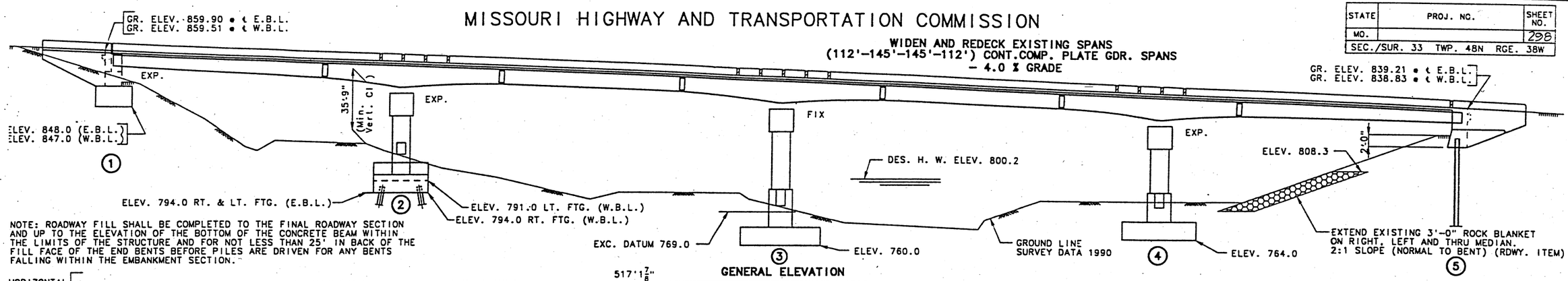
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

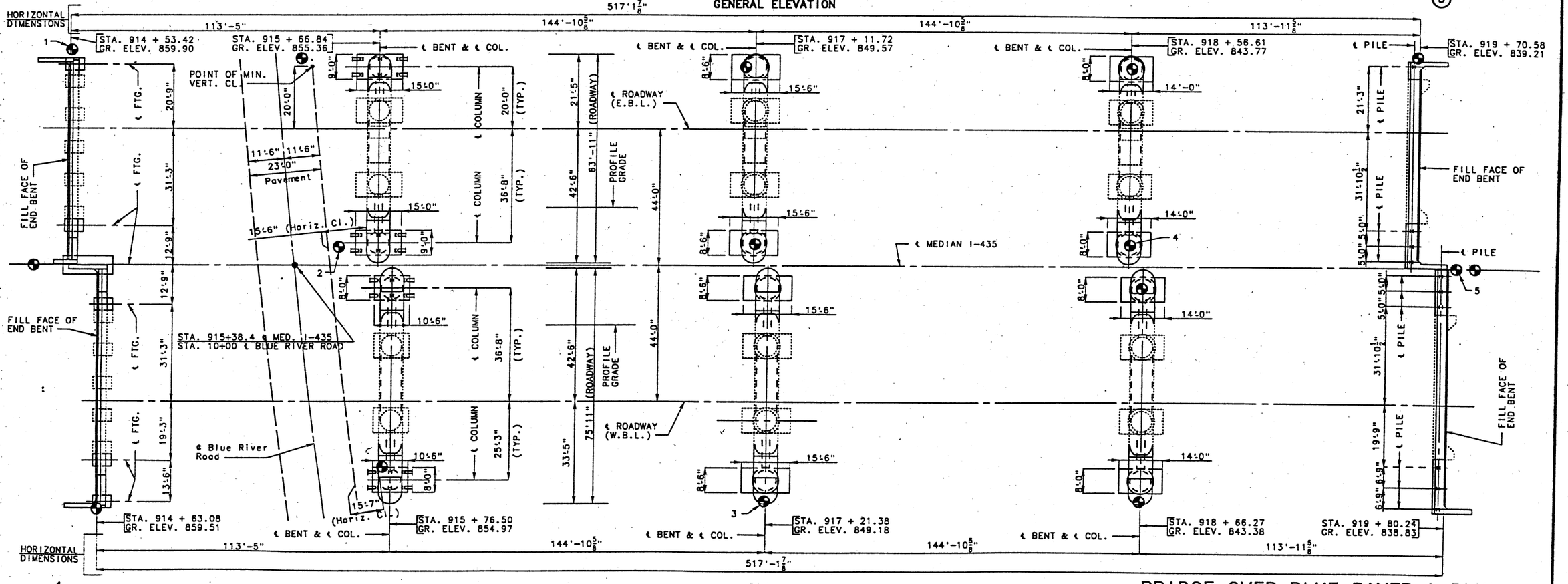
STATE	PROJ. NO.	SHEET NO.
MO.		298
SEC./SUR. 33 TWP. 48N RGE. 38W		

WIDEN AND REDECK EXISTING SPANS
(112'–145'–145'–112') CONT.COMP. PLATE GDR. SPANS
– 4.0 % GRADE



NOTE: ROADWAY FILL SHALL BE COMPLETED TO THE FINAL ROADWAY SECTION AND UP TO THE ELEVATION OF THE BOTTOM OF THE CONCRETE BEAM WITHIN THE LIMITS OF THE STRUCTURE AND FOR NOT LESS THAN 25' IN BACK OF THE FILL FACE OF THE END BENTS BEFORE PILES ARE DRIVEN FOR ANY BENTS FALLING WITHIN THE EMBANKMENT SECTION.

GENERAL ELEVATION



PLAN

B.M. ELEV. 860.63 P.-K. NAIL IN BR. CURB ● N.E. COR. E.B.L. BR. A-610

● INDICATES LOCATION OF BORINGS.

NOTE: FOR GENERAL NOTES, ESTIMATED QUANTITIES, HYDROLOGIC DATA AND PILE AND FOOTING DATA SEE SHEET NO. 2.

NOTE AND DISCLAIMER REGARDING BORING LOG DATA

THE LOCATIONS OF ALL SUBSURFACE BORING FOR THIS STRUCTURE ARE SHOWN ON THE BRIDGE PLAN SHEET FOR THIS STRUCTURE. BORING DATA FOR THE NUMBERED LOCATIONS IS SHOWN ON SHEET NO. 2. THE BORING DATA FOR ALL LOCATIONS INDICATED, AS WELL AS ANY OTHER BORING LOGS OR OTHER FACTUAL RECORDS OF SUBSURFACE DATA AND INVESTIGATIONS PERFORMED BY THE DEPARTMENT FOR THE DESIGN OF THE PROJECT, IS AVAILABLE FROM THE DISTRICT MATERIALS ENGINEER UPON WRITTEN REQUEST AS OUTLINED IN THE PROJECT SPECIAL PROVISIONS. NO GREATER SIGNIFICANCE OR WEIGHT SHOULD BE GIVEN TO THE BORING DATA DEPICTED ON THE PLAN SHEETS THAN TO SUBSURFACE DATA AVAILABLE FROM THE DISTRICT OR ELSEWHERE.

THE COMMISSION DOES NOT REPRESENT OR WARRANT THAT ANY SUCH BORING DATA ACCURATELY DEPICTS THE CONDITIONS TO BE ENCOUNTERED IN CONSTRUCTING THIS PROJECT. A CONTRACTOR ASSUMES ALL RISKS IT MAY ENCOUNTER IN BASING ITS BID PRICES, TIME OR SCHEDULE OF PERFORMANCE ON THE BORING DATA DEPICTED HERE OR THOSE AVAILABLE FROM THE DISTRICT, OR ON ANY OTHER DOCUMENTATION NOT EXPRESSLY WARRANTED, WHICH THE CONTRACTOR MAY OBTAIN FROM THE COMMISSION.

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

DESIGNED FEB. 1993
DETAILED AUG. 1993
CHECKED AUG. 1993

SHEET NO. 1 OF 5:.

BRIDGE OVER BLUE RIVER & BLUE RIVER ROAD

STATE ROAD: INTERSTATE RTE. I-435
ABOUT 1.5 MILES WEST OF RTE. 71
PROJECT NO. STA. 914+63.08
JOB NO. J410807 RTE. I-435
JACKSON COUNTY

DATE 2/28/94

STD.
STD. 706.35
A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		55

299

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1992
LOAD FACTOR DESIGN.
SEISMIC PERFORMANCE CATEGORY A.

DESIGN LOADING:
HS20-44 MODIFIED 24,000# TANDEM AXLE
NO FUTURE WEARING SURFACE
EARTH 120#/CU. FT., EQUIVALENT FLUID PRESSURE 45#/CU. FT.
FATIGUE STRESS - CASE I.

DESIGN UNIT STRESSES:
CLASS B CONCRETE (SUBSTRUCTURE) F'C=3,000 PSI.
CLASS B1 CONCRETE (SAFETY BARRIER CURB) F'C=4,000 PSI.
CLASS B2 CONCRETE (SUPERSTRUCTURE EXCEPT SAFETY BARRIER CURB) F'C=4,000 PSI.
REINFORCING STEEL (GRADE 60) FY=60,000 PSI.
STRUCTURAL CARBON STEEL FY=36,000 PSI.
STEEL PILE FB=9,000PSI.

STRUCTURAL STEEL:
FIELD CONNECTIONS, HIGH STRENGTH BOLTS 3/4"Ø, HOLES 13/16"Ø, EXCEPT AS NOTED.
HIGH STRENGTH BOLTS, NUTS AND WASHERS WILL BE SAMPLED FOR QUALITY ASSURANCE AS SPECIFIED IN STD. SPEC. 106 AND FIELD SECTION (F5-712).

REINFORCING STEEL:
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2", UNLESS OTHERWISE SHOWN.
ALL REINFORCING BARS IN TOPS OF SUBSTRUCTURE BEAMS OR CAPS SHALL BE SPACED TO CLEAR ANCHOR BOLTS FOR BEARINGS BY AT LEAST 1/2".
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.

PAINT:
PAINT NEW STRUCTURAL STEEL SYSTEM E SHOP COATS (GRAY) IN ACCORDANCE WITH SPECIAL PROVISIONS. NO FIELD PAINT EXCEPT FOR TOUCH UP.

AREAS TO BE ENCASED IN END BENT CONCRETE SHALL BE HAND CLEANED OF LOOSE RUST AND SCALE BEFORE CONCRETE IS POURED AND PAINTED WITH 1 COAT OF CALCIUM SULFONATE PRIMER. COST TO BE INCLUDED IN OTHER ITEMS.

JOINT FILLER:
ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1057.2.4, EXCEPT AS NOTED.

NOTE: OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY LINES INDICATE NEW WORK.
TRAFFIC OVER STRUCTURE TO BE MAINTAINED DURING CONSTRUCTION, SEE SHEET NO. 3.
CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW STEEL.

THE * DIAMETER RESIN ANCHOR SYSTEMS SHALL HAVE A MINIMUM ULTIMATE PULLOUT STRENGTH OF ** LBS. IN CONCRETE WITH FC'= 4000 PSI, SEE SPECIAL PROVISIONS.

* BAR SIZE	** PULLOUT
5/8"	15,500
3/4"	20,400
1"	33,600

HYDROLOGIC DATA	
DRAINAGE AREA	= 106.7 SQ. MI. (LT. HILLY)
DESIGN DISCHARGE	= 32,000 CFS (FEMA CURVES)
DESIGN HIGH WATER ELEVATION	= 800.2 (100 YEARS)
ESTIMATED BACKWATER	= 0.12 (FT.)

PILE & FOOTING DATA (E.B.L.)

	BENT NO.	1	2	3	4	5
BEARING PILE	PILE TYPE AND SIZE		HP12X53			HP10X42
	NUMBER		12			4
	APPROXIMATE LENGTH FT.		①			68
	DESIGN BEARING TONS					
	HAMMER ENERGY REQ'D FT.-LBS.					
SPREAD FOOTING	FOUNDATION MATERIAL	ROCK		SHALE		
	DESIGN BEARING TONS/SQ. FT.	5.5		6.0	6.0	

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.
ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.
MANUFACTURED PILE POINT REINFORCEMENT SHALL BE USED ON ALL PILES IN BENT 5. SEE SPECIAL PROVISION.

① 21' LEFT FOOTING
18" RIGHT FOOTING

PILE & FOOTING DATA (W.B.L.)

	BENT NO.	1	2	3	4	5
BEARING PILE	PILE TYPE AND SIZE		HP12X53			HP10X42
	NUMBER		12			6
	APPROXIMATE LENGTH FT.		68			67
	DESIGN BEARING TONS					
	HAMMER ENERGY REQ'D FT.-LBS.					
SPREAD FOOTING	FOUNDATION MATERIAL	ROCK		SHALE		
	DESIGN BEARING TONS/SQ. FT.	5.5		6.0	6.0	

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.
ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.
MANUFACTURED PILE POINT REINFORCEMENT SHALL BE USED ON ALL PILES IN BENT 5. SEE SPECIAL PROVISION.

ESTIMATED QUANTITIES

ITEM		SUBSTR.	SUPERSTR.	TOTAL
PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE	LUMP SUM			1
REMOVAL OF EXISTING BRIDGE DECK	SQ. FT.		48237	48237
CLASS 1 EXCAVATION	CU. YD.	1255		1255
CLASS 2 EXCAVATION	CU. YD.	422		422
STRUCTURAL STEEL PILES (10")	LIN. FT.	674		674
STRUCTURAL STEEL PILES (12")	LIN. FT.	450		450
PRE-BORE FOR PILING	LIN. FT.	294		294
PILE POINT REINFORCEMENT	EACH	10		10
CLASS B CONCRETE (SUBSTR.)	CU. YD.	992		992
SLAB ON STEEL	SQ. YD.		8339	8339
* SAFETY BARRIER CURB	LIN. FT.		2133	2133
STRIP SEAL EXPANSION DEVICE	LIN. FT.		140	140
REINFORCING STEEL (BRIDGES)	LB.	121740		121740
REINFORCING STEEL (EPOXY COATED)	LB.	2240		2240
FABRICATED STRUCTURAL CARBON STEEL (PLATE GIRDER)	LB.		827350	827350
SLAB DRAINS	EACH		120	120
EXISTING DIAPHRAGM CONNECTIONS TO FLANGES	LUMP SUM			1

NOTE: CONCRETE ABOVE UPPER CONSTRUCTION JOINT IN BACKWALL AT END BENT NO. 1. (E.B.L. & W.B.L.) IS INCLUDED WITH CLASS B (SUBSTRUCTURE) QUANTITIES.
ALL CONCRETE ABOVE THE LOWER CONSTRUCTION JOINT IN THE END BENT NO. 5 (E.B.L. & W.B.L.) IS INCLUDED WITH THE SUPERSTRUCTURE QUANTITIES.
ALL REINFORCEMENT IN END BENT NO. 1 (E.B.L. & W.B.L.) IS INCLUDED WITH SUBSTRUCTURE QUANTITIES.
ALL REINFORCEMENT IN END BENT NO. 5 (E.B.L. & W.B.L.) IS INCLUDED WITH SUPERSTRUCTURE QUANTITIES.
* SAFETY BARRIER CURB SHALL BE CAST-IN-PLACE OPTION OR SLIP-FORM-OPTION.

ESTIMATED QUANTITIES FOR ALTERNATE SLABS

TYPE OF SLABS	SLAB ON STEEL		
	REINF. (LBS.)		CONC. (CU. YDS.)
	EPOXY	PLAIN	
CAST-IN-PLACE CONVENTIONAL FORMS	712820	5910	2112.1
STAY-IN-PLACE FORMS ***	712820	5910	1984.8 **

NOTE: THE TABLE OF ESTIMATED QUANTITIES FOR ALTERNATE SLABS REPRESENTS THE QUANTITIES USED BY THE STATE IN PREPARING THE COST ESTIMATE FOR CONCRETE SLABS. VARIATIONS MAY BE ENCOUNTERED IN THESE ESTIMATED QUANTITIES BUT THESE VARIATIONS CANNOT BE USED FOR AN ADJUSTMENT IN THE CONTRACT UNIT PRICE PER SQUARE YARD OF ALTERNATE SLAB USED.
SEE SPECIAL PROVISIONS FOR ALTERNATE METHODS OF FORMING SLABS.
** DOES NOT INCLUDE CONCRETE REQUIRED TO FILL CORRUGATION OF S.I.P. FORMS.
*** DOES NOT INCLUDE REINFORCING BARS USED AS BAR SUPPORTS.

STATE	PROJ. NO.	SHEET NO.
MO.		300

ELEV. 858.0

DARK BROWN SILTY CLAY, WITH BOULDERS, MOIST.

ELEV. 853.4

WEATHERED GRAY CLAY SHALE.

ELEV. 849.9

LIGHT GRAY LIMESTONE, THIN BEDDED, FINE GRAINED, VUGGY, MODERATELY HARD (CHERT SEAM AT 12.9').

ELEV. 839.6

(1)

(CORE)

ELEV. 810.0

BROWN SILTY CLAY, MOIST.

ELEV. 808.5

BROWN SILTY CLAY WITH GRAVEL, BOULDERS, MOIST.

ELEV. 796.0

LIGHT BROWN SHALE, DRY.

ELEV. 787.9

(2)

STANDARD PENETRATION TEST

DEPTH	BLOWS/6"	
		ELEV. 783.3
		DARK GRAY SILTY CLAY, MOIST.
		ELEV. 772.2
		DARK GRAY SILTY CLAY WITH SOME COBBLES AND GRAVEL. (LIMESTONE LAYER FROM 13.0-14.0').
		ELEV. 769.3
18'	100 IN 4"	DARK GRAY SILTY CLAY, MOIST.
		ELEV. 765.9
23.4'	100 IN 5"	GRAY CLAY SHALE.
28.9'	100 IN 5"	ELEV. 754.4

(3)

STANDARD PENETRATION TEST

DEPTH	BLOWS/6"	
		ELEV. 785.7
5'	4-7-8	DARK GRAY, SILTY CLAY, STIFF TO VERY STIFF, MOIST.
		ELEV. 776.7
10'	2-2-3	GRAY BROWN CLAYEY SILT WITH SOME SAND, SOFT TO MEDIUM STIFF. MOIST.
15'	5-13-9	ELEV. 771.2
		GRAY BROWN SILTY CLAY WITH SOME GRAVEL, SCATTERED COBBLES AND LIMONITE STAINING, MOIST.
19'	100 IN 6"	ELEV. 767.4
25'	100 IN 5"	GRAY CLAY SHALE, VERY STIFF.
30.5'	100 IN 3"	ELEV. 755.2

(4)

ELEV. 837.0

DARK BROWN SILTY CLAY, MOIST.

ELEV. 830.5

DARK GRAY CLAY SHALE FILL.

ELEV. 797.0

COBBLES AND BOULDERS (FILL).

ELEV. 796.0

BOULDERS (FILL). REFUSAL AT 44.8'.

ELEV. 792.2

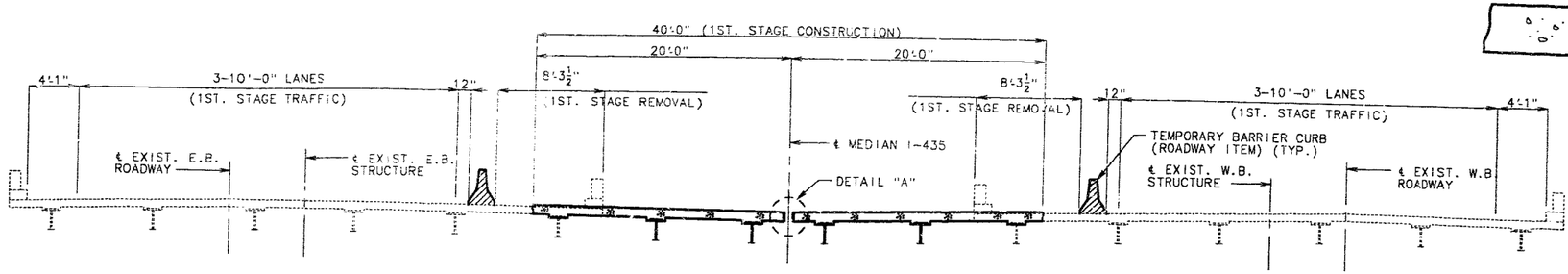
(5)

REVISED:

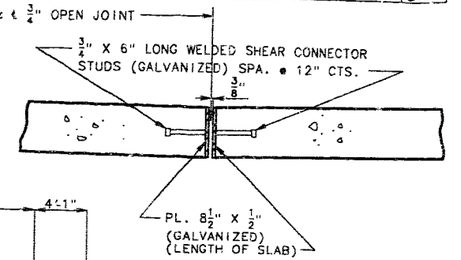
BORING DATA

NOTE: FOR LOCATION OF BORINGS SEE SHEET NO. 1. BORING DATA FOR ALL LOCATIONS IS AVAILABLE UPON REQUEST FROM THE DISTRICT OFFICE.

STATE	PROJ. NO.	SHEET NO.
MO.		301

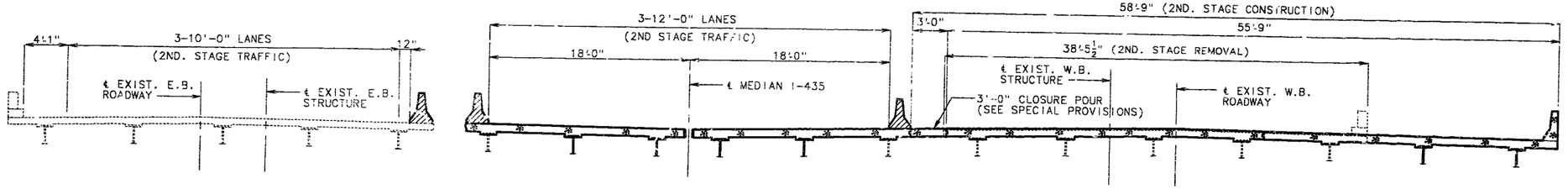


STAGE ONE CONSTRUCTION

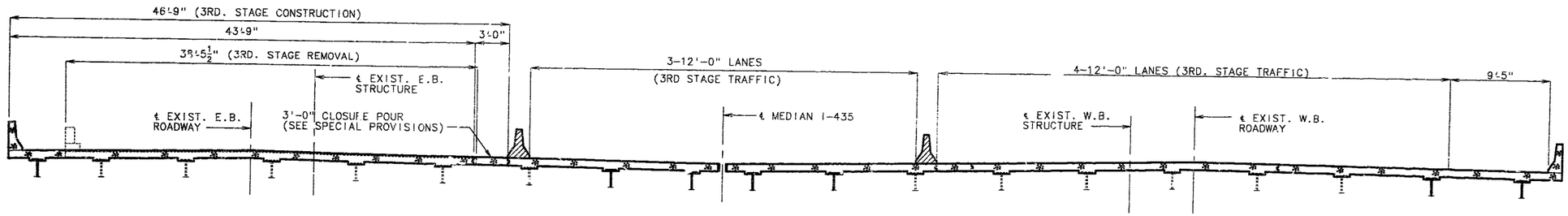


DETAIL "A"

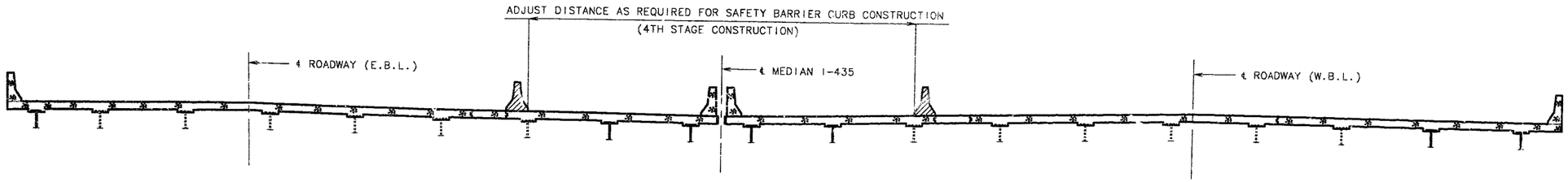
NOTE: THE 8 1/2"X 1/2" GALVANIZED PL. AND THE 3/4" Ø X 6" STUDS ARE INCLUDED IN FABRICATED STRUCTURAL CARBON STEEL QUANTITIES.



STAGE TWO CONSTRUCTION



STAGE THREE CONSTRUCTION



STAGE FOUR CONSTRUCTION

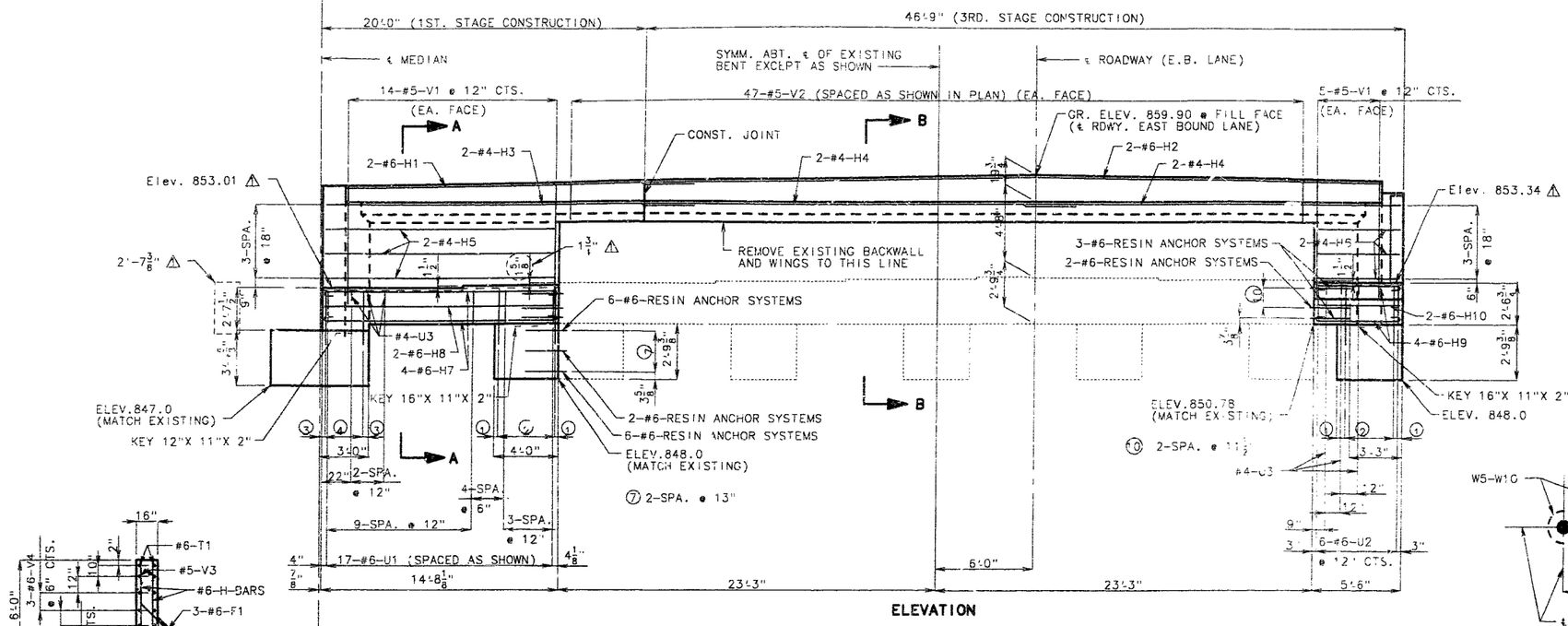
326-289

REVISED:

DETAILED JUNE 1993
CHECKED JUNE 1993

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

STATE	PROJ. NO.	SHEET NO.
MO.		



① = 4" FILL FACE
① = 6" FRONT FACE
② = 6-#6-D1 @ 8" CTS. FILL FACE
② = 4-#6-D1 @ 12" CTS. FRONT FACE
③ = 3"
④ = 6-#6-D1 @ 6" CTS. FILL FACE
④ = 4-#6-D1 @ 10" CTS. FRONT FACE

NOTE: TOP OF BACKWALL AND EXPANSION DEVICE FOR END BENT NO. 1 SHALL CONFORM TO THE CROWN OF ROADWAY SLAB. BACKWALL ABOVE UPPER CONSTRUCTION JOINT SHALL NOT BE POURED UNTIL THE SUPERSTRUCTURE SLAB HAS BEEN POURED IN THE ADJACENT SPAN.

FIELD BENDING SHALL BE REQUIRD FOR #6-F-BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WING.

FOR DETAILS OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.

FOR DETAIL OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

FOR DETAILS AND REINFOPCEMENT OF SAFETY BARRIER CURB SEE SHEETS NO. 40, 42, 43.

FOR SUBSTRUCTURE QUANITY TABLE, SECTION A-A, B-B AND ELEVATION OF WINGS SEE SHEET NO. 6.

ELEVATION

SECTION THRU WING

PLAN OF ANCHOR BOLTS

PLAN

DETAILS OF END BENT NO. 1

(EAST BOUND LANE)

290

REVISED:

⚠ Revised 5/19/94

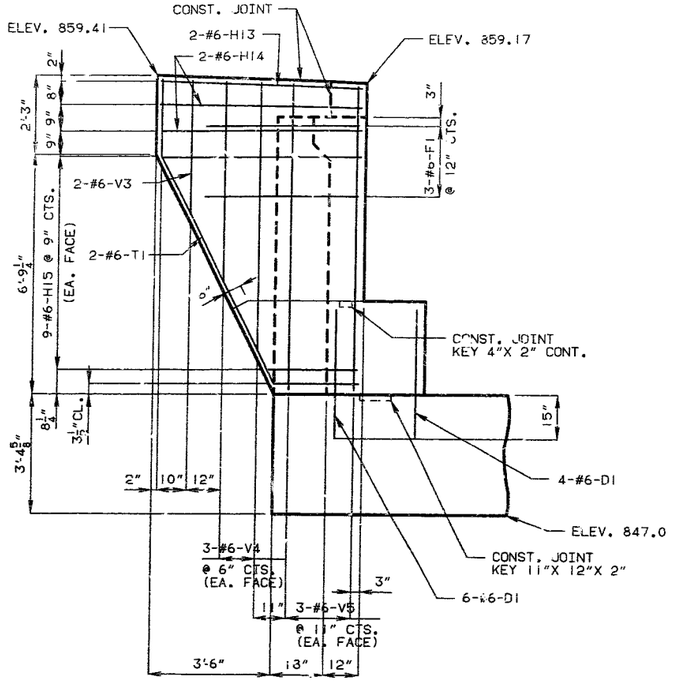
DETAILED MAY 1993
CHECKED JUNE 1993

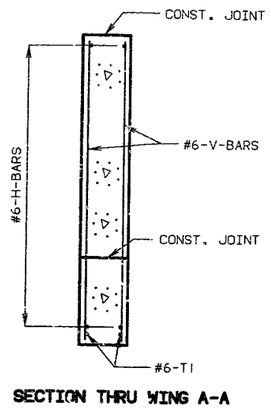
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

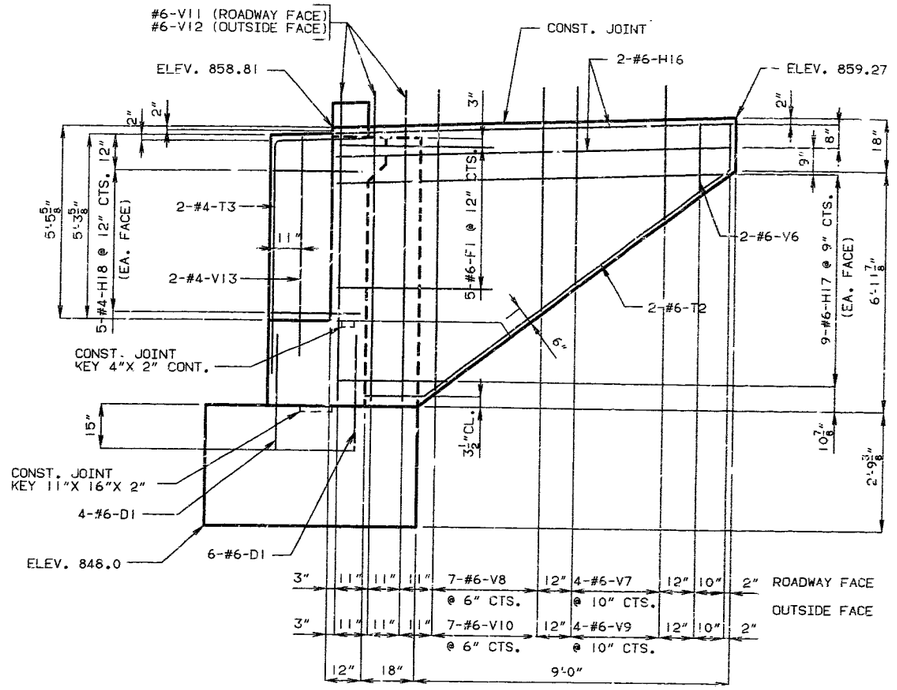
A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		303

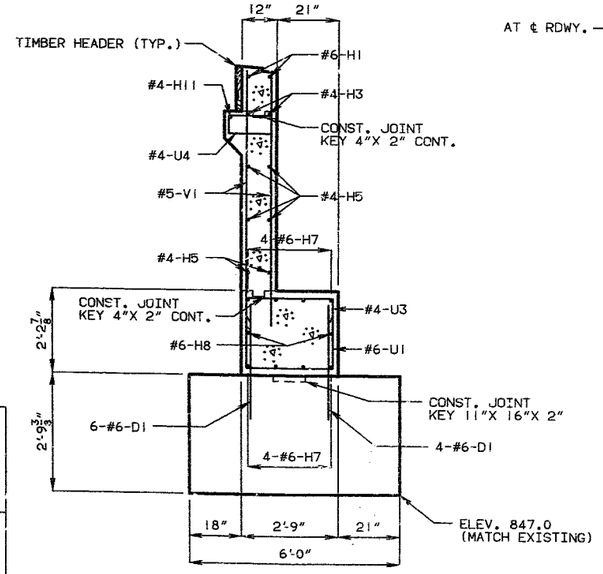




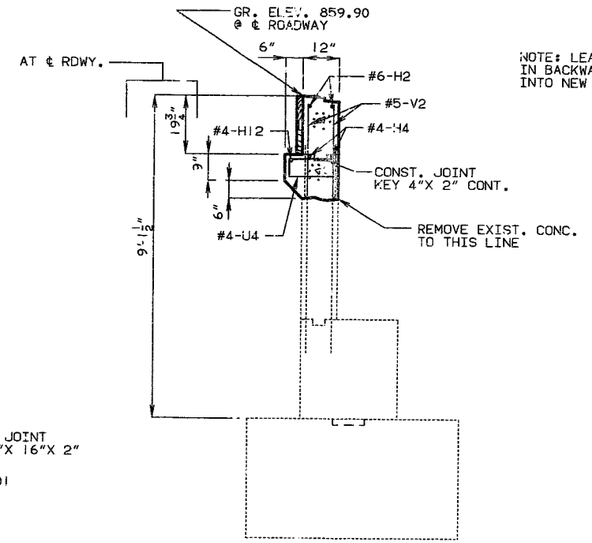
SECTION THRU WING A-A



ELEVATION B-B

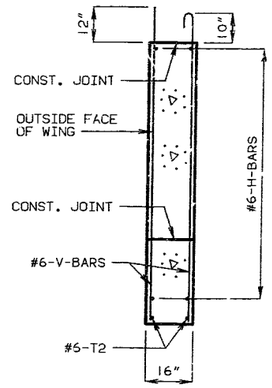


SECTION A-A



SECTION B-B

NOTE: LEAVE EXISTING V-BARS IN BACKWALL EXTEND 2'-4" INTO NEW CONCRETE.



SECTION THRU WING B-B

DETAILS OF END BENT NO. 1
(EAST BOUND LANE)

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	75
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	37.9
REINFORCING STEEL (BRIDGES)	LB.	2420
REINFORCING STEEL (EPOXY COATED)	LB.	520

NOTE: THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 2.

NOTE: THE AREA EXPOSED BY THE REMOVAL OF CONCRETE AND NOT COVERED WITH NEW CONCRETE SHALL BE COATED WITH AN APPROVED BITUMINOUS PAINT. FOR DETAILS OF TIMBER HEADER SEE SHEET NO. 43.

338 291

REVISED:

DETAILED MAY 1993
CHECKED JUNE 1993

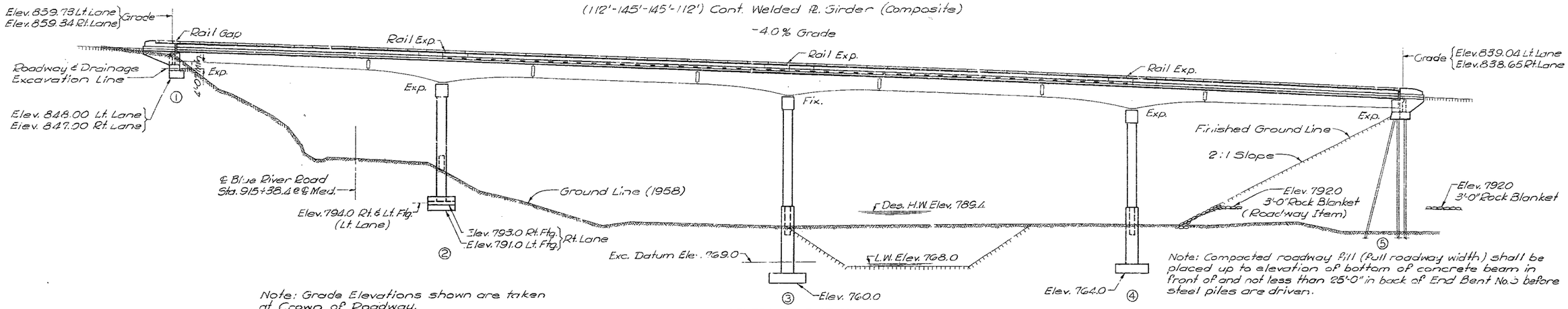
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

MISSOURI STATE HIGHWAY DEPARTMENT

CD. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	98	

(112'-145'-145'-112') Cont. Welded R. Girder (Composite)

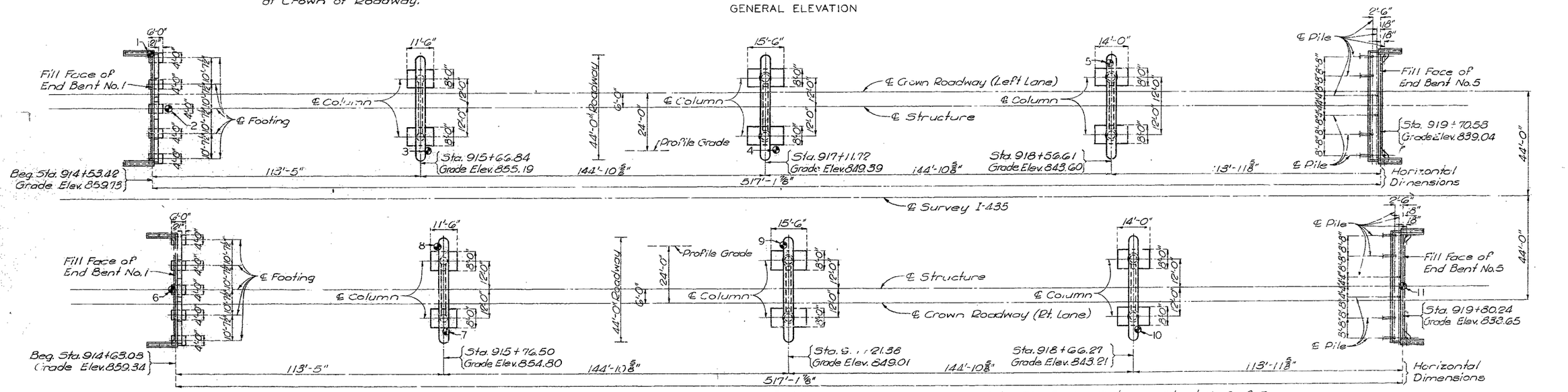
-4.0% Grade



Note: Grade Elevations shown are taken at Crown of Roadway.

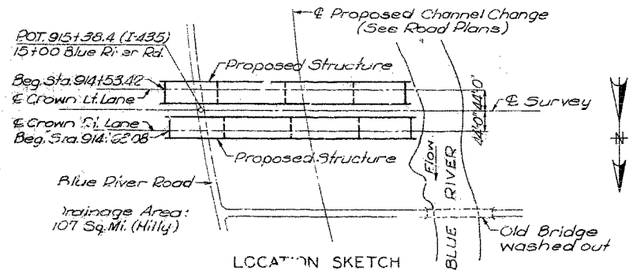
Note: Compacted roadway fill (full roadway width) shall be placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bent No.5 before steel piles are driven.

GENERAL ELEVATION



PLAN

Note: For Boring Data see Sheet No. 2 of 17
"⊕" Indicates location of boring.



LOCATION SKETCH

ESTIMATED QUANTITIES				
Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu.Yd.	1,300		1,300
Class 2 Excavation for Structures	Cu.Yd.	410		410
Steel Piles in Place (10")	Lin.Ft.	1,072		1,072
Steel Pile Cut-offs (10")	Lin.Ft.	48		48
Class B Concrete	Cu.Yd.	1,064.6		1,064.6
Class B1 Concrete	Cu.Yd.		1,291.6	1,291.6
Reinforcing Steel	Lb.	136,340	437,110	573,450
Painting	Ton		654.6	654.6
Fabricated Structural Carbon Steel	Lb.		1,312,750	1,312,750
Bridge Rail (Single tube type)	Lin.Ft.		2,089	2,089

Note: Concrete and reinforcing in end posts, parapets and curbs on end bents is included with superstructure Quantities
No payment for excavation will be allowed at End Bent 5.

B.M. #97 - Elev. 813.33 □ in center E.H.W., 141' Rt. Sta. 915 + 28.

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. HG-435-1(53)(RTE. I-435) **STA.** 914 + 53.42 (LT. LANE) 914 + 63.08 (RT. LANE)

JACKSON **COUNTY**

SUBMITTED BY D. B. Quarles (BRIDGE ENGINEER) DATE 5/20/66

APPROVED BY W. J. Snyder (CHIEF ENGINEER) DATE 5/30/66

DESIGNED DEC. 1965 BY STORSLETT
DETAILED JAN 1966 BY WEAVER
CHECKED MARCH 1966 BY MOBERLY

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

Sheet No. 1 of 17.

STD. 54.00
A-610

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	99	

Elev. 860.4
Elev. 859.2
Elev. 858.1
Elev. 857.7
Limestone
Black loamy topsoil with float limestone cobbles
Limestone, seamy, hard
Limestone, very hard.
①

Elev. 858.1
Elev. 857.0 — Brownish black loamy topsoil.
Elev. 855.0 — Limestone highly weathered and fractured.
Elev. 853.8 — Shale, stiff, gray, silty.
Elev. 850.9 — Limestone, seamy, somewhat weathered.
Limestone, med. to massive bedded, finely granular, dark gray, hard. Some solution seams. Becoming light gray near base. Bethany Falls Limestone.
Elev. 831.2 — Shale hard, 9 tons/ft. limey, fissile, bluish black. (Hushpuckney shale member).
Elev. 826.8 — Limestone, very algal, reef type deposit, thin to med. bedded. Some soft shale seams. 0.1' to 0.2' thick (Middle Creek member).
Elev. 817.9 — Limestone, massive bedded, hard, finely x-line, light gray, fossiliferous, glauconitic. (Sniabar Limestone member).
Elev. 811.8 — Shale, hard, 9 tons/ft.², dark bluish gray, dry, clayey, fissile (Mound City Shale member). Did not lose water circulation on this hole.
Elev. 810.0
Shale
② CORE

Elev. 855.7
Elev. 854.5 — Clay, brown silty, med.
Limestone highly weathered some clay or shale layers.
Elev. 849.7 — Limestone, med bedded, finely x-line, dark gray hard. Some solution seams.
Elev. 843.5 — Limestone, very thin bedded, unstable. Numerous solution seams.
Elev. 839.3 — Limestone, thin to medium bedded, finely x-line, hard, dark gray. Some solution seams. Becoming lighter gray near base. (Bethany Falls Limestone member)
Elev. 830.? — Shale, bluish gray at top to bluish black at base, all hard, 9 tons/ft.², limey, fissile. (Hushpuckney shale member).
Elev. 825.4 — Limestone, very hard, finely granular, full earthy gray, fossiliferous.
Elev. 824.7 — Limestone, algal, reef type structure, thin bedded, thin shale layers (0.1' to 0.2' thick).
Elev. 820.? — Limestone, massive bedded, light gray, very hard, finely x-line (Sniabar Limestone member).
Elev. 812.0 — Shale, dry, limey, very stiff, light bluish gray, silty (Bottomed in Mound City Shale member).
Elev. 810.4
Shale
⑥ CORE

Elev. 805.0 — Clay, silty and heavy limestone cobbles and boulders. Float material not in place.
Elev. 799.7 — Clay, buff brown silty, stiff.
Elev. 795.4 — Alternating ledge of very hard finely x-line light gray, limestone with very stiff brown/gray shale. Material is in place.
Elev. 790.4 — Shale, dry, silty, light brown, very stiff.
Elev. 784.0
Elev. 781.5 — Shale, dry, clayey, dark bluish gray, very stiff.
Shale
③

Elev. 808.5 — Limestone, cobbles and boulders. Float material not in place.
Elev. 804.0 — Clay, silty, buff brown, stiff. Very stiff below 11.4'.
Elev. 795.0
Elev. 787.6
Elev. 780.5
Elev. 772.5
Shale
⑦

Elev. 805.0 — Clay and limestone cobbles and boulders. Float material not in place.
Ledges of very hard limestone alternating with softer weathered ledges.
Elev. 792.3
Elev. 788.2
Limestone
⑧

Elev. 794.5 — Clay, silty, brown, soft to med. P.A.W.T.
Layer of sand and gravel.
Elev. 771.5
Elev. 767.0
Elev. 765.4 — Shale, weathered, moist, brownish gray, silty.
Shale, silty, bluish gray, stiff grading to very stiff. Wet hole.
Elev. 719.2
Shale
④

Elev. 786.2
Elev. 768.2
Elev. 767.8
Clay, silty, brown, soft to med.
Shale, weathered brownish gray, med.
Shale, very stiff, bluish gray, dry, silty, somewhat laminar. Greater than 9 tons/ft.². Some limey lenses below 30' adding further to the bearing value of the shale. (Pleasanton shale).
Elev. 740.1
Shale
⑤ CORE

Shale, dry, bluish gray, silty, stiff grading to very stiff.
Elev. 720.5
Shale
⑨

Elev. 783.9
Clay, silty, brown soft to med. P.A.W.T.
Layer of sand and gravel.
Elev. 771.4
Elev. 766.9
Elev. 764.9
Shale, weathered, moist, brownish gray, silty, med.
Elev. 785.3
Clay, silty, brownish gray, soft.
Elev. 770.8
Layer of sand and gravel.
Elev. 767.5
Elev. 739.3
Shale
Shale silty, bluish gray dry, silty. Some angular parting planes. Weathered at top according to 9 tons/ft.² below 730 also becoming micaceous in lower portion and leaving laminar parting planes. (Pleasanton Shale).
⑩ CORE

Clay, sandy, brown, mod. stiff. Shale weathered, silty, bluish gray med. to stiff.
Elev. 781.8
Elev. 767.0
Elev. 763.1
Elev. 740.2
Shale
Shale, very stiff, dark bluish gray, somewhat laminar, micaceous, silty, 9 ton/ft.² Shale becomes limey below 29.5' resulting in increased bearing strength. (Pleasanton Shale).
⑪ CORE

Note: "P.A.W.T.": Pushed auger without turning.
See sheet No. 1 of 17 for location of borings.

BORING DATA

GENERAL NOTES:
Design Specifications: A.A.S.H.O. - 1961

Design Loading:
H S20-44 15#/sq.ft. Future Wearing Surface.
Earth 120# Equivalent Fluid Pressure 30#
Modified 24,000# Tandem Axle
Design Unit Stresses:
Class B Concrete (substructure) f'_c = 1,200 psi
Class B1 Concrete (superstructure) f'_c = 1,600 psi
Reinforcing Steel f_s = 20,000 psi
Structural Steel (A.S.T.M. A36-62T) f_s = 20,000 psi
Steel Pile (A.S.T.M. A36-62T) f_b = 9,000 psi

Surface Seal:
Superstructure deck to be surface sealed.

Fabricated Steel:
Field connections, High Strength Bolts 3/4"ϕ, holes 7/8"ϕ except as noted.

Welding:
Details of welded joints shown are for manual arc welding except as noted.

Paint Item:
Paint; shop, none; Field, three coats.

FOOTING AND PILE DATA							
BENT NO.			2	3	4	5	
Spread Footings	Foundation Material		Rock	Shale	Shale	Shale	
	Design Bearing Tons/Sq. Ft.		5.7	6.0	5.9	6.0	
Bearing Pile	Pile type and size						10BP42
	Number						16
	Approximate length	Ft.					70
	Design Bearing	Ton					51
	Hammer Energy	Required* Ft.Lb.					11,500

* Minimum Energy requirement of hammer based on plan length and design bearing value of pile.
All pile shall be driven to practical refusal at 1.9 times the design bearing value.
Steel pile authorized in lengths greater than 65' may be furnished in two pieces for field splicing.
In no case shall the footings of Bents No. 3 and 4 be placed higher than Elevations shown.

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER
STATE ROAD: INTERSTATE ROUTE 435
ABOUT 5.0 MILES NORTH OF MARTIN CITY
PROJECT NO. HG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)
JACKSON **COUNTY**

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DETAILED JAN. 1966 BY WEAVER
CHECKED MARCH 1966 BY MOBERLY

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

Sheet No. 2 of 17.

A-610

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	100	

COMPLETE BILL OF REINFORCING STEEL

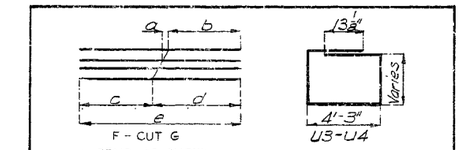
NO.	SIZE	LENGTH	MARK	LOCATION
END BENT NO. 1-LEFT & RIGHT LANE (SUBSTR.)				
108	#6	3'-0"	D7	Footing
20	#6	6'-6"	F1	Wing
8	#6	11'-0"	F2	Wing
8	#6	22'-3"	H1	Backwall
24	#4	23'-9"	H2	Backwall
20	#8	29'-9"	H3	Beam
8	#6	24'-0"	H4	Beam
20	#8	21'-0"	H5	Beam
8	#6	15'-0"	T2	Wing
58	#5	10'-9"	U17	Beam
36	#5	10'-3"	U18	Beam
24	#4	3'-6"	U19	Beam
20	#4	7'-0"	U20	Wing
4	#4	14'-0"	U21	Wing
12	#5	7'-0"	U22	Wing
180	#5	7'-9"	V14	Backwall
8	#6	12'-9"	V19	Wing
40	#4	8'-6"	V20	Wing
16	#5	11'-0"	V21	Wing
20	#6	15'-6"	V22	Wing
24	#2	19'-9"	W1	A.B. Wells
INT. BENT NO. 2-LEFT LANE (SUBSTR)				
24	#5	7'-9"	D3	Footing
30	#10	5'-0"	D1	Footing
14	#10	13'-9"	D6	Footing
8	#11	26'-0"	G13	Tie Beam
4	#9	39'-6"	G1	Beam
4	#9	43'-3"	G2	Beam
12	#6	20'-9"	G3	Beam
18	#11	20'-0"	G4	Beam
6	#11	26'-9"	G5	Beam
8	#7	10'-0"	G8	Beam
10	#6	26'-0"	G9	Tie Beam
22	#5	20'-6"	U1	Beam
10	#5	20'-0"	U2	Beam
4	#5	38'-3"	U3	Beam
4	#5	39'-0"	U4	Beam
16	#4	5'-3"	U5	Beam
2	#4	4'-9"	U6	Beam
1	#5	17'-6"	U7	Beam
1	#5	15'-9"	U8	Beam
1	#5	17'-3"	U9	Beam
1	#5	15'-6"	U10	Beam
36	#10	44'-3"	V1	Column
36	#10	5'-0"	V2	Column
36	#10	11'-9"	V3	Column
40	#10	18'-6"	V4	Column
56	#3	15'-9"	V5	Column
84	#3	12'-9"	V6	Column
12	#2	23'-0"	W2	A.B. Wells
12	#2	19'-9"	W1	A.B. Wells
INT. BENT NO. 2-RIGHT LANE (SUBSTR.)				
24	#5	7'-9"	D3	Footing
30	#10	5'-0"	D1	Footing
14	#10	13'-9"	D6	Footing
4	#9	39'-6"	G1	Beam
4	#9	43'-3"	G2	Beam
12	#6	20'-9"	G3	Beam
18	#11	20'-0"	G4	Beam
6	#11	26'-9"	G5	Beam
8	#7	10'-0"	G8	Beam
10	#6	26'-0"	G9	Tie Beam
8	#11	26'-0"	G13	Tie Beam
8	#7	10'-0"	G8	Beam

NO.	SIZE	LENGTH	MARK	LOCATION
INT. BT. NO. 2-RT. LANE (SUBSTR.) CONTINUED				
22	#5	20'-6"	U1	Beam
10	#5	20'-0"	U2	Beam
4	#5	38'-3"	U3	Beam
4	#5	39'-0"	U4	Beam
16	#4	5'-3"	U5	Beam
2	#4	4'-9"	U6	Beam
1	#5	17'-6"	U7	Beam
1	#5	15'-9"	U8	Beam
1	#5	17'-3"	U9	Beam
1	#5	15'-6"	U10	Beam
21	#4	16'-0"	U23	Tie Beam
24	#10	27'-6"	V9	Column
86	#3	12'-9"	V6	Column
15	#10	19'-6"	V12	Rt. Column
15	#10	21'-6"	V13	Lt. Column
12	#2	19'-9"	W1	A.B. Wells
INT. BENT NO. 3-LEFT LANE (SUBSTR.)				
40	#10	5'-0"	D1	Footing
24	#10	17'-9"	D2	Footing
32	#5	7'-9"	D3	Footing
4	#9	39'-6"	G1	Beam
4	#9	43'-3"	G2	Beam
12	#6	20'-9"	G3	Beam
18	#11	20'-0"	G4	Beam
6	#11	26'-9"	G5	Beam
22	#5	20'-6"	U1	Beam
10	#5	20'-0"	U2	Beam
4	#5	38'-3"	U3	Beam
4	#5	39'-0"	U4	Beam
16	#4	5'-3"	U5	Beam
2	#4	4'-9"	U6	Beam
1	#5	17'-6"	U7	Beam
1	#5	15'-9"	U8	Beam
1	#5	17'-3"	U9	Beam
1	#5	15'-6"	U10	Beam
36	#10	44'-3"	V1	Column
36	#10	5'-0"	V2	Column
36	#10	11'-9"	V3	Column
40	#10	18'-6"	V4	Column
56	#3	15'-9"	V5	Column
84	#3	12'-9"	V6	Column
12	#2	23'-0"	W2	A.B. Wells
INT. BENT NO. 3-RIGHT LANE (SUBSTR.)				
40	#10	5'-0"	D1	Footing
24	#10	17'-9"	D2	Footing
32	#5	7'-9"	D3	Footing
4	#9	39'-6"	G1	Beam
4	#9	43'-3"	G2	Beam
12	#6	20'-9"	G3	Beam
18	#11	20'-0"	G4	Beam
6	#11	26'-9"	G5	Beam
8	#7	10'-0"	G8	Beam
22	#6	26'-0"	G9	Tie Beam
38	#4	11'-9"	G10	Tie Beam
12	#10	27'-0"	G11	Tie Beam

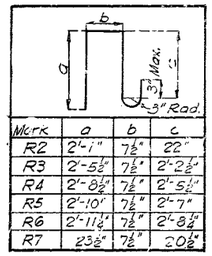
NO.	SIZE	LENGTH	MARK	LOCATION
INT. BT. NO. 3-RT. LANE (SUBSTR.) CONTINUED				
22	#5	20'-6"	U1	Beam
10	#5	20'-0"	U2	Beam
4	#5	38'-3"	U3	Beam
4	#5	39'-0"	U4	Beam
16	#4	5'-3"	U5	Beam
2	#4	4'-9"	U6	Beam
1	#5	17'-6"	U7	Beam
1	#5	15'-9"	U8	Beam
1	#5	17'-3"	U9	Beam
1	#5	15'-6"	U10	Beam
36	#10	44'-3"	V1	Column
36	#10	5'-0"	V2	Column
36	#10	11'-9"	V3	Column
40	#10	18'-6"	V4	Column
56	#3	15'-9"	V5	Column
82	#3	12'-9"	V6	Column
12	#2	23'-0"	W2	A.B. Wells
INT. BENT NO. 4-LEFT LANE (SUBSTR.)				
36	#10	5'-0"	D1	Footing
28	#5	7'-9"	D3	Footing
20	#10	16'-3"	D4	Footing
4	#9	39'-6"	G1	Beam
4	#9	43'-3"	G2	Beam
12	#6	20'-9"	G3	Beam
18	#11	20'-0"	G4	Beam
6	#11	26'-9"	G5	Beam
8	#7	10'-0"	G8	Beam
22	#6	26'-0"	G9	Tie Beam
38	#4	11'-9"	G10	Tie Beam
14	#9	27'-0"	G12	Tie Beam
22	#5	20'-6"	U1	Beam
10	#5	20'-0"	U2	Beam
4	#5	38'-3"	U3	Beam
4	#5	39'-0"	U4	Beam
16	#4	5'-3"	U5	Beam
2	#4	4'-9"	U6	Beam
1	#5	17'-6"	U7	Beam
1	#5	15'-9"	U8	Beam
1	#5	17'-3"	U9	Beam
1	#5	15'-6"	U10	Beam
30	#10	5'-0"	V2	Column
34	#10	11'-9"	V3	Column
24	#5	15'-9"	V5	Column
72	#3	12'-9"	V6	Column
30	#10	38'-3"	V7	Column
36	#10	14'-6"	V8	Column
12	#2	19'-9"	W1	A.B. Wells
INT. BENT NO. 4-RIGHT LANE (SUBSTR.)				
36	#10	5'-0"	D1	Footing
28	#5	7'-9"	D3	Footing
20	#10	16'-3"	D4	Footing
4	#9	39'-6"	G1	Beam
4	#9	43'-3"	G2	Beam
12	#6	20'-9"	G3	Beam
18	#11	20'-0"	G4	Beam
6	#11	26'-9"	G5	Beam
8	#7	10'-0"	G8	Beam
22	#6	26'-0"	G9	Tie Beam
38	#4	11'-9"	G10	Tie Beam
14	#9	27'-0"	G12	Tie Beam

NO.	SIZE	LENGTH	MARK	LOCATION
INT. BT. NO. 4-RT. LANE (SUBSTR.) CONTINUED				
22	#5	20'-6"	U1	Beam
10	#5	20'-0"	U2	Beam
4	#5	38'-3"	U3	Beam
4	#5	39'-0"	U4	Beam
16	#4	5'-3"	U5	Beam
2	#4	4'-9"	U6	Beam
1	#5	17'-6"	U7	Beam
1	#5	15'-9"	U8	Beam
1	#5	17'-3"	U9	Beam
1	#5	15'-6"	U10	Beam
30	#10	5'-0"	V2	Column
34	#10	11'-9"	V3	Column
48	#3	15'-9"	V5	Column
70	#3	12'-9"	V6	Column
30	#10	38'-3"	V7	Column
36	#10	14'-6"	V8	Column
12	#2	19'-9"	W1	A.B. Wells
END BENT NO. 5-LEFT & RIGHT LANE (SUBSTR.)				
20	#6	6'-6"	F1	Wing
8	#6	11'-0"	F2	Wing
3	#6	22'-9"	H1	Backwall
24	#4	23'-9"	H2	Backwall
20	#6	29'-9"	H3	Beam
8	#6	24'-0"	H4	Beam
20	#8	21'-0"	H5	Beam
8	#6	12'-9"	T1	Wing
54	#5	13'-0"	U11	Beam
34	#5	12'-9"	U12	Beam
44	#4	3'-9"	U13	Beam
20	#7	12'-0"	U14	Beam
20	#4	6'-6"	U15	Wing
4	#4	13'-6"	U16	Wing
180	#5	7'-9"	V14	Backwall
20	#4	8'-9"	V15	Wing
32	#4	6'-3"	V16	Wing
16	#6	14'-3"	V17	Wing
8	#6	9'-9"	V18	Wing
24	#2	19'-9"	W1	A.B. Wells

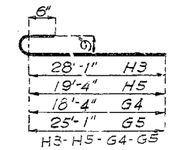
CUTTING DIAGRAMS & BENDING SKETCHES

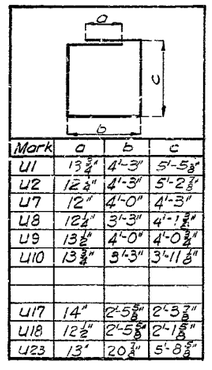


MARK	a	b	c	d	e	F	G	*
U3	3¼"	18'-2⅛"	18'-2⅛"	20'-0⅜"	38'-3"	8	24	*
U4	3¼"	18'-5⅜"	18'-6⅜"	20'-5⅜"	39'-0"	8	24	*
V15	8"	2'-9⅛"	2'-9⅛"	5'-5⅛"	8'-3"	5	20	
V17	10⅜"	5'-0⅛"	5'-0⅛"	9'-2¼"	14'-3"	4	16	
V20	5½	2'-3⅜"	2'-3⅜"	6'-2⅜"	8'-6"	10	40	
V22	2'-1¼"	3'-6½"	3'-6½"	11'-11½"	15'-6"	5	20	

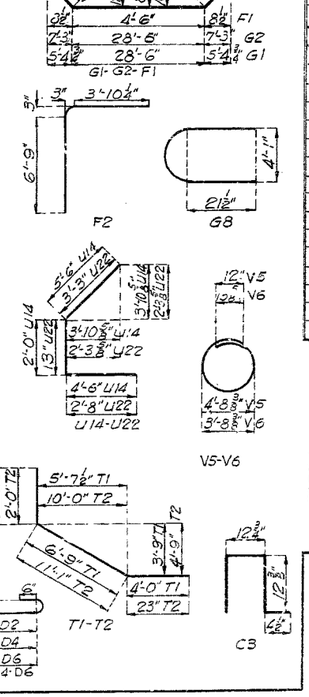


Mark	a	b	c
R2	2'-1"	7½"	22"
R3	2'-5⅛"	7½"	2'-2½"
R4	2'-8½"	7½"	2'-5½"
R5	2'-10"	7½"	2'-7"
R6	2'-11½"	7½"	2'-8½"
R7	23½"	7½"	20½"





Mark	a	b	c
U1	13¾"	4'-3"	5'-5⅜"
U2	12½"	4'-3"	5'-2⅝"
U7	12"	4'-0"	4'-3"
U8	12¼"	3'-3"	4'-1⅜"
U9	13⅛"	4'-0"	4'-0⅜"
U10	13⅜"	3'-3"	3'-11⅛"
U17	14"	2'-5⅜"	2'-3⅞"
U18	12⅝"	2'-5⅜"	2'-1⅝"
U23	13"	20¼"	5'-8⅜"



NO.	SIZE	LENGTH	MARK	LOCATION
SUPERSTRUCTURE - LT. & RT. LANE				
2056	#5	3'-6"	C3	Curb
48	#5	38'-5"	C4	Curb
64	#6	37'-3"	C5	Curb
2060	#5	5'-6"	R7	Curb & Parapet
96	#5	10'-3"	R8	Parapet
96	#5	34'-9"	R10	Parapet
128	#5	31'-9"	R11	Parapet
8240	#6	24'-0"	S1	Slab
1692	#4	29'-9"	S2	Slab
1952	#5	33'-6"	S3	Slab
276	#4	16'-0"	S4	Slab
END BT. NO. 1 - LT. & RT. LANE (SUPERSTR.)				
52	#5	3'-6"	C1	Curb
8	#6	12'-9"	C6	Curb
4	#5	5'-6"	R2	End Post
4	#5	6'-3"	R3	End Post
4	#5	6'-9"	R4	End Post
4	#5	7'-0"	R5	End Post
8	#5	7'-3"	R15	End Post
32	#5	5'-3"	R7	Parapet
8	#5	4'-9"	R12	End Post
16	#5	12'-3"	R13	Parapet
END BT. NO. 5 - LT. & RT. LANE (SUPERSTR.)				
40	#5	3'-6"	C1	Curb
8	#6	9'-9"	C2	Curb
24	#5	9'-3"	R1	End Post
4	#5	5'-6"	R2	End Post
4	#5	6'-3"	R3	End Post
4	#5	6'-9"	R4	End Post
4	#5	7'-0"	R5	End Post
24	#5	7'-3"	R6	End Post

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON COUNTY

A-610

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No. 30.5 Aug. 1963 Revised

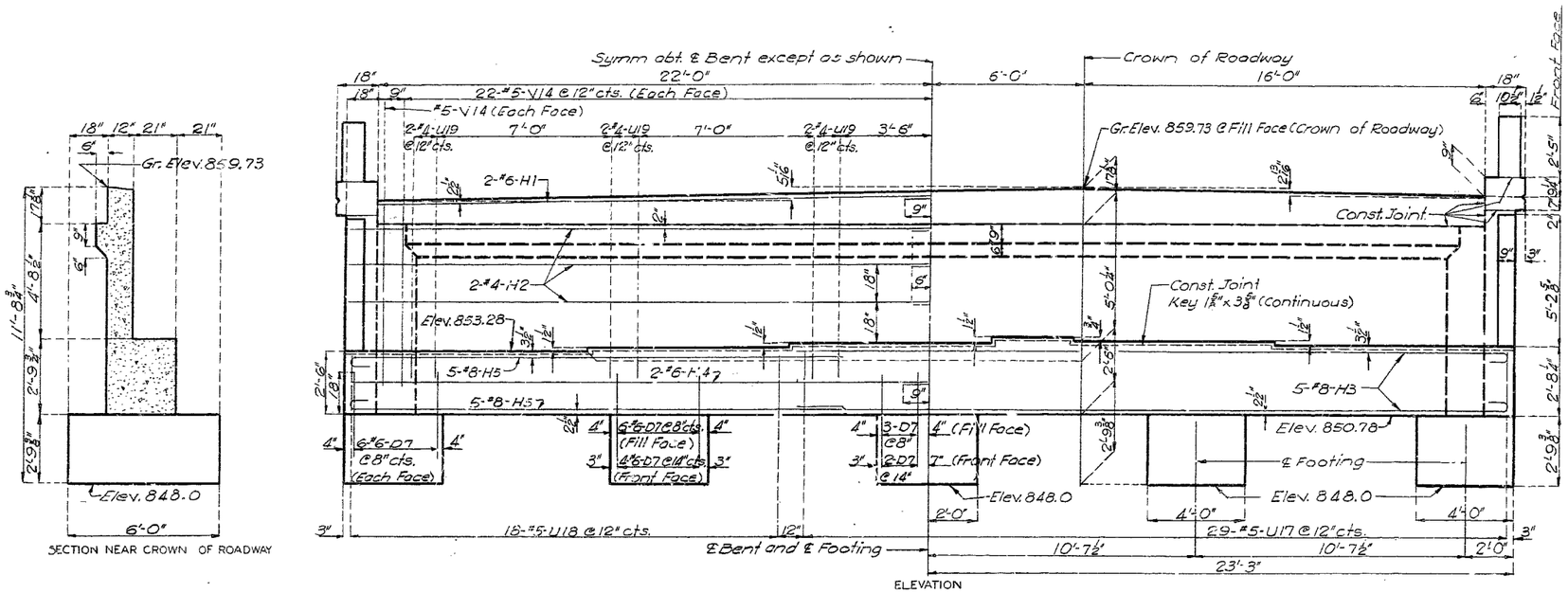
DETAILED JAN. 1966 BY WOODS

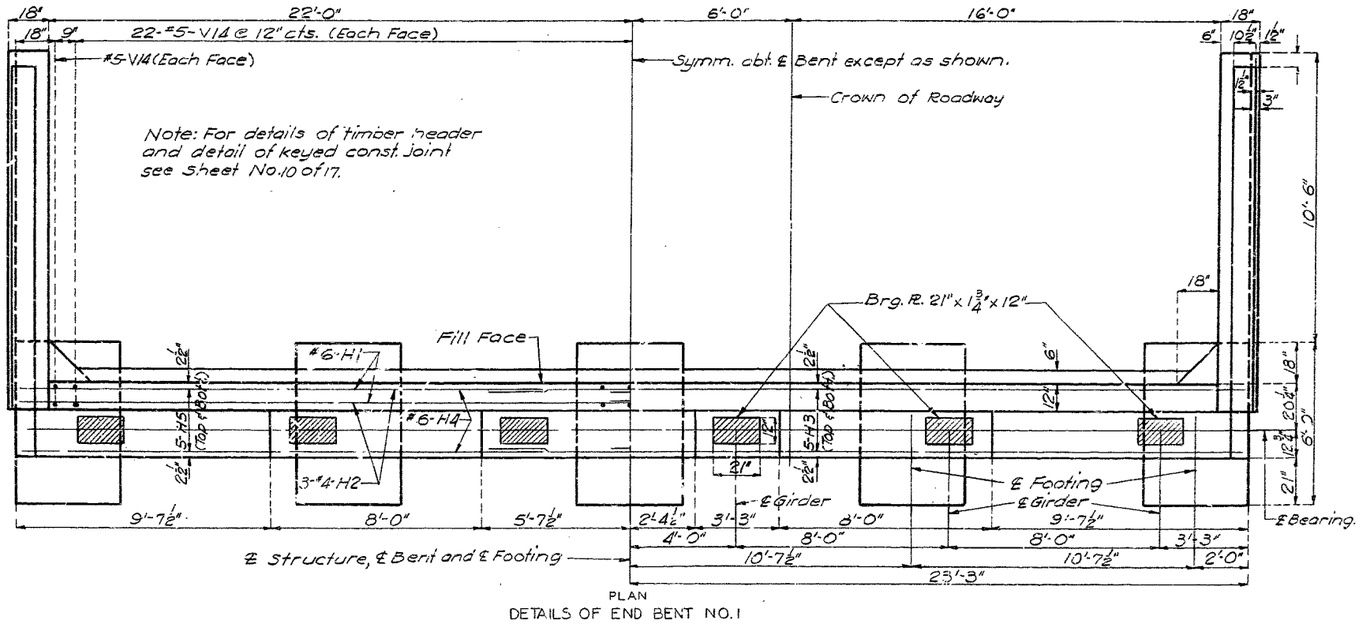
CHECKED MARCH 1966 BY MOBERLY

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

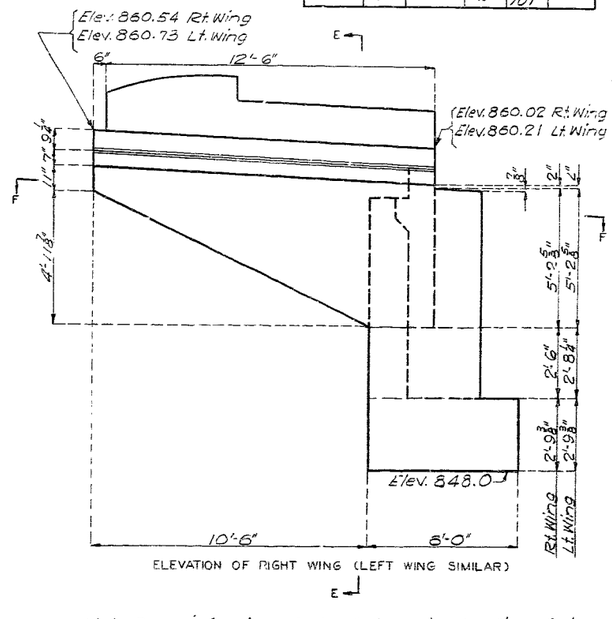
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	101	





DETAILS OF END BENT NO. 1
LEFT LANE



Note: For reinforcing steel not shown in elevation of wings and section near crown of roadway, see sheet No. 5 of 17.
For elevation of end post, end post ordinates, section E-E and section F-F see sheet No. 5 of 17.

Note: Fill at end bent No. 1 left lane shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.
Top of backwall and expansion device for end bent No. 1 left lane to conform to crown of roadway.
Backwall above upper construction joint shall not be poured until the structural steel of the expansion device has been installed and slab has been poured in adjacent span.

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER
STATE ROAD: INTERSTATE ROUTE 435
ABOUT 5.0 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)
JACKSON **COUNTY**

DETAILED JAN. 1966 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

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

Sheet No. 4 of 17.

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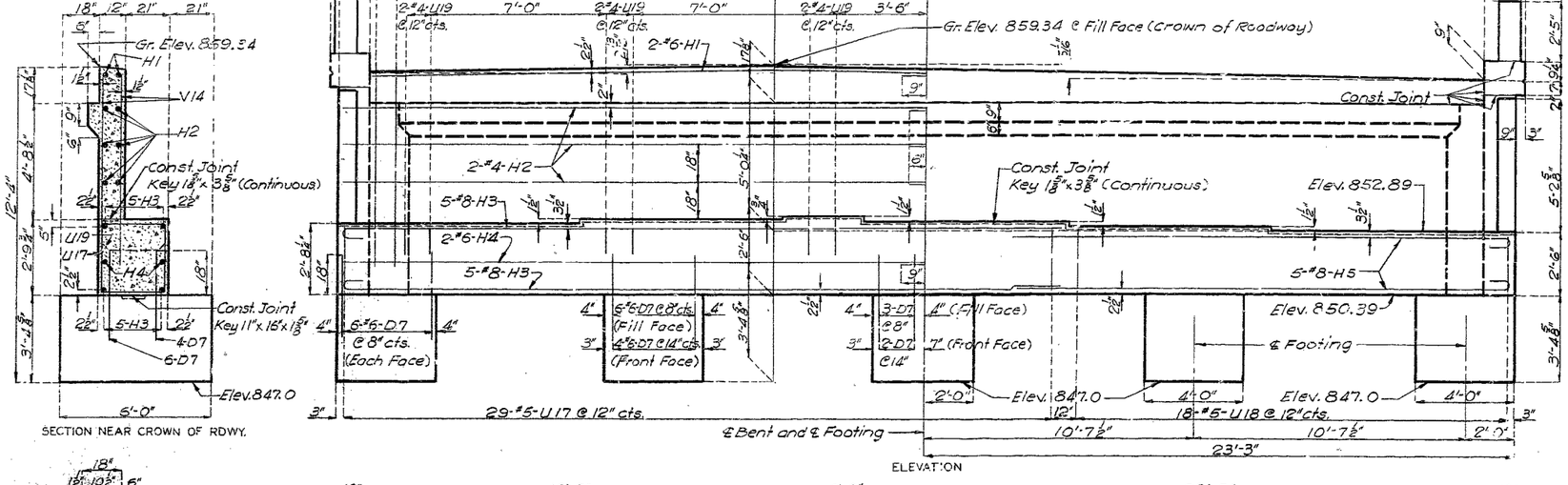
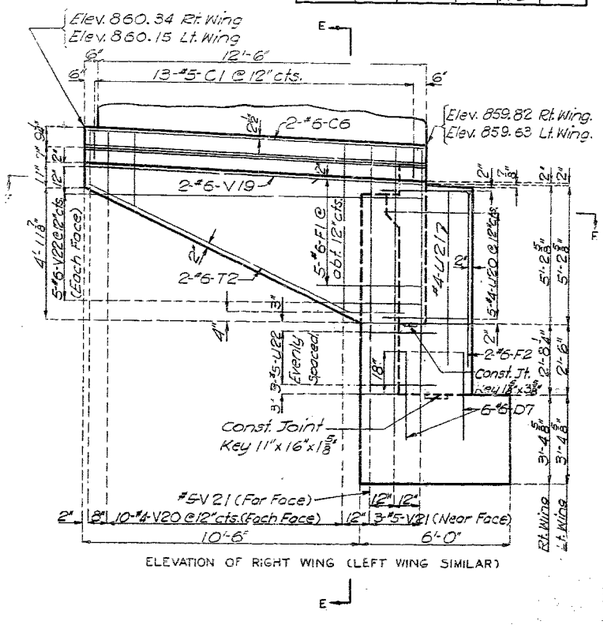
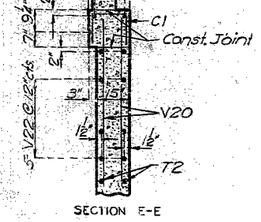
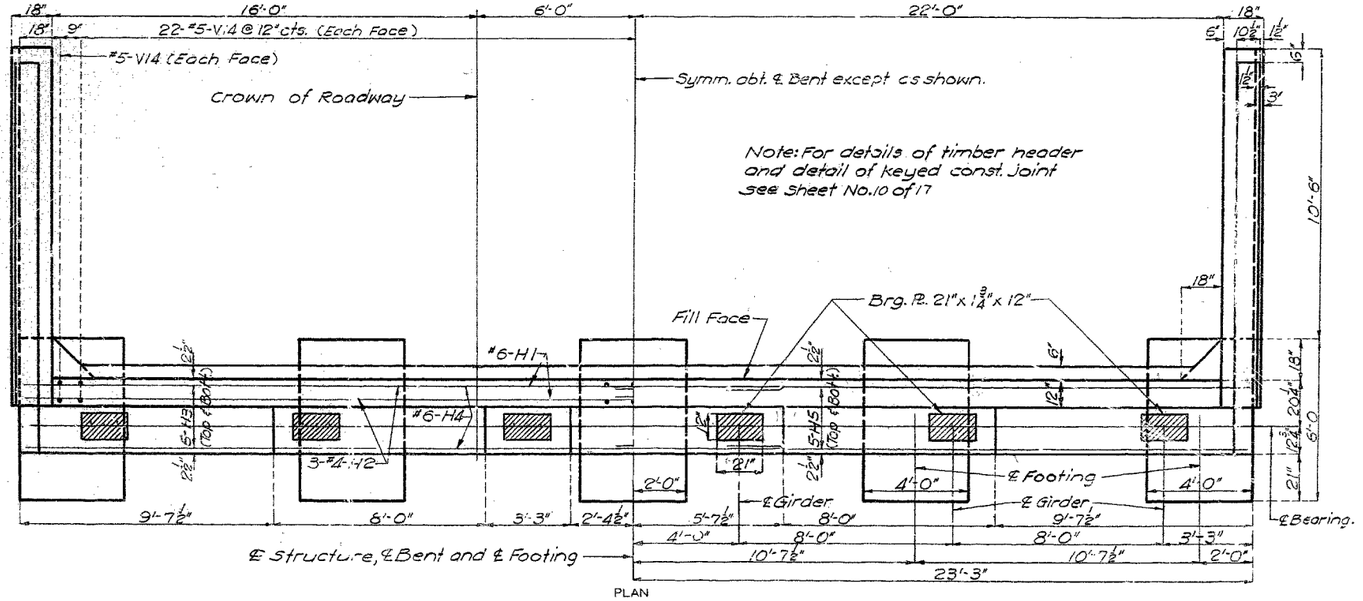
MISSOURI STATE HIGHWAY DEPARTMENT

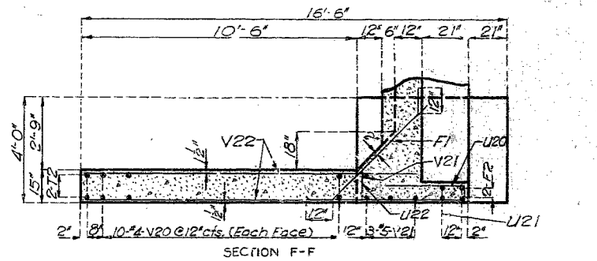
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	102	

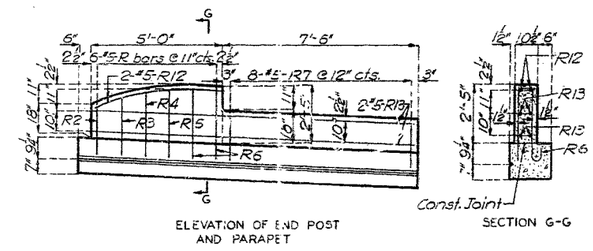


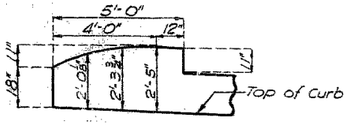












Note: Fill at end bent No. 1 right lane shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.

Top of backwall and expansion device for end bent No. 1 right lane to conform to crown of roadway.

Backwall above upper construction joint shall not be poured until the structural steel of the expansion device has been installed and slab has been poured in adjacent span.

DETAILS OF END BENT NO. 1
RIGHT LANE

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

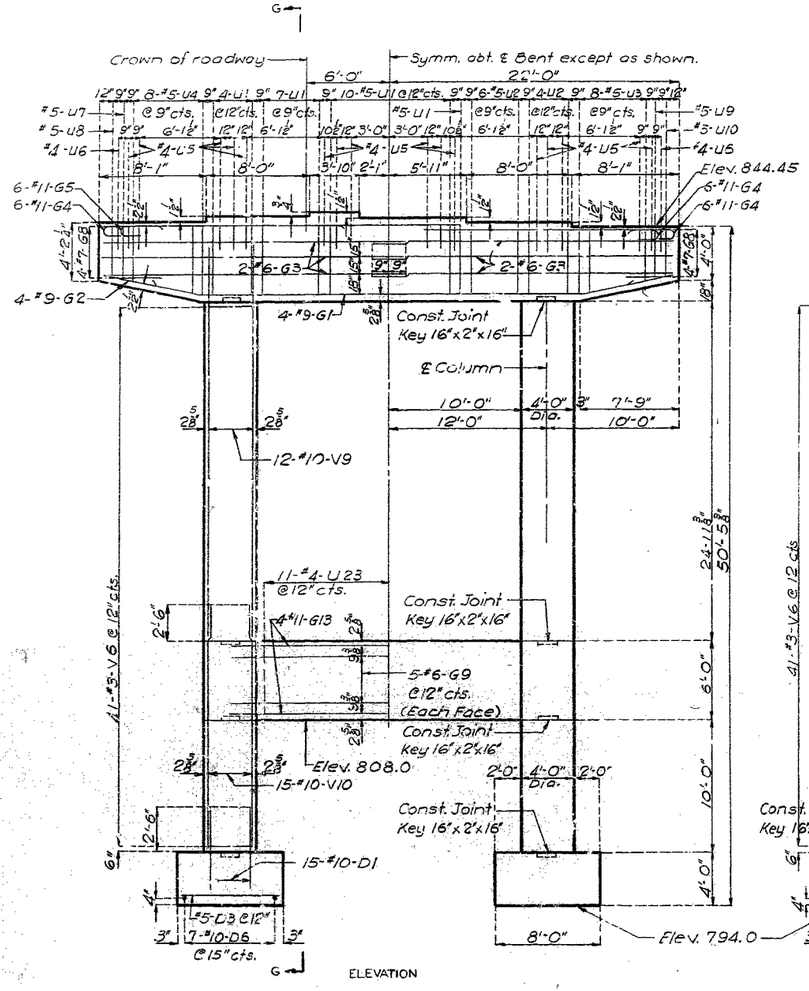
A-610

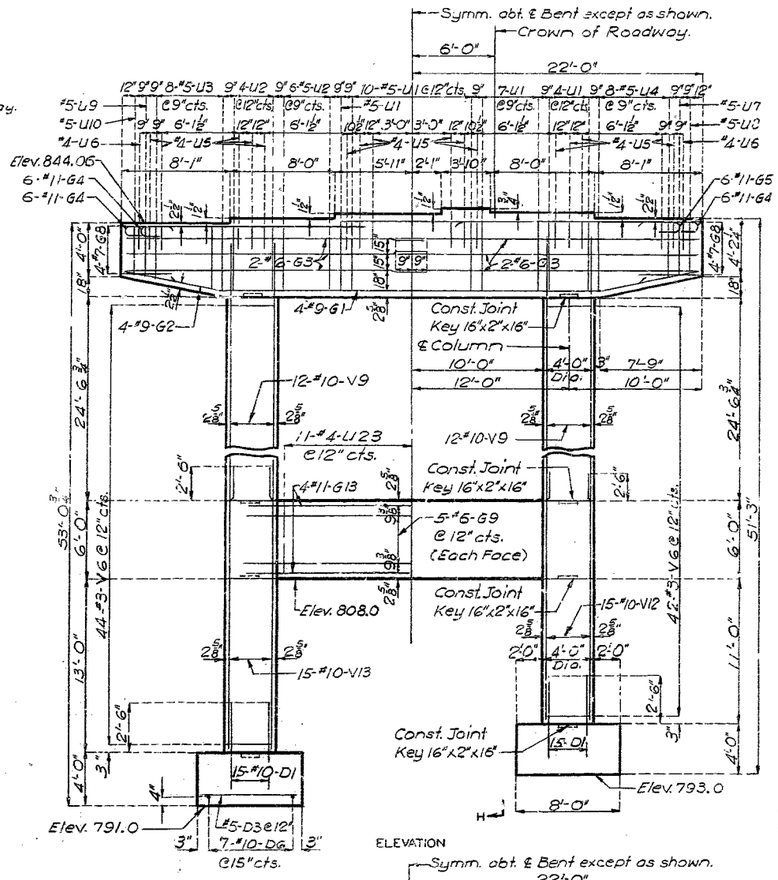
DETAILED JAN. 1966 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

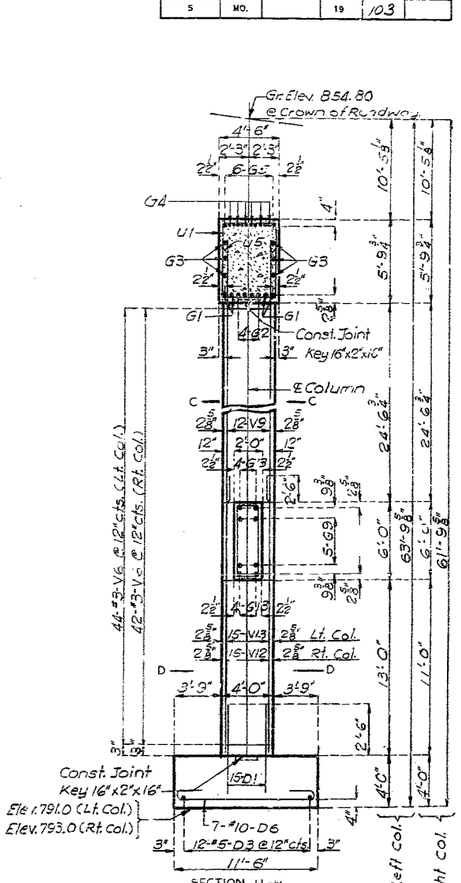
Note: This drawing is not to scale. Follow dimensions.

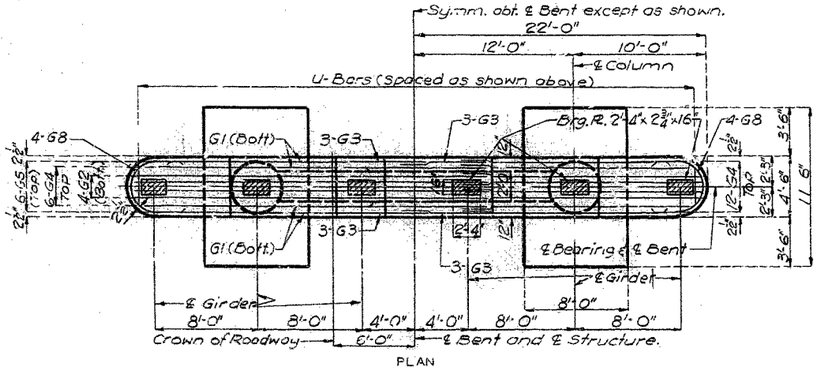
MISSOURI STATE HIGHWAY DEPARTMENT

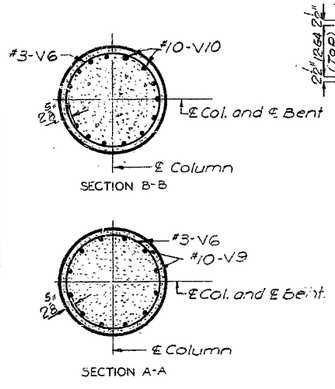
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	103	



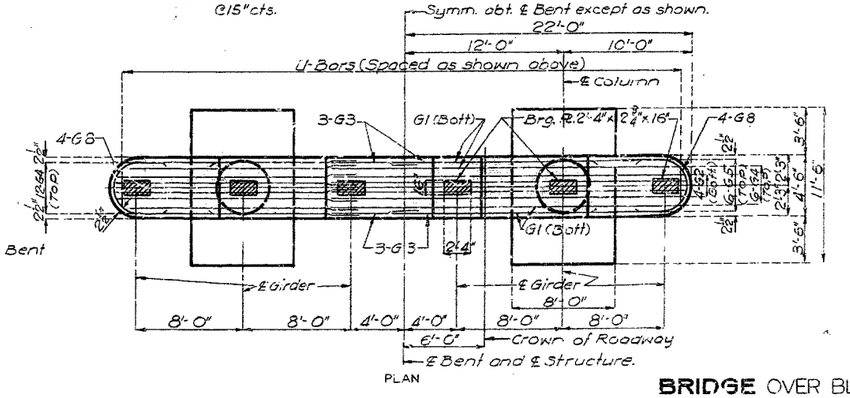




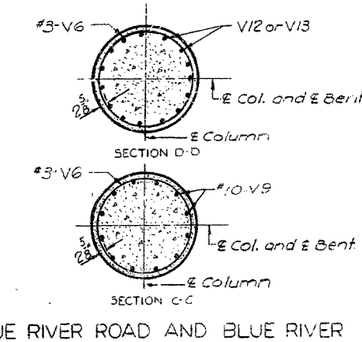




DETAILS OF INT. BENT NO. 2
LEFT LANE



DETAILS OF INT. BENT NO. 2
RIGHT LANE



BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)XRTE. I-435) **STA.** 914+53.42 (LT. LANE)
914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-610

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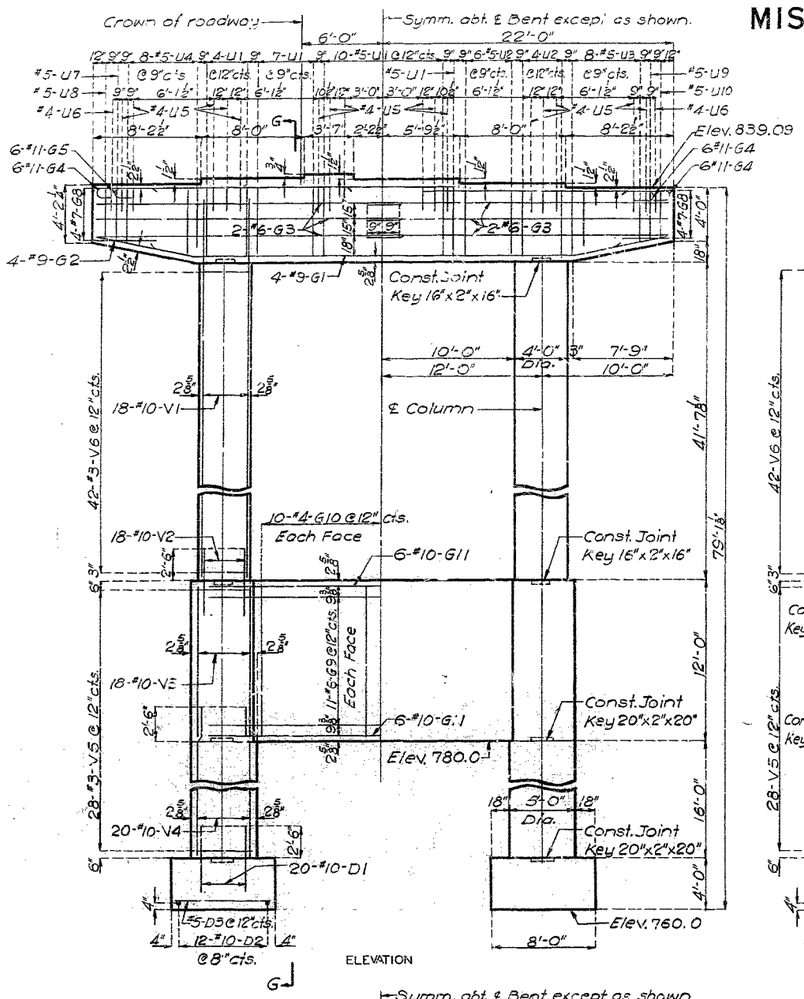
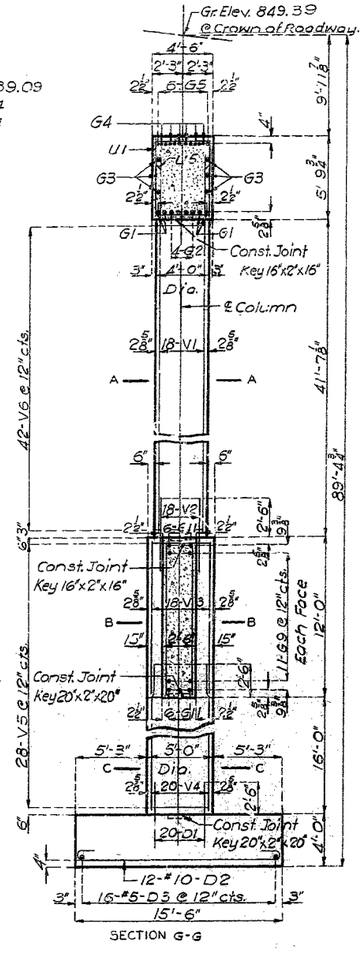
DETAILED DEC. 1965 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

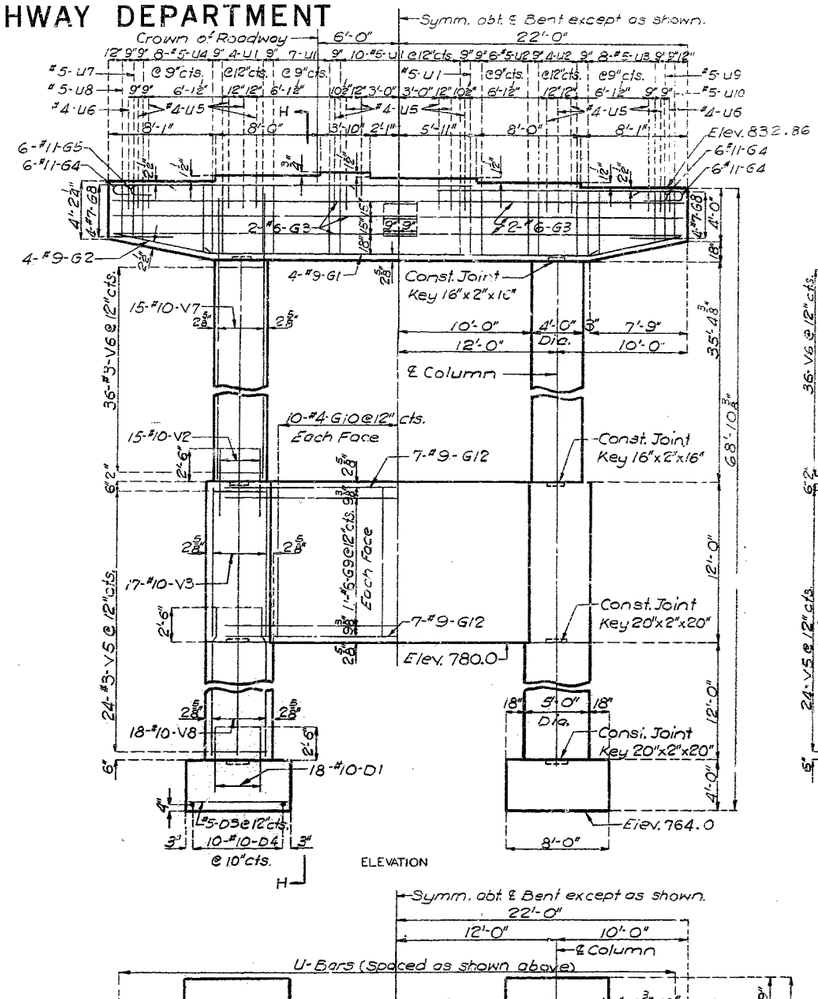
Note: This drawing is not to scale. Follow dimensions.

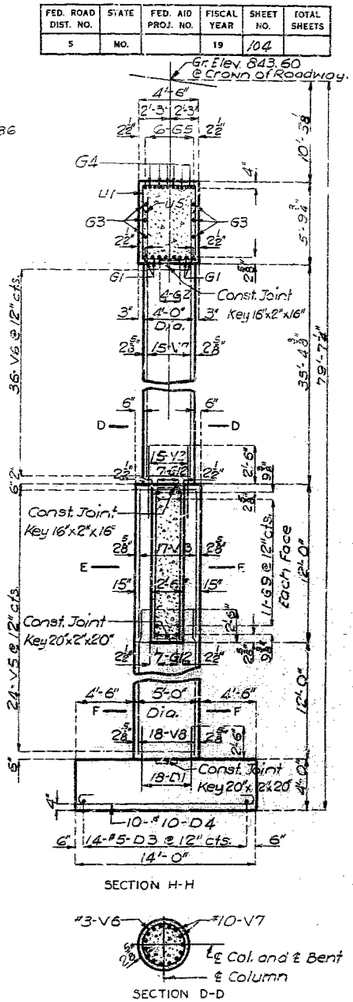
MISSOURI STATE HIGHWAY DEPARTMENT

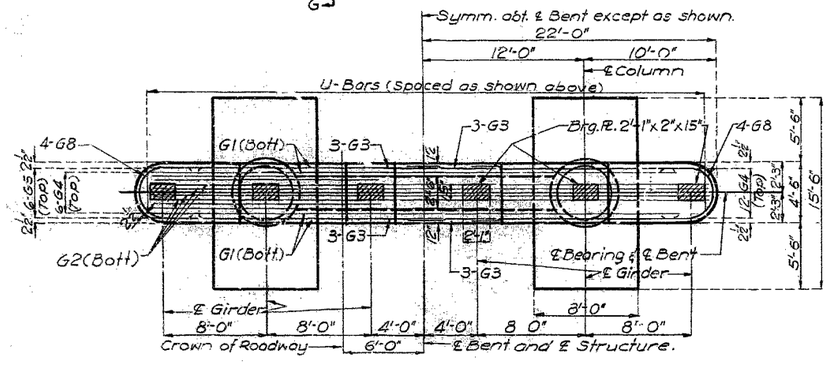
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	104	



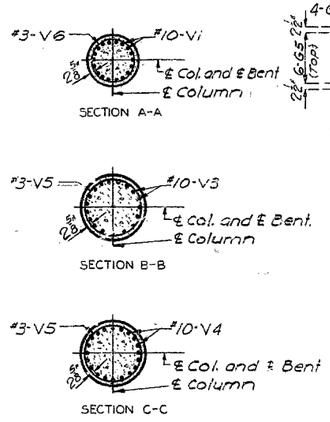


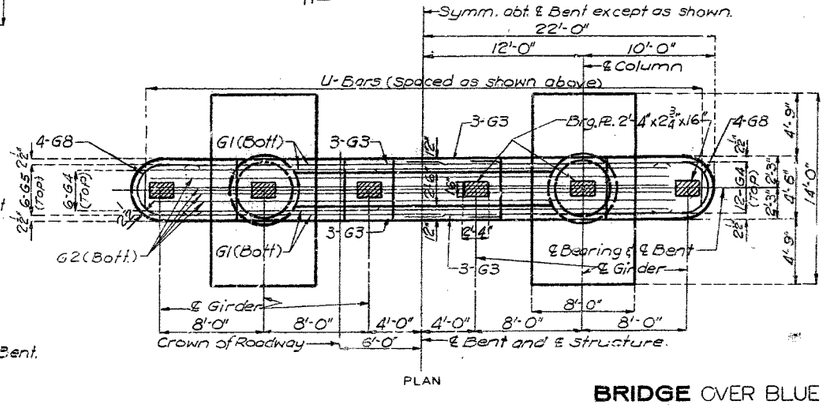




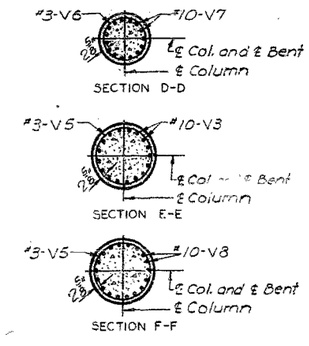


DETAILS OF INT. BENT NO. 3
FT LANE





DETAILS OF INT. BENT NO. 4
LEFT LANE



BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

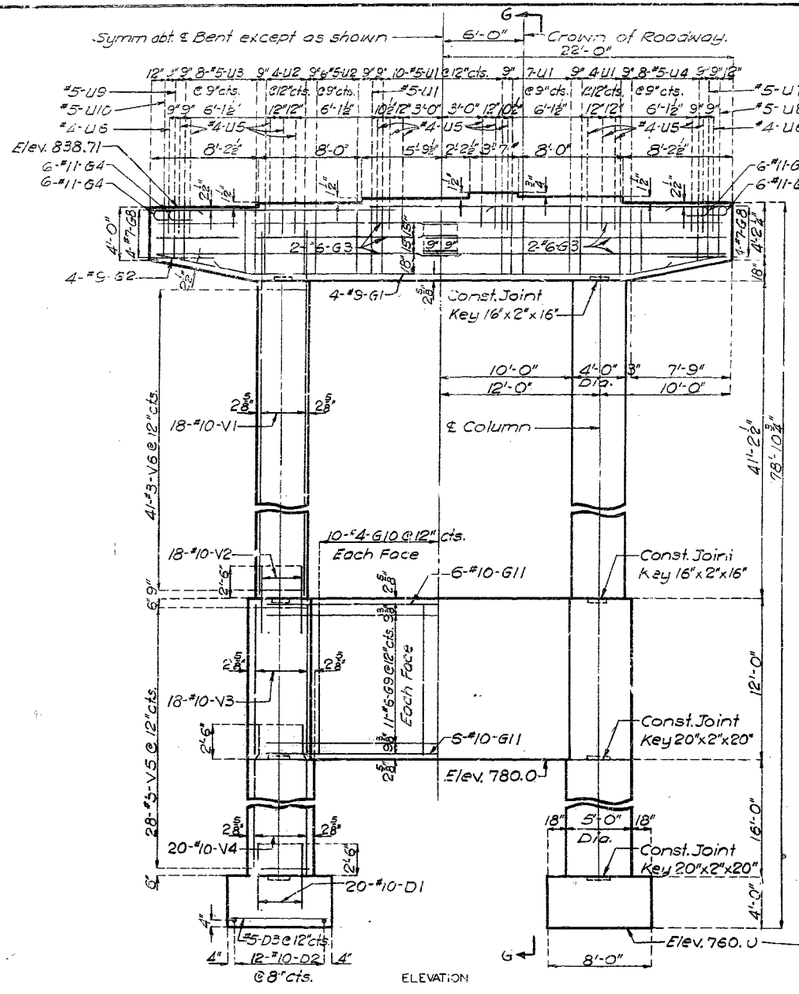
A-610

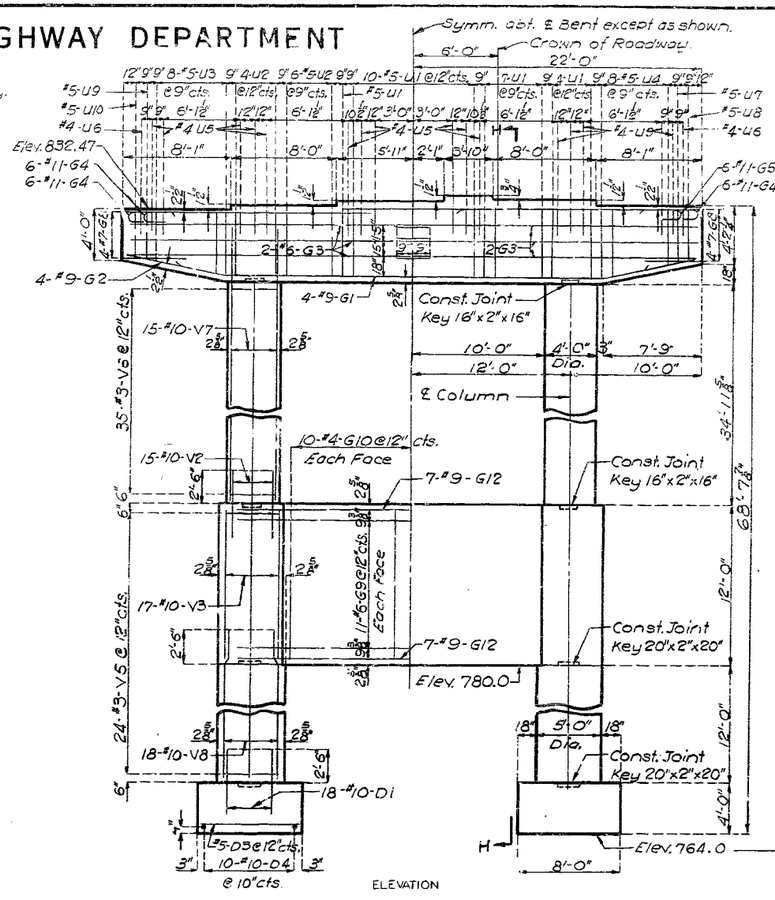
DETAILED DEC 1963 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

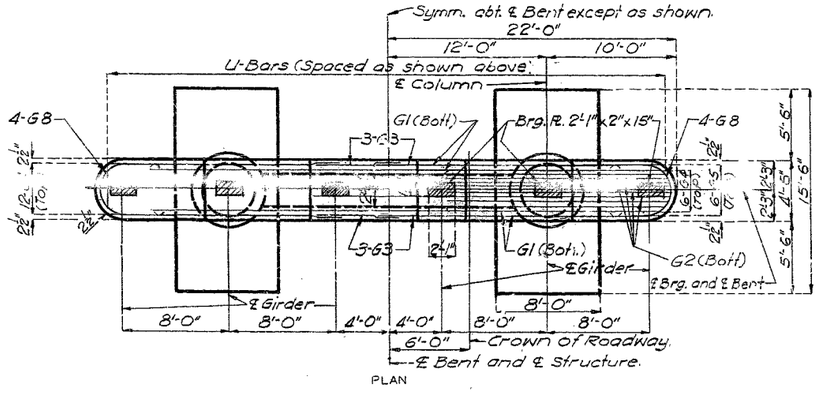
Note: This drawing is not to scale. Follow dimensions.

MISSOURI STATE HIGHWAY DEPARTMENT

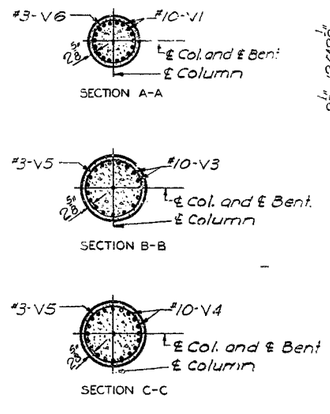
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	105	

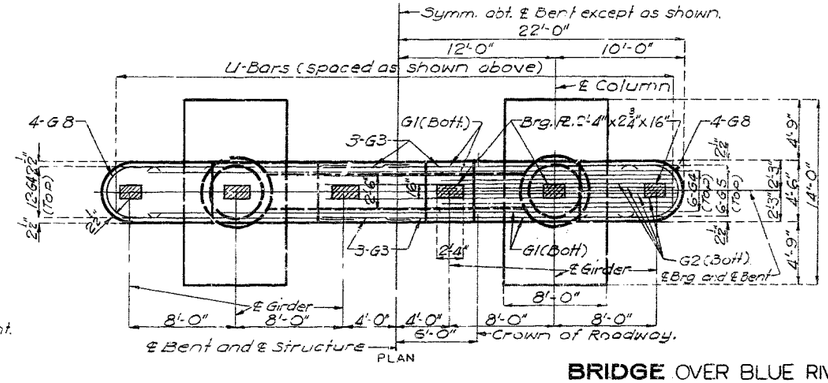




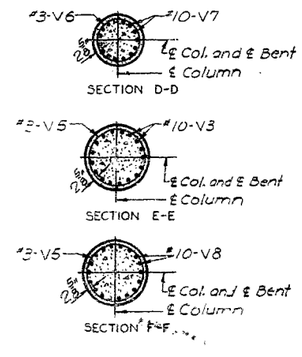


DETAILS OF INT. BENT NO. 3
RIGHT LANE





DETAILS OF INT. BENT NO. 4
RIGHT LANE



BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-610

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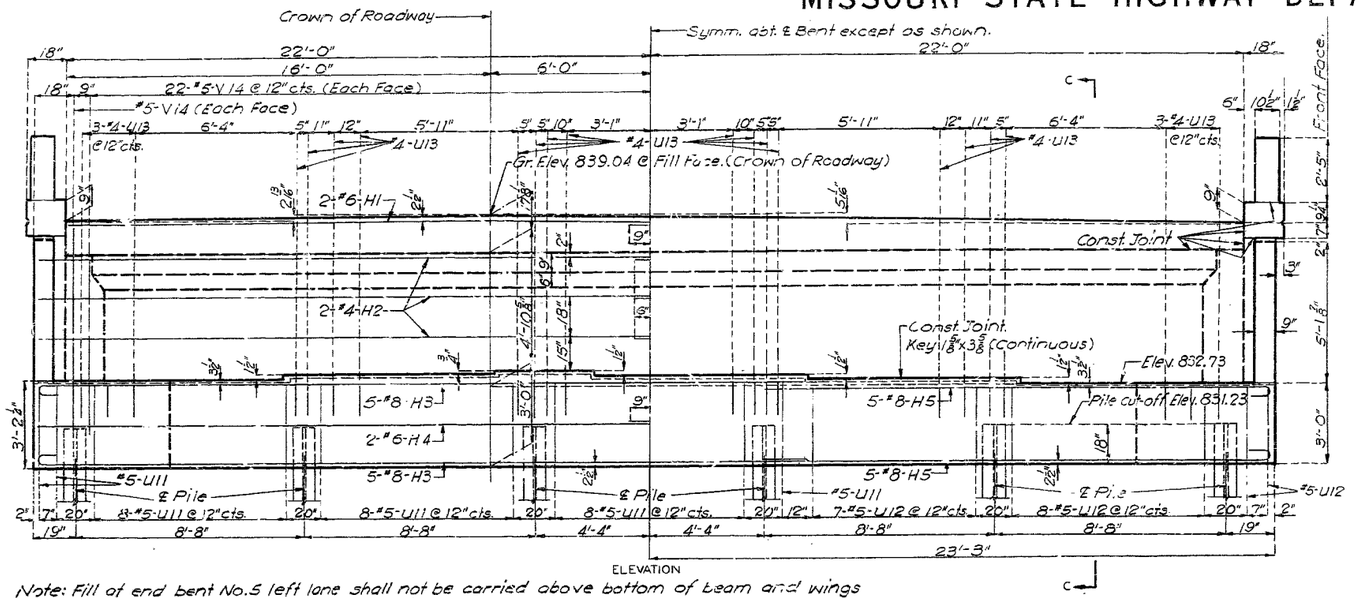
DETAILED DEC. 1965 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

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

MISSOURI STATE HIGHWAY DEPARTMENT

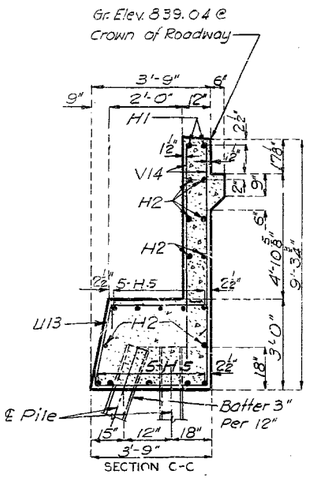
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	106	

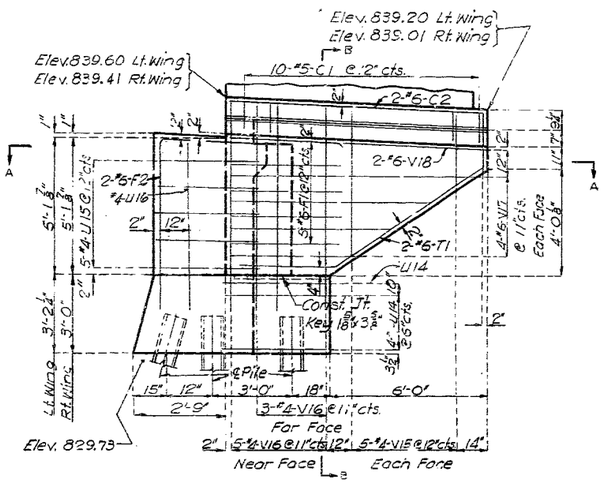


Note: Fill of end bent No.5 left lane shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.

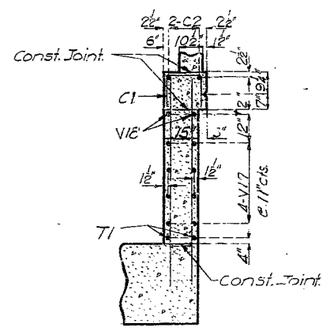
Top of backwall and expansion device for end bent No.5 left lane to conform to crown of roadway slab.

Backwall above upper construction joint shall not be poured until the structural steel of the expansion device has been installed and slab has been poured in adjacent span.

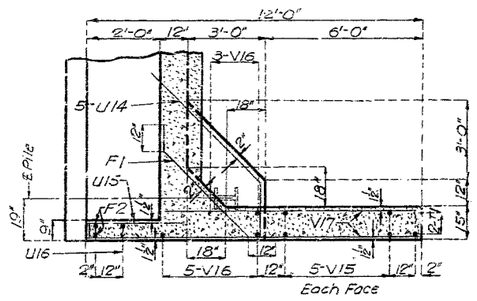




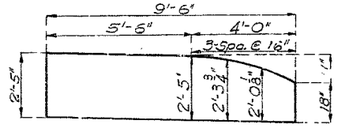
ELEVATION OF RIGHT WING
LEFT WING - SIMILAR



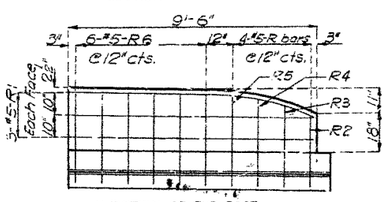
SECTION B-B



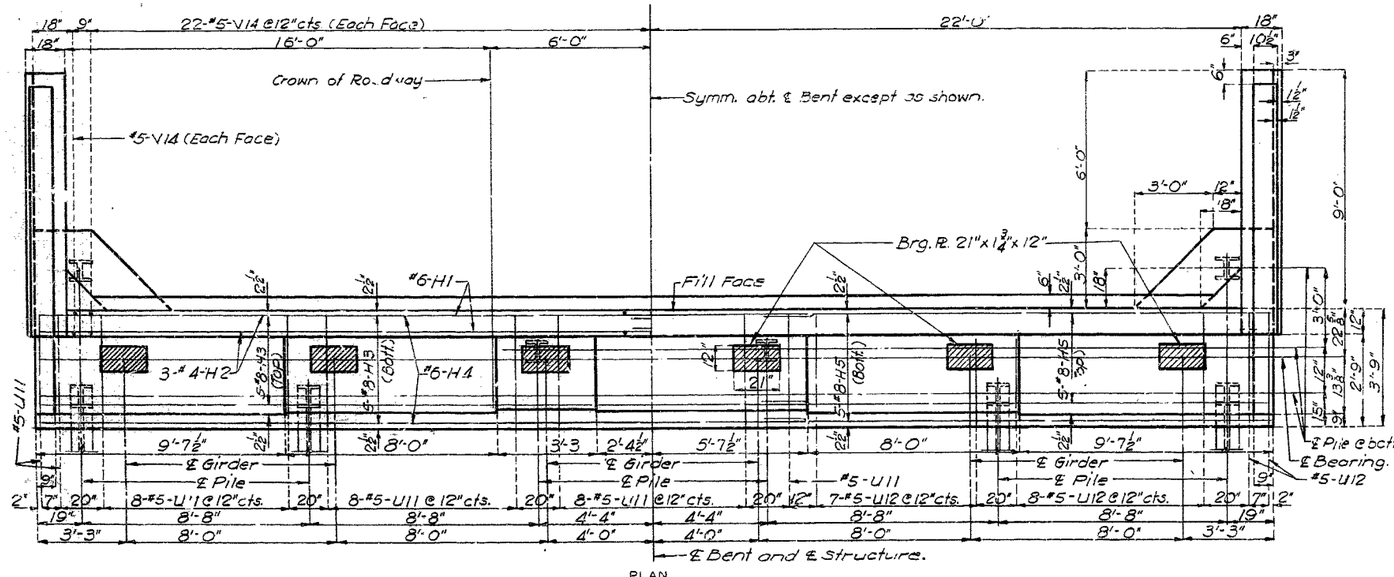
SECTION A-A



END POST ORDINATES

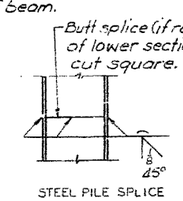


ELEVATION OF END POST



DETAILS OF END BENT NO. 5
LEFT LANE

Note: For details of timber header and detail of keyed const. joint see Sheet No.10 of 17.



STEEL PILE SPLICE

℄ Pile @ bottom of beam.
℄ Bearing.
#5-U12

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435(53) (RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-610

DETAILED JAN., 1966 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

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

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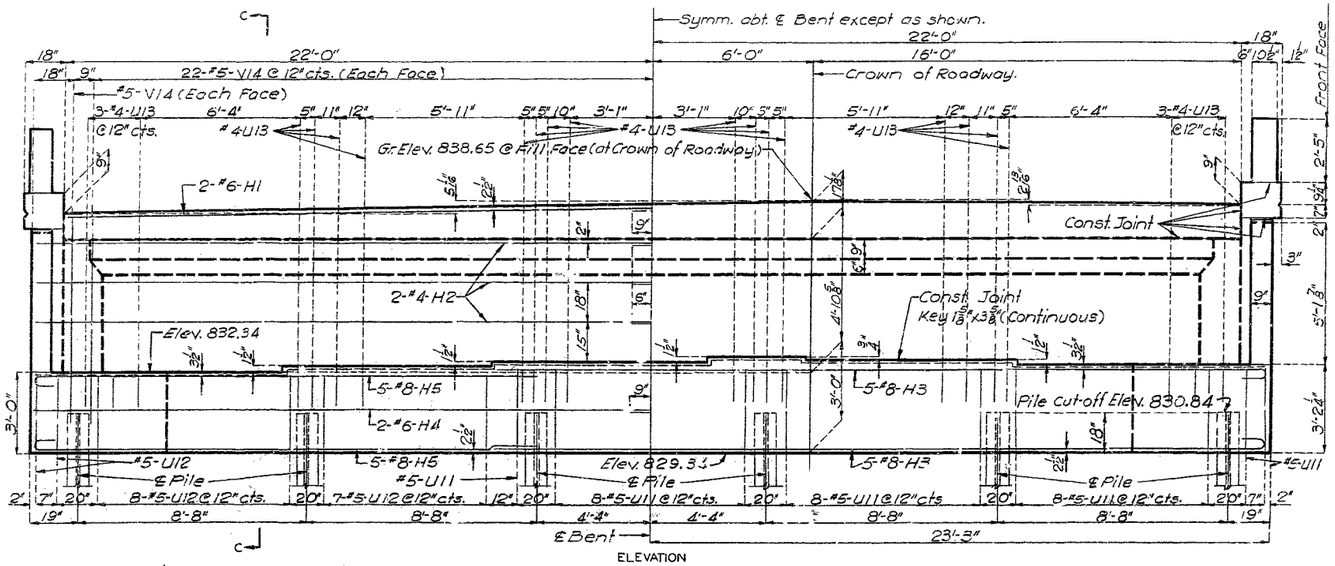
MISSOURI STATE HIGHWAY DEPARTMENT

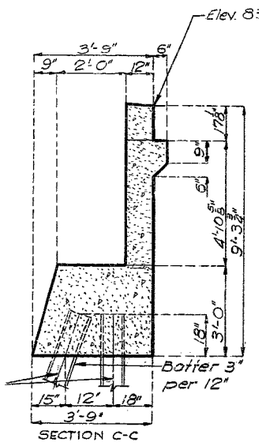
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	107	

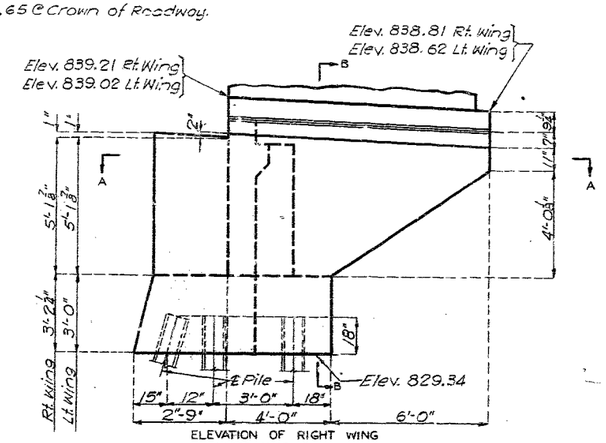


Note: Fill at end bent No. 5 right lane shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.

Top of backwall and expansion device for end bent No. 5, right lane to conform to crown of roadway slab.

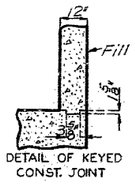
Backwall above upper construction joint shall not be poured until the structural steel of expansion device has been installed and slab has been poured in adjacent span.



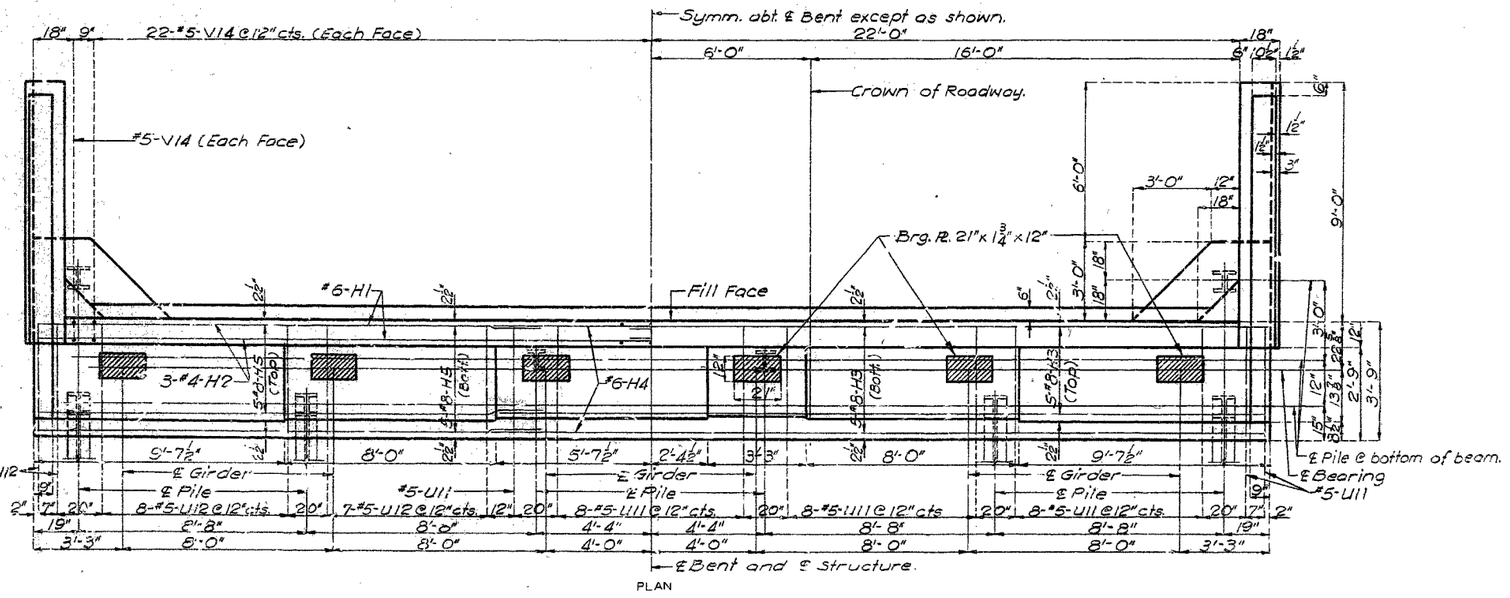


Note: For reinforcing steel not shown in section c-c and elevation of wings see Sheet No. 9 of 17.

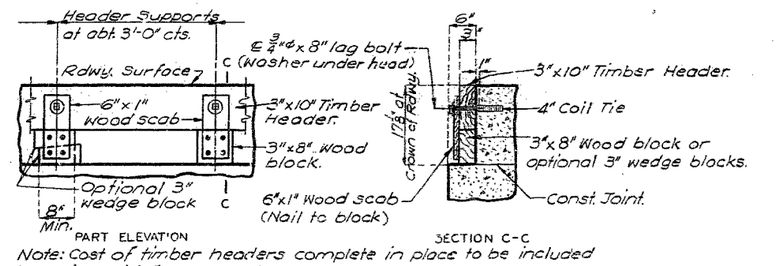
For elevation of end post, end post ordinates, steel pile splice, section A-A and section B-B see sheet No. 9 of 17.



DETAIL OF KEYED CONST. JOINT



DETAILS OF END BENT NO. 5
RIGHT LANE



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

DETAILS OF TIMBER HEADER

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-HG-435-1(53) (RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.06 (RT. LANE)

JACKSON **COUNTY**

A-610

DETAILED JAN. 1966 BY WOODS
CHECKED MARCH 1966 BY MUBERLY

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

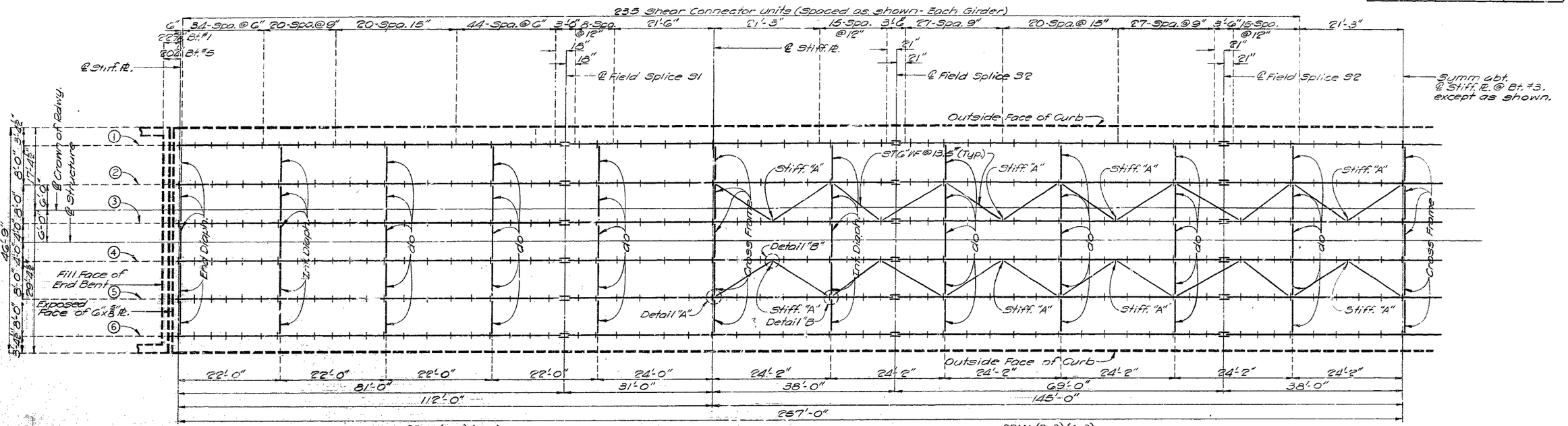
Sheet No. 10 of 17.

16

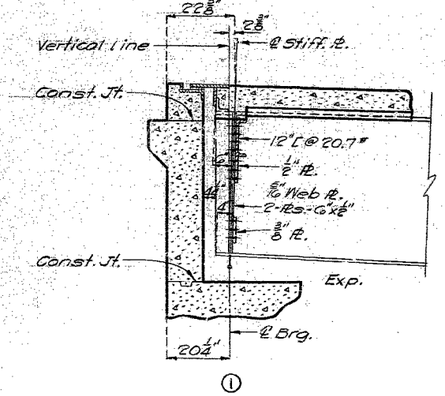
MISSOURI STATE HIGHWAY DEPARTMENT

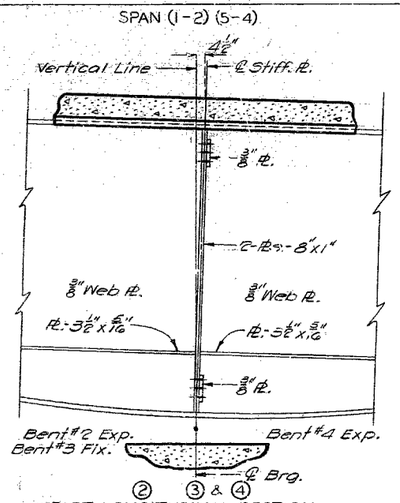
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	108	

Note: Longitudinal dimensions shown are taken parallel to grade at crown of roadway.



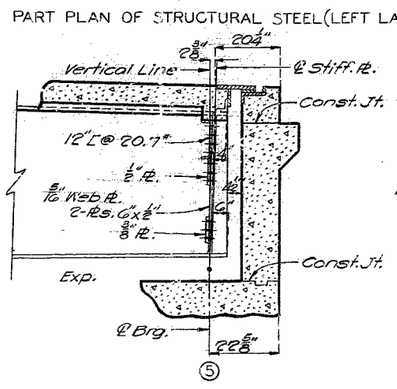
SPAN (1-2) (5-4)





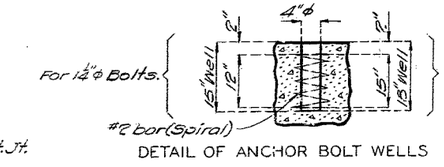
PART LONGITUDINAL SECTION

PART PLAN OF STRUCTURAL STEEL (LEFT LANE)

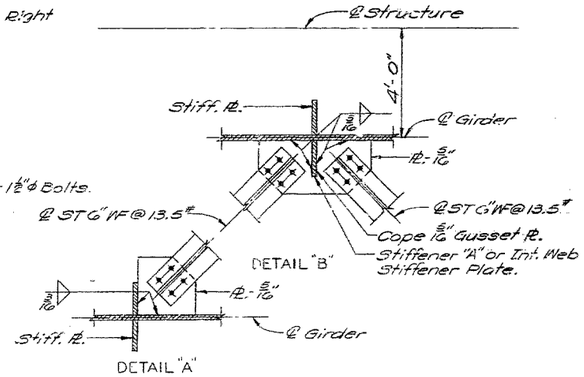


SPAN (2-3) (4-3)

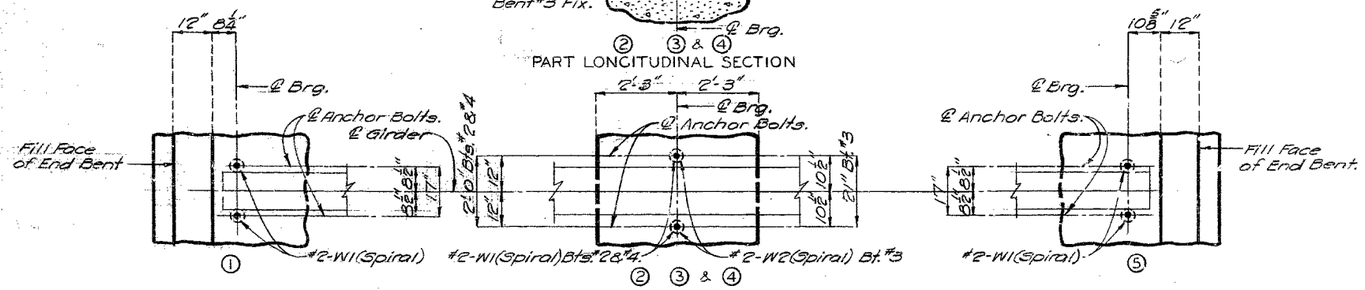
Note: Plan of Structural Steel for Right Lane is opposite hand laterally.



DETAIL OF ANCHOR BOLT WELLS



Note: For location of 5/16" Rt. See Sheet No. 12 of 17. Stiffener "A" to be used on interior girder where necessary for connection of lateral bracing.



PART ANCHOR BOLT PLAN

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

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)X(RTE I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-610

DETAILED DEC. 1965 BY H. MILLER

CHECKED MARCH 1966 BY MOBERLY

Sheet No. 11 of 17.

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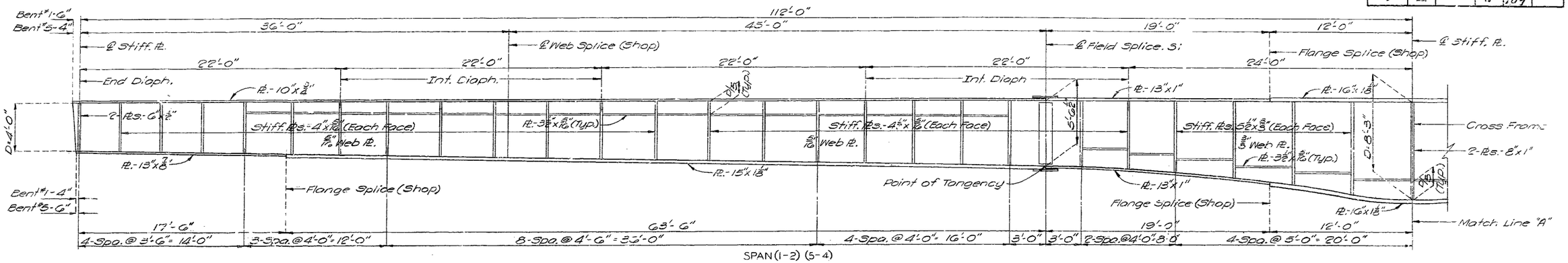
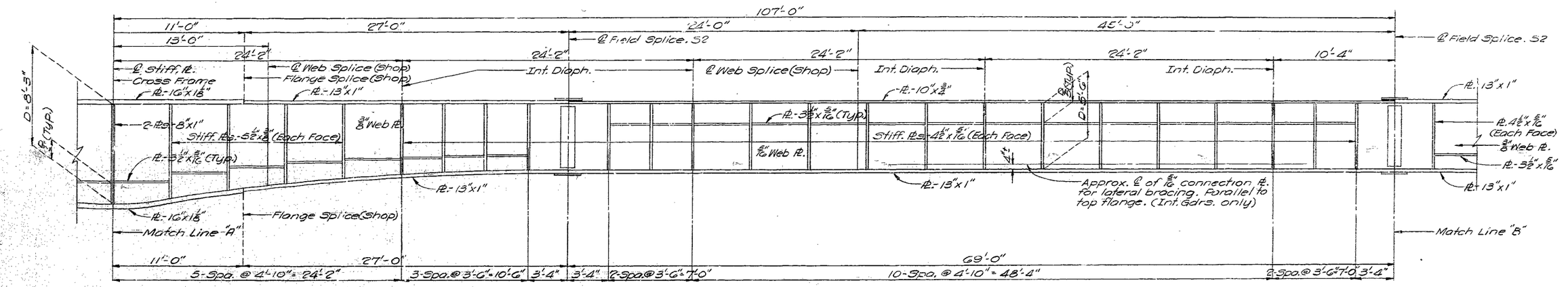
MISSOURI STATE HIGHWAY DEPARTMENT

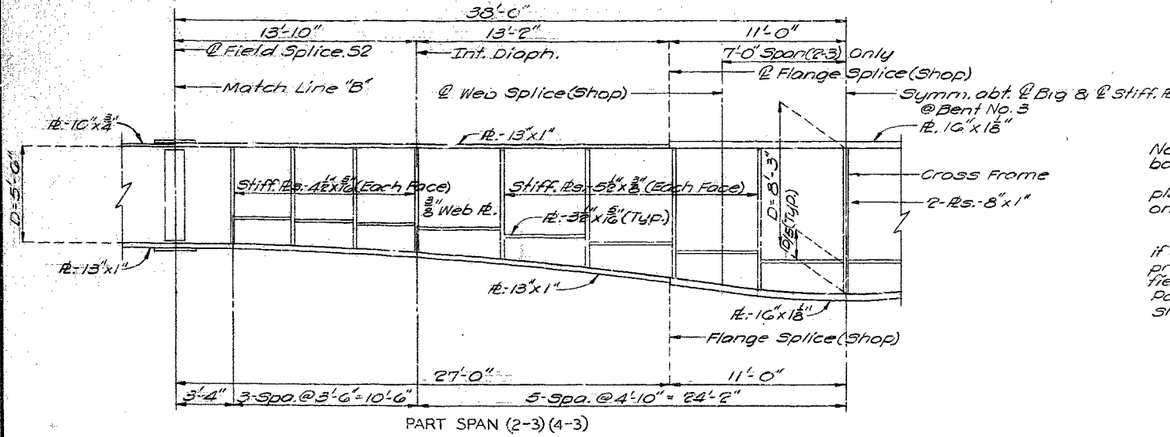
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	109	



SPAN (1-2) (5-4)



PART SPAN (2-3) (4-3)



PART SPAN (2-3) (4-3)

ELEVATION OF GIRDERS
(Girder #1 shown, Girders #2, 3, 4, 5 & 6 similar.

Note: Transverse stiffener plates as shown on both sides of web, spaced as shown.
Longitudinal stiffener plates 3/8"x 5/16" to be placed on inside face of girders #1, 3, 4 & 6 and on the outside face of girders #2 & 5.
For details of field splices. See Sheet No. 13 of 17
The contractor may omit any shop flange splice, if desired, by extending the heavier flange plate and providing approved modifications of details at field flange splices and elsewhere as required. Payweight in any case will be based on material shown on design plans.

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER
STATE ROAD: INTERSTATE ROUTE 435
ABOUT 5.0 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1 (53) (RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)
JACKSON **COUNTY**

168

DETAILED DEC. 1965 BY H. MILLER
CHECKED MARCH 1966 BY MOBERLY

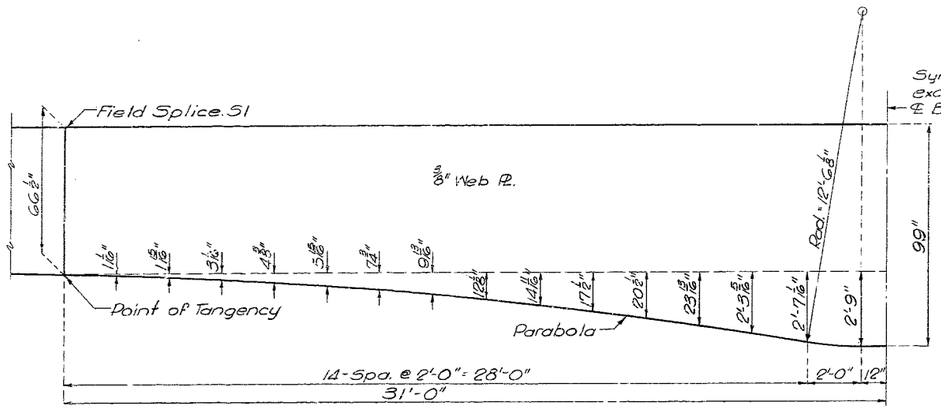
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 17.

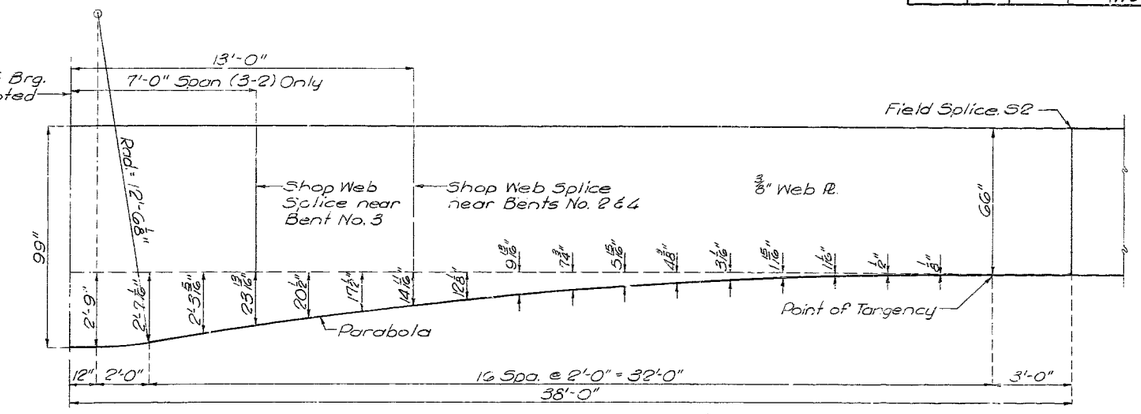
A-610

MISSOURI STATE HIGHWAY DEPARTMENT

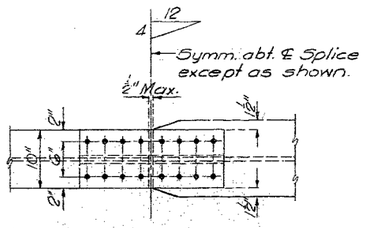
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	110	



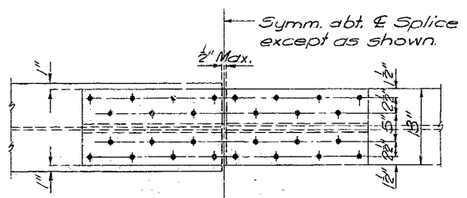
DETAIL OF GIRDER HAUNCH AT BENTS NO. 2 & 4 (END SPANS)



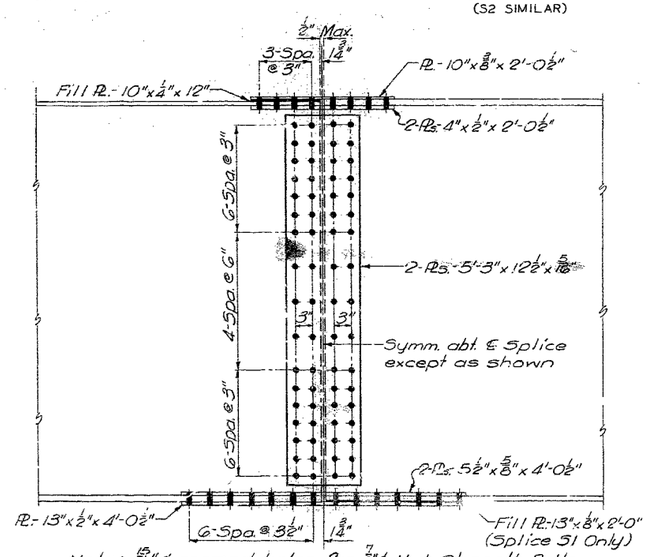
DETAIL OF GIRDER HAUNCH AT BENTS NO. 2 & 4 (INTERIOR SPANS) & NO. 3



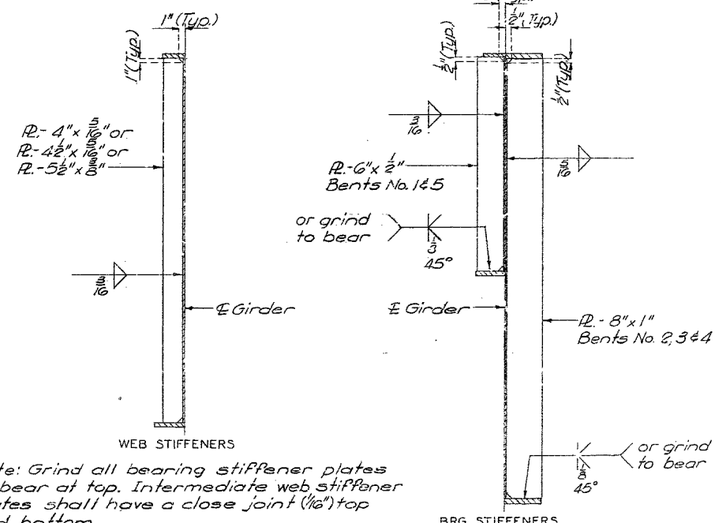
PLAN OF FLANGE SPLICE S1 & S2 (TOP)



PLAN OF FLANGE SPLICE S1 (BOTTOM) (S2 SIMILAR)



DETAILS OF FIELD SPLICE



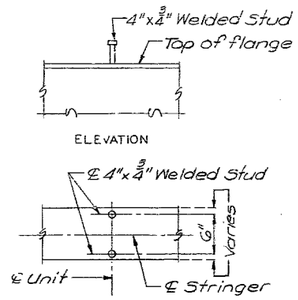
WEB STIFFENERS

BRG. STIFFENERS

Note: Grind all bearing stiffener plates to bear at top. Intermediate web stiffener plates shall have a close joint (1/16") top and bottom.

Fillet weld sizes greater than 3/16" may be reduced 1/16" if welding is done by submerged arc.

