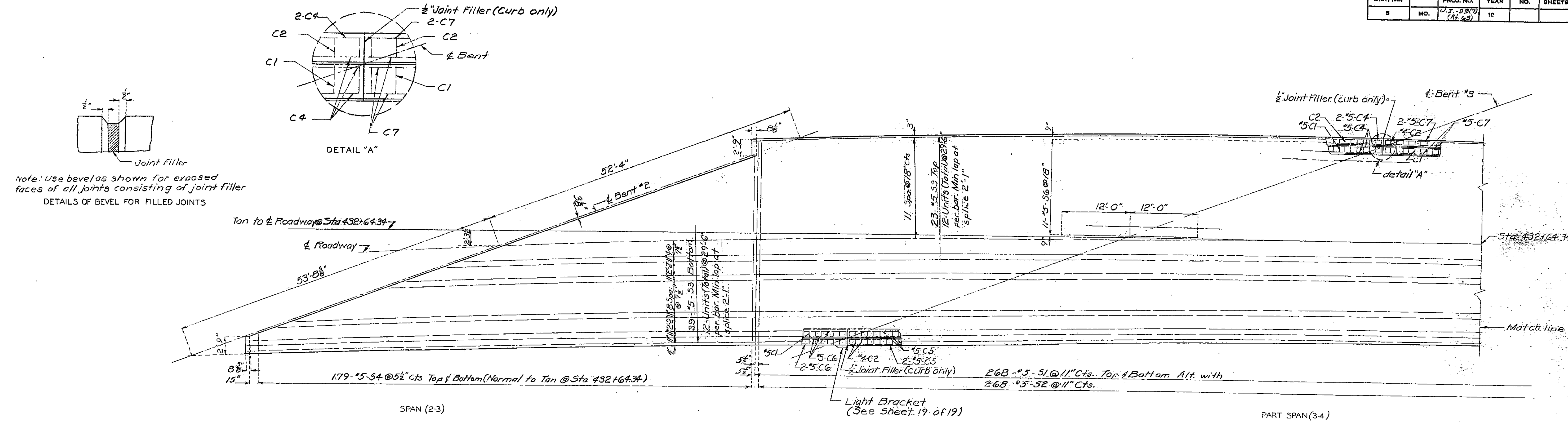
FINISHED

L-656

NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	MO.	21-537 (Rt. 69)	12		



PLAN OF SLAB CONTINUOUS SPANS SHOWING REINFORCEMENT

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIPOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U.I.-99(7) (RT. 69) STA. 430+23.84
 CLAY COUNTY

FINISHED FINISHED FINISHED
 L-656

Drawn Aug. 1954 by H.G.M.
 Checked Sep. 1954 by R.H.L.

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

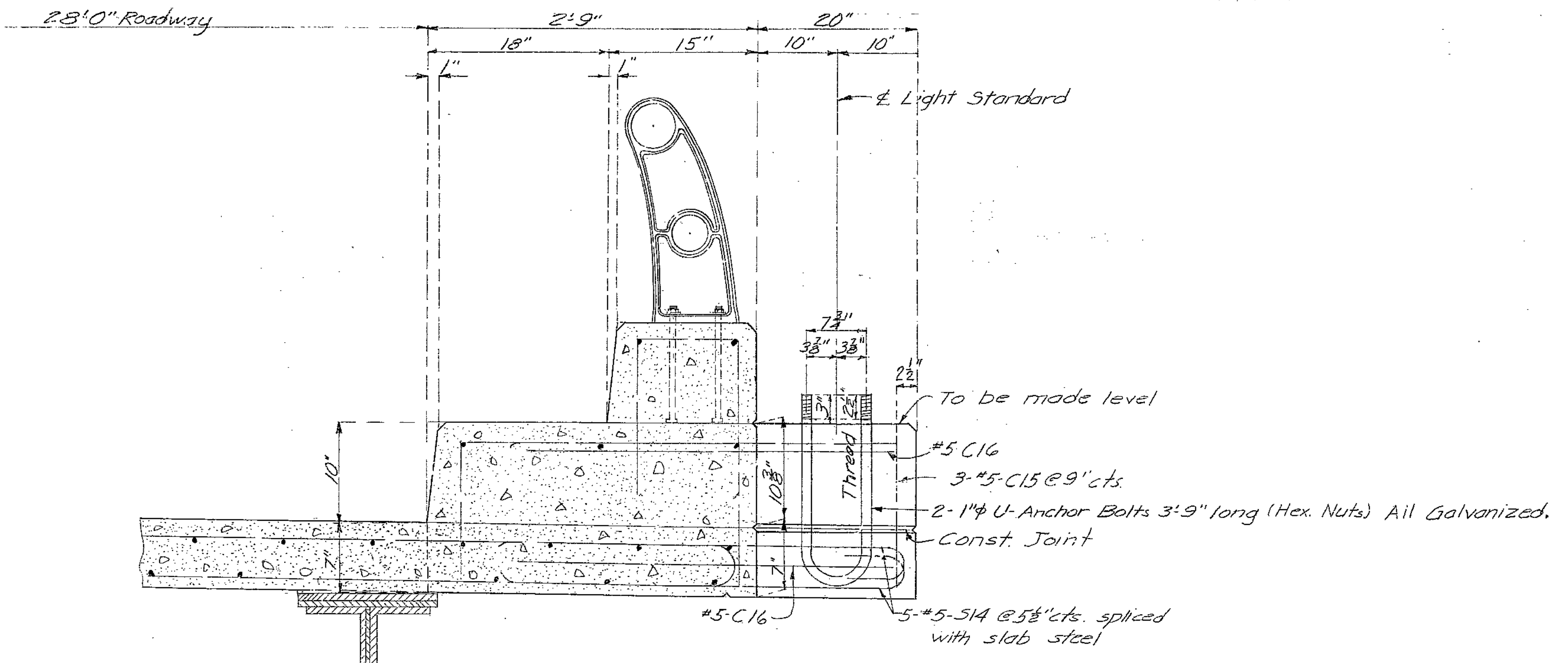
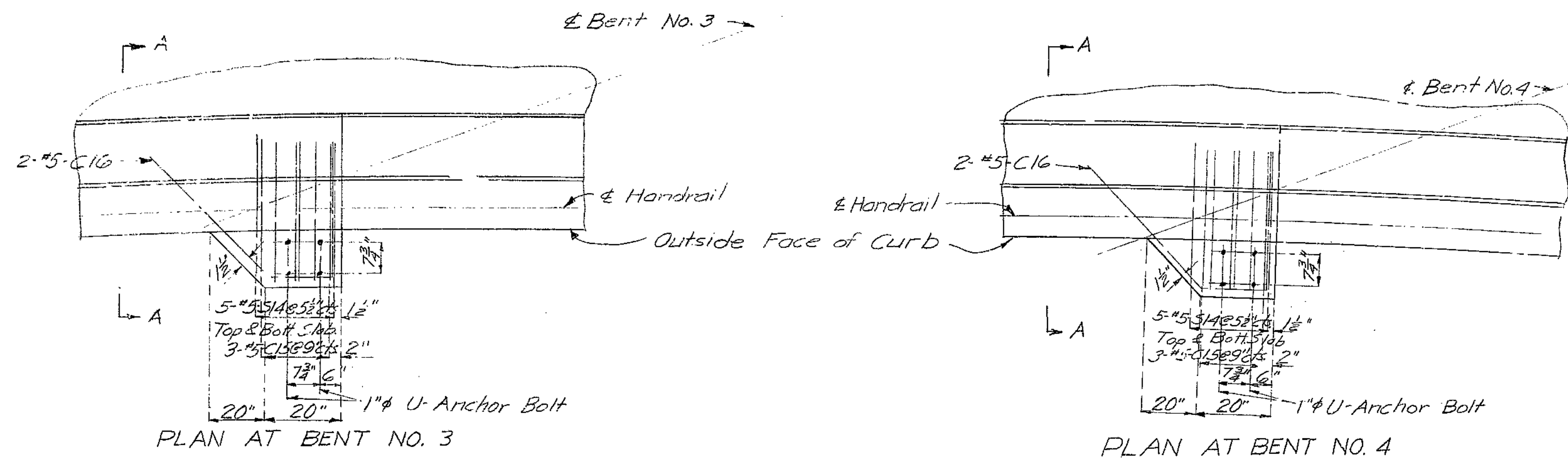
Sheet No. 17 of 19

NO CONSTRUCTION CHANGES

68

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U.I.-99(7) (L-62)	19		



Note: Cost of 1" U-Anchor bolts shall be included in price bid for "Class B Concrete."
Light standards will be furnished and placed by others.

SECTION A-A
LIGHT STANDARD MOUNTING

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY NE
ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
PROJECT NO. U.I.-99(7) (RT. 69) STA. 430+23.84

CLAY COUNTY

Drawn Aug 1954 by J.E.L.
Checked Sept. 1954 by R.H.L.

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

Sheet No. 19 of 19

FINISHED

FINISHED

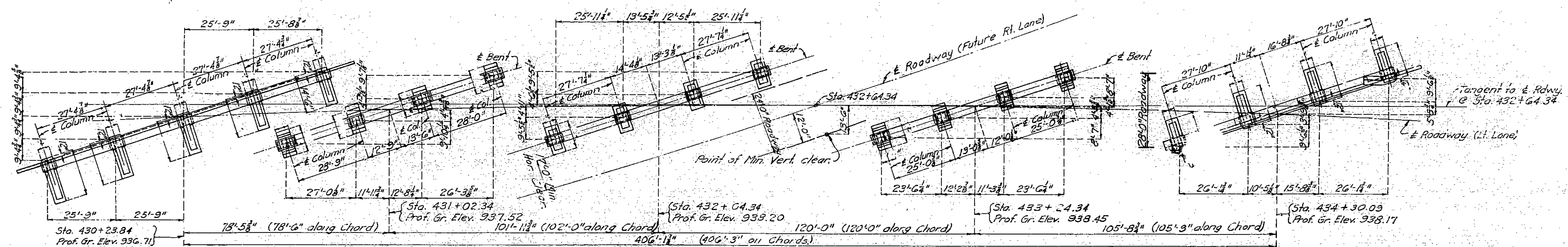
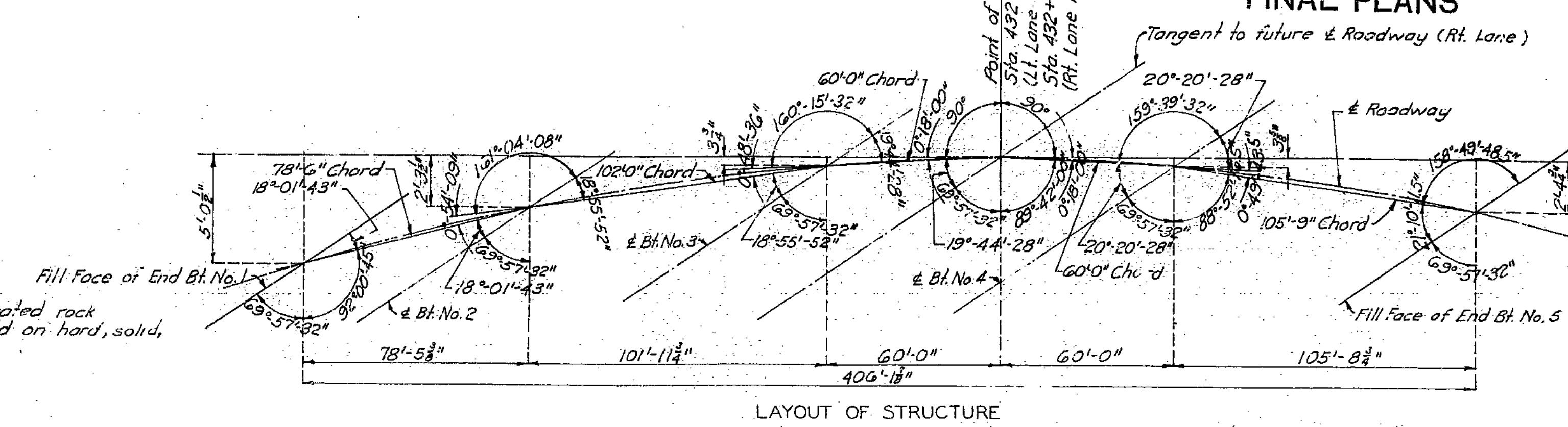
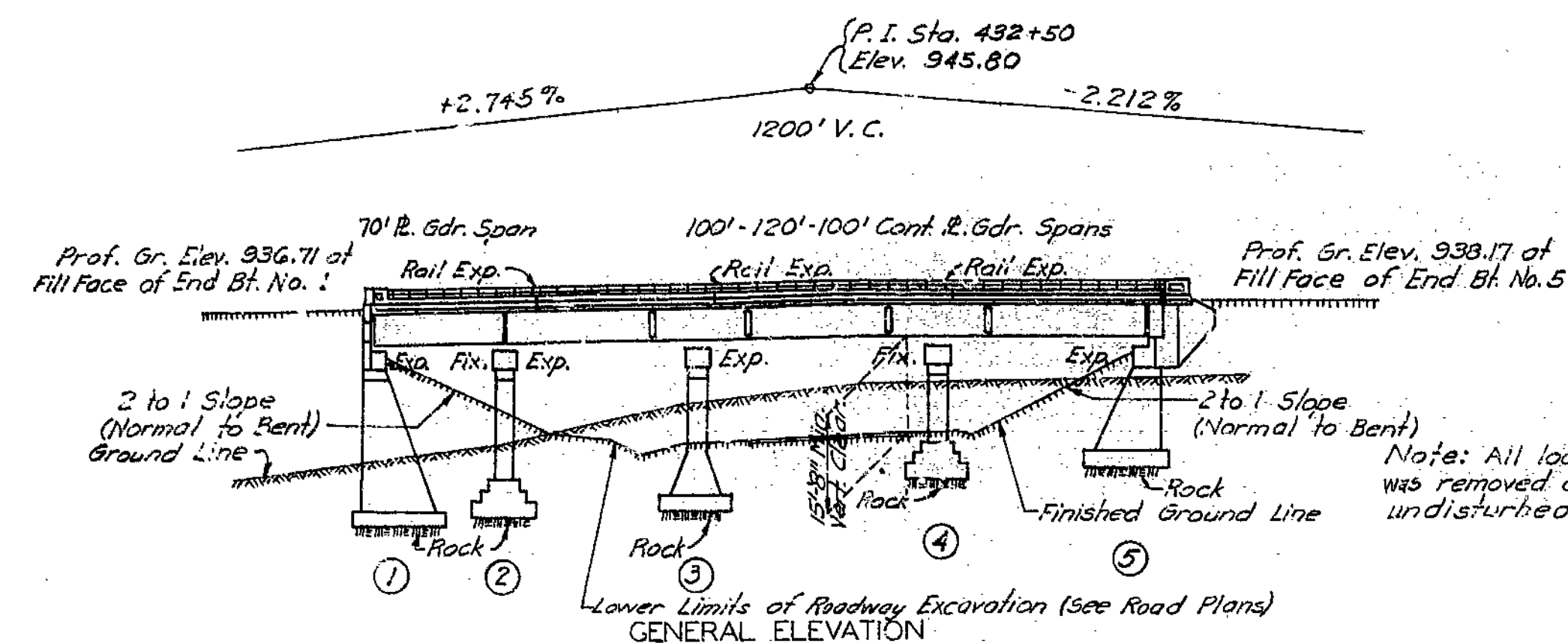
FINISHED
L-656

NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	PL. CAL. YL. R.	SHEET NO.	TOTAL SHEETS
5	MO.	UI-99(7)	19		

FINAL PLANS



PLAN

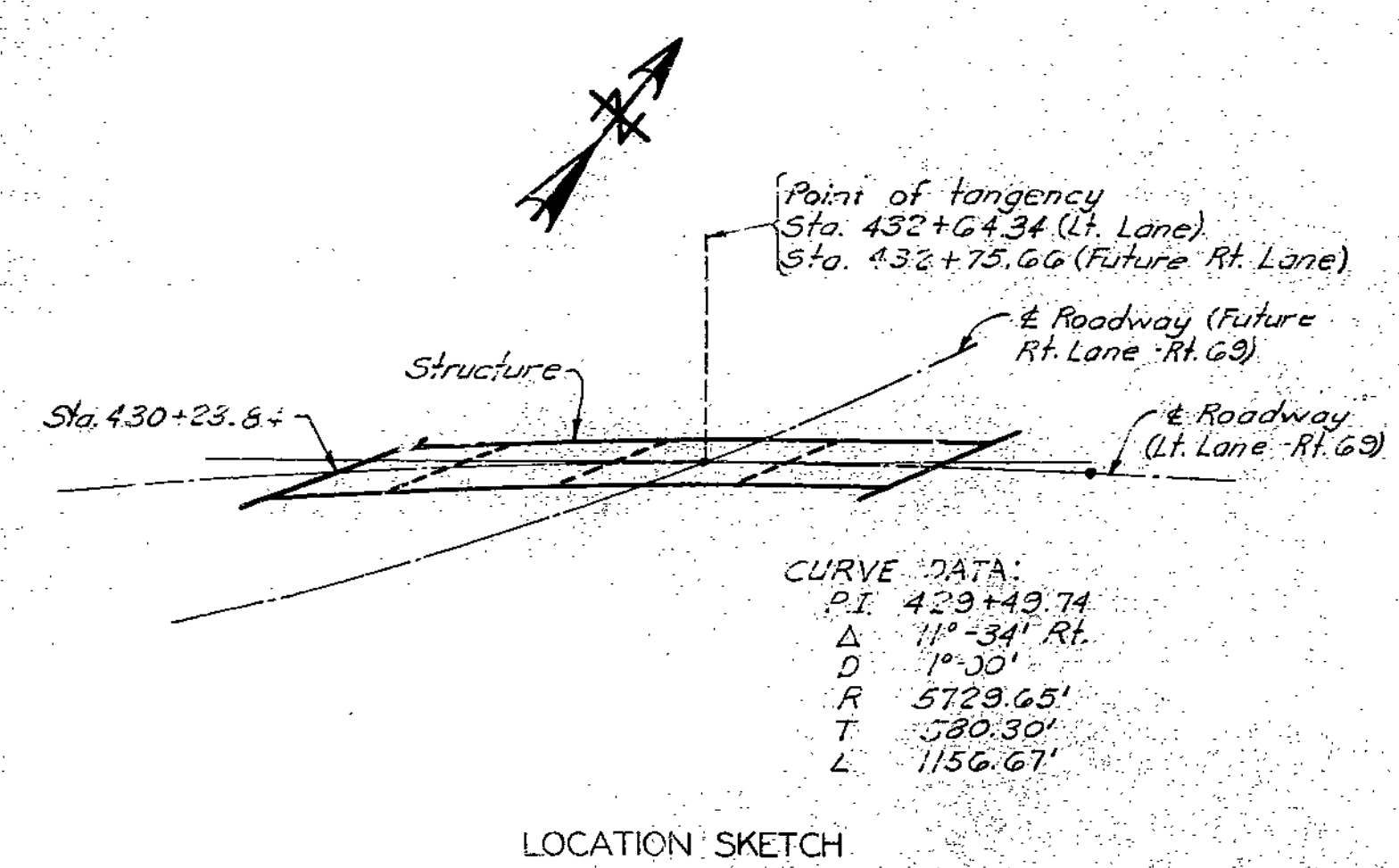
GENERAL NOTES:

Design Specifications: A.A.S.H.O. - 1953
 Loading: 120-S16-44
 Structural Steel Stress: 18,000 psi
 Reinforcing Steel Stress: 18,000 psi
 Concrete, Class "B" Stress: 4,000 psi
 All concrete shall be Class "B" (Air-Entrained)
 Rivets 3/4", holes 1/2" excess as noted.
 Field connections were made by high tensile steel bolts with carborundum washers in place of rivets. (See Special Provisions) for requirements on welding electrodes see Special Provisions. Qualification of welding operators was required.
 All girders over 50 feet in length were shipped by rail to the specified shipping point.
 Where joint filler is specified on the plans it conform with the requirements for Gray Rubber Compound Joints as given in section 38-19B(2) of the Standard Specifications.
 A rubbed surface finish was required on all exposed surfaces of concrete end posts above top of curbs.
 Paint: Shop, none; Field, contact surfaces of bolted field connections, except where high tensile bolts are used, one coat of red lead and surfaces inaccessible after erection three coats of red lead. All other exposed surfaces first coat red lead, second coat brown, third coat aluminum. Payment for cleaning and painting such surfaces was included in price bid for items painted.

Item	FINAL QUANTITIES		
	Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yds. 1007.0		1007.0
Class "B" Concrete	Cu. Yds. 611.5	403.5	1015.0
Fabricated Structural Steel	Lbs. 476,580		476,580
Aluminum Alloy Handrail	Lin. Ft. 793		793
Steel Castings	Lbs. 941.0		941.0
Reinforcing Steel	Lbs. 67,990	94,310	162,300
Contingent Item: Class 1 Exc. Below Plan Grade	37.5		37.5
Contingent Item: Foundation Test Holes	190		190

Note: Concrete in end posts at Bent No. 1 is included with superstructure concrete. Concrete in end posts at Bent No. 5 is included with substructure concrete.
 All excavation for bridge will be paid for as Class 1 Excavation for Structures.
 Estimated quantities of Class 1 Excavation for Structures includes only amount of excavation below Roadway Excavation (See Special Provisions).
 B.M. Elev. 938.07 on Right wing Abut. #5

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. UI-99(7) (RT. 69) STA. 430+23.84
 CLAY COUNTY



CURVE DATA:

P.I.	433+49.74
Δ	11°-34' Rt.
D	19'-30'
R	5729.65'
T	580.30'
L	1156.67'

LOCATION SKETCH

Designed Oct. 1954 by J.E.L.
 Drawn Sept. 1954 by M.H.P.
 Checked Sept. 1954 by R.H.L. & H.J.K.

Note: This drawing is not to scale, follow dimensions.

Sheet No. 1A of 8

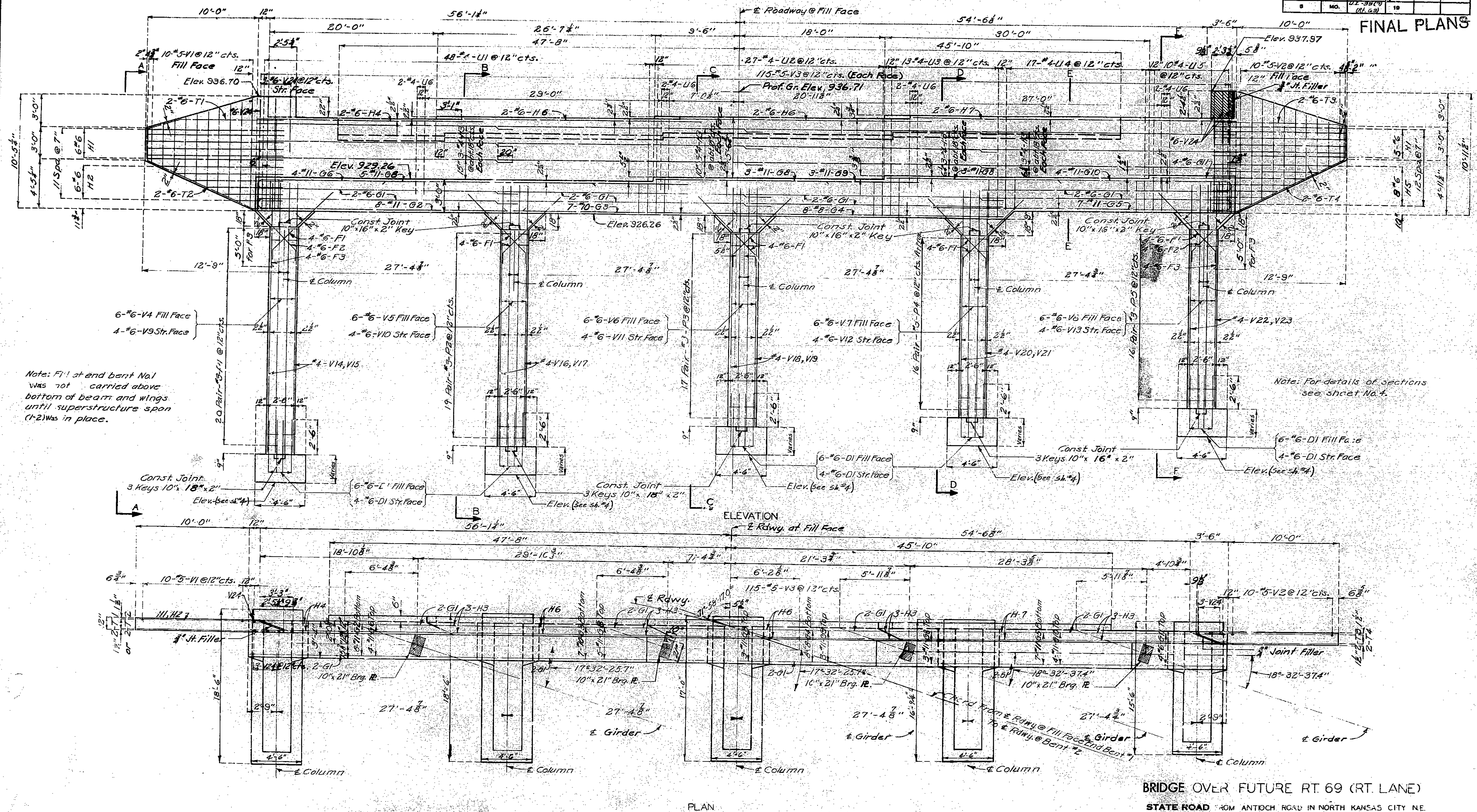
APPROVED BY: J.A. Williams, DATE 10/19/1954
 APPROVED BY: R.M. Whitton, DATE 10/13/1954
 FINISHED
 FINISHED
 FINISHED
 STD. C-110R3
 L-656

FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	MO.	U.I.-99(7) (Rt. 69)	19	19	

FINAL PLANS



Note: Fil at end bent No. 1 was not carried above bottom of beam and wings until superstructure span (1-2) was in place.

Note: For details of sections see sheet No. 4.

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BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD 406M ANTIOCH ROAD IN NORTH KANSAS CITY NE.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U.I.-99(7) (RT. 69) STA. 430+23.64
 CLAY COUNTY FINISHED

Drawn Aug. 1954 by D.J.G.
 Checked Sept. 1954 by H.J.K.

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

Sheet No. 3A of 8

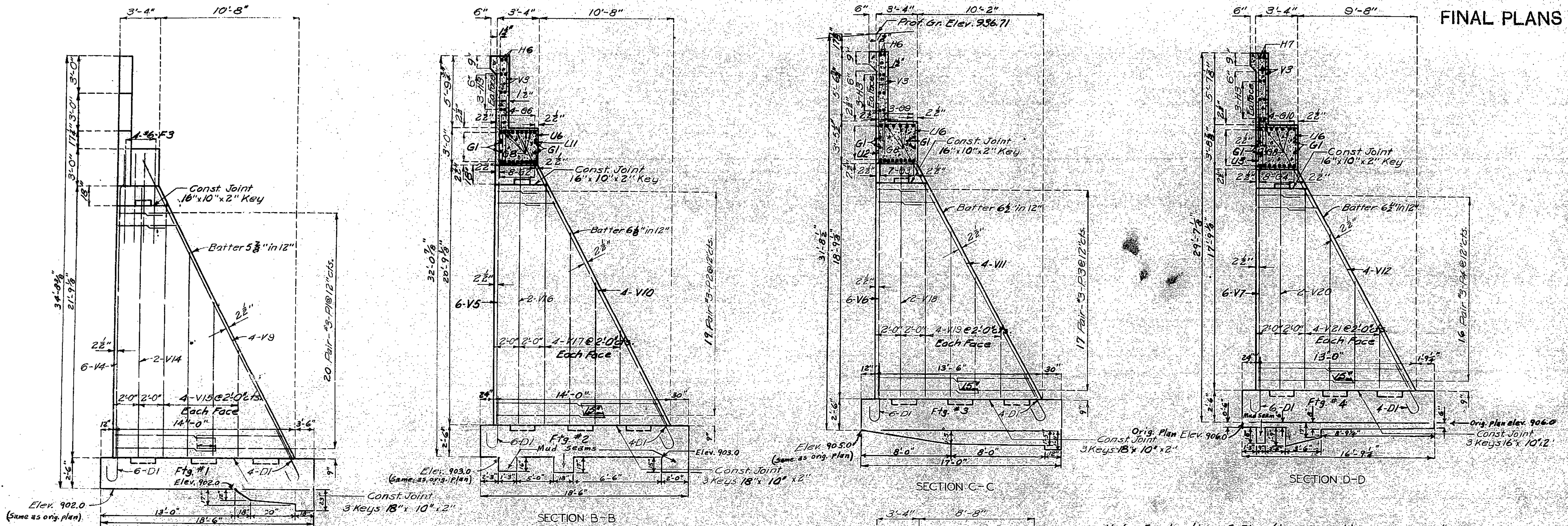
L-656

FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U1-99(7)	19		

FINAL PLANS



DETAILS OF END BENT NO. 1

Note: For location of Elevation & Sections see Sheet No. 3

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. U1-99(7) (RT. 69) STA. 430+23.21
 CLAY COUNTY FINISHED

FINAL PLANS

94

Drawn Sept. 1954 by D.J.G.
 Checked Sept. 1954 by H.J.K.

