Missouri Department of Transportation
State Bridge Inspection Report

May 02, 2024
4:06:30PM

COUNTY: JACKSON **DISTRICT: KC** **CLASS: STATBR** **FED-ID: 214** **BRIDGE: A0244**

GENERAL STRUCTURE INFORMATION

ROUTE: IS70E	**# SPANS:** 3	**PLACE CODE:** 38000 KANSAS CITY CITY	
FEATURE: CST E 12TH ST	**LANES ON:** 3	**LENGTH:** 156 FT 0 IN	
STATUS: A-OPEN	**LANES UNDER:** 2	**MAXIMUM SPAN:** 63 FT 0 IN	
LOG MILE: 2.345	**COMPASS DIRECTION:** NORTH to SOUTH	**APPROACH ROADWAY:** 60 FT 0 IN	
DETOUR: 1.00 MILES	**DIRECTION OF TRAFFIC:** 1-WAY TRAF	**CURB TO CURB:** 62 FT 2 IN	
NHS: YES	**FUNCTIONAL CLASS:** UR-INTERSTATE	**OUT TO OUT:** 64 FT 11 IN	
BUILT: 1958	**NBI OWNER:** MODOT	**AADT:** 55722	
REHAB: 2006	**NBI MAINTAINED:** MODOT	**AADT YEAR:** 2023	
LOCATION: S 5 T 49 R 33 W	**MAINTENANCE DISTRICT:** KC	**AADT TRUCK:** 18.4%	
LATITUDE: 39 5 58.47 (DMS)	**MAINTENANCE COUNTY:** JACKSON	**FUTURE AADT:** 75225	
LONGITUDE: 94 34 21.88 (DMS)	**SUB AREA:** 7C01	**FUTURE AADT YEAR:** 2043	

BRIDGE INSPECTION INFORMATION

DATE: 09/12/2023 **RESPONSIBILITY:** DISTRICT
FREQUENCY: 24 **CALCULATED INTERVAL**:** 24
TEAM LEADER: TIMOTHY HAZLETT **ELEMENT:** YES
INSPECTOR 2: **INSPECTOR 4:**
INSPECTOR 3:

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

GENERAL INSPECTION COMMENTS

FRACTURE CRITICAL INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

FRACTURE CRITICAL INSPECTION COMMENTS

INDEPTH INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

INDEPTH INSPECTION COMMENTS

SPECIAL INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

SPECIAL INSPECTION COMMENTS

UNDERWATER INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

UNDERWATER INSPECTION COMMENTS

OTHER SPECIAL INSPECTIONS

DATE	FREQUENCY	CATEGORY	NBI	CALCULATED INTERVAL	RESPONSIBILITY	METHOD

OTHER UNDERWATER INSPECTIONS

DATE	FREQUENCY	CATEGORY	NBI	CALCULATED INTERVAL	RESPONSIBILITY	METHOD

Missouri Department of Transportation
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STRUCTURE POSTING

APPROVED CATEGORY: S-1 NO POSTING REQUIRED
Ton 1: **Ton 2:** **Ton 3:**
COMMENTS:

FIELD CATEGORY: S-1 NO POSTING REQUIRED
Ton 1: **Ton 2:** **Ton 3:** **PROBLEM:** **PROBLEM DIRECTION:**
COMMENTS:

GENERAL COMMENTS/MAJOR RATED ITEMS

GENERAL COMMENTS: (BOWDEJ1, 10/07/2008)--(44'-63'-44') CONT CONC BOX GDR SPANS

[ITEM 58] DECK: 5-FAIR CONDITION
RATING : 09/22/2021
COMMENTS: (OTISL1, 09/21/2015)--RANDOM DECK CRACKS
(OTISL1, 09/28/2017)--SUPER CONTROLS RATINGS

[ITEM 59] SUPER: 5-FAIR CONDITION
RATING : 09/22/2021
COMMENTS: (OTISL1, 09/28/2017)--MODERATE EDGES DELAMINATED
(OTISL1, 10/01/2019)--SPALLS WITH EXPOSED REBAR

[ITEM 60] SUB: 5-FAIR CONDITION
RATING : 10/01/2019
COMMENTS: (OTISL1, 10/01/2019)--SPALLS/DETERIORATION OF BEARING SEATS @ EB1

[ITEM 61] BANK/CHANNEL: N-NOT APPLIC NO WATRWAY
RATING : 05/18/2001
COMMENTS:

[ITEM 113] SCOUR: N-NOT APPLIC NOT WATERW
RATING : 05/18/2001
EVALUATION TYPE :
COMMENTS:

[ITEM 71] WATERWAY ADEQUACY: NOT APPLICABLE
RATING : 05/18/2001
COMMENTS:

[ITEM 72] APPRRDWY ALIGNMENT: 8-VERYGOOD
RATING : 05/18/2001
COMMENTS:

RAILING AND APPROACH PAVEMENT COMPONENTS AND RATINGS

[ITEM 36A] BRIDGE RAILING RATING: *MEETS CURRENT STANDARDS-1* ***RATING :*** *02/04/2004* ***COMMENTS:***

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
REINFORCED CONCRETE	SAFETY BARRIER CURB	LEFT	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	COMMENT
VERTICAL CRACKS	THROUGHOUT		FEW	

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
REINFORCED CONCRETE	PARAPET	RIGHT	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	COMMENT
VERTICAL CRACKS	THROUGHOUT		FEW	

[ITEM 36B] TRANSITION RAILING RATING: *MEETS CURRENT STANDARDS-1* ***RATING :*** *05/18/2001* ***COMMENTS:***

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	THRIE BEAM TO W-BEAM	NORTHWEST	

[ITEM 36C] APPROACH RAILING RATING: *MEETS CURRENT STANDARDS-1* ***RATING :*** *05/18/2001* ***COMMENTS:***

Design_No = a0244

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	W-BEAM	NORTHWEST	

[ITEM 36D] RAIL END TREATMENT RATING: *MEETS CURRENT STANDARDS-1* **RATING :** *05/18/2001* **COMMENTS:**

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	OTHER	ALL	(REHAGM, 11/29/2004)--CONTINOUS > 100'

APPROACH PAVEMENT: *Overall condition assigned for each approach pavemenet component is shown below.

MATERIAL	CONSTRUCTION	DIRECTION	CONDITION*	COMMENTS
ASPHALT/CONCRETE	BITUMINOUS MAT/SLAB	BOTH	FAIR	(OTISL1, 09/22/2021)--FAILING @ SOUTH JOINT

DRAINAGE, EXPANSION DEVICES, BANK/SLOPE, AND DECK PROTECTIVE COMPONENTS

DECK PROTECTIVE COMPONENTS:

SERIES TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	THICKNESS	YEAR APPLIED	MANUFACTURE	OVERALL CONDITION
MAIN SERIES-1	WEARING SURFACE	PLAIN CONCRETE	LOW SLUMP	2.25 IN			FAIR

COMMENT:

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	COMMENT
MAP CRACKS	THROUGHOUT		FEW	
SPALLS	ENDS	SOUTH	MODERATE	

DECK PROTECTION	NOTAPPLICABLE	NONE

COMMENT:

MEMBRANE	NOTAPPLICABLE	NONE

COMMENT:

SECONDARY DECK PROTECTION	NOTAPPLICABLE	NONE

COMMENT:

DRAINAGE COMPONENTS:

COMPONENT	MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS

EXPANSION DEVICE COMPONENTS:

SUB UNIT-#	SUB LABEL	COMPONENT	MATERIAL	CONSTRUCTION	GAP	YEAR APPLIED	MANUFACTURE	OVERALL CONDITION
ABUTMENT-1		CLOSED EXPANSION JOINT	ELASTOMERIC	STRIP SEAL			XJS JOINT	VERY POOR

COMMENT: (HANSEC1, 02/08/2006)--XLS JOINT INSTALLED 2005
(OTISL1, 09/21/2015)--SEAL FAILURE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	COMMENT
DETERIORATION	THROUGHOUT		SEVERE	(RACKEM, 10/04/2011)--DEBONDING.

ABUTMENT-4		CLOSED EXPANSION JOINT	ELASTOMERIC	STRIP SEAL				VERY POOR

COMMENT: (OTISL1, 09/22/2021)--FAILED

BANK/SLOPE PROTECTION COMPONENTS:

COMPONENT	MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
BANK PROTECTION	PLAIN CONCRETE	PAVEDSLOPE	BOTH	(OTISL1, 09/21/2015)--FAULTING & EROSION UNDERNEATH

DECK COMPONENTS

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-1	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
LONGITUDINAL CRACKS	THROUGHOUT		FEW		
TRANSVERSE CRACKS	OVERHANGS		FEW		
TRANSVERSE CRACKS	THROUGHOUT		FEW		

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION
MAIN SPANS-2	DECK	REINFORCED CONCRETE	CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
LONGITUDINAL CRACKS	THROUGHOUT		FEW		
TRANSVERSE CRACKS	OVERHANGS		FEW		
TRANSVERSE CRACKS	THROUGHOUT		FEW		

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION
MAIN SPANS-3	DECK	REINFORCED CONCRETE	CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
LONGITUDINAL CRACKS	THROUGHOUT		FEW		
TRANSVERSE CRACKS	OVERHANGS		FEW		
TRANSVERSE CRACKS	THROUGHOUT		FEW		

SUPERSTRUCTURE COMPONENTS

SERIES TYPE-#	SPAN TYPE	MATERIAL	CONSTRUCTION	LABEL	COMMENTS
MAIN SERIES-1	CONTINUOUS SPAN	REINFORCED CONCRETE	BOX GIR-CIP MUL CELL		

SPAN	COMPOSITE INDICATOR	LENGTH	WEATHERING STEEL	COMMENTS
MAIN SPANS-1	NON-COMPOSITE	44 FT 0 IN	NO	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DELAMINATION	AT BEARING		MEDIUM		
DELAMINATION	EDGE		SMALL		
DIAGONAL CRACKS	EXTERIOR GIRDERS		OPEN		(HANSEC1, 02/13/2008)--OPEN D-CRACK E SIDE OF BOX AT ABUT
EFFLORESCENCE	BOTTOM		LIGHT		
REBAR EXPOSED	EDGE		MODERATE		
SPALLS	EDGE		HEAVY		
TRANSVERSE CRACKS	BOTTOM		RANDOM		

SPAN	COMPOSITE INDICATOR	LENGTH	WEATHERING STEEL	COMMENTS
MAIN SPANS-2	NON-COMPOSITE	63 FT 0 IN	NO	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
SATURATION	THROUGHOUT		MINOR		
TRANSVERSE CRACKS	THROUGHOUT		FEW		

SPAN	COMPOSITE INDICATOR	LENGTH	WEATHERING STEEL	COMMENTS
MAIN SPANS-3	NON-COMPOSITE	44 FT 0 IN	NO	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DELAMINATION	ENDS		MODERATE		
DIAGONAL CRACKS	ENDS		FEW		
SATURATION	THROUGHOUT		MINOR		

SUBSTRUCTURE COMPONENTS

SUBSTRUCTURE	SKEW	LENGTH	MATERIAL	CONSTRUCTION	LABEL	COMMENTS
ABUTMENT-1		64 FT 3 IN	REINFORCED CONCRETE	NON-INTEGRAL		

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
ASSOCIATED COMPONENT	MATERIAL	CONSTRUCTION			
BACKWALL	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
SPALLS	THROUGHOUT		MODERATE		
VERTICAL CRACKS	THROUGHOUT		MINOR		
PILING	STEEL	H-SHAPE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
TURNED BACK WINGS	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
LEACHING	THROUGHOUT		MODERATE		
MAP CRACKS	THROUGHOUT		MANY		
WING PILES	STEEL	H-SHAPE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
EXPANSION BEARING	STEEL	SINGLE ROLLER			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
RUSTING	THROUGHOUT		MODERATE		(RACKEM, 10/04/2011)--EXTERIOR.

BENT-2 *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
ASSOCIATED COMPONENT	MATERIAL	CONSTRUCTION			
COLUMN	REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
FOOTING	REINFORCED CONCRETE	H-PILE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

BENT-3 *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
ASSOCIATED COMPONENT	MATERIAL	CONSTRUCTION			
COLUMN	REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
HORIZONTAL CRACKS	TOP	THROUGHOUT	FEW		
REBAR EXPOSED	BOTTOM		FEW		
SPALLS	BOTTOM		MEDIUM		
FOOTING	REINFORCED CONCRETE	H-PILE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

ABUTMENT-4 *64 FT 3 IN* *REINFORCED CONCRETE* *NON-INTEGRAL*

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
ASSOCIATED COMPONENT	MATERIAL	CONSTRUCTION			
BACKWALL	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DELAMINATION	THROUGHOUT		MODERATE		
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
HORIZONTAL CRACKS	THROUGHOUT		FEW		
VERTICAL CRACKS	THROUGHOUT		FEW		
PILING	STEEL	H-SHAPE			
CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

TURNED BACK WINGS	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
EFFLORESCENCE	THROUGHOUT		MEDIUM		
MAP CRACKS	THROUGHOUT		RANDOM		
WING PILES	STEEL	H-SHAPE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
EXPANSION BEARING	STEEL	SINGLE ROLLER			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
RUSTING	THROUGHOUT		HEAVY		(RACKEM, 10/04/2011)--EXTERIOR.

OVER/UNDER ROUTES CLEARANCE INFORMATION

CLEARANCES OVER DECK

**NOTE: Vertical clearances for permitting purposes are taken as 2 inches less than the actual field measured clearance.

VERTICAL CLEARANCE TYPE**	VALUE	DIRECTION	DATE	COMMENT

CLEARANCES UNDER BRIDGE

**NOTE: Vertical clearances for permitting purposes are taken as 2 inches less than the actual field measured clearance.

RECORD #	ROUTE	# LANES	DIRECTION OF TRAFFIC	RIGHT LATERAL CLEARANCE	LEFT LATERAL CLEARANCE	UR-ID
1	CST E 12TH ST E	2	1-WAY TRAF	12 FT 6 IN		515

VERTICAL CLEARANCE TYPE**	VALUE	DIRECTION	DATE	COMMENT
ACTUAL	16 FT 0 IN			

STRUCTURE PAINT INFORMATION

CONDITION: **RUST AMOUNT :** **STEEL TONS :**

ORIGINAL PAINT	CONTRACT REPAINT	DEPARTMENT REPAINT	
PAINT TYPE :	**PAINT TYPE :**	**PAINT TYPE :**	**MANUFACTURE :**
NAME :	**NAME :**	**NAME :**	**SURFACE PREP :**
PAINT COLOR :	**PAINT COLOR :**	**PAINT COLOR :**	
PAINT YEAR :	**PAINT YEAR :**	**PAINT YEAR :**	
MILS :	**MILS :**	**MILS :**	

REQUESTED WORK ITEMS

GENERAL WORK COMMENTS:

Missouri Department of Transportation
State Bridge Inspection Report

COUNTY: JACKSON **DISTRICT: KC** **CLASS: STATBR** **FED-ID: 214** **BRIDGE: A0244**

RESPONSIBILITY	*LOCATION*	*ITEM*	*CATEGORY*	*PRIORITY*	*DATE*	*WORK ITEM COMMENT*
REGIONAL	BENT-COLUMN	REPAIR COLUMN OR SHAFT	SUBSTRUCTURE	3	02/08/2006	(WILSOR2, 10/30/2019)--REPAIR COLUMNS 10 SQFT AT IB3
DISTRICT SPECIAL	ABUTMENT	REPLACE EXPANSION DEVICE	EXPANSION DEVICE	2	09/28/2011	
DISTRICT ROUTINE	SEE COMMENT	CLEAN AND FLUSH	SUBSTRUCTURE	3	09/18/2017	(WILSOR2, 10/30/2019)--DROP INLET CLOGGED AT IB3
DISTRICT SPECIAL	BENT-CAPS	REPAIR BEARING SEAT	SUBSTRUCTURE	2	09/25/2019	
DISTRICT SPECIAL	ROADWAY SURFACE	SEAL DECK WITH IN DECK	DECK	3	01/02/2020	

UTILITY ATTACHMENTS

UTILITY	*OWNER*	*METHOD*	*MEASUREMENT TYPE*	*VALUE*	*NUMBER*	*UTILITY ATTACHMENT COMMENT*
ELECTRIC		ENCASED	DIAMETER	2 IN	1	

PROGRAM NOTES INFORMATION

YEAR	PROJECT #	MONTH LET	YEAR LET	ITEMS	COMMENT
2007	J4I1403	0	0	WEARING SURFACE	(MARTEP, 10/26/2011)--REPLACE CATHODIC PROTECTION SYSTEM, PLUS LOW SLUMP OVERLAY.

COMPUTER GENERATED RATINGS AND DEFICIENCY ITEMS

NOTE: The items listed in this section are updated whenever computer edits are ran on a structure after the inspection updates have been entered in to TMS.

Rated Item	Rating	Rating Date
[Item 67] Structure Evaluation Rating:	5-BETTER THAN MINIMUM	10/1/2019
[Item 68] Deck Geometry Rating:	9-SUPR TO PRES DESIRABLE	3/21/2003
[Item 69] Underclearance:	7-BETTER THAN PRESENT MIN	3/21/2003
Sufficiency Rating:	83.0%	3/2/2023
Deficiency:	NOT DEFICIENT	3/20/2002
Funding Eligibility:		----
Estimated New Structure Length:		----
Estimated Structure Cost:		----
Estimated Total Project Cost:		----
Year of Cost Estimate:		----

NOTE: The above structure length and cost estimates are computer generated using algorithims in the TMS system. These algorthims are generalized to use NBI items to come up with a new structure length and width to calculate a new area which is taken times a representative cost per square foot. The actual structure size and cost may vary significantly from these numbers once site specific engineering is done.

ADVANCED SIGN INFORMATION

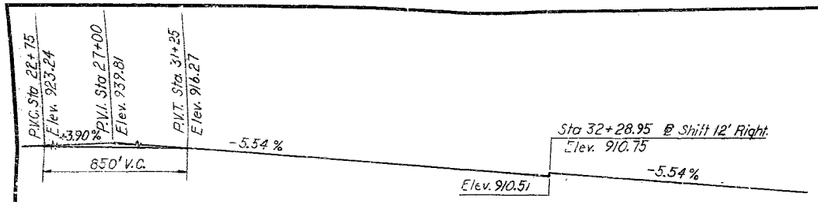
SIGN #	SIGN TYPE	PROBLEM	PROBLEM DIRECTION
1			

OUTFALL INSPECTION INFORMATION

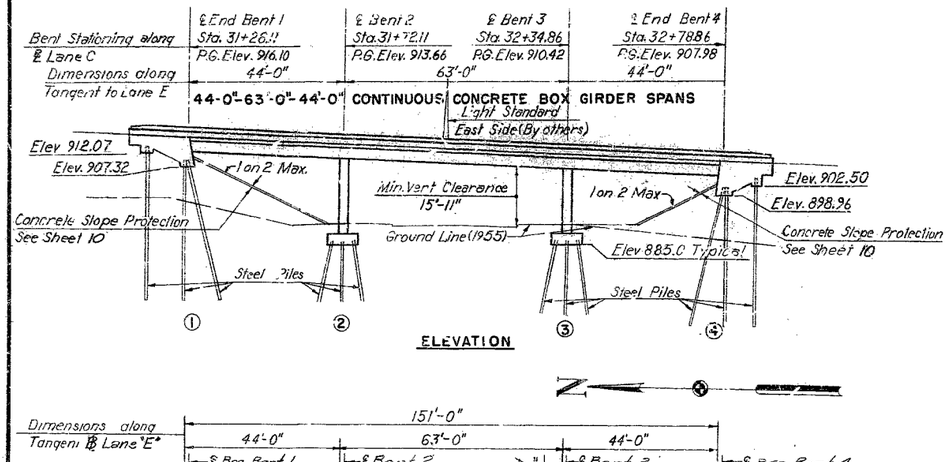
 # OUTFALLS: **INSPECTOR:**
STATUS: **DATE:**
NOTES:

MISSOURI STATE HIGHWAY DEPARTMENT

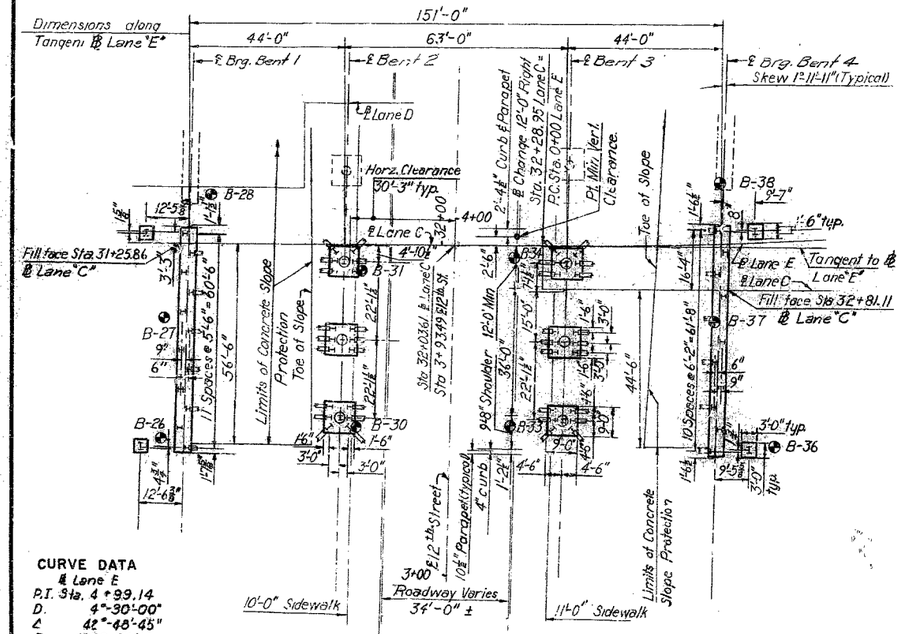
FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.				
DIST. NO.	COUNTY		ROUTE	SEC.	
4			40		



PROFILE GRADE, LANE C



ELEVATION



PLAN

Note: Bent 2 and 3 footing dimensions and pile spacing typical. Bent 1 and 4 wingwall footing dimensions and pile spacing typical.

CURVE DATA
℄ Lane E
P.I. Sta. 4+99.14
D. 4°-30'-00"
Δ 42°-48'-45"
R 1273.24'
T 499.14'
L 951.39'

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
MADE J.W.R. DATE 1-14-58 TRACED DATE
CHECKED B.A.C. DATE 2-28-58 SCALE

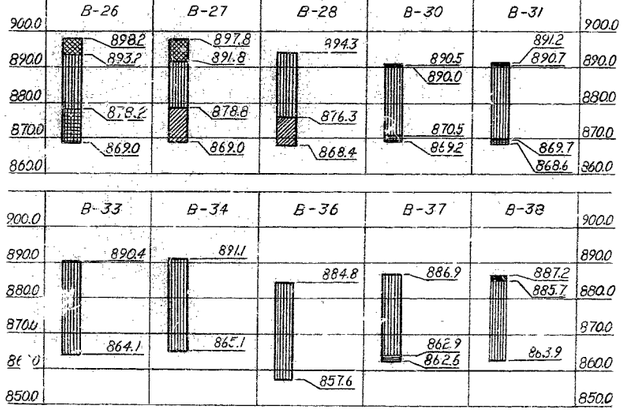
NOTE: This drawing is not to scale. Follow dimensions.

ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	SUB-STRUCTURE	SUPER-STRUCTURE	TOTAL
1-C	Class 1 Excavation for Structures	Cu. Yd.	160		160
16-B	Class A Concrete	Cu. Yd.	172.5		172.5
16-B-1	Class B-1 Concrete	Cu. Yd.		592.2	592.2
17-B	Fabricated Structural Steel	Pound		8290	8290
17-B	Fabricated Structural Steel (Bearing)	Pound		2770	2770
17-J	Aluminum Alloy Handrail	Lin. ft.		364	364
19-A	Reinforcing Steel	Pound	15,940	181,610	197,550
22-DD	Steel piles in place-10-BP42 (State furnished)	Lin. ft.	1064		1064
22-DD	Steel piles in place-12BP53 (State furnished)	Lin. ft.	803		803
40-A	Lighting Conduit System	L.S.			1

NOTES: All excavation for bridge will be paid for as Class 1 excavation for structures.
The estimated quantity of steel piles in place includes an allowance of 8' per splice for an estimated number of 2 splices for 10BP42 and an estimated number of 2 splices for 12BP53.
Estimated quantity of Class "B" concrete substructure, includes all concrete in end bents (including wingwalls and parapet) and intermediate bent footing. All other concrete is included in estimated quantity of Class "B-1" Concrete
No excavation will be allowed for bents No. 1 & 4

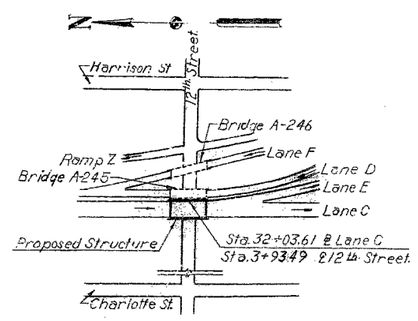
BORING LOGS



BORING LEGEND

- Fill (Miscellaneous Materials).
- Brown Clay or Brown Silty Clay
- Weathered Shale
- Weathered Limestone
- Shale with Clay Seams or Yellow Shale
- Street Surface or Sidewalks.

Location of borings are noted thus ⊕B-36.
Top elevation to existing ground surface.
Bottom elevation to top of rock.



LOCATION SKETCH

GENERAL NOTES

Design Specifications: A.A.S.H.O. 1953.
Construction Specification: Missouri Standard Specifications for State Roads, Materials, Bridges, Culverts, and Incidental Structures, 1955.
Design Loading: H20-S16-44 (Modified 24,000# Tandem Axle) (15#/Sq. Ft future wearing surface).
Concrete: Concrete stress: Class "B-1" f_c = 1400 p.s.i.; Class "B" f_c = 1200 p.s.i. Concrete for superstructure shall be Class "B-1" air entrained, see special provisions. Concrete for substructure shall be Class "B" air entrained If the contractor desires he may use Class "B-1" in lieu of Class "B" for concrete in substructure with payment made on the basis of Class "B" concrete. (All forms are to be removed from the interior of box girders.)
Reinforcing Steel: Allowable Stress 20,000 p.s.i.
All splices in reinforcing steel shall be 32 bar diameters.
Bar sizes are designated on the plans by numbers. The first digit after the letter in three digit marks and the first two digits after the letter in four digit marks indicate the size of the bar.
Dimensions shown on the plans from reinforcing steel to outside edge of concrete are all clear dimensions.
All bending dimension are from "out to out" of bars.
Piling: All piles shall conform with detail and notes on sheet No. 3. All steel piles required for this structure will be furnished by the state. (See Special provisions) All piles shall be driven to or into solid rock, boulders, shale or cemented gravel, or to not less than full length authorized and to sustain a load of at least 37 tons per pile for 10BP42 and 46 tons per pile for 12BP53. All piles shall be driven with a steam hammer. See section 22-9C of Standard Specifications for required painting of steel piles.
Compacted roadway fill (full roadway width) shall be placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of end bents before steel piles are driven.
Waterproofing of Decks: Superstructure deck to be water proofed, see special provisions.
Welding: Qualification of welding operators will be required.
Joint Filler: Where joint filler is specified on the plans, it shall conform with the requirements for gray rubber compound joints as given in section 59-22B of the standard specifications.
Fiber Conduit: Expansion sleeves shall be required in fiber conduits at all expansion joints. Expansion sleeves shall be an oversized fiber conduit with rubber ring as provided by the manufacturer.
Utilities: All utilities, unless shown otherwise, shall be removed or relocated by others. The contractor will notify the owner of the utilities of his work schedule sufficiently in advance to allow time for the disposition of utilities.
Shipping: Permits must be obtained for all truck loads over legal length.
Traffic: 12th Street shall remain open to traffic during construction. Falsework over 12th Street shall be constructed with a minimum vertical clearance of not less than 12'-0" and a minimum lateral clearance of not less than 28'-0". (See Special Provisions)

Bench Mark:
B.M. #1-"X" on South Bolt-Top hydrant N.W. corner 12th & Charlotte. Elev 888.18.

SUBMITTED BY
REGISTERED PROFESSIONAL ENGINEER MISSOURI NO. E-253

FINISHED

BRIDGE: LANE C OVER 12TH STREET

STATE ROAD U.S. 40 MIDTOWN FREEWAY
KANSAS CITY, MO.
PROJECT No. I-352 (18) (F.A.I.-R.-4) STA. 32+03.61 LANE C

FINISHED

JACKSON COUNTY

SUBMITTED BY [signature] BRIDGE ENGINEER 4-16-1958
APPROVED BY [signature] CHIEF ENGINEER 4-16-1958

STD. R
STD. C-I
A 244

GENERAL PLAN AND ELEVATION

SHEET 1 OF 10

293

SEE FINAL PLANS BROWN-LINES

FINISHED

MISSOURI STATE HIGHWAY DEPARTMENT

FED. AID PROJ. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOT. SHEETS
5	MO.				
DIST. NO.	COUNTY		ROUTE	SEC.	
4			40		

SUBSTRUCTURE

END BENT 1

NO.	SIZE	LENGTH	MARK	TYPE	DIMENSIONS A	B	C	D
36	4	21'-6"	H401	Str.				
6		6'-6"	H402	105	2'-0"	2'-3"	2'-3"	
10		15'-5"	H403	Str.				
1		16'-7"	H404	Str.				
9		1'-3"	H405	Str.				
9		1'-6"	H406	Str.				
20	6	32'-9"	H601	Str.				
4		19'-0"	H602					
2		18'-9"	H603					
6		16'-7"	H604					
3		13'-9"	H605					
1		11'-9"	H606					
2		5'-11"	H607					
10		4'-9"	H608					
2		11'-11"	H609					
2		9'-3"	H610					
2		6'-9"	H611					
16		2'-8"	H612					
4		14'-0"	H613					
1	6	15'-5"	H614	Str.				
66	4	4'-4"	V401	123	2'-9"	3'-6"	3'-9"	3'-7"
6		13'-0"	V402	123	2'-11"	2'-9"	3'-9"	2'-10"
120		6'-6"	V403	Str.				
6		7'-5"	V404	108	5'-6"	6¾"	1'-10"	1'-11"
61		3'-9"	V405	124	6"	1'-2"	5"	1'-8"
34		5'-2"	V406	105	6"	2'-4"	2'-4"	
12		6'-9"	V407	124	6"	2'-0"	1'-5"	2'-10"
4		10'-9"	V408	Str.				
1		4'-9"	V409	104	3'-11"	10"		
2		5'-2"	V410	104	4'-4"	10"		
1		5'-7"	V411	104	4'-9"	10"		
1		6'-0"	V412	104	5'-2"	10"		
1		6'-5"	V413	104	5'-7"	10"		
5		6'-10"	V414	104	6'-0"	10"		
1		7'-3"	V415	104	6'-5"	10"		
4		4'-9"	V416	Str.				
3		3'-6"	V417	104	2'-8"	10"		
3		2'-8"	V418	Str.				
2		14'-3"	V419	105	10"	6'-7"	6'-7"	
2		3'-11"	V420	Str.				
2		4'-3"	V421					
4		11'-3"	V422					
1		5'-4"	V423					
1		4'-11"	V424					
1		4'-6"	V425					
1		4'-1"	V426					
1		3'-8"	V427					
1		3'-3"	V428					
1		2'-10"	V429					
4		3'-9"	V430	Str.				
3		8'-10"	V431	131	1'-11"	1'-5"	1'-5"	11"
2		10'-8"	V432	105	2'-0"	6'-8"	2'-0"	
4	4	5'-7"	V433	Str.				

BENTS 2 & 3

NO.	SIZE	LENGTH	MARK	TYPE	DIMENSIONS A	B	C	D
120	8	8'-8"	F801	Str.				
120	11	7'-11"	F1101	126	5'-4"	1'-7"	1'-0"	1'-0"

END BENT 4

NO.	SIZE	LENGTH	MARK	TYPE	DIMENSIONS A	B	C	D
16	6	2'-6"	F601	Str.				
36	4	21'-9"	H401	Str.				
6		6'-6"	H402	105	2'-0"	2'-3"	2'-3"	
10		12'-5"	H403	Str.				
1		13'-5"	H404	Str.				
9		1'-3"	H405	Str.				
9	4	1'-6"	H406	Str.				
20	6	33'-3"	H501	Str.				
6		19'-3"	H602					
7		13'-7"	H603					
1		12'-5"	H604					
4		10'-5"	H605					
2		6'-1"	H606					
2		4'-6"	H607					
2		1'-2"	H608					
10		4'-4"	H609					
2	6	7'-9"	H610	Str.				
60	4	14'-4"	V401	123	2'-9"	3'-6"	3'-9"	3'-7"
6		13'-0"	V402	123	2'-11"	2'-9"	3'-9"	2'-10"
124		6'-6"	V403	Str.				
61		3'-9	V404	124	6"	1'-2"	5"	1'-8"
6		7'-6	V405	108	2'-0"	5'-6"	5"	1'-11½"
26		5'-2"	V406	105	6"	2'-4"	2'-4"	
2		4'-2"	V407	Str.				
3		8'-10	V408	131	1'-11"	1'-5"	1'-5"	11"
3		2'-8"	V409	Str.				
3		3'-6"	V410	104	2'-8"	10"		
7		4'-9"	V411	Str.				
3		5'-7"	V412	104	4'-9"	10"		
1		15'-0"	V413	105	2'-0"	6'-5"	6'-6"	
2		4'-0"	V414	Str.				
1		3'-0"	V415	Str.				
2				104		10"		
5		3'-9"	V417	Str.				
1		3'-7"	V418	Str.				
2		7'-1"	V419	Str.				
1		7'-11"	V420	104	7'-1"	10"		
2		5'-11"	V421	Str.				
1		6'-3"	V422	104	5'-11"	10"		
1		5'-0"	V423	Str.				
1		7'-1"	V424	104	6'-3	10"		
2		5'-4"	V425	Str.				
1		6'-2"	V426	104	5'-4"	10"		
1		6'-7"	V427	Str.				
1		7'-5	V428	104	6'-7"	10"		
9		6'-9"	V429	124	6"	2'-0"	1'-5"	2'-10"
4	4	5'-6"	V430	Str.				

SUPERSTRUCTURE

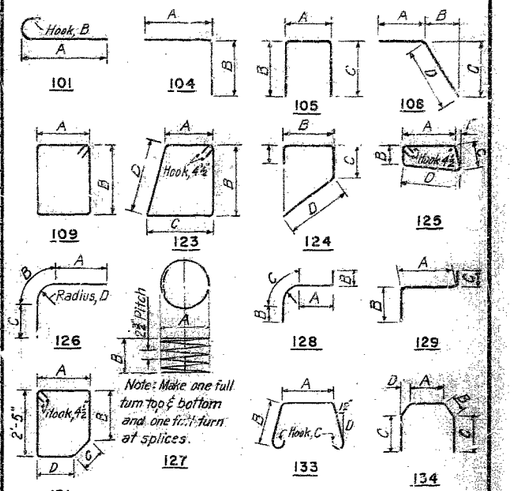
NO.	SIZE	LENGTH	MARK	TYPE	DIMENSIONS A	B	C	D
24	6	30'-4"	B601	Str.				
76	6	14'-8"	B602	109	3'-2"	3'-8"	6"	
20	10	58'-8"	B1001	Str.				
8		15'-5"	B1002					
8		13'-11"	B1003					
8		12'-5"	B1004					
4		13'-0"	B1005					
4		10'-0"	B1006					
8	10	14'-8"	B1007	Str.				
24	4	4'-2"	D401	109	8½"	1'-0"	4½"	
48		4'-7"	D402	109	8½"	1'-2½"	4½"	
48		5'-0"	D403	109	8½"	1'-5"	4½"	
48		5'-5"	D404	109	8½"	1'-7½"	4½"	
3		4'-9"	D405	109	1'-0"	1'-0"	4½"	
2	4	6'-0"	D406	109	1'-0"	1'-7½"	4½"	
24	6	30'-10"	D601	Str.				
20		2'-8"	D602	Str.				
106		10'-8"	D603	109	1'-2"	3'-8"	6"	
16		13'-4"	D604	109	1'-2"	5'-0"	6"	
12		6'-4"	D605	101	5'-10"	6"		
40		11'-2"	D606	108	5'-7"	5'-0½"	2'-4½"	5'-7"
2"	6	9'-10"	D607	134	3'-6"	2'-2"	1'-0"	1'-11"
96	4	18'-2"	G401	Str.				
72		26'-9"	G402					
48		17'-9"	G403					
36		17'-11"	G404					
36		13'-8"	G405					
30		12'-5"	G406					
30		18'-5"	G407					
24		23'-11"	G408					
24	4	7'-8"	G409	Str.				
274	5	5'-9"	G501	129	3'-9"	1'-0"	1'-0"	
274	5	5'-3"	G502	105	3'-3"	1'-0"	1'-0"	
1888	5	6'-0"	G503	128	3'-3"	1'-0"	9"	6"
120	6	2'-10"	G601	Str.				
36	8	26'-9"	G801	Str.				
61	10	43'-0"	G1001	Str.				
36		34'	G1002					
45		21'-0"	G1003					
18		43'-0"	G1004					
18		35'-0"	G1005					
36		26'-8"	G1006					
36		38'-0"	G1007					
18		36'-8"	G1008					
36		31'-0"	G1009					
36		21'-6"	G1010					
36		15'-0"	G1011					
18	10	9'-0"	G1012	Str.				
32	4	20'-0"	P401	Str.				
16	4	5'-8"	P402	Str.				
16	4	7'-6"	P403	Str.				
16	4	24'-2"	P404	Str.				

NO.	SIZE	LENGTH	MARK	TYPE	DIMENSIONS A	B	C	D
269	4	4'-10"	P405	109	1'-5"	6½"	4½"	
2	4	5'-5"	P406	109	1'-6"	10"	4½"	
4	4	4'-10"	P407	133	1'-1"	1'-4½"	6"	1'-0"
171	4	28'-8"	S401	Str.				
366		26'-7"	S402					
14		14'-4"	S403					
32		10'-10"	S404					
32		6'-10"	S405					
18		11'-4"	S406					
16		19'-4"	S407					
16		24'-4"	S408					
7		29'-4"	S409	Str.				
130	4	3'-11"	S410	108	1'-2"	6"	2'-8½"	2'-9"
286	5	31'-2"	S501	Str.				
166		36'-3"	S502					
341		29'-2"	S503					
199		28'-10"	S504					
32		4'-0"	S505					
55		31'-7"	S506					
33		36'-6"	S507					
62		31'-10"	S508					
35		36'-9"	S509					
31		29'-7"	S510					
18		29'-1"	S511					
31		29'-10"	S512					
17		29'-4"	S513					
18		9'-6"	S514					
9		19'-4"	S515					
9	5	12'-0"	S516	Str.				
50	6	28'-1"	S601	Str.				
44		4'-6"	S602					
16		21'-0"	S603					
6		34'-6"	S604					
30		24'-0"	S605					
4		9'-1"	S606					
12		32'-2"	S607					
6		32'-8"	S608					
6		20'-8"	S609					
6		36'-5"	S610					
8		29'-0"	S611					
4		34'-0"	S612					
4		26'-8"	S613					
2		36'-8"	S614					
2		36'-11"	S615					
2		29'-6"	S616					
2		34'-7"	S617					
2		27'-2"	S618	Str.				
56		3'-2"	S619	124	4"	9"	10"	1'-3"
22	6	5'-0"	S620	Str.				
4	8	6'-0"	S801	Str.				
42	4	23'-0"	W401	Str.				
7	4	9'-4"	W402	Str.				
135	4	6'-11"	W403	125	1'-11½"	10"	1'-3"	2'-1½"
135	4	4'-2"	W404	123	10"	10"	11"	10"

COLUMNS BENTS 2 & 3

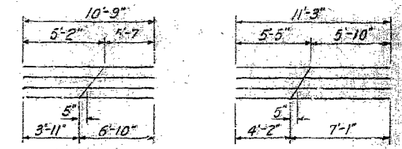
2	4	708'-3"	C402	127	2'-3"	22'-8"
1	4	597'-0"	C402	127	2'-3"	19'-3"
1	4	715'-8"	C403	127	2'-5"	23'-2"
2	4	612'-3"	C404	127	2'-3"	19'-9"
96	9	6'-11"	C901	126	1'-9"	3'-2"	2'-0"	2'-0"
40	11	25'-2"	C1101	Str.				
20	11	25'-7"	C1103	Str.				
20	11	22'-1"	C1103	Str.				
40	11	21'-8"	C1104	Str.				

BENDING DIAGRAMS



CUTTING DIAGRAMS

BENT 1



Note:
Prefix all bar marks for Bent 1 with B1, prefix all bar marks for Bent 4 with "B4" and prefix all bar marks for Superstructure with "SU". Example, - B1H401, B4-F601, SU-C1101.