WELDING DETAILS



DETAIL OF SHEAR CONNECTORS

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53) (RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-610

169

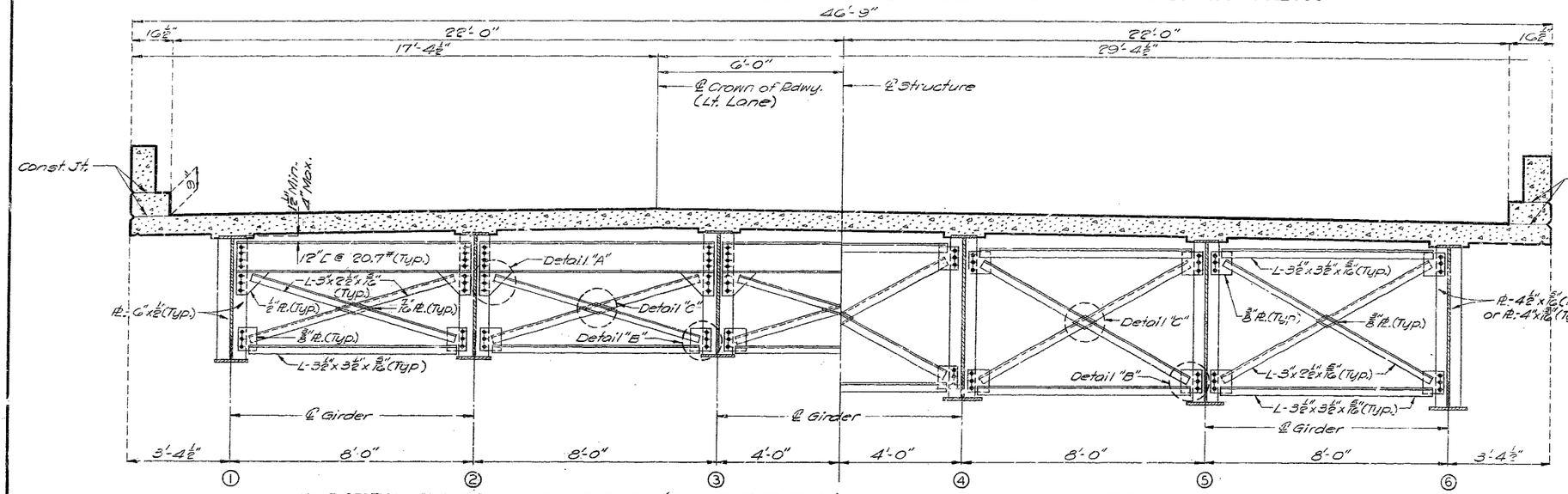
DETAILED JAN. 1966 **BY** WEAVER

CHECKED MARCH 1966 **BY** MOBERLY

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

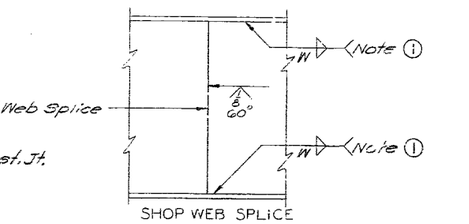
MISSOURI STATE HIGHWAY DEPARTMENT

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

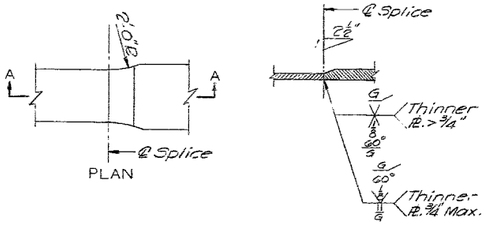


HALF SECTION AT END DIAPHRAGM BENT NO. 5 (SIMILAR AT BENT NO. 1)

HALF SECTION SHOWING INT. DIAPHRAGMS

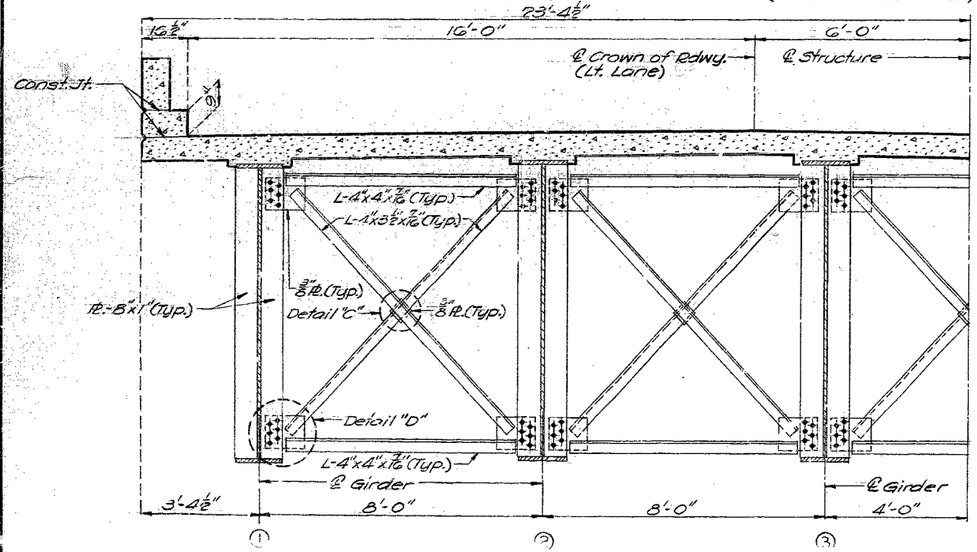


SHOP WEB SPLICE

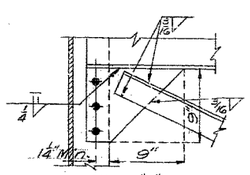


SECTION A-A

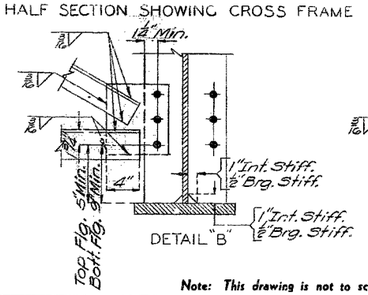
SHOP FLANGE SPLICE



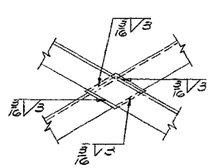
HALF SECTION SHOWING CROSS FRAME



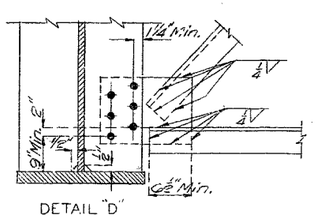
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

RADIOGRAPHIC AND MAGNETIC PARTICLE INSPECTION

RADIOGRAPHIC:

SHOP: All butt welded flange plates, and not more than ⅓ of each girder web splice beginning at a point of maximum tension.

FIELD: None.

MAGNETIC PARTICLE

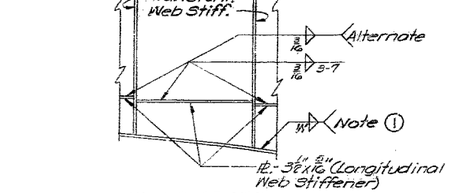
The following shop welds will be subject to inspection by the magnetic particle procedure, but this test procedure may also be used for the examination of weld passes and miscellaneous welds not specifically set out at the discretion of the engineer:

(A) At least 8" of every 10' length of weld and 8" of each weld less than 10' in length of each size and type of primary fillet weld of girders.

(B) Ten percent of secondary fillet welds on main members, fillet welds on secondary and bracing members and bearing shoes.

The tests shall be located at random in the members so as to be typical for each size and type of weld.

FIELD: None.



WEB STIFFENER

TABLE OF WELD SIZES	
FLANGE THICKNESS	W
To ½" inclusive	5/16
Over ½" to ¾"	¼
Over ¾" to 1½"	5/16

Note ①: Fillet weld size for flange to web welds when tandem fully automatic submerged arc process is used shall be 5/16" for material to ⅝" thick, ¼" for material ⅝" to ⅞" thick, and in accordance with AWS recommended weld sizes for material over ⅞" thick.

WELDING DETAILS

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-610

120

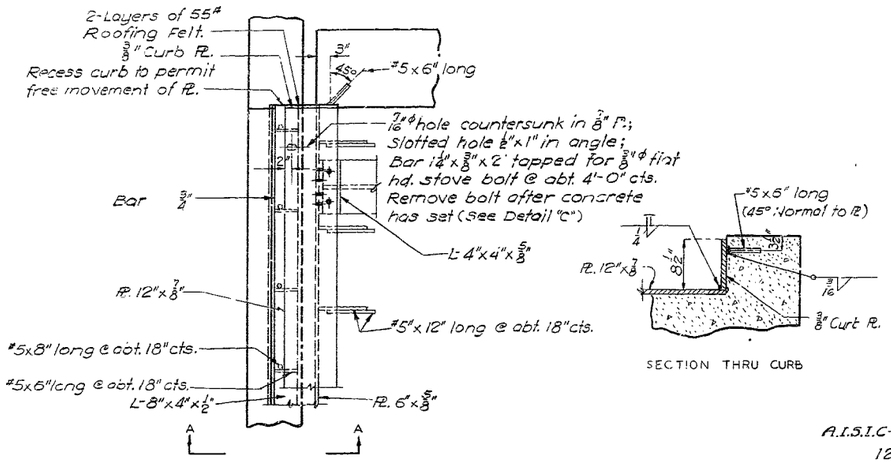
DETAILED DEC. 1965 BY H. MILLER

CHECKED MARCH 1966 BY MOBERLY

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

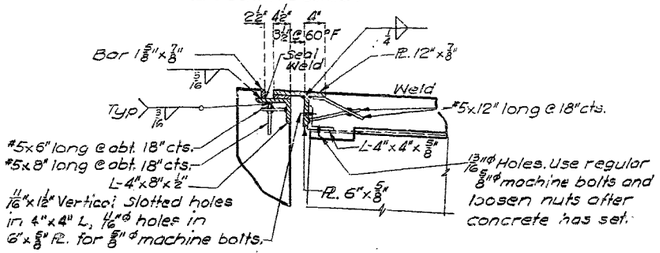
MISSOURI STATE HIGHWAY DEPARTMENT

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

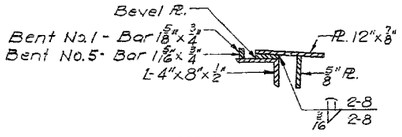


END BENT NO. 1 SHOWN
(End Bent No. 5 Similar)

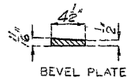
SECTION THRU CURB



SECTION A-A



SECTION THRU EXPANSION DEVICE



BEVEL PLATE

GENERAL NOTES:

Expansion Device shall be fabricated in one section except that when the length is over 40 feet splicing is permissible. The expansion device shall be bent to conform to crown and grade of roadway.

#5 Bars shall be structural grade. Approved stud welded anchors may be used in lieu of #5 bars shown.

Use two layers of 55# roofing felt between the sliding contact surface of curb plate and concrete backwall.

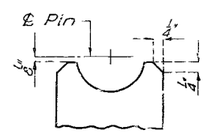
NOTES: TYPE "D" BEARINGS

Lead plates under bearings shall be approximately 1/8" thickness and weigh 8#/sq. ft. Cost of lead plates shall be included in price bid for other items. "Estimated weight" does not include weight of anchor bolts.

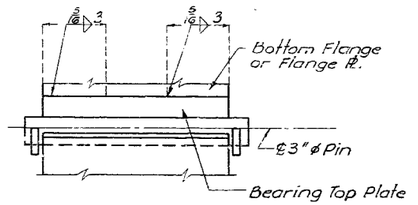
Rockers and pedestals shall be machined after welding.

Where flat surface is indicated, tolerance shall be .003 in/in in any direction.

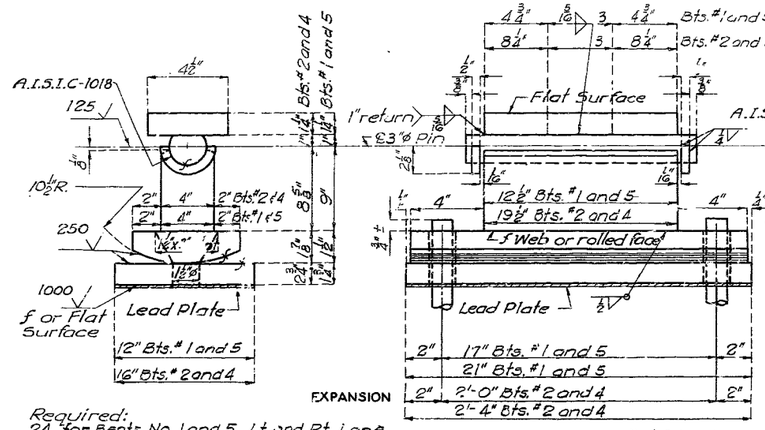
Anchor Bolts for Expansion Bearings shall be 1 1/4"ϕ swedged bolts and shall extend 12" into concrete, with no nuts. Anchor bolts for Fixed Bearings shall be 1 1/2"ϕ swedged bolts and shall extend 15" into concrete with hexagon nuts and plain washers.



END VIEW OF WEB EXPANSION BEARING



WELDING DETAILS



TYPE "D" BEARINGS
(Estimated Weight 79,390#)

Required:
24 for Bents No. 1 and 5 Lt. and Rt. Lane.
24 for Bents No. 2 and 4 Lt. and Rt. Lane.

Required: 12-for Bent No. 3 Lt. and Rt. Lane.

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-G-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE)
914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-610

DETAILED DEC. 1965 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

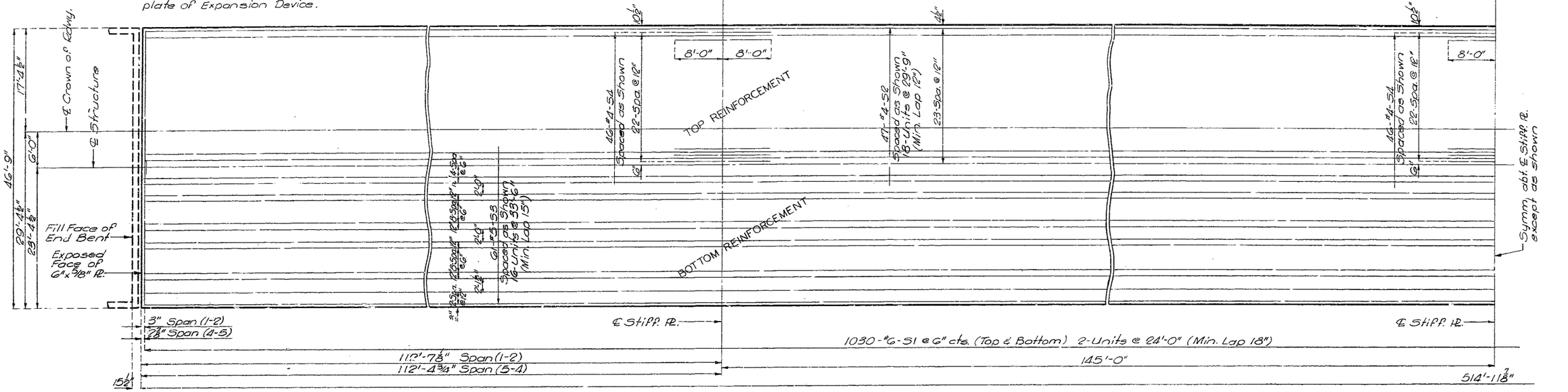
Note: This drawing is not to scale. Follow dimensions.

17

MISSOURI STATE HIGHWAY DEPARTMENT

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

Note: Longitudinal Reinforcing steel shall be placed so that ends shall not be more than 1" from 5/8" plate of Expansion Device.

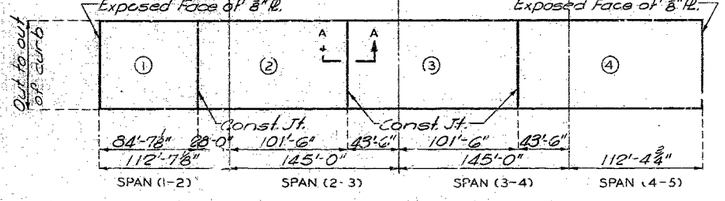


PLAN OF SLAB SHOWING REINFORCEMENT (LEFT LANE)

Note: For details of curb and handrail not shown see sheet No. 17 of 17.

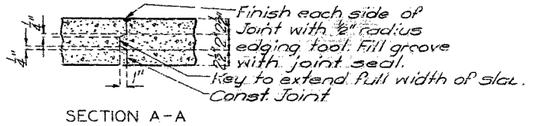
Note: Longitudinal dimensions shown are taken parallel to grade at crown of roadway.

Plan of slab for right lane is oppisite hand laterally.

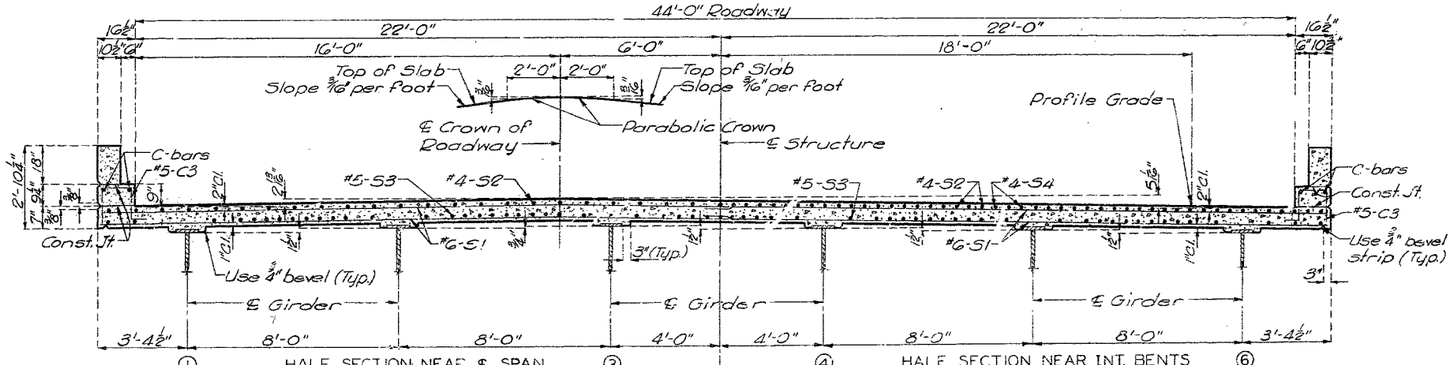


	Sequence of Pours Direction			
Basic Sequence	1 End to 2	2 1 to 3	3 2 to 4	4 3 to End
Alternate "A" Pours	1+2 End to 3		3 2 to 4	4 3 to End
Alternate "B" Pours	1+2 End to 3		3+4 2 to End	
Alternate "C" Pours	1+2+3+4 End to End			

Note: The contractor shall use an approved oscillating screed type, self-propelled mechanical finishing machine. He shall furnish an approved retarder to retard the set of the concrete to 2.5 hours and shall pour and satisfactorily finish the slab pours at a rate of not less than 44 cubic yards per hour. (See Standard Specification 411.8., for payment of retarder). He shall observe the basic pouring sequence unless he can demonstrate to the engineer that he can pour and satisfactorily finish one of the longer alternate pours. Finishing machine loads will not be permitted on concrete less than 48 hours old.



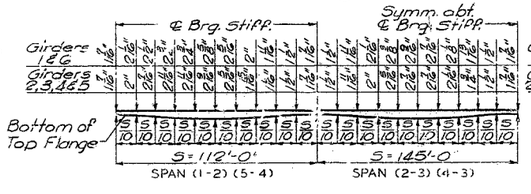
SECTION A-A



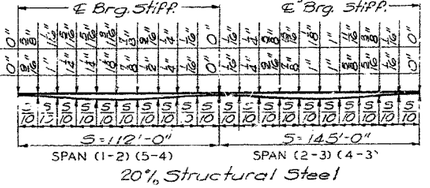
HALF SECTION NEAR ℄ SPAN

HALF SECTION NEAR INT. BENTS

Note: Left Lane structure shown in Half Sections. Right Lane structure is opposite hand.



THEORETICAL SLAB HAUNCHING DIAGRAM



20% Structural Steel DEAD LOAD DEFLECTION

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-610

DETAILED DEC. 1965 BY WEAVER

CHECKED MARCH 1966 BY MOBERLY

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

Sheet No. 16 of 17.

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MISSOURI STATE HIGHWAY DEPARTMENT

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

GENERAL NOTES:

All handrail posts shall be set normal to grade.

Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet.

Aluminum washer shims between top of parapet and post base may be used for adjusting handrail alignment. Maximum thickness of shims to be 1/8". Where more tilting of post is required for proper alignment, concrete bearing areas shall be ground down.

All parts of handrail, except anchor bolts, nuts, washers, and set screws are to be of aluminum material.

The contract unit price per linear foot of "Bridge Rail" shall include furnishing and erecting the handrail complete with anchor bolts, shims and Insulating compound.

All fillets 1/4" except as noted.

All drafts 3° except as noted.

Pipe rail to be fabricated in two or three panel lengths unless otherwise approved.

Omit set screw on side near filled joint in parapet at all expansion posts.

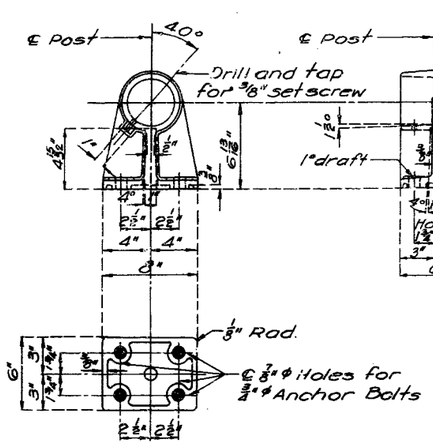
Top of curbs and parapets to be built parallel to grade with curb and parapet joints (except at end posts) normal to grade.

All exposed edges of end posts shall have 1/2" bevel. All exposed edges of curbs and parapets shall have 1/2" radius or 3/8" bevel.

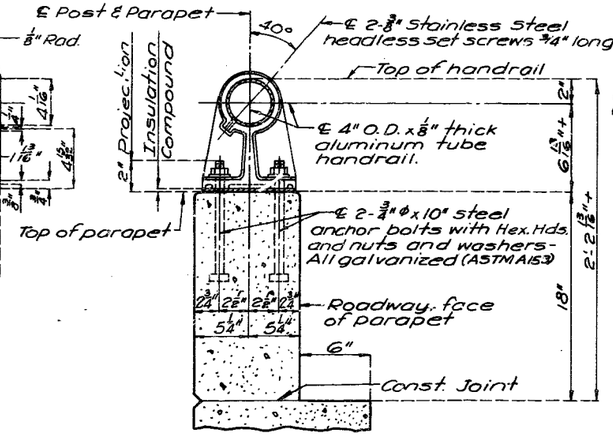
If the contractor desires, he may use drive fit cast aluminum end caps in lieu of welded aluminum closure plates.

Integrally cast test coupons and a coat of clear lacquer specified in Std. Spec. 56.2.4 and 56.3.5 respectively will not be required for these rail posts.

Concrete end posts and ends of parapet and curbs at expansion gaps to be vertical.

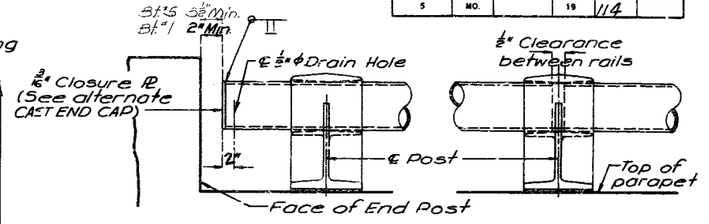


POST DETAILS

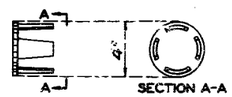


SECTION THRU HANDRAIL

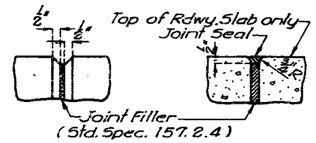
SINGLE TUBE ALUMINUM RAILING



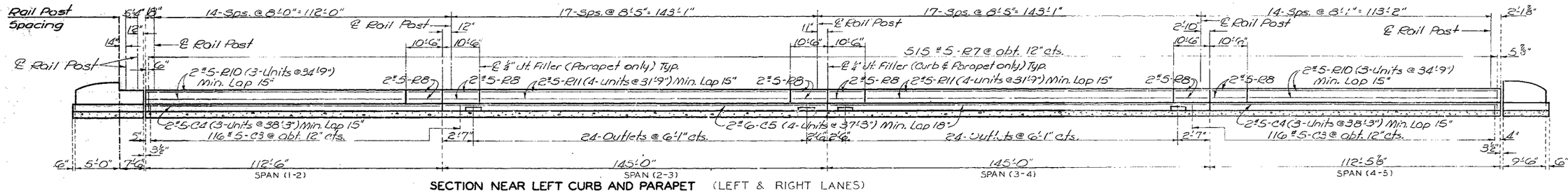
TYPICAL HANDRAIL DETAILS



CAST END CAP
(Drive Fit Type)

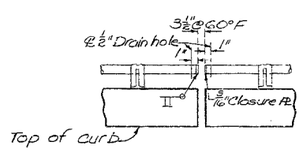


FILLED JOINT DETAILS

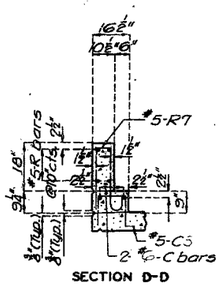


SECTION NEAR LEFT CURB AND PARAPET (LEFT & RIGHT LANES)

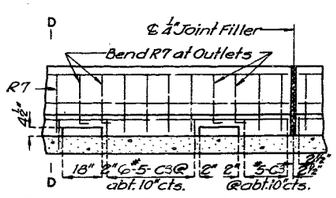
Note: For details of reinforcing not shown at ends of bridge see sheets No. 5 & 9 of 17.
Longitudinal dimensions shown are taken along top of parapet parallel to grade.



ELEVATION AT EXPANSION GAP - BENT NO. 1



SECTION D-D



SECTION AT OUTLETS & EXP. JOINT
Note: Where there are no outlets use #5-C3 @ abt. 12" cts.

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

A-010

Sheet No. 17 of 17

No.	Revised
15.2	Oct. 1965
Nov. 1963	

DETAILED JAN. 1966 **BY** ROBERDS
CHECKED MARCH 1966 **BY** MOBERLY

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

173

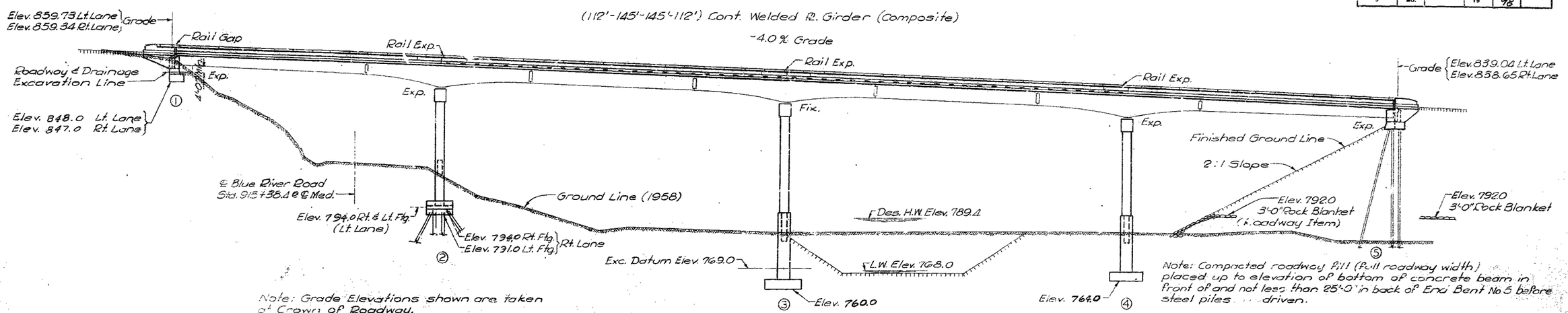
MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	98	

(112'-145'-145'-112') Cont. Welded P. Girder (Composite)

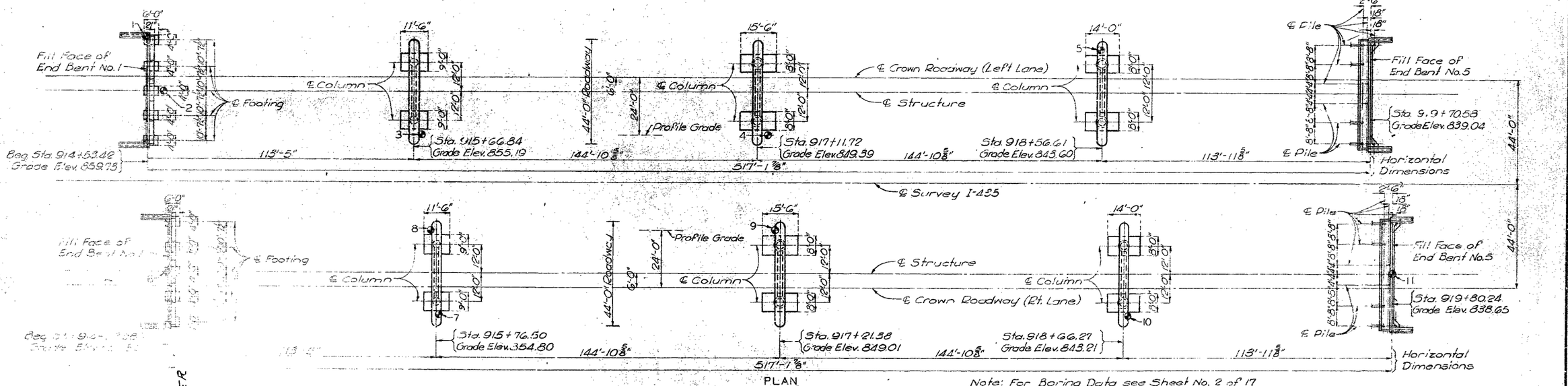
-4.0 % Grade



Note: Grade Elevations shown are taken at Crown of Roadway.

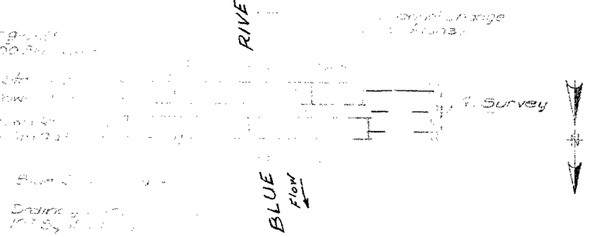
Note: Compacted roadway fill (full roadway width) placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bent No. 5 before steel piles are driven.

GENERAL ELEVATION



PLAN

Note: For Boring Data see Sheet No. 2 of 17
"⊕" Indicates location of boring.



LOCATION SKETCH

FINAL QUANTITIES

Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu.Yd.	1357.0		1357.0
Class 2 Excavation for Structures	Cu.Yd.	352.0		352.0
Steel Piles in Place (10")	Lin.Ft.	1783		1783
Steel Pile Cut-offs (10")	Lin.Ft.	167		167
Class B Concrete	Cu.Yd.	1070.9		1070.9
Class B1 Concrete	Cu.Yd.		1291.6	1291.6
Reinforcing Steel	Lb.	137,060	437,110	574,170
Painting	Ton		645.5	645.5
Fabricated Structural Carbon Steel	Lb.		1297870	1297,870
Bridge Rail (Single tube type)	Lin.Ft.		2.089	2.089
Cont. Items: Class 1 Exc. +25%	Cu.Yd.	26.0		26.0
Test Holes	Lin.Ft.	150		150
Bridge Anchors 6"	Each	5		5

Note: Concrete and reinforcing in end posts, parapets and curbs on end bents is included with superstructure Quantities. No payment allowed for excavation at End Bent 5.

B.M. " P.K. Nail Rt Wing Bt 1 Lt Lane
Elev. 860.63

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-HG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

FINISHED

SUBMITTED BY D.B. Jenkins BRIDGE ENGINEER DATE 5/20/66

APPROVED BY M.J. Sinclair CHIEF ENGINEER DATE 5/20/66

FINISHED

STD. 54.00

A-610

DESIGNED DEC. 1965 BY STORSELL

DETAILED JAN. 1966 BY WEAVER

CHECKED MARCH 1966 BY MOBERLY

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

Sheet No. 14 of 5.

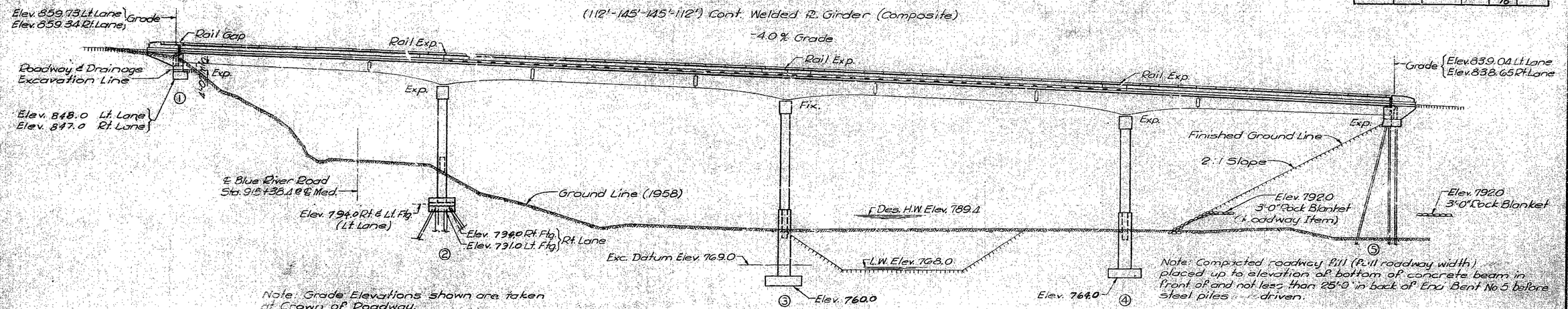
MISSOURI STATE HIGHWAY DEPARTMENT

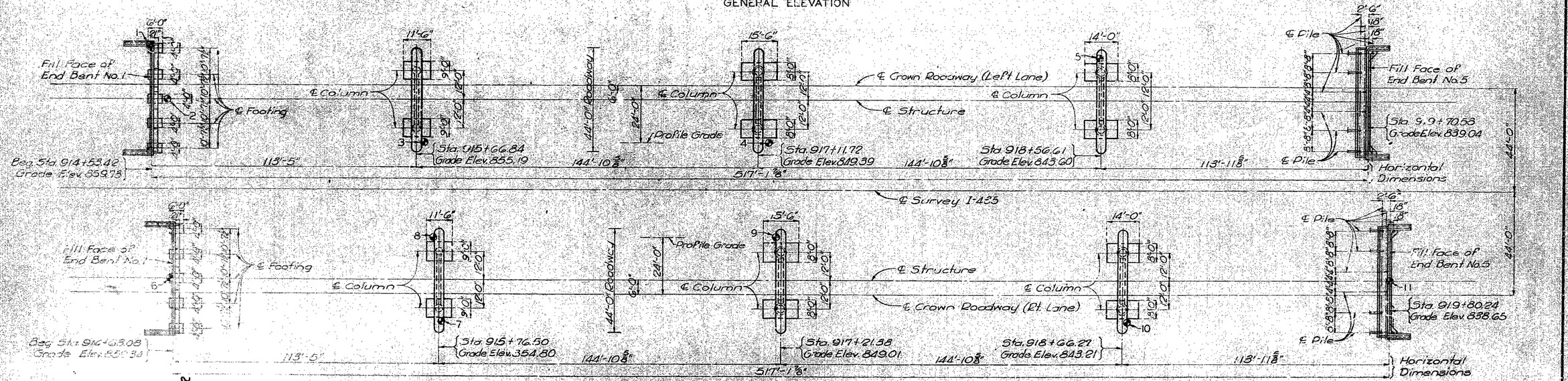
FINAL PLANS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	98	

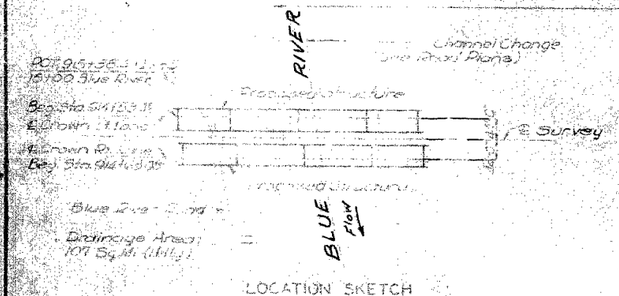
(112'-145'-145'-112') Cont. Welded Pl. Girder (Composite)

-4.0% Grade





Note: For Boring Data see Sheet No. 2 of 17
"⊕" Indicates location of boring.



FINAL QUANTITIES

Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu.Yd.	1357.0		1357.0
Class 2 Excavation for Structures	Cu.Yd.	352.0		352.0
Steel Piles in Place (10")	Lin.Ft.	1783		1783
Steel Pile Cut-offs (10")	Lin.Ft.	167		167
Class B Concrete	Cu.Yd.	1070.9		1070.9
Class B1 Concrete	Cu.Yd.		1291.6	1291.6
Reinforcing Steel	Lb.	137,060	437,110	574,170
Painting	Ton		645.5	645.5
Fabricated Structural Carbon Steel	Lb.		1,297,870	1,297,870
Bridge Rail (Single tube type)	Lin.Ft.		2,089	2,089
Cont. Items: Class 1 Exc. +25%	Cu.Yd.	26.0		26.0
Test Holes	Lin.Ft.	150		150
Bridge Anchors 6'	Each	5		5

Note: Concrete and reinforcing in end posts, parapets and curbs on end bents is included with superstructure quantities. No payment allowed for excavation at End Bent 5.

B.M.'s P.K. Nail Rt Wing Bt 1 Lt Lane Elev. 860.63 FINISHED

BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. HG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON **COUNTY**

FINISHED

SUBMITTED BY D.B. Jenkins BRI. ENGINEER DATE 5/20/66

APPROVED BY W.J. Linder CHIEF ENGINEER DATE 5/20/66

FINISHED

STD. 54.00

A-610

DESIGNED DEC. 1965 BY STORSLETT
DETAILED JAN. 1966 BY WEAVER
CHECKED MARCH 1966 BY MOBERLY

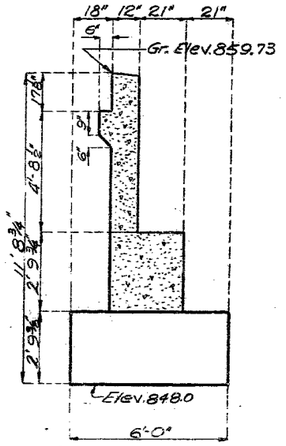
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 5.

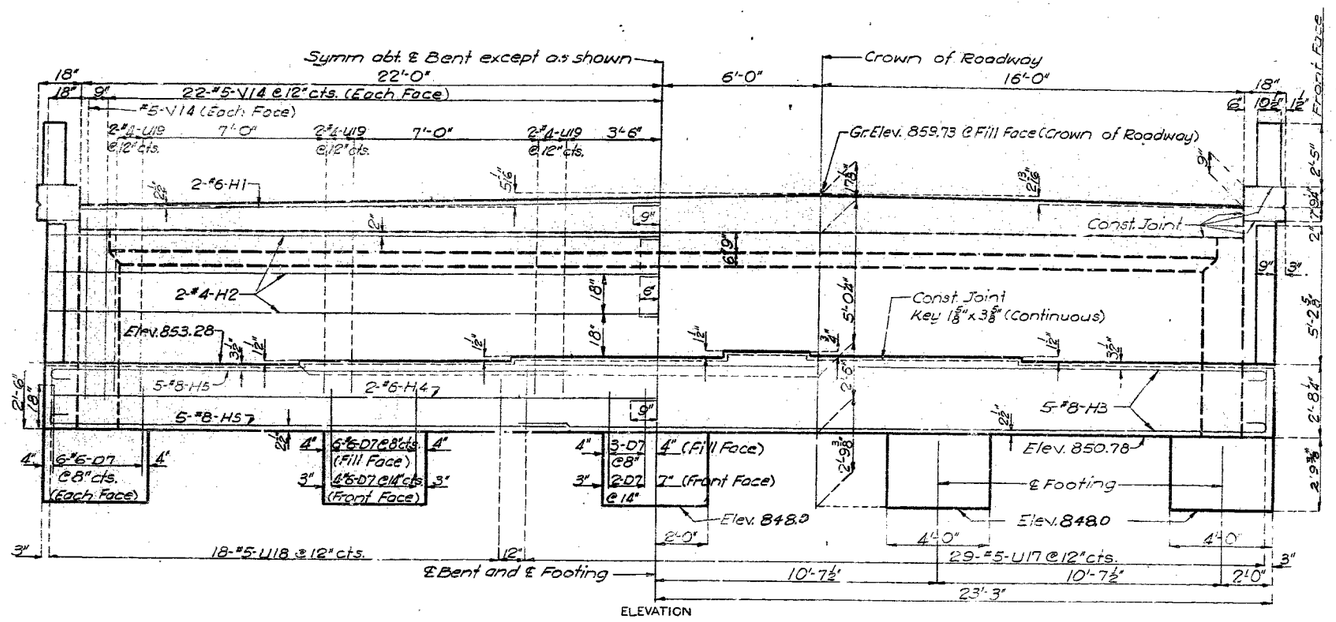
MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

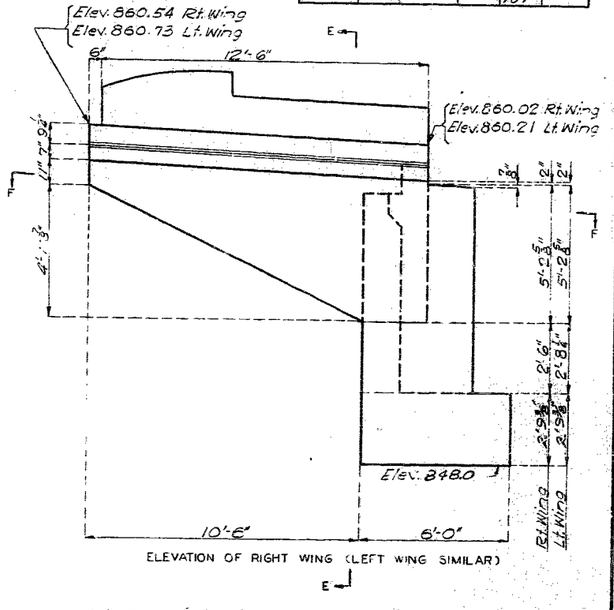
FED ROAD DIST. NO	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	101	



SECTION NEAR CROWN OF ROADWAY

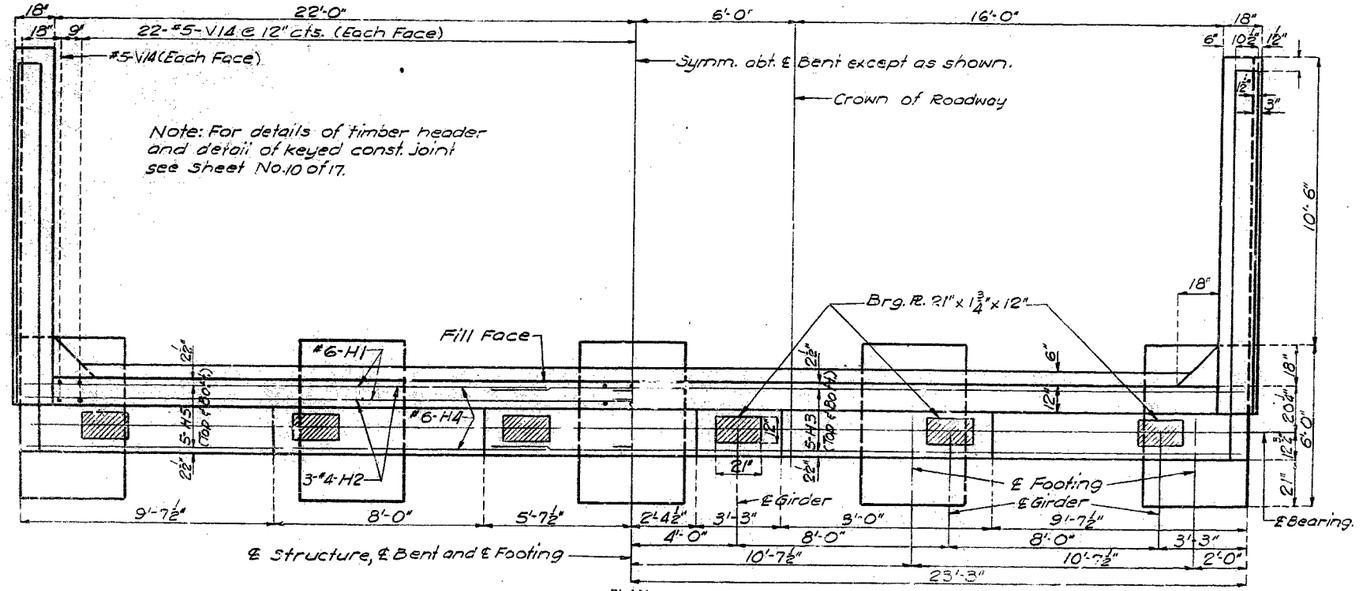


ELEVATION



ELEVATION OF RIGHT WING (LEFT WING SIMILAR)

Note: For reinforcing steel not shown in elevation of wings and section near crown of roadway, see sheet No. 5 of 17
For elevation of end post, end post ordinates, section E-E and section F-F see sheet No. 5 of 17.



PLAN

DETAILS OF END BENT NO. 1
LEFT LANE

Note: Fill at end bent No. 1 left lane was not carried above bottom of beam and wings until adjacent superstructure span was in place.

Top of backwall and expansion device for end bent No. 1 left lane to conform to crown of roadway.

Backwall above upper construction joint was not poured until the structural steel of the expansion device had been installed and slab had been poured in adjacent span.

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

Sheet No. 4A of 5.

DETAILED JAN. 1966 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

FINISHED

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON FINISHED **COUNTY** FINISHED

A-610

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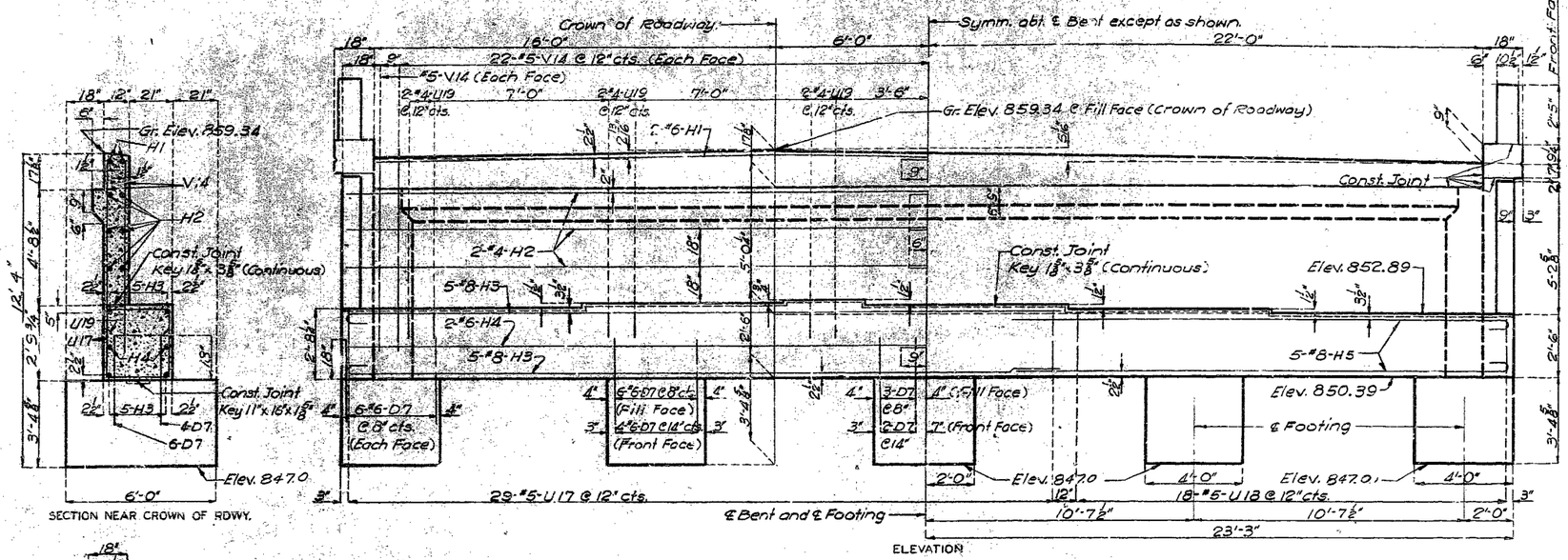
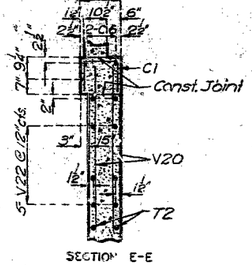
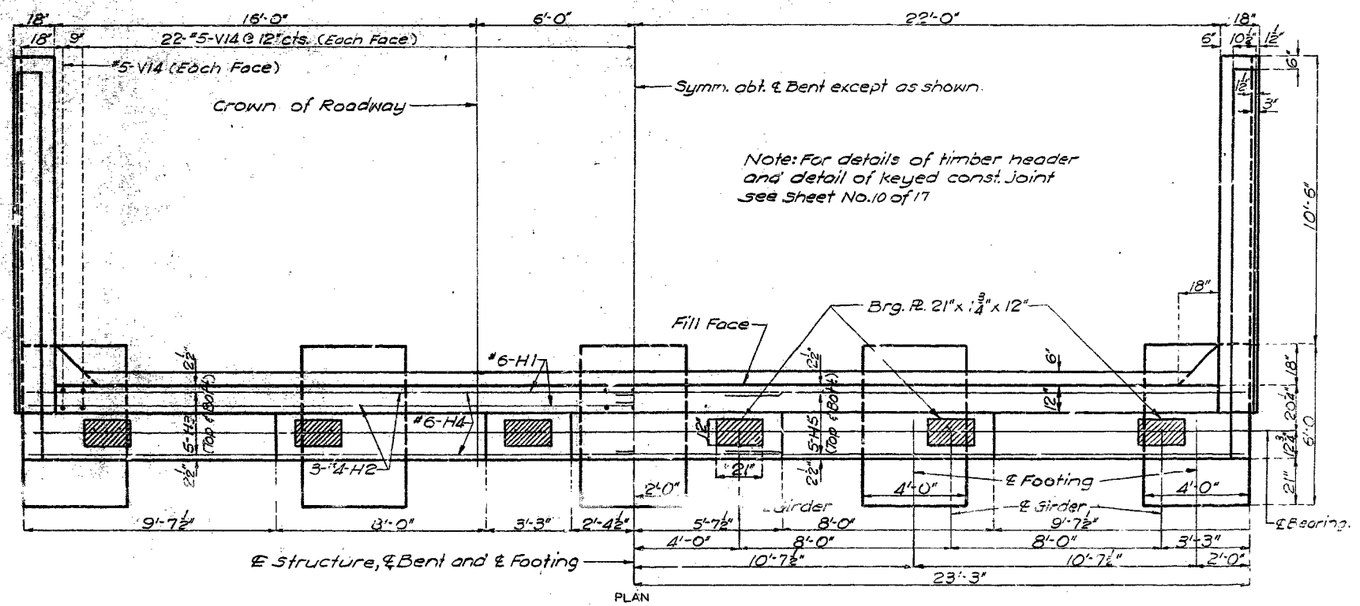
MISSOURI STATE HIGHWAY DEPARTMENT

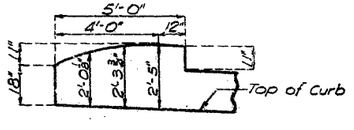
FINAL PLANS

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







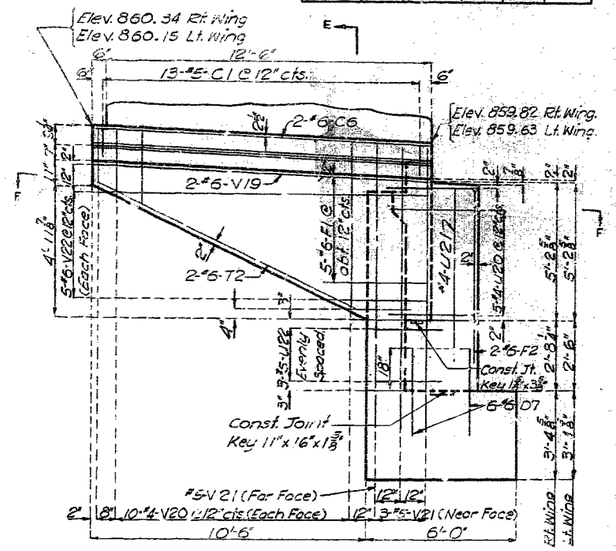


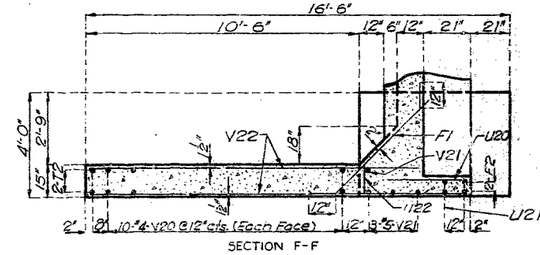
DETAILS OF END BENT NO. 1
RIGHT LANE

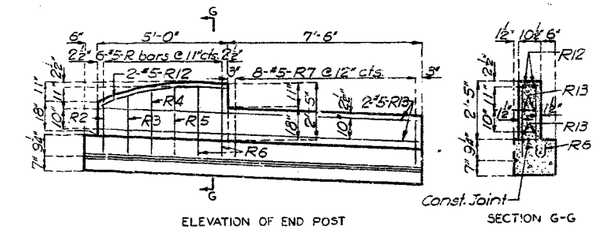
Note: Fill at end bent No. 1 right lane is not carried above bottom of beam and wings until adjacent superstructure spans are in place.

Top of backwall and expansion device for end bent No. 1 right lane to conform to crown of roadway.

Backwall above upper construction joint is not poured until the structural steel of the expansion device has been installed and slab has been poured in adjacent span.







BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON COUNTY

A-610

DETAILED JAN. 1966 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

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

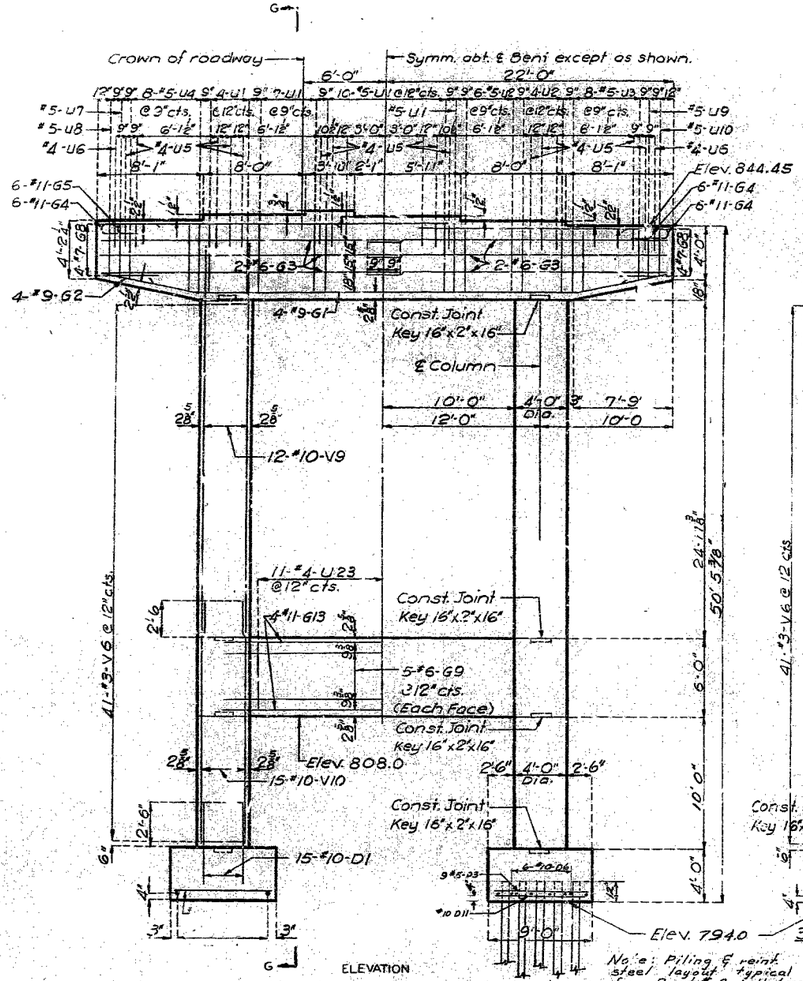
Sheet No. 5A of 5.

FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	103	



DETAILED DEC. 1965 BY WOODS

CHECKED MARCH 1966 BY MOBERLY

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

Sheet No. Ghot 5.

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-HG-435-1(53)XRTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON FINISHED COUNTY FINISHED

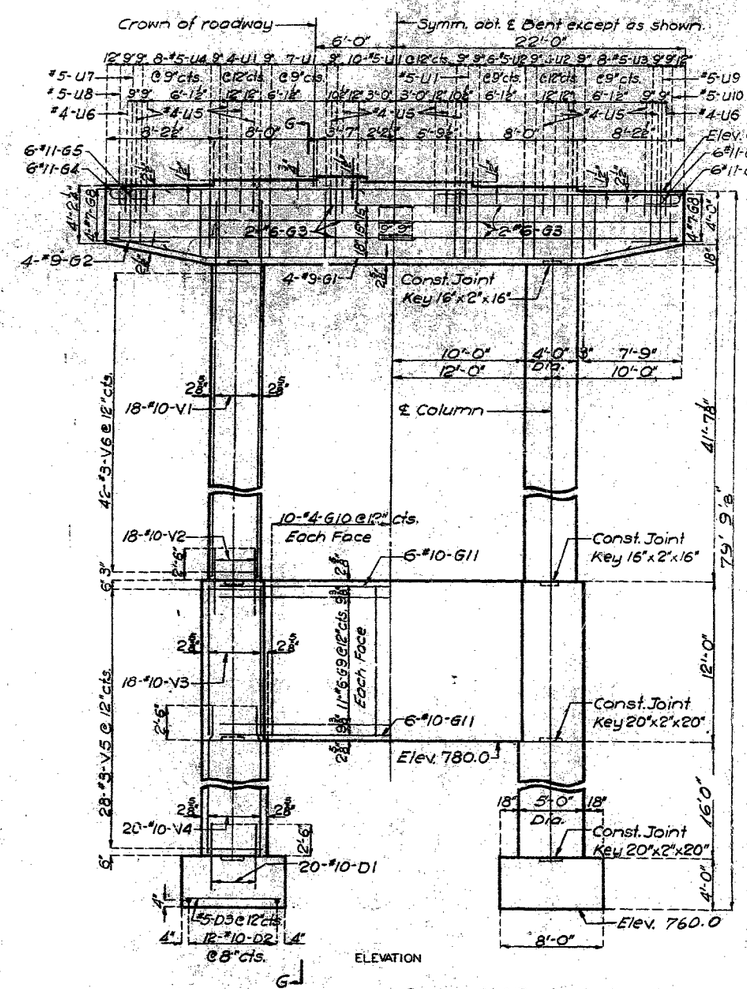
A-610

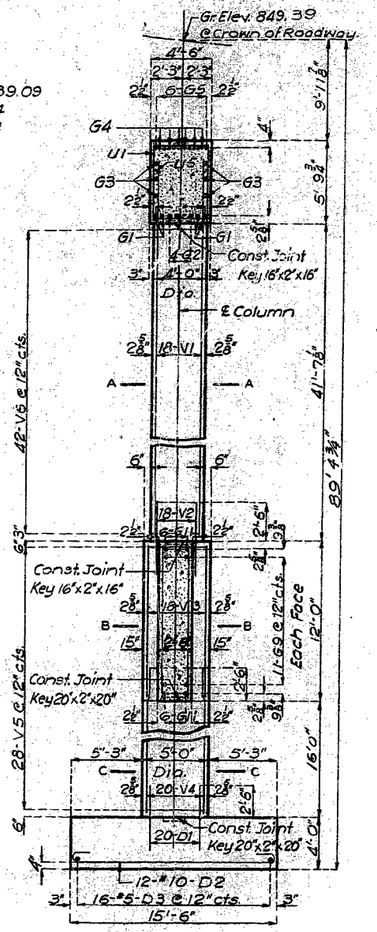
FINAL PLANS

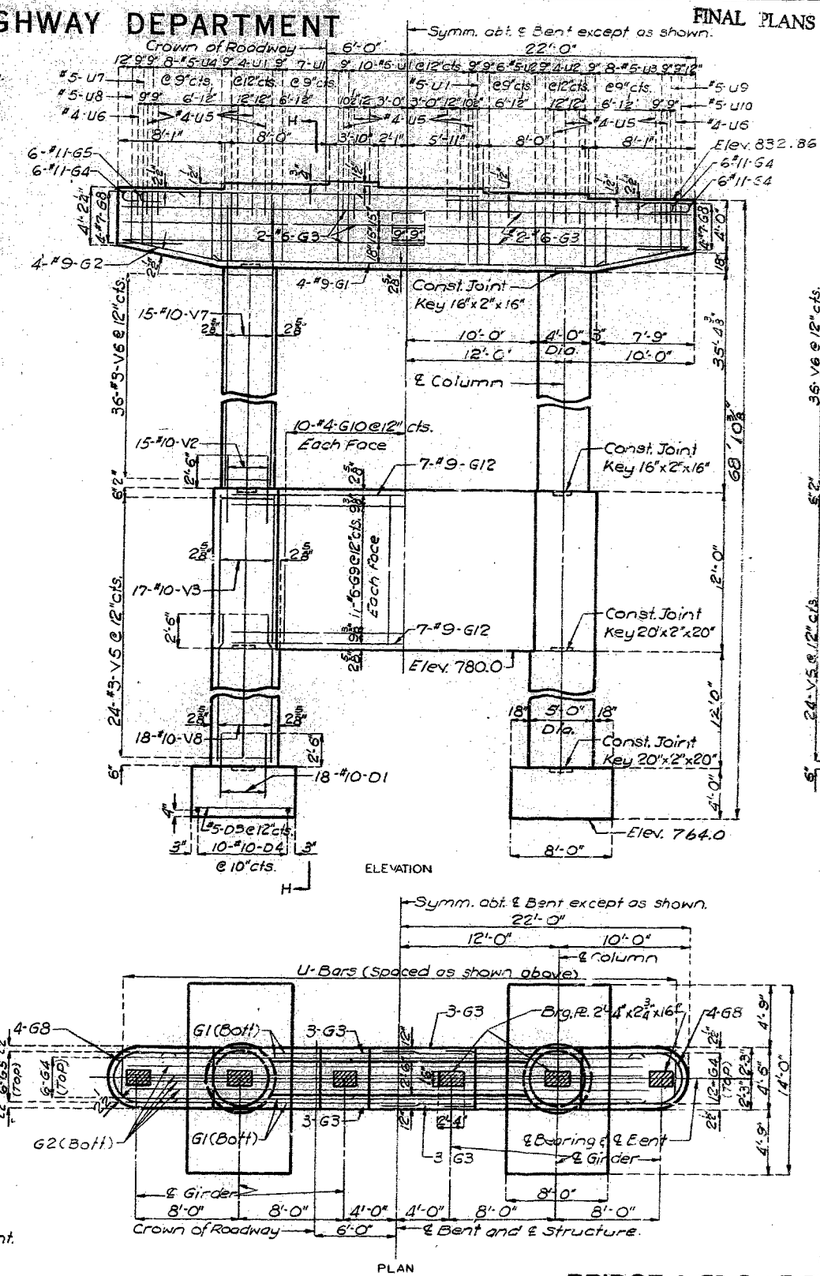
MISSOURI STATE HIGHWAY DEPARTMENT

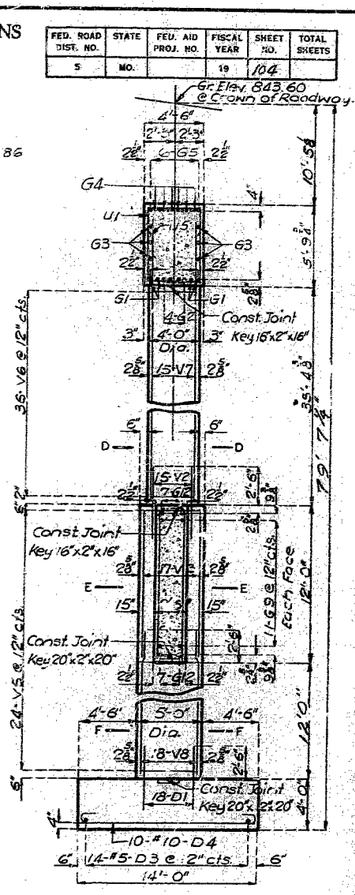
FINAL PLANS

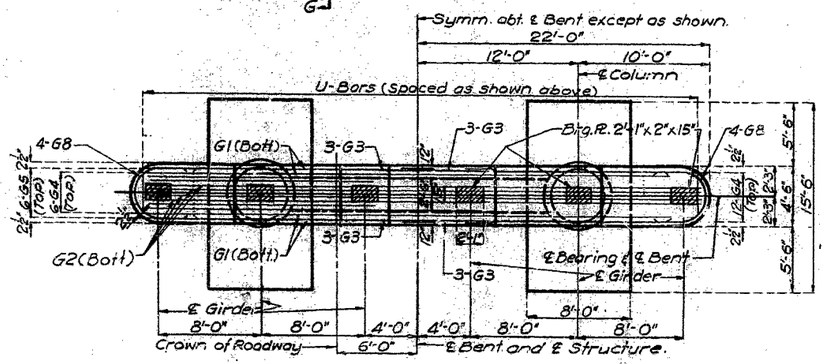
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	104	



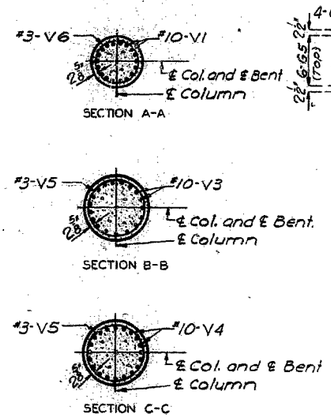




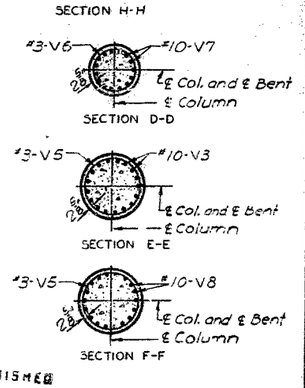




DETAILS OF INT. BENT NO. 3
LEFT LANE



DETAILS OF INT. BENT NO. 4
LEFT LANE



FINISHED

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON FINISHED **COUNTY** FINISHED

DETAILED DEC. 1965 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

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

Sheet No. 7A of 50

A-610

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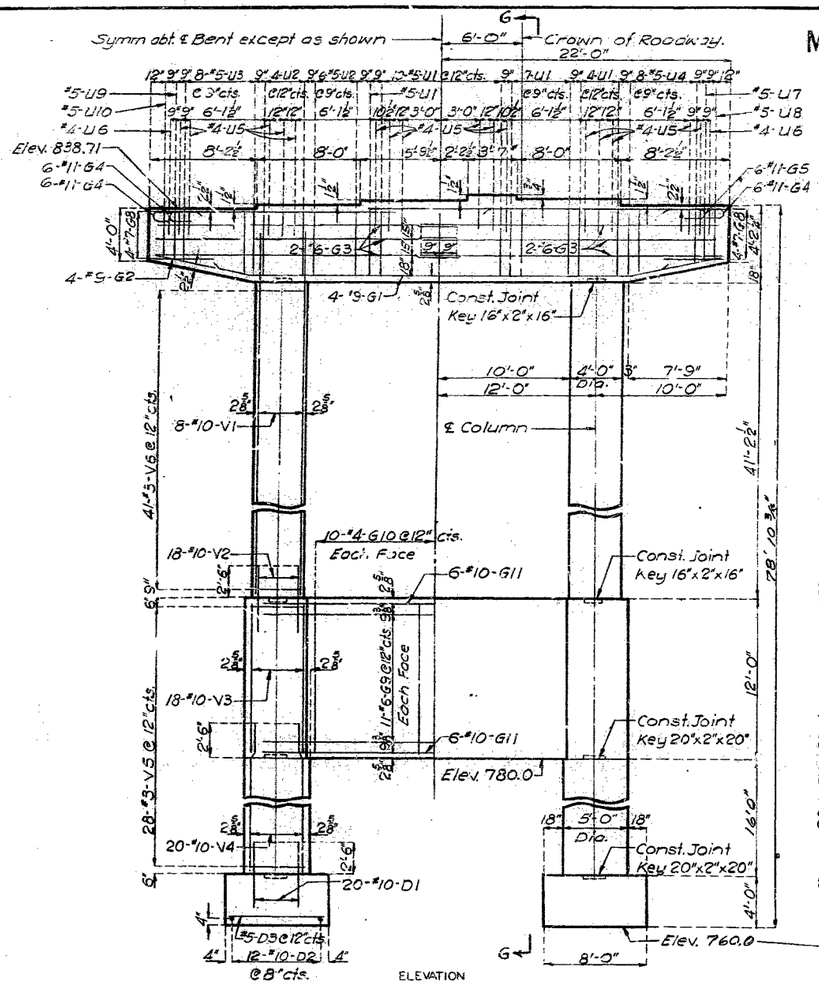
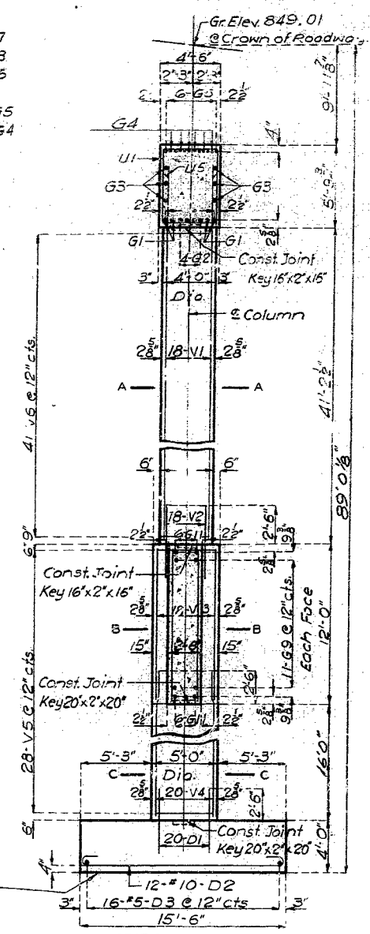
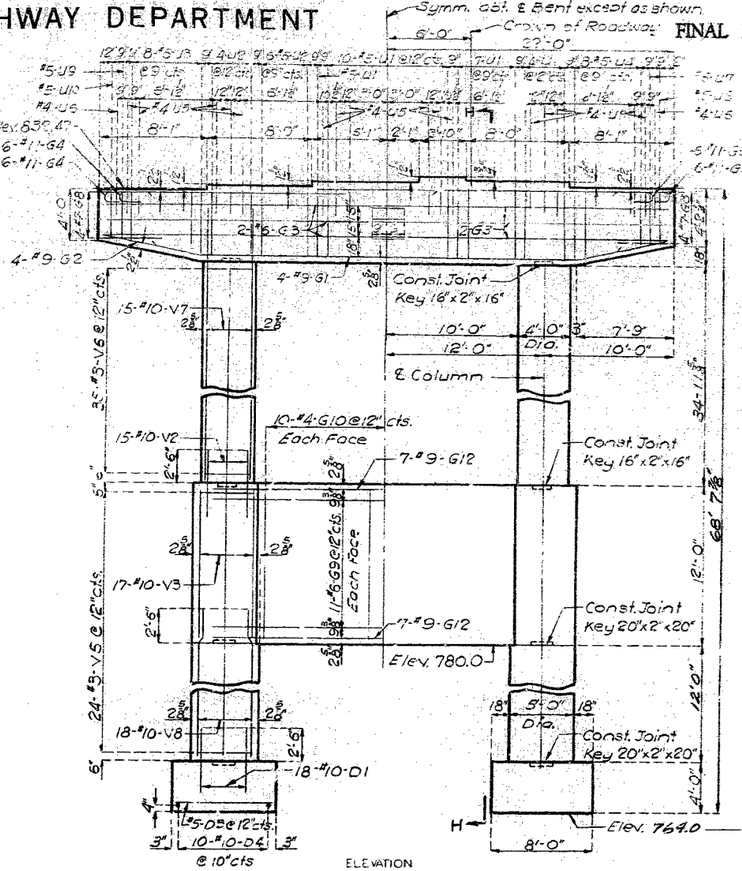
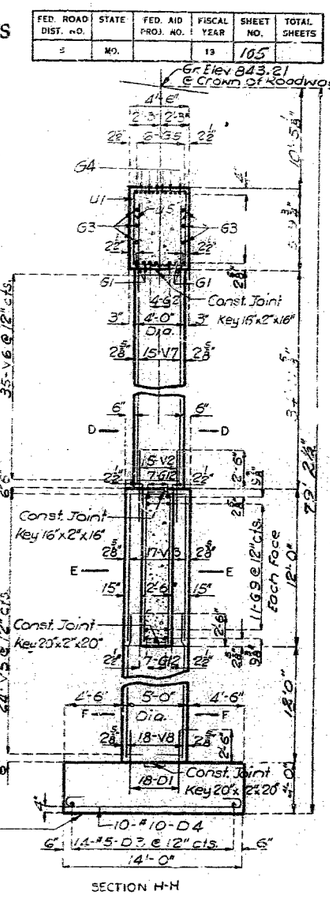
MISSOURI STATE HIGHWAY DEPARTMENT

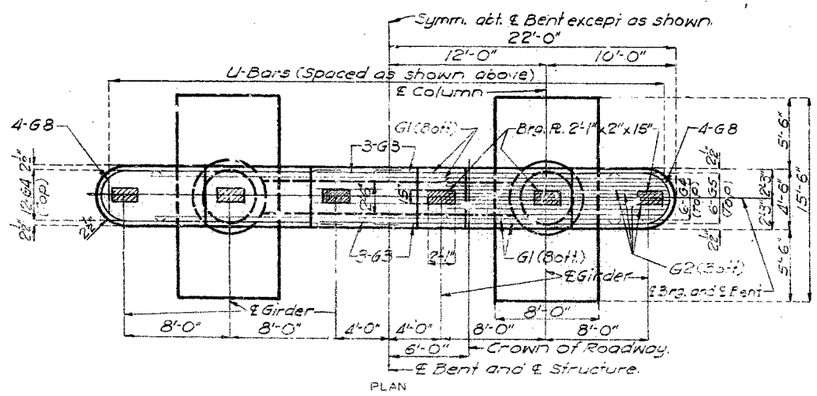
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		13	105	



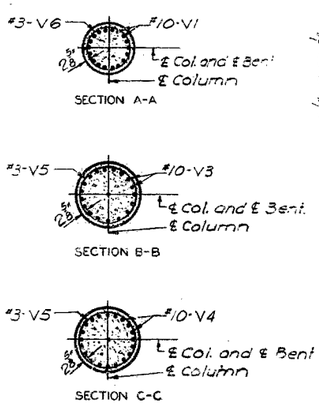


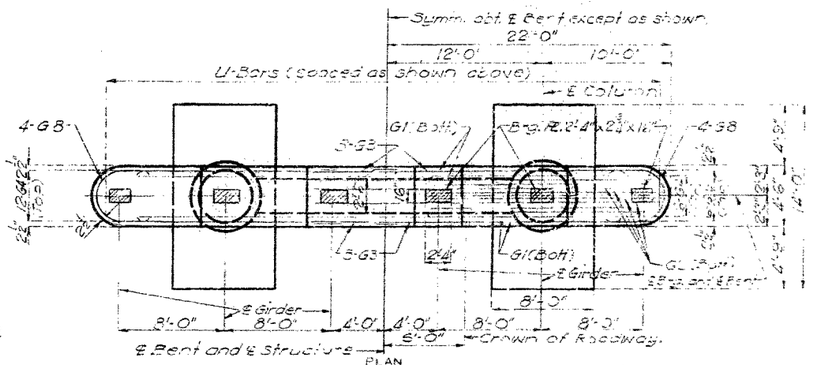




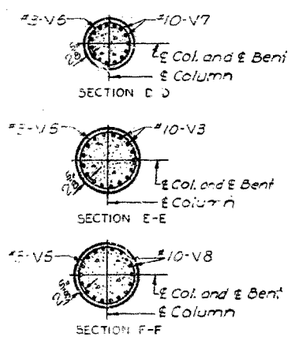


DETAILS OF INT. BENT NO. 3
RIGHT LANE





DETAILS OF INT. BENT NO. 4
RIGHT LANE



FINISHED

BRIDGE OVER BLUE RIVER ROAD AND BLUE RIVER

STATE ROAD: INTERSTATE ROUTE 435

ABOUT 5.0 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)URTE [illegible] **STA.** 914+53.42 (LT. LANE) 914+63.08 (RT. LANE)

JACKSON FINISHED **COUNTY** FINISHED

A-610

DETAILED DEC. 1965 BY WOODS
CHECKED MARCH 1966 BY MOBERLY

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

Sheet No. 8A of 5.

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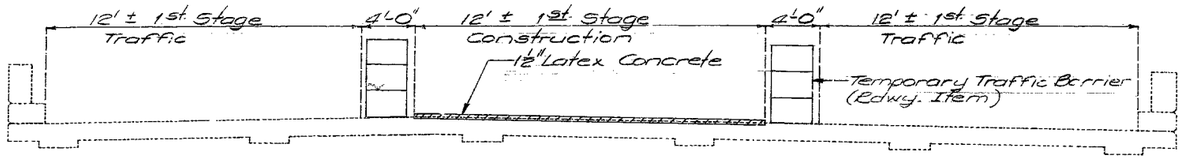
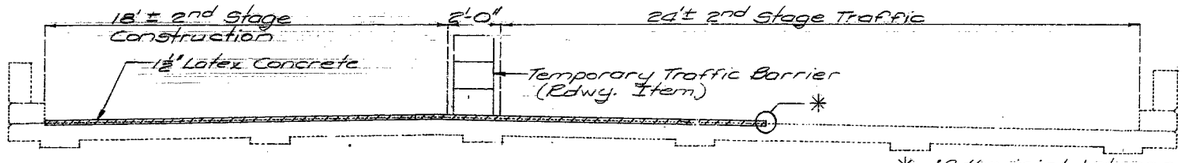
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		13	10	
SEC. 33		TWP. 48N	RGE. 33W		

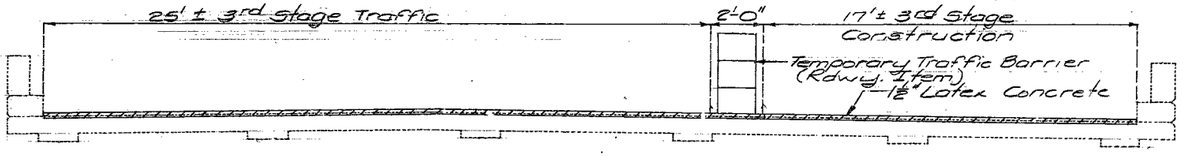


STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

* If the joint between latex overlay of stages 2 and 3 is damaged a new joint shall be saw cut the full length of the structure.

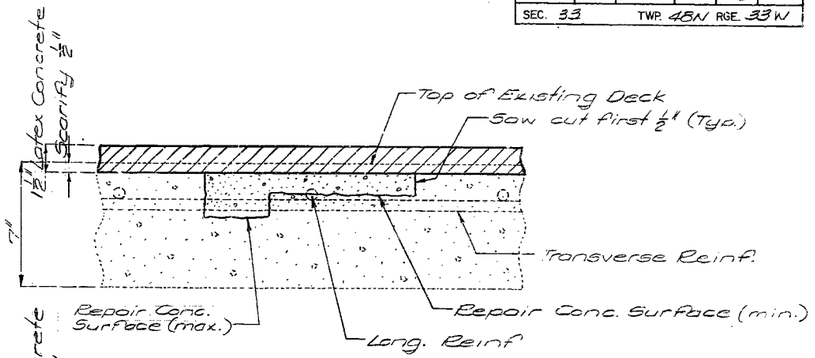


STAGE 3 CONSTRUCTION

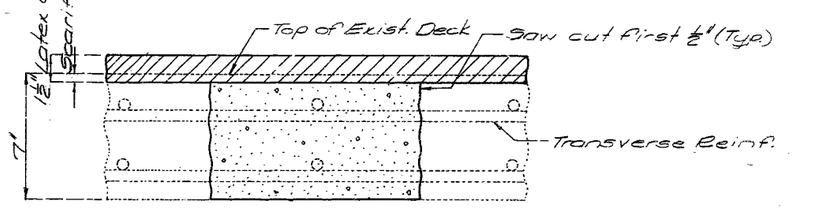
Note: Paint: System B by contractor in accordance with Std Spec 712.13 (Color of the final field coat for System B shall be aluminum). Areas to be encased in end bent concrete shall be painted one coat of system C primer and scratched or damaged surfaces are to be touched up before concrete is poured.

ESTIMATED QUANTITIES		
ITEM		TOTAL
Special Work	Lump Sum	1
Latex Concrete Wearing Surface	Sq. Yd.	5045
Repairing Concrete Deck (Half Soling)	Sq. Ft.	6775
Full Depth Repair	Sq. Ft.	492
Painting (System B) Aluminum	Lump Sum	1

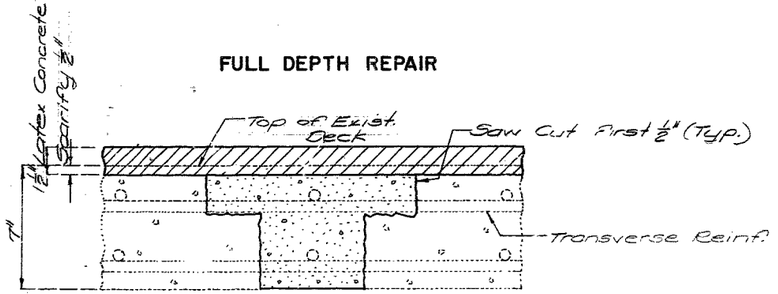
Note: Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.



HALF SOLED AREA



FULL DEPTH REPAIR



FULL DEPTH REPAIR IN HALF SOLED AREA

113

REPAIRS TO
BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD INTERSTATE 435

IN KANSAS CITY

PROJECT NO. IR-435-1(199)

JOB NO. 4-1435-442

JACKSON **COUNTY**

STA. 914+53.42 ± (LT. LANE)
STA. 914+63.08 ± (RT. LANE)

RTE. I-435

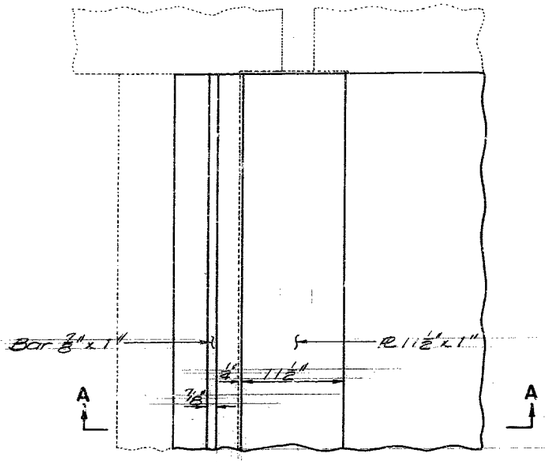
DATE 1/20/84

STD.
STD.
A-610R

DESIGNED SEPT 1983
DETAILED SEPT 1983
CHECKED SEPT 1983

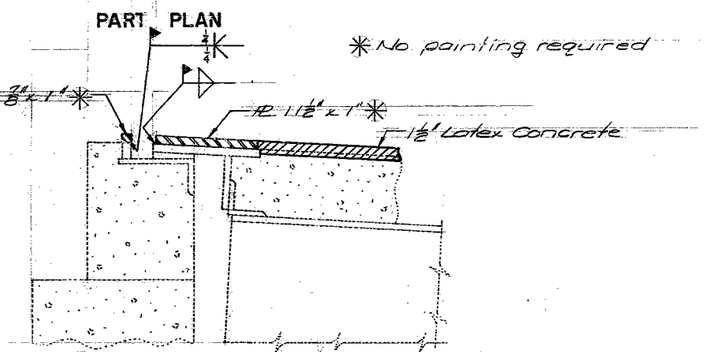
Note: This drawing is not to scale. Follow dimensions.

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



PART PLAN

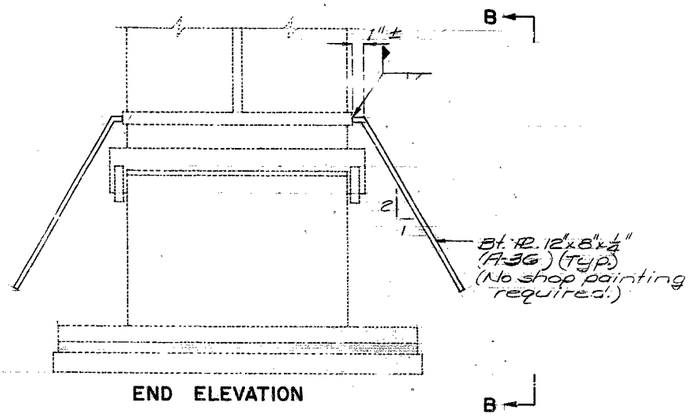
✳ No painting required



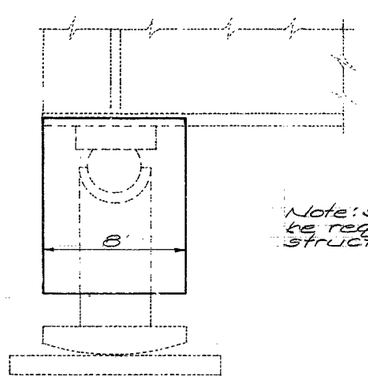
SECTION A-A

Note: Splices for ⅞" x 1" bar and 1 1/2" x 1" plate will be required for stage construction.

DETAILS OF EXP. DEVICE AT BENT NO. 1

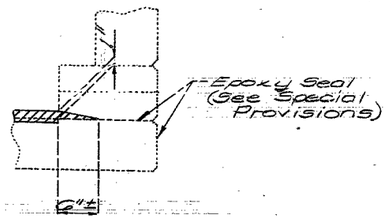


END ELEVATION



VIEW B-B

Note: Shop drawings will not be required for fabricated structural steel.

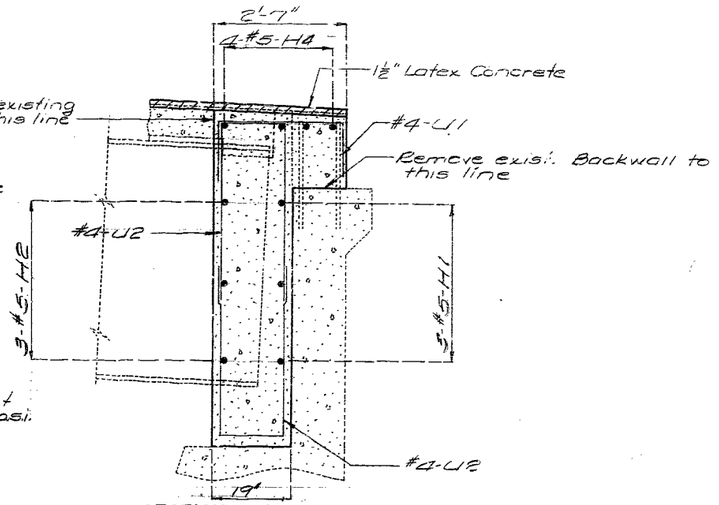


TYP. SECTION AT CURBS SHOWING OUTLETS

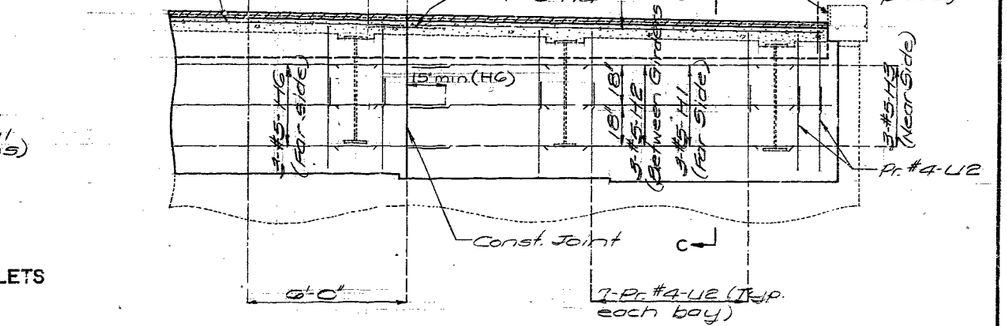
DETAILS OF BEARING MODIFICATION AT END BENT NO. 1

Note: 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.

Note: Concrete @ End Bent #5 shall be Class B, f'c = 3000 psi. Reinforcement @ End Bent #5 shall be Grade 60, fy = 60,000 psi.



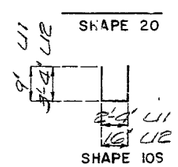
SECTION C-C



PART SECTION NEAR END BENT NO. 5
RIGHT OR LEFT LANE

Note: The quantities shown in the Bill of Reinforcement are for one bent only.

BILL OF REINFORCEMENT				
NO.	SIZE	MARK	SHAPE	LENGTH
6	5	H1	20	16'-3"
15	5	H2	20	7'-0"
6	5	H3	20	2'-0"
59	4	U1	105	3'-8"
78	4	U2	105	7'-10"
8	5	H4	20	15'-9"
4	5	H5	20	11'-9"
3	5	H6	20	14'-6"



S = Stirrup Bend

Note: Bars shall be bent in accordance with the CRSI Manual of Standard Practice.

DETAILS OF END BENT NO. 5

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DETAILED SEPT 1985
CHECKED SEPT 1985

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

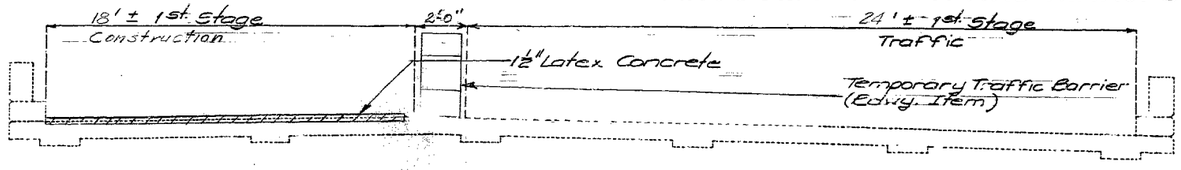
Sheet No. 2 of 2.

JACKSON COUNTY

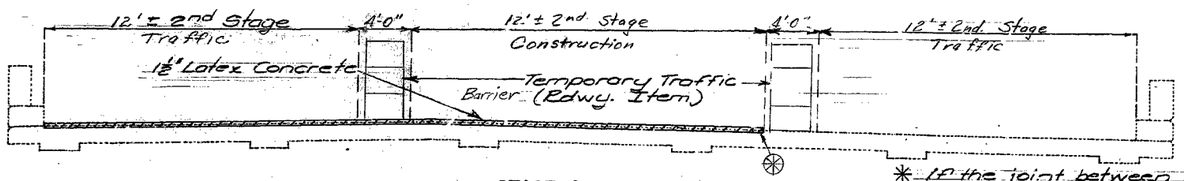
A-610R

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	10	
SEC. 33		TWP. 48N	RGE. 33W		

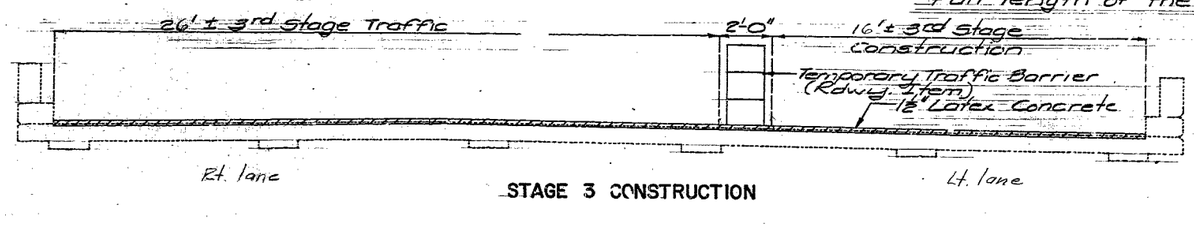


STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

* If the joint between latex overlay of stages 2 and 3 was damaged a new joint was saw cut the full length of the structure.

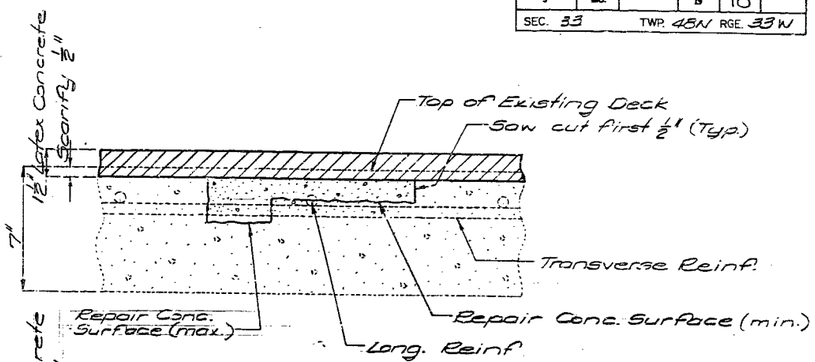


STAGE 3 CONSTRUCTION

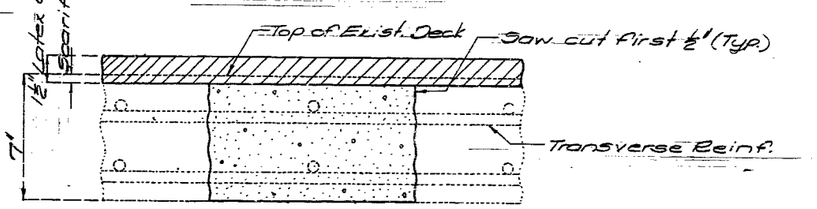
Note: Paint: System B by contractor in accordance with Std. Spec. 711.13 (Color of the final field coat for System B was aluminum). Areas encased in end bent concrete were painted one coat of system C primer and scratched or damaged surfaces were touched up before concrete poured.

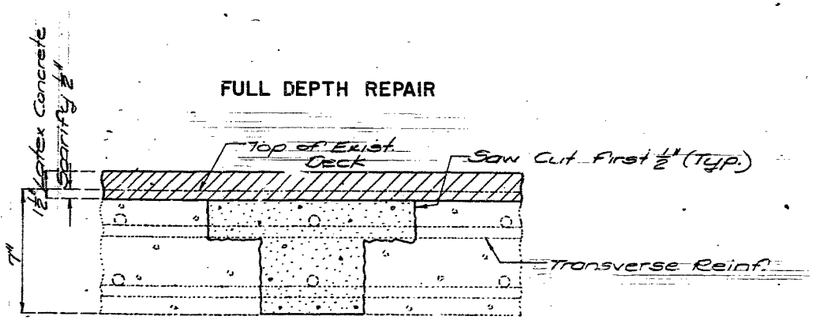
QUANTITIES		
ITEM		TOTAL
Special Work	Lump Sum	1
Latex Concrete Wearing Surface	Sq. Yd.	5045
Repairing Concrete Deck (Half-Soling)	Sq. Ft.	5772
Full Depth Repair	Sq. Ft.	87
Painting (System B) Aluminum	Lump Sum	1

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



HALF SOLED AREA





FULL DEPTH REPAIR

FULL DEPTH REPAIR IN HALF SOLED AREA

REPAIRS TO
BRIDGE OVER BLUE RIVER RD. & BLUE RIVER

STATE ROAD INTERSTATE 435

IN KANSAS CITY

PROJECT NO. IR-435-1(199) — STA. 914+53.42 ± (LT. LANE) STA. 914+63.08 ± (RT. LANE)

JOB NO. 4-1435-442 — **RTE.** I-435 — STD.

JACKSON — COUNTY — STD. A-SIOR

DATE 1/20/84

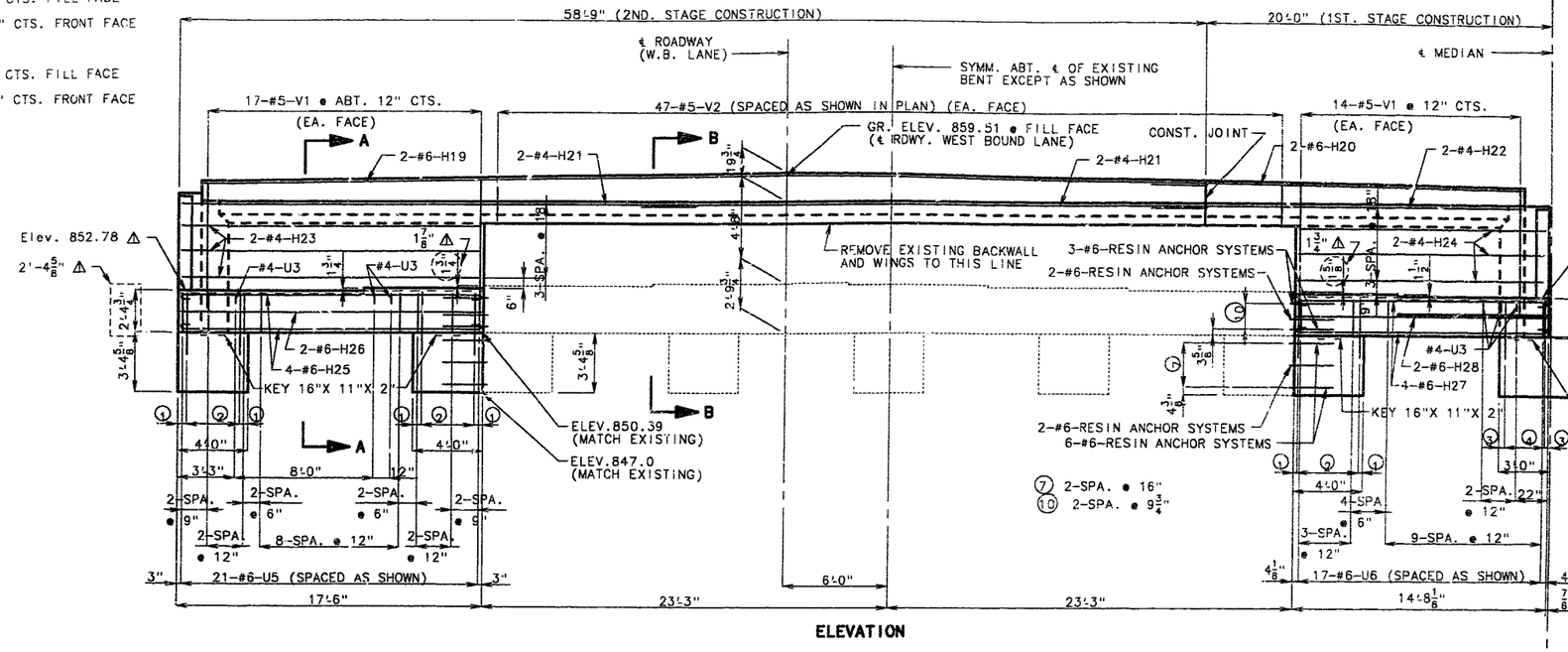
DESIGNED SEPT 19 83
DETAILED SEPT 19 83
CHECKED SEPT 19 83

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

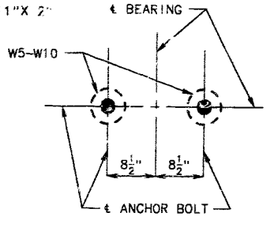
Sheet No. 1 of 2.

STATE	PROJ. NO.	SHEET NO.
MO.		

① = 4" FILL FACE
① = 6" FRONT FACE
② = 6-#6-D1 @ 8" CTS. FILL FACE
② = 4-#6-D1 @ 12" CTS. FRONT FACE
③ = 3"
④ = 6-#6-D1 @ 6" CTS. FILL FACE
④ = 4-#6-D1 @ 10" CTS. FRONT FACE

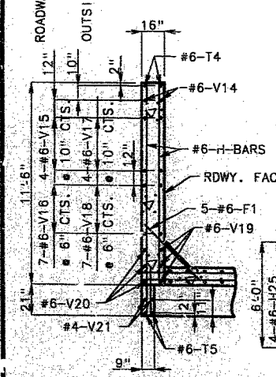


ELEVATION

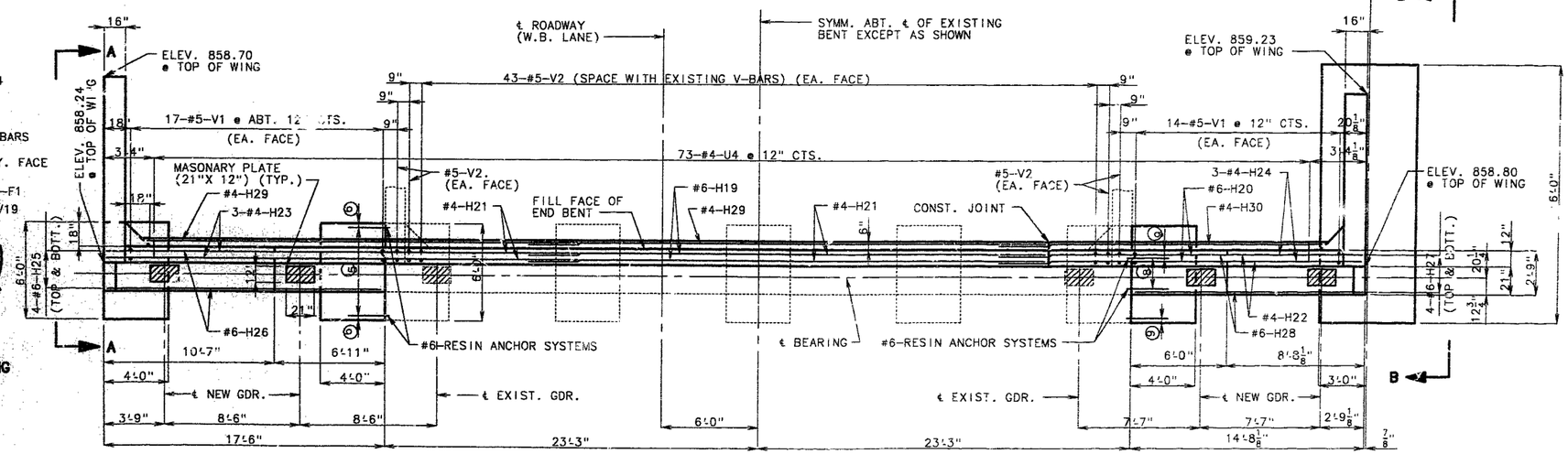


PLAN OF ANCHOR BOLTS

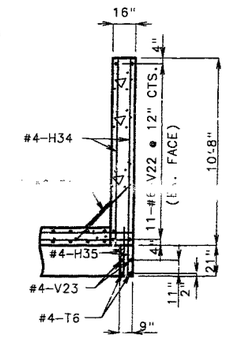
NOTE: TOP OF BACKWALL AND EXPANSION DEVICE FOR END BENT NO. 1 SHALL CONFORM TO THE CROWN OF ROADWAY SLAB. BACKWALL ABOVE UPPER CONSTRUCTION JOINT SHALL NOT BE POURED UNTIL THE SUPERSTRUCTURE SLAB HAS BEEN POURED IN THE ADJACENT SPAN.
FIELD BENDING SHALL BE REQUIRD FOR #6-F-BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WING.
FOR DETAIL OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB SEE SHEETS NO. 41, 42 & 43.
FOR SUBSTRUCTURE QUAINTY TABLE, SECTIONS A-A, B-B AND ELEVATION OF WINGS SEE SHEET NO. 8.



SECTION THRU WING



PLAN
DETAILS OF END BENT NO. 1
(WEST BOUND LANE)



SECTION THRU WING

⑤ = 6-#6-RESIN ANCHOR SYSTEMS (TOP & BOTT.) @ 12½" CTS.
⑥ = 4¾"

⑧ = 3-#6-RESIN ANCHOR SYSTEMS (TOP & BOTT.) @ 12" CTS.
⑨ = 4½"

⚠ Revised 5/19/94

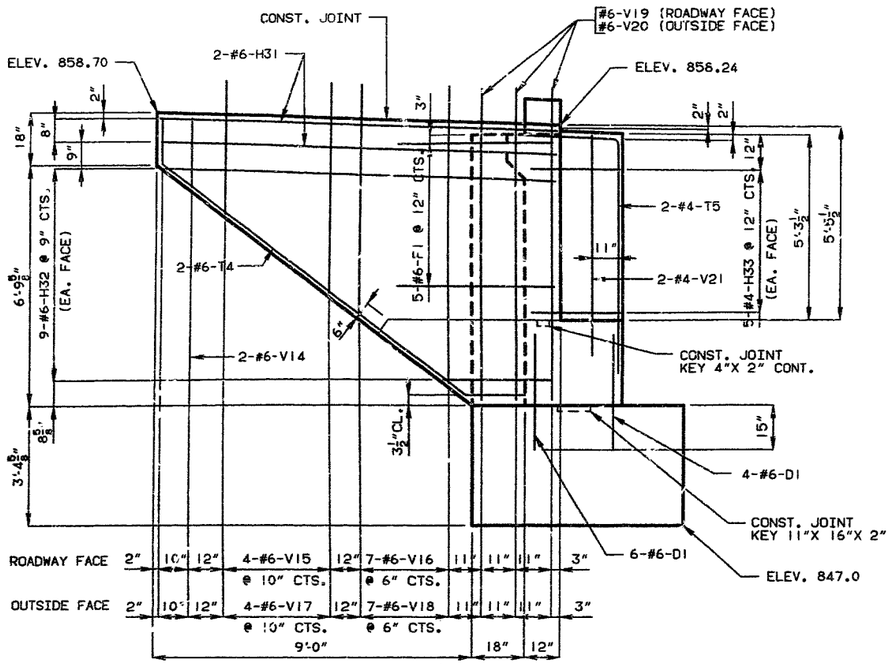
REVISED:

DETAILED APRIL 1993
CHECKED JUNE 1993

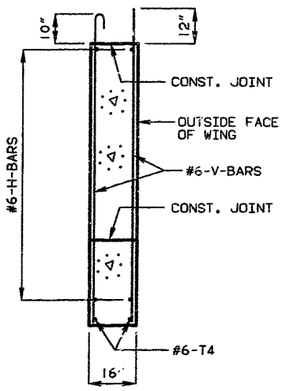
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 7 OF 51. JACKSON COUNTY A-610R1

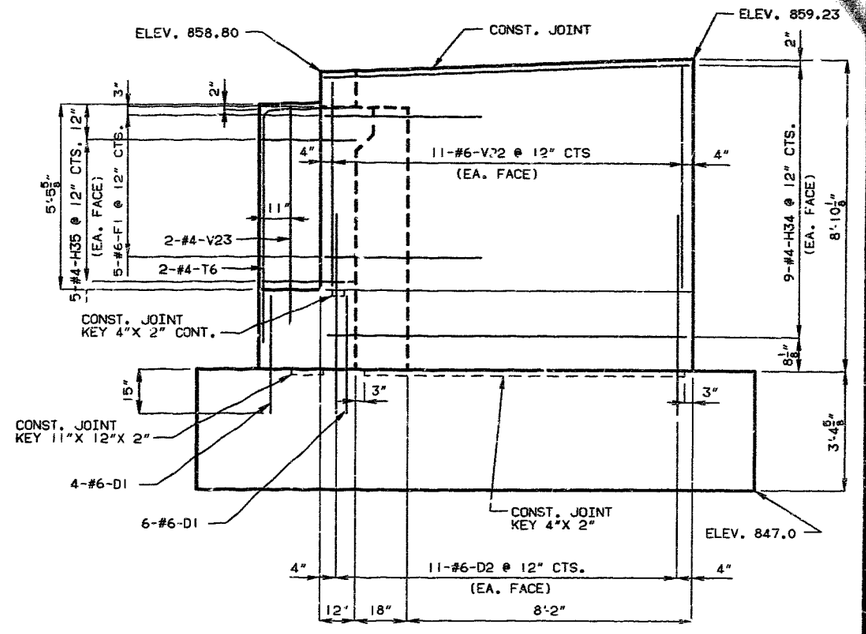
STATE	PROJ. NO.	SHEET NO.
MO.		305



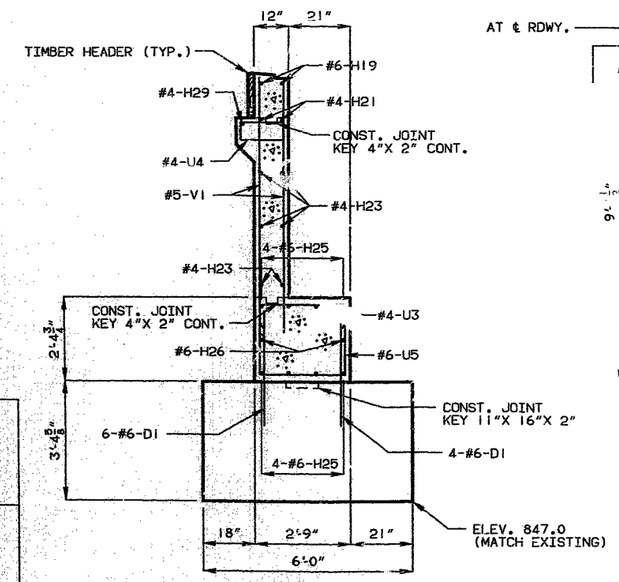
ELEVATION A-A



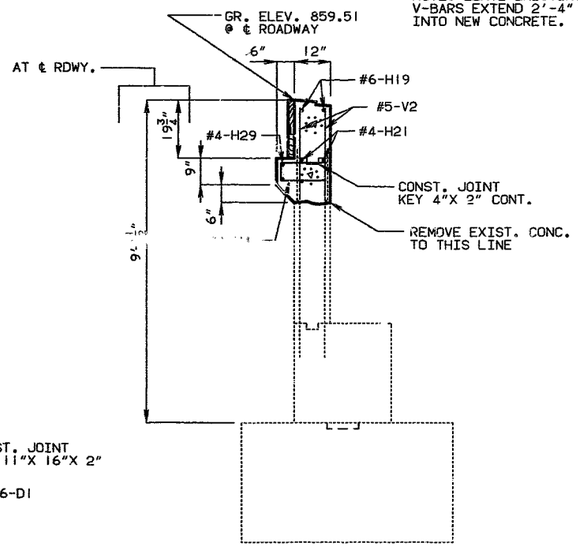
SECTION THRU WING A-A



ELEVATION B-B

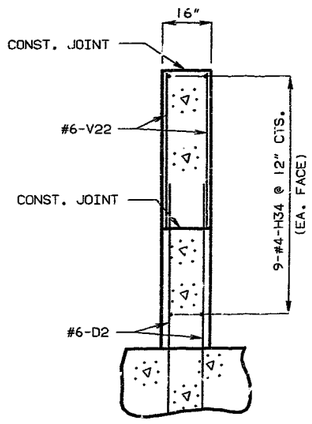


SECTION A-A



SECTION B-B

NOTE: LEAVE EXISTING V-BARS EXTEND 2'-4" INTO NEW CONCRETE.



SECTION THRU WING B-B

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	55
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	38.6
REINFORCING STEEL (BRIDGES)	LB.	7410
REINFORCING STEEL (EPOXY COATED)	LB.	540

NOTE: THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 2.

NOTE: THE AREA EXPOSED BY THE REMOVAL OF CONCRETE AND NOT COVERED WITH NEW CONCRETE SHALL BE COATED WITH AN APPROVED BITUMINOUS PAINT. FOR DETAILS OF TIMBER HEADER SEE SHEET NO. 43.

DETAILS OF END BENT NO. 1
(WEST BOUND LANE)

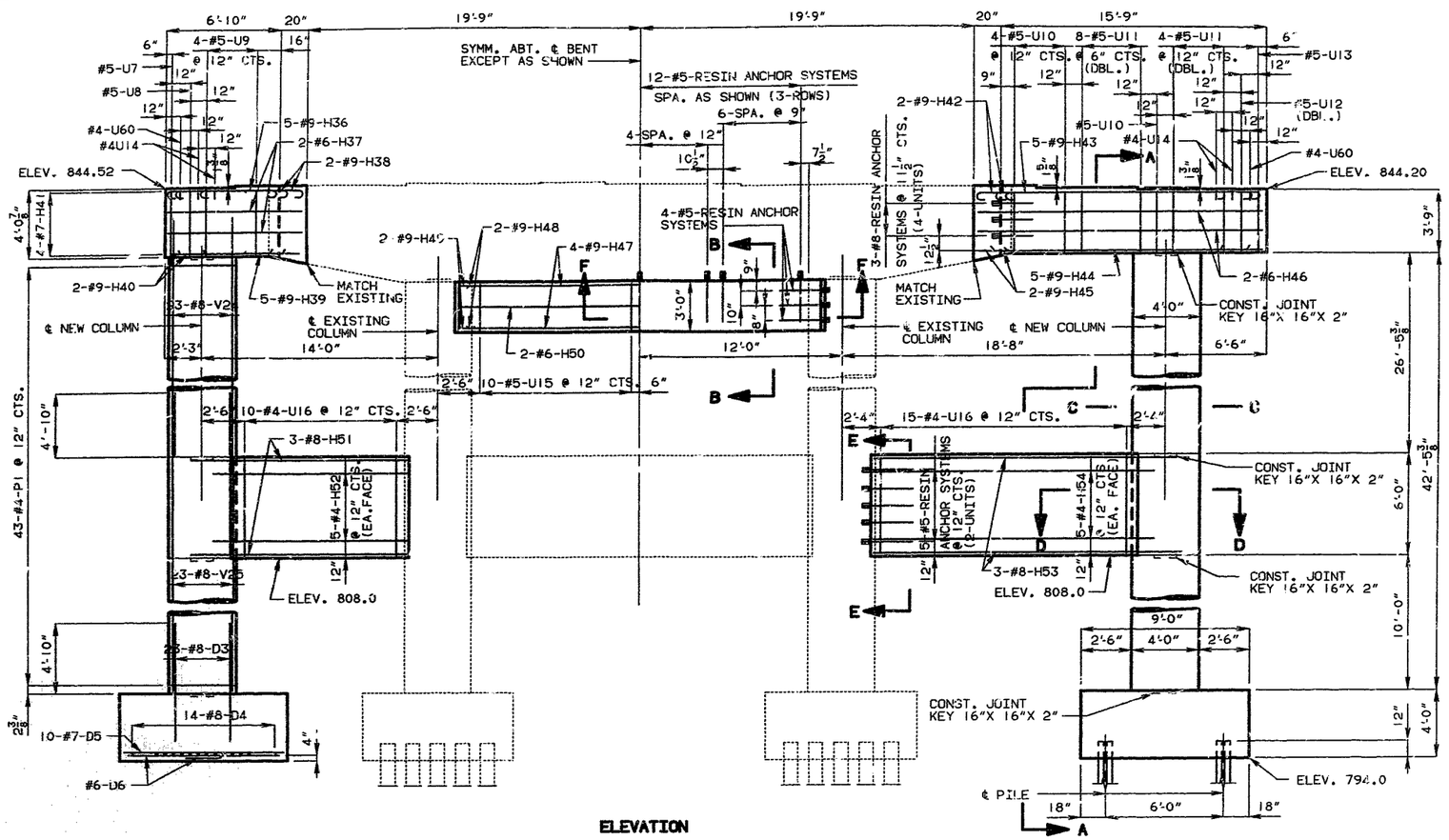
REVISED!

DETAILED MAY 1993
CHECKED JUNE 1993

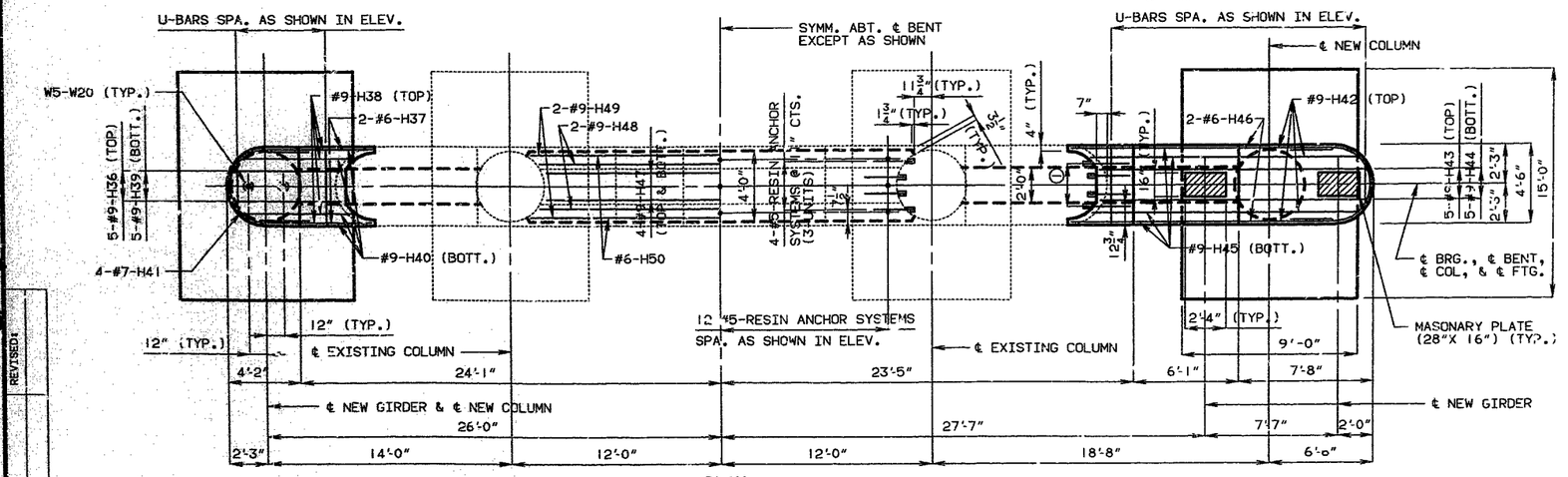
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-6101

STATE	PROJ. NO.	SHEET NO.
MD.		306

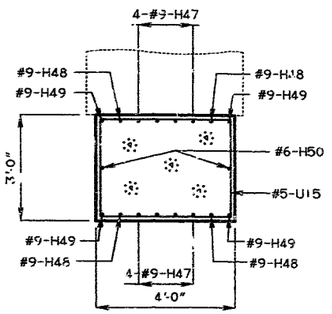


ELEVATION

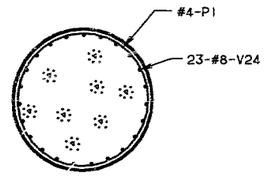


PLAN

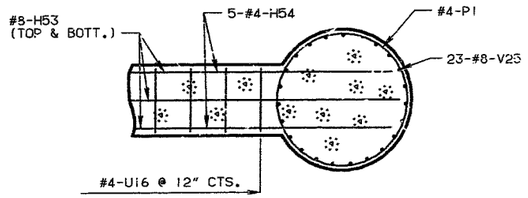
DETAILS OF INTERMEDIATE BENT NO. 2 (E.B.L.)



SECTION B-B



SECTION C-C



SECTION D-D

① 1-#8-RESIN ANCHOR SYSTEMS @ 9½" CTS. (3-UNITS)

NOTE: FOR DETAILS OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.
FOR SECTION A-A, E-E, F-F, PLAN OF FOOTING AND SUBSTRUCTURE QUANITY TABLE FOR BENT NO. 2 SEE SHEET. NO. 10.
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.
FOR DETAILS OF STEEL PILE SPLICE SEE SHEET NO. 22.

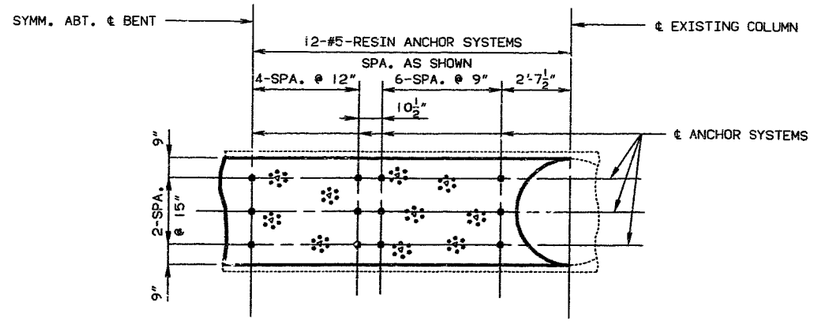
REVISED

DETAILED JUNE 1993
CHECKED JULY 1993

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

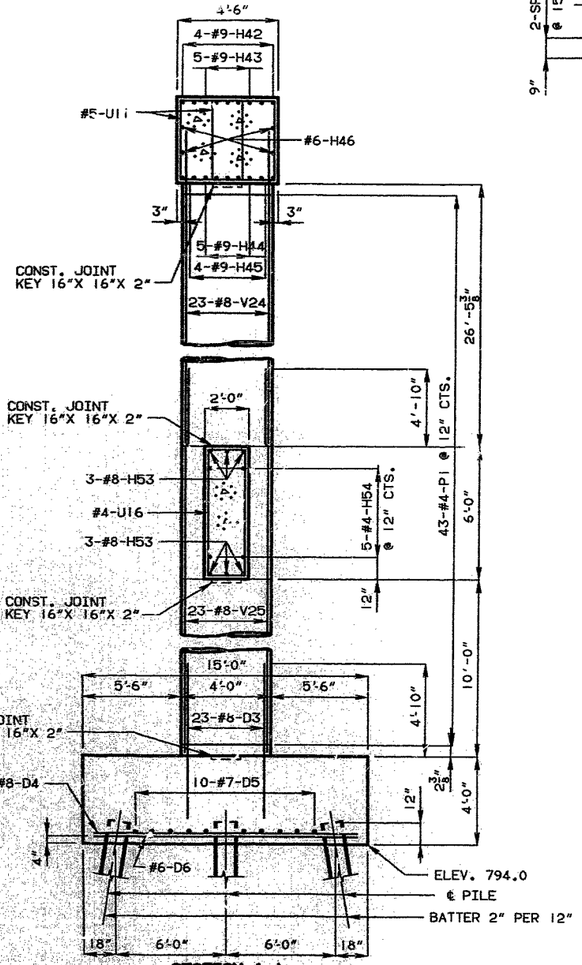
JACKSON COUNTY A-610(1)

STATE	PROJ. NO.	SHEET
MO.		30

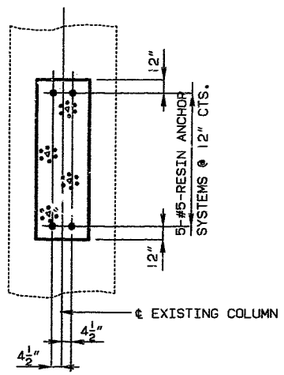


SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

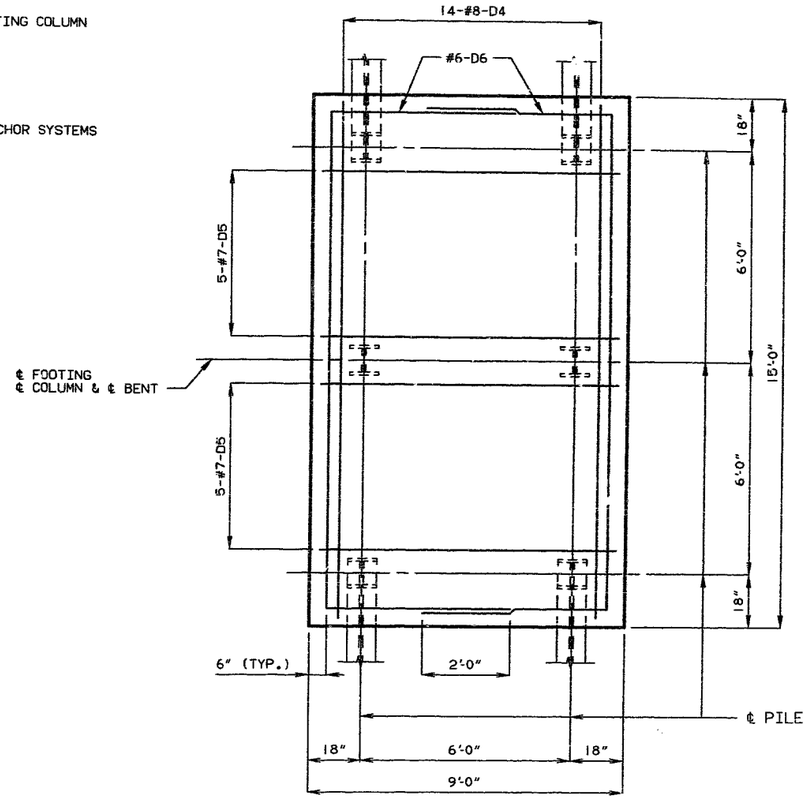


SECTION A-A



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



PLAN OF FOOTING

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE SHEET NO. 9.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2

ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	115
STRUCTURAL STEEL PILE (12")	LIN. FT.	234
PRE-BORE	LIN. FT.	156
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	114.5
REINFORCING STEEL (BRIDGES)	LBS.	14160

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

REVISED:

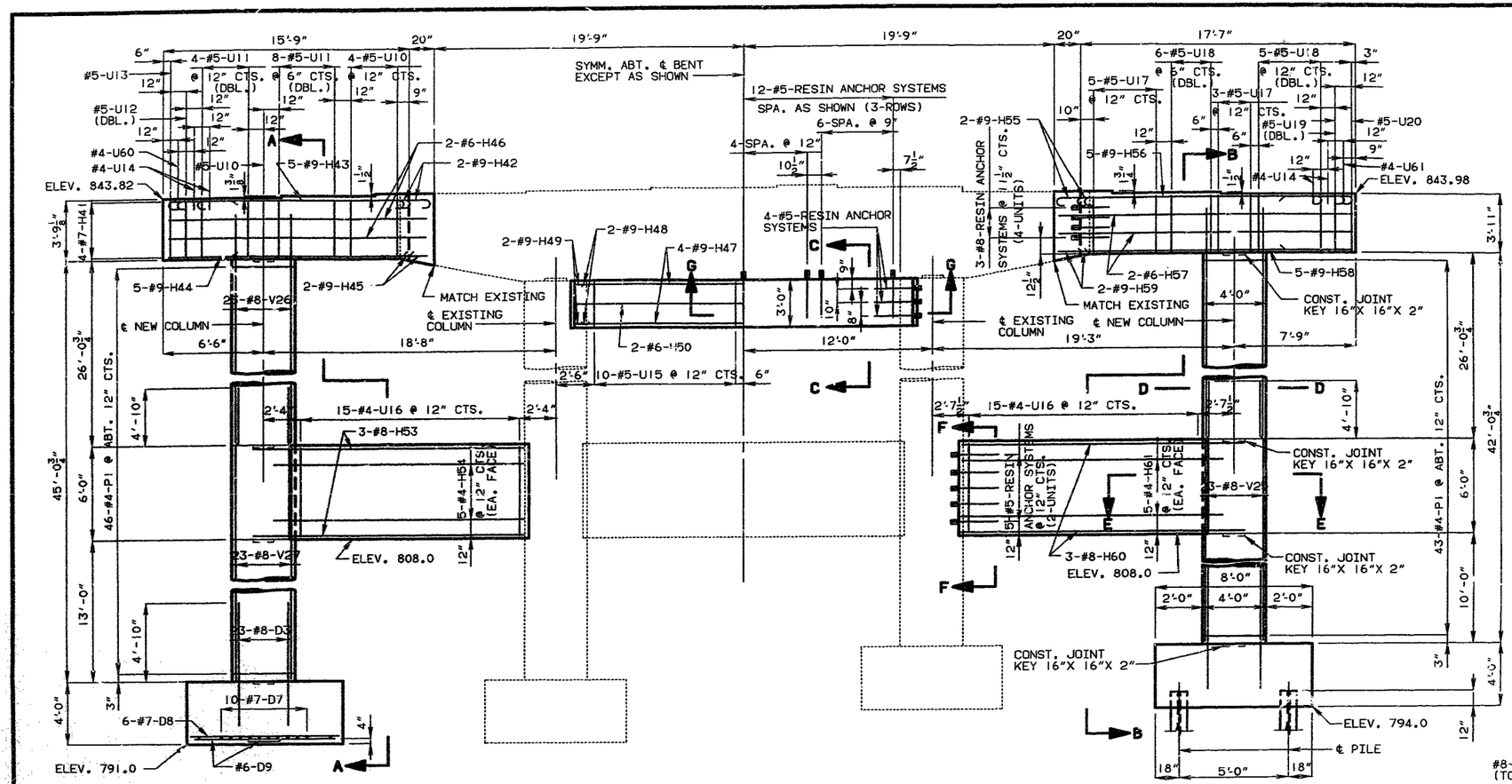
DETAILS OF INTERMEDIATE BENT NO. 2 (E.B.L.)

DETAILED JUNE 1993
CHECKED JULY 1993

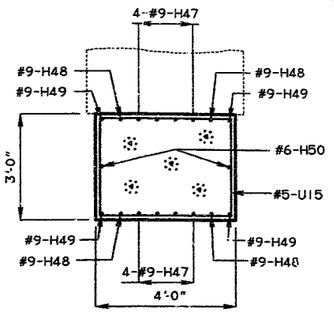
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-610R1

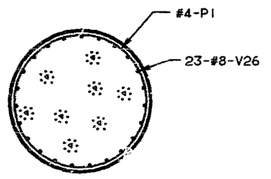
STATE	PROJ. NO.	SHEET NO.
MO.		308



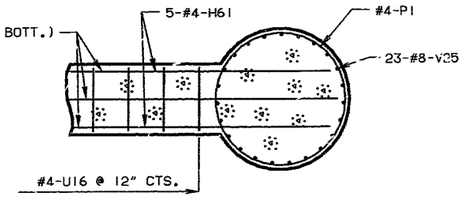
SECTION C-C



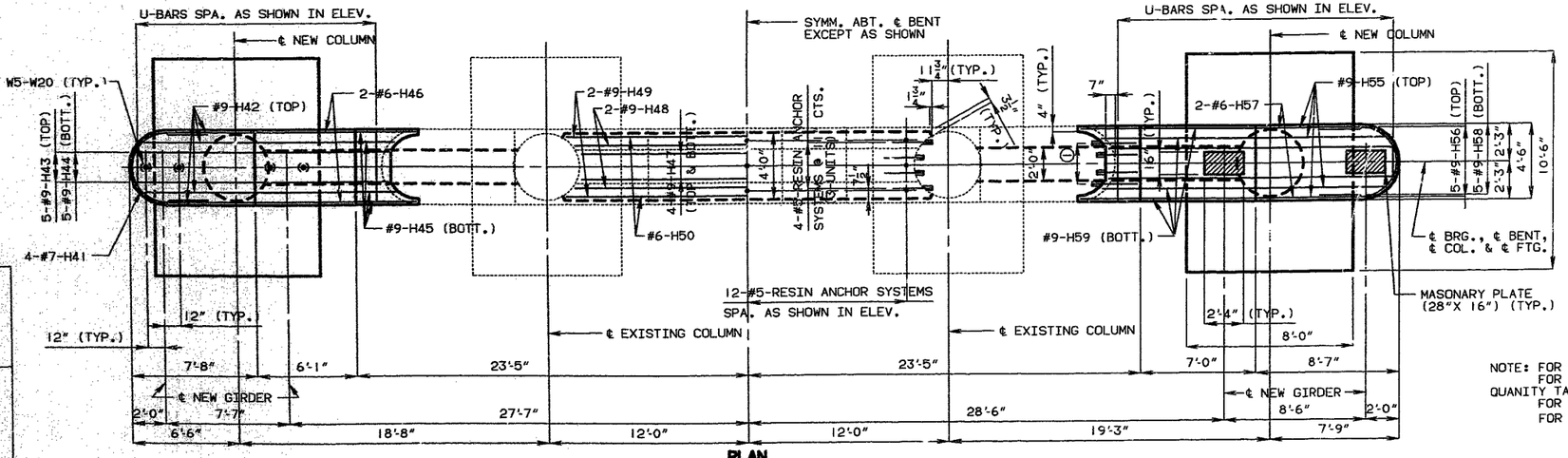
SECTION D-D



SECTION E-E



ELEVATION



PLAN

① 4-#8-RESIN ANCHOR SYSTEMS @ 9½" CTS. (3-UNITS)

NOTE: FOR DETAILS OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.
FOR SECTION A-A, B-B, F-F, G-G, PLAN OF FOOTING AND SUBSTRUCTURE QUANITY TABLE FOR BENT NO. 2 SEE SHEET. NO. 12.
FOR DETAILS OF STEEL PILE SPLICE SEE SHEET NO. 22.
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

DETAILS OF INTERMEDIATE BENT NO. 2 (W.B.L.)

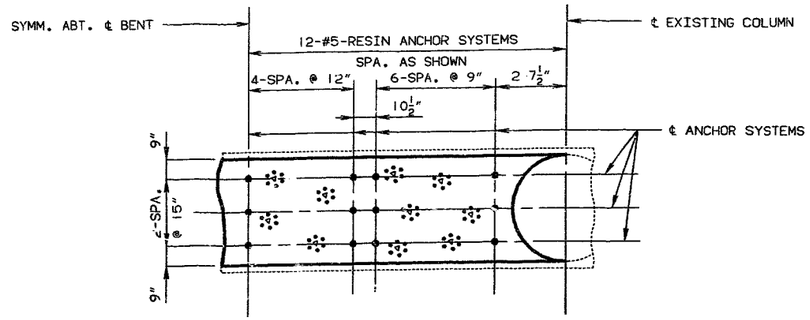
REVISED

DETAILED JUNE 1993
CHECKED AUG. 1993

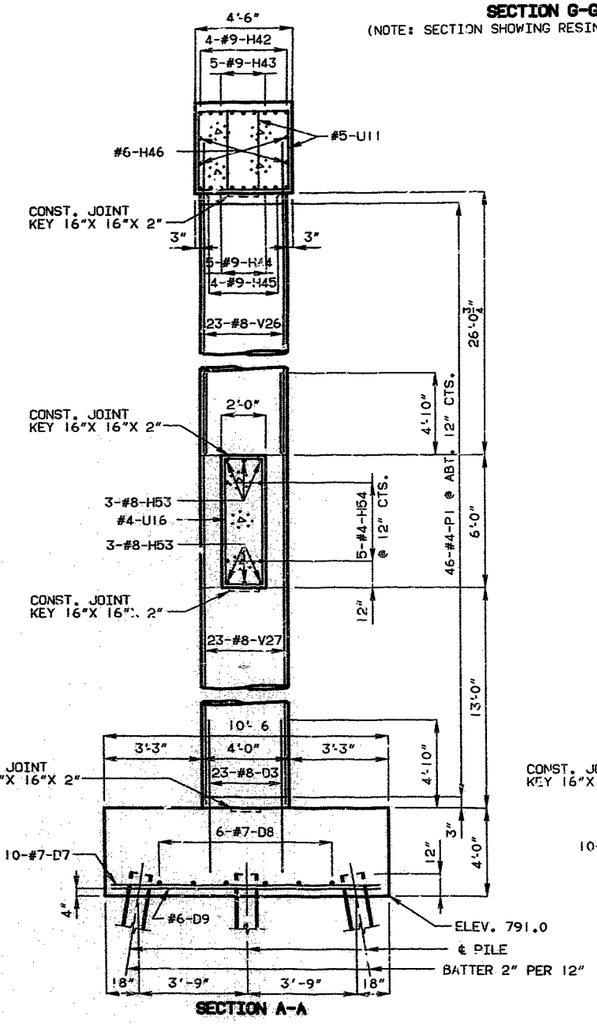
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-610R1

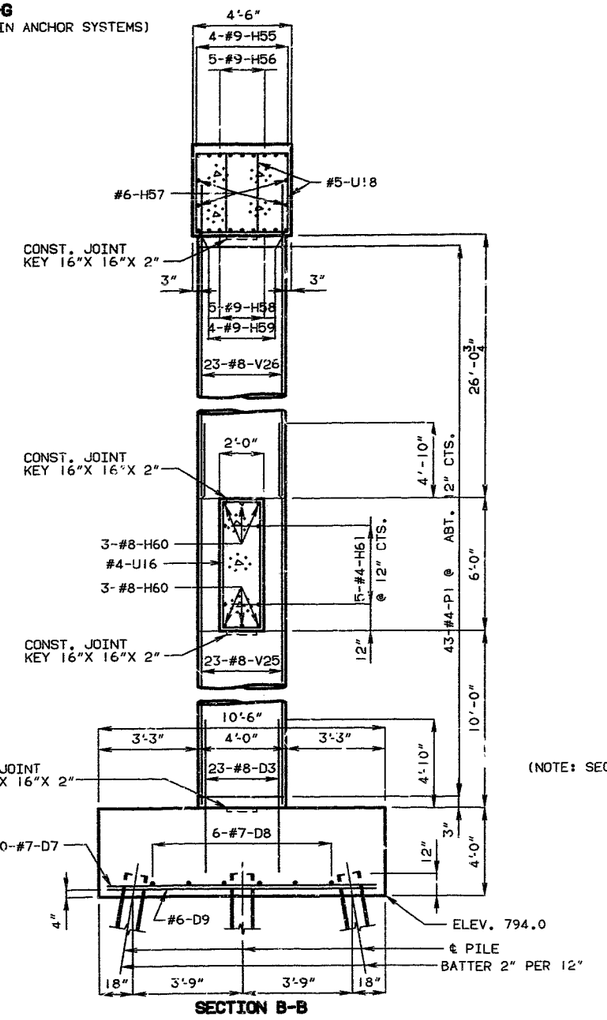
STATE	PROJ. NO.	SHEET NO.
MO.		309



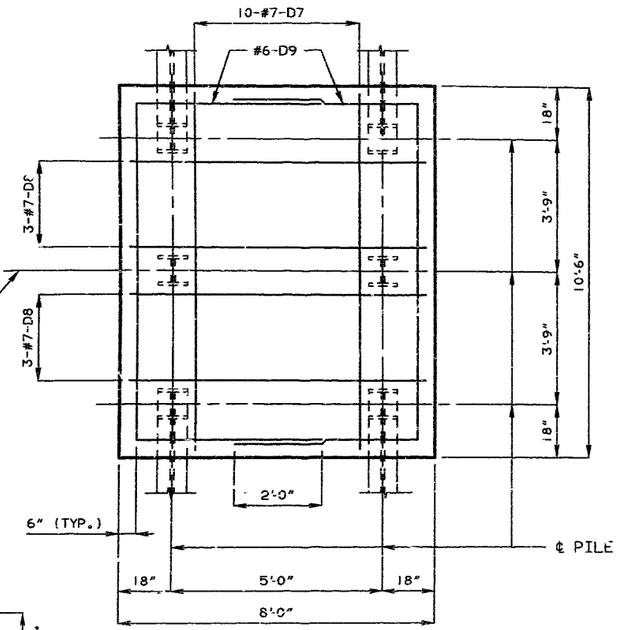
SECTION G-G
(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



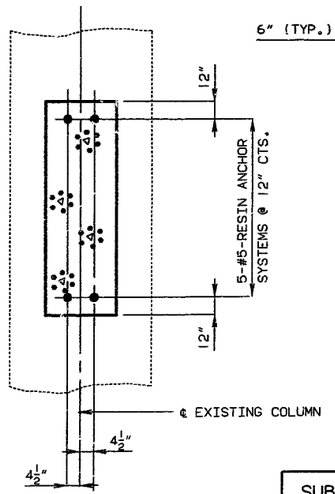
SECTION A-A



SECTION B-B



PLAN OF FOOTING



SECTION F-F
(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, B-B, F-F AND G-G SEE SHEET NO. 11.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2

ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	130
STRUCTURAL STEEL PILE ('12")	LIN. FT.	216
PRE-BORE	LIN. FT.	138
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	109.8
REINFORCING STEEL (BRIDGES)	LBS.	14720

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

33+23?

REVISED!

DETAILED JULY 1993
CHECKED AUG. 1993

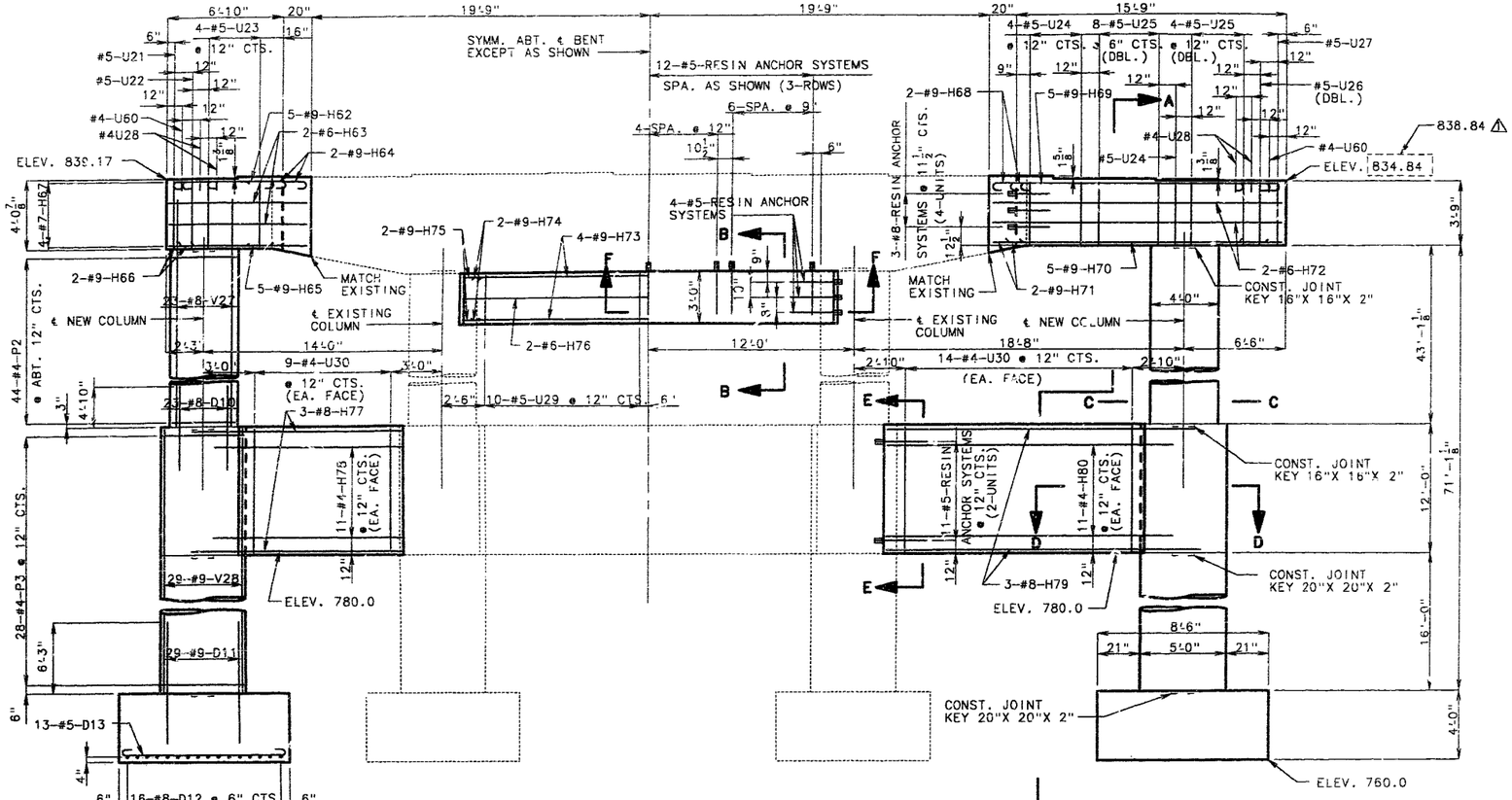
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

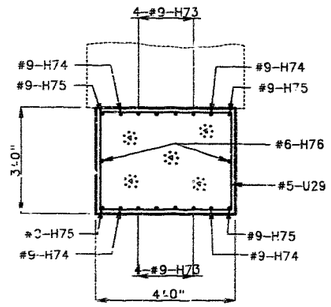
SHEET NO. 12 OF 51.

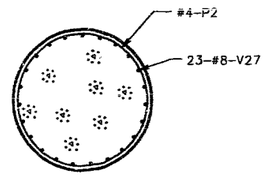
DETAILS OF INTERMEDIATE BENT NO. 2 (W.B.L.)