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

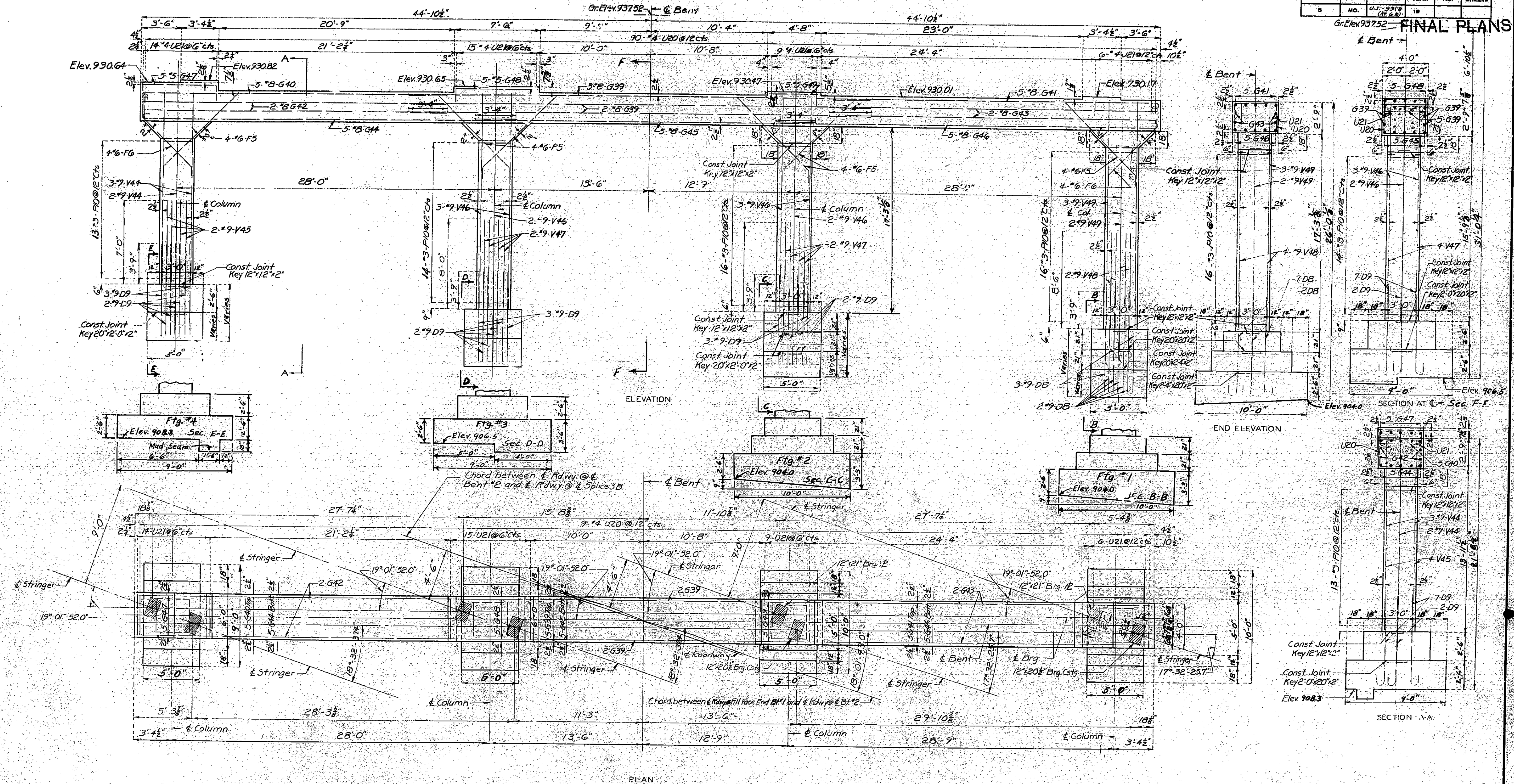
Sheet No. 4A of 8

L-656

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U.I.-99.7 (RT.69)	19		

Gr. Elev. 937.52 - Bent



DETAILS OF INTERMEDIATE BENT NO. 2

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY, MO.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. UI-99.7 (RT. 69) STA. 430+23.84

CLAY COUNTY FINISHED

Drawn Sep. 1954 by H.G.M.
 Checked Sept. 1954 by H.J.K.

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

Sheet No. 5A of 8

FINAL PLANS

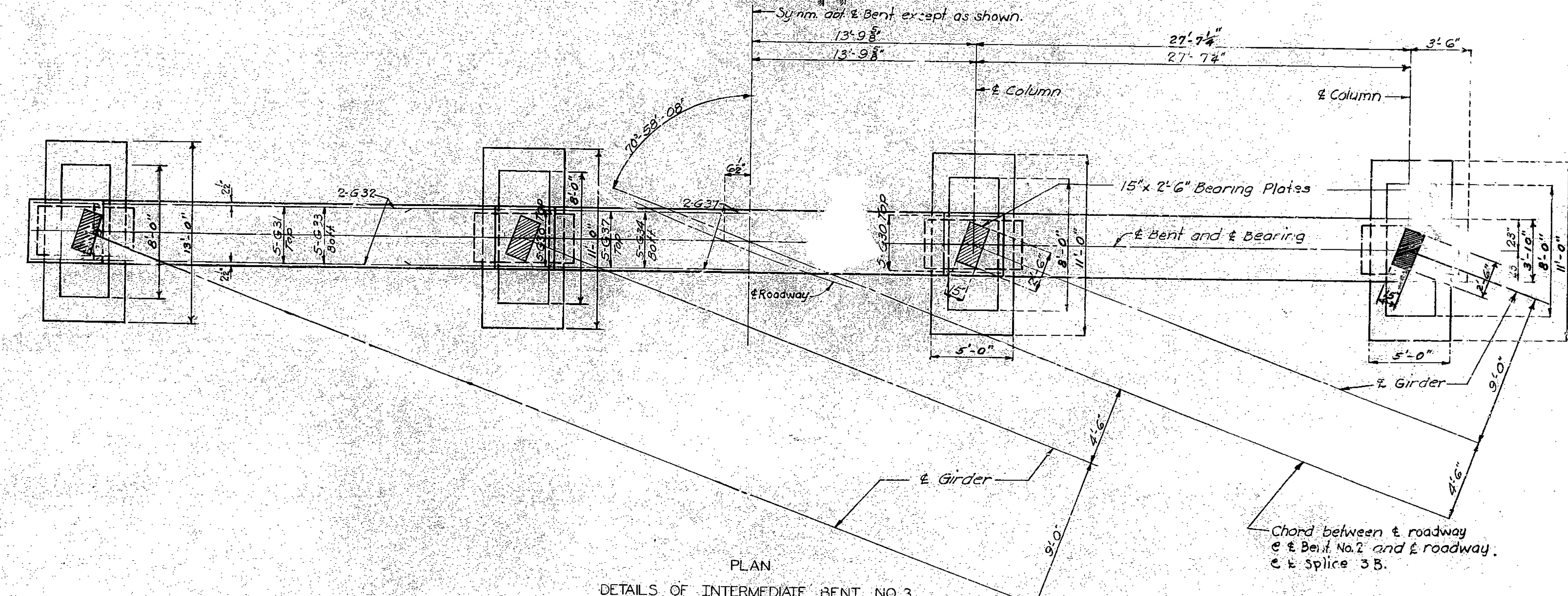
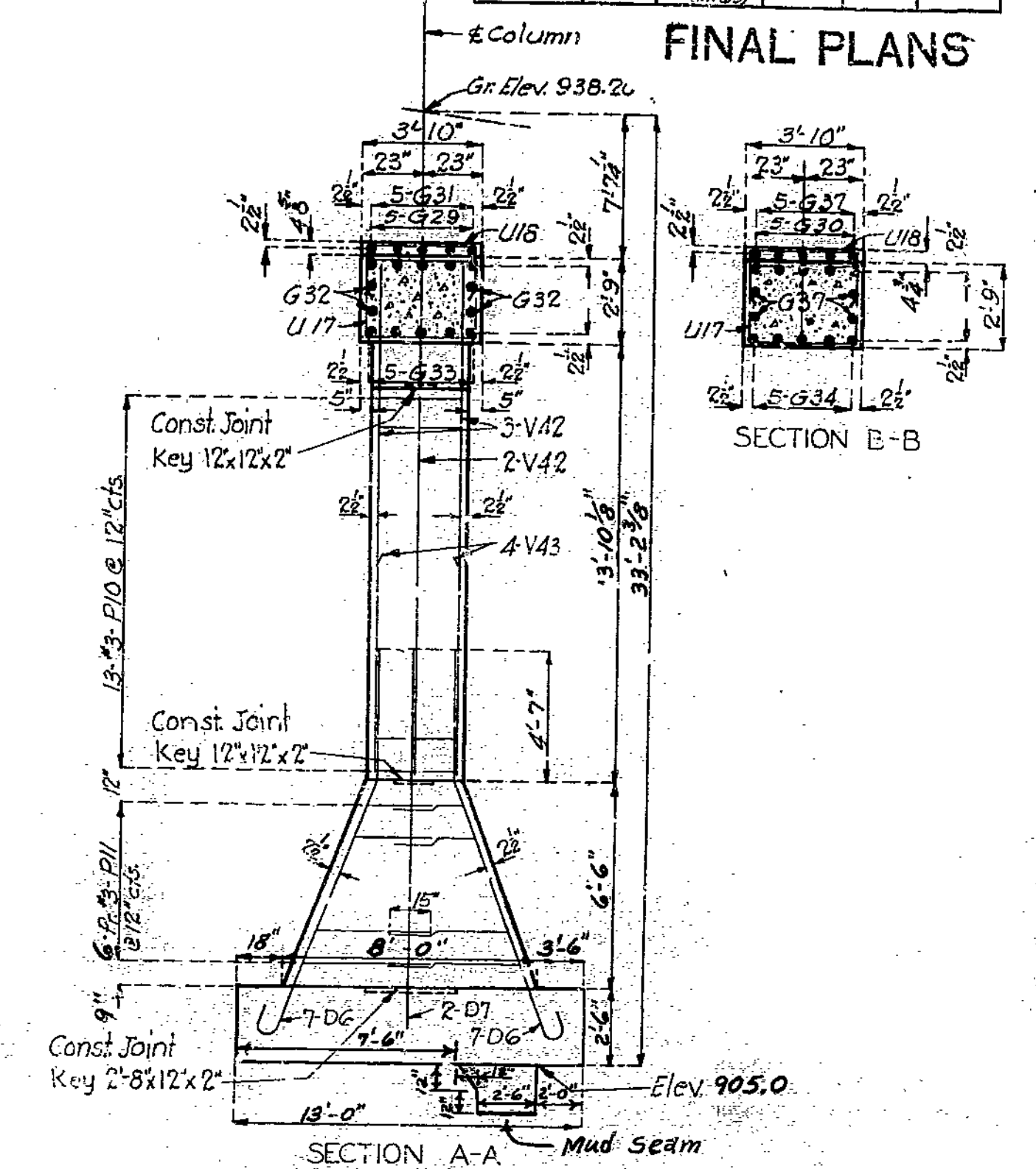
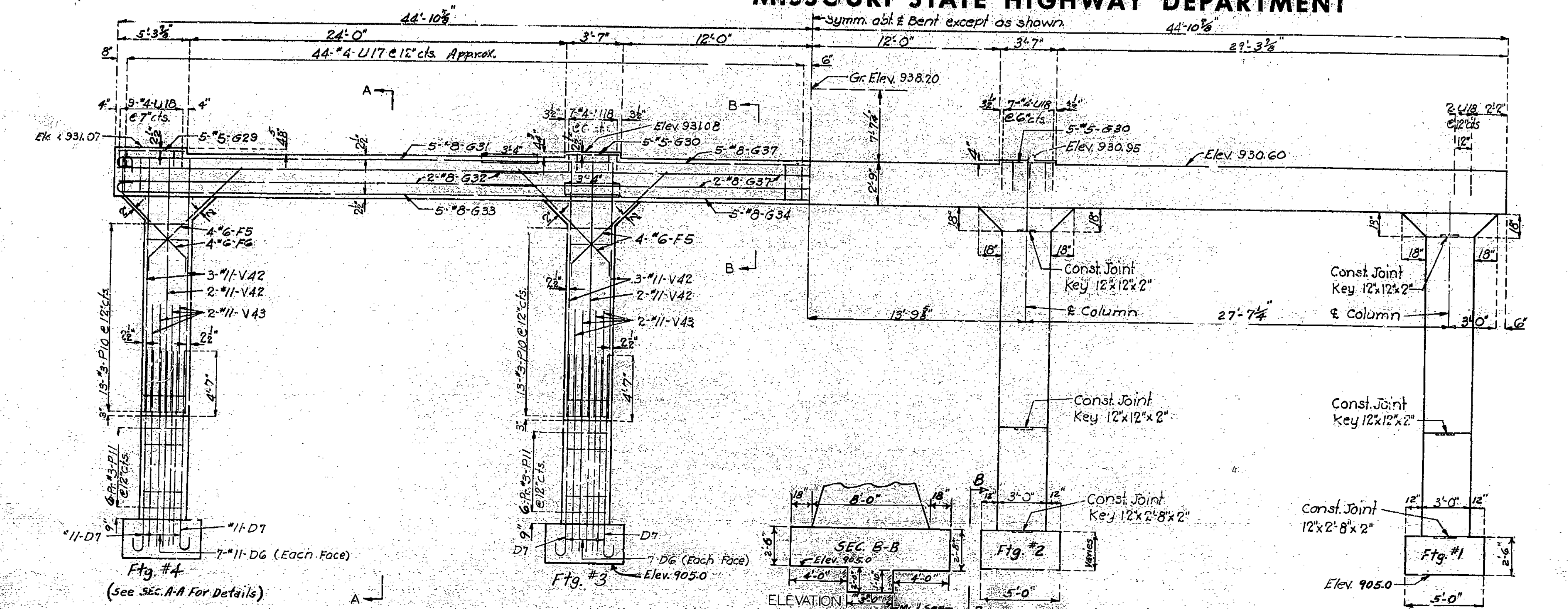
L-656

95

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	MO.	U.I.-99(7) (R.69)	19		

FINAL PLANS



PLAN
DETAILS OF INTERMEDIATE BENT NO. 3

BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIUCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. UI-99(7) (RT. 69) STA. 430+238.4

CLAY COUNTY FINISHED

FINAL PLANS

L-656

Drawn SEPT 1954 by K.R.W.
 Checked Sept 1954 by H.J.K.

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

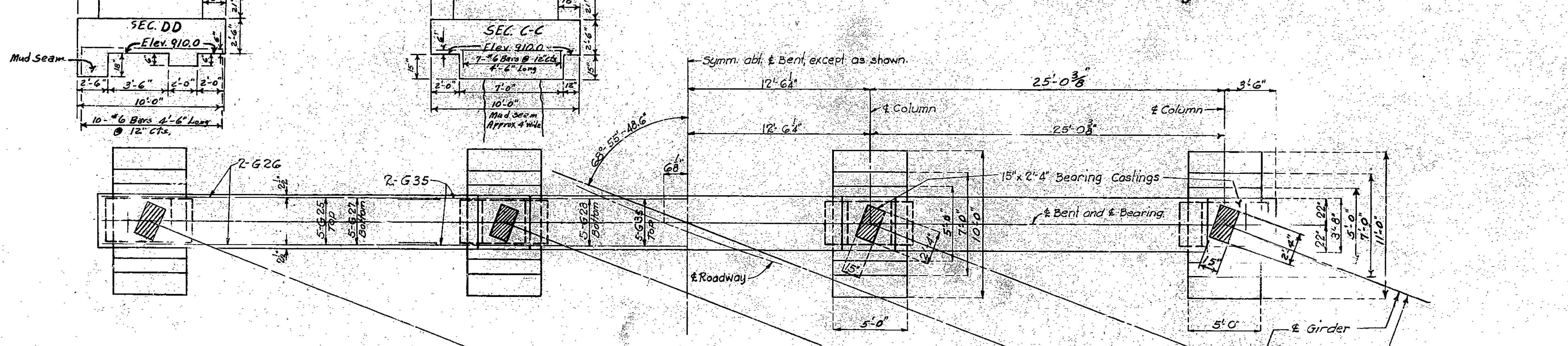
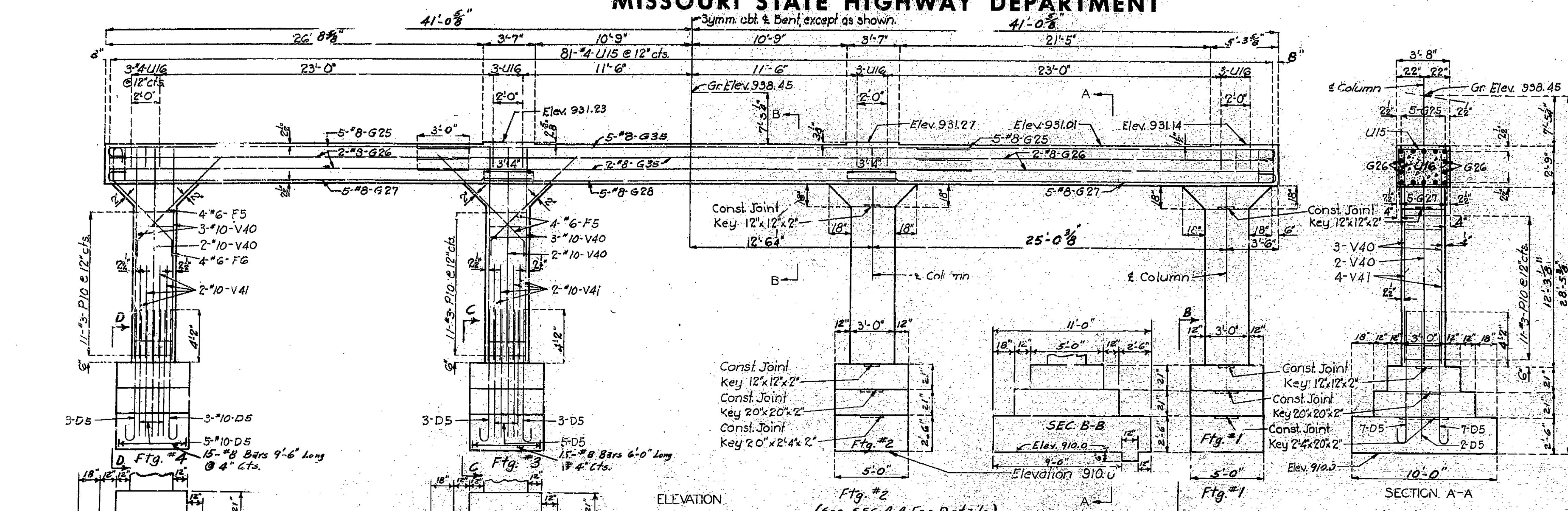
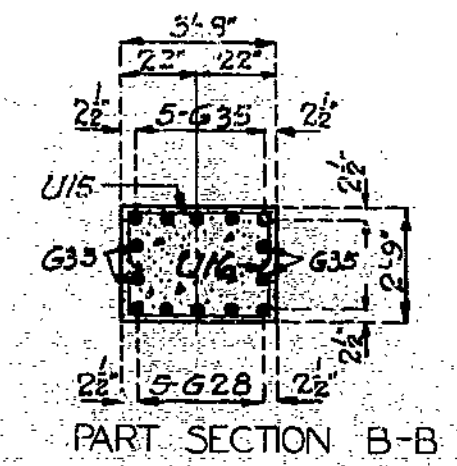
Sheet No. 6A of 8

96

MISSOURI STATE HIGHWAY DEPARTMENT

F.E.C. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
B	MO.	01-99(7) (R.69)	19	25	25

FINAL PLANS



BRIDGE OVER FUTURE RT. 69 (RT. LANE)
 STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
 ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
 PROJECT NO. UT-99(7) (RT. 69) STA. 430+23.84
 CLAY COUNTY FINISHED

Drawn SEPT. 1954 by K.R.W.
 Checked Sept. 1954 by H. J. K.

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

Sheet No. 7 of 8

FINAL PLANS

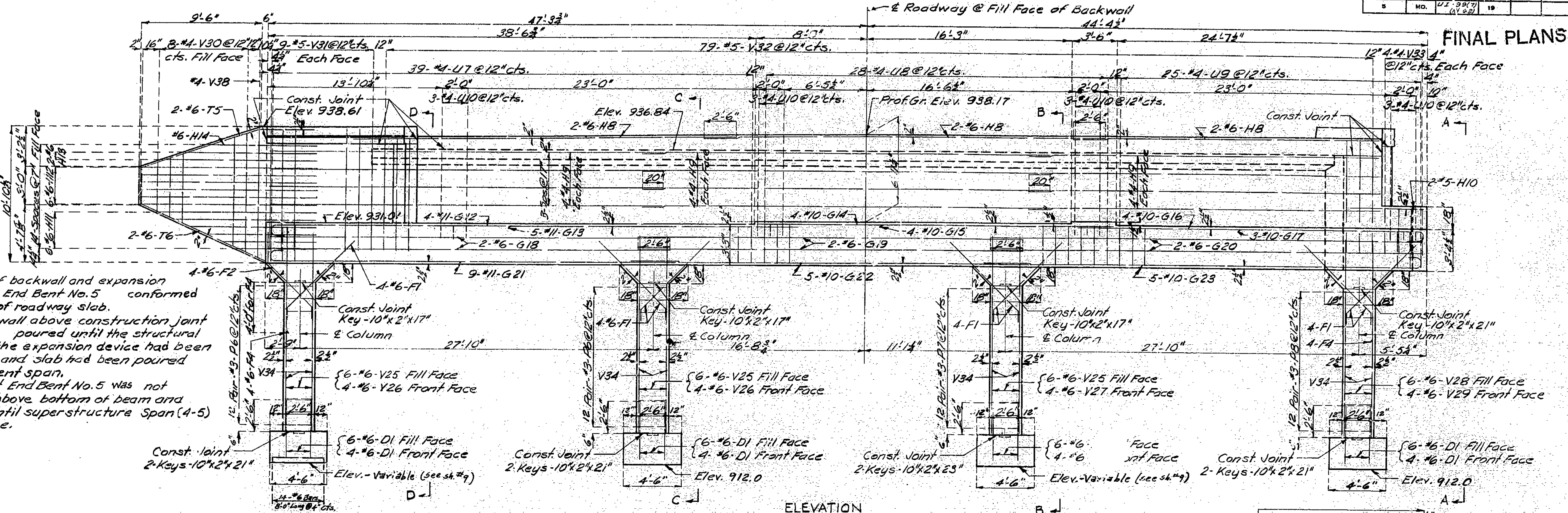
L-656

97

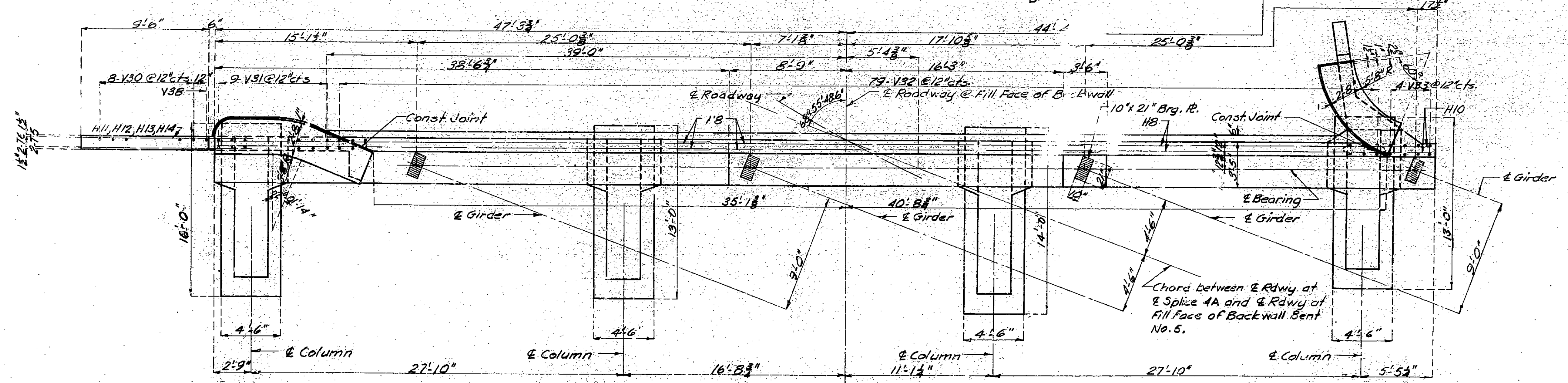
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PR. J. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	UI-99(7) (V. 52)	19		

FINAL PLANS



Note: Top of backwall and expansion device for End Bent No. 5 conformed to crown of roadway slab.
 Backwall above construction joint was not poured until the structural steel of the expansion device had been installed and slab had been poured in adjacent span.
 Fill at End Bent No. 5 was not carried above bottom of beam and wings until superstructure Span (4-5) was in place.



Note: See Sheet No. 9 for Elevation A-A, Section B-B, Section C-C, and Section D-D.

DETAILS OF END BENT NO. 5

Note: See Sheet No. 9 of 19 for plan of wings and details of End post.

BRIDGE OVER FUTURE RT. 69 (RT. LANE)

STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY NE.
 ABOUT 5 MILES NE. OF NORTH KANSAS CITY
 PROJECT NO. UI-99(7) (RT. 69) STA. 430+23.84

CLAY COUNTY

FINISHED

Drawn Aug. 1954 by H.R.B.
 Checked Sept. 1954 by H.J.K.

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

Sheet No. 8A of 8.

FINISHED

FINISHED

L-656

FINAL PLANS

98

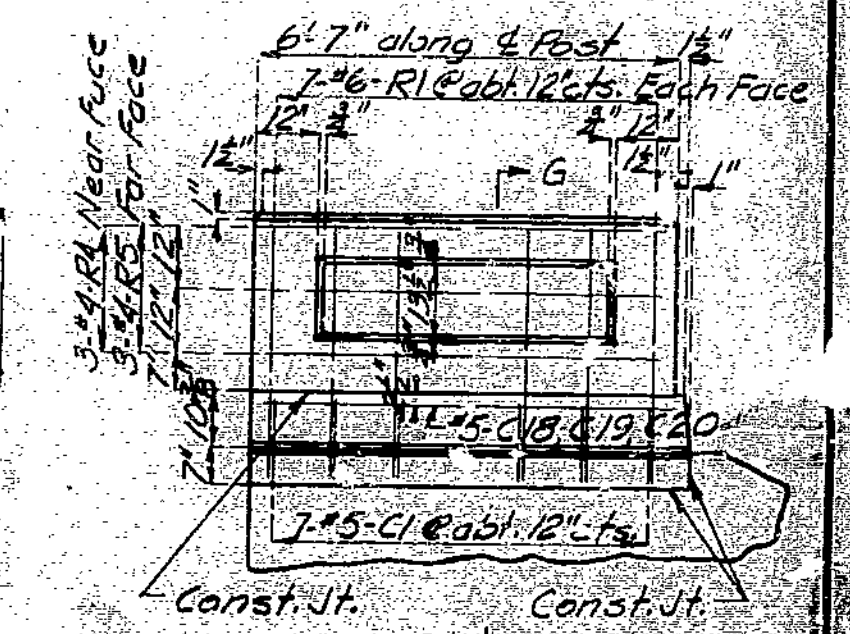
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	01-9977 (11-29)	19		

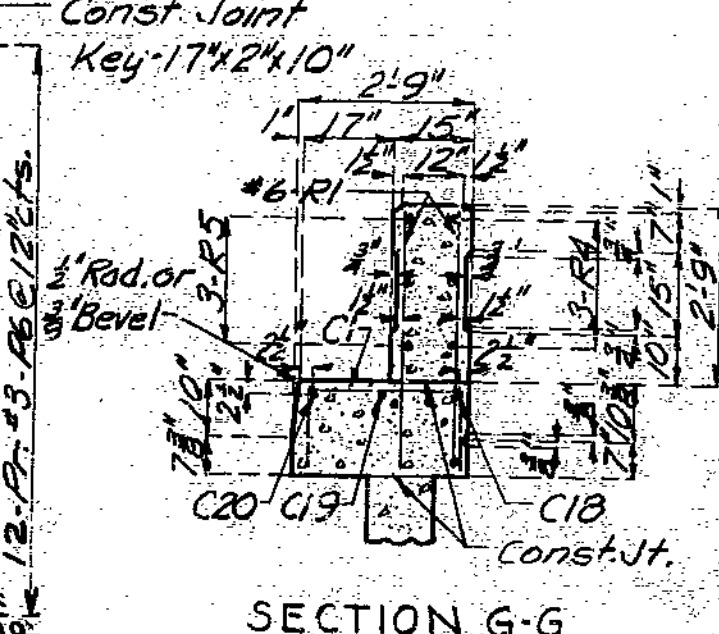
FINAL PLANS

Note: Steel in backwall not shown.