BRIDGE: LANE C OVER 12TH STREET

STATE ROAD US 40 MIDTOWN FREEWAY
KANSAS CITY, MO.
PROJECT NO. I-352 (18) I FAI-RT. 4 STA. 32+03.61 LANE C

JACKSON COUNTY

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE W.F.S. DATE 3-5-58 | TRACED ____ DATE ____
CHECKED L.H.B. DATE 3-5-58 | SCALE

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

REINFORCING SCHEDULE

SHEET 2 OF 10

A 244

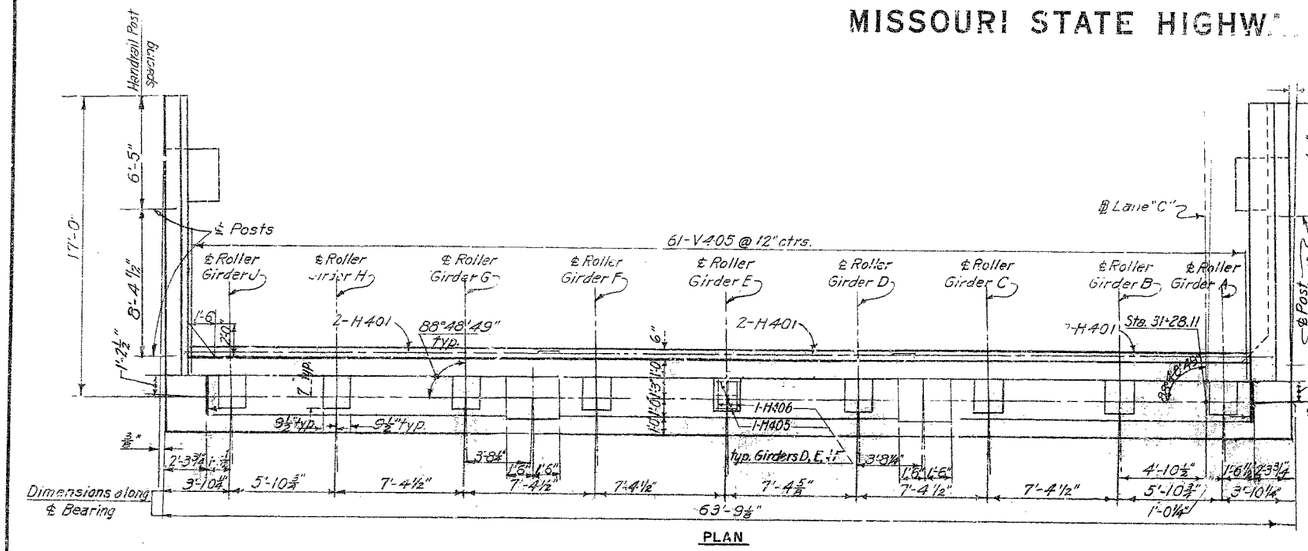
NO CONSTRUCTION CHANGES

29.2

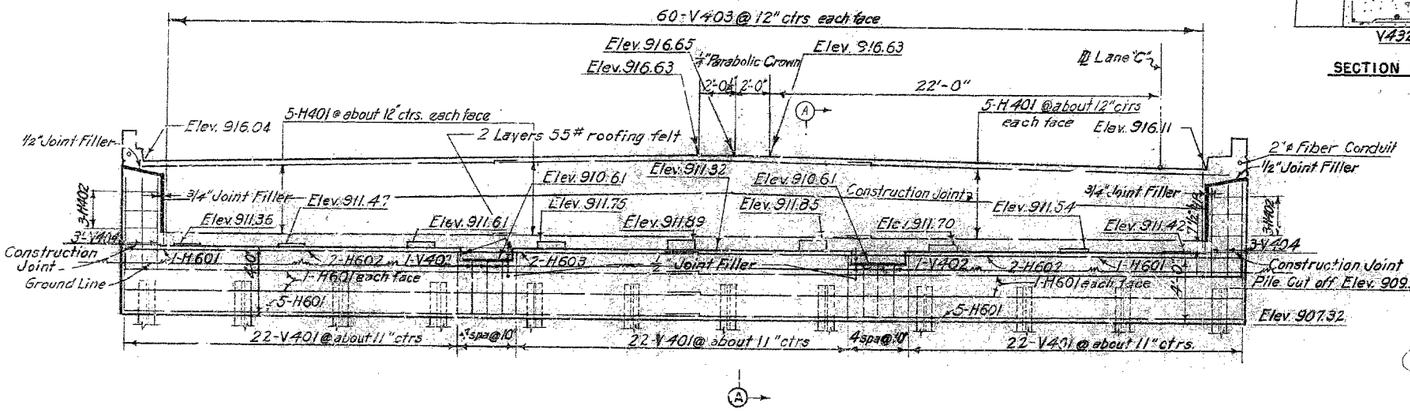
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.				
DIST. NO.	COUNTY		ROUTE	SEC.	
4			40		

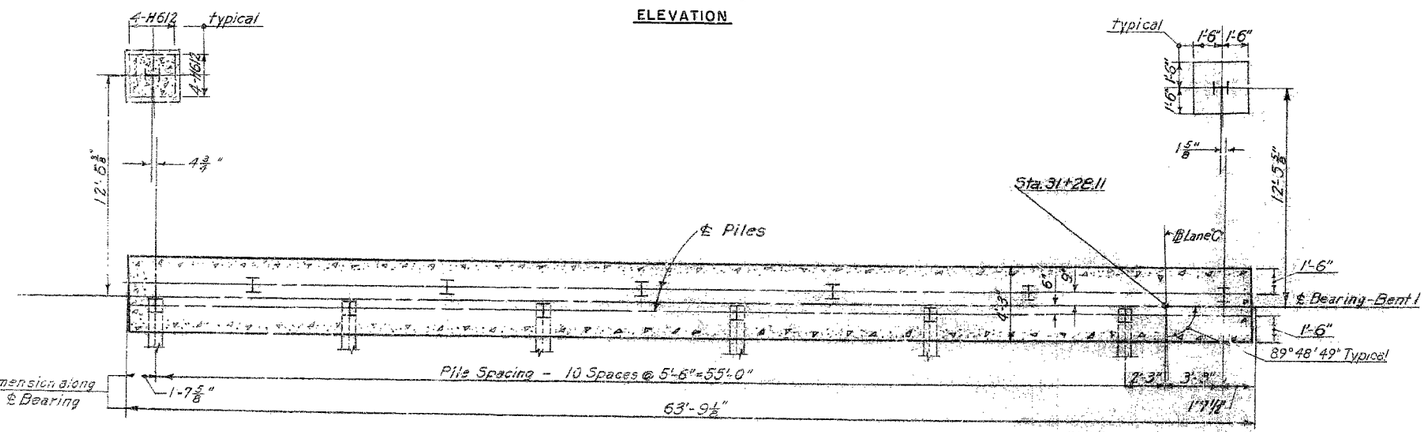
295



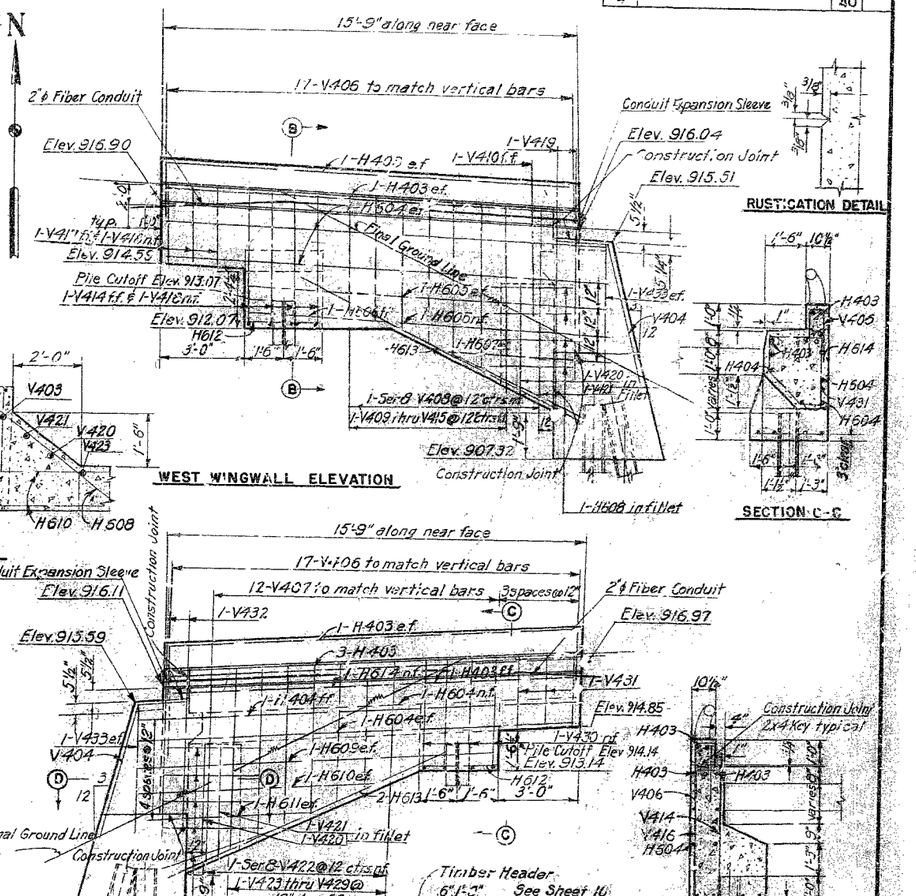
PLAN



ELEVATION



FOOTING PLAN



Notes:

Elevation and Dimensions shown to surfaces to receive Joint Filler are to the face of the concrete.

Unless noted otherwise all reinforcing steel shall be 2" clear.

All piles are 10 BP 42, Battered 3" per foot where shown.

For Expansion Roller details-See Sheet 10

For Handrail Post Details-See Sheet 10

Top of curb and parapet wall to be built parallel to grade. See sheet 6 for profile grade elevations.

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE FWD	DATE 2-5-58	TRACED	DATE
CHECKED BAR	DATE 2-4-58	SCALE	

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

BRIDGE: LANE C OVER 12TH STREET

STATE ROAD US 40 MIDTOWN FREEWAY

KANSAS CITY, MO.

PROJECT NO. I-352 (18) (FAI-RT. 4) STA. 32+03.61 LANE C

JACKSON COUNTY

END BENT 1 SHEET 3 OF 10

A 244

NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

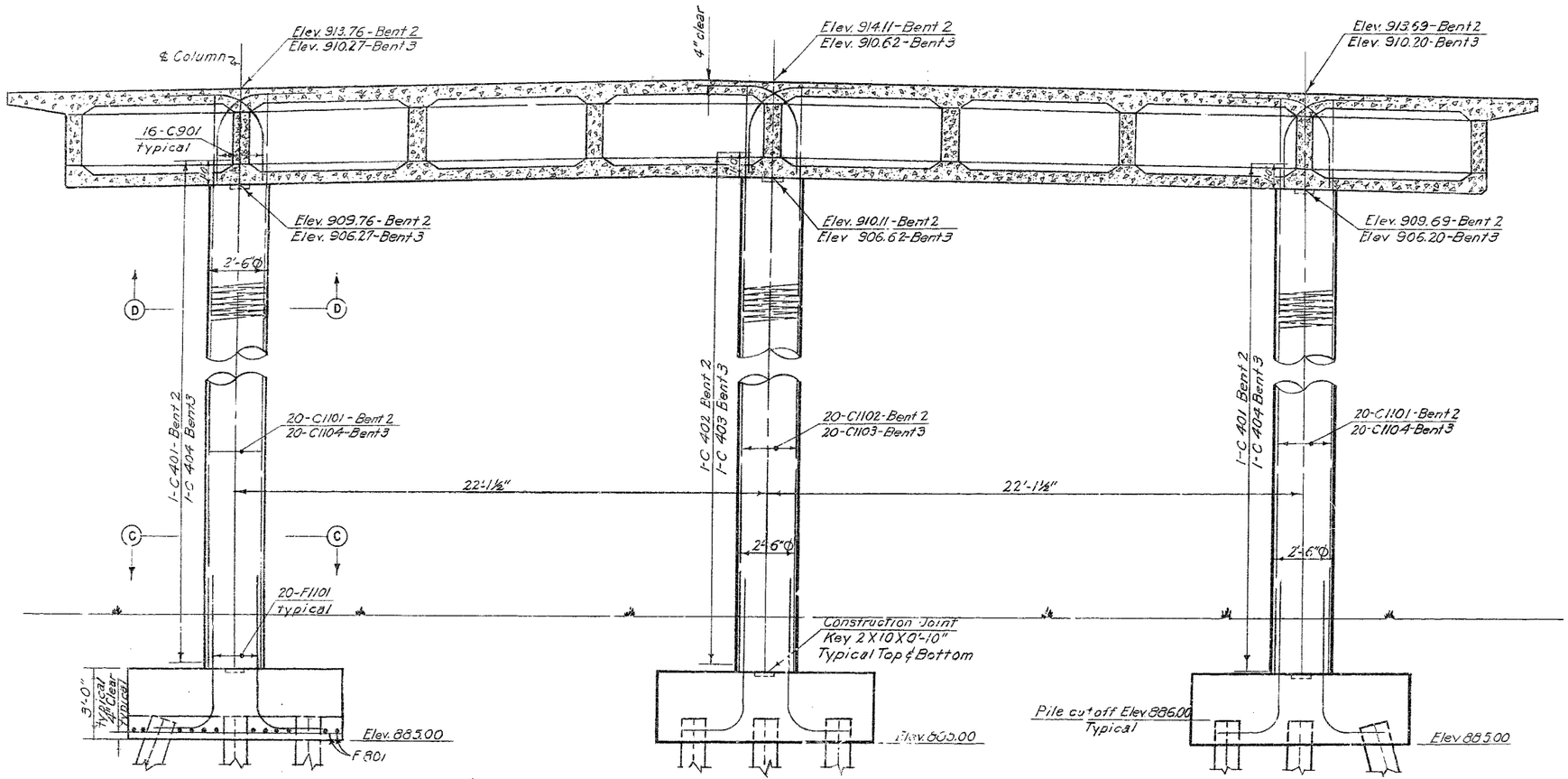
FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT No. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.				
DIST. NO.	COUNTY		ROUTE	SEC.	
4			40		

Notes:

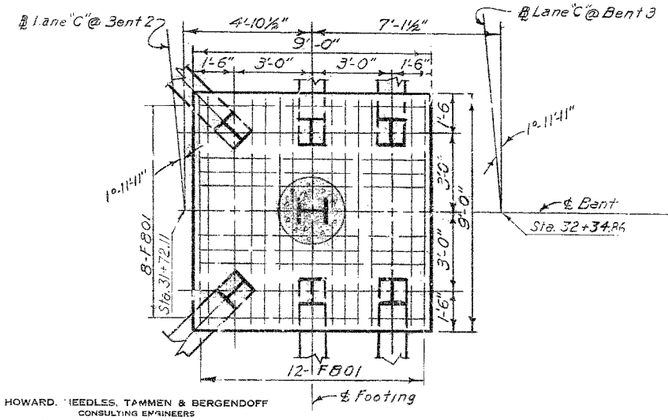
All Piles are 12 BP 53, Battered Piles are Battered 3" per ft. as shown.

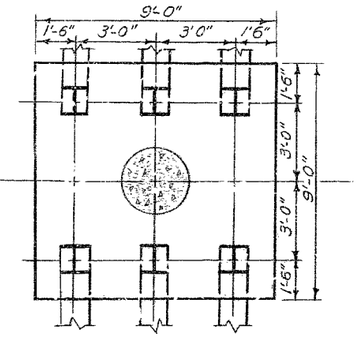
Footing Reinforcing shown in East footing is typical for all footings.

For Pile Splice Detail See Sheet 3

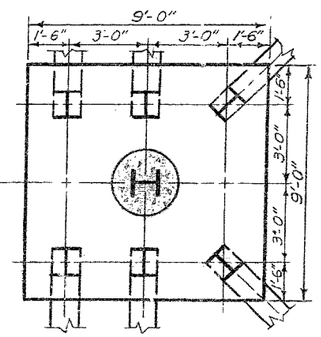


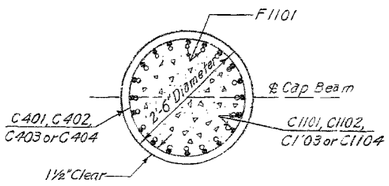
ELEVATION



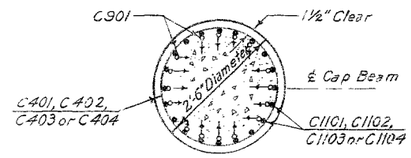


FOOTING PLAN





SECTION C-C



SECTION D-D

Note: Arrows show direction of placing C901 bars.

BRIDGE: LANE C OVER 12TH STREET

STATE ROAD US 40 MIDTOWN FREEWAY

KANSAS CITY, MO.

PROJECT NO. I-352 (18) (FAI-RT.4) STA. 32+03.61 LANE C

JACKSON COUNTY

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE E.W.P. DATE 1-15-58 TRACED DATE
CHECKED G.J.B. DATE 3-1-58 SCALE

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

BENTS 2 AND 3 SHEET 4 OF 10

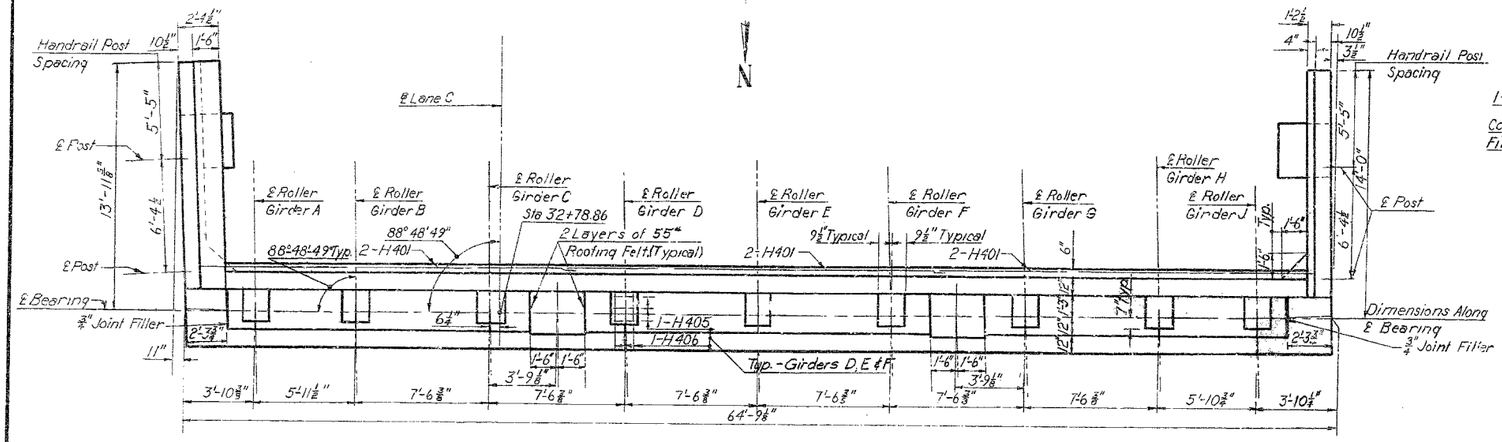
A 244

NO CONSTRUCTION CHANGES

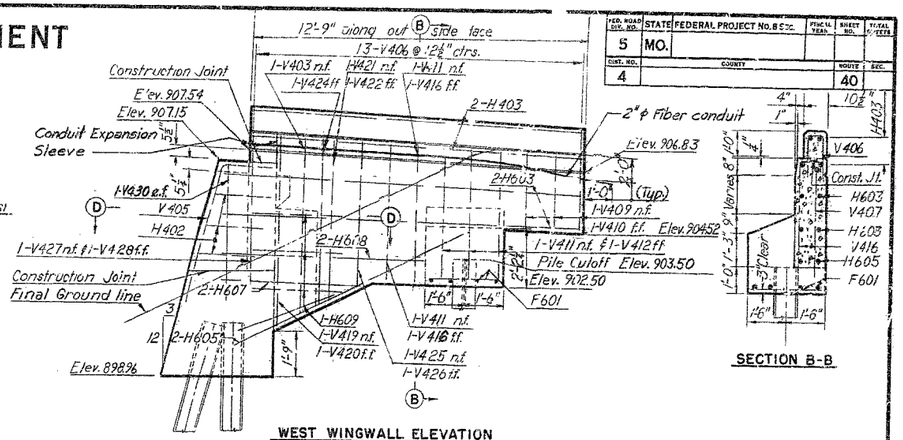
962

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT No.	PENCIL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.				
CONT. NO.	COUNTY			ROUTE	SEC.
4				40	

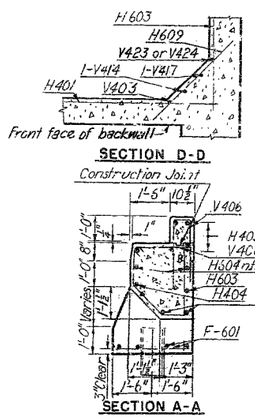


PLAN



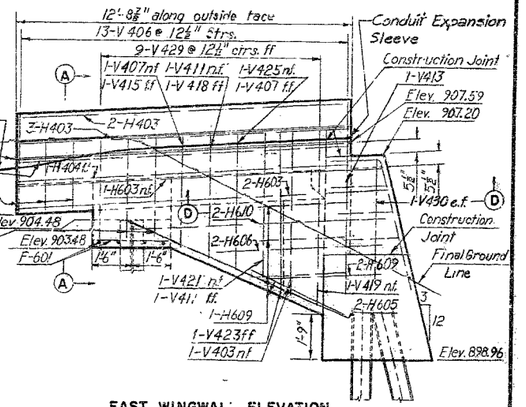
WEST WINGWALL ELEVATION

SECTION B-B

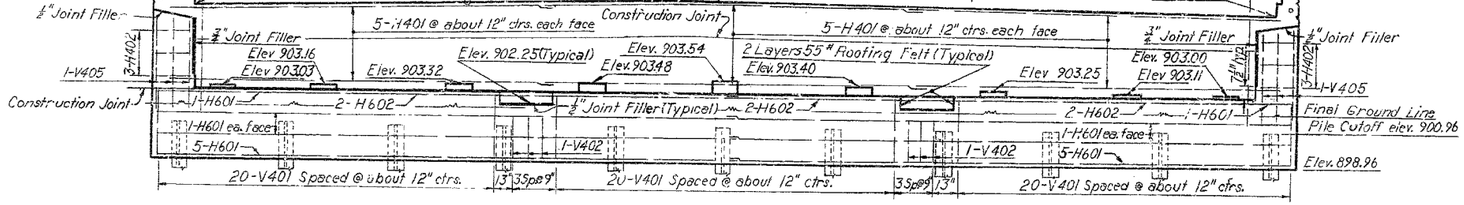


SECTION D-D

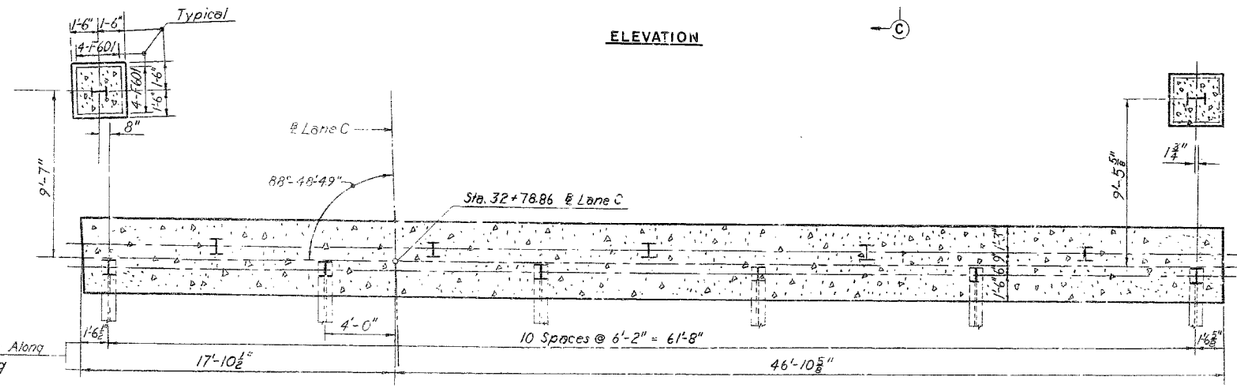
SECTION A-A



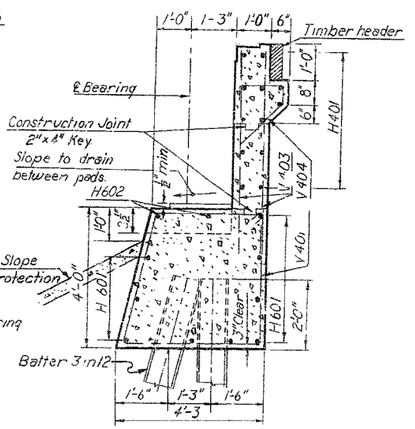
EAST WINGWALL ELEVATION



ELEVATION



FOOTING PLAN



SECTION C-C

NOTES:

For expansion device details see sheet 10.
For rustication details see sheet 3.
For Expansion Roller details see sheet 10.
For timber header details see sheet 10.
All piles 10 BP 42, battered 3 in 12 where shown.
Elevations and dimensions to surfaces to receive joint filler are to the face of the concrete, unless noted otherwise.
All reinforcing steel shall be 2" clear.
Top of curb and parapet wall to be built parallel to grade.
For profile grade elevation see sheet 6.

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE LJR DATE 1-21-58 TRACED DATE
CHECKED BAR DATE 3-4-58 SCALE

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

BRIDGE: LANE C OVER 12TH STREET

STATE ROAD U.S. 40 MIDTOWN FREEWAY
KANSAS CITY, MO.
PROJECT NO. I-35 2 (18) (FAI-RT. 4) STA. 32+03.61 LANE C

JACKSON COUNTY

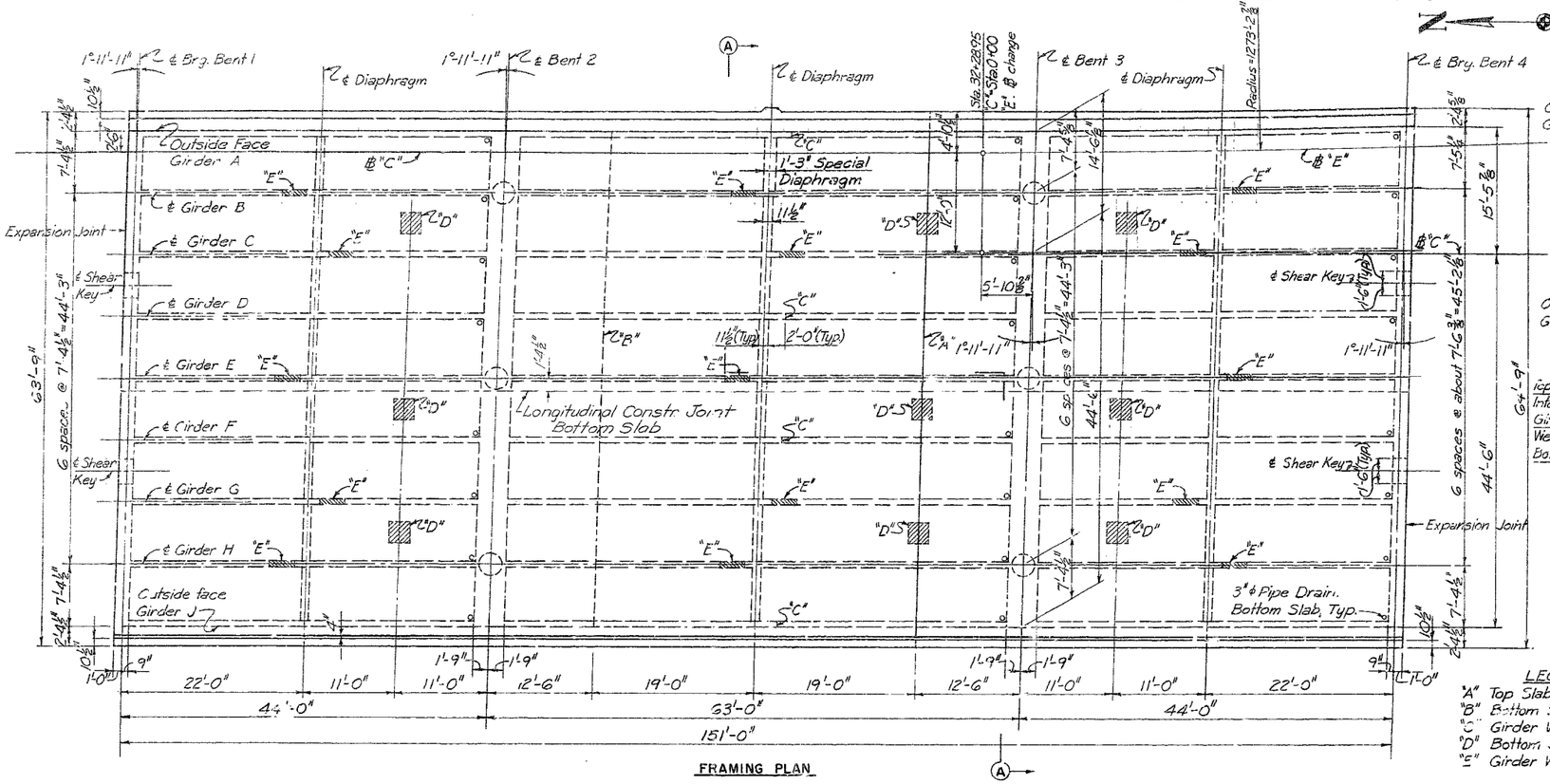
END BENT 4 SHEET 5 OF 10 A 244

782

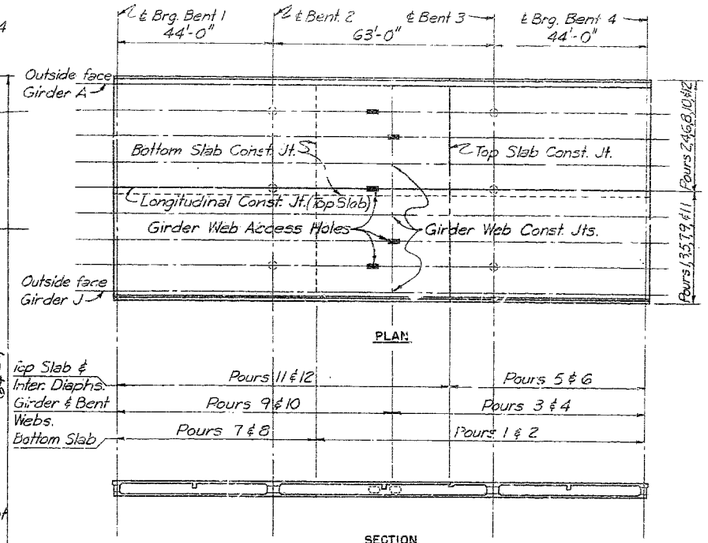
NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

P.O. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.				
DIST. NO.	COUNTY			COUNTY	SEC.
4				40	

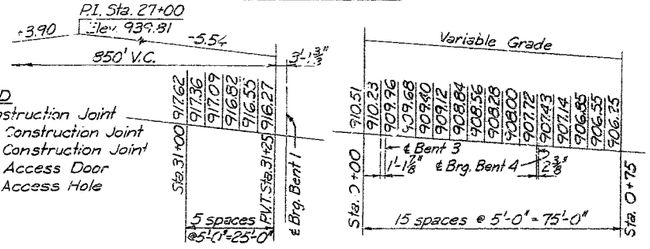


FRAMING PLAN



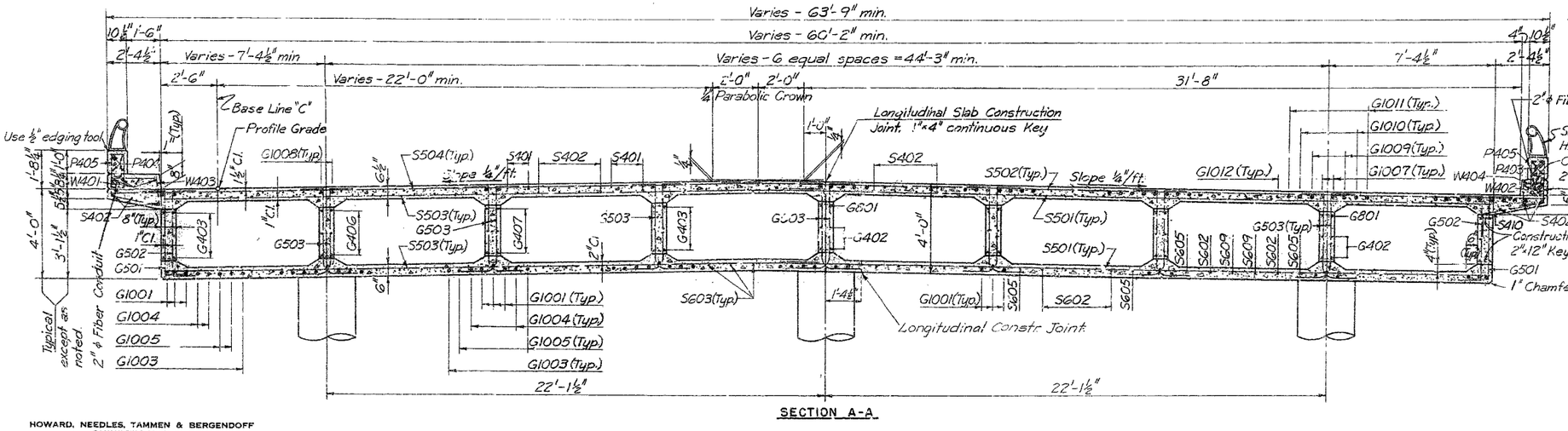
SECTION

POURING SEQUENCE



LEGEND

"A" Top Slab Construction Joint
"B" Bottom Slab Construction Joint
"C" Girder Web Construction Joint
"D" Bottom Slab Access Door
"E" Girder Web Access Hole

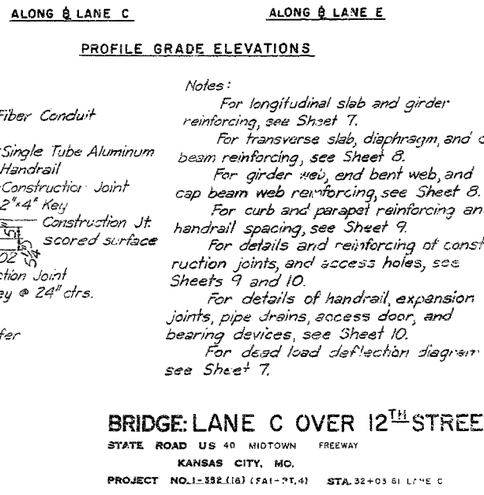


SECTION A-A

ALONG ℄ LANE C

ALONG ℄ LANE E

PROFILE GRADE ELEVATIONS



Notes:

For longitudinal slab and girder reinforcing, see Sheet 7.

For transverse slab, diaphragm, and cap beam reinforcing, see Sheet 8.

For girder web, end bent web, and cap beam web reinforcing, see Sheet 8.

For curb and parapet reinforcing and handrail spacing, see Sheet 9.

For details and reinforcing of construction joints, and access holes, see Sheets 9 and 10.

For details of handrail, expansion joints, pipe drains, access door, and bearing devices, see Sheet 10.

For dead load deflection diagram see Sheet 7.

BRIDGE: LANE C OVER 12TH STREET

STATE ROAD US 40 MIDTOWN FREEWAY

KANSAS CITY, MO.

PROJECT NO. I-332-(18) (FAI-PT.4) STA. 32+05.61 LINE C

JACKSON COUNTY

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE N2B	DATE 12-20-57	TRACED	DATE
CHECKED BAR	DATE 2-6-58	SCALE	

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

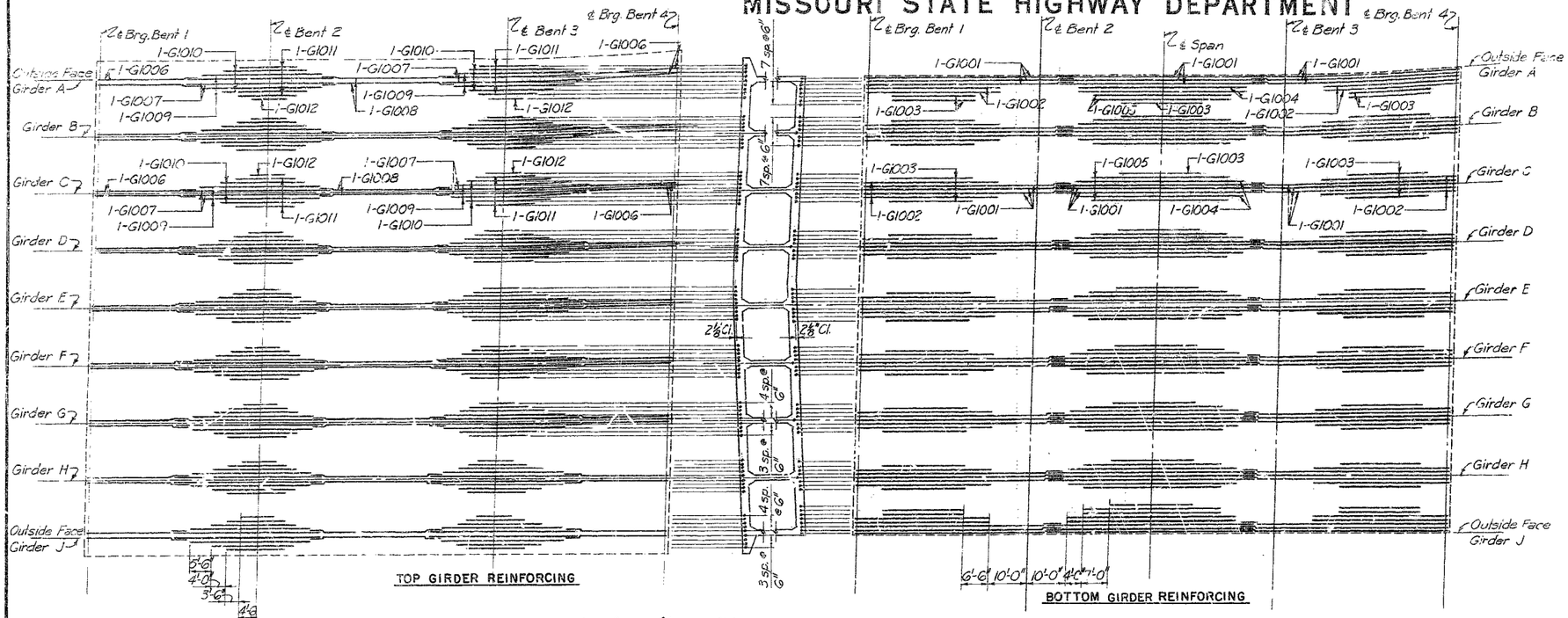
FRAMING PLAN SHEET 6 OF 10

A 244

298

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.				
DIST. NO.	COUNTY			ROUTE	SEC.
4				40	



TOP GIRDER REINFORCING

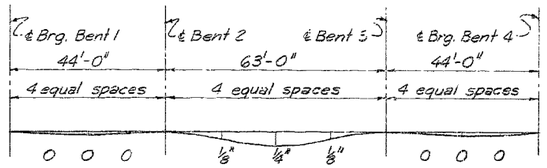
BOTTOM GIRDER REINFORCING

Notes:

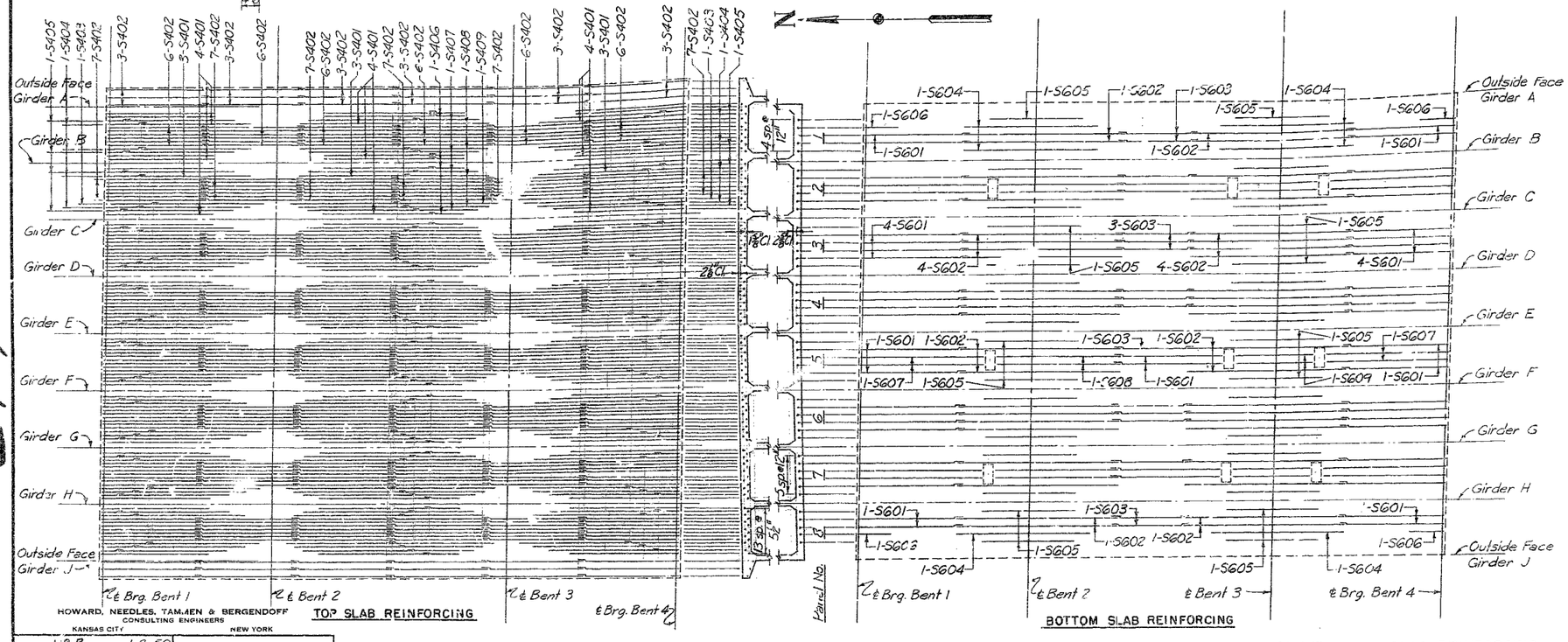
Girder A reinforcing as shown. Girders B, C, D, E, F, G, H, & J reinforcing as shown in girder C.

Top slab Reinforcing in Panel 1 as shown. Top slab reinforcing in Panels 2, 3, 4, 5, 6, 7, & 8 as shown in Panel 2.

Bottom slab reinforcing in Panels 1 & 8 as shown. Bottom slab reinforcing in Panels 2, 5, & 7, as shown in Panel 5. Bottom slab reinforcing in Panels 3, 4, & 6 as shown in Panel 3.



DEAD LOAD DEFLECTION DIAGRAM



TOP SLAB REINFORCING

BOTTOM SLAB REINFORCING

Notes:

All longitudinal reinforcing to be placed parallel to centerlines of girders.

Longitudinal top slab reinforcing to lap a minimum of 1'-4" with adjacent girder reinforcing.

Longitudinal bottom slab reinforcing to lap a minimum of 2'-0" with adjacent girder reinforcing.