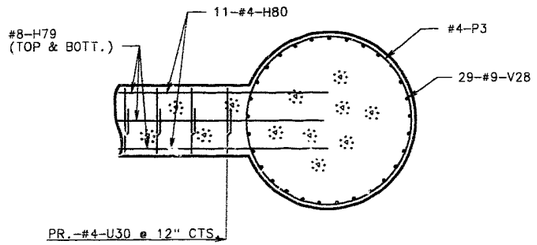
JACKSON COUNTY A-610R1

STATE NO.	PROJ. NO.	SHEET NO.









① 4-#8-RESIN ANCHOR SYSTEMS @ 9½" (3-UNITS)

NOTE: FOR DETAILS OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.
FOR SECTION A-A, E-E, F-F AND SUBSTRUCTURE QUANITY TABLE FOR BENT NO. 3 SEE SHEET. NO. 14.
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

⚠ Revised 5/19/94

DETAILS OF INTERMEDIATE BENT NO. 3 (E.B.L.)

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

DETAILED JUNE 1993
CHECKED JULY 1993

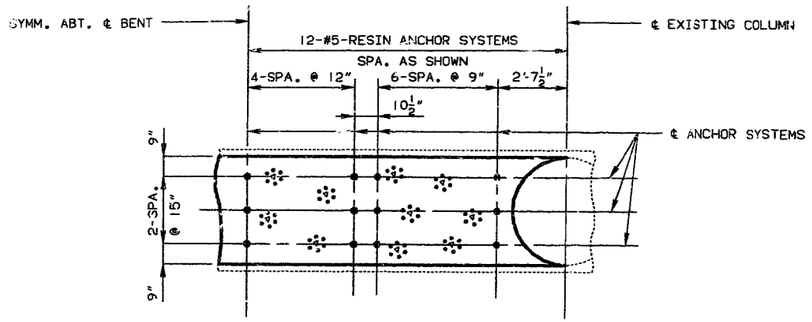
REVISED

SHEET NO. 13 OF 51.

JACKSON COUNTY

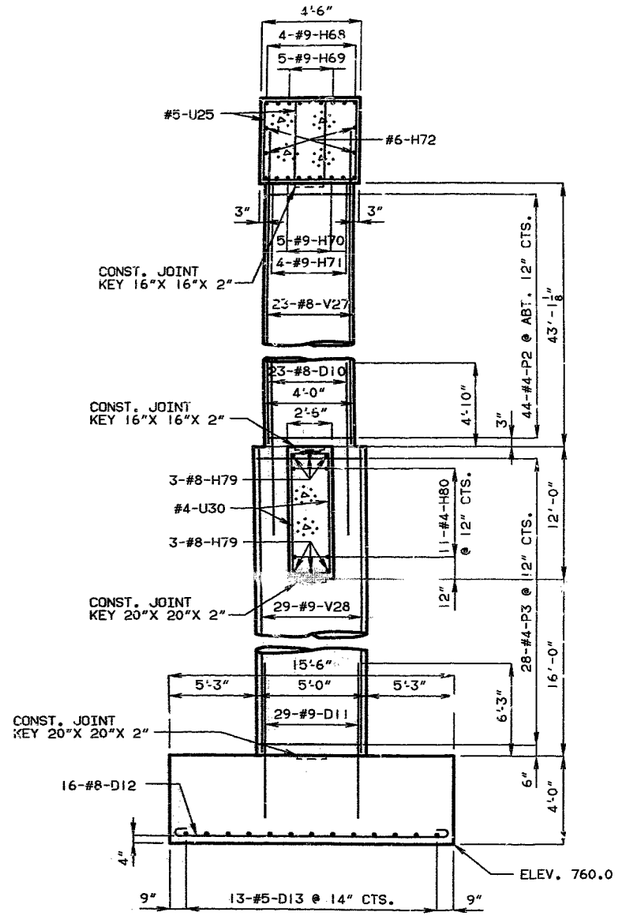
A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		311

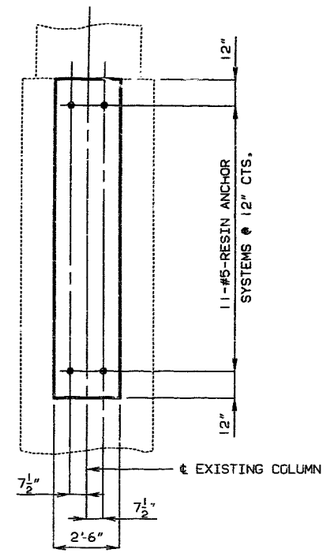


SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION A-A



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE SHEET NO. 13.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3		
ITEM		**QUANTITY**
CLASS 1 EXCAVATION	CU. YDS.	150
CLASS 2 EXCAVATION	C. YDS.	142
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	169.5
REINFORCING STEEL (BRIDGES)	LBS.	22070

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

REVISED

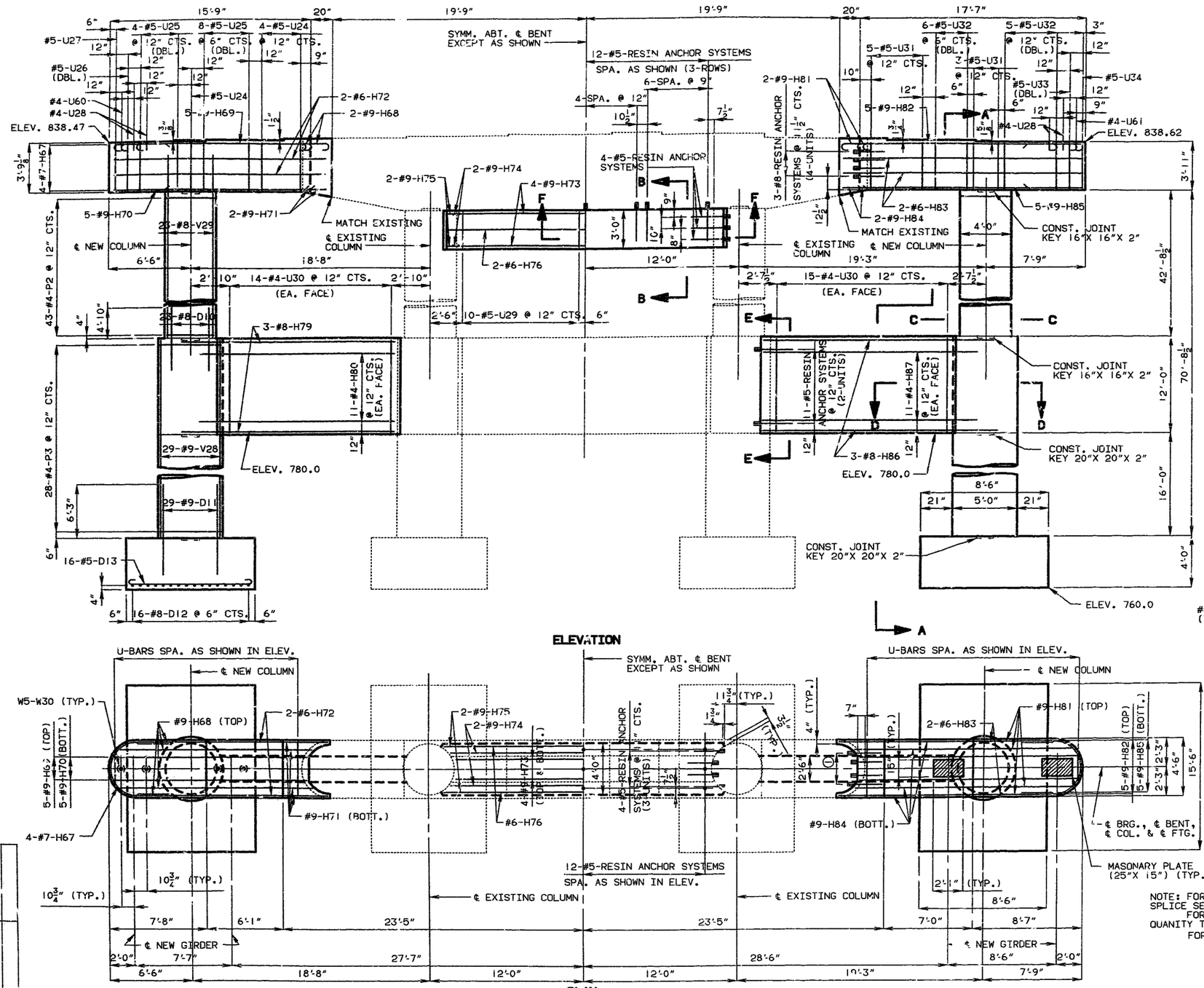
DETAILED JUNE 1993
CHECKED JULY 1993

DETAILS OF INTERMEDIATE BENT NO. 3 (E.B.L.)

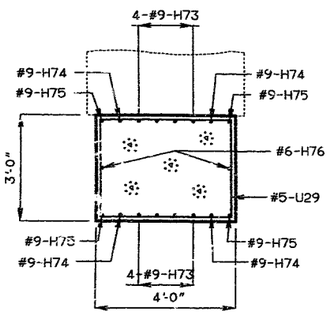
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-610R1

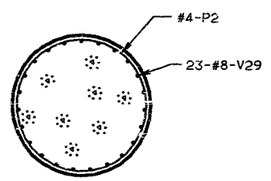
STATE	PROJ. NO.	SHEET NO.
MO.		312



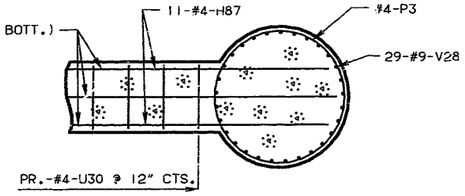
SECTION B-B



SECTION C-C



SECTION D-D



ELEVATION

PLAN

① 4-#8-RESIN ANCHOR SYSTEMS @ 9½" CTS. (3-UNITS)

NOTE: FOR DETAILS OF RESIN ANCHOR SYSTEMS AND DETAILS OF STEEL PILE SPLICE SEE SHEET NO. 22.
FOR SECTION A-A, E-E, F-F, PLAN OF FOOTING AND SUBSTRUCTURE QUANITY TABLE FOR BENT NO. 3 SEE SHEET. NO. 16.
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

300 33

REVISED:

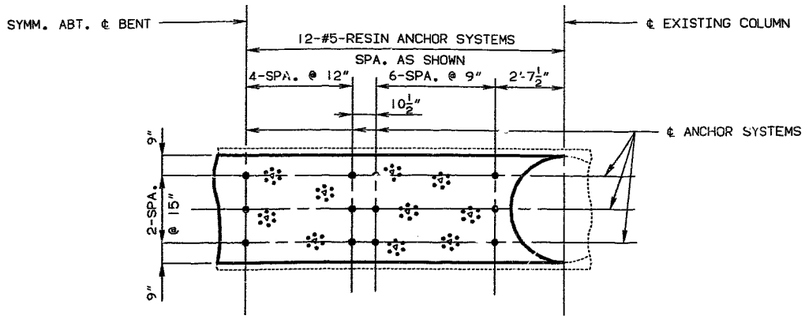
DETAILED JULY 1993
CHECKED AUG. 1993

DETAILS OF INTERMEDIATE BENT NO. 3 (W.B.L.)

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

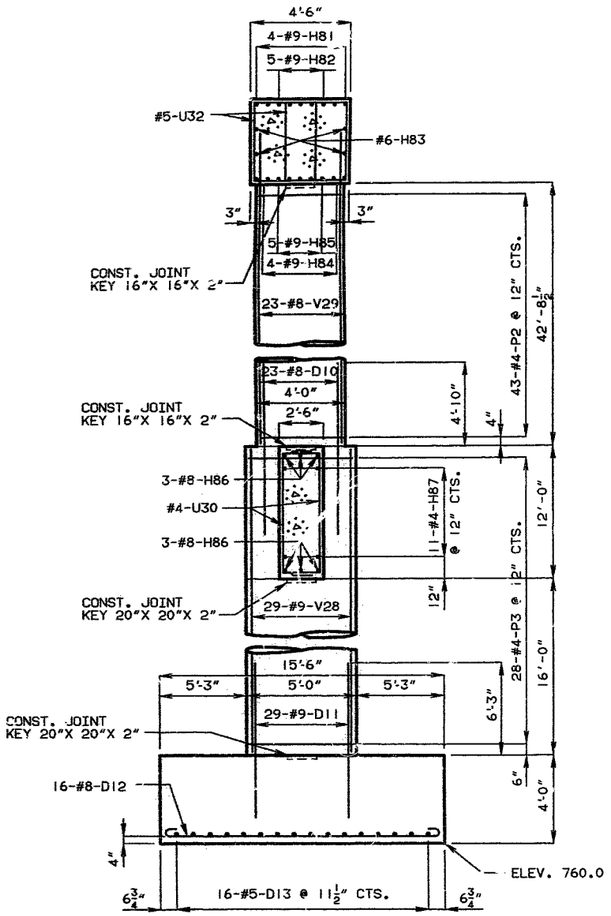
JACKSON COUNTY A-6101

STATE	PROJ. NO.	SHEET NO.
MO.		313

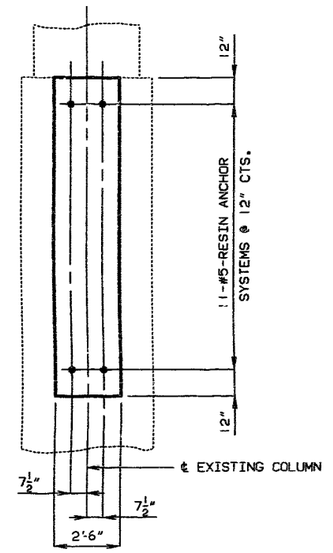


SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION A-A



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE SHEET NO. 15.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3		
ITEM		**QUANTITY**
CLASS 1 EXCAVATION	CU. YDS.	195
CLASS 2 EXCAVATION	CU. YDS.	142
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	182.0
REINFORCING STEEL (BRIDGES)	LBS.	23880

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

330 301

REVISED:

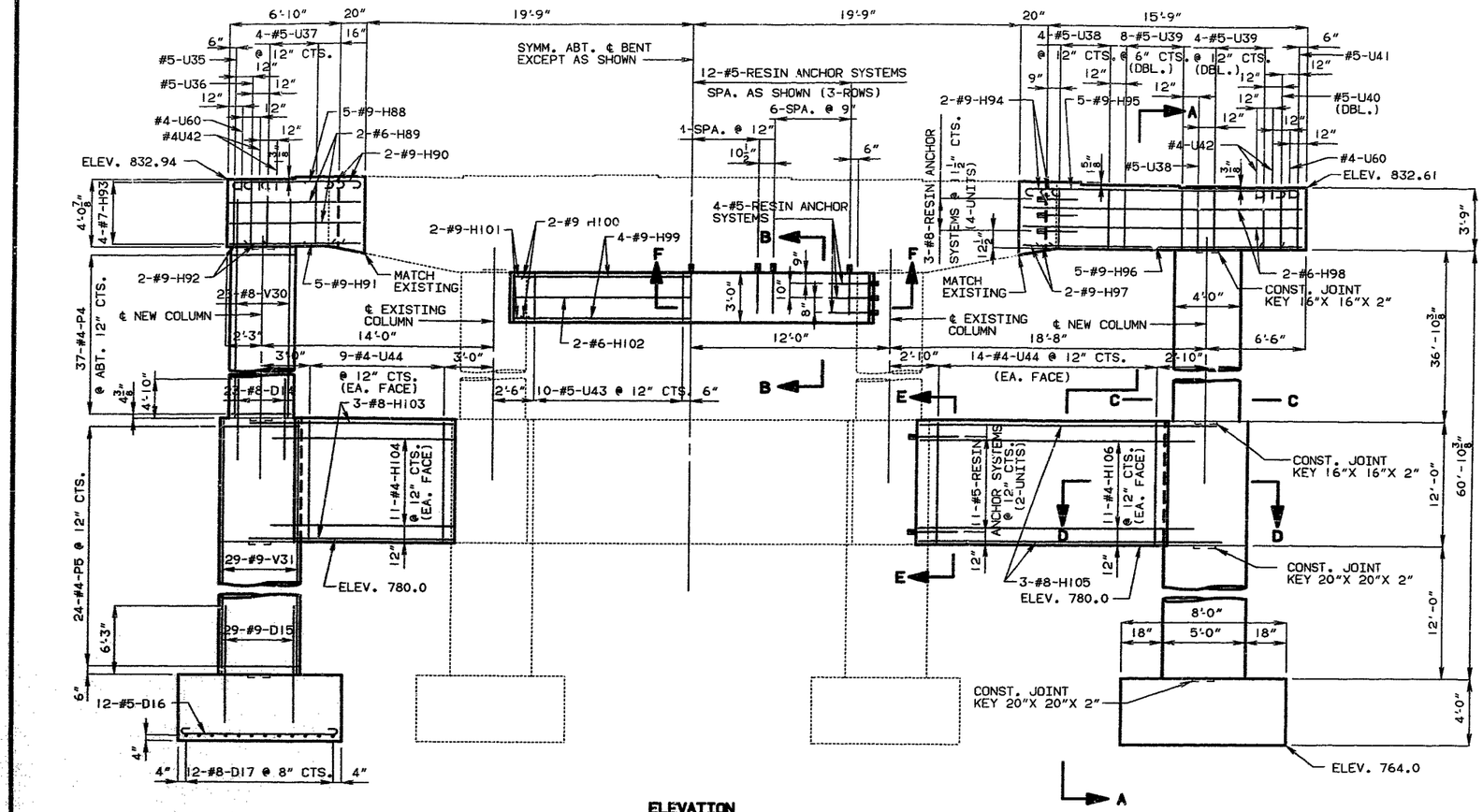
DETAILED AUG. 1993
CHECKED AUG. 1993

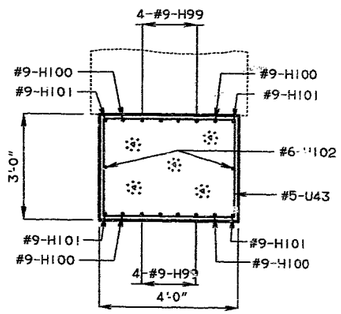
DETAILS OF INTERMEDIATE BENT NO. 3 (W.B.L.)

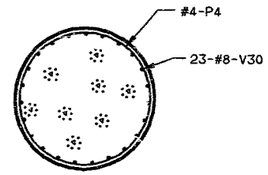
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

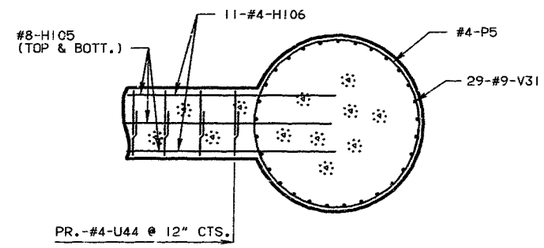
JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		314









① 4-#8-RESIN ANCHOR SYSTEMS @ 9½" CTS. (3-UNITS)

NOTE: FOR DETAILS OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.
FOR SECTION A-A, E-E, F-F AND SUBSTRUCTURE QUANITY TABLE FOR BENT NO. 3 SEE SHEET NO. 18.
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

33-302

REVISED:

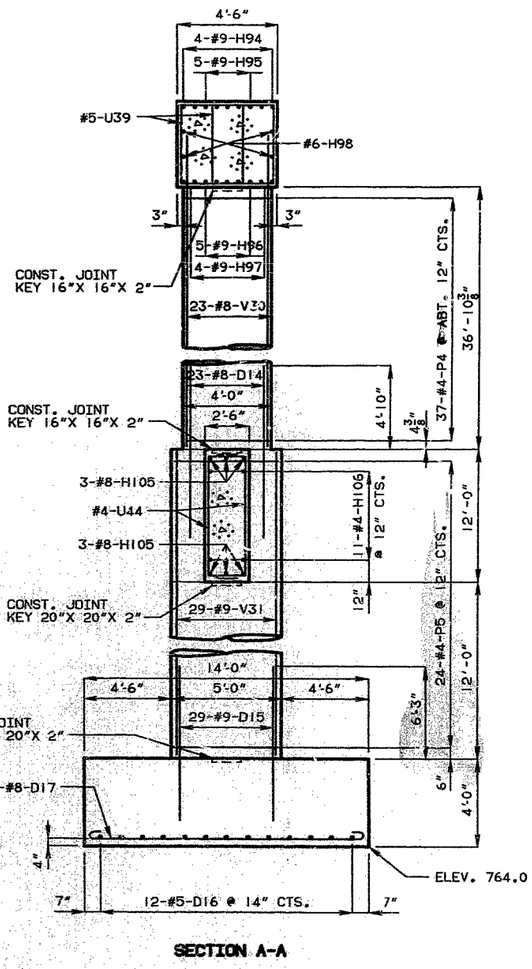
DETAILED JUNE 1993
CHECKED JULY 1993

DETAILS OF INTERMEDIATE BENT NO. 4 (E.B.L.)

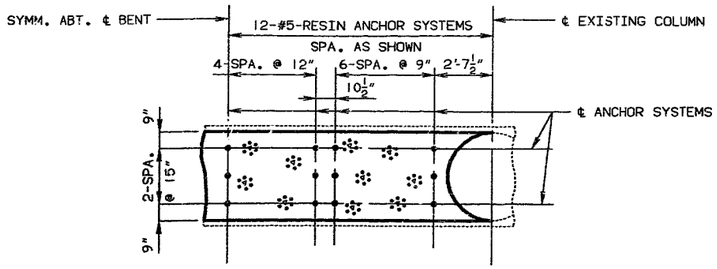
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		315

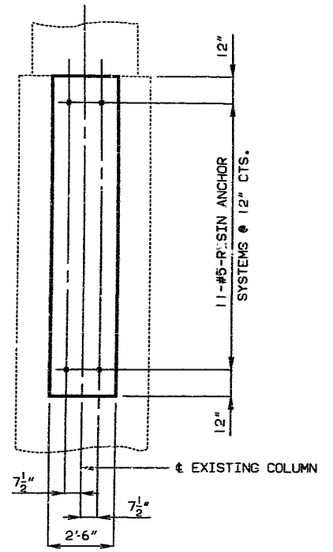


SECTION A-A



SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE, SHEET NO. 17.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 4		
ITEM		**QUANTITY**
CLASS I EXCAVATION	CU. YDS.	235
CLASS 2 EXCAVATION	CU. YDS.	69
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	152.0
REINFORCING STEEL (BRIDGES)	LBS.	20250

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

REVISED

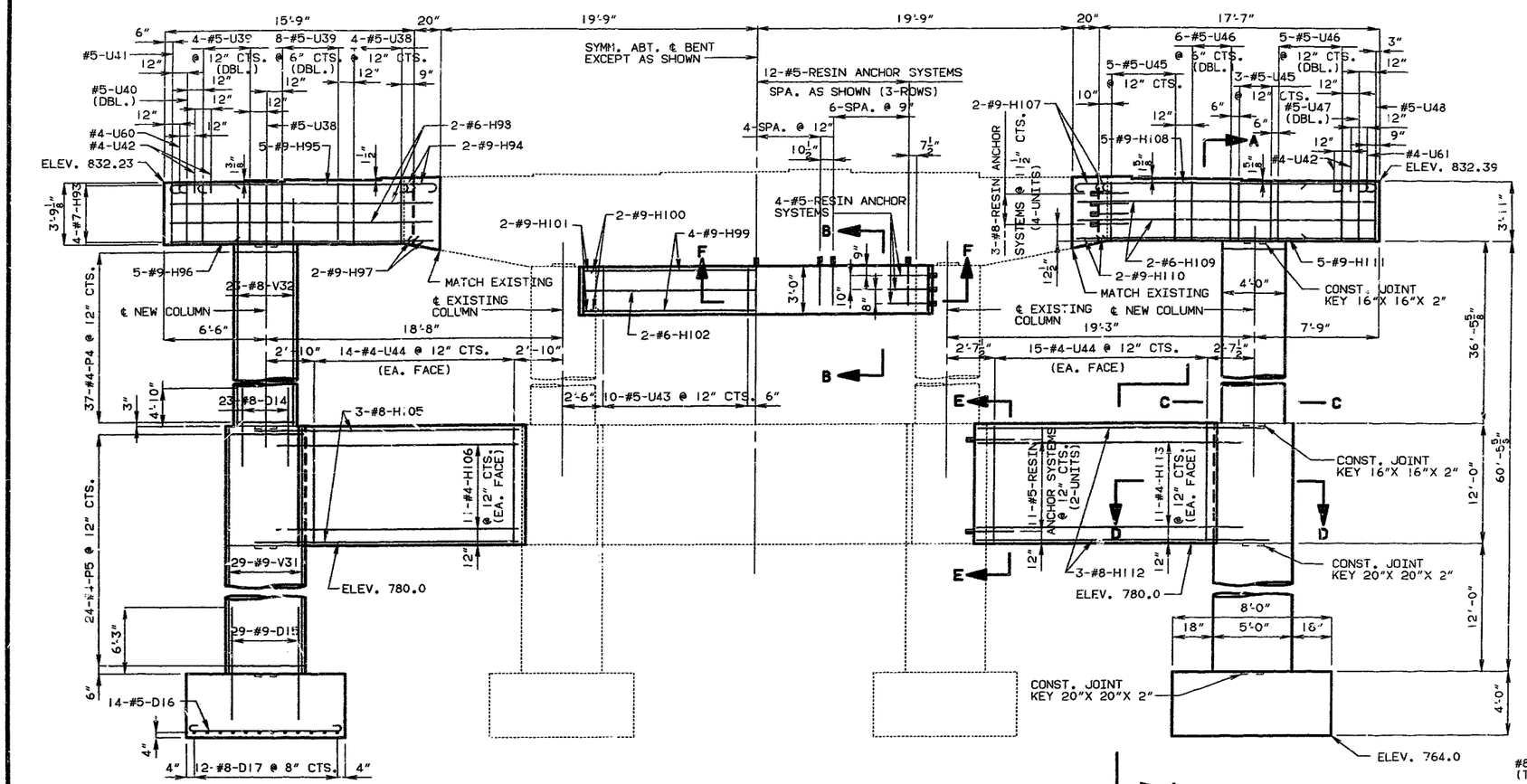
DETAILED JUNE 1993
CHECKED JULY 1993

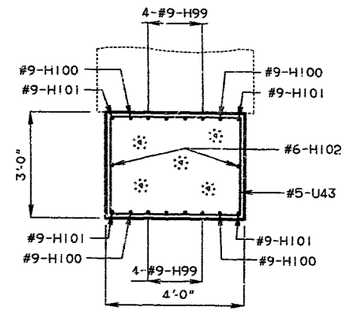
DETAILS OF INTERMEDIATE BENT NO. 4 (E.B.L.)

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

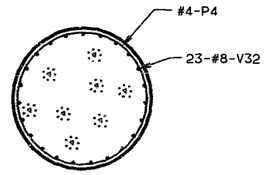
JACKSON COUNTY A-6101

STATE	PROJ. NO.	SH NO.
MO.		316



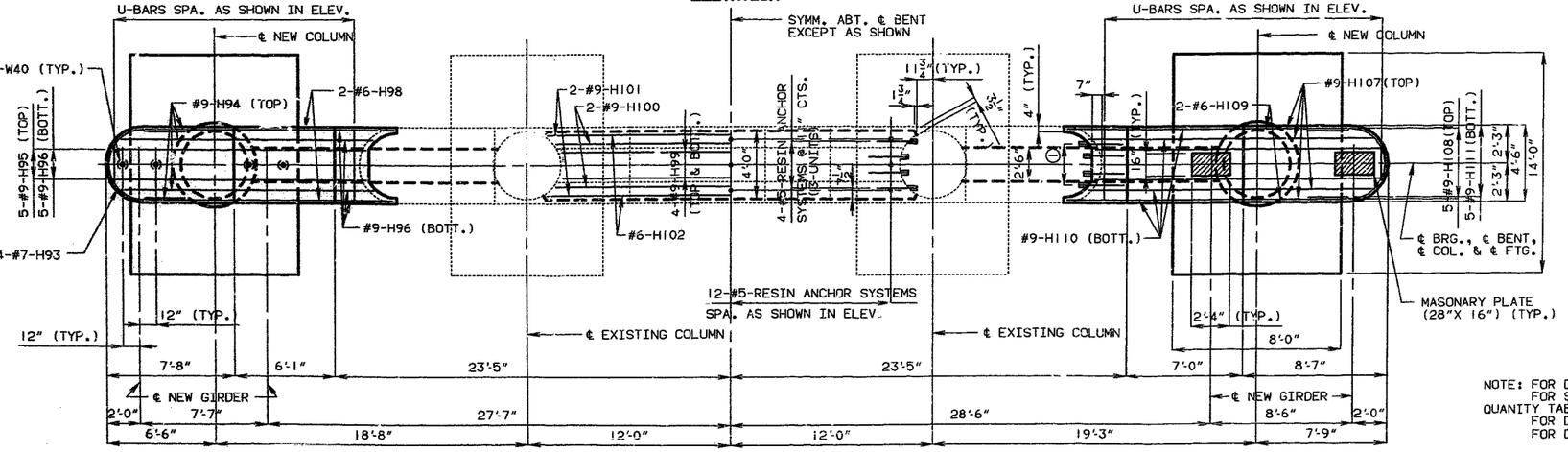


SECTION B-B

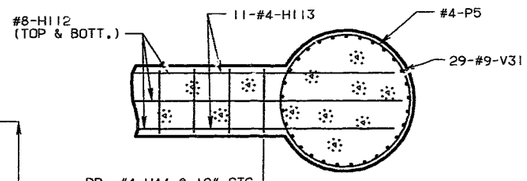


SECTION C-C

ELEVATION



PLAN



SECTION D-D

① 4-#8-RESIN ANCHOR SYSTEMS @ 9½" CTS. (3-UNITS)

NOTE: FOR DETAILS OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.
FOR SECTION A-A, E-E, F-F, PLAN OF FOOTING AND SUBSTRUCTURE QUANITY TABLE FOR BENT NO. 4 SEE SHEET NO. 20.
FOR DETAILS OF STEEL PILE SPLICE SEE SHEET NO. 22.
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

DETAILS OF INTERMEDIATE BENT NO. 4 (W.B.L.)

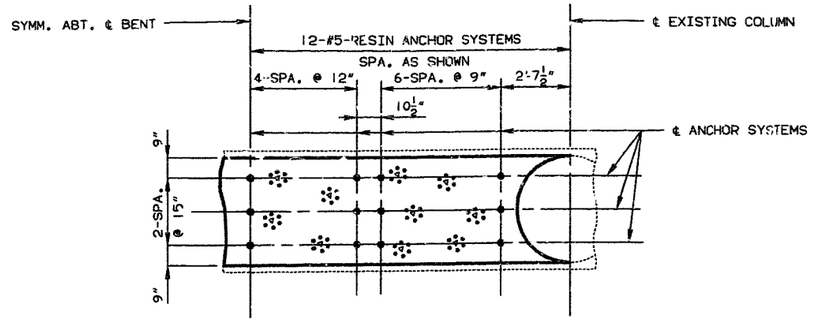
REVISED:

DETAILED JULY 1993
CHECKED AUG. 1993

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

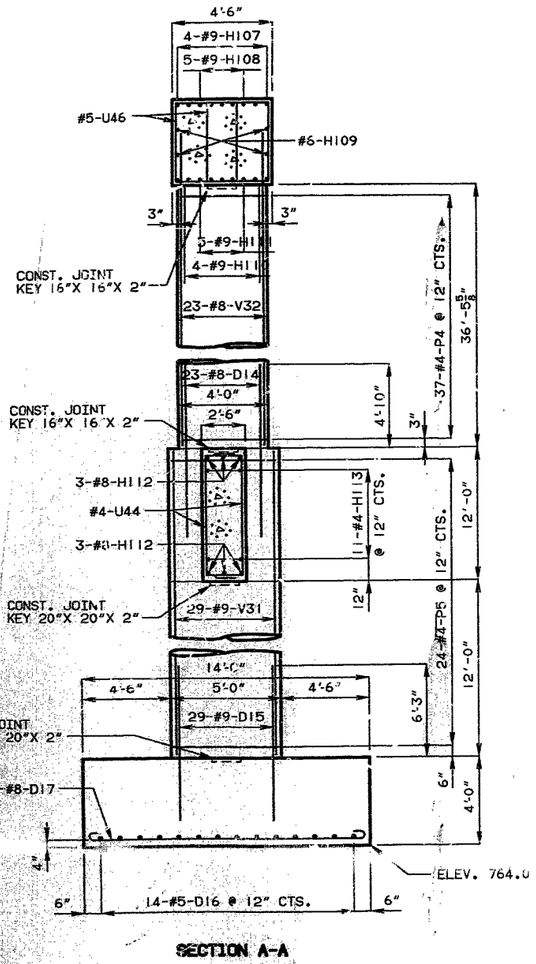
JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		317

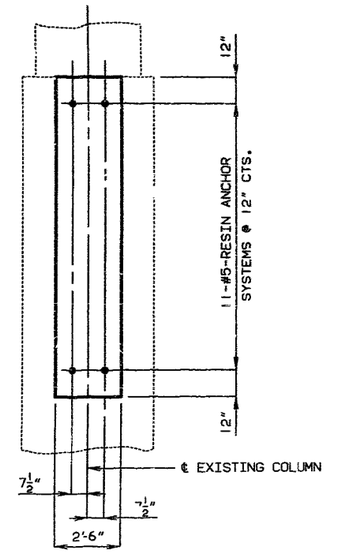


SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION A-A



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE SHEET NO. 19.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 4		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	235
CLASS 2 EXCAVATION	CU. YDS.	69
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	164.6
REINFORCING STEEL (BRIDGES)	LBS.	22010

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES SHOWN ON SHEET NO. 2.

342-305

REVISED:

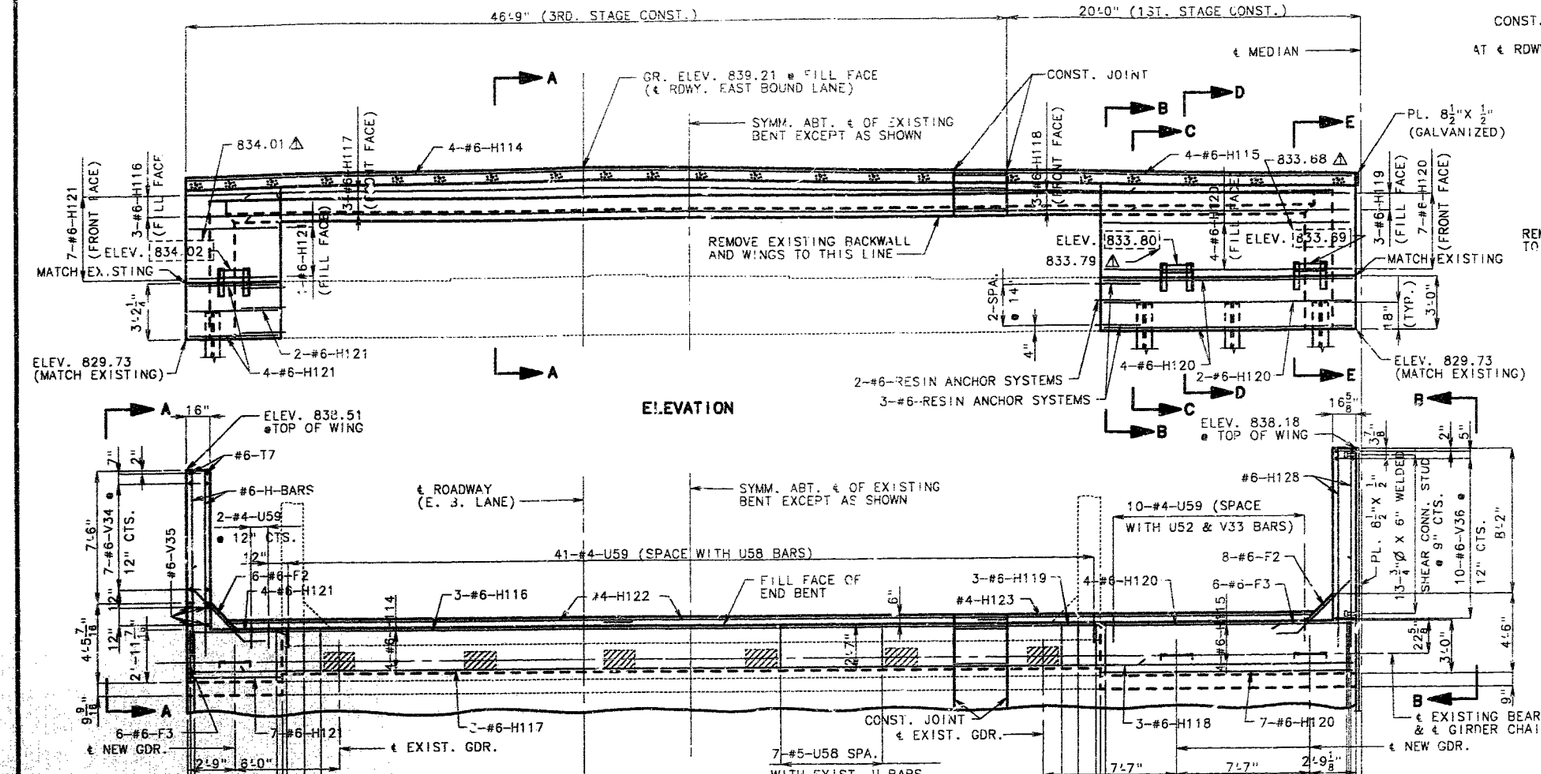
DETAILED AUG. 1993
CHECKED AUG. 1993

DETAILS OF INTERMEDIATE BENT NO. 4 (W.B.L.)

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

JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		



NOTE: FOR ELEVATION A-A, B-B, DETAILS OF RESIN ANCHOR SYSTEMS, KEY, STEEL PILE SPLICE AND SUBSTRUCTURE QUANITY TABLE SEE SHEET NO. 22.
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB SEE SHEETS NO. 40, 41 & 43.
SHIFT REINFORCING STEEL TO CLEAR THE ANGLES OF THE SUPPORT CHAIRS.
FIELD BENDING SHALL BE REQUIRED FOR #6-F BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WING.
* FIELD DRILL 3-1 1/8" Ø HOLES IN EXISTING GIRDERS. COST OF FIELD DRILLING HOLES IN EXISTING GIRDERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE.
FOR DETAILS OF SUPPORT CHAIR SEE SHEET NO. 29.

DETAILS OF END BENT NO. 5
(EAST BOUND LANE)

306

REVISED:

DETAILED APRIL 1993
CHECKED JUNE 1993

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

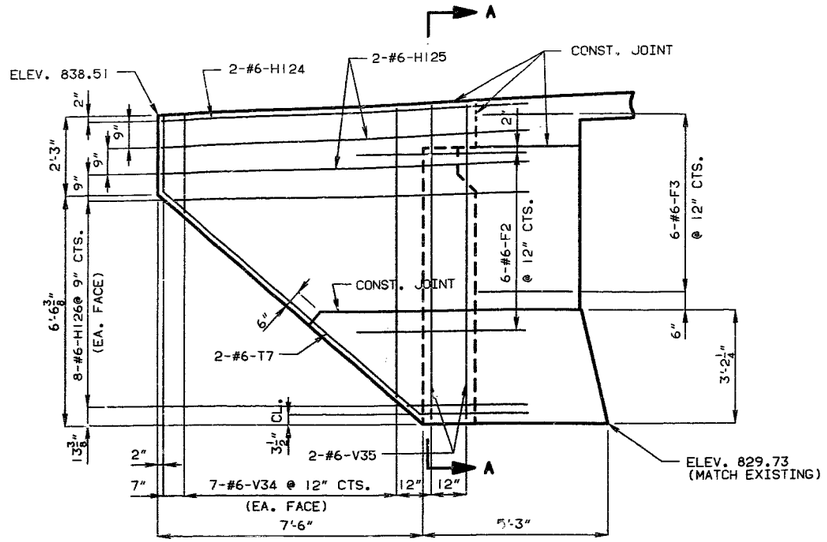
△ Revised 5/19/94

SHEET NO. 21 OF 51.

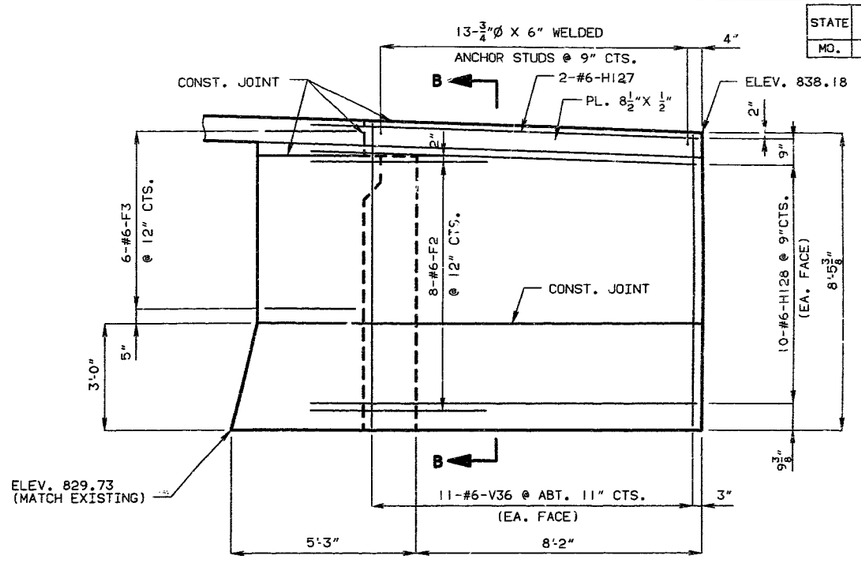
JACKSON COUNTY

A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		319

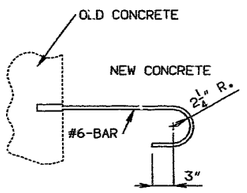


ELEVATION A-A



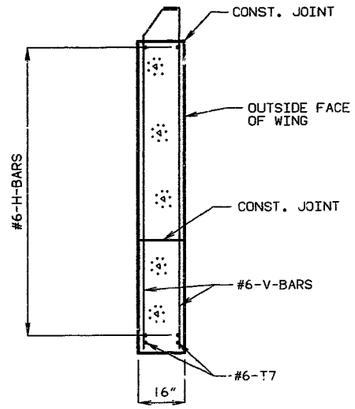
ELEVATION B-B

NOTE: COST OF FURNISHING AND INSTALLING RESIN ANCHOR SYSTEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CONCRETE.
SEE SPECIAL PROVISIONS FOR ACCEPTABLE RESIN ANCHOR SYSTEMS. THESE RESIN ANCHOR SYSTEMS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS EXCEPT AS MODIFIED BY THE JOB SPECIAL PROVISIONS AND THAT AN EPOXY COATED #6, GRADE 60 REINFORCING BAR PROJECTING 15" (EXCEPT AT APPROACH HAUNCH 7 1/2") INTO NEW CONCRETE SHALL BE USED.
A ① EPOXY COATED STRAIGHT REINFORCING BAR MAY BE SUBSTITUTED FOR A ② HOOKED BAR AS SHOWN ON PLANS.

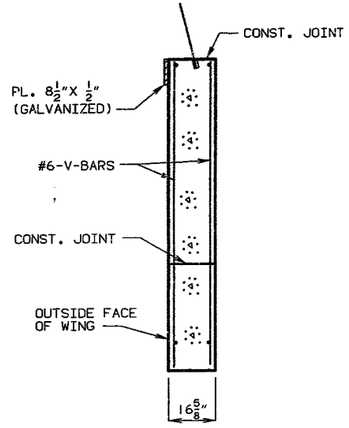


DETAIL OF RESIN ANCHOR SYSTEM

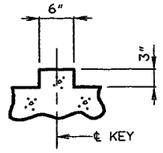
BAR SIZE & LENGTH	
①	②
#5	21"
#6	2'-3"
#8	4'-0"



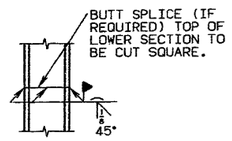
SECTION A-A



SECTION B-B



SECTION THRU KEY



STEEL PILE SPLICE

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	35
STRUCTURAL STEEL PILES (10")	LIN. FT.	272
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	10.0

NOTE: THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 2.

NOTE: CONCRETE DIAPHRAGMS SHALL BE POURED PRIOR TO THE SLAB, ALLOWING SUFFICIENT TIME FOR THE SET OF THE CONCRETE IN THE DIAPHRAGMS.
ALL CONCRETE IN THE END BENT ABOVE TOP OF BEAM AND BELOW TOP OF SLAB SHALL BE CLASS B2.
THE AREA EXPOSED BY THE REMOVAL OF CONCRETE AND NOT COVERED WITH NEW CONCRETE SHALL BE COATED WITH AN APPROVED BITUMINOUS PAINT.

3466 307

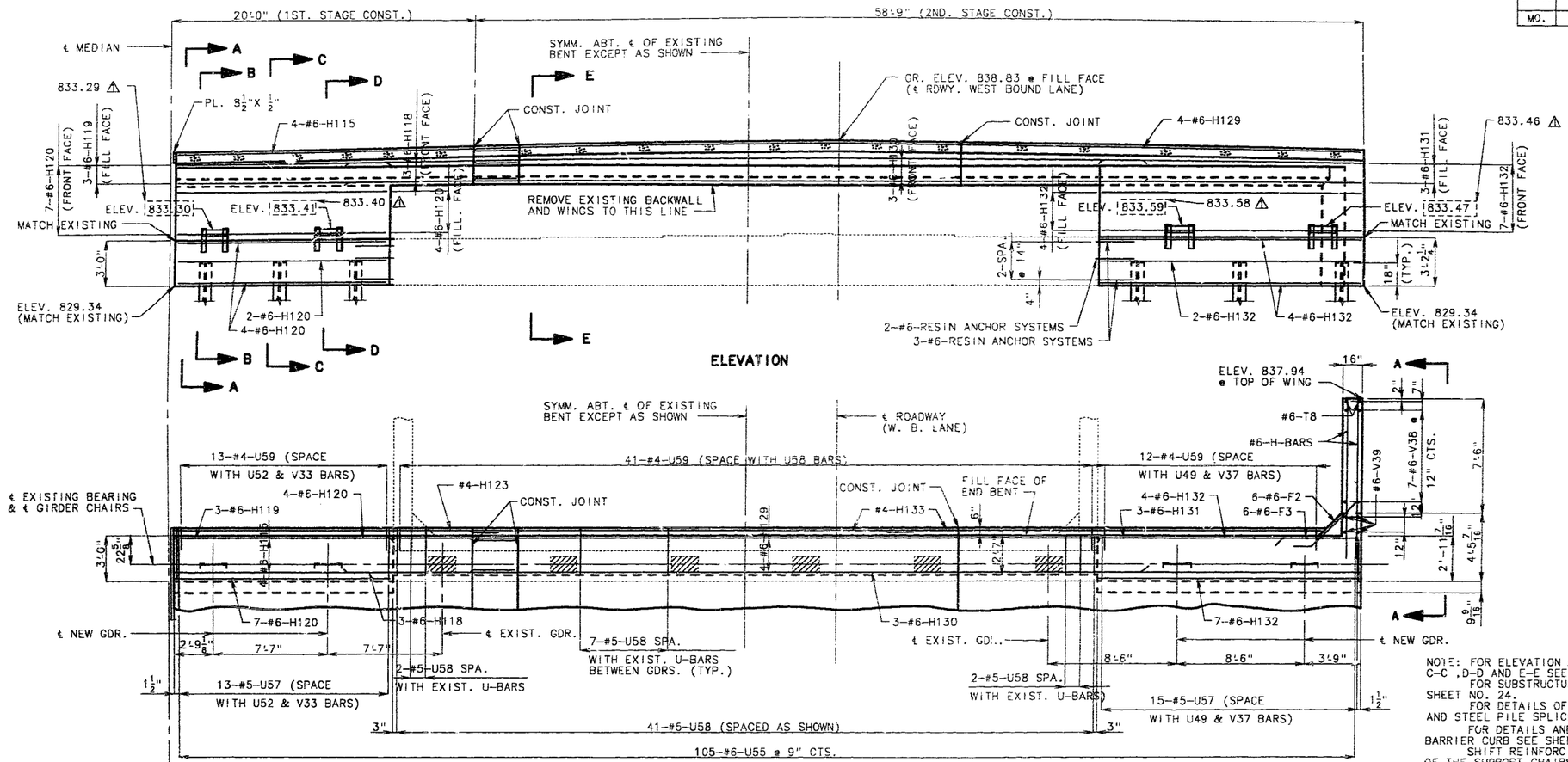
REVISED:

DETAILED APRIL 1993
CHECKED JUNE 1993

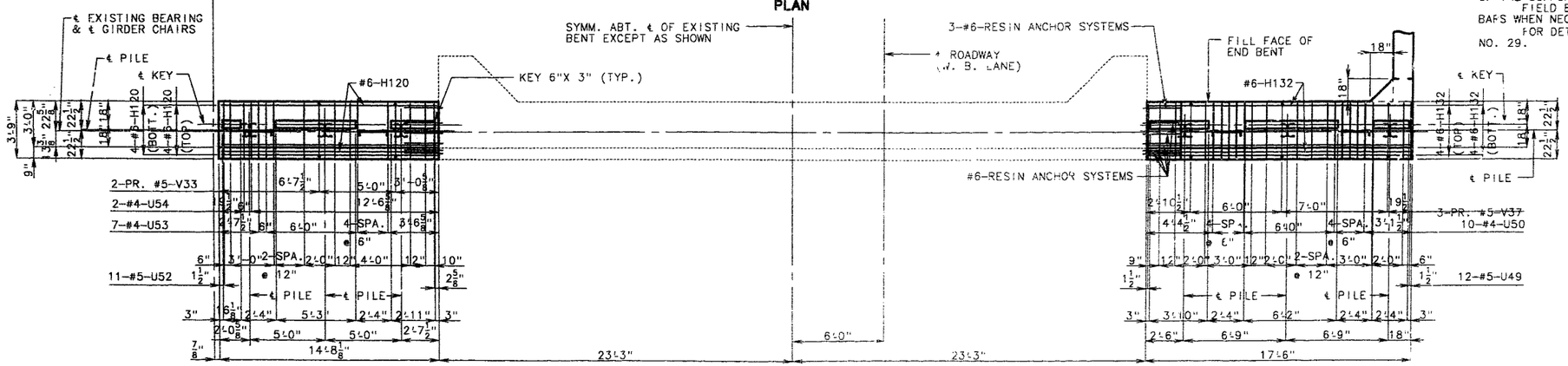
DETAILS OF END BENT NO. 5
(EAST BOUND LANE)

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

STATE	PROJ. NO.	SHEET NO.
MO.		



NOTE: FOR ELEVATION A-A AND SECTION A-A, B-B, C-C ,D-D AND E-E SEE SHEET NO. 24.
FOR SUBSTRUCTURE QUANITY TABLE SEE SHEET NO. 24.
FOR DETAILS OF RESIN ANCHOR SYSTEMS, KEY AND STEEL PILE SPLICE SEE SHEET NO. 22.
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB SEE SHEETS NO. 41, 42 & 43.
SHIFT REINFORCING STEEL TO CLEAR THE ANGLES OF THE SUPPORT CHAIRS.
FIELD BENDING SHALL BE REQUIRED FOR #6-F BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WIN
FOR DETAILS OF SUPPORT CHAIR SEE SHEET NO. 29.



PLAN OF BEAM

DETAILS OF END BENT NO. 5
(WEST BOUND LANE)

⚠ Revised 5/19/94

DETAILED APRIL 1993
CHECKED JUNE 1993

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

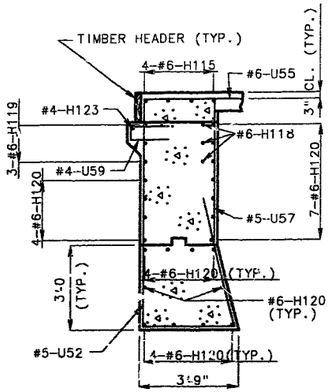
SHEET NO. 23 OF 51.

JACKSON COUNTY A-610R1

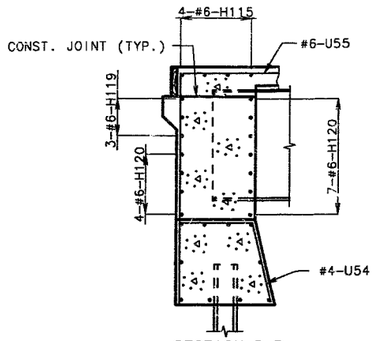
308

REVISED:

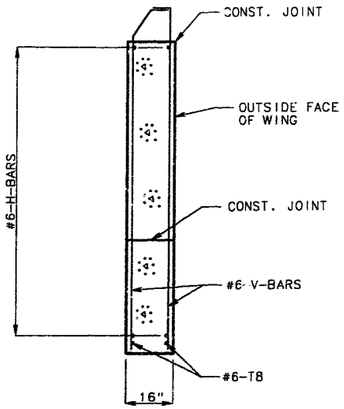
STATE	PROJ. NO.	SHEET NO.
MO.		321



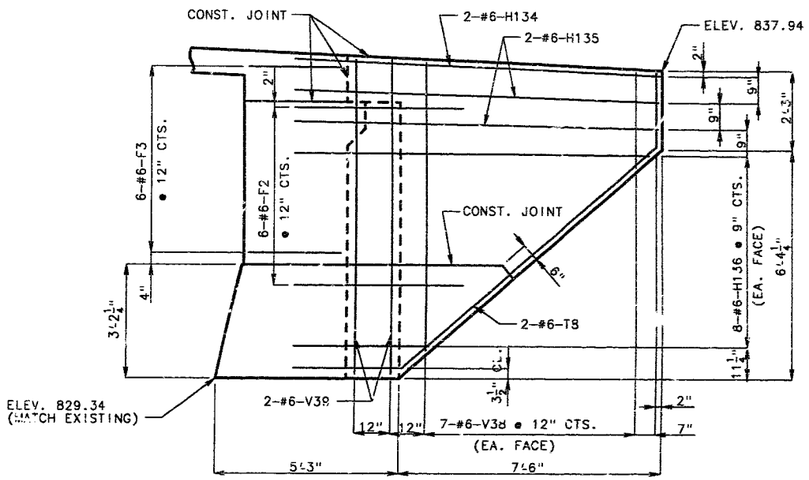
SECTION A-A



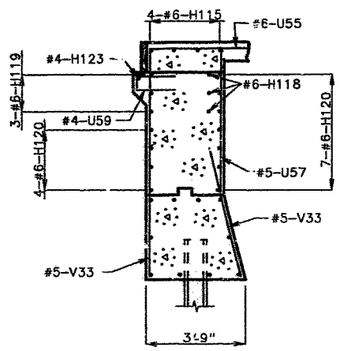
SECTION B-B



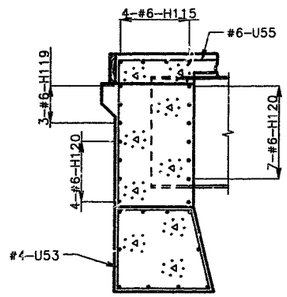
SECTION THRU WING



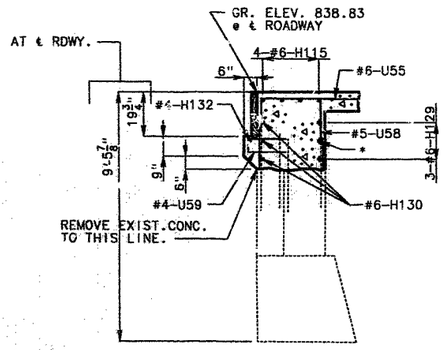
ELEVATION A-A



SECTION C-C



SECTION D-D



SECTION E-E

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 5		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	30
STRUCTURAL STEEL PILES (10")	LIN. FT.	402
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	13.1

NOTE: THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 2.

NOTE: CONCRETE DIAPHRAGMS SHALL BE POURED PRIOR TO THE SLAB, ALLOWING SUFFICIENT TIME FOR THE SET OF THE CONCRETE IN THE DIAPHRAGMS.
ALL CONCRETE IN THE END BENT ABOVE TOP OF BEAM AND BELOW TOP OF SLAB SHALL BE CLASS B2.
THE AREA EXPOSED BY THE REMOVAL OF CONCRETE AND NOT COVERED WITH NEW CONCRETE SHALL BE COATED WITH AN APPROVED BITUMINOUS PAINT.
* FIELD DRILL 3-1 1/8" Ø HOLES IN EXISTING GIRDERS. COST OF FIELD DRILLING HOLES IN EXISTING GIRDERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE.

DETAILS OF END BENT NO. 5
(WEST BOUND LANE)

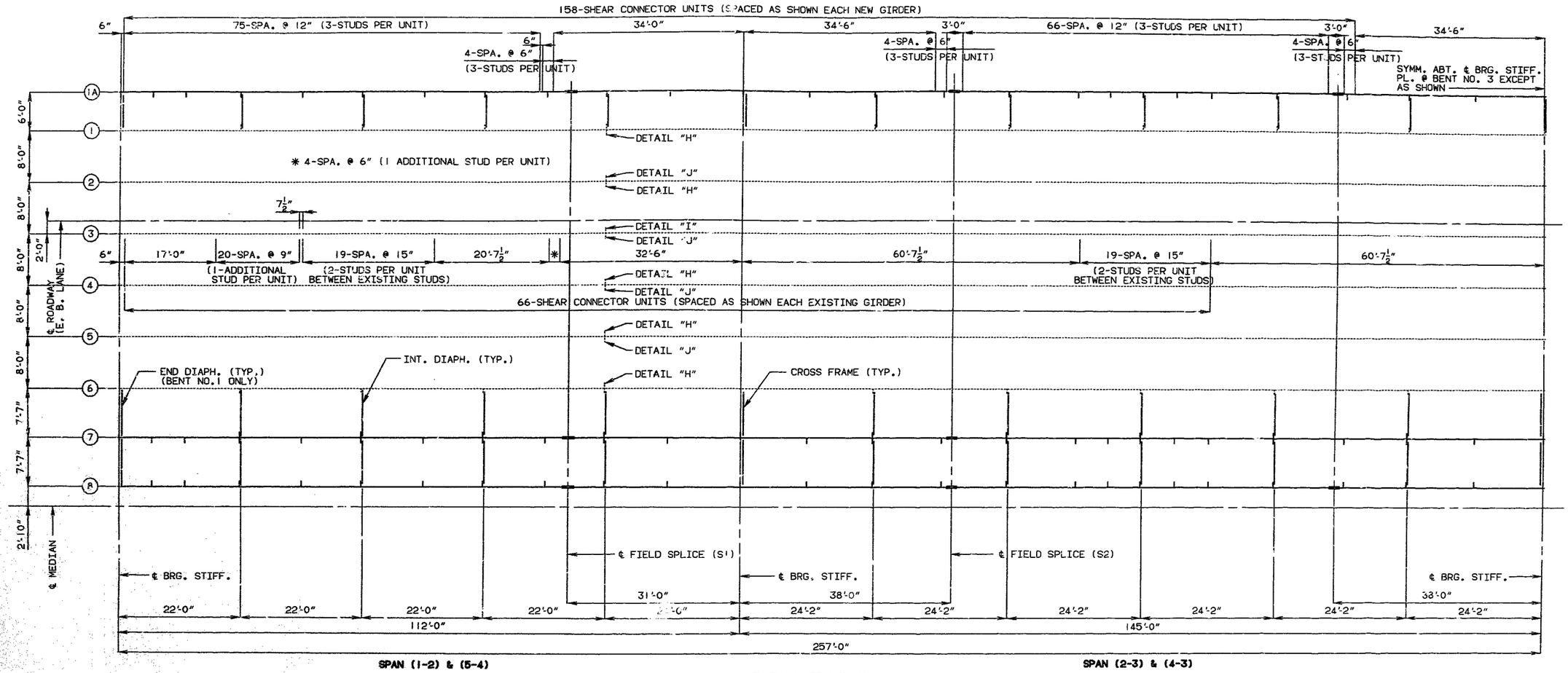
309

REVISED

DETAILED APRIL 1993
CHECKED JUNE 1993

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

STATE	PROJ. NO.	SHEET NO.
MO.		322



PART PLAN OF STRUCTURAL STEEL
(EAST BOUND LANE)

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN PARALLEL TO GRADE AT CROWN OF ROADWAY.

COST OF DRILLING HOLES IN EXISTING STRUCTURAL STEEL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FABRICATED STRUCTURAL CARBON STEEL.

INTERMEDIATE WEB STIFFENER PLATE AND DIAPHRAGM SPACING MAY VARY FROM PLAN DIMENSIONS BY A MAXIMUM OF 3" FOR DIAPHRAGM TO CONNECT TO THE INTERMEDIATE WEB STIFFENER PLATE.

FOR DETAILS OF DIAPHRAGMS SEE SHEETS NO. 30 & 31.

FOR DETAILS OF SHEAR CONNECTORS SEE SHEET NO. 29.

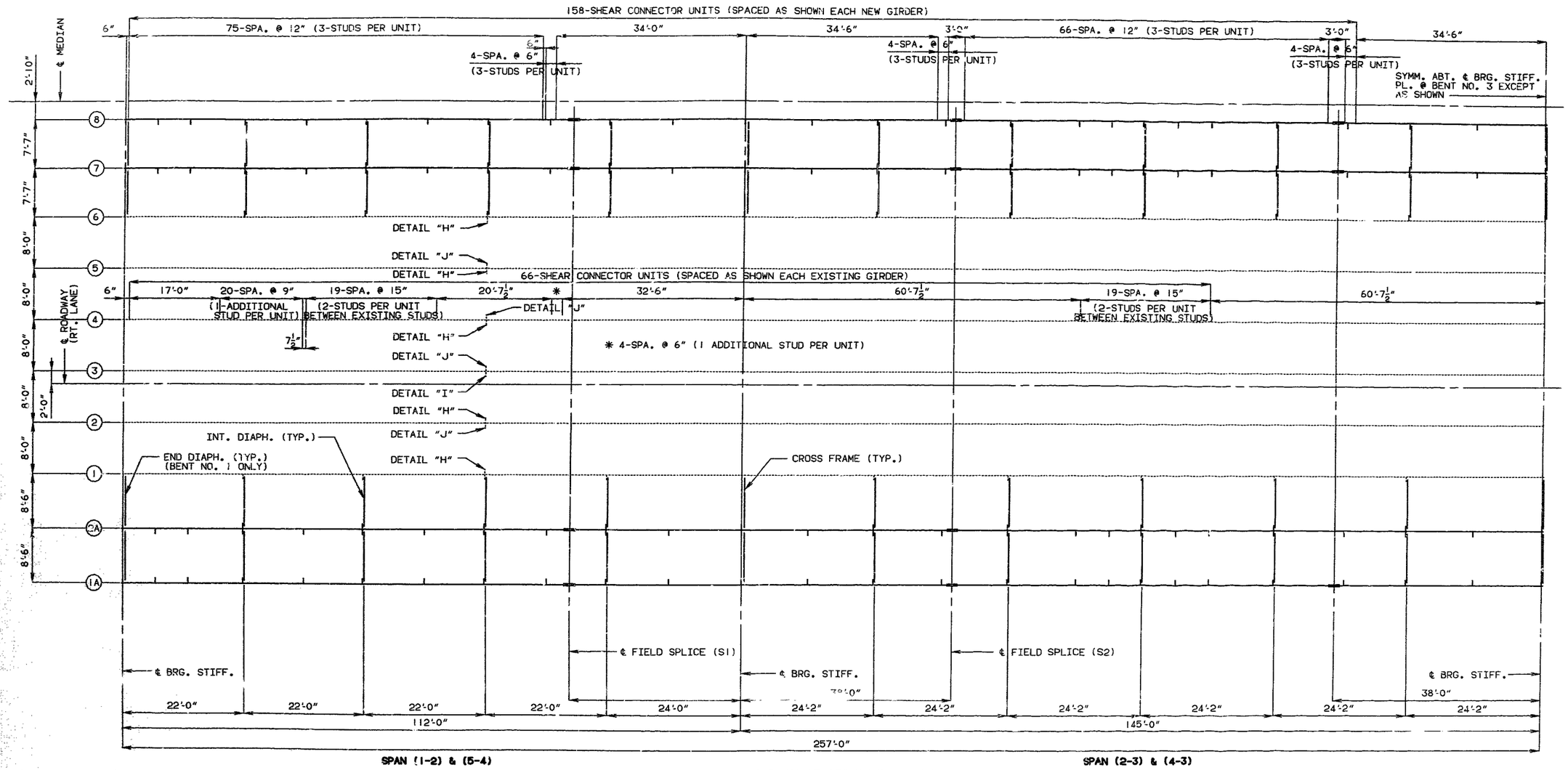
DETAIL "H", "I" AND "J" SHOWN ARE TYPICAL FOR ALL INTERMEDIATE DIAPHRAGMS ON EXISTING GIRDERS. SEE SHEET NO. 30 FOR DETAILS OF FLANGE CONNECTION ANGLES AND BENT PLATE.

322

REVISED

DETAILED SEPT. 1992
CHECKED MAY 1993

STATE	PROJ. NO.	SHEET NO.
MO.		323



PART PLAN OF STRUCTURAL STEEL
(WEST BOUND LANE)

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN PARALLEL TO GRADE AT CROWN OF ROADWAY.

COST OF DRILLING HOLES IN EXISTING STRUCTURAL STEEL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FABRICATED STRUCTURAL CARBON STEEL.

INTERMEDIATE WEB STIFFENER PLATE AND DIAPHRAGM SPACING MAY VARY FROM PLAN DIMENSIONS BY A MAXIMUM OF 3" FOR DIAPHRAGM TO CONNECT TO THE INTERMEDIATE WEB STIFFENER PLATE.

FOR DETAILS OF DIAPHRAGMS SEE SHEETS NO. 30 & 31.

FOR DETAILS OF SHEAR CONNECTORS SEE SHEET NO. 29.

DETAIL "H", "I" AND "J" SHOWN ARE TYPICAL FOR ALL INTERMEDIATE DIAPHRAGMS ON EXISTING GIRDERS. SEE SHEET NO. 30 FOR DETAILS OF FLANGE CONNECTION ANGLES AND BENT PLATE.

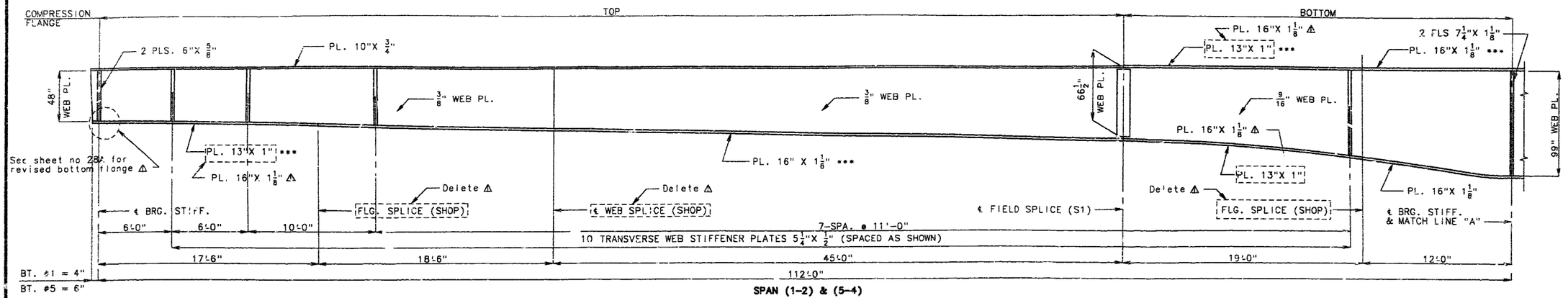
338-11

REVISED:

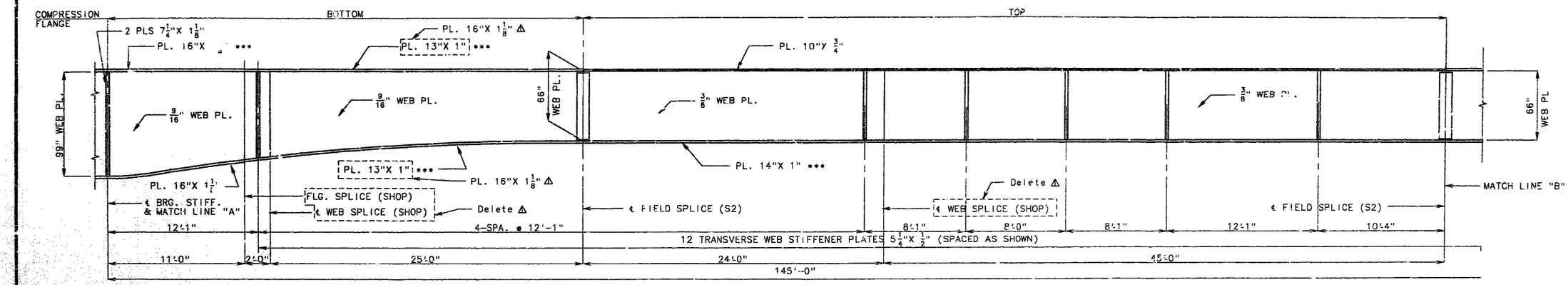
DETAILED SEPT. 1992
CHECKED JUNE 1993

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

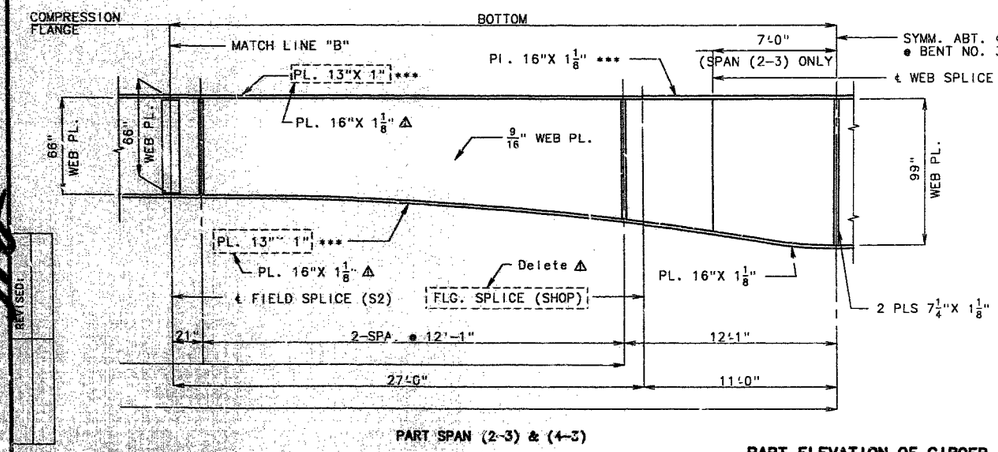
STATE	PROJ. NO.	SHEET NO.
MO.		



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

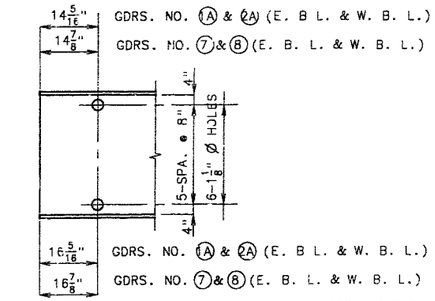


PART SPAN (2-3) & (4-3)

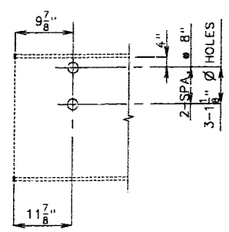


PART SPAN (2-3) & (4-3)

PART ELEVATION OF GIRDER



WEB HOLE DETAIL FOR NEW GIRDERS AT END BENT NO. 5



WEB HOLE DETAIL FOR EXISTING GIRDERS AT END BENT NO. 5

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN PARALLEL TO GRADE AT CROWN OF ROADWAY.

*** INDICATES FLANGE PLATES SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS. ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES SHALL BE SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS.

PLATE GIRDER SHALL BE FABRICATED TO CONFORM TO THE CAMBER DIAGRAM SHOWN ON SHEET NO. 37 & 38.

TRANSVERSE WEB STIFFENERS SHALL BE LOCATED AS SHOWN IN PLAN OF STRUCTURAL STEEL.

FABRICATED STRUCTURAL STEEL SHALL BE A36, EXCEPT AS NOTED.

REVISED

⚠ Revised 5/19/94

DETAILED SEPT. 1992
CHECKED MAY 1993

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

JACKSON COUNTY

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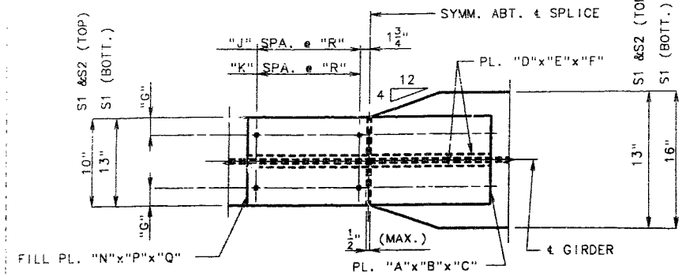
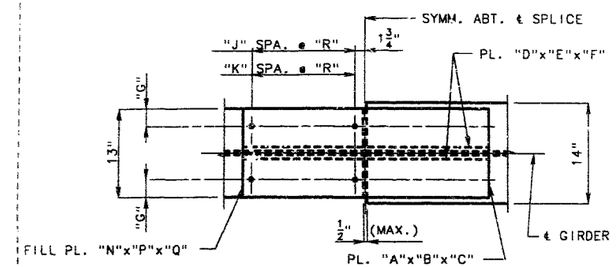
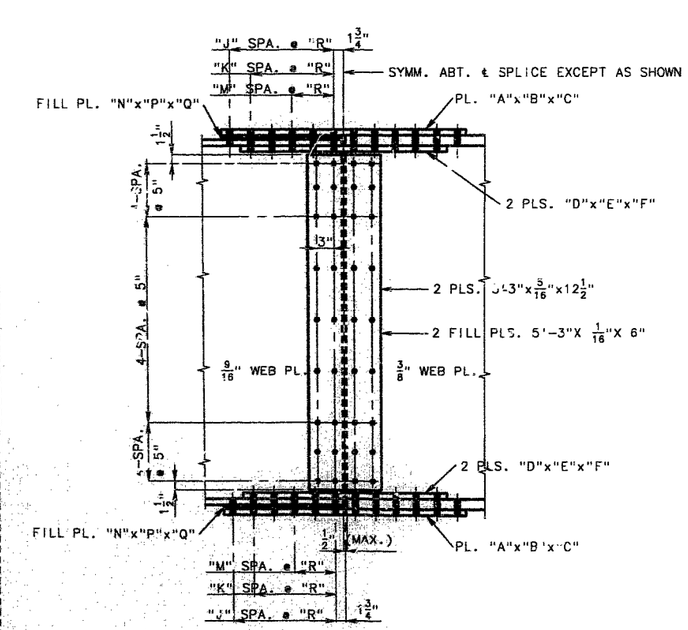
STATE	PROJ. NO.	SHEET NO.
MO.		



PLAN OF FLANGE
S1 & S2 (TOP) & S1 (BOTT.)

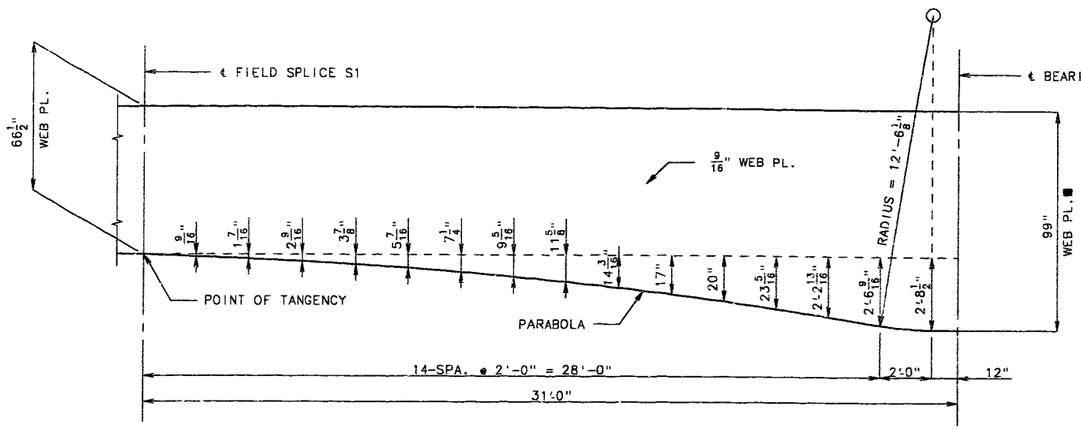


PLAN OF FLANGE
S2 (BOTT.)

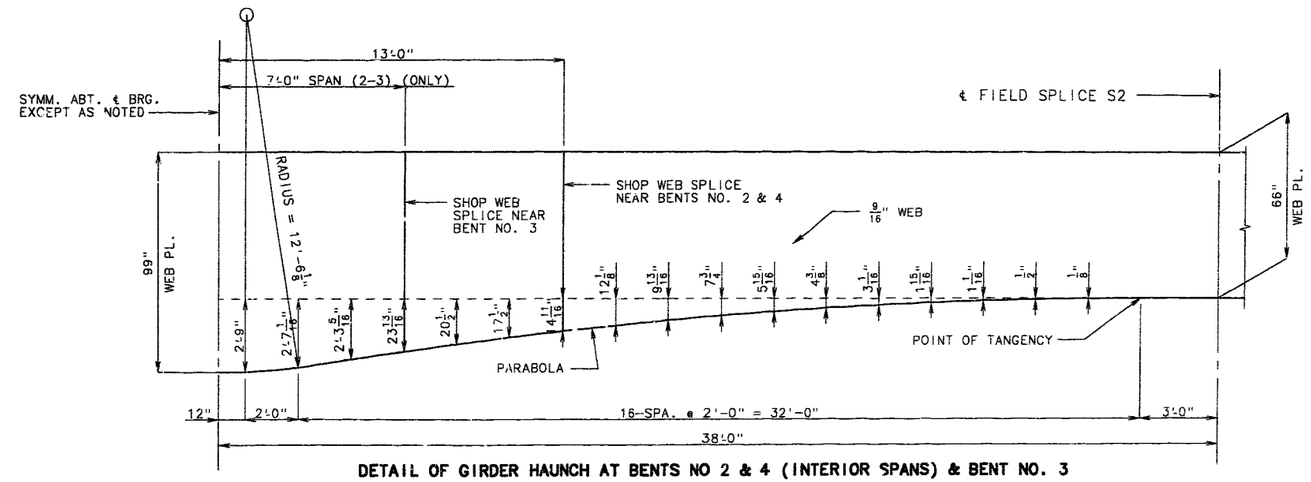


DETAIL OF BOLTED FIELD SPLICE

See sheet no. 28A for Details Of Bolted Field Splice ⚠



DETAIL OF GIRDER HAUNCH AT BENTS NO 2 & 4 (END SPANS)



DETAIL OF GIRDER HAUNCH AT BENTS NO 2 & 4 (INTERIOR SPANS) & BENT NO. 3

SPLICE LOCATION	TABLE OF DIMENSIONS-FIELD SPLICE												
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"J"	"K"	"N"	"P"	"Q"	"R"
S1 & S2 (TOP)	10"	⅜"	18½"	4"	½"	18½"	2"	2	2	10"	¼"	9"	3"
S1 BOTT.	13"	½"	2'-6½"	5½"	⅝"	2'-6½"	2¾"	4	4	13"	⅛"	15"	3"
S2 BOTT.	13"	½"	2'-6½"	5½"	⅝"	2'-6½"	2¾"	4	4	–	–	–	3"

NOTE: USE ⅞" Ø HIGH STRENGTH BOLTS WITH 15/16" REAMED HOLES.
CONTACT SURFACES ARE TO BE BLAST CLEANED IN ACCORDANCE WITH SECTION 712.12.2.1 OF THE STANDARD SPECIFICATIONS.
USE ONE 5'3"X 1/16"X 6" FILL PLATE ON EACH SIDE OF ⅜" WEB.

⚠ Revised 5/19/94

SPL. PL. JPG 3.42 A36.1.A
FIELD SPLICE REVISED: MAR. 1992

DETAILED SEPT.1992
CHECKED MAY 1993

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

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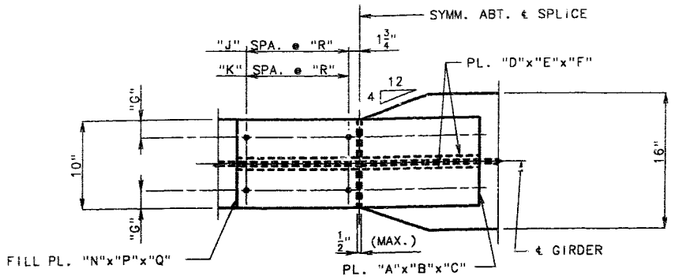
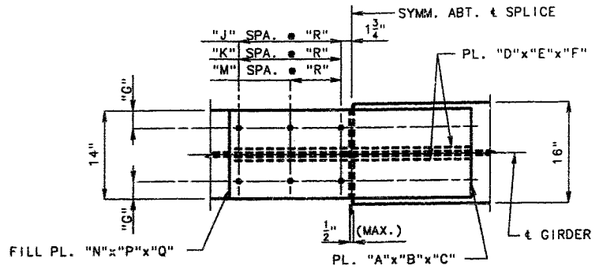
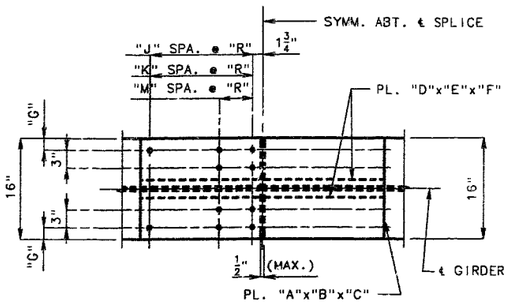
STATE	PROJ. NO.	SHEET NO.
MO.		



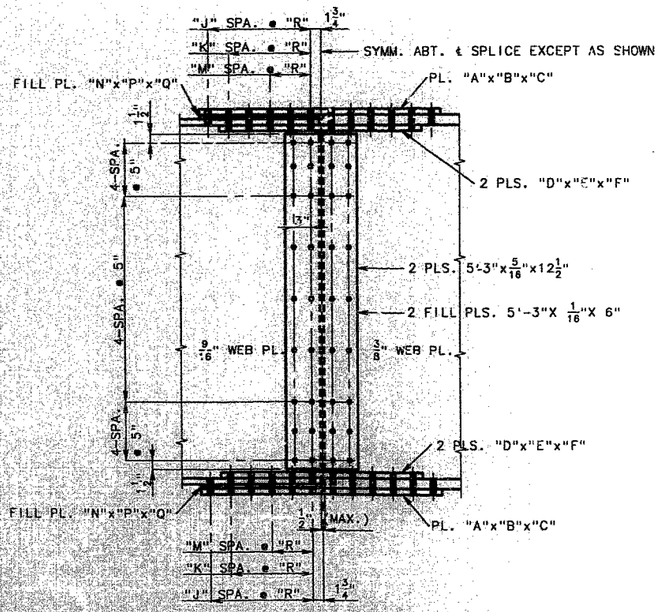
PLAN OF FLANGE
S1 & S2 (TOP)



PLAN OF FLANGE
S2 (BOTT.)



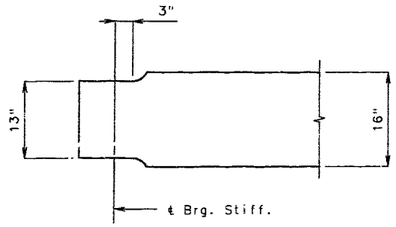
PLAN OF FLANGE
S1 (BOTT.)



DETAIL OF BOLTED FIELD SPLICE

SPLICE LOCATION	TABLE OF DIMENSIONS—FIELD SPLICE														
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"J"	"K"	"M"	"N"	"P"	"Q"	"R"
S1 & S2 (TOP)	10"	⅜"	18½"	4"	½"	18½"	2"	2	2		10"	⅜"	9"	3"
S1 BOTT.	16"	¾"	2'-3½"	7"	¾"	2'-3½"	2"	3	3	2				3½"
S2 BOTT.	14"	⅝"	20½"	6"	¾"	20½"	1½"	2	2	1	14"	⅛"	10"	3½"

NOTE: USE ⅞" Ø HIGH STRENGTH BOLTS WITH 15/16" REAMED HOLES.
CONTACT SURFACES ARE TO BE BLAST CLEANED IN ACCORDANCE WITH SECTION 712.12.2.1 OF THE STANDARD SPECIFICATIONS.
USE ONE 5'3"X 1/16"X 6" FILL PLATE ON EACH SIDE OF ⅜" WEB.



PART PLAN OF BOTTOM FLANGE
NEAR END BENTS

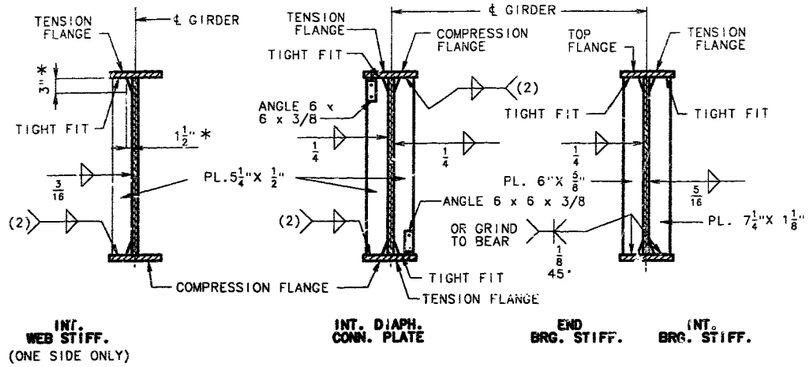
SPL. PL. PG 3.42 A36 I/A
FIELD SPLICE
REVISED:
MAR. 1992

DETAILED MAY 1994
CHECKED MAY 1994

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

JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		326

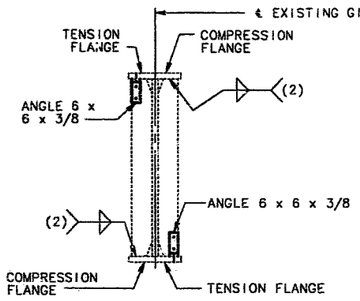


INT. WEB STIFF. (ONE SIDE ONLY) | INT. DIAPH. CONN. PLATE | END BRG. STIFF. | INT. BRG. STIFF.

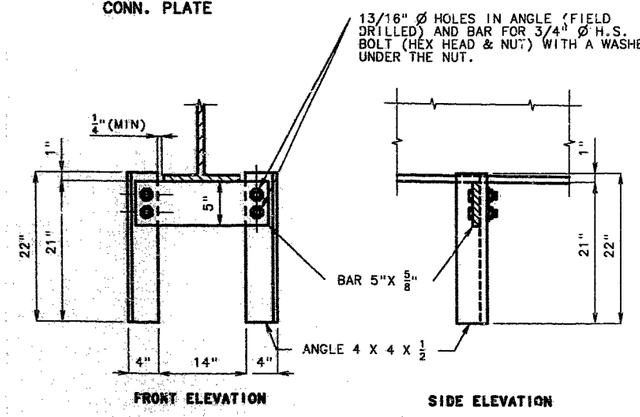
(2) WELD TO COMPRESSION FLANGE AS LOCATED ON ELEVATION OF GIRDER.

* TYPICAL FOR ALL INT. WEB STIFF., INT. DIAPH. CONN. PL. AND BRG. STIFF..

WELDING DETAILS

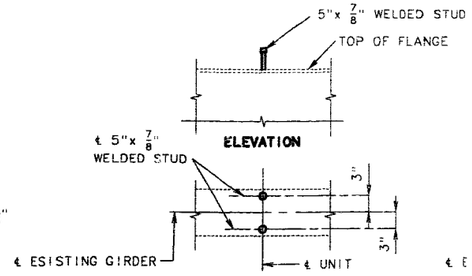


EXISTING INT. DIAPH. CONN. PLATE

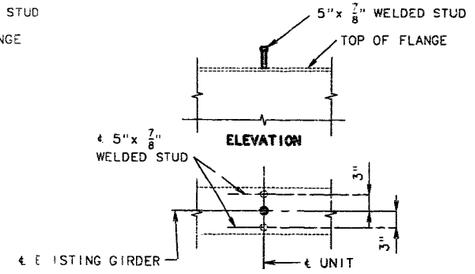


FRONT ELEVATION | SIDE ELEVATION

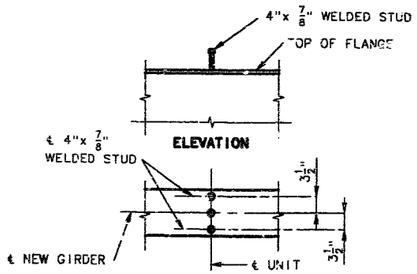
DETAILS OF SUPPORT CHAIR AT END BENT NO. 5



PLAN OF ADDITIONAL STUD CONN. FOR EXISTING GIRDERS (2 STUDS PER UNIT)



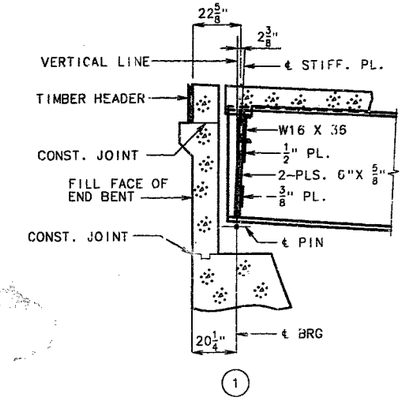
PLAN OF ADDITIONAL STUD CONN. FOR EXISTING GIRDERS (1 ADDITIONAL STUD PER UNIT)

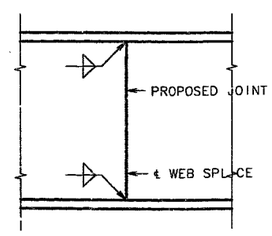


PLAN OF STUD CONN. FOR NEW GIRDERS (3 STUDS PER UNIT)

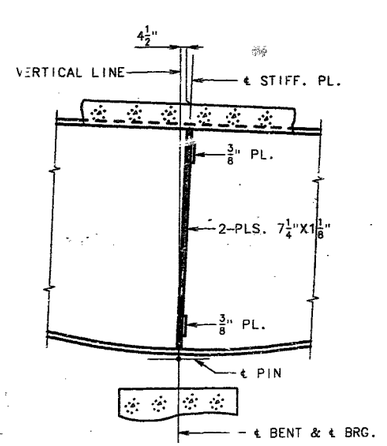
DETAILS OF SHEAR CONNECTORS

NOTE: WEIGHT OF 7868 LBS. OF SHEAR CONNECTORS IS INCLUDED IN WEIGHT OF FABRICATED STRUCTURAL CARBON STEEL (PL. GDR.) FOR NORTH AND SOUTH BOUND LANES.
SHEAR CONNECTORS SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1037.

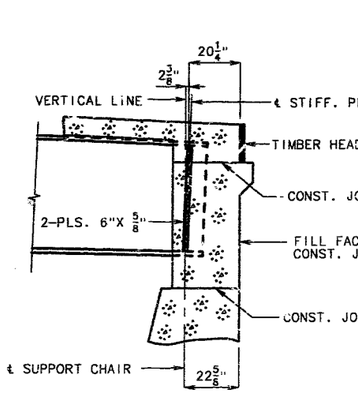


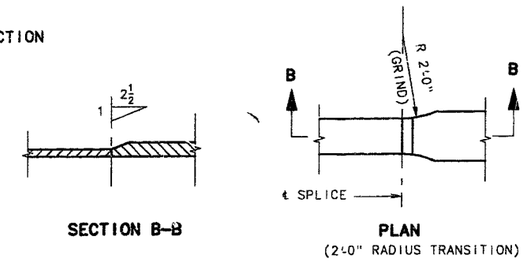


SHOP WEB SPLICE



PART LONGITUDINAL SECTION





SECTION B-B | PLAN (2'-0" RADIUS TRANSITION)

WELDED SHOP FLANGE SPLICE

DETAILED SEPT. 1992
CHECKED JUNE 1993

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

JACKSON COUNTY

A-610R1

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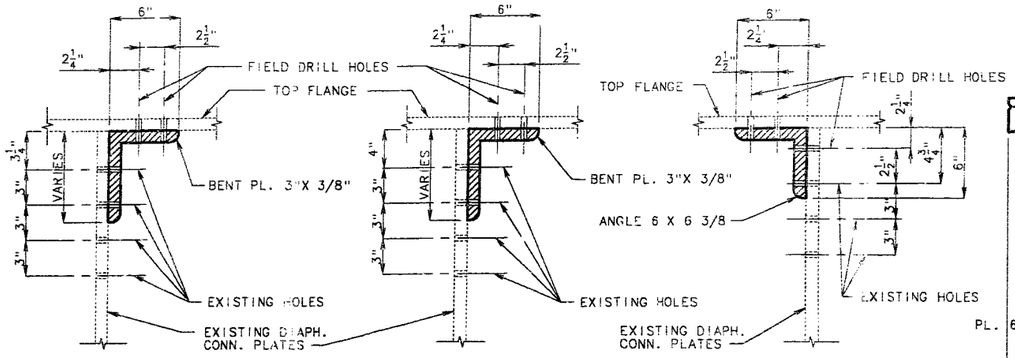
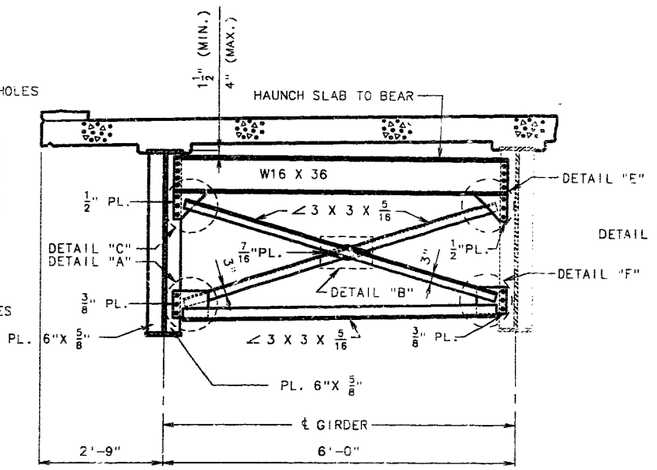
STATE	PROJ. NO.	SHEET NO.
MO.		327



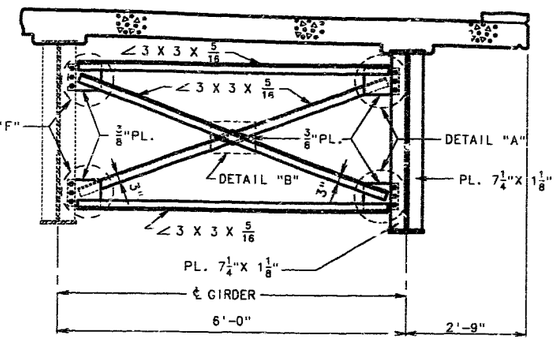
DETAIL "H" DETAIL "I" DETAIL "J"

DETAILS OF FLANGE CONNECTION ANGLE AND BENT PLATE TO EXISTING TOP FLANGE AND DIAPHRAGM CONNECTION PLATES

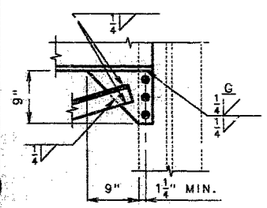
NOTE: FOR LOCATION OF DETAIL "H", DETAIL "I" AND DETAIL "J" SEE SHEETS NO. 25 AND NO. 26.



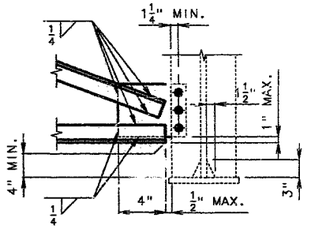
TYPICAL PART SECTION SHOWING END DIAPHRAGMS (E. B. L.) BENT NO. 1



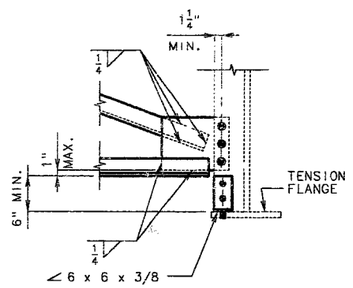
TYPICAL PART SECTION SHOWING CROSS FRAMES (E. B. L.)



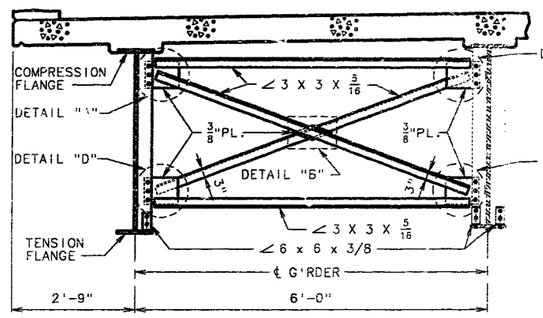
DETAIL "E"



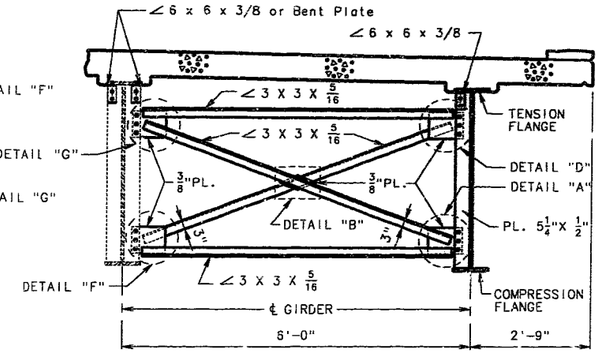
DETAIL "F"



DETAIL "G"

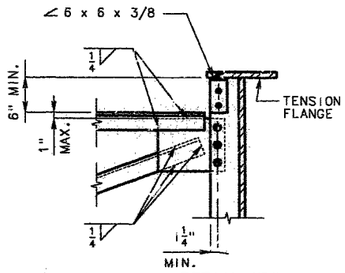


TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS BOTTOM FLANGE IN TENSION (E. B. L.)

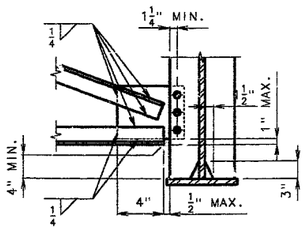


TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS TOP FLANGE IN TENSION (E. B. L.)

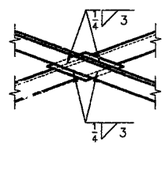
NOTE: FIELD DRILL 13/16" Ø HOLES IN EXISTING BEARING STIFFENERS AND WEB STIFFENERS FOR DIAPHRAGM AND CROSS FRAME CONNECTIONS. FLANGE CONNECTION ANGLES SHALL BE ADDED TO ALL EXISTING INTERMEDIATE DIAPHRAGM CONNECTION PLATES FOR EXISTING INTERMEDIATE DIAPHRAGMS.



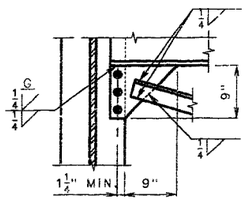
DETAIL "D"



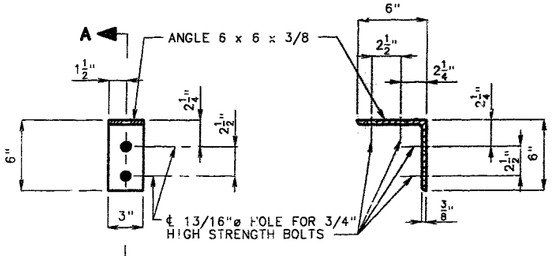
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL OF FLANGE CONNECTION ANGLE

SECTION A-A

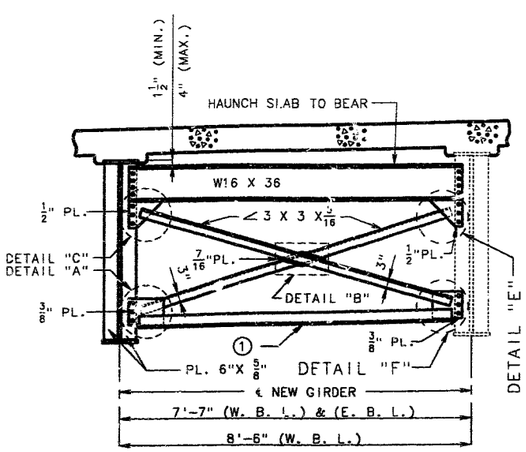
DIAPH>48;P/G3,42,STL. ,A		
DIAPH>48;P/G	REVISED	SEPT. 1992
APRIL 1991		

DETAILED SEPT. 1992
CHECKED MAY 1993

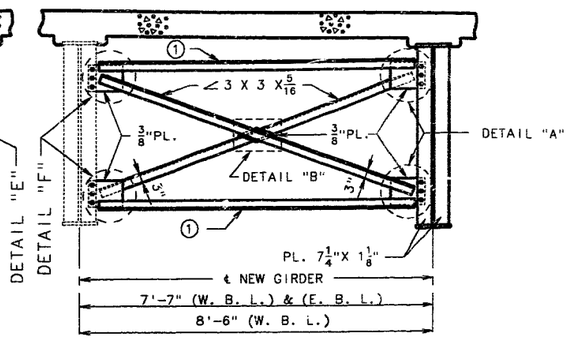
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-610R1

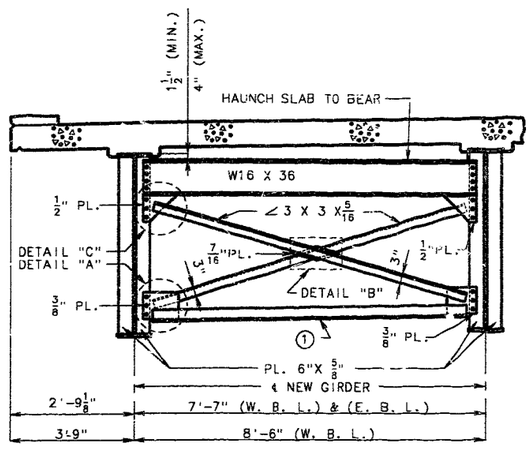
STATE	PROJ. NO.	SHEET NO.
MO.		328



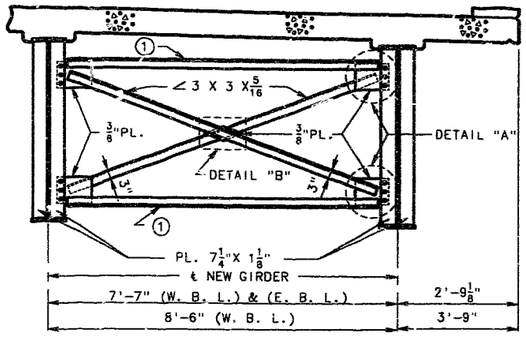
TYPICAL PART SECTION SHOWING
END DIAPHRAGMS BENT NO. 1



TYPICAL PART SECTION SHOWING
CROSS FRAMES

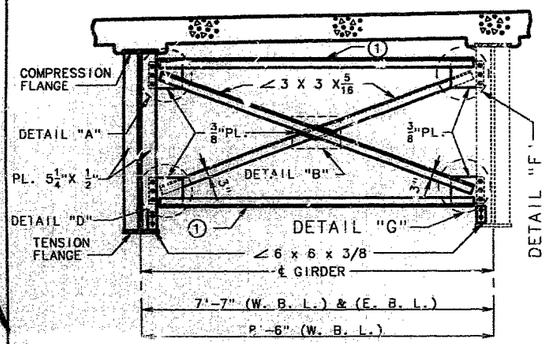


TYPICAL PART SECTION SHOWING
END DIAPHRAGMS END BENT NO 1

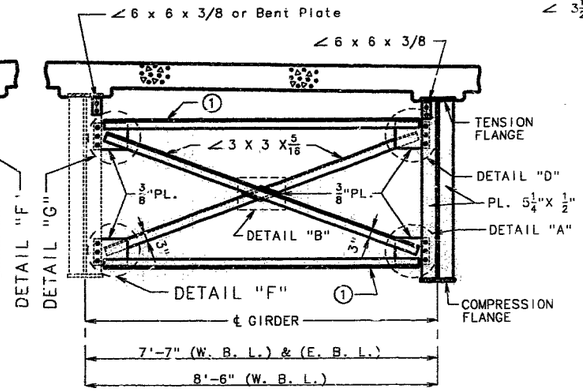


TYPICAL PART SECTION SHOWING
CROSS FRAMES

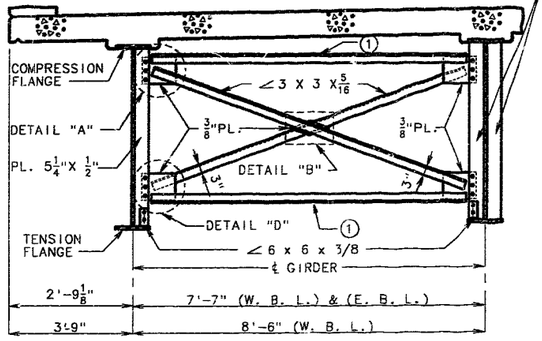
① ∠ 3½ X 3 X 5/16 FOR 7'-7" GDR. SPA.
∠ 3½"X 3½"X 5/16" FOR 8'-6" GDR. SPA.



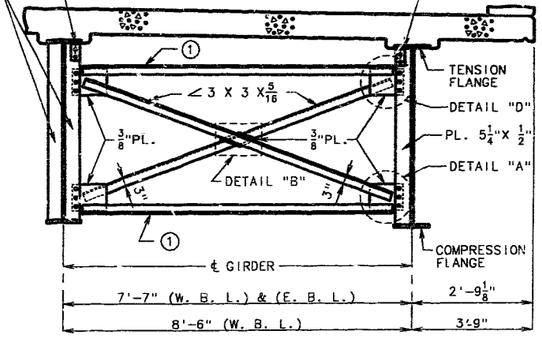
TYPICAL PART SECTION SHOWING
INTERMEDIATE DIAPHRAGMS
BOTTOM FLANGE IN TENSION



TYPICAL PART SECTION SHOWING
INTERMEDIATE DIAPHRAGMS
TOP FLANGE IN TENSION



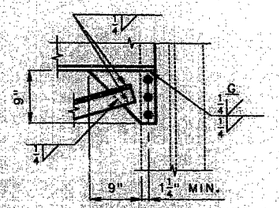
TYPICAL PART SECTION SHOWING
INTERMEDIATE DIAPHRAGMS
BOTTOM FLANGE IN TENSION



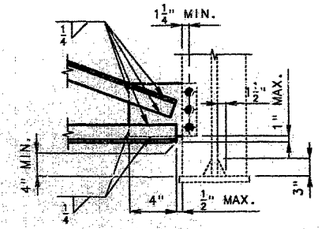
TYPICAL PART SECTION SHOWING
INTERMEDIATE DIAPHRAGMS
TOP FLANGE IN TENSION

NOTE: FIELD DRILL 13/16" Ø HOLES IN EXISTING BEARING STIFFENERS AND WEB STIFFENERS FOR DIAPHRAGM AND CROSS FRAME CONNECTIONS.

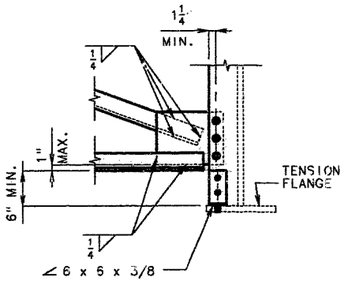
NOTE: FLANGE CONNECTION ANGLES SHALL BE ADDED TO ALL EXISTING INTERMEDIATE DIAPHRAGM CONNECTION PLATES FOR EXISTING INTERMEDIATE DIAPHRAGMS.
FOR DETAIL OF FLANGE CONNECTION ANGLE SEE SHEET NO. 30.



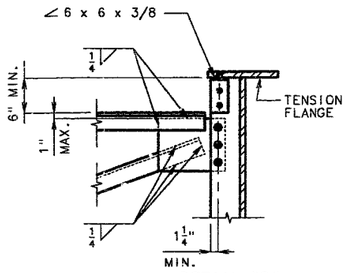
DETAIL "E"



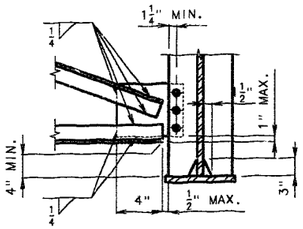
DETAIL "F"



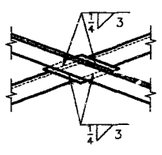
DETAIL "G"



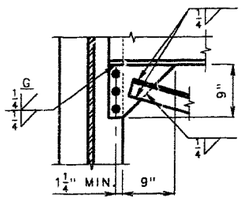
DETAIL "D"



DETAIL "A"



DETAIL "B"



DETAIL "C"

DIAPH>48, P/G3, 42, STL., A		
DIAPH>48, P/G	REVISED	SEPT., 1992
APRIL, 1991		

DETAILED SEPT., 1992
CHECKED MAY 1993

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

SHEET NO. 31 OF 51.

JACKSON COUNTY

A-610R1

STATE	PROJ. NO.	SHEET NO.
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NOTES:

ANCHOR BOLTS FOR TYPE "D" BEARINGS SHALL BE $1\frac{1}{4}$" Ø A588 STEEL SWEDGED BOLTS AND SHALL EXTEND 12" INTO THE CONCRETE WITH A194-2, 2H OR A563-C, C3, D, DH, DH3 HEAVY HEXAGON NUTS.

ACTUAL MANUFACTURER'S CERTIFIED MILL TEST REPORTS (CHEMICAL AND MECHANICAL) SHALL BE PROVIDED.

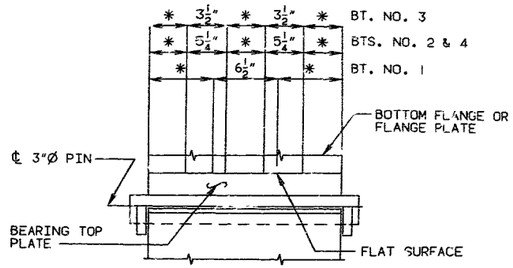
USE F436 HARDENED WASHERS FOR THE FIXED BEARINGS AND NO HEAVY HEXAGON NUTS OR HARDENED WASHERS FOR THE EXPANSION BEARINGS. (SWEDGING SHALL BE 1" LESS THAN EXTENSION INTO THE CONCRETE.)

ANCHOR BOLTS, HARDENED WASHERS AND HEAVY HEXAGON NUTS SHALL BE PAINTED WITH 2 COATS (5 MILS MINIMUM) OF INORGANIC ZINC. WELD AREAS TO BE TOUCHED UP AFTER ASSEMBLY.

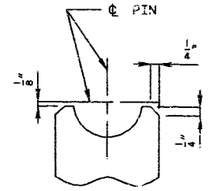
WEIGHT OF THE ANCHOR BOLTS, HARDENED WASHERS AND HEAVY HEXAGON NUTS FOR BEARINGS SHALL BE INCLUDED IN THE WEIGHT OF THE FABRICATED STRUCTURAL STEEL.

INDICATES MACHINE FINISH SURFACE.

SHOP DRAWINGS ARE NOT REQUIRED FOR THE LEAD PLATES AND/OR THE PREFORMED FABRIC PADS.

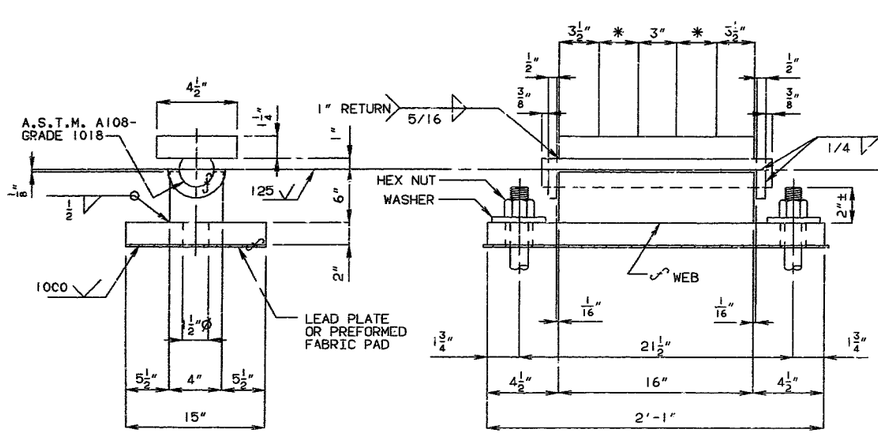


WELDING DETAILS



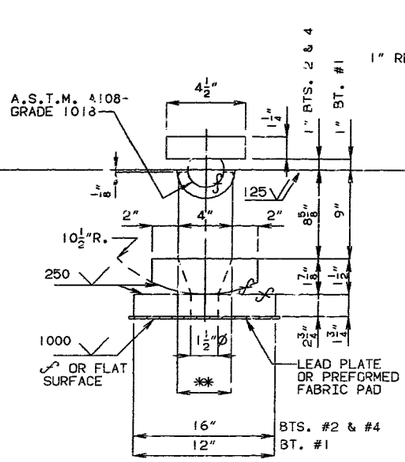
END VIEW OF WEB

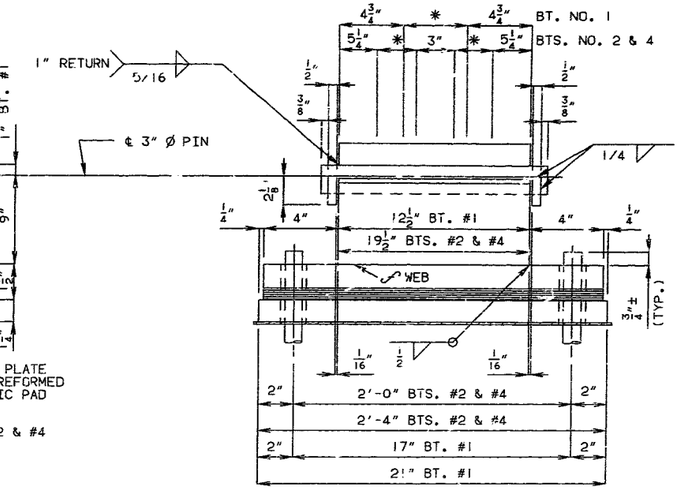
* = 5/16



FIXED

REQUIRED: 3 FOR BENT NO. 3 (EAST BOUND LANE)
4 FOR BENT NO. 3 (WEST BOUND LANE)





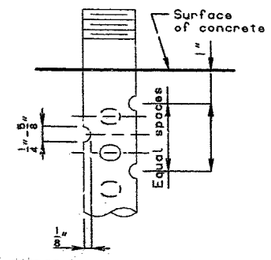
EXPANSION

REQUIRED: 3 FOR BENT NO. 1 (EAST BOUND LANE)
4 FOR BENT NO. 1 (WEST BOUND LANE)
3 FOR BENT NO. 2 (EAST BOUND LANE)
4 FOR BENT NO. 2 (WEST BOUND LANE)
3 FOR BENT NO. 4 (EAST BOUND LANE)
4 FOR BENT NO. 4 (WEST BOUND LANE)

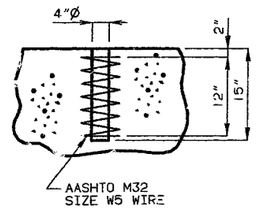
TYPE 'D' BEARINGS

(ESTIMATED WEIGHT 14,440)

** $1\frac{1}{2}$"X 3" SLOT, GDRS. NO. 1A, 7 & 8 (EAST BOUND LANE)
$1\frac{3}{4}$"X 3" SLOT, GDRS. NO. 1A, 2A, 7 & 8WEST BOUND LANE)



SWEDGE ANCHOR BOLT DETAILS



DETAIL OF ANCHOR BOLT WELLS

BRG 'D' .BRGS.31.STL.	REVISED	FEB. 1989
STD. D. BRG.		
FEB. 1965		

DETAILED OCT. 1992
CHECKED MAY 1993

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

JACKSON COUNTY

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GENERAL NOTES:

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 EXTRUSION SHALL MEET A.S.T.M. D-2628-69 MODIFIED (RECOVERY TEST EXCLUDED).

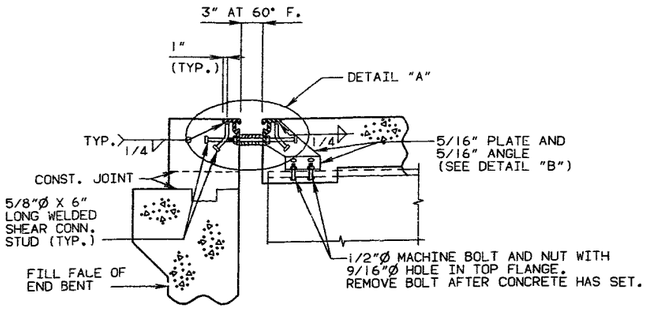
ANCHORS FOR EXTRUSIONS OR ARMOR SHALL BE APPROVED WELDED STUDS (C1010 THRU C1020).

PAYMENT FOR STEEL EXTRUSIONS AND NEOPRENE EXTRUSIONS SHALL BE MADE UNDER CONTRACT UNIT PRICE FOR "STRIP SEAL EXPANSION DEVICE".

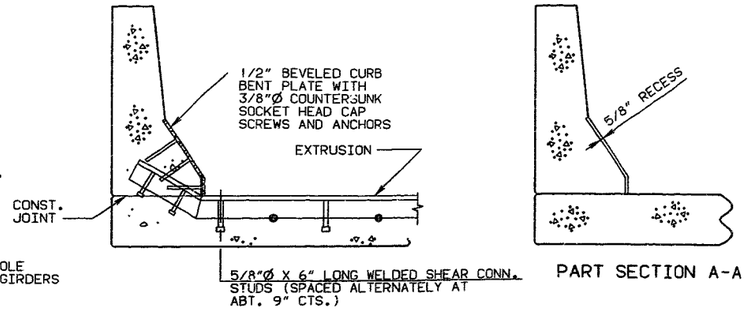
PAYMENT FOR FURNISHING, PAINTING, AND PLACING STRUCTURAL STEEL PLATES SHALL BE INCLUDED IN CONTRACT UNIT PRICE FOR "STRIP SEAL EXPANSION DEVICE.

GAP DIMENSION SHALL BE INCREASED 1/16" FOR EACH 10° FALL IN TEMPERATURE AND DECREASED 1/16" FOR EACH RISE IN TEMPERATURE.

A NEOPRENE EXTRUSION CAPABLE OF PROVIDING A TOTAL MOVEMENT OF 4" SHALL BE PROVIDED.



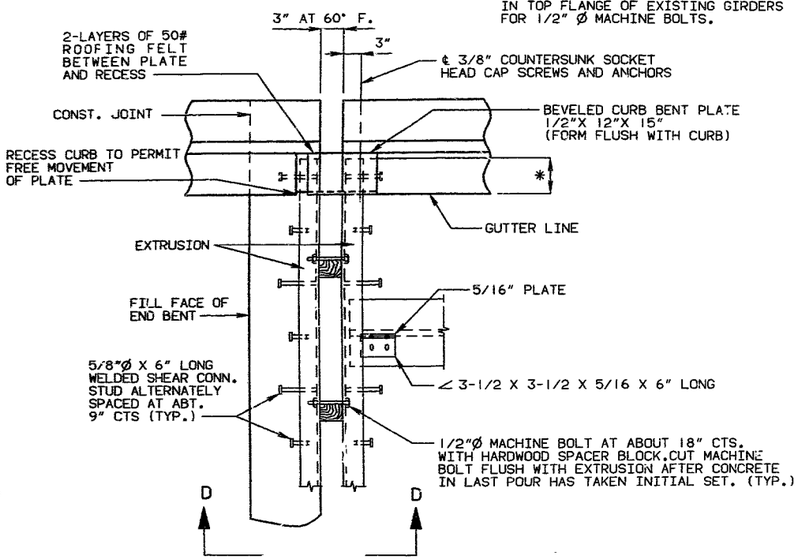
PART SECTION D-D



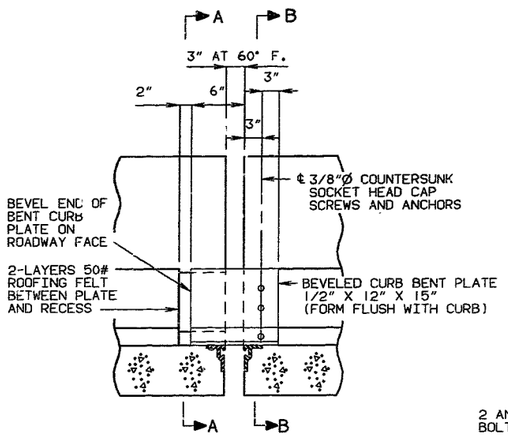
PART SECTION B-B

PART SECTION A-A

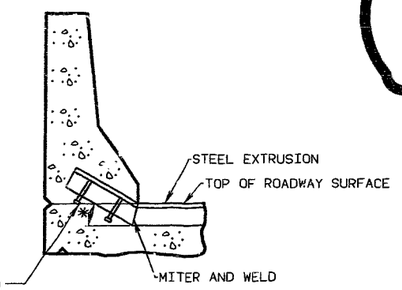
NOTE: FIELD DRILL 9/16"Ø HOLE IN TOP FLANGE OF EXISTING GIRDERS FOR 1/2" Ø MACHINE BOLTS.



PART PLAN

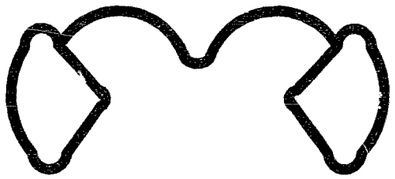


PART ELEVATION OF BARRIER CURB

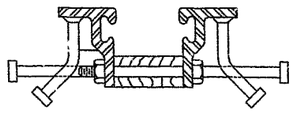


SECTION THRU SAFETY BARRIER CURB

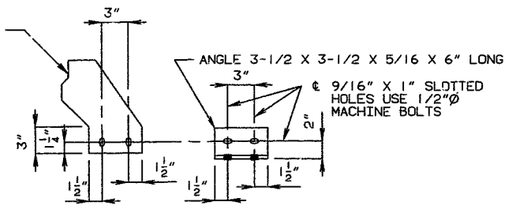
* AS SUGGESTED BY MANUFACTURER



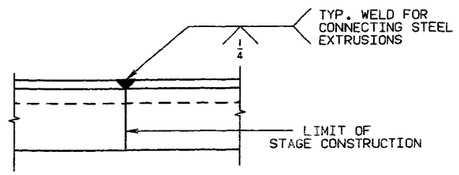
STRIP SEAL GLAND



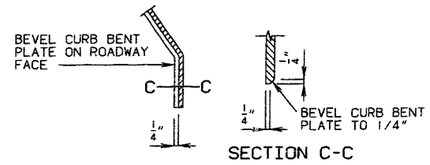
DETAIL "A"



DETAIL "B"



DETAIL SHOWING WELD FOR STAGE CONSTRUCTION



SECTION C-C

PART ELEVATION AT END OF BEVELED CURB BENT PLATE

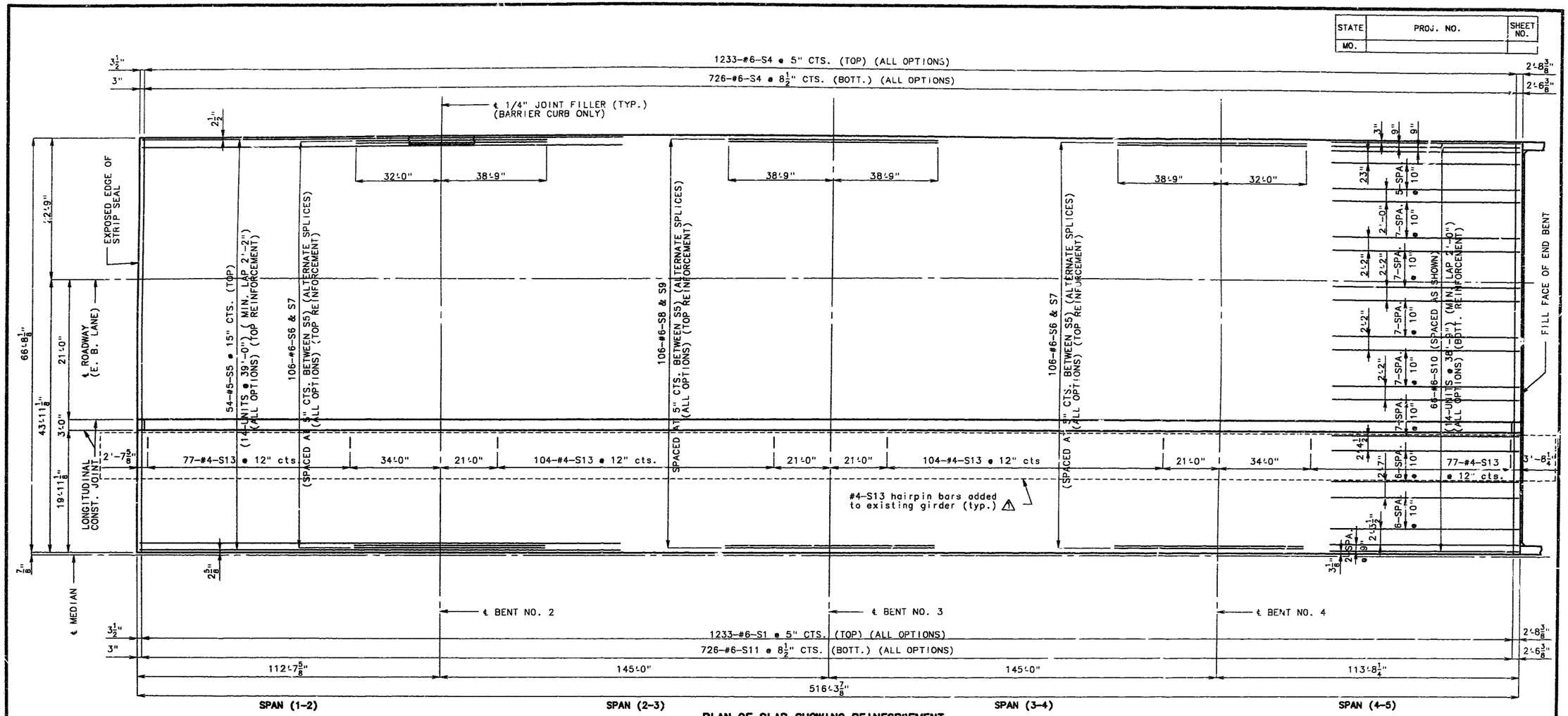
PCJS SQ,ED 3.35,STL,E,A	REVISED	MAY 1987
PCJS-STL EB-SQ		
OCT. 1973		

DETAILS OF PREFORMED COMPRESSION JOINT SEAL AT BENT NO. 1.

DETAILED SEPT. 1992
CHECKED MAY 1993

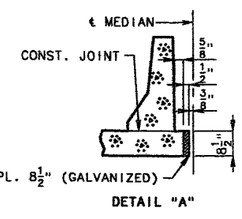
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

STATE	PROJ. NO.	SHEET NO.
MO.		

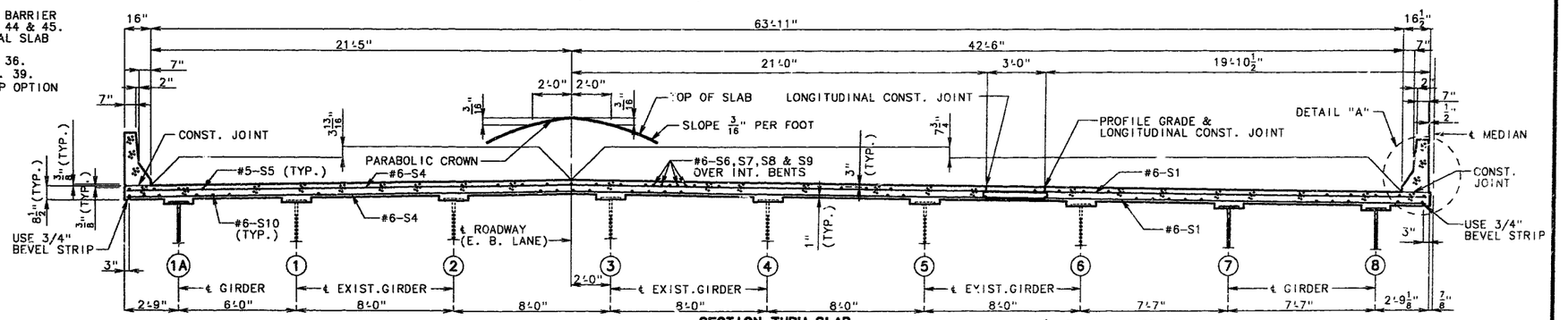


PLAN OF SLAB SHOWING REINFORCEMENT
(EAST BOUND LANE)

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NO. 40, 41, 42, 43, 44 & 45.
FOR GIRDER CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 37.
FOR SLAB POURING SEQUENCE SEE SHEET NO. 36.
FOR DETAILS OF SLAB DRAINS SEE SHEET NO. 39.
FOR PART SECTION THRU SLAB SHOWING S-I-P OPTION SEE SHEET NO. 36.



DETAIL "A"



SECTION THRU SLAB
(C. I. P. OPTION)

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

DETAILED SEPT. 1992
CHECKED MAY 1993

⚠ Revised 5/26/94

SHEET NO. 34 OF 51.

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REVISED:

STATE	PROJ. NO.	SHEET NO.
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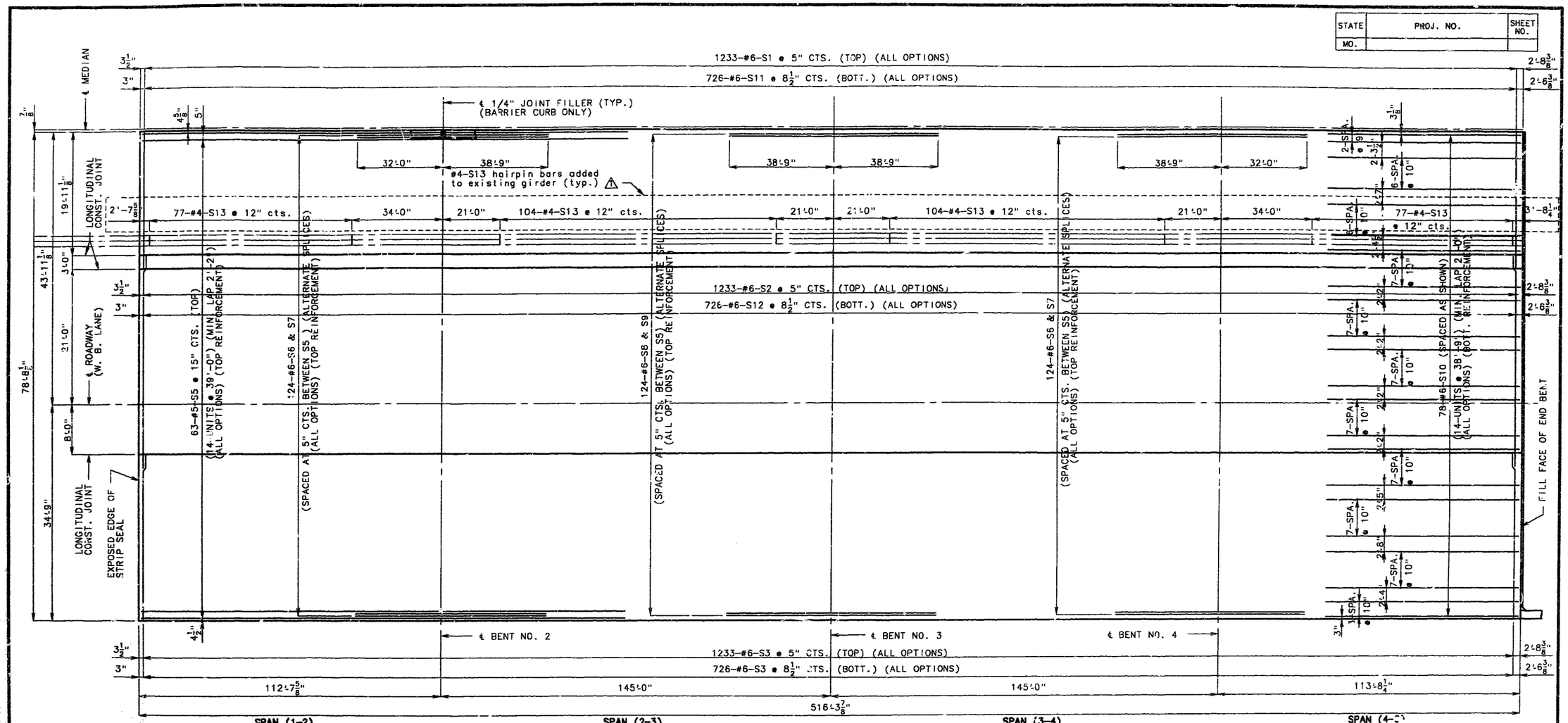
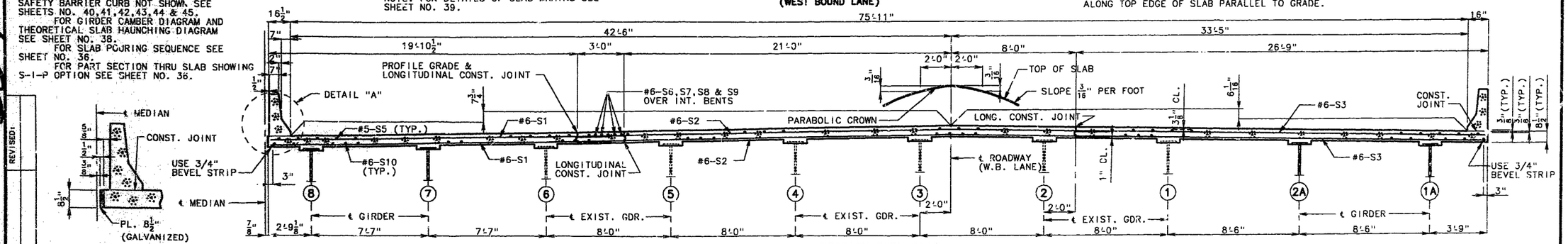


PLAN OF SLAB SHOWING REINFORCEMENT
(WEST BOUND LANE)

NOTE: FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN, SEE SHEETS NO. 40,41,42,43,44 & 45.
FOR GIRDER CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 38.
FOR SLAB POURING SEQUENCE SEE SHEET NO. 36.
FOR PART SECTION THRU SLAB SHOWING S-I-P OPTION SEE SHEET NO. 36.

NOTE: FOR DETAILS OF SLAB DRAINS SEE SHEET NO. 39.

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.



SECTION THRU SLAB
(C. I. P. OPTION)

REVISED:

DETAILED SEPT. 1992
CHECKED MAY 1993

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

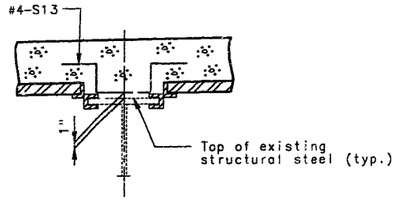
⚠1 Revised 5/26/94

SHEET NO. 35 OF 51.

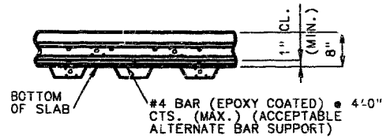
JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		

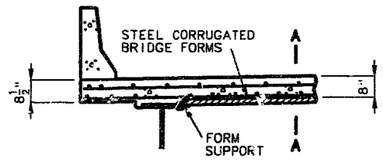
Added ⚠



SECTION THRU HAUNCH

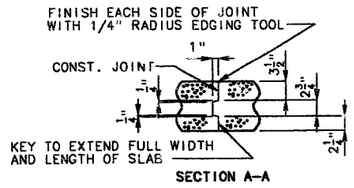


SECTION A-A

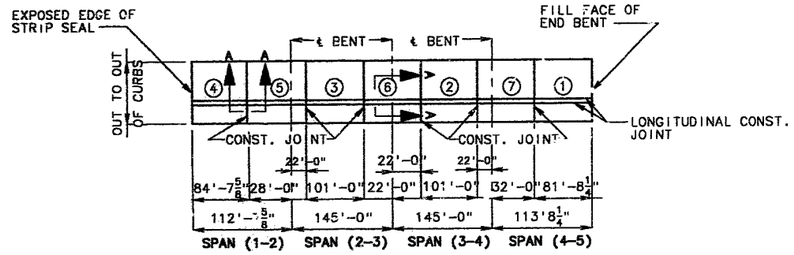


PART SECTION THRU SLAB
(S-I-P OPTION)

NOTE: S-I-P OPTION IS SAME AS C-I-P OPTION EXCEPT AS SHOWN.



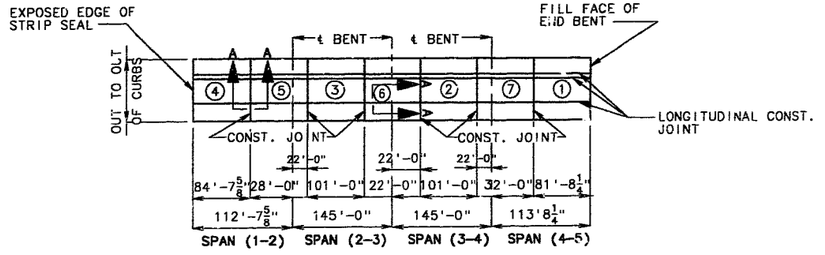
SECTION A-A



	SEQUENCE OF POURS							MIN. RATE OF POUR CU. YDS./HR.
	DIRECTION							WITH RETARDER
BASIC SEQUENCE	1	2	3	4	5	6	7	25
	EITHER DIRECTION							
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.								
ALTERNATE "A" POURS	1		7 + 2		6 + 3		5 + 4	54
	END TO 7		1 TO 6		2 TO 5		3 TO END	
ALTERNATE "B" POURS	1 + 7 + 2			6 + 3			5 + 4	54
	END TO 6			2 TO 5			3 TO END	
ALTERNATE "C" POURS	1 + 7 + 2				6 + 3 + 5 + 4			54
	END TO 6				2 TO END			
ALTERNATE "D" POURS	1 + 7 + 2 + 6 + 3 + 5 + 4							54
	END TO END							

SLAB POURING SEQUENCE
(EAST BOUND LANE)

NOTE: THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE SLAB POURS AT THE RATE GIVEN. RETARDER, SHALL BE AN APPROVED TYPE AND RETARD THE SET OF CONCRETE TO 2.5 HOURS.



	SEQUENCE OF POURS							MIN. RATE OF POUR CU. YDS./HR.	
	DIRECTION							WITH RETARDER	NO RETARDER
BASIC SEQUENCE	1	2	3	4	5	6	7	25	25
	EITHER DIRECTION								
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.									
ALTERNATE "A" POURS	1		7 + 2		6 + 3		5 + 4	37	61
	END TO 7		1 TO 6		2 TO 5		3 TO END		
ALTERNATE "B" POURS	1 + 7 + 2			6 + 3			5 + 4	37	61
	END TO 6			2 TO 5			3 TO END		
ALTERNATE "C" POURS	1 + 7 + 2				6 + 3 + 5 + 4			37	61
	END TO 6				2 TO END				
ALTERNATE "D" POURS	1 + 7 + 2 + 6 + 3 + 5 + 4							37	61
	END TO END								

SLAB POURING SEQUENCE
(WEST BOUND LANE)

NOTE: THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE SLAB POURS AT THE RATE GIVEN. RETARDER, IF USED SHALL BE AN APPROVED TYPE AND RETARD THE SET OF CONCRETE TO 2.5 HOURS.

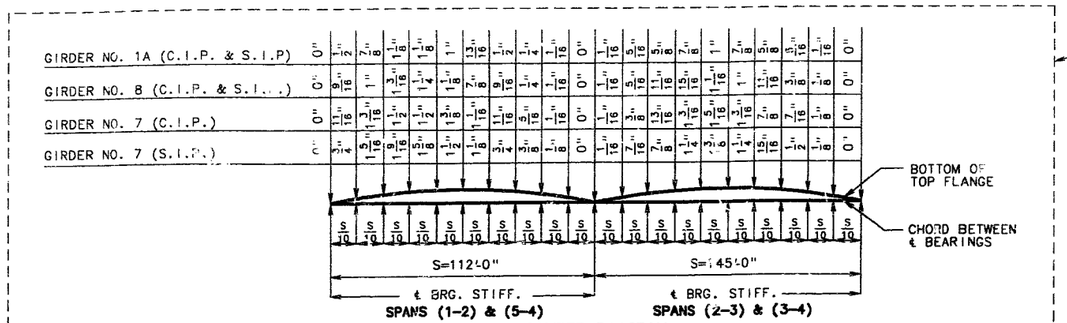
⚠ Revised 5/26/94

REVISED:

DETAILED SEPT. 1992
CHECKED JUNE 1993

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

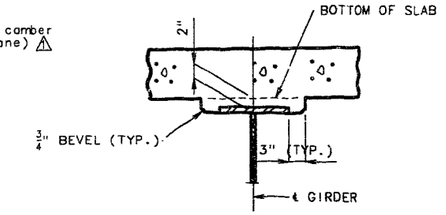
STATE	PROJ. NO.	SHEET NO.
MO.		



CAMBER DIAGRAM
(EAST BOUND LANE)

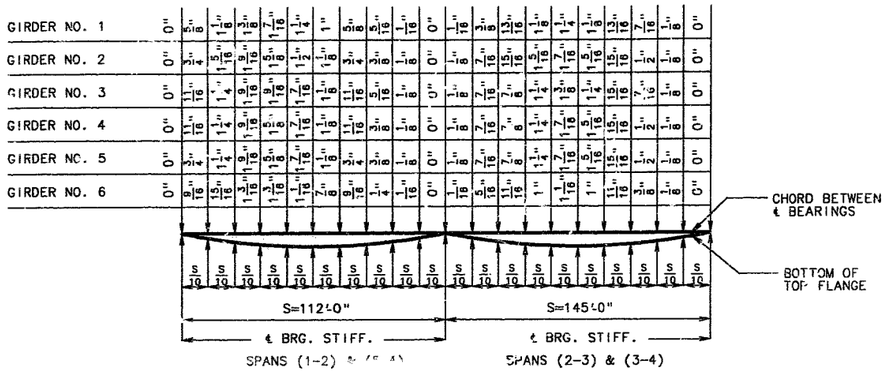
NOTE: CAMBER INCLUDES ALLOWANCE FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.
15% OF DEAD LOAD DEFLECTION IS DUE TO THE WEIGHT OF STRUCTURAL STEEL.

See sheet no. 37A for camber diagram (east bound lane) ⚠

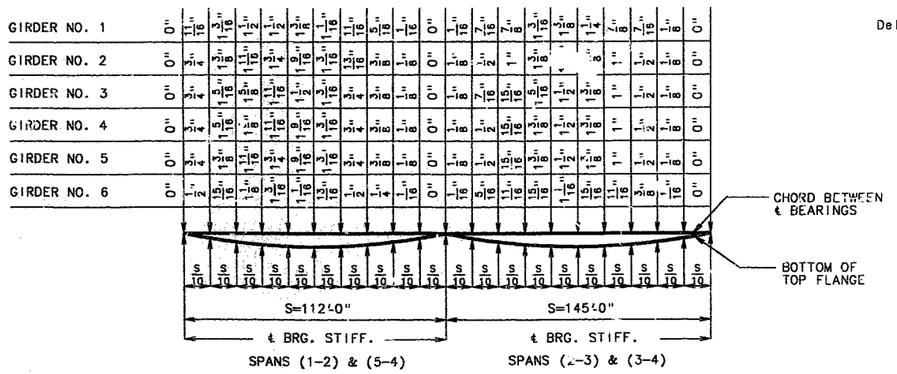


THEORETICAL SLAB HAUNCH
GIRDERS NO. 1A, 7 & 8 (C.I.P & S.I.P.)
(EAST BOUND LANE)

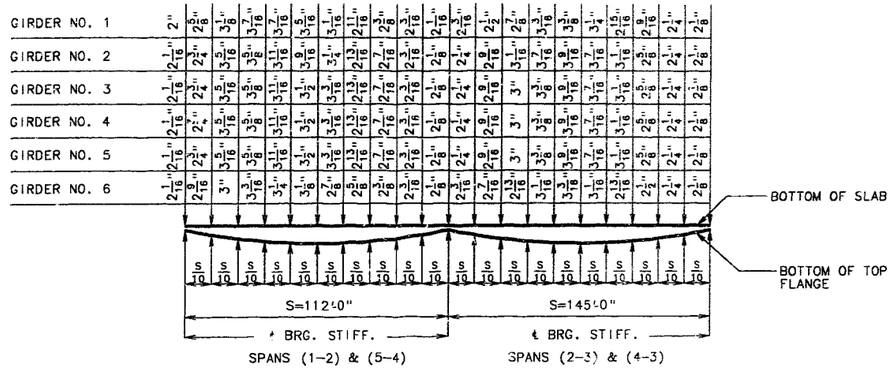
NOTE: 2" DIMENSION MAY VARY IF GIRDER CAMBER AFTER ERECTION DIFFERS FROM PLAN CAMBER BY MORE THAN THE ¾ OF D. L. DEFLECTION DUE TO WEIGHT OF STRUCTURAL STEEL. NO PAYMENT WILL BE MADE FOR ADDITIONAL FORMING OR CONCRETE REQUIRED FOR VARIATION IN HAUNCHING.