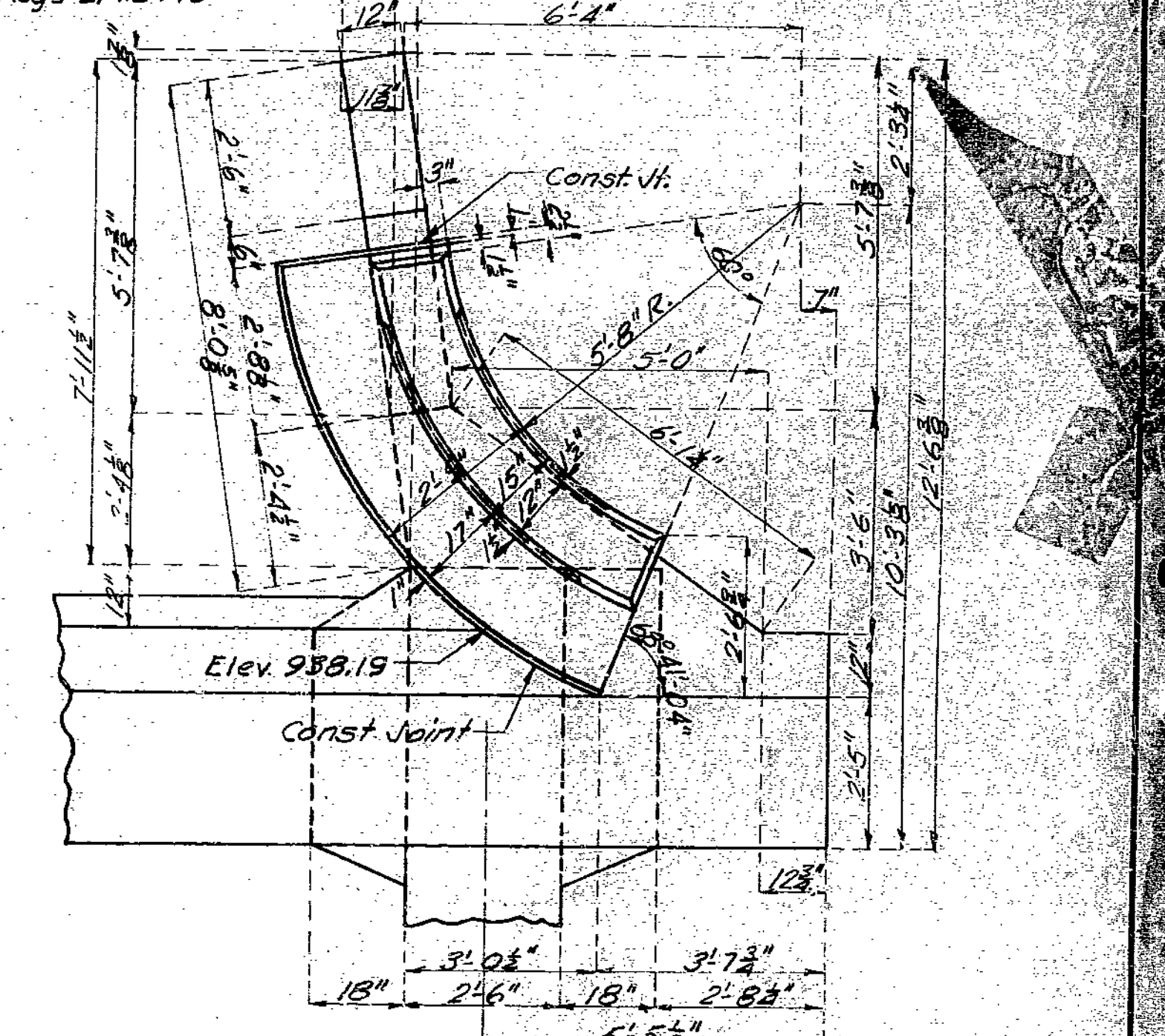
PART SECTION H-H



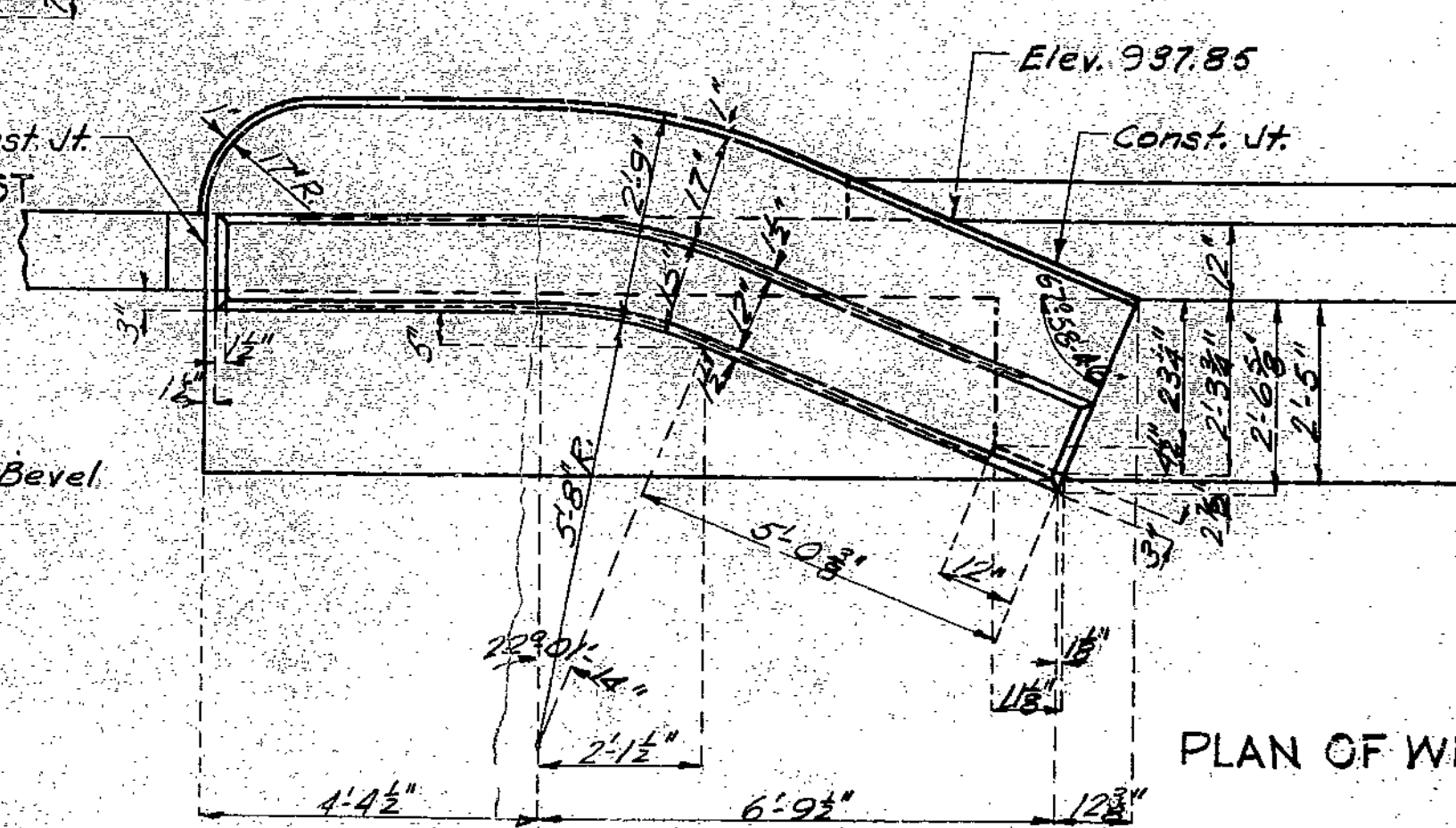
SECTION G-G



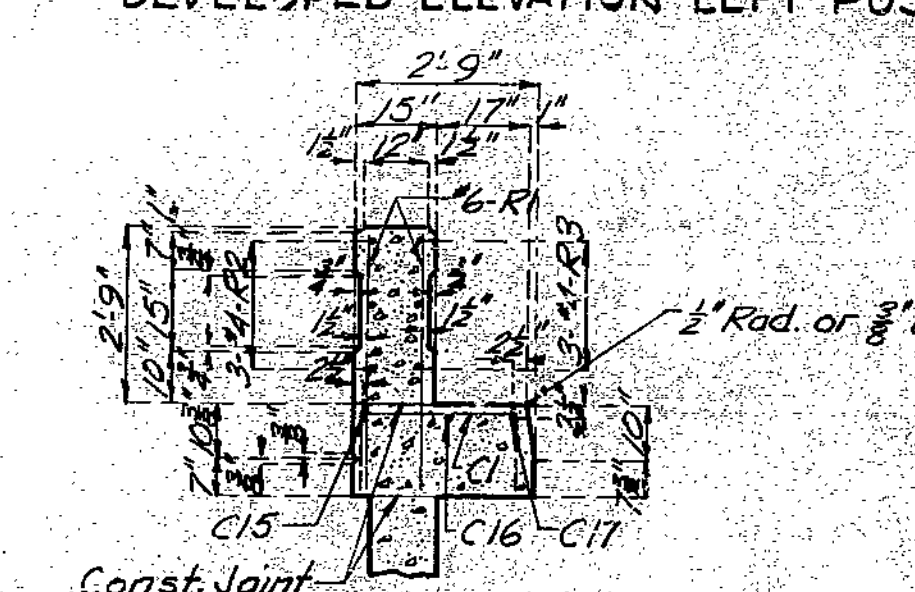
DEVELOPED ELEVATION RIGHT POST



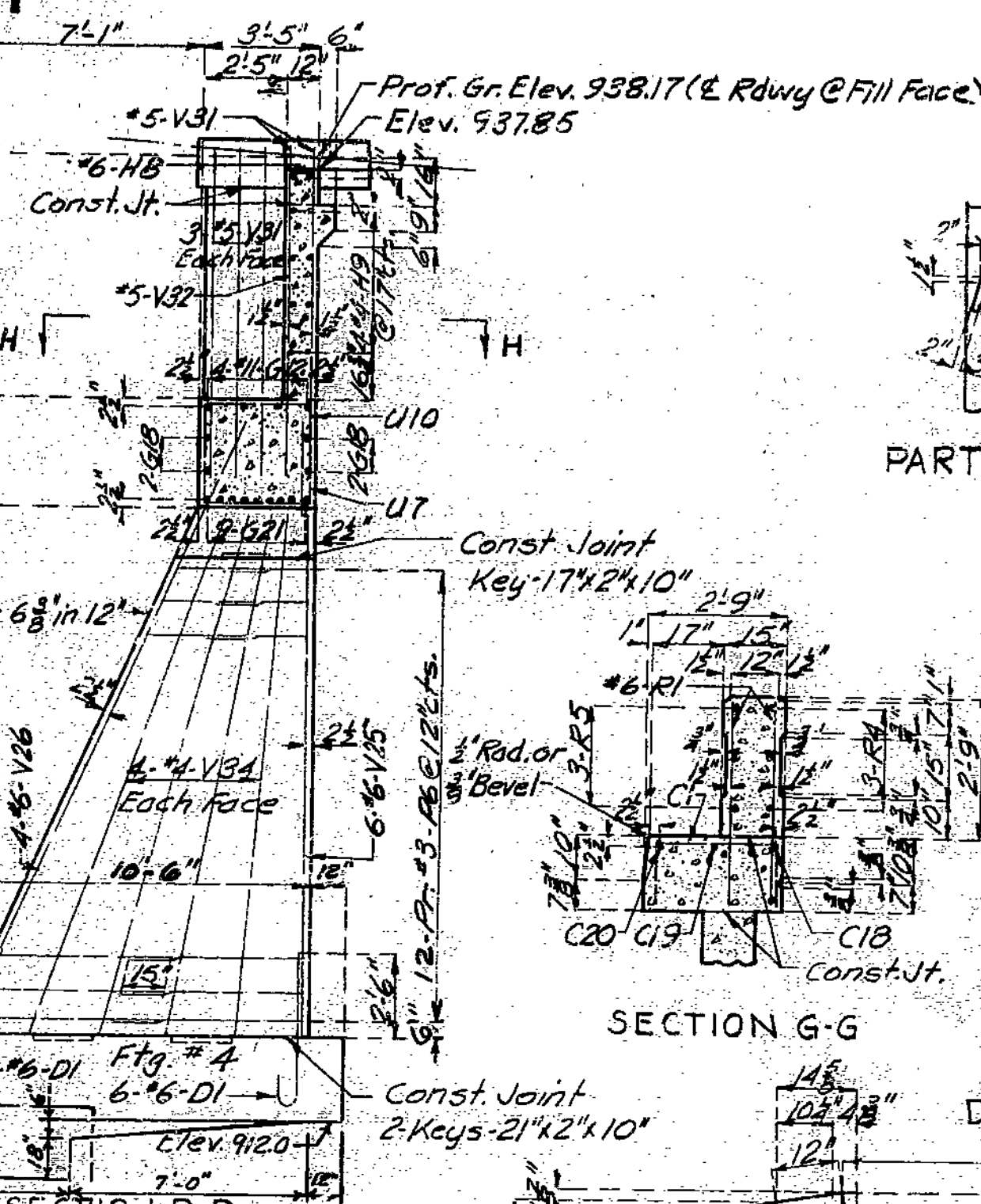
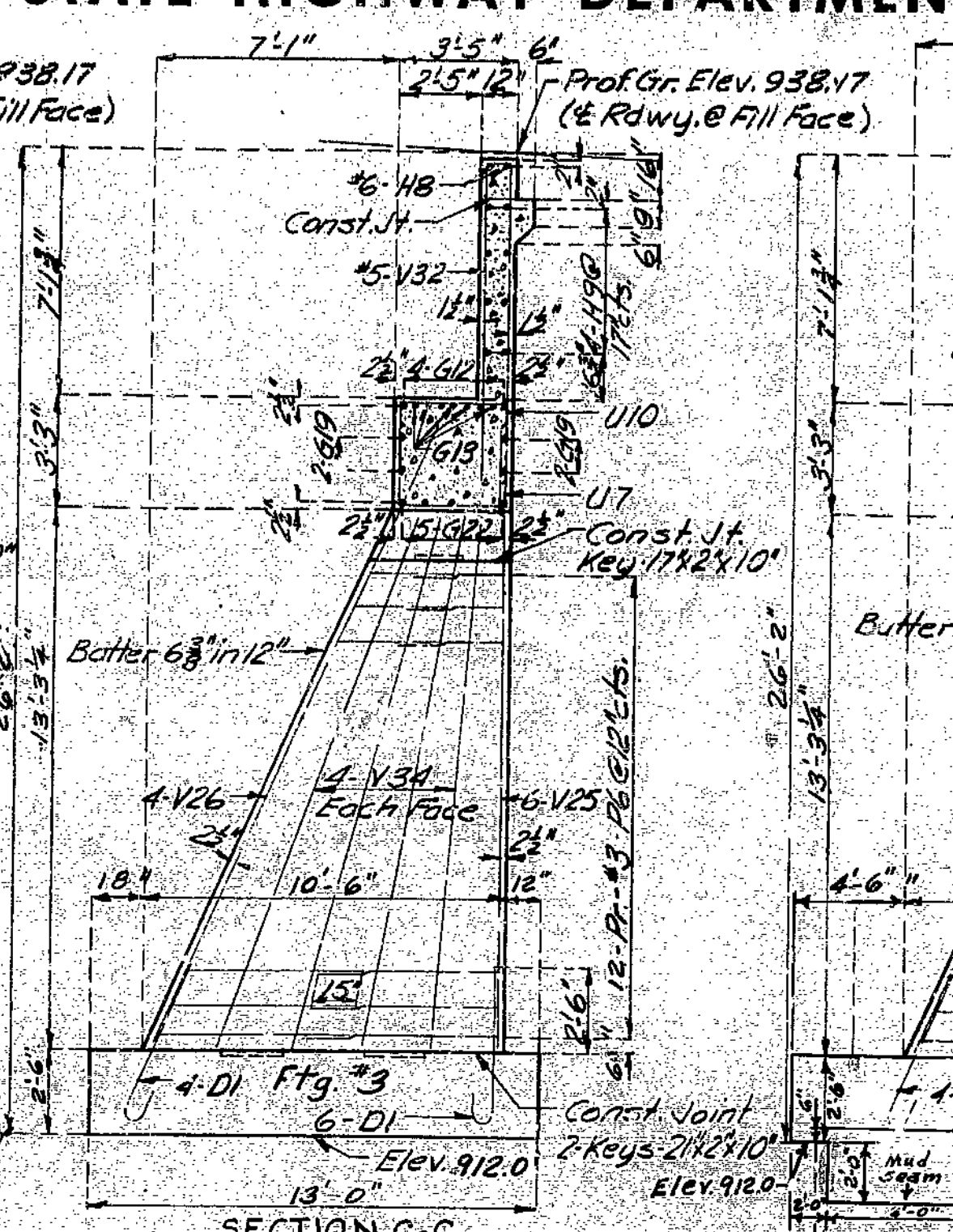
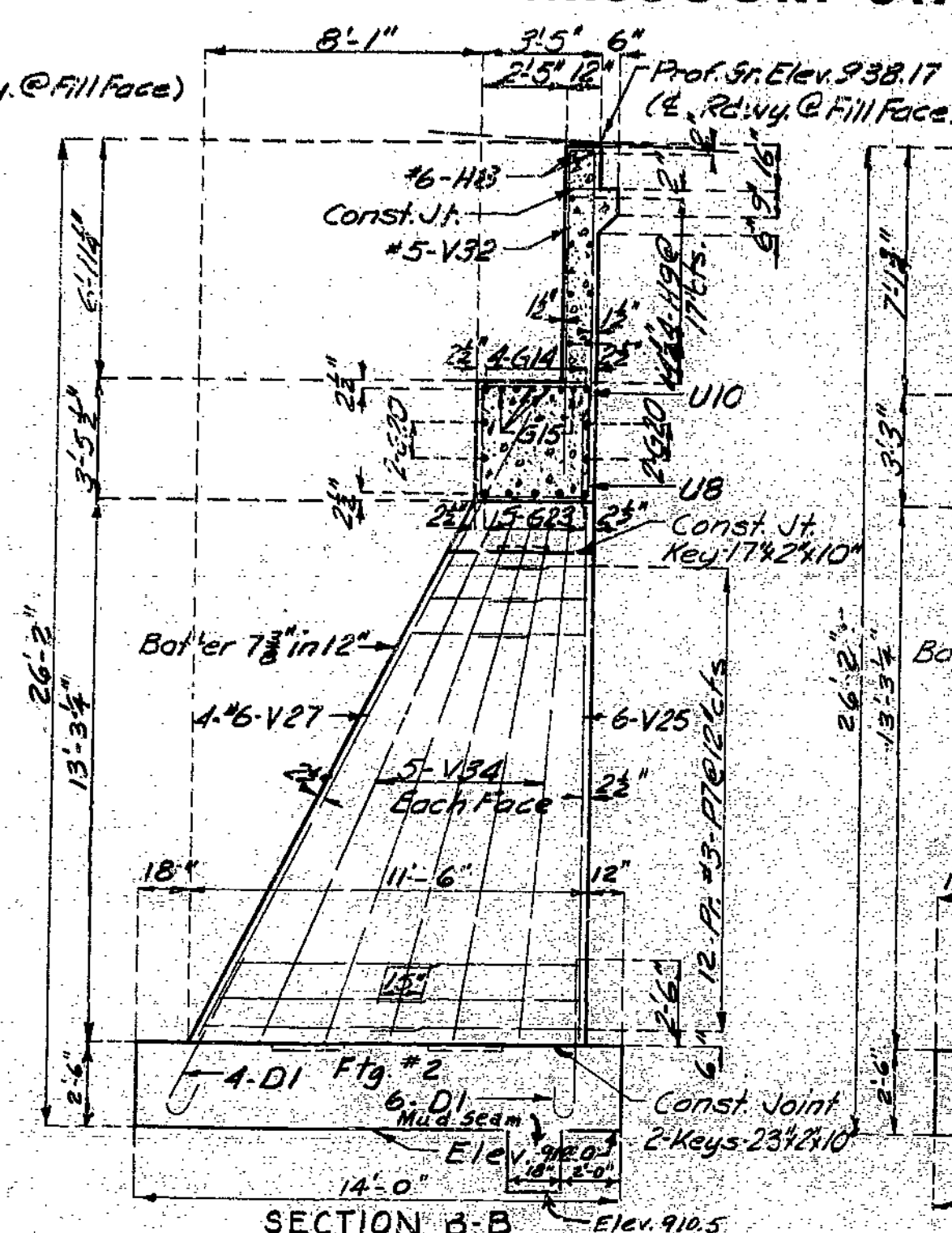
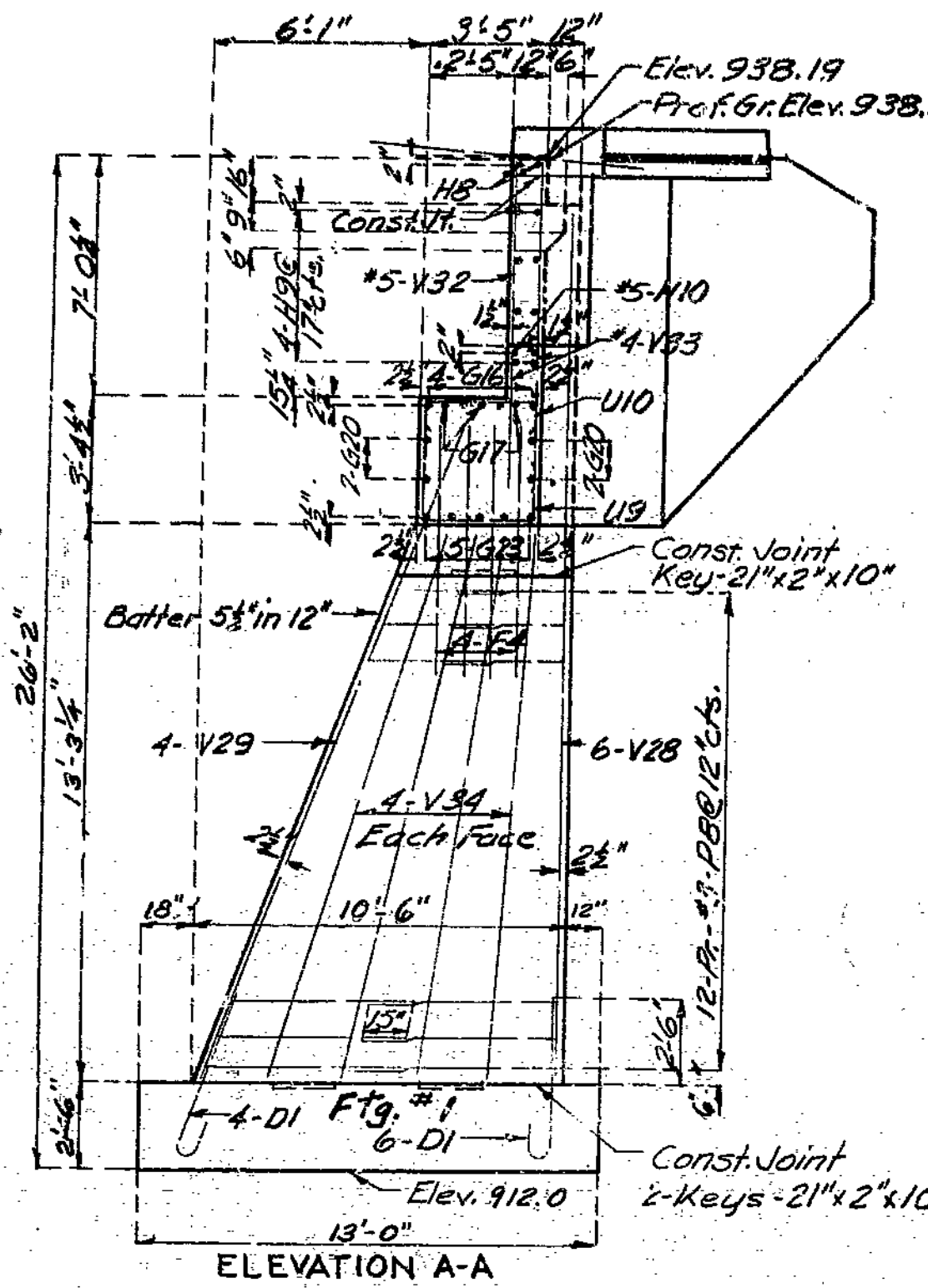
PLAN OF WINGS END BENT NO. 5



SECTION F-F

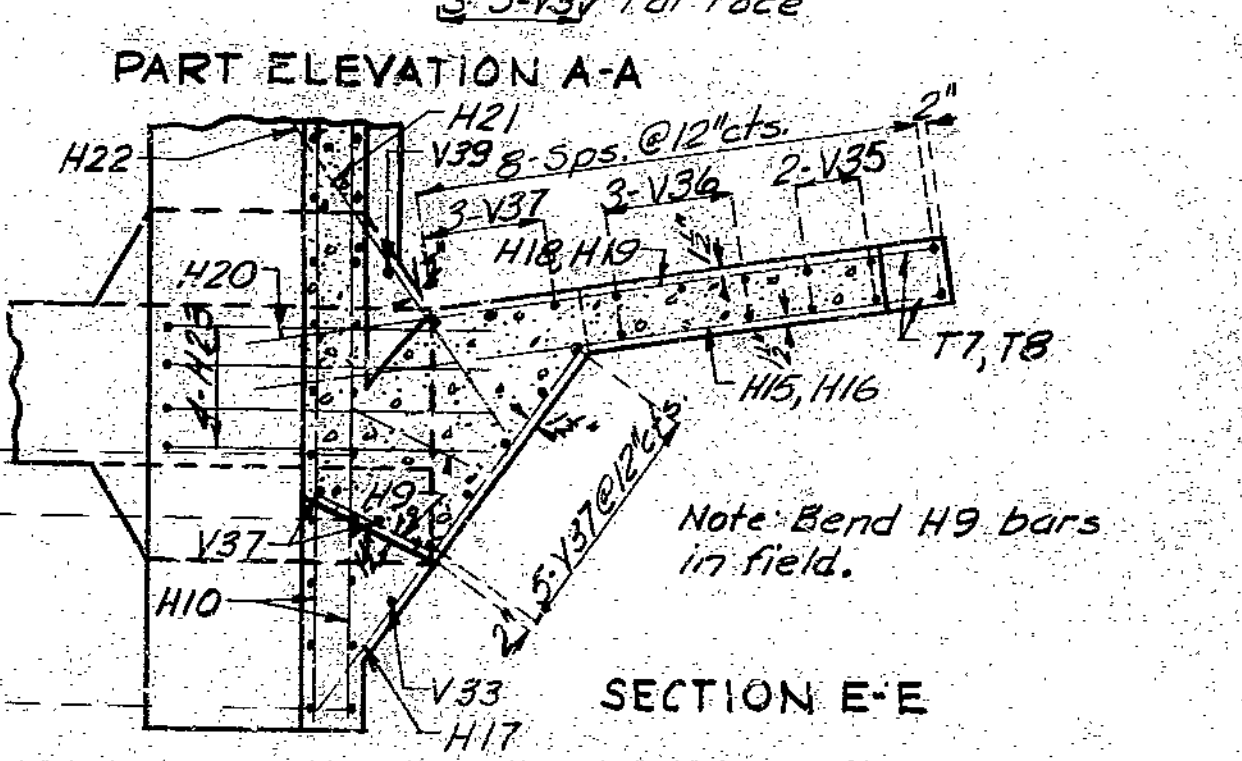
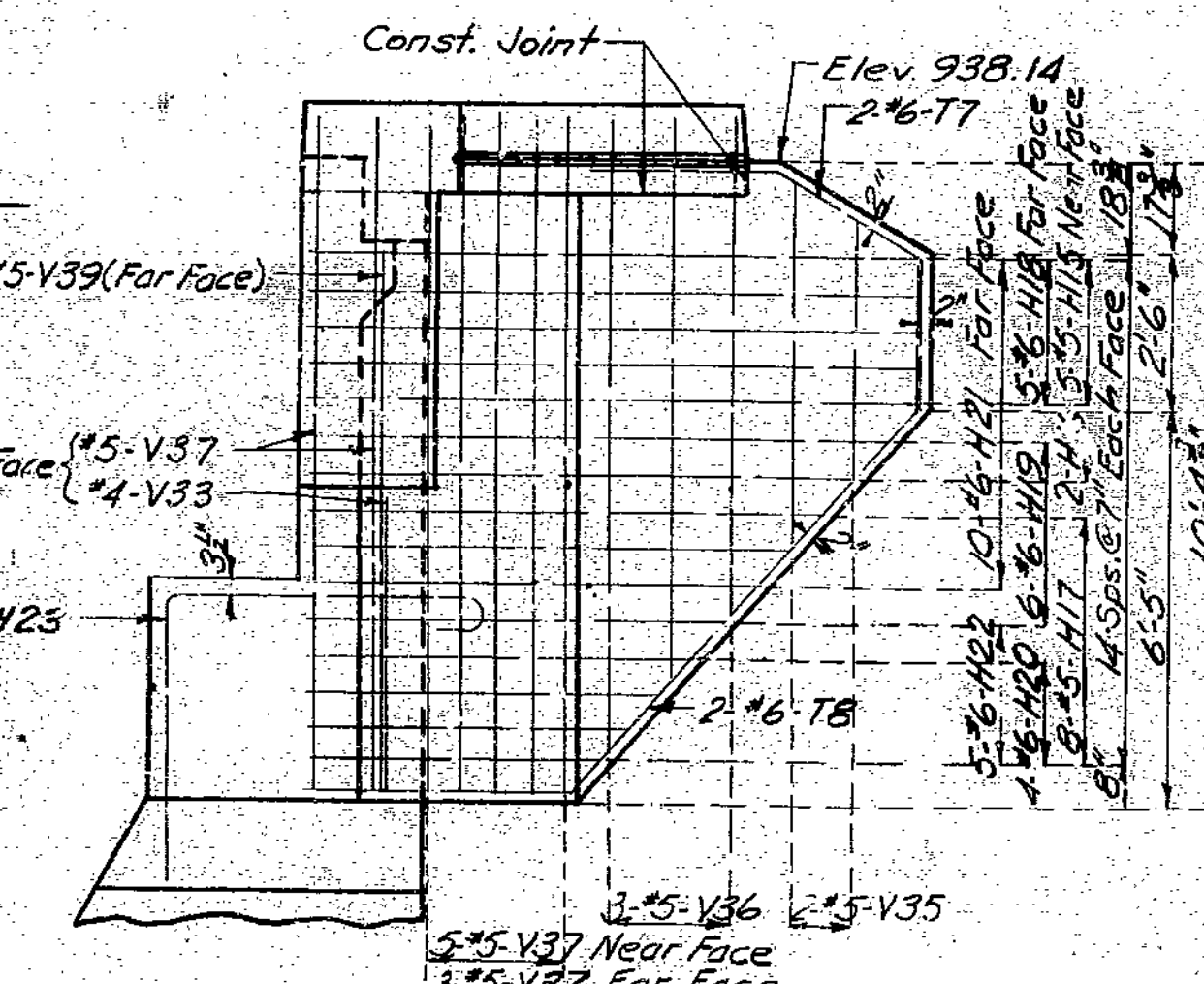
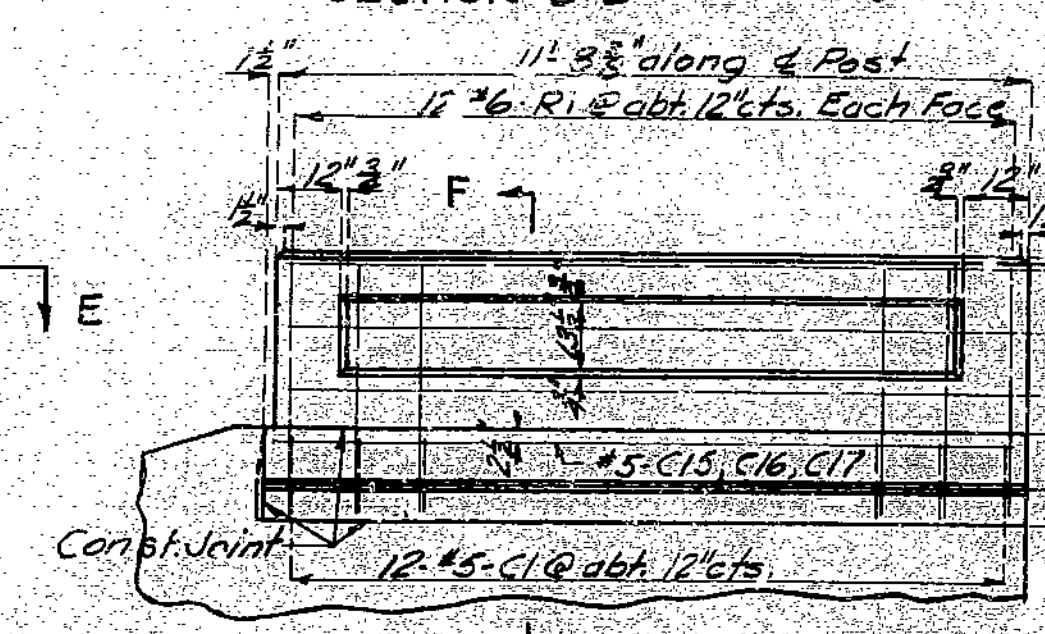


DETAILS OF END BENT NO 5



Note: For location of Elev. A-A, Sec. B-B, Sec. C-C, and Sec. D-D see Sheet No. B.