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE N&B	DATE 1-2-58	TRACED	DATE
CHECKED BAR	DATE 2-6-58	SCALE	

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

LONGITUDINAL SLAB REINFORCING

SHEET 7 OF 10

A 244

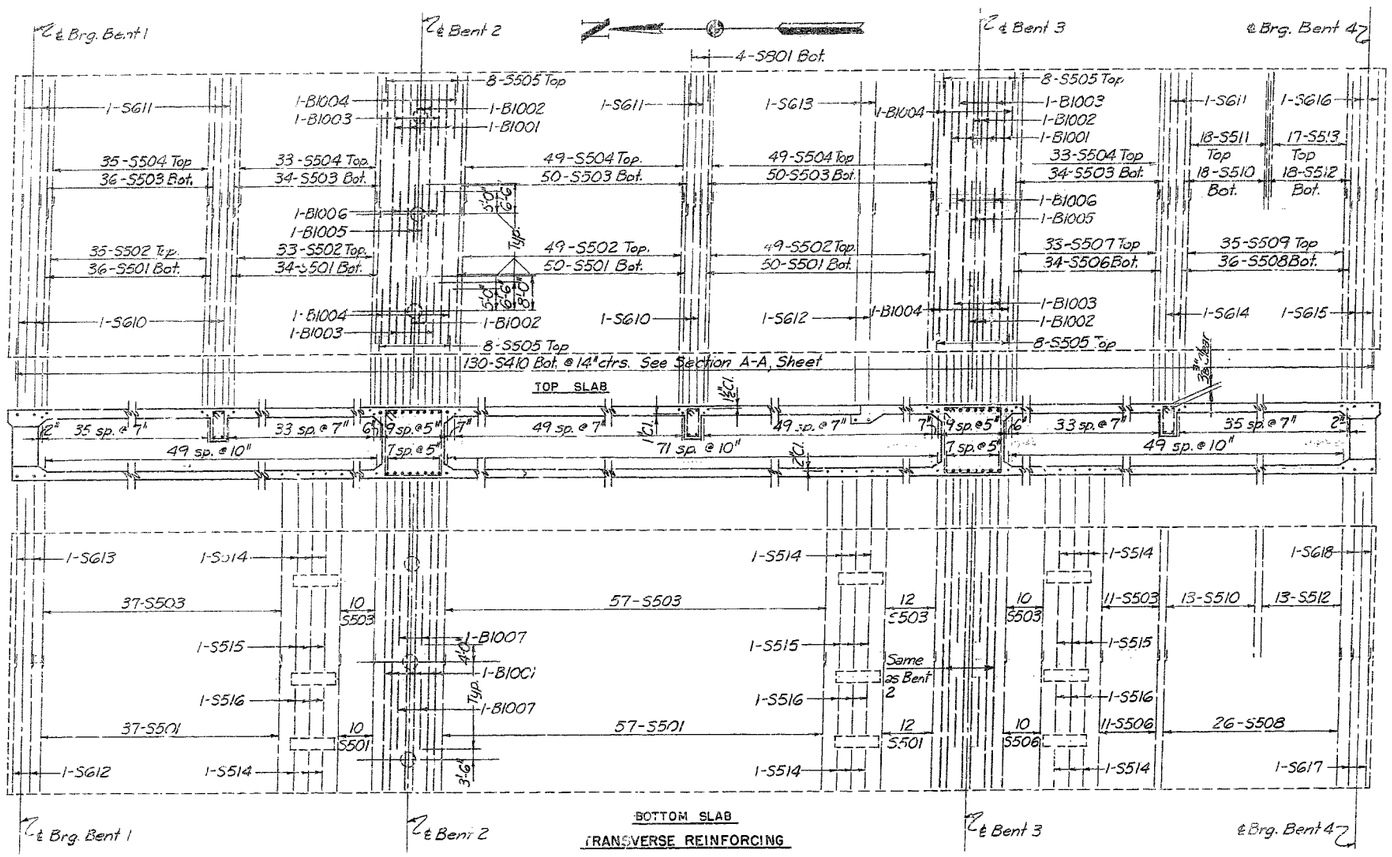
BRIDGE: LANE C OVER 12TH STREET

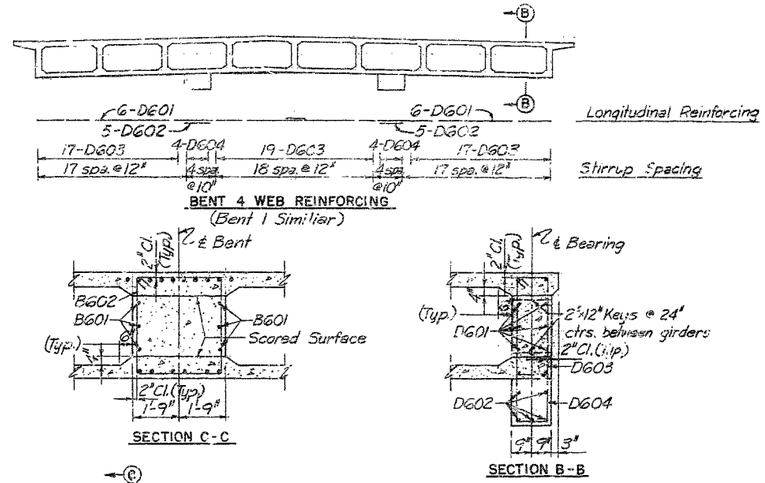
STATE ROAD US 40 MIDTOWN FREEWAY
KANSAS CITY, MO.
PROJECT NO. I-352 (18) (FAI-RT. 4) STA. 32+03.61 LANE C
JACKSON COUNTY

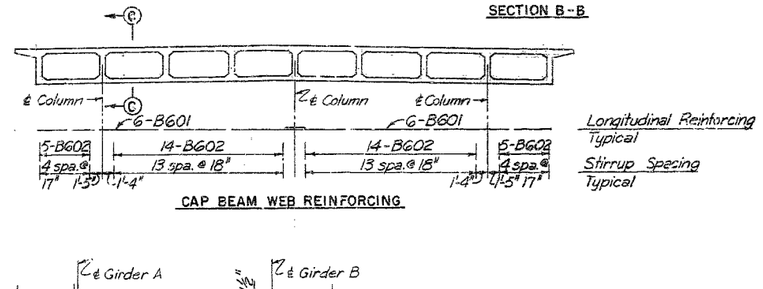
912

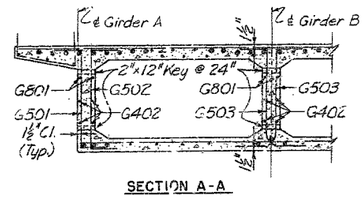
MISSOURI STATE HIGHWAY DEPARTMENT

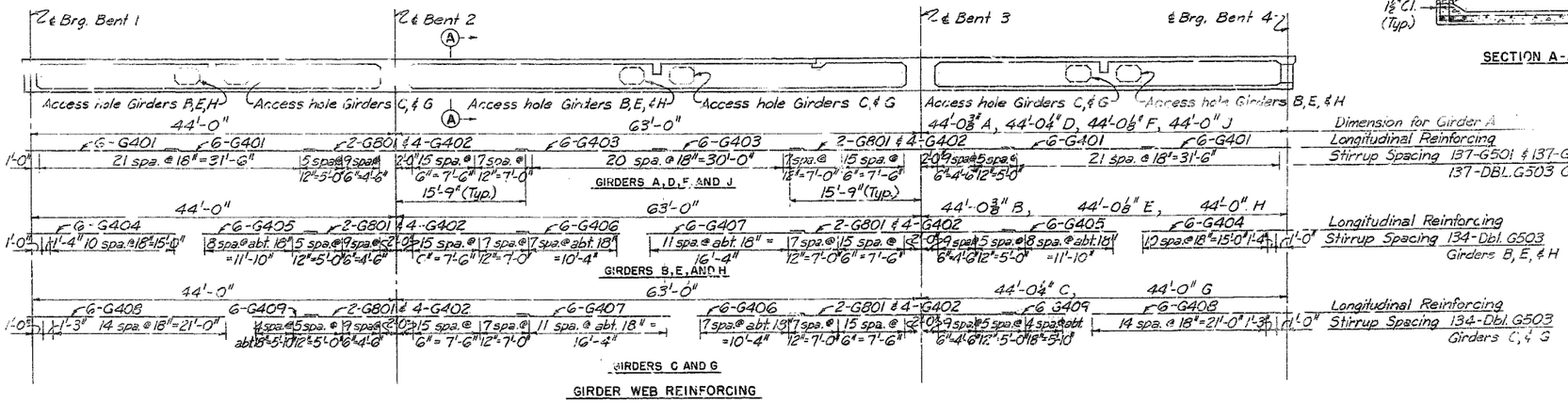
FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT No.	SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.					
DIST. NO.	COUNTY			ROUTE	SEC.	
4				10		











Notes:
Transverse steel reinforcing to be placed parallel to centerlines of bents.

300

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE NBB DATE 1-7-58 TRACED DATE
CHECKED BAR DATE 2-6-58 Jr E

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

TRANSVERSE SLAB AND WEB REINFORCING

SHEET 8 OF 10

BRIDGE: LANE C OVER 12TH STREET

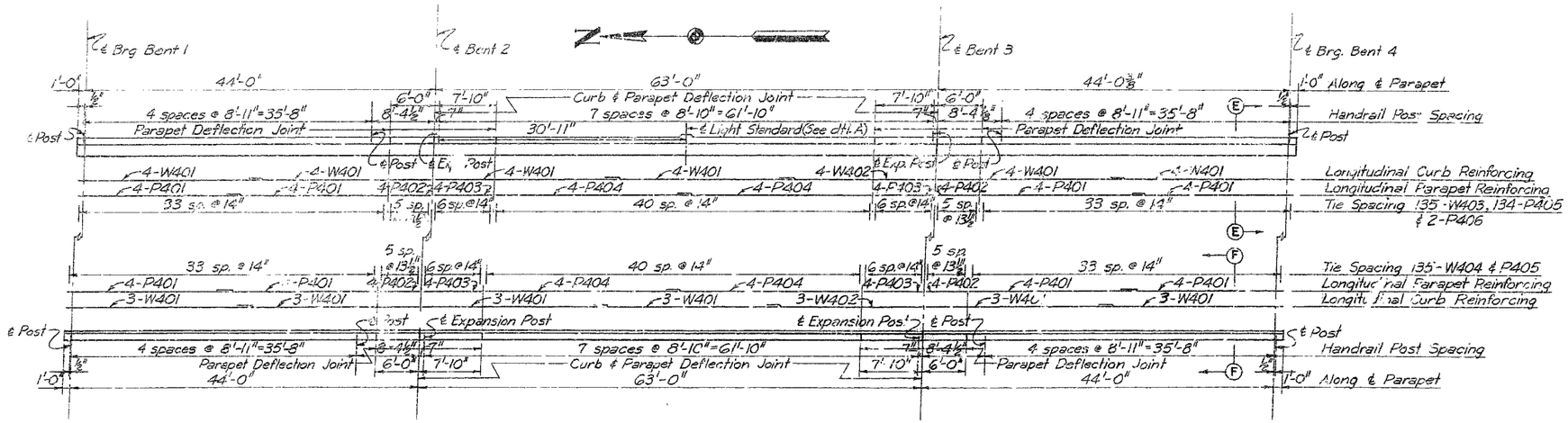
STATE ROAD US 40 MIDTOWN FREEWAY
KANSAS CITY, MO.
PROJECT NO. I-352 (18) (FAI-RT. 4) STA. 32+03.51 LANE C
JACKSON COUNTY

A 244

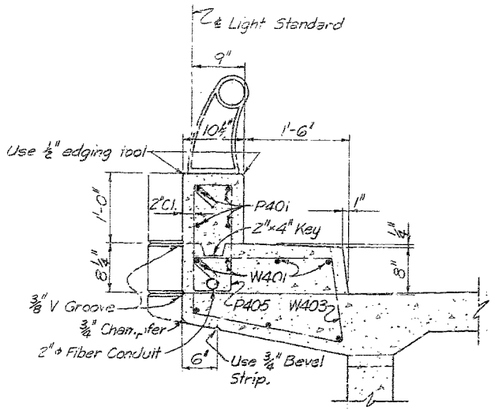
NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

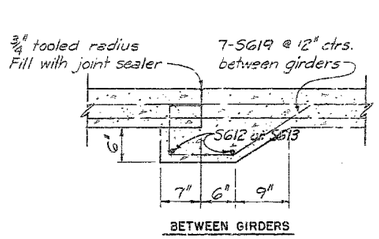
FED. AID PROJ. NO.	STATE	FEDERAL PROJECT No. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.				
DIST. NO.	COUNTY		ROUTE	SEC.	
4			40		



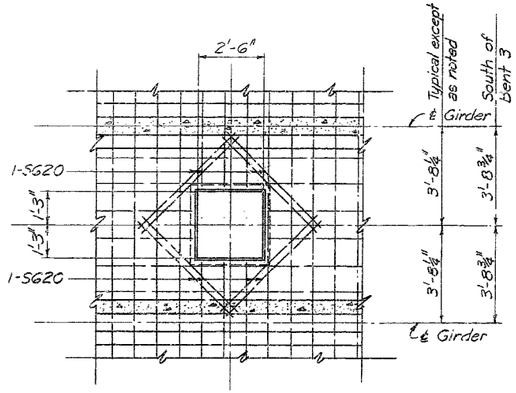
CURB AND PARAPET PLAN



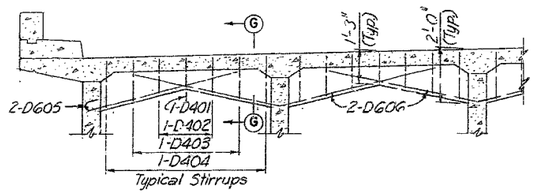
SECTION E-E



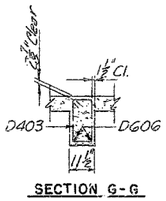
BETWEEN GIRDERS



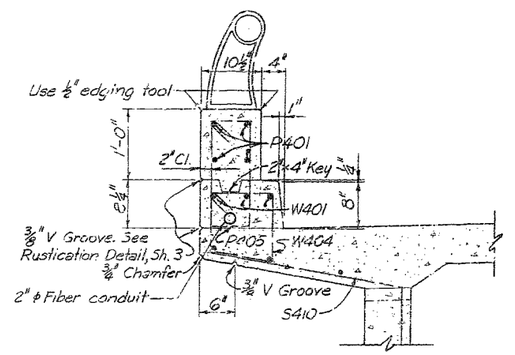
BOTTOM SLAB ACCESS DOOR



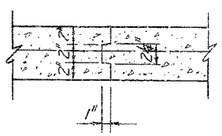
TYPICAL DIAPHRAGM



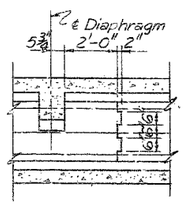
SECTION G-G



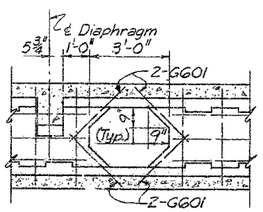
SECTION F-F



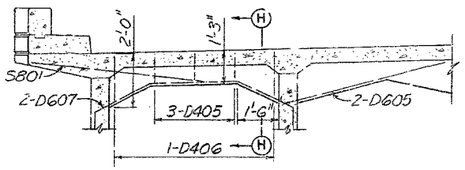
BOTTOM SLAB CONSTRUCTION JOINTS



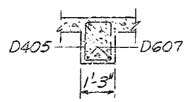
GIRDER WEB CONSTRUCTION JOINT



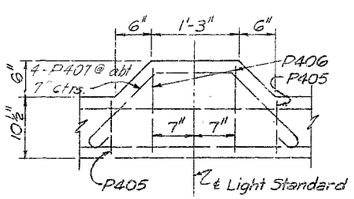
GIRDER WEB ACCESS HOLE



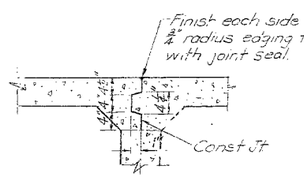
SPECIAL DIAPHRAGM



SECTION H-H



DETAIL A



TOP SLAB CONSTRUCTION JOINT
LONGITUDINAL

Notes:
For details of Handrail Posts and Light Standards see Sheet 10
For additional details of access door see Sheet 10
For continuation of handrail on bents 1 and 4 see Sheets 3 and 5

BRIDGE: LANE C OVER 12TH STREET

STATE ROAD US 40 MIDTOWN FREEWAY
KANSAS CITY, MO.
PROJECT NO. I-352 (18) (BA1-87.4) STA 32+03.61 LANE C
JACKSON COUNTY

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

DE. NBB DATE 1-17-58 TRACED ____ DATE ____
CHECKED BAP DATE 2-16-58 SCALE ____

NOTE: This drawing is not to scale. Follow dimensions

SUPERSTRUCTURE DETAILS

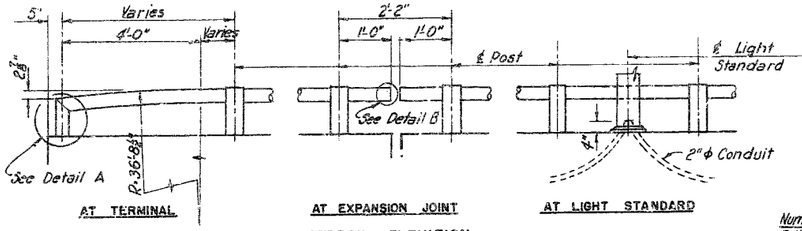
SHEET 9 OF 10

A 244

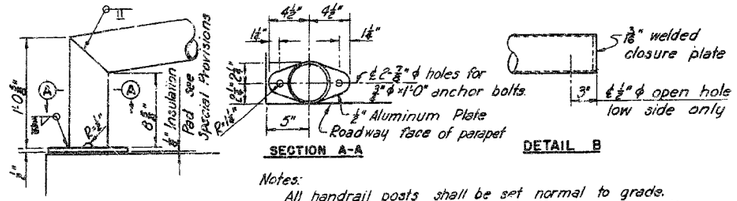
301

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.				
DIST. NO.	COUNTY			ROUTE	SEC.
4				40	



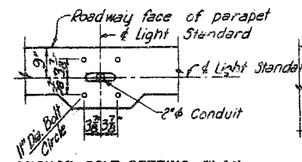
HANDRAIL ELEVATION



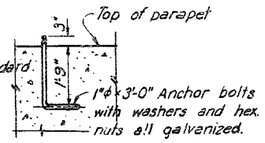
DETAIL B

Notes:
All handrail posts shall be set normal to grade.
Rails to be fabricated in two or three panel lengths.
See Missouri Std. R-2 - Standard Handrail Details.

HANDRAIL DETAILS



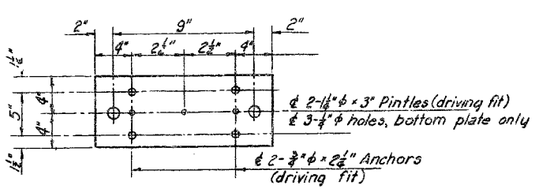
ANCHOR BOLT SETTING PLAN

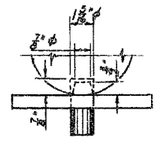


ANCHOR BOLT DETAIL

Note:
Cost of furnishing and placing anchor bolts shall be included in price bid for other items of work.

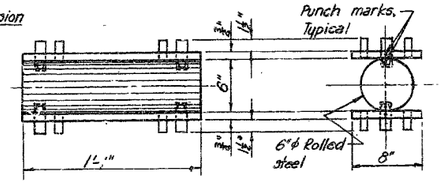
LIGHT STANDARD DETAILS

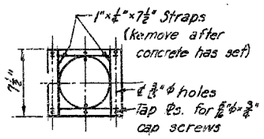




Number of Expansion Pollers Required

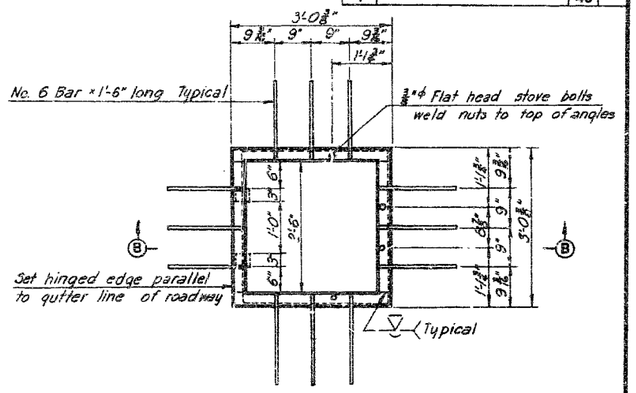
Bent 1	9
Bent 4	9



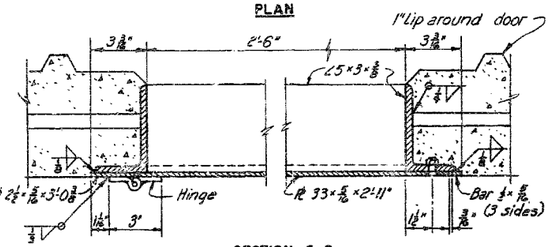


Notes:
Top and bottom plates to be U.S.S. T-1 Alloy or equivalent. Materials for pintles and rollers shall be cold finished carbon steel A.I.S.I.-C1042 or C1045 (turned and polished)
All bearing plates shall be straightened to plane surfaces.
E6015 or E6016 welding electrodes shall be used.
Paint: Shop: One coat red lead except top surface of top plate and bottom surface of bottom plate. Field: All exposed surfaces first coat brown, second coat aluminum.

EXPANSION ROLLER



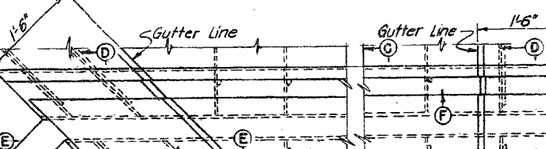
PLAN

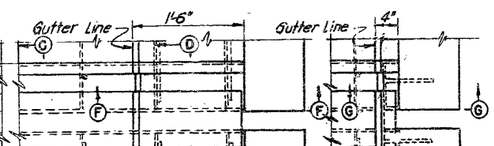


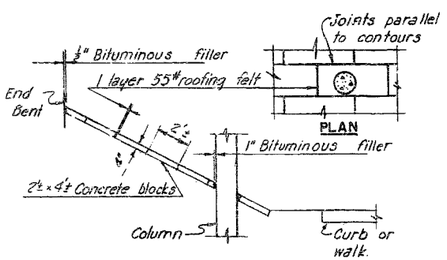
SECTION B-B

Notes:
Access Doors to be assembled and in place while slab is being poured.
Bottom surface of door to be flush with bottom of slab.
For painting see special provisions.
Payment for furnishing and installing access doors and frames shall be included in price bid for other items of work.

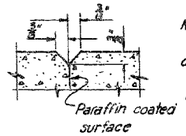
ACCESS DOOR IN BOTTOM SLAB





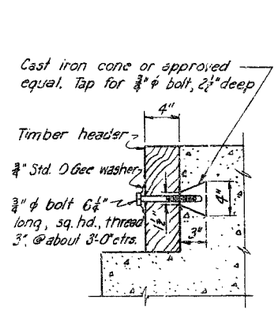


SLOPE PROTECTION UNDER ENDS OF SUPERSTRUCTURE



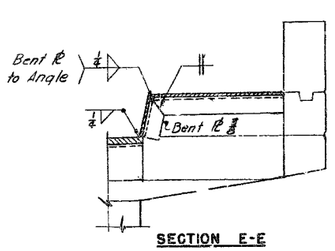
Notes:
Reinforcing shall stop 2" clear of joints.
No chamfer shall be placed on the sidewalk at deflection joints.

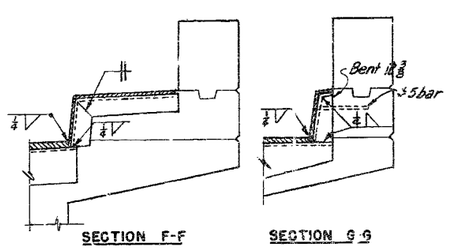
DEFLECTION JOINT DETAIL

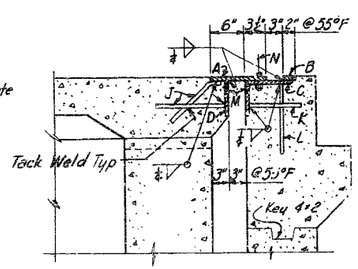


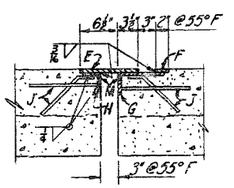
Note:
Cost of timber headers, complete in place, to be included in price bid for concrete.

TIMBER HEADER DETAIL







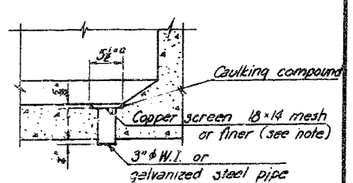


Note: Backwall to be poured and forms to be removed prior to pouring of top slab of box girder.

EXPANSION JOINT

A- ℞ 9½×⅜
B- Bar 2×⅜
C- L 8×6×½
D- ℞ 6×½
E- ℞ 10×⅜
F- ℞ 2×⅜
G- L 8×4×½
H- L 3×3×⅜
J- #5 bar 1'-0" long @ 12" ctrs
K- #5 bar 9" long @ 12" ctrs
L- #5 bar 1'-0" long @ 12" ctrs
} To be of structural grade
M- 1" ϕ air holes @ 12" ctrs.
N- ½" ϕ bolts @ 6'-0" ctrs. (2 per 1'-6" curb)
Tack weld nut to bottom of angle. Remove bolts within two hours after top slab is poured

Note: For painting see special provisions.



Notes:
If galvanized steel pipe is used, screen shall be aluminum.
Cost of furnishing and placing pipe, screen, and caulking compound shall be included in price bid for other items of work.

PIPE DRAIN IN BOTTOM SLAB

BRIDGE: LANE C OVER 12TH STREET
STATE ROAD US 40 MIDTOWN FREEWAY
KANSAS CITY, MO.
PROJECT NO. 1-332(18)(FAI-RT 4) STA. 32+03.61 LANE C
JACKSON COUNTY

302

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE WPD DATE 11-1-57 TRACED DATE
CHECKED B.A.P. DATE 2-28-58 SCALE

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

MISCELLANEOUS DETAILS SHEET 10 OF 10

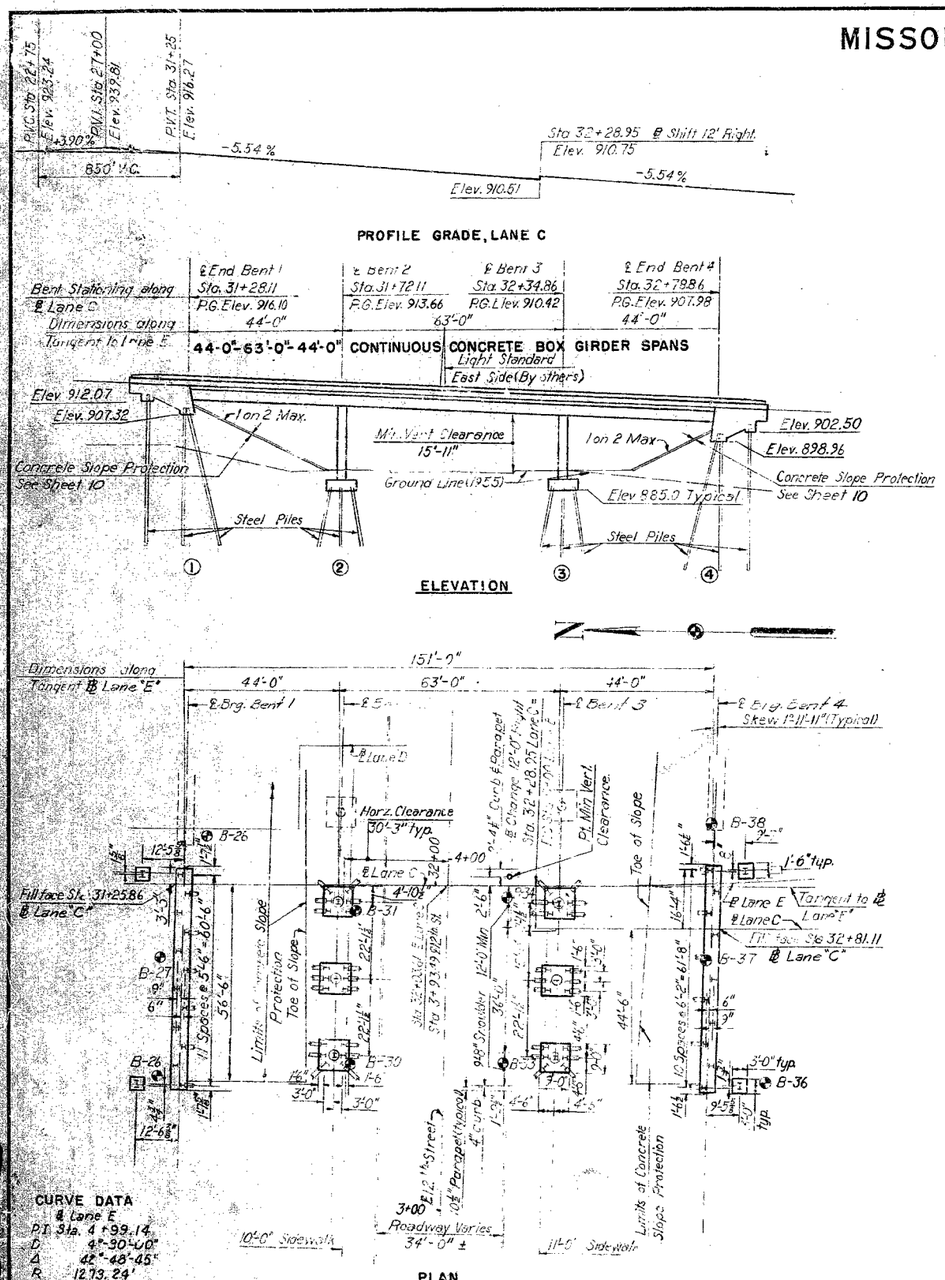
A 2+4

NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT No. & Sec.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	I 352 (18)			
DIST. NO.	COUNTY		ROUTE		
4	JACKSON		40		



Note: Bent 2 and 3 footing dimensions and pile spacing typical. Bent 1 and 4 wingwall footing dimensions and pile spacing typical.

CURVE DATA
℄ Lane E
P.I. Sta. 4+99.14
D 4°-30'-00"
Δ 42°-48'-45"
R 1273.24'
T 499.14'
L 951.39'

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
MADE LJR DATE 1-14-58 TRACED DATE
CHECKED BAE DATE 2-23-58 SCALE

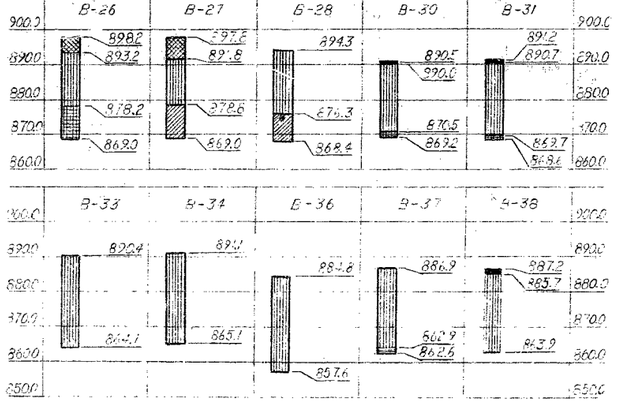
NOTE: This drawing is not to scale. Follow dimensions.

FINAL QUANTITIES

ITEM NO.	ITEM	UNIT	SUB-STRUCTURE	SUPER-STRUCTURE	TOTAL
1-G	Class 1 Excavation for Structures	Cu. Yd.	160		160
16-B	Class B Concrete	Cu. Yd.	172.5		172.5
16-B-1	Class B-1 Concrete	Cu. Yd.		592.2	592.2
17-B	Fabricated Structural Steel	Pound		8320	8320
17-B	Fabricated Structural Steel (Bearing)	Pound		2740	2740
17-J	Aluminum Alloy Handrail	Lin. ft.		364	364
19-A	Reinforcing Steel	Pound	15,940	182,740	198,680
22-DD	Steel piles in place - 10-BP42 (State furnished)	Lin. ft.	1169		1169
22-DC	Steel piles in place - 12BP53 (State furnished)	Lin. ft.	943		943
40-A	Lighting Conduit System	L.S.			1

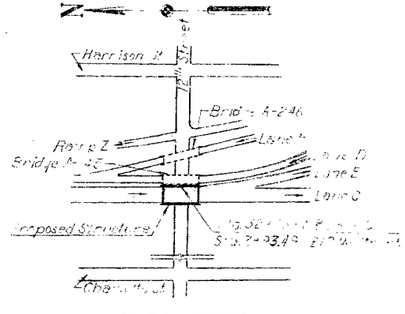
NOTES: All excavation for bridge will be paid for as Class 1 excavation for structures.
The estimated quantity of steel piles in place includes an allowance of 3' per splice for an estimated number of 3 splices for 10BP42 and an estimated number of 2 splices for 12BP53.
Estimated quantity of Class "B" concrete substructure, includes all concrete in end bents (including wingwalls and parapets) and intermediate bent footing. All other concrete is included in estimated quantity of Class "B-1" Concrete.
No excavation allowed for bents No. 1 & 4

BORING LOGS



BORING LEGEND
- Fill (Miscellaneous Materials).
- Brown Clay or Brown Shale.
- Weathered Shale.
- Weathered Limestone.
- Shale with Clay Seams or Yellow Clay.
- Street Surface or Sidewalks.

Location of borings are noted thus ⊕B-36.
Top elevation to existing ground surface.
Bottom elevation to top of rock.



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

SHEET 1A OF 1

GENERAL NOTES

Design Specifications: A.A.S.H.O. 1953.
Construction Specification: Missouri Standard Specifications for State Roads, Materials, Bridges, Culverts, and Incidental Structures, 1955.
Design Loading: H20-S16-44 (Modified 24000" Tandem Axle) (15#/Sq. Ft. future wearing surface).
Concrete: Concrete stress: Class "B-1" f_c = 1400 p.s.i., Class "B" f_c = 1200 p.s.i. Concrete for superstructure Class "B-1" air entrained, see special provisions. Concrete for substructure Class "B" air entrained. If the contractor desires he may use Class "B-1" in lieu of Class "B" for concrete in substructure with payment made on the basis of Class "B" concrete. (All forms removed from the interior of box girders.)
Reinforcing Steel: Allowable Stress 20,000 p.s.i. 24" splices in reinforcing steel 32 bar diameters. Bar sizes are designated on the plans by numbers. The first digit after the letter in three digit marks and the first two digits after the letter in four digit marks indicate the size of the bar. Dimensions shown on the plans from reinforcing steel to outside edge of concrete are all clear dimensions. All bending dimensions are from "out to out" of bars.
Piling: All piles conform with detail and notes on sheet No. 3. All steel piles required for this structure furnished by the state. (See Special provisions.) All piles driven to or into solid rock, boulders, shale or cemented gravel, or to not less than full length authorized and to sustain a load of at least 37 tons per pile for 10 BP 42 and 46 tons per pile for 12 BP 53. All piles shall be driven with a steam hammer. See section 22-9C of Standard Specifications for required painting of steel piles. Compacted roadway till (full roadway width) placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of end bents before steel piles are driven.
Waterproofing of Decks: Superstructure deck water proofed, see special provisions.
Welding: Qualification of welding operators required.
Joint Filler: Where joint filler is specified on the plans, it conform with the requirements for gray rubber compound joints as given in section 59-228 of the standard specifications.
Fiber Conduit: Expansion sleeves required in fiber conduits at all expansion joints. Expansion sleeves an oversized fiber conduit with rubber ring as provided by the manufacturer.
Utilities: All utilities, unless shown otherwise, removed or relocated by others. The contractor notify the owner of the utilities of his work schedule sufficiently in advance to allow time for the disposition of utilities.
Shipping: Permits obtained for all truck loads over legal length.
Traffic: 12th Street remain open to traffic during construction. Falsework over 12th Street constructed with a minimum vertical clearance of not less than 12'-0" and a minimum lateral clearance of not less than 28'-0". (See Special Provisions.)

Bench Mark:
BM #1-"X" South Bolt-Top hydrant N.W. corner 12th & Charlotte. Elev. 888.18.

SUBMITTED BY
L. A. Bergendoff
REGISTERED PROFESSIONAL ENGINEER MISSOURI NO. E-253

BRIDGE: LANE C OVER 12TH STREET

STATE ROAD U.S. 40 MIDTOWN FREEWAY
KANSAS CITY, MO.
PROJECT NO. I-352 (18) (FAI-RT.4) STA. 32+03.61 LANE C

JACKSON COUNTY

SUBMITTED BY J. A. Williams 4-Dec 1958 BRIDGE ENGINEER
APPROVED BY Rex M. Whitton 4-Dec 58 CHIEF ENGINEER

STD. R 2
STD. C-IIOR5
A 244

FINISHED
REVISED

FINAL PLANS

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	37	
SEC. TWP. 49 RGE. 33					

SEC. 3UR. 5

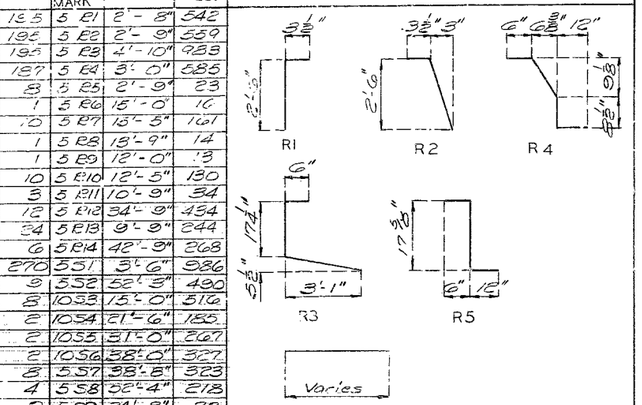
BILL OF REINFORCING STEEL

NO.	SIZE & MARK	LENGTH	WEIGHT LB.
155	5 E1	2'-8"	542
195	5 E2	2'-9"	559
195	5 E3	4'-10"	983
187	5 E4	3'-0"	585
23	5 E5	2'-9"	23
1	5 R6	15'-0"	16
10	5 R7	13'-5"	101
1	5 R8	15'-9"	14
1	5 R9	12'-0"	13
10	5 R10	12'-5"	130
5	5 R11	10'-9"	54
12	5 R12	34'-9"	454
24	5 R13	9'-9"	244
6	5 R14	42'-9"	268
270	5 S1	3'-6"	986
9	5 S2	52'-3"	490
5	10S3	15'-0"	316
2	10S4	21'-6"	185
2	10S5	31'-0"	267
2	10S6	38'-0"	327
8	5 S7	38'-5"	323
4	5 S8	52'-4"	218
2	5 S9	34'-8"	72
2	5 S10	29'-1"	61
2	10S11	31'-5"	270
1	10S12	35'-10"	154
1	5 S13	39'-4"	41
1	5 S14	47'-4"	49
20	5 H1	3'-1"	93
6	5 H2	15'-6"	97
6	5 H3	12'-5"	78

Epoxy Coated

**

BENDING DIAGRAM



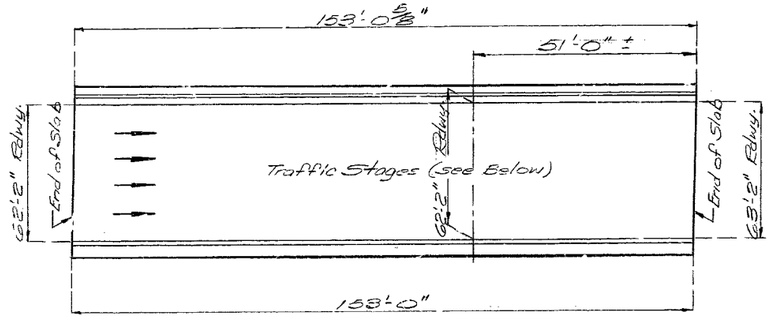
R6 THRU R14
H1 THRU H3
S1 THRU S14

All dimensions for R-bars are out to out.
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures Stirrup and tie dimensions.
Actual lengths of reinforcing bars are measured along centerline bar and to nearest inch.
#5 R-bars shall be epoxy coated.
** Two additional bars are included for testing.

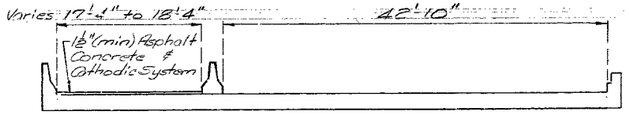
ESTIMATED QUANTITIES

ITEM		TOTAL
Special Work	Lump Sum	1
Cathodic Protection System	Lump Sum	1
Asphalt Cement AC-20 or PG 70 or PG 80	Ton	44
Mineral Aggregate (Asph. Conc) (Type A Mix)	Ton	84
Tack Coat - Emulsified Asphalt	Gal.	30
Repairing Concrete Deck (Half Soling)	Sq. Ft.	3680
Full Depth Repair	Sq. Ft.	460
Class B1 Concrete	Cu. Yd.	39.7
Reinforcing Steel (Grade 60)	Lbs.	4230
Conduit System on Structure	Lump Sum	1
Strip Seal Expansion Device	Lin. Ft.	125
Reinforcing Steel (Epoxy Coated)	Lbs.	4010
Clean and Paint Bearing	Each	18

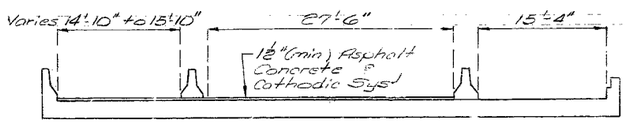
Tack Coat shall be emulsified asphalt applied at a rate of 0.05 gallons per square yards.



PLAN



STAGE ONE



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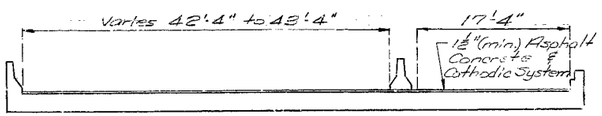
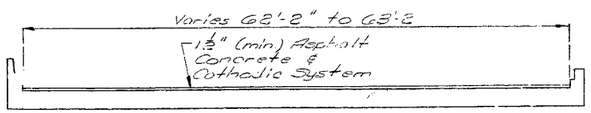


STAGE THREE



STAGE FOUR

GENERAL NOTES:

Design Specifications: A.A.S.H.T.O. 1977 and Interims thru 1982

Design Unit Stresses:

Class B1 Concrete $f'_c = 4000$ psi

Reinforcing Steel (Grade 60) $f_y = 60{,}000$ psi

Joint Filler: All joint filler shall meet the requirement of Std. Spec. 1057.2.4 except as noted.

Reinforcing Steel: Minimum clearance to reinforcing steel shall be 1½" unless otherwise shown.

Traffic: Traffic over structure to be maintained during construction.

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

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.

Taper roadway surfacing at bridge ends to match 1½" ± bridge overlay. (Roadway Item)

Construction Clearance: A minimum vertical clearance of 13'-6" from crown of existing lanes and a minimum lateral clearance of 32'-0" Normal to & 12th Street centered on existing lanes shall be maintained during construction.