DEAD LOAD DEFLECTIONS (C.I.P.)
(EAST BOUND LANE)

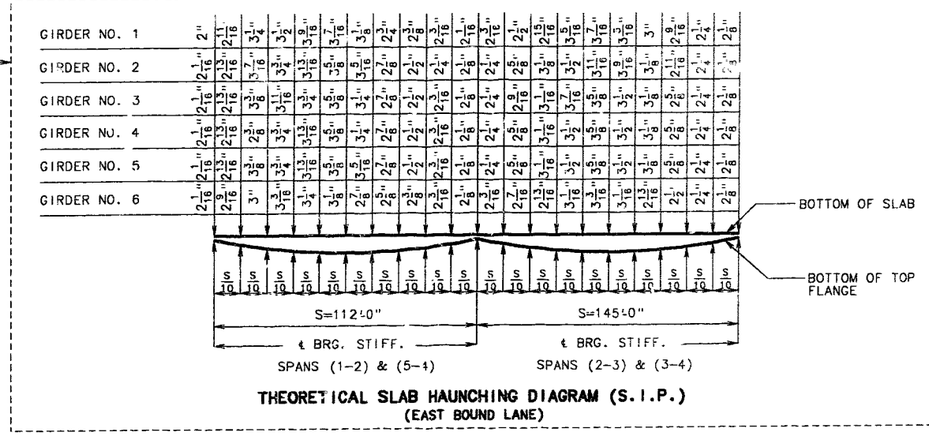


DEAD LOAD DEFLECTIONS (S.I.P.)
(EAST BOUND LANE)



THEORETICAL SLAB HAUNCHING DIAGRAM (C.I.P.)
(EAST BOUND LANE)

Delete ⚠



THEORETICAL SLAB HAUNCHING DIAGRAM (S.I.P.)
(EAST BOUND LANE)

TO DETERMINE THE HAUNCH FOR THE STAY-IN-PLACE ALTERNATE, ADD 1/2" TO THE HAUNCH FOR THE CAST-IN-PLACE ALTERNATE.

323

REVISED:

⚠ Revised 5/19/94
⚠ Revised 5/26/94

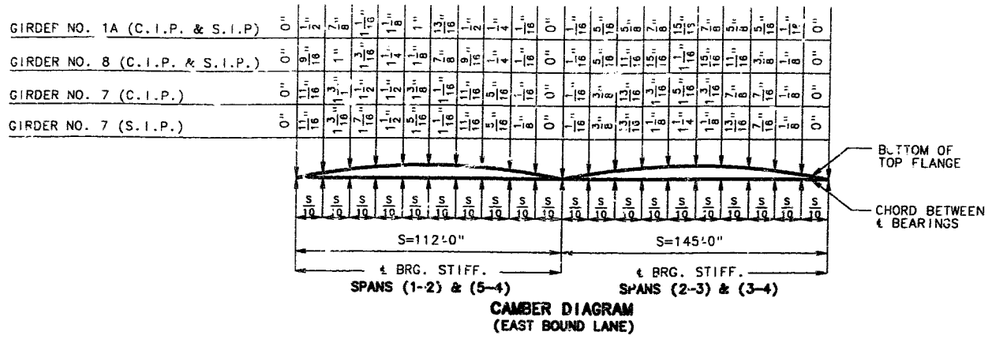
DETAILED SEPT. 1992
CHECKED MAY 1993

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

JACKSON COUNTY

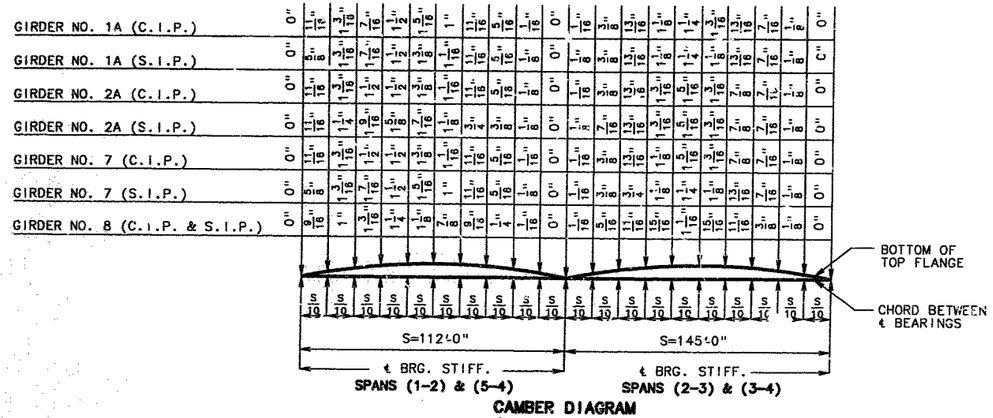
A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		



CAMBER DIAGRAM
(EAST BOUND LANE)

NOTE: CAMBER INCLUDES ALLOWANCE FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.
15% OF DEAD LOAD DEFLECTION IS DUE TO THE WEIGHT OF STRUCTURAL STEEL.



CAMBER DIAGRAM
(WEST BOUND LANE)

NOTE: CAMBER INCLUDES ALLOWANCE FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.
13% OF DEAD LOAD DEFLECTION IS DUE TO THE WEIGHT OF STRUCTURAL STEEL.

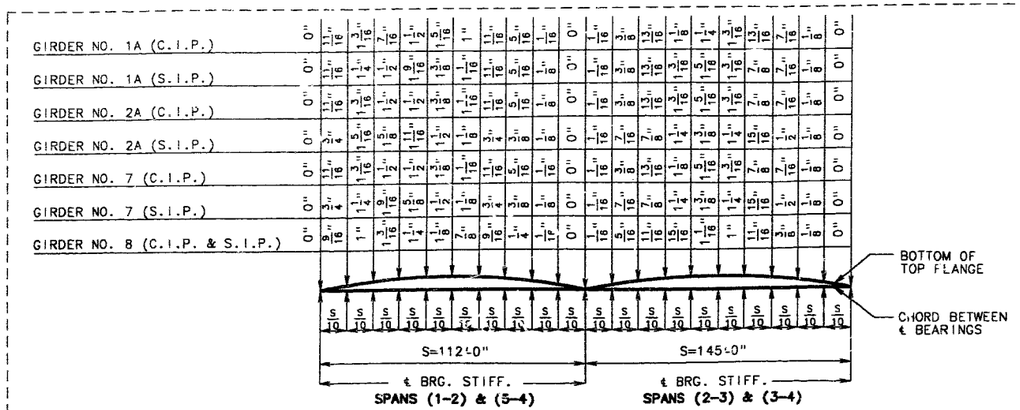
339

REVISED

DETAILED MAY 1994
CHECKED MAY 1994

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

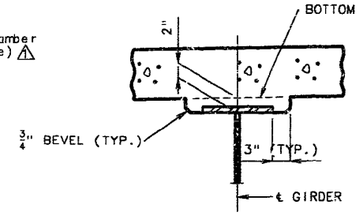
STATE	PROJ. NO.	SHEET NO.
MO.		



CAMBER DIAGRAM
(WEST BOUND LANE)

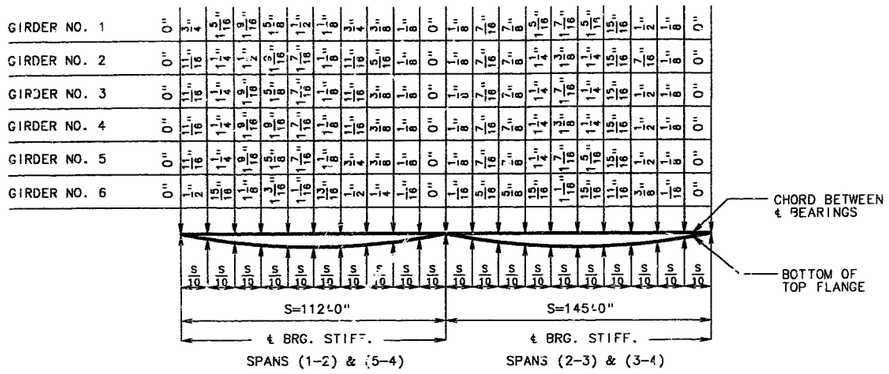
See sheet no. 37A for camber diagram (east bound lane) ⚠

NOTE: CAMBER INCLUDES ALLOWANCE FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.
13% OF DEAD LOAD DEFLECTION IS DUE TO THE WEIGHT OF STRUCTURAL STEEL.

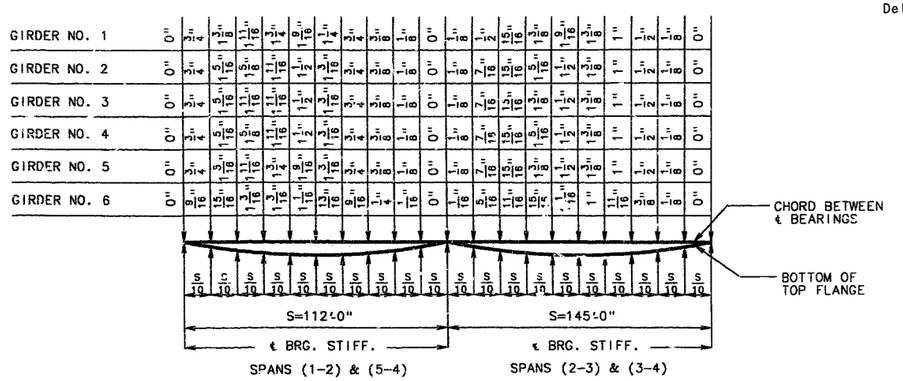


THEORETICAL SLAB HAUNCH
GIRDERS NO. 1A, 2A, 7 & 8 (C.I.P. & S.I.P.)
(WEST BOUND LANE)

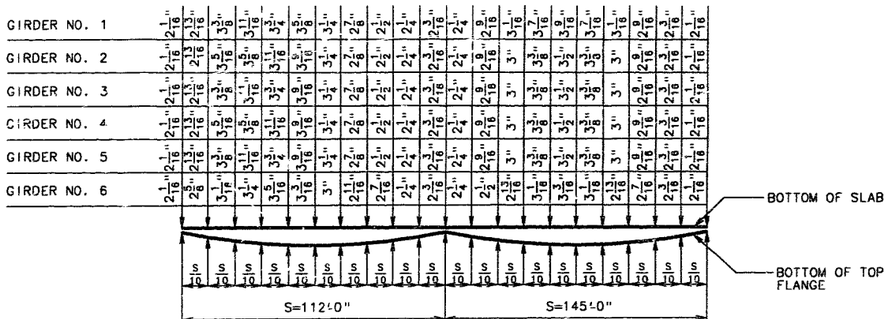
NOTE: 2" DIMENSION MAY VARY IF GIRDER CAMBER AFTER ERECTION DIFFERS FROM PLAN CAMBER BY MORE THAN THE ⅓ OF D. L. DEFLECTION DUE TO WEIGHT OF STRUCTURAL STEEL. NO PAYMENT WILL BE MADE FOR ADDITIONAL FORMING OR CONCRETE REQUIRED FOR VARIATION IN HAUNCHING.



DEAD LOAD DEFLECTIONS (C.I.P.)
(WEST BOUND LANE)

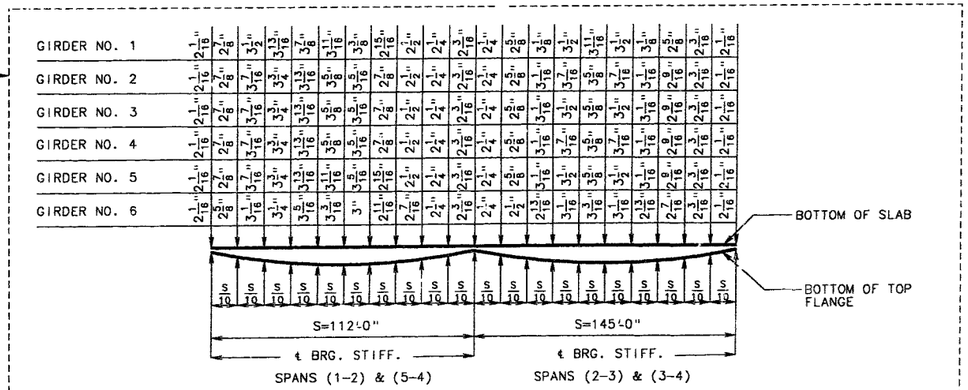


DEAD LOAD DEFLECTIONS (S.I.P.)
(WEST BOUND LANE)



THEORETICAL SLAB HAUNCHING DIAGRAM (C.I.P.)
(WEST BOUND LANE)

Delete ⚠



THEORETICAL SLAB HAUNCHING DIAGRAM (S.I.P.)
(WEST BOUND LANE)

TO DETERMINE THE HAUNCH FOR THE STAY-IN-PLACE ALTERNATE, ADD 1/2" TO THE HAUNCH FOR THE CAST-IN-PLACE ALTERNATE.

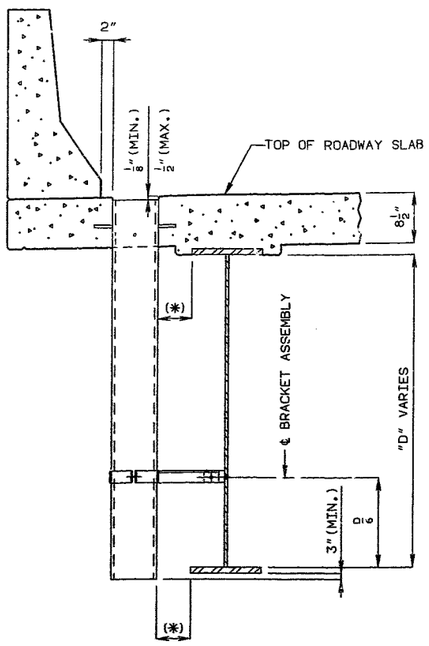
3025

REVISED:

⚠ Revised 5/19/94
⚠ Revised 5/26/94

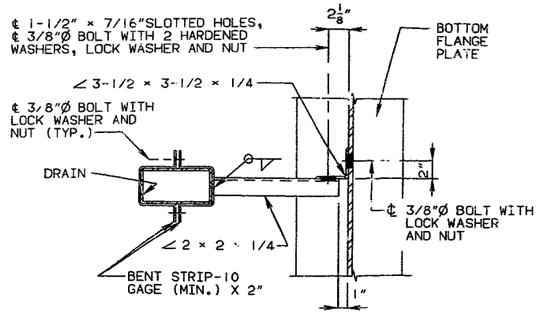
DETAILED SEPT. 1992
CHECKED MAY 1993

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

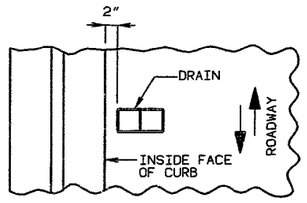


PART ELEVATION OF SLAB AT DRAIN

(*) IF DIMENSION IS LESS THAN 1", DRAINS SHALL BE PLACED PARALLEL TO ROADWAY, OTHERWISE PLACE DRAINS TRANSVERSE TO ROADWAY.

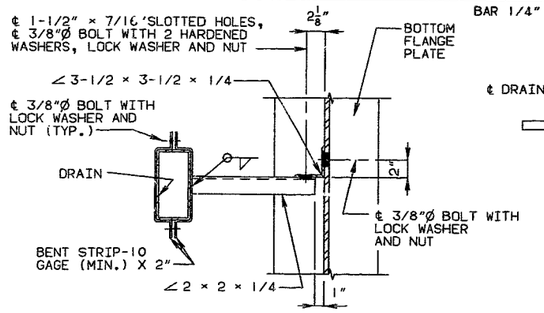


PART PLAN SHOWING BRACKET ASSEMBLY

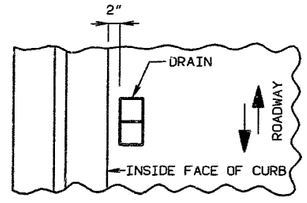


PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS TRANSVERSE TO ROADWAY

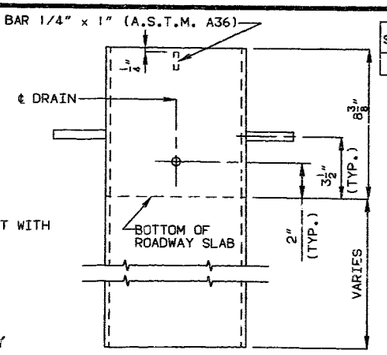


PART PLAN SHOWING BRACKET ASSEMBLY

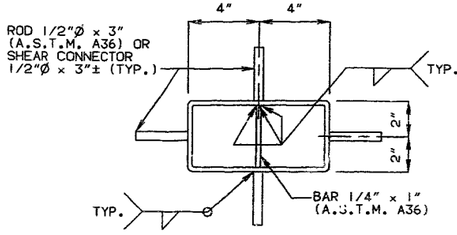


PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS PARALLEL TO ROADWAY



ELEVATION OF DRAIN



PLAN OF DRAIN

STATE	PROJ. NO.	SHEET NO.
MO.		336

GENERAL NOTES:

SLAB DRAINS MAY BE FABRICATED OF EITHER 1/4" WELDED SHEETS OF A.S.T.M. A36 STEEL OR FROM 1/4" STRUCTURAL STEEL TUBING A.S.T.M. A500 OR A501.

OUTSIDE DIMENSIONS OF DRAINS ARE 8" × 4".

LOCATE DRAINS IN THE SLAB BY DIMENSIONS SHOWN IN THE PART ELEVATION.

SHIFT REINFORCING IN FIELD WHERE NECESSARY TO CLEAR DRAINS.

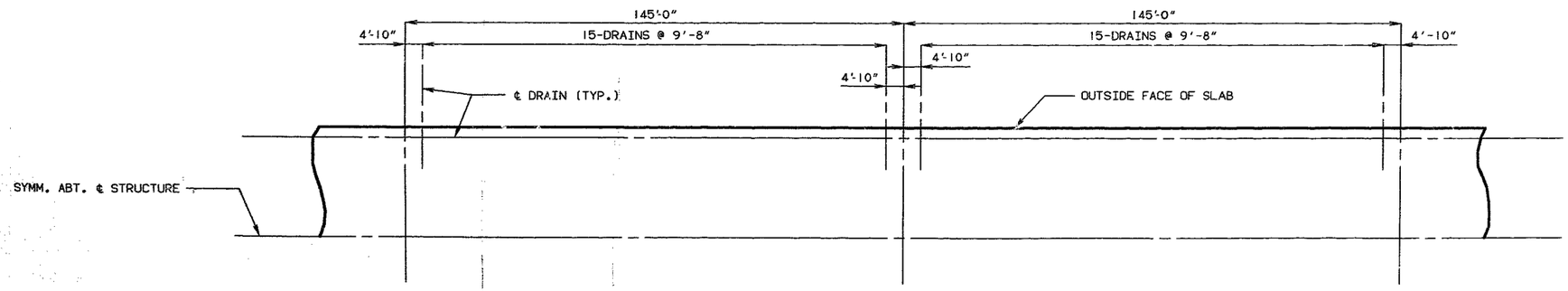
THE DRAINS AND BRACKET ASSEMBLY SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A123.

ALL BOLTS, HARDENED WASHERS, LOCK WASHERS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153.

THE BOLT HOLE FOR THE BRACKET ASSEMBLY ATTACHMENT SHALL BE LOCATED ON THE PLATE GIRDER SHOP DRAWINGS.

SHOP DRAWINGS WILL NOT BE REQUIRED FOR SLAB DRAINS AND THE BRACKET ASSEMBLY.

SLAB DRAIN DETAILS



PART PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS

NOTE: PART PLAN OF SLAB SHOWING SLAB DRAINS IN THE EAST BOUND LANE WEST BOUND LANE SIMILAR. LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.

DRAIN (GS 3.30,STL.,A
STEEL GDR DRAIN
FEB. 1975

REVISED
OCT. 1988

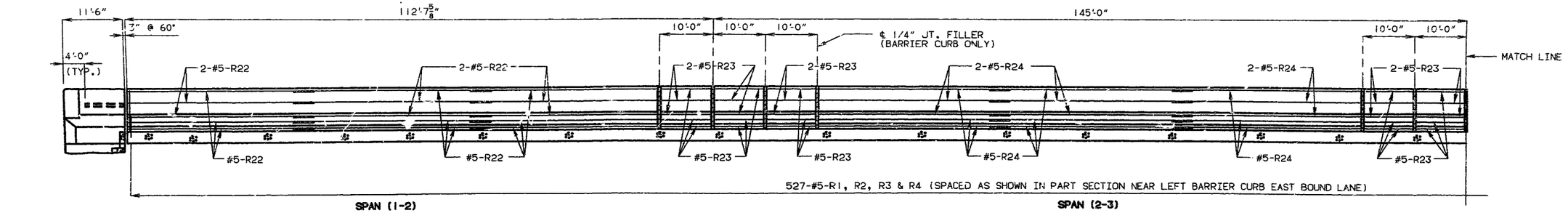
DETAILED SEPT. 1992
CHECKED MAY 1993

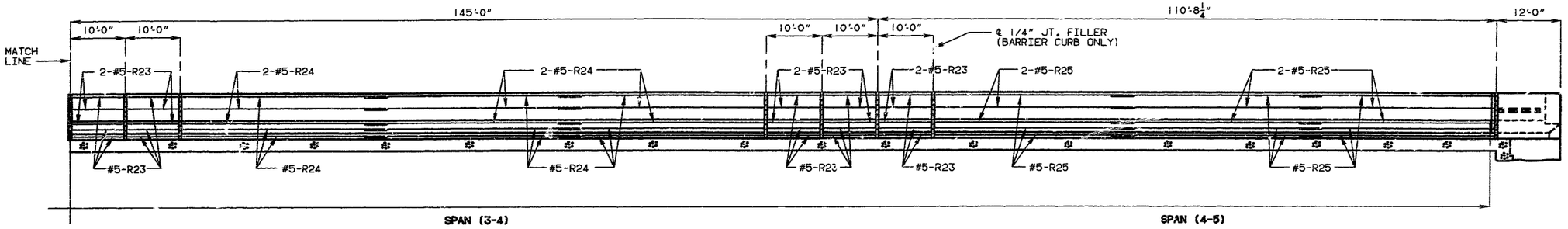
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

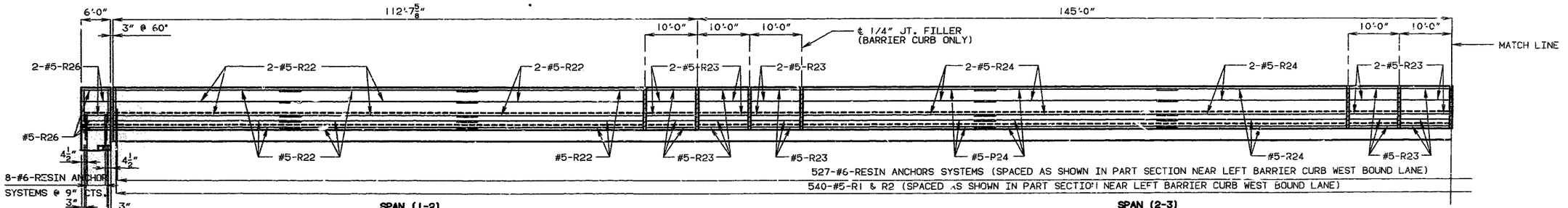
A-610R1

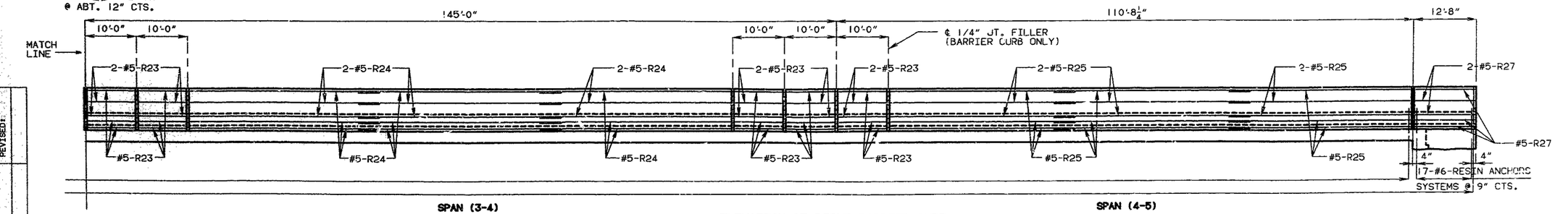
STATE	PROJ. NO.	SHEET NO.
MO.		337





SECTION NEAR LEFT BARRIER CURB
(EAST BOUND LANE)





ELEVATION OF RIGHT BARRIER CURB
(EAST BOUND LANE)

NOTE: FOR PART SECTION NEAR BARRIER CURB, SECTION THRU WING AT END BENT NO. 1 AND NO. 5 AND DETAILS OF BARRIER CURB NOT SHOWN SEE SHEET NO. 42.
FOR DETAILS SHOWING WING REINFORCEMENT SEE SHEET NO. 43.

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.

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

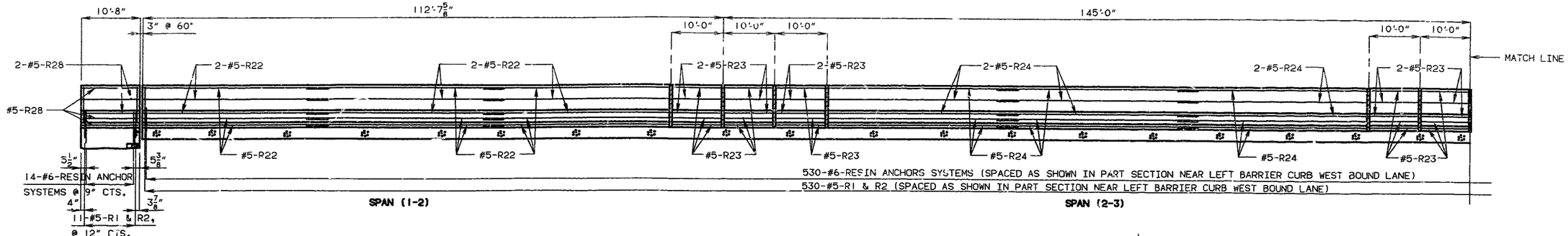
REVISED:

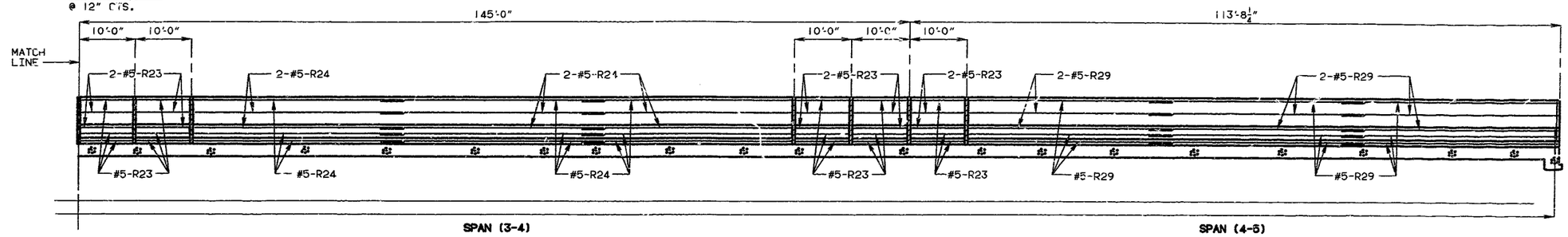
DETAILED SEPT. 1992
CHECKED JUNE 1993

337 362

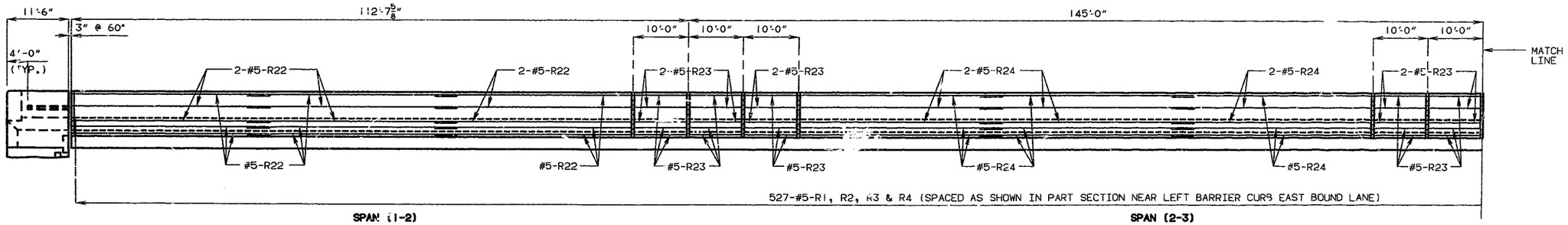
JACKSON COUNTY A-610R1

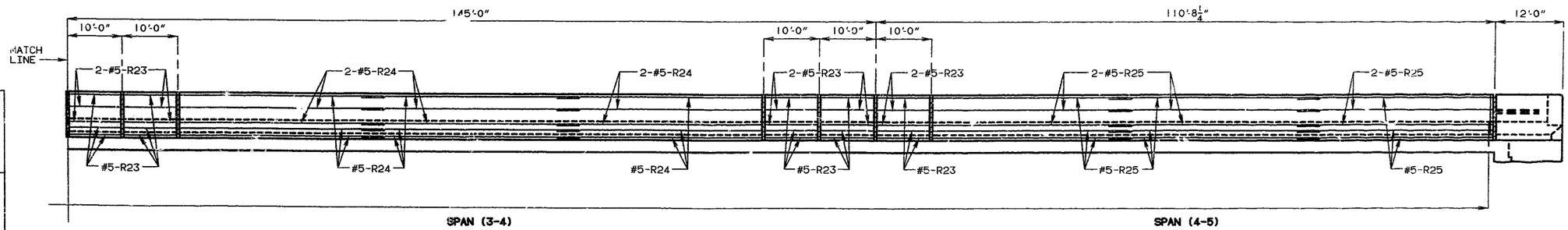
STATE	PROJ. NO.	SHEET NO.
MO.		338





SECTION NEAR LEFT BARRIER CURB (WEST BOUND LANE)





ELEVATION OF RIGHT BARRIER CURB (WEST BOUND LANE)

NOTE: FOR PART SECTION NEAR BARRIER CURB, SECTION THRU WING AT END BENT NO. 1 AND NO. 5 AND DETAILS OF BARRIER CURB NOT SHOWN SEE SHEET NO. 42.
FOR DETAILS SHOWING WING REINFORCEMENT SEE SHEET NO. 43.

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.

338

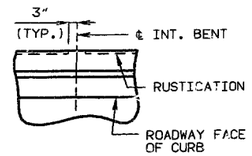
REVISED

DETAILED SEPT. 1992
CHECKED JUNE 1993

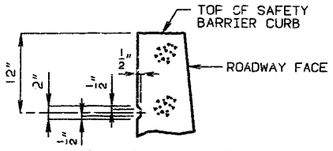
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-6101

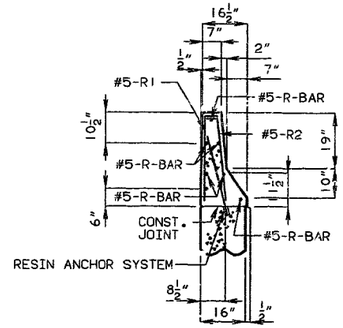
STATE	PROJ. NO.	SHEET NO.
MD.		339



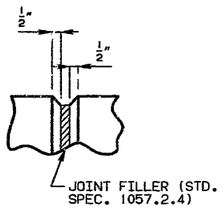
PART PLAN SHOWING RUSTICATION DETAILS



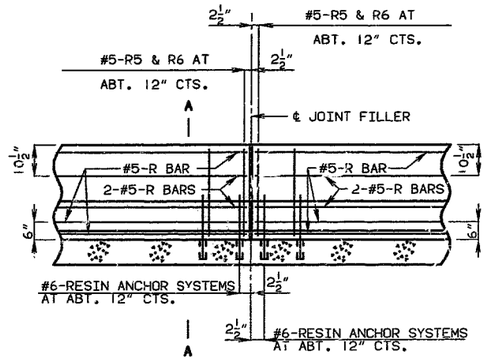
PART SECTION SHOWING RUSTICATION DETAILS



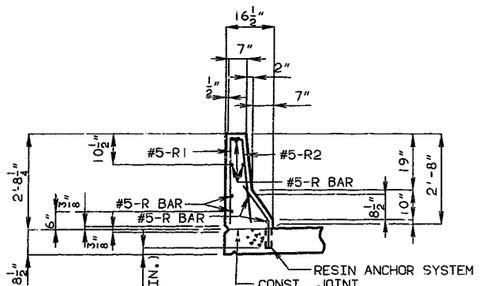
SECTION THRU WING END BENT NO. 1 RIGHT BARRIER CURB (EAST BOUND LANE), LEFT BARRIER CURB (WEST BOUND LANE) & SECTION THRU WING END BENT NO. 5 RIGHT BARRIER CURB (EAST BOUND LANE)



FILLED JOINT DETAIL

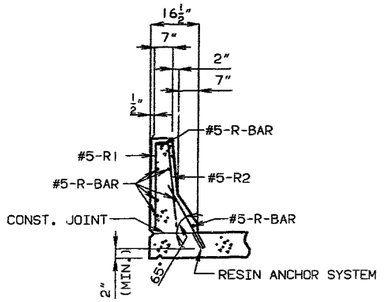


PART SECTION NEAR LEFT SAFETY BARRIER CURB WEST BOUND LANE (CAST-IN-PLACE CONVENTIONAL FORMING OPTION)

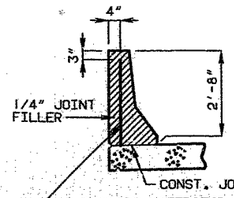


PART SECTION A-A

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS.
THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.



PART SECTION A-A
(OPTIONAL ANCHORING SYSTEM)

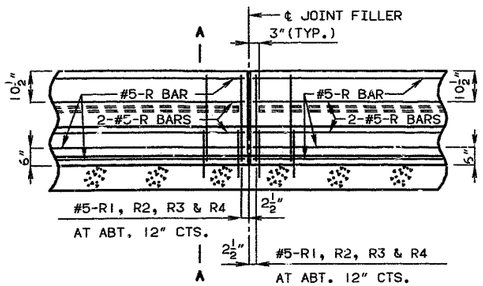


4" PLASTIC WATERSTOP STD. SPEC. 1057.2.1 (CENTERED ON JOINT)

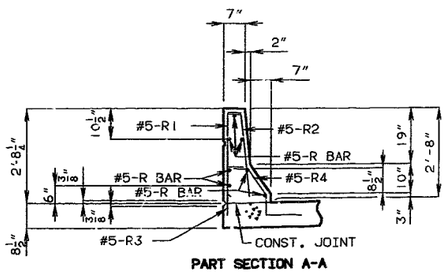
NOTE: PLASTIC WATERSTOP SHALL BE PLACED IN ALL SAFETY BARRIER CURB FILLED JOINTS. (EXCEPT STRUCTURES WITH SUPERELEVATION, USE ON ALL LOWER SAFETY BARRIER CURB JOINT ONLY).

COST OF PLASTIC WATERSTOP COMPLETE IN PLACE TO BE INCLUDED IN CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.

DETAILS OF PLASTIC WATERSTOP



PART SECTION NEAR LEFT SAFETY BARRIER CURB EAST BOUND LANE (CAST-IN-PLACE CONVENTIONAL FORMING OPTION)



PART SECTION A-A

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS.
THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

THE CONTRACTOR SHALL USE ONE OF THE RESIN ANCHOR SYSTEMS LISTED IN THE JOB SPECIAL PROVISIONS FOR THE SAFETY BARRIER CURB.

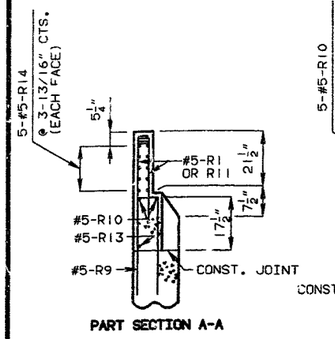
COST OF FURNISHING AND INSTALLING THE ANCHOR SYSTEM COMPLETE IN PLACE SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF SAFETY BARRIER CURB.

B/C ELIG/GS 3.30, 1, 4A	BARRIER CURB ELEVATION	JAN. 1990
REVISED:		FEB. 1991

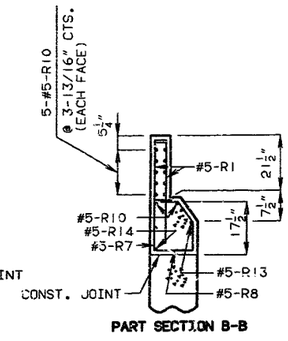
DETAILED SEPT. 1992
CHECKED JUNE 1993

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

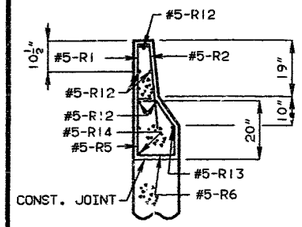
STATE	PROJ. NO.	SHEET NO.
MO.		340



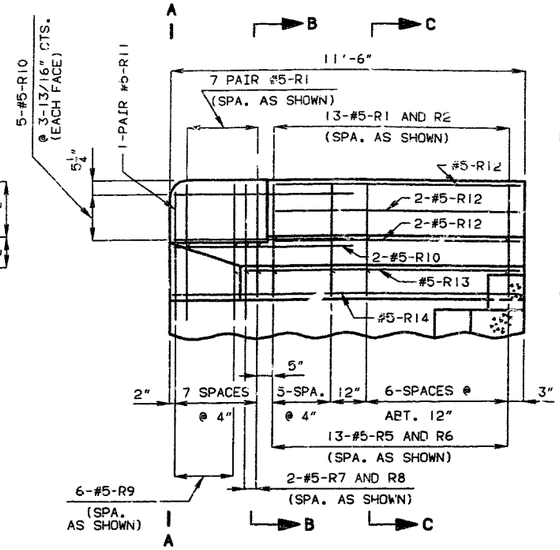
PART SECTION A-A

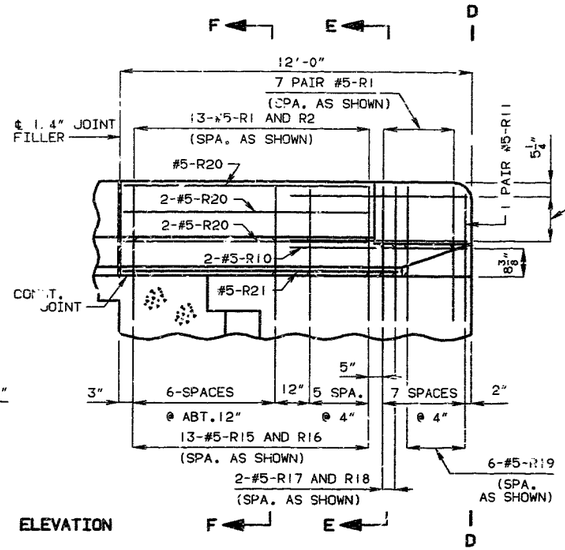


PART SECTION B-B

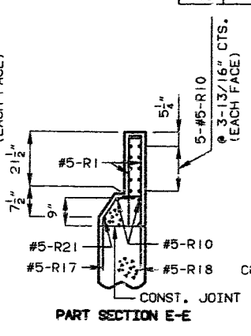


PART SECTION C-C

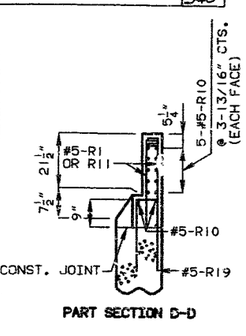




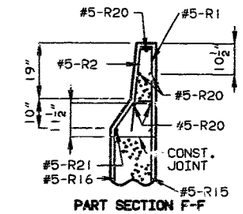
ELEVATION



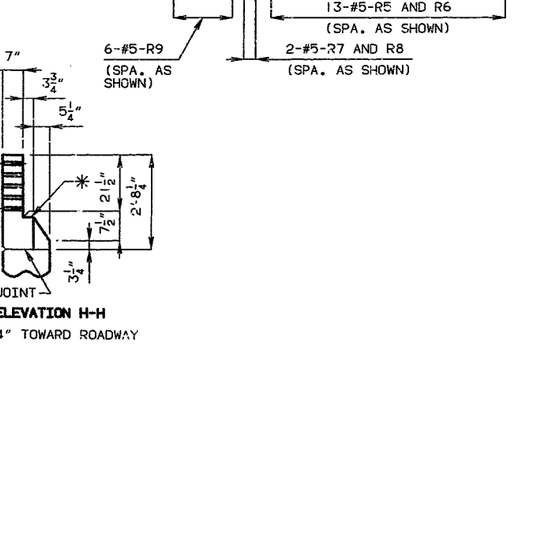
PART SECTION E-E

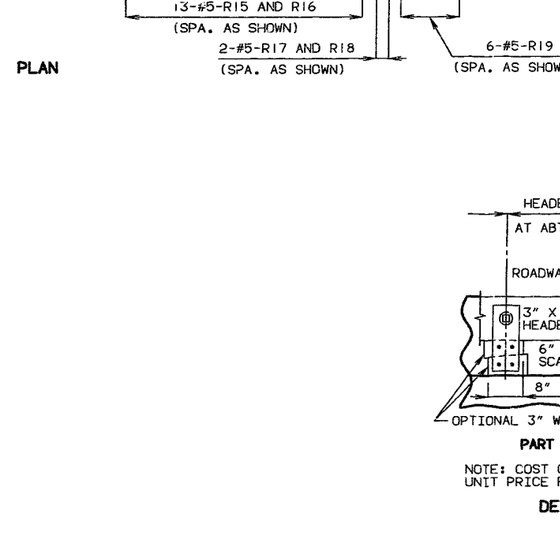


PART SECTION D-D

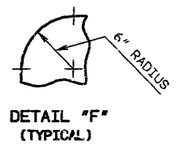


PART SECTION F-F

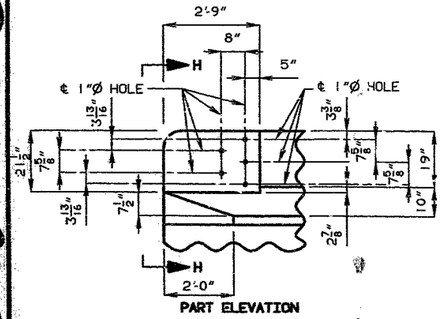




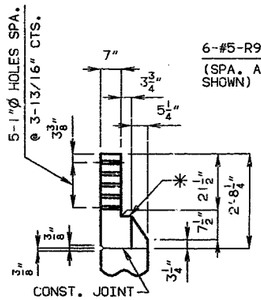
PLAN



DETAIL "F" (TYPICAL)

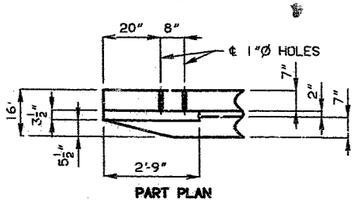


PART ELEVATION



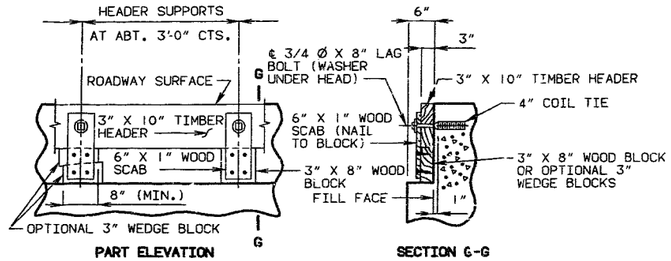
PART ELEVATION H-H

* SLOPE 1/4" TOWARD ROADWAY



PART PLAN

DETAILS OF GUARD RAIL ATTACHMENT



PART ELEVATION

SECTION G-G

NOTE: COST OF TIMBER HEADERS COMPLETE IN PLACE TO BE INCLUDED IN CONTRACT UNIT PRICE FOR CONCRETE.

DETAILS OF TIMBER HEADER AT END BENTS

DETAILS OF SAFETY BARRIER CURB AT END BENTS

365330

B/C EP16,GS 3.30,INT, ,A
INT-END POST (16')
AUG. 1978
REVISED
MARCH 1992

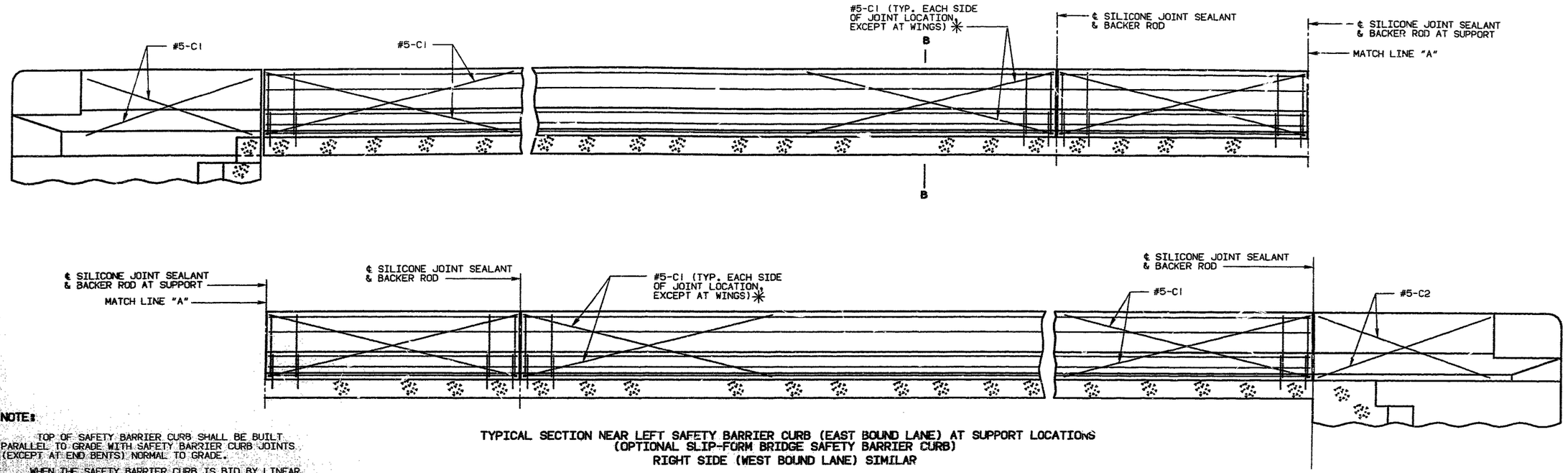
DETAILED SEPT. 1992
CHECKED JUNE 1993

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

JACKSON COUNTY

A-6!0R!

STATE	PROJ. NO.	SHEET NO.
MD.		341



TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB (EAST BOUND LANE) AT SUPPORT LOCATIONS
(OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB)
RIGHT SIDE (WEST BOUND LANE) SIMILAR

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

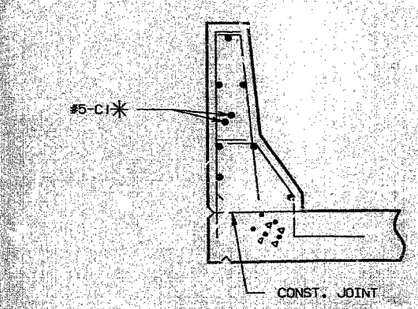
MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

NOTE:

JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE SAFETY BARRIER CURBS INSTEAD OF JOINT FILLER.

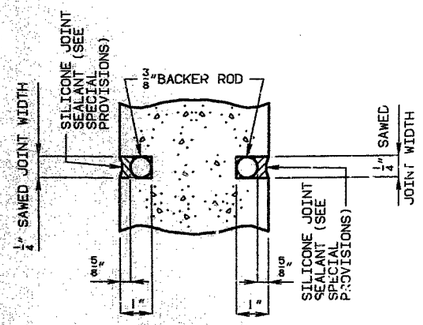
PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C-BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE SAFETY BARRIER CURB.



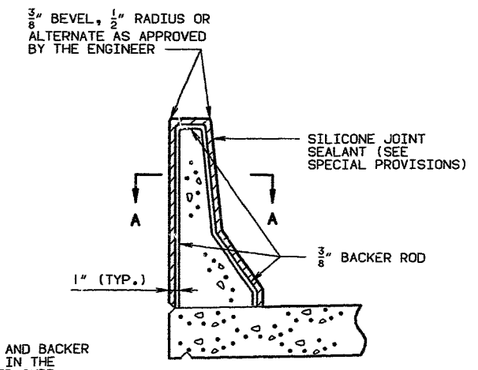
PART SECTION B-B

NOTE: ✳ EACH SIDE OF JOINT LOCATION, EXCEPT SPAN SIDE ONLY AT END BENTS.



SECTION A-A

NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.



SECTION THRU JOINT

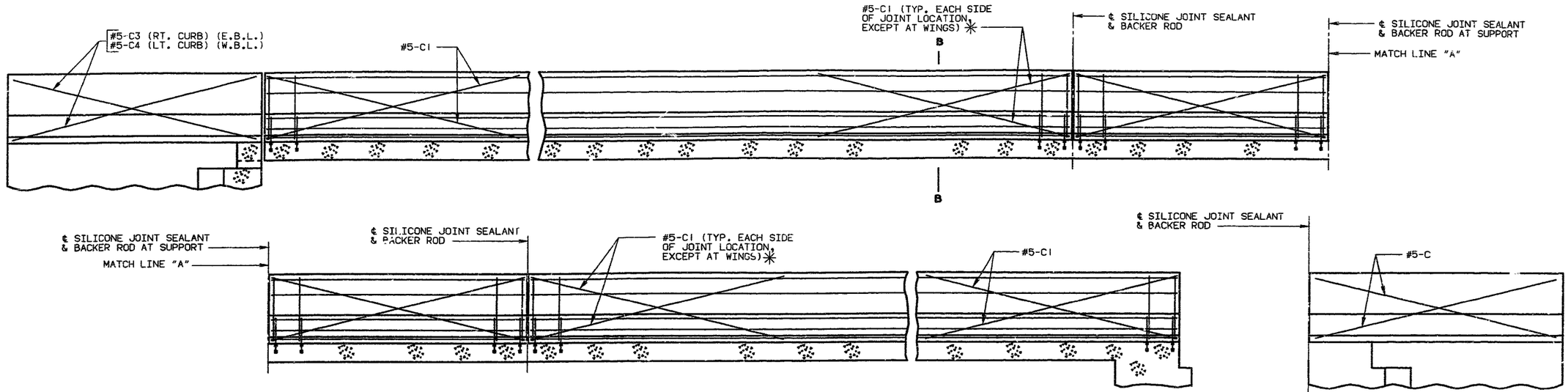
OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB

B/C SF16.06 (A)
BARRIER CURB ELEVATION (REVISED)
FEB., 1991

DETAILED SEPT. 1992
CHECKED MAY 1993

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

STATE	PROJ. NO.	SHEET NO.
MO.		342



TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB (WEST BOUND LANE) AT SUPPORT LOCATIONS
(OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB)
RIGHT SIDE (EAST BOUND LANE) SIMILAR

ELEVATION OF WING AT BENT NO. 5
(EAST BOUND LANE)

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END SENTS) NORMAL TO GRADE.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

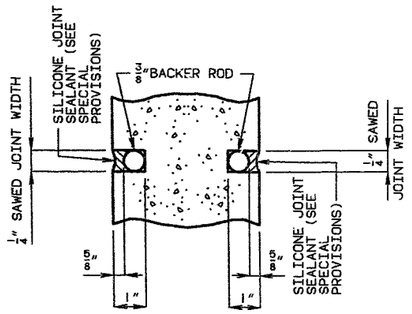
MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

NOTE:

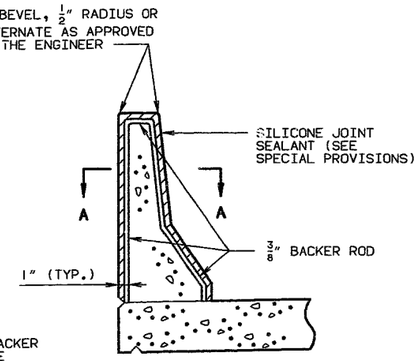
JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE SAFETY BARRIER CURBS INSTEAD OF JOINT FILLER.

PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C-BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE SAFETY BARRIER CURB.

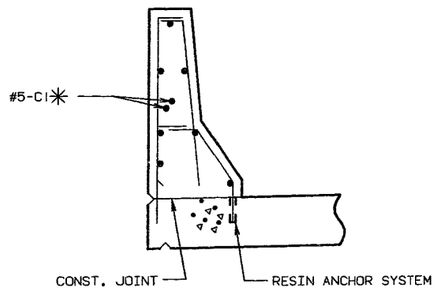


SECTION A-A



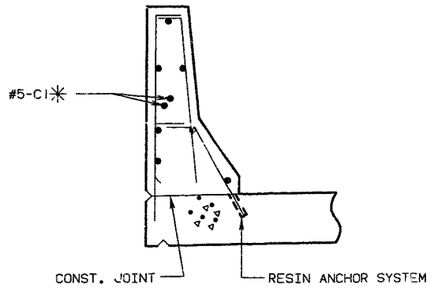
NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.

SECTION THRU JOINT



PART SECTION B-B

NOTE: * EACH SIDE OF JOINT LOCATION, EXCEPT SPAN SIDE ONLY AT END BENTS.



PART SECTION B-B
(OPTIONAL ANCHORING SYSTEM)

B/C SF16, 05 A
BARRIER CURB ELEVATION REVISED
FEB, 1991

DETAILED MAY 1993
CHECKED MAY 1993

OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB

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

JACKSON COUNTY

A-610R1

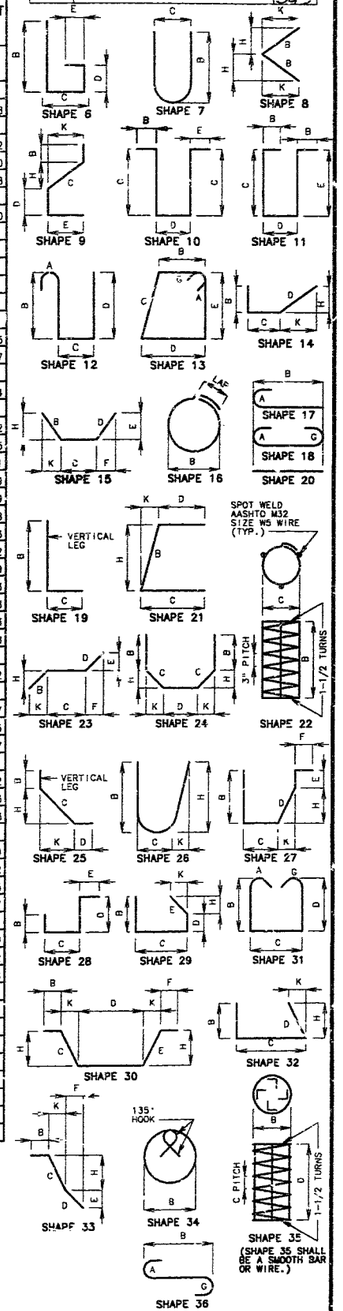
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			SUBSTRUCTURE																
			END BT NO 1																
			(E.B.L.)																
30	6D1		FOOTING		20		X			3 5.000							3 5	3 5	154
8	6F1		WING BRACE		15		X			14.000	4 7.875	14.000	9.875	9.875	9.875	9.875	7 0	6 11	83
2	6H1		BACKWALL	E	20		X			21 8.000							21 8	21 8	65
2	6H2		BACKWALL	E	20		X			45 2.000							45 2	45 2	136
2	4H3		BACKWALL		20		X			21 10.000							21 10	21 10	29
4	4H4		BACKWALL		20		X			24 2.000							24 2	24 2	65
6	4H5		BACKWALL		20		X			14 5.000							14 5	14 5	58
6	4H6		BACKWALL		20		X			5 3.000							5 3	5 3	21
8	6H7		BEAM		18		X			14 5.000							15 9	15 9	189
2	6H8		BEAM		20		X			14 5.000							14 5	14 5	43
8	6H9		BEAM		18		X			5 3.000							6 7	6 7	79
2	6H10		BEAM		20		X			5 3.000							5 3	5 3	16
1	4H11		APP. HCH.		20		X			18 10.000							18 10	18 10	13
2	4H12		APP. HCH.		20		X			22 10.000							22 10	22 10	31
2	6H13		WING	E	20		X			5 9.000							5 9	5 9	17
4	6H14		WING		20		X			5 9.000							5 9	5 9	35
18	6H15		WING		20		X	V	2	2 7.000							2 7	2 7	
			INCREMENT =							5 8.000							5 8	5 8	112
			4.625 INCH																
4	6H16		WING		20		X			11 3.000							11 3	11 3	68
13	6H17		WING		20		X	V	2	3 4.000							3 4	3 4	
			INCREMENT =							11 1.000							11 1	11 1	195
			11.625 INCH																
10	4H18		CURTAIN WALL		20		X			2 6.000							2 6	2 6	17
2	6T1		WING		25		X			2 2.000	7 2.875	19.000			6 5.125	3 3.875	11 0	10 11	33
2	6T2		WING		25		X			16.000	10 11.625	20.000			6 8.750	8 8.000	14 0	13 11	42
2	4T3		WING		19		X			6 8.000	3 2.000						9 10	9 9	13
17	6U1		BEAM		13 S		X			2 6.000	23.000	2 6.000	23.000				10 2	9 8	247
6	6U2		BEAM		13 S		X			2 6.000	2 2.875	2 6.000	2 2.875				10 10	10 4	93
6	4U3		BEAM		10 S		X				6.000	2 6.000					3 6	3 4	13
64	4U4		APP. HCH.		10 S		X				5.000	15.000					2 3	2 1	89
38	5V1		BACKWALL	E	20		X			7 3.000							7 3	7 3	287
94	5V2		BACKWALL	E	20		X			2 2.000							2 2	2 2	212
2	6V3		WING		20		X			3 9.000							3 9	3 9	11
6	6V4		WING		20		X	V	2	5 8.000							5 8	5 8	
			INCREMENT =							7 7.000							7 7	7 7	60
			11.500 INCH																
6	6V5		WING		20		X			8 6.000							8 6	8 6	77
2	6V6		WING		20		X			2 0.000							2 0	2 0	6
4	6V7		WING	E	17		X	V	1	3 7.000							4 3	4 3	
			INCREMENT =							5 6.000							6 2	6 2	31
			7.625 INCH																
7	6V8		WING	E	17		X	V	1	6 2.000							6 10	6 10	
			INCREMENT =							8 5.000							9 1	9 1	84
			4.500 INCH																
4	6V9		WING	E	20		X	V	1	3 9.000							3 9	3 9	
			INCREMENT =							5 8.000							5 8	5 8	28
			7.625 INCH																

BILL OF REINFORCING STEEL

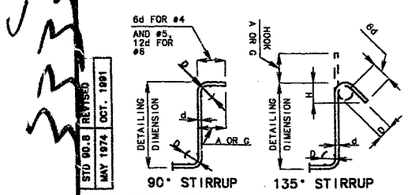
NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS
7	6V10		WING	E	20		X	V	1	6 4.000							6 4	6 4	
			INCREMENT =							8 7.000							8 7	8 7	78
			4.500 INCH																
3	6V11		WING	E	17		X			8 9.000							9 5	9 5	42
3	6V12		WING	E	20		X			8 11.000							8 11	8 11	40
2	4V13		CURTAIN WALL		20		X			6 3.000							6 3	6 3	8
6	W5W10		A.B. WELLS		22		X			12.000	9.125						19 9	19 9	20
			END BT NO 1																
			(W.B.L.)																
40	6D1		FOOTING		20		X			3 5.000							3 5	3 5	205
22	6D2		FOOTING		20		X			5 8.000							5 8	5 8	187
10	6F1		WING BRACE		15		X			14.000	4 7.875	14.000	9.875	9.875	9.875	9.875	7 0	6 11	104
2	6H19		BACKWALL	E	20		X			57 2.000							57 2	57 2	172
2	6H20		BACKWALL	E	20		X			21 8.000							21 8	21 8	65
4	4H21		BACKWALL		20		X			30 6.000							30 6	30 6	81
2	4H22		BACKWALL		20		X			21 10.000							21 10	21 10	29
6	4H23		BACKWALL		20		X			17 3.000							17 3	17 3	69
6	4H24		BACKWALL		20		X			14 5.000							14 5	14 5	58
8	6H25		BEAM		18		X			17 3.000							18 7	18 7	223
2	6H26		BEAM		20		X			17 3.000							17 3	17 3	52
8	6H27		BEAM		18		X			14 5.000							15 9	15 9	189
2	6H28		BEAM		20		X			14 5.000							14 5	14 5	43
2	4H29		APP. HCH.		20		X			28 9.000							28 9	28 9	38
1	4H30		APP. HCH.		20		X			18 10.000							18 10	18 10	13
4	6H31		WING		20		X			11 3.000							11 3	11 3	68
18	6H32		WING		20		X	V	2	3 1.000							3 1	3 1	
			INCREMENT =							11 1.000							11 1	11 1	192
			12.000 INCH																
10	4H33		CURTAIN WALL		20		X			2 6.000							2 6	2 6	17
18	4H34		WING		20		X			10 5.000							10 5	10 5	125
10	4H35		CURTAIN WALL		20		X			2 6.000							2 6	2 6	17
2	6T4		WING		25		X			16.000	10 10.250	21.000			6 6.500	8 7.875	13 11	13 10	42
2	4T5		CURTAIN WALL		19		X			6 8.000	3 2.000						9 10	9 9	13
2	4T6		CURTAIN WALL		19		X			6 10.000	3 2.000						10 0	9 11	13
6	6U3		BEAM		10 S		X				6.000	2 6.000					3 6	3 2	29
73	4U4		APP. HCH.		10 S		X				5.000	15.000					2 3	2 1	102
21	6U5		BEAM		13 S		X			2 6.000	2 0.875	2 6.000	2 0.875				10 6	10 0	315
17	6U6		BEAM		13 S		X			2 6.000	23.000	2 6.000	23.000				10 2	9 8	247
62	5V1		BACKWALL	E	20		X			7 3.000							7 3	7 3	469
94	5V2		BACKWALL	E	20		X			2 2.000							2 2	2 2	212
2	6V14		WING		20		X			2 0.000							2 0	2 0	6
4	6V15		WING	E	17		X	V	1	3 7.000							4 3	4 3	
			INCREMENT =							5 5.000							6 1	6 1	31
			7.375 INCH																
7	6V16		WING	E	17		X	V	1	6 2.000							6 10	6 10	
			INCREMENT =							8 3.000							8 11	8 11	83
			4.125 INCH																

STATE | PROJ. NO. | SHEET NO. 343
MO.



BENDING DIAGRAMS

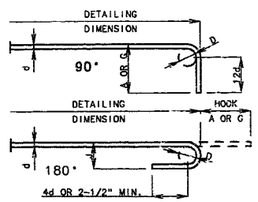
STD 90.8 REVISED OCT. 1991
MAY 1974



DETAILED AUG. 1993
CHECKED AUG. 1993

STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK HOOK A OR G	135° HOOK 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.



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

TWO ADDITIONAL ARE INCLUDED IN THE BAR BILL FOR TESTING.

END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL GRADES 180° HOOK A OR G	180° HOOK 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"

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 FABRICATORS 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.

SHEET NO. 46 OF 51.

JACKSON COUNTY

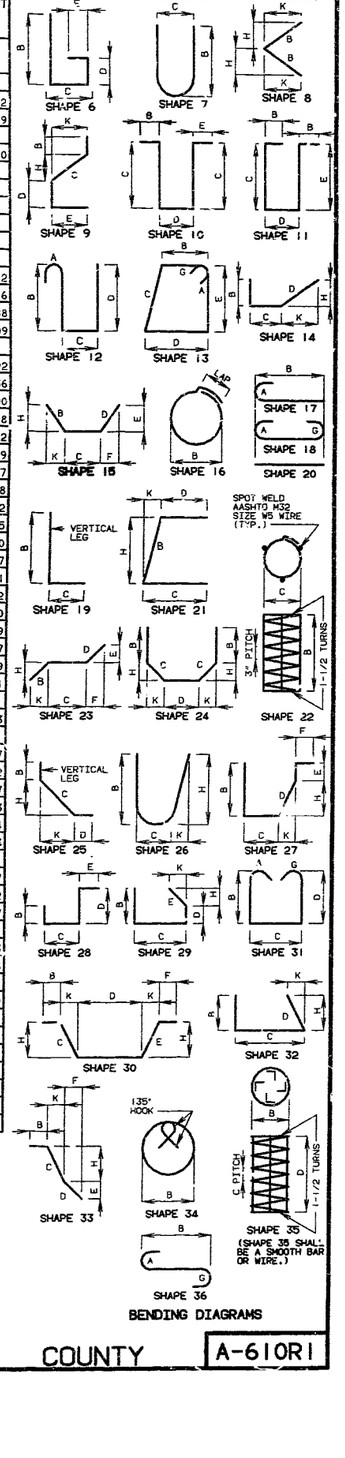
A-610R1

BILL OF REINFORCING STEEL

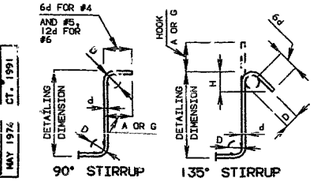
NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT.IN.	ACTUAL LENGTH FT.IN.	WEIGHT LBS.
4	6	V17	WING	E	20		X	V	1	3 9.000							3 9	3 9	
			INCREMENT =							5 7.000							5 7	5 7	28
			7.375 INCH																
7	6	V18	WING	E	20		X	V	1	6 4.000							6 4	6 4	
			INCREMENT =							8 5.000							8 5	8 5	78
			4.125 INCH																
3	6	V19	WING	E	17		X			8 7.000							9 3	9 3	42
3	6	V20	WING	E	20		X			8 9.000							8 9	8 9	39
2	4	V21	CURTAIN WALL		20		X			6 3.000							6 3	6 3	3
22	6	V22	WING		20		X	V	2	6 1.000							6 1	6 1	
			INCREMENT =							6 5.000							6 5	6 5	207
			0.375 INCH																
2	4	V23	CURTAIN WALL		20		X			6 5.000							6 5	6 5	9
8	W	5W10	A.B. WELLS		22		X			12.000	9.125						19 9	19 9	26
			INT. BT NO 2																
			(E.B.L.)																
46	8	D3	FOOTING		20		X			7 8.000							7 8	7 8	942
28	8	D4	FOOTING		20		X			14 8.000							14 8	14 8	1096
20	7	D5	FOOTING		20		X			8 8.000							8 8	8 8	354
4	6	D6	FOOTING		10		X				5 0.000	14 0.000					24 0	23 8	142
5	9	H36	BEAM		18		X			6 3.000							8 9	8 9	149
4	6	H37	BEAM		20		X			5 11.000							5 11	5 11	36
4	9	H38	BEAM		18		X			5 11.000							8 5	8 5	114
5	9	H39	BEAM		20		X			6 3.000							6 3	6 3	106
4	9	H40	BEAM		20		X			5 11.000							5 11	5 11	80
8	7	H41	BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	9	H42	BEAM		18		X			14 10.000							17 4	17 4	236
5	9	H43	BEAM		18		X			15 2.000							17 8	17 8	300
5	9	H44	BEAM		20		X			15 2.000							15 2	15 2	258
4	9	H45	BEAM		20		X			14 10.000							14 10	14 10	202
4	6	H46	BEAM		20		X			14 10.000							14 10	14 10	89
8	9	H47	WEB		20		X			19 9.000							19 9	19 9	537
4	9	H48	WEB		20		X			20 5.000							20 5	20 5	278
4	9	H49	WEB		20		X			21 6.000							21 6	21 6	292
2	6	H50	WEB		20		X			21 6.000							21 6	21 6	65
6	8	H51	TIE BEAM		20		X			13 5.000							13 5	13 5	215
10	4	H52	TIE BEAM		20		X			11 4.000							11 4	11 4	76
6	8	H53	TIE BEAM		20		X			18 1.000							18 1	18 1	290
10	4	H54	TIE BEAM		20		X			16 0.000							16 0	16 0	107
86	4	P1	COLUMN		16		X			3 9.000							12 8	12 8	728
1	5	U7	BEAM		13	S	X			2 4.875	3 9.875	2 4.875	3 9.875				13 5	13 1	14
1	5	U8	BEAM		13	S	X			3 11.750	3 9.875	3 11.750	3 9.875				16 6	16 3	17
4	5	U9	BEAM		13	S	X			4 3.000	3 9.875	4 3.000	3 9.875				17 1	16 9	70
5	5	U10	BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	84
24	5	U11	BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5	U12	BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5	U13	BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4	U14	BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5	U15	WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
25	4	U16	TIE BEAM		13	S	X			21.000	5 9.000	21.000	5 9.000				15 9	15 6	259
2	4	U60	BEAM		10	S	X				6.000	3 5.250					4 5	4 3	6

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
46	8	V24	COLUMN		20		X			29 2.000							29 2	29 2	3582
46	8	V25	COLUMN		20		X			20 10.000							20 10	20 10	2559
6	W	5W20	A.B. WELLS		20		X			12.000	9.125						19 9	19 9	20
			INT. BT NO 2																
			(W.B.L.)																
46	8	D3	FOOTING		20		X			7 8.000							7 8	7 8	942
20	7	D7	FOOTING		20		X			10 2.000							10 2	10 2	416
12	7	D8	FOOTING		20		X			7 8.000							7 8	7 8	188
4	6	D9	FOOTING		10		X				4 6.000	9 6.000					18 6	18 2	109
8	7	H41	BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	9	H42	BEAM		18		X			14 10.000							17 4	17 4	236
5	9	H43	BEAM		18		X			15 2.000							17 8	17 8	300
5	9	H44	BEAM		20		X			15 2.000							15 2	15 2	258
4	9	H45	BEAM		20		X			14 10.000							14 10	14 10	202
4	6	H46	BEAM		20		X			14 10.000							14 10	14 10	89
8	9	H47	WEB		20		X			19 9.000							19 9	19 9	537
4	9	H48	WEB		20		X			20 5.000							20 5	20 5	278
4	9	H49	WEB		20		X			21 6.000							21 6	21 6	292
2	6	H50	WEB		20		X			21 6.000							21 6	21 6	65
6	8	H51	TIE BEAM		20		X			18 1.000							18 1	18 1	290
10	4	H54	TIE BEAM		20		X			16 0.000							16 0	16 0	107
4	9	H55	BEAM		18		X			16 8.000							19 2	19 2	261
5	9	H56	BEAM		18		X			17 0.000							19 6	19 6	332
4	6	H57	BEAM		20		X			16 8.000							16 8	16 8	100
5	9	H58	BEAM		20		X			17 0.000							17 0	17 0	289
4	9	H59	BEAM		20		X			16 8.000							16 8	16 8	227
6	8	H60	TIE BEAM		20		X			18 8.000							18 8	18 8	299
10	4	H61	TIE BEAM		20		X			16 7.000							16 7	16 7	111
89	4	P1	COLUMN		12		X			3 9.000							12 8	12 8	753
4	5	U10	BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	67
24	5	U11	BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5	U12	BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5	U13	BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4	U14	BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5	U15	WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
30	4	U16	TIE BEAM		13	S	X			21.000	5 9.000	21.000	5 9.000				15 9	15 6	311
8	5	U17	BEAM		13	S	X			4 3.000	3 8.000	4 3.000	3 8.000				16 9	16 5	137
22	5	U18	BEAM		13	S	X			2 10.000	3 8.000	2 10.000	3 8.000				13 11	13 7	312
2	5	U19	BEAM		13	S	X			2 6.000	3 8.000	2 6.000	3 8.000				13 3	12 11	27
1	5	U20	BEAM		13	S	X			17.500	3 8.000	17.500	3 8.000				11 2	10 10	11
1	4	U60	BEAM		10	S	X				6.000	3 5.250					4 5	4 3	3
1	4	U61	BEAM		10	S	X				6.000	3 0.125					4 0	3 10	3
23	8	V25	COLUMN		20		X			20 10.000							20 10	20 10	1279
46	8	V26	COLUMN		20		X			28 10.000							28 10	28 10	3541
23	8	V27	COLUMN		20		X			23 10.000							23 10	23 10	1464
8	W	5W20	A.B. WELLS		22		X			12.000	9.125						19 9	19 9	26

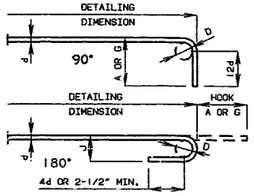


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	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.



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

TWO ADDITIONAL ARE INCLUDED IN THE BAR BILL FOR TESTING.

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"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE SENT 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 FABRICATORS 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.

STATE MO. | PROJ. NO. | SHEET NO. 344

STD 90.8 REVISED OCT. 1991
MAY 1974

DETAILED AUG. 1993
CHECKED AUG. 1993

SHEET NO. 47 OF 51.

JACKSON COUNTY

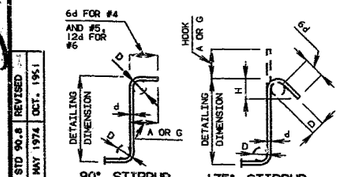
A-610R1

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			INT. BT NO 3																									
			(E.B.L.)																									
46	8D10	COLUMN		20		X			9	8.000														9	8	9	8	1187
58	8D11	FOOTING		20		X			9	11.000														9	11	9	11	1536
32	8D12	FOOTING		18		X			15	2.000														17	0	17	0	1452
26	5D13	FOOTING		18		X			8	2.000														9	4	9	4	253
5	9H62	BEAM		18		X			6	3.000														8	9	8	9	149
4	6H63	BEAM		20		X			5	11.000														5	11	5	11	36
4	9H64	BEAM		18		X			5	11.000														8	5	8	5	114
5	9H65	BEAM		20		X			6	3.000														6	3	6	3	106
4	9H66	BEAM		20		X			5	11.000														5	11	5	11	80
8	7H67	BEAM		7		X			4	9.000	4	1.750												11	9	11	9	192
4	9H68	BEAM		18		X			14	10.000														17	4	17	4	236
5	9H69	BEAM		18		X			15	2.000														17	8	17	8	300
5	9H70	BEAM		20		X			15	2.000														15	2	15	2	258
4	9H71	BEAM		20		X			14	10.000														14	10	14	10	202
4	6H72	BEAM		20		X			14	10.000														14	10	14	10	89
8	9H73	WEB		20		X			19	9.000														19	9	19	9	537
4	9H74	WEB		20		X			20	5.000														20	5	20	5	278
4	9H75	WEB		20		X			21	6.000														21	6	21	6	292
2	6H76	WEB		20		X			21	6.000														21	6	21	6	65
6	8H77	TIE BEAM		20		X			12	8.000														12	8	12	8	203
22	4H78	TIE BEAM		20		X			11	4.000														11	4	11	4	167
6	8H79	TIE BEAM		20		X			17	4.000														17	4	17	4	278
22	4H80	TIE BEAM		20		X			16	0.000														16	0	16	0	235
88	4P2	COLUMN		16		X			3	9.000														12	8	12	8	760
56	4P3	COLUMN		16		X			4	9.000														15	10	15	10	592
1	5U21	BEAM		13	S	X			2	4.875	3	9.875	2	4.875	3	9.875								13	5	13	1	14
1	5U22	BEAM		13	S	X			3	11.750	3	9.875	3	11.750	3	9.875								16	6	16	3	17
4	5U23	BEAM		13	S	X			4	3.000	3	9.875	4	3.000	3	9.875								17	1	16	9	70
5	5U24	BEAM		13	S	X			4	3.000	3	6.000	4	3.000	3	6.000								16	5	16	1	84
24	5U25	BEAM		13	S	X			2	10.000	3	6.000	2	10.000	3	6.000								13	7	13	3	332
2	5U26	BEAM		13	S	X			2	7.875	3	6.000	2	7.875	3	6.000								13	3	12	11	27
1	5U27	BEAM		13	S	X			2	4.875	3	6.000	2	4.875	3	6.000								12	9	12	5	13
4	4U28	BEAM		10	S	X						6.000	4	3.000										5	3	4	5	3
20	5U29	WEB		13	S	X			3	9.000	2	9.000	3	9.000	2	9.000								13	11	13	7	283
46	4U30	TIE BEAM		10	S	X					2	0.500	11	9.000										15	10	15	8	481
2	4U60	BEAM		10	S	X						6.000	3	5.250										4	5	4	3	6
	8W27									0.000														46	0	46	0	5650
58	9V28	COLUMN		20		X			27	9.000														27	7	9	5472
6	W5W30	A.B. WELLS		22		X				12.000		9.125												19	9	19	9	20
			INT. CT NO 3																									
			(W.B.L.)																									
46	8D10	COLUMN		20		X			9	8.000														9	8	9	8	1187
58	9D11	FOOTING		20		X			9	11.000														9	11	9	11	1956
32	8D12	FOOTING		16		X			15	2.000														17	0	17	0	1452
32	5D13	FOOTING		18		X			8	2.000														9	4	9	4	312

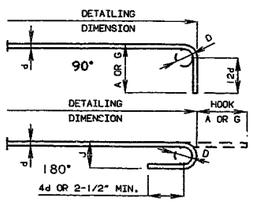
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
8	7H67	BEAM			7		X			4	9.000													11	9	11	9	192
4	9H68	BEAM			18		X			14	10.000													17	4	17	4	236
5	9H69	BEAM			18		X			15	2.000													17	8	17	8	300
5	9H70	BEAM			20		X			15	2.000													15	2	15	2	258
4	9H71	BEAM			20		X			14	10.000													14	10	14	10	202
4	6H72	BEAM			20		X			14	10.000													14	10	14	10	89
8	9H73	WEB			20		X			19	9.000													19	9	19	9	537
4	9H74	WEB			20		X			20	5.000													20	5	20	5	278
4	9H75	WEB			20		X			21	6.000													21	6	21	6	292
2	6H76	WEB			20		X			21	6.000													21	6	21	6	65
6	8H79	TIE BEAM			20		X			17	4.000													17	4	17	4	278
22	4H80	TIE BEAM			20		X			16	0.000													16	0	16	0	235
4	9H81	BEAM			18		X			16	8.000													16	8	16	8	227
5	9H82	BEAM			18		X			17	0.000													17	0	17	0	289
4	6H83	BEAM			20		X			16	8.000													17	11	17	11	287
4	9H84	BEAM			20		X			16	8.000													16	7	16	7	244
5	9H85	BEAM			20		X			17	0.000																	
6	8H86	TIE BEAM			20		X			17	11.000													12	8	12	8	728
22	4H87	TIE BEAM			20		X			16	7.000													15	10	15	10	592
5	5U24	BEAM		13	S	X				4	3.000	3	6.000	4	3.000	3	6.000								16	5	16	1	84
24	5U25	BEAM		13	S	X				2	10.000	3	6.000	2	10.000	3	6.000								13	7	13	3	332
2	5U26	BEAM		13	S	X				2	7.875	3	6.000	2	7.875	3	6.000								13	3	12	11	27
1	5U27	BEAM		13	S	X				2	4.875	3	6.000	2	4.875	3	6.000								12	9	12	5	13
4	4U28	BEAM		10	S	X						6.000	4	3.000										3	3	5	1	14
20	5U29	WEB		13	S	X				3	9.000	2	9.000	3	9.000	2	9.000								13	11	13	7	283
58	4U30	TIE BEAM		10	S	X						2	0.500	11	9.000									15	10	15	8	607
8	5U31	BEAM		13	S	X				4	3.000	3	8.000	4	3.000	3	8.000								16	9	16	5	137
22	5U32	BEAM		13	S	X				2	10.000	3	8.000	2	10.000	3	8.000								13	11	13	7	312
2	5U33	BEAM		13	S	X				2	6.000	3	8.000	2	6.000	3	8.000								13	3	12	11	27
1	5U34	BEAM		13	S	X					17.500	3	8.000		17.500	3	8.000								11	2	10	10	11
1	4U60	BEAM		10	S	X							6.000	3	5.250									4	5	4	3	3
1	4U61	BEAM		10	S	X							6.000	3	0.125									4	0	3	10	3
58	9V28	COLUMN		20		X				27	9.000													27	9	27	9	5472
46	8V29	COLUMN		20		X				45	7.000													45	7	45	7	5599
8	W5W30	A.B. WELLS		22		X					12.000		9.125											19	9	19	9	26
			INT. PT NO 4																									
			(E.B.L.)																									
46	8D14	COLUMN		20		X				5	0.000													9	8	9	8	1187
58	9D15	FOOTING		20		X				9	11.000													9	11	9	11	1956
24	5D16	FOOTING		18		X				7	8.000													8	10	8	10	221
24	8D17	FOOTING		18		X				13	8.000													15	6	15	6	993
5	9H88	BEAM			18		X			6	3.000													8	9	8	9	149
4	6H89	BEAM			20		X			5	11.000													5	11	5	11	36
4	9H90	BEAM			18		X			5	11.000													8	5	8	5	114
5	9H91	BEAM			20		X			6	3.000													6	3	6	3	106
4	9H92	BEAM			20		X			5	11.000													5	11	5	11	80
8	7H93	BEAM			7		X			4	9.000	4	1.750											11	9	11	9	192
4	9H94	BEAM			18		X			14	10.000													17	4	17	4	236
5	9H95	BEAM			18		X			15	2.000													17	8	17	8	300



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	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.



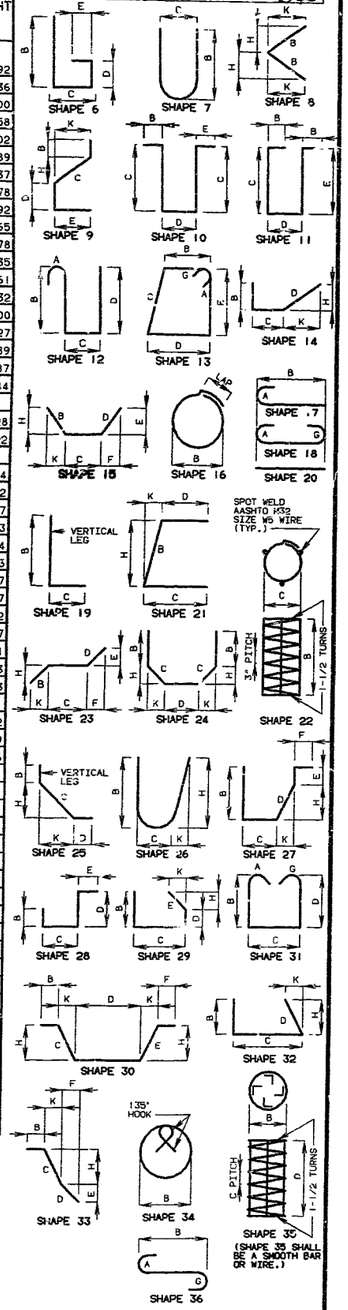
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

TWO ADDITIONAL

END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	ALL GRADES		
		180° HOOKS		90° HOOKS
		A OR G	J	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"

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 FABRICATORS 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.



STD 90.8 REVISED MAY 1974 OCT. 1951

DETAILED AUG. 1993
CHECKED AUG. 1993

STATE | PROJ. NO. | SHEET NO. 345
MO.

JACKSON COUNTY

A-610R1

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
5	9H96		BEAM		20		X			15 2.000							15 2	15 2	258
4	9H97		BEAM		20		X			14 10.000							14 10	14 10	202
4	6H98		BEAM		20		X			14 10.000							14 10	14 10	89
8	9H99		WEB		20		X			19 9.000							19 9	19 9	7
4	9H100		WEB		20		X			20 5.000							20 5	20 5	278
4	9H101		WEB		20		X			21 6.000							21 6	21 6	292
2	6H102		WEB		20		X			21 6.000							21 6	21 6	65
6	8H103		TIE BEAM		20		X			12 8.000							12 8	12 8	203
22	4H104		TIE BEAM		20		X			11 4.000							11 4	11 4	167
6	8H105		TIE BEAM		20		X			17 4.000							17 4	17 4	278
22	4H106		TIE BEAM		20		X			16 0.000							16 0	16 0	235
74	4P4		COLUMN		16		X			3 9.000							12 8	12 8	626
48	4P5		COLUMN		16		X			4 9.000							15 10	15 10	508
1	5U35		BEAM		13	S	X			2 4.8.	3 9.875	2 4.875	3 9.875				13 5	13 1	14
1	5U36		BEAM		13	S	X			3 11.750	3 9.875	3 11.750	3 9.875				16 6	16 3	17
4	5U37		BEAM		13	S	X			4 3.000	3 9.875	4 3.000	3 9.875				17 1	16 9	70
5	5U38		BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	84
24	5U39		BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5U40		BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5U41		BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4U42		BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5U43		WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
46	4U44		TIE BEAM		10	S	X				2 0.500	11 9.000					15 10	15 8	481
2	4U60		BEAM		10	S	X				6.000	3 5.250					4 5	4 3	6
46	8V30		COLUMN		20		X			39 9.000							39 9	39 9	4882
58	9V31		COLUMN		20		X			23 10.000							23 10	23 10	4700
6	W5W40		A.B. WELLS		22		X			12.000	9.125						19 9	19 9	20
			INT. BT NO 4 (W.B.L.)																
46	8D14		COLUMN		20		X			9 8.000							9 8	9 8	1187
58	9D15		FOOTING		20		X			9 11.000							9 11	9 11	1956
28	5D16		FOOTING		18		X			7 8.000							8 10	8 10	258
24	8D17		FOOTING		18		X			13 8.000							15 6	15 6	993
8	7H93		BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	9H94		BEAM		18		X			14 10.000							17 4	17 4	236
5	9H95		BEAM		18		X			15 2.000							17 8	17 8	300
5	9H96		BEAM		18		X			15 2.000							17 8	17 8	300
4	9H97		BEAM		20		X			14 10.000							14 10	14 10	202
4	6H98		BEAM		20		X			14 10.000							14 10	14 10	89
8	9H99		WEB		20		X			19 9.000							19 9	19 9	537
4	9H100		WEB		20		X			20 5.000							20 5	20 5	278
4	9H101		WEB		20		X			21 6.000							21 6	21 6	292
2	6H102		WEB		20		X			21 6.000							21 6	21 6	65
6	8H105		TIE BEAM		20		X			17 4.000							17 4	17 4	278
22	4H106		TIE BEAM		20		X			16 0.000							16 0	16 0	235
4	9H107		BEAM		18		X			16 8.000							19 2	19 2	261
5	9H108		BEAM		18		X			17 0.000							19 6	19 6	332
4	6H109		BEAM		20		X			16 8.000							16 8	16 8	100
4	9H110		BEAM		20		X			16 8.000							16 8	16 8	227
5	9H111		BEAM		20		X			17 0.000							17 0	17 0	289

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
6	8H112		TIE BEAM		20		X			17 11.000							17 11	17 11	287
22	4H113		TIE BEAM		20		X			16 7.000							16 7	16 7	244
74	4P4		COLUMN		16		X			3 9.000							12 8	12 8	626
48	4P5		COLUMN		16		X			4 9.000							15 10	15 10	508
5	5U38		BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	84
24	5U39		BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5U40		BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5U41		BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4U42		BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5U43		WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
58	5U44		TIE BEAM		10	S	X				2 0.500	11 9.000					15 10	15 8	948
8	5U45		BEAM		13	S	X			4 3.000	3 8.000	4 3.000	3 8.000				16 9	16 5	137
22	5U46		BEAM		13	S	X			2 10.000	3 8.000	2 10.000	3 8.000				13 11	13 7	312
2	5U47		BEAM		13	S	X			2 6.000	3 8.000	2 6.000	3 8.000				13 3	12 11	27
1	5U48		BEAM		13	S	X			17.500	3 8.000	17.500	3 8.000				11 2	10 10	11
1	4U60		BEAM		10	S	X				6.000	3 5.250					4 5	4 3	3
1	4U61		BEAM		10	S	X				6.000	3 0.125					4 0	3 10	3
58	9V31		COLUMN		20		X			23 9.000							23 9	23 9	4684
46	8V32		COLUMN		20		X			39 4.000							39 4	39 4	4831
8	W5W40		A.B. WELLS		22		X			12.000	9.125						19 9	19 9	26
			SUPERSTR.																
			END BT NO 5 (E.B.L.)																
14	6F2		WING BRACE		15					14.000	4 6.000	14.000	9.875	9.875	9.875	9.875	6 10	6 5	142
12	6F3		DIAPH.		19					4 3.000	2 7.000						6 10	6 8	120
4	6H114		DIAPH.	E	20					46 6.000							46 6	46 6	279
4	6H115		DIAPH.	E	20					22 10.000							22 10	22 10	137
3	6H116		DIAPH.		20					46 6.000							46 6	46 6	210
3	6H117		DIAPH.		20					43 8.000							43 8	43 8	197
3	6H118		DIAPH.		20					11 0.000							11 0	11 0	50
3	6H119		DIAPH.		20					22 10.000							22 10	22 10	103
21	6H120		DIAPH & BEAM		20					14 5.000							14 5	14 5	455
21	6H121		DIAPH & BEAM		20					5 3.000							5 3	5 3	166
2	4H122		APP. HCH.		20					23 0.000							23 0	23 0	31
1	4H123		APP. HCH.		20					21 8.000							21 8	21 8	14
2	6H124		WING	E	20					10 3.000							10 5	10 5	31
4	6H125		WING		20					10 5.000							10 5	10 5	63
16	6H126		WING		20			V	2	4 0.000							4 0	4 0	
			INCREMENT = 10.375 INCH							10 1.000							10 1	10 1	169
2	6H127			E	20					11 2.000							11 2	11 2	34
29	6H128		WING		20					11 2.000							11 2	11 2	335
2	6T7		WING		25					2 1.000	9 6.375	3 1.750		6 3.125	7 2.250		14 9	14 8	44
4	5J49		BEAM		32	S				4 11.25.	3 5.625	5 1.000		4 11.250	14.750		13 6	13 3	55
4	4U50		BEAM		13	S				2 8.875	3 0.125	3 5.625	2 11.000				12 11	12 7	34
1	4U51		BEAM		14	S				2 11.000	2 8.87.	3 0.125		2 11.000	8.750		8 9	8 6	5
11	5U52		BEAM		32	S				4 9.000	3 5.625	4 10.750		4 9.000	14.250		13 1	12 10	147

STATE MO. | PROJ. NO. | SHEET NO. 346

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 19 · SHAPE 20 · SHAPE 21 · SHAPE 22 · SHAPE 23 · SHAPE 24 · SHAPE 25 · SHAPE 26 · SHAPE 27 · SHAPE 28 · SHAPE 29 · SHAPE 30 · SHAPE 31 · SHAPE 32 · SHAPE 33 · SHAPE 34 · SHAPE 35 · SHAPE 36

SPOT WELD AASHTO M32 SIZE W5 W... (TYP.)

BENDING DIAGRAMS

STD 20.8 REVISED MAY 1974 OCT. 1991

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

90° STIRRUP · 135° STIRRUP

DETAILED AUG. 1993
CHECKED AUG. 1993

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"	5"	4-1/2"

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

DETAILING DIMENSION · 90° · 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 ARE INCLUDED IN THE BAR BILL FOR TESTING.

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

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 FABRICATORS 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.

SHEET NO. 49 OF 51.

JACKSON COUNTY

A-6101R1

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	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.
7	4U53		BEAM		13	5				2 9.375	2 10.000	3 5.625	2 9.000				12 7	12 4	58
2	4U54		BEAM		14	5				2 9.000	2 9.375	2 10.000			2 9.000	8.250	8 4	8 3	11
89	6U55		DIAPH.	E	19	5				2 1.000	4 1.000						6 2	6 0	802
4	5U56		DIAPH.	E	10	5					5 7.000	2 8.375					13 10	13 8	57
13	5U57		DIAPH.	E	10	5					5 5.000	2 9.000					13 7	13 5	182
41	5U58		DIAPH.	E	10	5					2 1.000	2 4.000					6 6	6 4	271
53	4U59		APP. HCH.		10	5					17.500	6.000					3 5	3 3	115
4	5V33		BEAM		20					4 11.000							4 11	4 11	21
14	6V34		WING		20		V	2		2 7.000							2 7	2 7	
			INCREMENT =							8 0.000							8 0	8 0	111
			10.875 INCH																
4	6V35		WING		20					8 10.000							8 10	8 10	53
22	6V36		WING		20		V	2		8 2.000							8 2	8 2	
			INCREMENT =							8 6.000							8 6	8 6	275
			0.375 INCH																
			END BT NO 5 (W.B.L.)																
6	6F2		WING BRACE		15					14.000	4 6.000	14.000	9.875	9.875	9.875	9.875	6 10	6 9	61
6	6F3		DIAPH.		19					4 3.000	2 7.000						6 10	6 8	60
3	6H115		DIAPH.	E	20					22 10.000							22 10	22 10	137
3	6H118		DIAPH.		20					11 0.000							11 0	11 0	50
3	6H119		DIAPH.		20					22 10.000							22 10	22 10	103
21	6H120		DIAPH & BEAM		20					14 5.000							14 5	14 5	455
1	4H123		APP. HCH.		20					21 8.000							21 8	21 8	14
4	6H129		DIAPH.	E	20					58 6.000							58 6	58 6	351
3	6H130		DIAPH.		20					44 0.000							44 0	44 0	198
3	6H131		DIAPH.		20					58 6.000							58 6	58 6	264
21	6H132		DIAPH & BEAM		20					17 3.000							17 3	17 3	544
2	4H133		APP. HCH.		20					29 0.000							29 0	29 0	39
2	6H134		WING	E	20					10 5.000							10 5	10 5	31
4	6H135		WING		20					10 5.000							10 5	10 5	63
16	6H136		WING		20		V	2	3	11.000							3 11	3 1	
			INCREMENT =							10 2.000							10 2	10 2	169
			10.750 INCH																
2	6T8		WING		25					2 1.000	9 5.000	3 1.750			6 1.000	7 2.250	14 8	14 7	44
12	5U49		BEAM		32	S				4 11.250	3 5.625	5 1.000			4 11.250	14.750	13 6	13 3	166
10	4U50		BEAM		33	S				2 8.875	3 0.125	3 5.625	2 11.000				12 11	12 7	84
11	5U52		BEAM		32	S				4 9.000	3 5.625	4 10.750			4 9.000	14.250	13 1	12 10	147
7	5U53		BEAM		33	S				2 9.375	2 10.000	3 5.625	2 9.000				12 9	12 5	91
2	4U54		BEAM		14	S				2 9.000	2 9.375	2 10.000			2 9.000	8.250	8 4	8 3	11
105	6U55		DIAPH.	E	19	S				2 1.000	4 1.000						6 2	6 0	946
28	5U57		DIAPH.	E	10	S					5 5.000	2 9.000					13 7	13 5	392
41	5U58		DIAPH.	E	10	S					2 1.000	2 4.000					6 6	6 4	271
66	4U59		APP. HCH.		10	S					17.500	6.000					3 5	3 3	143
4	5V33		BEAM		20					4 11.000							4 11	4 11	21
6	5V37		BEAM		20					5 1.000							5 1	5 1	32
14	6V33		WING		20		V	2		2 7.000							2 7	2 7	
			INCREMENT =							7 11.000							7 11	7 11	110
			10.625 INCH																
4	6V39		WING		20					8 8.000							8 8	8 8	52

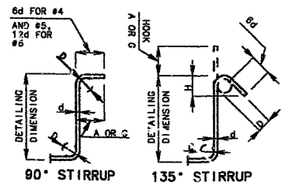
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	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.
144	5C1		BARRIER CURB	E	20					8 10.000							8 10	8 10	1327
4	5C2		BARRIER CURB	E	20					9 4.000							9 4	9 4	39
2	5C3		BARRIER CURB	E	20					6 3.000							6 3	6 3	13
2	5C4		BARRIER CURB	E	20					10 8.000							10 8	10 8	22
2	5C5		BARRIER CURB	E	20					12 8.000							12 8	12 8	26
2250	5R1		BARRIER CURB	E	19	S				2 6.000	3.500						2 10	2 8	6258
2194	5R2		BARRIER CURB	E	15	S				2 6.125	3.500						2 10	2 9	6293
1054	5R3		BARRIER CURB	E	19	S				17.000	6.000						23	22	2015
1054	5R4		BARRIER CURB	E	27	S					6.000	11.000	7.000	12.000	9.000	6.250	3 0	2 10	3115
26	5R5		BARRIER CURB	E	19	S				18.500	6.000						2 1	23	52
26	5R6		BARRIER CURB	E	27	S				12.000	9.750	10.625	6.000		6.125	8.750	3 2	3 0	81
4	5R7		BARRIER CURB	E	19	S				16.000	6.000						22	21	7
4	5R8		BARRIER CURB	E	27	S				12.000	9.750	7.750	6.000		6.625	6.250	3 0	2 10	12
12	5R9		BARRIER CURB	E	10	S					2 8.500	7.500					6 1	5 10	73
48	5R10		BARRIER CURB	E	20					5 0.000							5 0	5 0	250
8	5R11		BARRIER CURB	E	19	S				2 3.500	3.500						2 7	2 6	21
10	5R12		BARRIER CURB	E	20					8 6.000							8 6	8 6	89
2	5R13		BARRIER CURB	E	20					9 5.000							9 5	9 5	20
2	5R14		BARRIER CURB	E	20					11 3.000							11 3	11 3	23
26	5R15		BARRIER CURB	E	19	S				2 2.500	6.000						2 9	2 7	70
26	5R16		BARRIER CURB	E	27	S					6.000	11.000	17.750		9.000	6.250	2 11	2 10	77
4	5R17		BARRIER CURB	E	27	S					6.000	7.750	17.750		6.250	4.625	2 8	2 7	11
4	5R18		BARRIER CURB	E	19	S				2 0.000	6.000						2 6	2 5	10
12	5R19		BARRIER CURB	E	10	S					2 0.000	7.500					4 6	4 5	55
10	5R20		BARRIER CURB	E	20					9 0.000							9 0	9 0	94
2	5R21		BARRIER CURB	E	20					9 10.000							9 10	9 10	21
84	5R22		BARRIER CURB	E	20					35 1.000							35 1	35 1	3074
282	5R23		BARRIER CURB	E	20					9 9.000							9 9	9 9	2868
168	5R24		BARRIER CURB	E	20					35 11.000							35 11	35 11	6293
63	5R25		BARRIER CURB	E	20					34 6.000							34 6	34 6	2267
7	5R26		BARRIER CURB	E	20					5 9.000							5 9	5 9	42
7	5R27		BARRIER CURB	E	20					12 5.000							12 5	12 5	91
7	5R28		BARRIER CURB	E	20					10 5.000							10 5	10 5	76
21	5R29		BARRIER CURB	E	20					35 6.000							35 6	35 6	778
			CAST-IN-PLACE CONVENTIONAL FORMS OR STAY-IN-PLACE FORMS																
2466	6S1		SLAB	E	20					22 5.000							22 5	22 5	8 3030
1233	6S2		SLAB	E	20					34 7.000							34 7	34 7	6 4047
1959	6S3		SLAB	E	20					26 6.000							26 6	26 6	7 7974
1959	6S4		SLAB	E	20					46 6.000							46 6	46 6	13 6822
1638	5S5		SLAB	E	20					39 0.000							39 0	39 0	6 6629
460	6S6		SLAB	E	20					60 0.000							60 0	60 0	4 1455
462	6S7		SLAB	E	20					13 4.000							13 4	13 4	9252
230	6S8		SLAB	E	20					60 0.000							60 0	60 0	2 0728
230	6S9		SLAB	E	20					20 1.000							20 1	20 1	6938
2016	6S10		SLAB	E	20					38 9.000							38 9	38 9	11 7336
1452	6S11		SLAB	E	20					21 10.000							21 10	21 10	4 7616
726	6S12		SLAB	E	20					34 0.000							34 0	34 0	3 7075
4344	4S13		SLAB HAUNCH	E	10					6.000	7.000	7.000	6.000				2 9	2 5	7011

TWO ADDITIONAL #5-R23 & #6-S7 ARE INCLUDED IN THE BAR BILL FOR TESTING.

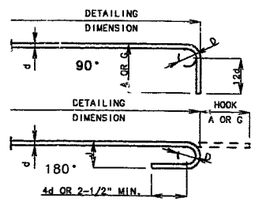
STD 90.8 REVISED MAY 1974 OCT. 1991

DETAILED AUG. 1993
CHECKED AUG. 1993



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.



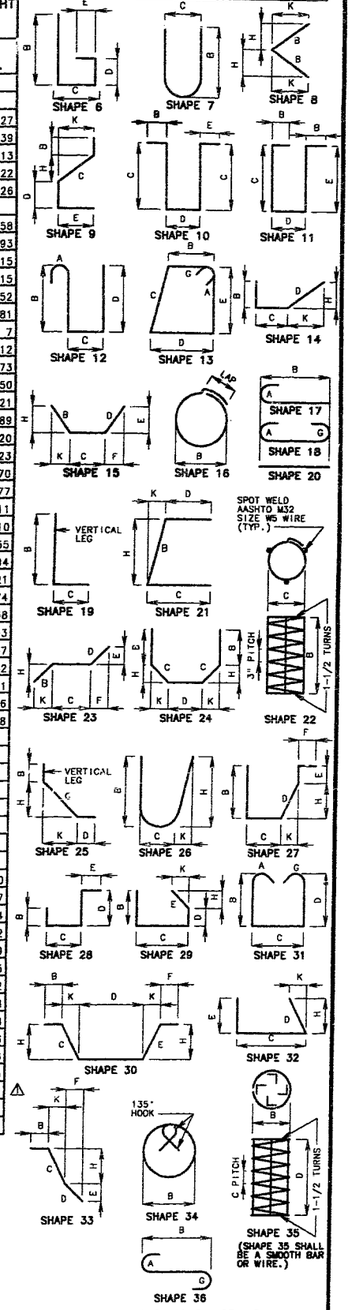
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

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

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 FABRICATORS 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.

⚠ Revised 5/26/94

STATE | PROJ. NO. | SHEET NO.
MO.



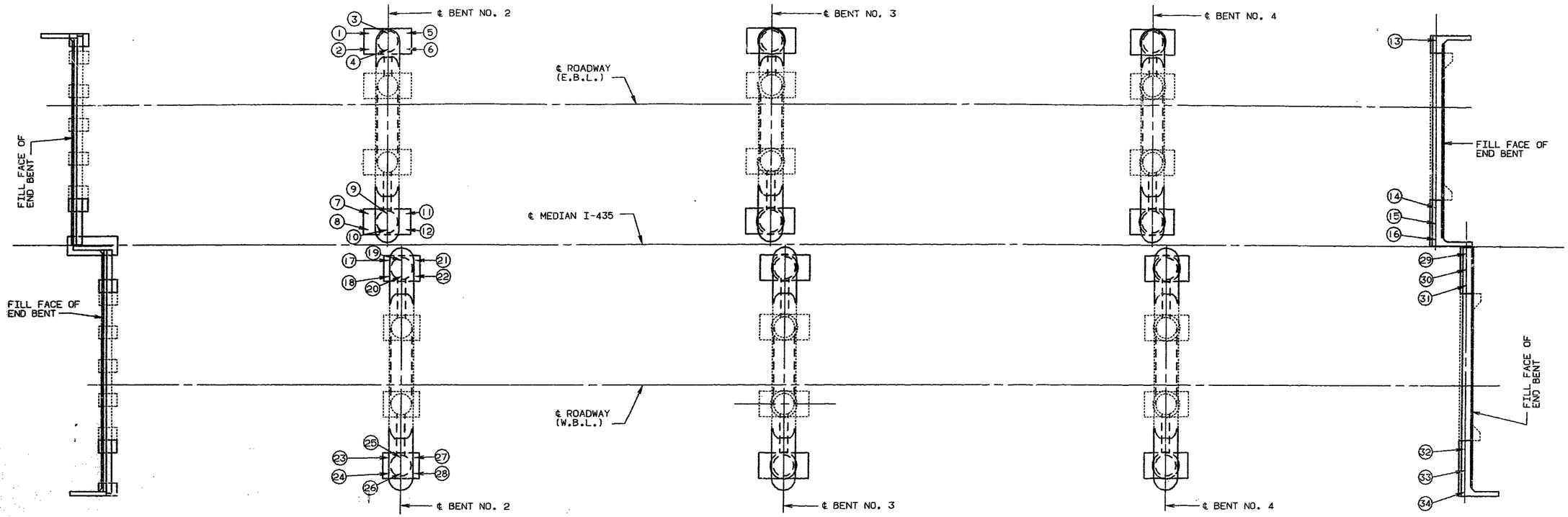
BENDING DIAGRAMS

SHEET NO. 50 OF 51.

JACKSON COUNTY

A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.		318



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
			INT. BENT NO. 2 (E.B.L.)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
			END BENT NO. 5 (E.B.L.)
13			
14			
15			
16			INT. BENT NO. 2 (W.B.L.)
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
27			
28			
			END BENT NO. 5 (W.B.L.)
29			
30			
31			
32			
33			
34			

END BENT NO. 5 (W.B.L.)

NOTE: INDICATE IN REMARK COLUMN:
A. IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.
B. PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.
C. TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

MISC. PILES IN PLA
PILES IN PLACE
MAY 1992
REVISED

DETAILED AUG. 1993
CHECKED AUG. 1993

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

SHEET NO. 51 OF 51.

JACKSON COUNTY

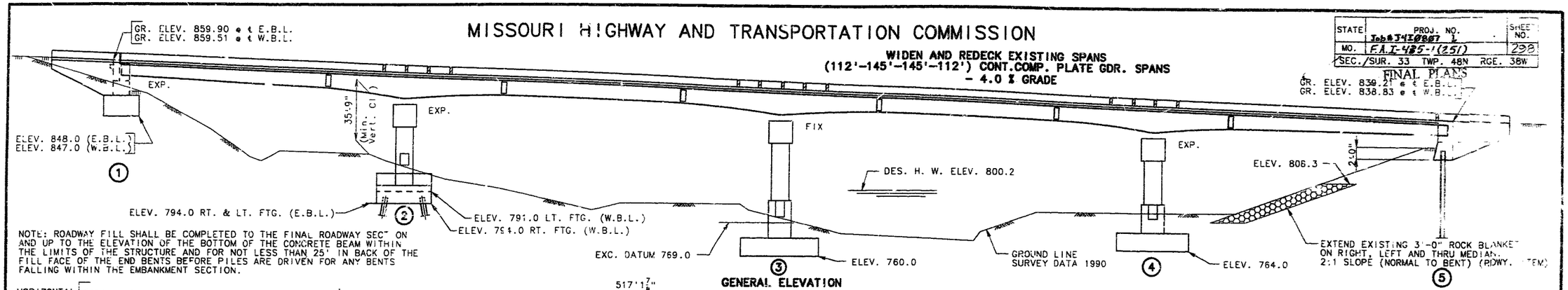
A-610R1

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ. NO.	SHEET NO.
MO.	Job#J4I0807 L F.A.I-435-1(251)	298
SEC./SUR. 33 TWP. 48N RGE. 38W		

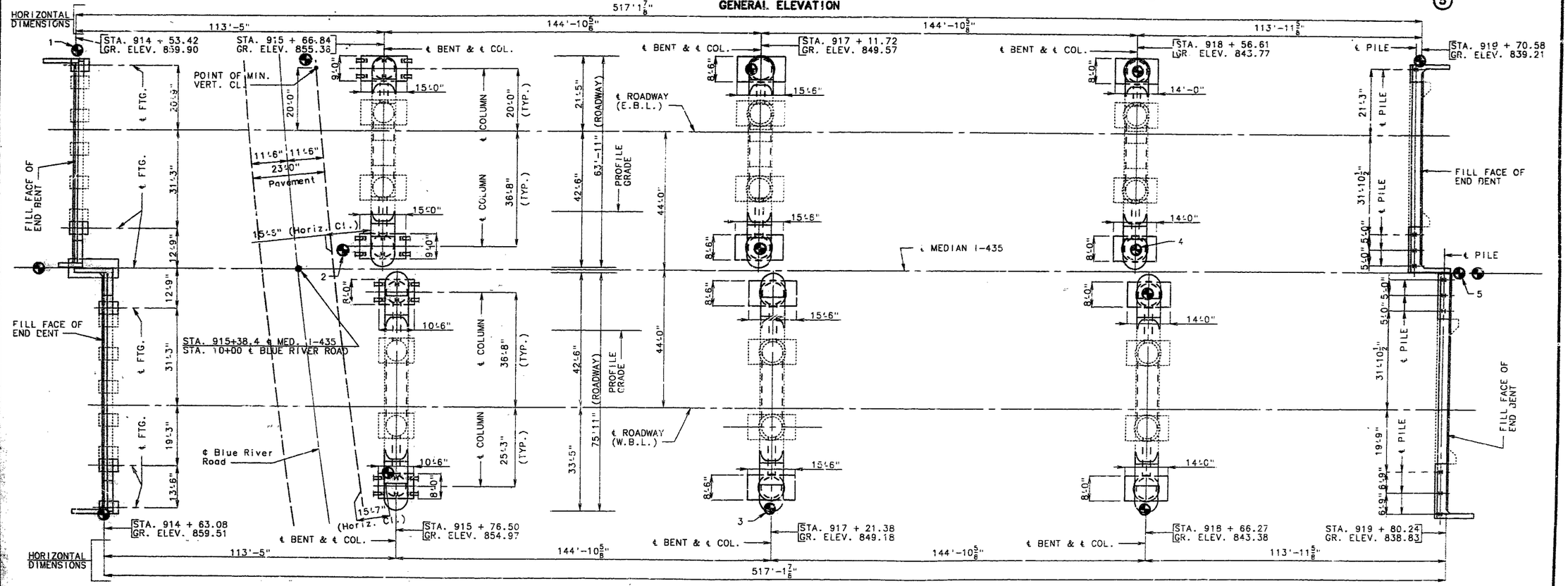
FINAL PLANS

WIDEN AND REDECK EXISTING SPANS
(112'–145'–145'–112') CONT.COMP. PLATE GDR. SPANS
– 4.0 % GRADE



NOTE: ROADWAY FILL SHALL BE COMPLETED TO THE FINAL ROADWAY SECTION AND UP TO THE ELEVATION OF THE BOTTOM OF THE CONCRETE BEAM WITHIN THE LIMITS OF THE STRUCTURE AND FOR NOT LESS THAN 25' IN BACK OF THE FILL FACE OF THE END BENTS BEFORE PILES ARE DRIVEN FOR ANY BENTS FALLING WITHIN THE EMBANKMENT SECTION.

GENERAL ELEVATION



PLAN

NOTE AND DISCLAIMER REGARDING BORING LOG DATA

THE LOCATIONS OF ALL SUBSURFACE BORING FOR THIS STRUCTURE ARE SHOWN ON THE BRIDGE PLAN SHEET FOR THIS STRUCTURE. BORING DATA FOR THE NUMBERED LOCATIONS IS SHOWN ON SHEET NO. 2. THE BORING DATA FOR ALL LOCATIONS INDICATED, AS WELL AS ANY OTHER BORING LOGS OR OTHER FACTUAL RECORDS OF SUBSURFACE DATA AND INVESTIGATIONS PERFORMED BY THE DEPARTMENT FOR THE DESIGN OF THE PROJECT, IS AVAILABLE FROM THE DISTRICT MATERIALS ENGINEER UPON WRITTEN REQUEST AS OUTLINED IN THE PROJECT SPECIAL PROVISIONS. NO GREATER SIGNIFICANCE OR WEIGHT SHOULD BE GIVEN TO THE BORING DATA DEPICTED ON THE PLAN SHEETS THAN TO SUBSURFACE DATA AVAILABLE FROM THE DISTRICT OR ELSEWHERE.

THE COMMISSION DOES NOT REPRESENT OR WARRANT THAT ANY SUCH BORING DATA ACCURATELY DEPICTS THE CONDITIONS TO BE ENCOUNTERED IN CONSTRUCTING THIS PROJECT. A CONTRACTOR ASSUMES ALL RISKS IT MAY ENCOUNTER IN BASING ITS BID PRICES, TIME OR SCHEDULE OF PERFORMANCE ON THE BORING DATA DEPICTED HERE OR THOSE AVAILABLE FROM THE DISTRICT, OR ON ANY OTHER DOCUMENTATION NOT EXPRESSLY WARRANTED, WHICH THE CONTRACTOR MAY OBTAIN FROM THE COMMISSION.

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

DESIGNED FEB. 1993
DETAILED AUG. 1993
CHECKED AUG. 1993

B.M. ELEV. 861.67 P.-K. NAIL IN BR. PARAPET
℄ N.E. COR. W.B.L. BR. A-610R1
77.5'± Rt. ℄ Med. Sta. 914+60±

⊕ INDICATES LOCATION OF BORINGS.

NOTE: FOR GENERAL NOTES, ESTIMATED QUANTITIES, HYDROLOGIC DATA AND PILE AND FOOTING DATA SEE SHEET NO. 2.

SHEET NO. 1 OF 51.

BRIDGE OVER BLUE RIVER & BLUE RIVER ROAD

STATE ROAD: INTERSTATE RTE. I-435
ABOUT 1.5 MILES WEST OF RTE. 71
PROJECT NO. **STA. 914+63.08**
JOB NO. J410807 **RTE. I-435**

JACKSON COUNTY

DATE 2/28/94

STD.
STD. 706.35
A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.	Job # J6I0887 F.A.I.-435-1(251)	55

FINAL PLANS

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1992
LOAD FACTOR DESIGN.
SEISMIC PERFORMANCE CATEGORY A.

DESIGN LOADING:
HS20-44 MODIFIED 24,000# TANDEM AXLE
NO FUTURE WEARING SURFACE
EARTH 120#/CU. FT., EQUIVALENT FLUID PRESSURE 45#/CU. FT.
FATIGUE STRESS - CASE I.

DESIGN UNIT STRESSES:
CLASS B CONCRETE (SUBSTRUCTURE) F'C=3,000 PSI.
CLASS B1 CONCRETE (SAFETY BARRIER CURB) F'C=4,000 PSI.
CLASS B2 CONCRETE (SUPERSTRUCTURE EXCEPT SAFETY BARRIER CURB) F'C=4,000 PSI.
REINFORCING STEEL (GRADE 60) FY=60,000 PSI.
STRUCTURAL CARBON STEEL FY=36,000 PSI.
STEEL PILE FB=9,000PSI.

STRUCTURAL STEEL:
FIELD CONNECTIONS, HIGH STRENGTH BOLTS 3/4"Ø, HOLES 13/16"Ø, EXCEPT AS NOTED.
HIGH STRENGTH BOLTS, NUTS AND WASHERS WILL BE SAMPLED FOR QUALITY ASSURANCE AS SPECIFIED IN STD. SPEC. 106 AND FIELD SECTION (F5-712).

REINFORCING STEEL:
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2", UNLESS OTHERWISE SHOWN.
ALL REINFORCING BARS IN TOPS OF SUBSTRUCTURE BEAMS OR CAPS SHALL BE SPACED TO CLEAR ANCHOR BOLTS FOR BEARINGS BY AT LEAST 1/2".
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.

PAINT:
PAINT NEW STRUCTURAL STEEL SYSTEM F SHOP COATS (GRAY) IN ACCORDANCE WITH SPECIAL PROVISIONS. NO FIELD PAINT EXCEPT FOR TOUCH UP.

AREAS TO BE ENCASED IN END BENT CONCRETE SHALL BE HAND CLEANED OF LOOSE RUST AND SCALE BEFORE CONCRETE IS POURED AND PAINTED WITH 1 COAT OF CALCIUM SULFONATE PRIMER. COST TO BE INCLUDED IN OTHER ITEMS.

JOINT FILLER:
ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1057.2.4, EXCEPT AS NOTED.

NOTE: OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY LINES INDICATE NEW WORK.
TRAFFIC OVER STRUCTURE TO BE MAINTAINED DURING CONSTRUCTION, SEE SHEET NO. 3.
CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW STEEL.

THE * DIAMETER RESIN ANCHOR SYSTEMS SHALL HAVE A MINIMUM ULTIMATE PULLOUT STRENGTH OF ** LBS. IN CONCRETE WITH FC'= 4000 PSI, SEE SPECIAL PROVISIONS.

* BAR SIZE	** PULLOUT
5/8"	15,500
3/4"	20,400
1"	33,600

FINAL QUANTITIES

ITEM		SUBSTR.	SUPERSTR.	TOTAL
PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE	LUMP SUM			1
REMOVAL OF EXISTING BRIDGE DECK	SQ. FT.		48237	48237
CLASS 1 EXCAVATION	CU. YD.	1462.5		1462.5
CLASS 2 EXCAVATION	CU. YD.	331.0		331.0
STRUCTURAL STEEL PILES (10")	LIN. FT.	652		652
STRUCTURAL STEEL PILES (12")	LIN. FT.	469		469
PRE-BORE FOR PILING	LIN. FT.	294		294
PILE POINT REINFORCEMENT	EACH	10		10
CLASS B CONCRETE (SUBSTR.)	CU. YD.	992		992
SLAB ON STEEL	SQ. YD.		8339	8339
SAFETY BARRIER CURB	LIN. FT.		2133	2133
STRIP SEAL EXPANSION DEVICE	LIN. FT.		140	140
REINFORCING STEEL (BRIDGES)	LB.	121740		121740
REINFORCING STEEL (EPOXY COATED)	LB.	2240		2240
FABRICATED STRUCTURAL CARBON STEEL (PLATE GIRDER)	LB.		82735	82735
SLAB DRAINS	EACH		120	120
EXISTING DIAPHRAGM CONNECTIONS TO FLANGES	LUMP SUM			1
Contingent Item				
50501 Modify Fabricated Girders	F.A.		6331.53	6331.53
50502 Epoxy Reinf. steel, Slab	LB.		7010	7010
50503 Expansion Device Repair	L.S.			1
50504 Modify Expansion Plates	L.S.			1
50505 Expansion Joint Maintenance	L.S.			1
50506 Crevice Concrete	C.Y.	0.9		0.9
50508 Foundation Test Holes	L.F.	64		64
50509 Median Expansion Joint Repair	L.S.		1	1
50507 Class I Excavation +25%	C.Y.	1		1
50510 Plate Girder Modification	L.S.		1	1

Note: Conc. above upper const. joint in bk. wall @ Abut. #1 (E.&W.B.L.) is included with Cl. B (substruct.) quantities.
All conc. above lower const. joint in Abut #5 (E.&W.B.L.) is included with superstruct. quan.
All reinf. in Abut. #1 (E.&W.B.L.) is included with substruct. quantities.
All reinf. in Abut. #5 (E.&W.B.L.) is included with superstruct quantities.
* Saftey Barr. Cb. shall be slip-form-option.

ESTIMATED QUANTITIES FOR ALTERNATE SLABS

TYPE OF SLABS	SLAB ON STEEL		
	REINF. (LBS.)		CONC. (CU. YDS.)
	EPOXY	PLAIN	
CAST-IN-PLACE CONVENTIONAL FORMS 719830 ⚠	712820	5910	2112.1
~~STAY IN PLACE FORMS~~ ***	~~712820~~	~~5910~~	~~1984.8~~ **

NOTE: THE TABLE OF ESTIMATED QUANTITIES FOR ALTERNATE SLABS REPRESENTS THE QUANTITIES USED BY THE STATE IN PREPARING THE COST ESTIMATE FOR CONCRETE SLABS. VARIATIONS MAY BE ENCOUNTERED IN THESE ESTIMATED QUANTITIES BUT THESE VARIATIONS CANNOT BE USED FOR AN ADJUSTMENT IN THE CONTRACT UNIT PRICE PER SQUARE YARD OF ALTERNATE SLAB USED.
SEE SPECIAL PROVISIONS FOR ALTERNATE METHODS OF FORMING SLABS.
~~** DOES NOT INCLUDE CONCRETE REQUIRED TO FILL CORRUGATION OF S.I.P. FORMS.~~
~~*** DOES NOT INCLUDE REINFORCING BARS USED AS BAR SUPPORTS.~~

HYDROLOGIC DATA

DRAINAGE AREA	= 106.7 SQ. MI. (LT. HILLY)
DESIGN DISCHARGE	= 32,000 CFS (FEMA CURVES)
DESIGN HIGH WATER ELEVATION	= 800.2 (100 YEARS)
ESTIMATED BACKWATER	= 0.12 (FT.)

PILE & FOOTING DATA (E.B.L.)

	BENT NO.	1	2	3	4	5
BEARING PILE	PILE TYPE AND SIZE		HP12X53			HP10X42
	NUMBER		12			4
	APPROXIMATE LENGTH FT.		①			~~65~~ ~~68~~
	DESIGN BEARING TONS		62			54
	HAMMER ENERGY REQ'D FT.-LBS.		14,600			11,800
SPREAD FOOTING	FOUNDATION MATERIAL	ROCK		SHALE		
	DESIGN BEARING TONS/SQ. FT.	5.5		6.0	6.0	

Added ⚠2

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.
ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.
MANUFACTURED PILE POINT REINFORCEMENT SHALL BE USED ON ALL PILES IN BENT 5. SEE SPECIAL PROVISION.

① ~~24'-10"~~ 24'-11" LEFT FOOTING
[18"] RIGHT FOOTING
~~17'-10"~~ 17'-11" ⚠2

PILE & FOOTING DATA (W.B.L.)

	BENT NO.	1	2	3	4	5
BEARING PILE	PILE TYPE AND SIZE		HP12X53			HP10X42
	NUMBER		12			6
	APPROXIMATE LENGTH FT.		68			67
	DESIGN BEARING TONS		69			51
	HAMMER ENERGY REQ'D FT.-LBS.		16,200			11,100
SPREAD FOOTING	FOUNDATION MATERIAL	ROCK		SHALE		
	DESIGN BEARING TONS/SQ. FT.	5.5		6.0	6.0	

Added ⚠2

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.
ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.
MANUFACTURED PILE POINT REINFORCEMENT SHALL BE USED ON ALL PILES IN BENT 5. SEE SPECIAL PROVISION.

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⚠ Revised 5/26/94 ⚠ Revised 7/1/94

DETAILED JUNE 1993
CHECKED AUG. 1993

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

STATE	PROJ. NO. Job# 9418097	SHEET NO.
MO.	F.A.I.-435-1(251)	

FINAL PLANS**FINAL PLANS**

① = 4" FILL FACE
① = 6" FRONT FACE
② = 6-#6-D1 @ 8" CTS. FILL FACE
② = 4-#6-D1 @ 12" CTS. FRONT FACE
③ = 3"
④ = 6-#6-D1 @ 6" CTS. FILL FACE
④ = 4-#6-D1 @ 10" CTS. FRONT FACE

NOTE: TOP OF BACKWALL AND EXPANSION DEVICE FOR END BENT NO. 1 SHALL CONFORM TO THE CROWN OF ROADWAY SLAB. BACKWALL ABOVE UPPER CONSTRUCTION JOINT SHALL NOT BE POURED UNTIL THE SUPERSTRUCTURE SLAB HAS BEEN POURED IN THE ADJACENT SPAN.

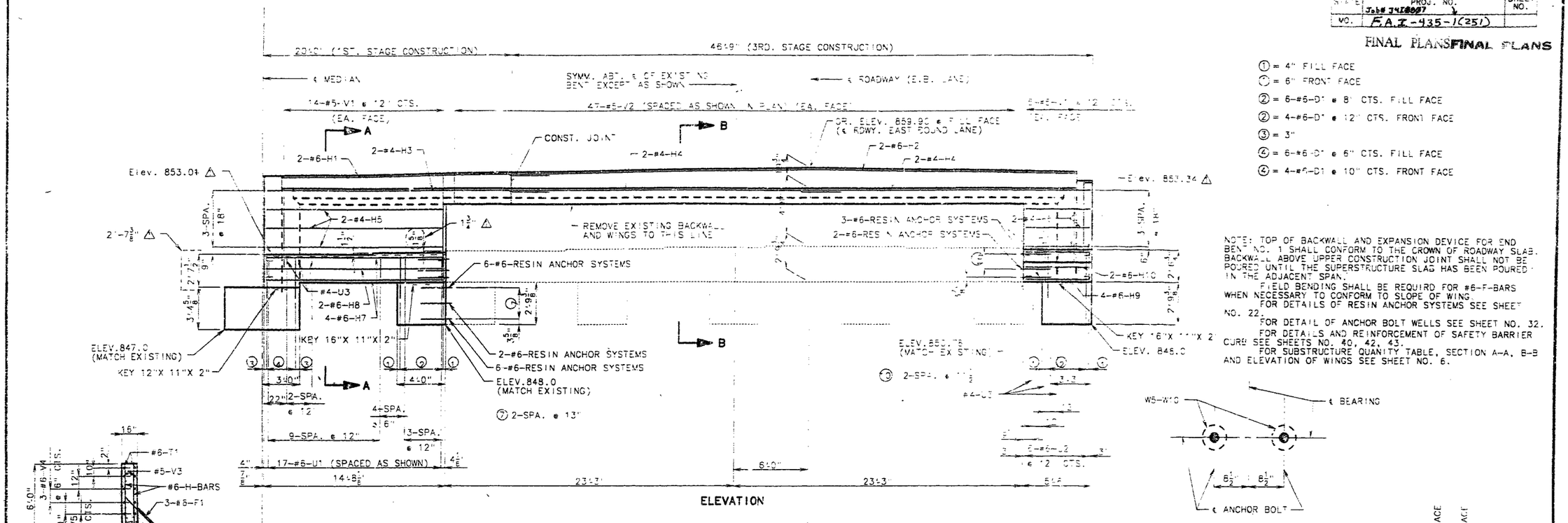
FIELD BENDING SHALL BE REQUIRD FOR #6-F-BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WING.

FOR DETAILS OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.

FOR DETAIL OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB SEE SHEETS NO. 40, 42, 43.

FOR SUBSTRUCTURE QUANITY TABLE, SECTION A-A, B-B AND ELEVATION OF WINGS SEE SHEET NO. 6.



341

REVISED:

△ Revised 5/19/94

DETAILED MAY 1993
CHECKED JUNE 1993

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

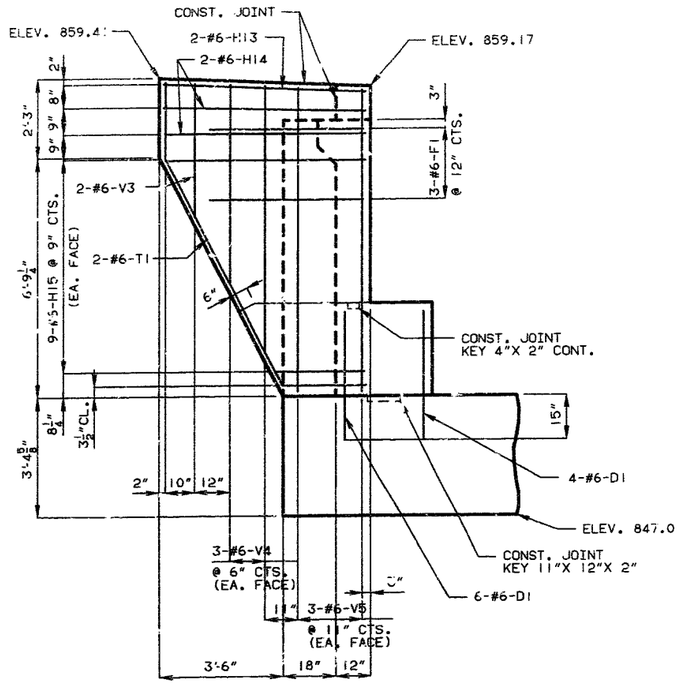
SHEET NO. 5 OF 81 SHEETS

JACKSON COUNTY

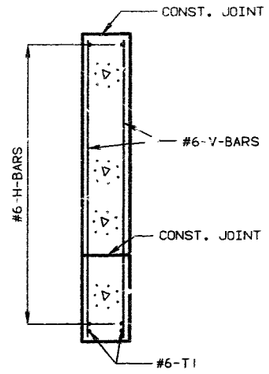
A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	303

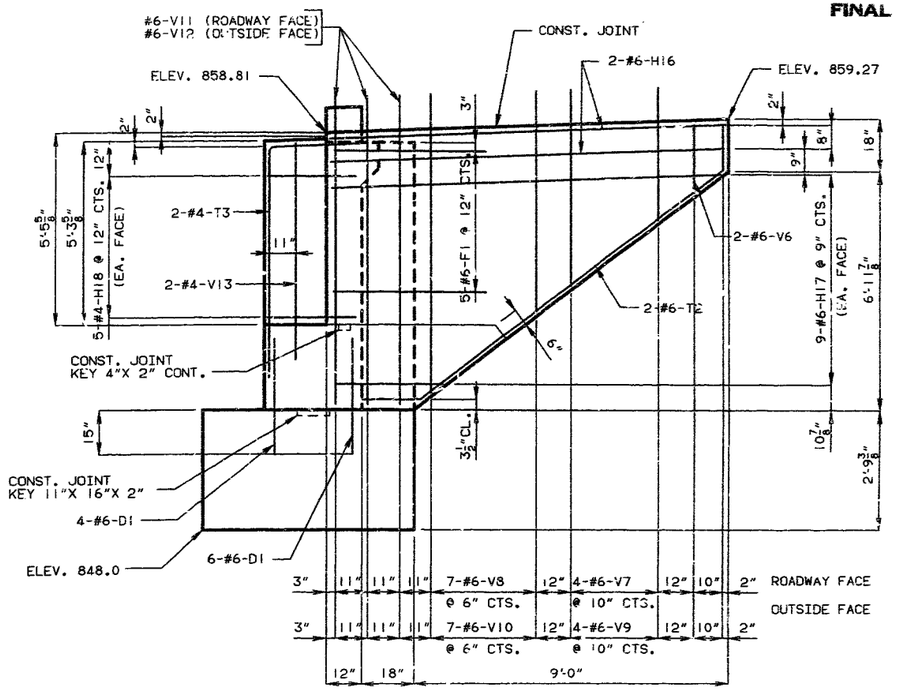
FINAL PLANS



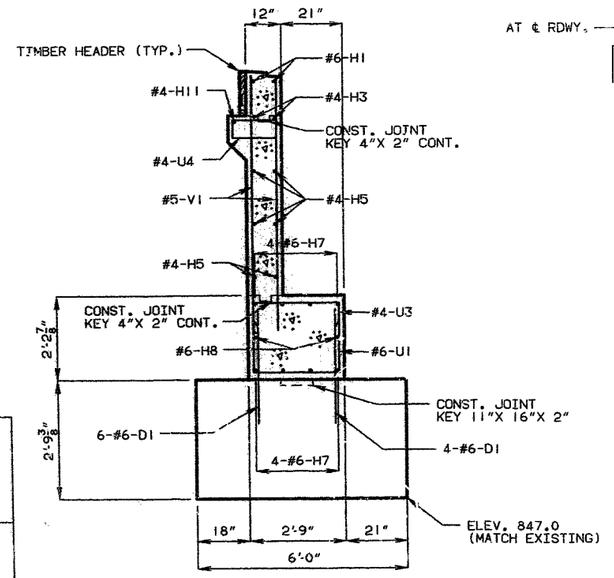
ELEVATION A-A



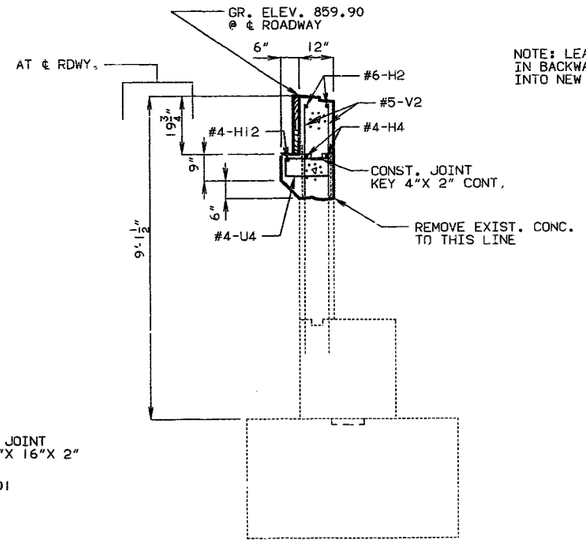
SECTION THRU WING A-A



ELEVATION B-B

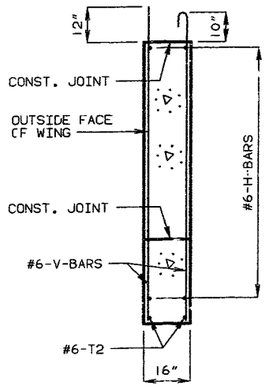


SECTION A-A



SECTION B-B

NOTE: LEAVE EXISTING V-BARS IN BACKWALL EXTEND 2'-4" INTO NEW CONCRETE.



SECTION THRU WING B-B

DETAILS OF END BENT NO. 1
(EAST BOUND LANE)

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	56.0
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	37.9
REINFORCING STEEL (BRIDGES)	LB.	2420
REINFORCING STEEL (EPOXY COATED)	LB.	520
FOUNDATION TEST HOLES	LIN. FT.	12

NOTE: THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 2.

NOTE: THE AREA EXPOSED BY THE REMOVAL OF CONCRETE AND NOT COVERED WITH NEW CONCRETE SHALL BE COATED WITH AN APPROVED BITUMINOUS PAINT. FOR DETAILS OF TIMBER HEADER SEE SHEET NO. 43.

328 342

REVISED

DETAILED MAY 1993
CHECKED JUNE 1993

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

JACKSON COUNTY A-5101R1

STATE	PROJ. NO.	SHEET NO.
MO.	Job # J4I0807 F.A.I. -435-1(25D)	

FINAL PLANS FINAL PLANS

NOTE: TOP OF BACKWALL AND EXPANSION DEVICE FOR END BENT NO. 1 SHALL CONFORM TO THE CROWN OF ROADWAY SLAB. BACKWALL ABOVE UPPER CONSTRUCTION JOINT SHALL NOT BE POURED UNTIL THE SUPERSTRUCTURE SLAB HAS BEEN POURED IN THE ADJACENT SPAN.

FIELD BENDING SHALL BE REQUIRD FOR #6-F-BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WING.

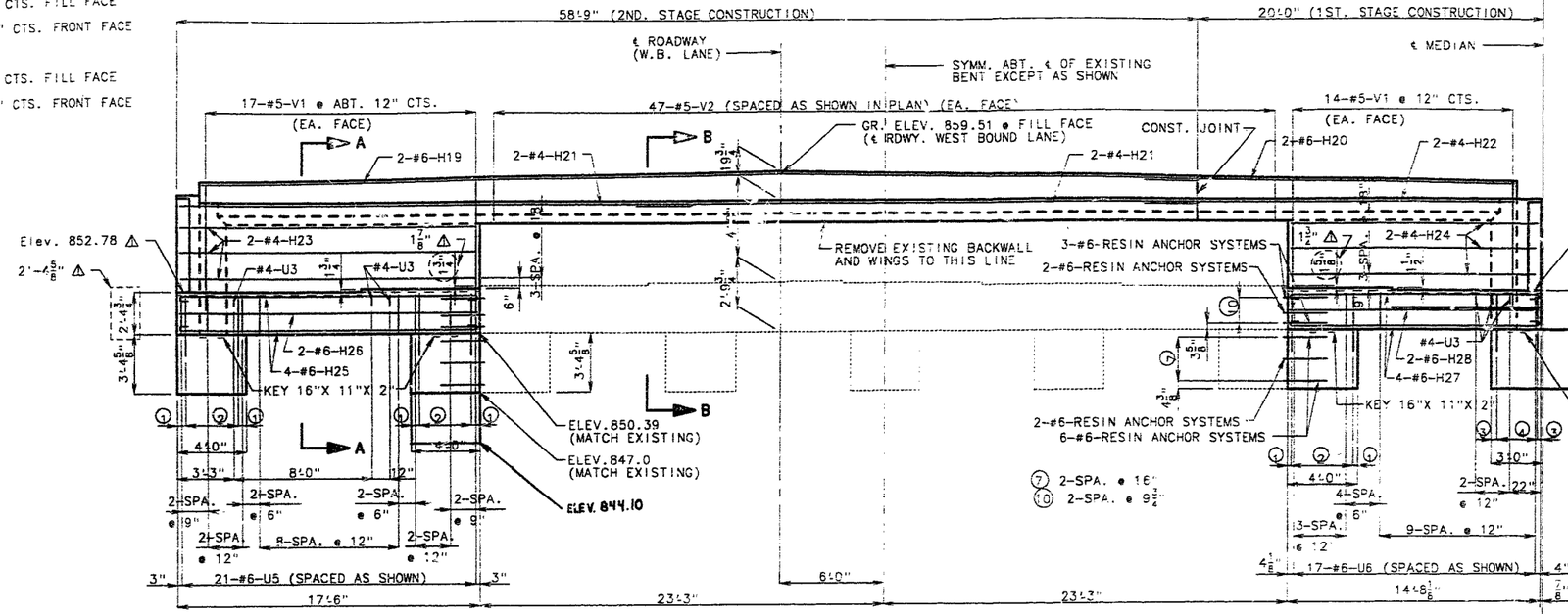
FOR DETAIL OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.

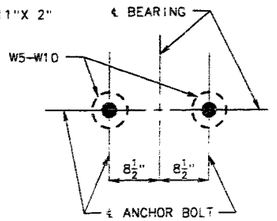
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB SEE SHEETS NO. 41, 42 & 43.

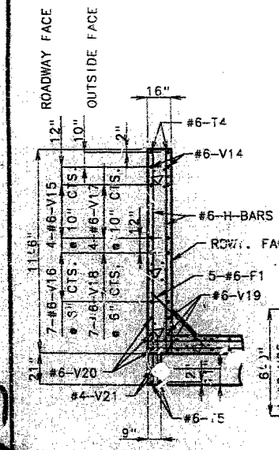
FOR SUBSTRUCTURE QUAINTY TABLE, SECTIONS A-A, B-B AND ELEVATION OF WINGS SEE SHEET NO. 8.

① = 4" FILL FACE
① = 6" FRONT FACE
② = 6-#3-D1 @ 8" CTS. FILL FACE
② = 4-#6-D1 @ 12" CTS. FRONT FACE
③ = 3"
④ = 6-#6-D1 @ 6" CTS. FILL FACE
④ = 4-#6-D1 @ 10" CTS. FRONT FACE

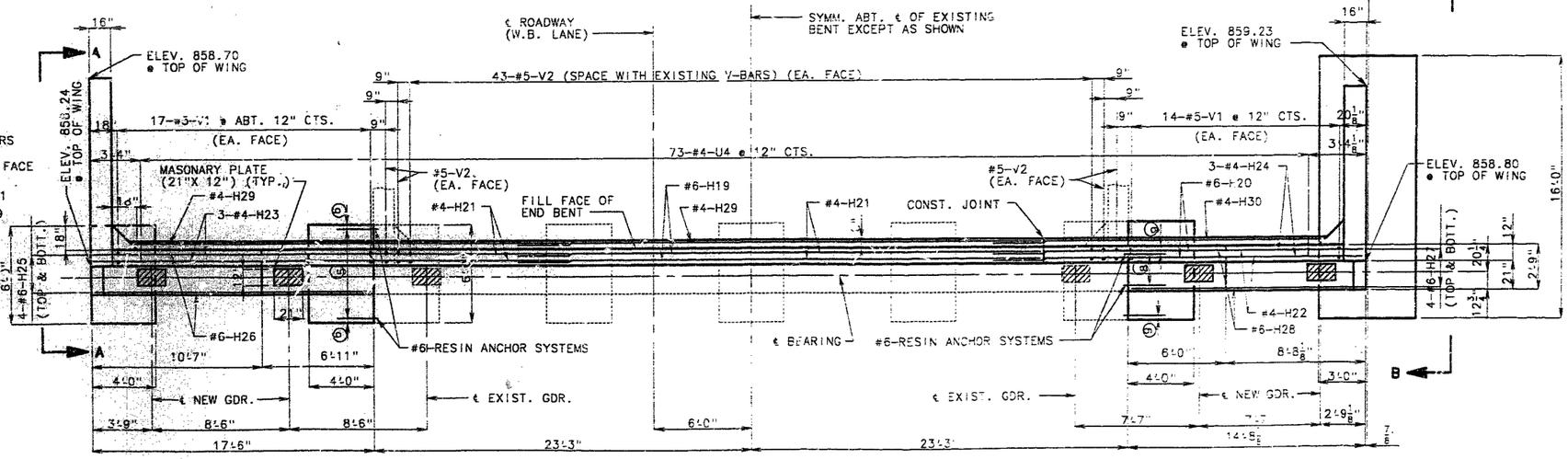


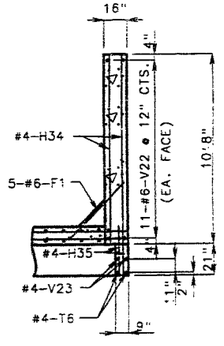


PLAN OF ANCHOR BOLTS



SECTION THRU WING





SECTION THRU WING

⑤ = 6-#6-RESIN ANCHOR SYSTEMS (TOP & BOTT.) @ 12 1/2" CTS.
⑥ = 4 3/4"
⑧ = 3-#6-RESIN ANCHOR SYSTEMS (TOP & BOTT.) @ 12" CTS.
⑨ = 4 1/2"

△ Revised 5/19/94

REVISED

DETAILED APRIL 1993
CHECKED JUNE 1993

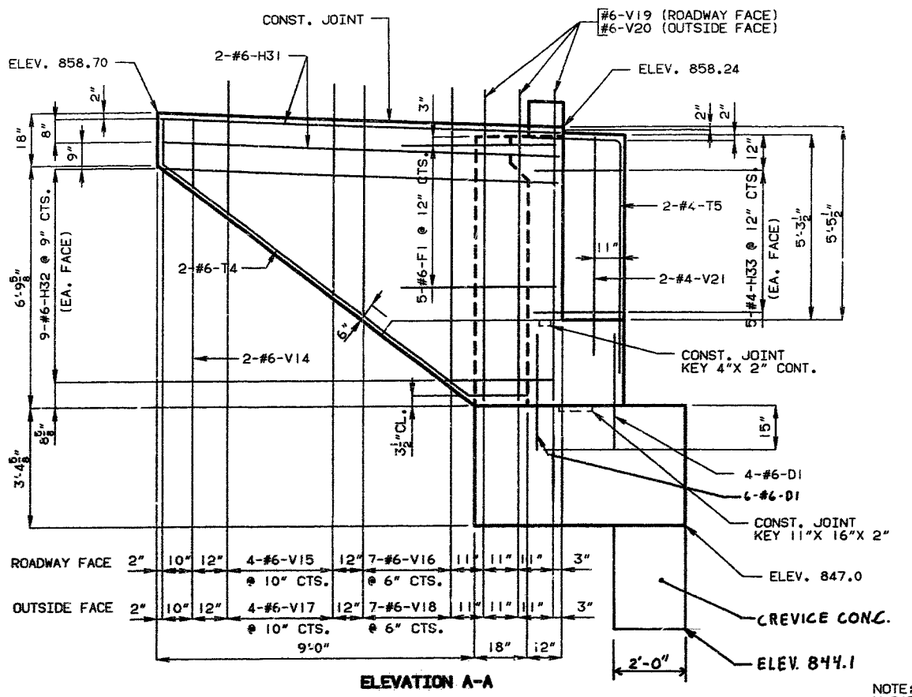
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

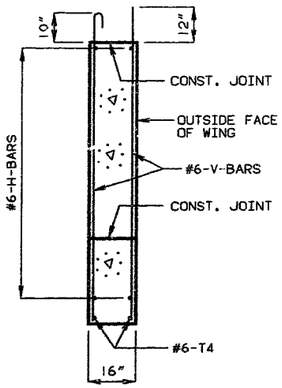
A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	305

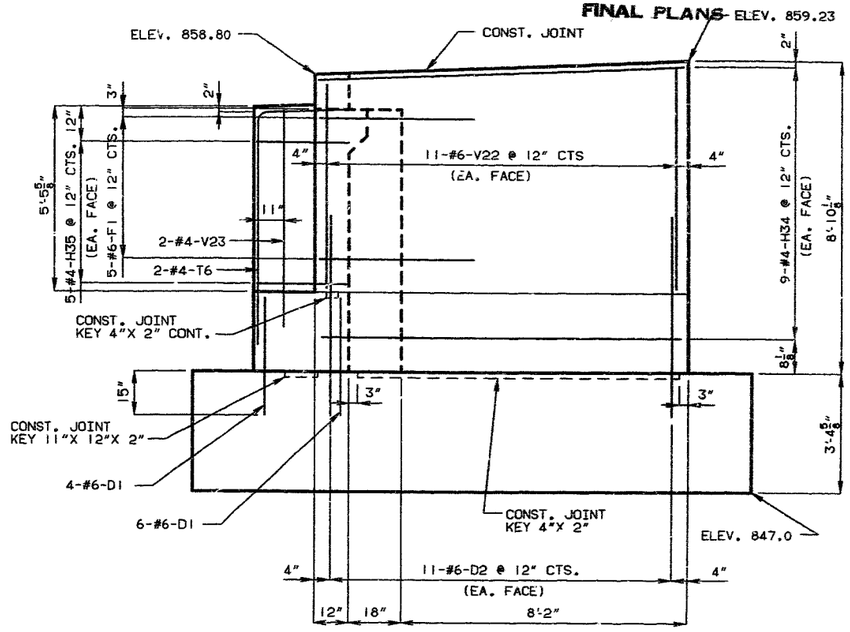
FINAL PLANS



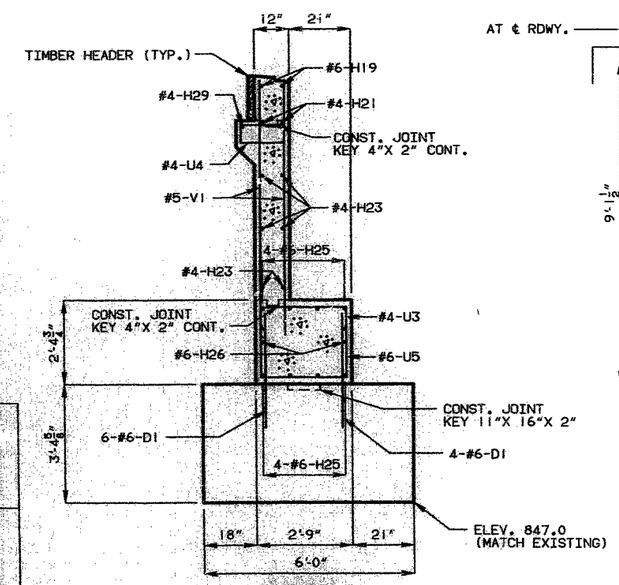
ELEVATION A-A



SECTION THRU WING A-A

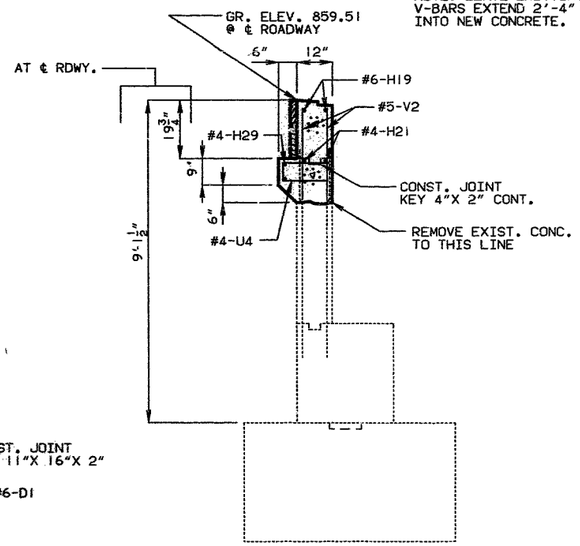


ELEVATION B-B

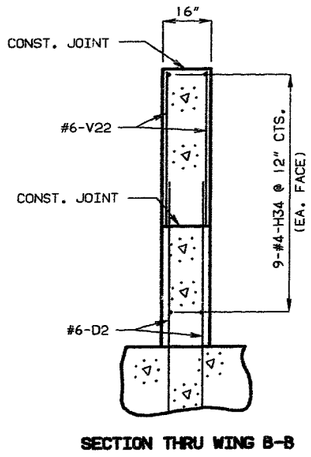


SECTION A-A

NOTE: LEAVE EXISTING V-BARS EXTEND 2'-4" INTO NEW CONCRETE.