DEVELOPED ELEVATION LEFT POST



Note: Bend H9 bars in field.

Drawn Sept. 1954 by H.R.B.
Checked Sept. 1954 by H.J.K.

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

Sheet No. 9A of 8

BRIDGE OVER FUTURE RT. 69 (4-T. LANE)
STATE ROAD FROM ANTIOCH ROAD IN NORTH KANSAS CITY N.E.
ABOUT 5 MILES N.E. OF NORTH KANSAS CITY
PROJECT NO. UI-9977 (RT. 69) STA. 430+23.34

FINISHED CLAY COUNTY FINISHED

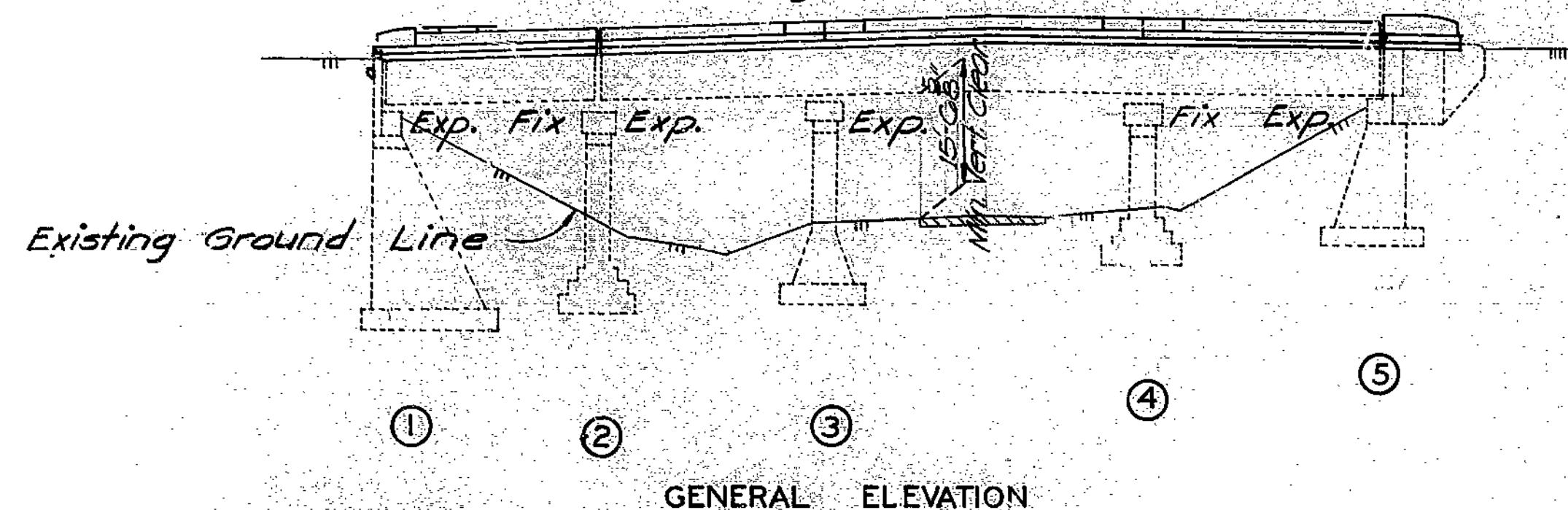
L-65

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		75	4	

P.I. Sta. 432+50
Elev. 946.39
+2.745% -2.212%
1200' VC

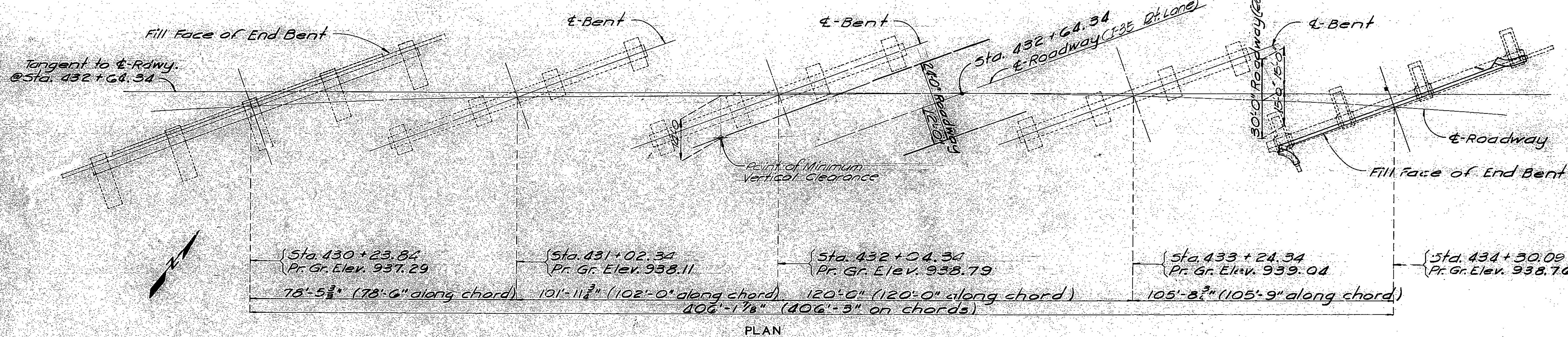
Raise & Redeck Existing Simple (70'), Cont. (100'-120'-100') R Gdr. Spans



Note: Bars banded in old concrete not removed shall be cleanly stripped and bent into new concrete where possible. If length is available, old bars shall be extended into new concrete at least 30 diameters.

GENERAL NOTES:
Design Specifications: A. A. S.H.T.O. 1973
Design Loading: H520-44
Design Unit Stresses:
Class B1 Concrete (Superstructure) $f_c = 1600$ psi
Reinforcing Steel $f_s = 20,000$ psi.
Structural Carbon Steel $f_s = 20,000$ psi.
Paint: Shop none; Field System A or B by contractor in accordance with Std. Spec. 712.13. Color of the final field coat shall be aluminum. See Special Provisions.
Minimum clearance to reinforcing steel shall be 1 1/2" unless otherwise shown. All concrete and reinforcement is included with superstructure quantities. Light dotted lines indicate old work. Heavy lines indicate new work.
Construction Clearance:
A minimum vertical clearance of 14'-0" and a minimum lateral clearance of 28'-0" centered on existing Right Lane shall be maintained during construction.

Roll 885



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ESTIMATED QUANTITIES		
ITEM	SUPERSTR.	TOTAL
Removal of Existing Bridge Deck	Sq. Ft. 13610	13610
Asphalt Cement (Asphalt Concrete)	10in	6.5
Mineral Aggregate Concrete (Special Mix)	122.5	122.5
Class B1 Concrete	Cu. Yd. 4173	4173
Steel Bolt Expansion Jt. Seal Lin. Ft.	76	76
Steel Bolt Expansion Jt. Seal Lin. Ft.	96	96
Reinforcing Steel	Lb. 180,880	180,880
Bridge Deck Waterproofing (Liquid)	Sq. Yd. 1370	1370
Fabricated Structural Carbon Steel	Lb. 2700	2700
Painting (System A or B)	Lump Sum	1
Bridge Guard Rail (One Tube)	Lb. Ft. 791	791
Special Work	Lump Sum	1
Clearing Existing Bearings	each	24

B.M. Elev. 938.07 on Corner Rt. Wing Abut. #5.

BRIDGE: RTE. 69 (SBL) UNDERPASS
STATE ROAD FROM VIVION ROAD SOUTH TO I-35
ABOUT 4 MILES N.E. OF NORTH KANSAS CITY
PROJECT NO. I-35-1 (106) **STA.** 430+23.84
JOB NO. 4-1-35-61 **RTE** I-35
CLAY COUNTY

DESIGNED JUNE 1974
DETAILED AUG 1974
CHECKED FEB 1975

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

Sheet No. 1 of 14

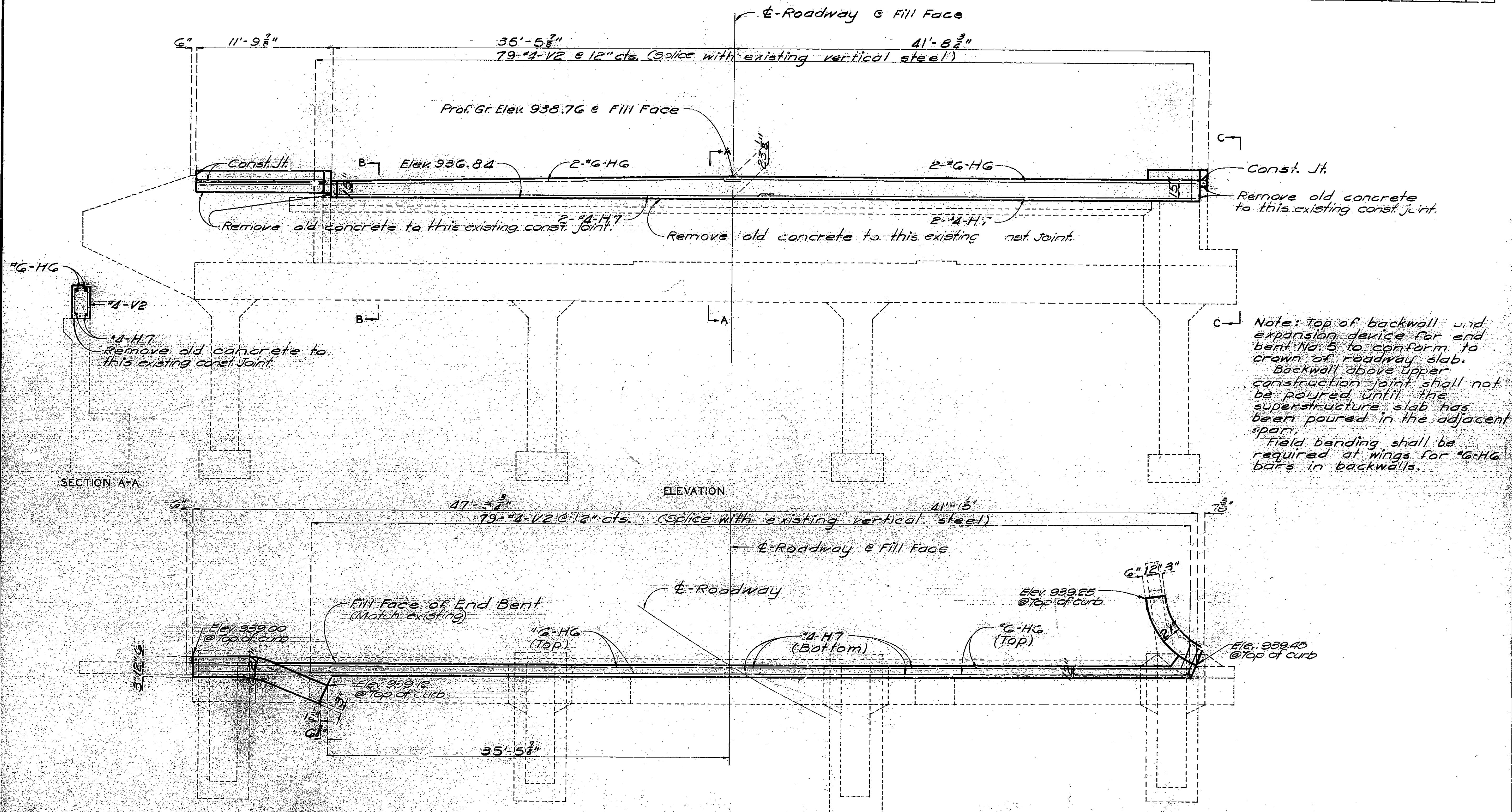
SEE FINAL PLANS

DATE 10/13/76

STD.
STD 706.30
L-656R

MISSOURI STATE HIGHWAY DEPARTMENT

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



Note: Top of backwall and expansion device for end bent No. 5 to conform to crown of roadway slab. Backwall above upper construction joint shall not be poured until the superstructure slab has been poured in the adjacent span. Field bending shall be required at wings for #6-HG bars in backwalls.

Note: Light dotted lines indicates old work. Heavy lines indicates new work.

PLAN
DETAILS OF END BENT NO. 5

Note: See sheet No. 3 for plan and details of End Posts. See sheet No. 3 for part sections B-B & C-C.

162
 DETAILED JUNE 1974
 CHECKED FEB 1975

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

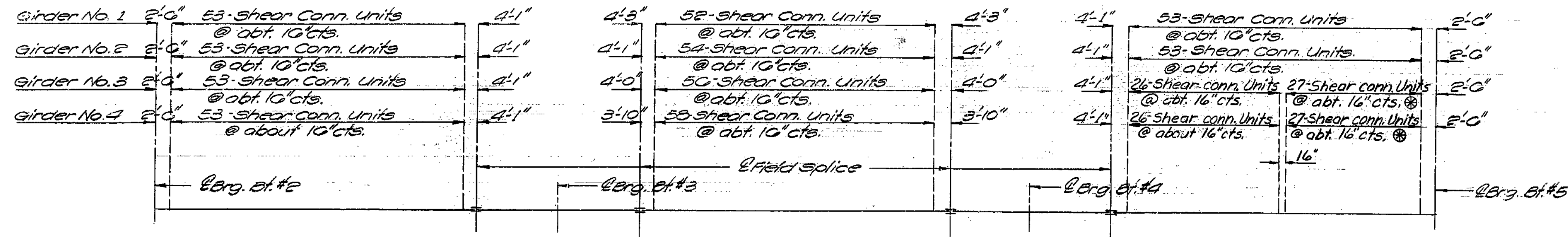
Sheet No. 2 of 14

CLAY COUNTY

L-656R

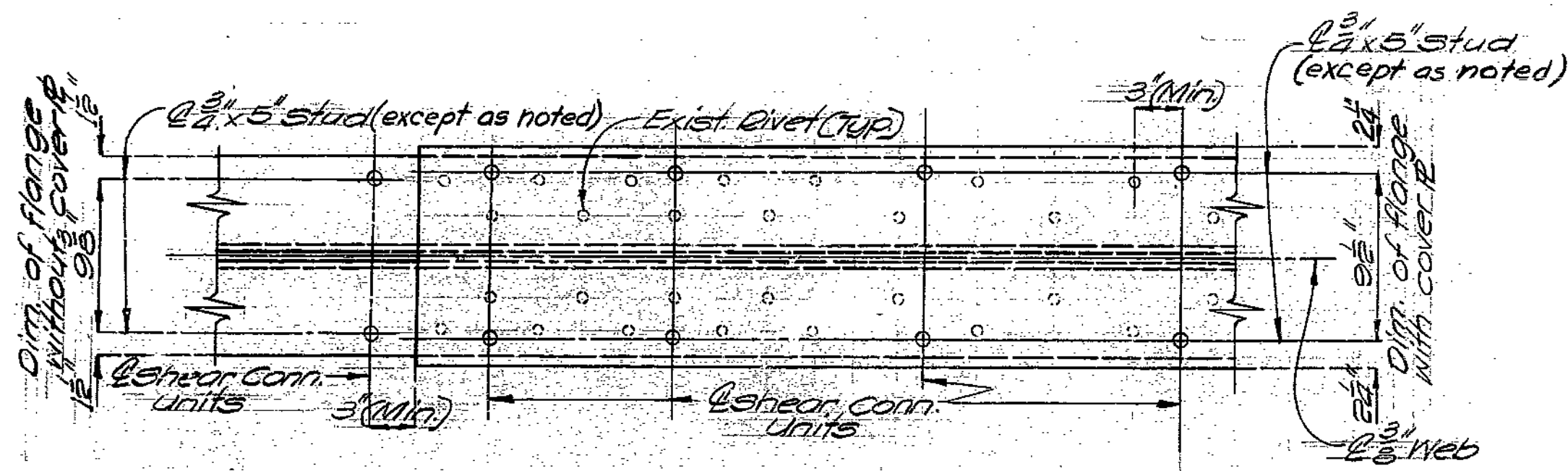
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	7	



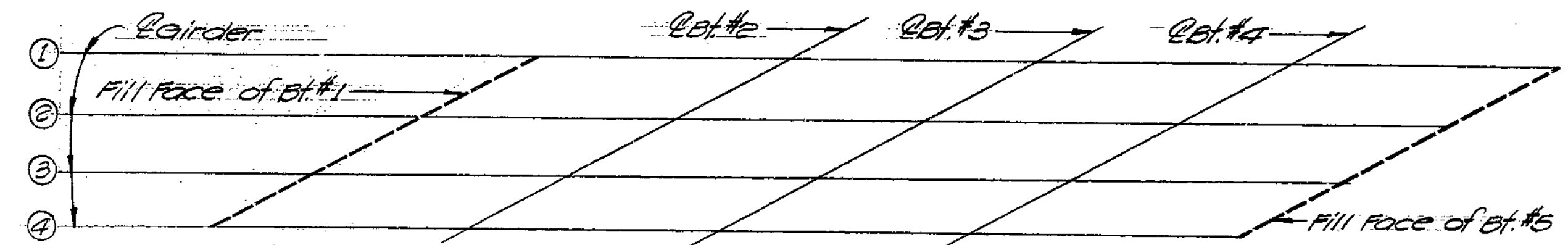
PLAN OF SHEAR CONNECTOR SPACING

⊗ Indicates shear connectors to be 3/4" x 6" studs

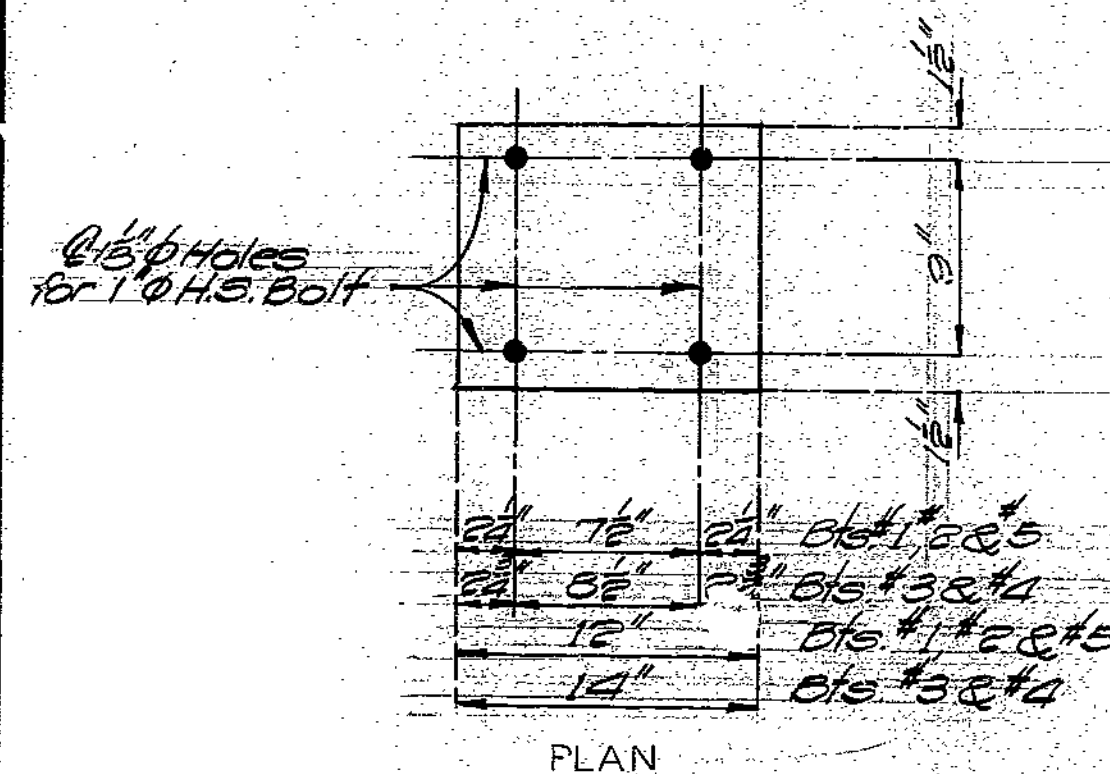


PART PLAN OF TOP FLANGE

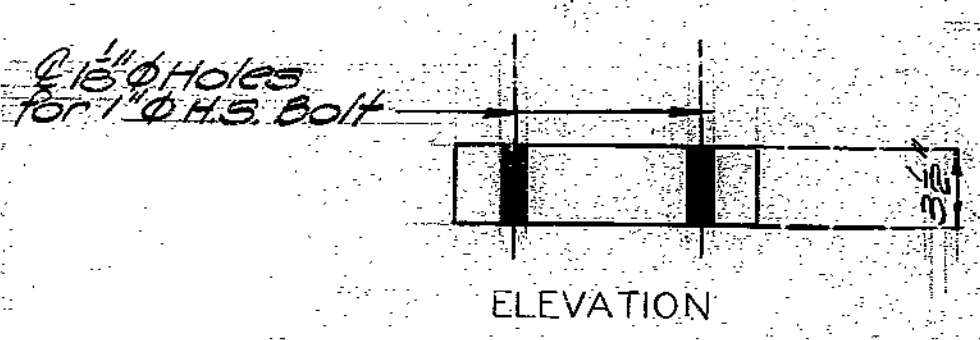
Note: 972 lbs of shear connectors are included in structural steel.



PART PLAN OF EXISTING STRUCTURAL STEEL SHOWING GIRDER NUMBERING



PLAN



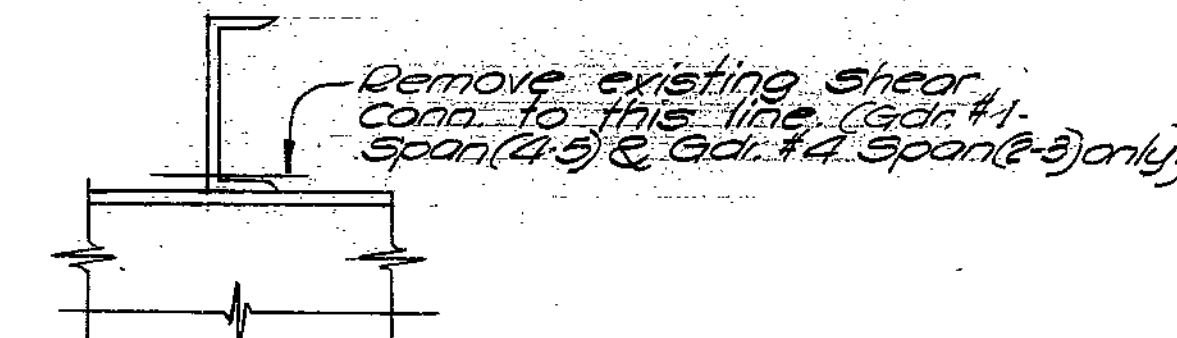
ELEVATION

Required: 10-Bts. No. 1, 2 & 5
8-Bts. No. 3 & 4

Total Wt. = 3620

Note: Steel for spacer shall be A-36.

DETAILS OF BRG. SPACER - P



DETAIL OF EXISTING SHEAR. CONN. REMOVAL

191

DETAILED JAN. 1975
CHECKED Feb. 1975

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

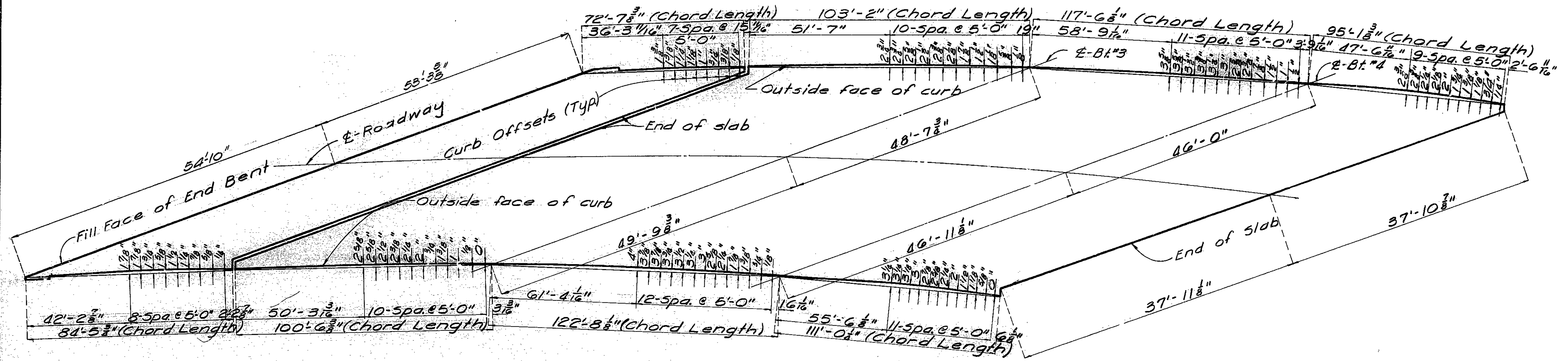
Sheet No. 4 of 14

CLAY COUNTY

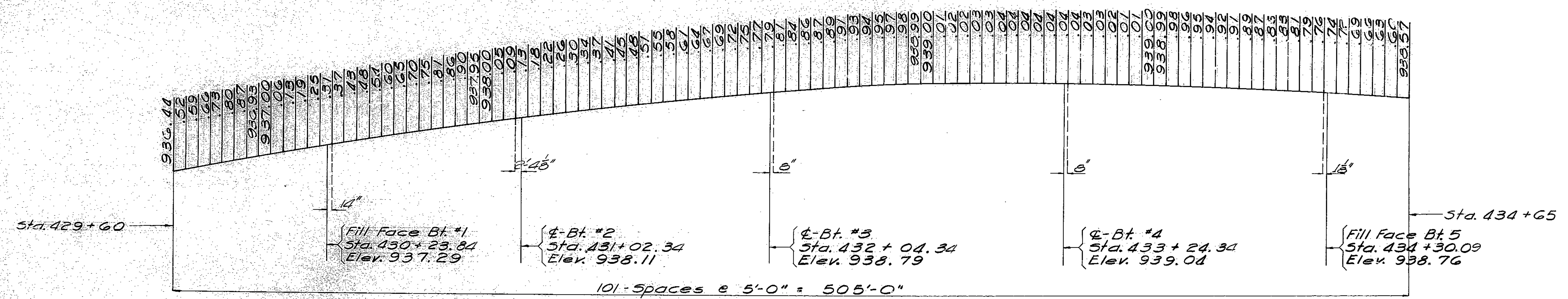
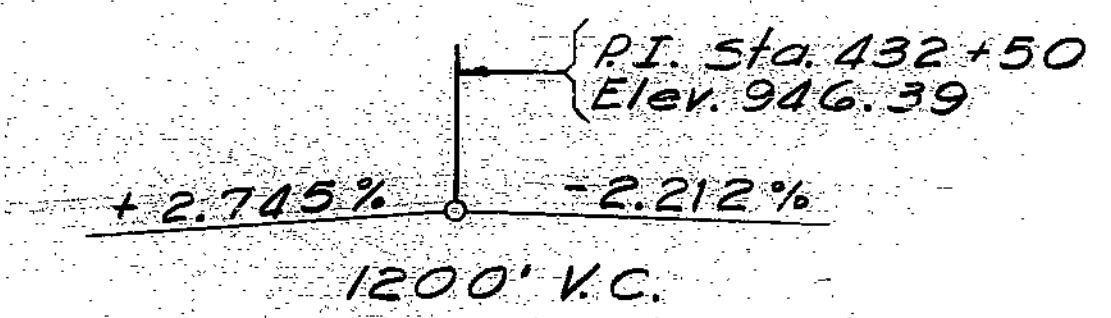
L-656R