REPAIRS TO
BRIDGE ; LANE C OVER 12TH STREET

STATE ROAD : MIDTOWN FREEWAY
IN KANSAS CITY

PROJECT NO. I-IR-70-1(101) **STA.** 32+03.61

JOB NO. 4-I070-450 **RTE.** I-70

JACKSON **COUNTY**

DATE 6/29/84

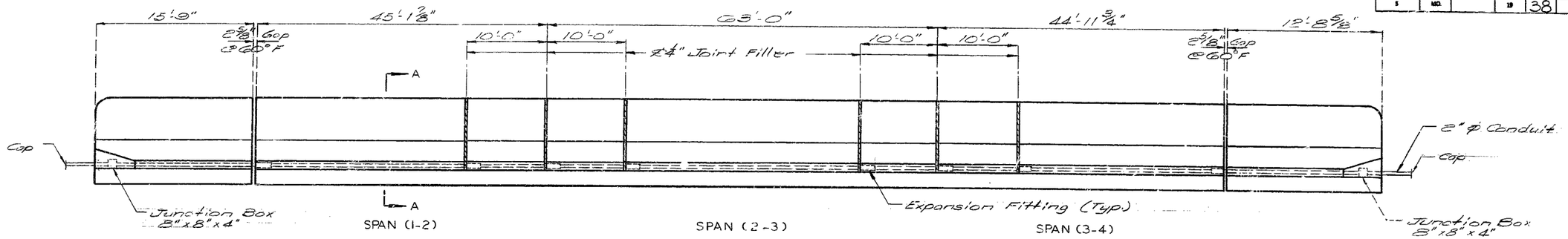
STD.	706.30
STD.	706.35
	A-244R

DESIGNED April 1984
DETAILED April 1984
CHECKED May 1984

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

Sheet No. 1 of 10.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	38	

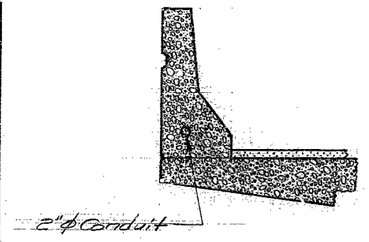


PART SECTION NEAR LEFT BARRIER CURB SHOWING CONDUIT

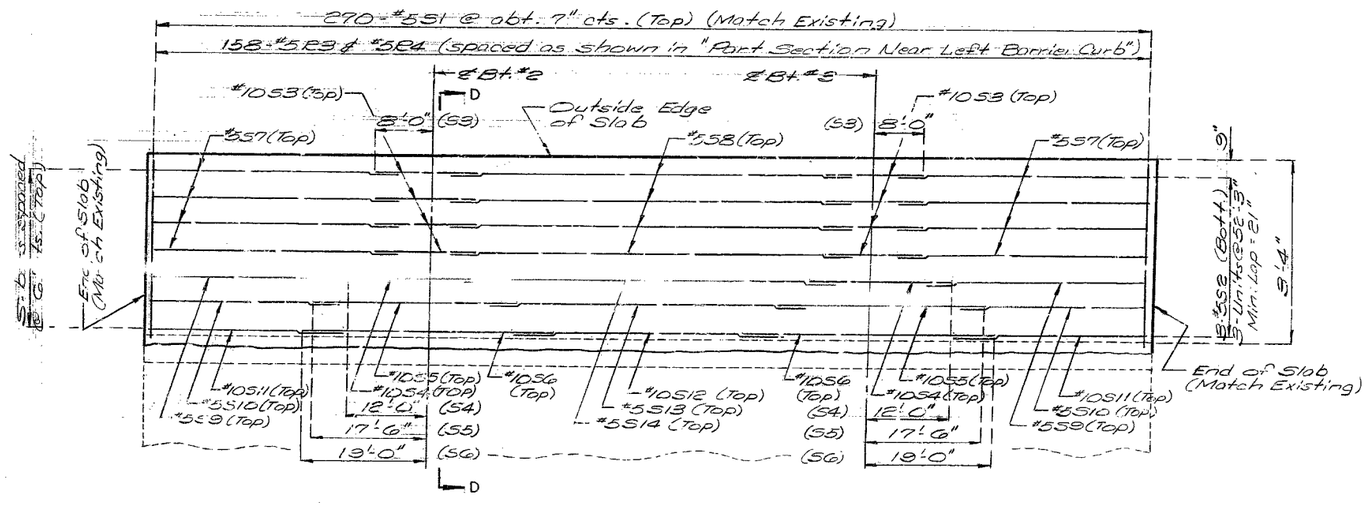
Note: All conduit to be rigid non-metalic conduit PVC Schedule 40 or HDP with 3" minimum cover in concrete. Shift reinforcing steel in field where necessary to clear conduits and junction boxes.

All end bent barrier curb junction boxes shall be PVC molded flush mounted and equal to "Carlon" Electrical Construction Products or "Triangle" Conduit and Cable Co. Inc. The conduit terminations shall be permanent or separable. The terminations and cover shall be water-tight.

PVC expansion fittings shall provide a minimum movement in either direction of 1/2" at filled joints on 1" at open joints.



SECTION A-A



PLAN OF SLAB SHOWING REINFORCEMENT

14

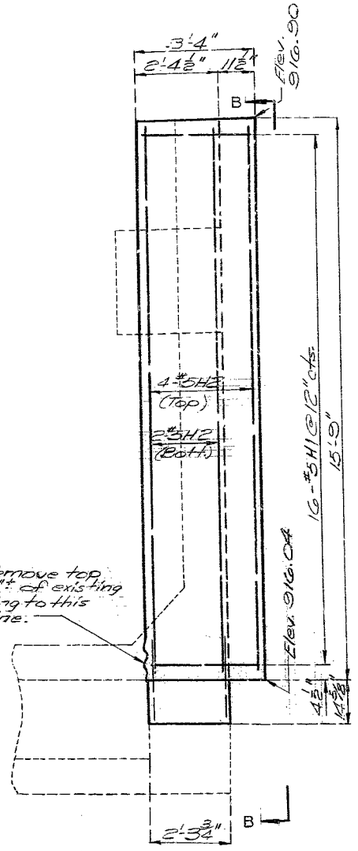
DETAILED April 19 84
CHECKED 19

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

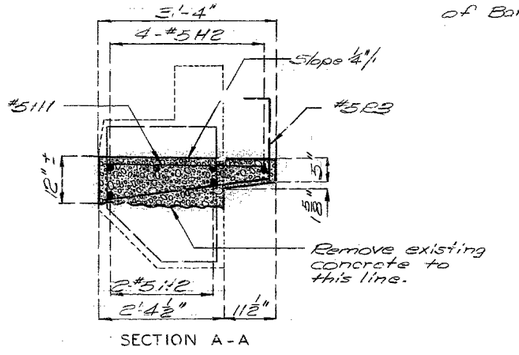
JACKSON COUNTY

A-244R

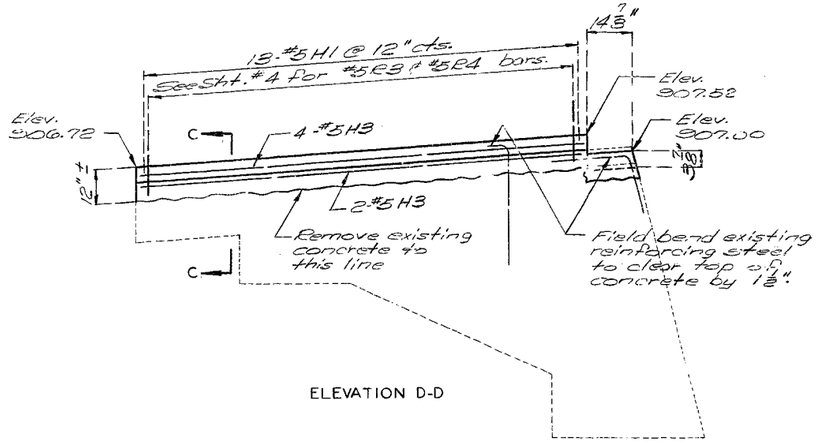
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	39	



PART PLAN

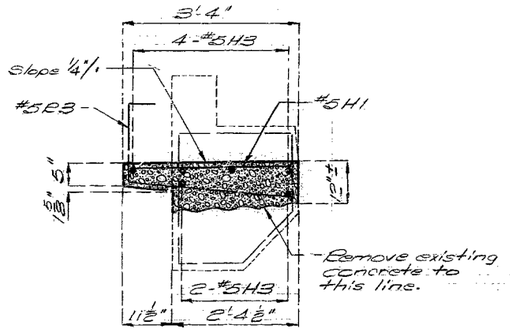


SECTION A-A

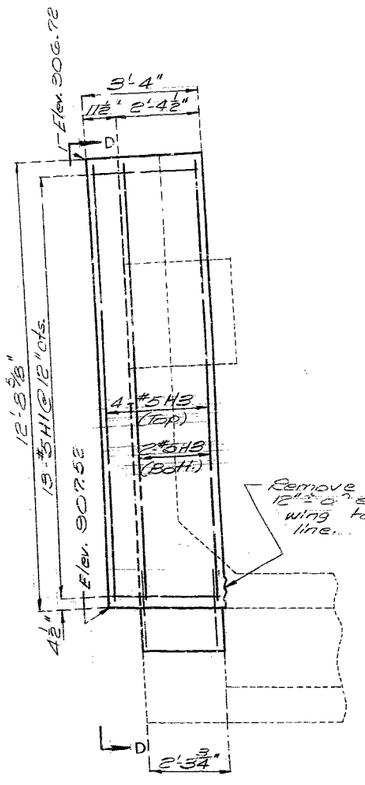


ELEVATION D-D

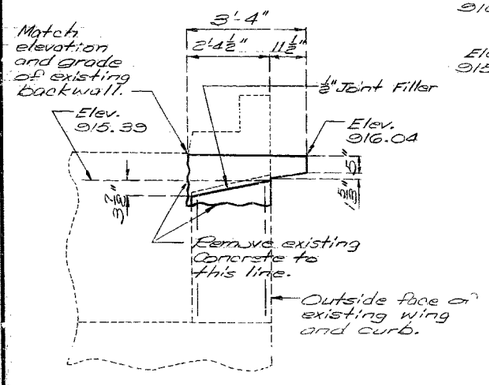
Note: For Detail of Expansion Device see Sht. # 6.
For Detail and reinforcement of Barrier Curb see Sht. # 4.



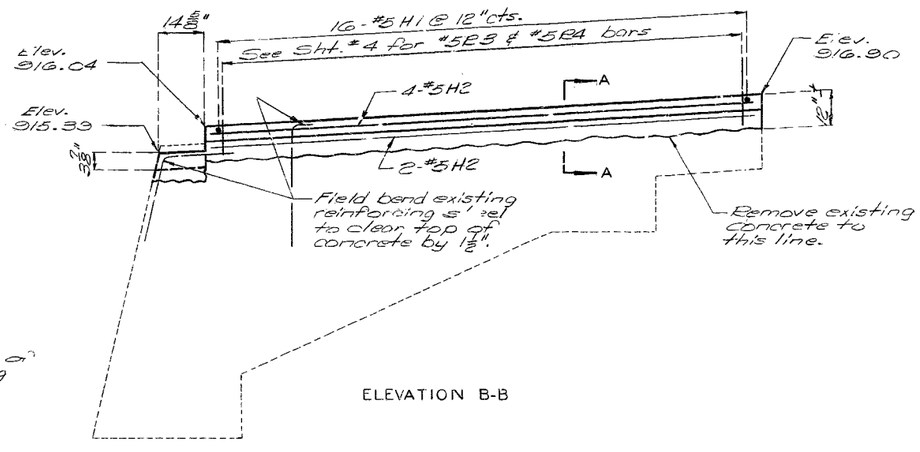
SECTION C-C



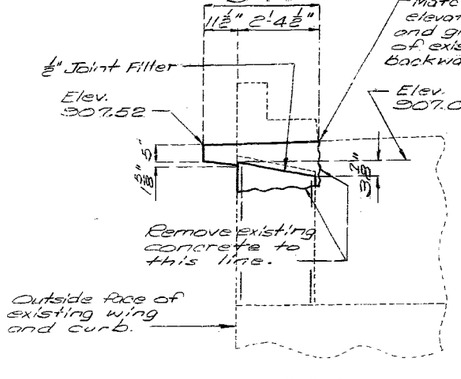
PART PLAN



PART ELEVATION



ELEVATION B-B



PART ELEVATION

DETAILS OF END BENT NO. 1

DETAILS OF END BENT NO. 4

15

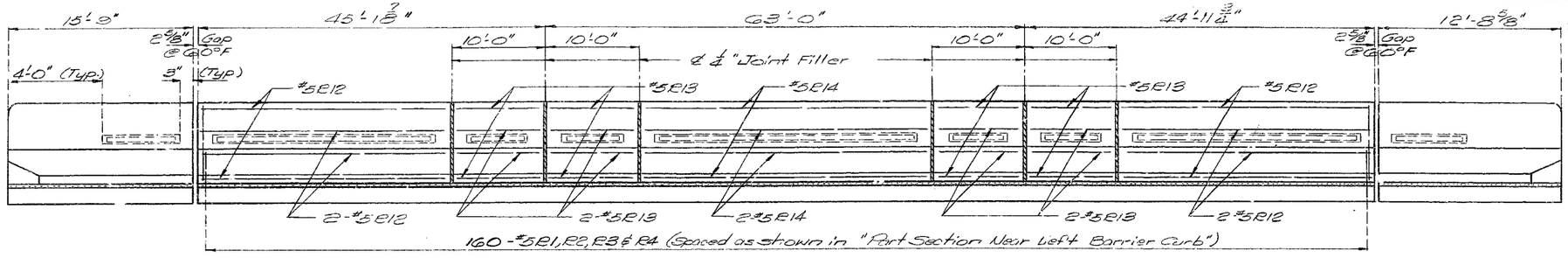
DETAILED Apr. 1 1984
CHECKED May 1984

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

JACKSON COUNTY

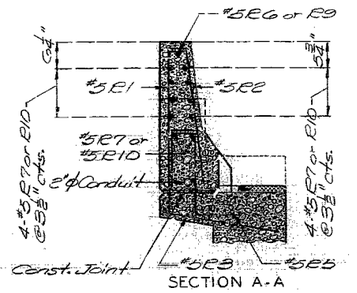
A-244R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	40	

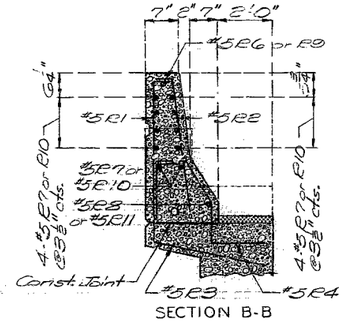


SPAN (1-2) SPAN (2-3) SPAN (3-4)

DEVELOPED SECTION NEAR LEFT BARRIER CURB

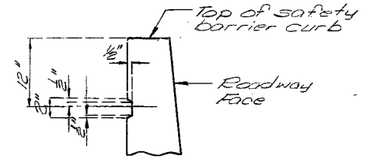


SECTION A-A

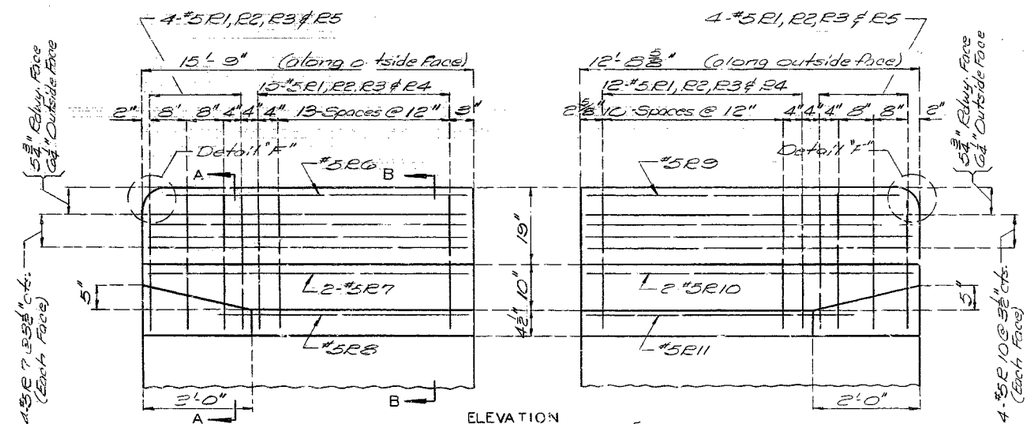


SECTION B-B

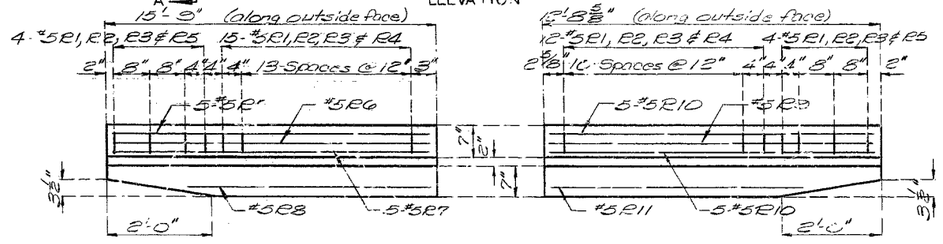
Notes: Top of barrier curb to be built parallel to grade with barrier curb joint (except at end bents) normal to grade.
All exposed edges of barrier shall have a ¾" radius or ⅜" bevel unless otherwise noted.
Use a minimum lap of 17" for #5 horizontal barrier bars.
Plastic waterstop shall be placed in all safety barrier curb filled joints.
Cost of plastic waterstop complete in place to be included in unit price bid per cubic yard of Class B1 Conc.
For location and details of conduit and light standard see Sht. # 2.
For Plan of 5'-6" Showing Reinforcement and location of Section D-D see Sht. # 2.



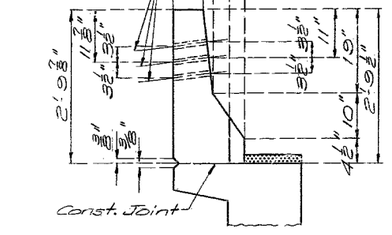
RUSTICATION DETAILS



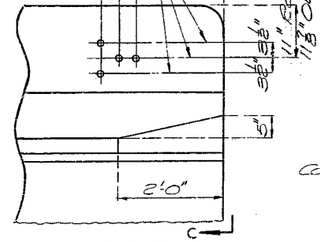
ELEVATION



PLAN

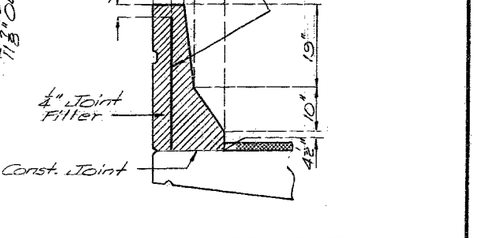


ELEVATION C-C

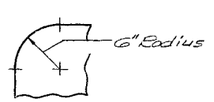


PART ELEVATION

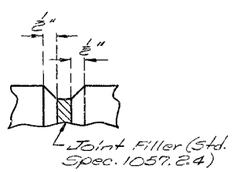
DETAILS OF GUARD RAIL ATTACHMENT



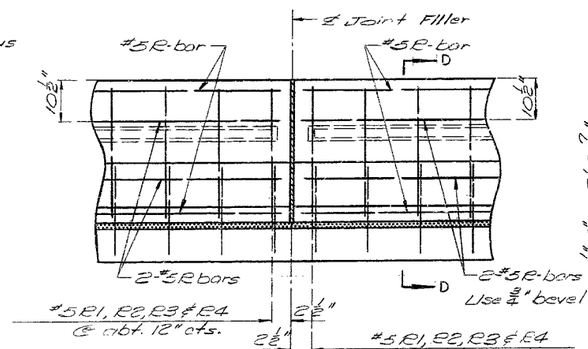
DETAILS OF PLASTIC WATERSTOP



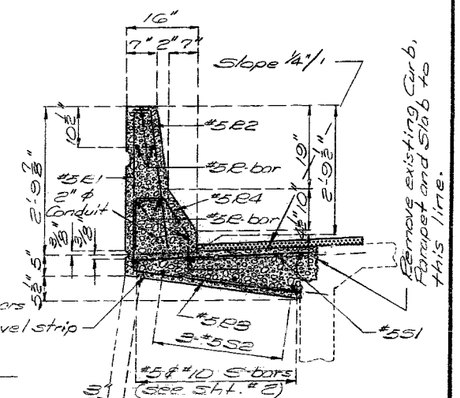
DETAIL "F"



FILLED JOINT DETAIL



PART SECTION NEAR LEFT BARRIER CURB



SECTION D-D

DETAILED April 1984
CHECKED May 1984

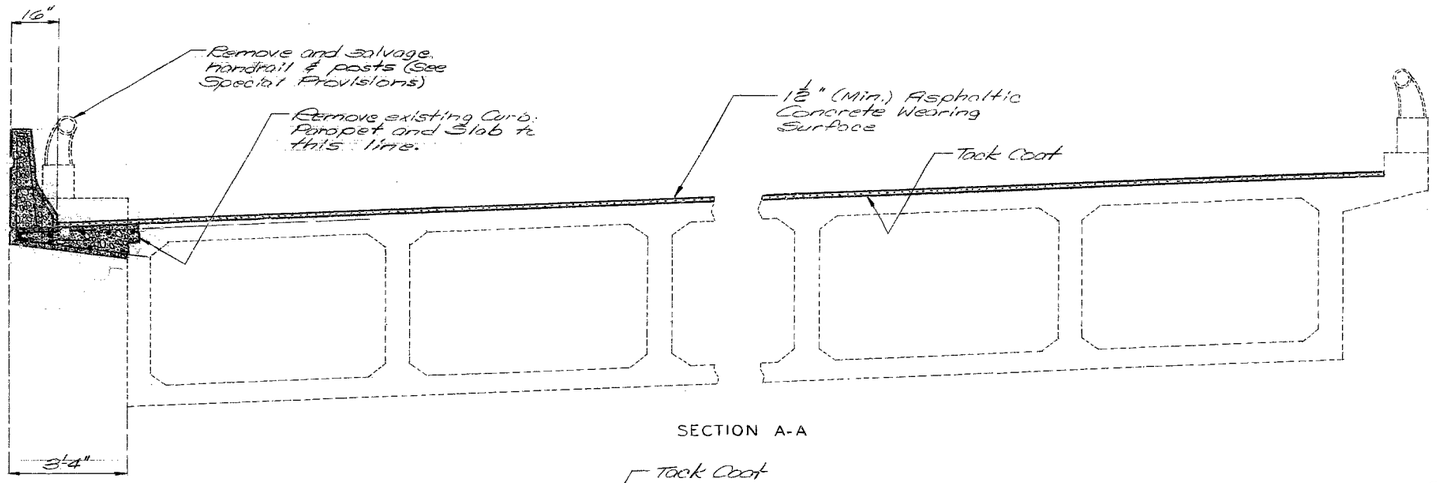
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 10.

JACKSON COUNTY

A-244R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	41	

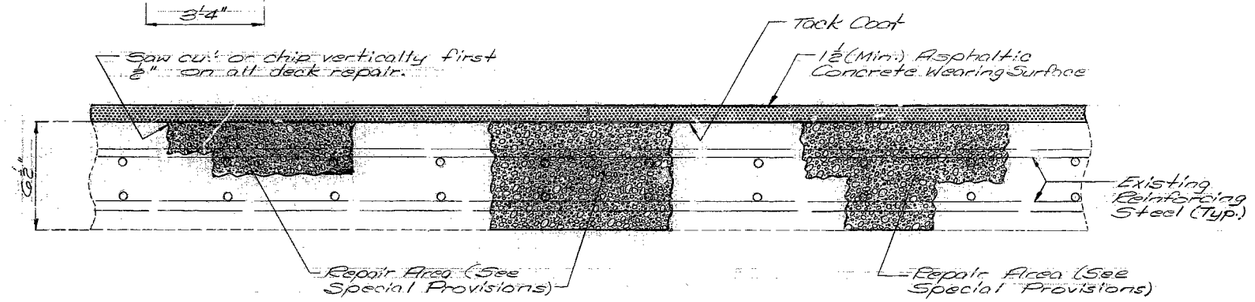


SECTION A-A

Note: Any concrete removal for half-sole repair or full-depth repair in areas designated "A", "B", "C" or "D" shall be repaired in alphabetical order. (See Special Provisions)

Stage construction requirements for handling traffic are to be met at all times during removal of old work and placing of new work.

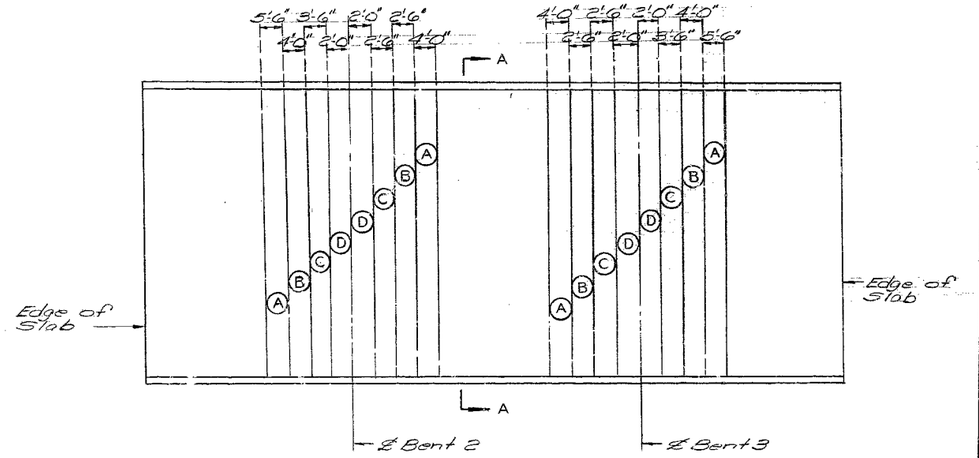
Any repair in the remainder of the bridge that is within 30" of adjacent zone A shall be completed before removing old concrete in zone E.



HALF SOLE REPAIR

FULL DEPTH REPAIR

FULL DEPTH REPAIR IN HALF SOLE AREA



PLAN OF SLAB

11

DETAILED April 1984
CHECKED May 1984

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

JACKSON COUNTY

A-244R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	42	

NOTES FOR EXPANSION DEVICE:

The expansion device shall be fabricated and installed in accordance with the recommendations of the manufacturer and as set forth in the special provisions.

The contractor must verify all dimensions prior to fabrication.

All welds shall conform to section 712 of the Standard Specifications.

Splices of steel extrusion shall develop full strength.

All steel shall be A-36 except steel extrusions shall be A.S.T.M. A-588 or A-36.

Neoprene extrusions shall meet A.S.T.M. D-2628-69 modified (recovery tests excluded).

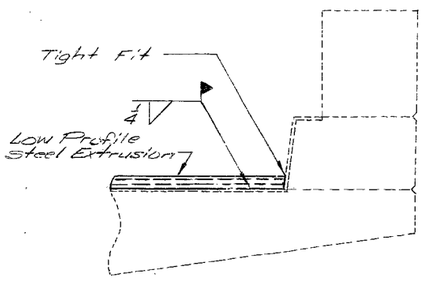
Welded stud anchors shall be A.S.T.M. A496.

Payment for steel extrusions and neoprene extrusions shall be made under contract unit price for "Strip Seal Expansion Device".

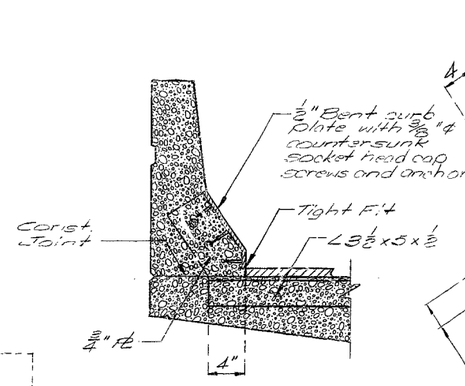
Payment for furnishing, painting and placing structural steel plates and angles shall be included in contract unit price for "Strip Seal Expansion Device".

Strip Seal shall be "Low Profile Strip Seal" with 4" Rated Movement.

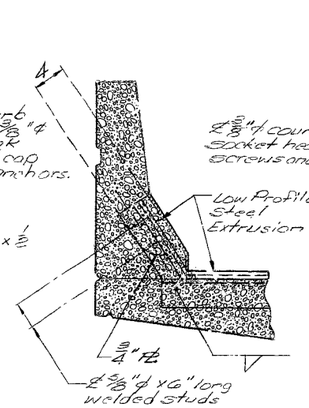
Expansion dimensions shall be increased 1/16" for each 10° fall in temperature and decreased 1/16" for each 10° rise in temperature at installation.



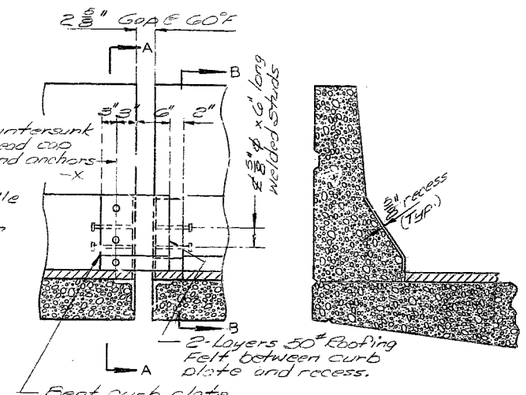
PART SECTION NEAR RIGHT BARRIER CURB



SECTION A-A

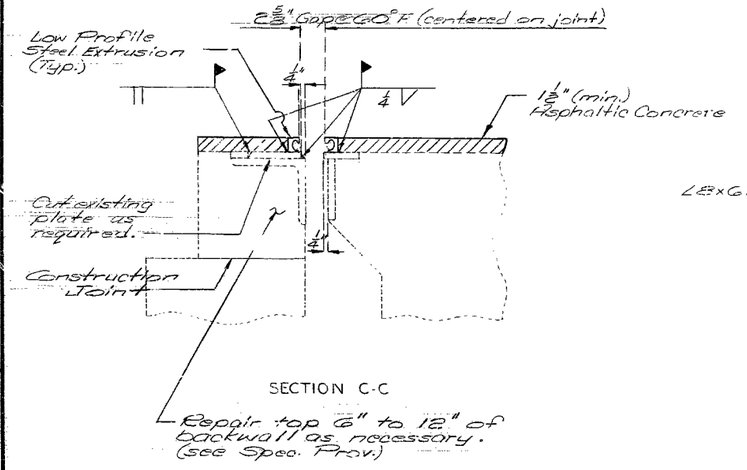


PART SECTION NEAR CURB

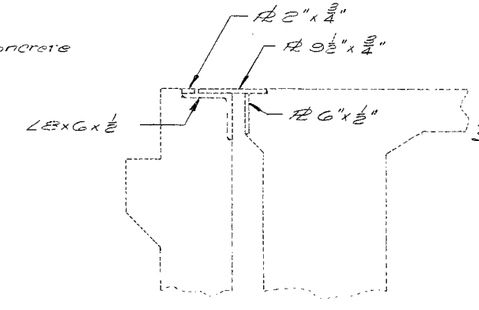


PART SECTION NEAR LEFT BARRIER CURB

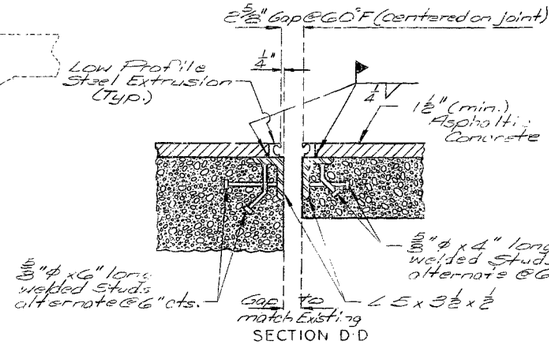
SECTION B-B



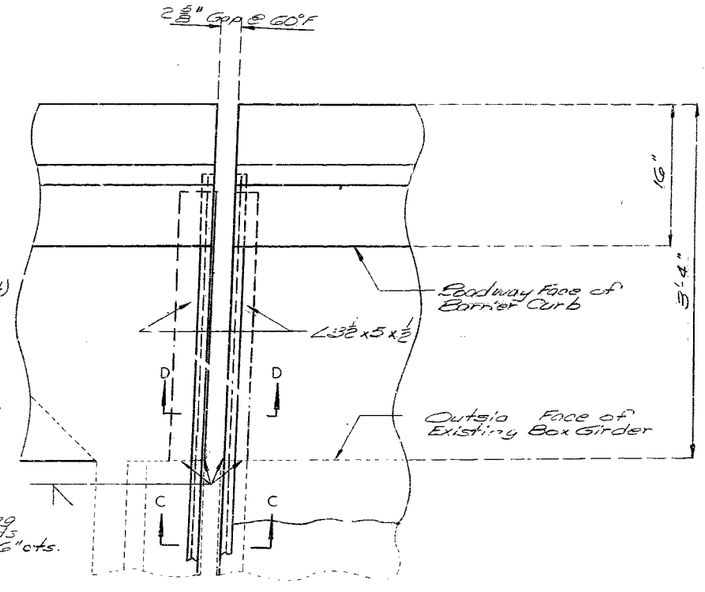
SECTION C-C



PART SECTION THRU EXISTING EXPANSION JOINT



SECTION D-D



PART PLAN

Note: If the contractor elects to use new structural steel in backwall repair, it shall be as shown for the backwall area in section O-O.

12

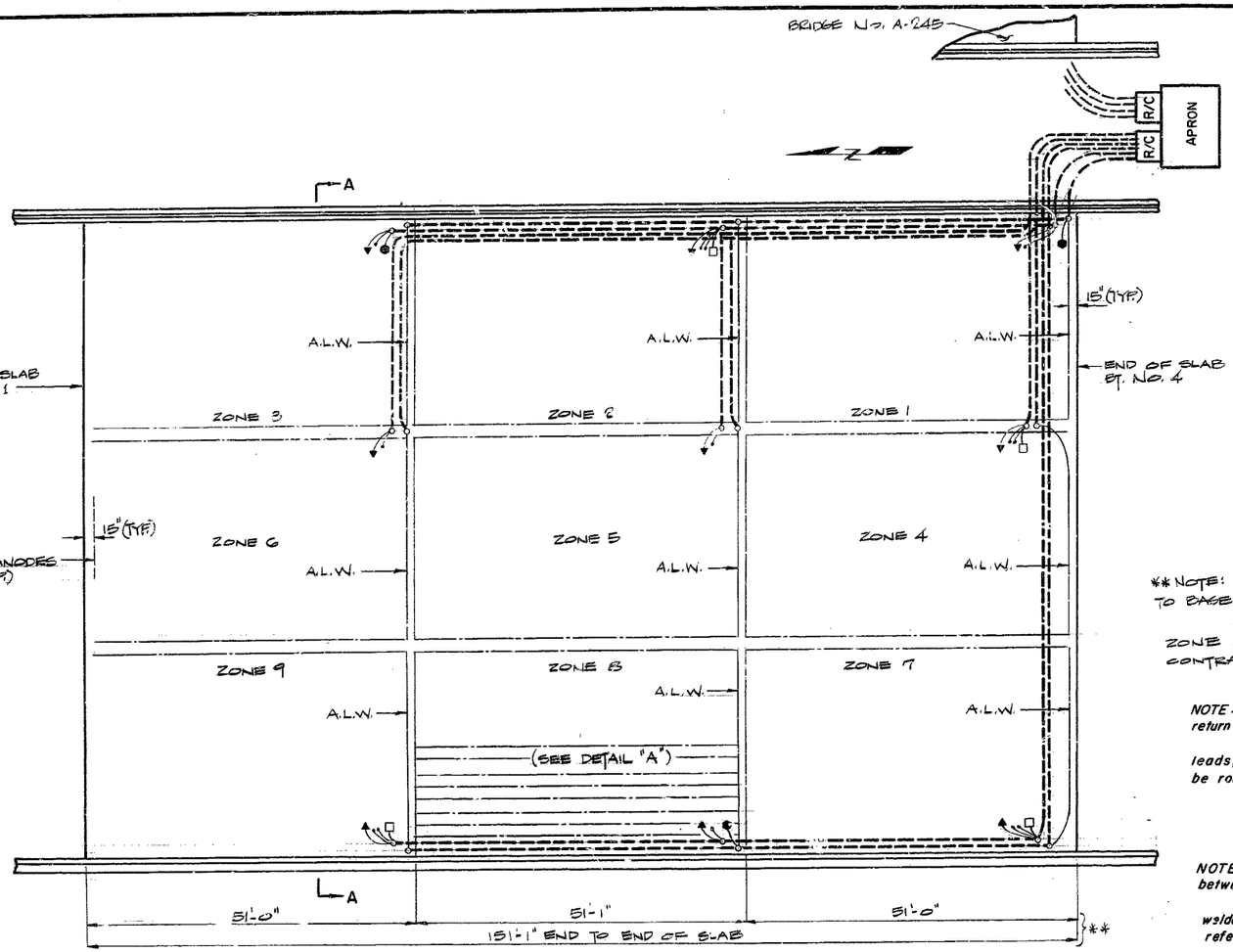
DETAILED April 1984
CHECKED May 1984

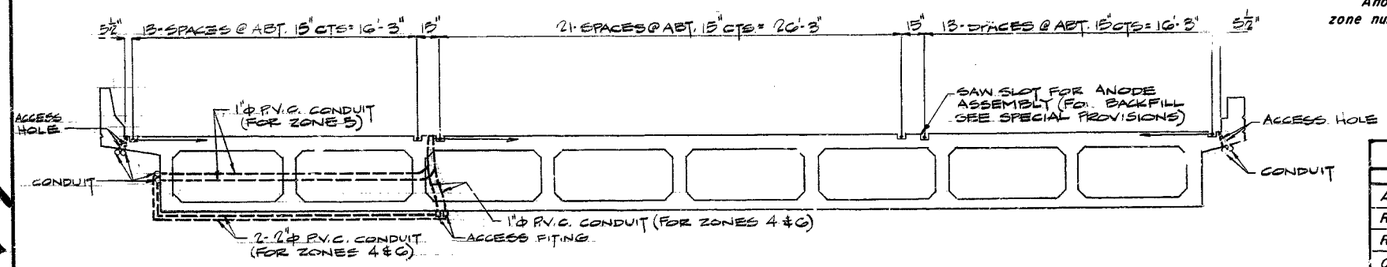
Note: This drawing is not to scale. Follow dimensions.

JACKSON COUNTY

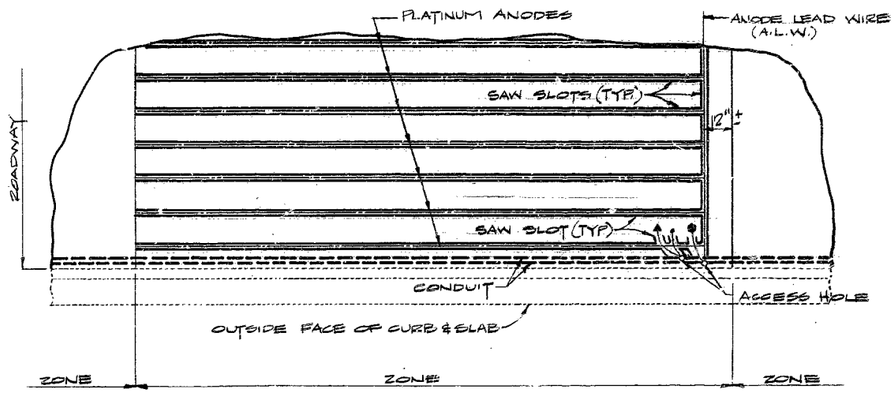
A-244R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MD.		19	43	





SECTION A-A



DETAIL A

(TYPICAL ZONE LAYOUT EXCEPT AS NOTED BELOW)

**NOTE: DIMENSIONS ARE ALONG TANGENT TO BASE LINE LANE "E".

ACTUAL ANODE LENGTHS FOR EACH ZONE ARE THE RESPONSIBILITY OF THE CONTRACTOR.

NOTE: The anode leads and system negative return leads shall be routed in the same conduit.

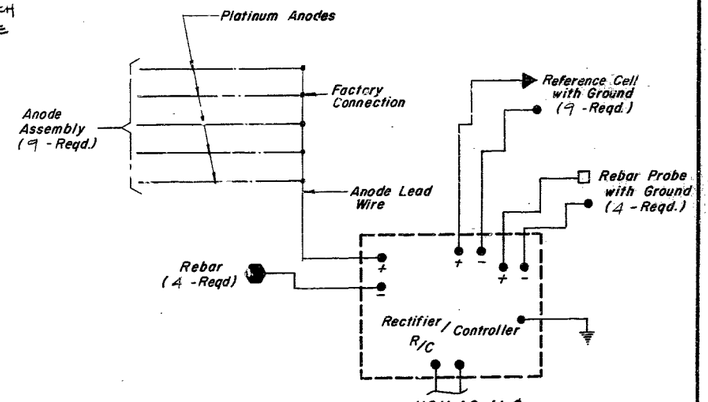
The reference cell, reference cell ground leads, rebar probe and probe ground leads shall be routed in the same conduit.

NOTE: Reference cells are to be placed between anodes.

Reference cell ground shall be welded to top rebar within one foot of reference cell.

All zones are similar with varying widths (see Section A-A).

Anode assembly number must match zone number.