SECTION B-B



SECTION THRU WING B-B

DETAILS OF END BENT NO. 1
(WEST BOUND LANE)

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	49.5
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	38.6
REINFORCING STEEL (BRIDGES)	LB.	3410
REINFORCING STEEL (EPOXY COATED)	LB.	540
CLASS I +25% EXC.	CU. YD.	1.0
CREVICE CONC.	CU. YD.	0.9
FOUNDATION TEST HOLES	L. F.	20

NOTE: THE AREA EXPOSED BY THE REMOVAL OF CONCRETE AND NOT COVERED WITH NEW CONCRETE SHALL BE COATED WITH AN APPROVED BITUMINOUS PAINT.
FOR DETAILS OF TIMBER HEADER SEE SHEET NO. 43.

30-344

REVISED

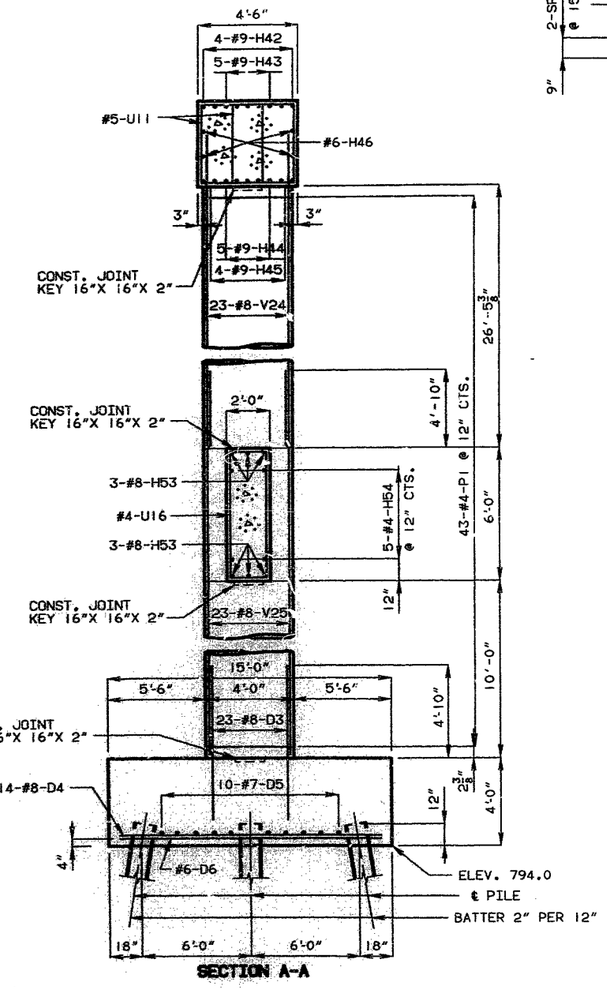
DETAILED MAY 1993
CHECKED JUNE 1993

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

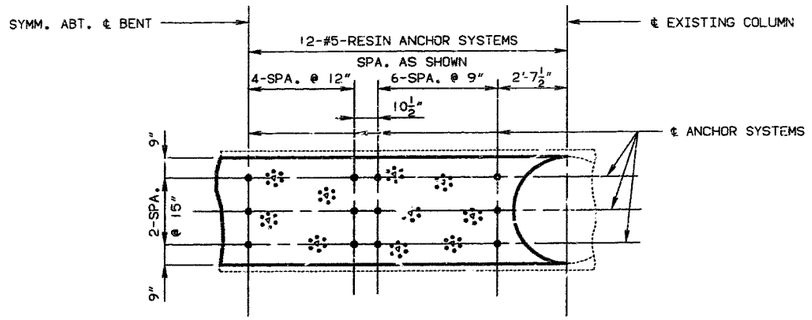
JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MD.	J4L0807	307

FINAL PLANS

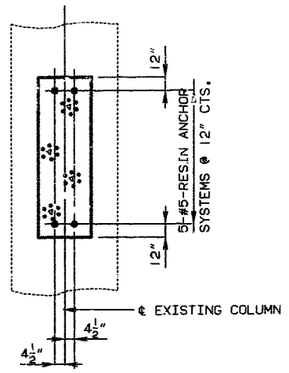


SECTION A-A



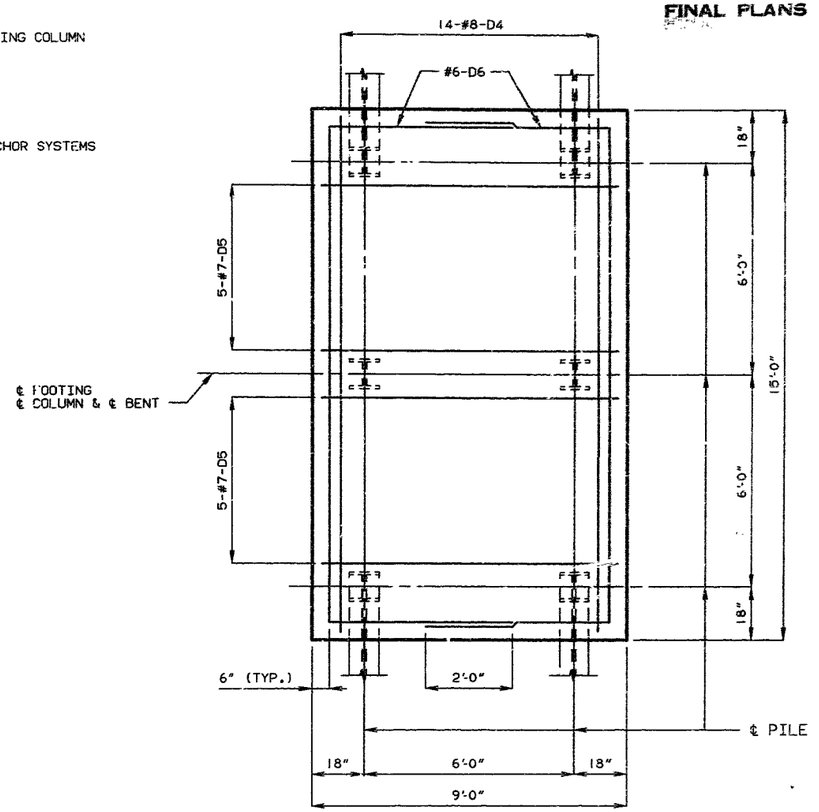
SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



PLAN OF FOOTING

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE SHEET NO. 9.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2

ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	233
STRUCTURAL STEEL PILE (12")	LIN. FT.	265
PRE-BORE	LIN. FT.	156
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	114.5
REINFORCING STEEL (BRIDGES)	LBS.	14160

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

REVISED:

DETAILED JUNE 1993
CHECKED JULY 1993

DETAILS OF INTERMEDIATE BENT NO. 2 (E.B.L.)

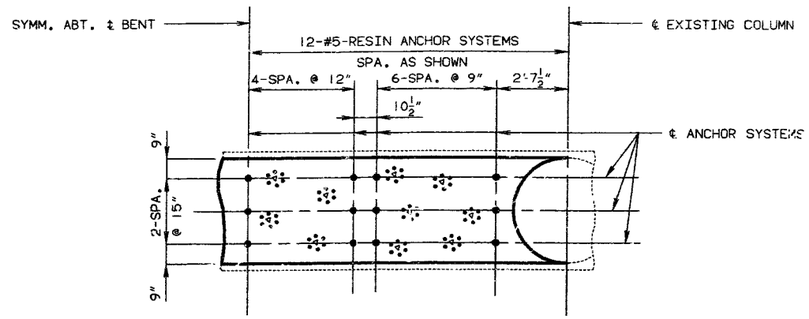
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

A-610R1

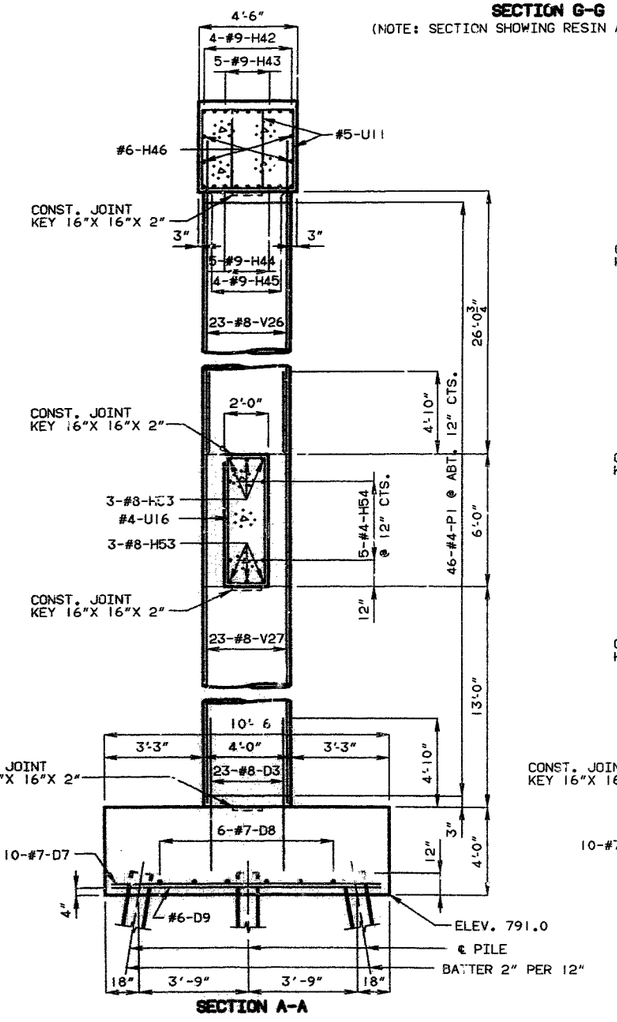
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	309

FINAL PLANS

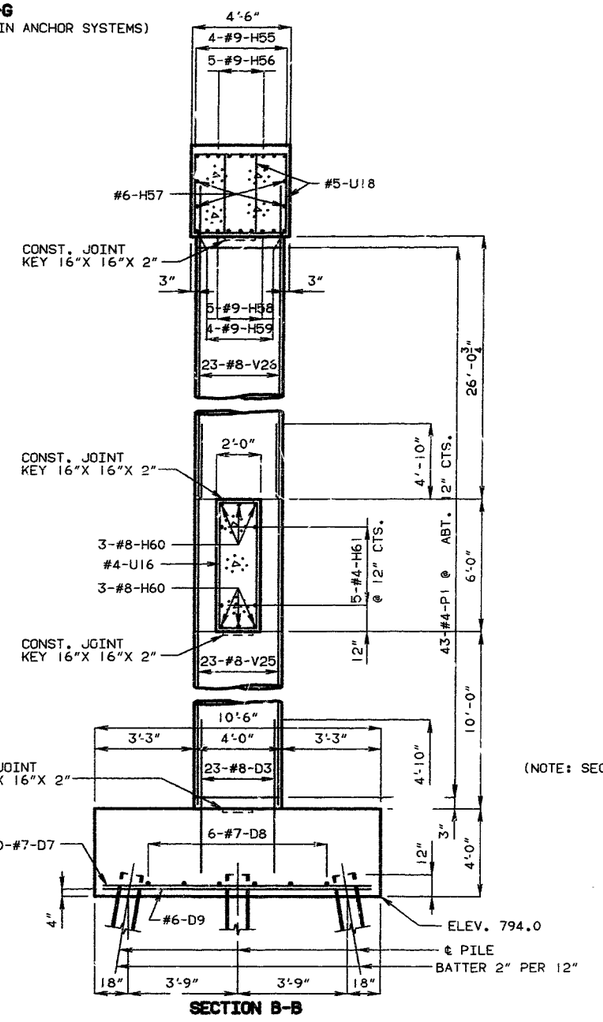


SECTION G-G

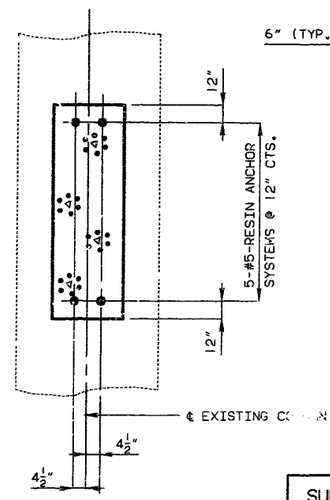
(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION A-A

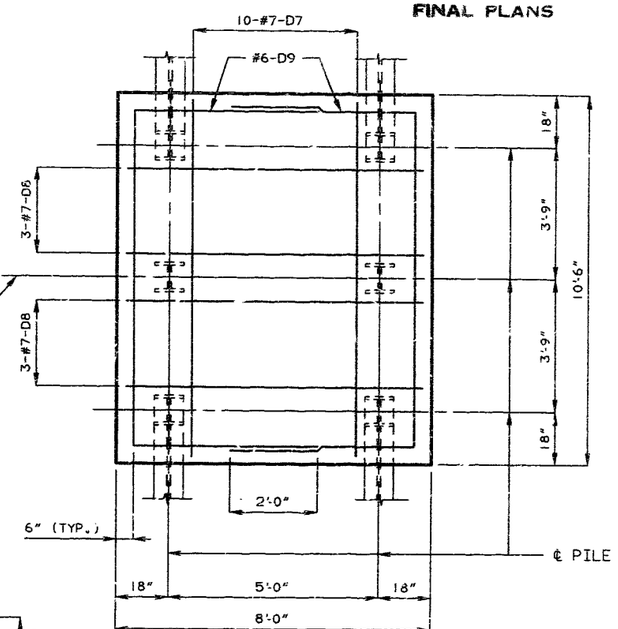


SECTION B-B



SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



PLAN OF FOOTING

NOTE: FOR LOCATION OF SECTIONS A-A, B-B, F-F AND G-G SEE SHEET NO. 11.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	143.5
STRUCTURAL STEEL PILE (12")	LIN. FT.	204
PRE-BORE	LIN. FT.	138
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	109.8
REINFORCING STEEL (BRIDGES)	LBS.	13540

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

337 346

REVISED:

DETAILS OF INTERMEDIATE BENT NO. 2 (W.B.L.)

DETAILED JULY 1993
CHECKED AUG. 1993

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

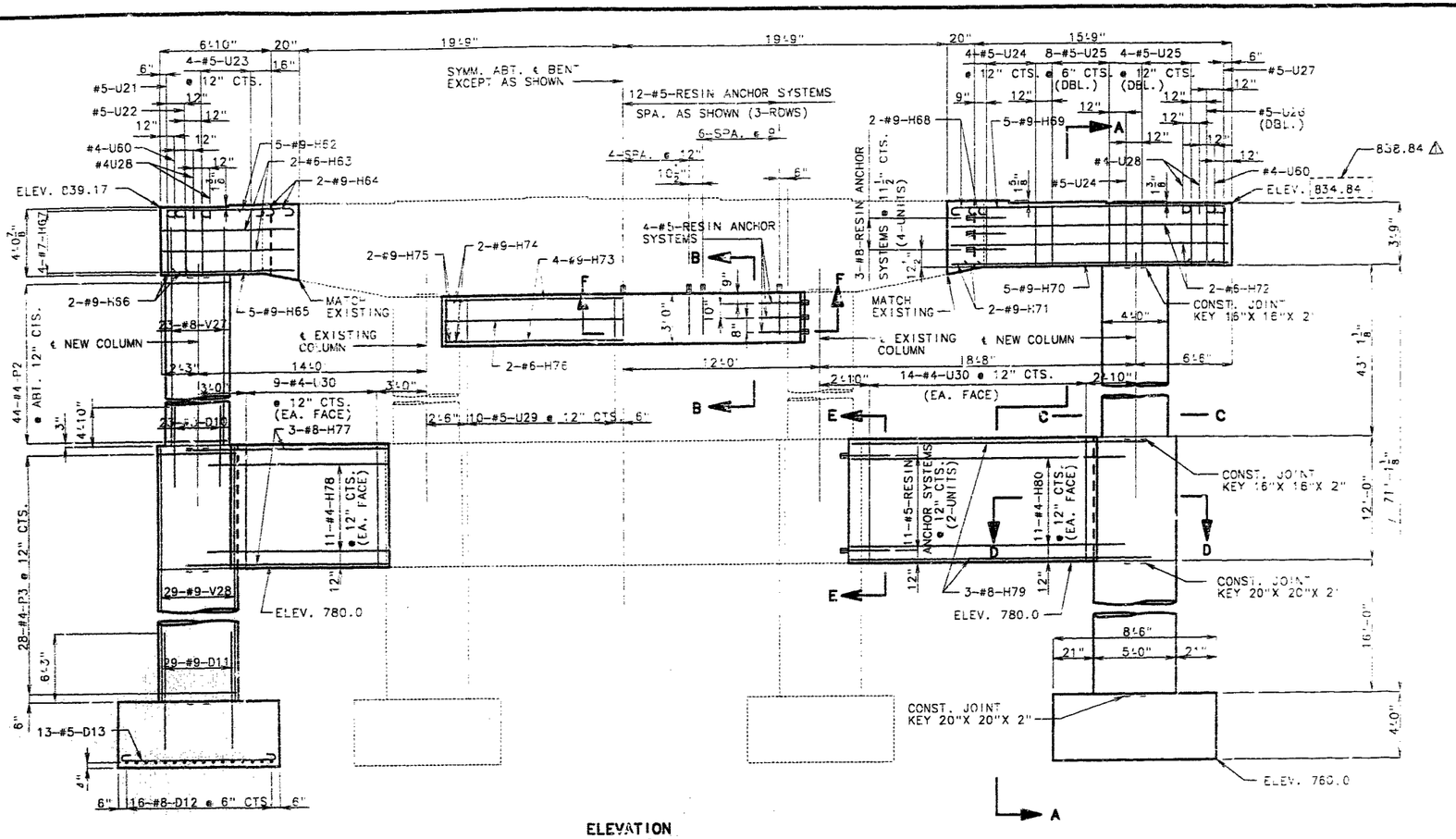
JACKSON COUNTY

A-610Ri

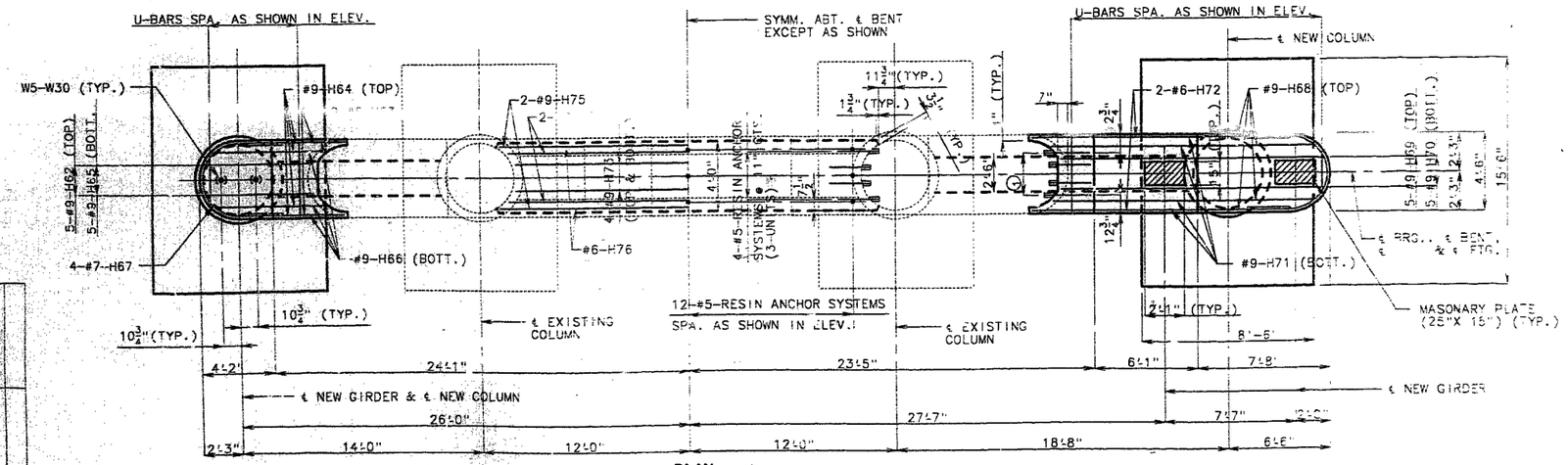
STATE	PROJ. NO.	SHEET NO.
MO.	Job# J7E0887 F.A.I.-435-1(25)1	

FINAL PLANS

FINAL PLANS

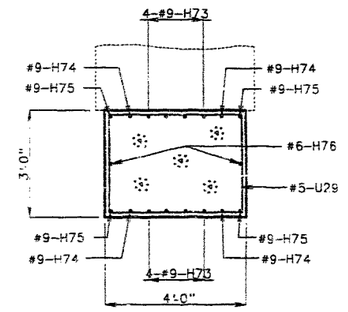


ELEVATION

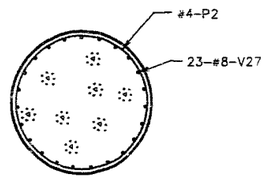


PLAN

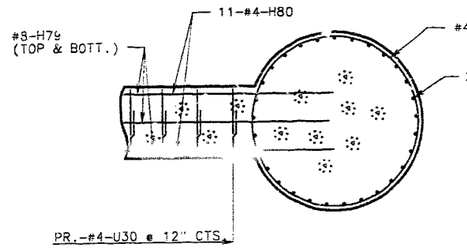
DETAILS OF INTERMEDIATE BENT NO. 3 (E.B.L.)



SECTION B-B



SECTION C-C



SECTION D-D

① 4-#8-RESIN ANCHOR SYSTEMS @ 9½" (3-UNITS)

NOTE: FOR DETAILS OF RESIN ANCHOR SYSTEMS SEE SHEET NO. 22.
FOR SECTION A-A, E-E, F-F AND SUBSTRUCTURE QUANITY TABLE FOR BENT NO. 3 SEE SHEET. NO. 14.
FOR DETAILS OF ANCHOR BOLT WELLS SEE SHEET NO. 32.

⚠ Revised 5/19/94

REVISED

DETAILED JUNE 1993
CHECKED JULY 1993

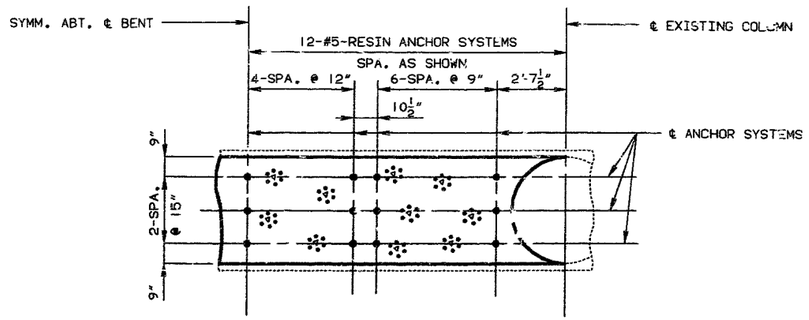
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

A-610R1

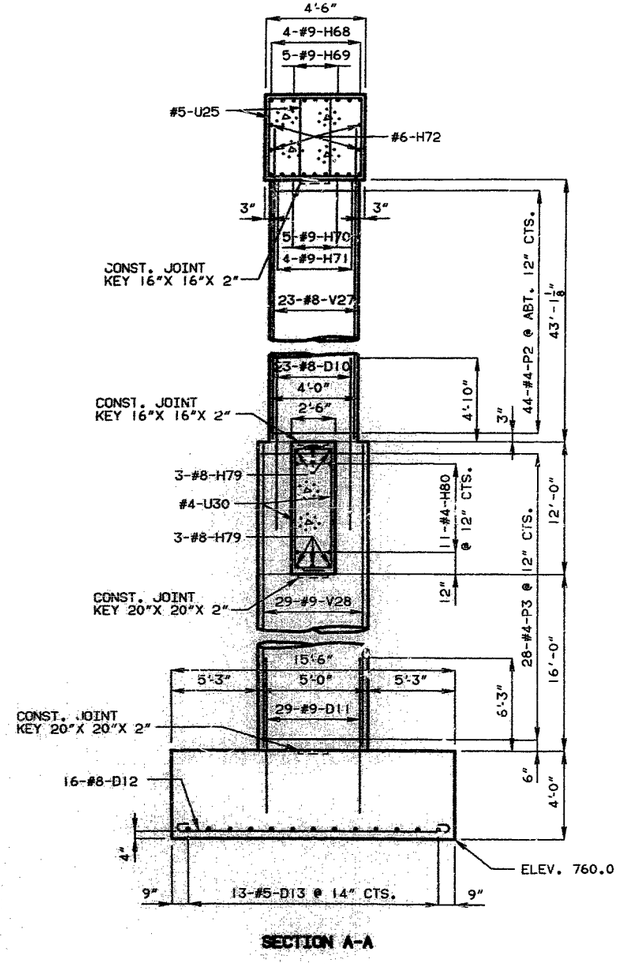
STATE	PROJ. NO.	SHEET NO.
MD.	J4IG887	311

FINAL PLANS

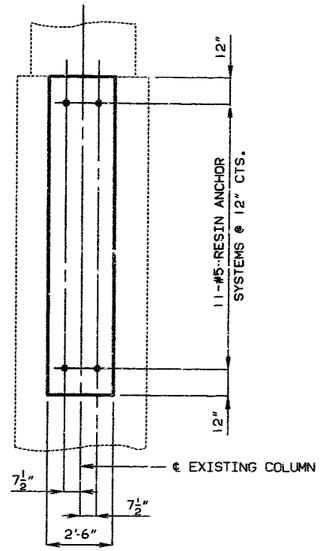


SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION A-A



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE SHEET NO. 13.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	213
CLASS 2 EXCAVATION	CU. YDS.	113
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	169.5
REINFORCING STEEL (BRIDGES)	LBS.	22070
FOUNDATION TEST HOLES	LIN. FT.	8

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILS OF INTERMEDIATE BENT NO. 3 (E.B.L.)

REVISED 3-26-98

DETAILED JUNE 1993
CHECKED JULY 1993

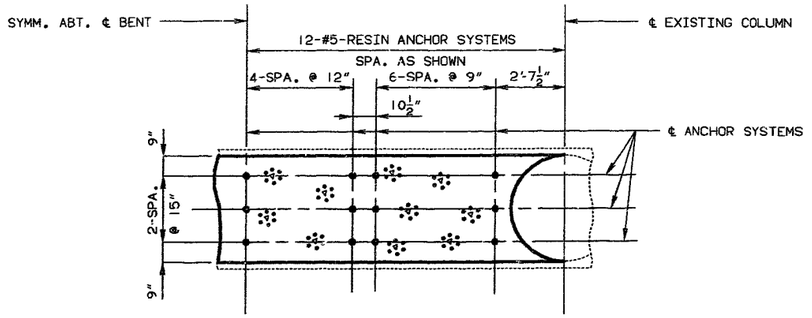
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

A-610R1

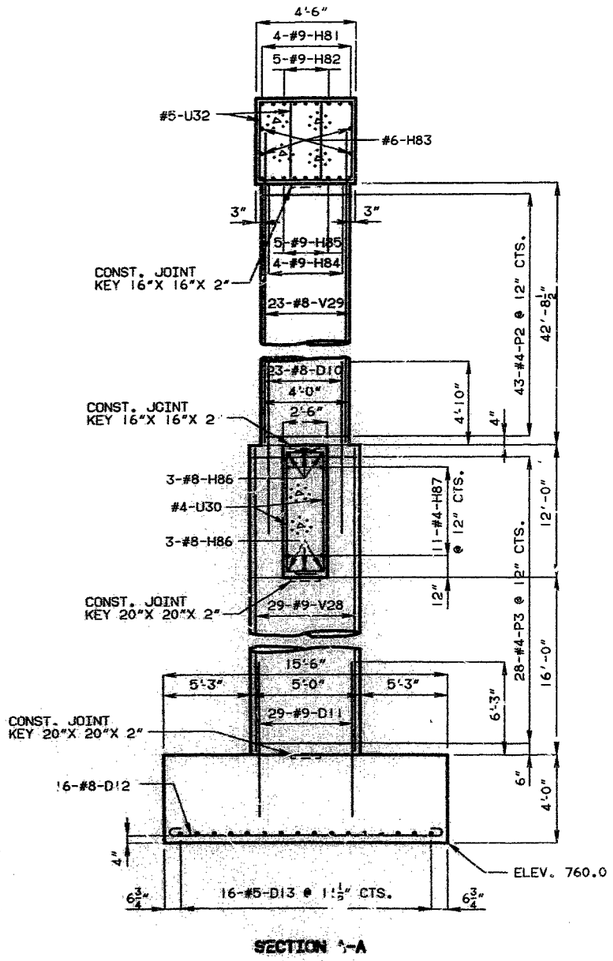
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	3/3

FINAL PLANS

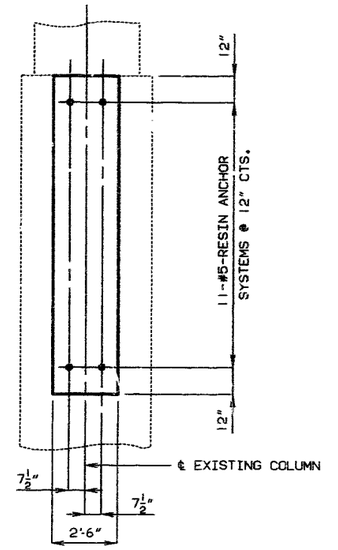


SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION A-A



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE SHEET NO. 15.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	212.5
CLASS 2 EXCAVATION	CU. YDS.	111.0
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	182.0
REINFORCING STEEL (BRIDGES)	LBS.	23880
FOUNDATION TEST HOLES	LIN. FT.	8

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILS OF INTERMEDIATE BENT NO. 3 (W.B.L.)

REVISION

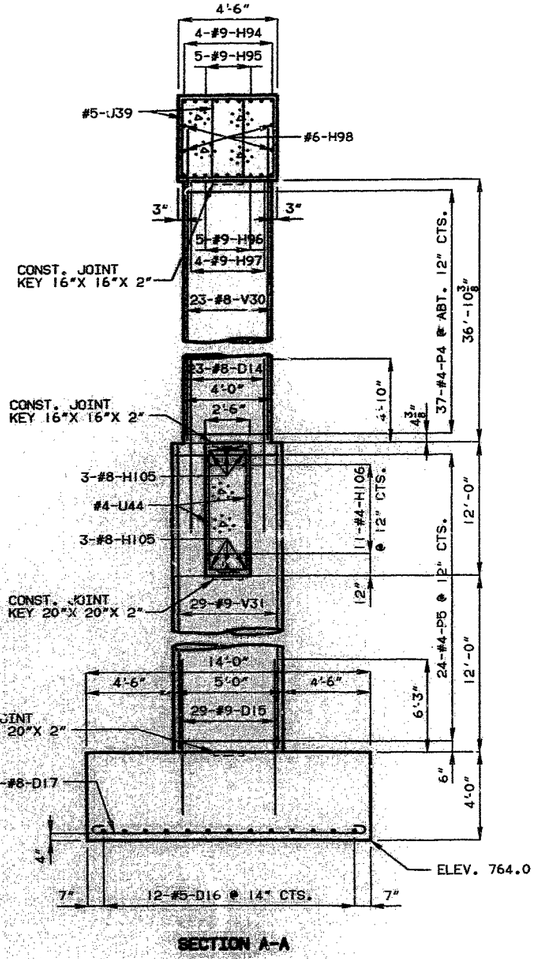
DETAILED AUG. 1993
CHECKED AUG. 1993

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

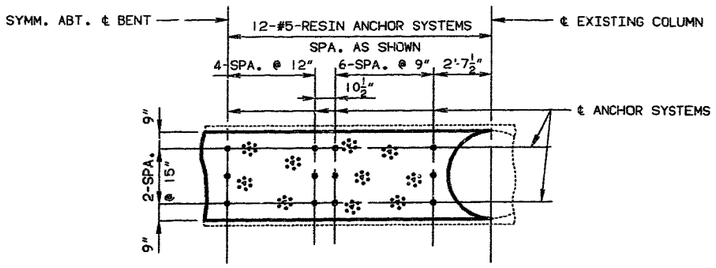
JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.	J9I0867	315

FINAL PLANS

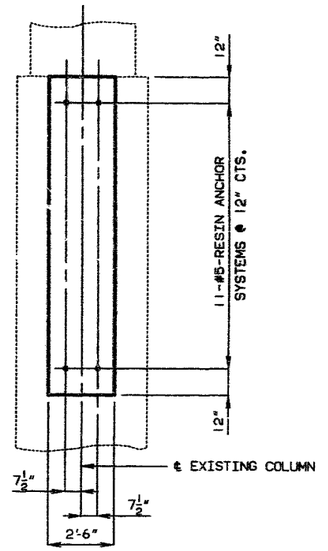


SECTION A-A



SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE, SHEET NO. 17.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 4		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	258.5 ✓
CLASS 2 EXCAVATION	CU. YDS.	52.5 ✓
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	152.0 ✓
REINFORCING STEEL (BRIDGES)	LBS.	20250 ✓
FOUNDATION TEST HOLES	LIN. FT.	8 ✓

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

REVISED

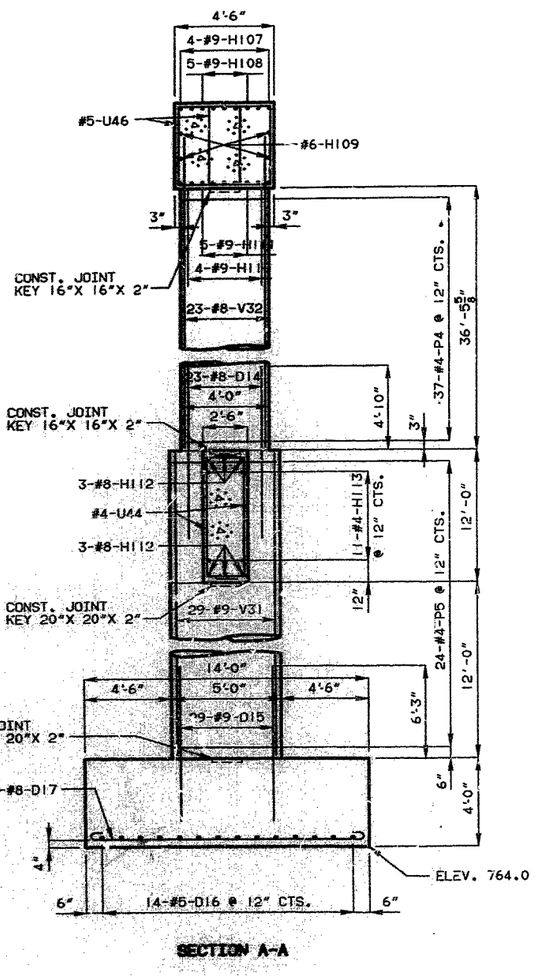
DETAILED JUNE 1993
CHECKED JULY 1993

DETAILS OF INTERMEDIATE BENT NO. 4 (E.B.L.)

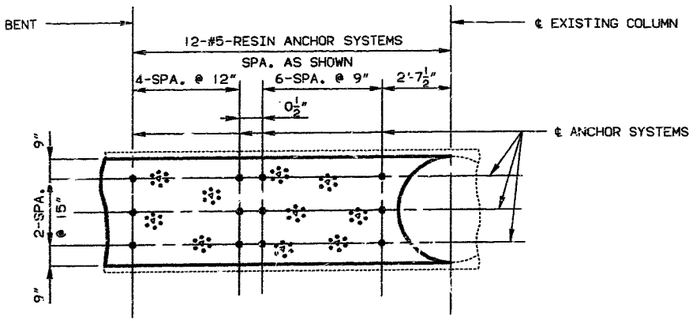
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

STATE	PROJ. NO.	SHEET NO.
NO.	J41P807	317

FINAL PLANS

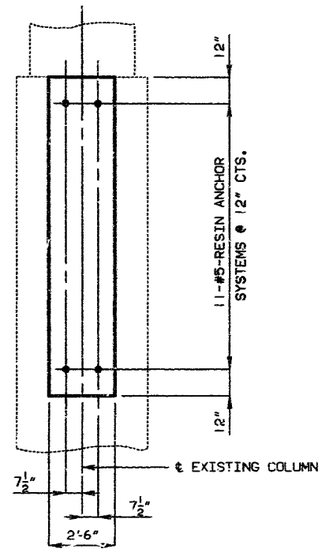


SECTION A-A



SECTION F-F

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)



SECTION E-E

(NOTE: SECTION SHOWING RESIN ANCHOR SYSTEMS)

NOTE: FOR LOCATION OF SECTIONS A-A, E-E AND F-F SEE SHEET NO. 19.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 4		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	252.5
CLASS 2 EXCAVATION	CU. YDS.	54.5
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	164.6
REINFORCING STEEL (BRIDGES)	LBS.	22010
FOUNDATION TEST HOLES	LIN. FT.	8

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILS OF INTERMEDIATE BENT NO. 4 (W.B.L.)

DETAILED AUG. 1993
CHECKED AUG. 1993

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

JACKSON COUNTY A-6101

STATE	PROJ. NO.	SHEET NO.
MO.	Job # J4I0887 F.A.I. -435-1(251)	

FINAL PLANS FINAL PLANS

46'-9" (3RD. STAGE CONST.) 20'-0" (1ST. STAGE CONST.)

ELEVATION

PLAN

PLAN OF BEAM

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

DETAILS OF END BENT NO. 5
(EAST BOUND LANE)

NOTE: FOR ELEVATION A-A, B-B, DETAILS OF RESIN ANCHOR SYSTEMS, KEY, STEEL PILE SPLICE AND SUBSTRUCTURE QUANITY TABLE SEE SHEET NO. 22.
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB SEE SHEETS NO. 40, 41 & 43.
SHIFT REINFORCING STEEL TO CLEAR THE ANGLES OF THE SUPPORT CHAIRS.
FIELD BENDING SHALL BE REQUIRED FOR #6-F BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WING.
△ FIELD DRILL 3-1 1/8" Ø HOLES IN EXISTING GIRDERS. COST OF FIELD DRILLING HOLES IN EXISTING GIRDERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE.
FOR DETAILS OF SUPPORT CHAIR SEE SHEET NO. 29.

△ Revised 5/19/94

DETAILED APRIL 1993
CHECKED JUNE 1993

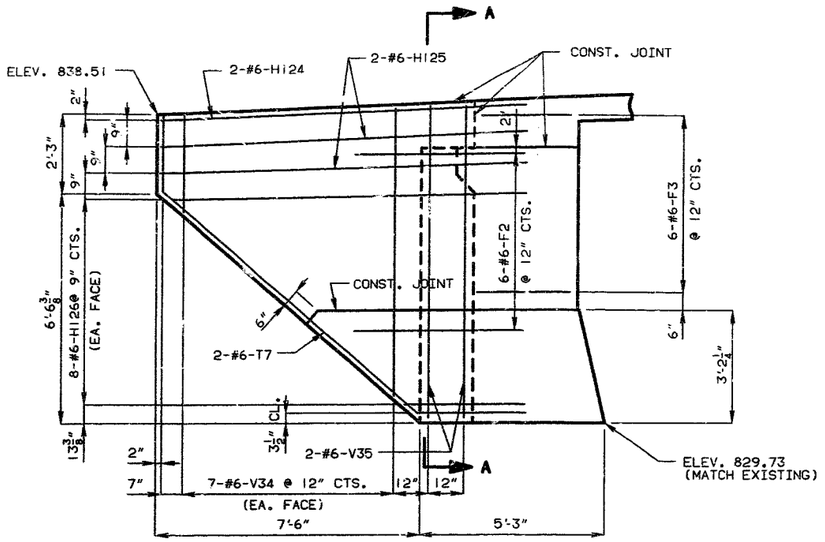
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

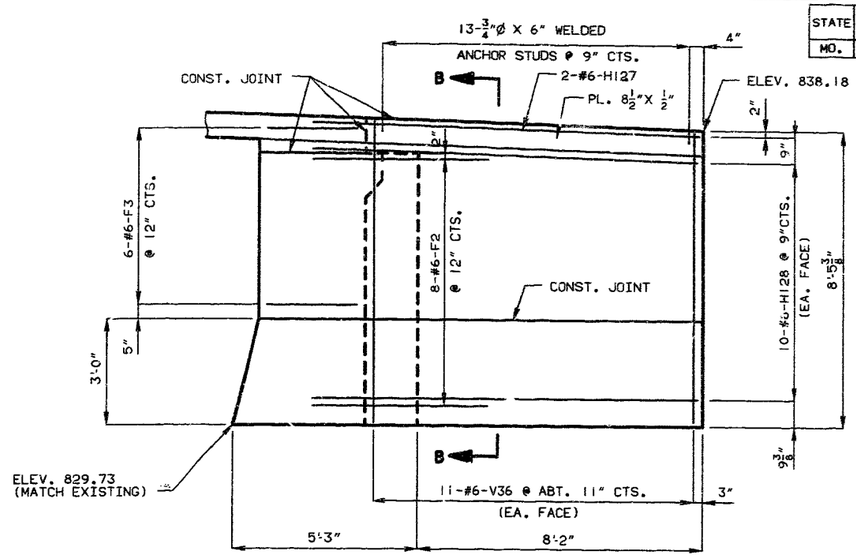
A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	319

FINAL PLANS



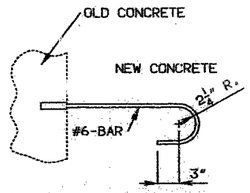
ELEVATION A-A



ELEVATION B-B

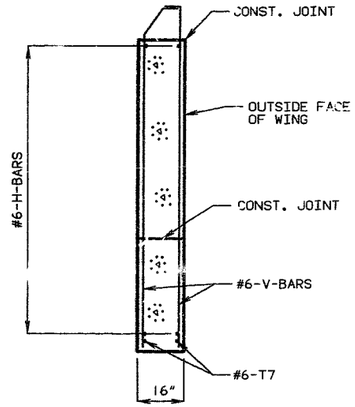
NOTE: COST OF FURNISHING AND INSTALLING RESIN ANCHOR SYSTEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CONCRETE. SEE SPECIAL PROVISIONS FOR ACCEPTABLE RESIN ANCHOR SYSTEMS. THESE RESIN ANCHOR SYSTEMS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS EXCEPT AS MODIFIED BY THE JOB SPECIAL PROVISIONS AND THAT AN EPOXY COATED #6, GRADE 60 REINFORCING BAR PROJECTING 15" (EXCEPT AT APPROACH HAUNCH 7 1/2") INTO NEW CONCRETE SHALL BE USED.

A ① EPOXY COATED STRAIGHT REINFORCING BAR MAY BE SUBSTITUTED FOR A ② HOOKED BAR AS SHOWN ON PLANS.

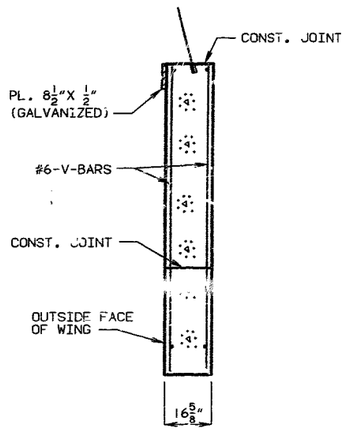


DETAIL OF RESIN ANCHOR SYSTEM

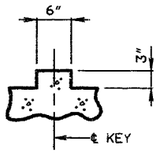
BAR SIZE & LENGTH	
①	②
#5	21"
#6	2'-3"
#8	4'-0"



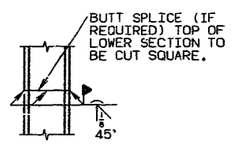
SECTION A-A



SECTION B-B



SECTION THRU KEY



STEEL PILE SPLICE

SUBSTPUCTURE QUANTITY TABLE FOR BENT NO. 5		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	25.0
STRUCTURAL STEEL PILES (10")	LIN. FT.	263
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	10.0
PILE POINT REINFORCEMENT	EA.	4

NOTE: THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 2.

NOTE: CONCRETE DIAPHRAGMS SHALL BE POURED PRIOR TO THE SLAB, ALLOWING SUFFICIENT TIME FOR THE SET OF THE CONCRETE IN THE DIAPHRAGMS.

ALL CONCRETE IN THE END BENT ABOVE TOP OF BEAM AND BELOW TOP OF SLAB SHALL BE CLASS B2.

THE AREA EXPOSED BY THE REMOVAL OF CONCRETE AND NOT COVERED WITH NEW CONCRETE SHALL BE COATED WITH AN APPROVED BITUMINOUS PAINT.

REVISED

DETAILED APRIL 1993
CHECKED JUNE 1993

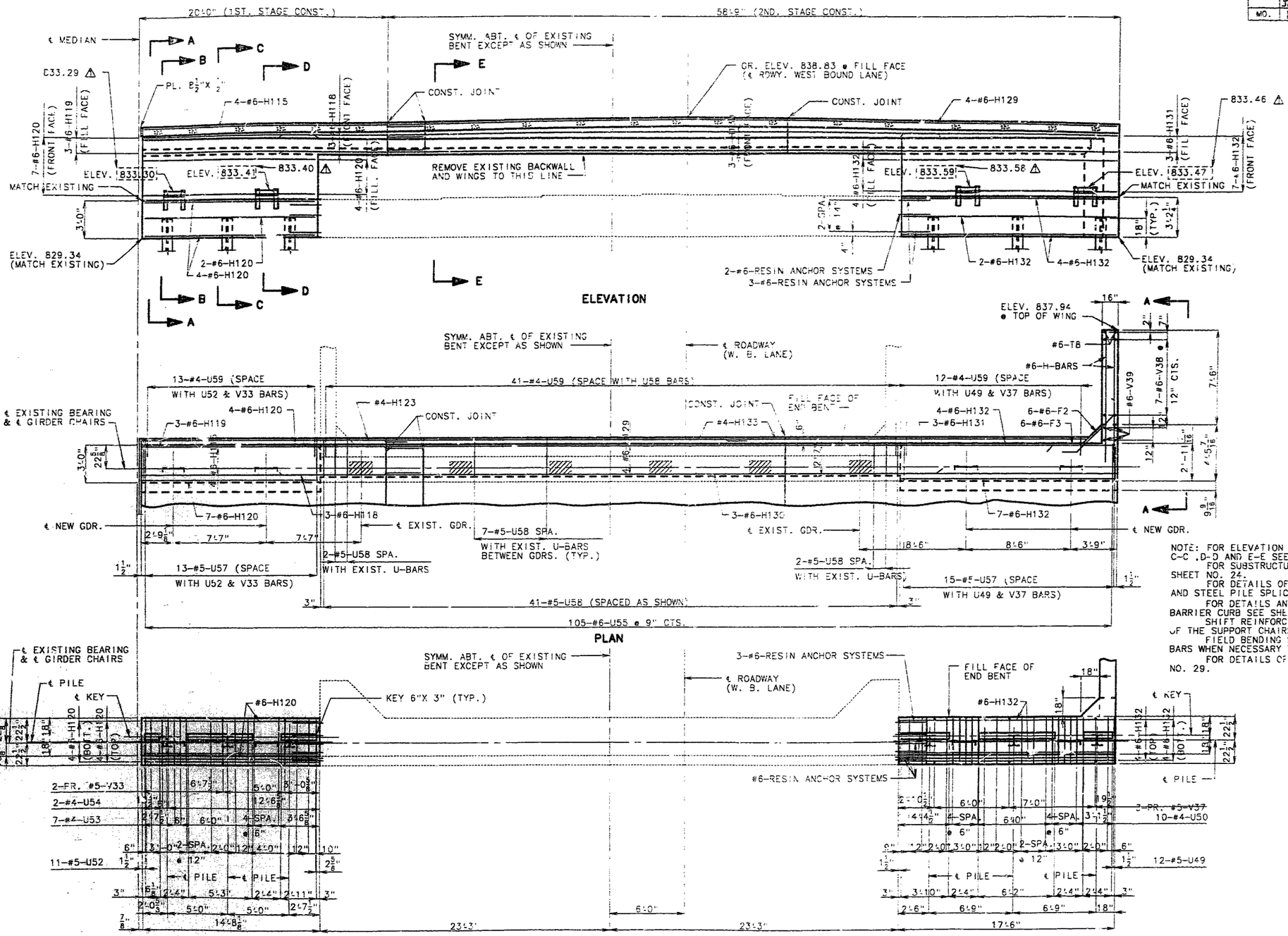
DETAILS OF END BENT NO. 5
(EAST BOUND LANE)

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

JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.	Job# 34EB047 1 F.A.I. - 435 - 1(251)	

FINAL PLANS FINAL PLANS



DETAILS OF END BENT NO. 5

(WEST BOUND LANE)

NOTE: FOR ELEVATION A-A AND SECTION A-A, B-B, C-C ,D-D AND E-E SEE SHEET NO. 24.
FOR SUBSTRUCTURE QUANITY TABLE SEE SHEET NO. 24.
FOR DETAILS OF RESIN ANCHOR SYSTEMS, KEY AND STEEL PILE SPLICE SEE SHEET NO. 22.
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB SEE SHEETS NO. 41, 42 & 43.
SHIFT REINFORCING STEEL TO CLEAR THE ANGLES OF THE SUPPORT CHAIRS.
FIELD BENDING SHALL BE REQUIRED FOR #6-F BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WIN
FOR DETAILS OF SUPPORT CHAIR SEE SHEET NO. 29.

⚠ Revised 5/19/94

DETAILED APRIL 1993
CHECKED JUNE 1993

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

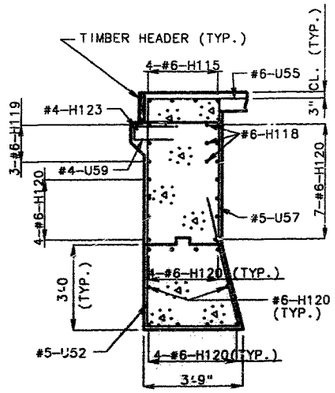
SHEET NO. 23 OF 51.

JACKSON COUNTY

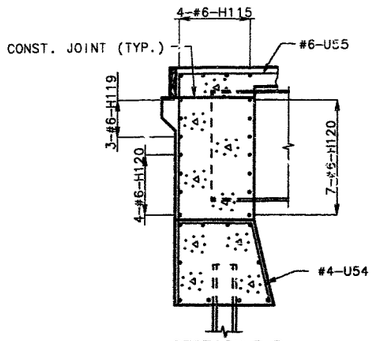
A-610R1

STATE	PROJ. NO.	SHEET NO.
WO.	J41Ø007	321

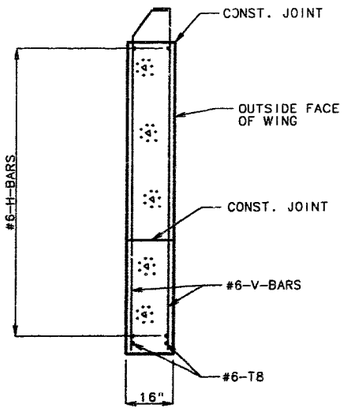
FINAL PLANS



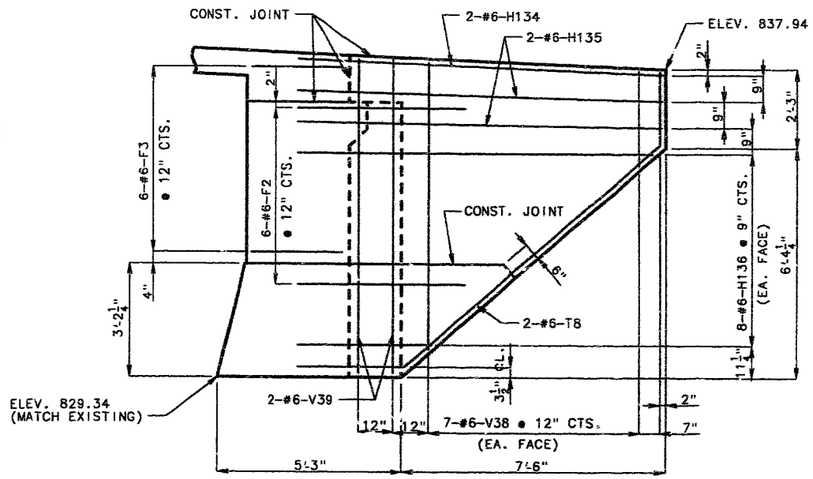
SECTION A-A



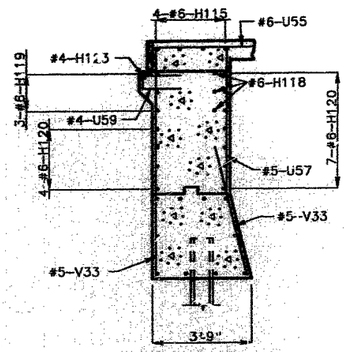
SECTION B-B



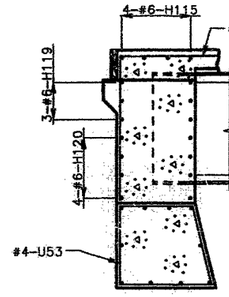
SECTION THRU WING



ELEVATION A-A



SECTION C-C

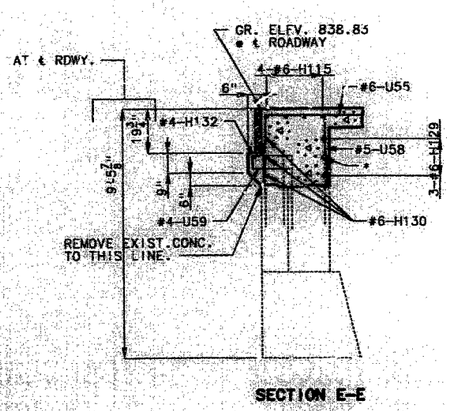


SECTION D-D

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 5		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	19.0 ✓
STRUCTURAL STEEL PILES (10")	LIN. FT.	389 ✓
CLASS B CONCRETE (SUBSTR.)	CU. YDS.	13.1 ✓
PILE POINT REINFORCEMENT	EA.	6 ✓

NOTE: THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 2.

NOTE: CONCRETE DIAPHRAGMS SHALL BE POURED PRIOR TO THE SLAB, ALLOWING SUFFICIENT TIME FOR THE SET OF THE CONCRETE IN THE DIAPHRAGMS.
ALL CONCRETE IN THE END BENT ABOVE TOP OF BEAM AND BELOW TOP OF SLAB SHALL BE CLASS B2.
THE AREA EXPOSED BY THE REMOVAL OF CONCRETE AND NOT COVERED WITH NEW CONCRETE SHALL BE COATED WITH AN APPROVED BITUMINOUS PAINT.
* FIELD DRILL 3-1 1/8" Ø HOLES IN EXISTING GIRDERS. COST OF FIELD DRILLING HOLES IN EXISTING GIRDERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE.



SECTION E-E

DETAILS OF END BENT NO. 5
(WEST BOUND LANE)

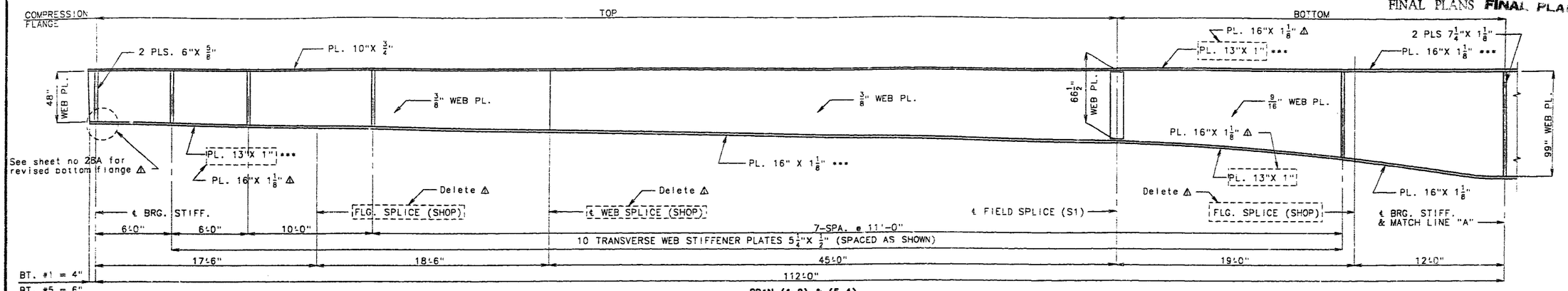
REVISED

DETAILED APRIL 1993
CHECKED JUNE 1993

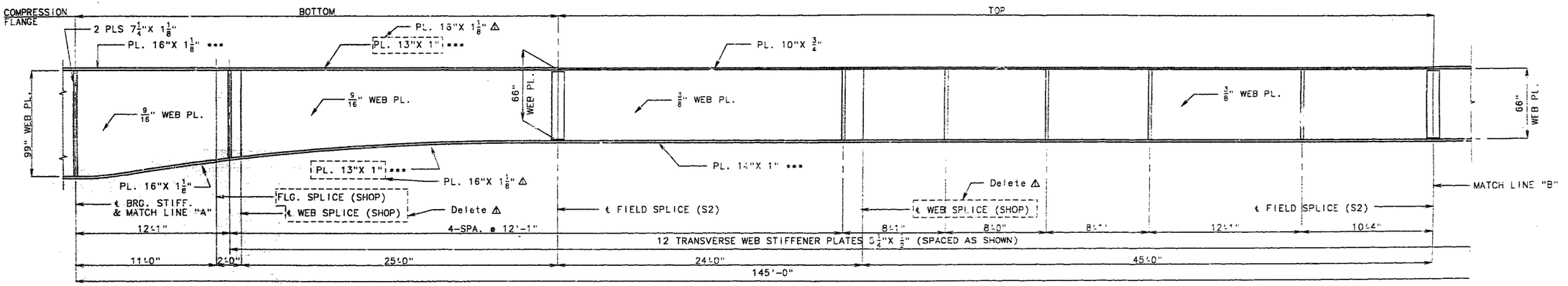
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

STATE	PROJ. NO.	SHEET NO.
MO.	Job # J4P0807 F.A.I. - 435 - 1(251)	

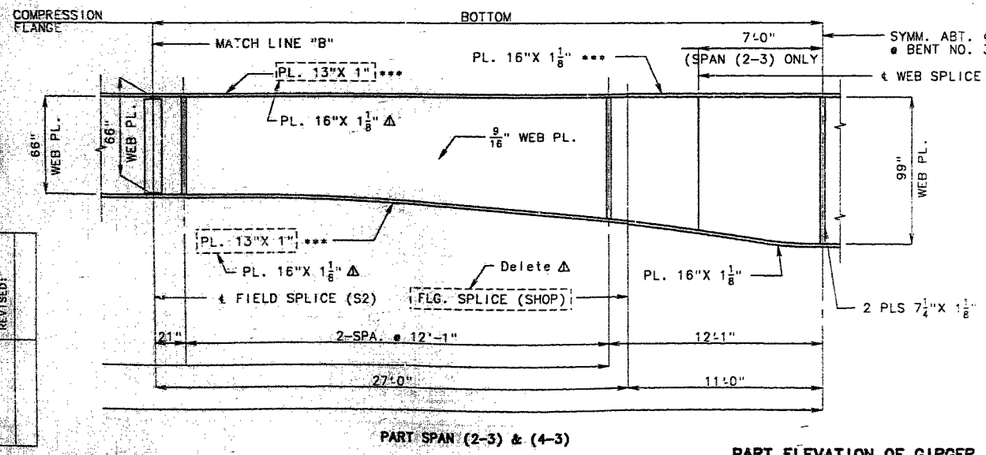
FINAL PLANS **FINAL** PLANS



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

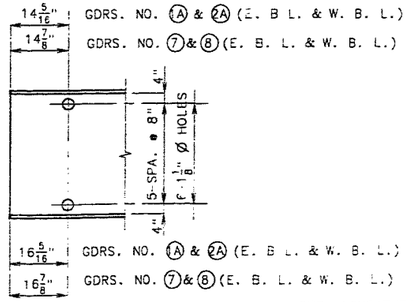


PART SPAN (2-3) & (4-3)

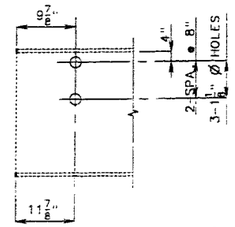


PART SPAN (2-3) & (4-3)

PART ELEVATION OF GIRGER



WEB HOLE DETAIL FOR NEW GIRDERS AT END BENT NO. 5



WEB HOLE DETAIL FOR EXISTING GIRDERS AT END BENT NO. 5

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN PARALLEL TO GRADE AT CROWN OF ROADWAY.
*** INDICATES FLANGE PLATES SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS.
ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES SHALL BE SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS.
PLATE GIRDER SHALL BE FABRICATED TO CONFORM TO THE CAMBER DIAGRAM SHOWN ON SHEET NO. 37 & 38.
TRANSVERSE WEB STIFFENERS SHALL BE LOCATED AS SHOWN IN PLAN OF STRUCTURAL STEEL.
FABRICATED STRUCTURAL STEEL SHALL BE A36, EXCEPT AS NOTED.

◬ Revised 5/19/94

REVISED

DETAILED SEPT. 1992
CHECKED MAY 1993

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

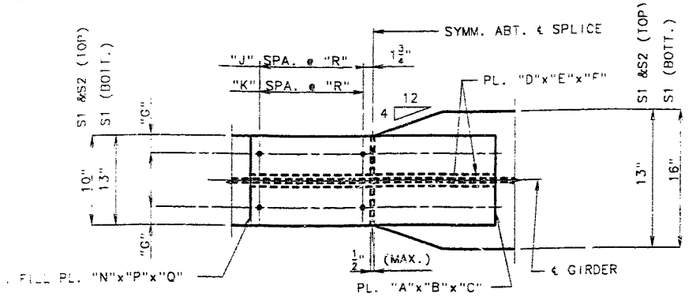
JACKSON COUNTY

A-610R1

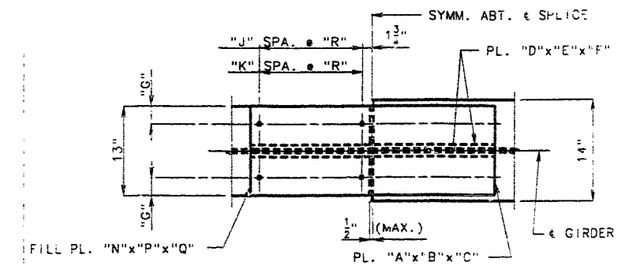
STATE	PROJ. NO.	SHEET NO.
MO.	Job # J4I0887 F.A.I.-435-1(251)	

FINAL PLANS

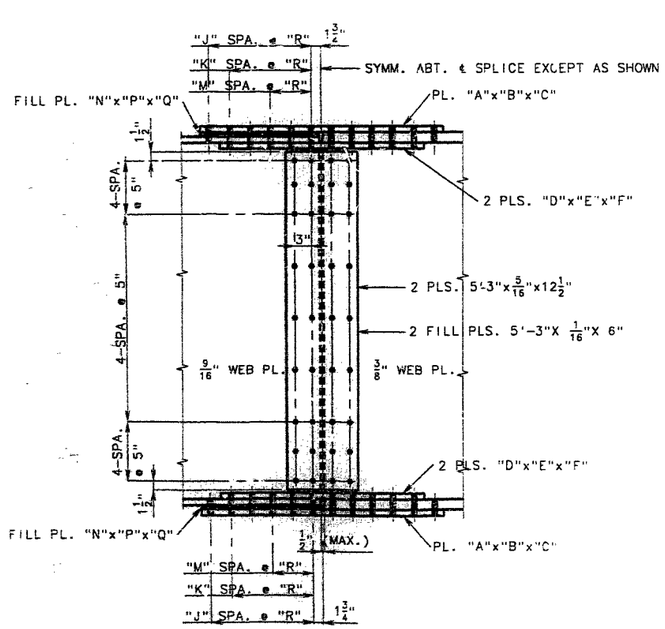
FINAL PLANS



PLAN OF FLANGE
S1 & S2 (TOP) & S1 (BOTT.)

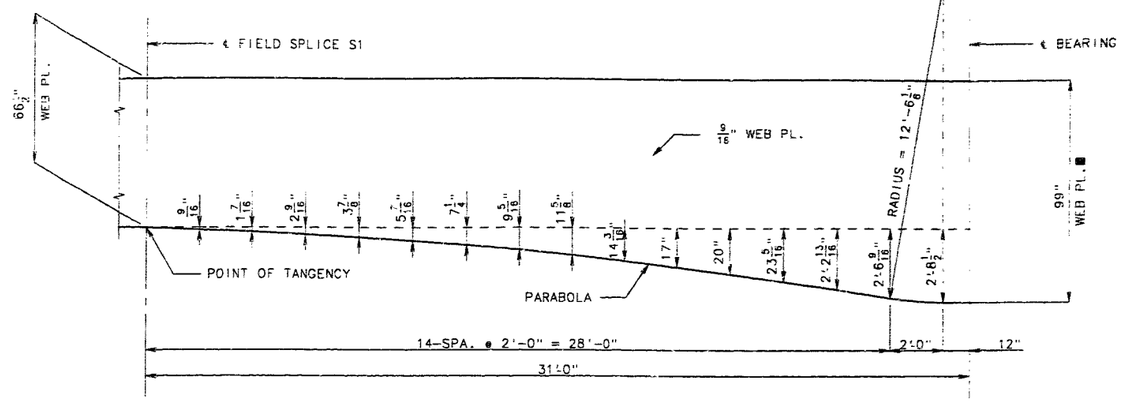


PLAN OF FLANGE
S2 (BOTT.)

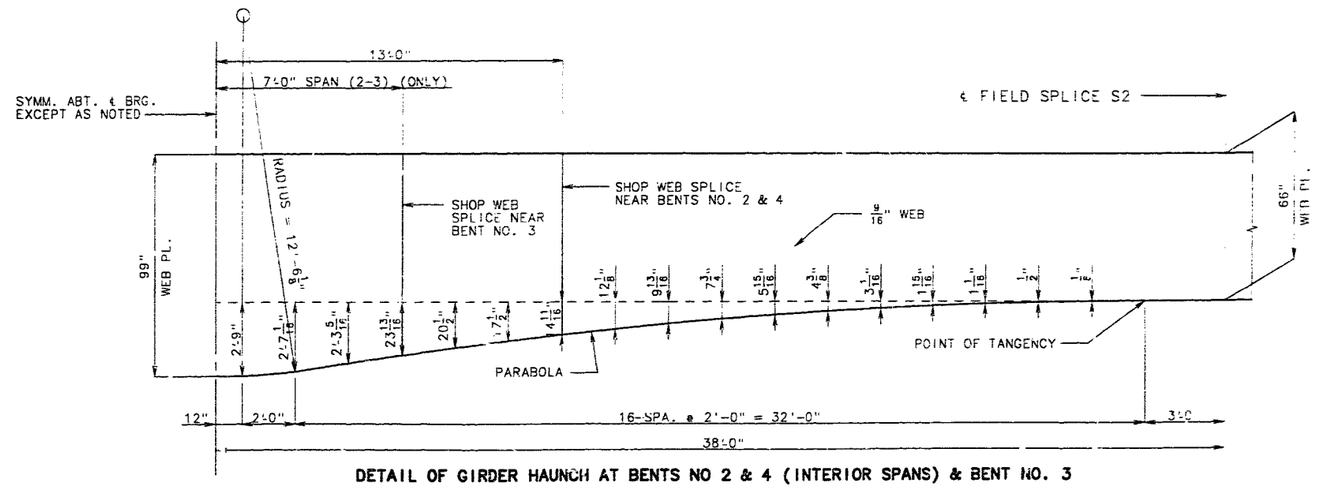


DETAIL OF BOLTED FIELD SPLICE

See sheet no. 28A for Details Of Bolted Field Splice ⚠



DETAIL OF GIRDER HAUNCH AT BENTS NO 2 & 4 (END SPANS)



DETAIL OF GIRDER HAUNCH AT BENTS NO 2 & 4 (INTERIOR SPANS) & BENT NO. 3

SPLICE LOCATION	TABLE OF DIMENSIONS-FIELD SPLICE												
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"J"	"K"	"N"	"P"	"Q"	"R"
S1 & S2 (TOP)	10"	⅜"	18½"	4"	½"	15½"	2"	2	2	10"	¼"	9"	3"
S1 BOTT.	13"	½"	2'-6½"	5½"	5/8"	2'-6½"	2¾"	4	4	13"	⅜"	15"	3"
S2 BOTT.	13"	½"	2'-6½"	5½"	5/8"	2'-6½"	2¾"	4	4	–	–	–	3"

NOTE: USE ⅞" Ø HIGH STRENGTH BOLTS WI H 15/16" REAMED HOLES.
CONTACT SURFACES ARE TO BE BLAST CLEANED IN ACCORDANCE WITH SECTION 712.12.2.1 OF THE STANDARD SPECIFICATIONS.
USE ONE 5'3"X 1/16"X 6" FILL PLATE ON EACH SIDE OF ⅜" WEB.

SPL. PL., PG. 3.42, A36, 1 / A
FIELD SPLICE REVISED:
MAR. 1992

⚠ Revised 5/19/94

DETAILED SEPT.1992
CHECKED MAY 1993

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

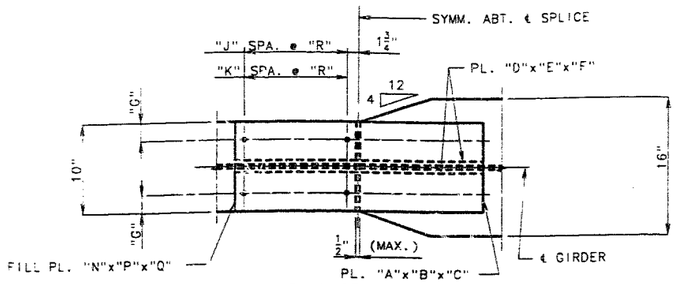
JACKSON COUNTY

A-610R1

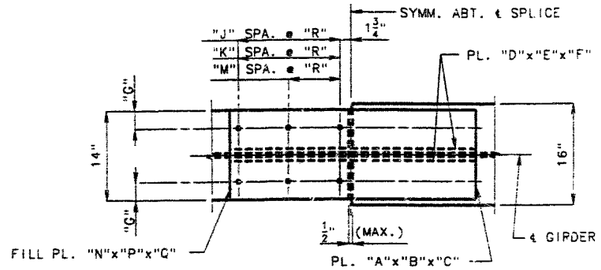
STATE	PROJ. NO. Job#J4I0887	SHEET NO. 3
MO.	F.A.I.-435-1(251)	

FINAL PLANS

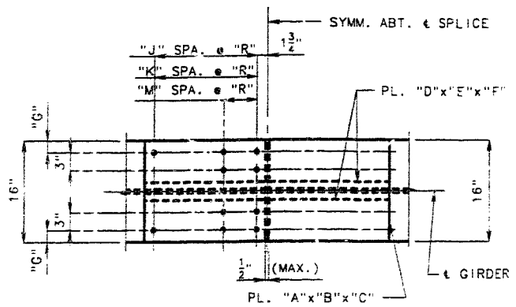
~~FINAL PLANS~~



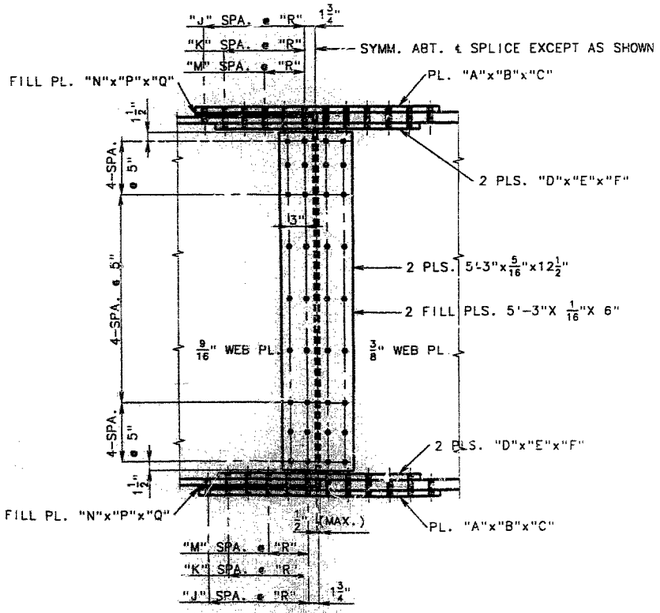
PLAN OF FLANGE
S1 & S2 (TOP)



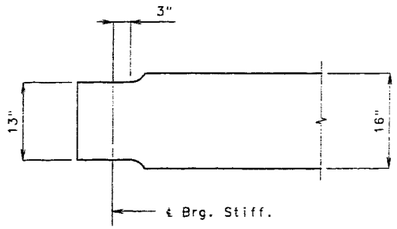
PLAN OF FLANGE
S2 (BOTT.)



PLAN OF FLANGE
S1 (BOTT.)



DETAIL OF BOLTED FIELD SPLICE



PART PLAN OF BOTTOM FLANGE
NEAR END BENTS

SPLICE LOCATION	TABLE OF DIMENSIONS—FIELD SPLICE													
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"J"	"K"	"M"	"N"	"P"	"Q"	"R"
S1 & S2 (TOP)	10"	⅜"	18½"	4"	¼	18½"	2"	2	2		10"	⅜"	9"	3"
S1 BOTT.	16"	¾"	2'-3½"	7"	¾"	2'-3½"	2"	3	3	2				3½"
S2 BOTT.	14"	⅝"	20½"	6"	¾"	20½"	1½"	2	2	1	14"	⅛"	10"	3½"

NOTE: USE ⅞" Ø HIGH STRENGTH BOLTS WITH 15/16" REAMED HOLES.
CONTACT SURFACES ARE TO BE BLAST CLEANED IN ACCORDANCE WITH SECTION 712.12.2.1 OF THE STANDARD SPECIFICATIONS.
USE ONE 5 3"X 1/16"X 6" FILL PLATE ON EACH SIDE OF ⅜" WEB.

SPL. PL., RG. 3.42, A36, 1-A
FIELD SPLICE | REVISED:
MAR. 1992

DETAILED MAY 1994
CHECKED MAY 1994

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

JACKSON COUNTY A-610R1

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0087	330

FINAL PLANS

GENERAL NOTES:

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 EXTRUSION SHALL MEET A.S.T.M. D-2628-69 MODIFIED (RECOVERY TEST EXCLUDED).

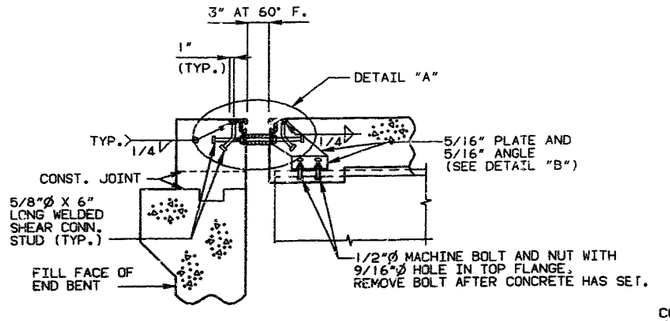
ANCHORS FOR EXTRUSIONS OR ARMOR SHALL BE APPROVED WELDED STUDS (C1010 THRU C1020).

PAYMENT FOR STEEL EXTRUSIONS AND NEOPRENE EXTRUSIONS SHALL BE MADE UNDER CONTRACT UNIT PRICE FOR "STRIP SEAL EXPANSION DEVICE".

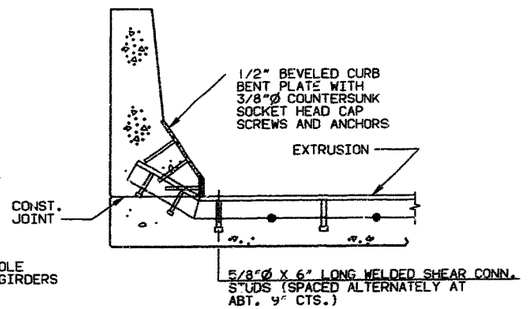
PAYMENT FOR FURNISHING, PAINTING, AND PLACING STRUCTURAL STEEL PLATES SHALL BE INCLUDED IN CONTRACT UNIT PRICE FOR "STRIP SEAL EXPANSION DEVICE.

GAP DIMENSION SHALL BE INCREASED 1/16" FOR EACH 10° FALL IN TEMPERATURE AND DECREASED 1/16" FOR EACH RISE IN TEMPERATURE.

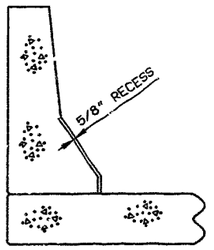
A NEOPRENE EXTRUSION CAPABLE OF PROVIDING A TOTAL MOVEMENT OF 4" SHALL BE PROVIDED.



PART SECTION D-D

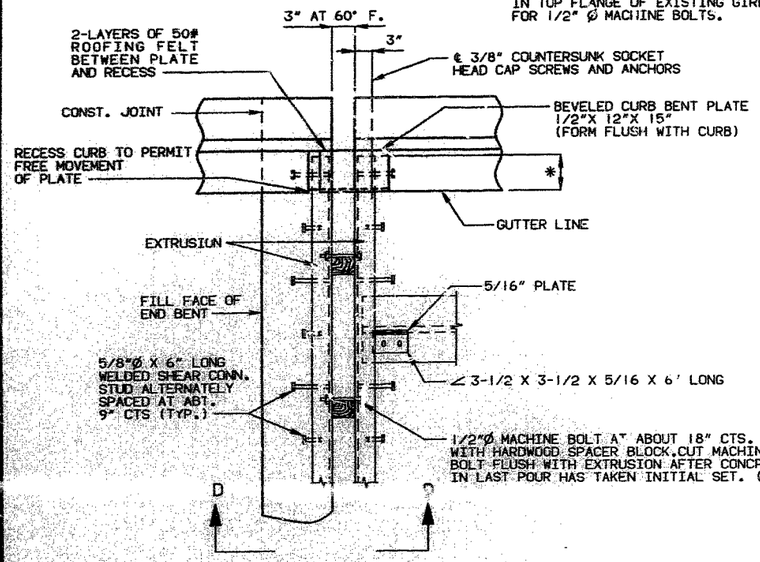


PART SECTION B-B

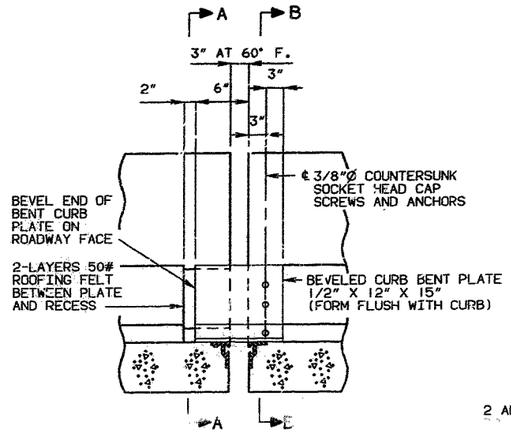


PART SECTION A-A

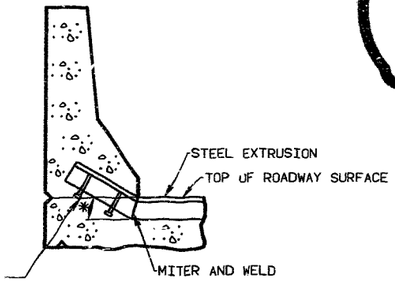
NOTE: FIELD DRILL 9/16"Ø HOLE IN TOP FLANGE OF EXISTING GIRDERS FOR 1/2" Ø MACHINE BOLTS.



PART PLAN

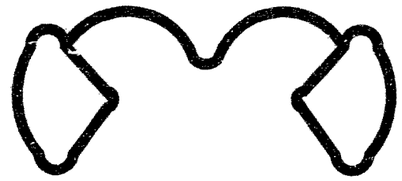


PART ELEVATION OF BARRIER CURB

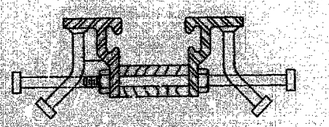


SECTION THRU SAFETY BARRIER CURB

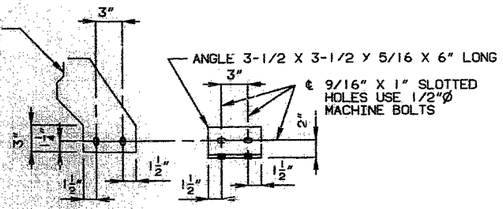
* AS SUGGESTED BY MANUFACTURER



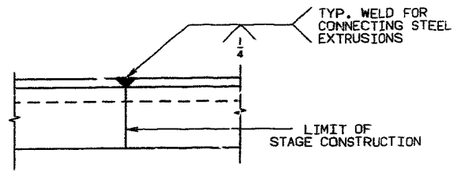
STRIP SEAL GLAND



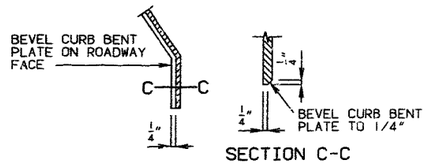
DETAIL "A"



DETAIL "B"



DETAIL SHOWING WELD FOR STAGE CONSTRUCTION



SECTION C-C

PART ELEVATION AT END OF BEVELED CURB BENT PLATE

DESIGNED	DRAWN	CHECKED	QUANTITIES CHECKED	REVISED
			OCT. 1993	MAY 1997

DETAILS OF PREFORMED COMPRESSION JOINT SEAL AT BENT NO. 1.

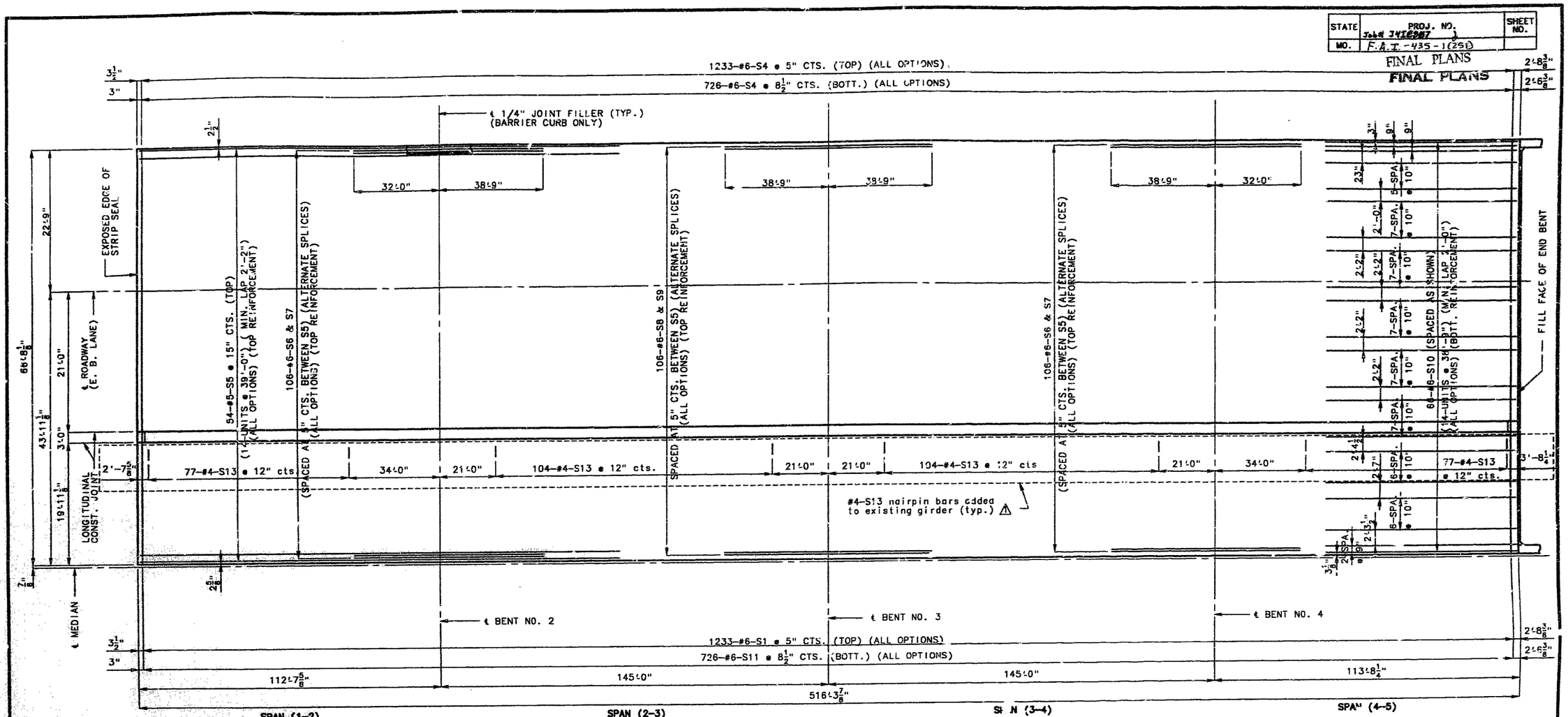
DETAILED SEPT. 1992
CHECKED MAY 1993

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

STATE	PROJ. NO.	SHEET NO.
MO.	Job# J4I0587 F.A.I.-435-1(25D)	

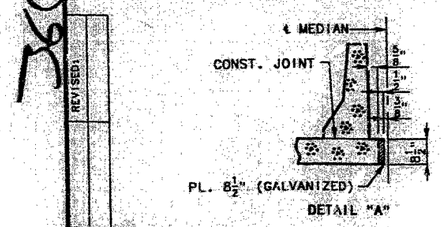
FINAL PLANS

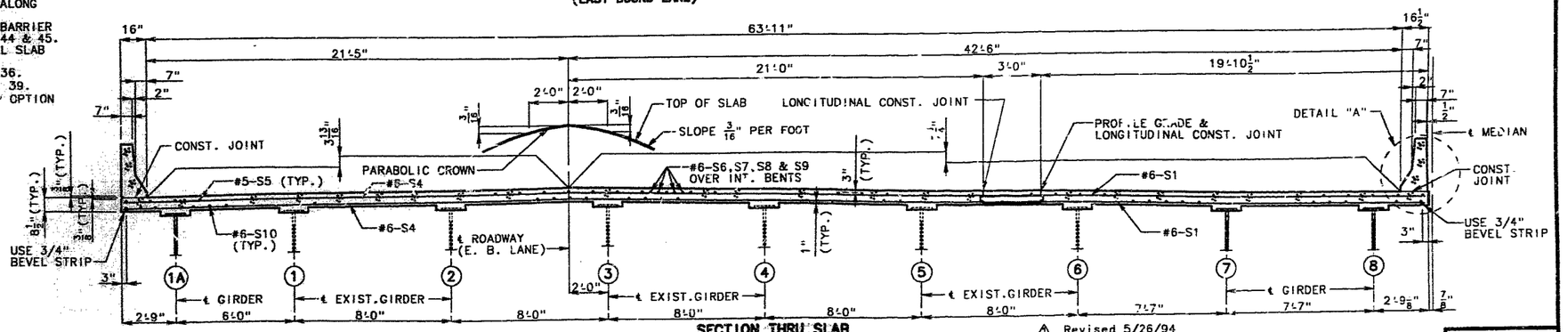
FINAL PLANS



PLAN OF SLAB SHOWING REINFORCEMENT
(EAST BOUND LANE)

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NO. 40, 41, 42, 43, 44 & 45.
FOR GIRDER CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 37.
FOR SLAB POURING SEQUENCE SEE SHEET NO. 36.
FOR DETAILS OF SLAB DRAINS SEE SHEET NO. 39.
FOR PART SECTION THRU SLAB SHOWING S-I-P OPTION SEE SHEET NO. 36.





SECTION THRU SLAB
(C. I. P. OPTION)

⚠ Revised 5/26/94

SHEET NO. 34 OF 51.

JACKSON COUNTY

A-610R1

REVISED

DETAILED SEPT. 1992
CHECKED MAY 1993

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

STATE	PROJ. NO.	SHEET NO.
MO.	Job# J4I0887 F.A.I.-435-1(251)	

FINAL PLANS

FINAL PLANS

1233-#6-S1 @ 5" CTS. (TOP) (ALL OPTIONS)
726-#6-S11 @ $8\frac{1}{2}$" CTS. (BOTT.) (ALL OPTIONS)

℄ 1/4" JOINT FILLER (TYP.) (BARRIER CURB ONLY)

#4-S13 hairpin bars added to existing girder (typ.) ⚠

77-#4-S13 @ 12" cts.

63-#5-S5 @ 15" CTS. (TOP) (14-UNITS @ 39'-0") (MIN. LAP 21'-2") (ALL OPTIONS) (TOP REINFORCEMENT)

124-#6-S6 & S7 5" CTS. BETWEEN S5 (ALTERNATE SPLICES) (ALL OPTIONS) (TOP REINFORCEMENT)

124-#6-S8 & S9 (SPACED AT 5" CTS. BETWEEN S5) (ALTERNATE SPLICES) (ALL OPTIONS) (TOP REINFORCEMENT)

124-#6-S6 & S7 (SPACED AT 5" CTS. BETWEEN S5) (ALTERNATE SPLICES) (ALL OPTIONS) (TOP REINFORCEMENT)

1233-#6-S2 @ 5" CTS. (TOP) (ALL OPTIONS)
726-#6-S12 @ $8\frac{1}{2}$" CTS. (BOTT.) (ALL OPTIONS)

78-#6-S10 (SPACED AS SHOWN) (14-UNITS @ 38'-9") (MIN. LAP 2'-0") (ALL OPTIONS) (BOTT. REINFORCEMENT)

℄ MEDIAN
℄ ROADWAY (W. B. LANE)
LONGITUDINAL CONST. JOINT
EXPOSED EDGE OF STRIP SEAL
FILL FACE OF END BENT

℄ BENT NO. 2
℄ BENT NO. 3
℄ BENT NO. 4

1233-#6-S3 @ 5" CTS. (TOP) (ALL OPTIONS)
726-#6-S3 @ $8\frac{1}{2}$" CTS. (BOTT.) (ALL OPTIONS)

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

PLAN OF SLAB SHOWING REINFORCEMENT (WEST BOUND LANE)

NOTE: FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NO. 40,41,42,43,44 & 45.
FOR GIRDER CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 38.
FOR SLAB POURING SEQUENCE SEE SHEET NO. 36.
FOR PART SECTION THRU SLAB SHOWING S-I-P OPTION SEE SHEET NO. 36.

NOTE: FOR DETAILS OF SLAB DRAINS SEE SHEET NO. 39.

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.

361

REVISED:

DETAIL "A"

℄ MEDIAN
CONST. JOINT
USE 3/4" BEVEL STRIP
PL. $8\frac{1}{2}$" (GALVANIZED)

DETAILED SEPT. 1992
CHECKED MAY 1993

PROFILE GRADE & LONGITUDINAL CONST. JOINT
DETAIL "A"
#5-S5 (TYP.)
#6-S1
#6-S10 (TYP.)
#6-S6,S7,S8 & S9 OVER INT. BENTS
#6-S2
PARABOLIC CROWN
TOP OF SLAB
SLOPE $\frac{3}{16}$" PER FOOT
LONG. CONST. JOINT
#6-S3
CONST. JOINT
USE 3/4" BEVEL STRIP
LONGITUDINAL CONST. JOINT
℄ ROADWAY (W.B. LANE)
℄ GIRDER
℄ EXIST. GDR.

SECTION THRU SLAB (C. I. P. OPTION)

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

⚠ Revised 5/26/94

JACKSON COUNTY

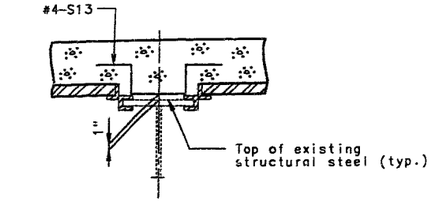
A-610R1

STATE	PROJ. NO. Job # J1I0067	SHEET NO.
MO.	F.A.T.-435-(251)	

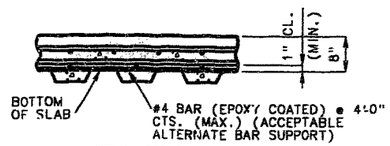
FINAL PLANS

FINAL PLANS

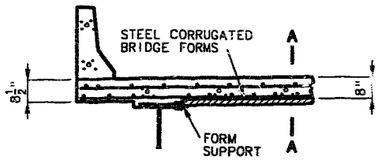
Added ⚠



SECTION THRU HAUNCH

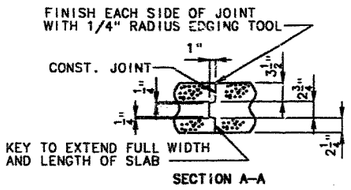


SECTION A-A

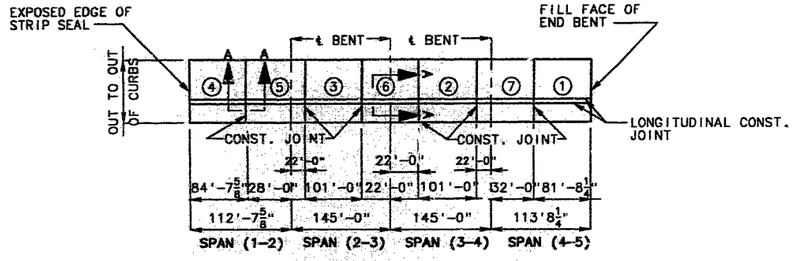


PART SECTION THRU SLAB (S-I-P OPTION)

NOTE: S-I-P OPTION IS SAME AS C-I-P OPTION EXCEPT AS SHOWN.



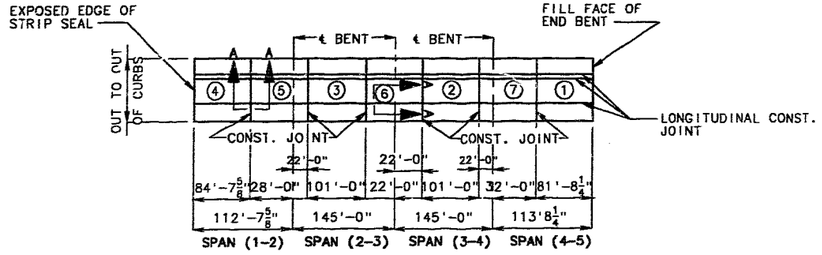
SECTION A-A



	SEQUENCE OF POURS							MIN. RATE OF POUR CU. YDS./HR.
	DIRECTION							WITH RETARDER
BASIC SEQUENCE	1	2	3	4	5	6	7	25
	EITHER DIRECTION							
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.								
ALTERNATE "A" POURS	1	7 + 2		6 + 3		5 + 4		54
	END TO 7	1 TO 6		2 TO 5		3 TO END		
ALTERNATE "B" POURS	1 + 7 + 2			6 + 3		5 + 4		54
	END TO 6			2 TO 5		3 TO END		
ALTERNATE "C" POURS	1 + 7 + 2			6 + 3 + 5 + 4				54
	END TO 6			2 TO END				
ALTERNATE "D" POURS	1 + 7 + 2 + 6 + 3 + 5 + 4							54
	END TO END							

SLAB POURING SEQUENCE
(EAST BOUND LANE)

NOTE: THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE SLAB POURS AT THE RATE GIVEN. RETARDER, SHALL BE AN APPROVED TYPE AND RETARD THE SET OF CONCRETE TO 2.5 HOURS.



	SEQUENCE OF POURS							MIN. RATE OF POUR CU. YDS./HR.	
	DIRECTION							WITH RETARDER	NO RETARDER
BASIC SEQUENCE	1	2	3	4	5	6	7	25	25
	EITHER DIRECTION								
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.									
ALTERNATE "A" POURS	1	7 + 2		6 + 3		5 + 4		37	61
	END TO 7	1 TO 6		2 TO 5		3 TO END			
ALTERNATE "B" POURS	1 + 7 + 2			6 + 3		5 + 4		37	61
	END TO 6			2 TO 5		3 TO END			
ALTERNATE "C" POURS	1 + 7 + 2			6 + 3 + 5 + 4				37	61
	END TO 6			2 TO END					
ALTERNATE "D" POURS	1 + 7 + 2 + 6 + 3 + 5 + 4							37	61
	END TO END								

SLAB POURING SEQUENCE
(WEST BOUND LANE)

NOTE: THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE SLAB POURS AT THE RATE GIVEN. RETARDER, IF USED SHALL BE AN APPROVED TYPE AND RETARD THE SET OF CONCRETE TO 2.5 HOURS.

⚠ Revised 5/26/94

262

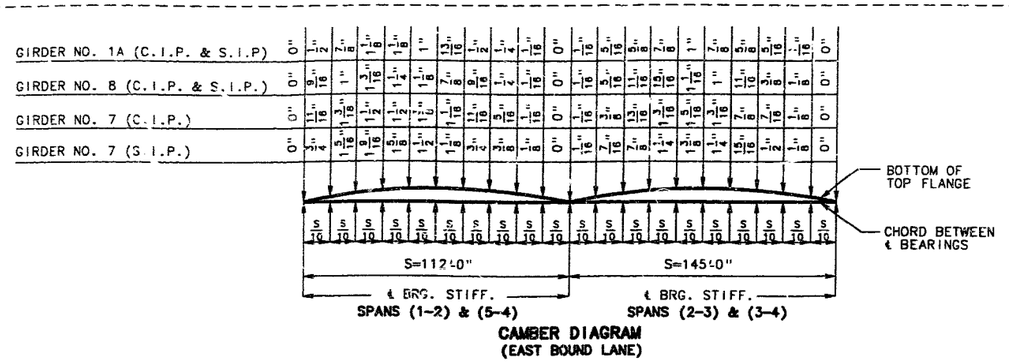
REVISED

DETAILED SEPT. 1992
CHECKED JUNE 1993

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

STATE	PROJ. NO. Job# 141887	SHEET NO.
MO.	F.A.I.-435-1(25)	

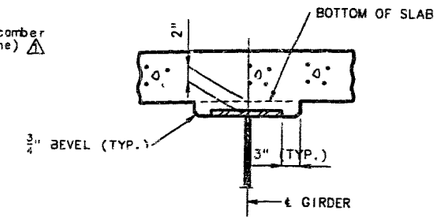
FINAL PLANS



CAMBER DIAGRAM
(EAST BOUND LANE)

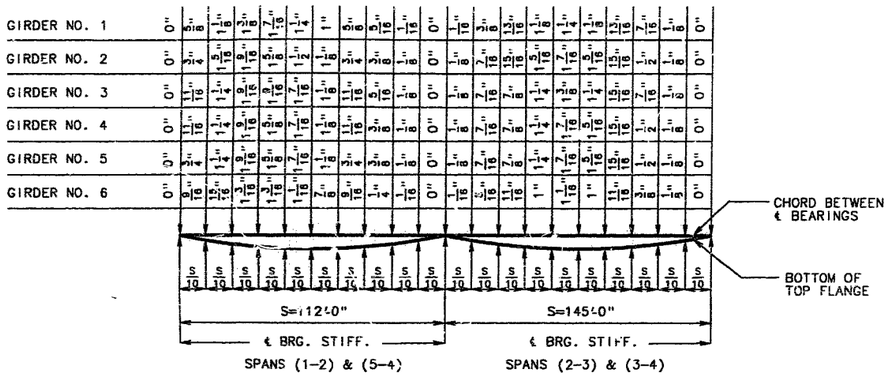
NOTE: CAMBER INCLUDES ALLOWANCE FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.
15% OF DEAD LOAD DEFLECTION IS DUE TO THE WEIGHT OF STRUCTURAL STEEL.

See sheet no. 37A for camber diagram (east bound lane) ⚠

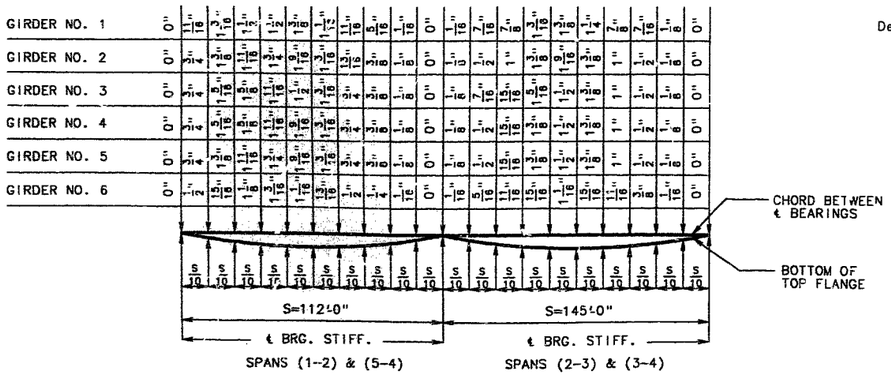


THEORETICAL SLAB HAUNCH
GIRDERS NO. 1A, 7 & 8 (C.I.P & S.I.P.)
(EAST BOUND LANE)

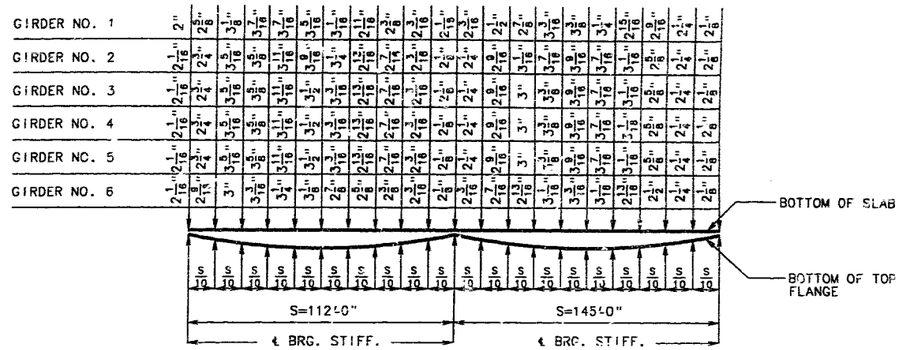
NOTE: 2" DIMENSION MAY VARY IF GIRDER CAMBER AFTER ERECTION DIFFERS FROM PLAN CAMBER BY MORE THAN THE ½ OF D. L. DEFLECTION DUE TO WEIGHT OF STRUCTURAL STEEL. NO PAYMENT WILL BE MADE FOR ADDITIONAL FORMING OR CONCRETE REQUIRED FOR VARIATION IN HAUNCHING.



DEAD LOAD DEFLECTIONS (C.I.P.)
(EAST BOUND LANE)

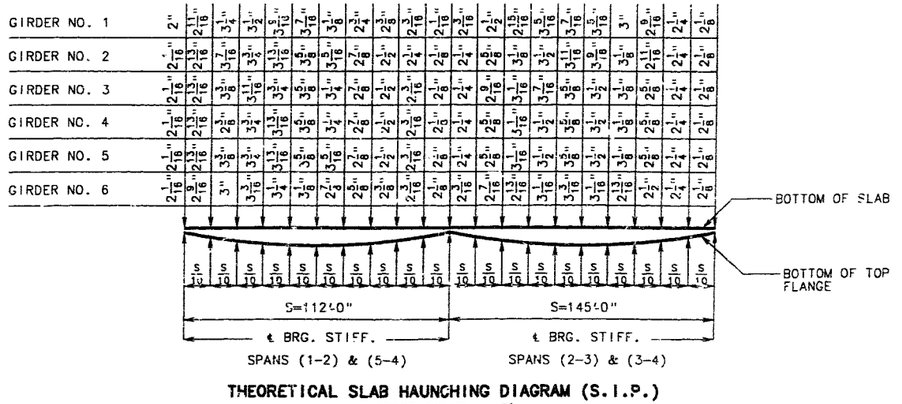


DEAD LOAD DEFLECTIONS (S.I.P.)
(EAST BOUND LANE)



THEORETICAL SLAB HAUNCHING DIAGRAM (C.I.P.)
(EAST BOUND LANE)

Delete ⚠



THEORETICAL SLAB HAUNCHING DIAGRAM (S.I.P.)
(EAST BOUND LANE)

TO DETERMINE THE HAUNCH FOR THE STAY-IN-PLACE ALTERNATE, ADD 1/2" TO THE HAUNCH FOR THE CAST-IN-PLACE ALTERNATE.

⚠ Revised 5/19/94
⚠ Revised 5/26/94

37

REVISED:

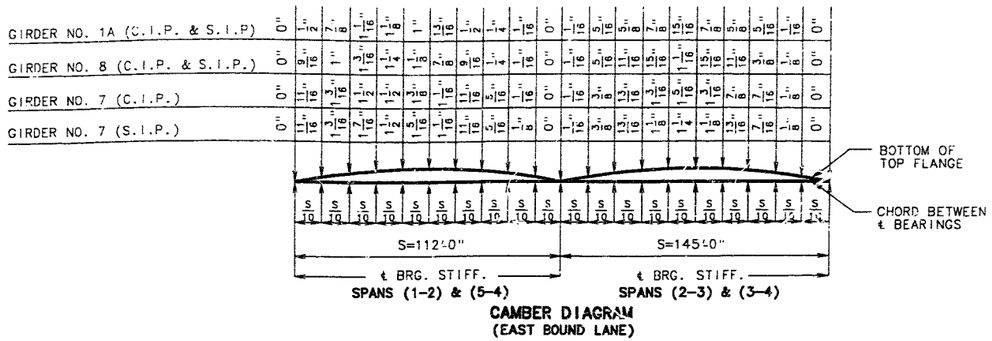
DETAILED SEPT. 1992
CHECKED MAY 1993

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

STATE	PROJ. NO. Job# J4I0887	SHEET NO.
MO.	F.A.I.-435-1(251)	

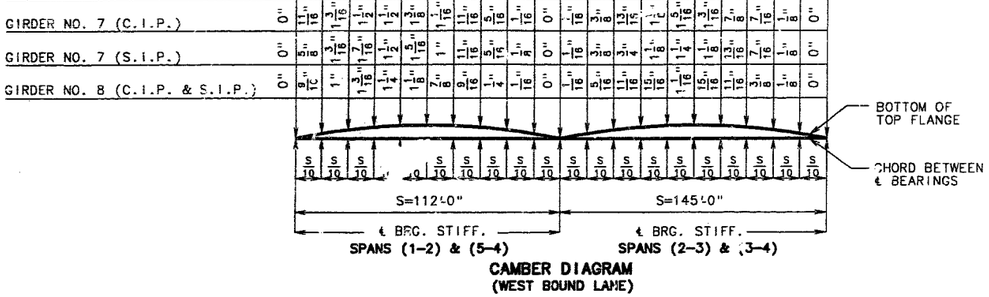
FINAL PLANS

FINAL PLANS



CAMBER DIAGRAM
(EAST BOUND LANE)

NOTE: CAMBER INCLUDES ALLOWANCE FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.
15% OF DEAD LOAD DEFLECTION IS DUE TO THE WEIGHT OF STRUCTURAL STEEL.



CAMBER DIAGRAM
(WEST BOUND LANE)

NOTE: CAMBER INCLUDES ALLOWANCE FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.
13% OF DEAD LOAD DEFLECTION IS DUE TO THE WEIGHT OF STRUCTURAL STEEL.

37A

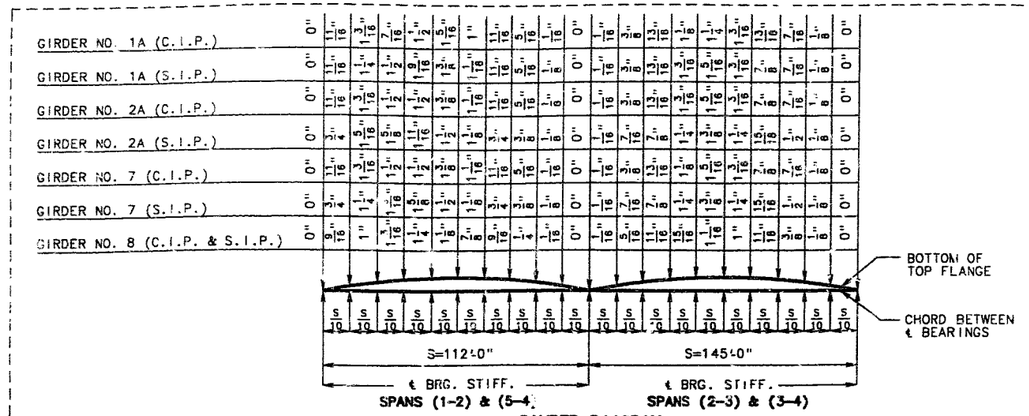
REVISED:

DETAILED MAY 1994
CHECKED MAY 1994

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

STATE	PROJ. NO.	SHEET NO.
MO.	Job # J4I0867 F.A.I.-435-1(251)	

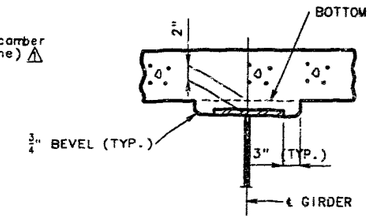
FINAL PLANS



CAMBER DIAGRAM
(WEST BOUND LANE)

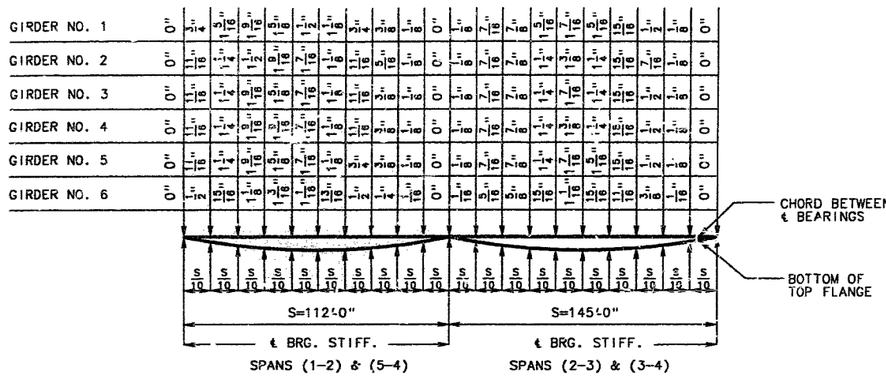
NOTE: CAMBER INCLUDES ALLOWANCE FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.
13% OF DEAD LOAD DEFLECTION IS DUE TO THE WEIGHT OF STRUCTURAL STEEL.

See sheet no. 37A for camber diagram (east bound lane) ⚠

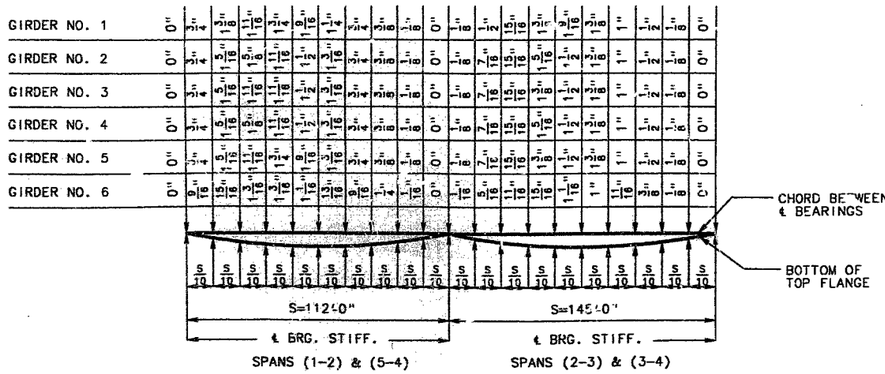


THEORETICAL SLAB HAUNCH
GIRDERS NO. 1A, 2A, 7 & 8 (C.I.P. & S.I.P.)
(WEST BOUND LANE)

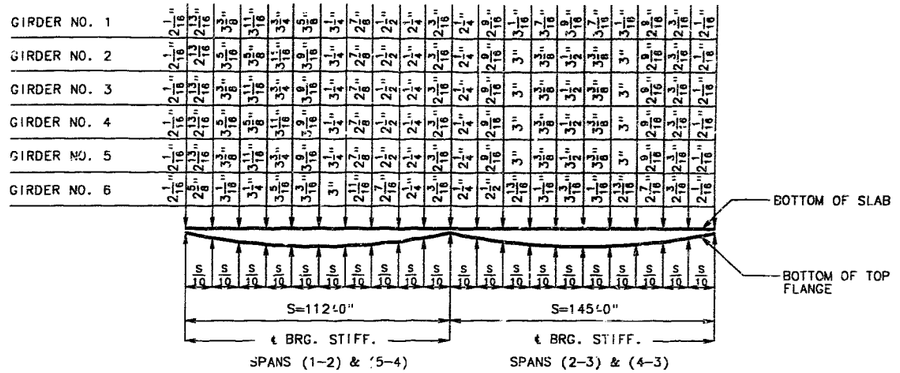
NOTE: 2" DIMENSION MAY VARY IF GIRDER CAMBER AFTER ERECTION DIFFERS FROM PLAN CAMBER BY MORE THAN THE ½ OF D. L. DEFLECTION DUE TO WEIGHT OF STRUCTURAL STEEL. NO PAYMENT WILL BE MADE FOR ADDITIONAL FORMING OR CONCRETE REQUIRED FOR VARIATION IN HAUNCHING.



DEAD LOAD DEFLECTIONS (C.I.P.)
(WEST BOUND LANE)

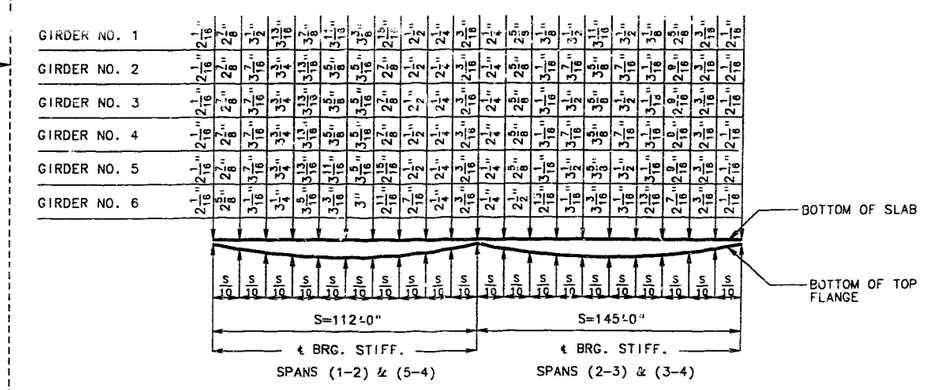


DEAD LOAD DEFLECTIONS (S.I.P.)
(WEST BOUND LANE)



THEORETICAL SLAB HAUNCHING DIAGRAM (C.I.P.)
(WEST BOUND LANE)

Delete ⚠



THEORETICAL SLAB HAUNCHING DIAGRAM (S.I.P.)
(WEST BOUND LANE)

TO DETERMINE THE HAUNCH FOR THE STAY-IN-PLACE ALTERNATE, ADD 1/2" TO THE HAUNCH FOR THE CAST-IN-PLACE ALTERNATE.

⚠ Revised 5/19/94
⚠ Revised 5/26/94

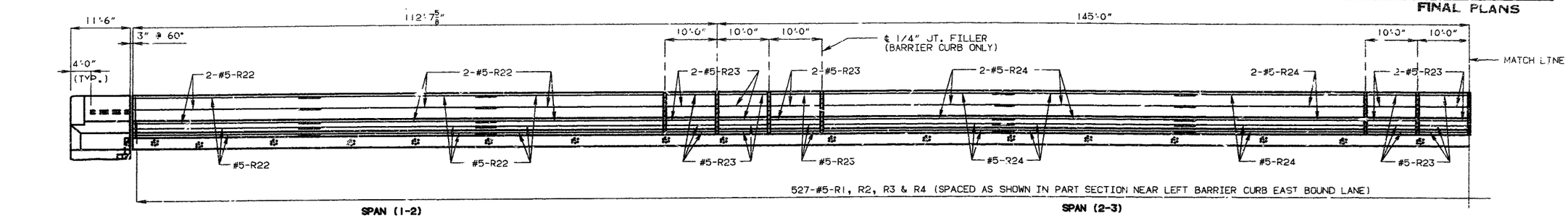
REVISED!

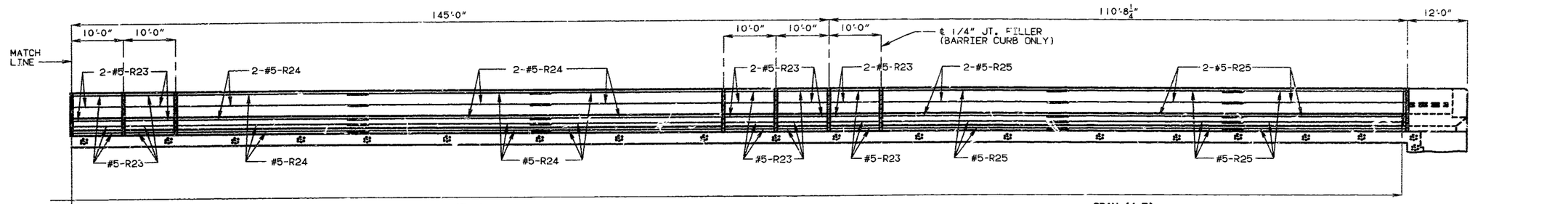
DETAILED SEPT. 1992
CHECKED MAY 1993

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

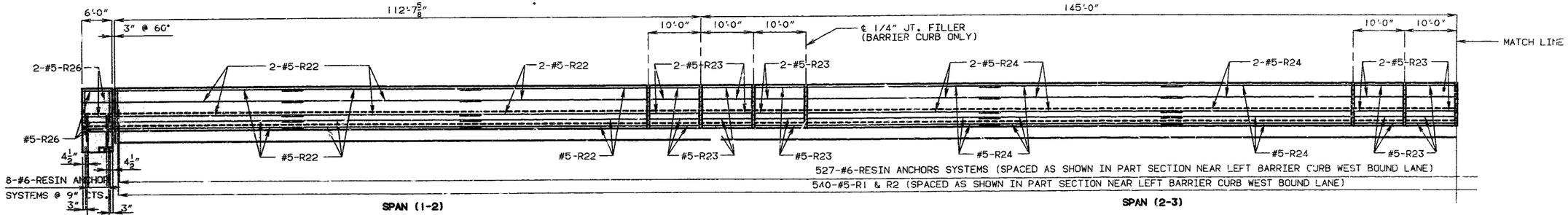
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	337

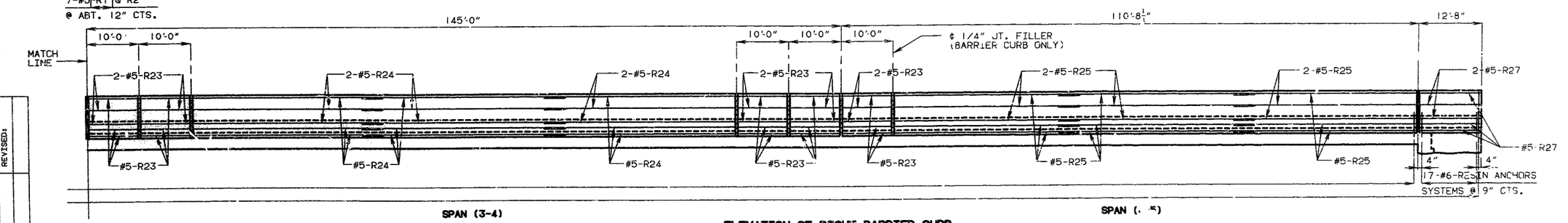
FINAL PLANS





SECTION NEAR LEFT BARRIER CURB (EAST BOUND LANE)





ELEVATION OF RIGHT BARRIER CURB (EAST BOUND LANE)

NOTE: FOR PART SECTION NEAR BARRIER CURB, SECTION THRU WING AT END BENT NO. 1 AND NO. 5 AND DETAILS OF BARRIER CURB NOT SHOWN SEE SHEET NO. 42.
FOR DETAILS SHOWING WING REINFORCEMENT SEE SHEET NO. 43.

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.

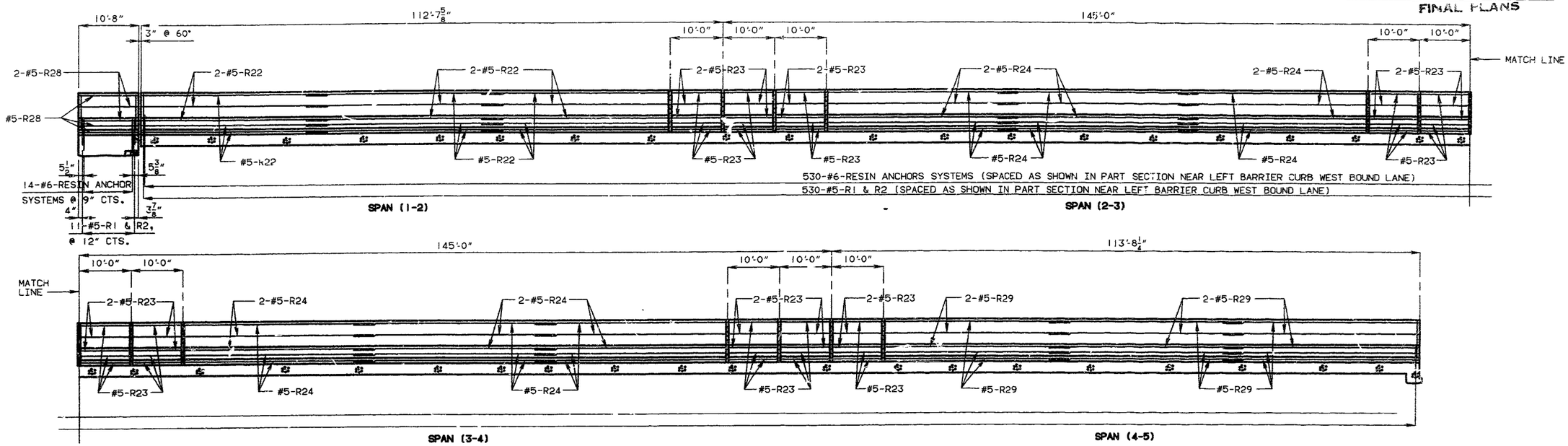
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

REVISED:

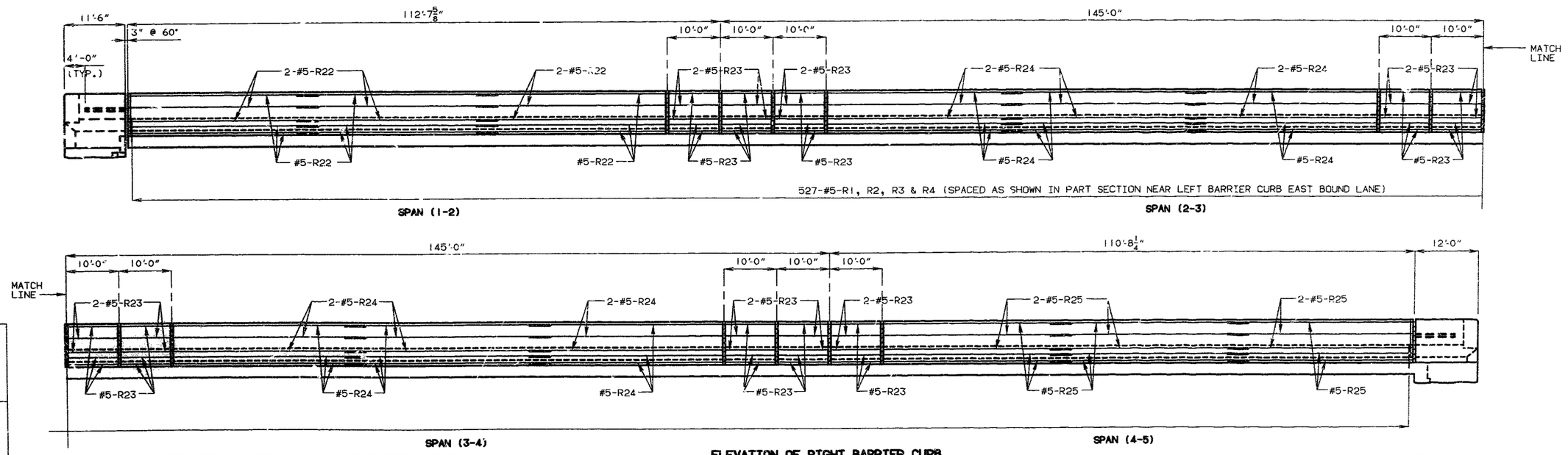
DETAILED SEPT. 1992
CHECKED JUNE 1993

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0B07	338

FINAL PLANS



SECTION NEAR LEFT BARRIER CURB
(WEST BOUND LANE)



ELEVATION OF RIGHT BARRIER CURB
(WEST BOUND LANE)

NOTE: FOR PART SECTION NEAR BARRIER CURB, SECTION THRU WING AT END BENT NO. 1 AND NO. 5 AND DETAILS OF BARRIER CURB NOT SHOWN SEE SHEET NO. 42.
FOR DETAILS SHOWING WING REINFORCEMENT SEE SHEET NO. 43.

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE TAKEN ALONG TOP EDGE OF SLAB PARALLEL TO GRADE.

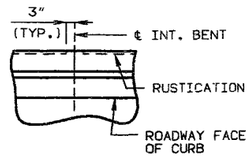
REVISED:

DETAILED SEPT. 1992
CHECKED JUNE 1993

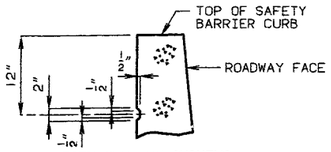
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

STATE	PROJ. NO.	SHEET NO.
MD.	J4IØBØ7	339

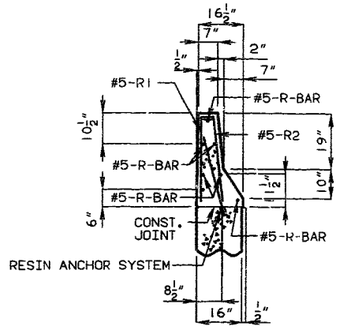
FINAL PLANS



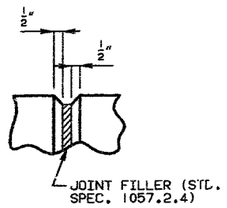
PART PLAN SHOWING RUSTICATION DETAILS



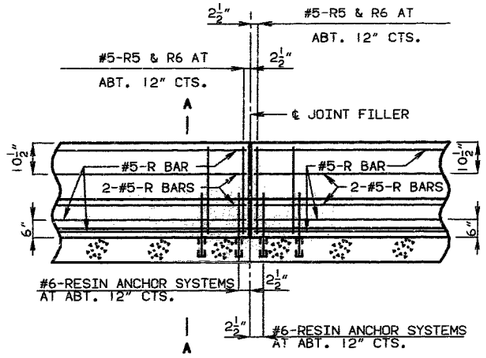
PART SECTION SHOWING RUSTICATION DETAILS



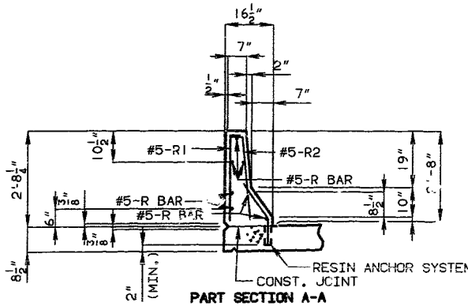
SECTION THRU WING END BENT NO. 1
RIGHT BARRIER CURB (EAST BOUND LANE),
LEFT BARRIER CURB (WEST BOUND LANE)
& SECTION THRU WING END BENT NO. 5
RIGHT BARRIER CURB (EAST BOUND LANE)



FILLED JOINT DETAIL

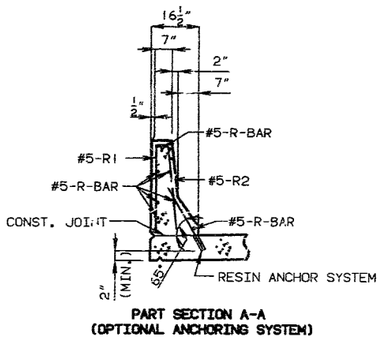


PART SECTION NEAR LEFT SAFETY BARRIER CURB
WEST BOUND LANE
(CAST-IN-PLACE CONVENTIONAL FORMING OPTION)

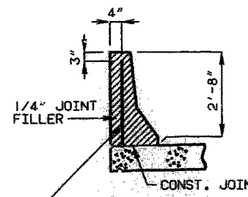


PART SECTION A-A

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS.
THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.



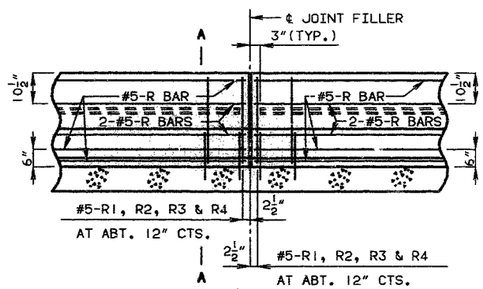
PART SECTION A-A
(OPTIONAL ANCHORING SYSTEM)



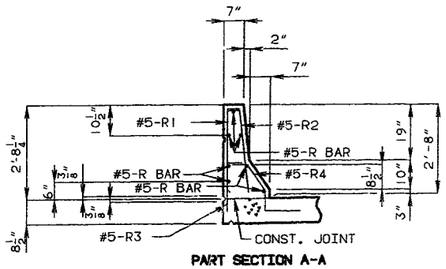
NOTE: PLASTIC WATERSTOP SHALL BE PLACED IN ALL SAFETY BARRIER CURB FILLED JOINTS. (EXCEPT STRUCTURES WITH SUPERELEVATION, USE ON ALL LOWER SAFETY BARRIER CURB JOINTS ONLY).

COST OF PLASTIC WATERSTOP COMPLETE IN PLACE TO BE INCLUDED IN CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.

DETAILS OF PLASTIC WATERSTOP



PART SECTION NEAR LEFT SAFETY BARRIER CURB
EAST BOUND LANE
(CAST-IN-PLACE CONVENTIONAL FORMING OPTION)



PART SECTION A-A

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS.
THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

THE CONTRACTOR SHALL USE ONE OF THE RESIN ANCHOR SYSTEMS LISTED IN THE JOB SPECIAL PROVISIONS FOR THE SAFETY BARRIER CURB.

COST OF FURNISHING AND INSTALLING THE ANCHOR SYSTEM COMPLETE IN PLACE SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF SAFETY BARRIER CURB.

364 368

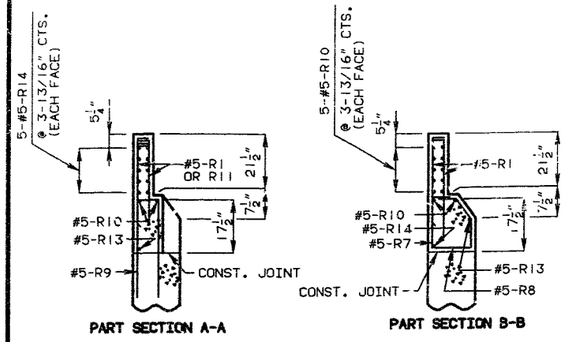
B/C EL 16,68 3.30, , 1A
BARRIER CURB ELEVATION REVISED! FEB. 1993
JAN. 1990

DETAILED SEPT. 1992
CHECKED JUNE 1993

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

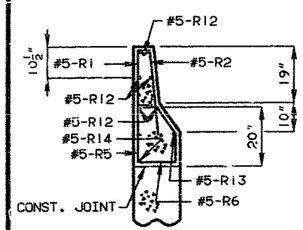
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	340

FINAL PLANS

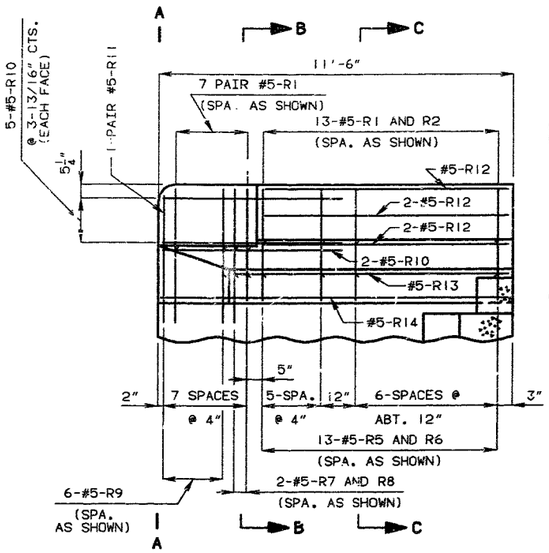


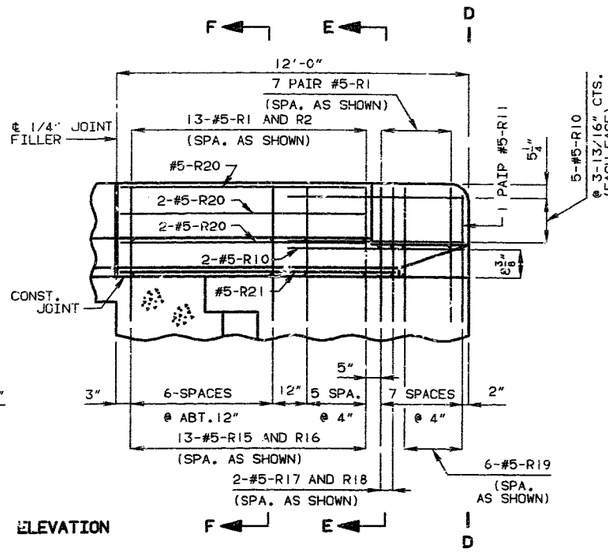
PART SECTION A-A

PART SECTION B-B

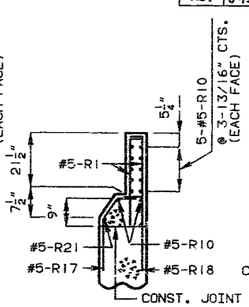


PART SECTION C-C

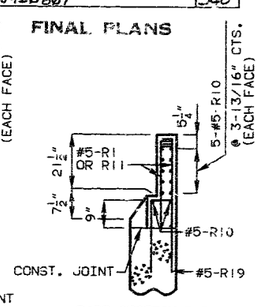




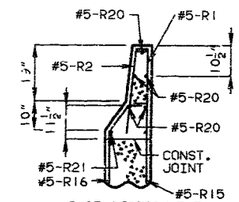
ELEVATION



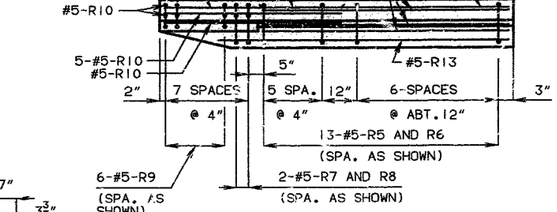
PART SECTION E-E

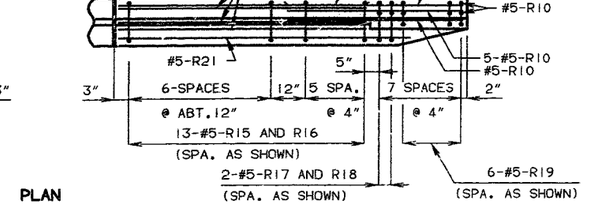


PART SECTION D-D

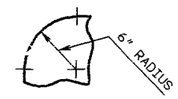


PART SECTION F-F

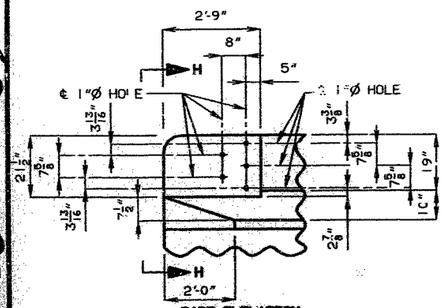




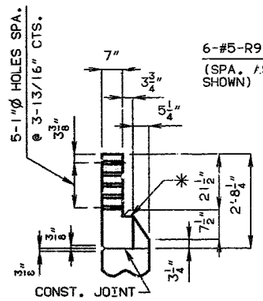
PLAN



DETAIL "F" (TYPICAL)

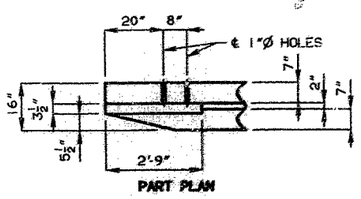


PART ELEVATION



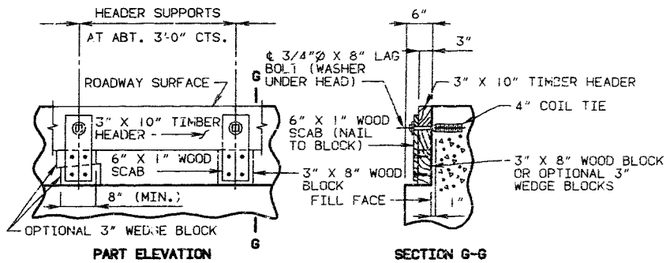
PART ELEVATION H-H

* SLOPE 1/4" TOWARD ROADWAY



PART PLAN

DETAILS OF GUARD RAIL ATTACHMENT



PART ELEVATION

SECTION G-G

NOTE: COST OF TIMBER HEADERS COMPLETE IN PLACE TO BE INCLUDED IN CONTRACT UNIT PRICE FOR CONCRETE.

DETAILS OF TIMBER HEADER AT END BENTS

DETAILS OF SAFETY BARRIER CURB AT END BENTS

3/C EP16,GS 3.30,INT, ,A
INT-END POST (16")
AUG. 1978
REVISED
MARCH 1992

DETAILED SEPT. 1992
CHECKED JUNE 1993

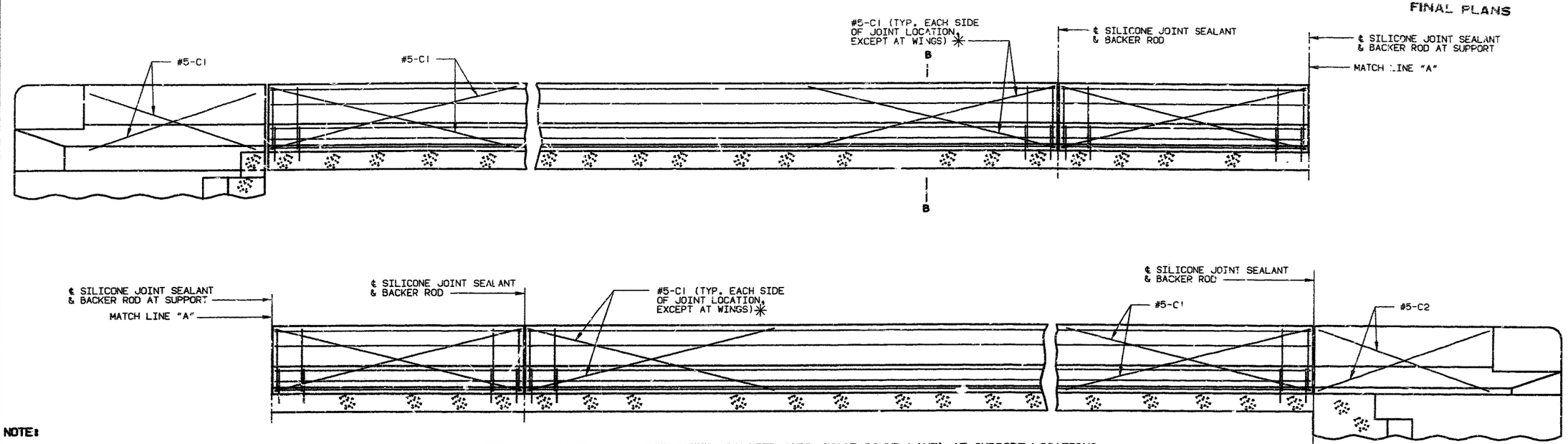
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

A-6I0RI

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0887	341

FINAL PLANS



TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB (EAST BOUND LANE) AT SUPPORT LOCATIONS
(OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB)
RIGHT SIDE (WEST BOUND LANE) SIMILAR

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

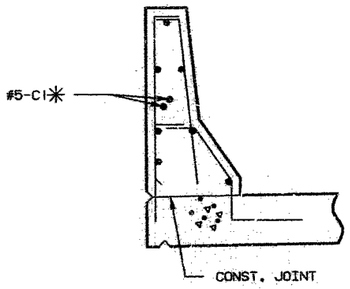
MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

NOTE:

JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE SAFETY BARRIER CURBS INSTEAD OF JOINT FILLER.

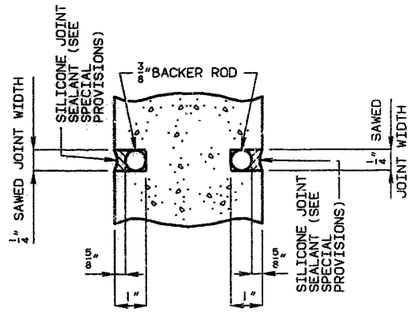
PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C-BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE SAFETY BARRIER CURB.