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	8	



PLAN OF SLAB SHOWING CURVE ORDINATES



PROFILE GRADE ELEVATIONS

168

DETAILED AUG. 1974
CHECKED Feb 1975

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

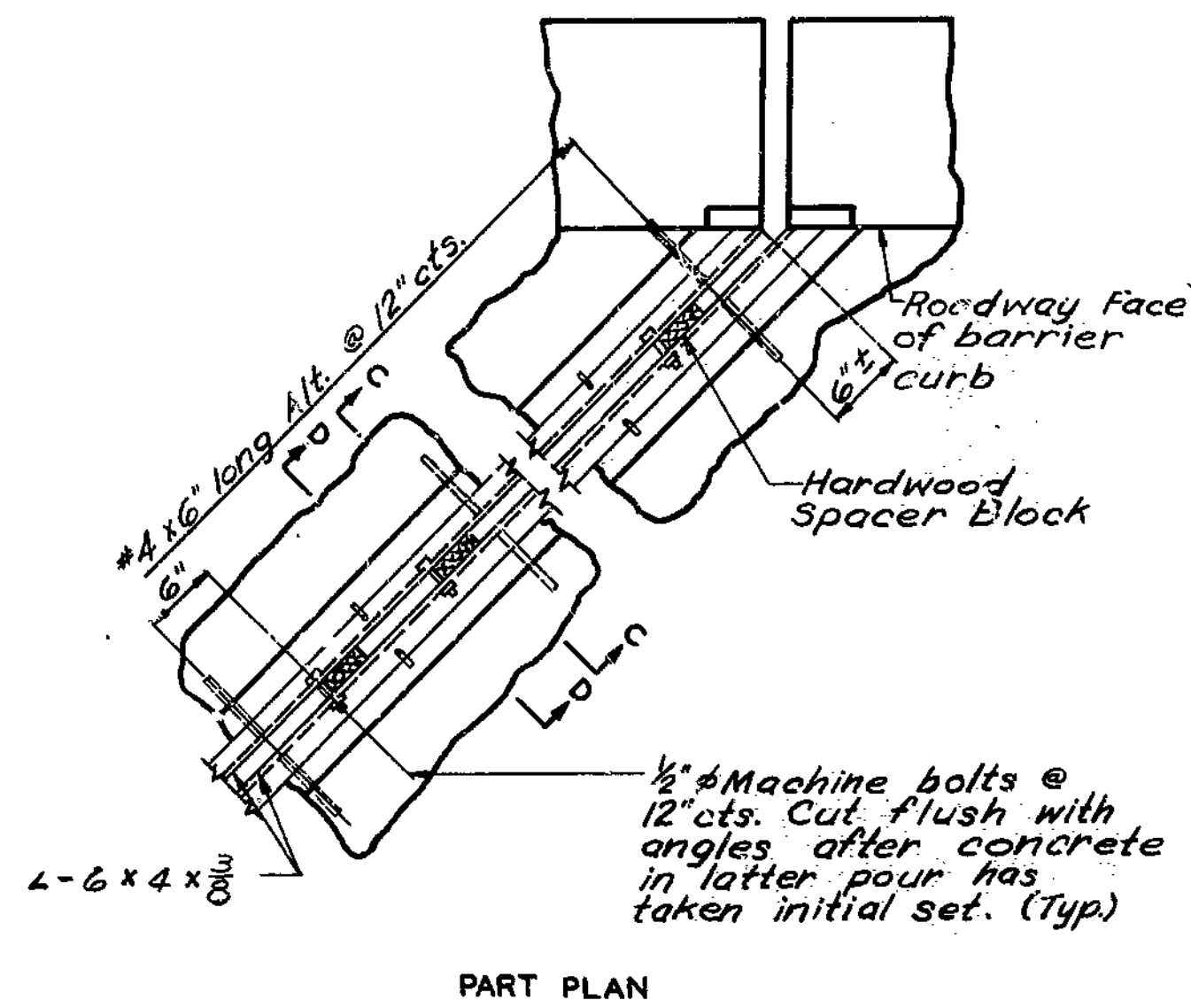
Sheet No. 5 of 14

CLAY COUNTY

L-656R

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	9	

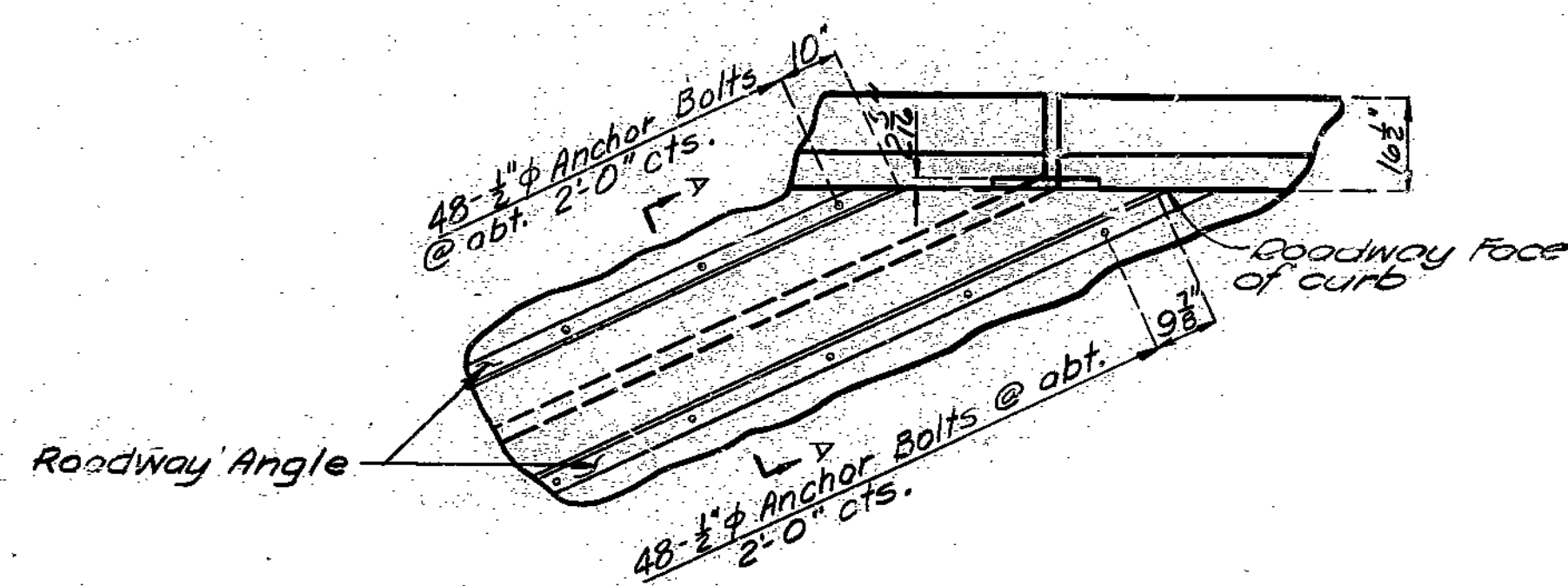


PART PLAN

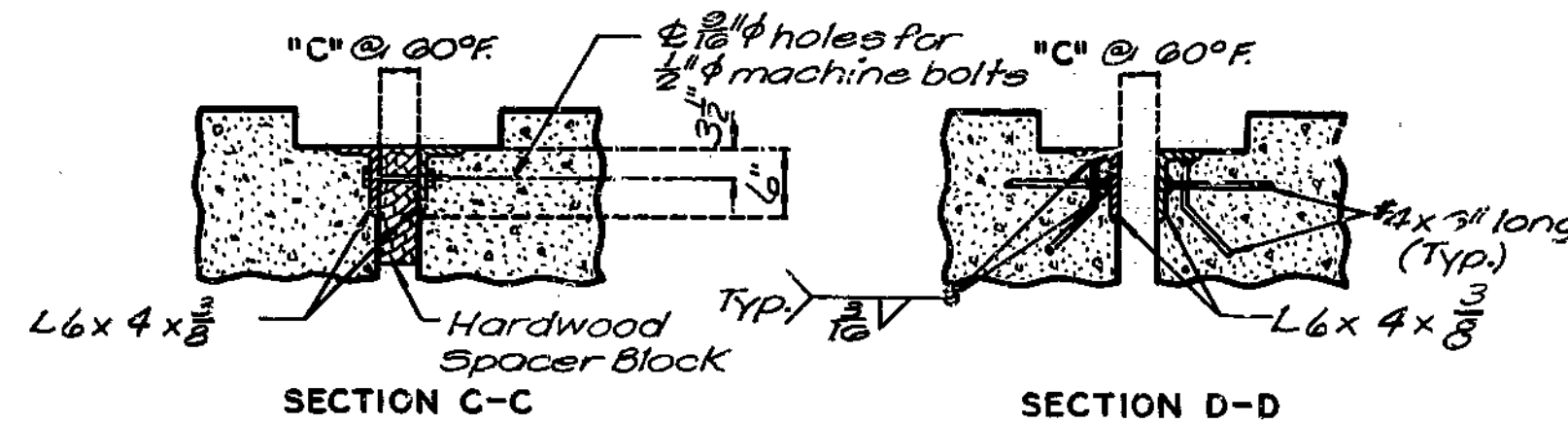
NOTES FOR ARMOR JOINT ANGLES:

ARMOR JOINT ANGLE FIELD SPLICES MADE BY AN EXPERIENCED WELDER ARE PERMITTED FOR SECTIONS OVER 50 FEET. THE ARMOR JOINT ANGLES SHALL BE BENT TO CONFORM TO CROWN AND GRADE OF ROADWAY.
 NO. 4 BARS FOR ARMOR JOINT ANGLES SHALL BE STRUCTURAL GRADE.
 APPROVED STUD-WELDED ANCHORS OR DEFORMED BAR ANCHORS (ASTM A496) MAY BE USED IN LIEU OF NO. 4 BARS SHOWN.
 PAYMENT FOR FURNISHING, PAINTING AND PLACING STRUCTURAL STEEL FOR JOINT ANGLES SHALL BE INCLUDED IN UNIT PRICE BID FOR OTHER ITEMS.
 ARMOR JOINT ANGLES SHOULD BE FIELD ADJUSTED WITH METAL SHIMS (1/8" x 1/2" x 1/2") PLACED BETWEEN ONE SIDE OF ANGLE AND HARDWOOD SPACER AT EACH BOLT, AS REQUIRED FOR TEMPERATURE CORRECTION.

DETAILS OF ARMOR JOINT ANGLES



PART PLAN AT INT. BENT NO. 2



TEMPERATURE OF	DIMENSION "A"	DIMENSION "B"	DIMENSION "C" (MAXIMUM)
110	17-5/8"	20-3/4"	2"
90	18-1/4"	21-3/8"	2-5/8"
70	18-3/4"	21-7/8"	3-1/8"
60	19-1/4"	22-3/8"	3-5/8"
50	19-5/8"	22-3/4"	4"
40	20"	23-1/8"	4-3/8"
30	20-1/2"	23-5/8"	4-7/8"
10	21"	24-1/8"	5-3/8"
-10	21-5/8"	24-3/4"	5"

JOINT SEAL FOR 4" MOVEMENT

NOTE: Plan dimensions are based on installation at 60°F. Expansion joint width shall be adjusted during installation for compliance with the above table. See Special Provisions.

NOTES FOR STEEL REINFORCED ELASTOMERIC EXPANSION JOINT SEAL:

THE EXPANSION JOINT SHALL BE SET, ANCHORED, BONDED AND SEALED AS RECOMMENDED BY THE MANUFACTURER AND AS SET FORTH IN THE SPECIAL PROVISIONS. ANCHORS SHALL BE CONE EXPANSION TYPE. PAYMENT FOR FURNISHING AND INSTALLING THE EXPANSION JOINT, INCLUDING ANCHOR BOLT ASSEMBLY, SHALL BE MADE UNDER UNIT PRICE BID PER LINEAL FOOT OF JOINT.

ACCURATELY LOCATE THE HOLE SPACING FOR 3/4" STUD ANCHORS (CONE EXPANSION TYPE), ON BOTH SIDES OF THE EXPANSION VOID AT A DISTANCE OF 7-13/16" FROM THE EDGE OF THE CONCRETE. LAYOUT TRANSVERSE HOLE SPACING IN ACCORDANCE WITH THE SHOP DRAWINGS AND THE TYPICAL LAYOUT AS SHOWN ON PLANS. INSURE THAT THE HOLES ARE DIRECTLY OPPOSITE EACH OTHER (SQUARE). DRILL HOLES 3-1/4" DEEP FOR 3/4" STUD ANCHORS.

HOLES SHALL NOT BE DRILLED NOR ANCHOR BOLTS SET UNTIL THE CONCRETE IS AT LEAST 7 DAYS OLD.

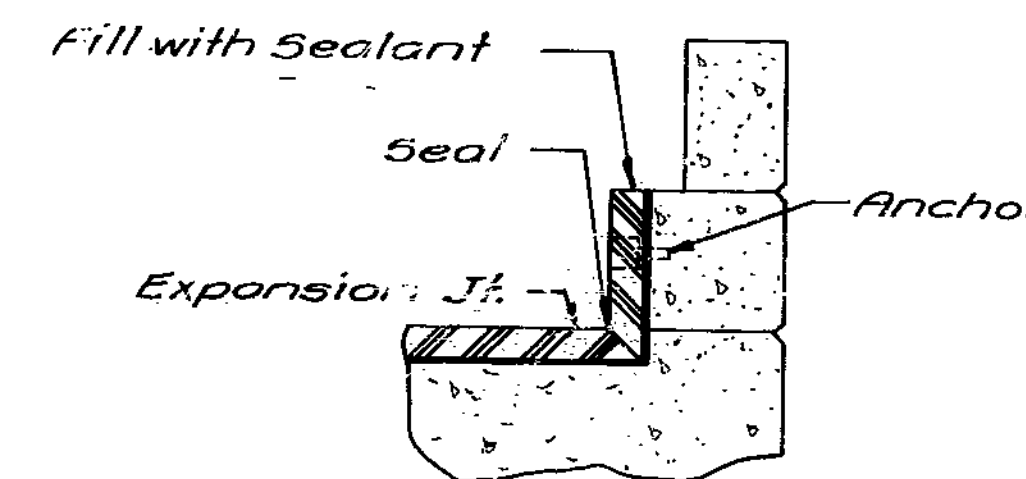
TIGHTEN ALL NUTS TO 85 FOOT POUNDS. RETIGHTEN TO 85 FOOT POUNDS A MINIMUM OF 30 MINUTES AFTER INITIAL TIGHTENING.

WIRE BRUSH BOLT CAVITY AND COAT WITH SEALANT. FILL CAVITY WITH SEALANT TO A DEPTH OF 1/2" AND PUSH PLUG DOWN TO 5/8" PLUG LOCK. SCRAPE OFF ALL EXCESS SEALANT.

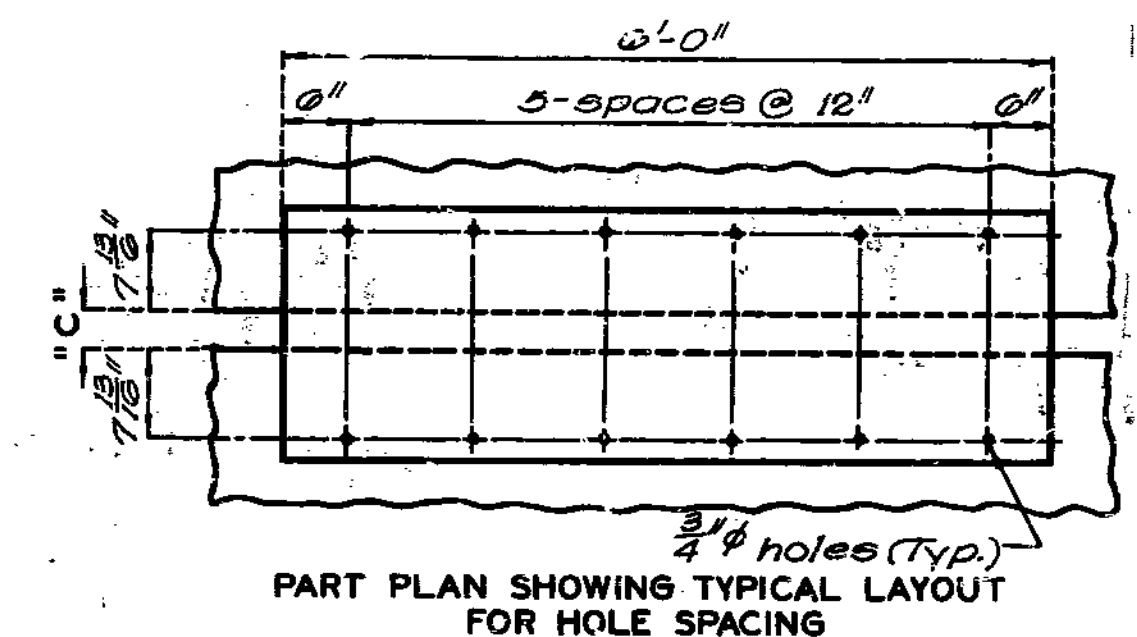
ROADWAY ANGLE NOTES:

ROADWAY ANGLE FIELD SPLICES MADE BY AN EXPERIENCED WELDER ARE PERMITTED FOR SECTIONS OVER 50 FEET. THE ROADWAY ANGLES SHALL BE BENT TO CONFORM TO CROWN AND GRADE OF ROADWAY.

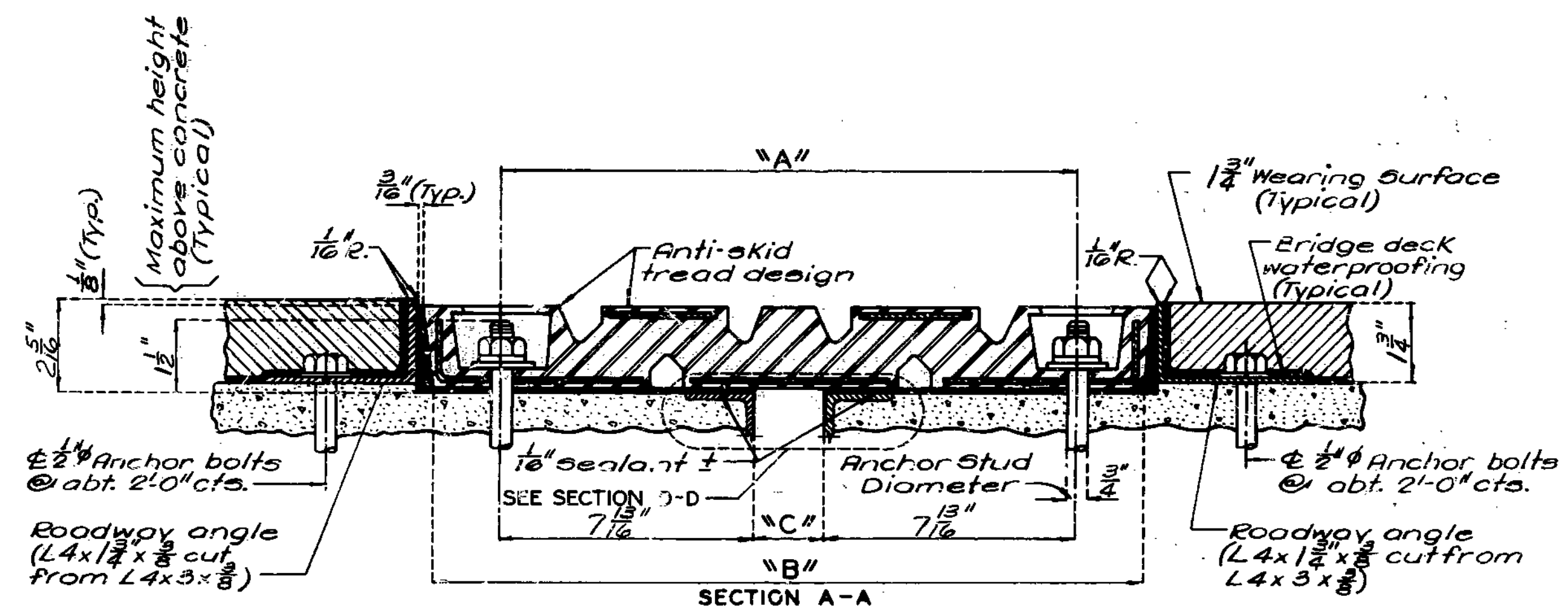
PAYMENT FOR FURNISHING, PAINTING AND PLACING STRUCTURAL STEEL FOR ROADWAY ANGLES SHALL BE INCLUDED IN UNIT PRICE BID FOR OTHER ITEMS.



SECTION THRU CURB



PART PLAN SHOWING TYPICAL LAYOUT FOR HOLE SPACING



DETAILS OF STEEL REINFORCED ELASTOMERIC EXPANSION JOINT SEAL AT BENT NO. 2

169

STD. 5.7.4, REVISED
 DEC. 1974, JAN. 1976

DETAILED AUG 1974
 CHECKED FEB 1975

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

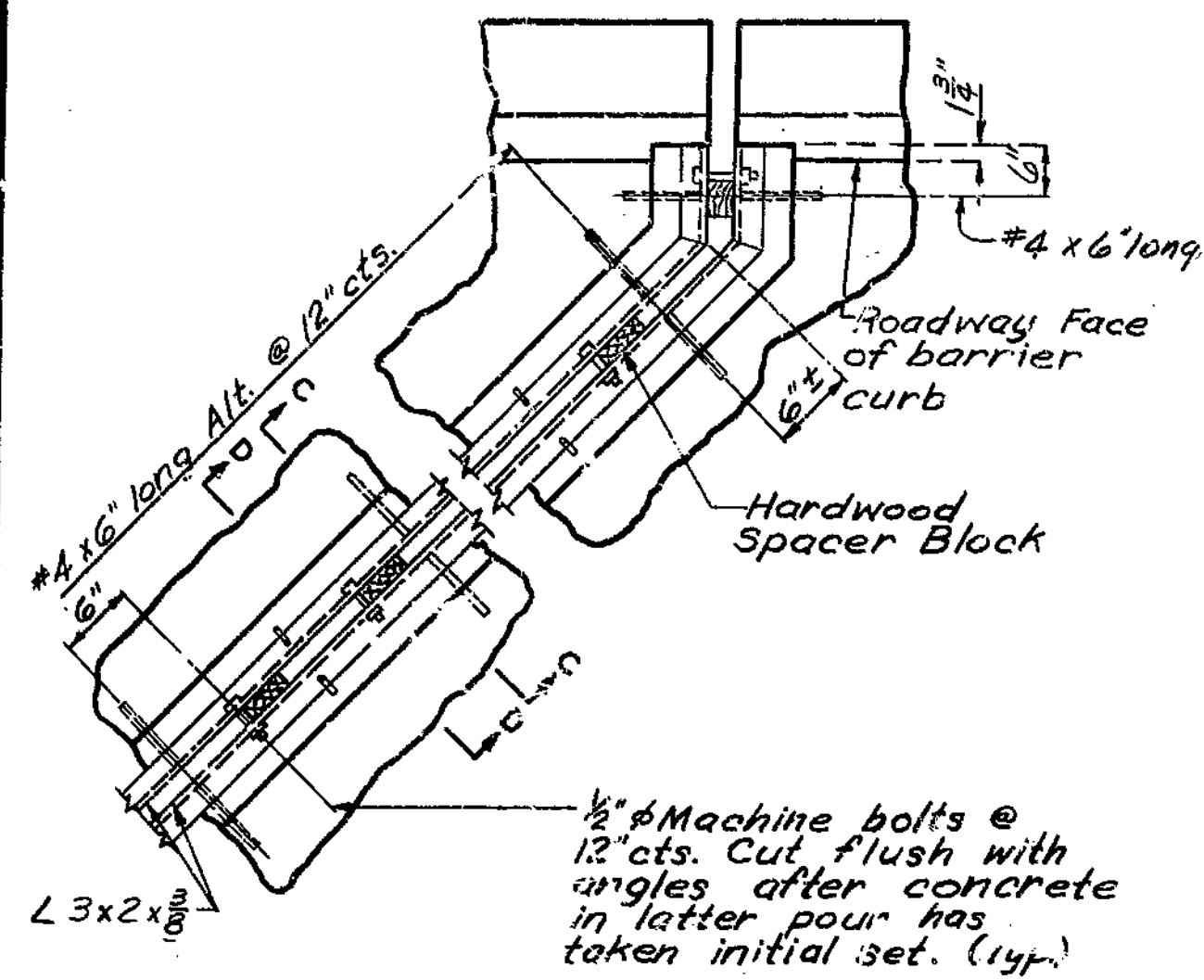
Sheet No. 6 of 14

CLAY COUNTY

L-656R

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		58	10	

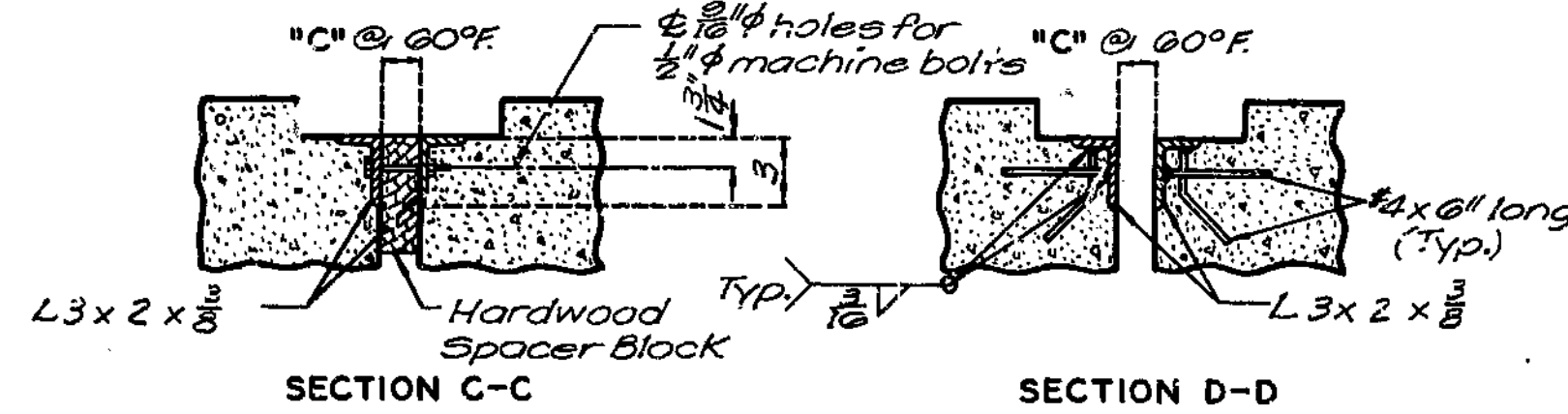


PART PLAN

NOTES FOR ARMOR JOINT ANGLES:

ARMOR JOINT ANGLE FIELD SPLICES MADE BY AN EXPERIENCED WELDER ARE PERMITTED FOR SECTIONS OVER 50 FEET. THE ARMOR JOINT ANGLES SHALL BE BENT TO CONFORM TO CROWN AND GRADE OF ROADWAY. NO. 4 BARS FOR ARMOR JOINT ANGLES SHALL BE STRUCTURAL GRADE. APPROVED STUD WELDED ANCHORS OR DEFORMED BAR ANCHORS (ASTM A496) MAY BE USED IN LIEU OF NO. 4 BARS SHOWN. PAYMENT FOR FURNISHING, PAINTING AND PLACING STRUCTURAL STEEL FOR ARMOR JOINT ANGLES SHALL BE INCLUDED IN UNIT PRICE BID FOR OTHER ITEMS. ARMOR JOINT ANGLES SHOULD BE FIELD ADJUSTED WITH METAL SHIMS (1/8 x 2 x 3) PLACED BETWEEN ONE SIDE OF ANGLE AND HARDWOOD SPACER AT EACH BOLT, AS REQUIRED FOR TEMPERATURE CORRECTION.

DETAILS OF ARMOR JOINT ANGLES



SECTION C-C

SECTION D-D

TABLE OF VARIABLE DIMENSIONS

TEMPERATURE OF	DIMENSION "A"	DIMENSION "B"	DIMENSION "C" (MAXIMUM)
110	7-5/8"	9-3/8"	1"
90	8"	9-3/4"	1-3/8"
70	8-1/4"	10"	1-5/8"
60	8-1/2"	10-1/4"	1-7/8"
50	8-5/8"	10-3/8"	2"
40	8-3/4"	10-1/2"	2-1/8"
30	9"	10-3/4"	2-3/8"
10	9-1/4"	11"	2-5/8"
-10	9-5/8"	11-3/8"	3"

JOINT SEAL FOR 2" MOVEMENT.

NOTE: Plan dimensions are based on installation at 60°F. Expansion joint width shall be adjusted during installation for compliance with the above table. See Special Provisions.

NOTES FOR STEEL REINFORCED ELASTOMERIC EXPANSION JOINT SEAL:

THE EXPANSION JOINT SHALL BE SET, ANCHORED, BONDED AND SEALED AS RECOMMENDED BY THE MANUFACTURER AND AS SET FORTH IN THE SPECIAL PROVISIONS. ANCHORS SHALL BE CONE EXPANSION TYPE. PAYMENT FOR FURNISHING AND INSTALLING THE EXPANSION JOINT, INCLUDING ANCHOR BOLT ASSEMBLY, SHALL BE MADE UNDER UNIT PRICE BID PER LINEAL FOOT OF JOINT.

ACCURATELY LOCATE THE HOLE SPACING FOR 1/2" STUD ANCHORS (CONE EXPANSION TYPE), ON BOTH SIDES OF THE EXPANSION VOID AT A DISTANCE OF 3-5/16" FROM THE EDGE OF THE CONCRETE. LAYOUT TRANSVERSE HOLE SPACING IN ACCORDANCE WITH THE SHOP DRAWINGS AND THE TYPICAL LAYOUT AS SHOWN ON PLANS. INSURE THAT THE HOLES ARE DIRECTLY OPPOSITE EACH OTHER (SQUARE). DRILL HOLES 2-1/4" DEEP FOR 1/2" STUD ANCHORS.

HOLES SHALL NOT BE DRILLED NOR ANCHOR BOLTS SET UNTIL THE CONCRETE IS AT LEAST 7 DAYS OLD.

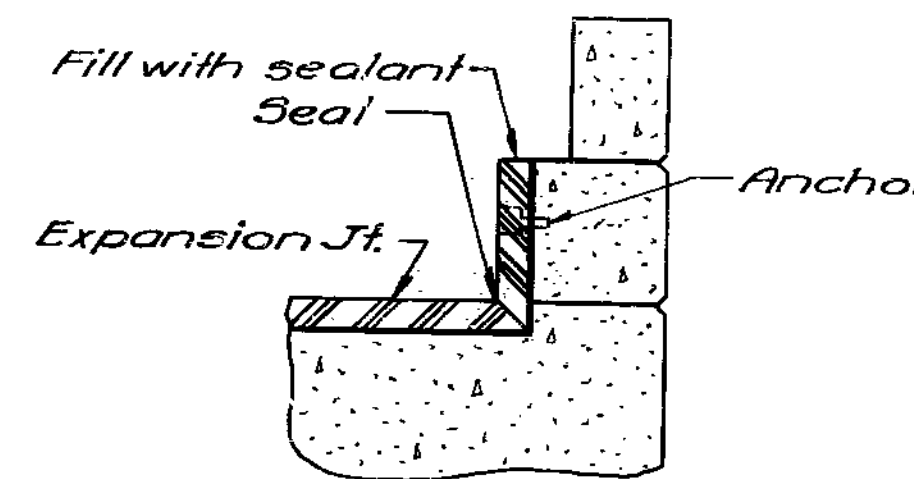
TIGHTEN ALL NUTS TO 40 FOOT POUNDS. RETIGHTEN TO 40 FOOT POUNDS A MINIMUM OF 30 MINUTES AFTER INITIAL TIGHTENING.

WIRE BRUSH BOLT CAVITY AND COAT WITH SEALANT. FILL CAVITY WITH SEALANT TO A DEPTH OF 1/2" AND PUSH PLUG DOWN TO SNAP LOCK. SCRAPE OFF ALL EXCESS SEALANT.