PARTIAL SCHEMATIC

ESTIMATED QUANTITIES *		
ITEM	UNIT	QUANTITY
Anode Strands	Lin. Ft.	7330
Reference Cells	Each	9
Rebar Probes	Each	4
Cadwelds	Each	16
Conduit 2"ø P.V.C.	Lin. Ft.	980
CONDUIT 1"ø P.V.C.	LIN. FT.	40

* For information only

NOTE: ANODE STRANDS AND CONDUIT LENGTHS ARE APPROXIMATE. ACTUAL LENGTHS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

DENOTATIONS

- A.L.W. Anode Lead Wire
- Platinum Anode
- System Negatives Connection
- Reference Cell
- Rebar Probe (Corrosometer)
- Grounds
- Conduit

CATHODIC PROTECTION SYSTEM

19

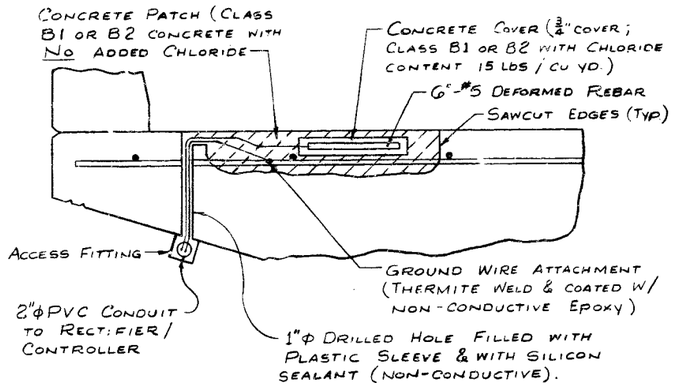
DETAILED MAY 1984
CHECKED MAY 1984

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

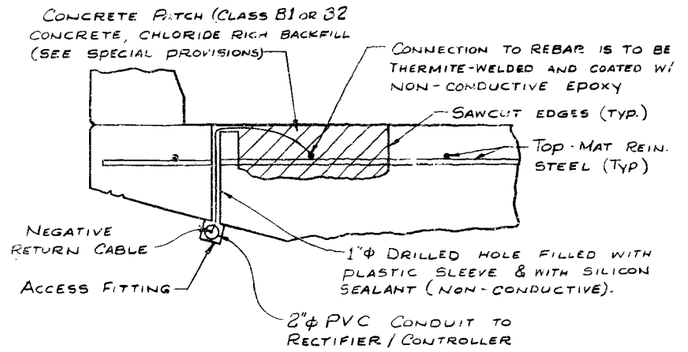
JACKSON COUNTY

A-244R

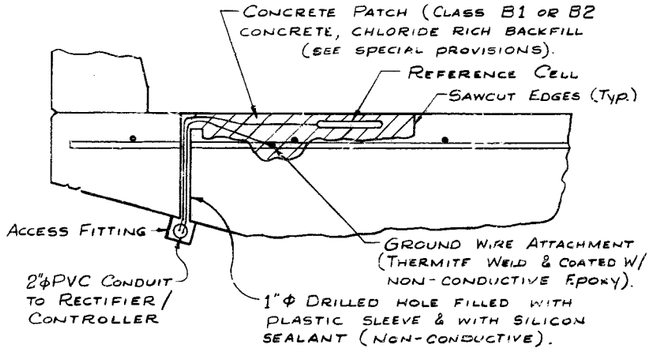
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOT. SHEETS
5	MO.		19	44	



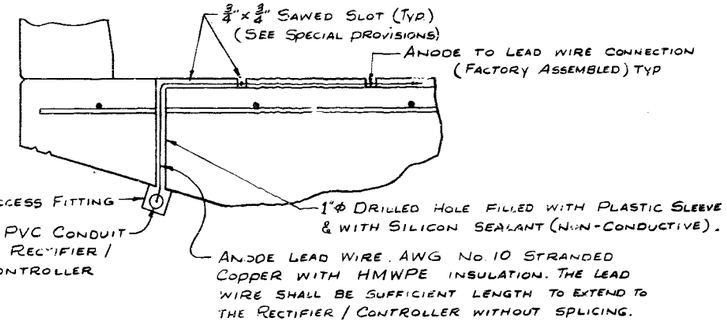
REBAR PROBE DETAILS



SYSTEM NEGATIVES CONNECTION DETAIL

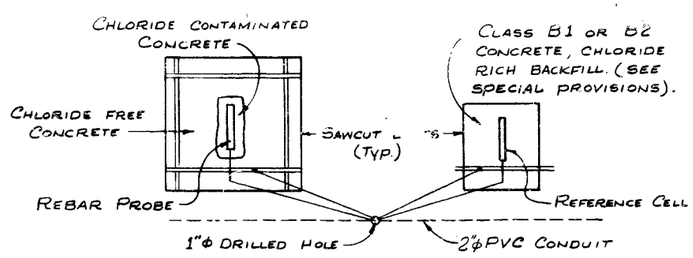


REFERENCE CELL DETAILS



ANODE LEAD WIRE DETAIL

Note: West Curb shown, East Curb similar.



PLAN OF REBAR PROBE AND REFERENCE CELL

See Sheet No. 7 for routing of Conduit.

Notes: Conduit shall be Schedule 40 Heavy Wall PVC (Polyvinyl Chloride Plastic).
Conduit shall be secured to concrete with clamps @ abt. 5' centers.
Weep holes shall be provided at appropriate locations to drain any moisture in the conduit lines.
The location and direction of conduit may be shifted to meet field conditions as approved by the Engineer.
Use Expansion couplings and Access Fittings where appropriate.

80

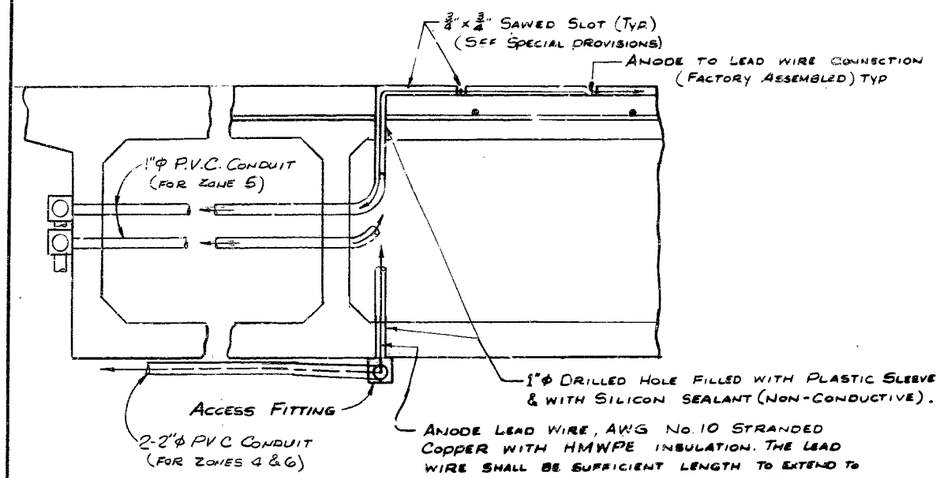
DETAILED June 1984
CHECKED June 1984

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

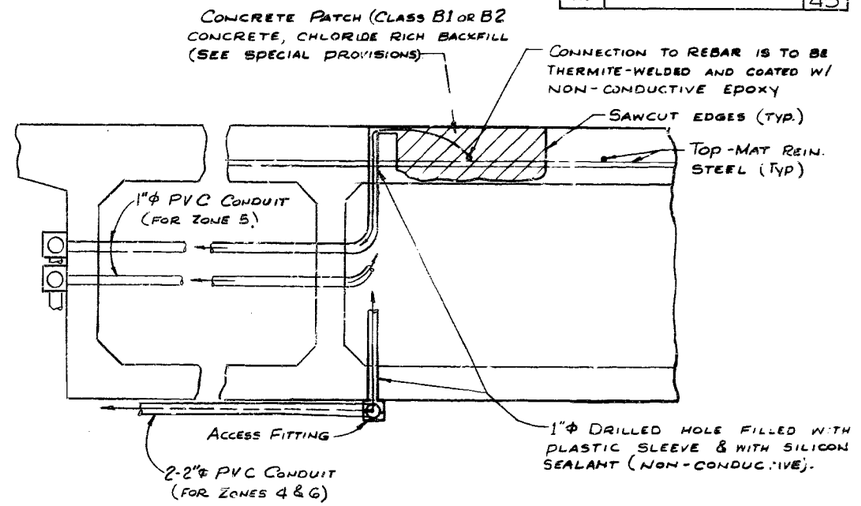
JACKSON COUNTY

A-244P

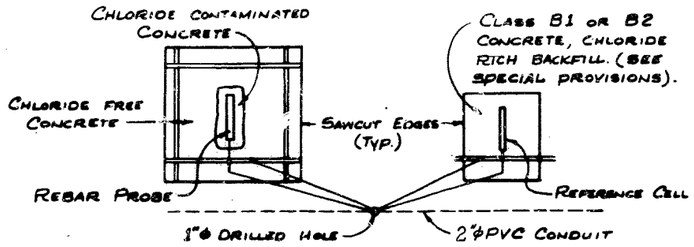
STATE	PROJ. NO.	SHEET NO.
MO		45



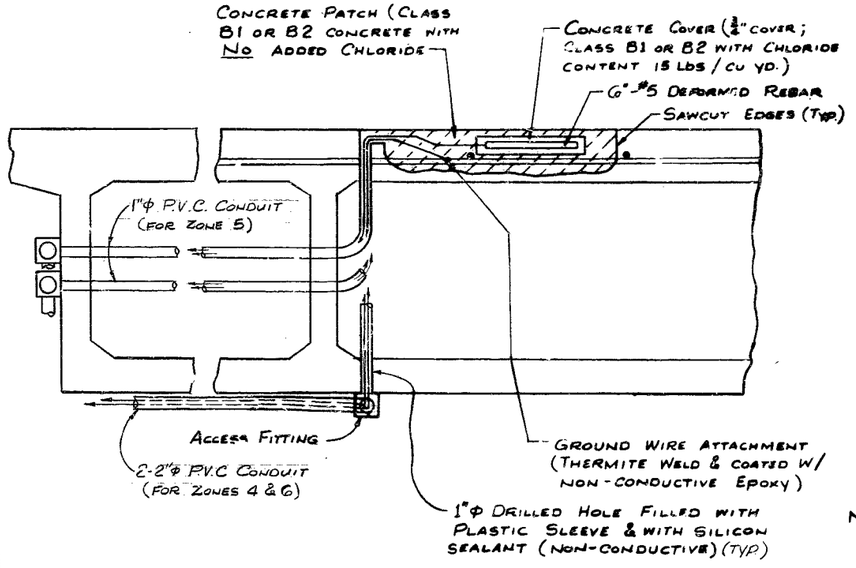
ANODE LEAD WIRE DETAIL



SYSTEM NEGATIVES CONNECTION DETAIL

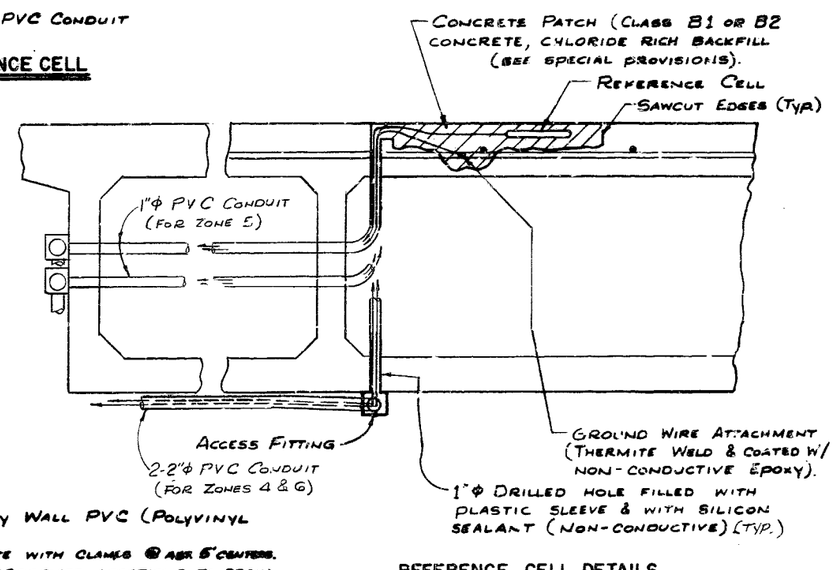


PLAN OF REBAR PROBE AND REFERENCE CELL



REBAR PROBE DETAILS

NOTE: SEE SHEET NO. 7 FOR ROUTING OF CONDUIT.



REFERENCE CELL DETAILS

NOTES: CONDUIT SHALL BE SCHEDULE 40 HEAVY WALL PVC (POLYVINYL CHLORIDE PLASTIC).
CONDUIT SHALL BE SECURED TO CONCRETE WITH CLAMPS @ AER 5' CENTERS.
WEEP HOLES SHALL BE PROVIDED AT APPROPRIATE LOCATIONS TO DRAIN ANY MOISTURE IN THE CONDUIT LINES.
THE LOCATION AND DIRECTION OF CONDUIT MAY BE SHIFTED TO MEET FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
USE EXPANSION COUPLINGS AND ACCESS FITTINGS WHERE APPROPRIATE

81

DETAILED JUNE 1984
CHECKED JUNE 1984

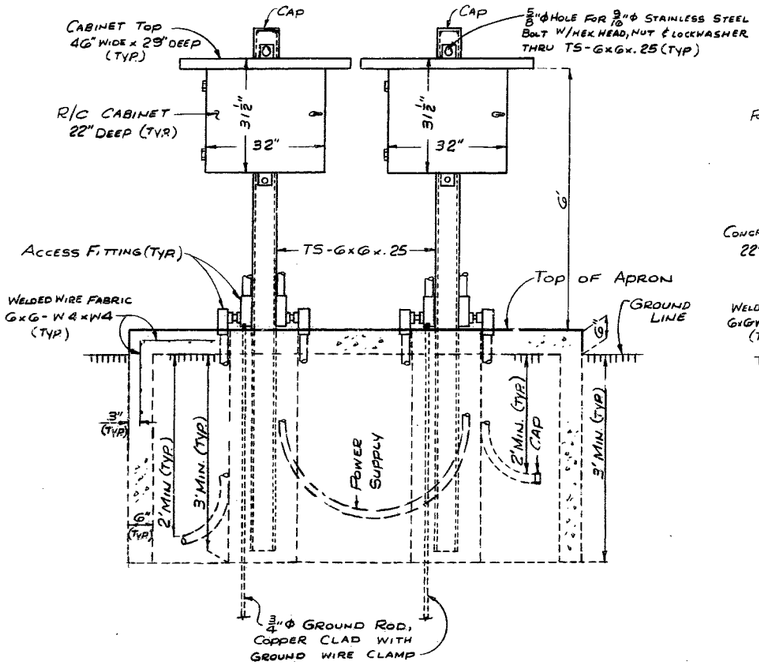
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 10.

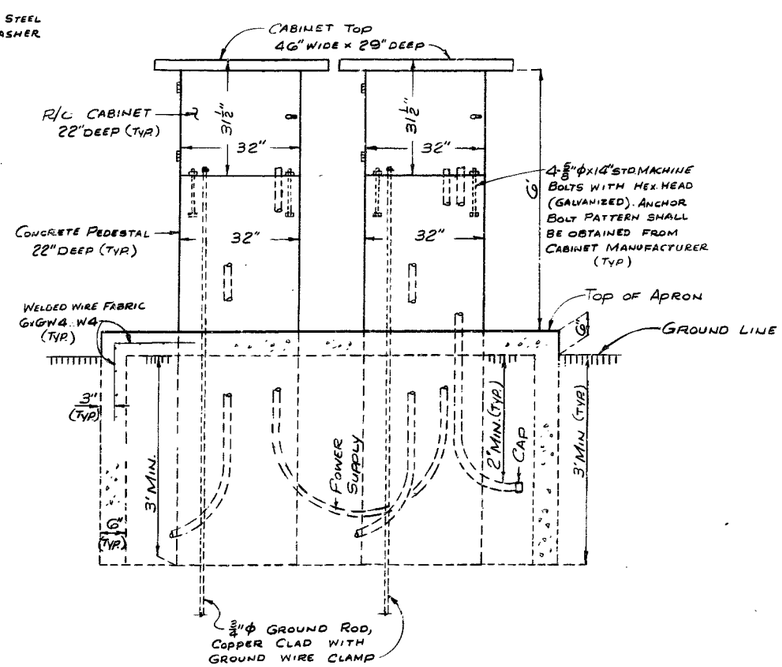
JACKSON COUNTY

A-244R

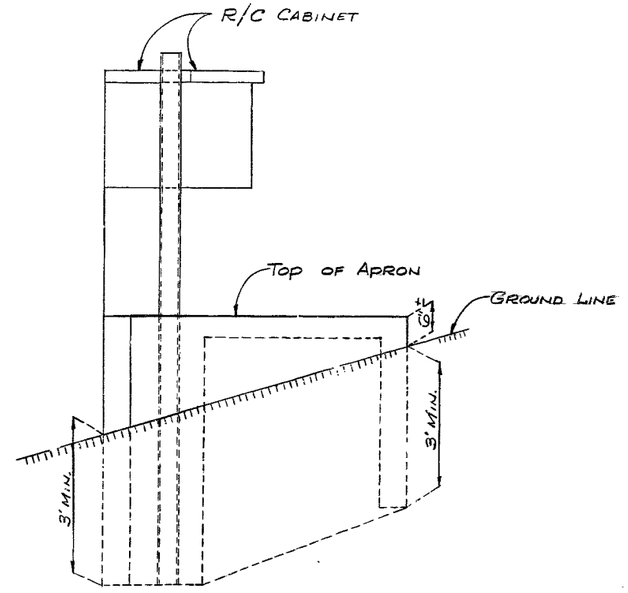
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	46	



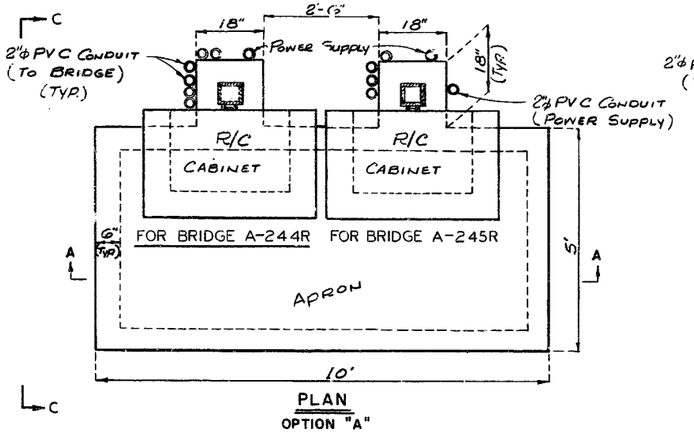
SECTION A-A



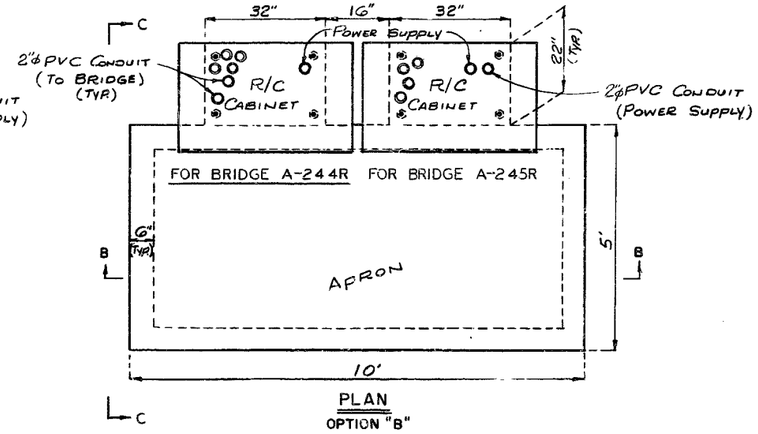
SECTION B-B



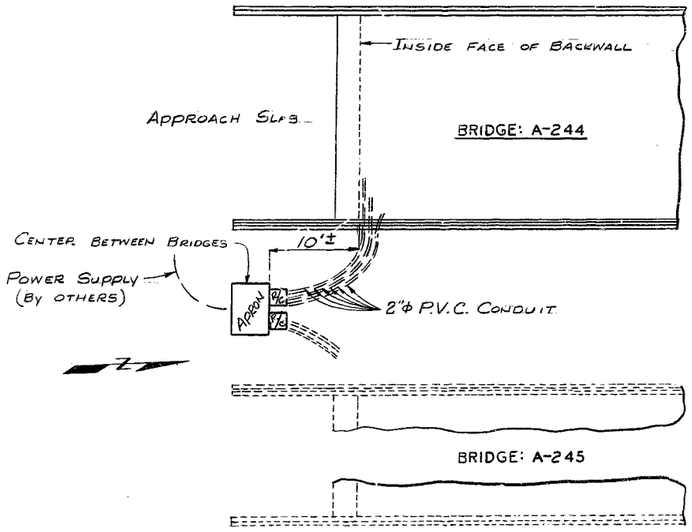
ELEVATION C-C



PLAN
OPTION "A"



PLAN
OPTION "B"



PLAN LOCATION OF RECTIFIER/CONTROLLER

NOTE: THE 3/4"ϕ GROUND RODS SHALL BE SUFFICIENT LENGTH TO EXTEND A MINIMUM OF 10' BELOW BOTTOM OF CONCRETE PEDESTAL. GROUND WIRE SHALL BE NO. 6 AWG MINIMUM.

KNOCKOUTS OR DRILLED HOLES SHALL BE PROVIDED IN CABINETS FOR ALL CONDUIT. LOCATIONS OF SUCH ARE THE RESPONSIBILITY OF THE CONTRACTOR AND CABINET MANUFACTURER.

DETAILED JUNE 1984
CHECKED JULY 1984

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

Sheet No. 10 of 10.

JACKSON COUNTY

A-244R

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	37	
SEC./SUR. 5	TWP. 49	RGE. 33			

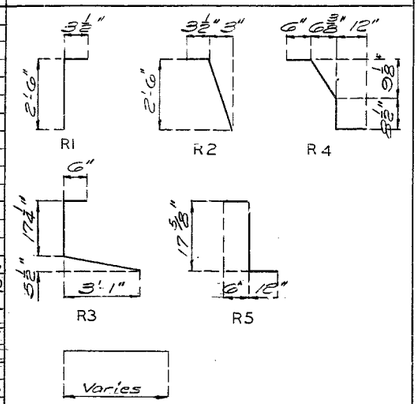
FINAL PLANS

BILL OF REINFORCING STEEL

NO.	SIZE & MARK	LENGTH	WEIGHT LB.
195	5 B1	2'- 8"	542
195	5 B2	2'- 9"	559
195	5 B3	4'- 10"	983
187	5 B4	3'- 0"	585
8	5 B5	2'- 9"	23
1	5 R6	15'- 0"	16
10	5 B7	15'- 5"	161
1	5 B8	13'- 9"	14
1	5 B9	12'- 0"	13
10	5 B10	12'- 5"	130
3	5 B11	10'- 9"	34
12	5 B12	34'- 9"	454
24	5 B13	9'- 9"	244
6	5 B14	42'- 9"	268
270	5 S1	3'- 6"	986
9	5 S2	52'- 3"	490
8	10 S3	15'- 0"	316
2	10 S4	21'- 6"	185
2	10 S5	31'- 0"	267
2	10 S6	38'- 0"	327
8	5 S7	38'- 8"	323
4	5 S8	52'- 4"	218
2	5 S9	34'- 8"	72
2	5 S10	29'- 1"	61
2	10 S11	31'- 5"	270
1	10 S12	38'- 10"	134
1	5 S13	39'- 4"	41
1	5 S14	47'- 2"	49
19	5 H1	3'- 1"	95
6	5 H2	15'- 6"	97
6	5 H3	12'- 5"	78

Epoxy Coated **

BENDING DIAGRAM



All dimensions for B bars are out to out. Hooks and bends shall be in accordance with the C.R.S.I. Manual of Standard Practice for Detailing Reinforced Concrete Structures. Stirrup and tie dimensions.

Actual lengths of reinforcing bars are measured along centerline bar and to nearest inch.

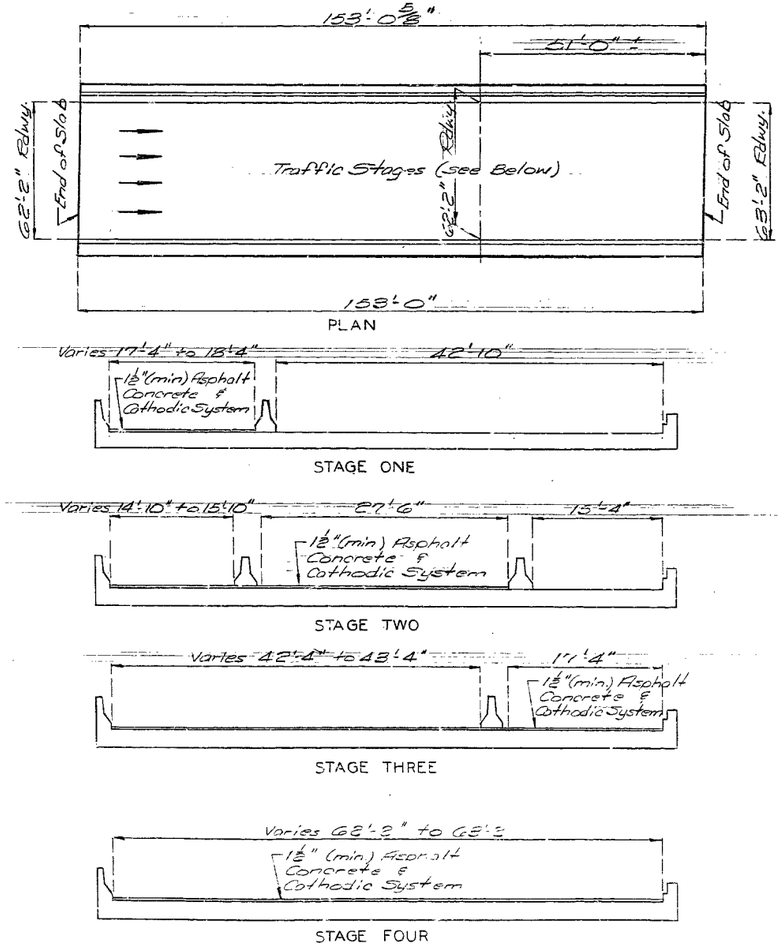
#5 B-bars shall be epoxy coated.

** Two additional bars are included for testing.

ESTIMATED QUANTITIES

ITEM		TOTAL
Special Work	Lump Sum	1
Cathodic Protection System	Lump Sum	1
Asphalt Cement AC 20	Ton	4.2
Mineral Aggregate (Asph. Conc) (Type A Mix)	Ton	84
Tack Coat - Emulsified Asphalt	Gal.	50
Repairing Concrete Deck (Half Soling)	Sq. Ft.	4877
Full Depth Repair	Sq. Ft.	250
Class B1 Concrete	Cu. Yd.	32.9
Reinforcing Steel (Grade 60)	Lbs.	4230
Conduit System on Structure	Lump Sum	1
Strip Seal Expansion Device	Lin. Ft.	125
Reinforcing Steel (Epoxy Coated)	Lbs.	4010
Clean and Paint Bearing	Each	18
Replace Re-Steel	F.A.	1371.06
Tapered Fill Plate	L.S.	1
Exp. Joint Filled Plate	L.S.	1

Tack Coat shall be emulsified asphalt applied at a rate of 0.05 gallons per square yards.



GENERAL NOTES:

Design Specifications: A.A.S.H.T.O. 1977 and Interims thru 1982

Design Unit Stresses:

Class B1 Concrete f'_c = 4000 psi

Reinforcing Steel (Grade 60) f_y = 60,000 psi

Joint Filler: All joint filler shall meet the requirement of Std. Spec. 1057.2.4 except as noted.

Reinforcing Steel: Minimum clearance to reinforcing steel shall be 1½" unless otherwise shown.

Traffic: Traffic over structure to be maintained during construction.

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

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.

Taper roadway surfacing at bridge ends to match 1½" ± bridge overlay. (Roadway Item)

Construction Clearance: A minimum vertical clearance of 13'-6" from crown of existing lanes and a minimum lateral clearance of 32'-0" Normal to E 12th Street centered on existing lanes shall be maintained during construction.

REPAIRS TO
BRIDGE : LANE C OVER 12TH STREET

STATE ROAD : MIDTOWN FREEWAY
IN KANSAS CITY

PROJECT NO. I-IR-70-1(101) **STA.** 32+03.61

JOB NO. 4-I070-450 **RTE.** I-70

JACKSON **COUNTY**

DATE 6/29/84

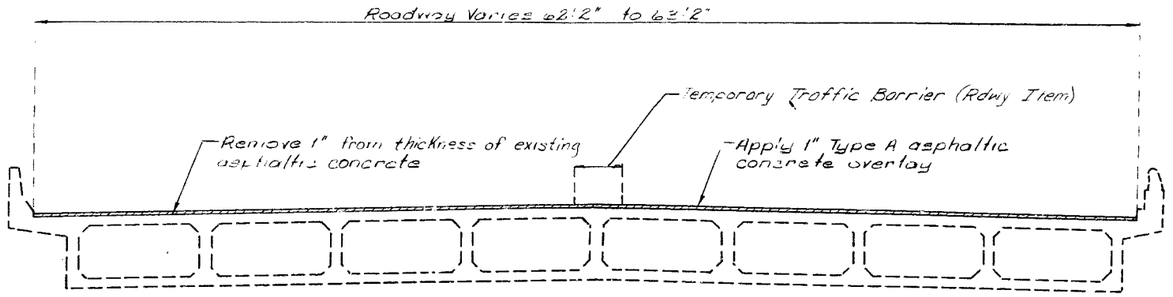
STD. 706.30	
STD. 706.35	
A-244R	

DESIGNED April 1984
DETAILED April 1984
CHECKED May 1984

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

Sheet No. 1A of 10.

STATE	PROJ NO	SHEET NO
MO	[illegible] (160)	–
SEC/SUR 5	TWP 49N RGE 33W	



SECTION THRU SLAB

GENERAL NOTES:

Existing Work
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Traffic Maintained
Maintain three lanes of traffic over structure during construction. (See roadway plans)

In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. No payment will be allowed for additional labor, materials or equipment for variations in thickness of overlay.

The top slab of this structure has an existing cathodic protection system in service. The contractor is cautioned to use extreme caution to prevent damage to any component of this system.

Note: Roadway surfacing adjacent to bridge ends to match top of concrete wearing surface (Rdwy Item).

ESTIMATED QUANTITIES		
ITEM		TOTAL
Asphalt Cement ①	Ton	3.0
Mineral Aggregate ②	Ton	58
Removal of exist. bituminous pavement ③	Sq. Yd.	1058

① (Asphaltic Concrete) 60-70 or AC-20 (Type A Mix)
② (Asphaltic Concrete) (Type A Mix)
③ (Cold Milling)

397 118

DETAILED DEC. 1991
CHECKED JUNE 992

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

SEE FINAL PLANS

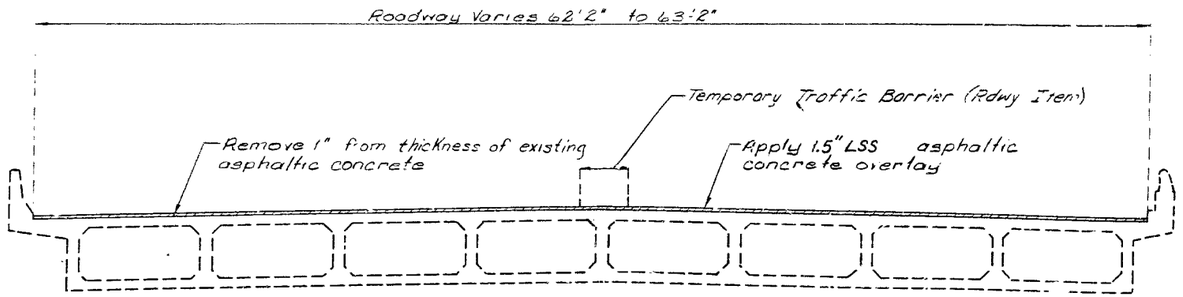
Sheet No. / of /

REPAIRS TO
BRIDGE : LANE C OVER 12TH STREET

STATE ROAD : MIDTOWN FREEWAY
IN KANSAS CITY
PROJECT NO. F.A.I-70-1(160) STA. 31+25.86 ℄ LANE C
JOB NO. J410991 RTE. I-70
DATE 9/4/92 JACKSON COUNTY

A-244R1

STATE	PROJ NO	SHEET NO
MO	F.A.I-70-1(160)	110
SEC/SUR 5	TWP 49N RGE 33W	



SECTION THRU SLAB

GENERAL NOTES:

Existing Work
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Traffic Maintained
Maintain three lanes of traffic over structure during construction. (See roadway plans)

In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. No payment will be allowed for additional labor, materials or equipment for variations in thickness of overlay.

The top slab of this structure has an existing cathodic protection system in service. The contractor is cautioned to use extreme caution to prevent damage to any component of this system.

Note: Roadway surfacing adjacent to bridge ends to match top of concrete wearing surface (Rdwy Item).

FINAL QUANTITIES		
ITEM		TOTAL
Asphalt Cement ①	Ton	5.1
Mineral Aggregate ②	Ton	81
Removal of exist. bituminous pavement ③	Sq. Yd.	1023

① (Asphaltic Concrete) AC-20
② (Asphaltic Concrete)(LSS)
③ (Cold Milling)

REPAIRS TO
BRIDGE: LANE C OVER 12TH STREET

STATE ROAD: MIDTOWN FREEWAY
IN KANSAS CITY
PROJECT NO. F.A.I-70-1(160) STA. 31+25.86 ℄ LANE C
JOB NO. J4I0991 RTE. I-70
DATE 9/4/92 JACKSON COUNTY

A-244R1

DETAILED DEC. 1991
CHECKED JUNE 1992

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

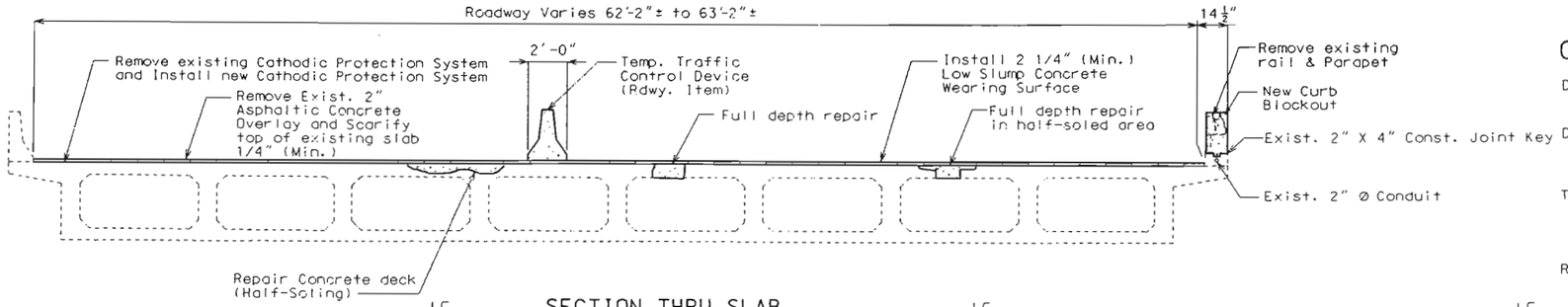
Sheet No. 1A of 1

QUALITY REPRO

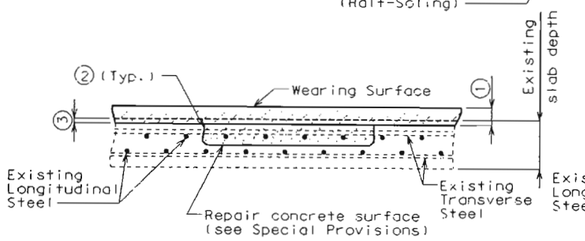
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

U.I.P. EXISTING (44'-63-44') CONT. BOX GIRDER SPANS

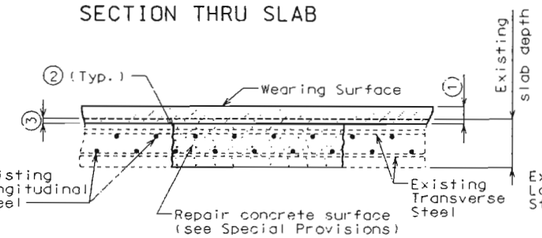
State	Proj. No.				Sheet No.
MO					668
SEC/SUR	5	TWP	49N	RGE	33W



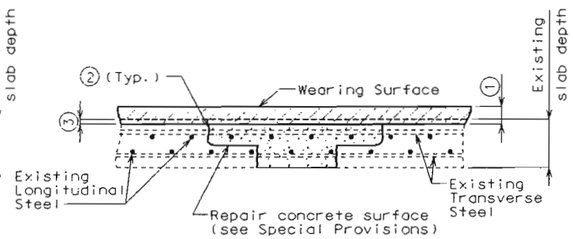
SECTION THRU SLAB



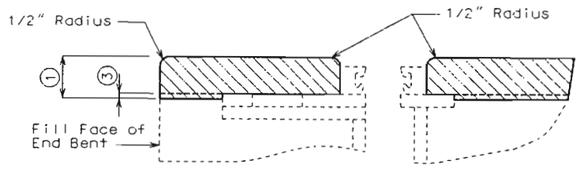
HALF-SOLED AREA



FULL DEPTH REPAIR



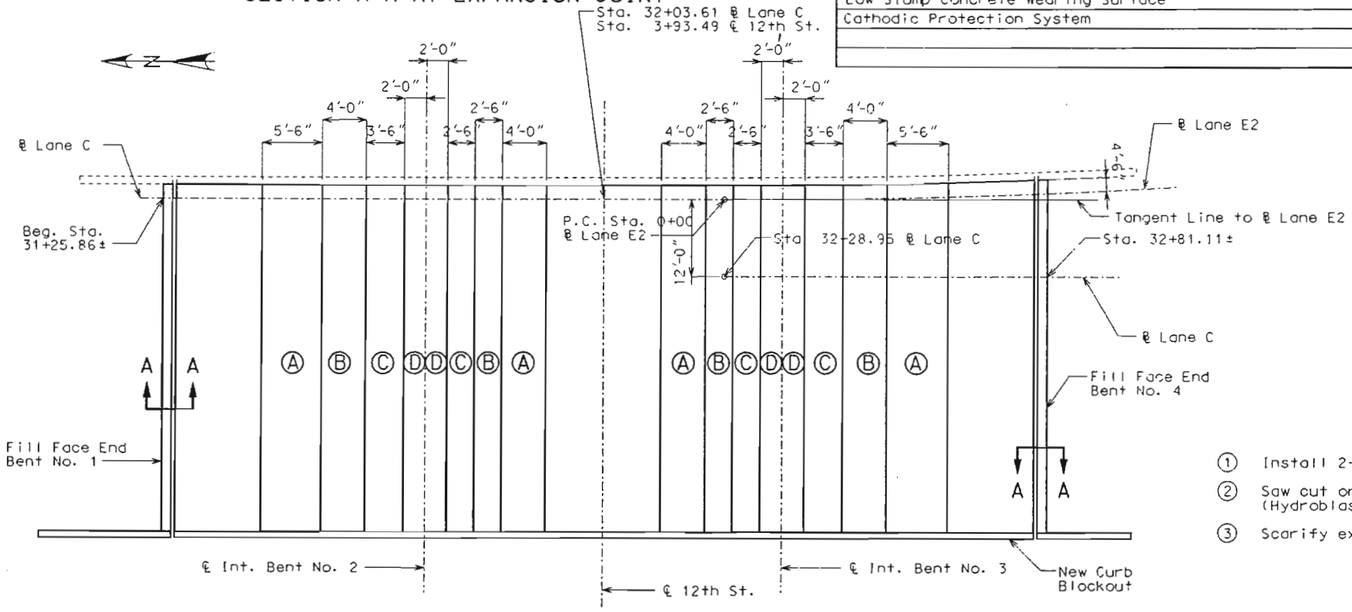
FULL DEPTH REPAIR IN HALF-SOLED AREA



SECTION A-A AT EXPANSION JOINT

ESTIMATED QUANTITIES

ITEM		TOTAL
Removal of Cathodic Protection System	lump sum	1
Parapet Removal (Bridges)	linear foot	182
Asphalt Removal (Bridges)	sq. foot	9620
Curb Blockout	linear foot	182
Repairing Concrete Deck (Half-Soling)	sq. foot	700
Full Depth Repair	sq. foot	200
Low Slump Concrete Wearing Surface	sq. yard	1069
Cathodic Protection System	lump sum	1



PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

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

CURVE DATA ℄ Lane E2

PI Sta. 4+99.14

D = 4°30'00"

△ = 42°48'45" (LT.)

R = 1279.24'

T = 499.14'

L = 951.39'

① Install 2-1/4" (Min.) Low Slump Concrete Wearing Suface.

② Saw cut or chip vertically first ½" of all deck repair. (Hydroblasting allowed by Special Provisions.)

③ Scarify existing slab (1/4" min.).

GENERAL NOTES:

DESIGN SPECIFICATIONS:

AASHTO-1996 and Interims thru 2002

DESIGN UNIT STRESSES:

Reinforcing Steel (Grade 60) fy = 60.000 psi
Class B1 Concrete (Curb Blockout and End posts) f'c = 4000 psi

TRAFFIC HANDLING:

Maintain traffic on structure during construction (see Rdwy. Plans.)

REINFORCING STEEL:

Minimum clearance to reinforcing steel shall be 1½", 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.

JOINT FILLER:

All joint filler shall meet the requirements of Section 1057.2.4. of the Missouri Standard Specifications, except as noted.

CURB BLOCKOUTS:

Cost of Concrete and Reinforcement in End Posts shall be considered completely covered in the contract unit price for Curb Blockout per linear foot.

Cost of any concrete curb removal and/or repair shall be considered completely covered in the contract unit price for Curb Blockout per linear foot.

Cost of removing existing parapet and aluminum bridge rail shall be considered completely covered in the contract unit price for Parapet Removal (Bridges) per linear foot.

MISCELLANEOUS:

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

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

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

In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. No payment will be allowed for additional labor, materials or equipment for variations in thickness of overlay.

SPECIAL REPAIR ZONES:

Any repair in the remainder of the bridge that is within 2'-6" of Zone A shall be completed before removing old concrete in Zone A.

Zones with the same letter designation may be repaired at the same time. Sequence of repairs follows Zone A, Zone B, Zone C then Zone D.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER E-28985
REGISTERED PROFESSIONAL ENGINEER
DATE 9-6-02

REPAIRS TO BRIDGE: LANE C OVER 12TH STREET

STATE ROAD : MIDTOWN FREEWAY

IN KANSAS CITY

PROJECT NO. **STA. 31+25.86± (℄ Lane C) (Match existing)**

JOB NO. J4I1403 **RTE. I-70 (E.B.L.)**

JACKSON COUNTY

Date: 9/6/02

STD. 706.35

A02443

REV.