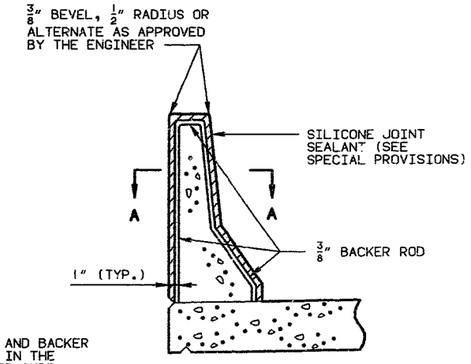
PART SECTION B-B

NOTE: ✳ EACH SIDE OF JOINT LOCATION, EXCEPT SPAN SIDE ONLY AT END BENTS.



SECTION A-A

NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.



SECTION THRU JOINT

OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB

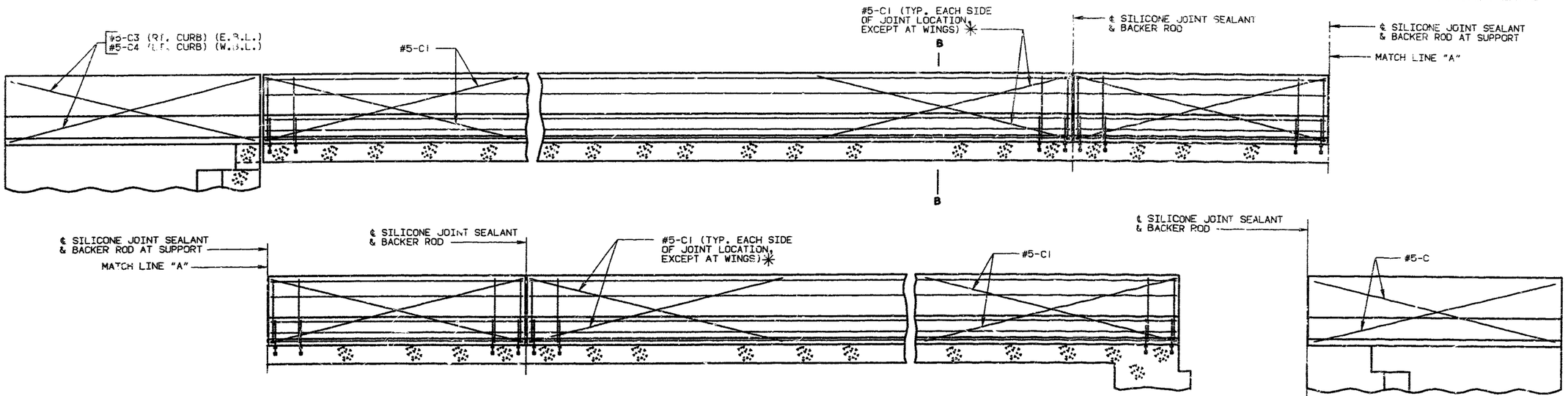
B/C SF16,06 3.30, 3.44 | BARRIER CURB ELEVATION REVISED | FEB. 1991

DETAILED SEPT. 1992
CHECKED MAY 1993

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

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	342

FINAL PLANS



TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB (WEST BOUND LANE) AT SUPPORT LOCATIONS
(OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB)
RIGHT SIDE (EAST BOUND LANE) SIMILAR

ELEVATION OF WING AT BENT NO. 5
(EAST BOUND LANE)

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN SAFETY BARRIER CURB SHALL BE CLASS B1.

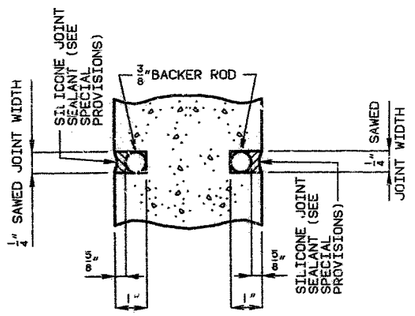
MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

NOTE:

JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE SAFETY BARRIER CURBS INSTEAD OF JOINT FILLER.

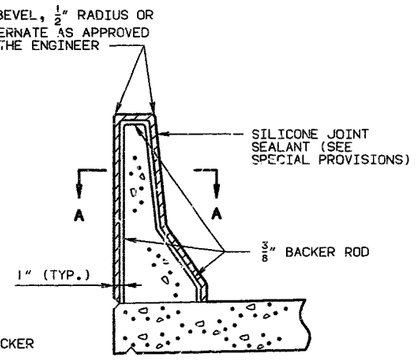
PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C-BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE SAFETY BARRIER CURB.

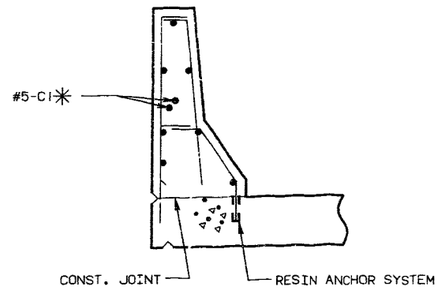


SECTION A-A

NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.

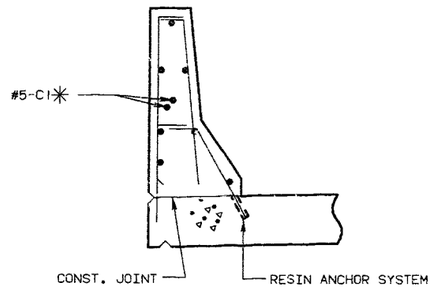


SECTION THRU JOINT



PART SECTION B-B

NOTE: ✳ EACH SIDE OF JOINT LOCATION, EXCEPT SPAN SIDE ONLY AT END BENTS.



PART SECTION B-B
(OPTIONAL ANCHORING SYSTEM)

OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB

B/C SF16,GS 3.30, , 1A
BARRIER CURB ELEVATION REVISED:
FEB. 1991

DETAILED MAY 1993
CHECKED MAY 1993

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

JACKSON COUNTY

A-6 (OR) 1

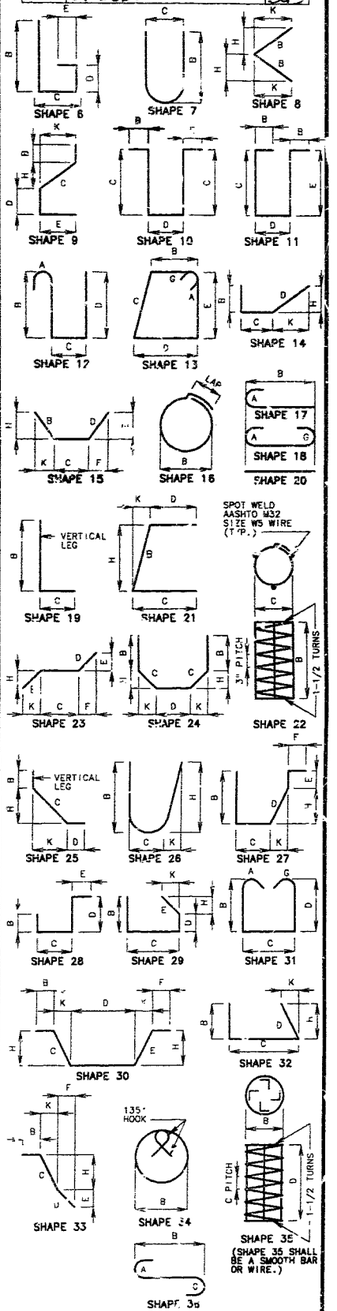
FINAL PLANS

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	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.
		SUBSTRUCTURE																
		END BT NO 1																
		(E.B.L.)																
30	6D1	FOOTING		20		X			3 5.000							3 5	3 5	154
8	6F1	WING BRACE		15		X			14.000	4 7.875	14.000	9.875	9.875	9.875	9.875	7 0	6 11	83
2	6H1	BACKWALL	E	20		X			21 8.000							21 8	21 8	65
2	6H2	BACKWALL	E	20		X			45 2.000							45 2	45 2	136
2	4H3	BACKWALL		20		X			21 10.000							21 10	21 10	29
4	4H4	BACKWALL		20		X			24 2.000							24 2	24 2	65
6	4H5	BACKWALL		20		X			14 5.000							14 5	14 5	58
6	4H6	BACKWALL		20		X			5 3.000							5 3	5 3	21
8	6H7	BEAM		18		X			14 5.000							15 9	15 9	189
2	6H8	BEAM		20		X			14 5.000							14 5	14 5	43
8	6H9	BEAM		18		X			5 3.000							6 7	6 7	79
2	6H10	BEAM		20		X			5 3.000							5 3	5 3	16
1	4H11	APP. HCH.		20		X			18 10.000							18 10	18 10	13
2	4H12	APP. HCH.		20		X			22 10.000							22 10	22 10	31
2	6H13	WING	E	20		X			5 9.000							5 9	5 9	17
4	6H14	WING		20		X			5 9.000							5 9	5 9	35
18	3H15	WING		20		X	V	2	2 7.000							2 7	2 7	
		INCREMENT =							5 8.000							5 8	5 8	112
		4.625 INCH																
4	6H16	WING		20		X			11 3.000							11 3	11 3	68
18	6H17	WING		20		X	V	2	3 4.000							3 4	3 4	
		INCREMENT =							11 1.000							11 1	11 1	195
		11.625 INCH																
10	4H18	CURTAIN WALL		20		X			2 6.000							2 6	2 6	17
2	6T1	WING		25		X			2 2.000	7 2.875	19.000			6 5.125	3 3.875	11 0	10 11	33
2	6T2	WING		25		X			16.000	10 11.625	20.000			6 8.750	8 8.000	14 0	13 11	42
2	4T3	WING		19		X			6 8.000	3 2.000						9 10	9 9	13
17	6U1	BEAM		13	S	X			2 9.000	23.000	2 6.000	23.000				10 2	9 8	247
6	6U2	BEAM		13	S	X			2 6.000	2 2.875	2 6.000	2 2.875				10 10	10 4	93
6	4U3	BEAM		10	S	X				6.000	2 6.000					3 6	3 4	13
64	4U4	APP. HCH.		10	S	X				6.000	15.000					2 3	2 1	89
38	5V1	BACKWALL	E	20		X			7 3.000							7 3	7 3	287
94	5V2	BACKWALL	E	20		X			2 2.000							2 2	2 2	212
2	6V3	WING		20		X			3 9.000							3 9	3 9	11
6	6V4	WING		20		X	V	2	5 8.000							5 8	5 8	
		INCREMEN =							7 7.000							7 7	7 7	60
		11.500 INCH																
6	6V5	WING		20		X			8 6.000							8 6	8 6	77
2	6V6	WING		20		X			2 0.000							2 0	2 0	6
4	6V7	WING	E	17		X	V	1	3 7.000							4 3	4 3	
		INCREMENT =							5 8.000							6 2	6 2	31
		7.625 INCH																
7	6V8	WING	E	17		X	V	1	6 2.000							6 10	6 10	
		INCREMENT =							8 5.000							9 1	9 1	84
		4.500 INCH																
4	6V9	WING	E	20		X	V	1	3 9.000							3 9	3 9	
		INCREMENT =							5 8.000							5 8	5 8	28
		7.625 INCH																

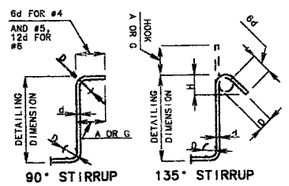
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	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.
7	6V10	WING	E	20		X	V	1	6 4.000							8 4	8 4	
		INCREMENT =							8 7.000							8 7	8 7	78
		4.500 INCH																
3	6V11	WING	E	17		X			8 9.000							9 5	9 5	42
3	6V12	WING	E	20		X			8 11.000							8 11	8 11	40
2	4V13	CURTAIN WALL		20		X			6 3.000							6 3	6 3	8
6	W5W10	A.B. WELLS		22		X			12.000	9.125						19 9	19 9	20
		END BT NO 1																
		(W.B.L.)																
40	6D1	FOOTING		20		X			3 5.000							3 5	3 5	205
22	6D2	FOOTING		20		X			5 8.000							5 8	5 8	187
10	6F1	WING BRACE		15		X			14.000	4 7.875	14.000	9.875	9.875	9.875	9.875	7 0	6 11	104
2	6H19	BACKWALL	E	20		X			57 2.000							57 2	57 2	172
2	6H20	BACKWALL	E	20		X			21 8.000							21 8	21 8	65
4	4H21	BACKWALL		20		X			30 6.000							30 6	30 6	81
2	4H22	BACKWALL		20		X			21 10.000							21 10	21 0	29
6	4H23	BACKWALL		20		X			17 3.000							17 3	17 3	69
6	4H24	BACKWALL		20		X			14 5.000							14 5	14 5	58
8	6H25	BEAM		18		X			17 3.000							18 7	18 7	223
2	6H26	BEAM		20		X			17 3.000							17 3	17 3	52
8	6H27	BEAM		18		X			14 5.000							15 9	15 9	189
2	6H28	BEAM		20		X			14 5.000							14 5	14 5	43
2	4H29	APP. HCH.		20		X			28 9.000							28 9	28 9	38
1	4H30	APP. HCH.		20		X			18 10.000							18 10	18 10	13
4	6H31	WING		20		X			11 3.000							11 3	11 3	68
18	6H32	WING		20		X	V	2	3 1.000							3 1	3 1	
		INCREMENT =							11 1.000							11 1	11 1	192
		12.000 INCH																
10	4H33	CURTAIN WALL		20		X			2 6.000							2 6	2 6	17
18	4H34	WING		20		X			10 5.000							10 5	10 5	125
10	4H35	CURTAIN WALL		20		X			2 6.000							2 6	2 6	17
2	6T4	WING		25		X			16.000	10 10.250	21.000			6 6.500	8 7.875	13 11	13 10	42
2	4T5	CURTAIN WALL		19		X			6 8.000	3 2.000						9 10	9 9	13
2	4T6	CURTAIN WALL		19		X			6 10.000	3 2.000						10 0	9 11	13
6	6U3	BEAM		10	S	X				6.000	2 6.000					3 6	3 2	29
73	4U4	APP. HCH.		10	S	X				6.000	15.000					2 3	2 1	102
21	6U5	BEAM		13	S	X			2 6.000	2 0.875	2 6.000	2 0.875				10 6	10 0	315
17	6U6	BEAM		13	S	X			2 6.000	23.000	2 6.000	23.000				10 2	9 8	247
62	5V1	BACKWALL	E	20		X			7 3.000							7 3	7 3	469
94	5V2	BACKWALL	E	20		X			2 2.000							2 2	2 2	212
2	6V14	WING		20		X			2 0.000							2 0	2 0	6
4	6V15		E	17		X	V	1	3 7.000							4 3	4 3	
		INCREMENT =							5 8.000							6 1	6 1	31
		7.375 INCH																
7	6V16	WING	E	17		X	V	1	6 2.000							6 10	6 10	
		INCREMENT =							8 3.000							8 11	8 11	83
		4.125 INCH																



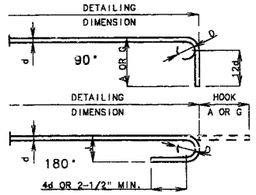
BENDING DIAGRAMS

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	343



STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	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.



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

TWO ADDITIONAL ARE INCLUDED IN THE BAR BILL FOR TESTING.

END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	ALL GRADES 180° HOOKS		90° HOOKS
		A OR G	J	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	6-1/2"	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"

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 FABRICATORS 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.

STD 90.8 REVISED MAY 1974 OCT. 1991

DETAILED AUG. 1993
CHECKED AUG. 1993

SHEET NO. 46 OF 51.

JACKSON COUNTY

A-610R1

FINAL PLANS

BILL OF REINFORCING STEEL

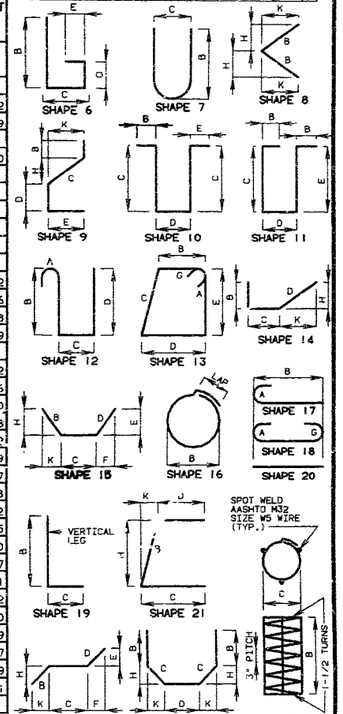
NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
4	6V17	WING	E	20		X	V	1	3 9.000							3 9	3 9	
		INCREMENT =							5 7.000							5 7	5 7	28
		7.375 INCH																
7	6V18	WING	E	20		X	V	1	6 4.000							6 4	6 4	
		INCREMENT =							8 5.000							8 5	8 5	78
		4.125 INCH																
3	6V19	WING	E	17		X			8 7.000							9 3	9 3	42
3	6V20	WING	E	20		X			8 9.000							8 9	8 9	39
2	4V21	CURTAIN WALL		20		X			6 3.000							6 3	6 3	8
22	6V22	WING		20		X	V	2	6 1.000							6 1	6 1	
		INCREMENT =							6 5.000							6 5	6 5	207
		0.375 INCH																
2	4V23	CURTAIN WALL		20		X			6 5.000							6 5	6 5	9
8	W5W10	A.B. WELLS		22		X			12.000	9.125						19 9	19 9	26
		INT. BT NO 2																
		(E.B.L.)																
46	8D3	FOOTING		20		X			7 8.000							7 8	7 8	942
28	8D4	FOOTING		20		X			14 8.000							14 8	14 8	1096
20	7D5	FOOTING		20		X			8 8.000							8 8	8 8	354
4	6D6	FOOTING		10		X				5 0.000	14 0.000					24 0	23 8	142
5	9H36	BEAM		18		X			6 3.000							8 9	8 9	149
4	6H37	BEAM		20		X			5 11.000							5 11	5 11	36
4	9H38	BEAM		18		X			5 11.000							8 5	8 5	114
5	9H39	BEAM		20		X			6 3.000							6 3	6 3	106
4	9H40	BEAM		20		X			5 11.000							5 11	5 11	80
8	7H41	BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	9H42	BEAM		18		X			14 10.000							17 4	17 4	236
5	9H43	BEAM		18		X			15 2.000							17 8	17 8	300
5	9H44	BEAM		20		X			15 2.000							15 2	15 2	258
4	9H45	BEAM		20		X			14 10.000							14 10	14 10	202
4	6H46	BEAM		20		X			14 10.000							14 10	14 10	89
8	9H47	WEB		20		X			19 9.000							19 9	19 9	537
4	9H48	WEB		20		X			20 5.000							20 5	20 5	278
4	9H49	WEB		20		X			21 6.000							21 6	21 6	292
2	6H50	WEB		20		X			21 6.000							21 6	21 6	65
6	8H51	TIE BEAM		20		X			13 5.000							13 5	13 5	215
10	4H52	TIE BEAM		20		X			11 4.000							11 4	11 4	76
6	8H53	TIE BEAM		20		X			18 1.000							18 1	18 1	290
10	4H54	TIE BEAM		20		X			16 0.000							16 0	16 0	107
86	4P1	COLUMN		16		X			3 9.000							12 8	12 8	728
	5U7	BEAM		13	S	X			2 4.875	3 9.875	2 4.875	3 9.875				13 5	13 1	14
1	5U8	BEAM		13	S	X			3 11.750	3 9.875	3 11.750	3 9.875				16 6	16 3	17
4	5U9	BEAM		13	S	X			4 3.000	3 9.875	4 3.000	3 9.875				17 1	16 9	70
5	5U10	BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	84
24	5U11	BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5U12	BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5U13	BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4U14	BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5U15	WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
25	4U16	TIE BEAM		13	S	X			21.000	5 9.000	21.000	5 9.000				15 9	15 6	259
2	4U60	BEAM		10	S	X				6.000	3 5.250					4 5	4 3	6

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	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.
46	8V24	COLUMN		20		X			29 2.000							29 2	29 2	3532
46	8V25	COLUMN		20		X			20 10.000							20 10	20 10	2559
6	W5W20	A.B. WELLS		22		X			12.000	9.125						19 9	19 9	20
		INT. BT NO 2																
		(W.B.L.)																
46	8D3	FOOTING		20		X			7 8.000							7 8	7 8	942
20	7D7	FOOTING		20		X			10 2.000							10 2	10 2	416
12	7D8	FOOTING		20		X			7 8.000							7 8	7 8	188
4	6D9	FOOTING		10		X				4 6.000	9 6.000					18 6	18 2	109
8	7H41	BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	9H42	BEAM		18		X			14 10.000							17 4	17 4	236
5	9H43	BEAM		18		X			15 2.000							17 8	17 8	300
5	9H44	BEAM		20		X			15 2.000							15 2	15 2	258
4	9H45	BEAM		20		X			14 10.000							14 10	14 10	202
4	6H46	BEAM		20		X			14 10.000							14 10	14 10	89
8	9H47	WEB		20		X			19 9.000							19 9	19 9	537
4	9H48	WEB		20		X			20 5.000							20 5	20 5	278
4	9H49	WEB		20		X			21 6.000							21 6	21 6	292
2	6H50	WEB		20		X			21 6.000							21 6	21 6	65
6	8H53	TIE BEAM		20		X			18 1.000							18 1	18 1	290
10	4H54	TIE BEAM		20		X			16 0.000							16 0	16 0	107
4	9H55	BEAM		18		X			16 8.000							19 2	19 2	261
5	9H56	BEAM		18		X			17 0.000							19 6	19 6	332
4	6H57	BEAM		20		X			16 8.000							16 8	16 8	100
5	9H58	BEAM		20		X			17 0.000							17 0	17 0	289
4	9H59	BEAM		20		X			16 6.000							16 8	16 8	227
6	8H60	TIE BEAM		20		X			18 8.000							18 8	18 8	299
10	4H61	TIE BEAM		20		X			16 7.000							16 7	16 7	111
89	4P1	COLUMN		16		X			3 9.000							12 8	12 8	753
4	5U10	BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	67
24	5U11	BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5U12	BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5U13	BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4U14	BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5U15	WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
30	4U16	TIE BEAM		13	S	X			21.000	5 9.000	21.000	5 9.000				15 9	15 6	311
8	5U17	BEAM		13	S	X			4 3.000	3 8.000	4 3.000	3 8.000				16 9	16 5	137
22	5U18	BEAM		13	S	X			2 10.000	3 8.000	2 10.000	3 8.000				13 11	13 7	312
2	5U19	BEAM		13	S	X			2 6.000	3 8.000	2 6.000	3 8.000				13 3	12 11	27
1	5U20	BEAM		13	S	X			17.500	3 8.000	17.500	3 8.000				11 2	10 10	11
1	4U60	BEAM		10	S	X				6.000	3 5.250					4 5	4 3	3
1	4U61	BEAM		10	S	X				6.000	3 0.125					4 0	3 10	3
23	8V25	COLUMN		20		X			20 10.000							20 10	20 10	1279
46	8V26	COLUMN		20		X			28 10.000							28 10	28 10	3541
23	8V27	COLUMN		20		X			23 10.000							23 10	23 10	1464
8	W5W20	A.B. WELLS		22		X			12.000	9.125						19 9	19 9	26

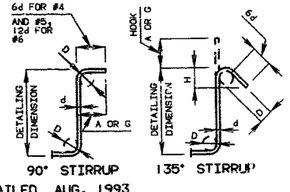
TWO ADDITIONAL ARE INCLUDED IN THE BAR BILL FOR TESTING.

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	344



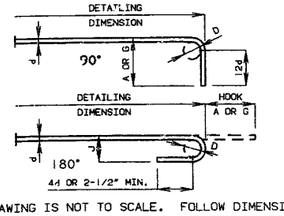
BENDING DIAGRAMS

STD 90.8	REVISED
MAY 1972	OCT. 1991



STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI					
BAR SIZE	D (IN.)	90° HOOK		135° HOOK	
		HOOK A OR G		HOOK A OR G	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		90° HOOKS	
		A OR G	J	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"	

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

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 FABRICATORS 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.

DETAILED AUG. 1993
CHECKED AUG. 1993

SHEET NO. 47 OF 51.

JACKSON COUNTY

A-6101

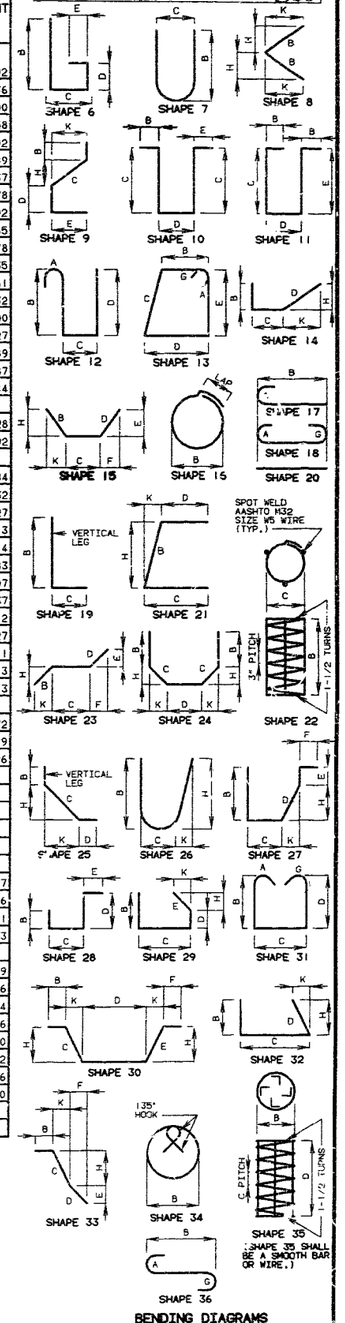
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			INT. BT NO 3																
			(E.B.L.)																
46	8	D10	COLUMN		20		X			9 8.000							9 8	9 8	1187
58	8	D11	FOOTING		20		X			9 11.000							9 11	9 11	1536
32	8	D12	FOOTING		18		X			15 2.000							17 0	17 0	1452
26	5	D13	FOOTING		18		X			8 2.000							9 4	9 4	253
5	9	H62	BEAM		18		X			6 3.000							8 9	8 9	149
4	6	H63	BEAM		20		X			5 11.000							5 11	5 11	36
4	9	H64	BEAM		18		X			5 11.000							8 5	8 5	114
5	9	H65	BEAM		20		X			6 3.000							6 3	6 3	106
4	9	H66	BEAM		20		X			5 11.000							5 11	5 11	80
8	7	H67	BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	9	H68	BEAM		18		X			14 10.000							17 4	17 4	236
5	9	H69	BEAM		18		X			15 2.000							17 8	17 8	300
5	9	H70	BEAM		20		X			15 2.000							15 2	15 2	258
4	9	H71	BEAM		20		X			14 10.000							14 10	14 10	202
4	6	H72	BEAM		20		X			14 10.000							14 10	14 10	89
8	9	H73	WEB		20		X			19 9.000							19 9	19 9	537
4	9	H74	WEB		20		X			20 5.000							20 5	20 5	278
4	9	H75	WEB		20		X			21 6.000							21 6	21 6	292
2	6	H76	WEB		20		X			21 6.000							21 6	21 6	65
6	8	H77	TIE BEAM		20		X			12 8.000							12 8	12 8	203
22	4	H78	TIE BEAM		20		X			11 4.000							11 4	11 4	167
6	8	H79	TIE BEAM		20		X			17 4.000							17 4	17 4	278
22	4	H80	TIE BEAM		20		X			16 0.000							16 0	16 0	235
88	4	P2	COLUMN		16		X			3 9.000							12 8	12 8	745
56	4	P3	COLUMN		16		X			4 9.000							15 10	15 10	592
1	5	U21	BEAM		13	S	X			2 4.875	3 9.875	2 4.875	3 9.875				13 5	13 1	14
1	5	U22	BEAM		13	S	X			3 11.750	3 9.875	3 11.750	3 9.875				16 6	16 3	17
4	5	U23	BEAM		13	S	X			4 3.000	3 9.875	4 3.000	3 9.875				17 1	16 9	70
5	5	U24	BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	84
24	5	U25	BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5	U26	BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5	U27	BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4	U28	BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5	U29	WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
46	4	U30	TIE BEAM		10	S	X				2 0.500	11 9.000					15 10	15 8	481
2	4	U60	BEAM		10	S	X				6.000	3 5.250					4 5	4 3	6
46	8	V27	COLUMN		20		X			46 0.000							46 0	46 0	5650
58	9	V28	COLUMN		20		X			27 9.000							27 9	27 9	5472
6	W5	W30	A.B. WELLS		22		X			12.000	9.125						19 9	19 9	20
			INT. BT NO 3																
			(W.B.L.)																
46	8	D10	COLUMN		20		X			9 8.000							9 8	9 8	1187
58	9	D11	FOOTING		20		X			9 11.000							9 11	9 11	1956
32	8	D12	FOOTING		18		X			15 2.000							17 0	17 0	1452
32	5	D13	FOOTING		18		X			8 2.000							9 4	9 4	312

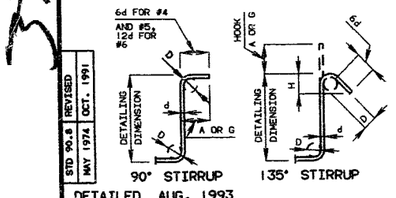
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
8	7	H67	BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	9	H68	BEAM		18		X			14 10.000							17 4	17 4	236
5	9	H69	BEAM		18		X			15 2.000							17 8	17 8	300
5	9	H70	BEAM		20		X			15 2.000							15 2	15 2	258
4	9	H71	BEAM		20		X			14 10.000							14 10	14 10	202
4	6	H72	BEAM		20		X			14 10.000							14 10	14 10	89
8	9	H73	WEB		20		X			19 9.000							19 9	19 9	537
4	9	H74	WEB		20		X			20 5.000							20 5	20 5	278
4	9	H75	WEB		20		X			21 6.000							21 6	21 6	292
2	6	H76	WEB		20		X			21 6.000							21 6	21 6	65
6	8	H79	TIE BEAM		20		X			17 4.000							17 4	17 4	278
22	4	H80	TIE BEAM		20		X			16 0.000							16 0	16 0	235
4	9	H81	BEAM		18		X			16 8.000							19 2	19 2	261
5	9	H82	BEAM		18		X			17 0.000							19 6	19 6	332
4	6	H83	BEAM		20		X			16 8.000							16 8	16 8	100
4	9	H84	BEAM		20		X			16 8.000							16 8	16 8	227
5	9	H85	BEAM		20		X			17 0.000							17 0	17 0	289
6	8	H86	TIE BEAM		20		X			17 11.000							17 11	17 11	287
22	4	H87	TIE BEAM		20		X			16 7.000							16 7	16 7	244
86	4	P2	COLUMN		16		X			3 9.000							12 8	12 8	728
56	4	P3	COLUMN		16		X			4 9.000							15 10	15 10	592
5	5	U24	BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	84
24	5	U25	BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5	U26	BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5	U27	BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4	U28	BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5	U29	WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
58	4	U30	TIE BEAM		10	S	X				2 0.500	11 9.000					15 10	15 8	607
8	5	U31	BEAM		13	S	X			4 3.000	3 8.000	4 3.000	3 8.000				16 9	16 5	137
22	5	U32	BEAM		13	S	X			2 10.000	3 8.000	2 10.000	3 8.000				13 11	13 7	312
2	5	U33	BEAM		13	S	X			2 6.000	3 8.000	2 6.000	3 8.000				13 3	12 11	27
1	5	U34	BEAM		13	S	X			17.500	3 8.000	17.500	3 8.000				11 2	10 10	11
1	4	U60	BEAM		10	S	X				6.000	3 5.250					4 5	4 3	3
1	4	U61	BEAM		10	S	X				6.000	3 0.125					4 0	3 [illegible]	3
58	9	V28	COLUMN		20		X			27 9.000							27 9	27 9	5472
46	8	V29	COLUMN		20		X			45 7.000							45 7	45 7	3559
8	W5	W30	A.B. WELLS		22		X			12.000	9.125						19 9	19 9	26
			INT. BT NO 4																
			(E.B.L.)																
46	8	D14	COLUMN		20		X			9 8.000							9 8	9 8	1187
58	9	D15	FOOTING		20		X			9 11.000							9 11	9 11	1956
24	5	D16	FOOTING		18		X			7 8.000							8 10	8 10	221
24	8	D17	FOOTING		18		X			17 8.000							15 6	15 6	993
5	9	H88	BEAM		18		X			6 3.000							8 9	8 9	149
4	6	H89	BEAM		20		X			5 11.000							5 11	5 11	36
4	9	H90	BEAM		18		X			5 11.000							8 5	8 5	114
5	9	H91	BEAM		20		X			6 3.000							6 3	6 3	106
4	9	H92	BEAM		20		X			5 11.000							5 11	5 11	80
8	7	H93	BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	9	H94	BEAM		18		X			14 10.000							17 4	17 4	236
5	9	H95	BEAM		18		X			15 2.000							17 8	17 8	300

STATE MO. | PROJ. NO. J4I0807 | SHEET NO. 345

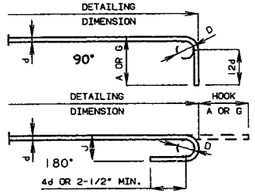


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK HOOK A OR G	135° HOOK 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.



TWO ADDITIONAL ARE INCLUDED IN THE BAR BILL FOR TESTING.

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"

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 VARIES 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 FABRICATORS 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.

STD 90.8	REVISED
MAY 1974	OCT. 1991

DETAILED AUG. 1993
CHECKED AUG. 1993

JACKSON COUNTY

A-610R1

FINAL PLANS

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
5	9H96		BEAM		20		X			15 2.000							15 2	15 2	258
4	9H97		BEAM		20		X			14 10.000							14 10	14 10	202
4	6H98		BEAM		20		X			14 10.000							14 10	14 10	89
8	9H99		WEB		20		X			19 9.000							19 9	19 9	537
4	9H100		WEB		20		X			20 5.000							20 5	20 5	278
4	9H101		WEB		20		X			21 6.000							21 6	21 6	292
2	6H102		WEB		20		X			21 6.000							21 6	21 6	65
6	8H103		TIE BEAM		20		X			12 8.000							12 8	12 8	203
22	4H104		TIE BEAM		20		X			11 4.000							11 4	11 4	167
6	8H105		TIE BEAM		20		X			17 4.000							17 4	17 4	278
22	4H106		TIE BEAM		20		X			16 0.000							16 0	16 0	235
74	4P4		COLUMN		16		X			3 9.000							12 8	12 8	626
48	4P5		COLUMN		16		X			4 9.000							15 10	15 10	508
1	5U35		BEAM		13	S	X			2 4.875	3 9.875	2 4.875	3 9.875				13 5	13 1	14
1	5U36		BEAM		13	S	X			3 11.750	3 9.875	3 11.750	3 9.875				16 6	16 3	17
4	5U37		BEAM		13	S	X			4 3.000	3 9.875	4 3.000	3 9.875				17 1	16 9	70
5	5U38		BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	84
24	5U39		BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5U40		BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5U41		BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4U42		BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5U43		WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
46	4U44		TIE BEAM		10	S	X				2 0.500	11 9.000					15 10	15 8	481
2	4U60		BEAM		10	S	X				6.000	3 5.250					4 5	4 3	6
46	8V30		COLUMN		20		X			39 9.000							39 9	39 9	4882
58	9V31		COLUMN		20		X			23 10.000							23 10	23 10	4700
6	W5W40		A.B. WELLS		22		X			12.000	9.125						19 9	19 9	20
			INT. BT NO 4 (W.B.L.)																
46	8D14		COLUMN		20		X			9 8.000							9 8	9 8	1187
58	9D15		FOOTING		20		X			9 11.000							9 11	9 11	1956
28	5D16		FOOTING		18		X			7 8.000							8 10	8 10	258
24	8D17		FOOTING		18		X			13 8.000							15 6	15 6	993
8	7H93		BEAM		7		X			4 9.000	4 1.750						11 9	11 9	192
4	5H94		BEAM		18		X			14 10.000							17 4	17 4	236
5	9H95		BEAM		18		X			15 2.000							17 8	17 8	300
5	9H96		BEAM		18		X			15 2.000							17 8	17 8	300
4	9H97		BEAM		20		X			14 10.000							14 10	14 10	202
4	6H98		BEAM		20		X			14 10.000							14 10	14 10	89
8	9H99		WEB		20		X			19 9.000							19 9	19 9	537
4	9H100		WEB		20		X			20 5.000							20 5	20 5	278
4	9H101		WEB		20		X			21 6.000							21 6	21 6	292
2	6H102		WEB		20		X			21 6.000							21 6	21 6	65
6	8H105		TIE BEAM		20		X			17 4.000							17 4	17 4	278
22	4H106		TIE BEAM		20		X			16 0.000							16 0	16 0	235
4	9H107		BEAM		18		X			16 8.000							19 2	19 2	261
5	9H108		BEAM		18		X			17 0.000							19 6	19 6	332
4	6H109		BEAM		20		X			16 8.000							16 8	16 8	100
4	9H110		BEAM		20		X			16 8.000							16 8	16 8	227
5	9H111		BEAM		20		X			17 0.000							17 0	17 0	289

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
6	8H112		TIE BEAM		20		X			17 11.000							17 11	17 11	287
22	4H113		TIE BEAM		20		X			16 7.000							16 7	16 7	244
74	4P4		COLUMN		16		X			3 9.000							12 8	12 8	626
48	4P5		COLUMN		16		X			4 9.000							15 10	15 10	508
5	5U38		BEAM		13	S	X			4 3.000	3 6.000	4 3.000	3 6.000				16 5	16 1	84
24	5U39		BEAM		13	S	X			2 10.000	3 6.000	2 10.000	3 6.000				13 7	13 3	332
2	5U40		BEAM		13	S	X			2 7.875	3 6.000	2 7.875	3 6.000				13 3	12 11	27
1	5U41		BEAM		13	S	X			2 4.875	3 6.000	2 4.875	3 6.000				12 9	12 5	13
4	4U42		BEAM		10	S	X				6.000	4 3.000					5 3	5 1	14
20	5U43		WEB		13	S	X			3 9.000	2 9.000	3 9.000	2 9.000				13 11	13 7	283
58	5U44		TIE BEAM		10	S	X				2 0.500	11 9.000					15 10	15 8	948
8	5U45		BEAM		13	S	X			4 3.000	3 8.000	4 3.000	3 8.000				16 9	15 5	137
22	5U46		BEAM		13	S	X			2 10.000	3 8.000	2 10.000	3 8.000				13 11	13 7	312
2	5U47		BEAM		13	S	X			2 6.000	3 8.000	2 6.000	3 8.000				13 3	12 11	27
1	5U48		BEAM		13	S	X			17.500	3 8.000	17.500	3 8.000				11 2	10 10	11
1	4U60		BEAM		10	S	X				6.000	3 5.250					4 5	4 3	3
1	4U61		BEAM		10	S	X				6.000	3 0.125					4 0	3 10	3
58	9V31		COLUMN		20		X			23 9.000							23 9	23 9	4684
46	8V32		COLUMN		20		X			39 4.000							39 4	39 4	4831
8	W5W40		A.B. WELLS		22		X			12.000	9.125						19 9	19 9	26
			SUPERSTR.																
			END BT NO 5 (E.B.L.)																
14	6F2		WING BRACE		15					14.000	4 6.000	14.000	9.875	9.875	9.875	9.875	6 10	6 9	142
12	6F3		DIAPH.		19					4 3.000	2 7.000						6 10	6 8	120
4	6H14		DIAPH.	E	20					46 6.000							46 6	46 6	279
4	6H15		DIAPH.	E	20					22 10.000							22 10	22 10	137
3	6H116		DIAPH.		20					46 6.000							46 6	46 6	210
3	6H117		DIAPH.		20					43 8.000							43 8	43 8	197
3	6H118		DIAPH.		20					11 0.000							11 0	11 0	50
3	6H119		DIAPH.		20					22 10.000							22 10	22 10	103
21	6H120		DIAPH & BEAM		20					14 5.000							14 5	14 5	455
21	6H121		DIAPH & BEAM		20					5 3.000							5 3	5 3	166
2	4H122		APP. HCH.		20					23 0.000							23 0	23 0	31
1	4H123		APP. HCH.		20					21 8.000							21 8	21 8	14
2	6H124		WING	E	20					10 5.000							10 5	10 5	31
4	6H125		WING		20					10 5.000							10 5	10 5	63
16	6H126		WING		20			V	2	4 0.000							4 0	4 0	
			INCREMENT = 10.375 INCH							10 1.000							10 1	10 1	169
2	6H127			E	20					11 2.000							11 2	11 2	34
20	6H128		WING		20					11 2.000							11 2	11 2	335
2	6T7		WING		25					2 1.000	9 6.375	3 1.750					6 3.125	7 2.250	14 9	14 8	44
4	5U49		BEAM		32	S				4 11.250	3 5.625	5 1.000					4 11.250	14.750	13 6	13 3	55
4	4U50		BEAM		13	S				2 8.875	3 0.125	3 5.625	2 11.000				12 11	12 7	34
1	4U51		BEAM		14	S				2 11.000	2 8.875	3 0.125					2 11.000	8.750	8 8	8 .	6
11	5U52		BEAM		32	S				4 9.000	3 5.625	4 10.750					4 9.000	14.250	13 1	12 10	147

STATE | PROJ. NO. | SHEET NO.
MO. J41B807 | 346

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 · SHAPE 22 · SHAPE 23 · SHAPE 24 · SHAPE 25 · SHAPE 26 · SHAPE 27 · SHAPE 28 · SHAPE 29 · SHAPE 31 · SHAPE 30 · SHAPE 32 · SHAPE 33 · SHAPE 34 · SHAPE 35 · SHAPE 36

SPOT WELD AASHTO M32 SIZE W5 WIRE (TYP.)

BENDING DIAGRAMS

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

90° STIRRUP

135° STIRRUP

STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK HOOK A OR G	135° HOOK 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° · 180° · HOOK A OR G · 4d OR 2-1/2" MIN.

TWO ADDITIONAL ARE INCLUDED IN THE BAR BILL FOR TESTING.

END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL GRADES 150° HOOKS A OR G	150° 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"

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

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 FABRICATORS 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.

STD 90.8 REVISED OCT. 1991
MAY 1974

DETAILED AUG. 1993
CHECKED AUG. 1993

SHEET NO. 49 OF 51.

JACKSON COUNTY A-610R1

FINAL PLANS

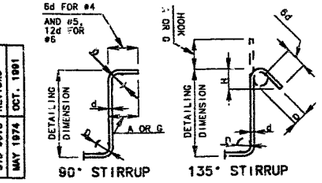
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B	C	D	E	F	H	K	NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
7	4U53	BEAM		13	S				2 9.375	2 10.000	3 5.625	2 9.000				12 7	12 4	58
2	4U54	BEAM		14	S				2 9.000	2 9.375	2 10.000			2 9.000	8.250	8 4	8 3	11
89	6U55	DIAPH.	E	19	S				2 1.000	4 1.000						6 2	6 0	802
4	5U56	DIAPH.	E	10	S					5 7.000	2 8.375					13 10	13 8	57
13	5U57	DIAPH.	E	10	S					5 5.000	2 9.000					13 7	13 5	182
41	5U58	DIAPH.	E	10	S					2 1.000	2 4.000					6 5	6 4	271
53	4U59	APP. HCH.		10	S					17.500	6.000					3 5	3 3	115
4	5V33	BEAM		20					4 11.000							4 11	4 11	21
14	6V34	WING		20			V	2	2 7.000							2 7	2 7	
		INCREMENT =							8 0.000							8 0	8 0	111
		10.875 INCH																
4	6V35	WING		20					8 10.000							8 10	8 10	53
22	6V36	WING		20			V	2	8 2.000							8 2	8 2	
		INCREMENT =							8 6.000							8 6	8 6	275
		0.375 INCH																
		END BT NO 5 (W.B.L.)																
8	5F2	WING BRACE		15					13.000	4 6.000	14.000	9.875	9.875	9.875	9.875	6 10	6 9	61
6	6F3	DIAPH.		19					4 3.000	2 7.000						6 10	6 8	60
4	6H115	DIAPH.	E	20					22 10.000							22 10	22 10	137
3	6H118	DIAPH.		20					11 0.000							11 0	11 0	50
3	6H119	DIAPH.		20					22 10.000							22 10	22 10	103
21	6H120	DIAPH & BEAM		20					14 5.000							14 5	14 5	455
1	4H123	APP. HCH.		20					21 8.000							21 8	21 8	14
4	6H129	DIAPH.	E	20					58 6.000							58 6	58 6	351
3	6H130	DIAPH.		20					44 0.000							44 0	44 0	198
3	6H131	DIAPH.		20					58 6.000							58 6	58 6	264
21	6H132	DIAPH & BEAM		20					17 3.000							17 3	17 3	544
2	4H133	APP. HCH.		20					29 0.000							29 0	29 0	39
2	6H134	WING	E	20					10 5.000							10 5	10 5	31
4	6H135	WING		20					10 5.000							10 5	10 5	63
16	6H136	WING		20			V	2	3 11.000							3 11	3 11	
		INCREMENT =							10 2.000							10 2	10 2	169
		10.750 INCH																
2	6T8	WING		25					2 1.000	9 5.000	3 1.750			6 1.000	7 2.250	14 8	14 7	44
12	5U49	BEAM		32	S				4 11.250	3 5.625	5 1.000			4 11.250	14.750	13 6	13 3	166
10	4U50	BEAM		13	S				2 8.875	3 0.125	3 5.625	2 11.000				12 11	12 7	84
11	5U52	BEAM		32	S				4 9.000	3 5.625	4 10.750			4 9.000	14.250	13 1	12 10	147
7	5U53	BEAM		13	S				2 9.375	2 10.000	3 5.625	2 9.000				12 9	12 5	91
2	4U54	BEAM		14	S				2 9.000	2 9.375	2 10.000			2 9.000	8.250	8 4	8 3	11
105	6U55	DIAPH.	E	19	S				2 1.000	4 1.000						6 2	6 0	946
28	5U57	DIAPH.	E	10	S					5 5.000	2 9.000					13 7	13 5	392
41	5U58	DIAPH.	E	10	S					2 1.000	2 4.000					6 6	6 4	271
68	4U59	APP. HCH.		10	S					17.500	6.000					3 5	3 3	143
4	5V33	BEAM		20					4 11.000							4 11	4 11	21
6	5V37	BEAM		20					5 1.000							5 1	5 1	32
14	6V38	WING		20			V	2	2 7.000							2 7	2 7	
		INCREMENT =							7 11.000							7 11	7 11	110
		10.625 INCH																
				20														52

BILL OF REINFORCING STEEL

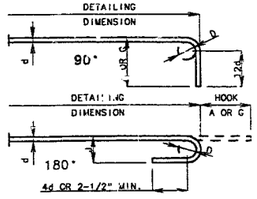
NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B	C	D	E	F	H	K	NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
144	5C1	BARRIER CURB	E	20					8 10.000							3 10	8 10	1327
4	5C2	BARRIER CURB	E	20					9 4.000							9 4	9 4	39
2	5C3	BARRIER CURB	E	20					6 3.000							6 3	6 3	13
2	5C4	BARRIER CURB	E	20					10 8.000							10 8	10 8	22
2	5C5	BARRIER CURB	E	20					12 8.000							12 8	12 8	26
2250	5R1	BARRIER CURB	E	19	S				2 6.000	3.500						2 10	2 8	6258
2194	5R2	BARRIER CURB	E	19	S				2 6.125	3.500				2 8.000	3.125	2 10	2 9	6293
1054	5R3	BARRIER CURB	E	19	S				17.000	6.000						23	22	2015
1054	5R4	BARRIER CURB	E	27	S					6.000	11.000	7.000	12.000	9.000	6.250	3 0	2 10	3115
26	5R5	BARRIER CURB	E	19	S				18.500	6.000						2 1	23	52
26	5R6	BARRIER CURB	E	27	S				12.000	9.750	10.625	6.000		6.125	8.750	3 2	3 0	81
4	5R7	BARRIER CURB	E	19	S				16.000	6.000						22	21	7
4	5R8	BARRIER CURB	E	27	S				12.000	9.750	7.750	6.000		4.625	6.250	3 0	2 10	12
12	5R9	BARRIER CURB	E	10	S					8.500	7.500					6 1	5 10	73
48	5R10	BARRIER CURB	E	20					5 0.000							5 0	5 0	250
8	5R11	BARRIER CURB	E	19	S				2 3.500	3.500						2 7	2 6	21
10	5R12	BARRIER CURB	E	20					8 5.000							8 6	8 6	89
2	5R13	BARRIER CURB	E	20					9 5.000							9 5	9 5	20
2	5R14	BARRIER CURB	E	20					11 3.000							11 3	11 3	23
26	5R15	BARRIER CURB	E	19	S				2 2.500	6.000						2 9	2 7	70
26	5R16	BARRIER CURB	E	27	S					6.000	11.000	17.750		9.000	6.250	2 11	2 10	77
4	5R17	BARRIER CURB	E	27	S					6.000	7.750	17.750		6.250	4.825	2 8	2 7	11
4	5R18	BARRIER CURB	E	19	S				2 0.000	6.000						2 6	2 5	10
12	5R19	BARRIER CURB	E	10	S					2 0.000	7.500					4 8	4 5	55
10	5R20	BARRIER CURB	E	20					9 0.000							9 0	9 0	94
2	5R21	BARRIER CURB	E	20					9 10.000							9 10	9 10	21
84	5R22	BARRIER CURB	E	20					35 1.000							35 1	35 1	3074
282	5R23	BARRIER CURB	E	20					9 9.000							9 9	9 9	2868
168	5R24	BARRIER CURB	E	20					35 11.000							35 11	35 11	6293
62	5R25	BARRIER CURB	E	20					34 6.000							34 6	34 6	2267
7	5R26	BARRIER CURB	E	20					5 9.000							5 9	5 9	42
7	5R27	BARRIER CURB	E	20					12 5.000							12 5	12 5	91
7	5R28	BARRIER CURB	E	20					10 5.000							10 5	10 5	76
21	5R29	BARRIER CURB	E	20					35 6.000							35 5	35 6	778
		CAST-IN-PLACE CONVENTIONAL FORMS OR STAY-IN-PLACE FORMS																
2466	6S1	SLAB	E	20					22 5.000							22 5	22 5	8 3030
1233	6S2	SLAB	E	20					34 7.000							34 7	34 7	6 4047
1959	6S3	SLAB	E	20					26 6.000							26 6	26 6	7 7971
1959	6S4	SLAB	E	20					46 6.000							46 6	46 6	13 6822
1638	5S5	SLAB	E	20					39 0.000							39 0	39 0	6 6629
460	6S6	SLAB	E	20					60 0.000							60 0	60 0	4 1453
462	S7	SLAB	E	20					13 4.000							13 4	13 4	9252
230	6S8	SLAB	E	20					60 0.000							60 0	60 0	2 0728
230	6S9	SLAB	E	20					20 1.000							20 1	20 1	6938
2016	6S10	SLAB	E	20					38 9.000							38 9	38 9	11 7336
1452	6S11	SLAB	E	20					21 10.000							21 10	21 10	4 7616
726	6S12	SLAB	E	20					34 0.000							34 0	34 0	3 7075
4344	4S13	SLAB HAUNCH	E	10					6.000	7.000	7.000	6.000				2 9	2 5	7011

TWO ADDITIONAL #5-R23 & #6-S7 ARE INCLUDED IN THE BAR BILL FOR TESTING.



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"	5"	3"
#5	2-1/2"	6"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	4-1/2"

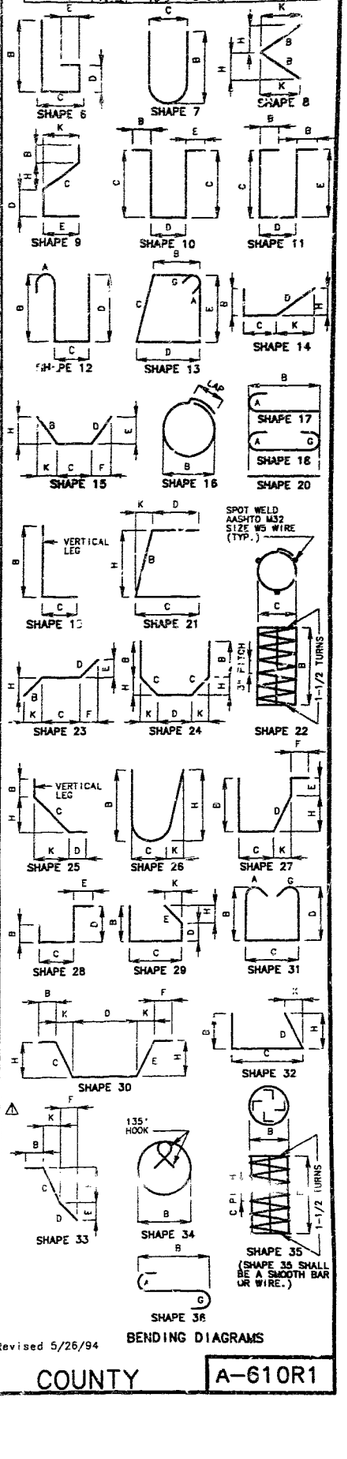
NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



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"	8"
#4	3"	8"	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"

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

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 FABRICATORS 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.



STATE | PROJ. NO. Job # J41B887 | SHEET NO.
MO. F.A.I. -435-1(25)1

STD 90.8 REVISED MAY 1974 OCT. 1991

DETAILED AUG. 1993
CHECKED AUG. 1993

⚠ Revised 5/26/94

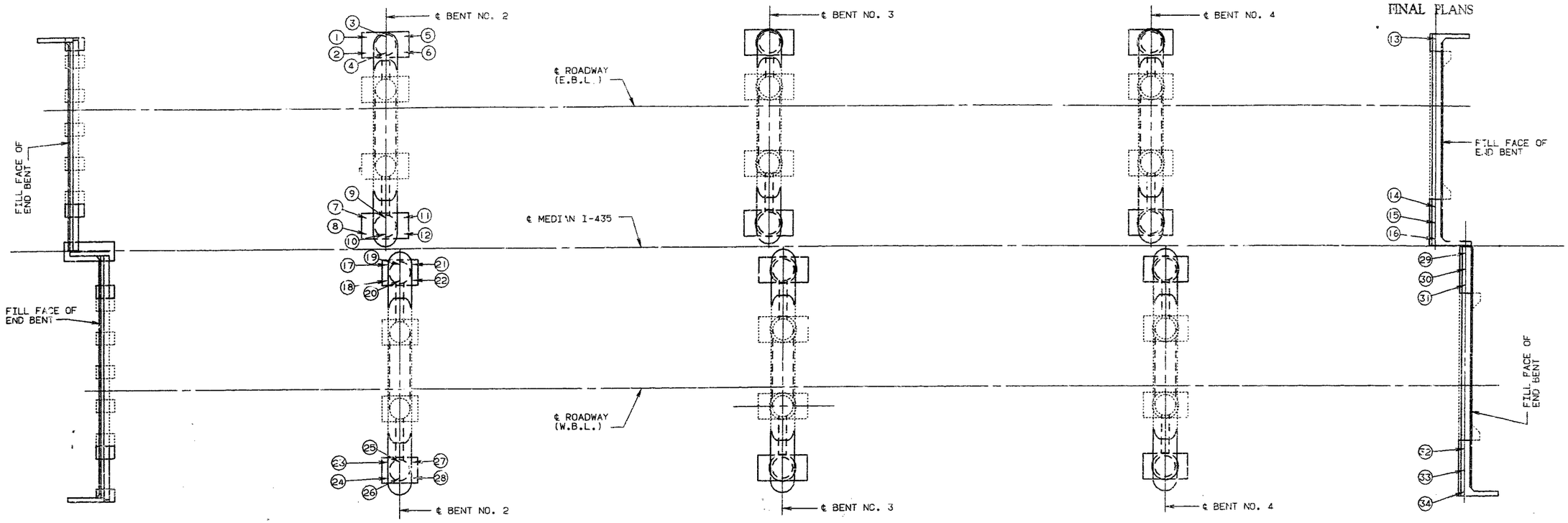
SHEET NO. 50 OF 51.

JACKSON COUNTY

A-610R1

STATE	PROJ. NO. Job # J4I0847	SHEET NO.
MO.	F.A.I.-435-1(25I)	348

FINAL PLANS



PART PLAN SHOWING
PILE NUMBERING FOR RECORDING
"AS BUILT PILE" DATA

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	Pre-Bore	Pile Point Reinf.	REMARKS
					INT. BENT NO. 2 (E.B.L.)
1	24'	132.8	13'	–	HP 12×53 All pile driven to practical refusal
2	24'	161.3	13'	–	" "
3	24'	157.3	13'	–	" "
4	24'	196.7	13'	–	" "
5	24'	141.1	13'	–	" "
6	24'	141.1	13'	–	" "
7	19'	150.5	13'	–	" "
8	19'	188.2	13'	–	" "
9	19'	168.6	13'	–	" "
10	20'	147.5	13'	–	" "
11	22'	141.1	13'	–	" "
12	22'	161.3	13'	–	" "
	265'	Subtotal	156'	–	

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	Pre-Bore	Pile Point Reinf.	REMARKS
					END BENT NO. 5 (E.B.L.)
13	66'	118.0	–	1'	HP 10×42 All pile driven to practical refusal.
14	65'	115.3	–	1'	" "
15	66'	115.8	–	1'	" "
16	66'	115.8	–	1'	" "
	263'	Subtotal	–	4'	INT. Bent No. 2. (W.B.L.)
17	17'	141.1	11.5'	–	HP 12×53 All pile driven to practical refusal.
18	16'	161.3	11.5'	–	" "
19	17'	168.6	11.5'	–	" "
20	16'	147.5	11.5'	–	" "
21	21'	141.1	11.5'	–	" "
22	18'	141.1	11.5'	–	" "
23	17'	161.3	11.5'	–	" "
24	16'	188.2	11.5'	–	" "
25	16'	196.7	11.5'	–	" "
26	16'	147.5	11.5'	–	" "

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	Pre-Bore	Pile Point Reinf.	REMARKS
27	17'	141.1	11.5'	–	HP 12×53 All pile driven to practical refusal
28	17'	141.1	11.5'	–	" "
	204'	Subtotal	138'		END BENT NO. 5 (W.B.L.)
29	65'	115.8	–	1'	HP 10×42 All pile driven to practical refusal
30	65'	110.8	–	1'	" "
31	65'	106.2	–	1'	" "
32	15'	118.0	–	1'	" "
33	65'	107.3	–	1'	" "
34	64'	107.3	–	1'	" "
	389'	subtotal	–	6'	
	263'	subtotal	–	4'	
	652'	Total		10'	10×42
	265'	subtotal	156'	–	
	204'	subtotal	138'	–	
	469'	Total	294'		12×53

NOTE: INDICATE IN REMARK COLUMN:
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.
C.) TYPE OF PILING USED.

~~NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.~~

MISC. PILES IN PLACE REVISED: MAY 1992

DETAILED AUG. 1993
CHECKED AUG. 1993

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

SHEET NO. 51 OF 51. JACKSON COUNTY A-610R1

KC

Safe & Sound = N

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A0610**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A0610** 444	STRUCTURE STATUS :	P-POSTLOAD	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	38000 KANSAS CITY CITY
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	1-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	JESSE ELSEMAN (STATE), LARRY FRITZ
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	9/4/2012
FACILITY CARRIED :	**IS 435 N**	DEFICIENT CODE :		LANES ON STRUCTURE	5	INSPECTION FREQUENCY :	24
CURB TO CURB :	75 Ft. 10.8 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	2	LATITUDE :	38 56 21.73 (DMS)
STRUCTURE LENGTH :	517 FEET	YEAR BUILT :	1966	BEGINNING COMPASS DIRECTION :	WEST	LONGITUDE :	94 33 39.62 (DMS)
FEATURE INTERSECTED :	**BLUE RVR. CST BLUE RIV**	RECONSTRUCTION YEAR	1994	ENDING COMPASS DIRECTION :	EAST	SCOUR EVALUATION TYPE :	OBSERVED

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-C3 LIMITS : Ton1 : 65 WEIGHT LIMIT 65 TONS.
FIELD POSTING CATEGORY : S-C3 LIMITS : Ton1 : 65 WEIGHT LIMIT 65 TONS.
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 65342 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI : FREQUENCY :
PIN : DATE :
CATEGORY :
METHODS :
INSPECTORS :
COMMENTS :

UNDERWATER INFORMATION

NBI : NO FREQUENCY : 60
PIN : NO DATE : 10/11/2011
CATEGORY : DRY
METHODS : VISUAL
INSPECTORS : RICHARD KI, TERRY WILS
COMMENTS :

NBI : FREQUENCY :
PIN : DATE :
CATEGORY :
METHODS :
INSPECTORS :
COMMENTS :

INDEPTH INFORMATION

NBI : NO FREQUENCY : 24
PIN : NO DATE : 09/04/2012
CATEGORY : PG-INTERSTATE
METHODS : SNOOPER
INSPECTORS : JESSE ELSE, LARRY FRIT
COMMENTS : INSPECTION TIME - 4 HRS

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (113'-144'-144'-114') CONT COMP PL GDR SPANS (WELDED)

RATINGS : **(ITEM 58) DECK RATING :** 7-GOOD CONDITION 10/31/2011 **(ITEM 59) SUPERSTRUCTURE RATING :** 5-FAIR CONDITION 03/09/2010 **(ITEM 60) SUBSTRUCTURE RATING :** 8-VERY GOOD CONDITION 05/18/2001

COMMENTS : **COMMENTS :** SEVERAL CRACKS IN COMPR. ZONES OF NON-FCM. **COMMENTS :**

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN STEEL PLATE GIRDERS NUMBER OF SPANS : 4

TOTAL NUMBER OF SPANS : 4

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	1 MEETS CURRENT STANDARDS	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :

COMPONENT : BRIDGE RAILING REINFORCED CONCRETE SAFETY BARRIER CURB DIRECTION : BOTH
CONDITION : VERTICAL CRACKS THROUGHOUT MANY

(ITEM 36B) TRANSITION RAILING :

COMPONENT : TRANSITION RAILING GALVANIZED STEEL THRIE BEAM TO W-BEAM DIRECTION : SOUTHEAST

(ITEM 36C) APPROACH RAILING :

COMPONENT : APPROACH RAILING GALVANIZED STEEL W-BEAM DIRECTION : SOUTHEAST

(ITEM 36D) RAIL END TREATMENT :

COMPONENT : RAIL END TREATMENT GALVANIZED STEEL BREKAWAY SYSTEM MANUFACTURE : ET-2000 DIRECTION : SOUTHEAST

Design_No = A0610

APPROACH PAVEMENT :

COMPONENT : APPROACH PAVEMENT | REINFORCED CONCRETE | SLAB | DIRECTION : BOTH

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 7-GOOD CONDITION

DECK COMPONENTS

MAIN SPANS 1

COMPONENT : DECK | REINFORCED CONCRETE | CAST-IN-PLACE

COMMENTS : LIVE LOAD DEFLECTION MODERATE IN ALL SPANS

CONDITION : EFFLORESCENCE | BOTTOM | FEW

CONDITION : TRANSVERSE CRACKS | BOTTOM | MANY

MAIN SPANS 2

COMPONENT : DECK | REINFORCED CONCRETE | CAST-IN-PLACE

CONDITION : EFFLORESCENCE | BOTTOM | FEW

CONDITION : TRANSVERSE CRACKS | BOTTOM | MANY

MAIN SPANS 3

COMPONENT : DECK | REINFORCED CONCRETE | CAST-IN-PLACE

CONDITION : EFFLORESCENCE | BOTTOM | FEW

CONDITION : TRANSVERSE CRACKS | BOTTOM | MANY

MAIN SPANS 4

COMPONENT : DECK | REINFORCED CONCRETE | CAST-IN-PLACE

CONDITION : EFFLORESCENCE | BOTTOM | FEW

CONDITION : TRANSVERSE CRACKS | BOTTOM | MANY

DRAINAGE COMPONENTS

DRAINAGE 0

COMPONENT : DRAINAGE | STEEL | FLOOR DRAIN

COMMENTS : FLOOR DRAINS OVER PEDESTRIAN WALK WAY @ W END

EXPANSION DEVICES

ABUTMENT 1

COMPONENT : CLOSED EXPANSION JOINT | FELT | FILLED JOINT | OVERALL CONDITION : FAIR

ABUTMENT 5

COMPONENT : CLOSED EXPANSION JOINT | ELASTOMERIC | STRIP SEAL | OVERALL CONDITION : POOR

COMMENTS : TORN W SIDE 1 INCH LOWER THAN E SIDE

PROTECTIVE COMPONENTS

MAIN SERIES 1

COMPONENT : WEARING SURFACE | PLAIN CONCRETE | MONOLITHIC

CONDITION : TRANSVERSE CRACKS | THROUGHOUT | FEW

COMPONENT : DECK PROTECTION | EPOXY POLYMER | COATED REBAR

COMPONENT : MEMBRANE | NOTAPPLICABLE | NONE

COMPONENT : SECONDARY DECK PROTECTION | LIQUID SEALANT | INTERNALLY SEALED | MANUFACTURE : STAR MACRO | YEAR APPLIED : 2009

RAILING COMPONENTS

BRIDGE RAILING 0

COMPONENT : BRIDGE RAILING | REINFORCED CONCRETE | SAFETY BARRIER CURB

CONDITION : VERTICAL CRACKS | THROUGHOUT | MANY

COMPONENT : APPROACH RAILING | GALVANIZED STEEL | W-BEAM

COMPONENT : TRANSITION RAILING | GALVANIZED STEEL | THRIE BEAM TO W-BEAM

COMPONENT : RAIL END TREATMENT | GALVANIZED STEEL | BREKAWAY SYSTEM | MANUFACTURE : ET-2000

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 5-FAIR CONDITION

COMMENT S : SEVERAL CRACKS IN COMPR. ZONES OF NON-FCM.

MAIN SERIES 1 CONTINUOUS SPAN STEEL PLATE GIRDERS NUMBER OF SPANS : 4

APPROACH ROADWAY WIDTH : 78 FOOT 0 INCH | CURB TO CURB : 75 FOOT 10.8 INCH | OUT TO OUT : 78 FOOT 7.19988 INCH | LEFT CURB WIDTH : 0 FOOT 7.2 INCH | RIGHT CURB WIDTH : 0 FOOT 7.2 INCH

MAIN SPANS 1 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 113 FOOT 5 INCH WEATHERING IND : N

CONDITION : VERTICAL CRACKS FINE TOP FLANGE

COMMENTS : 11/30/05 - OLD 2-1/4" CRK @ WELD & WEB 2ND DIAPH E. OF ABUT 1 GDR 2 FROM S.
11/30/05 - NEW 1" CRK IN WEB OF GDR 2ND DIAPH E. OF ABUT N. SIDE GDR 4
11/30/05 - OLD 1-1/4" CRK @ WELD & WEB 2ND DIAPH E. OF ABUT 1 N. SIDE GDR 5
11/30/05 - OLD 1-1/4" CRK @ WELD & WEB 3RD DIAPH FROM E. N. SIDE GDR 5
11/30/05 - OLD 1" CRK @ WELD & WEB 3RD DIAPH E. OF ABUT 1 S. SIDE OF GDR 4
11/30/05 - OLD 1-3/4" CRK @ WELD & OLD 1" CRK TOP STIFF WELD 3RD DIAPH E. OF BT 2 GDR 4

MAIN SPANS 2 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 144 FOOT 11 INCH WEATHERING IND : N

CONDITION : VERTICAL CRACKS FINE TOP FLANGE

COMMENTS : 11/30/05 - OLD 1" CRK @ WELD & WEB 2ND DIAPH E. OF BT 2 S. SIDE OF GDR 5
11/30/05 - NEW 1-3/4" CRK @ WELD & WEB 2ND DIAPH E. OF BT 2 N. SIDE 0F GDR5
11/30/05 - OLD 3-3/4" CRK GROWN 3/4" TO 4-1/2"@ WELD & WEB 3RD DIAPH E. OF BT 2 N. SIDE 0F GDR6
& OLD 2" CRK TOP STIFF WELD
11/30/05 - OLD 3-1/2" CRK GROWN 1" TO 4-1/2"@ WELD & WEB 4TH DIAPH E. OF BT 2 S. SIDE 0F GDR4
11/30/05 - OLD 3-1/4" CRK GROWN 1" TO 4-1/4"@ WELD & WEB 4TH DIAPH E. OF BT 2 S. SIDE 0F GDR5
11/30/05 - OLD 2" CRK @ WELD & WEB 3RD DIAPH E. OF BT 2 S. SIDE OF GDR 5
11/30/05 - OLD 3" CRK GROWN 1/2" TO 3-1/2"@ WELD & WEB 4TH DIAPH E. OF BT 2 W. SIDE 0F GDR6

MAIN SPANS 3 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 144 FOOT 11 INCH WEATHERING IND : N

CONDITION : VERTICAL CRACKS FINE TOP FLANGE

COMMENTS : 11/05/2005 4" CRK @ WELD & WEB 2ND DIAPH E. OF BT 3 S. SIDE OF GDR 5. 2-3/4" @ WELD & WEB 2ND DIAPH E. OF BT 3 W. SIDE 0F GDR6. 1-3/4"@ WELD & WEB 4TH DIAPH E. OF BT 3 W. SIDE GDR5. 6-1/2" CRK @ WELD & WEB 3RD DIAPH E. OF BT 3 N. SIDE OF GDR 5. 7-1/4" CRK @ WELD & 2" CRK TOP STIFF WELD 3RD DIAPH E. OF BT 3 N. SIDE GDR 4. 4-1/2" CRK @ WELD & WEB 4TH DIAPH E. OF BT 3 N. SIDE OF GDR 4. 5" @ WELD & WEB 3TH DIAPH E. OF BT 3 S. SIDE GDR3 & OLD 1-1/2" CRK GROWN 2" TO 3-1/2" TOP STIFF WELD. 3-1/4"@ WELD & WEB 3TH DIAPH E. OF BT 3 BOTH SIDE GDR2. 1-1/2" CRK @ WELD & WEB 2ND DIAPH W. OF BT 4 S. SIDE OF GDR 2 & OLD 1" CRK TOP STIFF WELD

CONDITION : VERTICAL CRACKS FINE TOP FLANGE WELD 7 INCH

COMMENTS : 3RD DIAPH EAST BT 3 SIDE GIRDER 3.

MAIN SPANS 4 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 114 FOOT 0 INCH WEATHERING IND : N

CONDITION : VERTICAL CRACKS FINE TOP FLANGE

COMMENTS : 11/30/05 2-1/2" CRK @ WELD & WEB 2ND DIAPH E. OF BT 4 N. SIDE OF GDR6. 1" CRK @ WELD & WEB 2ND DIAPH E. OF BT 4 S. SIDE OF GDR7. 2-1/4" CRK @ WELD & WEB 4TH DIAPH E. OF BT 4 S. SIDE OF GDR2. 03/02/2010 4-3/4"@ WELD & WEB 2ND DIAPH E. OF BT 4 N. SIDE GDR4.

CONDITION : VERTICAL CRACKS FINE TOP FLANGE WELD 1 INCH

COMMENTS : GIRDER 7 FROM SOUTH 1ST DIAPH WEST OF ABUT 5.

TOTAL NUMBER OF SPANS 4

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 8-VERY GOOD CONDITION

ABUTMENT 1	LABEL :			REINFORCED CONCRETE	INTEGRAL
LEFTADVAN LENGTH : 46 FOOT 6 INCH					
BACKWALL		REINFORCED CONCRETE	CAST-IN-PLACE		
BEAM CAP		REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : EFFLORESCENCE	THROUGHOUT	FEW			
CONDITION : VERTICAL CRACKS	THROUGHOUT	FEW			
FOOTING		REINFORCED CONCRETE	SPREAD		
TURNED BACK WINGS		REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING		STEEL	ROCKER	OVERALL CONDITION:	
COMMENTS : ABUT MADE INTEGRAL BRGS ENCASED					
CLOSED EXPANSION JOINT		FELT	FILLED JOINT	OVERALL CONDITION: FAIR	
BENT 2	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 44 FOOT 0 INCH					
BEAM CAP		REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING		REINFORCED CONCRETE	SPREAD		
COLUMN		REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : MAP CRACKS	THROUGHOUT	MANY			
TIE BEAM		REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING		STEEL	ROCKER	OVERALL CONDITION:	
BENT 3	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 44 FOOT 0 INCH					
BEAM CAP		REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING		REINFORCED CONCRETE	SPREAD		
COLUMN		REINFORCED CONCRETE	CAST-IN-PLACE		

TIE BEAM		REINFORCED CONCRETE	CAST-IN-PLACE		
FIXED BEARING		STEEL	PEDESTAL(ROTATING)	OVERALL CONDITION:	
BENT 4	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 44 FOOT 0 INCH					
BEAM CAP		REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING		REINFORCED CONCRETE	SPREAD		
COLUMN		REINFORCED CONCRETE	CAST-IN-PLACE		
TIE BEAM		REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING		STEEL	ROCKER	OVERALL CONDITION:	
ABUTMENT 5	LABEL :			REINFORCED CONCRETE	NON-INTEGRAL
LEFTADVAN LENGTH : 46 FOOT 6 INCH					
BACKWALL		REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : EFFLORESCENCE	THROUGHOUT	FEW			
CONDITION : VERTICAL CRACKS	THROUGHOUT	FEW			
BEAM CAP		REINFORCED CONCRETE	CAST-IN-PLACE		
TURNED BACK WINGS		REINFORCED CONCRETE	CAST-IN-PLACE		
PILING		STEEL	H-SHAPE		
EXPANSION BEARING		STEEL	ROCKER	OVERALL CONDITION:	
CONDITION : RUSTING	THROUGHOUT	LIGHT			
CLOSED EXPANSION JOINT		ELASTOMERIC	STRIP SEAL	OVERALL CONDITION: POOR	
COMMENTS : TORN W SIDE 1 INCH LOWER THAN E SIDE					

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS
COMMENTS : SEVERAL CRACKS IN COMPR. ZONES OF NON-FCM.

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : 8-PROTECTED DEVICES STBLE
SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : 8-STABLE FOR CALCULATED
WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : DECK ABOVE FLOOD ELEV
APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD
BANK PROTECTION

ROCK BLANKET NORTH

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION FAIR RUST AMOUNT : 8=.1% OF SURFACE RUSTED STEEL TONS : 584

ORIGINAL PAINT		CONTRACT REPAINT		DEPARTMENT REPAINT		
PAINT TYPE :		PAINT TYPE :	F SYSTEM	PAINT TYPE :		MANUFACTURE :
NAME :		NAME :	HIGH SOLIDS ZINC	NAME :		SURFACE PREPARATION :
PAINT COLOR :		PAINT COLOR :	ALUMINUM	PAINT COLOR :		
PAINT YEAR :	0	PAINT YEAR :	1995	PAINT YEAR :	0	
MILS :	0	MILS :	8	MILS :	0	

CREW : LAYER : DATE :

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED
DISTRICT ROUTINE	SLOPE	CUT BRUSH & TREES	2	08/23/2011
	ROADWAY SURFACE	SEAL DECK WITH IN DECK	2	10/11/2011
DISTRICT SPECIAL	ABUTMENT	REPAIR EXPANSION DEVICE	3	09/04/2012

PROGRAM RECOMMENDATIONS

KC

Safe & Sound =

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A0610**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A0610** 443	STRUCTURE STATUS :	P-POSTLOAD	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	38000 KANSAS CITY CITY
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	1-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	JESSE ELSEMAN (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	9/10/2012
FACILITY CARRIED :	**IS 435 S**	DEFICIENT CODE :		LANES ON STRUCTURE	4	INSPECTION FREQUENCY :	24
CURB TO CURB :	63 Ft. 10.8 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	2	LATITUDE :	38 56 22.67 (DMS)
STRUCTURE LENGTH :	517 FEET	YEAR BUILT :	1966	BEGINNING COMPASS DIRECTION :	EAST	LONGITUDE :	94 33 40.01 (DMS)
FEATURE INTERSECTED :	**BLUE RVR. CST BLUE RIV**	RECONSTRUCTION YEAR	1994	ENDING COMPASS DIRECTION :	WEST	SCOUR EVALUATION TYPE :	OBSERVED

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-C3 LIMITS : Ton1 : 65 WEIGHT LIMIT 65 TONS.
FIELD POSTING CATEGORY : S-C3 LIMITS : Ton1 : 65 WEIGHT LIMIT 65 TONS.
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 31833 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI : FREQUENCY :
PIN : DATE :
CATEGORY :
METHODS :
INSPECTORS :
COMMENTS :

UNDERWATER INFORMATION

NBI : NO FREQUENCY : 60
PIN : NO DATE : 10/11/2011
CATEGORY : DRY
METHODS : VISUAL
INSPECTORS : RICHARD KI, TERRY WILS
COMMENTS :

NBI : FREQUENCY :
PIN : DATE :
CATEGORY :
METHODS :
INSPECTORS :
COMMENTS :

INDEPTH INFORMATION

NBI : NO FREQUENCY : 24
PIN : NO DATE : 09/10/2012
CATEGORY : PG-INTERSTATE
METHODS : SNOOPER
INSPECTORS : JESSE ELSE
COMMENTS : INSPECTION TIME - 5.5 HRS

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (113'-144'-144'-114') CONT COMP PL GDR SPANS (WELDED)
RATINGS : (ITEM 58) DECK RATING : 7-GOOD CONDITION 02/14/2002 **(ITEM 59) SUPERSTRUCTURE RATING :** 5-FAIR CONDITION 03/09/2010 **(ITEM 60) SUBSTRUCTURE RATING :** 6-SATISFACTORY CONDITION 10/31/2011
COMMENTS : **COMMENTS :** SEVERAL CRACKS IN COMPR ZONES OF NON-FCM **COMMENTS :**

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN STEEL PLATE GIRDERS NUMBER OF SPANS : 4
TOTAL NUMBER OF SPANS : 4

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	1 MEETS CURRENT STANDARDS	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :

COMPONENT :	BRIDGE RAILING	REINFORCED CONCRETE	SAFETY BARRIER CURB	DIRECTION : BOTH

(ITEM 36B) TRANSITION RAILING :

COMPONENT :	TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM	DIRECTION : NORTHWEST
COMPONENT :	TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM	DIRECTION : NORTHEAST

(ITEM 36C) APPROACH RAILING :

COMPONENT :	APPROACH RAILING	GALVANIZED STEEL	W-BEAM	DIRECTION : NORTHWEST
COMPONENT :	APPROACH RAILING	GALVANIZED STEEL	W-BEAM	DIRECTION : NORTHEAST

(ITEM 36D) RAIL END TREATMENT :

Design_No = A0610

COMPONENT : RAIL END TREATMENT | GALVANIZED STEEL | BREKAWAY SYSTEM | MANUFACTURE : ET-2000 | DIRECTION : NORTHEAST

APPROACH PAVEMENT :

COMPONENT : APPROACH PAVEMENT | ASPHALT | BITUMINOUS MAT | DIRECTION : BOTH

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 7-GOOD CONDITION

DECK COMPONENTS

MAIN SPANS 1

COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	

MAIN SPANS 2

COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	

MAIN SPANS 3

COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	

MAIN SPANS 4

COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	

DRAINAGE COMPONENTS

DRAINAGE 0

COMPONENT : DRAINAGE | GALVANIZED STEEL | FLOOR DRAIN

EXPANSION DEVICES

ABUTMENT 5

COMPONENT : CLOSED EXPANSION JOINT		ELASTOMERIC	STRIP SEAL	OVERALL CONDITION : POOR
CONDITION : MISSING		CLOSED EXPANSION JOINT	NOT APPLICABLE	
COMMENTS : TORN WITH 4' HOLE.				
CONDITION : FAILING		THROUGHOUT	BOTH	
CONDITION : POUNDING		THROUGHOUT	NOT APPLICABLE	

PROTECTIVE COMPONENTS

MAIN SERIES 1

COMPONENT : WEARING SURFACE		PLAIN CONCRETE	MONOLITHIC	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MEDIUM	
COMMENTS : SOME OPENING				
COMPONENT : DECK PROTECTION		EPOXY POLYMER	COATED REBAR	
COMPONENT : MEMBRANE		NOTAPPLICABLE	NONE	
COMPONENT : SECONDARY DECK PROTECTION		LIQUID SEALANT	INTERNALLY SEALED	MANUFACTURE : STAR MACRO YEAR APPLIED : 2009

RAILING COMPONENTS

BRIDGE RAILING 0

COMPONENT : BRIDGE RAILING	REINFORCED CONCRETE	SAFETY BARRIER CURB	
COMPONENT : TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM	
COMPONENT : APPROACH RAILING	GALVANIZED STEEL	W-BEAM	
COMPONENT : RAIL END TREATMENT	GALVANIZED STEEL	BREKAWAY SYSTEM	MANUFACTURE : ET-2000
COMPONENT : TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM	
COMPONENT : APPROACH RAILING	GALVANIZED STEEL	W-BEAM	

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 5-FAIR CONDITION

COMMENT S : SEVERAL CRACKS IN COMPR ZONES OF NON-FCM

MAIN SERIES 1 CONTINUOUS SPAN STEEL PLATE GIRDERS NUMBER OF SPANS : 4

APPROACH ROADWAY WIDTH : 66 FOOT 0 INCH CURB TO CURB : 63 FOOT 10.8 INCH OUT TO OUT : 66 FOOT 7.19988 INCH LEFT CURB WIDTH : 0 FOOT 7.2 INCH RIGHT CURB WIDTH : 0 FOOT 7.2 INCH

CONDITION : NOT APPLICABLE OTHER DIAPHRAGMS

MAIN SPANS 1 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 113 FOOT 5 INCH WEATHERING IND :

Design_No = A0610

CONDITION : FATIGUE CRACKS MODERATE GDR7 6 INCH
COMMENTS : TOP FLANGE WELD 2ND DIAPH SOUTH OF ABUT 1.
CONDITION : FATIGUE CRACKS SMALL GDR3 4 INCH
COMMENTS : 3RD DIAPH WEST OF ABUT 5.

MAIN SPANS 2 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 144 FOOT 11 INCH WEATHERING IND :
CONDITION : FATIGUE CRACKS SMALL GDR4
COMMENTS : 3RD DIAPH WEST OF BENT 4 @ TFW
CONDITION : FATIGUE CRACKS SMALL GDR5 3.25 INCH
COMMENTS : 3RD DIAPH WEST OF BT 4 @ TFW.

MAIN SPANS 3 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 144 FOOT 11 INCH WEATHERING IND :
COMMENTS : HOAN LIKE DETAIL IN SPAN 3 W/INTERSECTING WELDS BETWEEN GIRDERS 4 & 5.
CONDITION : FATIGUE CRACKS MODERATE GDR5
COMMENTS : 1" CRACK IN TOP STIFF WELD 4TH DIAPH WEST OF BENT 4 NORTH SIDE & ALSO 1" CRACK IN TOP FLANGE WELD.
2" CRACK @ TOP FLANGE WELD & 1" CRACK @ TOP FTIFF WELD 3RD DIPAH WEST OF BENT 3 SOUTHSIDE OF GIRDER 5.
CONDITION : FATIGUE CRACKS MODERATE GDR4
COMMENTS : 4" CRACK IN TOP FLANGE WELD 3RD DIAPH WEST OF BENT 4 SOUTH SIDE OF GIRDER 4 & ALSO 1 1/2 CRACK IN TOP STIFF WELD.
2 1/4" CRACK @ TOP FLANGE WELD & 2 1/4" CRACK ON TOP OF DIPAH STIFF WELD 3RD DIPAH WEST OF BENT 4 GIRDER 4 NORTH SIDE.
1 3/4" CRACK @ TOP FLANGE WELD & TOP STIFF WELD 2ND DIAPH WEST OF BENT 3 NORTH SIDE OF GIRDER 3.
CONDITION : FATIGUE CRACKS MODERATE GDR6
COMMENTS : 1/2" CRACK @ TOP STIFF WELD 4TH DIPAH WEST OF BENT 3 NORTH SIDE OF GIRDER 6.
3 3/4" CRACK @ TOP FLANGE WELD & 2 1/2" CRACK @ TOP STIFF WELD 3RD DIPAH WEST OF BETN 3 SOUTH SIDE OF GIRDER 6.
CONDITION : FATIGUE CRACKS MODERATE GDR7
COMMENTS : 4" CRACK @ TOP FLANGE WELD & 1" CRACK @ TOP FTIFF WELD 3RD DIPAH WEST OF BENT 3 NORTHSIDE OF GIRDER 7.
CONDITION : FATIGUE CRACKS SMALL GDR3 2.5 INCH
COMMENTS : 2ND DIAPH WEST OF BT 3

MAIN SPANS 4 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 114 FOOT 0 INCH WEATHERING IND :
CONDITION : FATIGUE CRACKS MODERATE GDR5
COMMENTS : 1" CRACK @ TOP STIFF WELD 3RD DIAPH WEST OF ABUT 5 SOUTH SIDE.
2" CRACK @ TOP FLANGE WELD 4TH DIPAH WEST FO ABUT 5 NORTH SIDE.
2 1/2" CRACK IN TOP FLANGE WELD 3RD DIPAH WEST OF ABUT 5 NORTH SIDE. 1 1/2 CRACK IN SAME LOCATION.

TOTAL NUMBER OF SPANS 4

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

ABUTMENT 1 LABEL : REINFORCED CONCRETE INTEGRAL
COMMENTS : MINOR WASHING ON NORTH END.
LENGTH : 46 FOOT 6 INCH
CONDITION : MODERATE LEACHING GIRDERS MINOR UNDERMINING THROUGHOUT
COMMENTS : NW CORNER.
BACKWALL REINFORCED CONCRETE CAST-IN-PLACE
BEAM CAP REINFORCED CONCRETE CAST-IN-PLACE
FOOTING REINFORCED CONCRETE SPREAD
TURNED BACK WINGS REINFORCED CONCRETE CAST-IN-PLACE

BENT 2 LABEL : REINFORCED CONCRETE MULTIPLE COLUMN
LENGTH : 44 FOOT 0 INCH
BEAM CAP REINFORCED CONCRETE CAST-IN-PLACE
CONDITION : VERTICAL CRACKS AT COLUMNS FEW
FOOTING REINFORCED CONCRETE SPREAD
COLUMN REINFORCED CONCRETE CAST-IN-PLACE
TIE BEAM REINFORCED CONCRETE CAST-IN-PLACE
EXPANSION BEARING STEEL ROCKER OVERALL CONDITION:

BENT 3 LABEL : REINFORCED CONCRETE MULTIPLE COLUMN
LENGTH : 44 FOOT 0 INCH
BEAM CAP REINFORCED CONCRETE CAST-IN-PLACE
CONDITION : HORIZONTAL CRACKS ENDS FEW
CONDITION : VERTICAL CRACKS ENDS FEW
FOOTING REINFORCED CONCRETE SPREAD

COLUMN		REINFORCED CONCRETE	CAST-IN-PLACE		
TIE BEAM		REINFORCED CONCRETE	CAST-IN-PLACE		
FIXED BEARING		STEEL	PEDESTAL(ROTATING)	OVERALL CONDITION:	
BENT 4	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 44 FOOT 0 INCH					
BEAM CAP		REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : VERTICAL CRACKS	FRONT FACE	FEW			
FOOTING		REINFORCED CONCRETE	SPREAD		
COLUMN		REINFORCED CONCRETE	CAST-IN-PLACE		
TIE BEAM		REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING		STEEL	ROCKER	OVERALL CONDITION:	
ABUTMENT 5	LABEL :			REINFORCED CONCRETE	NON-INTEGRAL
COMMENTS : N END OF CAP PILING EXPOSED					
LENGTH : 46 FOOT 6 INCH					
BACKWALL		REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : VERTICAL CRACKS	THROUGHOUT	RANDOM			
BEAM CAP		REINFORCED CONCRETE	CAST-IN-PLACE		
TURNED BACK WINGS		REINFORCED CONCRETE	CAST-IN-PLACE		
PILING		STEEL	H-SHAPE		
EXPANSION BEARING		STEEL	ROCKER	OVERALL CONDITION:	
CLOSED EXPANSION JOINT		ELASTOMERIC	STRIP SEAL	OVERALL CONDITION:	
CONDITION : MISSING	CLOSED EXPANSION JOINT	NOT APPLICABLE			
COMMENTS : TORN WITH 4' HOLE.					
CONDITION : FAILING	THROUGHOUT	BOTH			
CONDITION : POUNDING	THROUGHOUT	NOT APPLICABLE			

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS
COMMENTS : SEVERAL CRACKS IN COMPR ZONES OF NON-FCM

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : 8-PROTECTED DEVICES STBLE
SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : 8-STABLE FOR CALCULATED
WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : DECK ABOVE FLOOD ELEV
APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD
SLOPE PROTECTION
ROCK BLANKET BOTH

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS
OVERALL PAINT CONDITION FAIR RUST AMOUNT : 9=.03% OF SURFACE RUSTED STEEL TONS : 585

ORIGINAL PAINT		CONTRACT REPAINT		DEPARTMENT REPAINT			
PAINT TYPE :		PAINT TYPE :	A SYSTEM	PAINT TYPE :		MANUFACTURE :	
NAME :		NAME :	RED LEAD	NAME :		SURFACE PREPARATION :	
PAINT COLOR :		PAINT COLOR :	ALUMINUM	PAINT COLOR :			
PAINT YEAR :	0	PAINT YEAR :	1984	PAINT YEAR :	0		
MILS :	0	MILS :	7	MILS :	0		

COMMENTS : OUTSIDE GIRDERS SAY 6/96 SYSTEM F
CREW : LAYER : DATE :

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED
REGIONAL	ABUTMENT-BEARINGS	CLEAN, PAINT, AND RESET	3	11/06/2007
DISTRICT ROUTINE	SLOPE	CUT BRSH&TREES SPAYVINES	3	03/01/2010
	SEE COMMENT	BACKFILL ABUTMENT-SLOPE	3	09/12/2012

GENERAL COMMENTS : MUDJACK AT W ABUT
SPECIAL COMMENTS : PREFER EPOXY OVERLAY PRIORITY 1, INDECK IS OPTION B

PROGRAM RECOMMENDATIONS

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

August 1, 2013
10:56:28am

COUNTY : JACKSON **BRIDGE NO.** A0610 R1 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	443
27	Year Built	1966
106	Year Reconstructed	1994
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 S
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006042
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	04
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 33 T 48 N R 33 W
11	Milepoint	52.40 miles
16	Latitude	38 D 56 M 23 S
17	Longitude	94 D 33 M 40 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	31833
30	AADT Year	2012
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	11%
114	Future AADT	42974
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	BLUE RVR, CST BLUE RIVER
42B	Type of Service Under	HIGHWAY-WATERWAY
28B	Lanes Under Structure	02
54A	Vert. Clearance Ref.	N/A
54B	Vert. Clearance	0 Ft. 0 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	17 Ft. 0 In.
56	Left Lat Clearance	0 Ft. 0 In.
38	Navigation Control	PERMIT NOT REQ
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	65 Ft. 11 In.
34	Skew	0.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	64 Ft. 11 In.
48	Maximum Span Length	144 Ft. 11 In.
49	Structure Length	515 Ft. 12 In.
50A	Left Curb/Sidewalk Width	0 Ft. 7 In.
50B	Right Curb/Sidewalk Width	0 Ft. 7 In.
51	Curb to Curb Br. Width	63 Ft. 11 In.
52	Deck Width (Out-Out)	66 Ft. 7 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A0610 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

August 1, 2013
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RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

LOAD RATING AND POSTING INFORMATION

31	Design Load	HS 20
41	Structure Status	P - POSTED FOR LOAD
63	Oper. Rating Meth.	LOAD FACTOR
64	Operating Rating	61 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	36 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	84.3 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	5
69	Underclearance App. Rating	N
71	Waterway Adeq. App. Rating	8
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	8

APPROVED POSTING INFORMATION

Approved Posting Categor S-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	65		

General Text for Posting Sign

WEIGHT LIMIT 65 TONS.

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	STEEL CONTINUOUS
43B	Main struc Constr. Type	STRINGER/MULTIBEAM - GRD
45	# of Main Spans	4
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.	1 MONO CONCRETE
108B	Membrane Mat/Constr.	0 NONE
108C	Deck Protect Mat/Constr.	1 EPOXY

CONDITION RATING INFORMATION

58	Deck Cond. Rating	7
59	Superstructure Cond. Rating	5
60	Substructure Cond. Rating	6
61	Channel /Channel Protection Cond. Rating	8
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	9 / 12	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Insp. Dat	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-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	65		

General Text for Posting Sign

WEIGHT LIMIT 65 TONS.

Design_No = A0610 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

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106	Year Reconstructed	1994
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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	RIGHT
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 N
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006039
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	05
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 33 T 48 N R 33 W
11	Milepoint	2.55 miles
16	Latitude	38 D 56 M 22 S
17	Longitude	94 D 33 M 40 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	65342
30	AADT Year	2012
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	18%
114	Future AADT	88211
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	BLUE RVR, CST BLUE RIVER
42B	Type of Service Under	HIGHWAY-WATERWAY
28B	Lanes Under Structure	02
54A	Vert. Clearance Ref.	N/A
54B	Vert. Clearance	0 Ft. 0 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	17 Ft. 0 In.
56	Left Lat Clearance	0 Ft. 0 In.
38	Navigation Control	PERMIT NOT REQ
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	78 Ft. 0 In.
34	Skew	0.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	77 Ft. 0 In.
48	Maximum Span Length	144 Ft. 11 In.
49	Structure Length	515 Ft. 12 In.
50A	Left Curb/Sidewalk Width	0 Ft. 7 In.
50B	Right Curb/Sidewalk Width	0 Ft. 7 In.
51	Curb to Curb Br. Width	75 Ft. 9 In.
52	Deck Width (Out-Out)	78 Ft. 8 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A0610 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

Missouri Department of Transportation
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64	Operating Rating	61 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	36 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	77.2 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

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36D	Rail End Treat. App. Rating	MEETS ACCEPTBLE STND
67	Struc Eval App. Rating	5
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Approved Posting Categor S-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	65		

General Text for Posting Sign

WEIGHT LIMIT 65 TONS.

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108A	Wear Surf Mat/Constr.	1 MONO CONCRETE
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93A	Frac. Critical Insp. Date		
92B	Underwater Inspection	N	Months
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92C	Special Inspection	N	Months
93C	Special Inspection Date		

BORDER BRIDGE INFORMATION

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FIELD POSTING INFORMATION

Field Posting Category S-C3

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Tonnage Values for Posting Sign	65		

General Text for Posting Sign

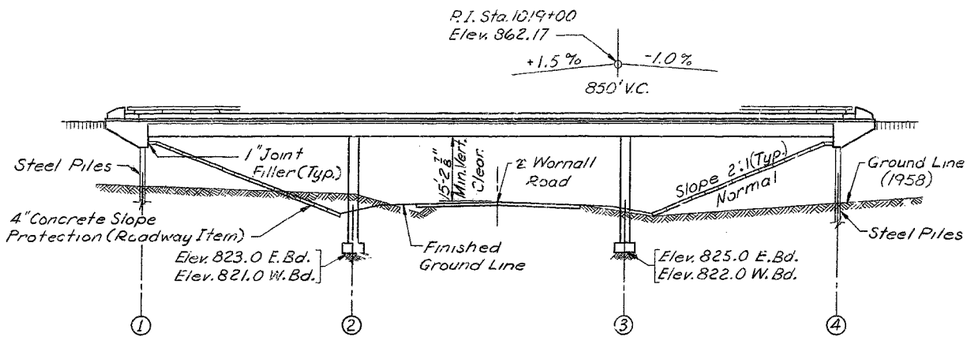
WEIGHT LIMIT 65 TONS.

Design_No = A0610 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	139	

Twin 62.03'-80.04'-62.04' Cont. Concrete Box Girder Spans



GENERAL ELEVATION

ESTIMATED QUANTITIES				
Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yd.	285	—	285
10" Steel Piles in Place	Lin. Ft.	798	—	798
10" Steel Pile Cut Offs	Lin. Ft.	72	—	72
Class B Concrete	Cu. Yd.	27.8	—	27.8
Class B1 Concrete	Cu. Yd.	—	1507.4	1507.4
Reinforcing Steel	Lb.	250	545,400	545,650
Bridge Rail (Single Tube Type)	Lin. Ft.	—	854	854

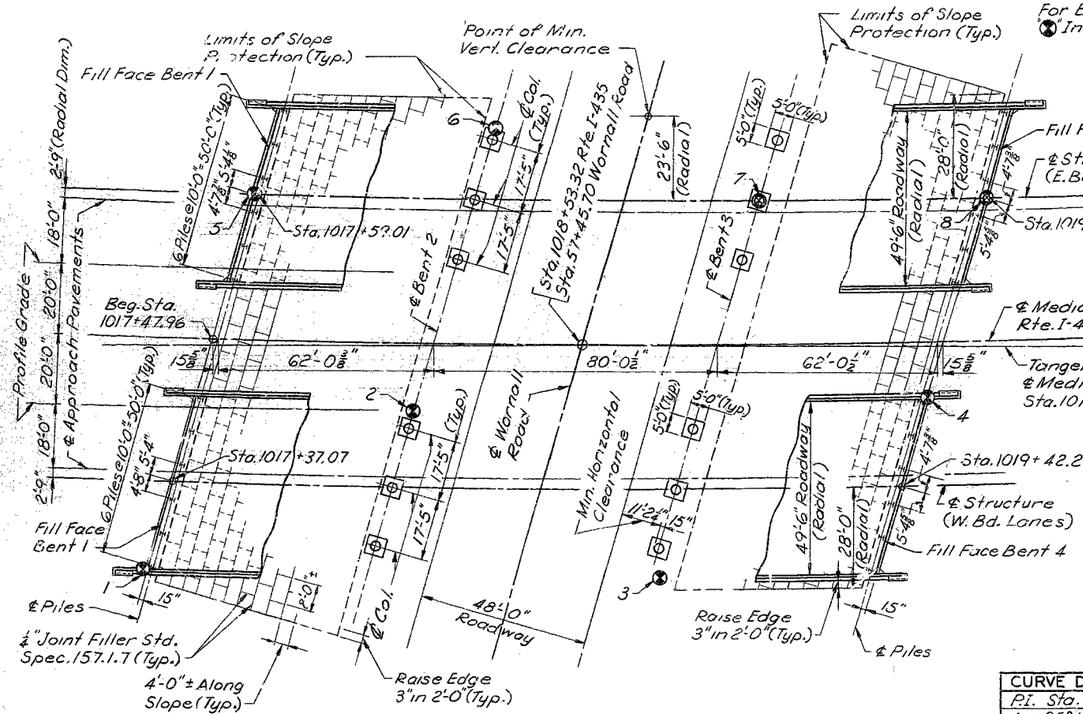
QUANTITY NOTES:

All concrete and reinforcement above footings is included in superstructure quantities.
No payment for excavation will be allowed at End Bents Nos. 1 & 4.
Payment for furnishing and installing access doors and frames shall be made and considered fully covered under price bid for other items.

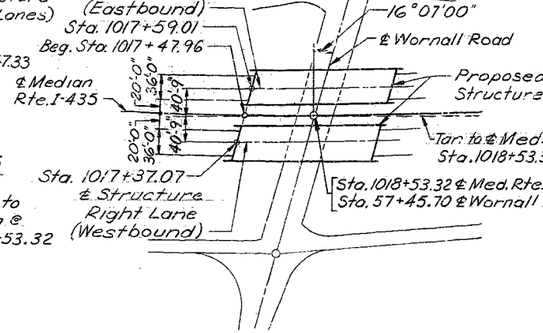
MISCELLANEOUS NOTES:

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.

Lengths of Structures, fill face to fill face of end bents, along ℄ of structures are 206'-10" for Eastbound and 206'-7 1/4" for Westbound.
For Boring Data see Sheet No. 2 of 13.
⊗ Indicates location of boring.



PLAN



LOCATION SKETCH

CURVE DATA (RTE. I-435)
P.I. Sta. 1014+50.4
Δ = 25°14'Lt.
D = 1°
T = 1282.48'
L = 2523.33'
R = 5729.65'
S.E. = .025 ft./ft.
W. = 0

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.O. - 1961
DESIGN LOADING:
HS 20-44; 15#/sq. ft. Future Wearing Surface;
Modified 24,000# Tandem Axle;
Earth 120#; Equivalent Fluid Pressure 30#.
DESIGN UNIT STRESSES:
Class B Concrete (substructure) fc = 1,200 p.s.i.
Class B1 Concrete (superstructure) fc = 1,600 p.s.i.
Reinforcing Steel fs = 20,000 p.s.i.
Structural Steel (A.S.T.M. A36-62T) fs = 20,000 p.s.i.
Steel Pile (A.S.T.M. A36-62T) fb = 9,000 p.s.i.
SURFACE SEAL: Superstructure deck to be surface sealed.
PAINTING:
Structural Steel access doors shall be cleaned and painted in the field or may be cleaned and painted one coat of red lead in the shop with the two remaining coats applied in the field except that final coat on access doors and frames shall be gray. In lieu of painting, the contractor may, if he prefers, galvanize this material. All galvanizing shall be done after fabrication. Cost of painting or galvanizing to be included in price bid for other items.
FALSEWORK:
Falsework over existing lanes shall be constructed with a minimum vertical clearance of 13'-0" from crown of existing lanes and a minimum lateral clearance of 26'-0" centered on existing lanes.

FOOTING AND PILE DATA								
BENT NO.		1		2		3		4
LANES		E.Bd.	W.Bd.					E.Bd. W.Bd.
SPREAD FOOTINGS	Foundation Material			Rock		Rock		
	Design Bearing Tons/Sq. Ft.			11.3		11.3		
BEARING PILE	Pile Type & Size	10BP42						10BP42
	Number	6	6					6 6
	Approximate Length Ft.	35	40					35 35
	Design Bearing Value Tons	50	50					50 50
	* Hammer Energy Reqd. Ft.lbs.	11,200						11,200

FOOTING AND PILE NOTES:

Footings shall be carried 6" into hard, solid, undisturbed rock or 18' to soft rock or shale and cast against vertical faces of same.

* Minimum Energy Requirement of hammer, based on plan length and design bearing value of pile. All pile shall be driven to practical refusal of 1.9 times the design bearing value.

Note. For location of existing utility conduits see Road Plans.

BENCH MARK:
B.M. #106 Elev. 814.11
□ in S.W. Wing Bridge over Indian Creek on Wornall Road 300'± Rt. Sta. 1016+00

BRIDGE OVER WORNALL ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 1017+59.01 E.B. LANE, 1017+37.07 W.B. LANE
JACKSON **COUNTY**

STATE OF MISSOURI — EUGENE L. FIELDHAMMER NUMBER E-10795 — REGISTERED PROFESSIONAL ENGINEER

SUBMITTED BY
REGISTERED PROFESSIONAL ENGINEER
MISSOURI NO. E-10795

SUBMITTED BY D. B. Jenkins, BRIDGE ENGINEER DATE 5/20/66
APPROVED BY M. J. Smith, CHIEF ENGINEER DATE 5/20/66

STD. 54.00
A-1240

DESIGNED NOV. 1965 BY R. PARIKH
DETAILED OCT. 1965 BY VIEHLAND
CHECKED NOV. 1965 BY J. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

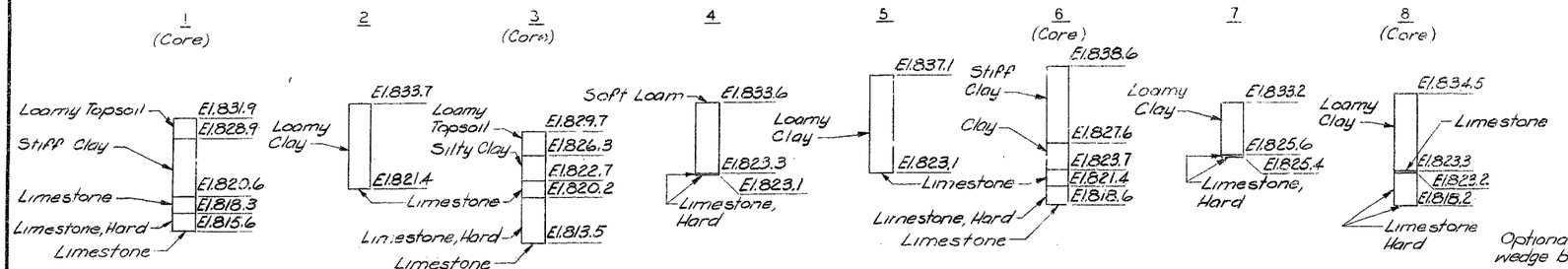
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 13.

253

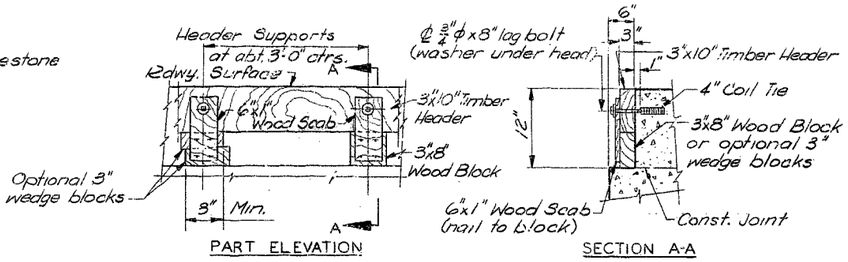
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	146	



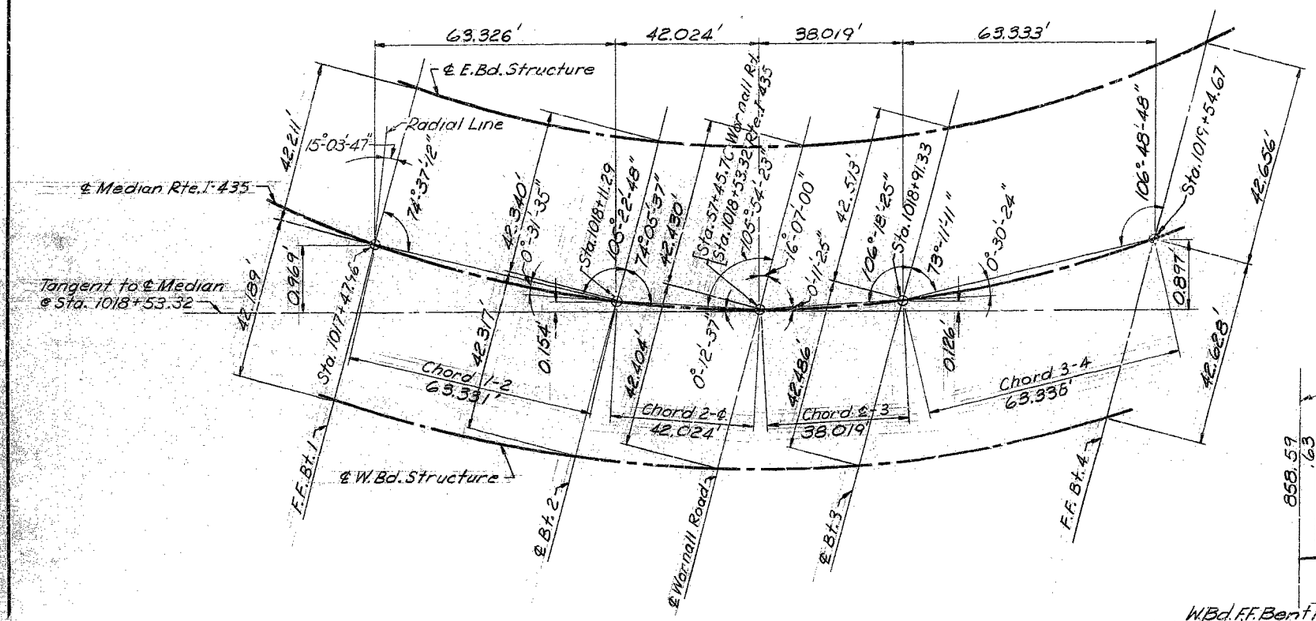
NOTE:
Core Drill Equipment: 2⅞" Double Tube Core Bbl.

BORING DATA



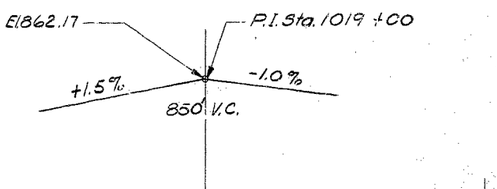
TIMBER HEADER DETAIL

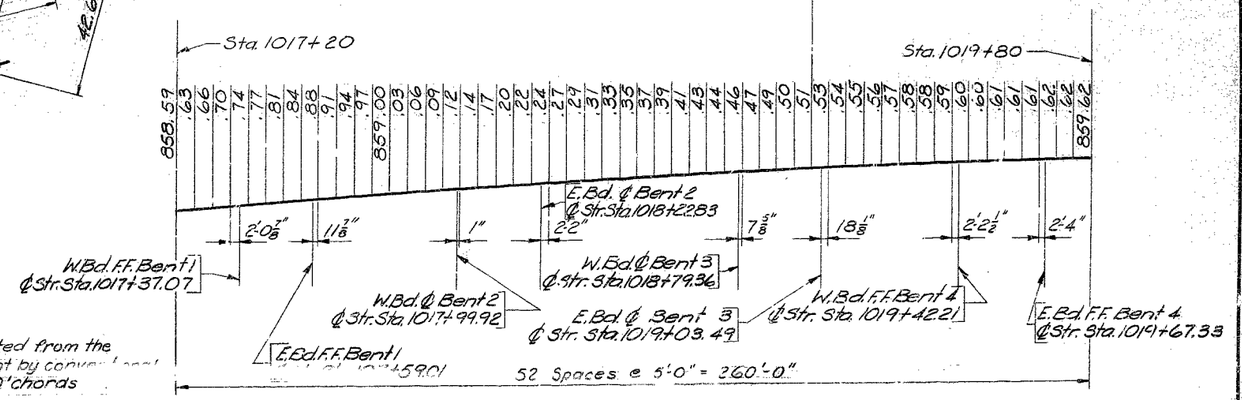
NOTE:
Cost of timber headers complete in place to be included in price bid for concrete.



LAYOUT PLAN

NOTE:
Bents cannot be accurately located from the recorded tangent by conventional survey methods based on 100' chords (All Bents are parallel).





PROFILE GRADE ELEVATIONS

BRIDGE OVER WORNALL ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(63)(RTE. I-435) **STA.** 1017+59.01 E.B. LANE, 1017+37.07 W.B. LANE
JACKSON COUNTY

DETAILED SEP. 1965 BY HERD
CHECKED NOV. 1965 BY J. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 2 of 13.

A-1240

254

NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	141	

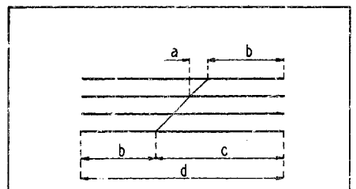
COMPLETE BILL OF REINFORCING STEEL

NO.	SIZE	LENGTH	MARK	LOCATION
SUPERSTRUCTURE (E.Bd.&W.Bd.)				
1560	#6	30'-6"	S1	Top Slab
1560	#6	25'-6"	S2	"
256	#5	41'-0"	S3	"
256	#11	42'-3"	S4	"
240	#11	22'-6"	S5	"
128	#5	40'-9"	S6	"
744	#5	35'-9"	S7	"
232	#10	52'-0"	S9	Bott. Slab
216	#8	37'-6"	S10	"
232	#5	25'-3"	S11	"
116	#10	57'-6"	S12	"
108	#9	44'-6"	S13	"
48	#6	6'-0"	S14	"
522	#5	27'-9"	S15	"
522	#5	22'-9"	S16	"
840	#4	3'-6"	G5	Diaphragms
112	#4	25'-0"	G19	"
1248	#5	7'-0"	G6	Webs
3264	#6	7'-0"	G7	"
16	#8	34'-0"	G8	"
24	#8	59'-0"	G9	"
16	#8	42'-6"	G10	"
32	#8	31'-0"	G11	"
32	#8	40'-6"	G12	"
16	#5	33'-3"	G13	"
48	#5	30'-3"	G14	"
16	#5	41'-9"	G15	"
32	#5	31'-0"	G16	"
32	#5	39'-9"	G17	"
192	#5	8'-0"	G18	"
48	#5	4'-9"	R1	End Post
8	#5	5'-6"	R2	"
8	#5	6'-3"	R3	"
8	#5	6'-9"	R4	"
8	#5	7'-0"	R5	"
16	#5	7'-3"	R6	"
1026	#5	5'-3"	R7	Parapet
16	#5	5'-3"	R8	"
64	#5	27'-3"	R9	"
64	#5	9'-6"	R10	"
32	#5	30'-9"	R11	"
16	#5	4'-6"	R12	"
820	#5	3'-5"	C1	Curb
74	#5	3'-9"	C2	"
8	#6	7'-0"	C3	"
16	#5	32'-3"	C4	"
24	#5	27'-6"	C5	"
8	#6	8'-3"	C6	"
16	#6	32'-6"	C7	"
SUPERSTR. INT. BT. 2 (E.Bd.&W.Bd.)				
14	#11	51'-0"	G1	Beam
18	#9	48'-6"	G2	"
4	#11	12'-6"	G3	"
8	#6	48'-6"	G4	"
244	#5	9'-9"	U2	"
185	#3	7'-9"	V1	Columns
8	#9	31'-3"	V2	"
8	#9	31'-9"	V4	"
8	#9	32'-3"	V6	"
8	#9	34'-0"	V8	"
8	#9	34'-6"	V10	"
8	#9	36'-0"	V11	"

NO.	SIZE	LENGTH	MARK	LOCATION
SUPERSTR. INT. BT. 3 (E.Bd.&W.Bd.)				
14	#11	51'-0"	G1	Beam
18	#9	48'-6"	G2	"
4	#11	12'-6"	G3	"
8	#6	48'-6"	G4	"
244	#5	9'-9"	U2	"
178	#3	7'-7"	V1	Columns
8	#9	25'-6"	V3	"
8	#9	30'-0"	V5	"
8	#9	30'-6"	V7	"
8	#9	34'-0"	V8	"
8	#9	33'-6"	V9	"
8	#9	34'-6"	V10	"
SUPERSTR. END BT. (E&W.Bd.&E.Bd.)				
40	#6	53'-6"	H1	Beam
40	#6	54'-0"	H2	"
256	#6	8'-0"	S8	"
392	#5	10'-9"	U1	"
24	#6	8'-6"	H3	Wings
24	#6	6'-6"	H4	"
48	#6	15'-0"	H5	"
16	#6	10'-9"	H6	"
56	#4	9'-0"	V12	"
32	#4	7'-9"	V13	"
16	#6	14'-6"	T1	"
SUBSTRUCTURE INT. BENTS				
96	#5	2'-6"	D1	Footing

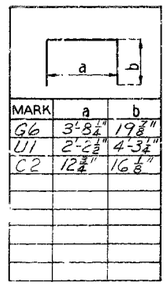
NO.	SIZE	LENGTH	MARK	LOCATION

BENDING SKETCHES & CUTTING DIAGRAMS

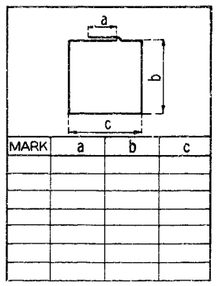


CUTTING SCHEDULE

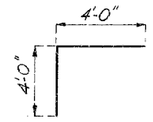
REMARKS	a	b	c	d
6 #5 Cut 48	14"	4'-7"	10'-5"	15'-0"
7 #12 Cut 56	10"	2'-0"	7'-0"	9'-0"



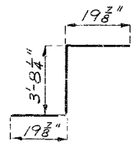
MARK	a	b
G6	3'-8 1/4"	19 7/8"
U1	2'-2 3/8"	4'-3 1/4"
C2	12 3/4"	16 1/8"



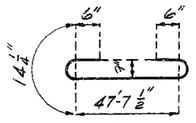
MARK	a	b	c



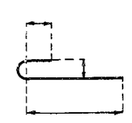
S8

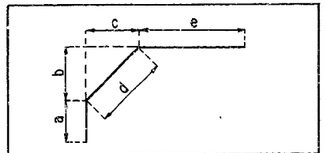


G7

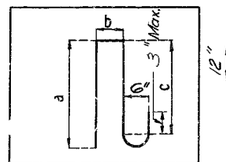


G1

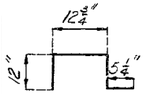




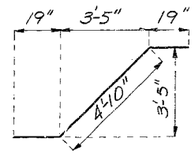
MARK	a	b	c	d	e
T1	18"	6'-2"	7'-4"	9'-7"	3'-5"



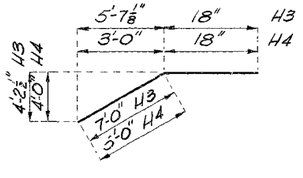
MARK	a	b	c
R2	2'-1"	7 1/8"	22"
R3	2'-5 1/2"	7 1/8"	2'-2 1/2"
R4	2'-8 1/2"	7 1/8"	2'-5 1/2"
R5	2'-10"	7 1/8"	2'-7"
R6	2'-11 1/2"	7 1/8"	2'-8 1/4"
R7	23 1/4"	7 1/8"	20 5/8"



C1

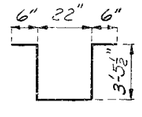


G18



H3-H4

V1



U2

255

NO.	DATE	REVISED
904	DEC. 1963	AUG. 1964

DETAILED NOV. 1965 BY HERD

CHECKED NOV. 1965 BY J. PARIKH

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

Sheet No. 3 of 13.

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 5 MILES NORTH OF MARTIN CITY

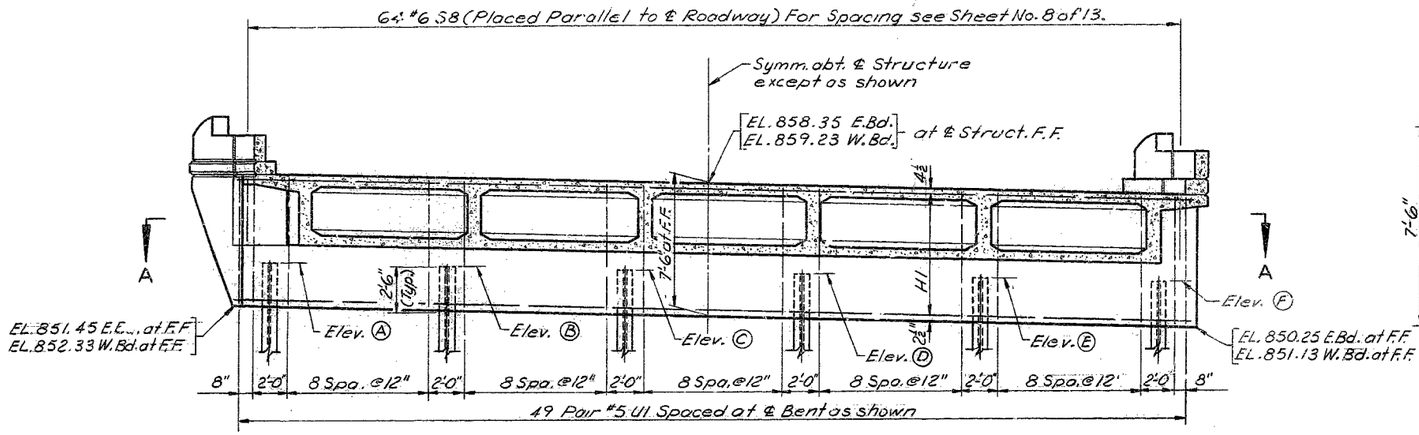
PROJECT NO. I-IG-435-1(63) (RTE I-435) **STA.** 1017+59.21 E.B. LANE, 1017+37.07 W.B. LANE

JACKSON **COUNTY**

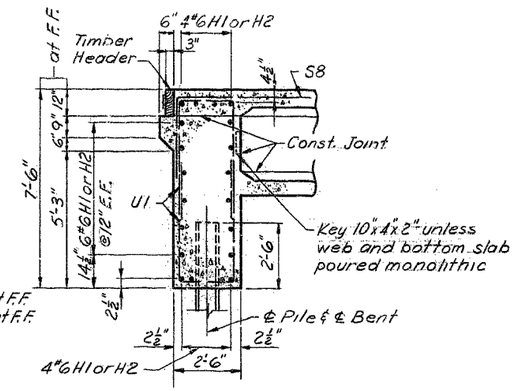
A-1240

MISSOURI STATE HIGHWAY DEPARTMENT

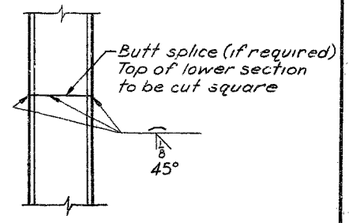
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	142	



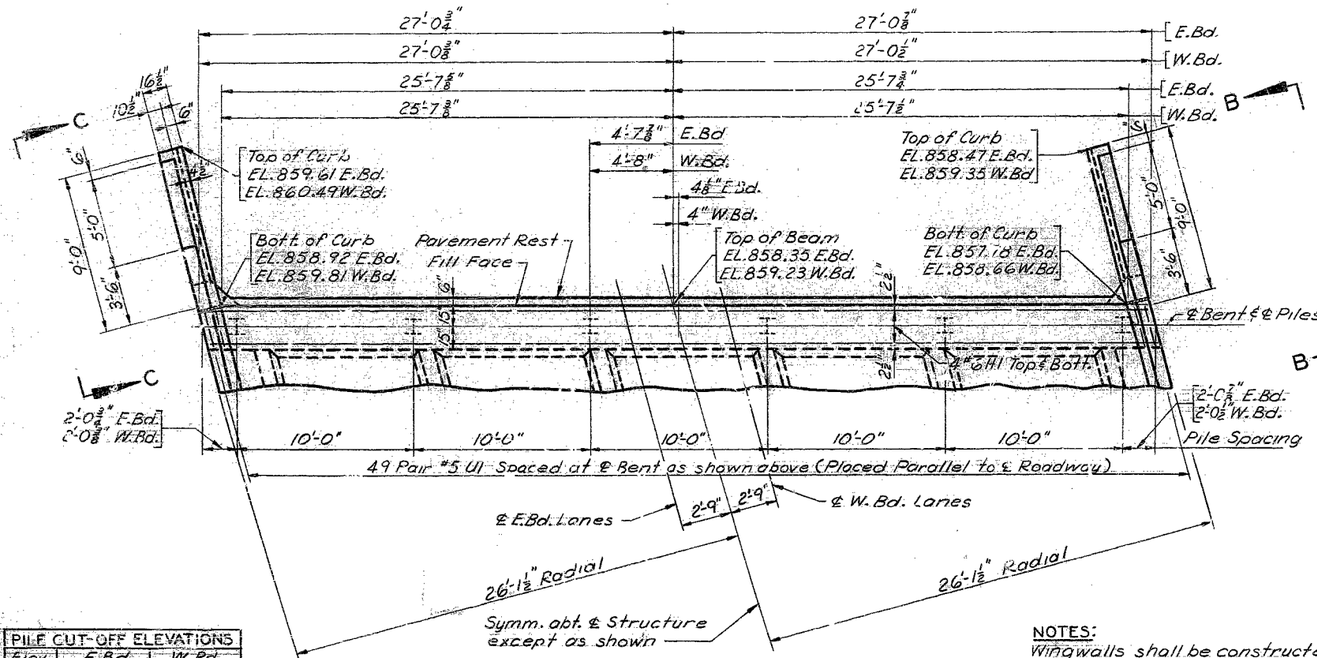
ELEVATION



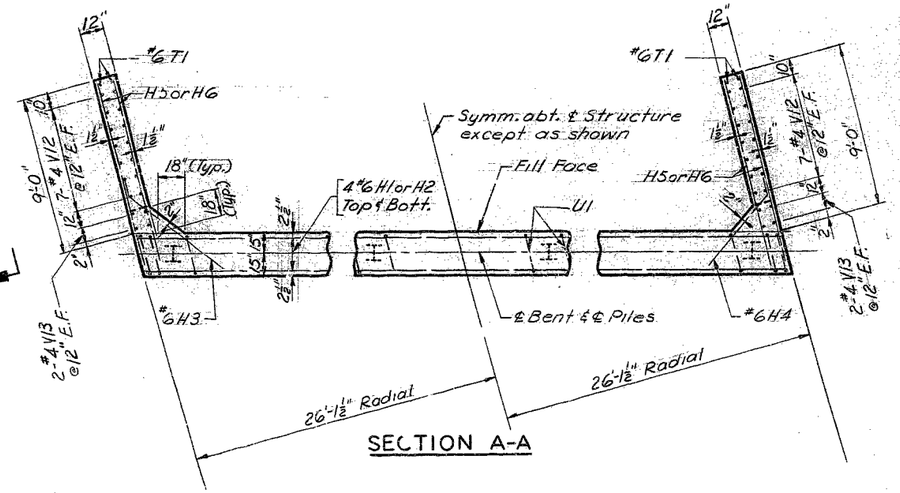
SECTION AT ℄



STEEL PILE SPLICE



PLAN



SECTION A-A

PILE CUT-OFF ELEVATIONS		
Elev.	E.Bd.	W.Bd.
A	853.91	854.79
B	853.69	854.57
C	853.46	854.35
D	853.24	854.12
E	853.01	853.90
F	852.79	853.68

END BENT 1

NOTES:
Wingwalls shall be constructed on a horizontal curve. For offsets, see Sheet No. 12 of 13.
For Timber Header Detail, see Sheet No. 2 of 13.
Fill at end bent No. 1 shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.
For Elevations B-B, and C-C, see Sheet No. 5 of 13.
For reinforcement in Curb, Parapet and End Post, see Sheet No. 13 of 13.

BRIDGE OVER WORNALL ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53) (RTE. I-435) **STA.** 1017+59.01 E.B. LANE, 1017+37.07 W.B. LANE
JACKSON **COUNTY**

A-1240

DETAILED OCT. 1965 BY VIEHLAND
CHECKED NOV. 1965 BY J. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 4 of 13.

NO CONSTRUCTION CHANGES

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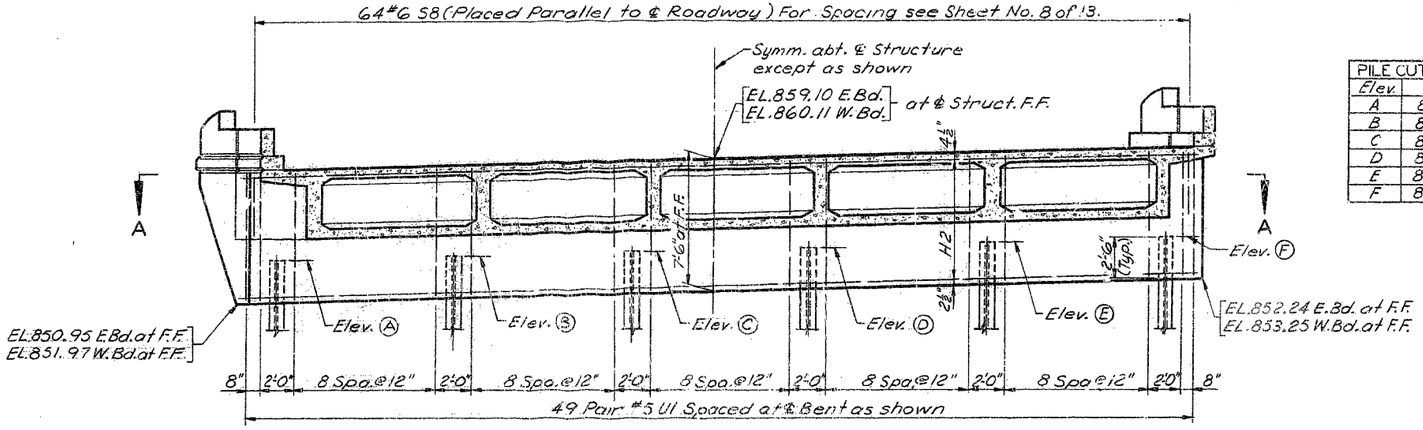
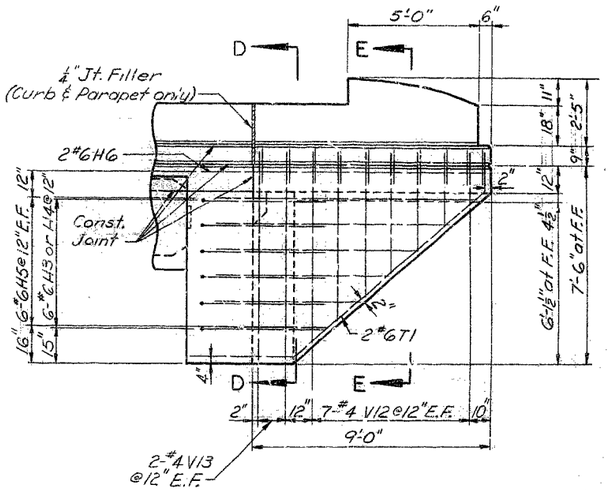
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	193	

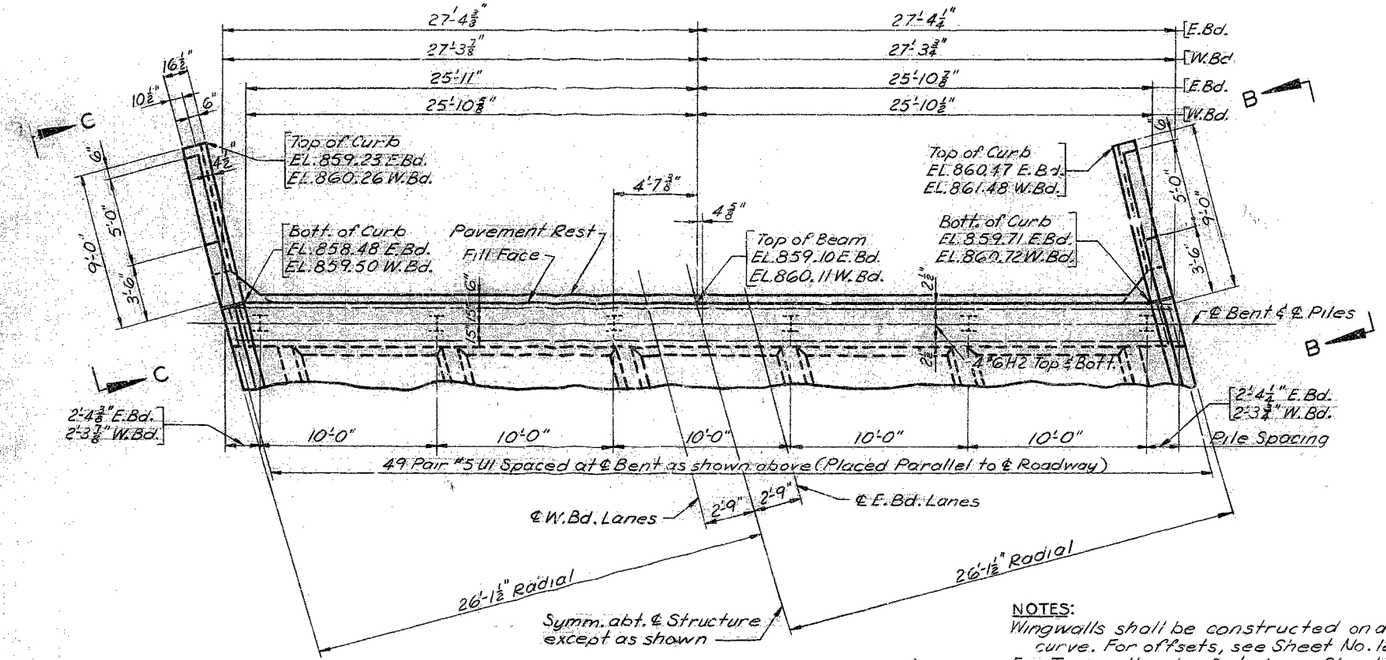


ELEVATION

PILE CUT-OFF ELEVATIONS		
Elev.	E.Bd.	W.Bd.
A	853.50	854.52
B	853.74	854.76
C	853.98	854.99
D	854.21	855.23
E	854.45	855.46
F	854.69	855.70

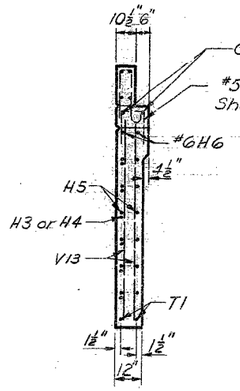


ELEVATION B-B
(Elev. C-C Opposite hand)

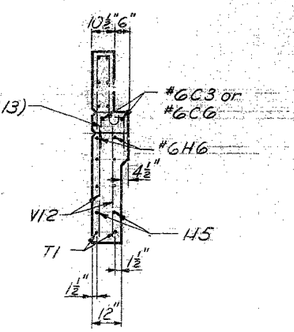


PLAN

END BENT 4



SECTION D-D



SECTION E-E

NOTES:
Wingwalls shall be constructed on a horizontal curve. For offsets, see Sheet No. 12 of 13.
For Timber Header Detail, see Sheet No. 2 of 13.
Fill at end bent No. 4 shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.
For Section A-A, Steel Pile Splice and Section at ℄, see Sheet No. 4 of 13.
For reinforcement in Curb, Parapet and End Post, see Sheet No. 13 of 13.

BRIDGE OVER WORNALL ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 1017+59.01 E.B. LANE 1017+37.07 W.B. LANE
JACKSON **COUNTY**

A-1240

DETAILED OCT. 1965 BY VIEHLAND
CHECKED NOV. 1965 BY J. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 5 of 13.

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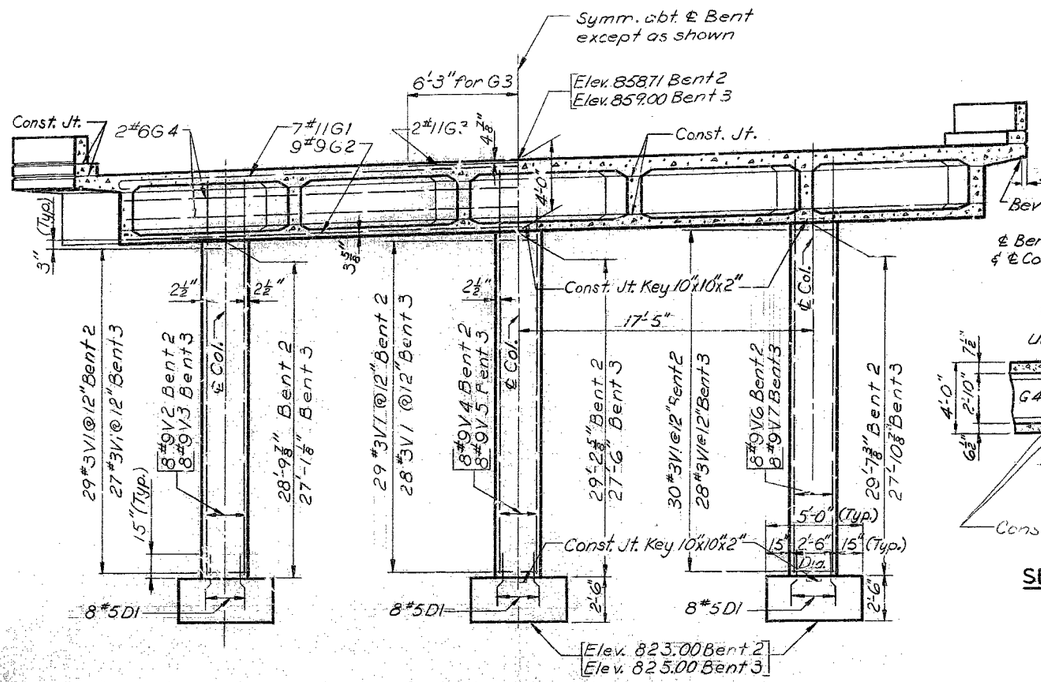
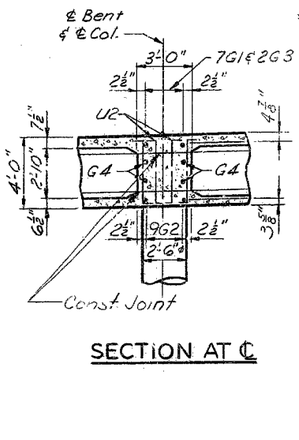
NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

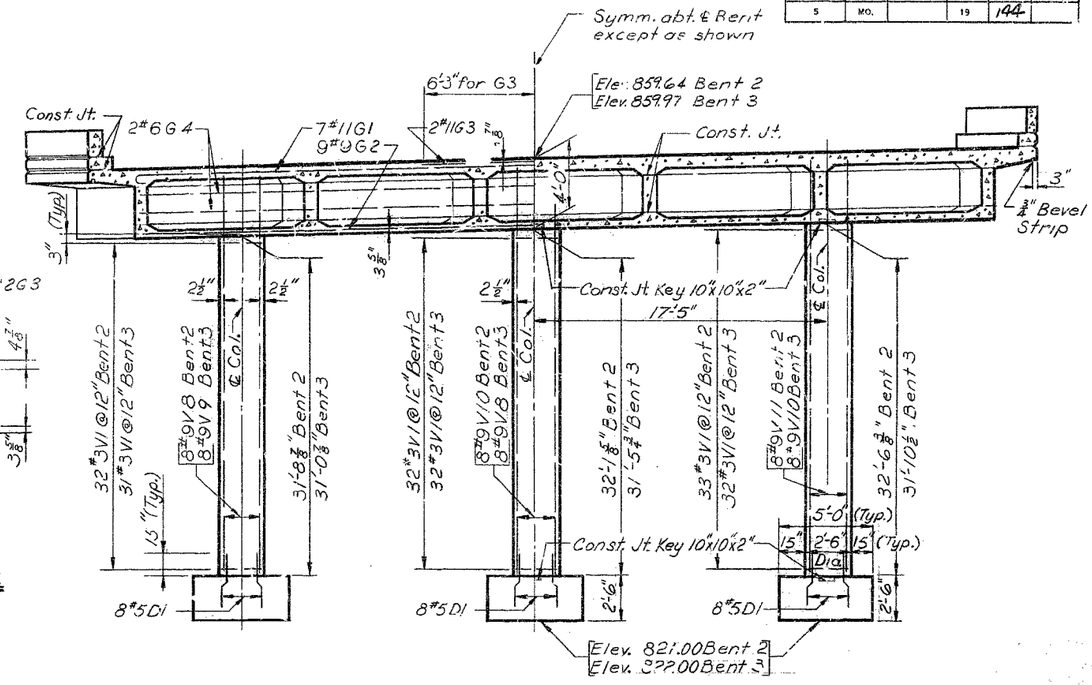
FED. ROAD D'ST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	144	



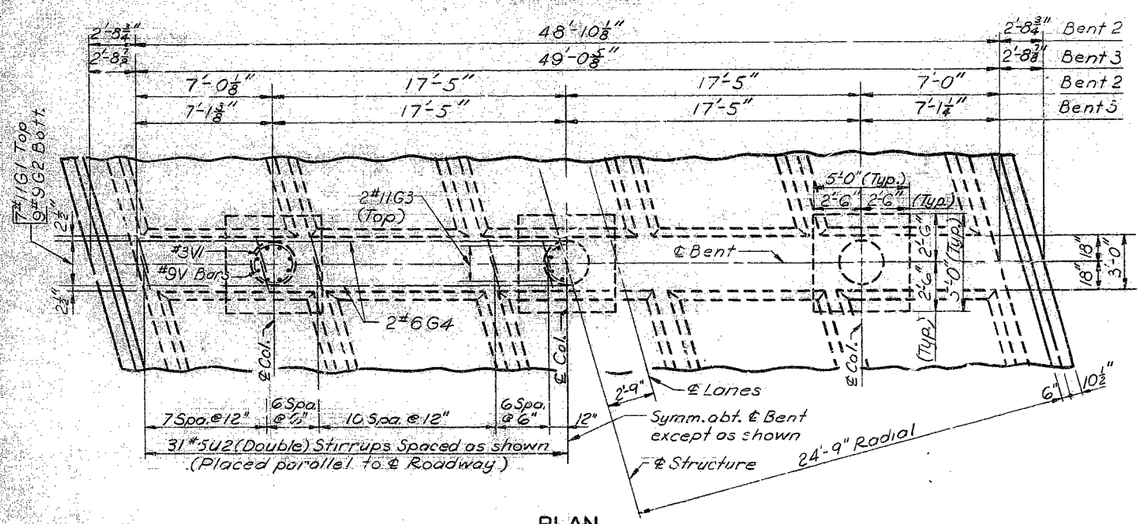
ELEVATION



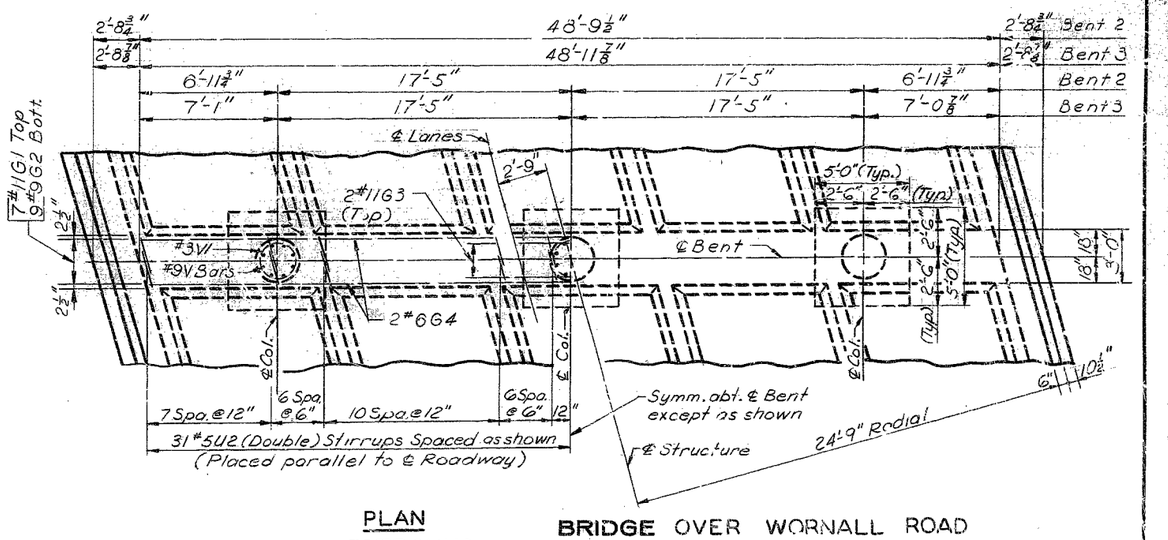
SECTION AT ℄



ELEVATION



PLAN
EASTBOUND



PLAN
WESTBOUND

INT. BENTS NO. 2 & 3

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 5 MILES NORTH OF MARTIN CITY

PROJECT NO. IG-435-1(53) (RTE. I-435) **STA.** 1017+59.01 E.B. LANE
1017+37.07 W.B. LANE

JACKSON COUNTY

A-1240

DETAILED SEPT. 19 65 BY HOHLT
CHECKED NOV. 1965 BY J. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 6 of 13.