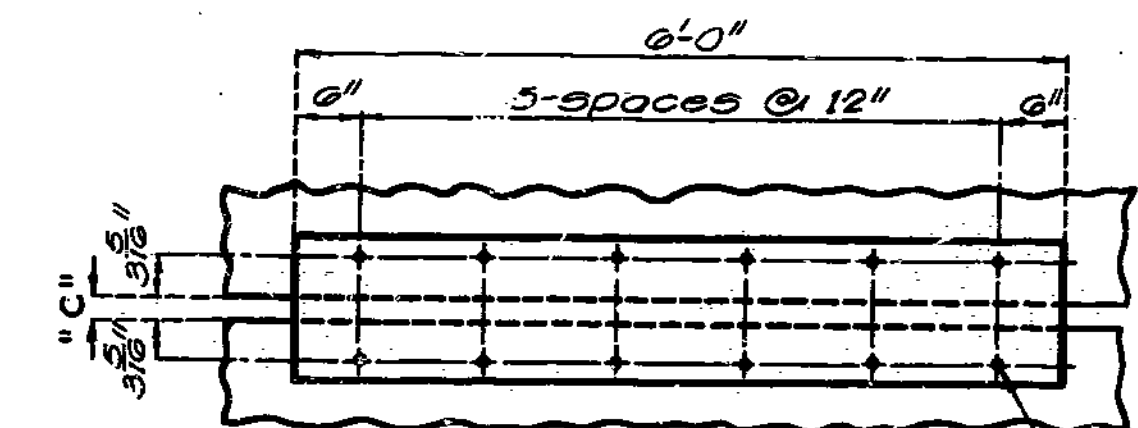
ROADWAY ANGLE NOTES:

ROADWAY ANGLE FIELD SPLICES MADE BY AN EXPERIENCED WELDER ARE PERMITTED FOR SECTIONS OVER 50 FEET. THE ROADWAY ANGLES SHALL BE BENT TO CONFORM TO CROWN AND GRADE OF ROADWAY.

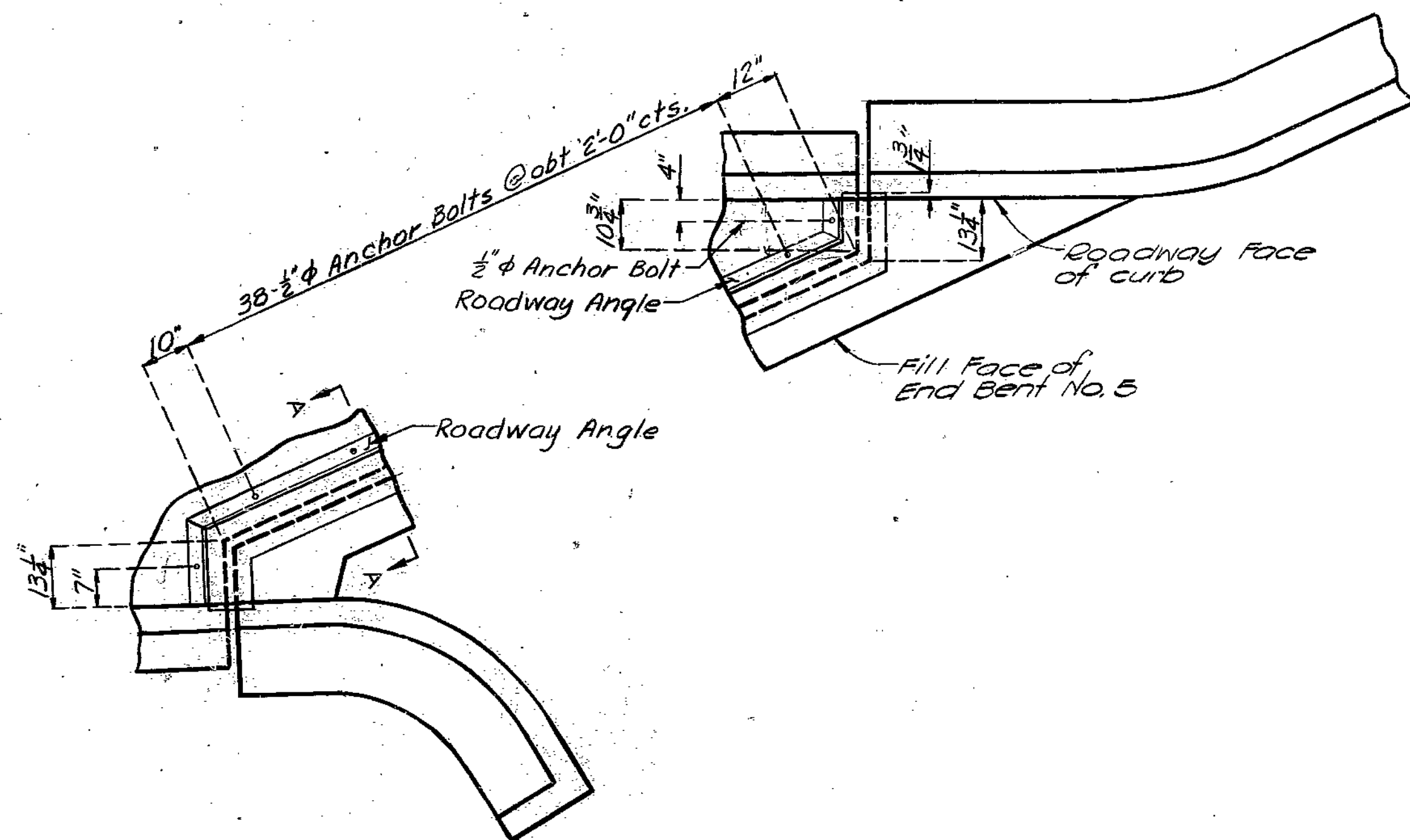
PAYMENT FOR FURNISHING, PAINTING AND PLACING STRUCTURAL STEEL FOR ROADWAY ANGLES SHALL BE INCLUDED IN UNIT PRICE BID FOR OTHER ITEMS.



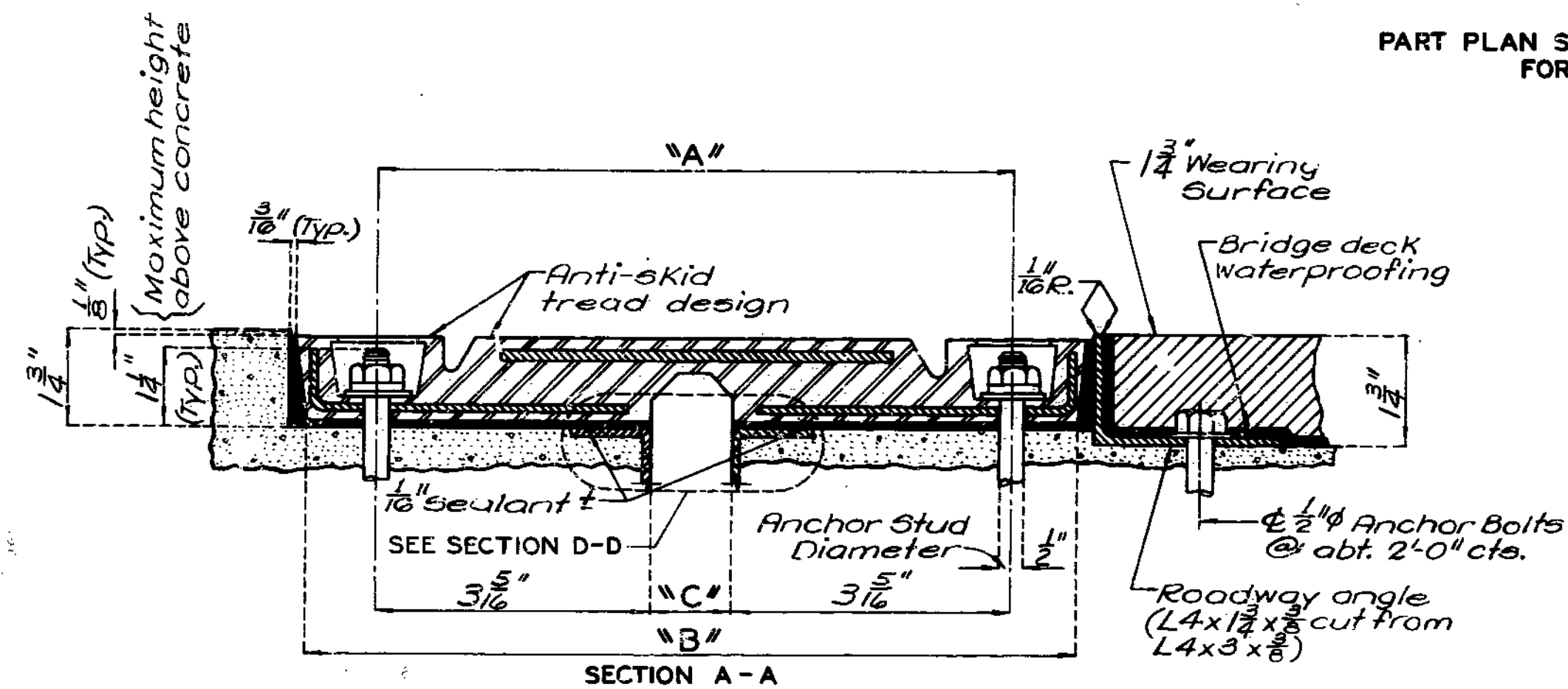
SECTION THRU CURB



PART PLAN SHOWING TYPICAL LAYOUT FOR HOLE SPACING



PART PLAN AT END BENT NO. 5



SECTION A-A

DETAILS OF STEEL REINFORCED ELASTOMERIC EXPANSION JOINT SEAL AT BENT NO. 5

170

STD. 5.7.2
DEC. 1974
REVISED
JAN. 1976

DETAILED AUG 1974
CHECKED FEB 1975

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

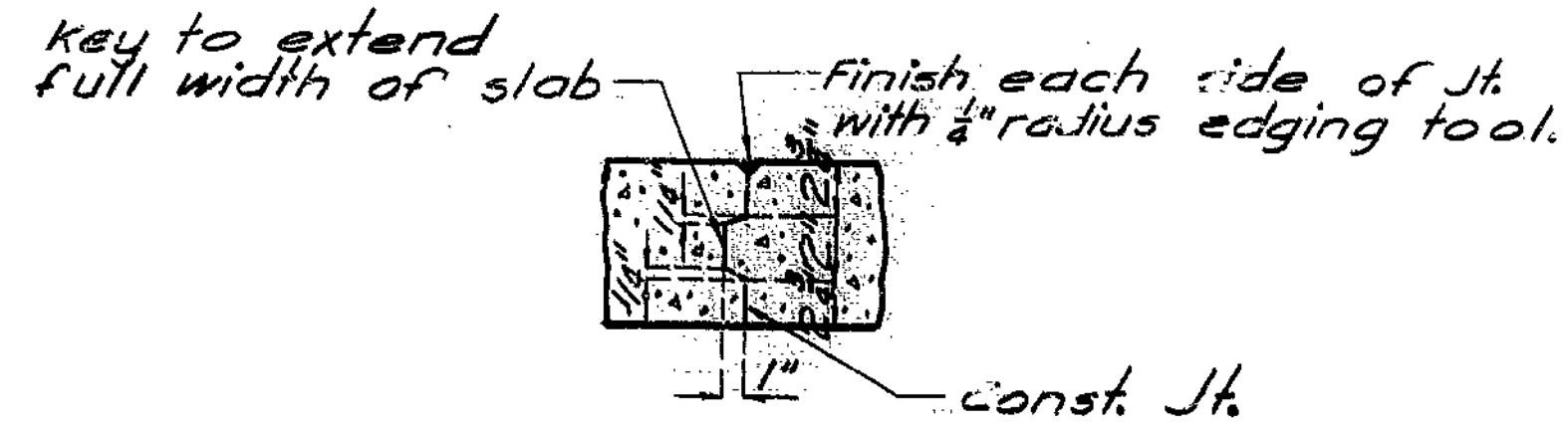
Sheet No. 7 of 14

CLAY COUNTY

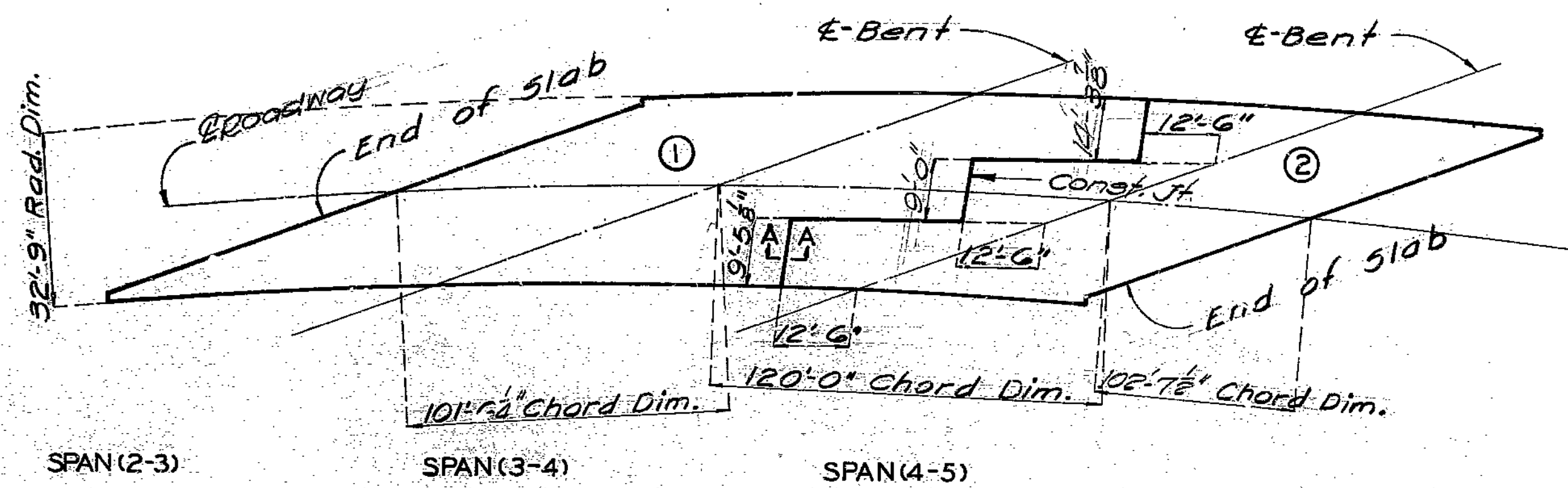
L-656R

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. I.O.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	11	



SECTION A-A



	Sequence of Pours	
	Direction 1	Direction 2
Basic Sequence	End to End	1 to End
Alternate "A" Pours	1 + 2	End to End

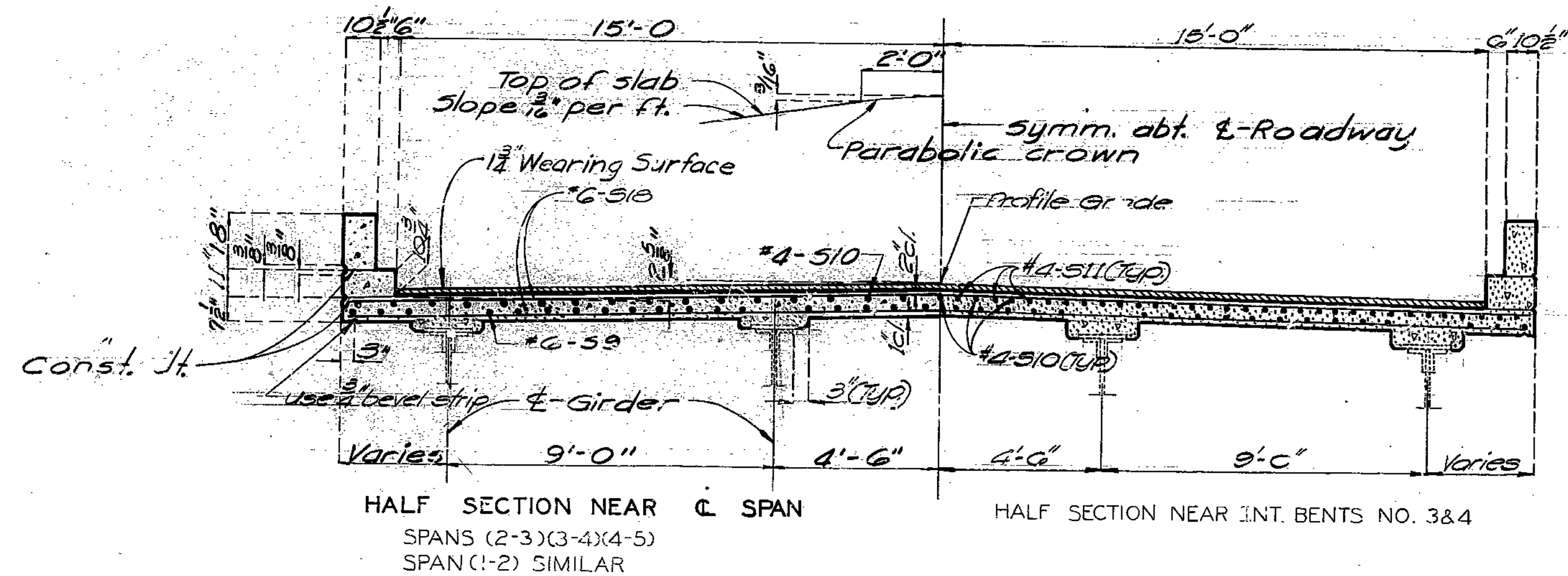
Continuous spans

The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours and shall pour and satisfactorily finish the slab pours at a rate of not less than 47 cubic yards per hour.

Simple spans

The contractor shall pour and satisfactorily finish the roadway slab at a rate of not less than 25 cubic yards per hour before pouring the continuous spans.

SLAB POURING SEQUENCE



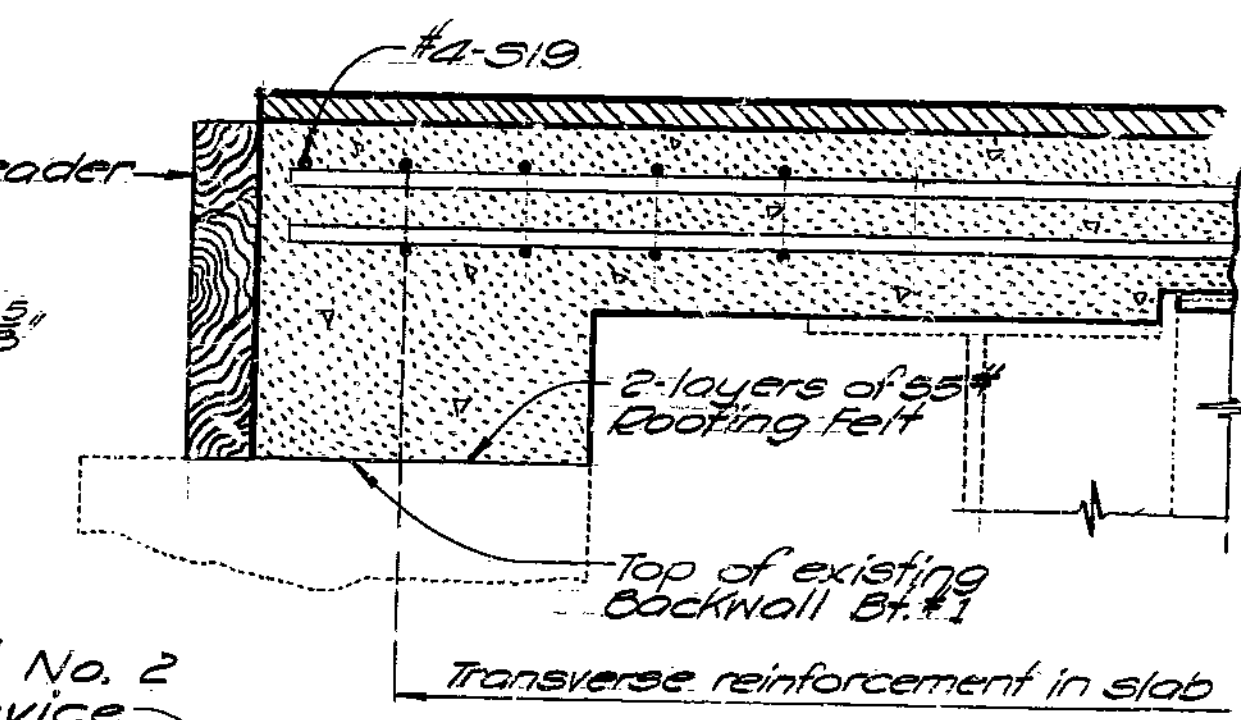
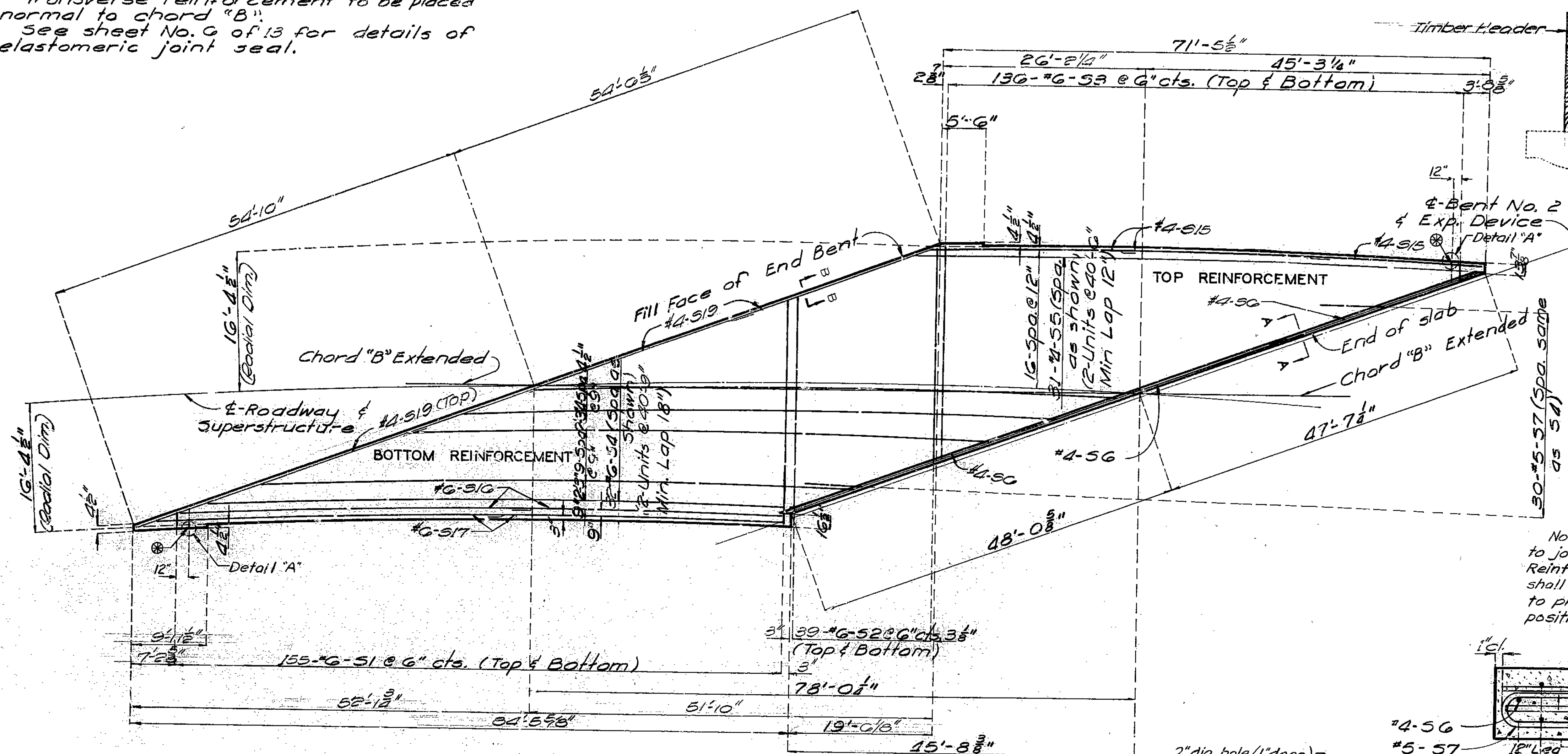
Note: For details and reinforcement of curb and parapet not shown see sheets No. 11 & 12.

MISSOURI STATE HIGHWAY DEPARTMENT

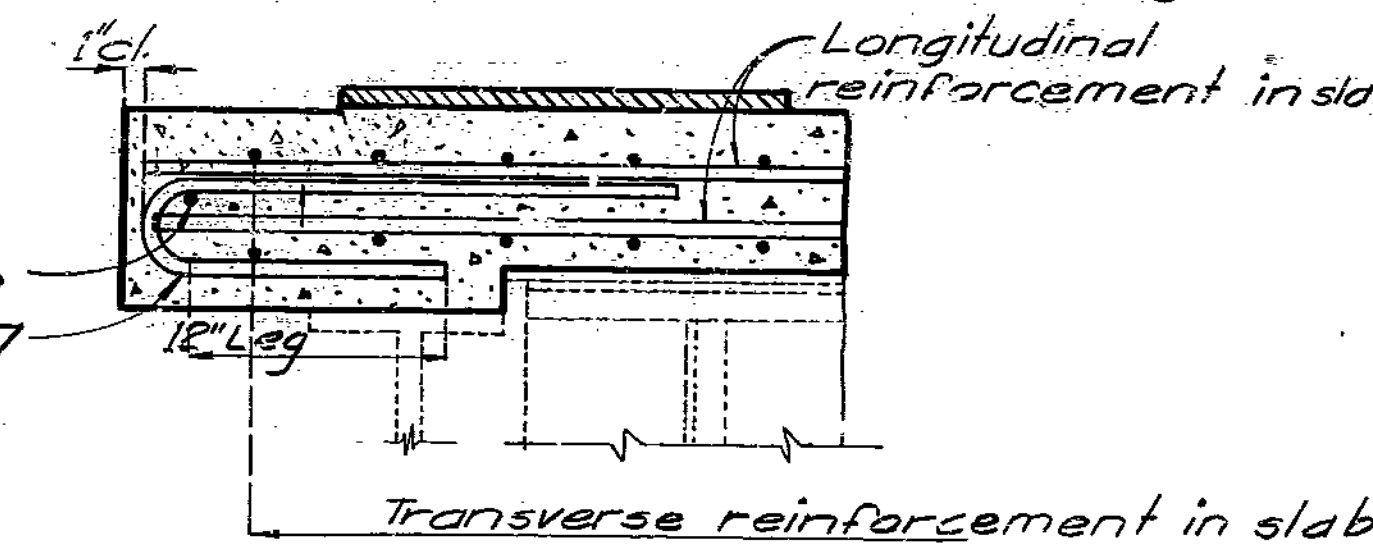
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	12	

Note: Longitudinal dimensions shown are taken parallel to grade along chord "B" except as shown.

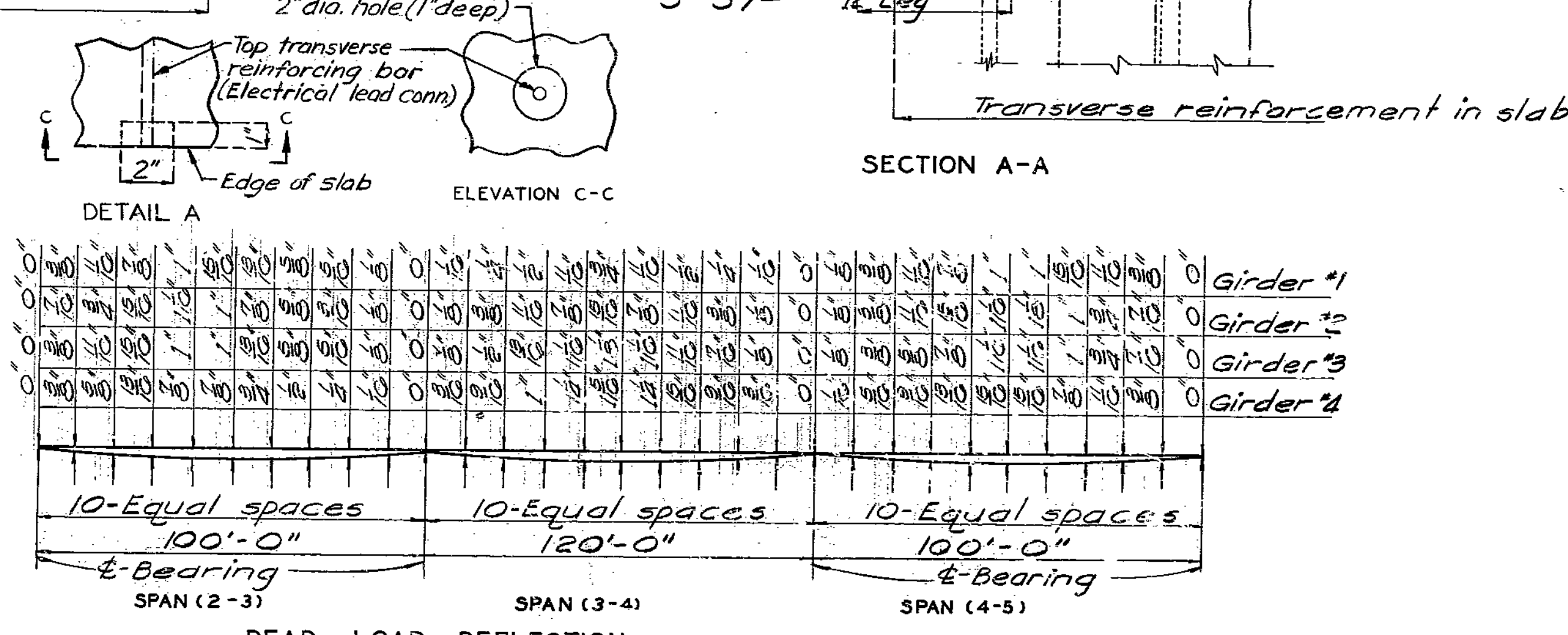
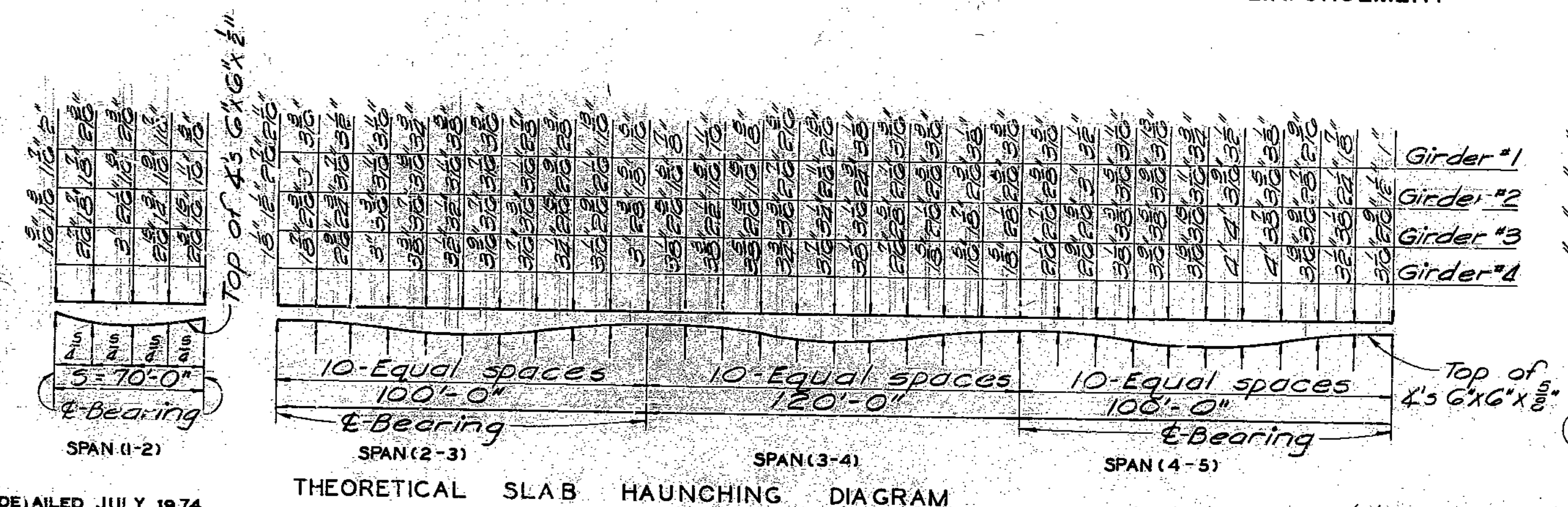
Transverse reinforcement to be placed normal to chord "B".
See sheet No. 9 of 13 for details of elastomeric joint seal.