Detailed Nov. 2001
Checked June 2002

Sheet No. 1 of 8

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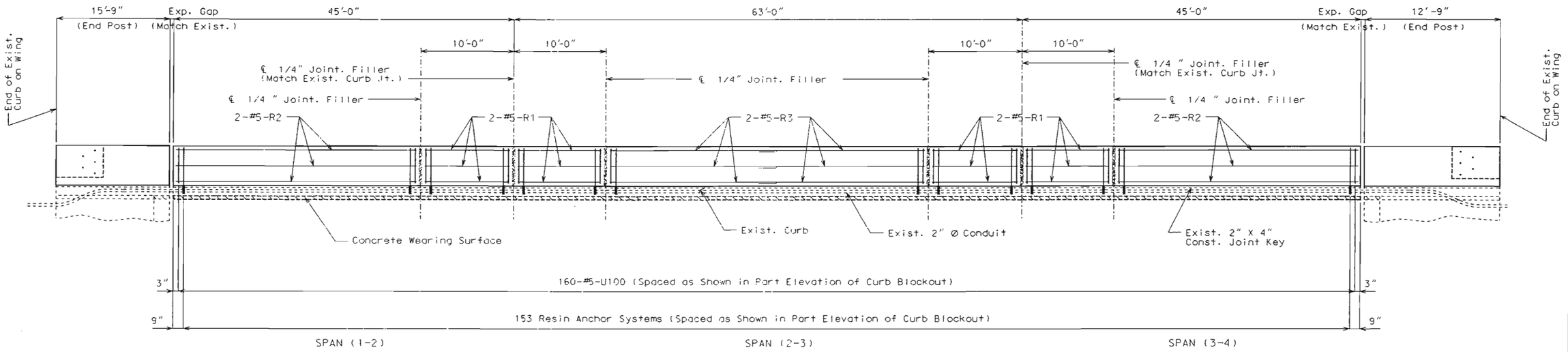
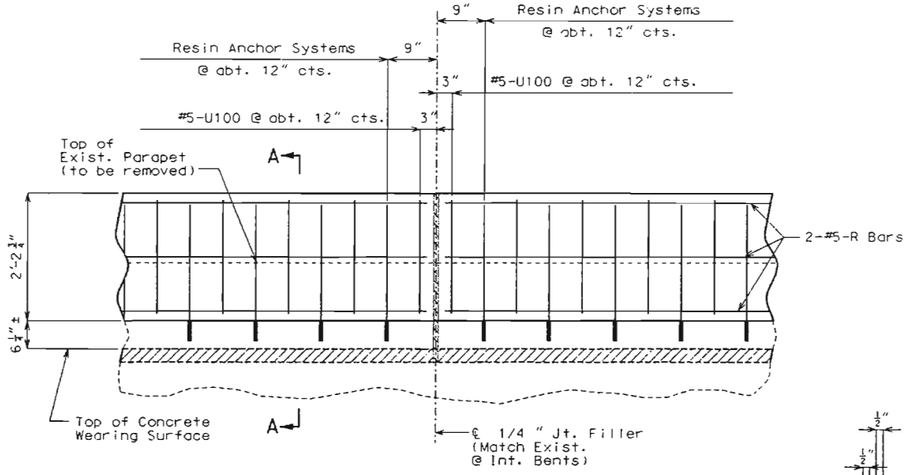
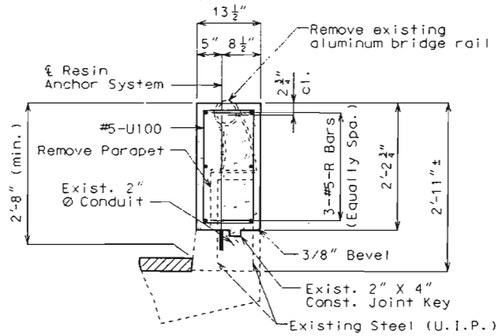
State	Proj. No.	Sheet No.
MO		369



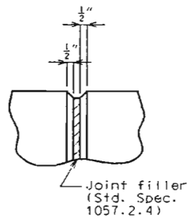
ELEVATION OF CURB BLOCKOUT



PART ELEVATION OF CURB BLOCKOUT



SECTION A-A



FILLED JOINT DETAIL

DETAILS OF CURB BLOCKOUT

NOTES FOR CURB BLOCKOUT:

All reinforcement shall be epoxy coated.

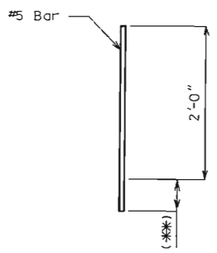
Concrete in curb blockout shall be Class B1 with f'c = 4,000 psi

Measurement of curb blockout is to the nearest linear foot measured along the top of outside edge of existing curb from end of wing to end of wing.

All exposed edges of curb blockout shall have either a 1/2" radius or a 3/8" bevel, unless otherwise shown.

Payment for concrete, reinforcing steel, resin anchor systems and any other work incidental to the curb blockout and end posts, complete in place, shall be included in the contract unit price for Curb Blockout per lin. foot.

Use a minimum lap of 2'-11" for #5 horizontal Curb Blockout bars.



(Install in Curb)

NOTE: (**) Manufacturer's embedment length. (6" Max.)

DETAIL OF RESIN ANCHORS

NOTES FOR RESIN ANCHOR SYSTEM:

The contractor shall use one of the resin anchor systems listed in the job special provisions. These resin anchor systems shall be installed according to the manufacturer's specifications, except as modified by the job special provisions. Contractor shall avoid damage to any exist. conduit in curb.

The 5/8" diameter resin anchor systems shall have a minimum ultimate pullout strength of 15,500 lbs. in concrete with f'c = 4,000 psi (See Special Provisions).

Cost of furnishing and installing the anchor system complete in place shall be included in the price bid for Curb Blockout.

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8 "Ø threaded rod stud.

STATE OF MISSOURI — DANIEL M. SMITH NUMBER E-28985 — REGISTERED PROFESSIONAL ENGINEER

DATE 9-6-02

Detailed Nov. 2001
Checked June 2002

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

JACKSON COUNTY A02443

REV.

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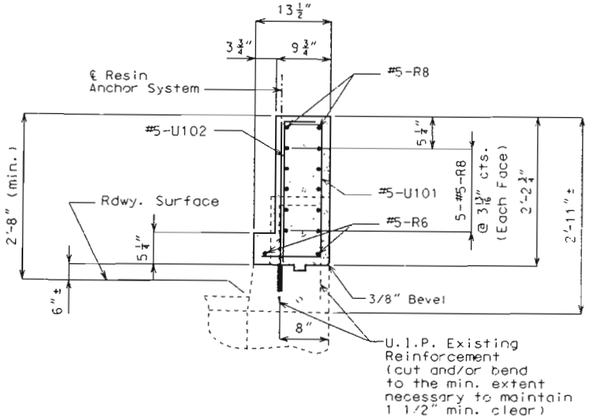
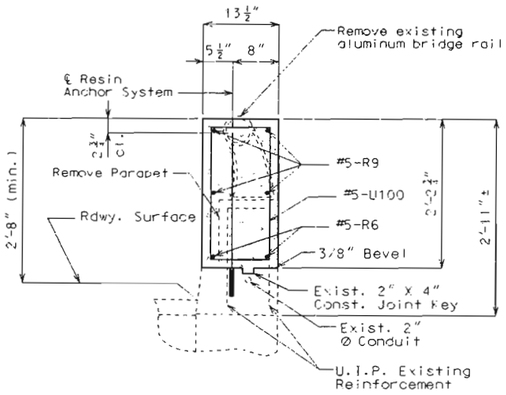
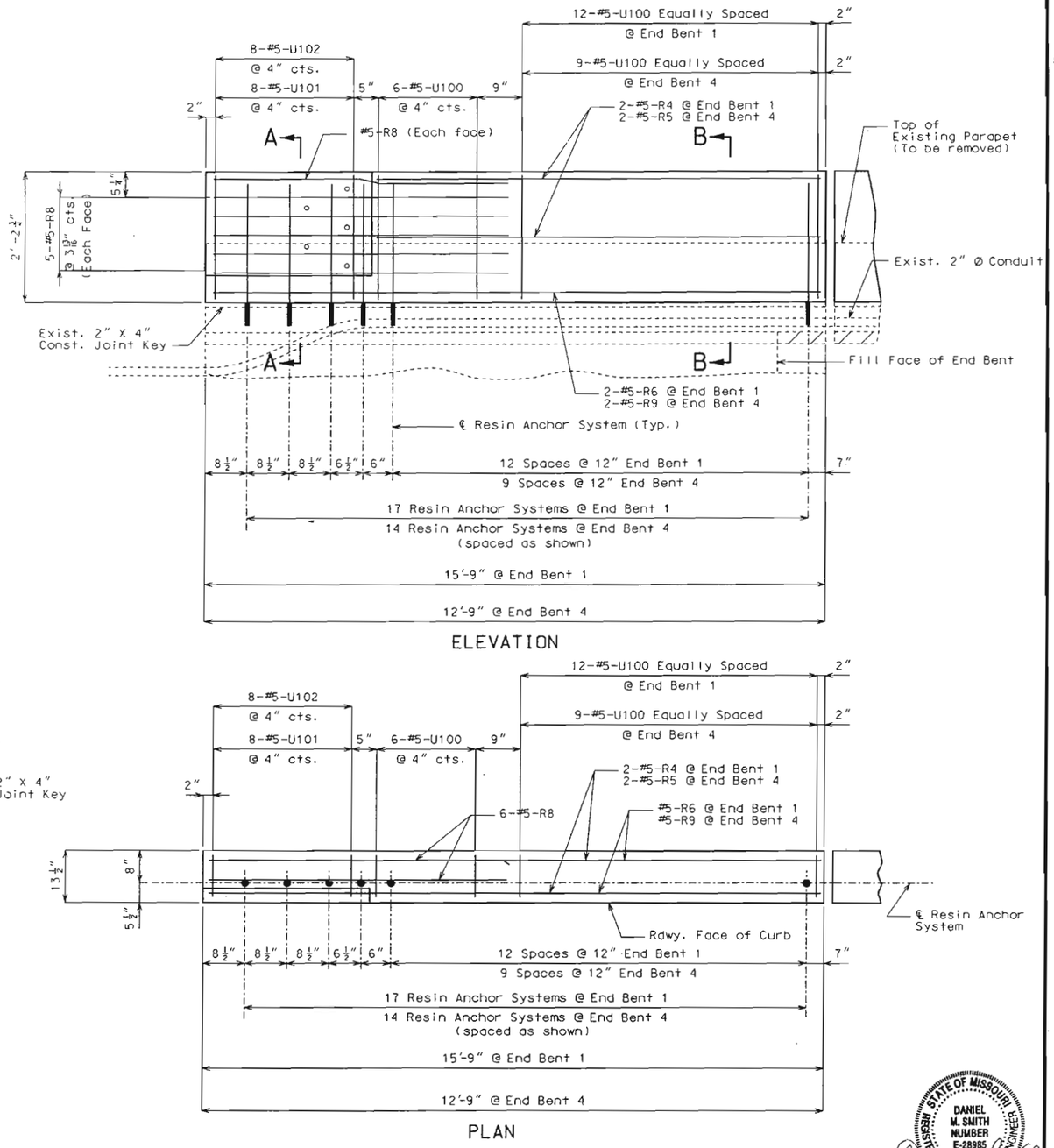
State	Proj. No.	Sheet No.
MO		3 of 8



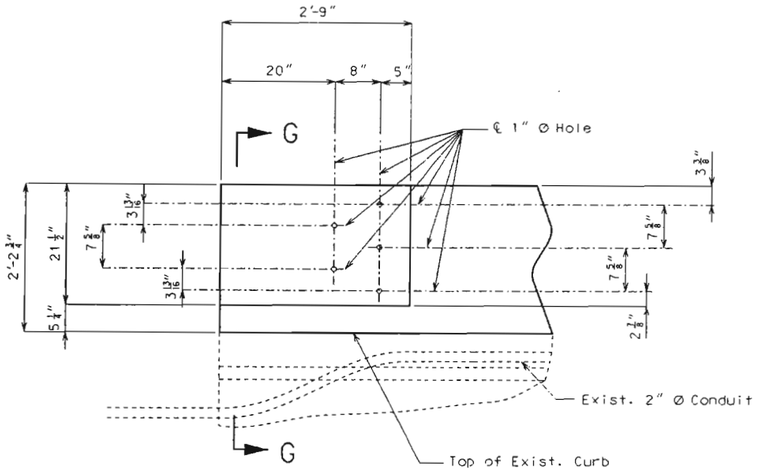
SECTION A-A



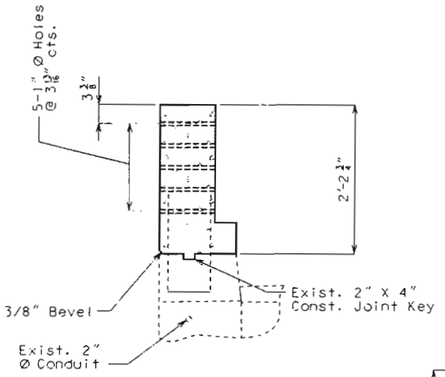
SECTION B-B



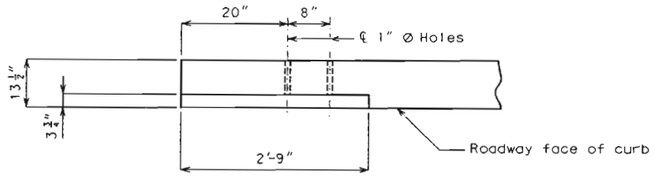
ELEVATION



PART ELEVATION



PART SECTION G-G



PART PLAN

DETAILS OF GUARD RAIL ATTACHMENT

PLAN

DETAILS OF CURB BLOCKOUT AT END BENTS

REGISTERED STATE OF MISSOURI PROFESSIONAL ENGINEER
DANIEL M. SMITH NUMBER E-28985

DATE 9-6-02

Detailed Nov. 2001
Checked June 2002

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

JACKSON COUNTY A02443

REV.

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BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	(E) EPOXY	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
		BLOCKOUT																
193	5 U100	BLOCKOUT	E	13	S				10.500	23.750	10.500	23.750				6 8	6 4	1275
16	5 U101	BLOCKOUT	E	11	S					10.500	23.750	6.750				3 5	3 3	54
16	5 U102	BLOCKOUT	E	19	S				23.750	6.750						2 7	2 5	40
24	5 R1	BLOCKOUT	E	20					9 9.000							9 9	9 9	244
12	5 R2	BLOCKOUT	E	20					34 9.000							34 9	34 9	435
12	5 R3	BLOCKOUT	E	20					22 10.000							22 10	22 10	286
4	5 R4	BLOCKOUT	E	20					12 9.000							12 9	12 9	53
4	5 R5	BLOCKOUT	E	20					9 9.000							9 9	9 9	41
* 4	5 R6	BLOCKOUT	E	20					15 6.000							15 6	15 6	65
24	5 R8	BLOCKOUT	E	20					5 7.000							5 7	5 7	140
2	5 R9	BLOCKOUT	E	20					12 6.000							12 6	12 6	26
		TOTALS																
	5		E															2659
		TOTAL																0
		TOTAL	E															2659

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	(E) EPOXY	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.

State	Proj. No.	Sheet No.
MO		B71

SHAPE 6 SHAPE 7 SHAPE 8

SHAPE 9 SHAPE 10 SHAPE 11

SHAPE 12 SHAPE 13 SHAPE 14

SHAPE 15 SHAPE 16 SHAPE 17 SHAPE 18 SHAPE 20

SHAPE 19 SHAPE 21

SPOT WELD AASHTO M32 SIZE W5 WIRE (TYP.)

SHAPE 23 SHAPE 24 SHAPE 22

SHAPE 25 SHAPE 26 SHAPE 27

SHAPE 28 SHAPE 29 SHAPE 31

SHAPE 30 SHAPE 32

SHAPE 36 SHAPE 35 SHAPE 34 SHAPE 33

BENDING DIAGRAMS

6d FOR #4 AND #5. 12d FOR #6

90° STIRRUP 135° STIRRUP

DETAILED Nov. 2001
CHECKED June 2002

STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK APPROX. H
#4	2"	4-1/2"	4-1/2"	3"
#5	2-1/2"	6"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	4-1/2"

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

DETAILING DIMENSION 90° 12d 180° 4d OR 2-1/2" MIN.

END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL GRADES 180° HOOKS A OR G	180° HOOKS J	90° HOOKS A OR G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	12"
#7	5-1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9-1/2"	15"	11-3/4"	19"
#10	10-3/4"	17"	13-1/4"	22"
#11	12"	19"	14-3/4"	2'-0"
#14	18-1/4"	2'-3"	21-3/4"	2'-7"

* TWO ADDITIONAL #5-R6 ARE INCLUDED IN THE BAR BILL FOR TESTING.

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
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.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATOR'S USE (NEAREST INCH).
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.
REINFORCING STEEL (GRADE 60) = FY 60,000 PSI.

DANIEL M. SMITH NUMBER E-28985 REGISTERED PROFESSIONAL ENGINEER STATE OF MISSOURI

DATE 9-6-02

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

SHEET NO. 4 OF 8

JACKSON COUNTY A02443

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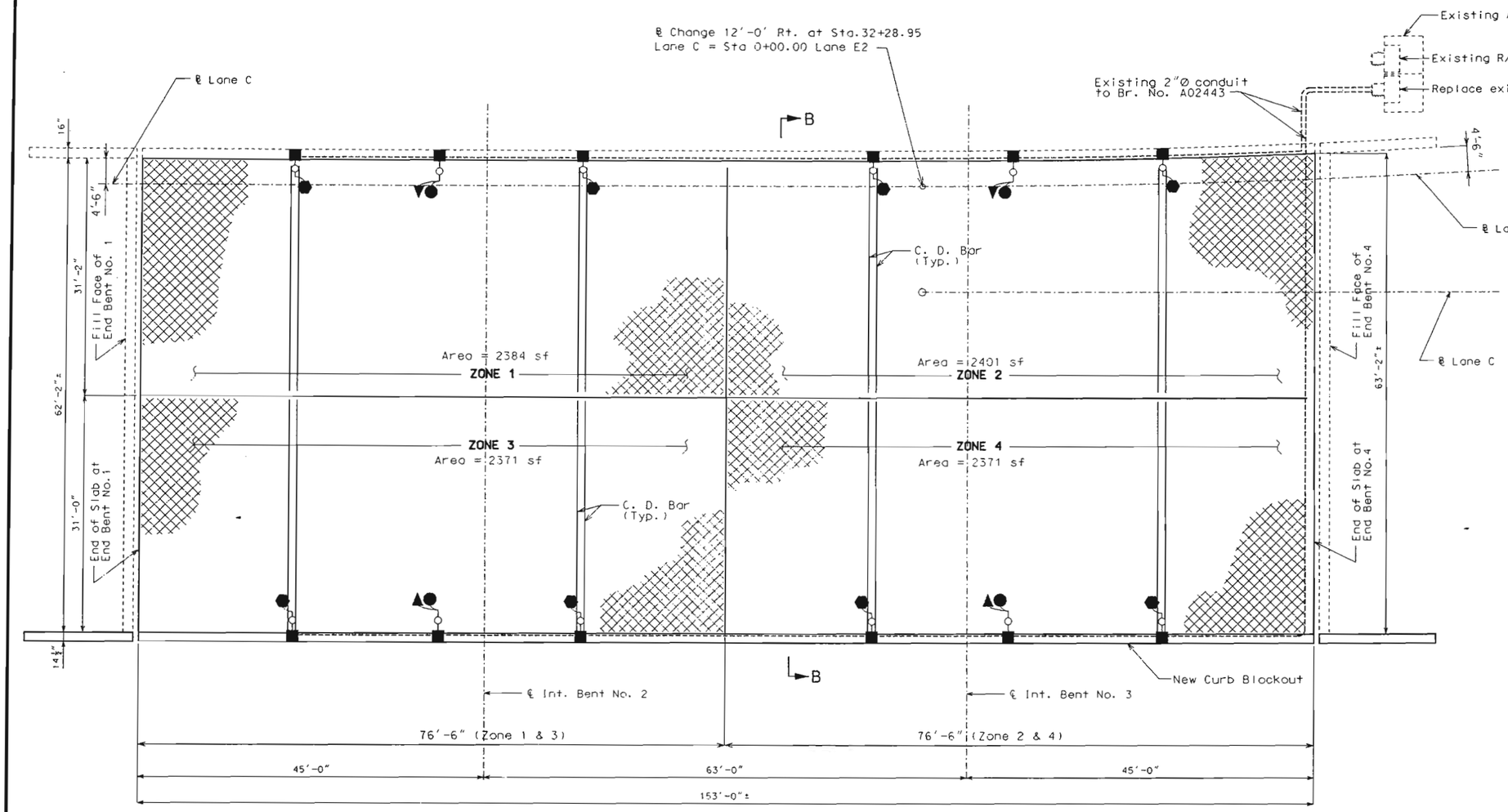
State	Proj. No.	Sheet No.
MO		672



DENOTATIONS

- TITANIUM ANODE MESH
- SYSTEM NEGATIVE CONNECTION
- REFERENCE CELL
- GROUNDS
- EXISTING CONDUIT
- ACCESS HOLE
- EXISTING JUNCTION BOX/ ACCESS FITTING

PART PLAN OF SLAB SHOWING TITANIUM MESH CATHODIC PROTECTION SYSTEM

ESTIMATED QUANTITIES	For Information only	
ITEM	UNIT	QUANTITY
Titanium Anode Mesh (Elgard 210)	Sq. Feet	9527
Reference Cells	Each	4
Thermite Welds	Each	12

Note: No direct payment shall be made for any additional conduit, junction boxes, access fittings, additional material, labor and modification to existing conduit.

NOTE:

Reference cells are to be placed at approximate ℄ of zone length as determined by the engineer.

Current Distribution Bars (C.D. Bar) to be placed near 1/4 point of Zones.

For Section B-B Thru Slab, typical zone layout and partial electrical schematic, see sheet no. 6.

Existing overlay and cathodic protection system shall be removed and the original deck scarified prior to installation of new Cathodic Protection System (see special provisions).

NOTE:

Replace existing R/C Cabinet with new enclosure, mounted on existing apron and meeting required manufacturer's specifications and all local electrical codes.

Use existing conduit and appurtenances, with the approval of the Engineer, as shown on the plans. All existing conduit and appurtenances not used with the new Cathodic Protection System shall be removed from the Structure.

All existing wiring in the deck and conduits shall be removed and replaced with new wiring.

The anode leads, system negative return leads, reference cell and reference cell ground lead shall be routed in one of the existing conduits.

The telephone cable shall be routed into the rectifier through one of the unused existing conduits.

The reference cell ground lead shall be welded to the top rebar within 12" of the reference cell.

Anode assembly number must match zone number.

Existing access holes through deck not used with the new cathodic protection system shall have its plastic sleeve and silicone sealant removed, hole cleaned and plugged with a nonmetallic expansive mortar in accordance with Std. Spec. 1066.

STATE OF MISSOURI DANIEL M. SMITH NUMBER E-28985 REGISTERED PROFESSIONAL ENGINEER

DATE 9-6-02

Detailed Mar. 2002
Checked July 2002

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

JACKSON COUNTY A02443

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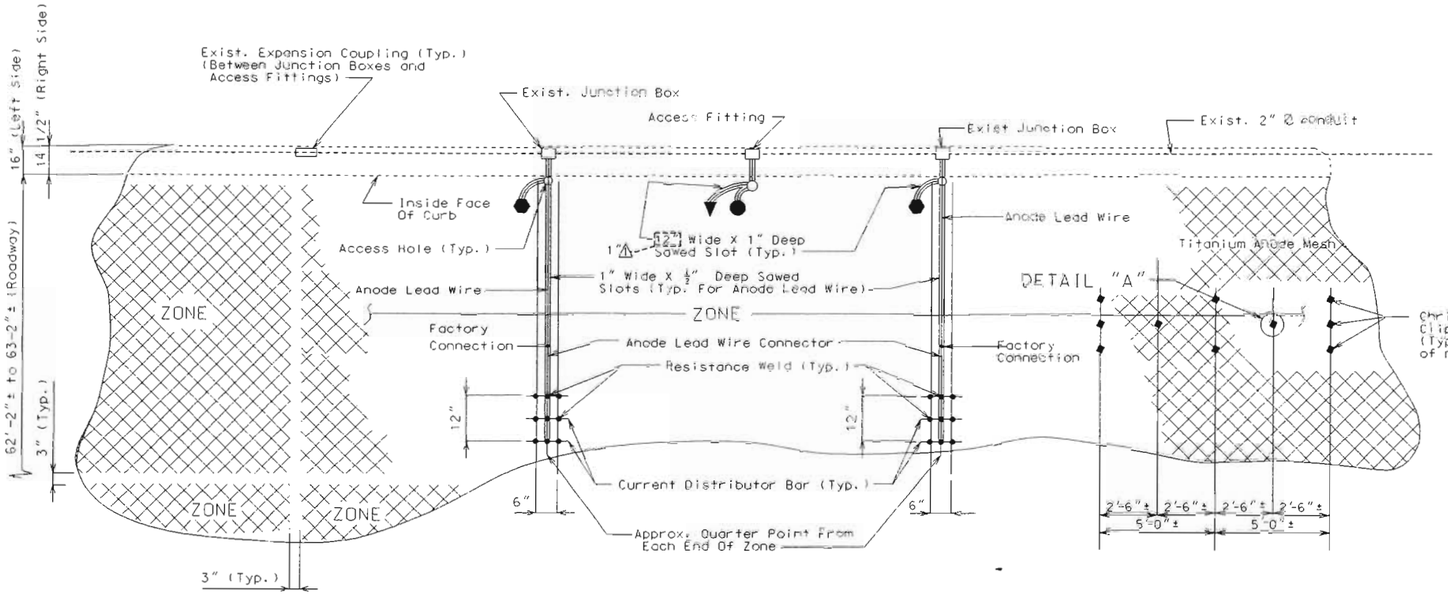
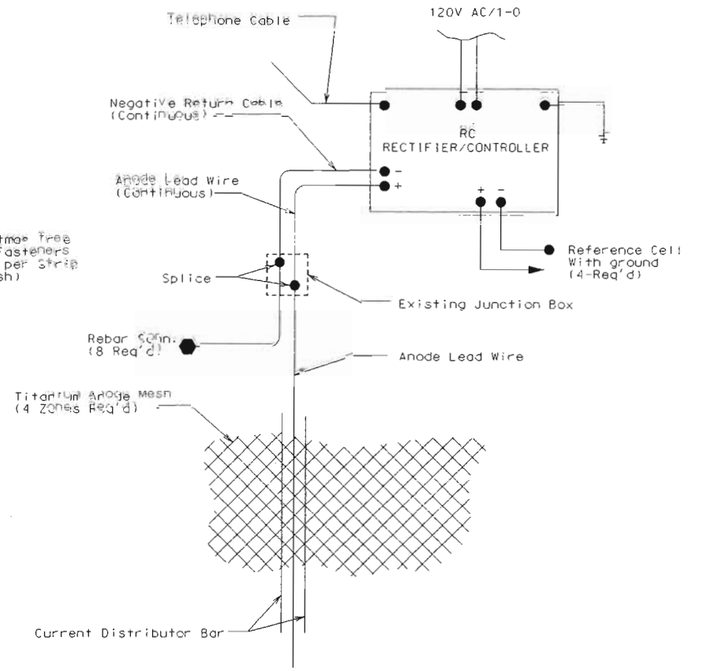
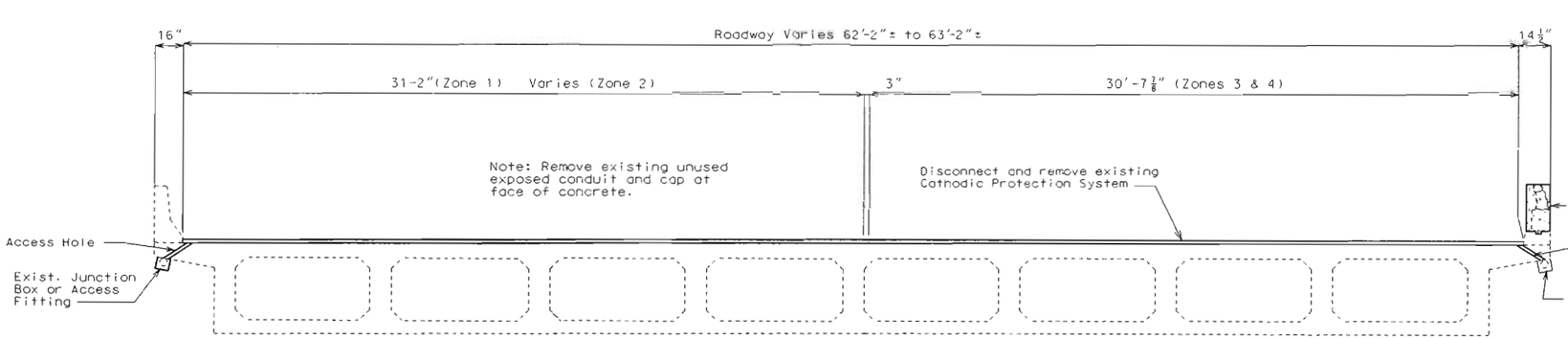


TYPICAL ZONE LAYOUT

Note: Use existing access holes, access fittings and junction boxes where acceptable as determined by the engineer.

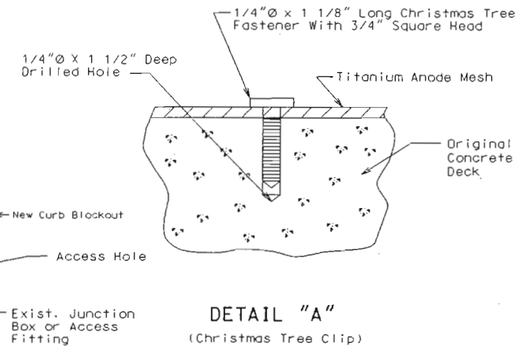


PARTIAL SCHEMATIC



SECTION B-B THRU SLAB

For Location of Section B-B, see Part Plan of Slab Showing Titanium Mesh Cathodic Protection System



DETAIL "A"
(Christmas Tree Clip)

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER E-28985
REGISTERED PROFESSIONAL ENGINEER

DATE 3-4-03

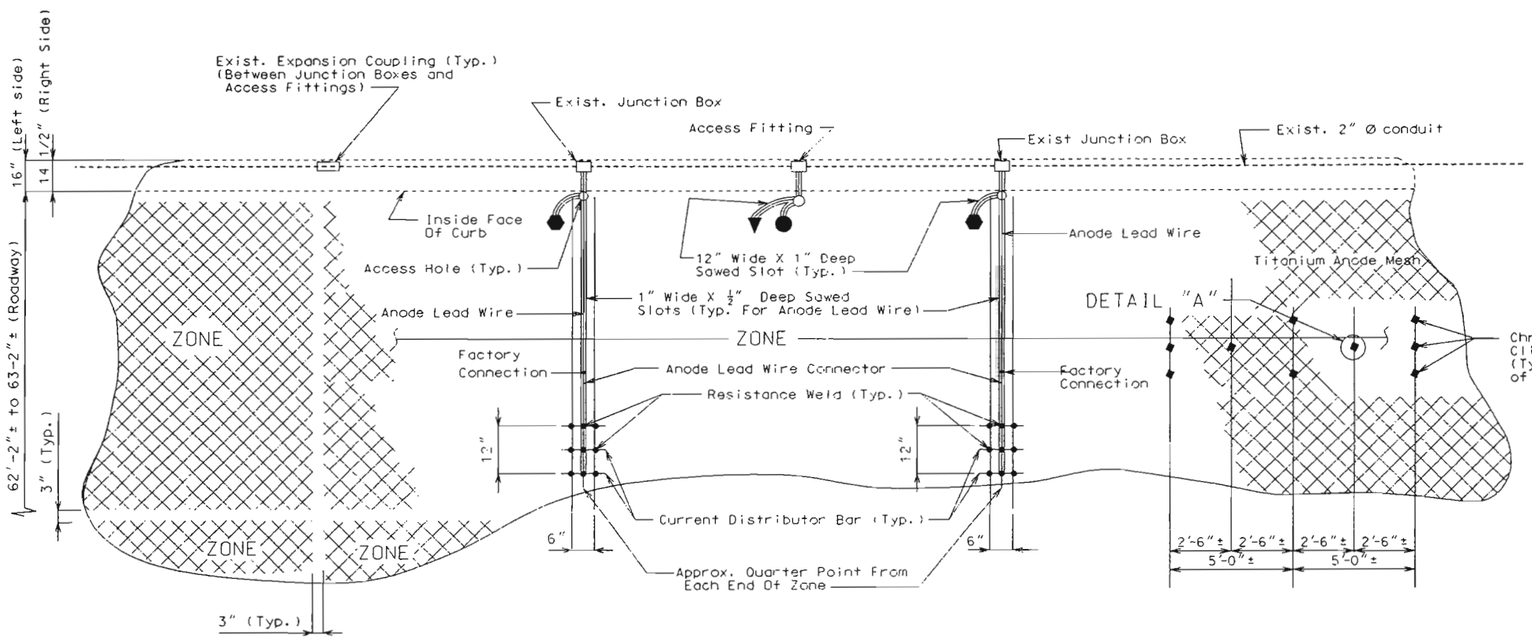
Detailed Mar. 2002
Checked July 2002

Note: This drawing is not to scale. Follow dimensions. ⚠ Revised 3/4/2003 Sheet No. 6 of 8

JACKSON COUNTY A02443

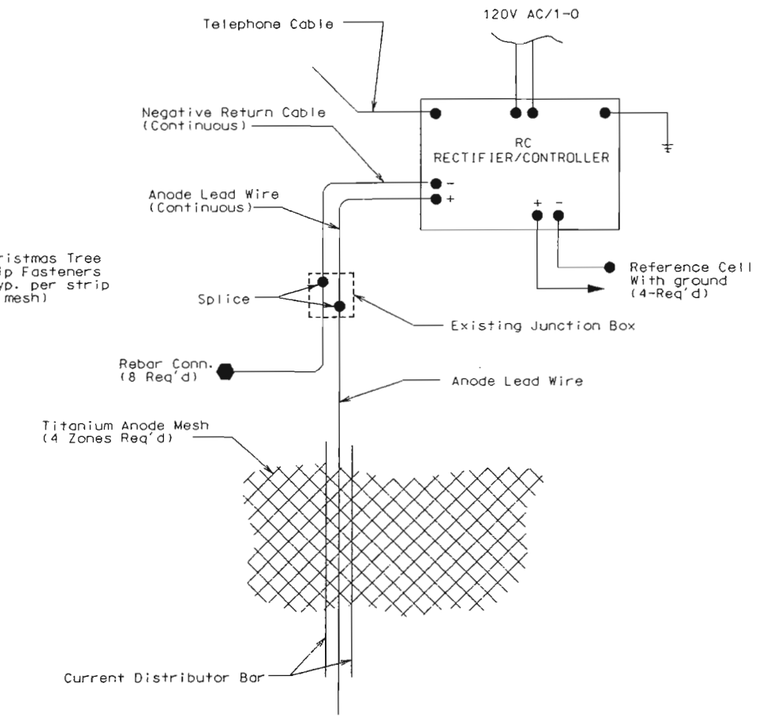
REV.

State	Proj. No.	Sheet No.
MO		B73

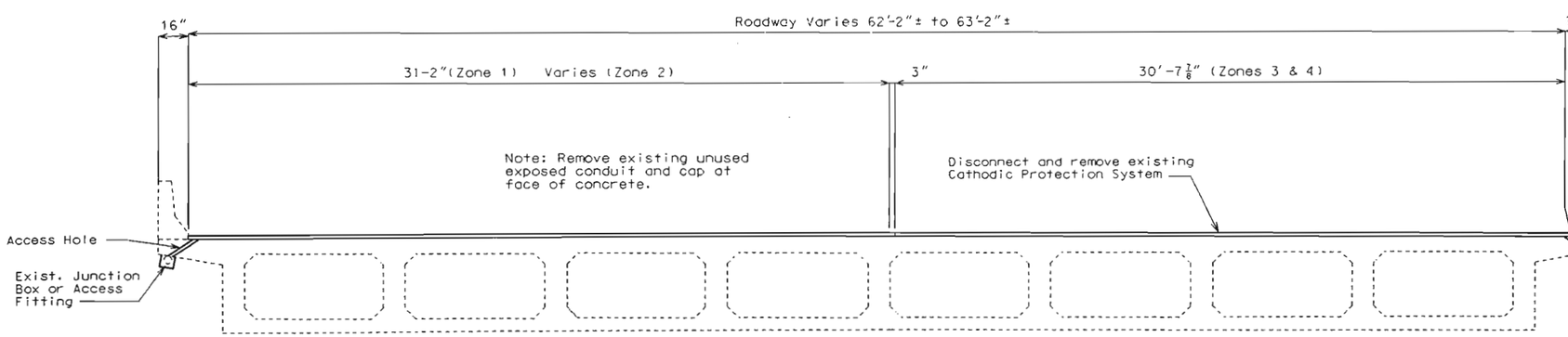


TYPICAL ZONE LAYOUT

Note: Use existing access holes, access fittings and junction boxes where acceptable as determined by the engineer.

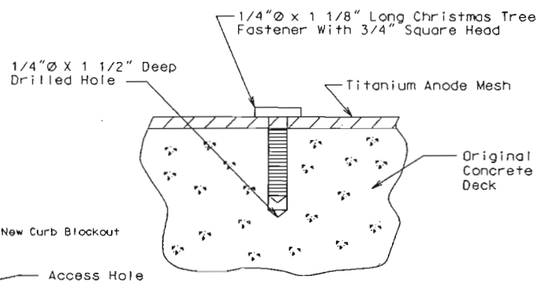


PARTIAL SCHEMATIC



SECTION B-B THRU SLAB

For Location of Section B-B, see Part Plan of Slab Showing Titanium Mesh Cathodic Protection System



DETAIL "A"
(Christmas Tree Clip)

VOID

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER E-28985
REGISTERED PROFESSIONAL ENGINEER

DATE 9-6-02

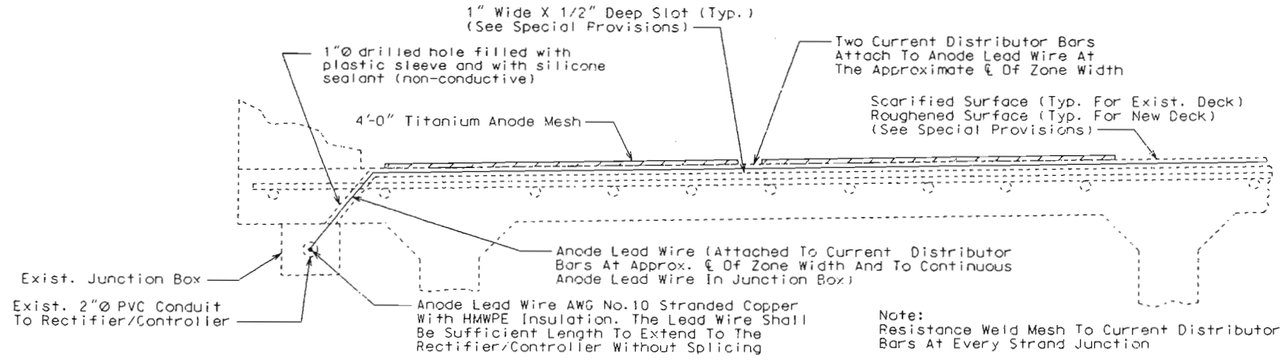
Detailed Mar. 2002
Checked July 2002

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

JACKSON COUNTY A02443

REV.

State	Proj. No.	Sheet No.
MO		B74



TITANIUM ANODE MESH DETAILS

Notes for New Conduit and Appurtenances (if required by Engineer):
Conduit shall be schedule 40 heavy wall PVC (Polyvinyl Chloride Plastic). Each section of conduit shall bear the underwriters laboratories, inc. (UL) label.

Conduit shall be secured to concrete with clamps (galvanized/AASHTO M111) at abt. 5'-0" cts. Concrete anchors for clamps shall meet federal specification FF-S-325, group II, type 4, class 1 and shall be galvanized in accordance with ASTM A-153, B695-91 class 50 or stainless steel. Minimum embedment in concrete shall be 1 3/4". The supplier shall furnish a manufacturer's certification that the concrete anchors meet the required material and galvanizing specifications.

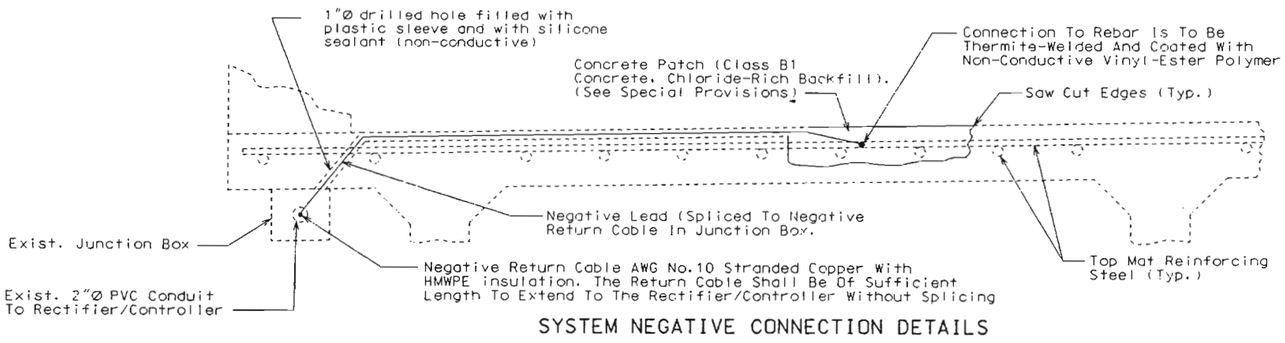
Weepholes shall be provided at appropriate locations to drain any moisture in the conduit lines.

Expansion couplings shall be installed on conduit lines between all junction boxes and access fittings as approved by the engineer.

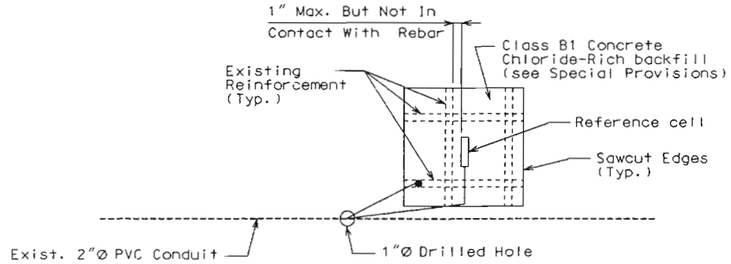
The location and direction of conduit may be shifted to meet field conditions as directed by the engineer.

All junction boxes shall be PVC molded, surface mounted, size 8" x 8" x 7" and equal to Carlon Electrical Construction products or Triangle Conduit and Cable company Inc.. The terminations shall be permanent or seperable.

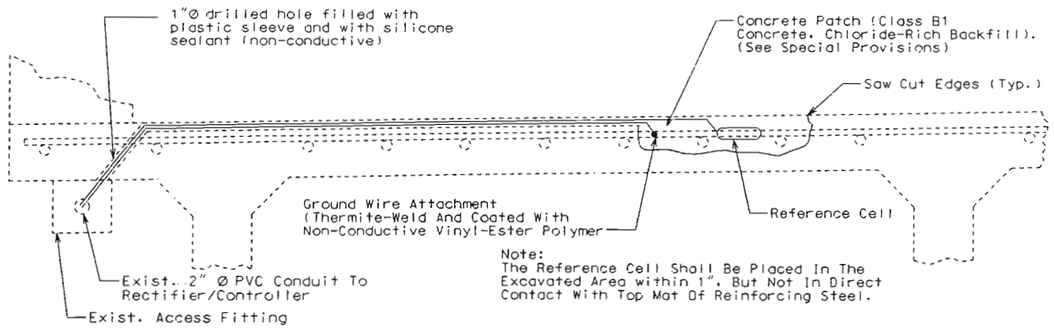
The terminations and covers shall be of watertight construction.