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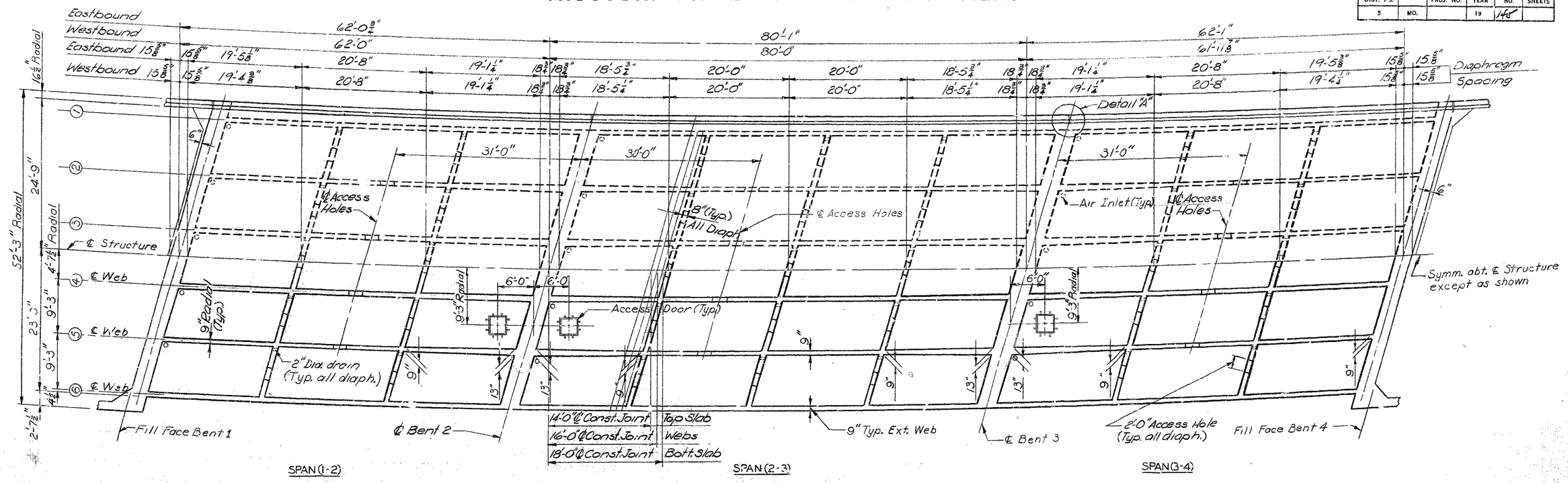
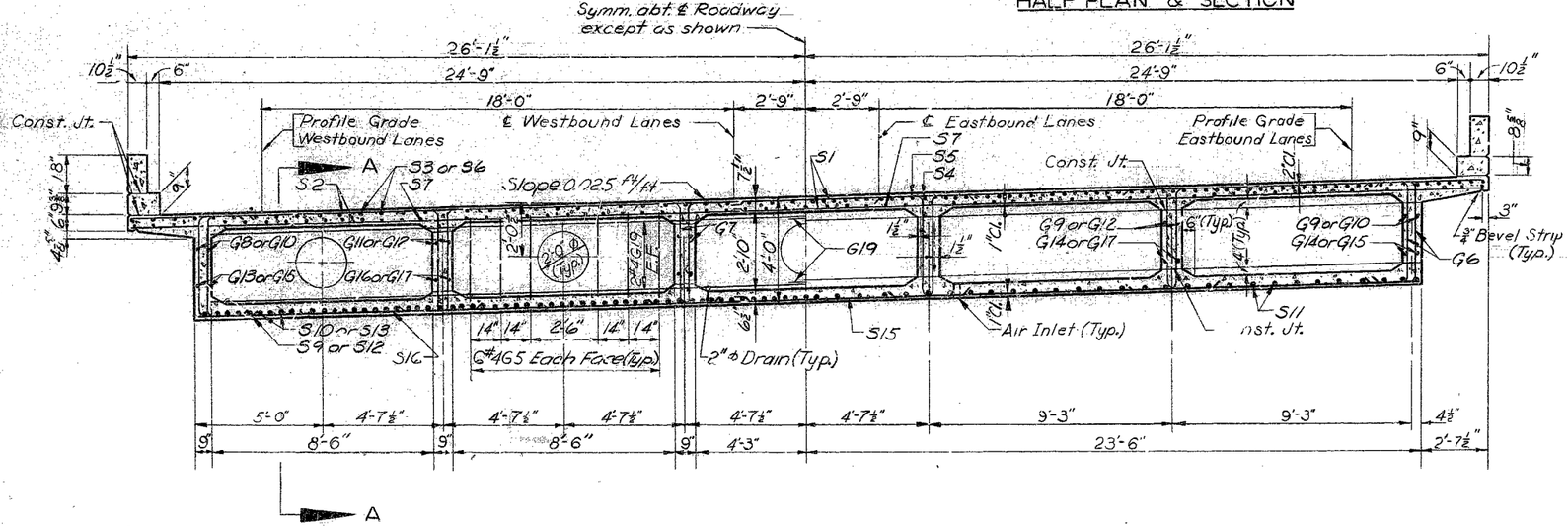
SEE FINAL PLANS BROWN-LINES

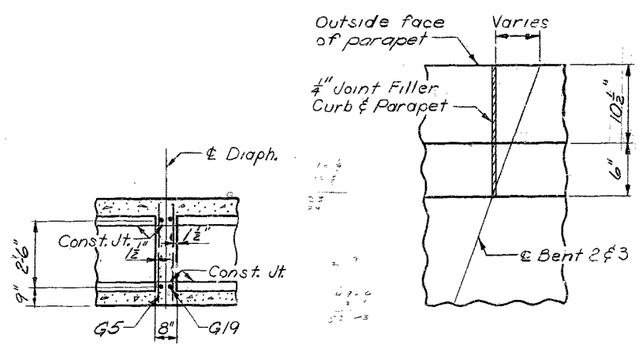
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	145	



HALF PLAN & SECTION





SECTION AA

DETAIL A

HALF SECTION NEAR DIAPHRAGM

HALF SECTION NEAR INT. BENT

NOTES:
For Air Inlet Details see sheet No. 8 of 13.
For Access Door Details see sheet No. 9 of 13.

BRIDGE OVER WORNALL ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 1017+59.01 E.B. LANE, 1017+37.07 W.B. LANE
JACKSON **COUNTY**

A-1240

259

DETAILED OCT. 1965 BY HOHLT
CHECKED NOV. 1965 BY J. PARIKH

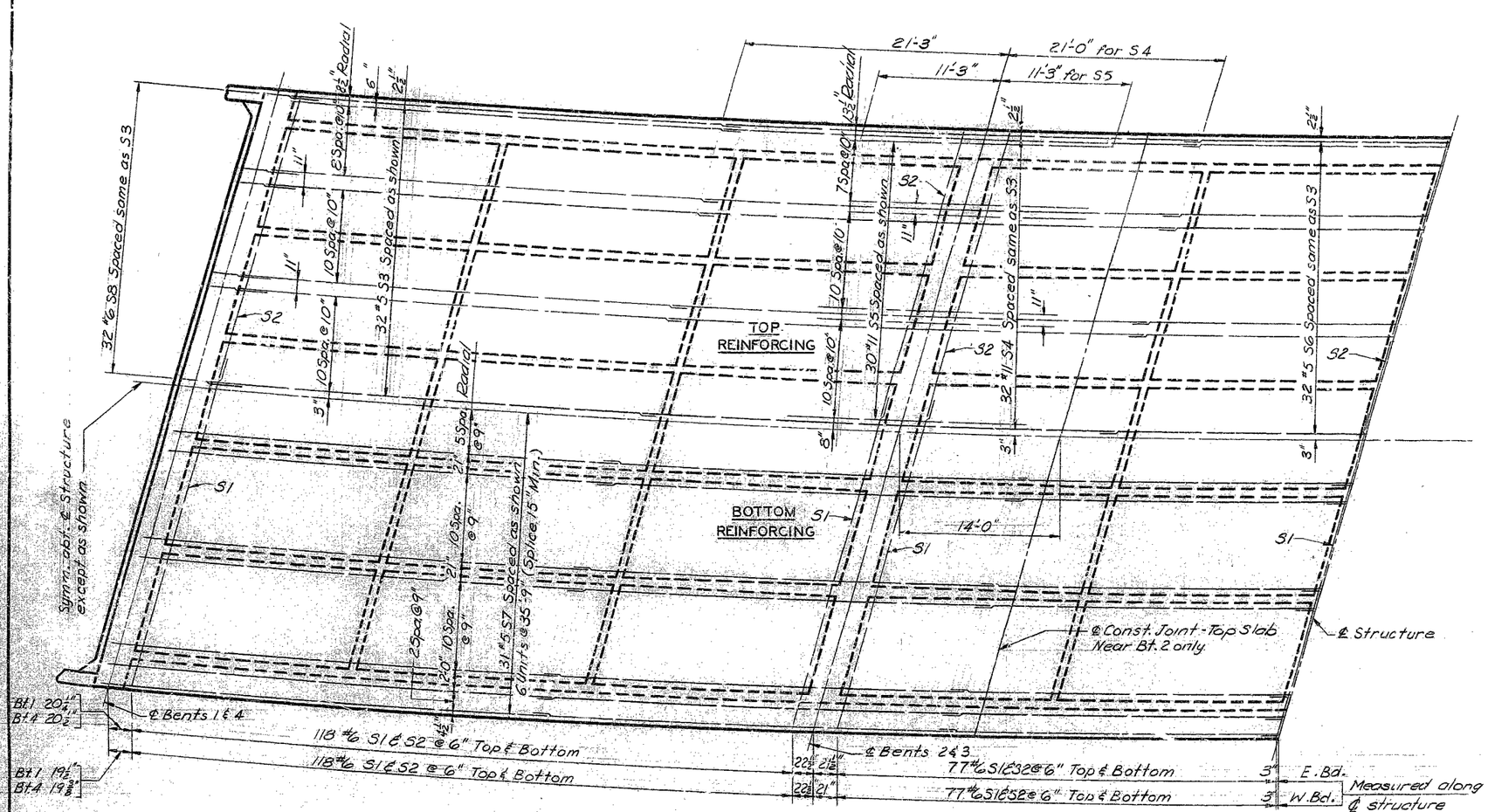
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 13.

NO CONSTRUCTION CHANGES

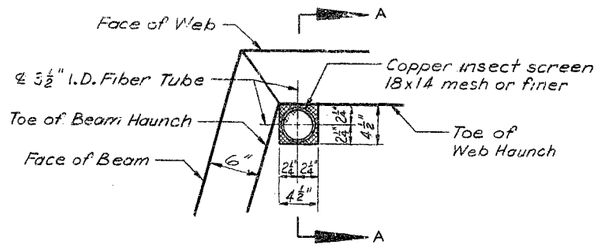
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	146	

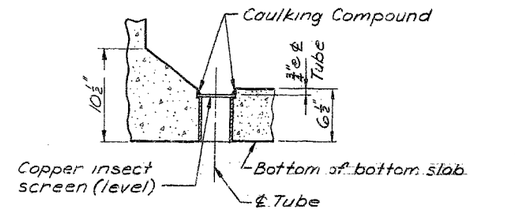


SPAN (1-2)(4-3) HALF SPAN (2-3)

PLAN - TOP - SLAB



PLAN



SECTION A-A

AIR INLET DETAILS

NOTES:

Payment for furnishing and placing fibre tube, copper screen and caulking compound shall be included in price bid for other items of works.

For location of air inlets, and section thru slab see Sheet No. 7 of 13.

Min. lap for reinforcing steel shall be 24 dia. except as noted.

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 5 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 1017+59.01 E.B. LANE 1017+37.07 W.B. LANE

JACKSON **COUNTY**

A-1240

DETAILED OCT. 1965 BY VIEHLAND

CHECKED NOV. 1965 BY J. PARIKH

P. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

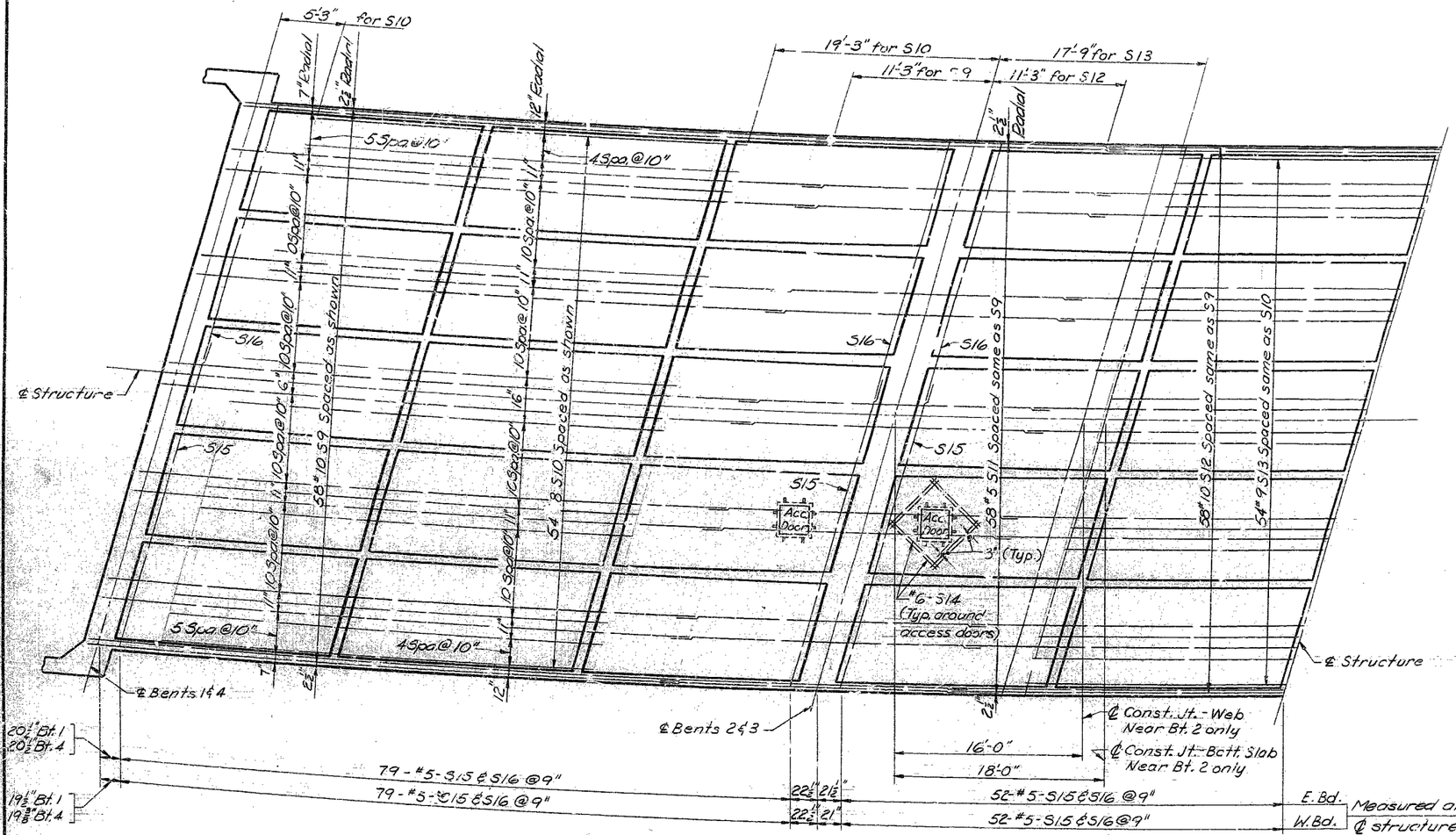
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 13.

NO CONSTRUCTION CHANGES

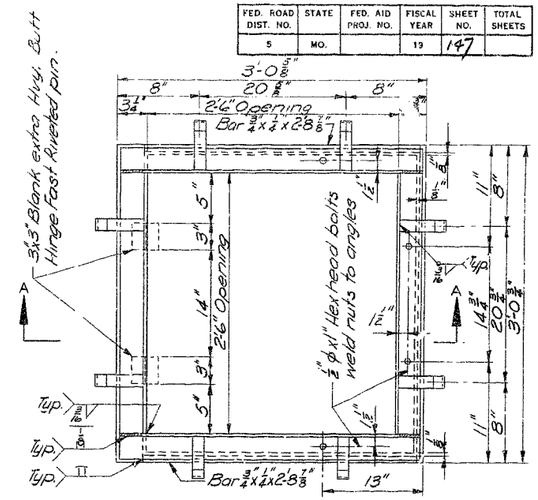
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	147	

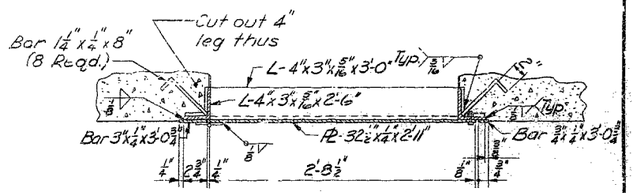


SPAN (1-2)(4-3) HALF SPAN (2-3)

PLAN - BOTTOM SLAB



PLAN



SECTION A-A

ACCESS DOOR DETAIL

(3 Required)

NOTES:

Access doors to be assembled and in place while slab is being poured. Weight of one door & frame is approx. 179#

Bottom surface of door is to be flush with bottom slab.

Bottom slab reinforcing shall be cut in field to allow access door installation.

For location of access doors and section thru slab see Sheet No. 7 of 13.

Min. lap for reinforcing steel shall be 24 dia. except as noted.

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 5 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 1017+59.01 E.B. LANE 1017+37.07 W.B. LANE

JACKSON **COUNTY**

DETAILED OCT. 1965 BY HERD

CHECKED NOV. 1965 BY J. PARIKH

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

Sheet No. 9 of 13.

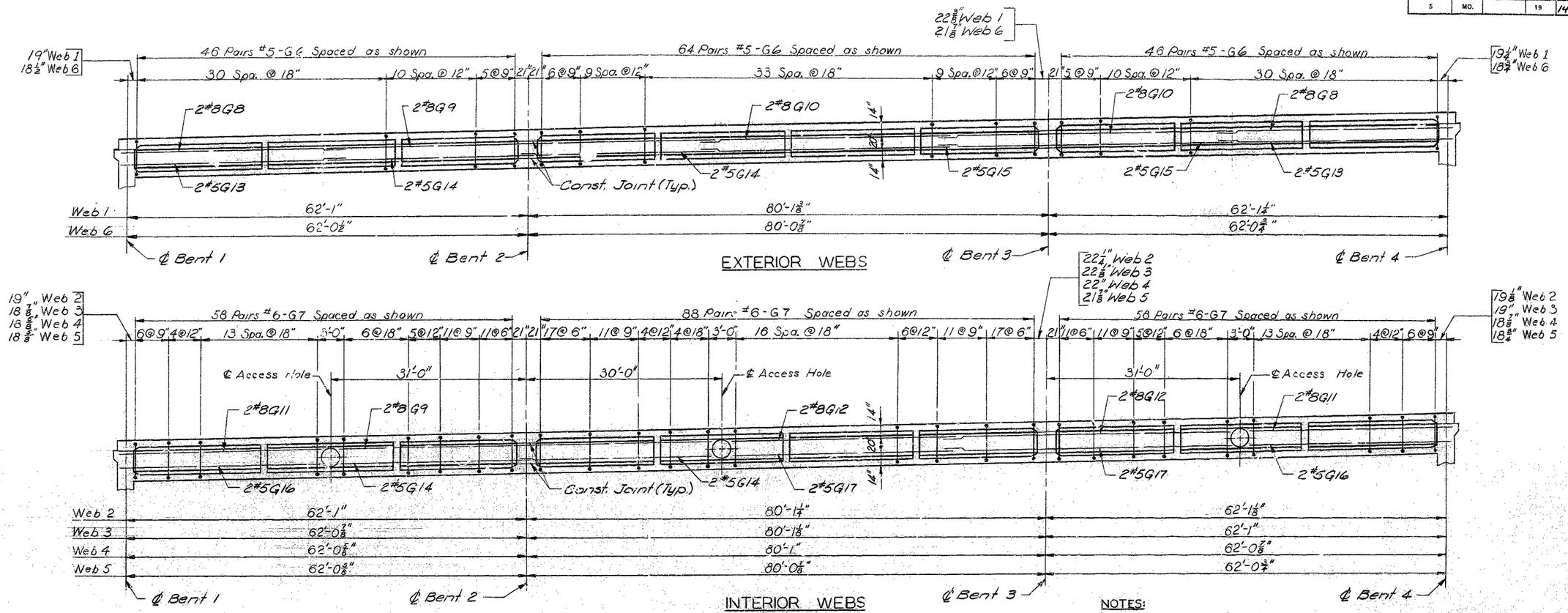
A-1240

NO CONSTRUCTION CHANGES

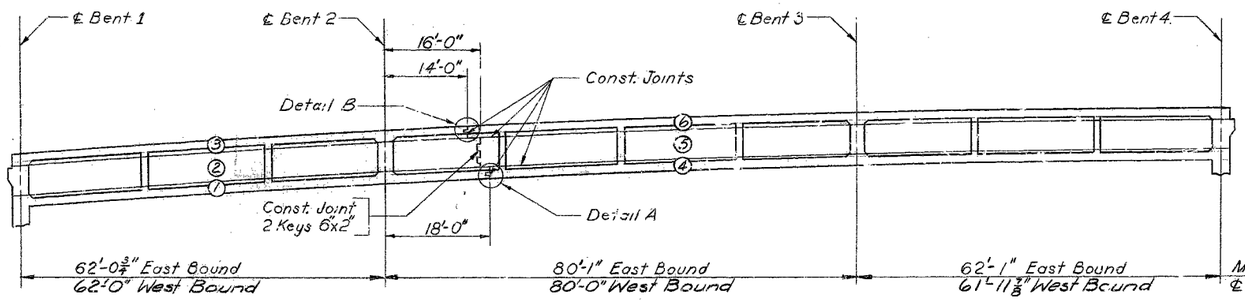
261

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	148	



WEB ELEVATIONS EASTBOUND LANES



POURING SEQUENCE

NOTES:

Numbers in circles indicate the basic pouring sequence. Longitudinal joints in roadway slabs, unless specifically on plans, will not be permitted.

The contractor shall use an approved oscillating screed type, self-propelled mechanical finishing machine and shall pour roadway slabs at a rate of not less than 50 cubic yards per hour. He shall observe the basic pouring sequence unless he can demonstrate to the engineer that he can pour and satisfactorily finish the superstructure concrete at a rate which will permit the combining of such of the basic pours as may be specifically designated by the engineer as being compatible with design. Finishing machine loads will not be permitted on concrete less than 48 hours old.

With use of forms and basic falsework meeting the approval of the engineer, the girder webs and diaphragms may be poured with the bottom slab sections on which they bear.

All forms shall be removed from the interior of box girders except top slab forms which may be left in place.

All stirrups shall be placed parallel to bents.

For Detail "A", Detail "B" and reinforcing around access hole in web See Sheet 11 of 13.

Min. lap for reinforcing steel shall be 24 dia. except as noted.

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 5 MILES NORTH OF MARTIN CITY

PROJECT NO. 1-IG-435-1(53)(RTE I-435) **STA.** 1017+59.01 E.B. LANE 1017+37.07 W.B. LANE

JACKSON **COUNTY**

A-1240

DETAILED OCT. 1965 BY HOHLT

CHECKED NOV. 1965 BY J. PARIKH

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

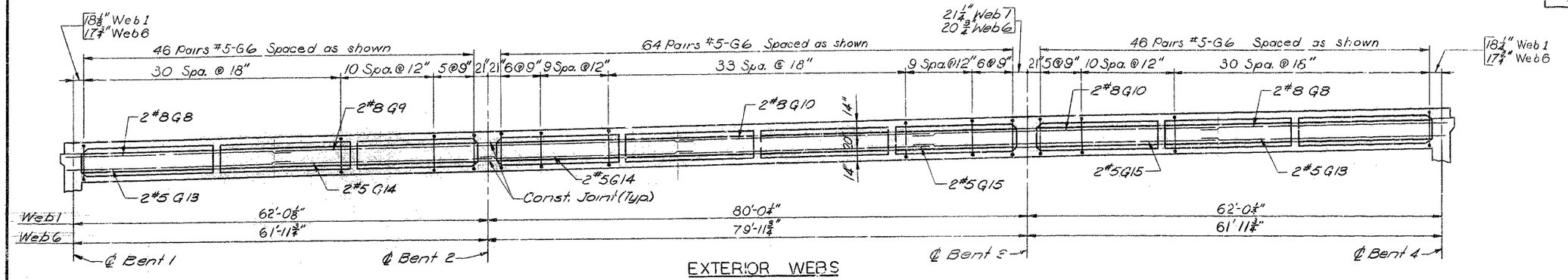
Sheet No. 10 of 13.

NO CONSTRUCTION CHANGES

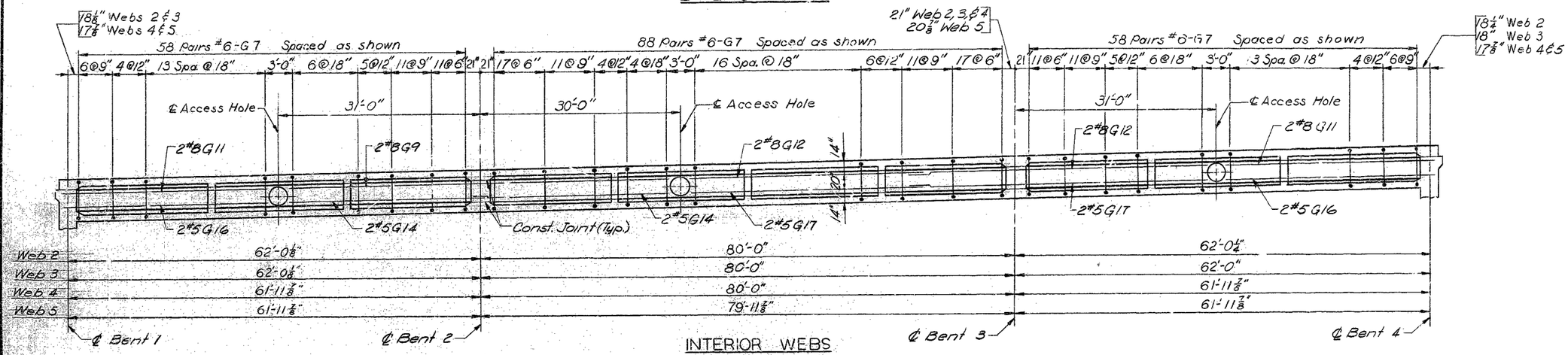
262

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	149	



EXTERIOR WEBS



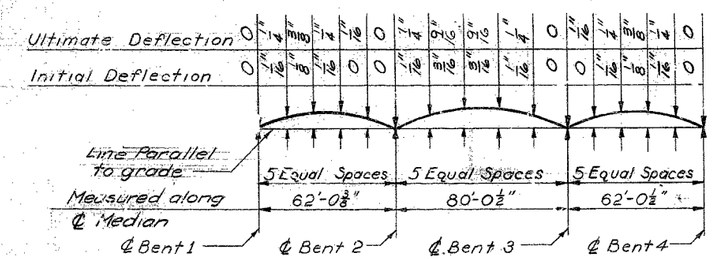
INTERIOR WEBS

WEB ELEVATIONS WESTBOUND LANES

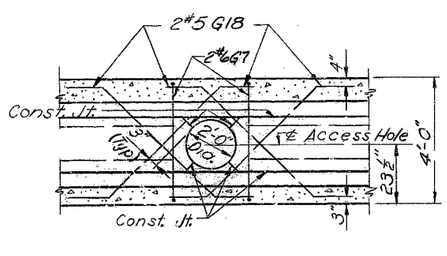
NOTES:

All stirrups shall be placed parallel to bents. For location of Detail "A", and Detail "B" See Sheet No. 10 of 13.

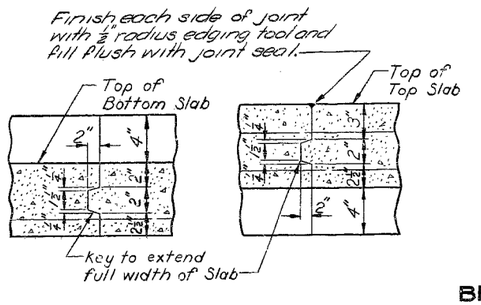
Min. Lap for reinforcing steel shall be 24 dia. except as noted.



CAMBER DIAGRAM



ACCESS HOLE IN WEB



DETAIL A

DETAIL B

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 5 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE I-435) **STA.** 1017+59.01 E.B. LANE
1017+37.07 W.B. LANE

JACKSON **COUNTY**

A-1240

DETAILED OCT. 1965 BY HOHLT

CHECKED NOV. 1965 BY J. PARIKH

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

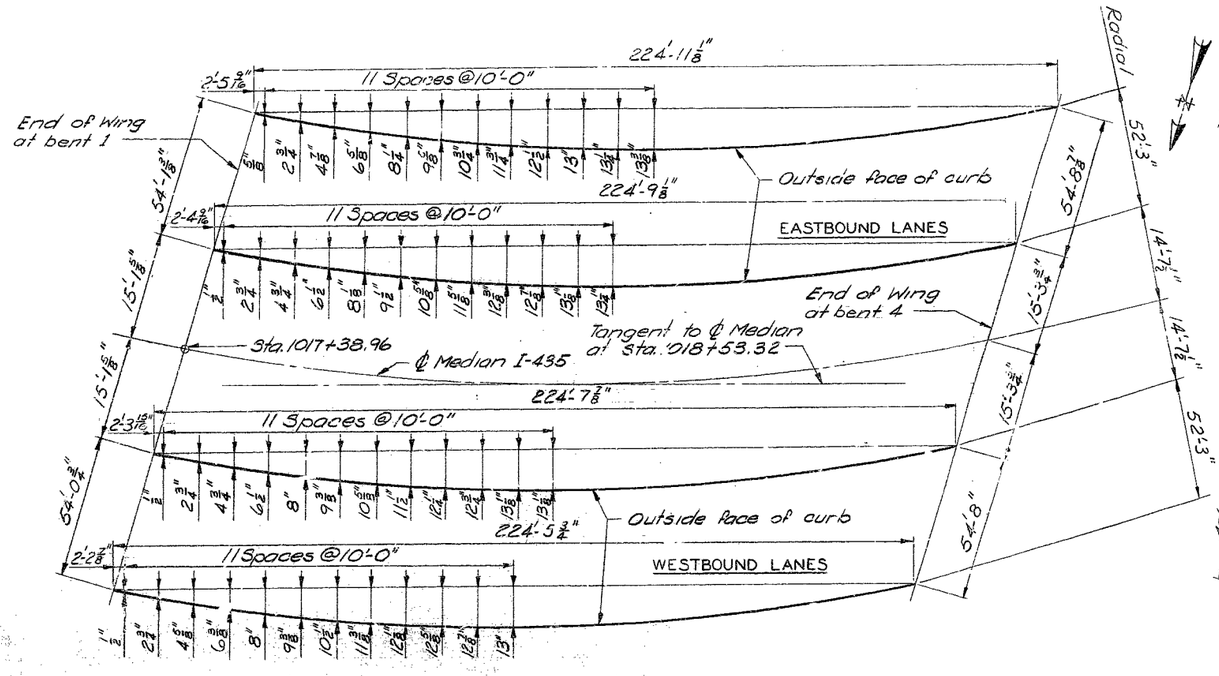
Sheet No. 11 of 13.

NO CONSTRUCTION CHANGES

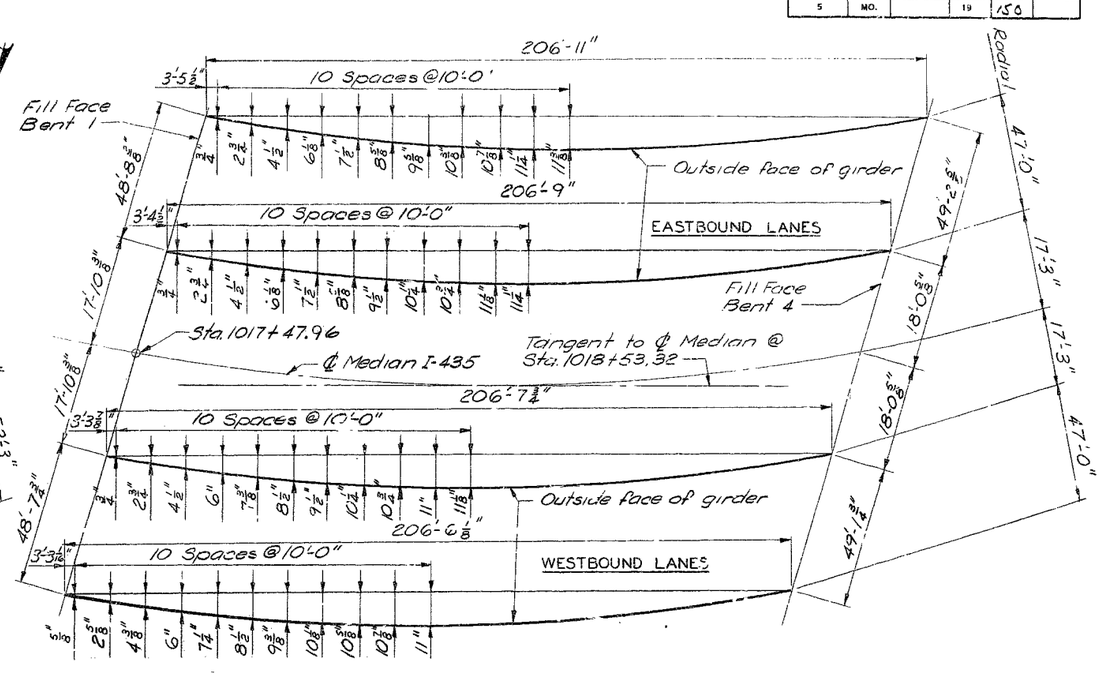
263

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SH T NO.	TOTAL SHEETS
5	MO.		19	50	

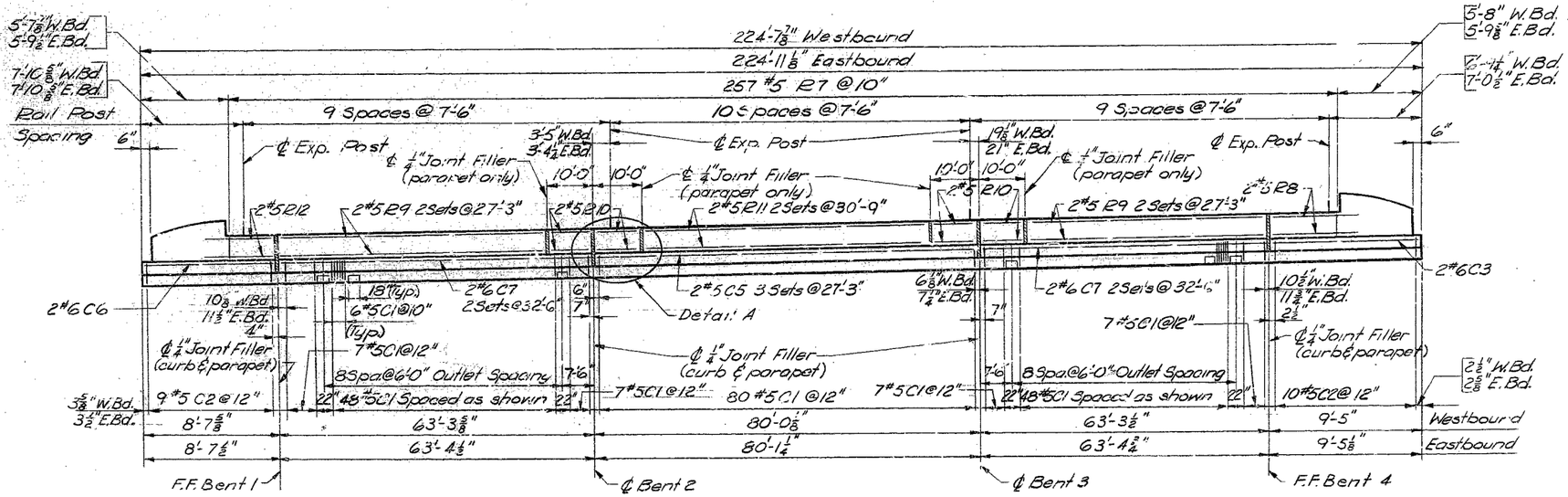


OUTSIDE FACE OF PARAPETS



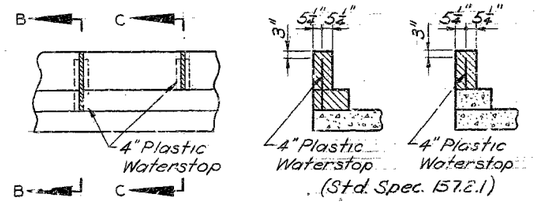
OUTSIDE FACE OF GIRDERS

CURVE OFFSETS



CURB & PARAPET ELEVATION
LEFT RAIL

NOTE:
All longitudinal dimensions are along the outside face of parapet.



DETAIL A SECTION B-B SECTION C-C

PLASTIC WATERSTOPS
(Left Rail Only)

NOTES:
Cost of plastic waterstop complete in place to be included in unit price bid for concrete.
For Handrail Details, Plan of End Posts and Curb & Parapet elevation of Right Rail see Sheet 13 of 13.

BRIDGE OVER WORNALL ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE 1-435) **STA.** 1017+59.01 E.B. LANE, 1017+37.07 W.B. LANE
JACKSON **COUNTY**

DETAILED OCT. 1965 BY HERD
CHECKED NOV. 1965 BY R. PARIKH

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

Sheet No. 12 of 13.

A-1240

MISSOURI STATE HIGHWAY DEPARTMENT

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5	MO		19	151	

GENERAL NOTES:

All handrail posts shall be set normal to grade.

Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet.

Aluminum washer shims between top of parapet and post base may be used for adjusting handrail alignment. Maximum thickness of shims to be 1/8". Where more fitting of post is required for proper alignment, concrete bearing areas shall be ground down.

All parts of handrail, except anchor bolts, nuts, washers, and set screws are to be of aluminum material.

The contract unit price per linear foot of "Bridge Rail" shall include furnishing and erecting the handrail complete with anchor bolts, shims and Insulating compound.

All fillets 1/4" except as noted.

All drafts 3° except as noted.

Pipe rail to be fabricated in two or three panel lengths unless otherwise approved.

Omit set screw on side near filled joint in parapet at all expansion posts.

Top of curbs and parapets to be built parallel to grade with curb and parapet joints normal to grade.

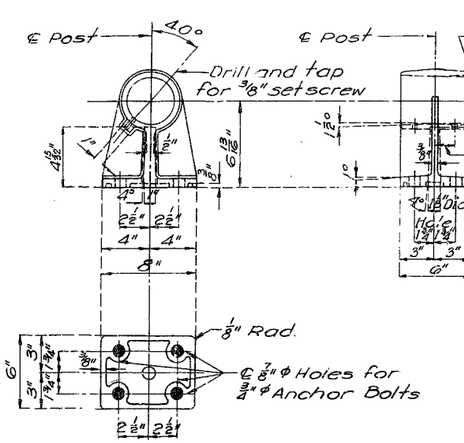
Concrete end posts to be vertical.

All exposed edges of end posts, parapets and curbs shall have 3/4" radius.

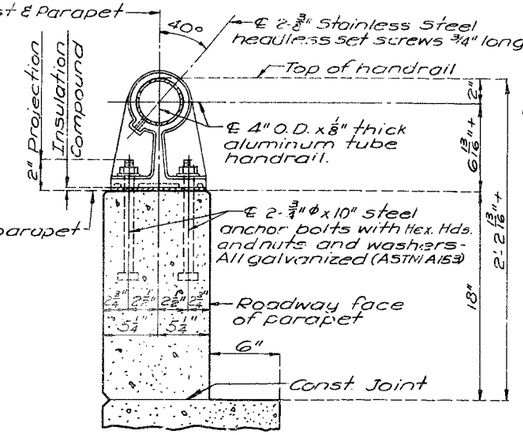
If the contractor desires, he may use drive fit cast aluminum end caps in lieu of welded aluminum closure plates.

Integrally cast trust coupons and a coat of clear lacquer specified in Std. Spec. 56.2.4 and 56.3.5 respectively will not be required for these rail posts.

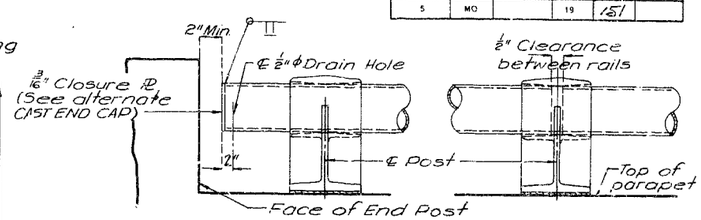
All longitudinal dimensions are along the outside face of parapet.



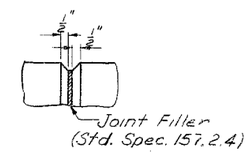
POST DETAILS



SECTION THRU HANDRAIL

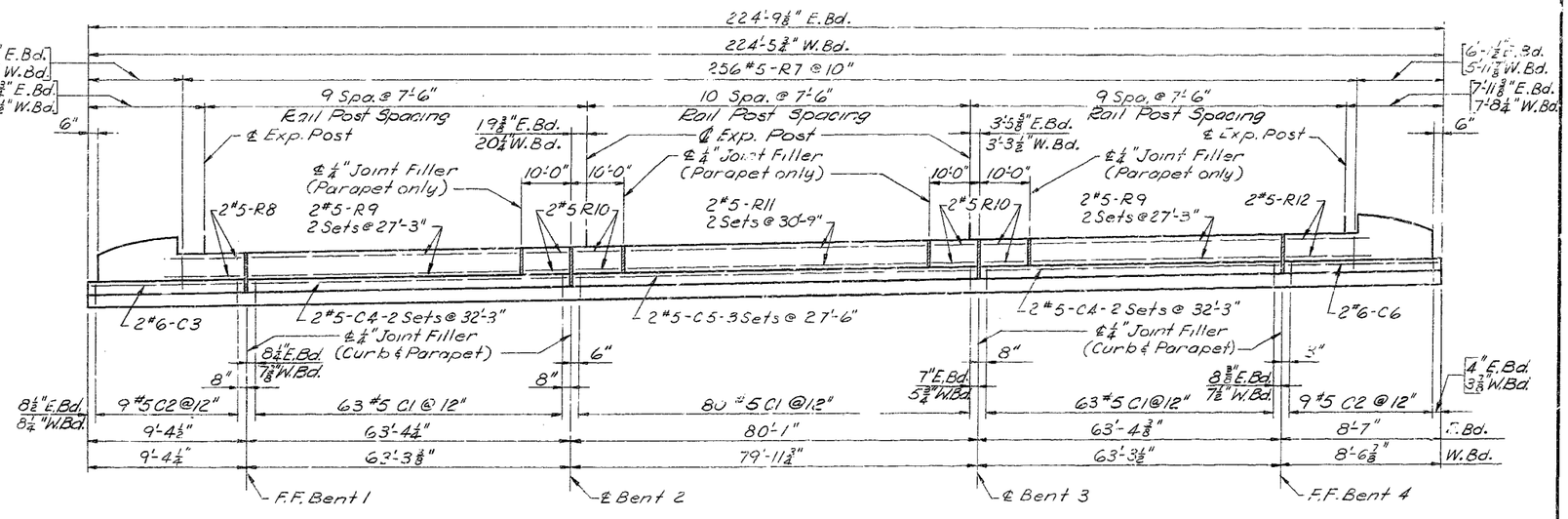


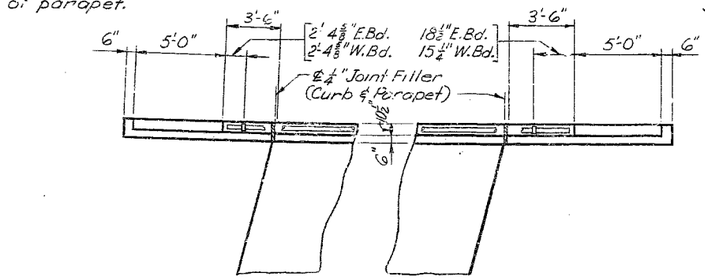
TYPICAL HANDRAIL DETAILS



FILLED JOINT DETAILS

SINGLE TUBE ALUMINUM RAILING

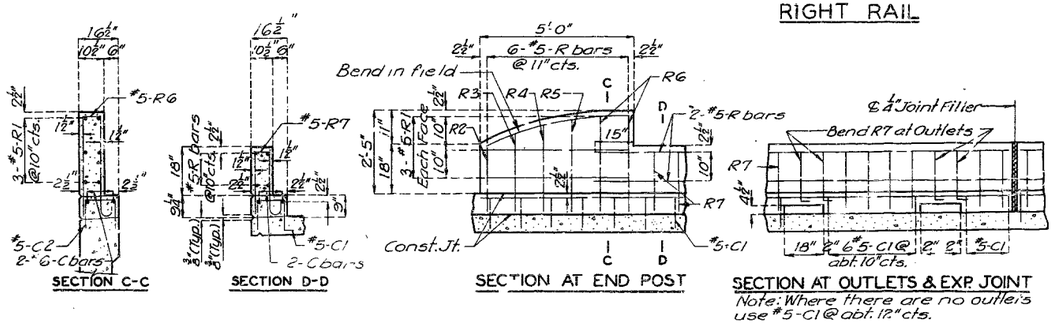


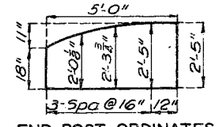


PLAN OF END POSTS

NOTE:
For Curb and Parapet elevation of Left Rail and Details of Plastic Waterstop, see Sheet 12 of 13.

CURB & PARAPET ELEVATION RIGHT RAIL





END POST ORDINATES

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

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 5 MILES NORTH OF MARTIN CITY

PROJECT NO. I-[illegible](53)(RTE I-435) **STA.** 1017+59.01 E.B. LANE
1017+37.07 W.B. LANE

JACKSON **COUNTY**

A-1240

No.	Revised	Date
1 & 2	Revised	May 1965
		Nov. 1963

DETAILED OCT. 1965 BY VIEHLAND
CHECKED NOV. 1965 BY R. PARISH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS MISSOURI

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

Sheet No. 13 of 13.

265

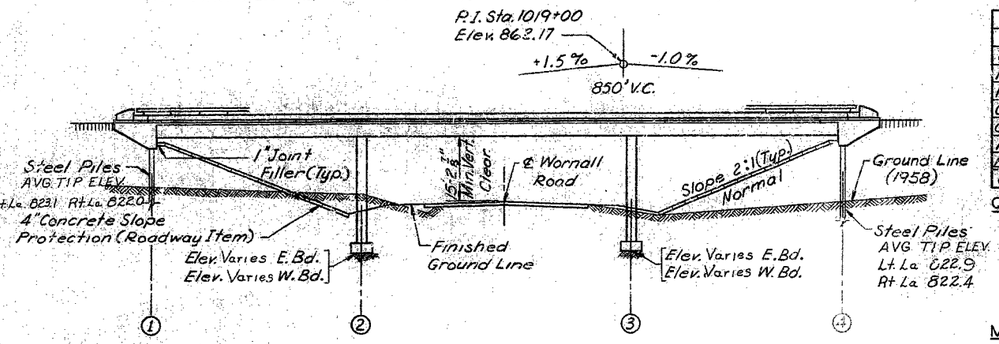
FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	139	

Twin 62.03'-80.04'-62.04' Cont. Concrete Box Girder Spans



GENERAL ELEVATION

QUANTITIES				
Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yd.	279.0	—	279.0
10" Steel Piles in Place	Lin. Ft.	757	—	757
10" Steel Pile Cut Offs	Lin. Ft.	87	—	87
Class B Concrete	Cu. Yd.	28.1	—	28.1
Class B1 Concrete	Cu. Yd.		1507.9	1507.9
Reinforcing Steel	Lb.	250	545790	546040
Bridge Rail (Single Tube Type)	Lin. Ft.	—	854	854
Cont. Items: Class 1 at 2.5%	Cu. Yd.	15	—	15
QUANTITY NOTES: Test Holes (Bridge Pusher 6" Curb Ends)	Lin. Ft.	52	—	52

All concrete and reinforcement above footings is included in superstructure quantities.
No payment for excavation allowed at End Bents Nos. 1 & 4.
Payment for furnishing and installing access doors and frames made and considered fully covered under price bid for other items.

MISCELLANEOUS NOTES:
Compacted roadway fill (full roadway width). placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bents before steel piles were driven.

Lengths of Structures, fill face to fill face of end bents, along ℄ of structures are 206'-10" for Eastbound and 206'-7 1/2" for Westbound.
For Boring Data see Sheet No. 2 of 13.
⊠ Indicates location of boring.

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.O. - 1961
DESIGN LOADING:
HS 20-44; 15#/sq. ft. Future Wearing Surface;
Modified 24,000# Tandem Axle;
Earth 120#; Equivalent Fluid Pressure 30#.
DESIGN UNIT STRESSES:
Class B Concrete (substructure) f_c = 1,200 p.s.i.
Class B1 Concrete (superstructure) f_c = 1,600 p.s.i.
Reinforcing Steel f_s = 20,000 p.s.i.
Structural Steel (A.S.T.M. A36-62T) f_s = 20,000 p.s.i.
Steel Pile (A.S.T.M. A36-62T) f_b = 9,000 p.s.i.
SURFACE SEAL: Superstructure deck surface sealed.
PAINTING:
Structural Steel access doors cleaned and painted in the field or may be cleaned and painted one coat of red lead in the shop with the two remaining coats applied in the field except that final coat on access doors and frames gray.

Cost of Painting included in price bid for other items.

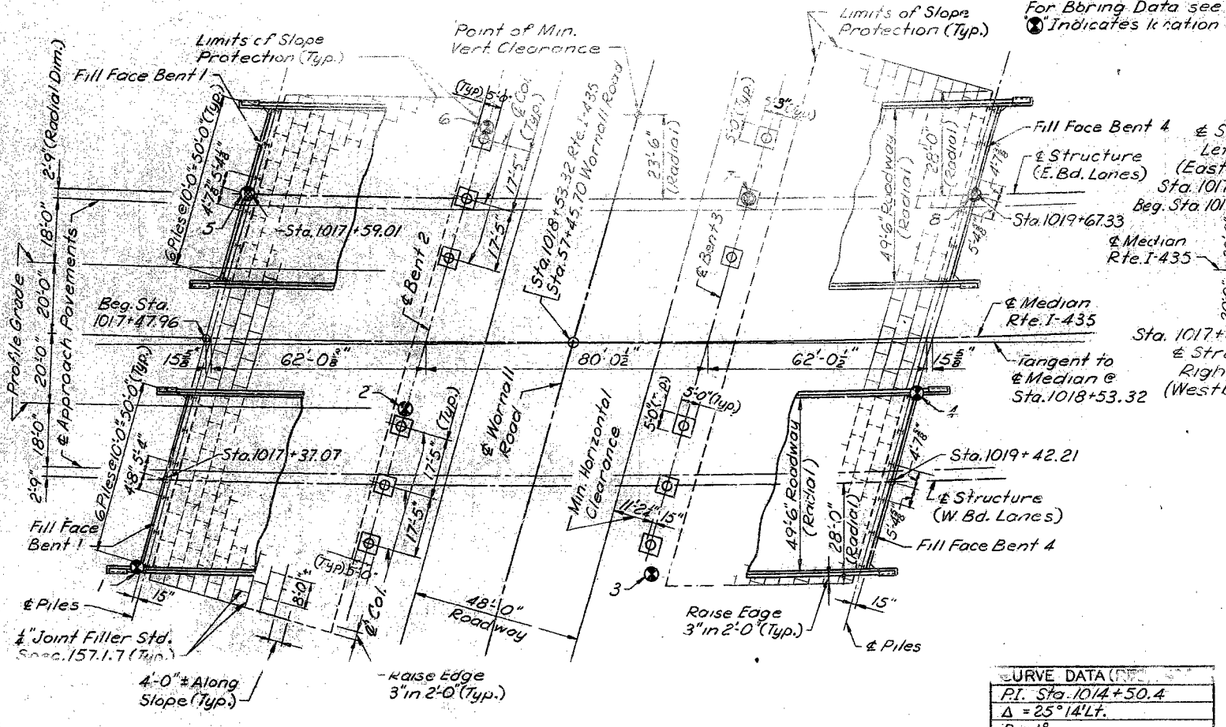
FALSEWORK:
Falsework over existing lanes constructed with a minimum vertical clearance of 13'-0" from crown of existing lanes and a minimum lateral clearance of 26'-0" centered on existing lanes.

FOOTING AND PILE DATA								
BENT NO.		1		2		3	4	
LANES		EBd	WBd				EBd	WBd
SPREAD FOOTINGS	Foundation Material			Rock		Rock		
	Design Bearing Tons/Sq.Ft.			11.3		11.3		
BEARING PILE	Pile Type & Size	10BP42					10BP42	
	Number	6	6				6	6
	Approximate Length Ft.	35	40				35	35
	Design Bearing Value Tons	50	50				50	50
	* Hammer Energy Rqd. Ft-Lb	11,200					11,200	

FOOTING AND PILE NOTES:
Footings carried 6" into hard, solid, undisturbed rock or 18" into soft rock or shale and cast against vertical faces of same.

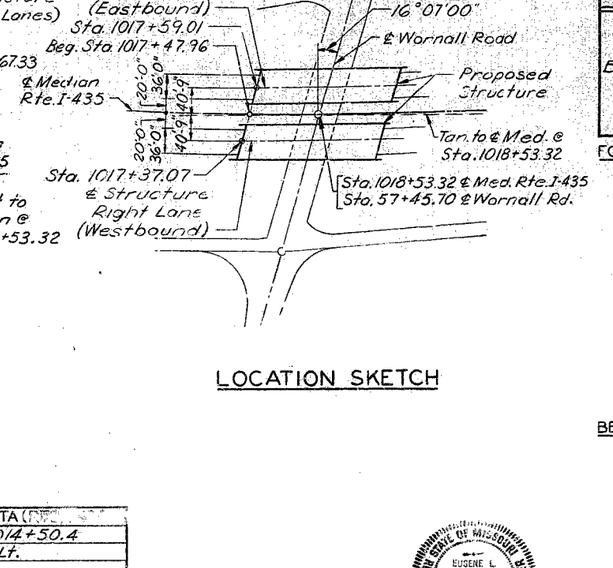
* Minimum Energy Requirement of hammer, based on plan length and design bearing value of pile. All piles driven to practical refusal at 1.9 times the design Bearing Value.

Note. For location of existing utility conduits see Road Plans.



PLAN

CURVE DATA (I.E.)
P.I. Sta. 1014+50.4
Δ = 25°14' Lt.
D = 1°
T = 1282.48'
L = 2523.33'
R = 5729.65'
S.E. = .025 ft./ft.
W. = 0



LOCATION SKETCH

BENCH MARK:
B.M. PK NAIL IN END N. WING BT. #1 LT. LA BR.
ELEV. 859.61

REGISTERED ENGINEER STATE OF MISSOURI EUGENE L. FIELDHAMMER NUMBER E-10795 REGISTERED PROFESSIONAL ENGINEER

SUBMITTED BY
REGISTERED PROFESSIONAL ENGINEER
MISSOURI NO. E-10795

BRIDGE OVER WORNALL ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 1017+59.01 ℄ B. LANE, 1017+37.07 W. B. LANE
JACKSON **COUNTY**

FINISHED

SUBMITTED BY D B Jamison BRIDGE ENGINEER DATE 5/20/66
APPROVED BY M F Shrider CHIEF ENGINEER DATE 5/20/66

STD. 54.00
A-1240

DESIGNED NOV. 1965 BY R. PARIKH.
DETAILED OCT. 1965 BY VIEHLAND.
CHECKED NOV. 1965 BY J. PARIKH.

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 1A of 2

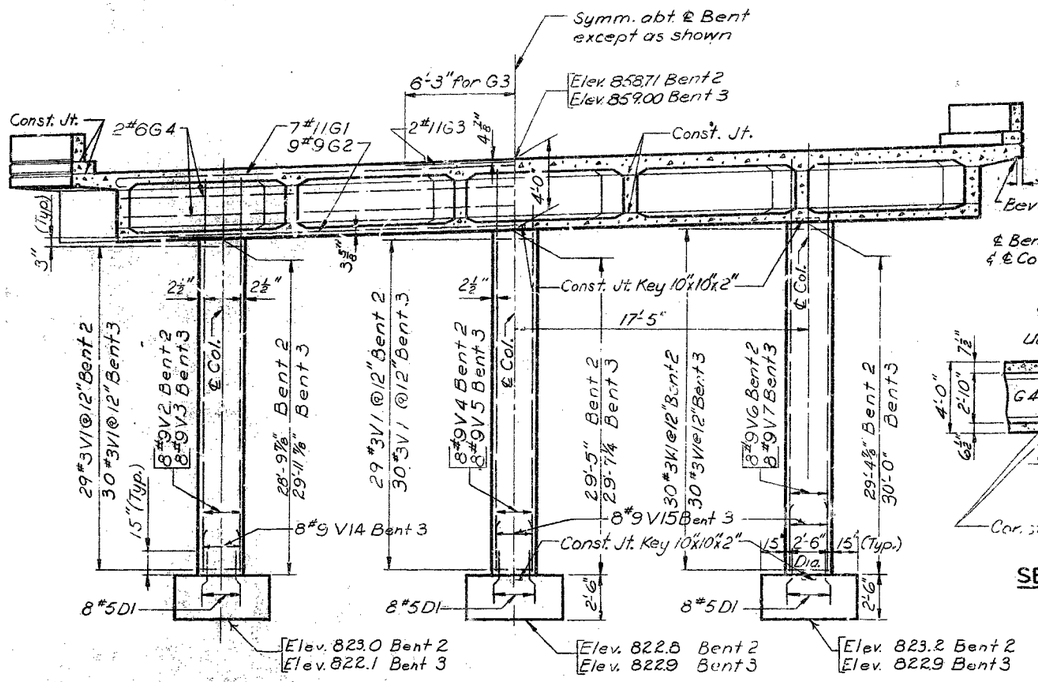
FINAL PLANS

FINAL PLANS

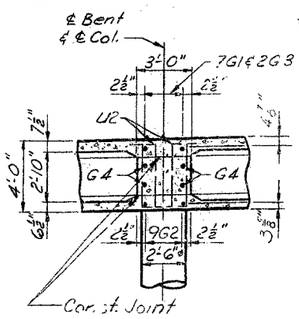
MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

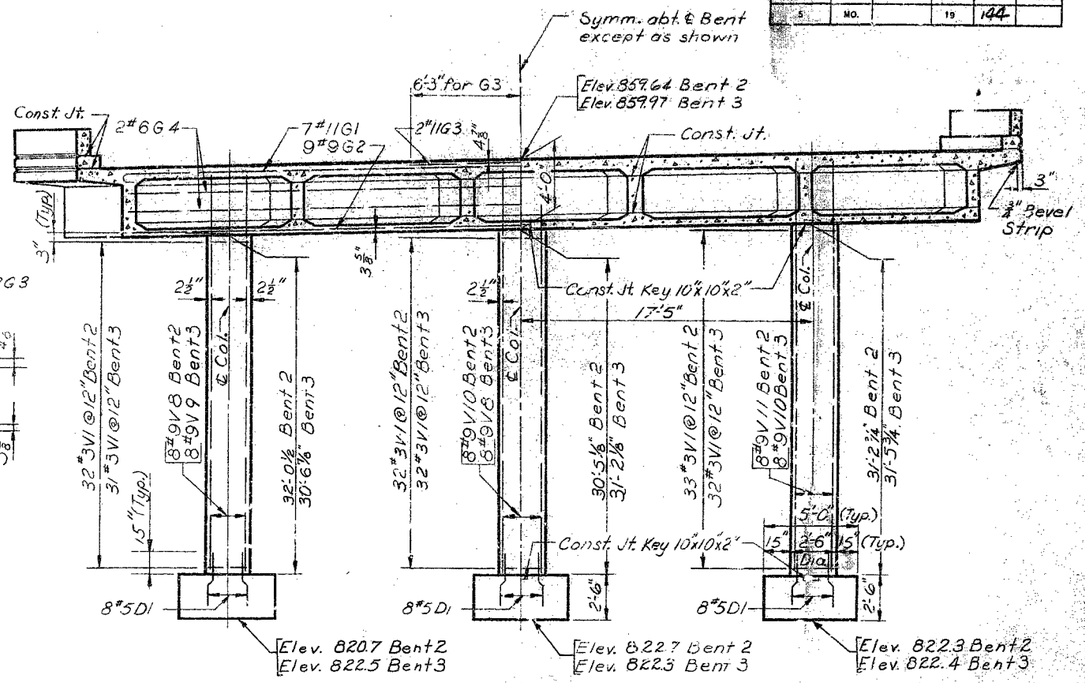
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	144	



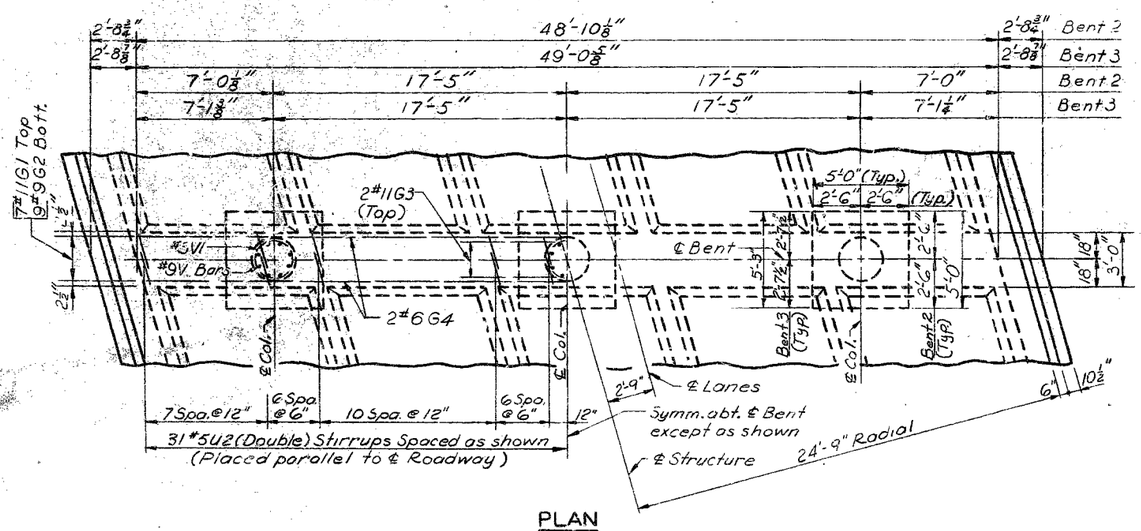
ELEVATION



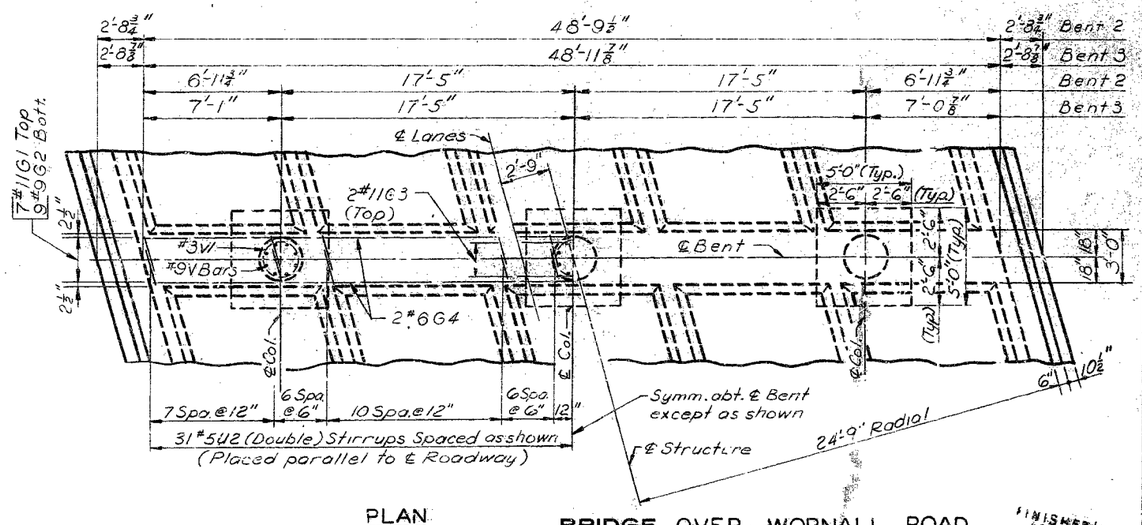
SECTION AT ℄



ELEVATION



PLAN
EASTBOUND



PLAN
WESTBOUND

INT. BENTS NO. 2 & 3

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 5 MILES NORTH OF MARTIN CITY

PROJECT NO I-IG-435-1(53)(RTE. I-435) **STA.** 1017+59.01 E.B. LANE
1017+37.07 W.B. LANE

JACKSON COUNTY

FINISHED

A-1240

DETAILED SEPT. 1965 BY HOHLT
CHECKED NOV. 1965 BY J. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 6A of 2.

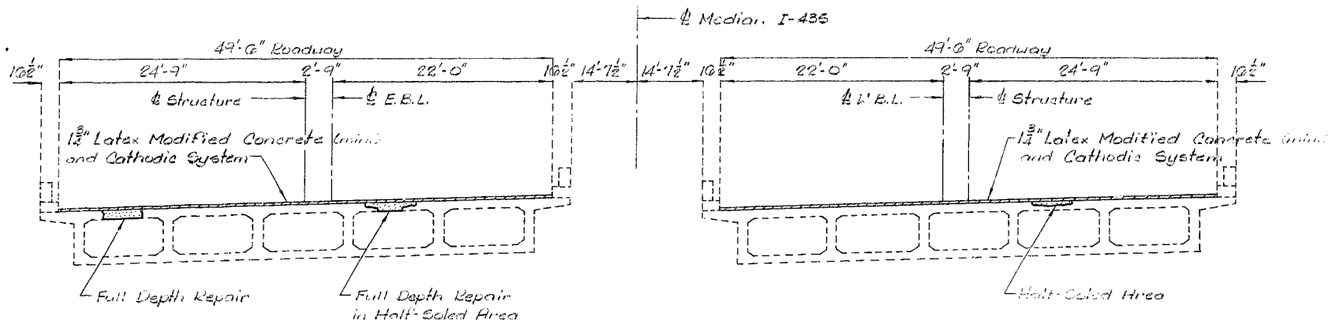
FINAL PLANS

267

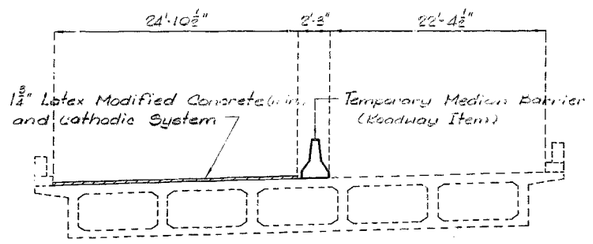
AF 338104

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

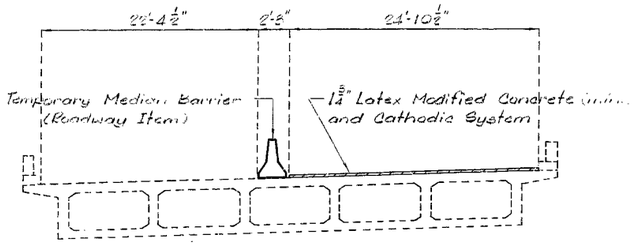
STATE	PROJ. NO	SHEET NO.
MO		28
SEC. / SUR 31	TWP 48N RGE. 33W	



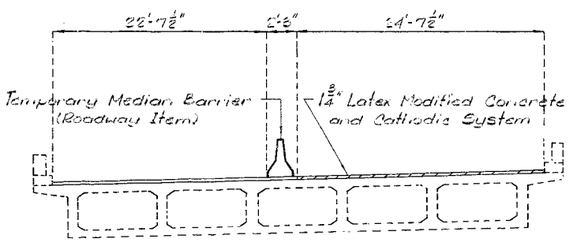
SECTION THRU SLAB



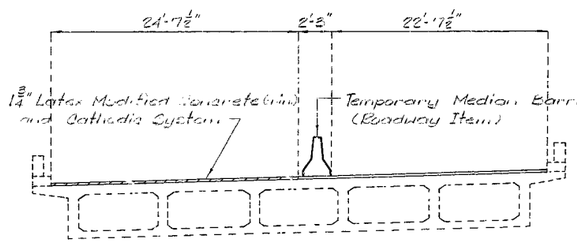
PHASE 1 - E.B.L.



PHASE 3 - W.B.L.



PHASE 2 - E.B.L.



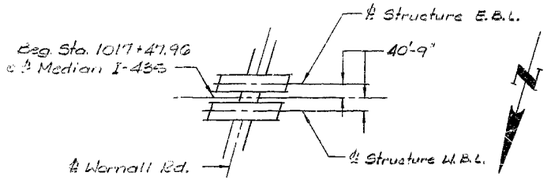
PHASE 4 - W.B.L.

GENERAL NOTES:

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

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

Traffic over structure to be maintained during construction.



LOCATION SKETCH

ESTIMATED QUANTITIES		
ITEM		TOTAL
Repairing Concrete Dk (Half-Soling)	Sq. Ft.	1,023
Full Depth Repair	Sq. Ft.	205
Latex Concrete Wearing Surface	Sq. Yd.	2,274
Cathodic Protection System	Lump Sum	1

323

REPAIRS TO:

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

IN KANSAS CITY

PROJECT NO. I-IR-IR6-435-1(149) **STA.** 1017+47.96

JOB NO. 4-1435-442B **RTE.** I-435

JACKSON **COUNTY**

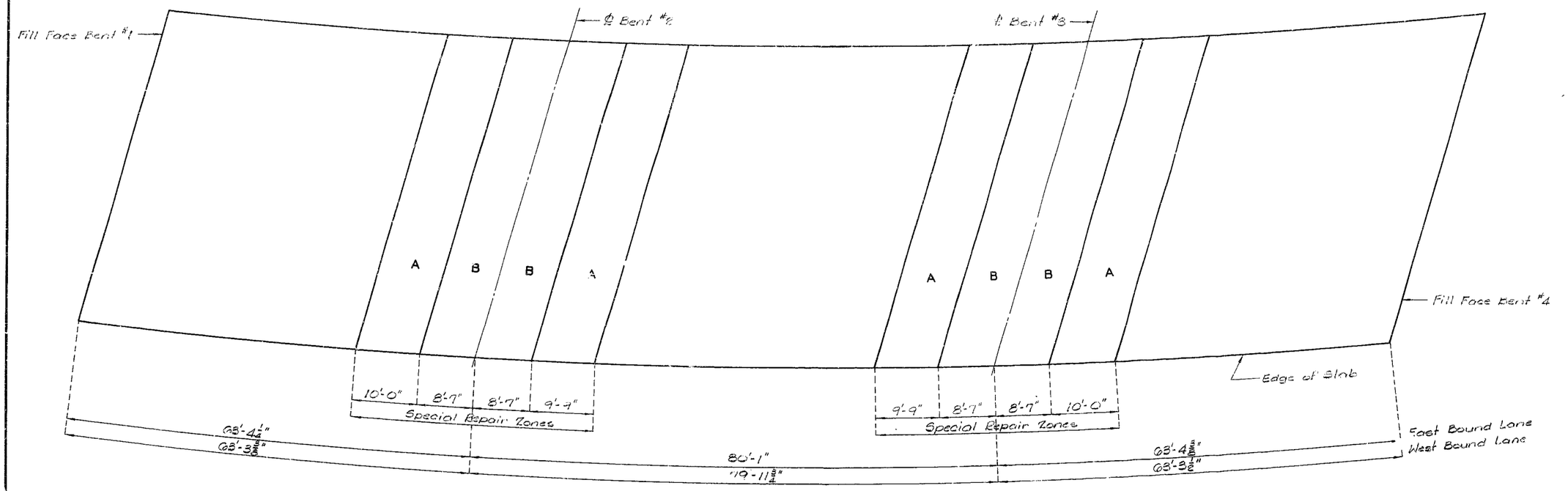
DATE Jan. 15, 1985

STD.
STD.
A-1240R

DESIGNED OCT., 1984
DETAILED OCT., 1984
CHECKED OCT., 1984

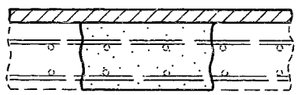
Note: This drawing is not to scale. Follow dimensions.

STATE	PROJ NO	SHEET NO.
MO.		29

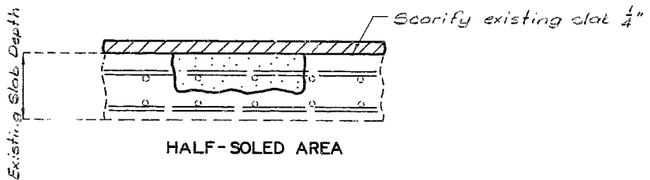


PLAN OF EXISTING SLAB
SHOWING SPECIAL REPAIR ZONES

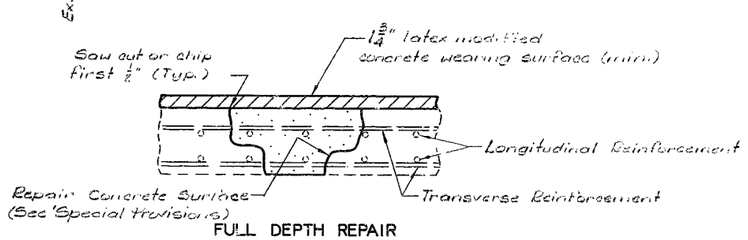
Note: Any repair in the remainder of the bridge that is within 3'-0" of Zone A shall be completed before removing old concrete in Zone A.
Sequence of Repair: Zone A then Zone B.
Zones with the same letter designation may be repaired at the same time.



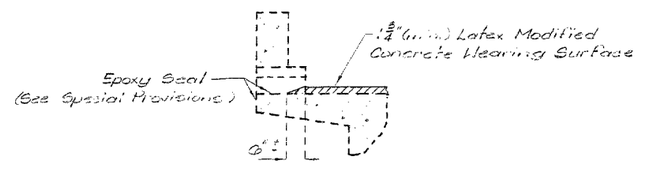
FULL DEPTH REPAIR



HALF-SOLED AREA



FULL DEPTH REPAIR
IN HALF-SOLED AREA



TYPICAL SECTION AT CURB SHOWING OUTLET

324

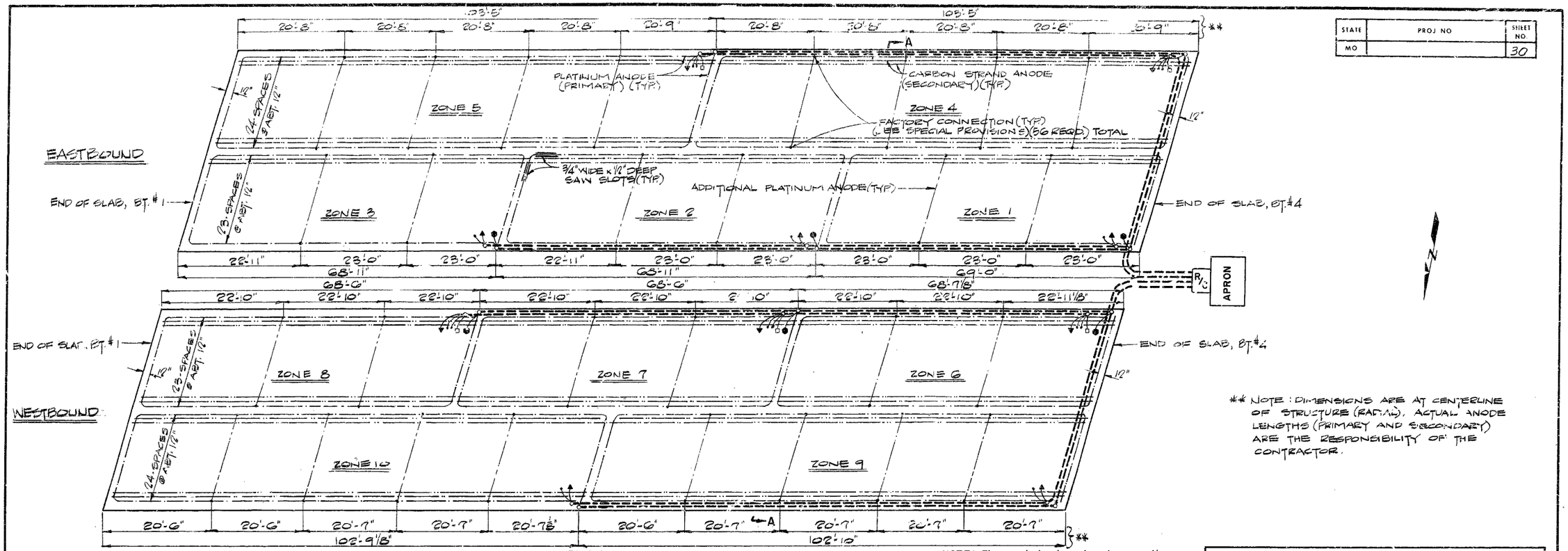
DETAILED OCT., 1984
CHECKED OCT., 1984

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

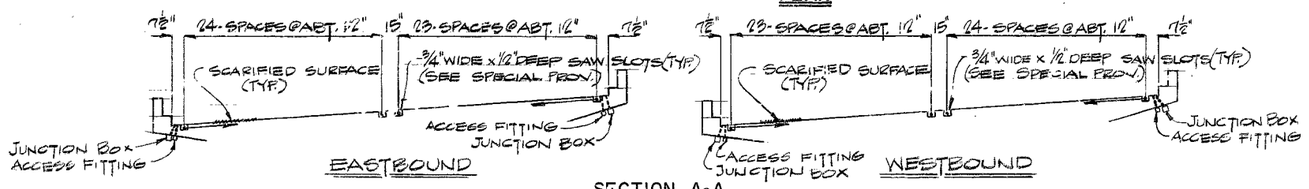
JACKSON COUNTY

A-1240R

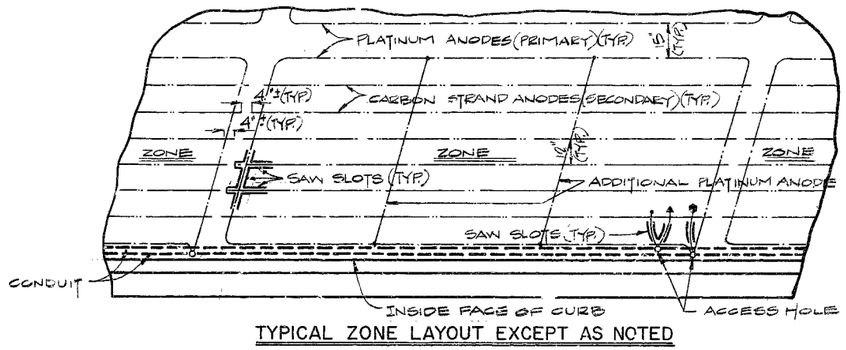
STATE	PROJ NO	SHEET NO.
MO		30



** NOTE: DIMENSIONS ARE AT CENTERLINE OF STRUCTURE (RADIAL). ACTUAL ANODE LENGTHS (PRIMARY AND SECONDARY) ARE THE RESPONSIBILITY OF THE CONTRACTOR.



SECTION A-A



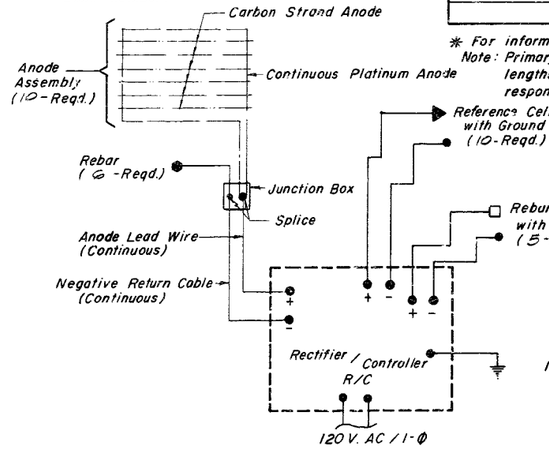
TYPICAL ZONE LAYOUT EXCEPT AS NOTED

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.
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.

ESTIMATED QUANTITIES *

ITEM	UNIT	QUANTITY
Primary Anodes	Lin. Ft.	2780
Secondary Anode Strands	Lin. Ft.	18,560
Reference Cells	Each	10
Rebar Probes	Each	5
Thermite Welds	Each	21
Conduit 2" ϕ P.V.C.	Lin. Ft.	1400

* For information only.
Note: Primary anodes, secondary anode strands and conduit lengths are approximate. Actual lengths are the responsibility of the contractor.



PARTIAL SCHEMATIC

DENOTATIONS
- Platinum Anode
- Carbon Strand Anode
- System Negatives Connection
- Reference Cell
- Rebar Probe (Corrosometer)
- Grounds
- Conduit

Note: Primary and secondary anode strands shall be placed as shown with a placement tolerance of plus or minus three inches.

CATHODIC PROTECTION SYSTEM

DETAILED DEC. 1984
CHECKED DEC. 1984

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

Sheet No. 3 of 5.

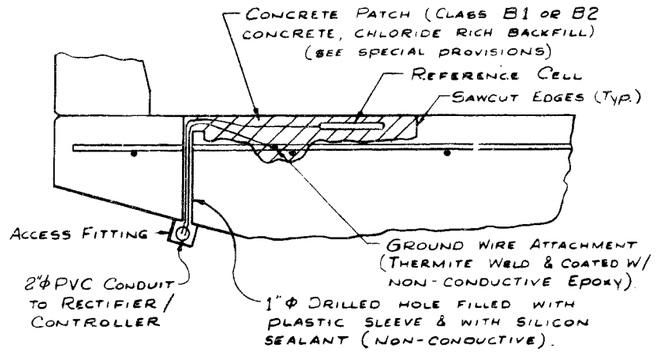
JACKSON COUNTY

A-1240R

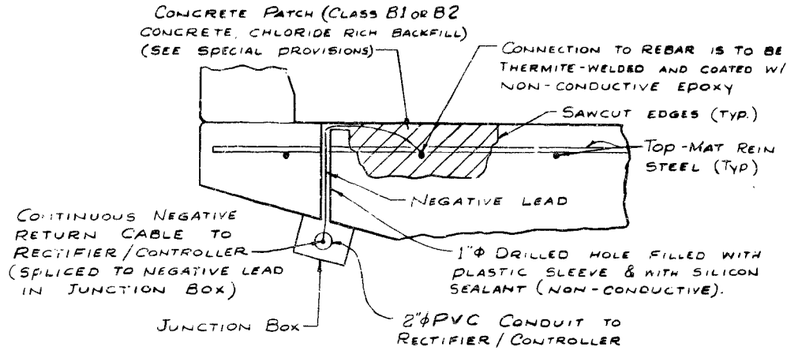
325

STATE	PROJ NO	SHEET NO
MO		31

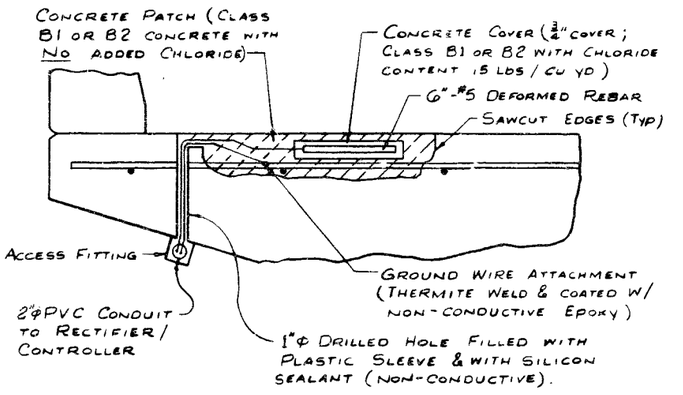
NOTE: THE REFERENCE CELL SHALL BE PLACED IN THE EXCAVATED AREA WITHIN 1" BUT NOT IN DIRECT CONTACT OF TOP-MAT REINFORCING STEEL.



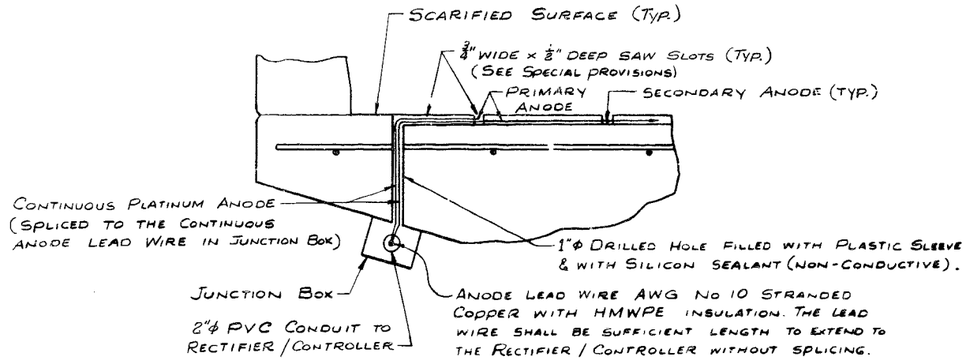
REFERENCE CELL DETAILS



SYSTEM NEGATIVES CONNECTION DETAIL

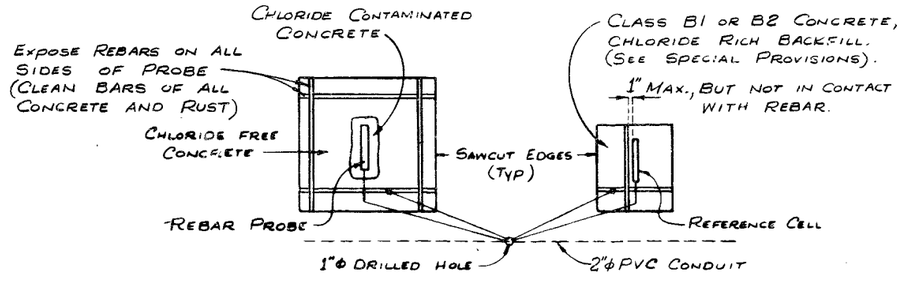


REBAR PROBE DETAILS



PRIMARY ANODE TO ANODE LEAD WIRE DETAIL

NOTE: ALL CONCRETE REMOVAL SHALL BE INITIATED BY SAW CUTTING THE FIRST ½"



PLAN OF REBAR PROBE AND REFERENCE CELL

Notes: 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 at abt. 5'-0" cts.
Weepholes 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.
The junction boxes shall be PVC molded, surface mounted, size 6"x 6"x 4". They shall be equal to "Carlon" Electrical Construction Products or "Triangle" Conduit & Cable Co. Inc. The conduit terminations and cover shall be of water tight construction.

3216

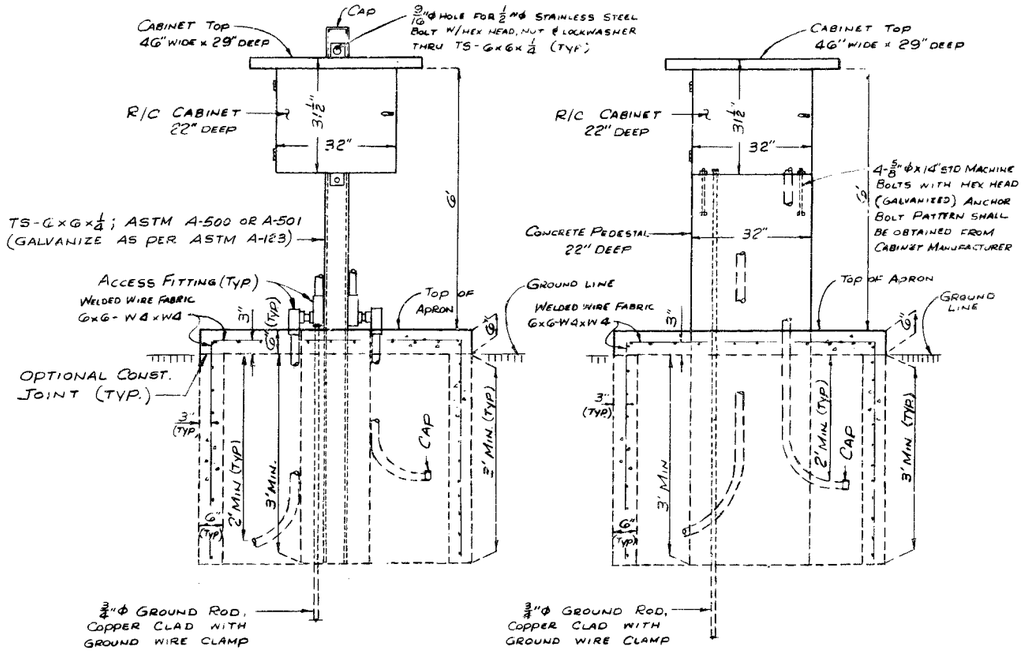
DETAILED DEC. 1984
CHECKED DEC. 1984

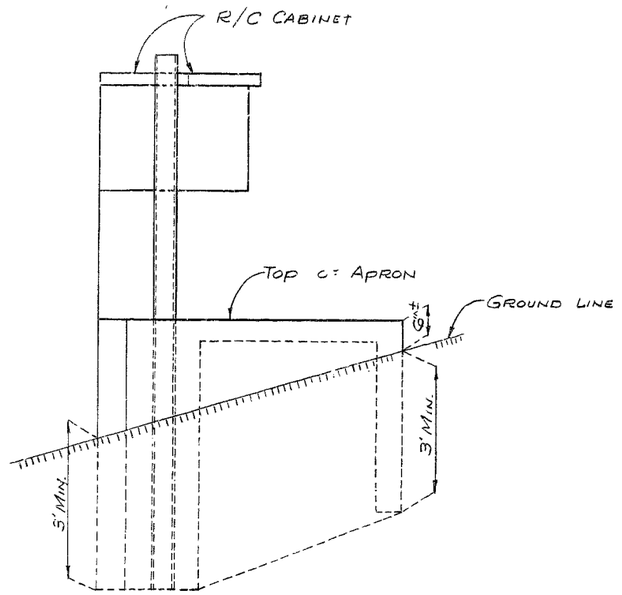
Note: This drawing is not to scale. Follow dimensions.

JACKSON COUNTY

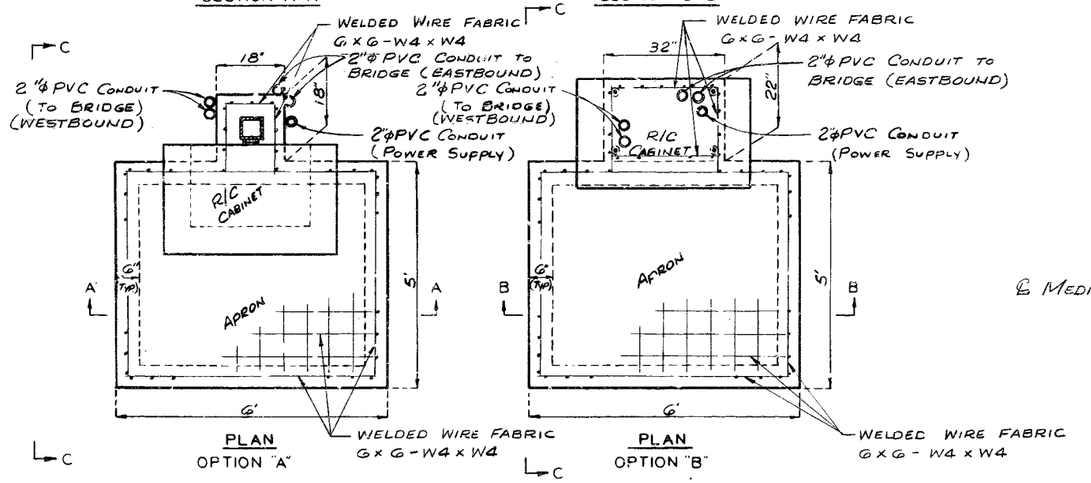
A-1240R

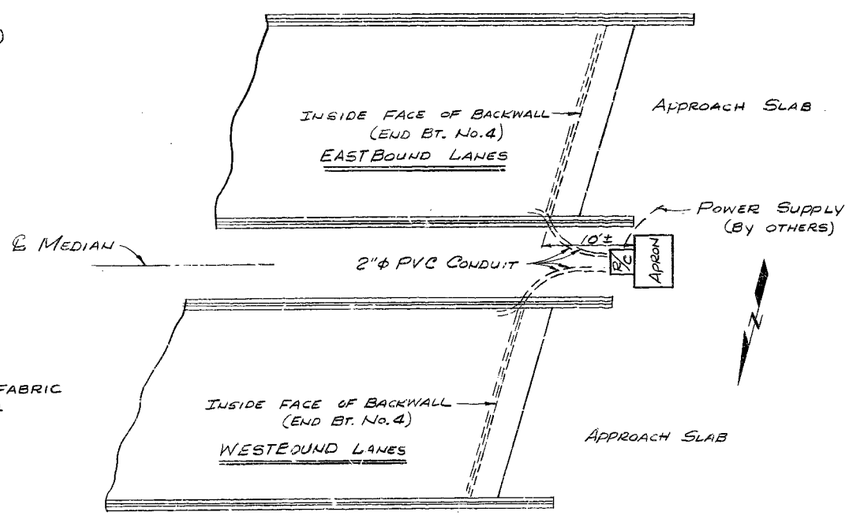
STATE	PROJ NO	SHEET NO
MO		32





ELEVATION C-C





PLAN LOCATION OF RECTIFIER/CONTROLLER

Note: The 3/4"Ø ground rods shall be sufficient length to extend a minimum of 10'-0" 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.

321

DETAILED DEC. 1984
CHECKED DEC. 1984

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

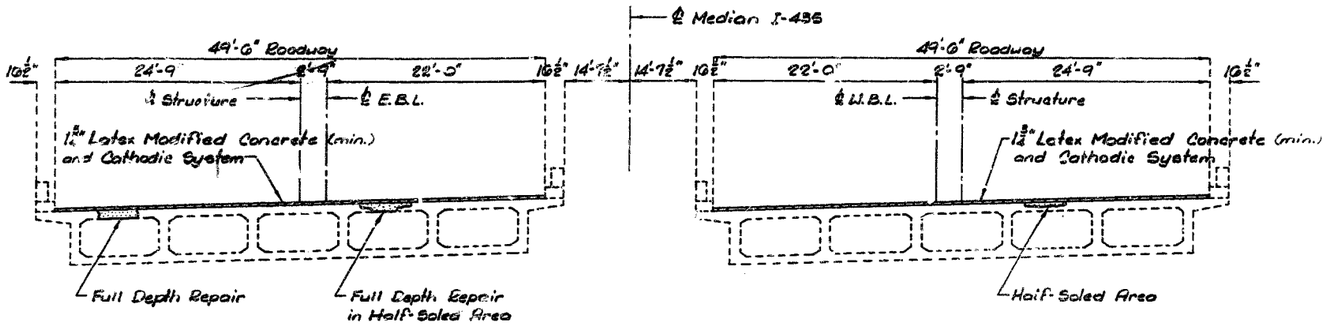
JACKSON **COUNTY**

A-1240R

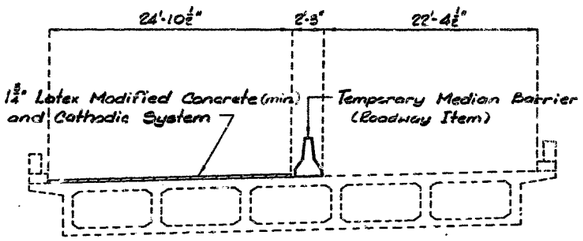
FINAL PLANS

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

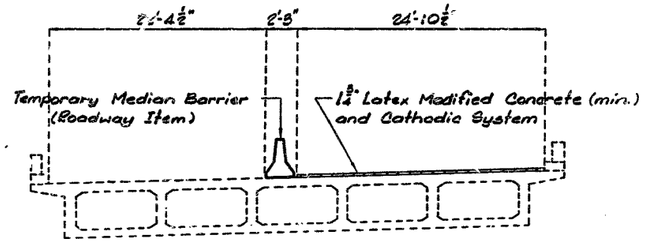
STATE	PROJ NO	SHEET NO
MO		1A
SEC/SUR 31	TWP 48N	RGE 33W



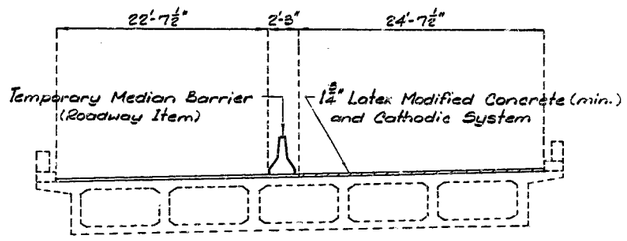
SECTION THRU SLAB



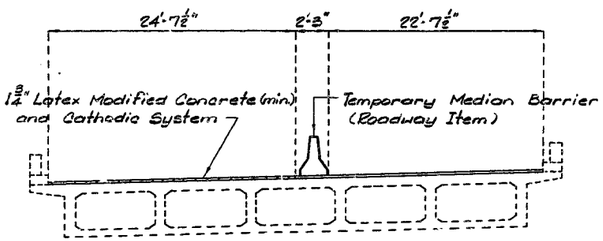
PHASE 1 - E.B.L.



PHASE 3 - W.B.L.



PHASE 2 - E.B.L.



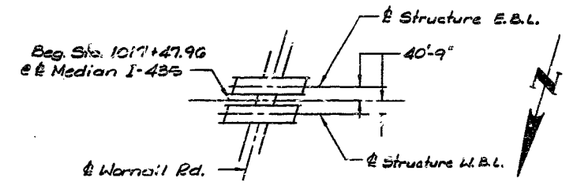
PHASE 4 - W.B.L.

GENERAL NOTES:

Design Specifications: A.A.S.H.T.O. - 1977 and Interims through 1981.

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

Traffic over structure was maintained during construction.



LOCATION SKETCH

ESTIMATED QUANTITIES		
ITEM		TOTAL
Repairing Concrete Leak (Half-Soling)	Sq. Ft.	158
Full Depth Repair	Sq. Ft.	0
Latex Concrete Wearing Surface	Sq. Yd.	6,274
Cathodic Protection System	Lump Sum	1

REPAIRS TO:

BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435

IN KANSAS CITY

PROJECT NO. I-IR-IR6-435-1(149) STA: 1017+47.96

JOB NO. 4-1435-442B RTE. I-435

JACKSON COUNTY

DATE Jan. 15, 1985

DESIGNED OCT., 1984
DETAILED OCT., 1984
CHECKED OCT., 1984

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

Sheet No. 1A of 5

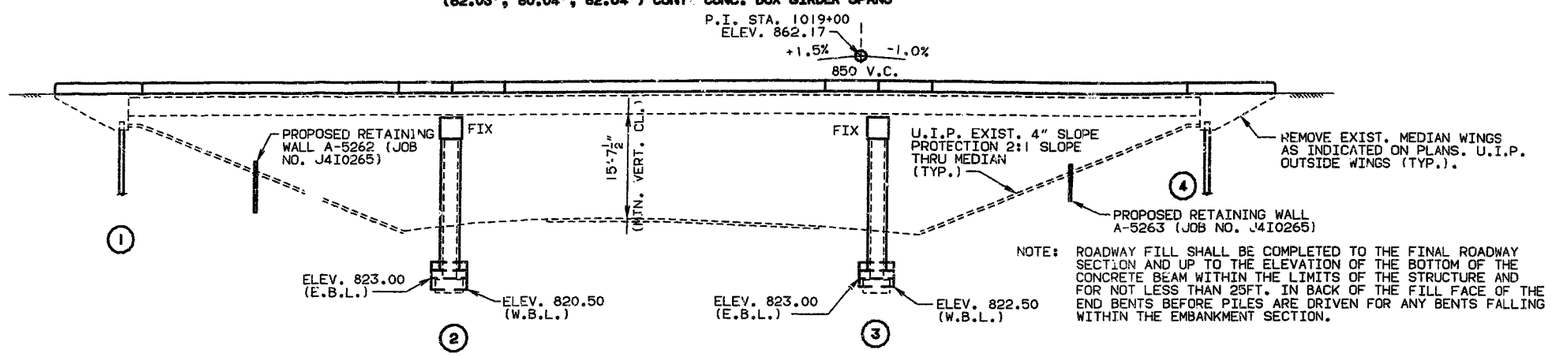
STD.
STD.
A-1240R

30

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ. NO.	SHEET NO.
MO.	F.A.I.-435-1(254)	13
SEC. 31,32	TWP. 48N RGE. 33W	

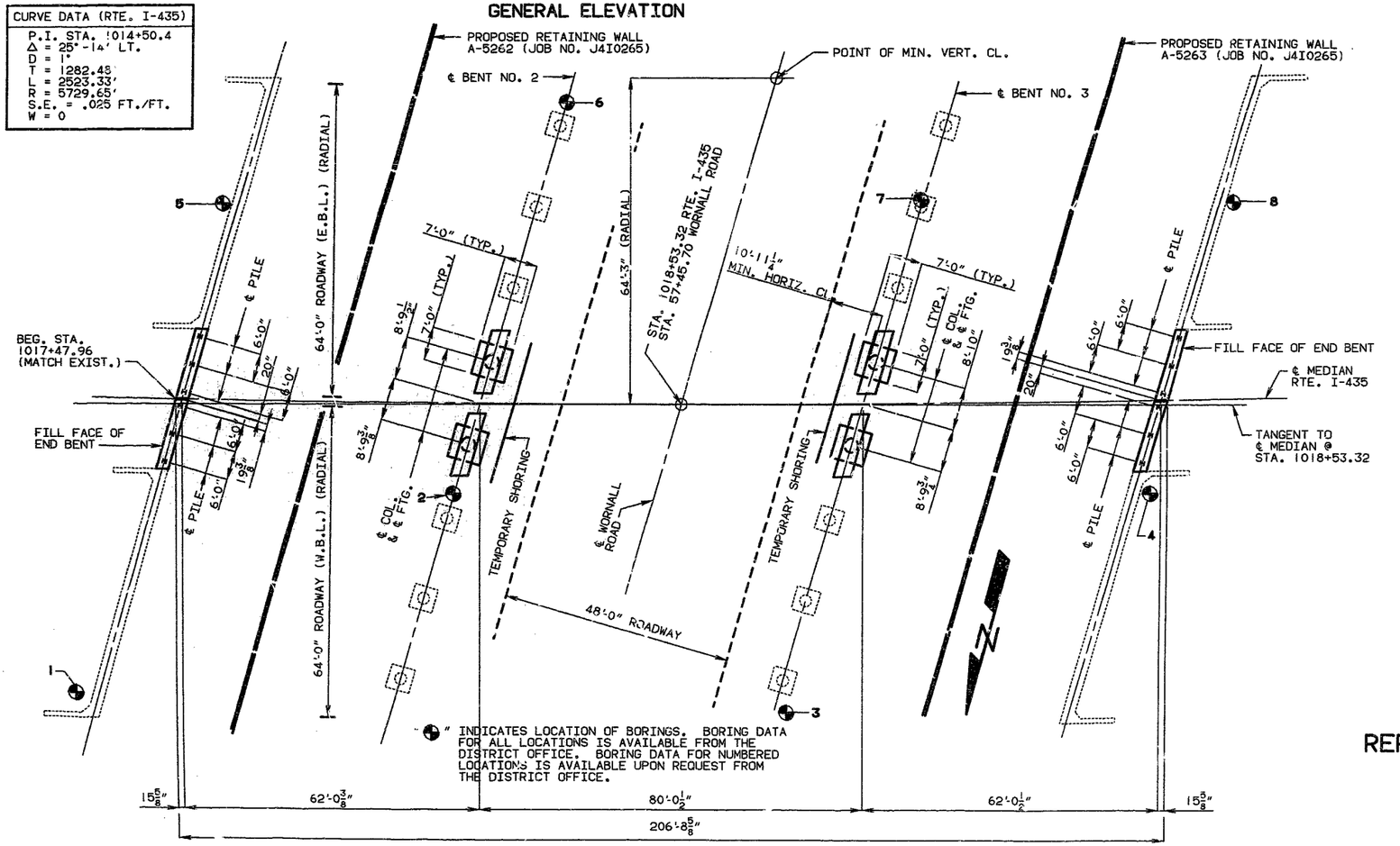
WIDEN MEDIAN RT. AND LT. - U.I.P. EXISTING TWIN (62.03', 80.04', 62.04') CONT. CONC. BOX GIRDER SPANS



NOTE: ROADWAY FILL SHALL BE COMPLETED TO THE FINAL ROADWAY SECTION AND UP TO THE ELEVATION OF THE BOTTOM OF THE CONCRETE BEAM WITHIN THE LIMITS OF THE STRUCTURE AND FOR NOT LESS THAN 25FT. IN BACK OF THE FILL FACE OF THE END BENTS BEFORE PILES ARE DRIVEN FOR ANY BENTS FALLING WITHIN THE EMBANKMENT SECTION.

CURVE DATA (RTE. I-435)
P.I. STA. 1014+50.4
Δ = 25°-14' LT.
D = 1°
T = 1282.48
L = 2523.33'
R = 5729.65'
S.E. = .025 FT./FT.
W = 0

GENERAL ELEVATION



" INDICATES LOCATION OF BORINGS. BORING DATA FOR ALL LOCATIONS IS AVAILABLE FROM THE DISTRICT OFFICE. BORING DATA FOR NUMBERED LOCATIONS IS AVAILABLE UPON REQUEST FROM THE DISTRICT OFFICE.

PLAN

DESIGNED SEPT. 1991
DETAILED SEPT. 1991
CHECKED MAY 1992

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

SHEET NO. 1 OF 35.

46-8

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1989 AND INTERIM 1990. LOAD FACTOR DESIGN. A.A.S.H.T.O.-1983 GUIDE SPECIFICATIONS FOR SEISMIC DESIGN. PERFORMANCE CATEGORY A.

DESIGN LOADING:

HS20-44 35# FUTURE WEARING SURFACE
MODIFIED 24,000# TANDEM AXLE
EARTH 120#/CU. FT., EQUIVALENT FLUID PRESSURE 45#/CU. FT.

SUPERSTRUCTURE: SIMPLY-SUPPORTED, NON-COMPOSITE FOR DEAD LOAD. CONTINUOUS COMPOSITE FOR LIVE LOAD.

DESIGN UNIT STRESSES:

CLASS B CONCRETE (SUBSTRUCTURE) F'C=3,000 PSI

CLASS B2 CONCRETE (SUPERSTRUCTURE, EXCEPT PRESTRESSED GDRS. AND SAFETY BARRIER CURB) F'C=4,000 PSI

CLASS B1 CONCRETE (SAFETY BARRIER CURB) F'C=4,000 PSI

REINFORCING STEEL (GRADE 60) FY=60,000 PSI

STEEL PILE FB=9,000 PSI

FOR PRESTRESSED GIRDER STRESSES, SEE SHT. NOS. 11, 12 AND 13.

NEOPRENE BEARING PADS: BEARINGS SHALL BE 60 DUROMETER NEOPRENE PADS. THE NEOPRENE PAD SHALL BE BONDED TO THE BEARING SEAT WITH AN EPOXY ADHESIVE AS APPROVED BY THE BEARING MANUFACTURER FOR BONDING NEOPRENE TO CONCRETE.

JOINT FILLER: ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1057.2.4, EXCEPT AS NOTED.

REINFORCING STEEL: MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2", UNLESS OTHERWISE SHOWN.

BARS BONDED IN OLD CONCRETE NOT REMOVED SHALL BE CLEANLY STRIPPED AND EMBEDDED INTO NEW CONCRETE WHERE POSSIBLE. IF LENGTH IS AVAILABLE, OLD BARS SHALL EXTEND INTO NEW CONCRETE AT LEAST 30 DIAMETERS FOR DEFORMED BARS, UNLESS OTHERWISE NOTED.

CONSTRUCTION CLEARANCE: A MINIMUM VERTICAL CLEARANCE OF 14'-9" FROM CROWN OF EXISTING LANES AND A MINIMUM LATERAL CLEARANCE OF 28'-0" CENTERED ON EXISTING LANES SHALL BE MAINTAINED DURING CONSTRUCTION.

TRAFFIC MAINTAINED: TRAFFIC OVER STRUCTURE TO BE MAINTAINED DURING CONSTRUCTION. (SEE ROADWAY PLANS)

EXISTING STRUCTURE: OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY LINES INDICATE NEW WORK.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW MATERIALS.

RESIN ANCHOR SYSTEMS: THE CONTRACTOR SHALL USE ONE OF THE RESIN ANCHOR SYSTEMS LISTED IN THE SPECIAL PROVISIONS. THESE ANCHOR SYSTEMS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS EXCEPT AS MODIFIED BY THE JOB SPECIAL PROVISIONS AND THAT A PLAIN, #5, GRADE 60 REINFORCING BAR 2'-3" LONG SHALL BE SUBSTITUTED FOR THE THREADED ROD STUD.

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.

COST OF FURNISHING AND INSTALLING THE ANCHOR SYSTEM COMPLETE IN PLACE SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF SAFETY BARRIER CURB.

ALL BENTS ARE PARALLEL.

ROADWAY SURFACING ADJACENT TO BRIDGE ENDS TO MATCH BRIDGE OVERLAY (ROADWAY ITEM).

B.M. ELEV.859.61 A-1240 P.K. NAIL IN END N. WING BT. #1 LT. LANE (E.B.L.) I-435 @ STA. 1017+55± & 15' ± LT/O ℄ MED.

REPAIRS TO: BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. F.A.I-435-1(254) STA. 1017+47.96
JOB NO. J4I00807B RTE. I-435

JACKSON COUNTY

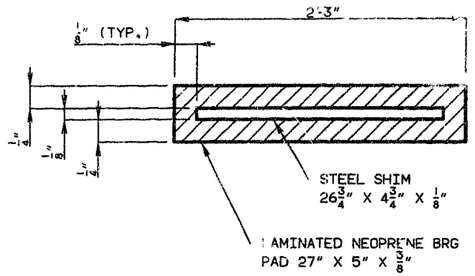
DATE: 8/10/92

STD. 611.60
STD. 617.00
STD. 706.35
A-1240R1

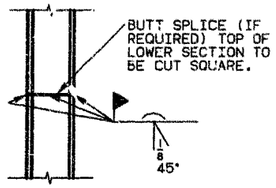
SEE FINAL PLANS

STATE	PROJ. NO.	SHEET NO.
MO.		14

NOTE: THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYERS OF ELASTOMER AND MOLDED TOGETHER TO FORM AN INTERGRAL UNIT.



DETAILS OF LAMINATED NEOPRENE BEARING PAD



DETAIL OF STEEL PILE SPLICE

ESTIMATED QUANTITIES

	ITEM		SUBSTR.	SUPERSTR	TOTAL
	CURB REMOVAL (BRIDGES)	LIN. FT.		899	899
	PARTIAL REMOVAL OF SUBSTR. CONCRETE	LUMP SUM			1
	PARTIAL REMOVAL OF EXIST. BRIDGE DECK	SQ. FT.		414	414
	CLASS I EXCAVATION	CU. YD.	250		250
	TEMPORARY SHORING	LUMP SUM			1
	STRUCTURAL STEEL PILES (10")	LIN. FT.	372		372
	CLASS B CONCRETE (SUBSTR.)	CU. YD.	94.2		94.2
	CLASS B2 CONC. (SUPSTR.) CONC. ON BOX GDR.	CU. YD.		191.8	191.8
	SAFETY BARRIER CURB	LIN. FT.		414	414
*	16-1'2" SAFETY BARRIER CURB	LIN. FT.		450	450
	PLAIN NEOPRENE BEARING PADS	EACH		16	16
	LAMINATED NEOPRENE BEARING PADS	EACH		32	32
	SLAB EDGE REPAIR (BRIDGES)	LIN. FT.		30	30
	SUPERSTRUCTURE REPAIR (UNFORMED)	SQ. FT.		30	30
	LATEX CONC. WEARING SURFACE	SQ. YD.		666	666
	P/S CONC. BOX GDR. (62' SPAN)	EACH		16	16
	P/S CONC. BOX GDR. (80' SPAN)	EACH		6	8
	REINFORCING STEEL (BRIDGES)	POUND	11,980	37,740	49,720
	CATHODIC PROTECTION SYSTEM	LUMP SUM			1
	SLAB DRAINS	EACH		10	10
	FABRICATED SIGN SUPPORT BRACKETS (STEEL)	LUMP SUM			1

NOTE: ALL CONCRETE ABOVE THE CONSTRUCTION JOINT IN END BENTS IS INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

ALL REINFORCEMENT IN THE END BENTS IS INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

THE COST OF FURNISHING, FABRICATING AND INSTALLING NEOPRENE BEARING PADS, COMPLETE-IN-PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR PLAIN AND LAMINATED NEOPRENE BEARING PADS PER EACH.

* SAFETY BARRIER CURB SHALL BE CAST-IN-PLACE OR SLIP-FORM OPTION.

COST OF FURNISHING AND INSTALLING RESIN ANCHOR SYSTEMS, COMPLETE IN PLACE, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE.

PILE AND FOOTING DATA

BENT NUMBER		1 EBL	1 WBL	2 EBL	2 WBL	3 EBL	3 WBL	4 EBL	4 WBL
BEARING PILE	PILE TYPE AND SIZE	HP10X42	HP10X42					HP10X42	HP10X42
	NUMBER	3	3					3	3
	APPROXIMATE LENGTH (FT.)	31	31					31	31
	DESIGN BEARING (TONS)	49	49					49	49
	HAMMER ENERGY REQ'D. (FT/LBS)	11,000	11,000					11,000	11,000
SPREAD FOOTINGS	FOUNDATION MATERIAL			ROCK	ROCK	ROCK	ROCK		
	DESIGN BEARING TONS/SQ. FT.			10.6	10.6	10.6	10.6		

NOTE: MINIMUM ENERGY REQUIREMENT OF HAMMER BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES. ALL PILE SHALL BE DRIVEN TO PRACTICAL REFUSAL.

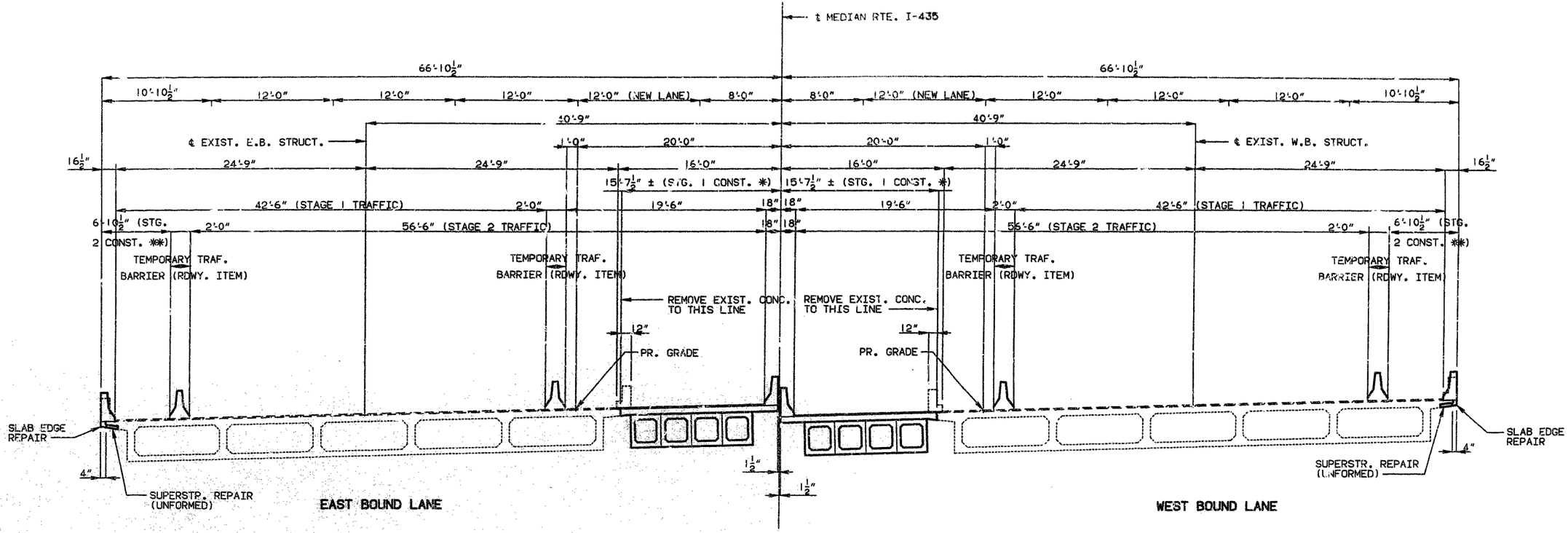
DETAILED SEPT. 1991
CHECKED MAY 1992

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

JACKSON COUNTY A-1240R1

SEE FINAL PLANS

STATE	PROJ. NO.	SHEET NO.
MO.		15



STAGE CONSTRUCTION SEQUENCE

(NOTE: ALL DIMENSIONS ARE RADIAL AND HORIZONTAL)

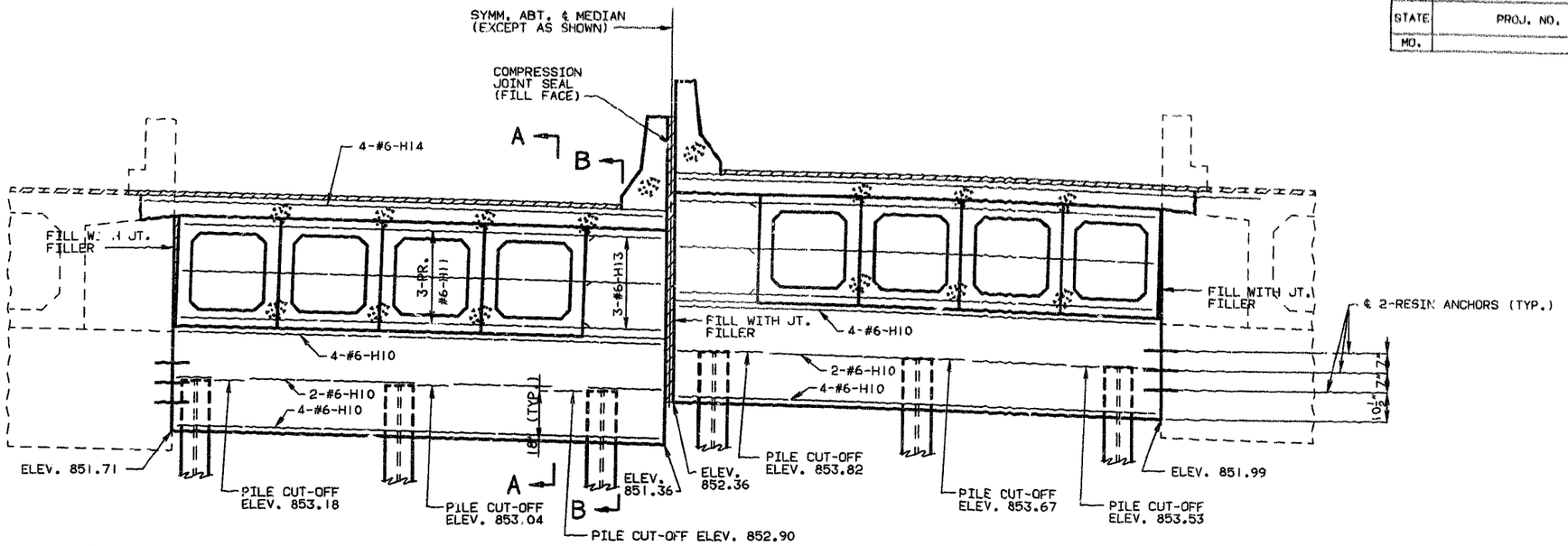
NOTE:

* INSTALL A CATHODIC PROTECTION SYSTEM WITH 1¾" LATEX MODIFIED CONCRETE ON NEW SLAB, ROUGHEN NEW SLAB BEFORE APPLYING 1¾" OVERLAY.

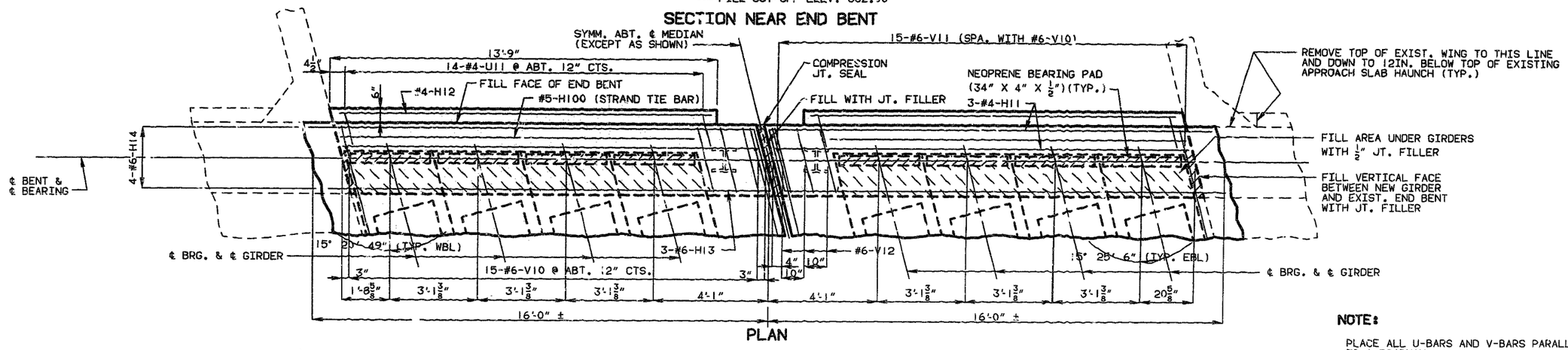
** REMOVE CURB AND PARAPET AND REPLACE WITH 16½" SAFETY BARRIER CURB.

48 10

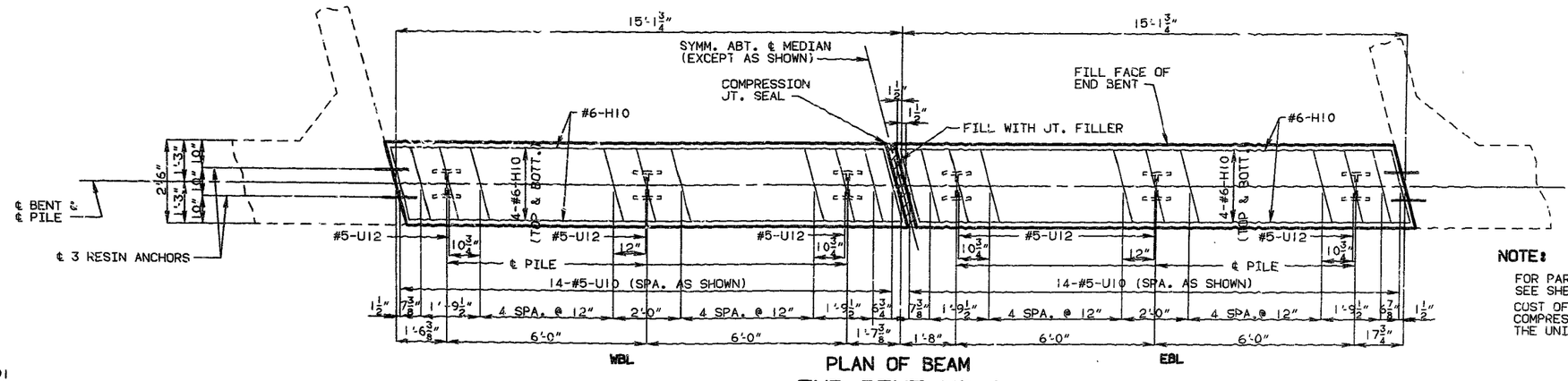
STATE	PROJ. NO.	NO.
MO.		16



SECTION NEAR END BENT



PLAN



PLAN OF BEAM

END BENT NO. 1

NOTE:

PLACE ALL U-BARS AND V-BARS PARALLEL TO ℄ ROADWAY.

FOR SECTION A-A AND SECTION B-B SEE SHEET NO. 5.

ALL CONCRETE IN THE END BENT ABOVE TOP OF BEAM AND BELOW TOP OF SLAB SHALL BE CLASS B2.

STRANDS AT END OF GIRDER SHALL BE FIELD BENT OR, IF NECESSARY, CUT IN FIELD TO MAINTAIN 1-1/2" MINIMUM CLEARANCE TO FILL FACE OF END BENT.

FOR DETAIL OF STEEL PILE SPLICE, SEE SHEET NO. 3.

NOTE:

FOR PART CROSS SECTION THRU COMP. JOINT SEAL SEE SHEET NO 5.

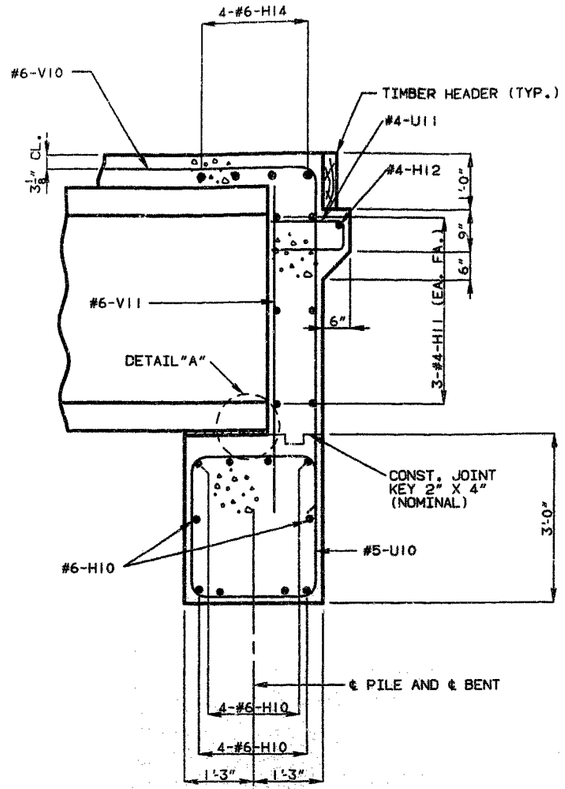
COST OF FURNISHING AND INSTALLING PREFORMED COMPRESSION JOINT SEAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

DETAILED SEPT. 1991
CHECKED MAY 1992

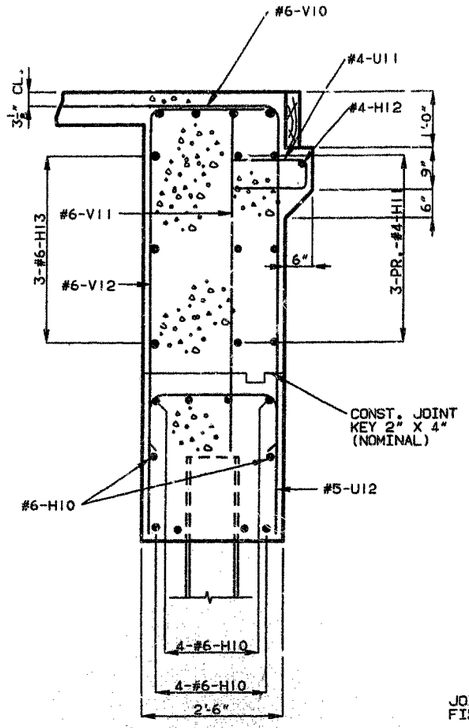
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1240R1

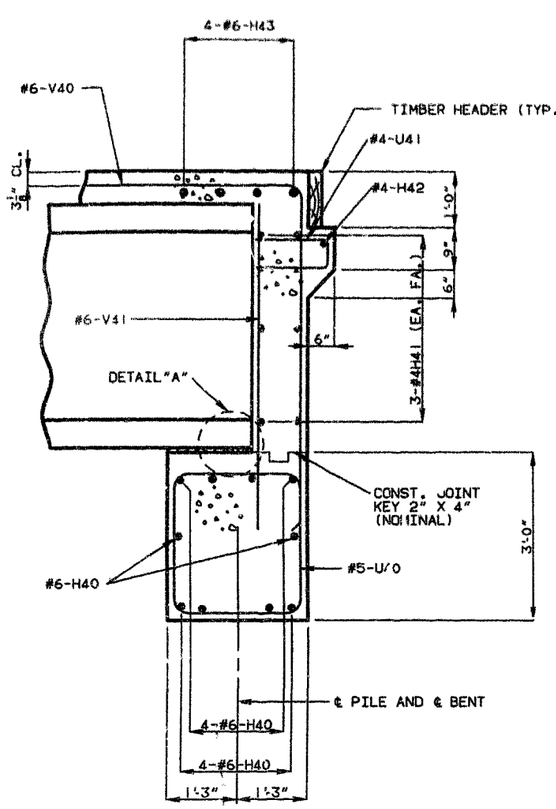
STATE	PROJ. NO.	SHEET NO.
MO.		17



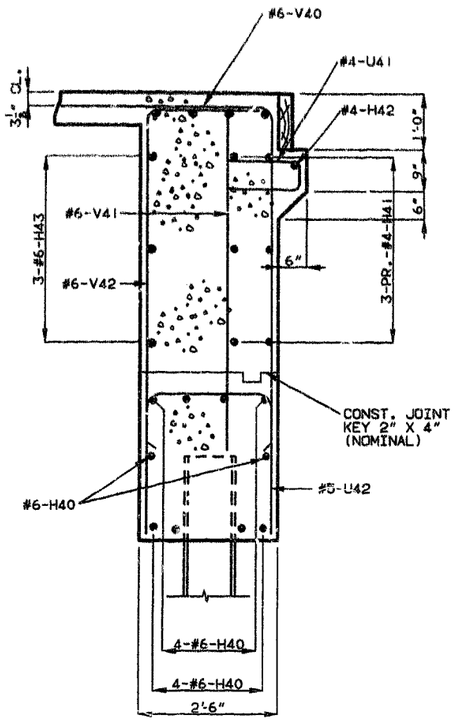
SECTION A-A



SECTION B-B



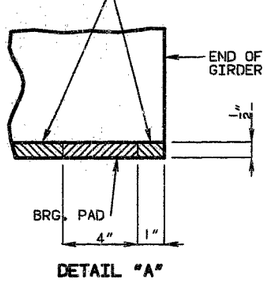
SECTION C-C



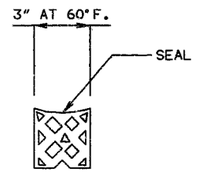
SECTION D-D

SECTIONS AT END BENT NO. 1

* SUBSTRUCTURE QUANTITY TABLE FOR END BENT NO. 1		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	15
STRUCTURAL STEEL PILE (10IN.)	LIN. FT.	186
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	8.3



DETAIL "A"



PART CROSS SECTION
THRU COMP. JOINT SEAL

NOTE: DEPTH OF SEAL SHALL NOT BE LESS THAN WIDTH OF SEAL.

SECTIONS AT END BENT NO. 4

* SUBSTRUCTURE QUANTITY TABLE FOR END BENT NO. 4		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	15
STRUCTURAL STEEL PILE (10IN.)	LIN. FT.	186
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	8.4

NOTE:
FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 4.
FOR LOCATION OF SECTION C-C AND D-D SEE SHEET NO. 10.
FOR DETAILS OF TIMBER HEADER SEE SHEET NO. 24.
FOR DETAIL OF STEEL PILE SPLICE, SEE SHEET NO. 2.
* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.

SQ 12

DETAILED SEPT. 1991
CHECKED MAY 1992

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

JACKSON COUNTY A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		18

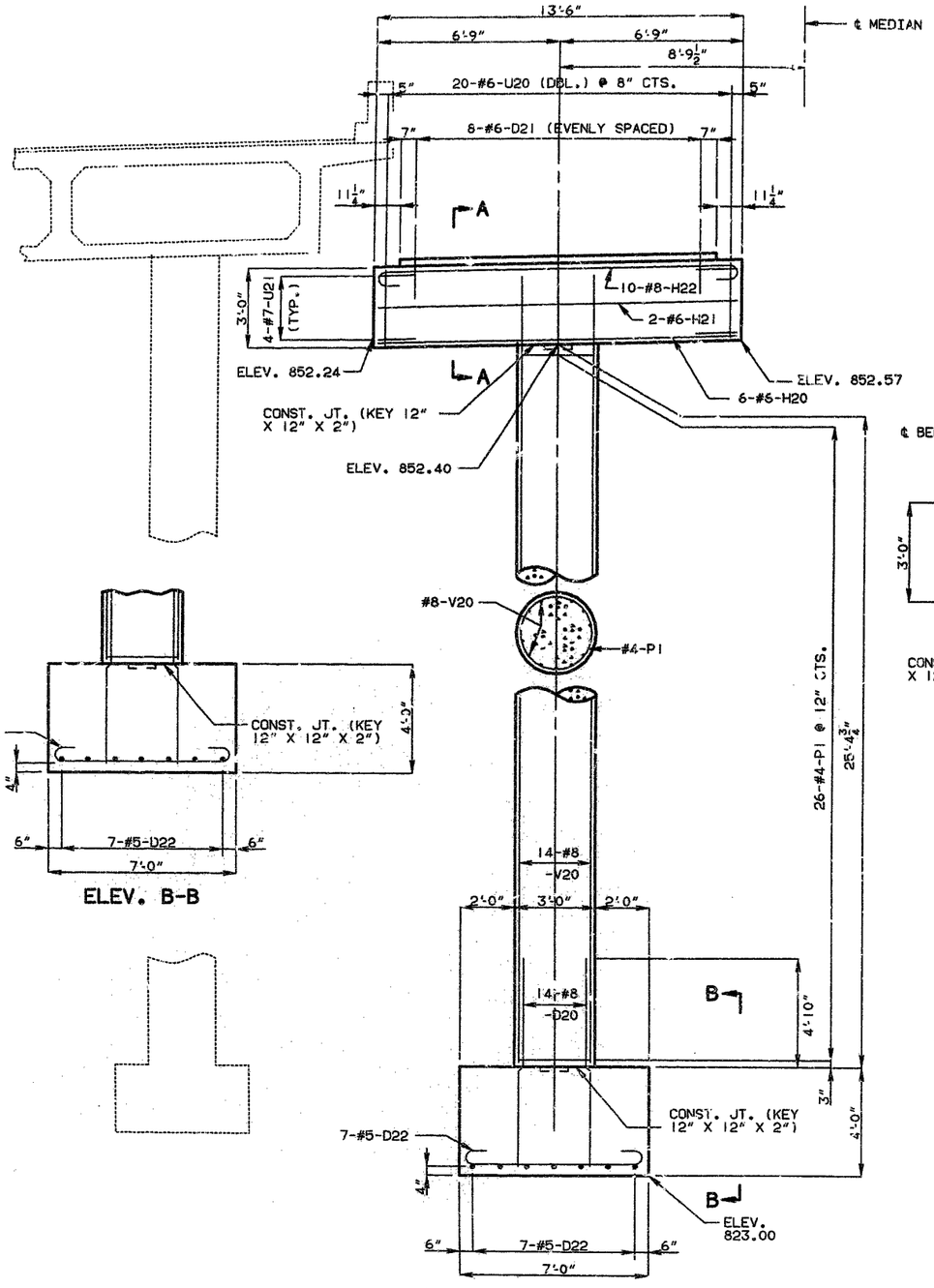
NOTE:

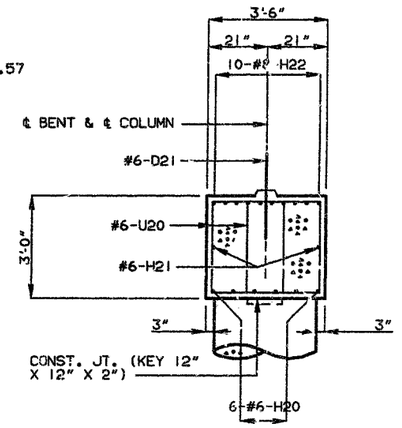
FOR SECTION THRU KEY SEE SHEET NO. 7.
FOR DETAILS OF LAMINATED NEOPRENE BEARING PAD, SEE SHEET NO. 2.

① 1-LAYER OF 50# ROOFING FELT BETWEEN JOINT FILLER.

* SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2 (E.B.L.)		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	55
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	19.2
REINFORCING STEEL	LBS.	2,960

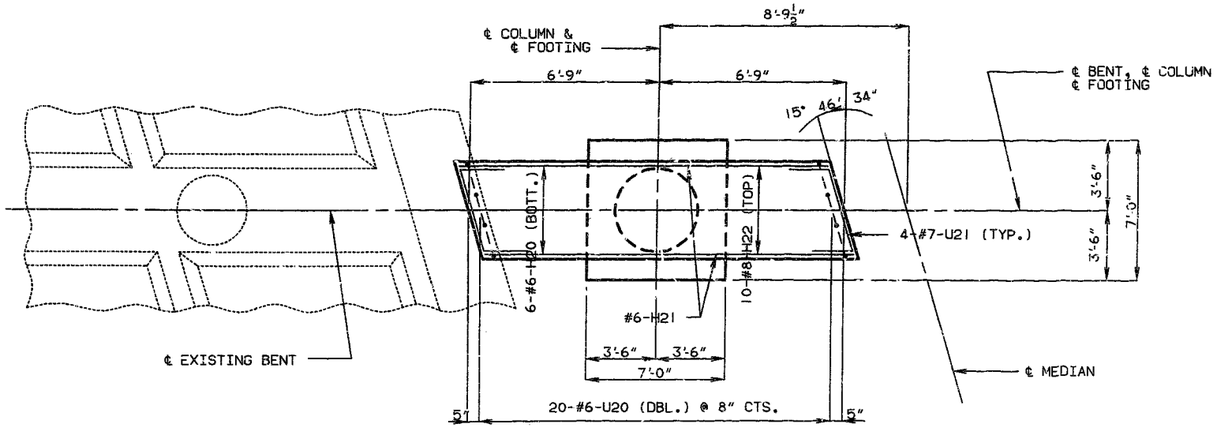
* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.





SECTION A-A

PLAN SHOWING BEARINGS



PLAN SHOWING REINFORCEMENT

INT. BT. 2 E.B.L.

DETAILED SEPT. 1991
CHECKED MAY 1992

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

SEE FINAL PLANS

JACKSON COUNTY A-1240R1

SEE FINAL

STATE	PROJ. NO.	SHEET NO.
MO.		19

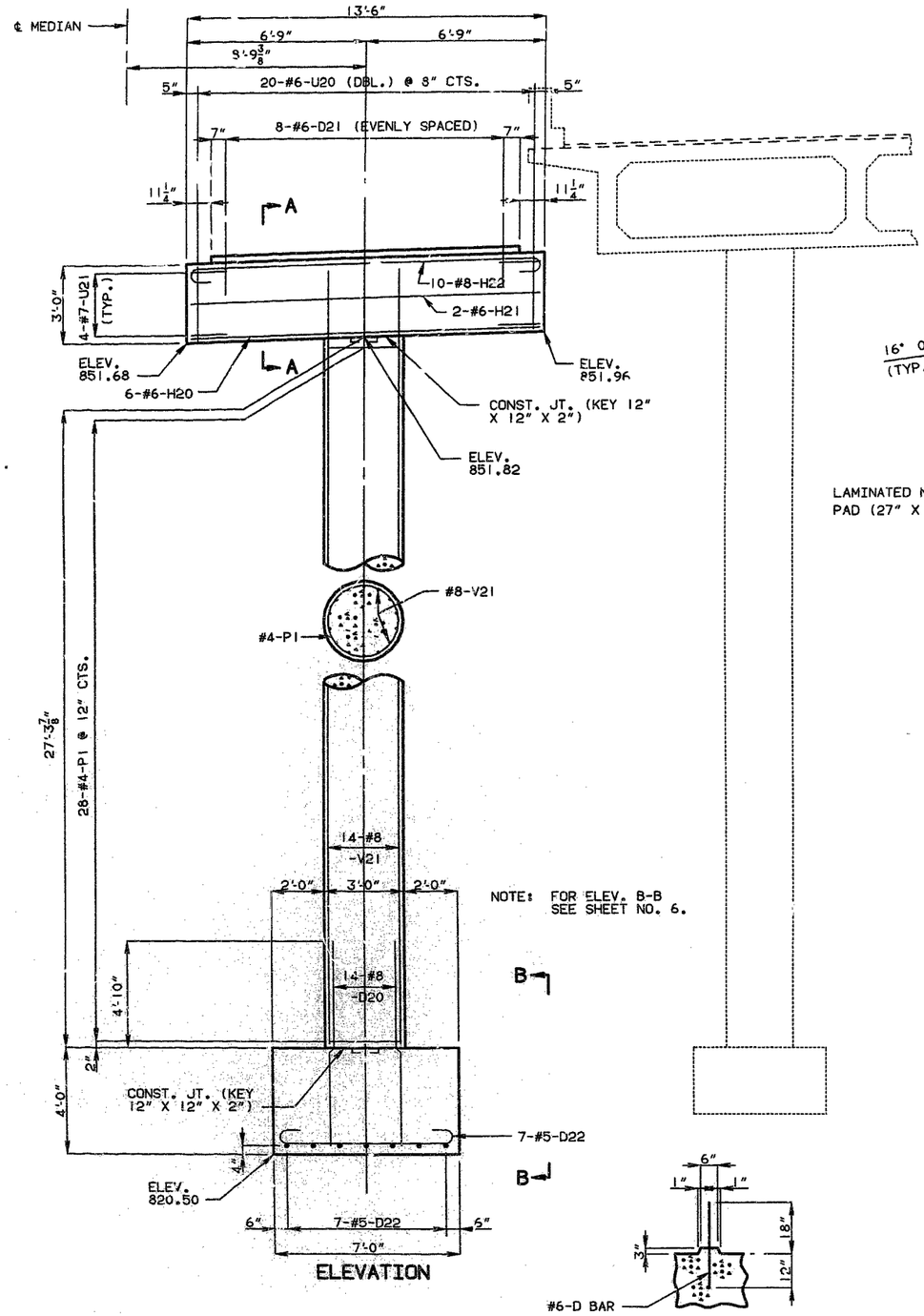
NOTE:

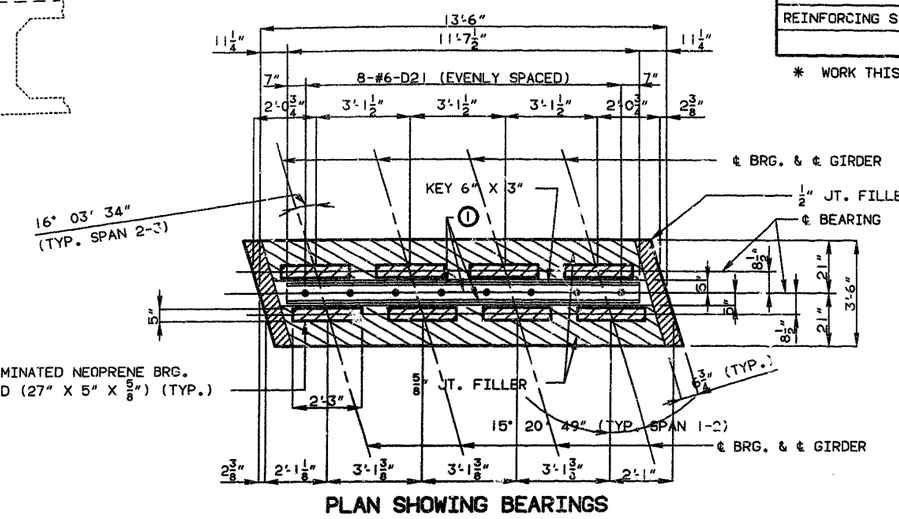
FOR DETAILS OF LAMINATED NEOPRENE BEARING PAD SEE SHEET NO. 2.

① 1-LAYER OF 50# ROOFING FELT BETWEEN JOINT FILLER.

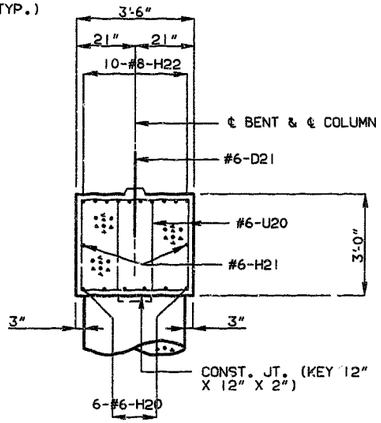
* SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2 (W.B.L.)		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	55
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	19.7
REINFORCING STEEL	LBS.	3,060

* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.

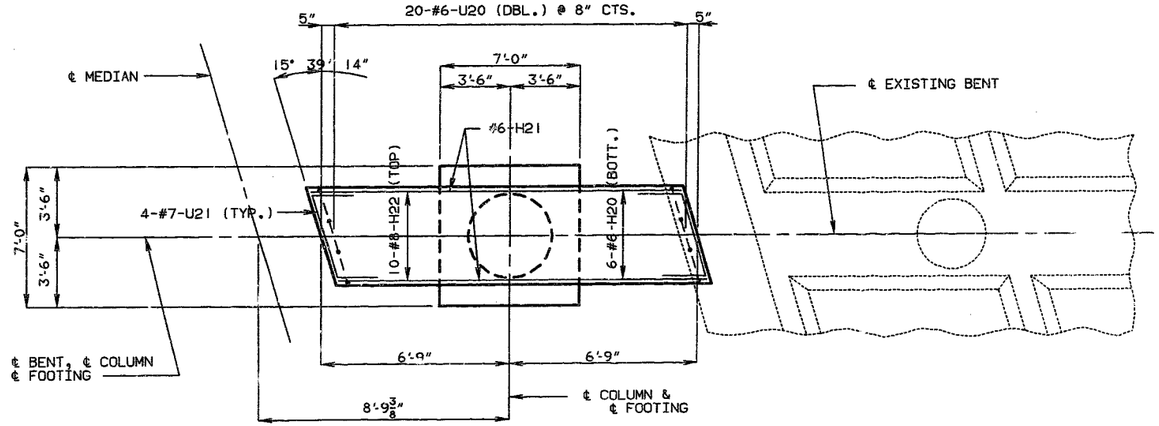




PLAN SHOWING BEARINGS



SECTION A-A



PLAN SHOWING REINFORCEMENT

INT. BT. 2 W.B.L.

DETAILED SEPT. 1991
CHECKED MAY 1992

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

JACKSON COUNTY

SEE FINAL PLANS

STATE	PROJ. NO.	SHEET NO.
MO.		20

NOTE:

FOR DETAILS OF LAMINATED NEOPRENE BEARING PAD SEE SHEET NO. 2.