Note: Position of slab reinforcement adjacent to joints that are to be protected by Steel Reinforced Elastomeric Expansion Joint Seal shall be adjusted to the minimum extent necessary to provide 1/2" clear distance from anchor bolt positions shown on approved shop drawings.



PART PLAN OF SLAB SHOWING REINFORCEMENT



DETAILED JULY 1974
CHECKED Feb. 1975

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

Note: 100% Dead Load Deflection due to structural steel.

Sheet No. 9 of 14

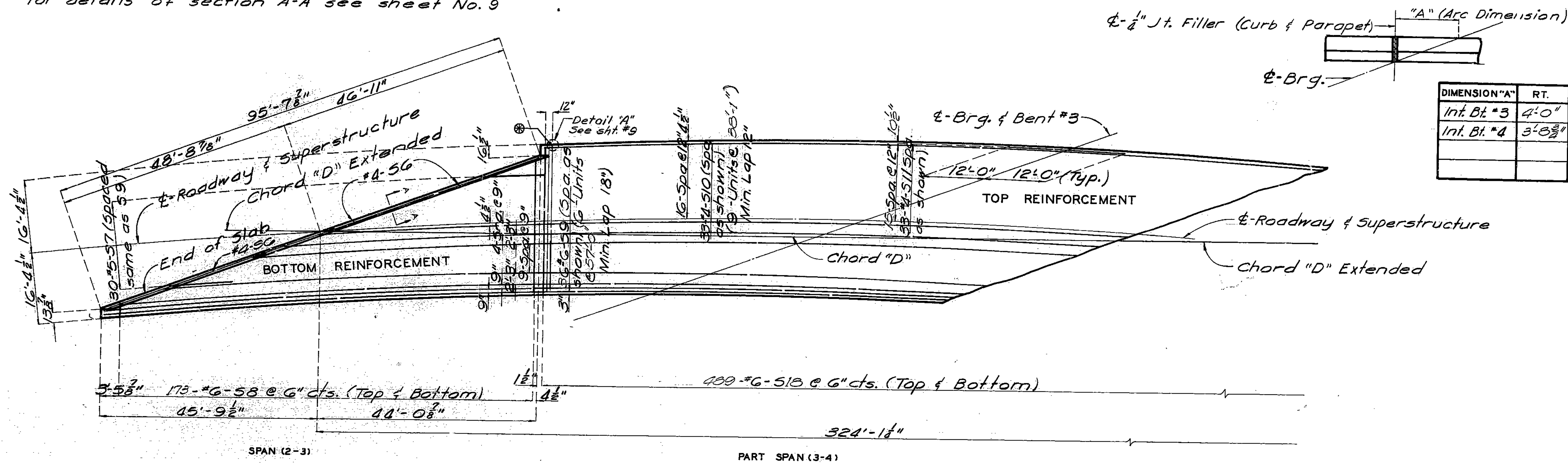
CLAY COUNTY

L-656R

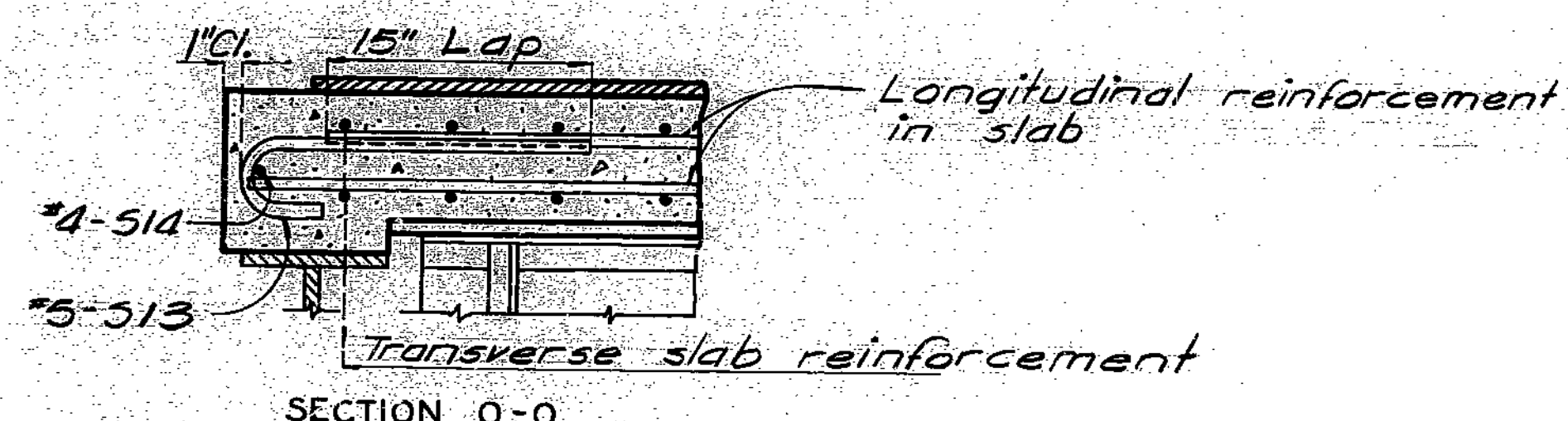
MISSOURI STATE HIGHWAY DEPARTMENT

Note: Longitudinal dimensions shown are taken parallel to grade along chord "D" except as shown.
 Transverse reinforcement to be placed normal to chord "D".
 For details of section A-A see sheet No. 9

FED. ROAD DIST. NO.	STATE NO.	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5			19	13	

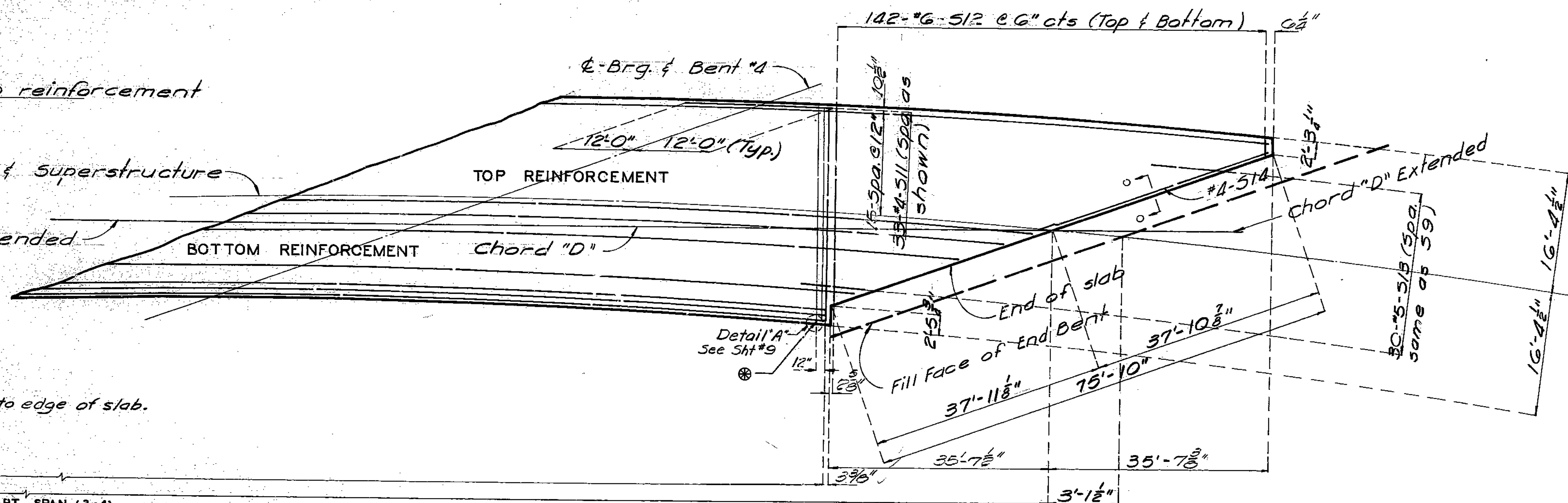


DIMENSION "A"	RT.	LT.
Int. Bl. #3	4'-0"	3'-9 $\frac{3}{8}$ "
Int. Bl. #4	3'-0 $\frac{3}{8}$ "	3'-6 $\frac{3}{8}$ "



Note: For details of elastomeric joint seal see sheets No. 6 & 7

Note: Position of slab reinforcement adjacent to joints that are to be protected by Steel Reinforced Elastomeric Expansion Joint Seal shall be adjusted to the minimum extent necessary to provide $\frac{1}{2}$ " clear distance from anchor bolt positions shown on approved shop drawings



Note: Shift top transverse bar to edge of slab.

173

DETAILED AUG. 1974
 CHECKED Feb. 1975

PART SPAN (3-4) SPAN (4-5) PLAN OF SLAB SHOWING REINFORCEMENT

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

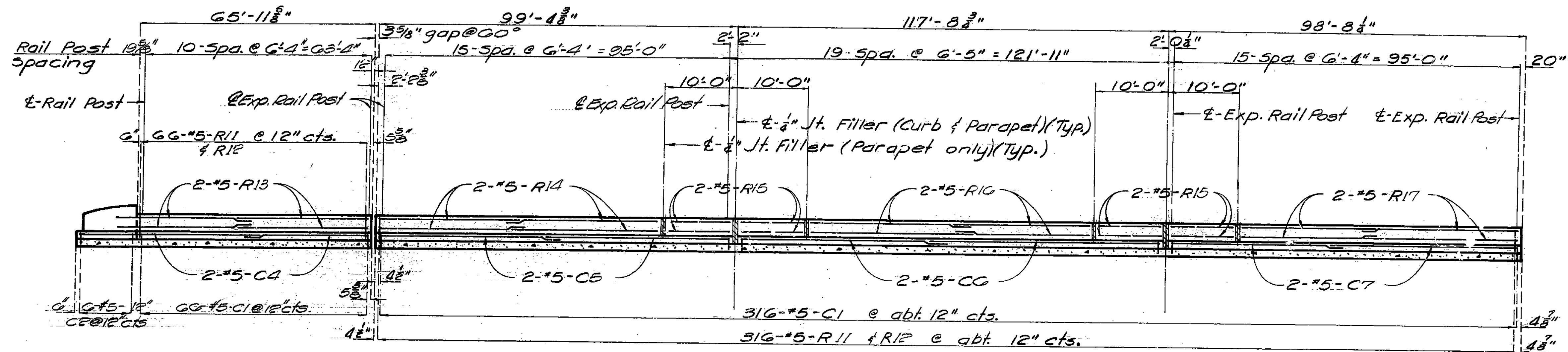
Sheet No. 10 of 14

CLAY COUNTY

L-656R

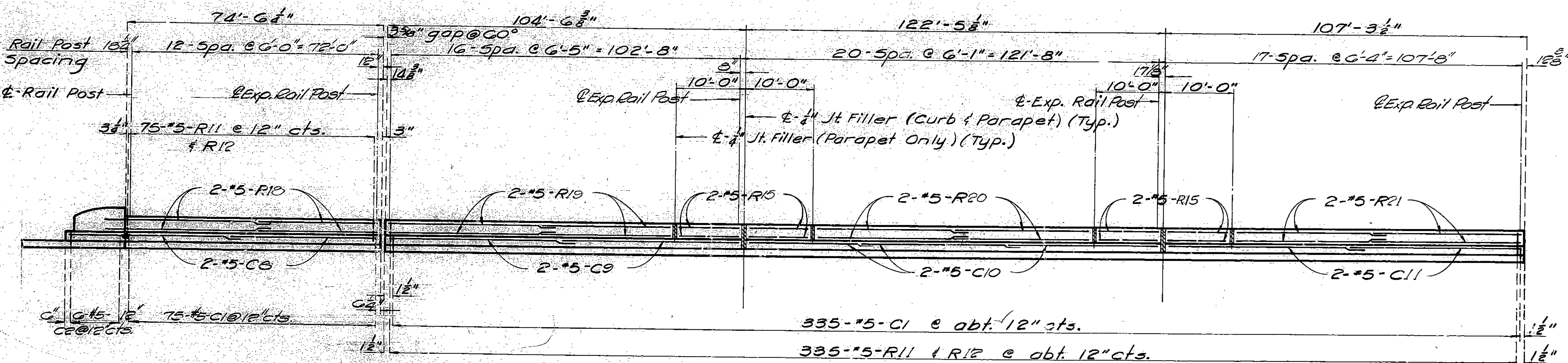
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	12	



SPAN (1-2) SPAN (2-3) SPAN (3-4) SPAN (4-5)
SECTION NEAR LEFT CURB AND PARAPET

Note: Longitudinal dimensions shown are taken parallel to grade at top and $\frac{1}{2}$ of parapet.
For details of curb & parapet not shown see sheet No. 12.



SPAN (1-2) SPAN (2-3) SPAN (3-4) SPAN (4-5)
ELEVATION OF RIGHT CURB AND PARAPET

174

DETAILED AUG. 1974
CHECKED FEB. 1975

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

Sheet No. 11 of 14

CLAY

COUNTY

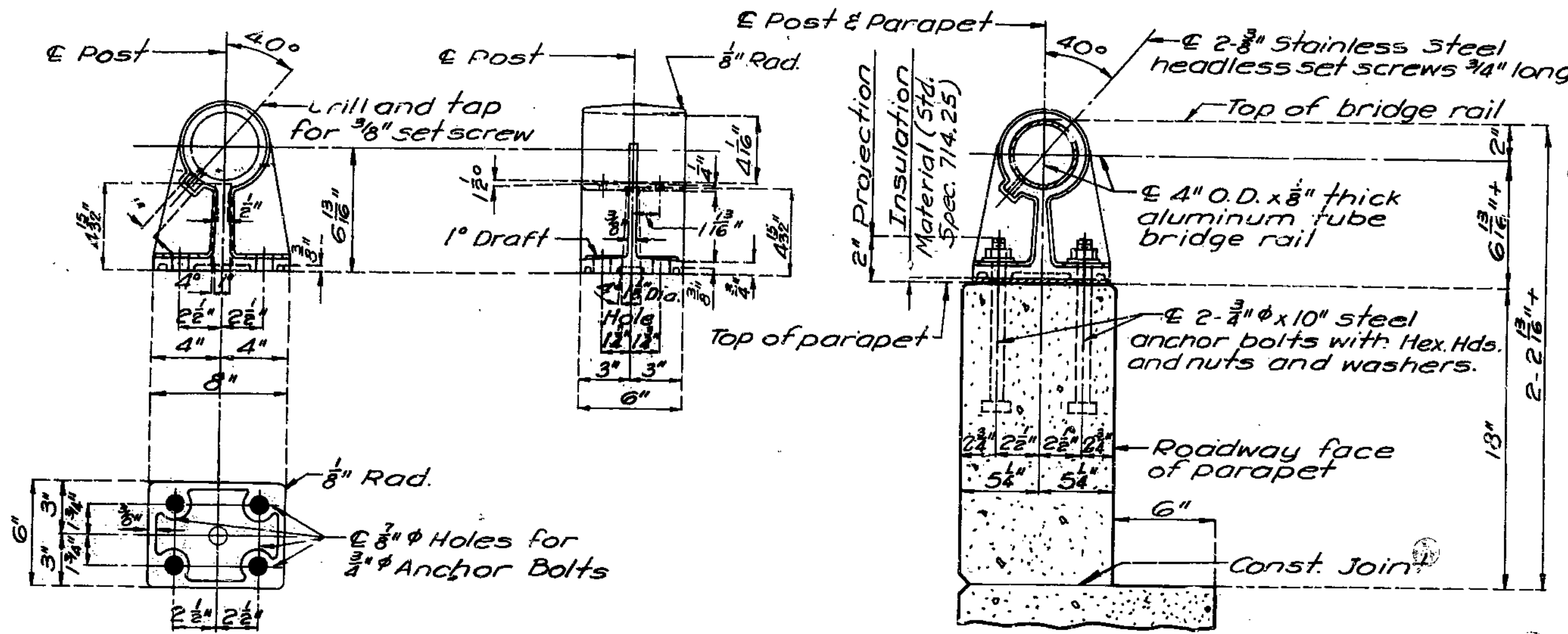
L-65 6R

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	15	

GENERAL BRIDGE RAIL NOTES:

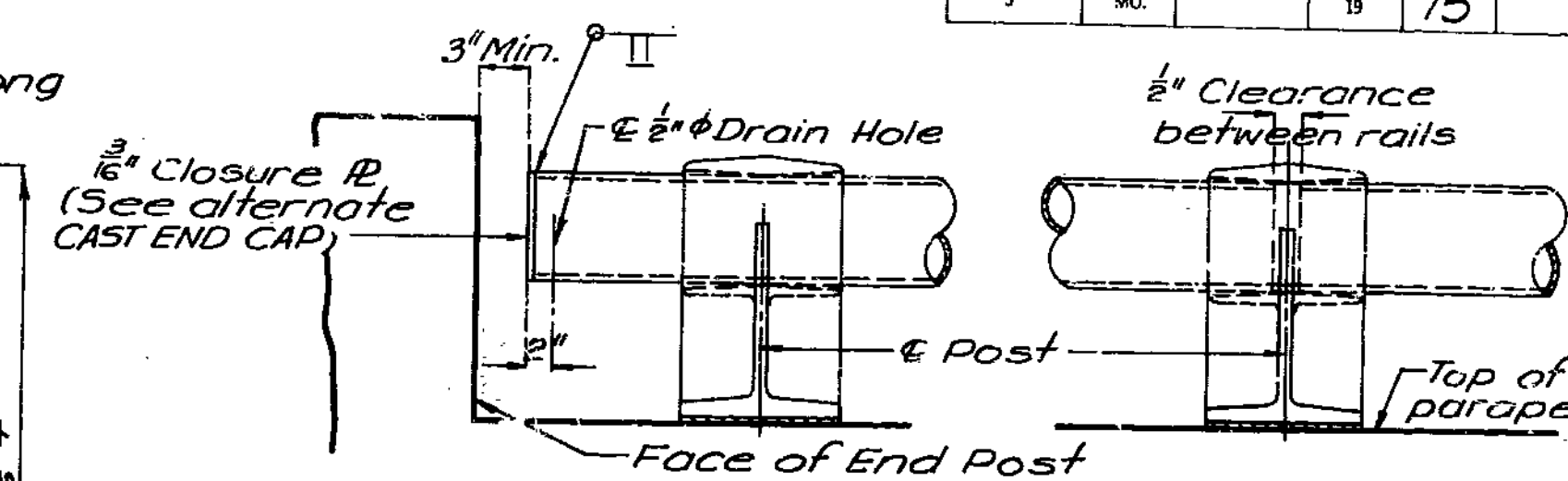
All bridge rail posts shall be set normal to grade. Aluminum tube bridge rail shall be bent to conform to vertical and horizontal alignment of parapet.
 Aluminum washer shims between top of parapet and post base may be used for adjusting bridge rail alignment. Maximum thickness of shims to be 3". Where more tilting of post is required for proper alignment, concrete bearing areas shall be y-round down.
 All parts of bridge rail, except anchor bolts, nuts, washers, and set screws are to be of aluminum material.
 All fillets 1/4" except as noted.
 All drafts 3° except as noted.
 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 parapet 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 2" radius or 1/8" bevel unless otherwise noted.
 A thin coating of material shall be applied to the stainless steel headless set screws to prevent locking to aluminum posts. The coating material shall be equal to Wynn Oil Company's "Viscotene" or Stahl Specialty Company's "PBC 516".



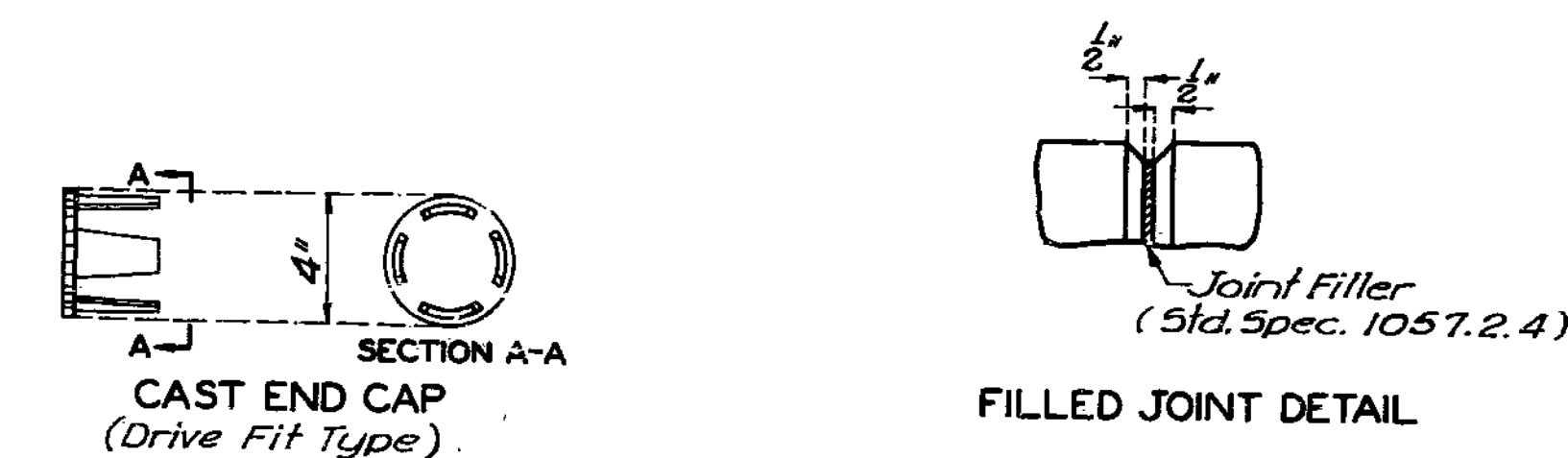
POST DETAILS

SECTION THRU BRIDGE RAIL

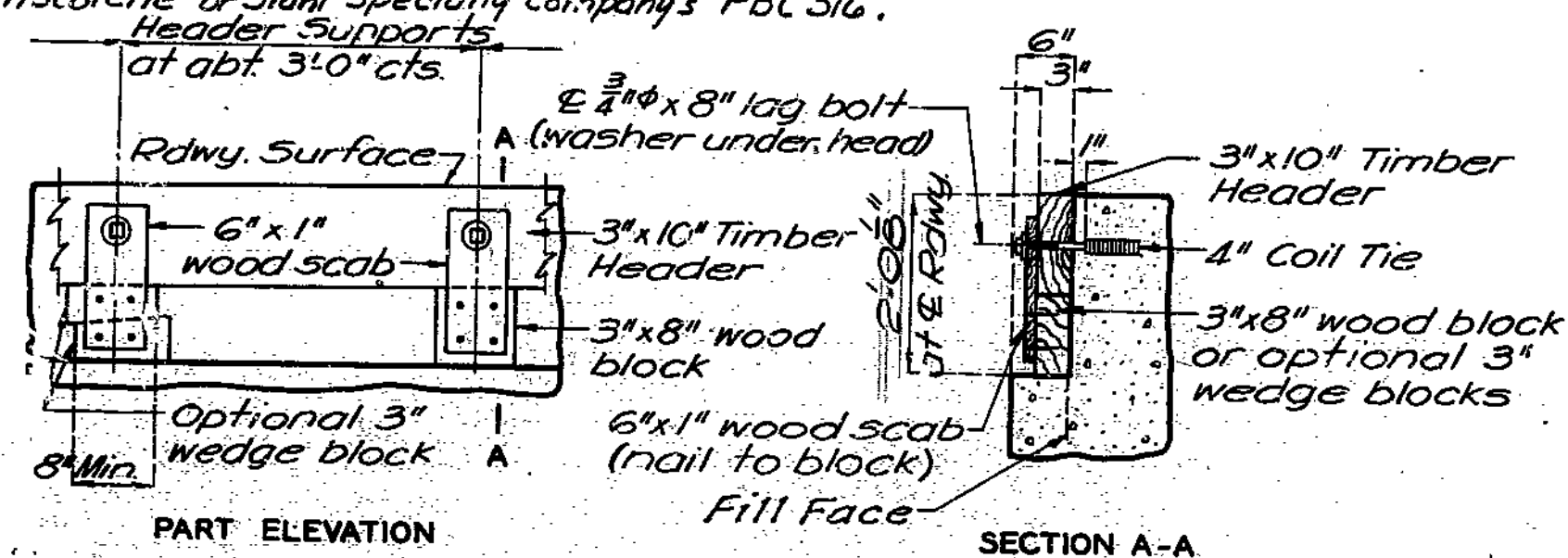
ONE TUBE ALUMINUM RAILING



TYPICAL BRIDGE RAIL DETAILS

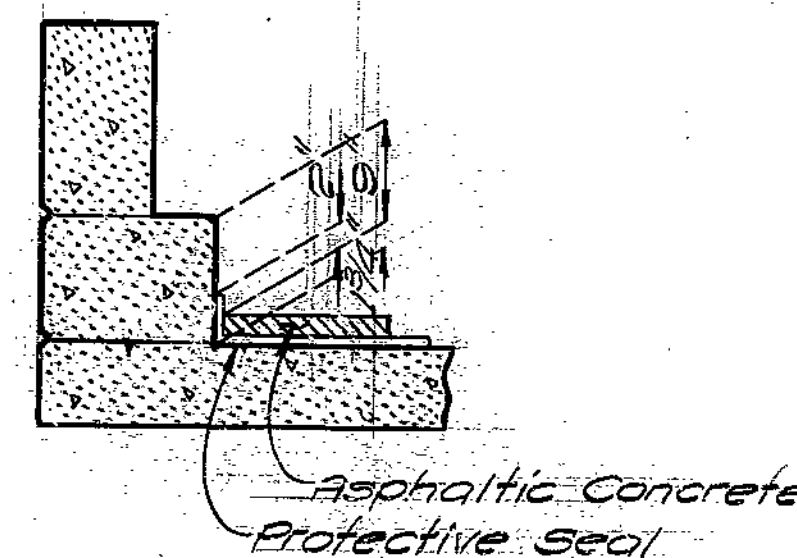


FILLED JOINT DETAIL

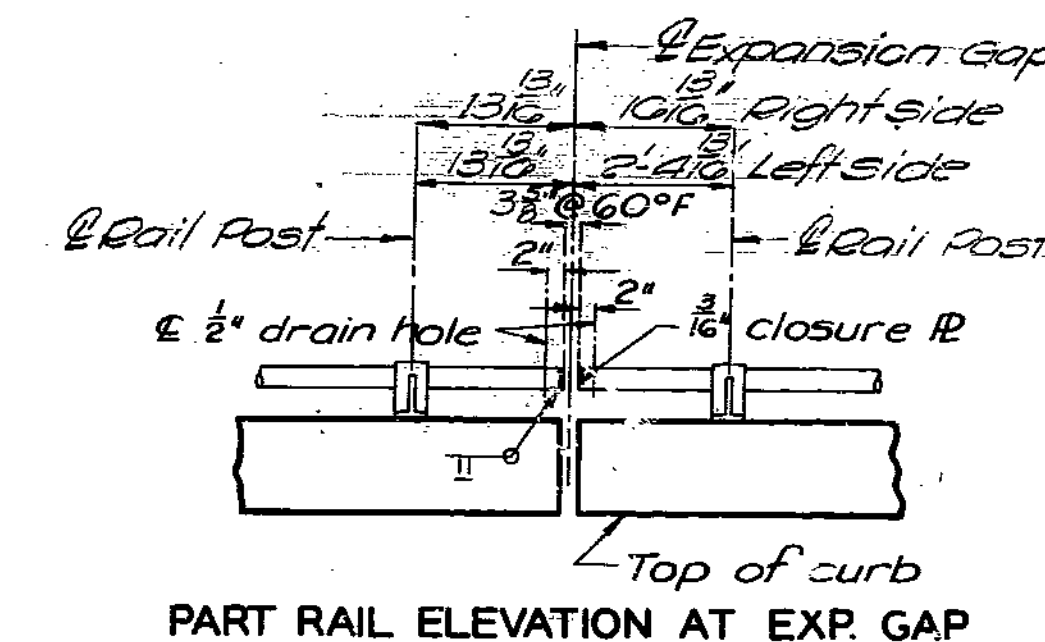


DETAILS OF TIMBER HEADER AT END BENTS

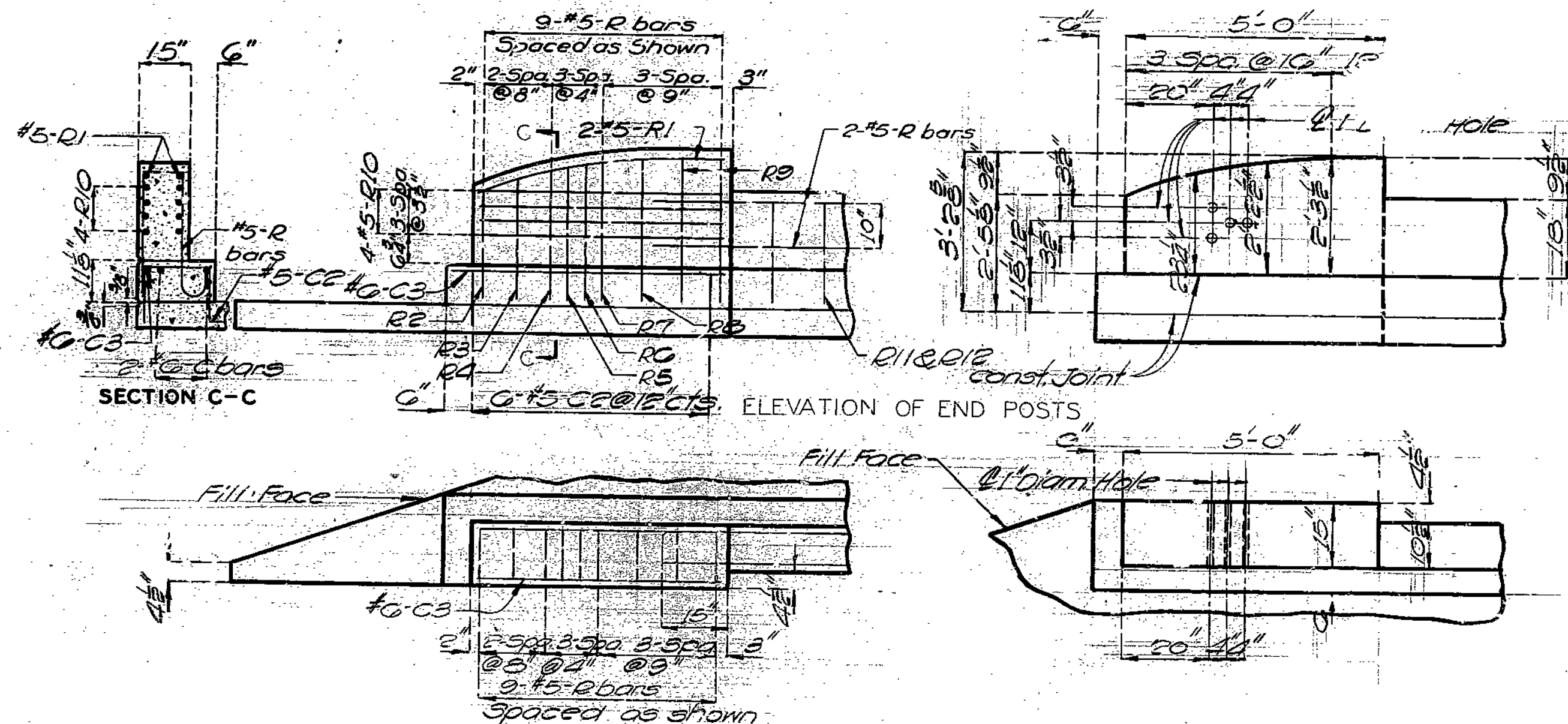
Note: Cost of timber headers complete in place to be included in price bid for concrete.