SYSTEM NEGATIVE CONNECTION DETAILS



PLAN OF REFERENCE CELL



REFERENCE CELL DETAILS

Note:
All concrete removal shall be intiated by saw cutting the first 1/2".

Note: The 3/4"Ø ground rod shall be of sufficient length to extend a minimum of 10'-0" below bottom of concrete pedestal. (Use existing if approved by the engineer).
Ground wire shall be AGW No.6 minimum (Use existing if approved by the engineer).
Knockouts or drilled holes shall be provided in cabinets for all conduit. Locations of these holes are the responsibility of the contractor and cabinet manufacturer.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER E-28985
REGISTERED PROFESSIONAL ENGINEER

DATE 9-6-02

Detailed Mar. 2002
Checked July 2002

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

JACKSON COUNTY A02443

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State	Proj. No.	Sheet No.
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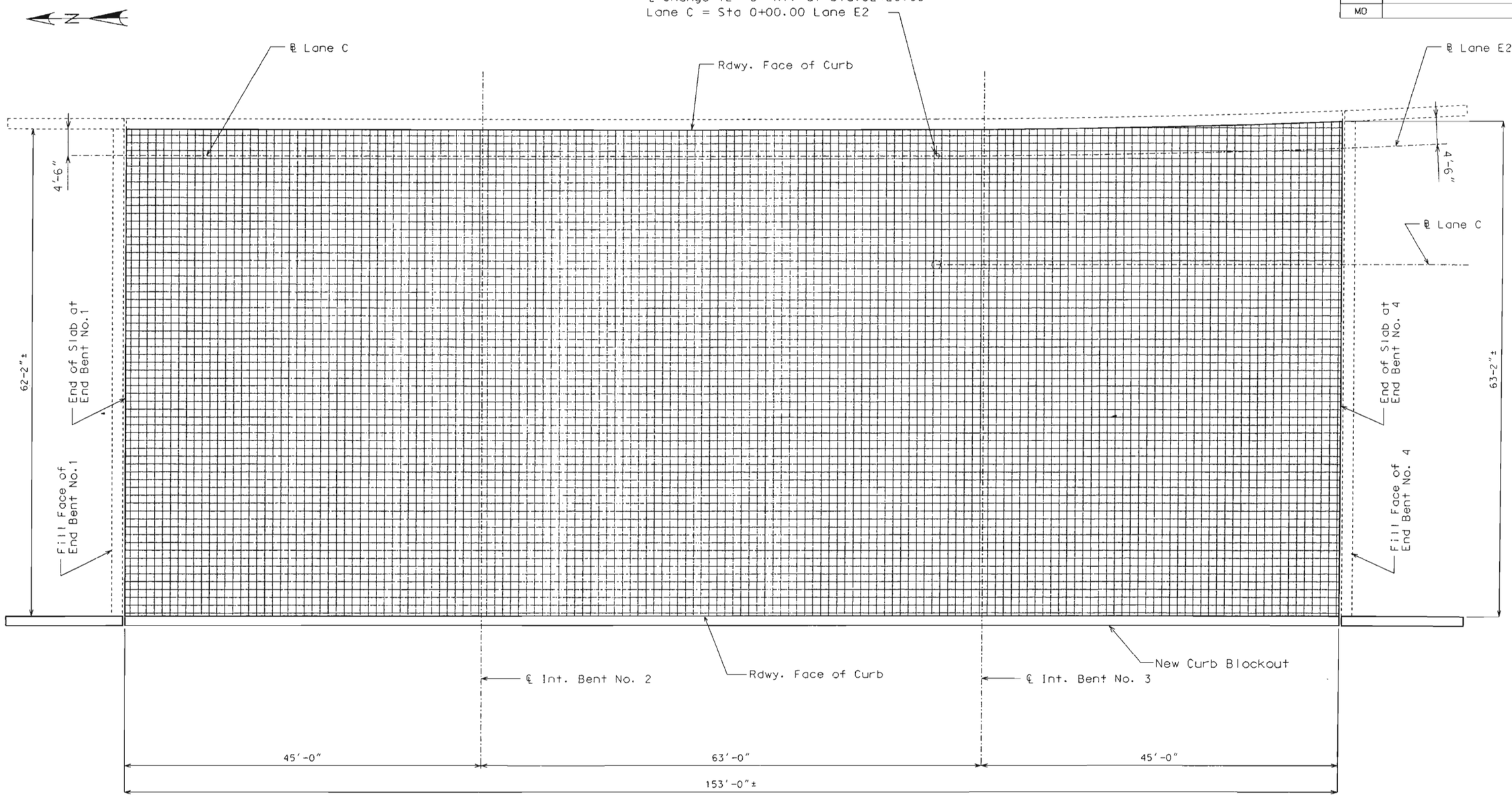


PLAN OF CONCRETE DECK SHOWING GRID

0 5' 10'

Scale

Note: Grid = Approx. 12" Squares

(For location of deck repair and reference cells.)

Note: This sheet is to be completed by MoDOT construction personnel.

I-70 LANE C OVER 12th ST.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER E-28985
REGISTERED PROFESSIONAL ENGINEER

DATE 9-6-02

Detailed Mar. 2002
Checked July 2002

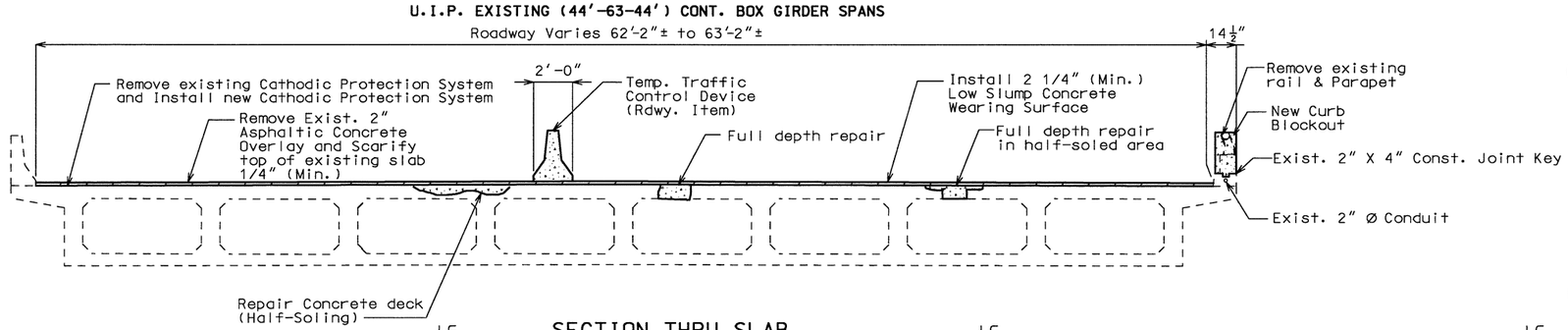
JACKSON COUNTY A02443

REV.

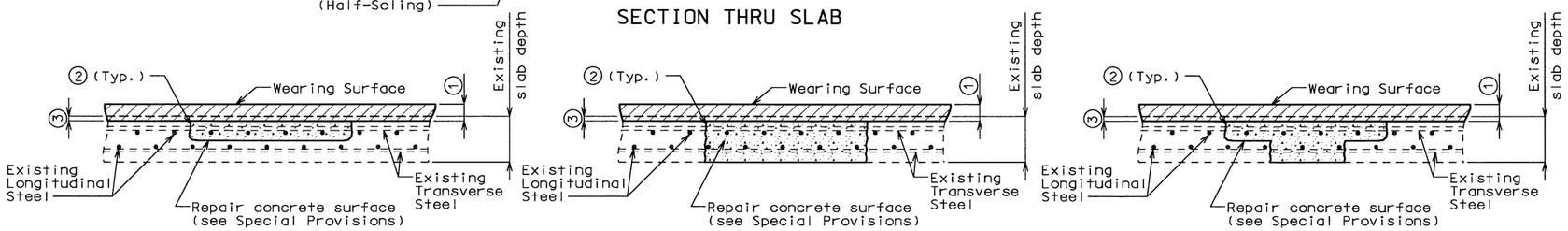
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

State	Proj. No.				Sheet No.
MO					
SEC/SUR	5	TWP 49N	RGE	33W	

U.I.P. EXISTING (44'-63-44') CONT. BOX GIRDER SPANS



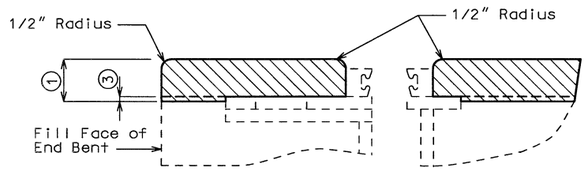
SECTION THRU SLAB



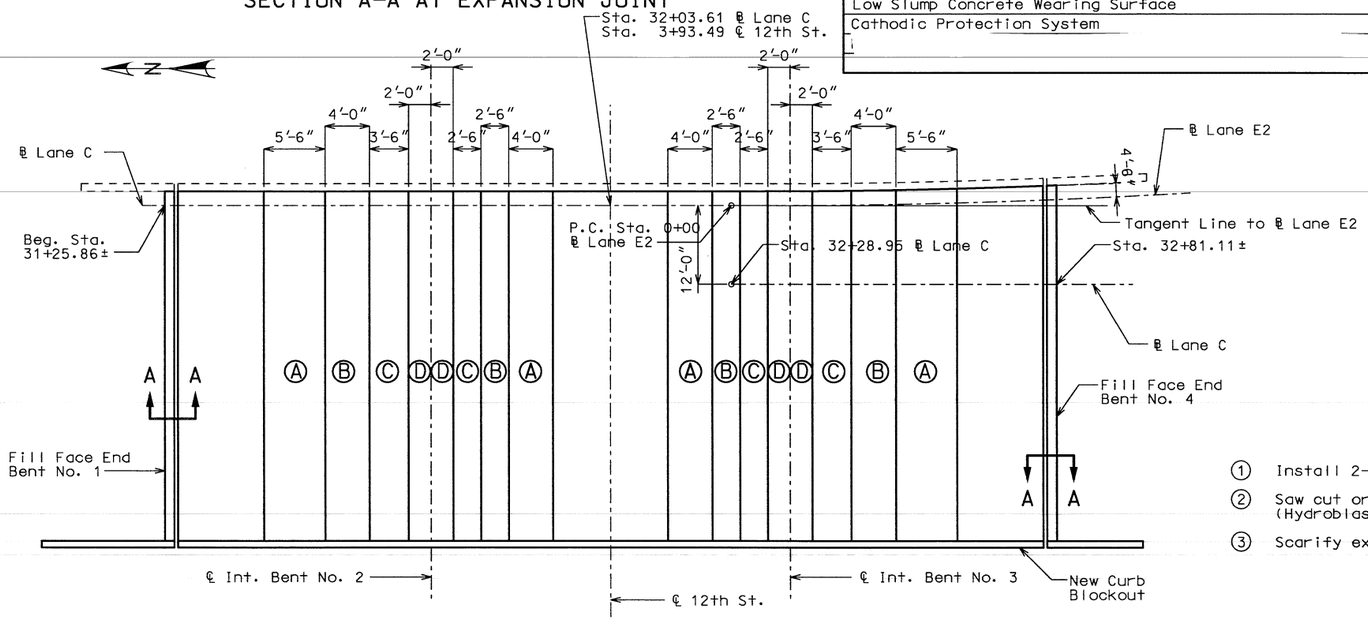
HALF-SOLED AREA

FULL DEPTH REPAIR

FULL DEPTH REPAIR IN HALF-SOLED AREA



SECTION A-A AT EXPANSION JOINT



PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

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

FINAL QUANTITIES

ITEM		TOTAL
Removal of Cathodic Protection System	lump sum	1
Parapet Removal (Bridges)	linear foot	182
Asphalt Removal (Bridges)	sq. foot	9620
Curb Blockout	linear foot	182
Repairing Concrete Deck (Half-Soling)	sq. foot	1076
Full Depth Repair	sq. foot	21
Low Slump Concrete Wearing Surface	sq. yard	1069
Cathodic Protection System	lump sum	1

CURVE DATA ℄ Lane E2

PI Sta. 4+99.14

D = 4°30'00"

△ = 42°48'45" (LT.)

R = 1279.24'

T = 499.14'

L = 951.39'

① Install 2-1/4" (Min.) Low Slump Concrete Wearing Suface.

② Saw cut or chip vertically first ½" of all deck repair. (Hydroblasting allowed by Special Provisions.)

③ Scarify existing slab (1/4" min.).

GENERAL NOTES:

FINAL PLANS

DESIGN SPECIFICATIONS:

AASHTO-1996 and Interims thru 2002

DESIGN UNIT STRESSES:

Reinforcing Steel (Grade 60) fy = 60,000 psi
Class B1 Concrete (Curb Blockout and End posts) f'c = 4000 psi

TRAFFIC HANDLING:

Maintain traffic on structure during construction (see Rdwy. Plans.)

REINFORCING STEEL:

Minimum clearance to reinforcing steel shall be 1½", 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.

JOINT FILLER:

All joint filler shall meet the requirements of Section 1057.2.4. of the Missouri Standard Specifications, except as noted.

CURB BLOCKOUTS:

Cost of Concrete and Reinforcement in End Posts shall be considered completely covered in the contract unit price for Curb Blockout per linear foot.

Cost of any concrete curb removal and/or repair shall be considered completely covered in the contract unit price for Curb Blockout per linear foot.

Cost of removing existing parapet and aluminum bridge rail shall be considered completely covered in the contract unit price for Parapet Removal (Bridges) per linear foot.

MISCELLANEOUS:

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

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

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

In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. No payment will be allowed for additional labor, materials or equipment for variations in thickness of overlay.

SPECIAL REPAIR ZONES:

Any repair in the remainder of the bridge that is within 2'-6" of Zone A shall be completed before removing old concrete in Zone A.

Zones with the same letter designation may be repaired at the same time. Sequence of repairs follows Zone A, Zone B, Zone C then Zone D.

REPAIRS TO BRIDGE: LANE C OVER 12TH STREET

STATE ROAD : MIDTOWN FREEWAY

IN KANSAS CITY

PROJECT NO. **STA. 31+25.86± (℄ Lane C) (Match existing)**

JOB NO. J4I1403 **RTE. I-70 (E.B.L.)**

JACKSON COUNTY

STD. 706.35

A02443

REV.

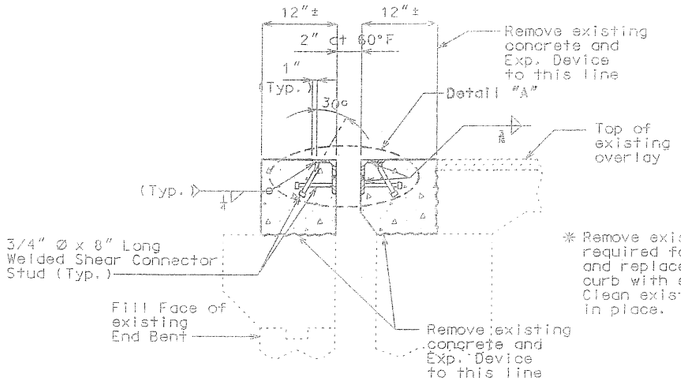
Date: / /

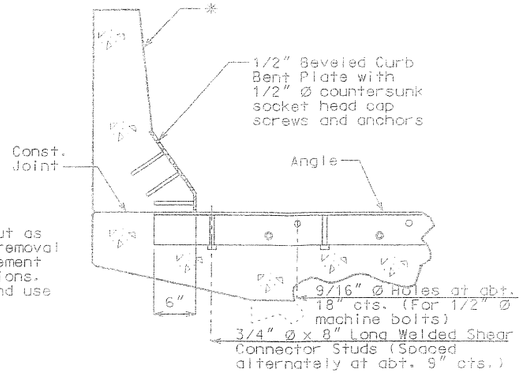
Detailed Nov. 2001
Checked June 2002

Sheet No. 1 of 8

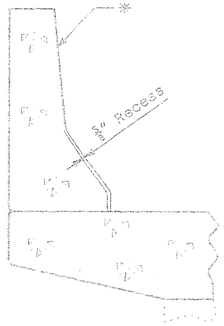
FINAL PLANS

State	Proj. No.	Sheet No.
MO		



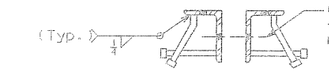


PART SECTION B-B



PART SECTION A-A

PART SECTION D-D



DETAIL "A"

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system 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 1/16" for each 10° fall or rise in temperature at installation.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36. Anchors for the expansion joint system shall be in accordance with Sec 1037. Silicone Expansion Joint Sealant Systems shall be in accordance with Sec 717.

Structural steel for the expansion joint system 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.

Concrete shall be forced under armor angle and around anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

Longitudinal reinforcing steel shall be placed so that ends shall not be more than ±1" from vertical leg of angle at the expansion joint system.

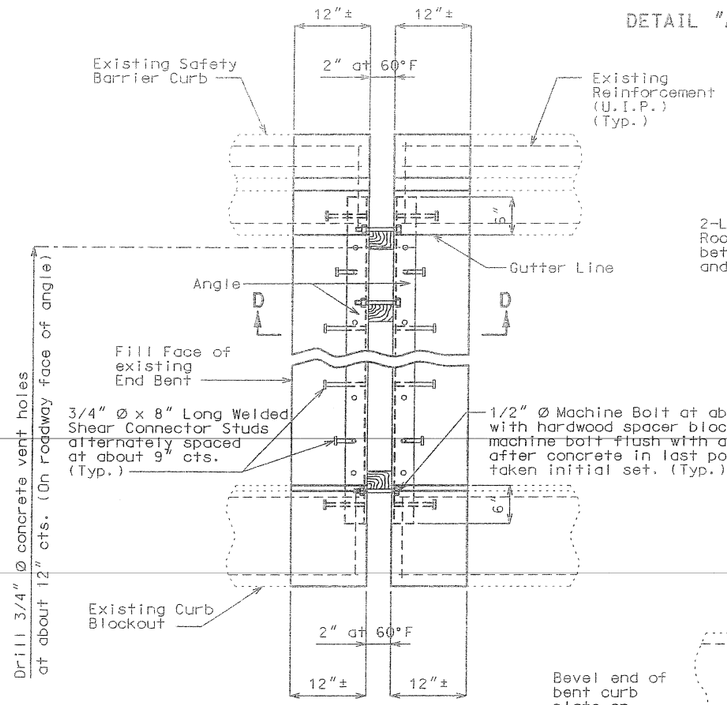
Curb plate anchors shall be a drilled cone expansion or a cast-in-place wing type threaded insert. The minimum ultimate pullout capacity for these anchors shall be 2700 lbs in f'c = 4000 psi concrete. Lead anchors will not be permitted. Holes in the barrier curb for anchors shall not be drilled until the concrete is at least 7 days old.

Payment for furnishing, coating or galvanizing and installing the structural steel for the expansion joint will be considered completely covered by the contract unit price for Silicone Expansion Joint Sealant System.

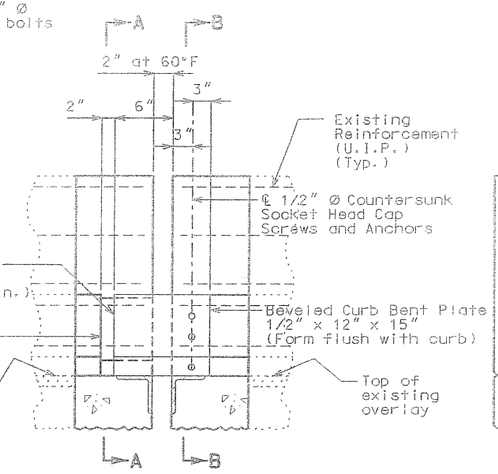
Contractor shall verify all dimensions in field before ordering new material.

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

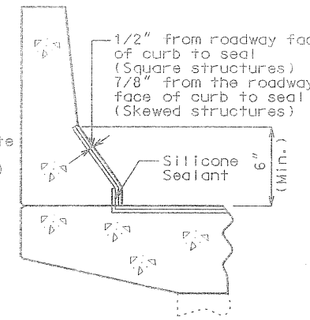
Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.



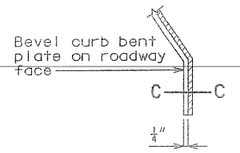
PART PLAN



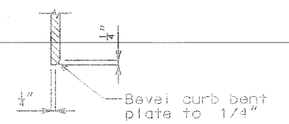
PART ELEVATION OF BARRIER CURB



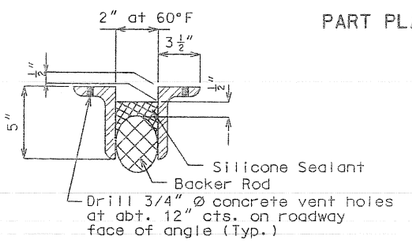
PART SECTION THRU SAFETY BARRIER CURB SHOWING SILICONE EXPANSION JOINT SEALANT



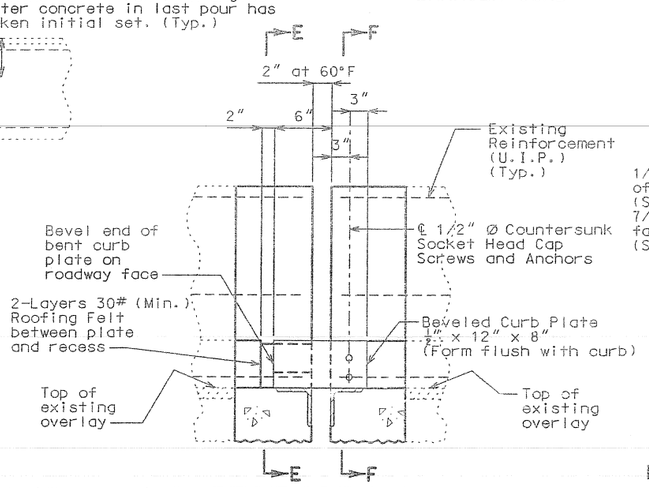
PART ELEVATION AT END OF BEVELED CURB BENT PLATE



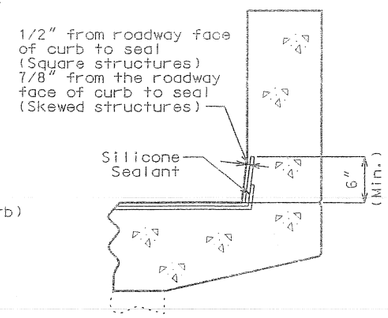
SECTION C-C



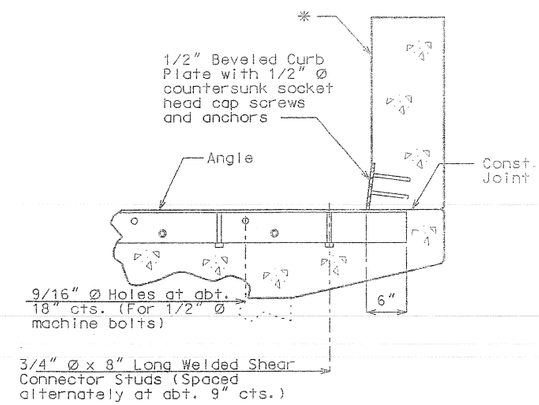
PART CROSS SECTION THRU EXPANSION JOINT



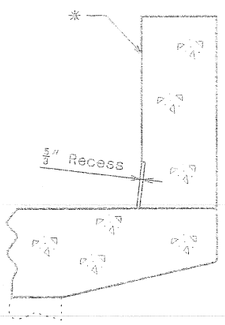
PART ELEVATION OF CURB BLOCKOUT



PART SECTION THRU CURB BLOCKOUT SHOWING SILICONE EXPANSION JOINT SEALANT



PART SECTION F-F



PART SECTION E-E

Detailed May 2005
Checked May 2005

DETAILS OF SILICONE EXPANSION JOINT SEAL AT END BENT

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

Sheet No. 1A of 8.

JACKSON COUNTY A02443

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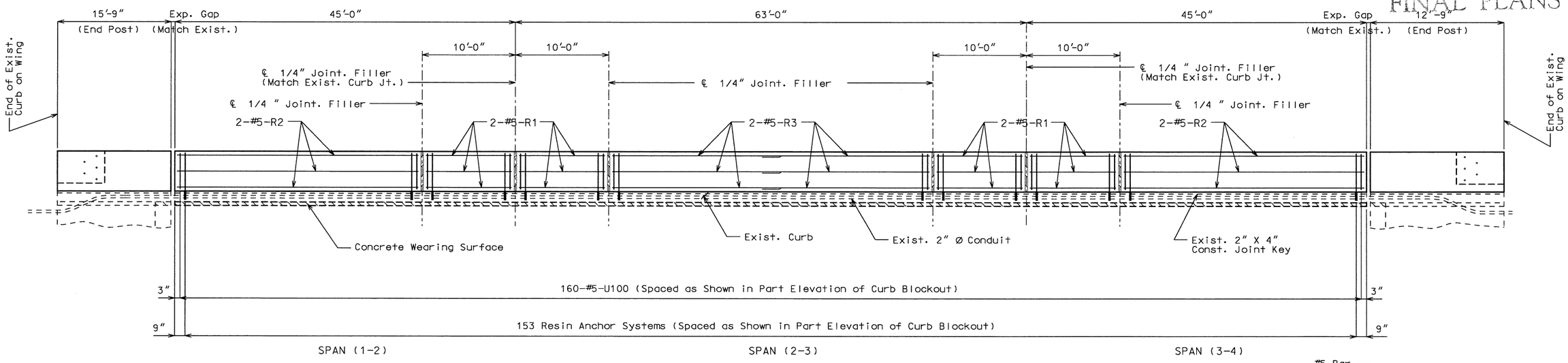
FEDERAL PROJECT# I-70-1(175)

FINAL PLANS



ELEVATION OF CURB BLOCKOUT

NOTES FOR CURB BLOCKOUT:

All reinforcement shall be epoxy coated.

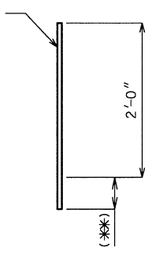
Concrete in curb blockout shall be Class B1 with f'c = 4,000 psi

Measurement of curb blockout is to the nearest linear foot measured along the top of outside edge of existing curb from end of wing to end of wing.

All exposed edges of curb blockout shall have either a 1/2" radius or a 3/8" bevel, unless otherwise shown.

Payment for concrete, reinforcing steel, resin anchor systems and any other work incidental to the curb blockout and end posts, complete in place, shall be included in the contract unit price for Curb Blockout per lin. foot.

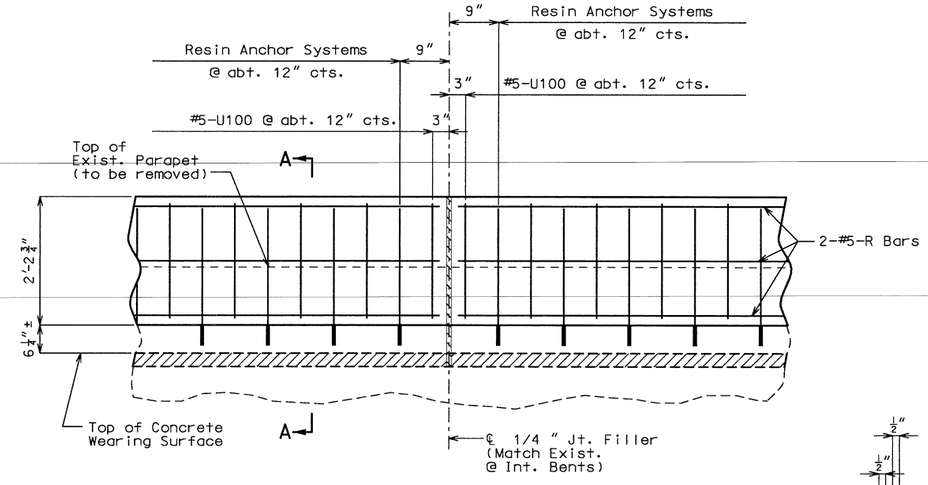
Use a minimum lap of 2'-11" for #5 horizontal Curb Blockout bars.



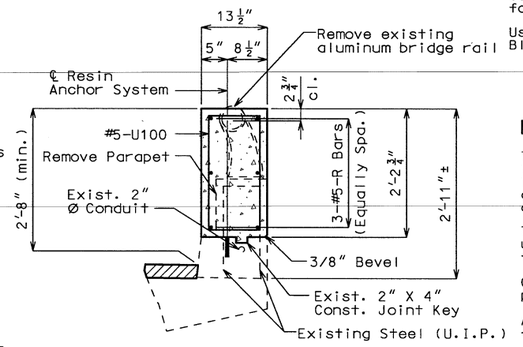
(Install in Curb)

NOTE: (**) Manufacturer's embedment length. (6" Max.)

DETAIL OF RESIN ANCHORS



PART ELEVATION OF CURB BLOCKOUT



SECTION A-A

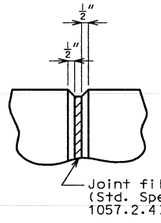
NOTES FOR RESIN ANCHOR SYSTEM:

The contractor shall use one of the resin anchor systems listed in the job special provisions. These resin anchor systems shall be installed according to the manufacturer's specifications, except as modified by the job special provisions. Contractor shall avoid damage to any exist. conduit in curb.

The 5/8" diameter resin anchor systems shall have a minimum ultimate pullout strength of 15,500 lbs. in concrete with f'c = 4,000 psi (See Special Provisions).

Cost of furnishing and installing the anchor system complete in place shall be included in the price bid for Curb Blockout.

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8 "Ø threaded rod stud.



FILLED JOINT DETAIL

DETAILS OF CURB BLOCKOUT

FINAL PLANS

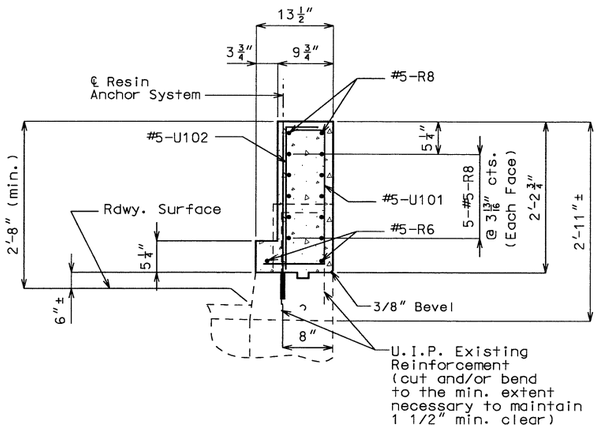
I CERTIFY THAT THIS PLAN SHEET ACCURATELY DEPICTS THE CONFIGURATION AND LOCATION OF THE ROADWAY AND ALL ITS APPURTENANT FEATURES, TO THE BEST OF MY KNOWLEDGE, AS I AND MY STAFF HAVE OBSERVED THE CONTRACTOR'S CONSTRUCTION OF THIS PROJECT. I SPECIFICALLY DISCLAIM ANY RESPONSIBILITY FOR THE DESIGN OF THIS PROJECT, EXCEPT AS I AND MY STAFF MAY HAVE MODIFIED OR AUTHORIZED THE MODIFICATION OF THE PROJECT DESIGN DURING ITS CONSTRUCTION; AND I DISCLAIM RESPONSIBILITY FOR THE CONTRACTOR'S ACTUAL CONSTRUCTION OF THE PROJECT, EXCEPT AS I AND MY STAFF MAY HAVE DIRECTED OR ORDERED THAT THE PROJECT BE CONSTRUCTED.

SIGNATURE _____ DATE _____

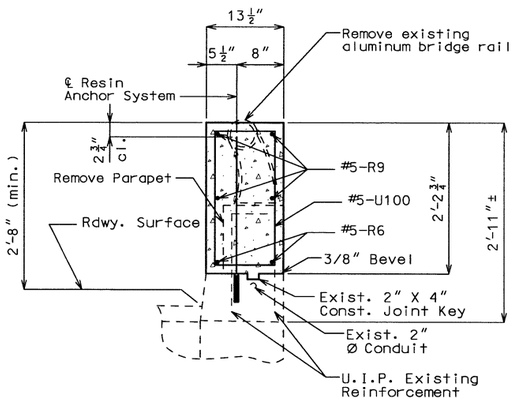
State	Proj. No.	Sheet No.
MO	021213-402	B33

FEDERAL PROJECT# I-70-1(175)

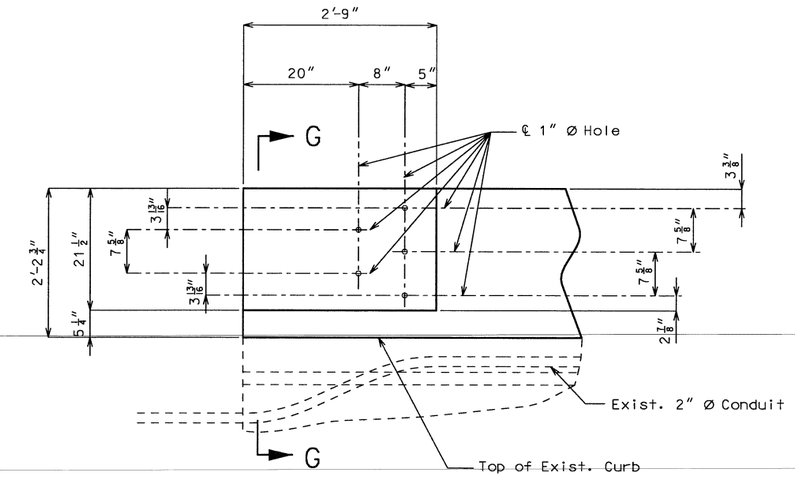
FINAL PLANS



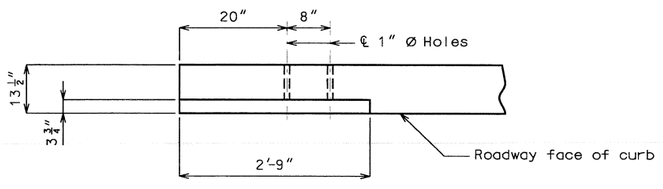
SECTION A-A



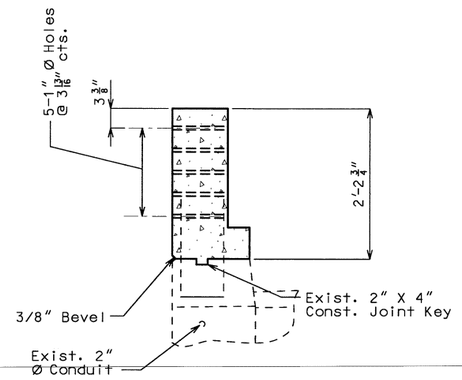
SECTION B-B



PART ELEVATION



PART PLAN



PART SECTION G-G

FINAL PLANS

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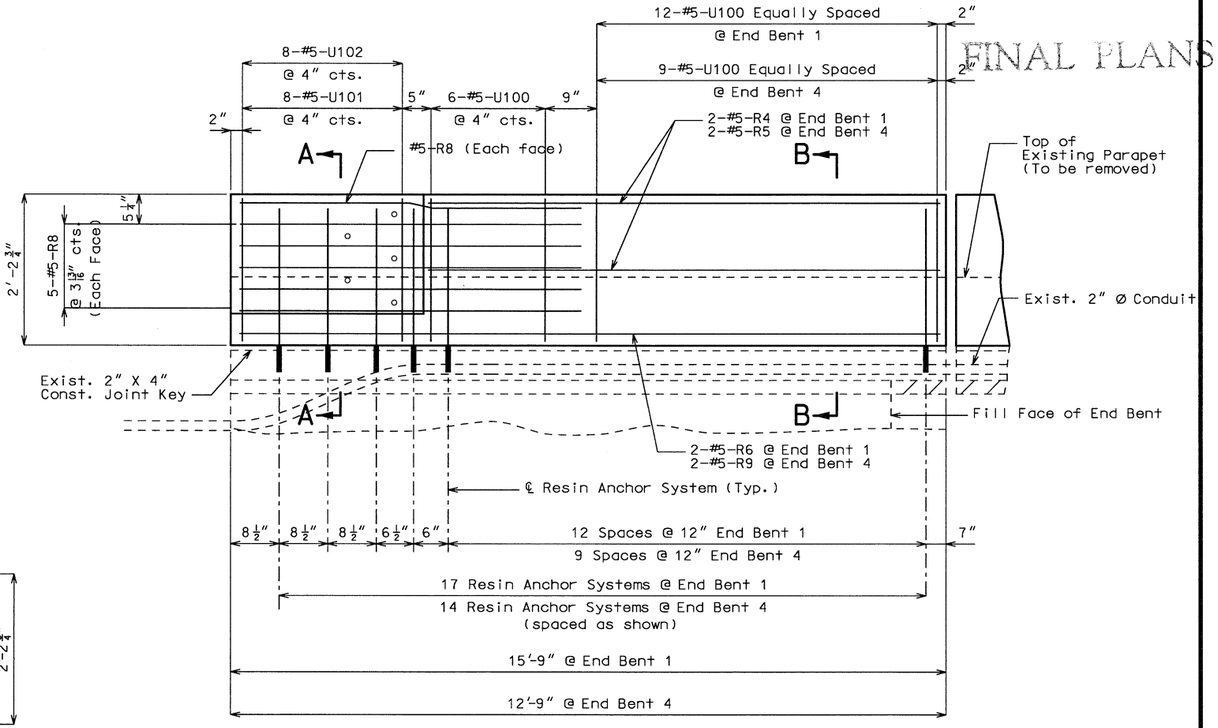
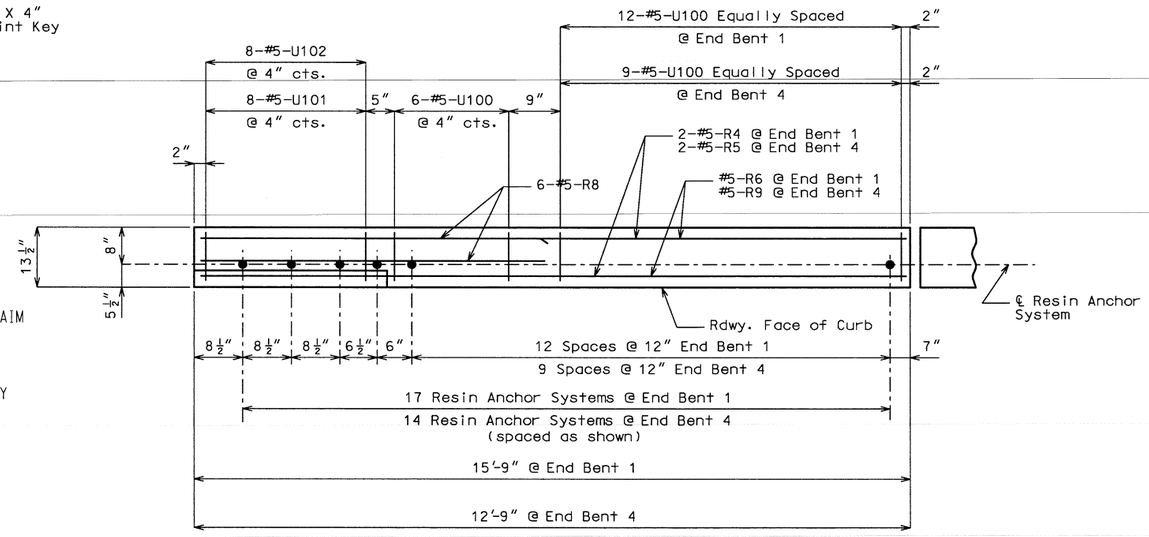
SIGNATURE _____ DATE _____

DETAILS OF GUARD RAIL ATTACHMENT



ELEVATION



PLAN

DETAILS OF CURB BLOCKOUT AT END BENTS

FINAL PLANS

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	(E) EPOXY	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			BLOCKOUT																									
193	5	U100	BLOCKOUT	E	13	S				10.	500	23.	750	10.	500	23.	750								6	8	6	4	1275
16	5	U101	BLOCKOUT	E	11	S						10.	500	23.	750	6.	750								3	5	3	3	54
16	5	U102	BLOCKOUT	E	19	S				23.	750	6.	750												2	7	2	5	40
24	5	R1	BLOCKOUT	E	20					9	9.000														9	9	9	244
12	5	R2	BLOCKOUT	E	20					34	9.000														34	9	34	9	435
12	5	R3	BLOCKOUT	E	20					22	10.000														22	10	22	10	286
4	5	R4	BLOCKOUT	E	20					12	9.000														12	9	12	9	53
4	5	R5	BLOCKOUT	E	20					9	9.000														9	9	9	9	41
* 4	5	R6	BLOCKOUT	E	20					15	6.000														15	6	15	6	65
24	5	R8	BLOCKOUT	E	20					5	7.000														5	7	5	7	140
2	5	R9	BLOCKOUT	E	20					12	6.000														12	6	12	6	26
			TOTALS																									
	5			E																								2659
			TOTAL																									0
			TOTAL	E																								2659

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	(E) EPOXY	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.

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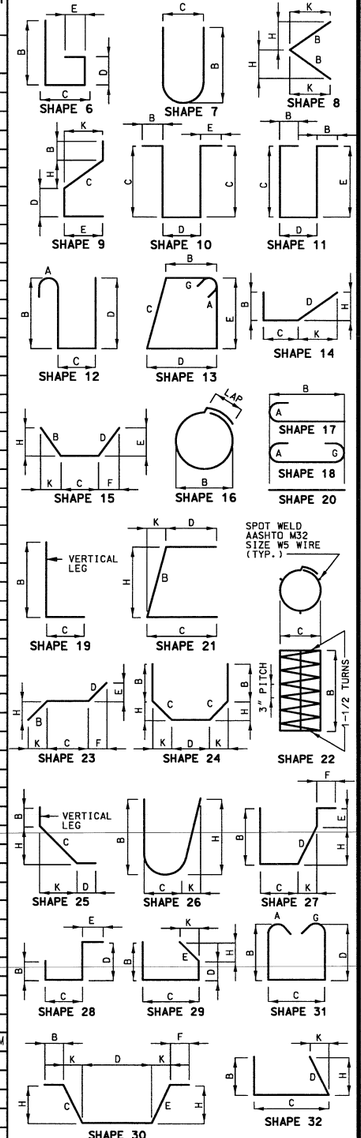
MO	021213-402	B34

FEDERAL PROJECT# I-70-1(175)



FINAL PLANS

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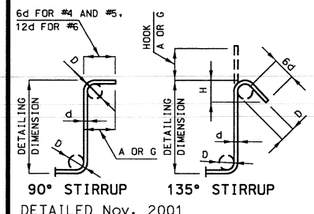
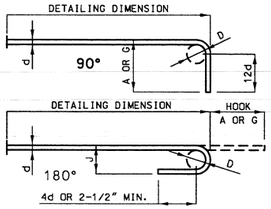
SIGNATURE _____ DATE _____



DETAILED Nov. 2001
CHECKED June 2002

STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK APPROX. H
#4	2"	4-1/2"	4-1/2"	3"
#5	2-1/2"	6"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	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	D (IN.)	ALL GRADES 180° HOOKS A OR G	180° HOOKS J	90° HOOKS A OR G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	12"
#7	5-1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9-1/2"	15"	11-3/4"	19"
#10	10-3/4"	17"	13-1/4"	22"
#11	12"	19"	14-3/4"	2'-0"
#14	18-1/4"	2'-3"	21-3/4"	2'-7"

* TWO ADDITIONAL #5-R6 ARE INCLUDED IN THE BAR BILL FOR TESTING.

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
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.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATOR'S USE (NEAREST INCH).
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.
REINFORCING STEEL (GRADE 60) = FY 60,000 PSI.

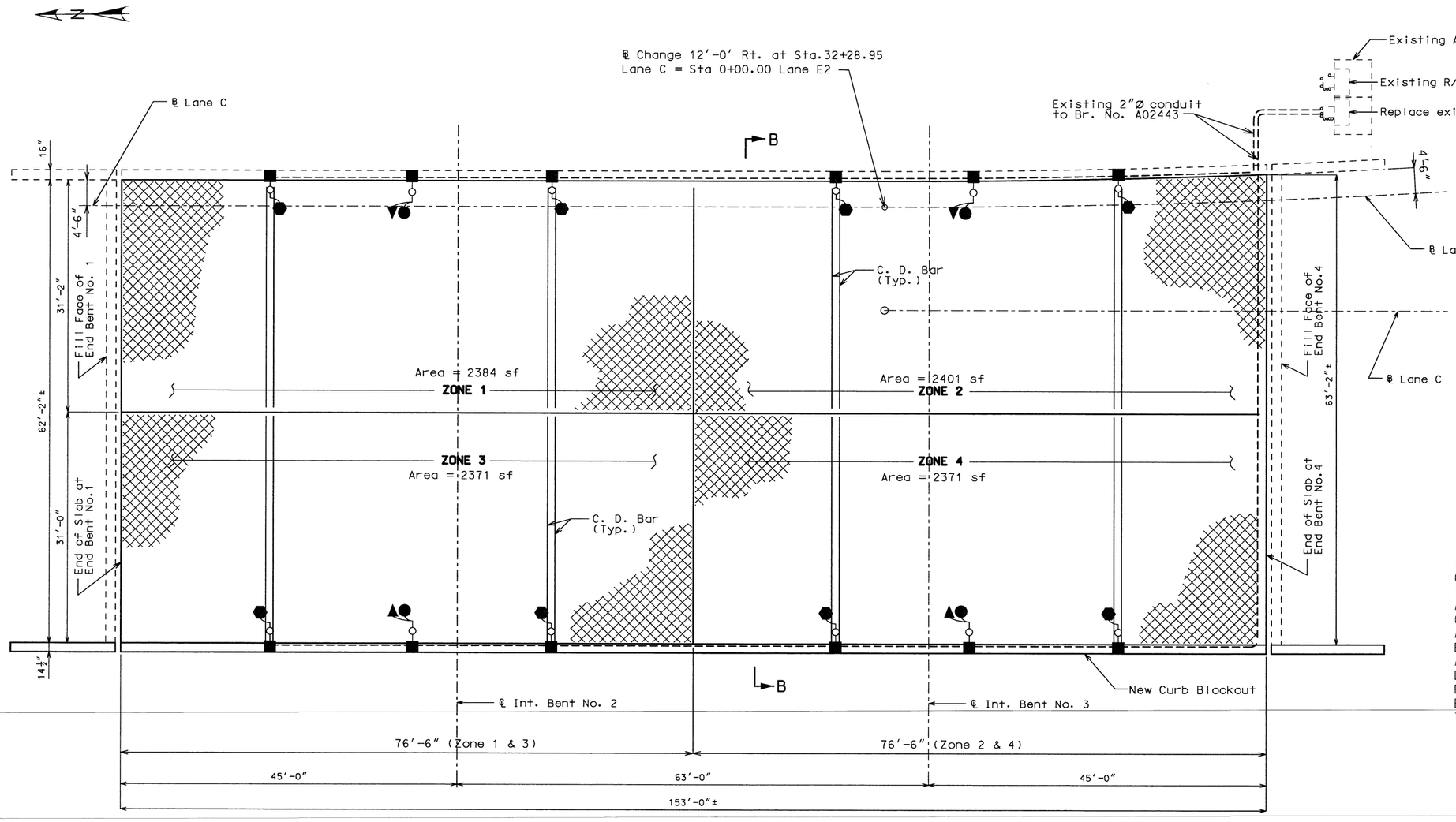
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A02443

State	Proj. No.	Sheet No.
MO	021213-402	B35

FEDERAL PROJECT# I-70-1(175)

FINAL PLANS



DENOTATIONS

- TITANIUM ANODE MESH
- SYSTEM NEGATIVE CONNECTION
- REFERENCE CELL
- GROUNDS
- EXISTING CONDUIT
- ACCESS HOLE
- EXISTING JUNCTION BOX/ ACCESS FITTING

FINAL PLANS

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PART PLAN OF SLAB SHOWING TITANIUM MESH CATHODIC PROTECTION SYSTEM

FINAL QUANTITIES	For Information only	
ITEM	UNIT	QUANTITY
Titanium Anode Mesh (Elgard 210)	Sq. Feet	9527
Reference Cells	Each	4
Thermite Welds	Each	12

Note: No direct payment shall be made for any additional conduit, junction boxes, access fittings, additional material, labor and modification to existing conduit.

NOTE:

Reference cells are to be placed at approximate ℄ of zone length as determined by the engineer.

Current Distribution Bars (C.D. Bar) to be placed near 1/4 point of Zones.

For Section B-B Thru Slab, typical zone layout and partial electrical schematic, see sheet no. 6.

Existing overlay and cathodic protection system shall be removed and the original deck scarified prior to installation of new Cathodic Protection System (see special provisions).

NOTE:

Replace existing R/C Cabinet with new enclosure, mounted on existing apron and meeting required manufacturer's specifications and all local electrical codes.

Use existing conduit and appurtenances, with the approval of the Engineer, as shown on the plans. All existing conduit and appurtenances not used with the new Cathodic Protection System shall be removed from the Structure.

All existing wiring in the deck and conduits shall be removed and replaced with new wiring.

The anode leads, system negative return leads, reference cell and reference cell ground lead shall be routed in one of the existing conduits.

The telephone cable shall be routed into the rectifier through one of the unused existing conduits.

The reference cell ground lead shall be welded to the top rebar within 12" of the reference cell.

Anode assembly number must match zone number.

Existing access holes through deck not used with the new cathodic protection system shall have its plastic sleeve and silicone sealant removed, hole cleaned and plugged with a nonmetallic expansive mortar in accordance with Std. Spec. 1066.

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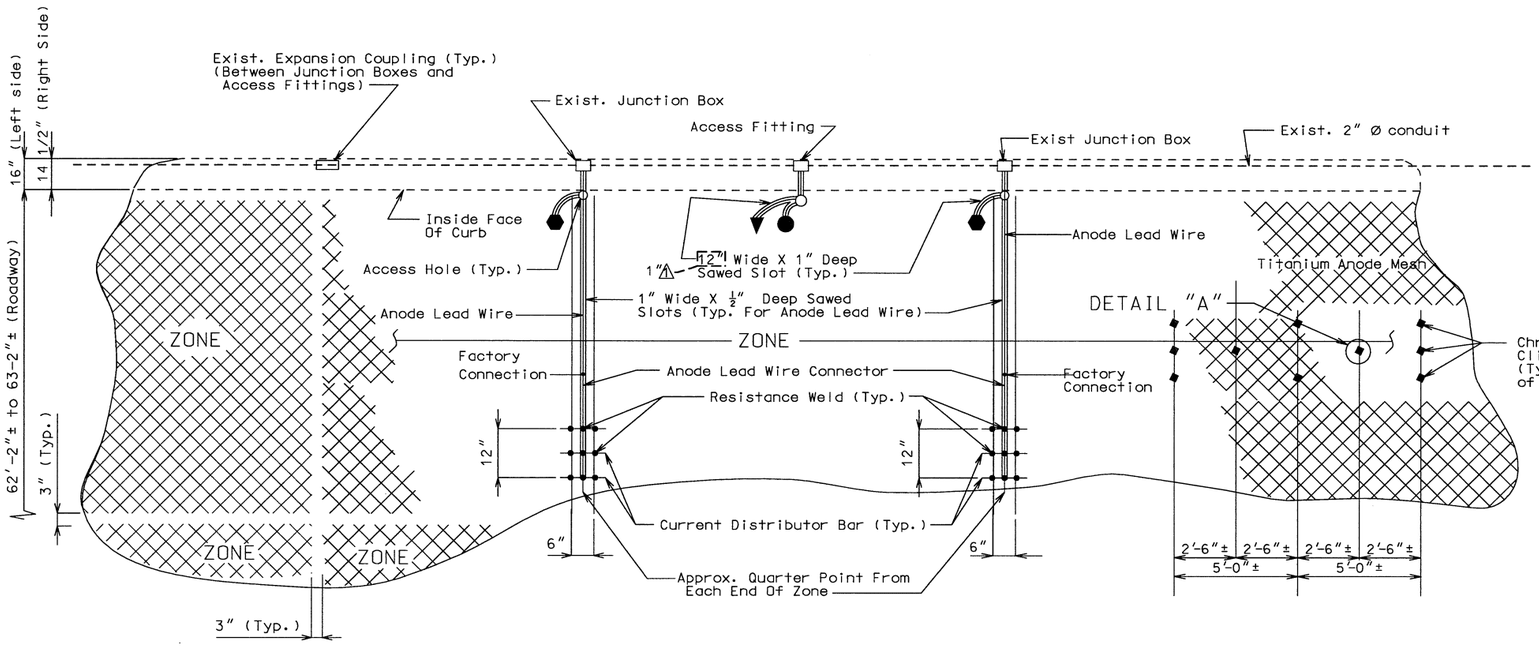
MO	021213-402	B36

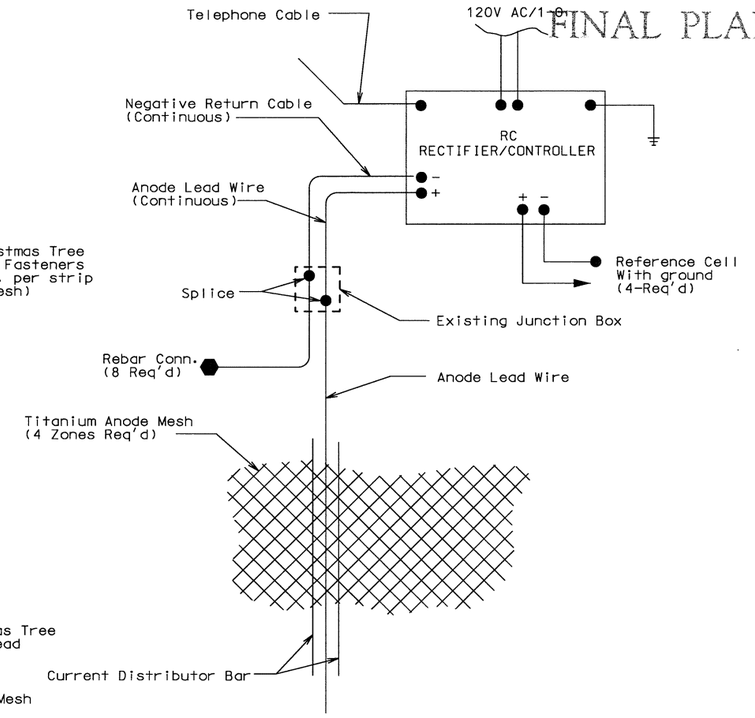
FEDERAL PROJECT# I-70-1(175)

FINAL PLANS

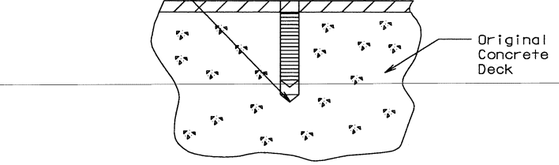


TYPICAL ZONE LAYOUT

Note: Use existing access holes, access fittings and junction boxes where acceptable as determined by the engineer.

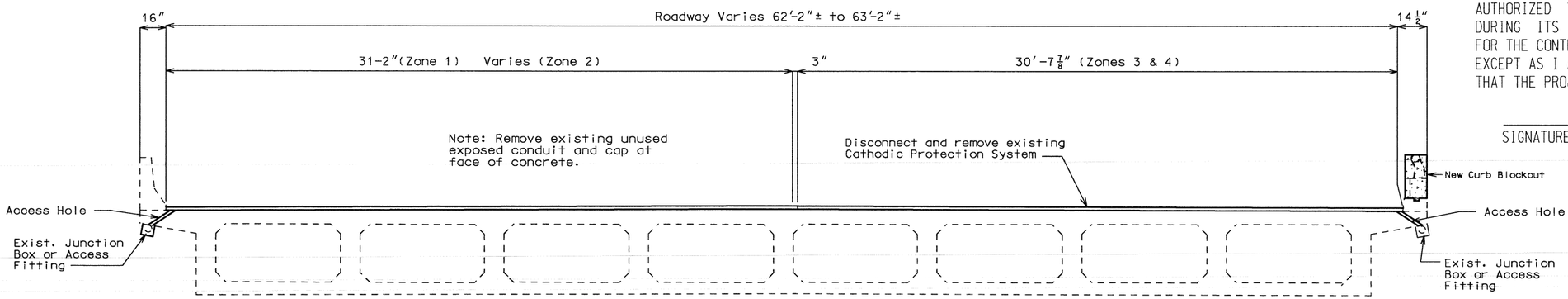


PARTIAL SCHEMATIC



DETAIL "A"

(Christmas Tree Clip)



SECTION B-B THRU SLAB

For Location of Section B-B, see Part Plan of Slab Showing Titanium Mesh Cathodic Protection System

FINAL PLANS

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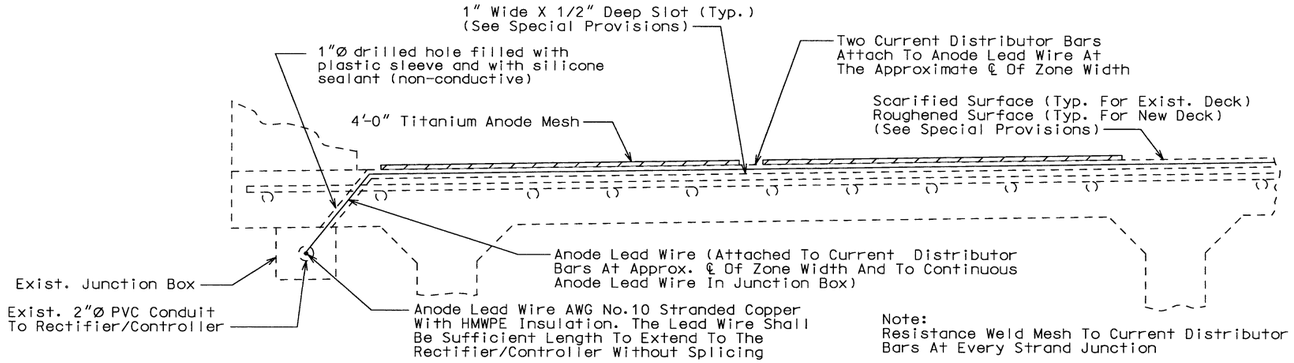
SIGNATURE _____ DATE _____

State	Proj. No.	Sheet No.
MO	021213-402	B37

FEDERAL PROJECT# I-70-1(175)

FINAL PLANS



TITANIUM ANODE MESH DETAILS

Notes for New Conduit and Appurtenances (if required by Engineer):
Conduit shall be schedule 40 heavy wall PVC (Polyvinyl Chloride Plastic). Each section of conduit shall bear the underwriters laboratories, inc. (UL) label.

Conduit shall be secured to concrete with clamps (galvanized/AASHTO M111) at abt. 5'-0" cts. Concrete anchors for clamps shall meet federal specification FF-S-325, group II, type 4, class I and shall be galvanized in accordance with ASTM A-153, B695-91 class 50. Minimum embedment in concrete shall be 1¼". The supplier shall furnish a manufacturer's certification that the concrete anchors meet the required material and galvanizing specifications.

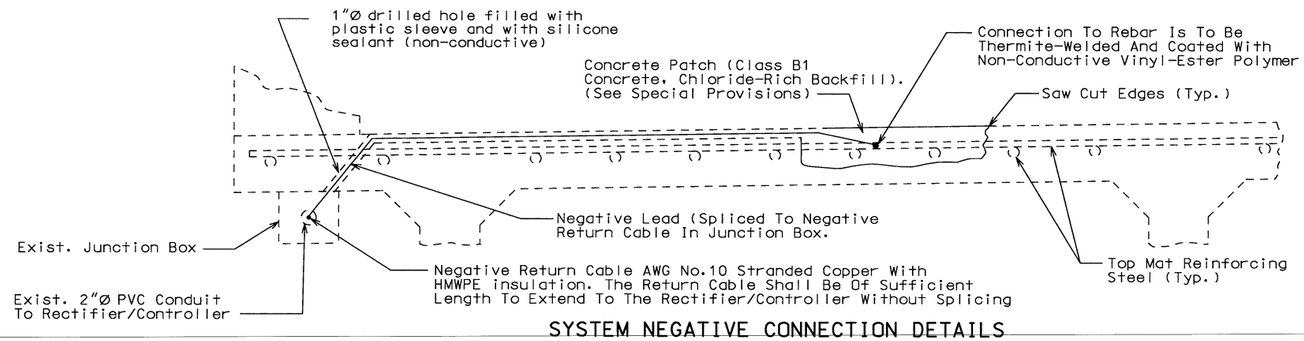
Weepholes shall be provided at appropriate locations to drain any moisture in the conduit lines.

Expansion couplings shall be installed on conduit lines between all junction boxes and access fittings as approved by the engineer.

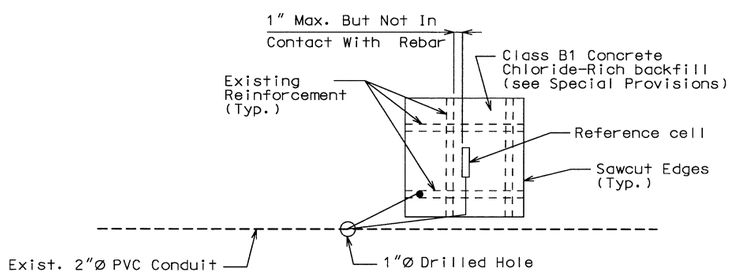
The location and direction of conduit may be shifted to meet field conditions as directed by the engineer.

All junction boxes shall be PVC molded, surface mounted, size 8" x 8" x 7" and equal to Carlon Electrical Construction products or Triangle Conduit and Cable company Inc.. The terminations shall be permanent or seperable.

The terminations and covers shall be of watertight construction.

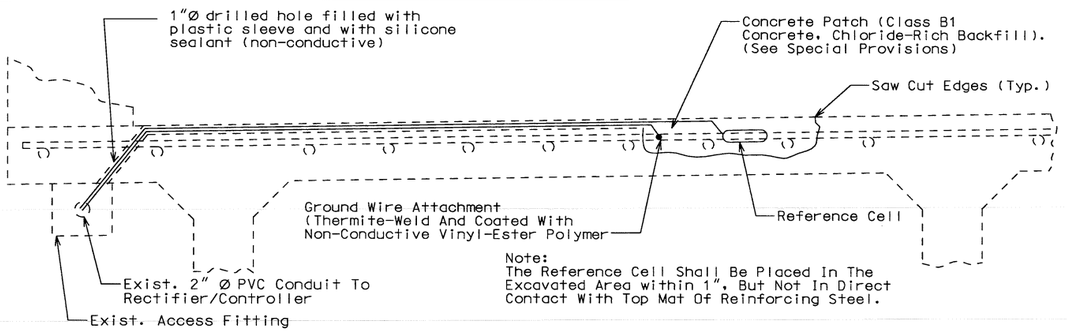


SYSTEM NEGATIVE CONNECTION DETAILS



PLAN OF REFERENCE CELL

Note: The ¾"Ø ground rod shall be of sufficient length to extend a minimum of 10'-0" below bottom of concrete pedestal. (Use existing if approved by the engineer).
Ground wire shall be AGW No.6 minimum (Use existing if approved by the engineer).
Drilled holes shall be provided in cabinets for all conduit. Locations of these holes are the responsibility of the contractor and cabinet manufacturer.



REFERENCE CELL DETAILS

Note:
All concrete removal shall be intiated by saw cutting the first 1/2".

FINAL PLANS

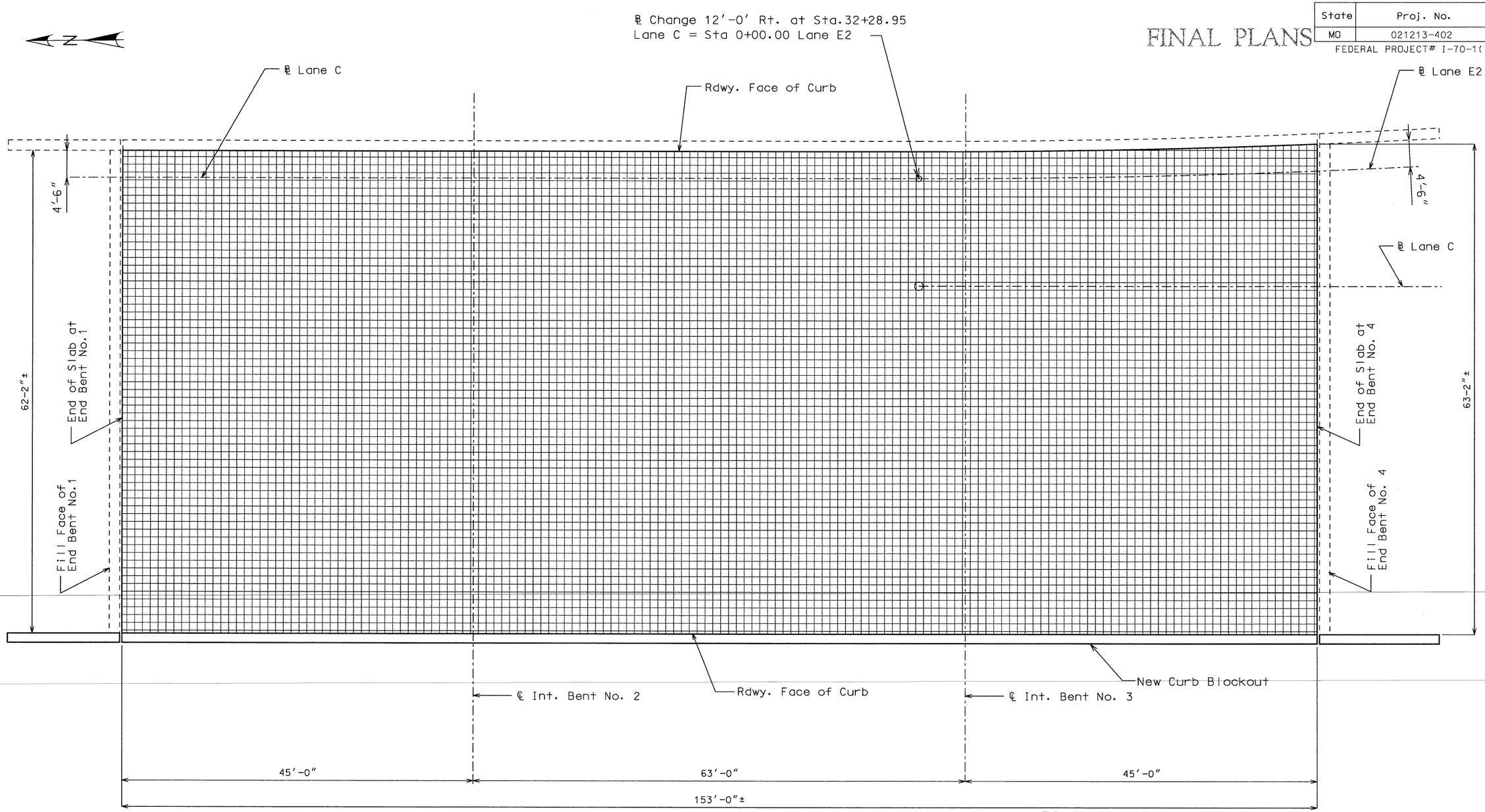
I CERTIFY THAT THIS PLAN SHEET ACCURATELY DEPICTS THE CONFIGURATION AND LOCATION OF THE ROADWAY AND ALL ITS APPURTENANT FEATURES, TO THE BEST OF MY KNOWLEDGE, AS I AND MY STAFF HAVE OBSERVED THE CONTRACTOR'S CONSTRUCTION OF THIS PROJECT. I SPECIFICALLY DISCLAIM ANY RESPONSIBILITY FOR THE DESIGN OF THIS PROJECT, EXCEPT AS I AND MY STAFF MAY HAVE MODIFIED OR AUTHORIZED THE MODIFICATION OF THE PROJECT DESIGN DURING ITS CONSTRUCTION; AND I DISCLAIM RESPONSIBILITY FOR THE CONTRACTOR'S ACTUAL CONSTRUCTION OF THE PROJECT, EXCEPT AS I AND MY STAFF MAY HAVE DIRECTED OR ORDERED THAT THE PROJECT BE CONSTRUCTED.

SIGNATURE _____ DATE _____

State	Proj. No.	Sheet No.
MO	021213-402	B38

FEDERAL PROJECT# I-70-1(175)

FINAL PLANS



PLAN OF CONCRETE DECK SHOWING GRID

0 5′ 10′

Scale

Note: Grid = Approx. 12″ Squares

(For location of deck repair and reference cells.)

Note: This sheet is to be completed by MoDOT construction personnel.

FINAL PLANS

I CERTIFY THAT THIS PLAN SHEET ACCURATELY DEPICTS THE CONFIGURATION AND LOCATION OF THE ROADWAY AND ALL ITS APPURTENANT FEATURES, TO THE BEST OF MY KNOWLEDGE, AS I AND MY STAFF HAVE OBSERVED THE CONTRACTOR'S CONSTRUCTION OF THIS PROJECT. I SPECIFICALLY DISCLAIM ANY RESPONSIBILITY FOR THE DESIGN OF THIS PROJECT, EXCEPT AS I AND MY STAFF MAY HAVE MODIFIED OR AUTHORIZED THE MODIFICATION OF THE PROJECT DESIGN DURING ITS CONSTRUCTION; AND I DISCLAIM RESPONSIBILITY FOR THE CONTRACTOR'S ACTUAL CONSTRUCTION OF THE PROJECT, EXCEPT AS I AND MY STAFF MAY HAVE DIRECTED OR ORDERED THAT THE PROJECT BE CONSTRUCTED.

SIGNATURE _____ DATE _____

Detailed Mar. 2002
Checked July 2002

I-70 LANE C OVER 12th ST.

Sheet No. 8 of 8

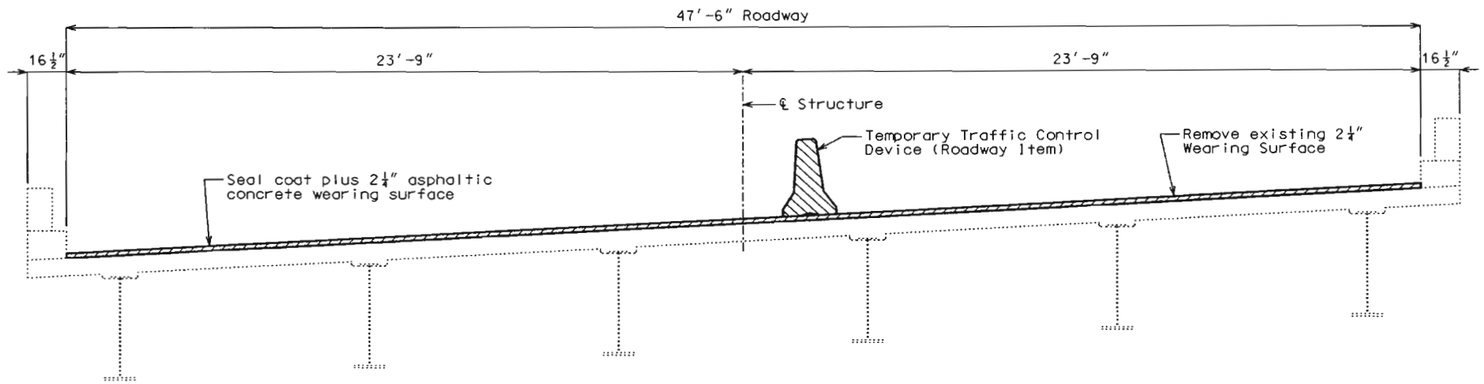
JACKSON COUNTY A02443

REV.

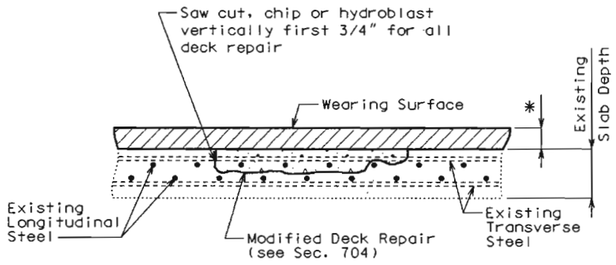
J:\$copee1\J411403 Bridge sheets\A02443\A02443_005_thru_8.dgn 11:13:31 AM 11/29/2004

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

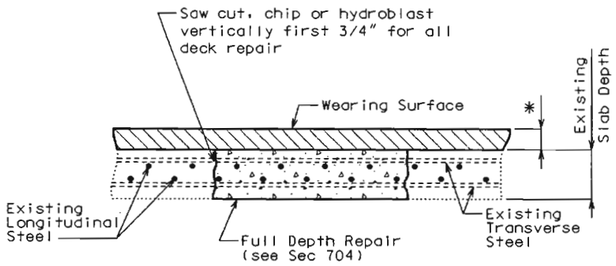
State	Proj. No.	Sheet No.
MO		B1
SEC/SUR	TWP	RGE



SECTION THRU EXISTING SLAB
(Left lane shown, right lane similar)



MODIFIED DECK REPAIR



FULL DEPTH REPAIR

* Seal coat and 2¼" asphaltic concrete wearing surface (Typ.)

GENERAL NOTES:

Design Specifications:
2002 - AASHTO 17th Edition
Bridge Deck Rating = 7

Miscellaneous:
Roadway surfacing adjacent to bridge ends to match bridge overlay (Roadway Item).

"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

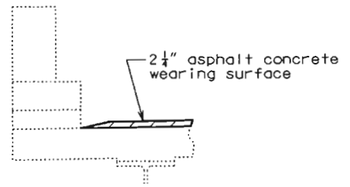
Outline of old work is indicated by dashed lines. Heavy lines indicate new work.

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

Existing expansion devices are to be used in place. Do not disturb.

Concrete for repairing concrete deck shall be a qualified special mortar in accordance with Sec 704 instead of the Class B-2 or B-1 concrete.

Estimated Quantities (Includes Left & Right Lanes)		
Item		Total
Removal of Asphalt Wearing Surface	sq. foot	22,895
Asphaltic Concrete Wearing Surface		(Rdwy. Item)
Seal Coat, Grade C	sq. yard	2,544
Full Depth Repair	sq. foot	230
Modified Deck Repair	sq. foot	2,290



TYPICAL SECTION OF EXISTING CURB SHOWING OUTLET

REPAIRS TO BRIDGE OVER RTE. 50

STATE ROAD IN KANSAS CITY

PROJECT NO. **STA. (Match Exist.)**
JOB NO. J1D0690A **RTE. I-470**

JACKSON COUNTY Date: 3/23/05

A-2444 REV.

Detailed Mar. 2005
Checked Mar. 2005

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

T:\br-proj\gabelr1\j1d0690a\a2444\a2444_001.dgn 08:24:13 AM 03/23/2005

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

May 2, 2024
4:15:46pm

COUNTY : JACKSON **BRIDGE :** A0244 R1 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 3/7/2024 **SUBMITTAL YEAR :** 2023

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	214
27	Year Built	1958
106	Year Reconstructed	2006
42A	Type of Service On	HIGHWAY
21	Structure Maintenance	STATE HIGHWAY AGENCY
22	Structure Owner	STATE HIGHWAY AGENCY
33	Br. Median Code	NO MEDIAN
37	Historical Significance	NOT ELIGIBLE FOR NR OF HP
101	Parallel Struc Desg	LEFT
103	Temporary Structure	NOT TEMPORARY
112	NBIS Bridge Length	YES

ROUTE DESIGNATION INFORMATION

5A	Record Type	ROUTE CARRIED 'ON' STRUCT
5B	Route Signing Prefix	IS
5C	Designated Level of Service	MAINLINE
5D	Route Number	00070
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 70 E
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000000019
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	03
100	STRAHNET Designation	ON A DEFENSE HWY
104	National Highway System	ON NHS
105	Federal Lands Highway	NOT APPLICABLE
110	Designated Nat. Network	YES

STRUCTURE LOCATION INFORMATION

4	Place	KANSAS CITY CITY
	Code	38000
9	Location	S 5 T 49 N R 33 W
11	Milepoint	2.34 miles
16	Latitude	39 D 5 M 58 S
17	Longitude	94 D 34 M 22 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	55722
30	AADT Year	2023
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	18%
114	Future AADT	75225
115	Future AADT Year	2043

UNDERRECORD INFORMATION

6	Features Intersected	CST E 12TH ST
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	02
54A	Vert. Clearance Ref.	HIGHWAY
54B	Vert. Clearance	15 Ft. 11 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	12 Ft. 6 In.
56	Left Lat Clearance	0 Ft. 0 In.
38	Navigation Control	N/A
39	Nav Vertical Clear	0 Ft. 0 In.
40	Nav Horizontal Clear	0 Ft. 0 In.
111	Nav. Pier Protection	
116	Nav. Cl. Vert. Clear	

STRUCTURE GEOMETRIC INFORMATION

10	Inventory Rte. Vert. Clear	99 Ft. 99 In.
19	By pass Detour Length	0.62 miles
32	Approach Roadway Width	60 Ft. 0 In.
34	Skew	0.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	60 Ft. 0 In.
48	Maximum Span Length	62 Ft. 12 In.
49	Structure Length	155 Ft. 10 In.
50A	Left Curb/Sidewalk Width	0 Ft. 0 In.
50B	Right Curb/Sidewalk Width	0 Ft. 0 In.
51	Curb to Curb Br. Width	62 Ft. 0 In.
52	Deck Width (Out-Out)	64 Ft. 12 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A0244

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

May 2, 2024
4:15:46pm

COUNTY : JACKSON **BRIDGE :** A0244 R1 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 3/7/2024 **SUBMITTAL YEAR :** 2023

LOAD RATING AND POSTING INFORMATION

31	Design Load	HS 20
41	Structure Status	A - OPEN NO RESTRICTIONS
63	Oper. Rating Meth.	LOAD FACTOR
64	Operating Rating	110 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	67 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	83.0 Percent
	Deficiency Rating	NOT DEFICIENT
	Funding Eligibility	
75A	Proposed Work	
75B	Work Done By	
76	New Struc Length	0 Ft. 0 In.
94	Struc Improve Cost	$ 0,000
95	Roadway Improve Cost	$ 0,000
96	Total Project Cost	$ 0,000
97	Year of Cost Estimates	0

APPRAISAL RATING INFORMATION

36A	Br. Rail App. Rating	MEETS ACCEPTBLE STND
36B	Transition Rail App. Rating	MEETS ACCEPTBLE STND
36C	Approach Rail App. Rating	MEETS ACCEPTBLE STND
36D	Rail End Treat. App. Rating	MEETS ACCEPTBLE STND
67	Struc Eval App. Rating	5
68	Deck Geometry App. Rating	9
69	Underclearance App. Rating	7
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	N

APPROVED POSTING INFORMATION

Approved Posting Category S-1

Ton1 Ton2 Ton3

Tonnage Values for Posting Sign

General Text for Posting Sign

NO POSTING REQUIRED

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	CONCRETE CONTINUOUS
43B	Main struc Constr. Type	BOX BEAM OR GIRDERS- SING
45	# of Main Spans	3
44A	Appr Struc. Mat type	
44B	Appr Struc. Cnstr. type	
46	# of Approach Span	0
107	Deck Mat/Constr.	1 CONCRETE CIP
108A	Wear Surf Mat/Constr.	4 LOW SLUMP
108B	Membrane Mat/Constr.	0 NONE
108C	Deck Protect Mat/Constr.	0 NONE

CONDITION RATING INFORMATION

58	Deck Cond. Rating	5
59	Superstructure Cond. Rating	5
60	Substructure Cond. Rating	5
61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	9 / 23	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Inspection	N	Months
93A	Frac. Critical Insp. Date		
92B	Underwater Inspection	N	Months
93B	Underwater Insp. Date		
92C	Special Inspection	N	Months
93C	Special Inspection Date		

BORDER BRIDGE INFORMATION

98	Neighboring State Code
98B	Neighboring State % Respon
99	Neighboring State Struc. No.

FIELD POSTING INFORMATION

Field Posting Category S-1

Ton1 Ton2 Ton3

Tonnage Values for Posting Sign

General Text for Posting Sign

NO POSTING REQUIRED

Design_No = A0244

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

May 2, 2024
4:15:46pm

COUNTY : JACKSON **BRIDGE :** A0244 R1 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE 'UNDER' STRUCT **RUN DATE :** 3/7/2024 **SUBMITTAL YEAR :** 2023

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	214
27	Year Built	1958
106	Year Reconstructed	0
42A	Type of Service On	HIGHWAY
21	Structure Maintenance	
22	Structure Owner	
33	Br. Median Code	
37	Historical Significance	
101	Parallel Struc Desg	LEFT
103	Temporary Structure	NOT TEMPORARY
112	NBIS Bridge Length	

ROUTE DESIGNATION INFORMATION

5A	Record Type	ROUTE 'UNDER' STRUCT	Code : 2
5B	Route Signing Prefix	CST	
5C	Designated Level of Service	MAINLINE	
5D	Route Number	00000	
5E	Directional Suffix	NOT APPLICABLE	
7	Facility Carried	IS 70 E	
12	Base Hwy. Network		
13A	LRS Inventory Route No.		
13B	Subroute No.		
20	Toll Status	ON FREE ROAD	
26	Functional Classification	17-URBAN COLLECTOR	
28A	Lanes on Structure	03	
100	STRAHNET Designation	RTE NOT A DEFENSE HWY	
104	National Highway System	NOT ON NHS	
105	Federal Lands Highway		
110	Designated Nat. Network	NO	

STRUCTURE LOCATION INFORMATION

4	Place	KANSAS CITY CITY
	Code	38000
9	Location	S 5 T 49 N R 33 W
11	Milepoint	0.56 miles
16	Latitude	39 D 5 M 58 S
17	Longitude	94 D 34 M 22 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	2609
30	AADT Year	2023
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	5%
114	Future AADT	
115	Future AADT Year	

UNDERRECORD INFORMATION

6	Features Intersected	CST E 12TH ST
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	02
54A	Vert. Clearance Ref.	
54B	Vert. Clearance	
55A	Rt. Lat Clear Ref.	
55B	Rt. Lat Clearance	
56	Left Lat Clearance	
38	Navigation Control	
39	Nav Vertical Clear	
40	Nav Horizontal Clear	
111	Nav. Pier Protection	
116	Nav. Cl. Vert. Clear	

STRUCTURE GEOMETRIC INFORMATION

10	Inventory Rte. Vert. Clear	15 Ft. 11 In.
19	By pass Detour Length	0.00 miles
32	Approach Roadway Width	
34	Skew	
35	Struct. Flared	
47	Total Horiz. Clear	17 Ft. 1 In.
48	Maximum Span Length	62 Ft. 12 In.
49	Structure Length	155 Ft. 10 In.
50A	Left Curb/Sidewalk Width	
50B	Right Curb/Sidewalk Width	
51	Curb to Curb Br. Width	
52	Deck Width (Out-Out)	
53	Vert.Clearance Over Deck	

Design_No = A0244

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

May 2, 2024
4:15:46pm

COUNTY :	**JACKSON**	**BRIDGE :**	**A0244 R1**	**REVIEW STATUS :**	**APPROVED**	**NBI STATUS :**	**P**
RECORD TYPE :	**ROUTE 'UNDER' STRUCT**			**RUN DATE :**	**3/7/2024**	**SUBMITTAL YEAR :**	**2023**

LOAD RATING AND POSTING INFORMATION

31	Design Load
41	Structure Status
63	Oper. Rating Meth.
64	Operating Rating
65	Inventory Rating Meth
66	Inventory Rating
70	Bridge Posting Code

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating
	Deficiency Rating
	Funding Eligibility
75A	Proposed Work
75B	Work Done By
76	New Struc Length
94	Struc Improve Cost
95	Roadway Improve Cost
96	Total Project Cost
97	Year of Cost Estimates

APPRAISAL RATING INFORMATION

36A	Br. Rail App. Rating
36B	Transition Rail App. Rating
36C	Approach Rail App. Rating
36D	Rail End Treat. App. Rating
67	Struc Eval App. Rating
68	Deck Geometry App. Rating
69	Underclearance App. Rating
71	Waterway Adeq. App. Rating
72	Approach Road App. Rating
113	Scour Assess App. Rating

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	CONCRETE CONTINUOUS
43B	Main struc Constr. Type	BOX BEAM OR GIRDERS- SING
45	# of Main Spans	
44A	Appr Struc. Mat type	
44B	Appr Struc. Cnstr. type	
46	# of Approach Span	
107	Deck Mat/Constr.	
108A	Wear Surf Mat/Constr.	
108B	Membrane Mat/Constr.	
108C	Deck Protect Mat/Constr.	

CONDITION RATING INFORMATION

58	Deck Cond. Rating
59	Superstructure Cond. Rating
60	Substructure Cond. Rating
61	Channel /Channel Protection Cond. Rating
62	Culvert Cond. Rating

INSPECTION INFORMATION

90	Gen. Insp Date
91	Gen. Insp. Frequency
92A	Frac. Critical Inspection
93A	Frac. Critical Insp. Date
92B	Underwater Inspection
93B	Underwater Insp. Date
92C	Special Inspection
93C	Special Inspection Date

BORDER BRIDGE INFORMATION

98	Neighboring State Code
98B	Neighboring State % Respon
99	Neighboring State Struc. No.

APPROVED POSTING INFORMATION

Approved Posting Category

Ton1 Ton2 Ton3

Tonnage Values for Posting Sign

General Text for Posting Sign

FIELD POSTING INFORMATION

Field Posting Category

Ton1 Ton2 Ton3

Tonnage Values for Posting Sign

General Text for Posting Sign

Design_No = A0244