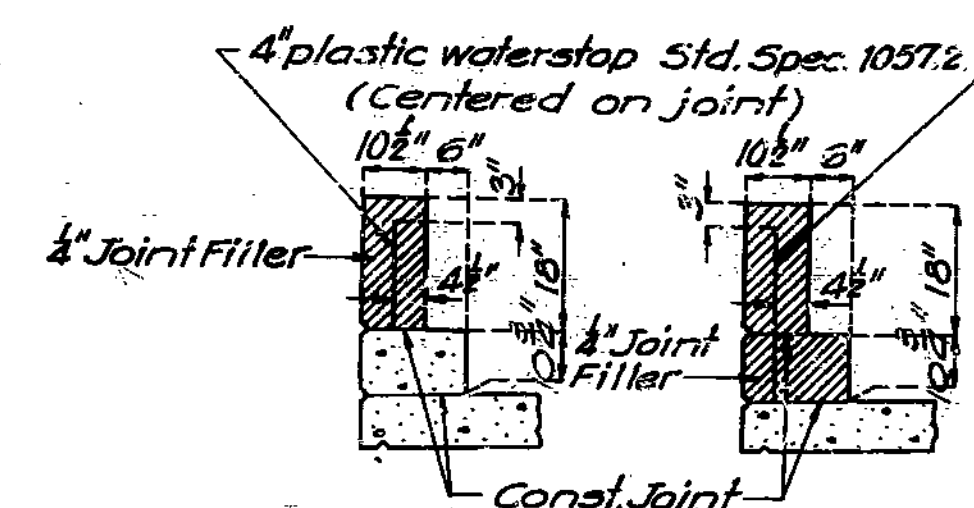
PART SECTION THRU CURB



PART RAIL ELEVATION AT EXP. GAP

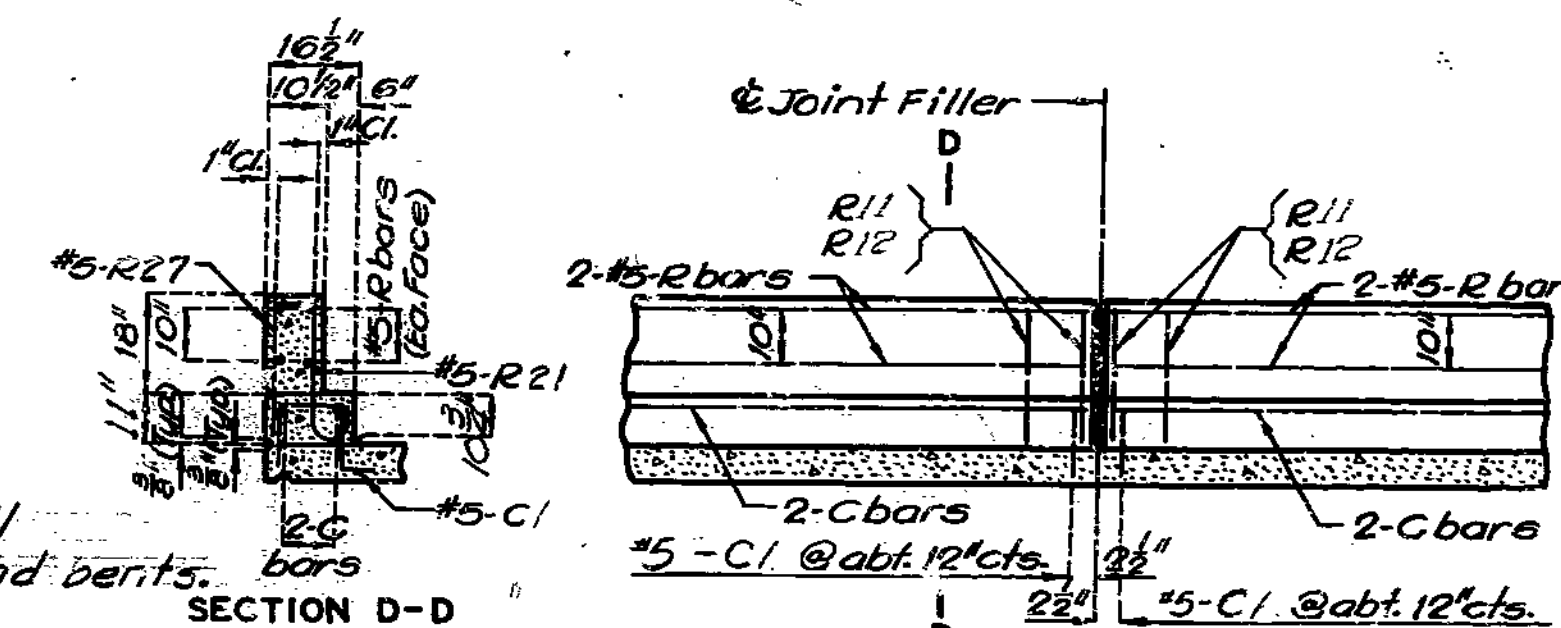


PLAN OF END POSTS BENT NO. 1
 Note: This drawing is not to scale. Follow dimensions.



Note: Plastic waterstop shall be placed in all parapet and curb filled joints except at end bents. Cost of plastic waterstop complete in place to be included in unit price bid for concrete.

DETAILS OF PLASTIC WATERSTOP



ELEVATION OF CURB & PARAPET

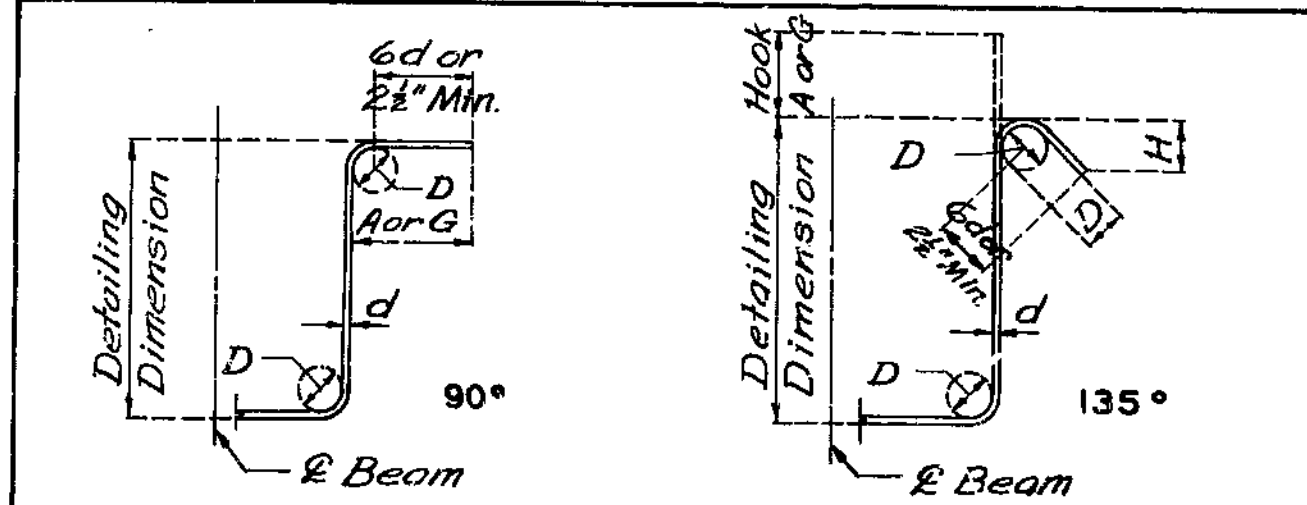
Note: For horizontal curb and parapet bars use a minimum lap of 15" for #5 and 18" for #6.

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 STD. 1.5.2 REVISED
 MAR. 1964 JAN. 1974
 DETAILED AUG. 1974
 CHECKED Feb. 1975

MISSOURI STATE HIGHWAY DEPARTMENT

COMPLETE BILL OF REINFORCING STEEL

NO. REQ.	MARK NO.	LOCATION	GRADE 60(H)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
								B	C	D	E	F	H	K	FT. IN.			
		SUBSTRUCTURE																
792	5C1	CURB	10	S				6.000	14.500	13.500				4 1 3 9	3098			
12	5C2	CG-S	10	S				6.000	14.500	18.000				4 5 4 1	51			
2	6C3	CURB	20					5 3.000						5 3 5 3	16			
4	5C4	CURB	20					36 4.000						36 4 36 4	152			
4	5C5	CURB	20					50 3.000						50 3 50 3	210			
4	5C6	CURB	20					59 6.000						59 6 59 6	248			
4	5C7	CURB	20					50 9.000						50 0 50 0	209			
4	5C8	CURB	20					40 6.000						40 6 4 6	169			
4	5C9	CURB	20					52 10.000						52 10 52 10	220			
6	5C10	CURB	20					41 7.000						41 7 41 7	260			
4	5C11	CURB	20					54 3.000						54 3 54 3	226			
1	6C12	CURB	20					7 8.000						7 8 7 8	12			
1	6C13	CURB	20					6 2.000						6 2 6 2	9			
1	6C14	CURB	20					11 5.000						11 5 11 5	17			
1	6C15	CURB	20					11 11.000						11 11 11 11	18			
19	5C16	CURB	10	S					19.000	18.000				4 8 4 6	89			
4	6H6	BACKWALL	20					46 8.000						46 8 46 8	280			
4	6H7	BACKWALL	20					38 9.000						38 9 38 9	104			
4	5R1	END POST	20					4 9.000						4 9 4 9	20			
2	5R2	END POST	12	S				2 3.125	12.000	2 3.125				6 1 5 11	12			
2	5R3	END POST	12	S				2 5.875	12.000	2 5.875				6 7 6 4	13			
2	5R4	END POST	12	S				2 8.000	12.000	2 8.000				6 11 6 8	14			
2	5R5	END POST	12	S				2 9.000	12.000	2 9.000				7 1 6 10	14			
2	5R6	END POST	12	S				2 9.750	12.000	2 9.750				7 3 7 0	15			
2	5R7	END POST	12	S				2 10.375	12.000	2 10.375				7 4 7 1	15			
2	5R8	END POST	12	S				2 11.250	12.000	2 11.250				7 6 7 3	15			
4	5R9	END POST	12	S				2 11.500	12.000	2 11.500				7 6 7 3	30			
8	5R10	END POST	10	S				4 9.000	10.750					10 5 10 2	85			
792	5R11	PARAPET	19	S				2 2.125	7.000					2 9 2 8	2203			
792	5R12	PARAPET	12	S				2 2.125	7.000					3 4 3 3	2685			
8	5R13	PARAPET	20					34 0.000						34 0 34 0	284			
8	5R14	PARAPET	20					45 3.000						45 3 45 3	378			
32	5R15	PARAPET	20					9 9.000						9 9 9 9	325			
8	5R16	PARAPET	20					49 4.000						49 4 49 4	412			
8	5R17	PARAPET	20					45 0.000						45 0 45 0	375			
8	5R18	PARAPET	20					38 1.000						38 1 38 1	318			
8	5R19	PARAPET	20					47 10.000						47 10 47 10	399			
8	5R20	PARAPET	20					51 10.000						51 10 51 10	432			
8	5R21	PARAPET	20					49 3.000						49 3 49 3	411			
5	5R22	END POST	20					6 7.000						6 7 6 7	36			
5	5R23	END POST	20					5 8.000						5 8 5 8	30			
2	5R24	END POST	10	S				3 0.500	12.000					7 1 6 11	14			
2	5R25	END POST	10	S				3 3.250	12.000					7 7 7 4	15			
2	5R26	END POST	10	S				3 5.375	12.000					7 11 7 8	16			
2	5R27	END POST	10	S				3 6.375	12.000					8 1 7 10	17			
2	5R28	END POST	10	S				3 7.125	12.000					8 2 8 0	17			
18	5R29	END POST	10	S				3 9.000	12.000					8 6 8 4	156			
5	5R30	END POST	20					10 11.000						10 11 10 11	57			
5	5R31	END POST	20					11 2.000						11 2 11 2	58			
310	6S1	SLAB	20			V	2	2 6.000						2 6 2 6				
		INCR = 1.875 IN						26 4.000						26 4 26 4	6713			
78	6S2	SLAB	20					25 0.000						25 0 25 0	2929			

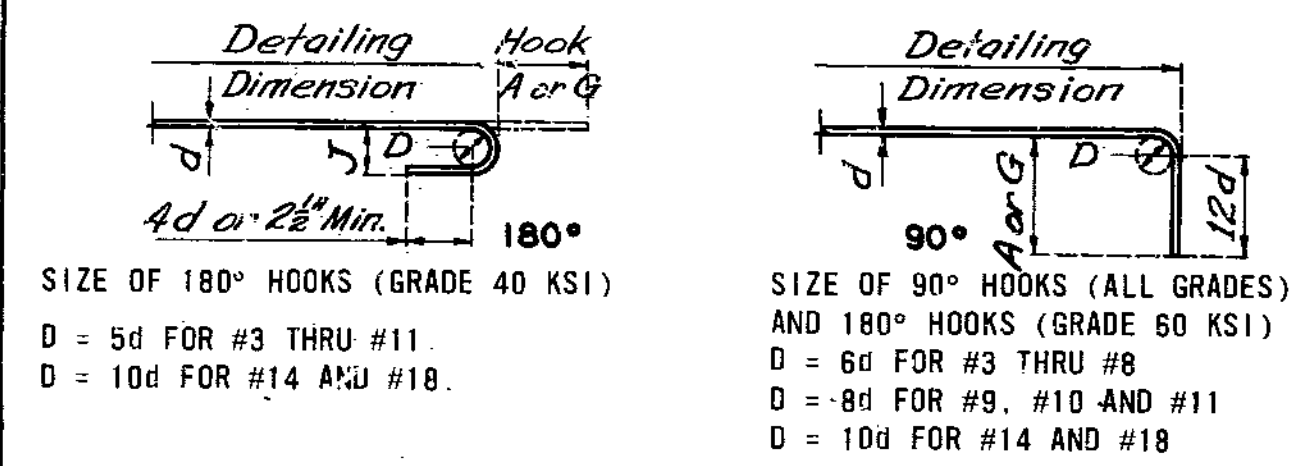


STIRRUP HOOK DIMENSIONS

GRADES 40-50-60 KSI

BAR SIZE	D (IN.)	90° HOOK		135° HOOK
		A OR G	HOOK	APPROX. H
#3	1 1/2"	4"	4"	2 1/2"
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 1/2"
#6	3"	6 1/2"	6 1/2"	4 1/2"

NOTE - UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS

BAR SIZE	180° HOOKS				90° HOOKS
	GRADE 40		GRADE 60		ALL GRADES
	A OR G	J	A OR G	J	
#3	5"	2 1/2"	5"	3"	6"
#4	6"	3 1/2"	6"	4"	8"
#5	7"	4 1/2"	7"	5"	10"
#6	8"	5 1/2"	8"	6"	12"
#7	9"	6 1/2"	10"	7"	14"
#8	10"	7"	11"	8"	16"
#9	12"	8"	15"	11 1/2"	19"
#10	13"	9"	17"	12 1/2"	22"
#11	14"	10"	19"	14 1/2"	2'-0"
#14	2'-2"	20 1/2"	2'-2"	20 1/2"	2'-7"
#18	2'-11"	2'-3"	2'-11"	2'-3"	3'-5"

NOTE - ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEG. STANDARD HOOKS.

NOTE - HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.

NOMINAL LENGTHS ARE BASED ON OUT TO DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE.

PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.

H - HIGH STRENGTH (ASTM A-615 GRADE 60)

S - STIRRUP

X - BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.

LENGTH - TOTAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

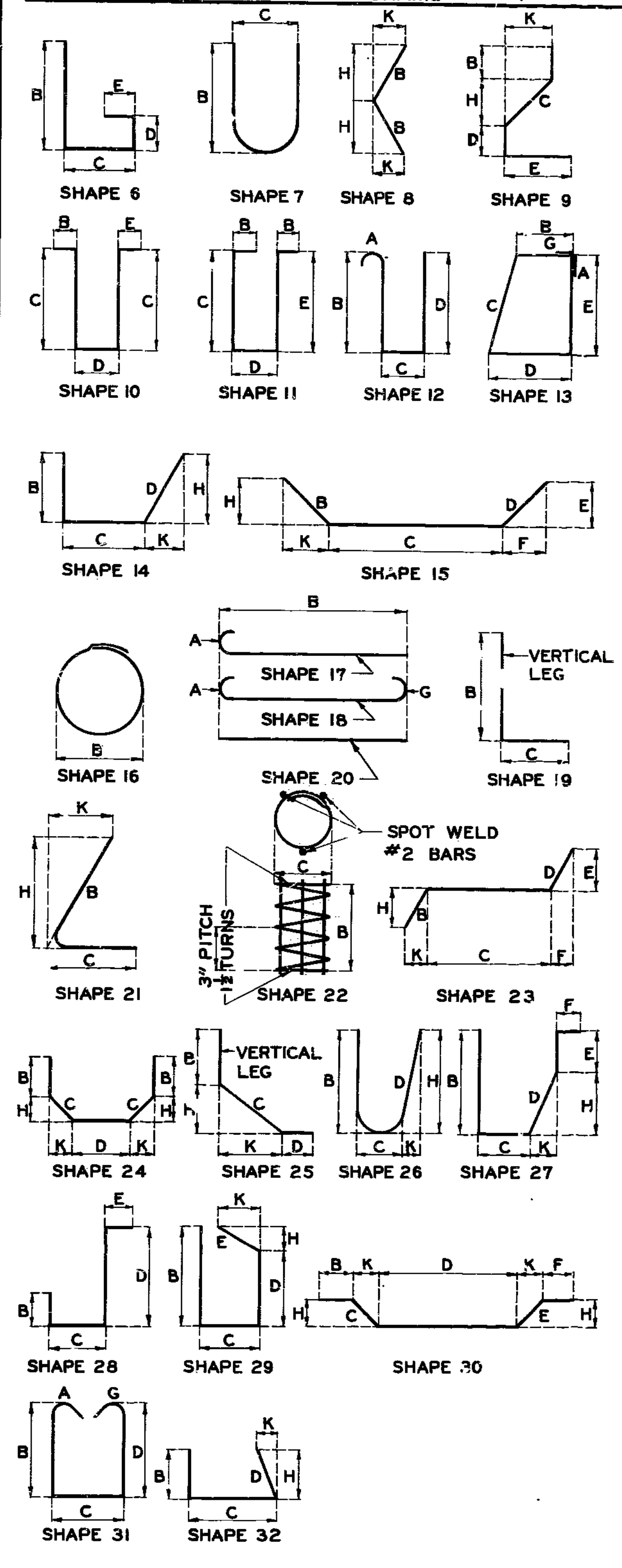
V - BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.

NO. EA. - NUMBER OF BARS OF EACH LENGTH.

*ALL HOOKS AND BENDS FOR SHAPE NO. 12 (only) ARE BASED ON D = 5d.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	16	

BENDING DIAGRAMS



176
STD. 90.8 REVISED MAY 1974
REVISOR: [Name] SEPT. 1974
CHECKED: [Name] FEB. 1975

DETAILED Feb. 1975
CHECKED Feb. 1975

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

Sheet No. 13 of 14.

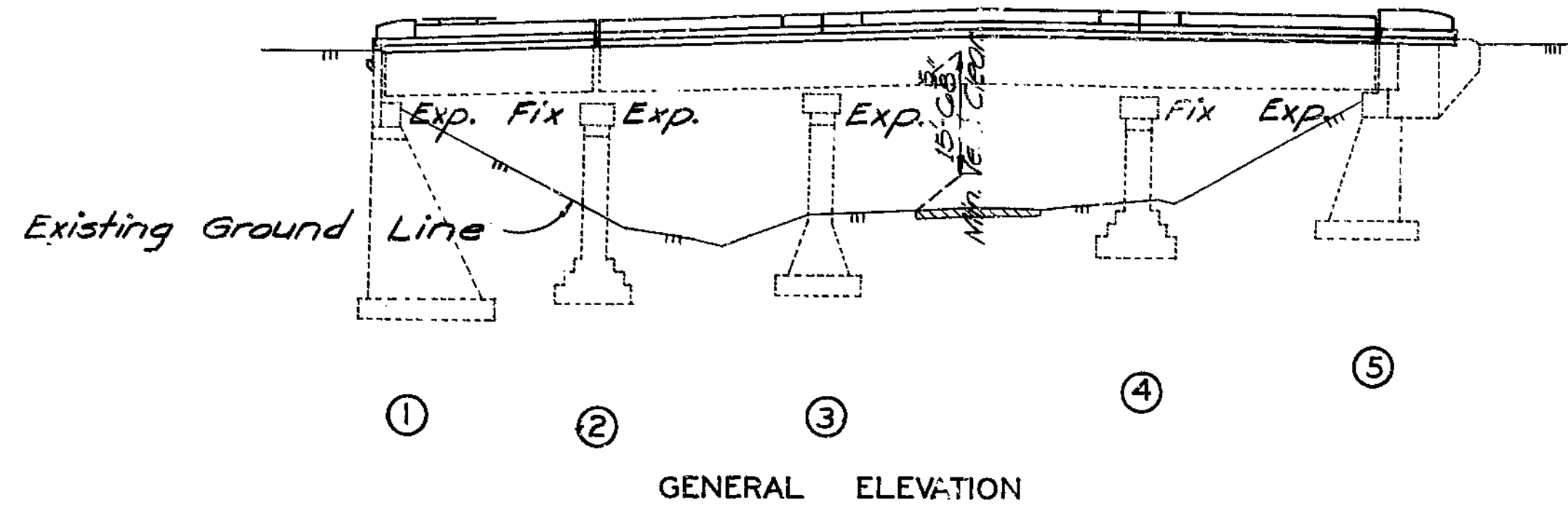
CLAY COUNTY

L-656R

Sta. 432+50
Elev. 946.39
+2.745% -2.212%
1200' KC.
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		79	4	

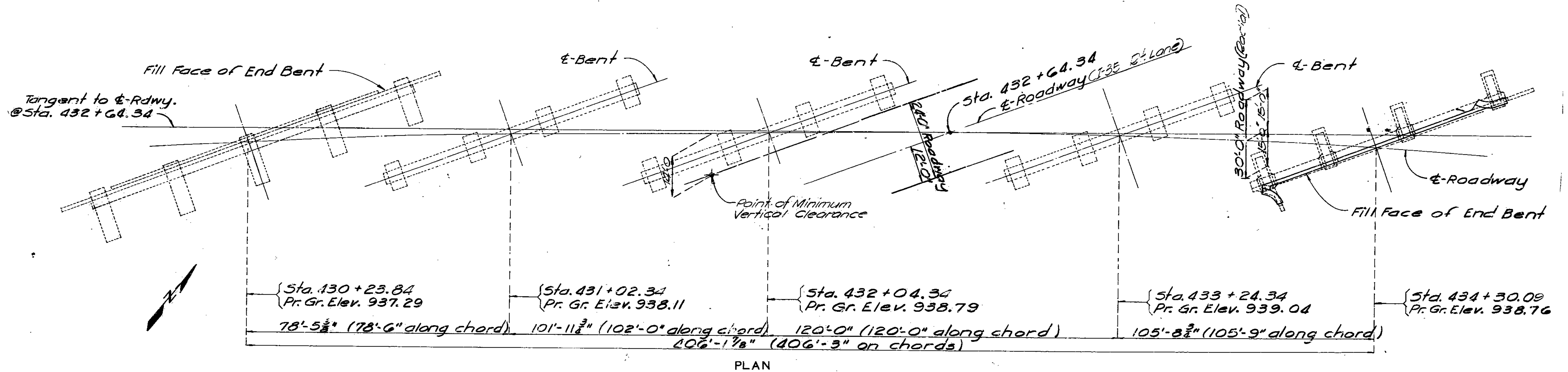
Raise & Redeck Existing Simple (70'), Cont. (100'-120'-100') & Gdr. spans



Note: Bars bonded in old concrete not removed shall be cleanly stripped and bent into new concrete where possible. If length is available, old bars shall be extended into new concrete at least 30 diameters.

GENERAL NOTES:
Design Specifications: A. A. S. H. T. O. 1973
Design Loading: HS20-44
Design Unit Stresses:
 Class B1 Concrete (Superstructure) $f_c = 1600 \text{ psi}$
 Reinforcing Steel $f_s = 20,000 \text{ psi}$
 Structural Carbon Steel $f_s = 20,000 \text{ p.s.i.}$
 Paint: Shop none; Field System A or B by contractor in accordance with Std. Spec. 712.13. Color of the final field coat shall be aluminum. See Special Provisions.
 Minimum clearance to reinforcing steel shall be 1 1/2" unless otherwise shown. All concrete and reinforcement is included with superstructure quantities. Light dotted lines indicate old work. Heavy lines indicate new work.
Construction Clearance:
 A minimum vertical clearance of 14'-0" and a minimum lateral clearance of 23'-0" centered on an existing Right Lane shall be maintained during construction.

FINAL PLANS



ESTIMATED QUANTITIES		
ITEM	SUPERSTR.	TOTAL
Removal of Existing Bridge Deck	Sq. Ft. 13610	13610
Asphalt Cement (Asphaltic Concrete)	Ton 6.8	6.8
Mineral Aggregate (Fresh Conc. @ Special Mix)	Ton 131	131
Class B1 concrete	Cu. Yd. 417.3	417.3
Steel Rein. Elastomeric Expansion Jt. Seal 5" Lin. Ft.	76	76
Steel Rein. Elastomeric Expansion Jt. Seal 4" Lin. Ft.	96	96
Reinforcing Steel	Lb. 126220	126220
Bridge Deck Waterproofing (Liquid)	Sq. Yd. 1370	1370
Fabricated Structural Carbon Steel	Lb. 4770	4770
Painting (System A or B)	Lump Sum 1	1
Bridge Guard Rail (One Tube)	Lin. Ft. 791	791
Special Work	Lump Sum 1	1
Cleaning Existing Bearings	each 24	24
Class I Excavation (Cont.)	Cu. Yd. 56	56
Class B Concrete (Substn.) (Cont.)	Cu. Yd. 30.2	30.2
Reinforcing Steel Bridge (Cont.)	Lb. 2600	2600
Remove Backwall (Cont.)	F.A. 2713.38	2713.38
Lead Plates (Cont.)	F.A. 538.82	538.82

B.M. Elev. 938.07 on Corner Rt. Wing Abut. "5.

BRIDGE: RTE. 69 (SBL) UNDERPASS
 STATE ROAD FROM VIVION ROAD SOUTH TO I-35
 ABOUT 4 MILES N.E. OF NORTH KANSAS CITY
PROJECT NO. I-35 1 (106) **STA.** 430+23.84
JOB NO. 4-1-35-01 **RTE.** I-35
 CLAY **COUNTY**

STD.
STD. 706.30
L-656R

DESIGNED JUNE 1974
 DETAILED AUG 1974
 CHECKED Feb 1975

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

Sheet No. 1A of 14.

DATE 10/13/76

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