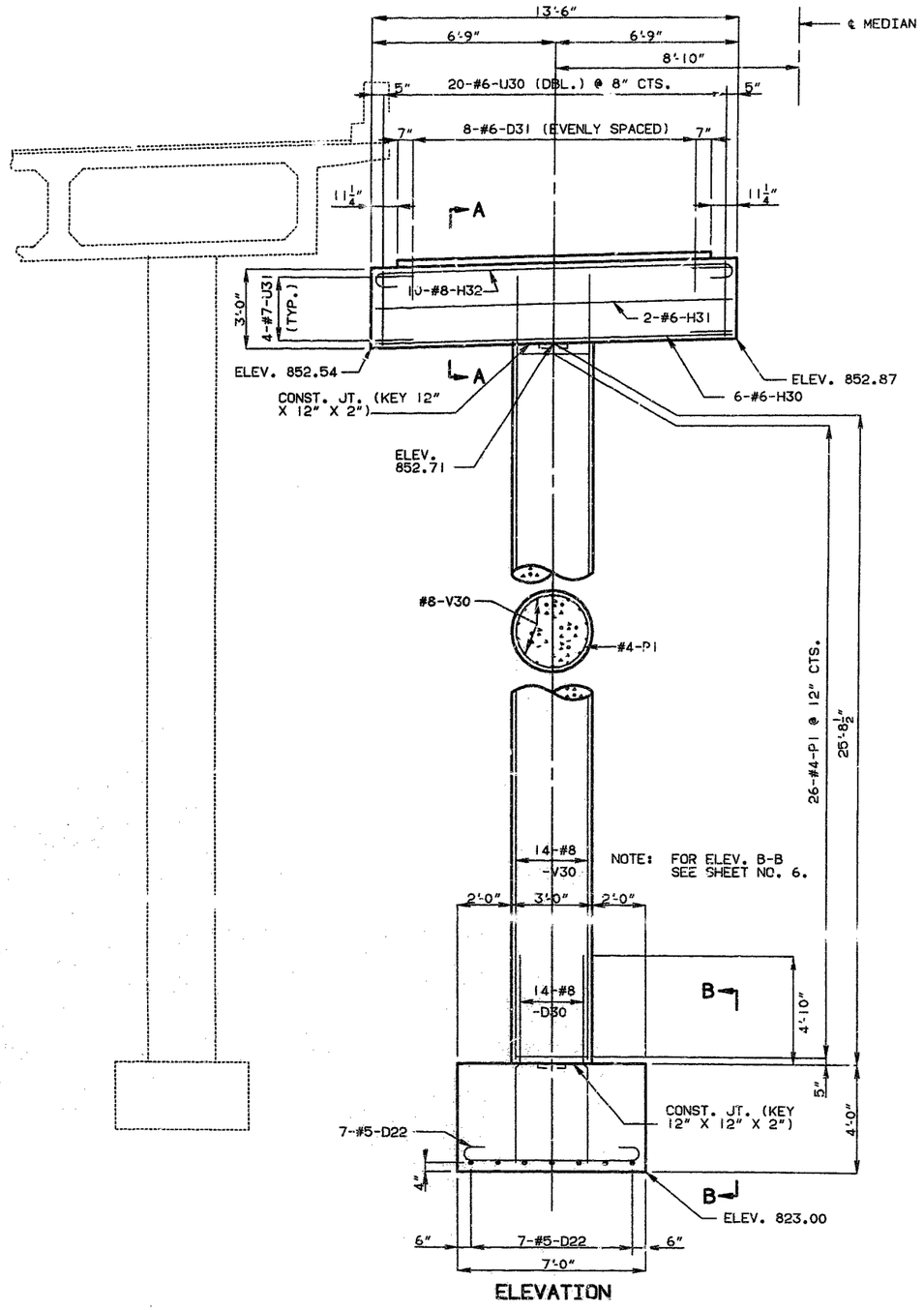
FOR SECTION THRU KEY SEE SHEET NO. 7.

① 1-LAYER OF 50# ROOFING FELT BETWEEN JOINT FILLER.

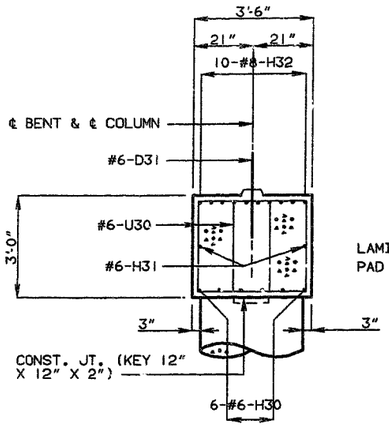
*** SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3 (E.B.L.)**

ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	55
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	19.3
REINFORCING STEEL	LBS.	2,980

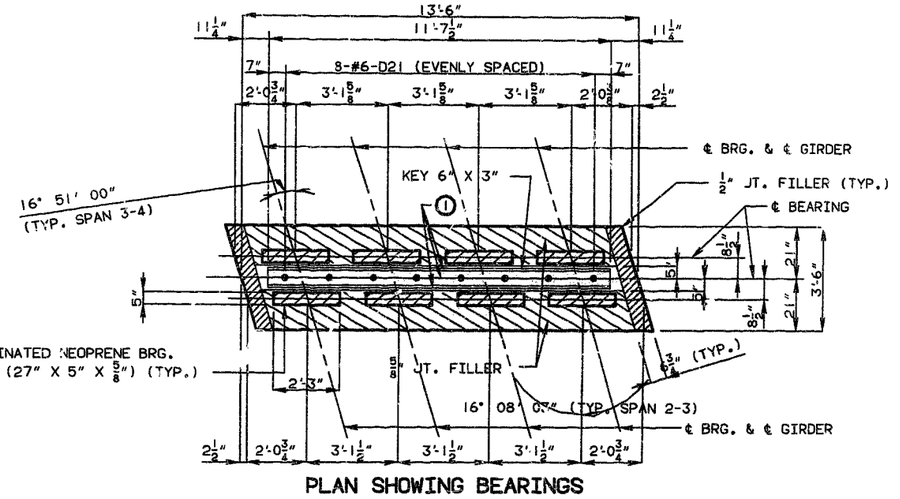
* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.



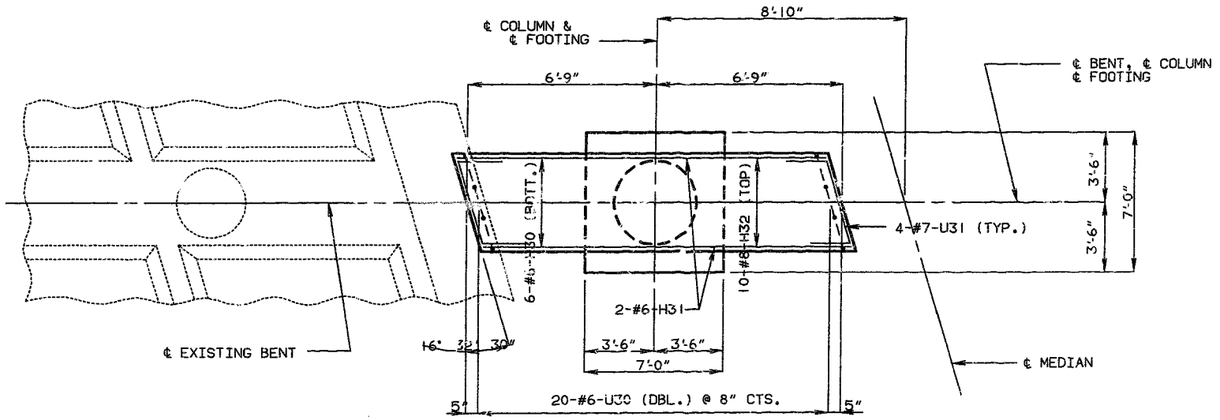
ELEVATION



SECTION A-A



PLAN SHOWING BEARINGS



PLAN SHOWING REINFORCEMENT

INT. BT. 3 E.B.L.

DETAILED SEPT. 1991
CHECKED MAY 1992

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

SHEET NO. 8 OF 35.

JACKSON COUNTY

SEE FINAL PLANS

STATE	PROJ. NO.	SHEET NO.
MO.		21

NOTE:

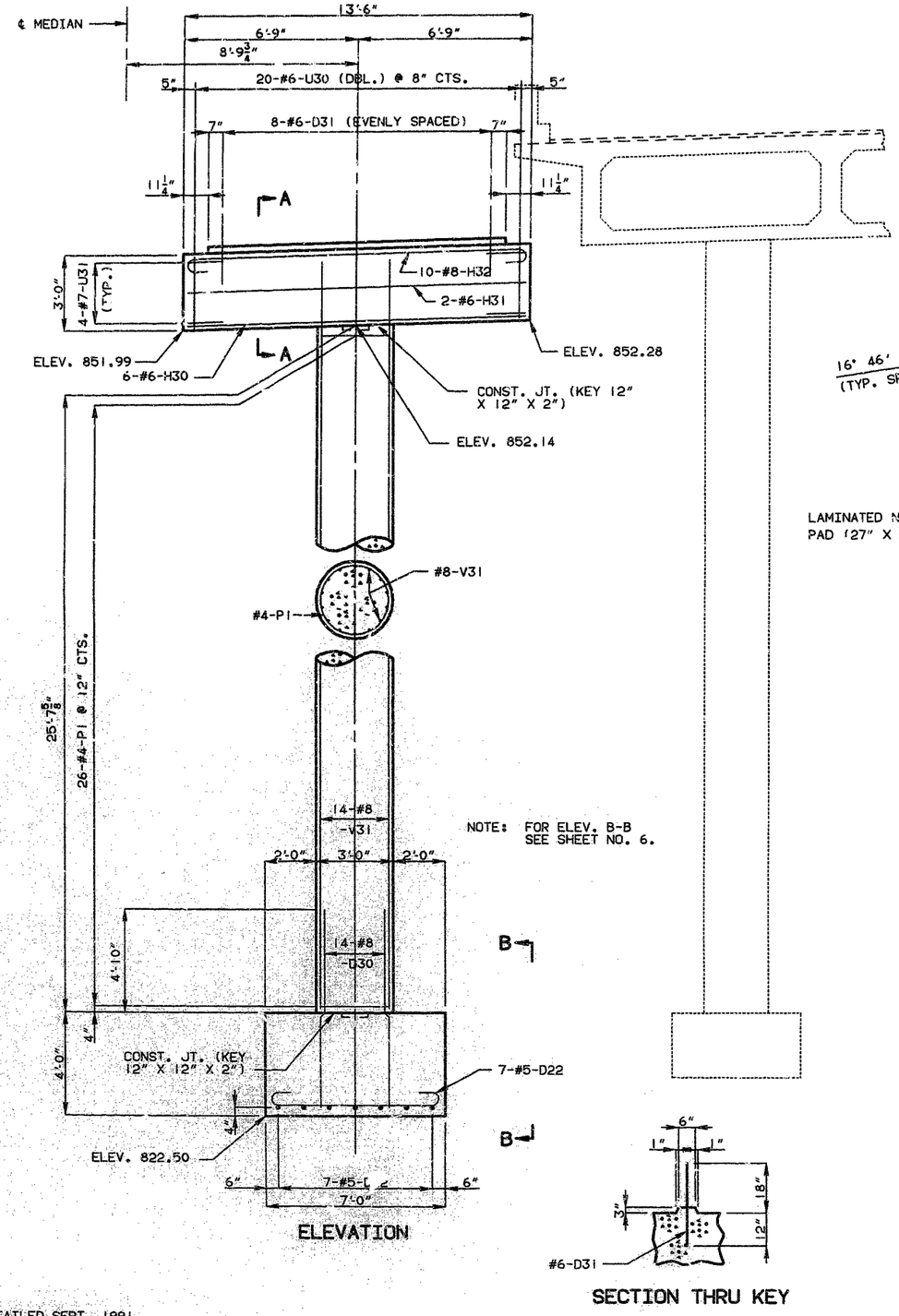
FOR DETAILS OF LAMINATED NEOPRENE BEARING PAD SEE SHEET NO. 2.

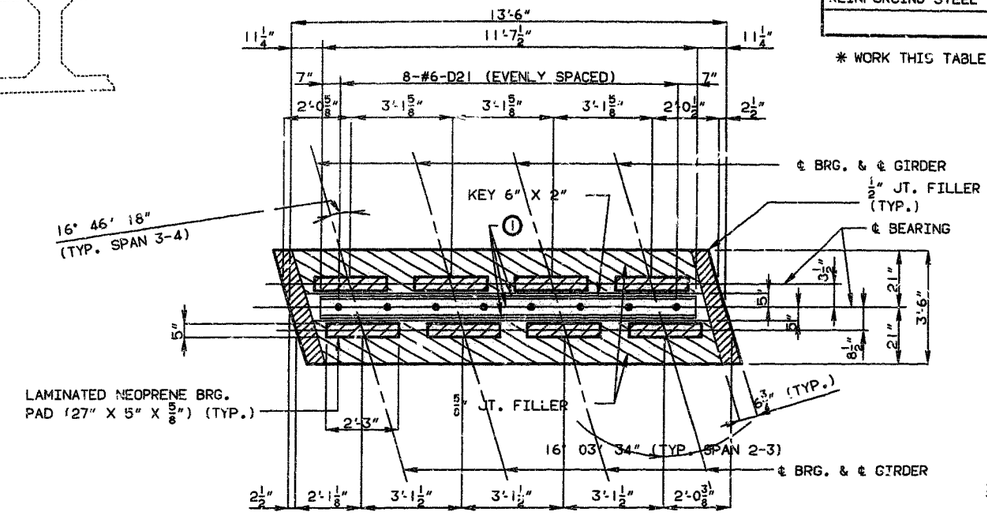
① 1-LAYER OF 50# ROOFING FELT BETWEEN JOINT FILLER.

*** SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3 (W.B.L.)**

ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	55
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	19.3
REINFORCING STEEL	LBS.	2,980

* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.





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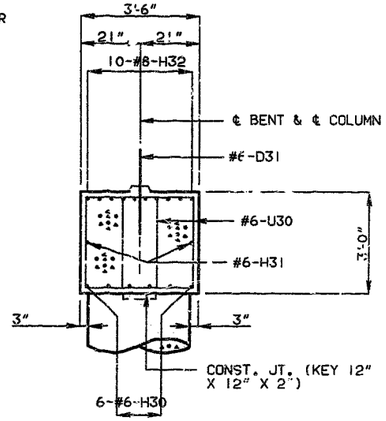
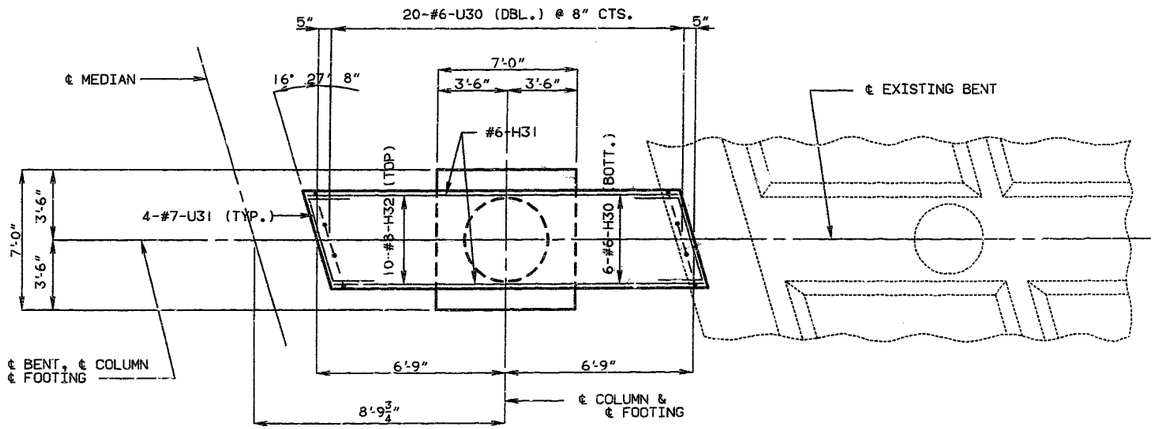


SECTION A-A



PLAN SHOWING REINFORCEMENT

54-15

INT. BT. 3 W.B.L.

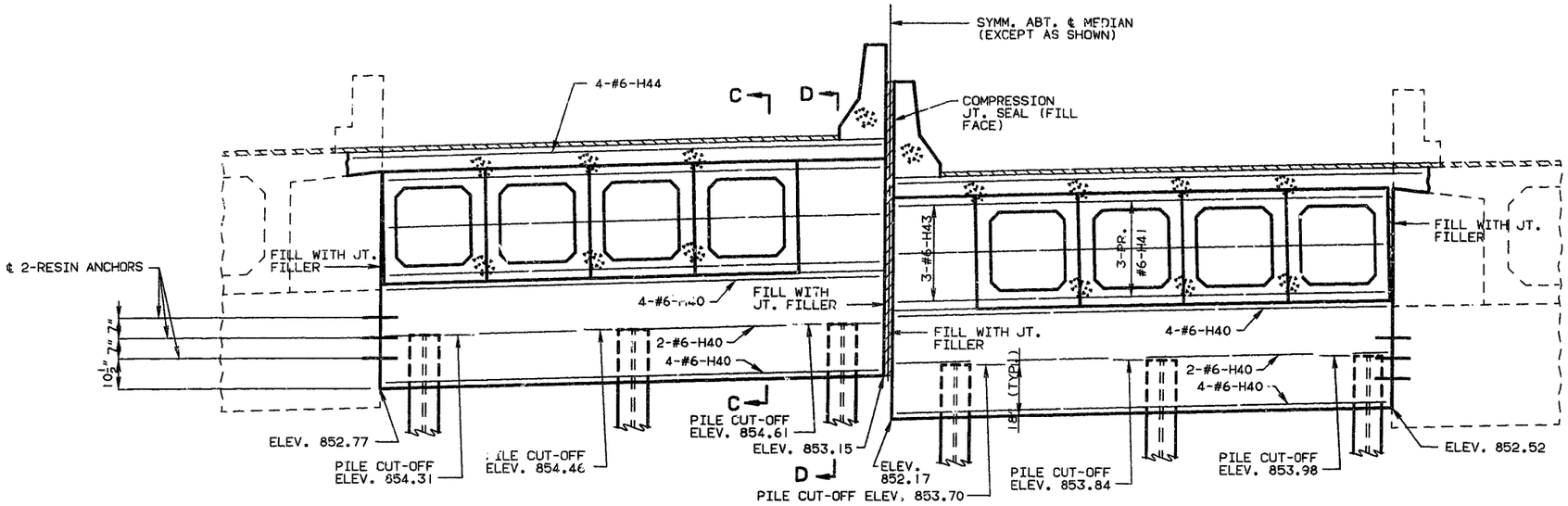
DETAILED SEPT. 1991
CHECKED MAY 1992

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

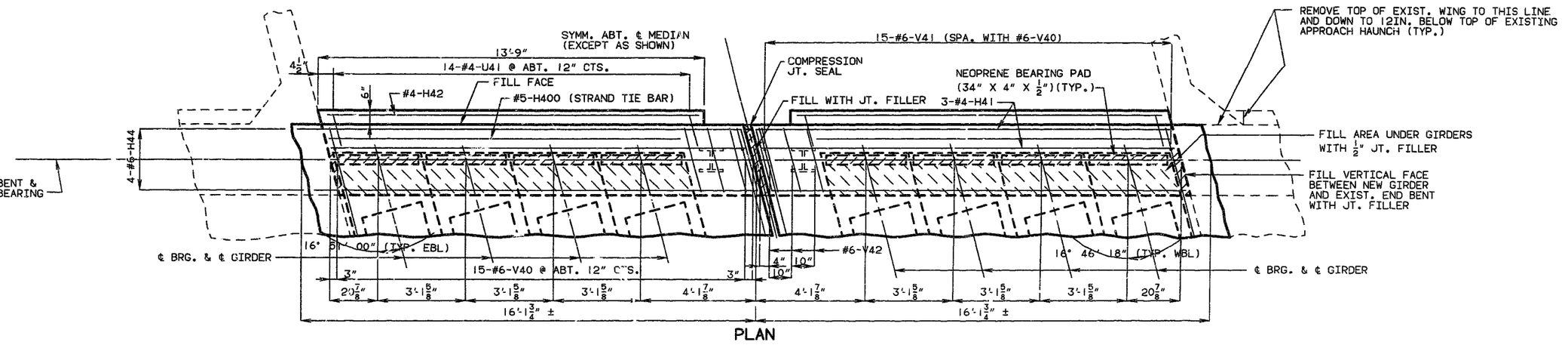
JACKSON COUNTY A-1240R1

SEE FINAL PLANS

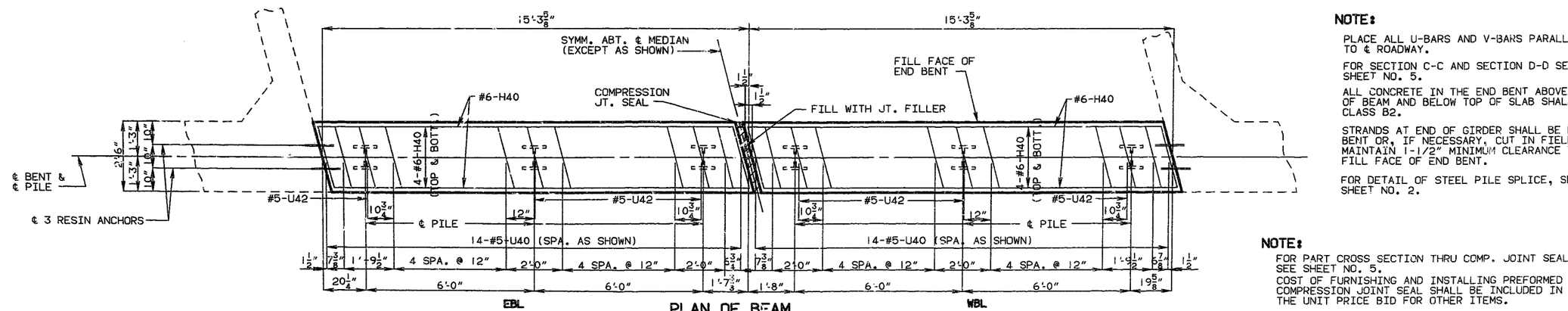
STATE	PROJ. NO.	SHEET NO.
MO.		22



SECTION NEAR END BENT



PLAN



PLAN OF BEAM

END BENT NO. 4

NOTE:

PLACE ALL U-BARS AND V-BARS PARALLEL TO ℄ ROADWAY.

FOR SECTION C-C AND SECTION D-D SEE SHEET NO. 5.

ALL CONCRETE IN THE END BENT ABOVE TOP OF BEAM AND BELOW TOP OF SLAB SHALL BE CLASS B2.

STRANDS AT END OF GIRDER SHALL BE FIELD BENT OR, IF NECESSARY, CUT IN FIELD TO MAINTAIN 1-1/2" MINIMUM CLEARANCE TO FILL FACE OF END BENT.

FOR DETAIL OF STEEL PILE SPLICE, SEE SHEET NO. 2.

NOTE:

FOR PART CROSS SECTION THRU COMP. JOINT SEAL SEE SHEET NO. 5.
COST OF FURNISHING AND INSTALLING PREFORMED COMPRESSION JOINT SEAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

DETAILED SEPT. 1991
CHECKED MAY 1992

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

SHEET NO. 10 OF 35.

JACKSON COUNTY A-1240R1

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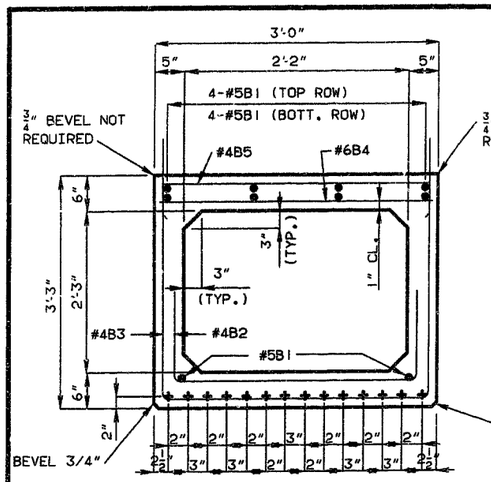
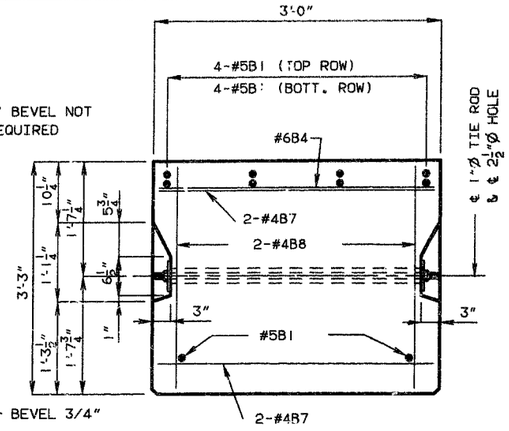
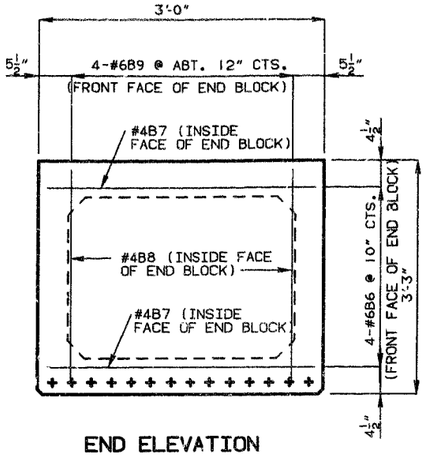


SECTION AT INT. DIAPH.



END ELEVATION



NOTE: CONCRETE FOR PRESTRESSED GIRDERS SHALL BE CLASS A1 WITH F'C = 5000 PSI

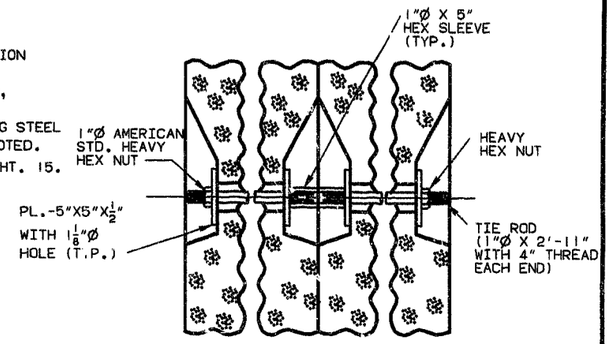
(+) INDICATES PRESTRESSING STRANDS.

USE 14 STRANDS WITH AN INITIAL PRESTRESS FORCE OF 434 KIPS.

PRESTRESSING STRANDS SHALL BE UNCOATED SEVEN WIRE LOW RELAXATION STRANDS, ½" DIAMETER CONFORMING TO A.A.S.H.T.O. M203, GRADE 270, SEE MO. STD. SPEC. 705.4.8.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1½" UNLESS OTHERWISE NOTED.

FOR FIELD BENDING OF #4B3 SEE SHT. 15.



EXTERIOR GIRDER INTERIOR GIRDER

PART SECTION NEAR 1"Ø TIE ROD

NOTE: COST OF FURNISHING 1"Ø TIE ROD ASSEMBLIES IS INCLUDED IN PRICE BID FOR OTHER ITEMS.

1"Ø TIE RODS, SLEEVES, PLATES AND NUTS SHALL BE GALVANIZED.

1"Ø TIE RODS, SLEEVES AND NUTS SHALL BE A-307.

PLATES SHALL BE A-36.

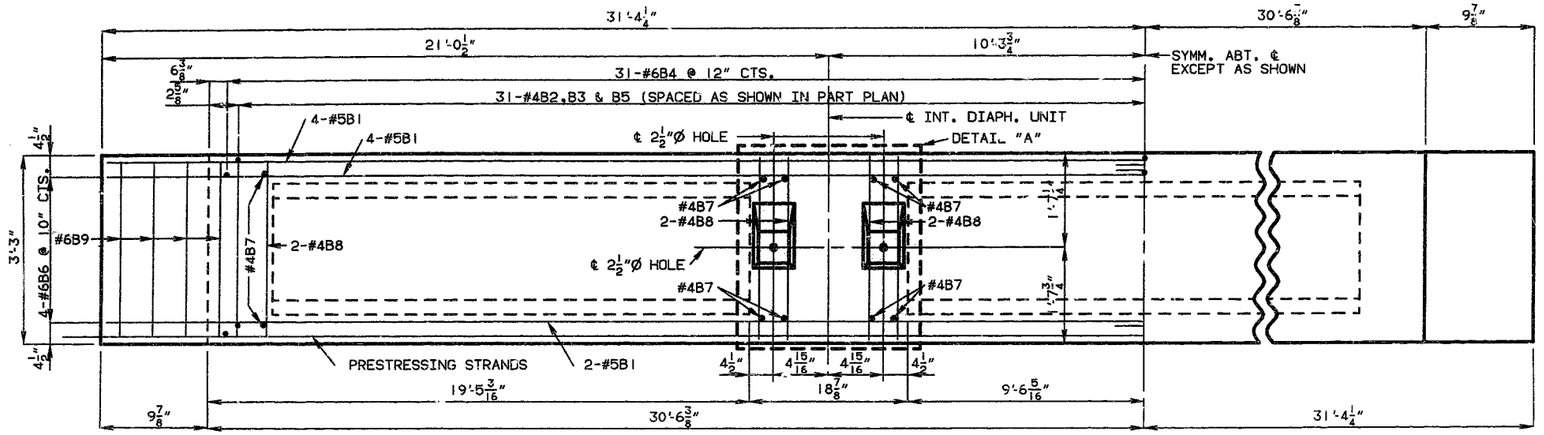
FOR COMPLETE BILL OF REINFORCING STEEL SEE SHT. 14.

FOR STRAND DETAILS AT GIRDER ENDS, TYPICAL SECTION THRU BOX GIRDER & PART PLAN OF INT. DIAPH. SHOWING TIE ROD LOCATION SEE SHT. 15.

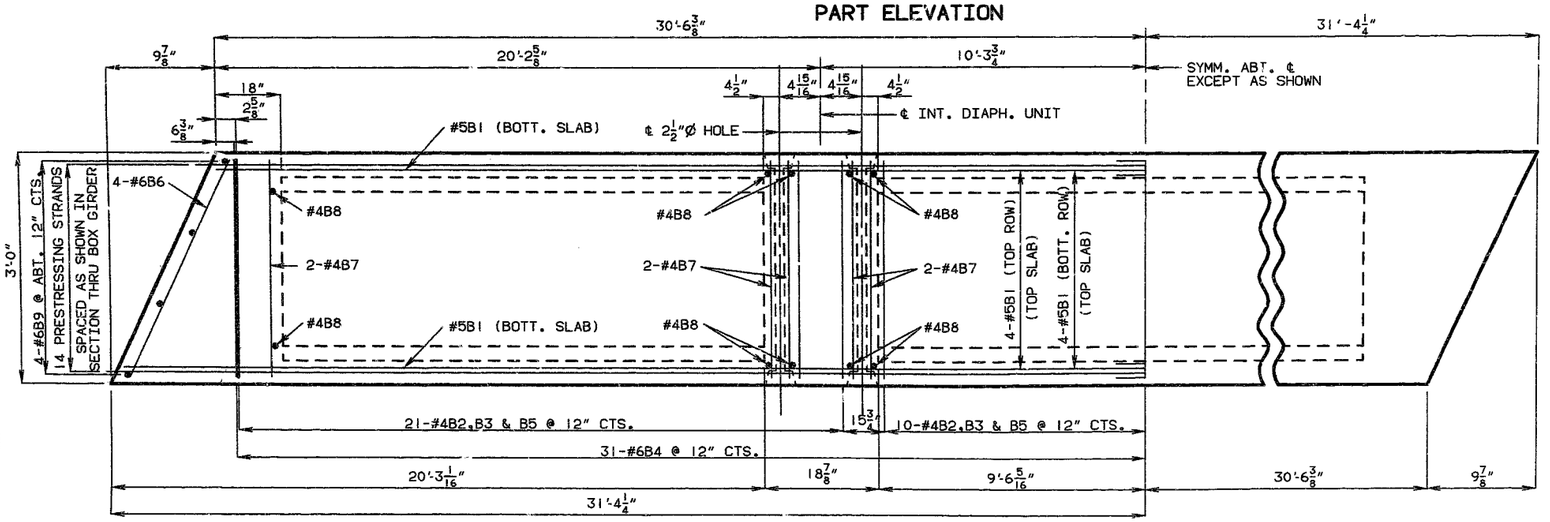
FOR LOCATION OF COIL TIE INSERTS FOR SLAB DRAINS, (EXTERIOR GIRDER, W.B.L. ONLY), SEE SHEET NO. 20.
FOR DETAILS OF WEEP HOLES SEE SHEET NO. 15.

TYPICAL SECTION THRU BOX GIRDER

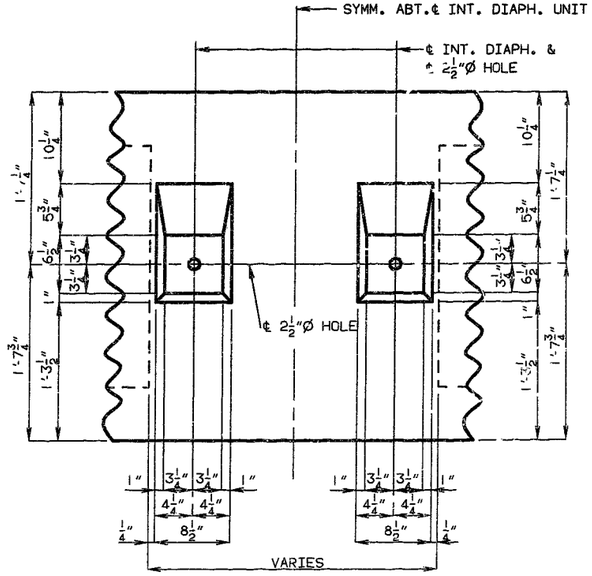
NOTE: ADEQUATE LIFTING DEVICES SHALL BE PROVIDED AND SHOWN ON SHOP DRAWINGS.



PART ELEVATION



PART PLAN



PART ELEVATION OF INT. DIAPH. UNITS (DETAIL "A")

DETAILS OF BOX GIRDER SPAN (1-2)

JACKSON COUNTY A-1240R1

DETAILED SEPT. 1991
CHECKED MAY 1992

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

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STATE	PROJ. NO.	SHEET NO.
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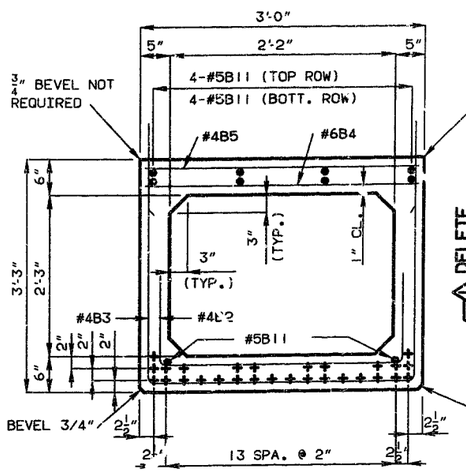
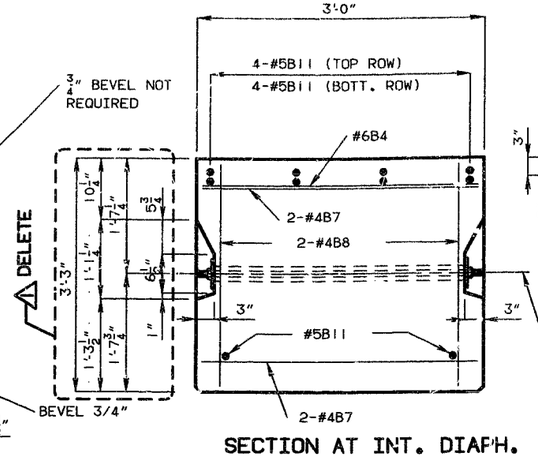
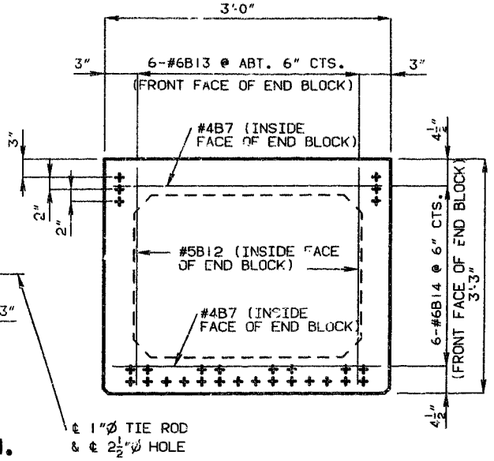


TYPICAL SECTION THRU BOX GIRDER



SECTION AT INT. DIAPH.



END ELEVATION

NOTE: CONCRETE FOR PRESTRESSED GIRDERS SHALL BE CLASS A1 WITH F'C = 5000 PSI

(+) INDICATES PRESTRESSING STRANDS.

USE 28 STRANDS WITH AN INITIAL PRESTRESS FORCE OF 868 KIPS.

PRESTRESSING STRANDS SHALL BE UNCOATED SEVEN WIRE LOW RELAXATION STRANDS, 1/2" DIAMETER CONFORMING TO A.A.S.H.T.O. M203, GRADE 270 SEE MO. STD. SPEC. 705.4.8.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2" UNLESS OTHERWISE NOTED.

FOR PART SECTION NEAR 1"Ø TIE RODS SEE SHT. 11.

FOR COMPLETE BILL OF REINFORCING STEEL SEE SHT. 14.

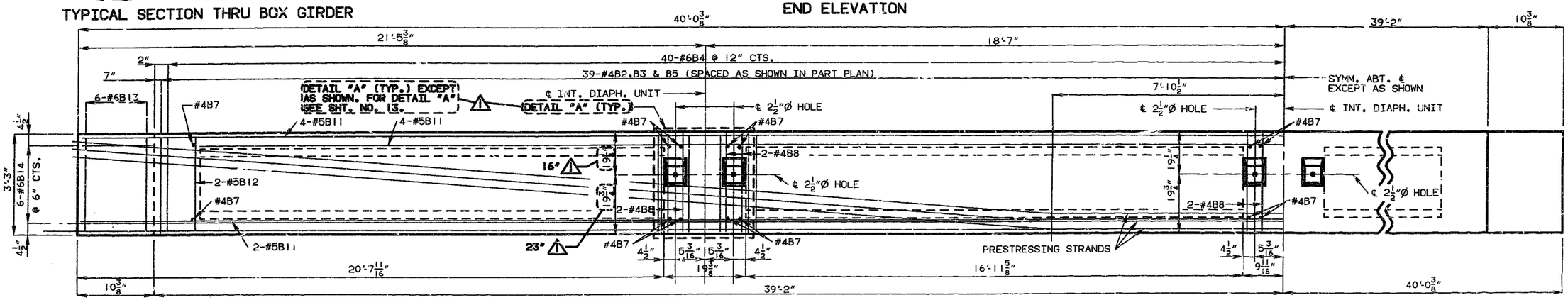
FOR STRAND DETAILS AT GIRDER ENDS, TYPICAL SECTION THRU BOX GIRDER & PART PLAN OF INT. DIAPH. SHOWING TIE ROD LOCATION, SEE SHT. 15.

FOR FIELD BENDING OF #4B3 SEE SHT. 15.
FOR DETAIL "A" SEE SHT. 11.

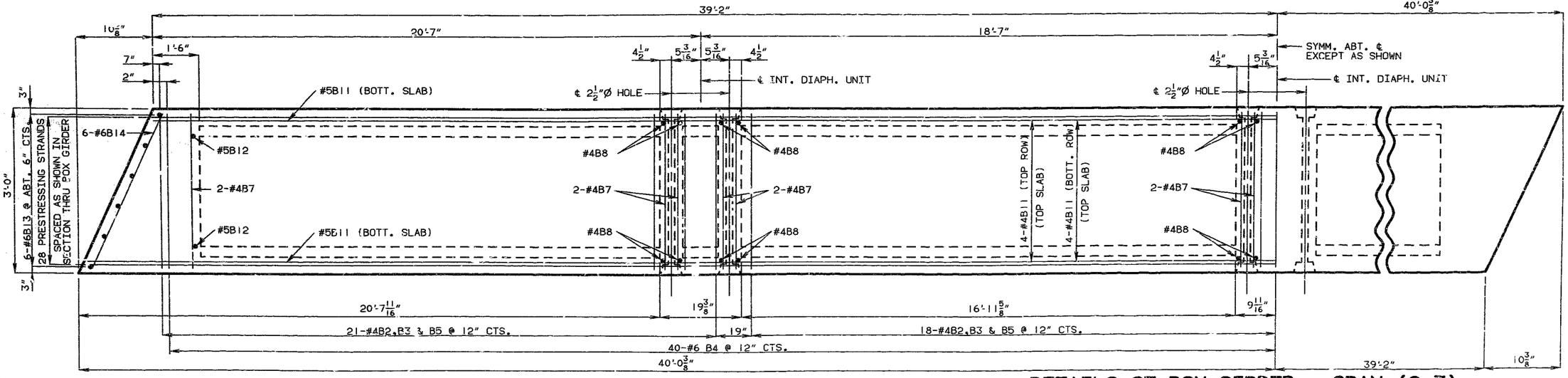
ADEQUATE LIFTING LOOPS SHALL BE PROVIDED AND SHOWN ON SHOP DRAWINGS.

FOR DETAILS OF WEEP HOLES SEE SHEET NO. 15.

A 3-INCH WIDE STRIP AT EACH END AND 1/10TH POINTS ACROSS THE TOP FLANGE OF THE MEMBER SHALL BE SMOOTH FINISHED TO ACCURATE TOP FLANGE DEPTH.



PART ELEVATION



PART PLAN

DETAILED SEPT. 1991
CHECKED MAY 1992

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

DETAILS OF BOX GIRDER - SPAN (2-3)

SHEET NO. 12 OF 35.

⚠ REVISED 5/14/93

JACKSON COUNTY

A-1240R1

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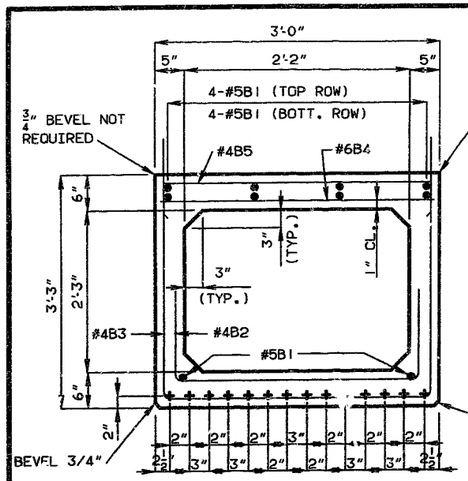
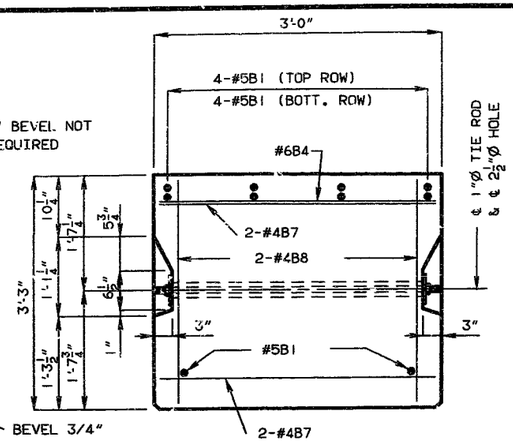
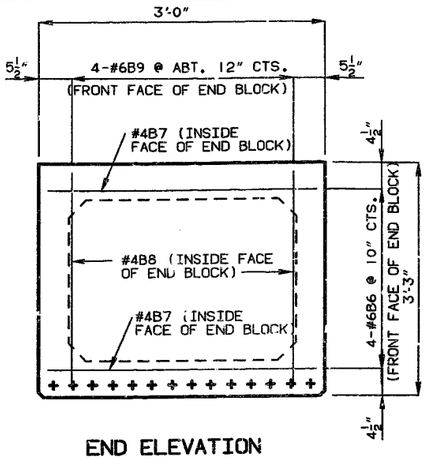
STATE	PROJ. NO.	SHEET NO.
MO.		



TYPICAL SECTION THRU BOX GIRDER



SECTION AT INT. DIAPH.



END ELEVATION

NOTE: CONCRETE FOR PRESTRESSED GIRDERS SHALL BE CLASS A1 WITH F'C = 5000 PSI

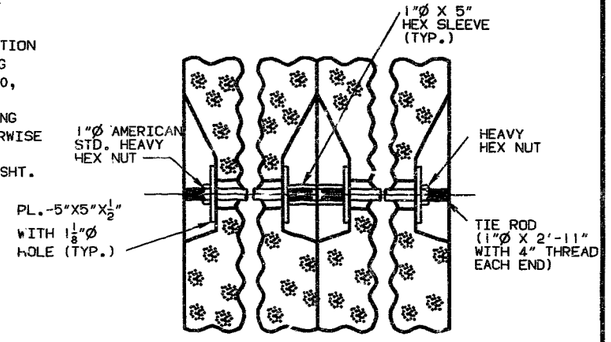
(+) INDICATES PRESTRESSING STRANDS.

USE 14 STRANDS WITH AN INITIAL PRESTRESS FORCE OF 434 KIPS.

PRESTRESSING STRANDS SHALL BE UNCOATED SEVEN WIRE LOW RELAXATION STRANDS, ½" DIAMETER CONFORMING TO A.A.S.H.T.O. M203, GRADE 270, SEE MO. STD. SPEC. 705.4.8.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1½" UNLESS OTHERWISE NOTED.

FOR FIELD BENDING OF #4B3 SEE SHT. NO. 15.



EXTERIOR GIRDER INTERIOR GIRDER

PART SECTION NEAR 1"Ø TIE ROD

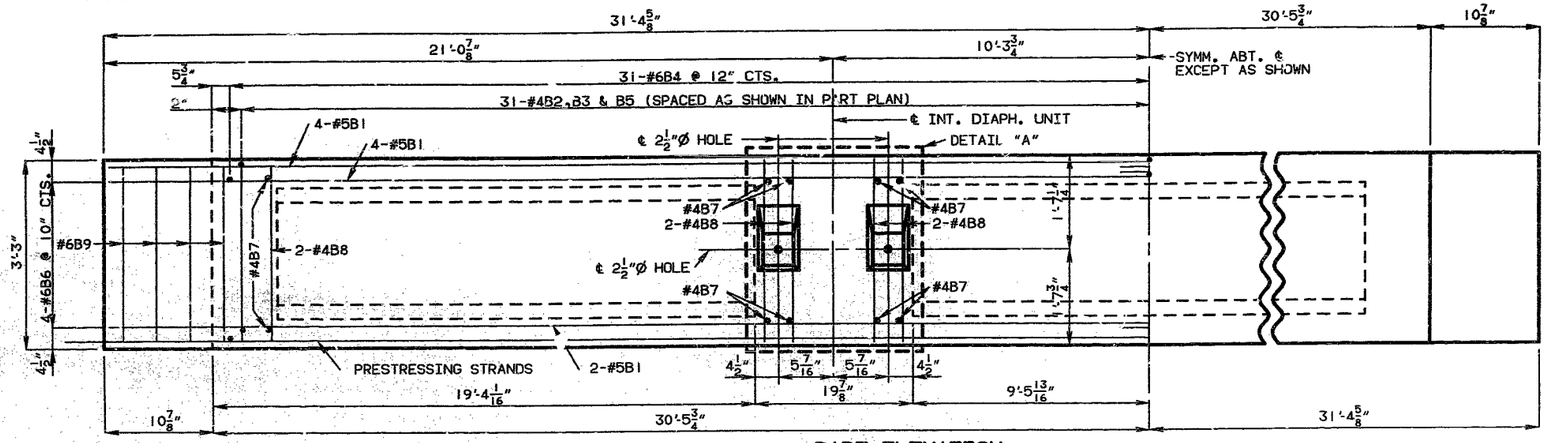
NOTE: COST OF FURNISHING 1"Ø TIE ROD ASSEMBLIES IS INCLUDED IN PRICE BID FOR OTHER ITEMS.
1"Ø TIE RODS, SLEEVES, PLATES AND NUTS SHALL BE GALVANIZED.
1"Ø TIE RODS, SLEEVES AND NUTS SHALL BE A-307.
PLATES SHALL BE A-36.

FOR COMPLETE BILL OF REINFORCING STEEL SEE SHT. 14.

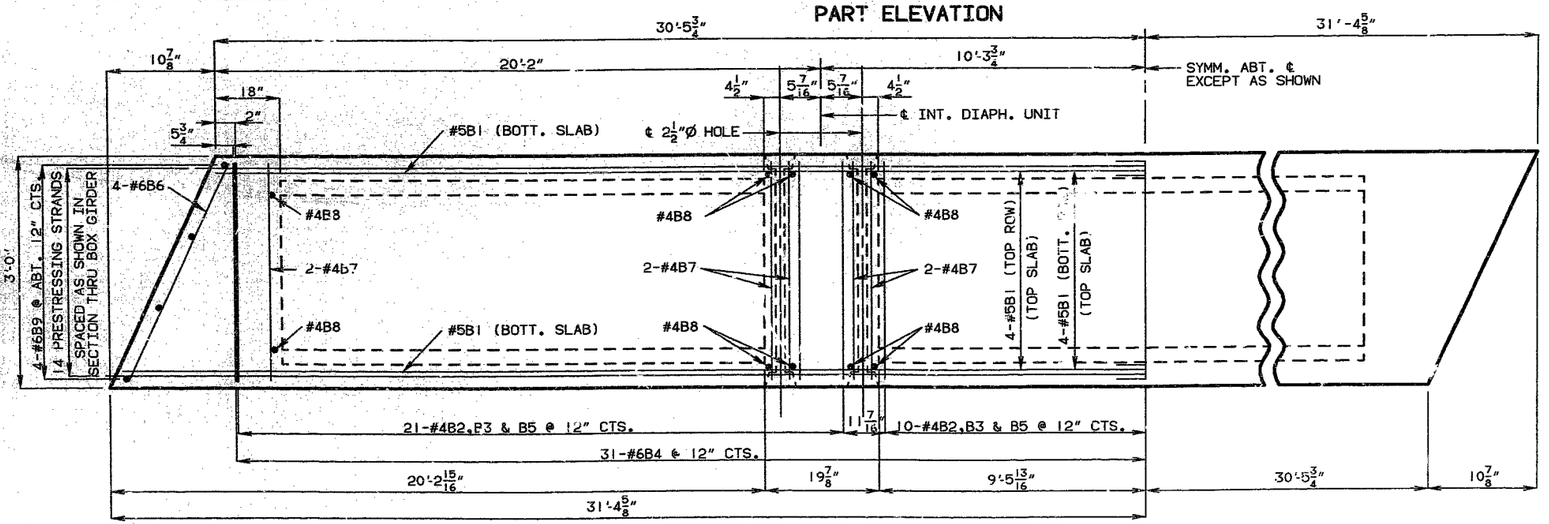
FOR STRAND DETAILS AT GIRDER ENDS, TYPICAL SECTION THRU BOX GIRDER & PART PLAN OF INT. DIAPH. SHOWING TIE ROD LOCATION SEE SHT. 15.

FOR DETAILS OF WEEP HOLES SEE SHEET NO. 15.

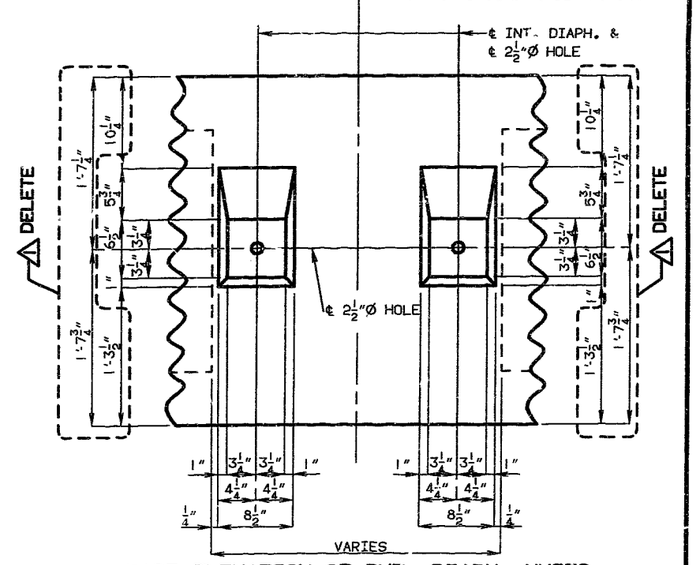
NOTE: ADEQUATE LIFTING DEVICES SHALL BE PROVIDED AND SHOWN ON SHOP DRAWINGS.



PART ELEVATION



PART PLAN



PART ELEVATION OF INT. DIAPH. UNITS (DETAIL "A")

DETAILS OF BOX GIRDER SPAN (4-3)

DETAILED SEPT. 1991
CHECKED MAY 1992

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

SHEET NO. 13 OF 35.

⚠ REVISED 5/14/93

JACKSON COUNTY A-1240RI

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COMPLETE BILL OF REINFORCING STEEL - EACH BOX GIRDER

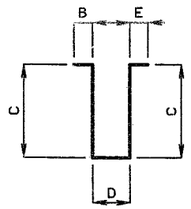
NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	GRADE 60 (H)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
20	5	B1	GIRDER	H	20					31	8													31	8	31	8	661
61	4	B2	GIRDER	H	10	S						22		2	6									6	2	6	0	244
61	4	B3	GIRDER	H	10	S						4	1.5	2	9									11	0	10	10	441
61	6	B4	GIRDER	H	20					2	9													2	9	2	9	252
61	4	B5	GIRDER	H	10	S						20		2	9									6	1	5	11	241
8	6	B6	GIRDER	H	20					2	10													2	10	2	10	34
20	4	B7	GIRDER	H	20					2	9													2	9	2	9	37
20	4	B8	GIRDER	H	20					3	0													3	0	3	0	40
8	6	B9	GIRDER	H	20					3	0													3	0	3	0	36

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

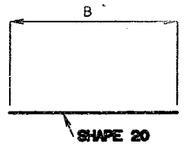
COMPLETE BILL OF REINFORCING STEEL - EACH BOX GIRDER

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	GRADE 60 (H)	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.
77	4	B2	GIRDER	H	10	S						22		2	6									6	2	6	0	309
77	4	B3	GIRDER	H	10	S						4	1.5	2	9									11	0	10	10	557
79	6	B4	GIRDER	H	20					2	9													2	9	2	9	326
77	4	B5	GIRDER	H	10	S						20		2	9									6	1	5	11	304
28	4	B7	GIRDER	H	20					2	9													2	9	2	9	52
24	4	B8	GIRDER	H	20					3	0													3	0	3	0	48
20	5	B11	GIRDER	H	20					40	4													40	4	40	4	841
4	5	B12	GIRDER	H	20					3	0													3	0	3	0	13
12	6	B13	GIRDER	H	20					3	0													3	0	3	0	54
12	6	B14	GIRDER	H	20					2	10													2	10	2	10	51

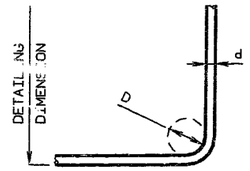
SPAN (2-3)



SHAPE 10



SHAPE 20



#4 : D = 2"
#5 : D = 2½"

90° STIRRUP BEND

NOTE: ALL REINFORCEMENT SHALL BE GRADE 60. FY=60,000 PSI.
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEG. STANDARD HOOK.

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

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

S = STIRRUP

ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

WEIGHTS ARE BASED ON ACTUAL LENGTHS.

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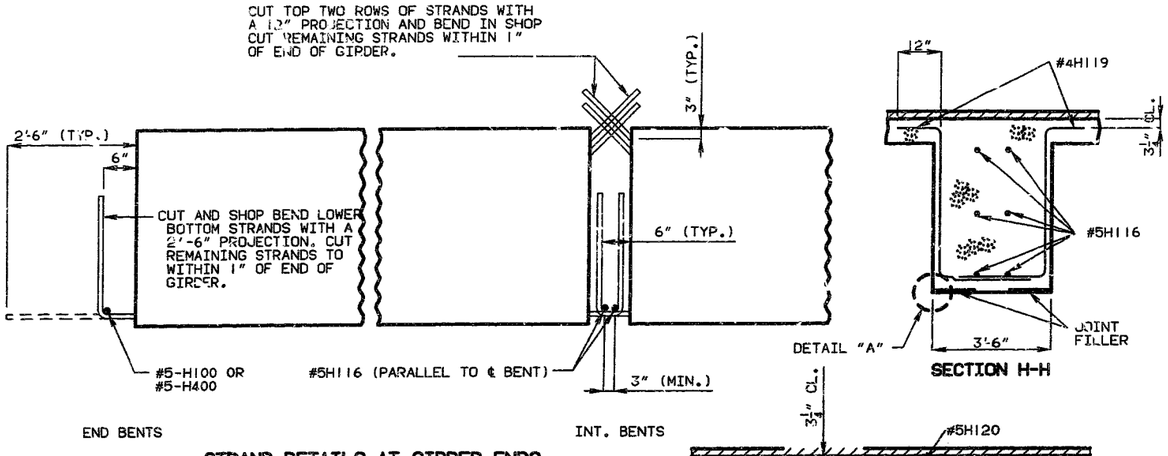
DETAILED SEPT. 1991
CHECKED MAY. 1992

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

JACKSON COUNTY

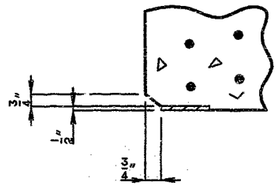
A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		27

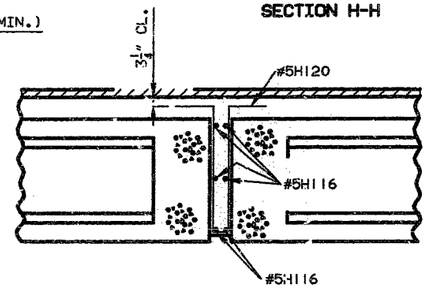


STRAND DETAILS AT GIRDER ENDS

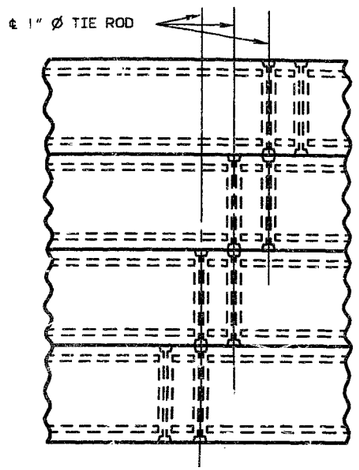
SECTION H-H



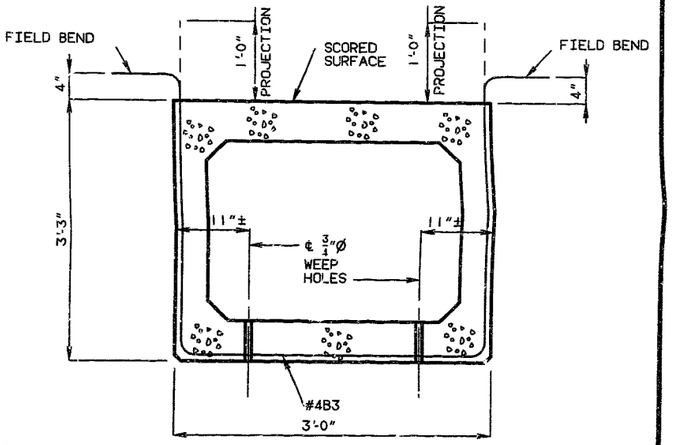
DETAIL "A"



SECTION B-B



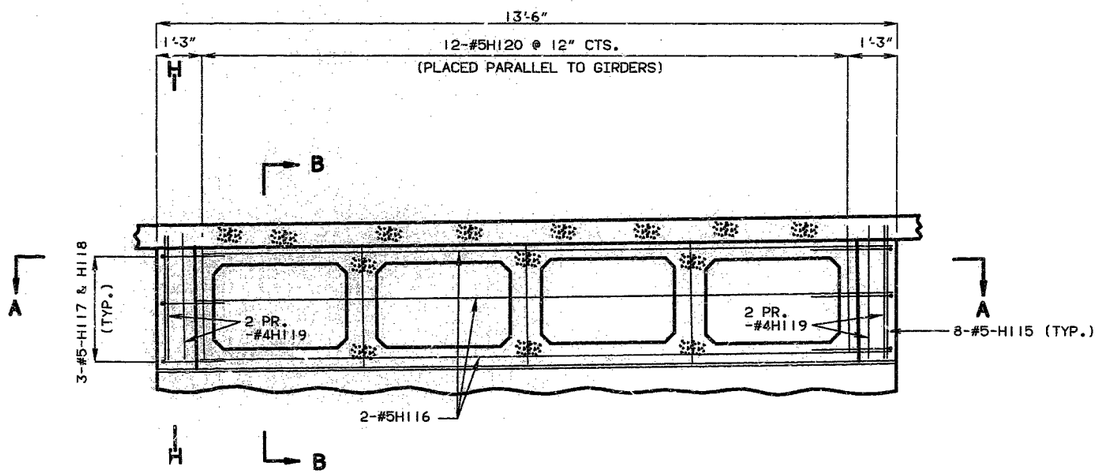
PART PLAN OF INT. DIAPH. SHOWING TIE ROD LOCATION



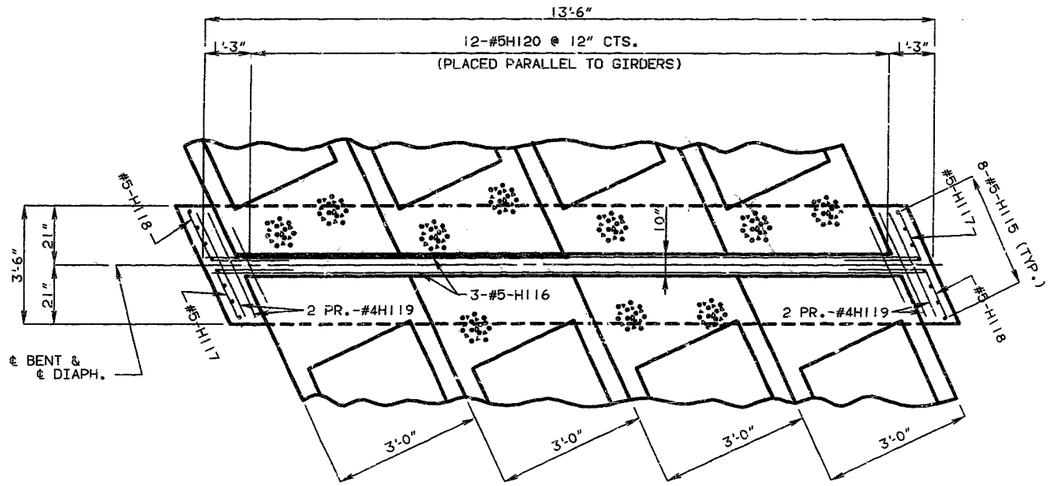
TYPICAL SECTION THRU BOX GIRDER

NOTE: TWO ¾"Ø WEEP HOLES SHALL BE PROVIDED AT LOWER END OF EACH VOID. THEY SHALL EXTEND THRU FORMS AND BE KEPT OPEN AT ALL TIMES. ¾"Ø WEEP HOLES TO BE CENTERED BETWEEN PRESTRESSED STRANDS. DRILLING WILL NOT BE ALLOWED.

DIAPHRAGMS AT INTERMEDIATE BENTS SHALL BE VERTICAL.



SECTION THRU DIAPH. AT INT. BENTS



SECTION A-A

9-22

DETAILED SEPT. 1991
CHECKED MAY 1992

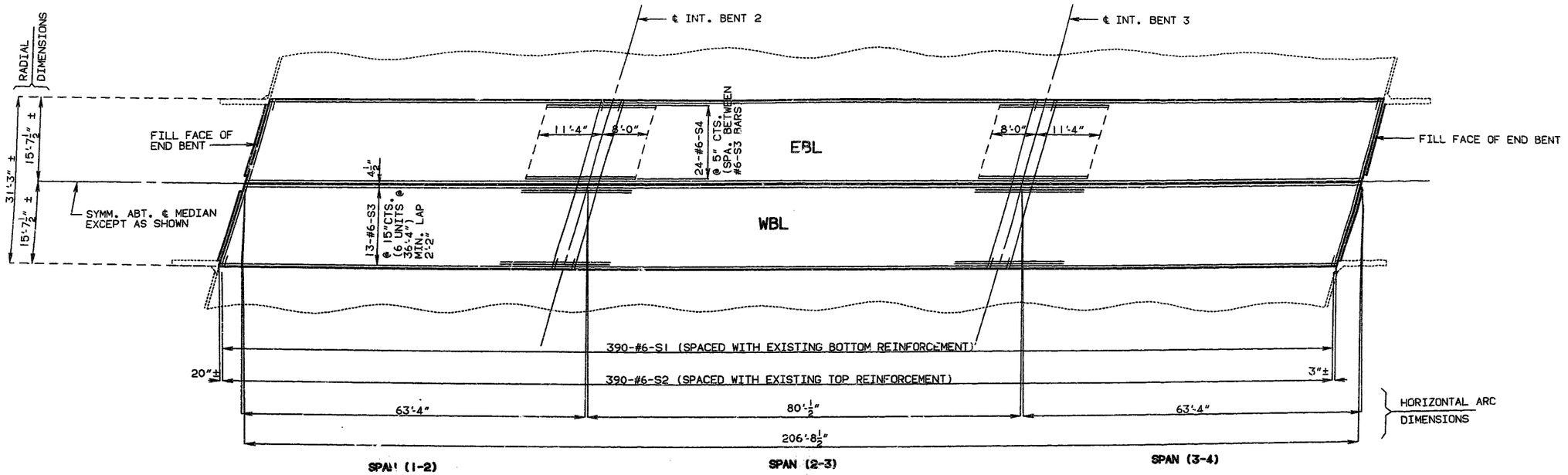
NOTE: THIS DRAWING IS NOT TO SCALE ... ONS.

SHEET NO. 15 OF 35.

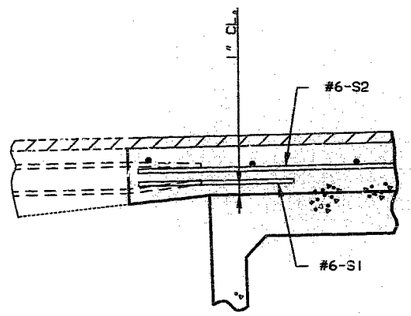
JACKSON COUNTY

A-1240R1

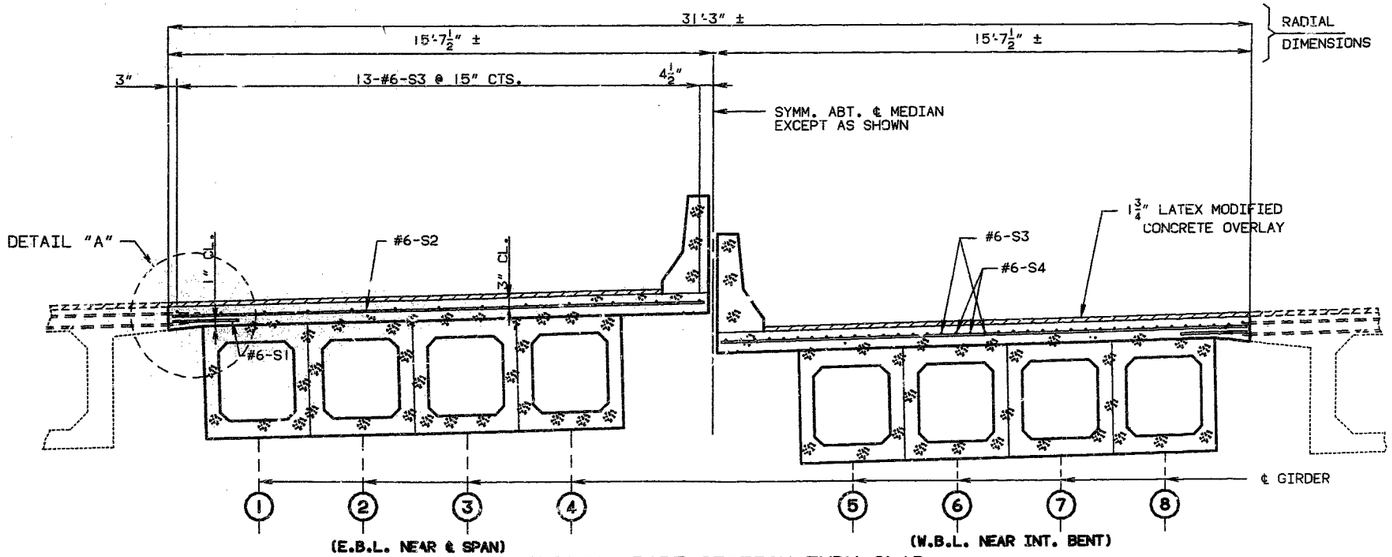
STATE	PROJ. NO.	SHEET NO.
MO.		28



PART PLAN OF SLAB SHOWING REINFORCEMENT



DETAIL "A"



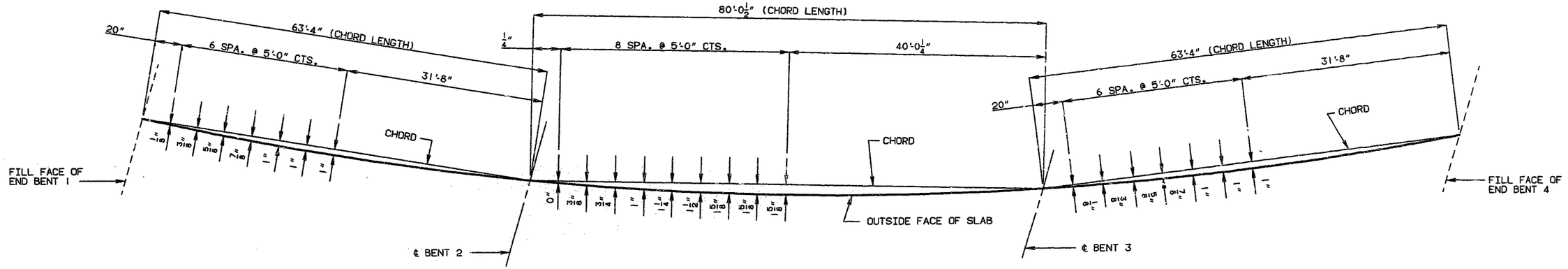
TYPICAL PART SECTION THRU SLAB

DETAILED SEPT. 1991
CHECKED MAY 1992

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

JACKSON COUNTY A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		29



PART PLAN OF SLAB SHOWING CURVE OFFSETS
(NEAR ¢ MEDIAN E.B.L. AND W.B.L.)

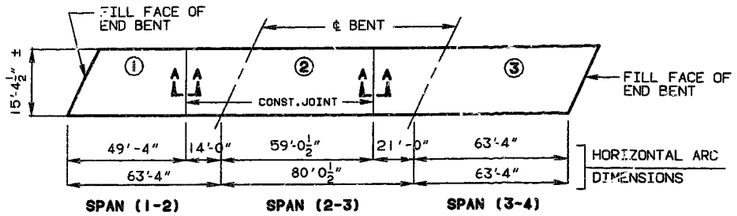
CURVE OFFSETS

DETAILED SEPT. 1991
CHECKED MAY 1992

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

JACKSON COUNTY A-1240R1

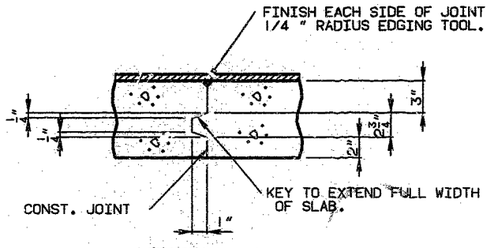
STATE	PROJ. NO.	SHEET NO.
MO.		30



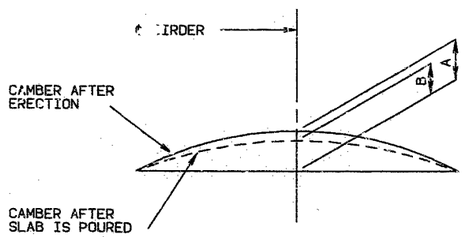
E.B.L. SHOWN (W.B.L. SIMILAR)

	SEQUENCE OF POURS			MINIMUM RATE OF POUR (CUBIC YARDS PER HOUR)
	DIRECTION			WITH RETARDER
BASIC SEQUENCE	1 END TO 2	2 1 TO 3	3 2 TO END	25
ALTERNATE POURS TO THE BASIC SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.				
ALTERNATE "A" POURS	1 + 2 END TO 3		3 2 TO END	25
ALTERNATE "B" POURS	1 + 2 + 3 END TO END			25

SLAB POURING SEQUENCE



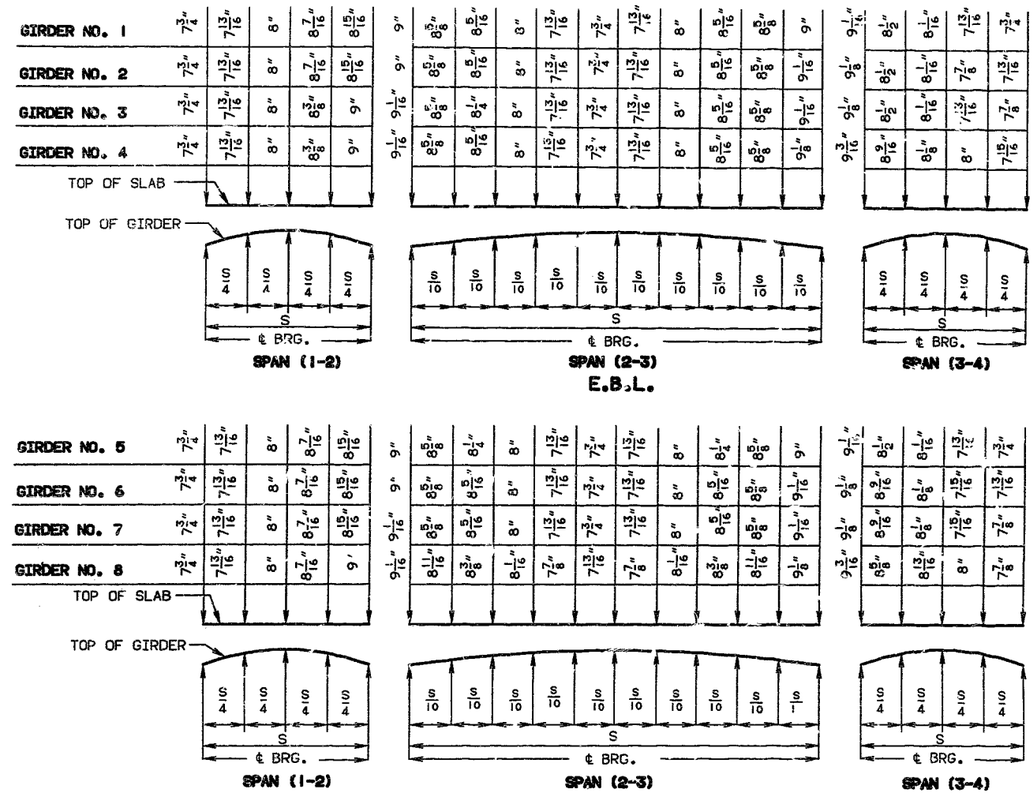
SECTION A-A



CONVERSION FACTORS FOR GIRDER CAMBER
0.25 PT. = 0.7125 X 0.5 PT.
0.10 PT. = 0.3140 X 0.5 PT.
0.20 PT. = 0.5930 X 0.5 PT.
0.30 PT. = 0.8130 X 0.5 PT.
0.40 PT. = 0.9520 X 0.5 PT.

TABLE OF DIMENSIONS		
SPAN	A	B
(1-2)	$\frac{13}{16}$"	$\frac{1}{2}$"
(2-3)	$2\frac{3}{8}$"	$1\frac{1}{2}$"
(3-4)	$\frac{13}{16}$"	$\frac{1}{2}$"

GIRDER CAMBER DIAGRAM



THEORETICAL SLAB THICKNESS DIAGRAM

NOTE:

SLAB TO BE BUILT PARALLEL TO GRADE AND TO A MINIMUM THICKNESS OF $7\frac{3}{4}$".

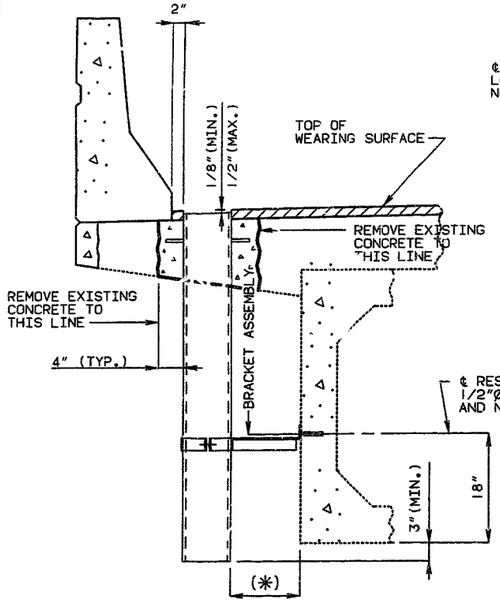
IF GIRDER CAMBER IS DIFFERENT FROM THAT SHOWN IN THE CAMBER DIAGRAM, IT SHALL BE NECESSARY TO INCREASE THE SLAB THICKNESS OR TO RAISE THE GRADE UNIFORMLY THROUGHOUT THE STRUCTURE. NO PAYMENT WILL BE MADE FOR ADDITIONAL LABOR OR MATERIALS REQUIRED FOR VARIATION IN SLAB THICKNESS OR GRADE ADJUSTMENT.

CONCRETE IN SLAB IS INCLUDED IN THE ESTIMATED QUANTITIES AS CLASS B2 CONCRETE.

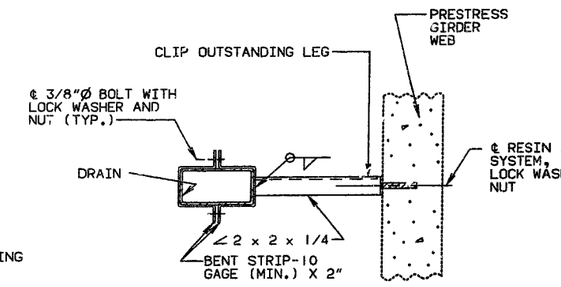
THE DIAPHRAGM AT THE INTERMEDIATE AND END BENTS SHALL BE POURED A MINIMUM OF 30 MINUTES AND A MAXIMUM OF 2 HOURS BEFORE THE SLAB IS POURED.

THE CONTRACTOR SHALL FURNISH AN APPROVED RETARDER TO RETARD THE SET OF THE CONCRETE TO 2.5 HOURS AND SHALL POUR AND SATISFACTORILY FINISH THE SLAB POURS AT NOT LESS THAN 25 CUBIC YARDS PER HOUR.

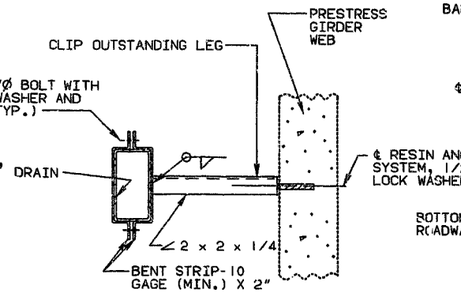
635



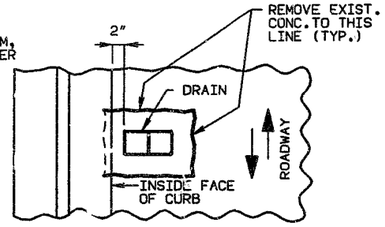
PART ELEVATION OF SLAB AT DRAIN



PART SECTION SHOWING BRACKET ASSEMBLY

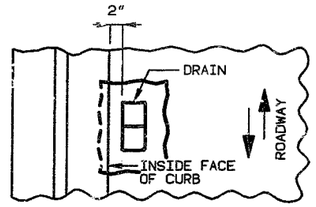


PART SECTION SHOWING BRACKET ASSEMBLY



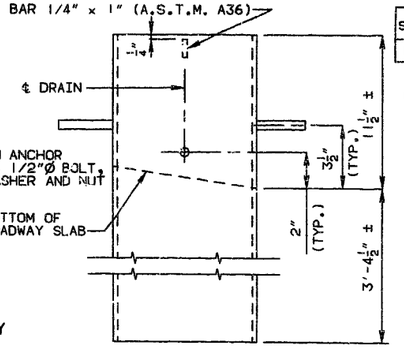
PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS TRANSVERSE TO ROADWAY

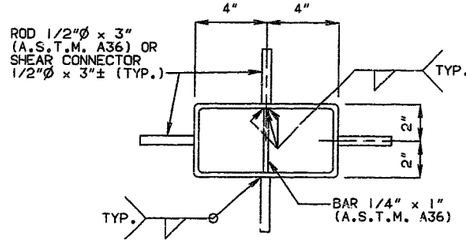


PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS PARALLEL TO ROADWAY



ELEVATION OF DRAIN



PLAN OF DRAIN

STATE	PROJ. NO.	SHEET NO.
MO.		31

GENERAL NOTES:

SLAB DRAINS MAY BE FABRICATED OF EITHER 1/4" WELDED SHEETS OF A.S.T.M. A36 STEEL OR FROM 1/4" STRUCTURAL STEEL TUBING A.S.T.M. A500 OR A501.

OUTSIDE DIMENSIONS OF DRAINS ARE 8" x 4".

LOCATE DRAINS IN THE SLAB BY DIMENSIONS SHOWN IN THE PART ELEVATION.

SHIFT REINFORCING IN FIELD WHERE NECESSARY TO CLEAR DRAINS.

THE DRAINS AND BRACKET ASSEMBLY SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A123.

ALL BOLTS, THREADED ROD STUDS, LOCK WASHERS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153.

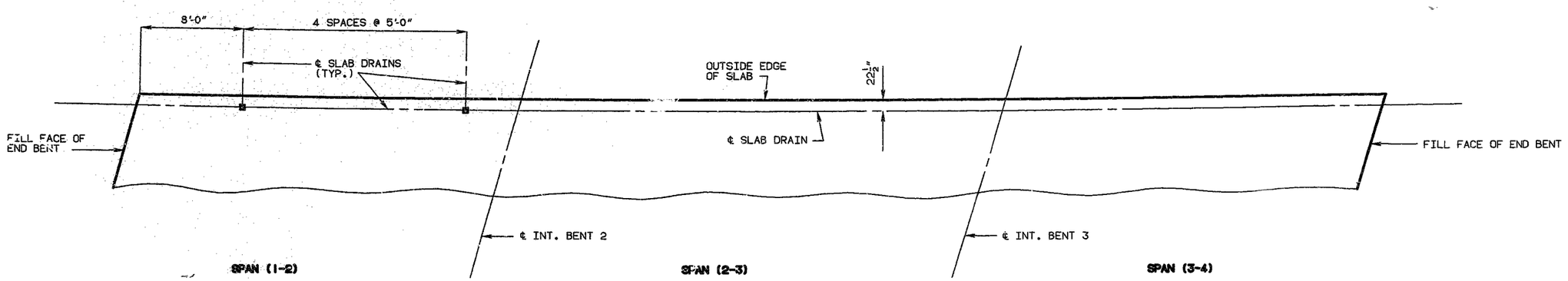
SHOP DRAWINGS WILL NOT BE REQUIRED FOR SLAB DRAINS AND THE BRACKET ASSEMBLY.

CONCRETE REQUIRED TO INSTALL SLAB DRAINS SHALL BE CLASS B1.
ALL MATERIAL AND LABOR REQUIRED TO INSTALL SLAB DRAINS AS SHOWN SHALL BE INCLUDED IN THE PRICE BID FOR SLAB DRAINS.

RESIN ANCHOR SYSTEMS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATION, EXCEPT AS MODIFIED BY THE JOB SPECIAL PROVISIONS. RESIN ANCHOR SYSTEMS SHALL HAVE AN MINIMUM ULTIMATE PULL OUT STRENGTH OF 3,000 LBS. IN CONCRETE WITH F'C = 4,000 PSI (SEE SPECIAL PROVISIONS)

(*) IF DIMENSION IS LESS THAN 1", DRAINS SHALL BE PLACED PARALLEL TO ROADWAY, OTHERWIS PLACE DRAINS TRANSVERSE TO ROADWAY.

SLAB DRAIN DETAILS



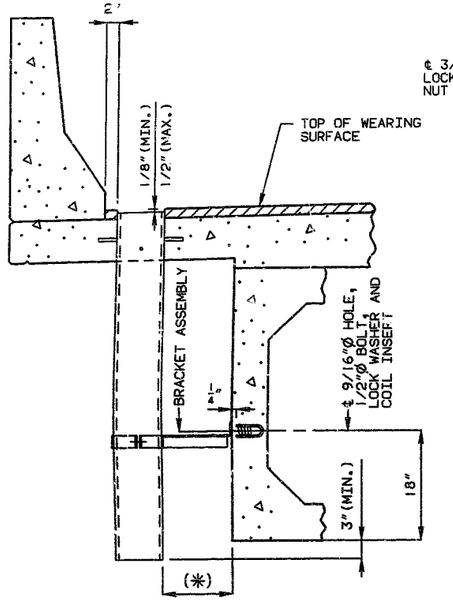
PART PLAN NEAR LEFT BARRIER CURB (E.B.L.)

DRAIN .GS 3.30,P.S., A	REVISED	OCT. 1988
P/S GDR. DRAIN		
JULY 1982		

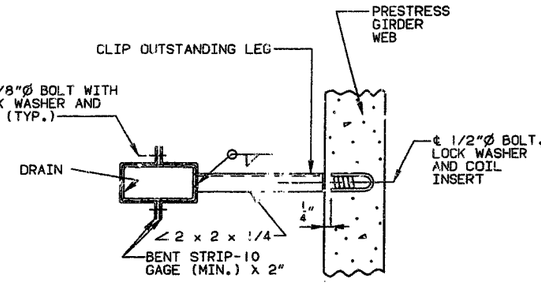
DETAILED SEPT. 1991
CHECKED MAY 1992

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

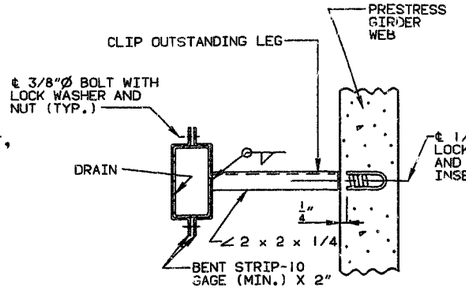
JACKSON COUNTY A-1240R1



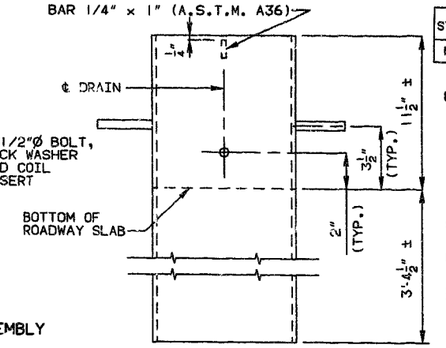
PART ELEVATION OF SLAB AT DRAIN



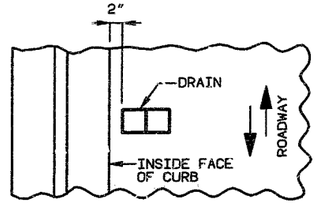
PART SECTION SHOWING BRACKET ASSEMBLY



PART SECTION SHOWING BRACKET ASSEMBLY

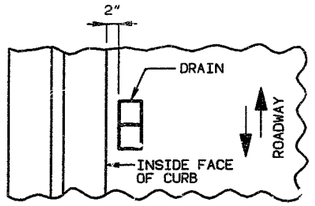


ELEVATION OF DRAIN



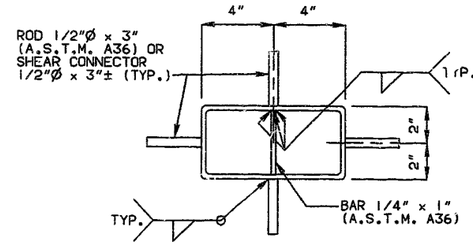
PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS TRANSVERSE TO ROADWAY



PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS PARALLEL TO ROADWAY



PLAN OF DRAIN

(*) IF DIMENSION IS LESS THAN 1", DRAINS SHALL BE PLACED PARALLEL TO ROADWAY, OTHERWISE PLACE DRAINS TRANSVERSE TO ROADWAY.

STATE	PROJ. NO.	SHEET NO.
MO.		32

GENERAL NOTES:

SLAB DRAINS MAY BE FABRICATED OF EITHER 1/4" WELDED SHEETS OF A.S.T.M. A36 STEEL OR FROM 1/4" STRUCTURAL STEEL TUBING A.S.T.M. A500 OR A501.

OUTSIDE DIMENSIONS OF DRAINS ARE 8" x 4".

LOCATE DRAINS IN THE SLAB BY DIMENSIONS SHOWN IN THE PART ELEVATION.

SHIFT REINFORCING IN FIELD WHERE NECESSARY TO CLEAR DRAINS.

THE DRAINS AND BRACKET ASSEMBLY SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A123.

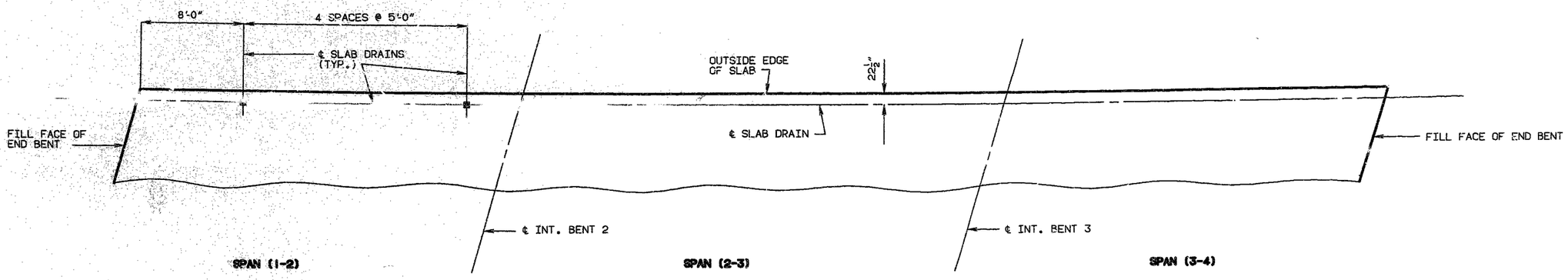
ALL BOLTS, THREADED ROD STUDS, LOCK WASHERS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153.

SHOP DRAWINGS WILL NOT BE REQUIRED FOR SLAB DRAINS AND THE BRACKET ASSEMBLY.

COIL INSERTS SHALL HAVE A CONCRETE PULL-OUT STRENGTH (ULTIMATE LOAD) OF AT LEAST 2,500 POUNDS IN 5,000 PSI CONCRETE.

ALL MATERIALS AND LABOR REQUIRED TO INSTALL SLAB DRAINS AS SHOWN SHALL BE INCLUDED IN THE PRICE BID FOR SLAB DRAINS.

SLAB DRAIN DETAILS



PART PLAN NEAR LEFT BARRIER CURB (W.B.L.)

37

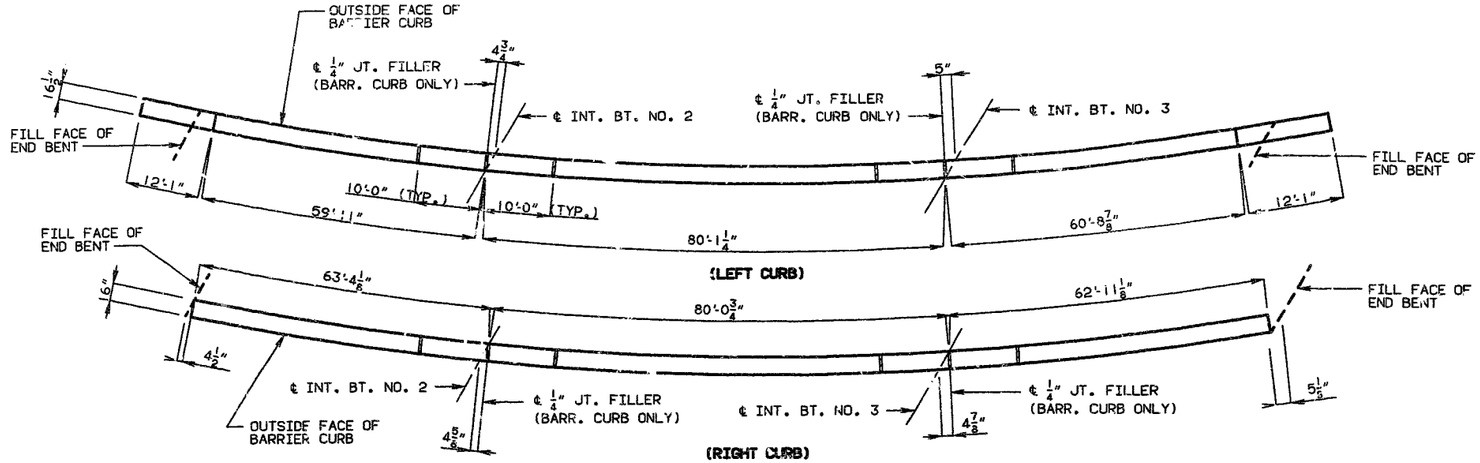
DRAIN ,GS 3.30,P/S, 1A	REVISED	OCT. 1988
P/S GDR. DRAIN		
JULY 1982		

DETAILED SEPT. 1991
CHECKED MAY 1992

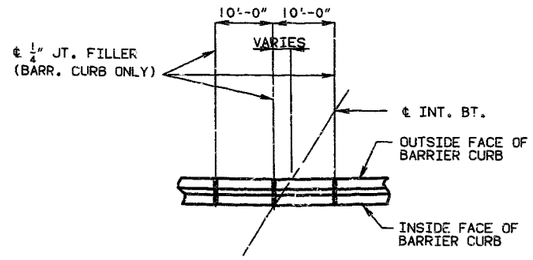
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		33



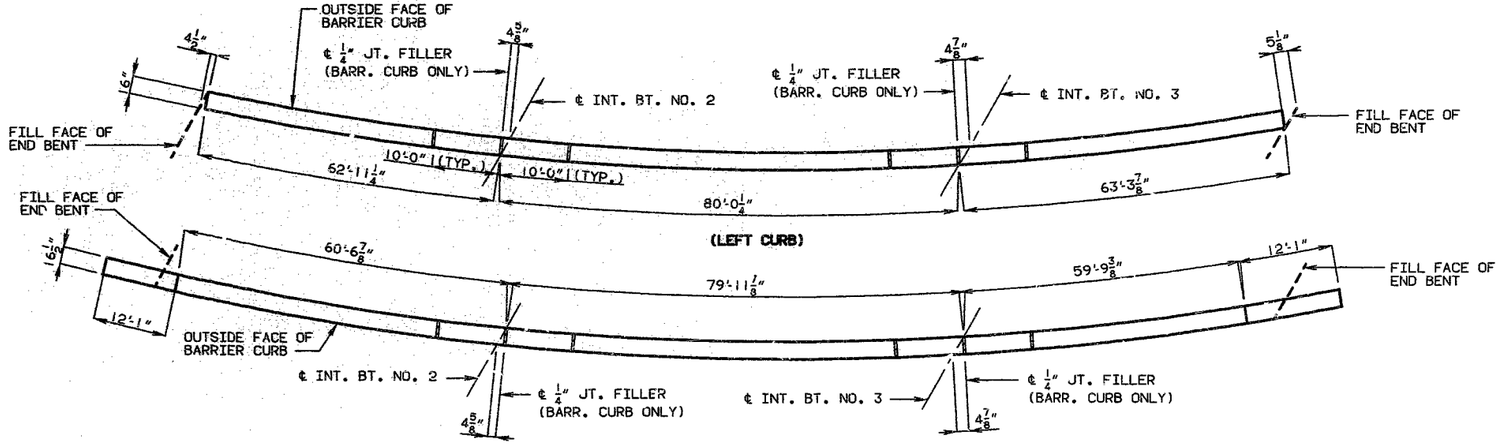
E.B.L.



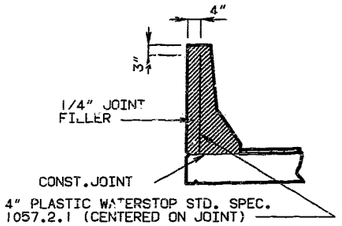
TYP. PART PLAN OF BARRIER CURB NEAR INT. BENT

NOTE:

1/4" JT. FILLER IN BARRIER CURBS 10 FOOT ADJACENT TO ℄ INT. BENTS WILL HAVE SAME OFFSETS AS JT. FILLER IN BARRIER CURBS AT ℄ INT. BENTS.



W.B.L.



NOTE: PLASTIC WATERSTOP SHALL BE PLACED IN ALL SAFETY BARRIER CURB FILLED JOINTS, (EXCEPT STURUCTURES WITH SUPERELEVATION, USE ON ALL LOWER SAFETY BARRIER CURB JOINTS ONLY).

COST OF PLASTIC WATERSTOP COMPLETE IN PLACE TO BE INCLUDED IN CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.

NOTE:
WORK THIS SHEET WITH SHEET NO. 22, 23 & 24.

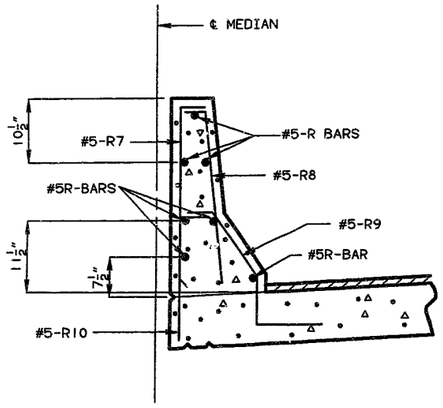
PLAN OF BARRIER CURB

DETAILED SEPT. 1991
CHECKED MAY 1992

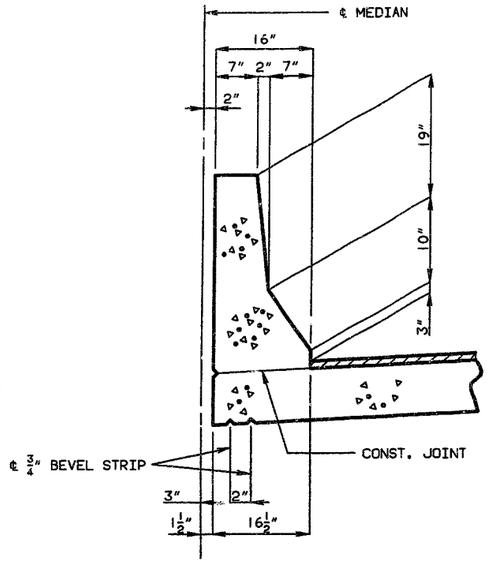
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1240R1

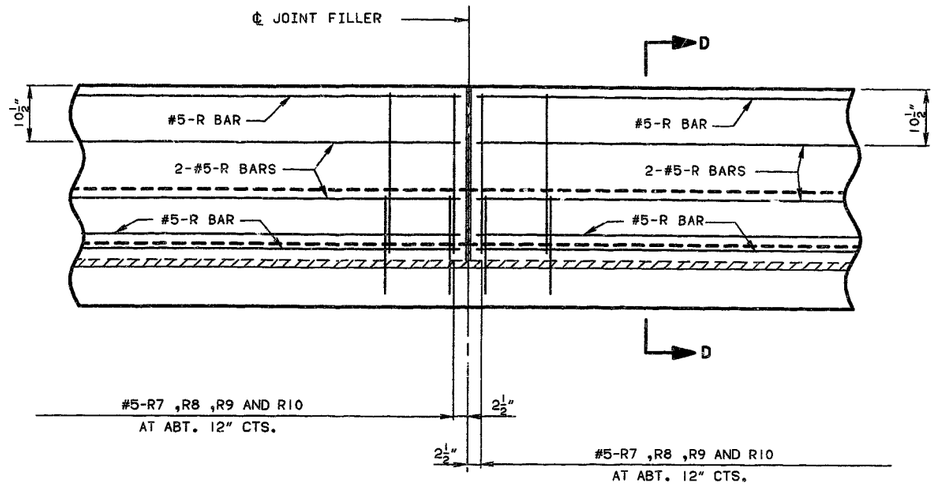
STATE	PROJ. NO.	SHEET NO.
MO.		34



SECTION C-D



TYPICAL SECTION SHOWING DIMENSIONS



PART ELEVATION OF SAFETY BARRIER CURB NEAR MEDIAN

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

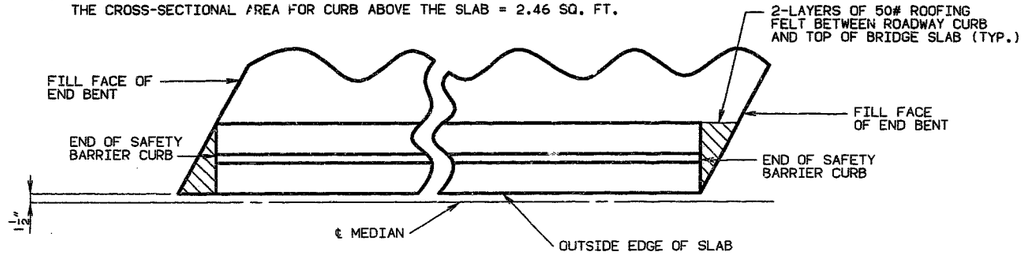
CONCRETE FOR THE SAFETY BARRIER CURB SHALL BE CLASS B1.

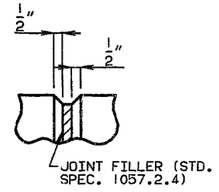
MEASUREMENT OF THE SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT MEASURED ALONG ℄ MEDIAN AT TOP OF SLAB FROM END TO END OF CURB.

LONGITUDINAL DIMENSIONS ARE HORIZONTAL ARC DIMENSIONS ALONG OUTSIDE EDGE OF SLAB.

FOR DETAIL OF PLASTIC WATERSTOP, SEE SHEET NO. 21.

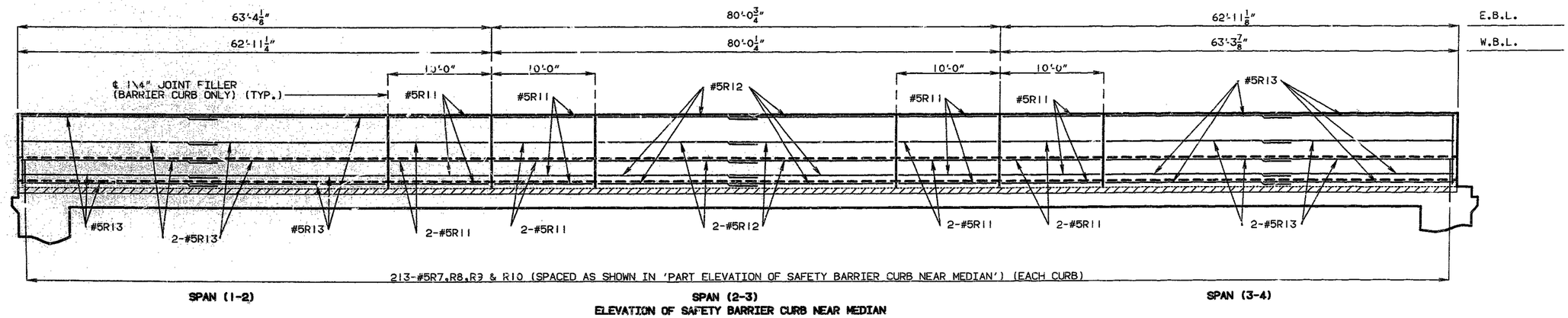
NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS. THE CROSS-SECTIONAL AREA FOR CURB ABOVE THE SLAB = 2.46 SQ. FT.





FILLED JOINT DETAIL

PART PLAN OF SAFETY BARRIER CURB NEAR MEDIAN



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

ELEVATION OF SAFETY BARRIER CURB NEAR MEDIAN

DETAILS OF SAFETY BARRIER CURB NEAR MEDIAN (E.B.L. & W.B.L.)

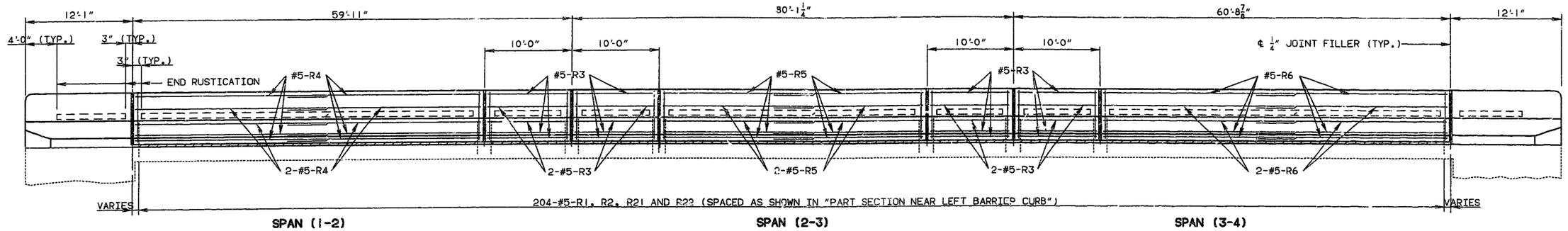
DETAILED SEPT. 1991
CHECKED MAY 1992

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

SHEET NO. 22 OF 35.

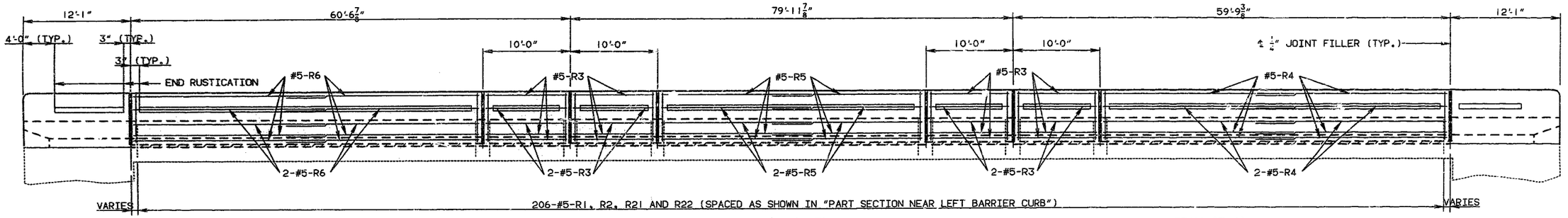
JACKSON COUNTY A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		35

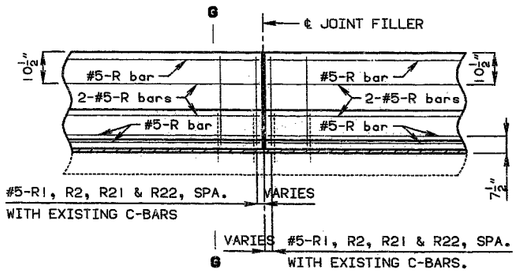


SECTION NEAR LEFT BARRIER CURB (E.B.L.)

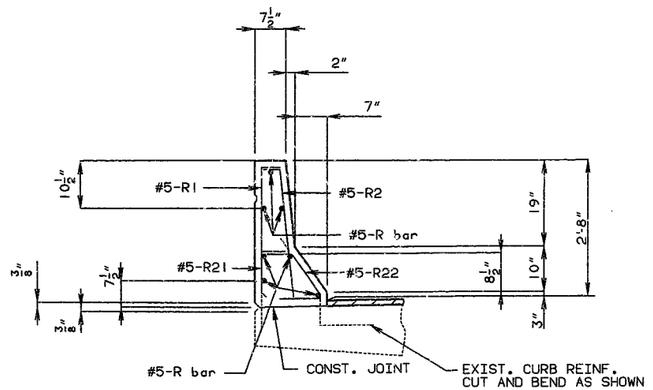
NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL ARC DIMENSIONS ALONG OUTSIDE EDGE OF SLAB.



ELEVATION NEAR RIGHT BARRIER CURB (W.B.L.)

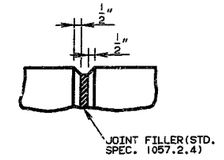


PART SECTION NEAR LEFT SAFETY BARRIER CURB
(RUSTICATION NOT SHOWN FOR CLARITY)

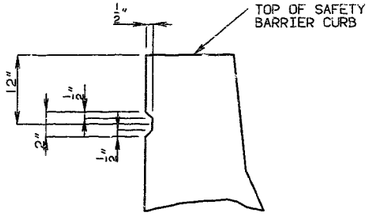


PART SECTION G-G

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS.
THE CROSS SECTIONAL AREA FOR EACH CURB ABOVE THE SLAB = 2.58 SQ. FT.



FILLED JOINT DETAIL



RUSTICATION DETAIL

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE FOR THE SAFETY BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF THE SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

FOR DETAIL OF PLASTIC WATERSTOP, SEE SHEET NO. 21.

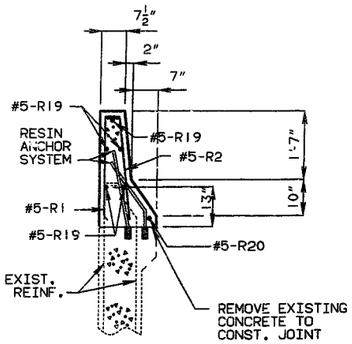
68 30

DETAILED SEPT. 1991
CHECKED MAY 1992

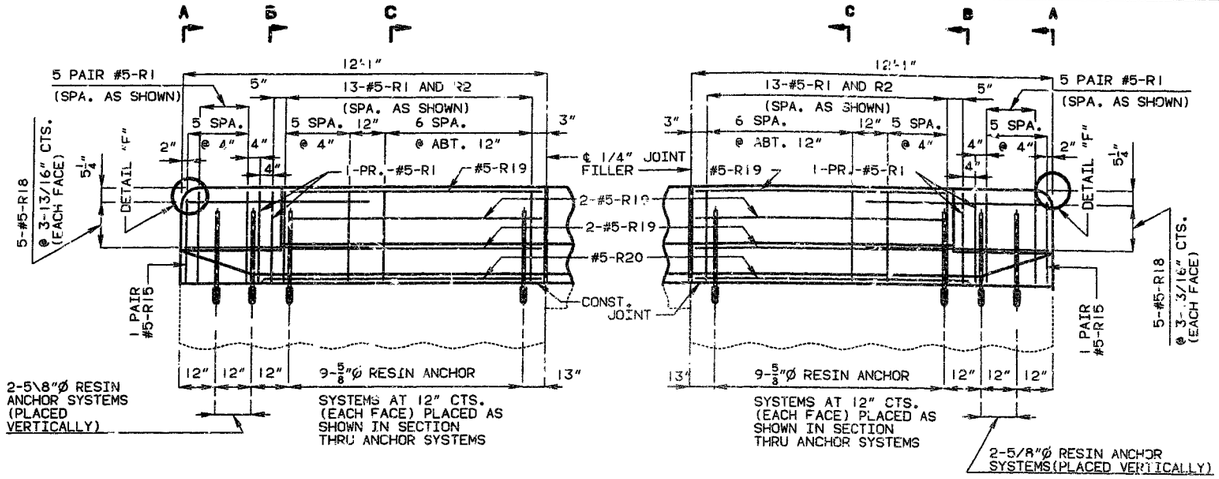
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

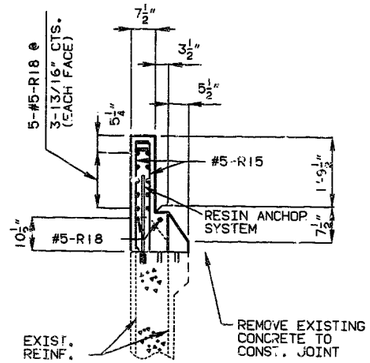
JACKSON COUNTY A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		36



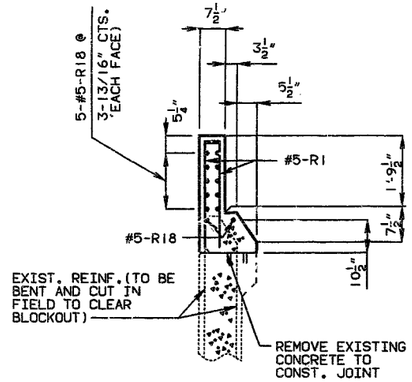
PART SECTION C-C



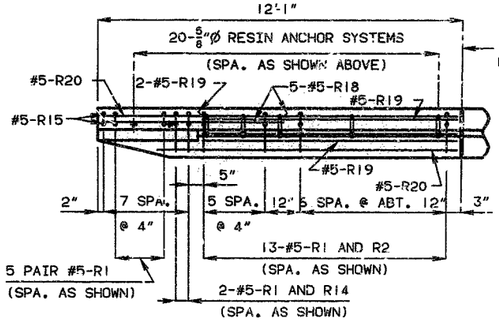


PART SECTION A-A

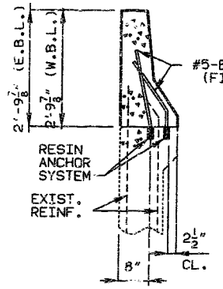
NOTE: RUSTICATION NOT SHOWN FOR CLARITY.



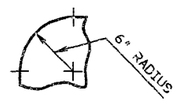
PART SECTION B-B



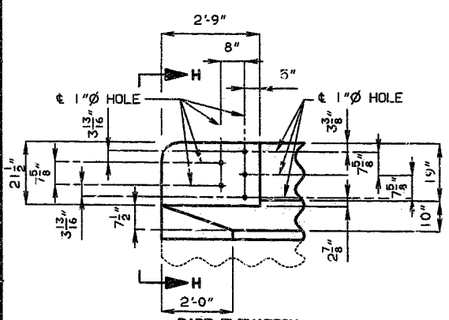
PLAN



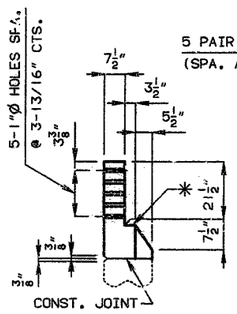
SECTION THRU ANCHOR SYSTEMS



DETAIL "F" (TYPICAL)

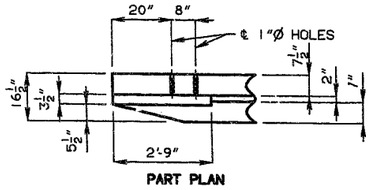


PART ELEVATION



PART ELEVATION H-H

* SLOPE 1/4" TOWARD ROADWAY



PART PLAN

DETAILS OF GUARD RAIL ATTACHMENT

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

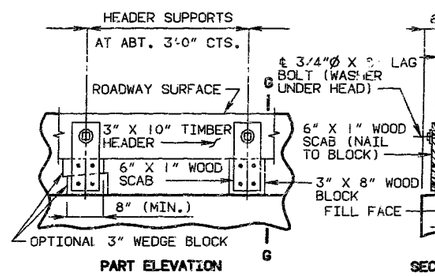
MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

THE CONTRACTOR SHALL USE ONE OF THE RESIN ANCHOR SYSTEMS LISTED IN THE JOB SPECIAL PROVISIONS FOR THE SAFETY BARRIER CURB.

THESE ANCHOR SYSTEMS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS, EXCEPT AS MODIFIED BY THE JOB SPECIAL PROVISIONS AND THAT AN EPOXY COATED GRADE 60 REINF. BAR(*) 2'-3" LONG SHALL BE SUBSTITUTED FOR THE 5/8"Ø THREADED ROD STUD.

COST OF FURNISHING AND INSTALLING THE ANCHOR SYSTEM COMPLETE IN PLACE SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF SAFETY BARRIER CURB.

FOR DETAILS OF RUSTICATION AND PLASTIC WATERSTOP SEE SHEET NO. 21.



PART ELEVATION

SECTION G-G

NOTE: COST OF TIMBER HEADERS COMPLETE IN PLACE TO BE INCLUDED IN CONTRACT UNIT PRICE FOR CONCRETE.

DETAILS OF TIMBER HEADER AT END BENTS

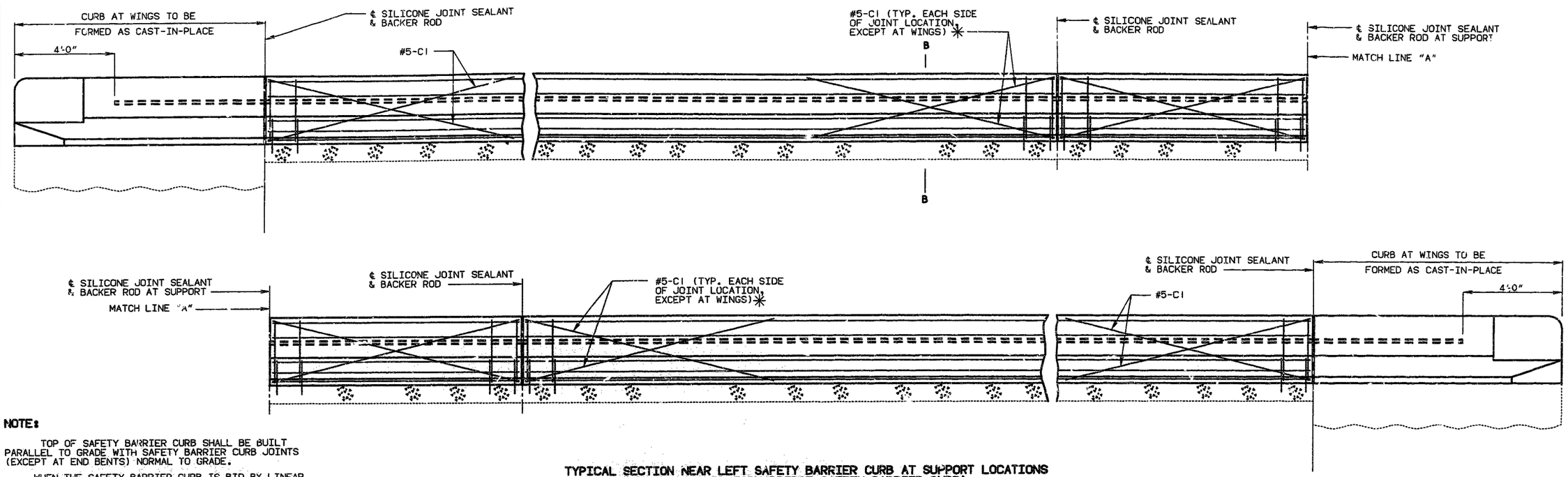
DETAILS OF SAFETY BARRIER CURB AT END BENTS

DETAILED SEPT. 1991
CHECKED MAY 1992

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

JACKSON COUNTY A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		37



NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

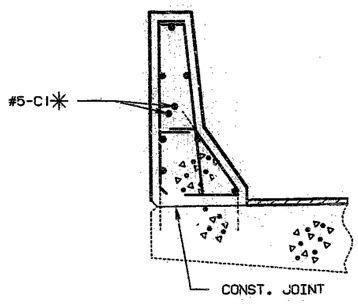
TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB AT SUPPORT LOCATIONS (OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB)

NOTE:

JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE SAFETY BARRIER CURBS INSTEAD OF JOINT FILLER.

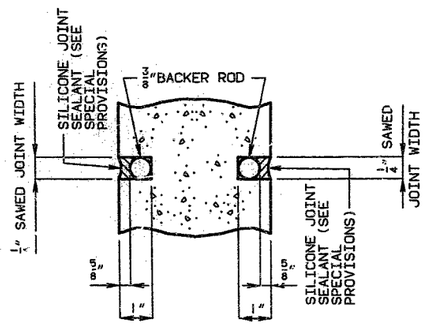
PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C1 BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE SAFETY BARRIER CURB.



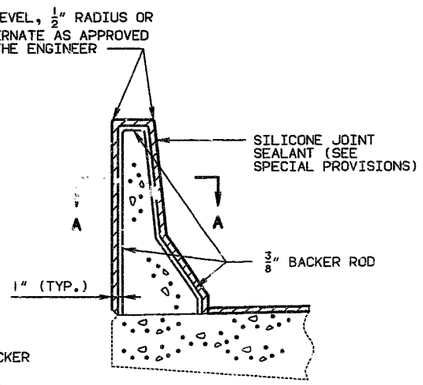
PART SECTION B-B

NOTE: ✳ EACH SIDE OF JOINT LOCATION, EXCEPT SPAN SIDE ONLY AT END BENTS.

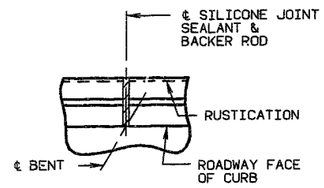


SECTION A-A

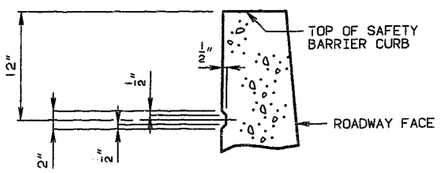
NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.



SECTION THRU JOINT



PART PLAN SHOWING SAFETY BARRIER CURB JOINT



PART SECTION SHOWING RUSTICATION DETAILS

RUSTICATION DETAIL

(USE ON HIGHWAY GRADE SEPARATION ONLY)

OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB

B/C SF16,GS 3.30, , 1A
BARRIER CURB ELEVATION REVISED:
FEB. 1991

DETAILED MAY 1992
CHECKED MAY 1992

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

JACKSON COUNTY A-1240R1

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			SUBSTRUCTURE																
			INT BT 2 EBL																
14	8D20		FOOTING&COL		20		X			7 9.000							7 9	7 9	290
8	6D21		BEAM		20		X			2 6.000							2 6	2 6	30
14	5D22		FOOTING		18		X			6 8.000							7 10	7 10	114
6	6H20		BEAM		20		X			13 3.000							13 3	13 3	119
2	6H21		BEAM		20		X			13 3.000							13 3	13 3	40
10	8H22		BEAM		18		X			13 3.000							15 1	15 1	403
26	4P1		COLUMN		16		X			2 9.000							9 6	9 6	165
40	6U20		BEAM		13	S	X			2 2.000	2 9.000	2 2.000	2 9.000				11 2	10 8	641
8	7U21		BEAM		21		X			3 3.000	2 6.000	2 6.000			3 1.500	10.500	8 3	7 10	128
14	8V20		COLUMN		20		X			27 8.000							27 8	27 8	1034
			INT BT 2 WBL																
14	8D20		FOOTING&COL		20		X			7 9.000							7 9	7 9	290
8	6D21		BEAM		20		X			2 6.000							2 6	2 6	30
14	5D22		FOOTING		18		X			6 8.000							7 10	7 10	114
6	6H20		BEAM		20		X			13 3.000							13 3	13 3	119
2	6H21		BEAM		20		X			13 3.000							13 3	13 3	40
10	8H22		BEAM		18		X			13 3.000							15 1	15 1	403
28	4P1		COLUMN		16		X			2 9.000							9 6	9 6	178
40	6U20		BEAM		13	S	X			2 2.000	2 9.000	2 2.000	2 9.000				11 2	10 8	641
8	7U21		BEAM		21		X			3 3.000	2 6.000	2 6.000			3 1.500	10.500	8 3	7 10	128
14	8V20		COLUMN		20		X			29 10.000							29 10	29 10	1115
			INT BT 3 EBL																
14	8D30		FOOTING&COL		20		X			7 9.000							7 9	7 9	290
8	6D31		BEAM		20		X			2 6.000							2 6	2 6	30
14	3D32		FOOTING		18		X			6 8.000							7 10	7 10	114
6	6H30		BEAM		20		X			13 3.000							13 3	13 3	119
2	6H31		BEAM		20		X			13 3.000							13 3	13 3	40
10	8H32		BEAM		18		X			13 3.000							15 1	15 1	403
26	4P1		COLUMN		16		X			2 9.000							9 6	9 6	165
40	6U30		BEAM		13	S	X			2 2.000	2 9.000	2 2.000	2 9.000				11 2	10 8	641
8	7U31		BEAM		21		X			3 3.125	2 6.000	2 6.000			3 1.500	11.125	8 3	7 10	128
14	8V30		COLUMN		20		X			28 0.000							28 0	28 0	1047

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			INT BT 3 WBL																
14	8D30		FOOTING&COL		20		X			7 9.000							7 9	7 9	290
8	6D31		BEAM		20		X			2 6.000							2 6	2 6	30
14	5D32		FOOTING		18		X			6 8.000							7 10	7 10	114
6	6H30		BEAM		20		X			13 3.000							13 3	13 3	119
2	6H31		BEAM		20		X			13 3.000							13 3	13 3	40
10	8H32		BEAM		18		X			13 3.000							15 1	15 1	403
26	4P1		COLUMN		16		X			2 9.000							9 6	9 6	165
40	6U30		BEAM		13	S	X			2 2.000	2 9.000	2 2.000	2 9.000				11 2	10 8	641
8	7U31		BEAM		21		X			3 3.125	2 6.000	2 6.000			3 1.500	11.125	8 3	7 10	128
14	8V30		COLUMN		20		X			28 0.000							28 0	28 0	1047
			SUPERSTRUCTR																
			END BT 1 EBL																
10	6H10		BEAM		20					14 9.000							14 9	14 9	222
6	4H11		DIAPHRAGM		20					14 9.000							14 9	14 9	99
1	4H12		APPROACH HCH		20					13 6.000							13 6	13 6	9
3	6H13		DIAPHRAGM		20					2 3.000							2 3	2 3	10
4	6H14		DIAPHRAGM		20					15 9.000							15 9	15 9	95
1	5H100		STRAND TIE		20					12 6.000							12 6	12 6	13
14	5U10		BEAM		13	S				2 4.125	2 7.000	2 4.125	2 7.000				10 9	10 6	153
14	4U11		APPROACH HCH		10	S					17.500	6.000					3 5	3 3	30
3	5U12		BEAM		10	S					2 7.000	2 4.125					7 6	7 4	23
15	6V10		DIAPHRAGM		19	S				5 1.000	3 8.000						8 9	8 7	193
15	6V11		DIAPHRAGM		20					5 1.000							5 1	5 1	115
3	6V12		DIAPHRAGM		19	S				5 1.000	2 4.125						7 5	7 3	33
			END BT 1 WBL																
10	6H10		BEAM		20					14 9.000							14 9	14 9	222
6	4H11		DIAPHRAGM		20					14 9.000							14 9	14 9	99
1	4H12		APPROACH HCH		20					13 6.000							13 6	13 6	9
3	6H13		DIAPHRAGM		20					2 3.000							2 3	2 3	10
4	6H14		DIAPHRAGM		20					15 9.000							15 9	15 9	95
1	5H100		STRAND TIE		20					12 6.000							12 6	12 6	13
14	5U10		BEAM		13	S				2 4.125	2 7.000	2 4.125	2 7.000				10 9	10 6	153
14	4U11		APPROACH HCH		10	S					17.500	6.000					3 5	3 3	30
3	5U12		BEAM		10	S					2 7.000	2 4.125					7 6	7 4	23
15	6V10		DIAPHRAGM		19	S				5 1.000	3 8.000						8 9	8 7	193
15	6V11		DIAPHRAGM		20					5 1.000							5 1	5 1	115
3	6V12		DIAPHRAGM		19	S				5 1.000	2 4.125						7 5	7 3	33

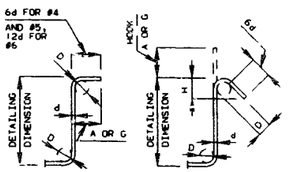
STATE NO. | PROJ. NO. | SHEET NO. 38

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 · SHAPE 23 · SHAPE 24 · SHAPE 22 · SHAPE 25 · SHAPE 26 · SHAPE 27 · SHAPE 28 · SHAPE 29 · SHAPE 31 · SHAPE 30 · SHAPE 32 · SHAPE 33 · SHAPE 34 · SHAPE 35 · SHAPE 36

SPOT WELD AASHTO M32 SIZE W5 WIRE (TYP.)

BENDING DIAGRAMS

STD 90.8 REVISED OCT. 1991 · MAY 1974



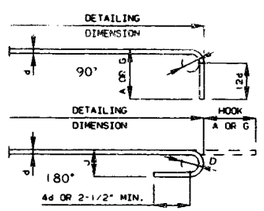
DETAILED 19
CHECKED 19

STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

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

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

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 FABRICATORS 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.

SHEET NO. 26 OF 35

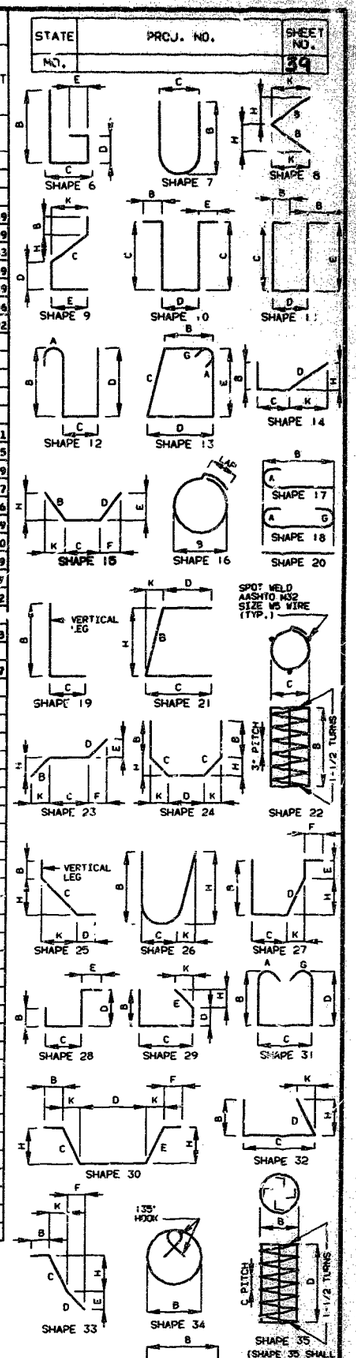
JACKSON COUNTY A-1240R1

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			END BT 4 EBL																									
10		6M40	BEAM		20					14	11.000													14	11	14	11	224
6		4M41	DIAPHRAGM		20					14	11.000													14	11	14	11	60
1		4M42	APPROACH MCH		20					13	6.000													13	6	13	6	9
3		6M43	DIAPHRAGM		20					2	3.000													2	3	2	3	10
4		6M44	DIAPHRAGM		20					15	11.000													15	11	15	11	96
1		5M400	STRAND TIE		20					12	6.000													12	6	12	6	13
14		5U40	BEAM		13	S				2	4.125	2	7.000	2	4.125	2	7.000							10	9	10	6	153
14		4U41	APPROACH MCH		10	S						17.500		6.000										3	5	3	3	30
3		5U42	BEAM		10	S						2	7.000	2	4.125									7	6	7	4	23
15		6V40	DIAPHRAGM		19	S				5	1.000	3	8.000											8	9	8	7	193
15		6V41	DIAPHRAGM		20					5	1.000													5	1	5	1	115
3		6V42	DIAPHRAGM		19	S				5	1.000	2	4.125											7	5	7	3	33
			END BT 4 WBL																									
10		6M40	BEAM		20					14	11.000													14	11	14	11	224
6		4M41	DIAPHRAGM		20					14	11.000													14	11	14	11	60
1		4M42	APPROACH MCH		20					13	6.000													13	6	13	6	9
3		6M43	DIAPHRAGM		20					2	3.000													2	3	2	3	10
4		6M44	DIAPHRAGM		20					15	11.000													15	11	15	11	96
1		5M400	STRAND TIE		20					12	6.000													12	6	12	6	13
14		5U40	BEAM		13	S				2	4.125	2	7.000	2	4.125	2	7.000							10	9	10	6	153
14		4U41	APPROACH MCH		10	S						17.500		6.000										3	5	3	3	30
3		5U42	BEAM		10	S						2	7.000	2	4.125									7	6	7	4	23
15		6V40	DIAPHRAGM		19	S				5	1.000	3	8.000											8	9	8	7	193
15		6V41	DIAPHRAGM		20					5	1.000													5	1	5	1	115
3		6V42	DIAPHRAGM		19	S				5	1.000	2	4.125											7	5	7	3	33
			DIAPHRAGMS @ INT BTS 2&3																									
54		5M115	DIAPHRAGM		20					3	9.000													3	9	3	9	750
24		5M116	DIAPHRAGM		20					13	3.000													13	3	13	3	332
24		5M117	DIAPHRAGM		21	S				2	2.000	18.000								2	1.000	7.125	3	8	3	6	88
24		5M118	DIAPHRAGM		15	S				18.125		2	2.500							17.375		5.000		3	9	3	8	92
32		4M119	DIAPHRAGM		28	S						2	7.000	3	7.000	17.000								7	2	7	0	150
48		5M120	DIAPHRAGM		10	S				14.000		3	7.000	7.250		14.000								10	1	9	8	484
			C.I.P. SLAB																									
780		6S1	SLAB		20					2	2.000													2	2	2	2	2538
780		6S2	SLAB		20					15	9.000													15	9	15	9	18452
156		6S3	SLAB		20					36	4.000													36	4	36	4	8513
96		6S4	SLAB		20					19	4.000													19	4	19	4	2788

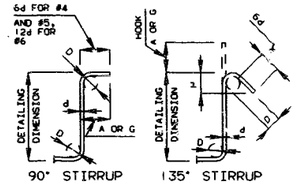
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			BARRIER CURB NEAR MEDIAN																									
426		5R7	CURBS@MEDIAN		19	S				2	7.500	3.500													2	11	2	10	1259
426		5R8	CURBS@MEDIAN		15	S				2	7.625	3.500									2	7.500	3.000		2	11	2	10	1259
426		5R9	CURBS@MEDIAN		27	S						6.500		11.125		8.500		12.000		9.125		6.375		3	2	3	0	1333
426		5R10	CURBS@MEDIAN		19	S					18.500	6.500												2	1	2	0	809
56		5R11	CURBS@MEDIAN		20					9	9.000													9	9	9	9	569
28		5R12	CURBS@MEDIAN		20					30	8.000													30	8	30	8	896
56		5R13	CURBS@MEDIAN		20					27	3.000													27	3	27	3	1592
			EXTERIOR BARRIER CURB																									
516		5R1	EXT. CURBS		19	S				2	7.500	3.500													2	11	2	10	1531
462		5R2	EXT. CURBS		15	S				2	7.625	3.500									2	7.500	3.000		2	11	2	10	1365
56		5R3	EXT. CURBS		20					9	9.000													9	9	9	9	569
28		5R4	EXT. CURBS		20					25	7.000													25	7	25	7	747
28		5R5	EXT. CURBS		20					30	8.000													30	8	30	8	896
28		5R6	EXT. CURBS		20					26	0.000													26	0	26	0	759
8		5R15	EXT. CURBS		19	S				2	3.000	3.500													2	7	2	5	20
40		5R18	EXT. CURBS		20					5	0.000													5	0	5	0	209
19		5R19	EXT. CURBS		20					9	1.000													9	1	9	1	189
4		5R20	EXT. CURBS		20					10	0.000													10	0	10	0	42
410		5R21	EXT. CURBS		1	S					12.000	6.500													19		17	6
410		5R22	EXT. CURBS		27	S						3.000		11.125		6.500				6.375		9.125			21		20	713
40		5C1	(SLIP-FORMED CURB ONLY)		20					10	0.000													10	0	10	0	417
			END OF LIST																									



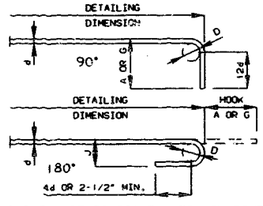
BENDING DIAGRAMS

STATE | PROJ. NO. | SHEET NO. 39



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	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		90 HOOKS	
		A OR G	J	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"	

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 FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAY WEIGHTS 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.

STD 90.8	REVISED
MAY 1974	OCT. 1991

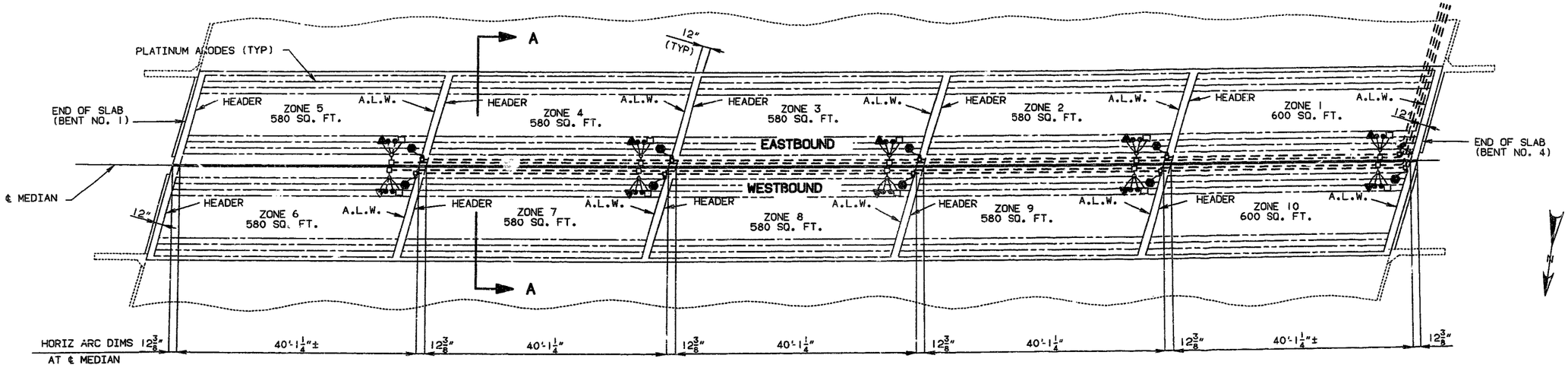
DETAILED 19
CHECKED 19

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

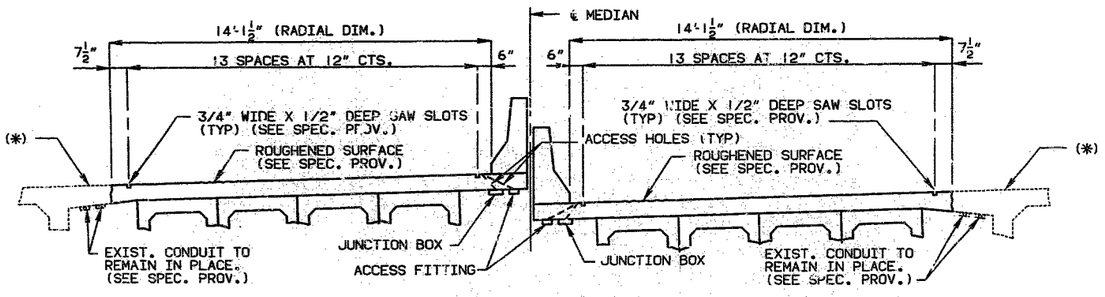
SHEET NO. 27 OF 35

JACKSON COUNTY A-1240R1

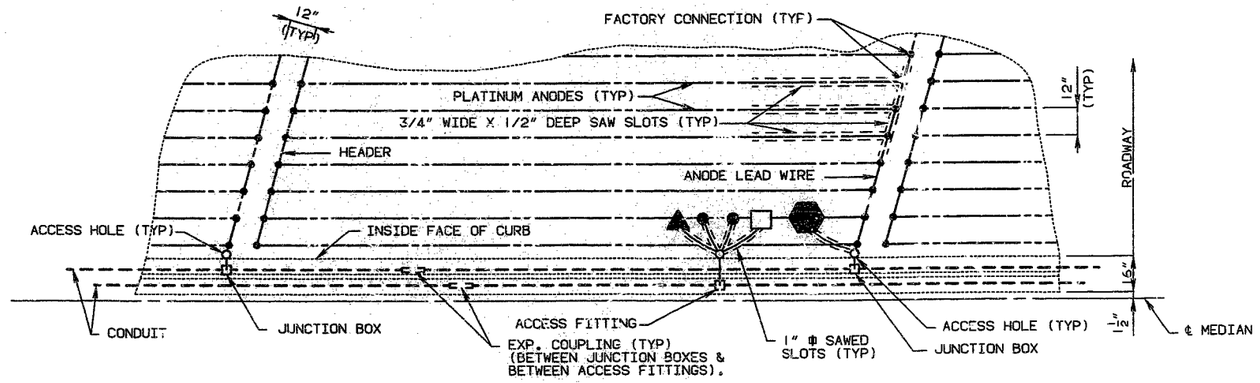
STATE	PROJ. NO.	SHEET NO.
MO.		40



PART PLAN OF SLAB, AT NEW MEDIAN WIDENING, SHOWING PLATINUM CATHODIC PROTECTION SYSTEM (ALTERNATE "A")



SECTION A-A



TYPICAL ZONE LAYOUT EXCEPT AS NOTED

NOTE: ANODES SHALL BE PLACED AS SHOWN WITH A MINIMUN TOLERANCE OF PLUS OR MINUS THREE INCHES.

NOTE:
DIMENSIONS ARE ALONG CENTERLINE OF MEDIAN (END TO END OF SLAB). ACTUAL ANODE LENGTHS FOR EACH ZONE ARE THE RESPONSIBILITY OF THE CONTRACTOR.
THE ANODE LEAD WIRE AND HEADER MAY BE AWG NO. 10 STRANDED COPPER WIRE WITH HMWPE INSULATION IN LIEU OF THE PLATINUM ANODE SHOWN.

(*)-EXISTING CATHODIC PROTECTION SYSTEM TO REMAIN IN PLACE. (SEE SPEC. PROV.).

NOTE:
FOR PART PLAN SHOWING LOCATION OF NEW RECTIFIER AND RELOCATION OF EXISTING RECTIFIER, SEE SHEET NO. 30.

DENOTATIONS

- A.L.W. (ANODE LEAD WIRE) (PLATINUM ANODE)
- HEADER (PLATINUM ANODE)
- PLATINUM ANODE
- SYSTEM NEGATIVES CONNECTION
- REFERENCE CELL
- REBAR PROBE (CORROSOMETER)
- GROUNDS
- CONDUIT

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.

REFERENCE CELL GROUND SHALL BE WELDED TO TOP REBAR WITHIN ONE FOOT OF REFERENCE CELL.

ALL ZONES ARE SIMILAR WITH VARYING WIDTHS (SEE SECTION THRU SLAB)

ANODE ASSEMBLY NUMBER MUST MATCH ZONE NUMBER.

REFERENCE CELLS ARE TO BE PLACED BETWEEN ANODES.

ESTIMATED QUANTITIES FOR INFORMATION ONLY

ITEM	UNIT	QUANTITY
PLATINUM ANODES	LIN.FT.	5910
REFERENCE CELLS	EACH	10
REBAR PROBES	EACH	10
THERMITE WELDS	EACH	30
CONDUIT 2" Ø PVC	LIN.FT.	1070 **

** QUANTITY DOES NOT INCLUDE CONDUIT FOR RELOCATING EXISTING RECTIFIER CONTROLLER.

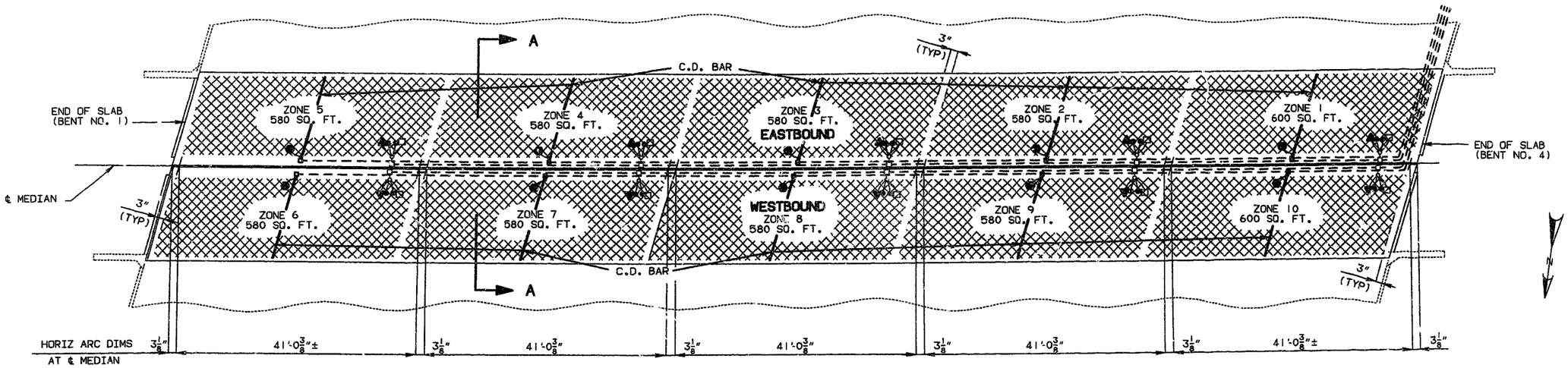
NOTE: ANODE AND CONDUIT LENGTHS ARE APPROXIMATE. ACTUAL LENGTHS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

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

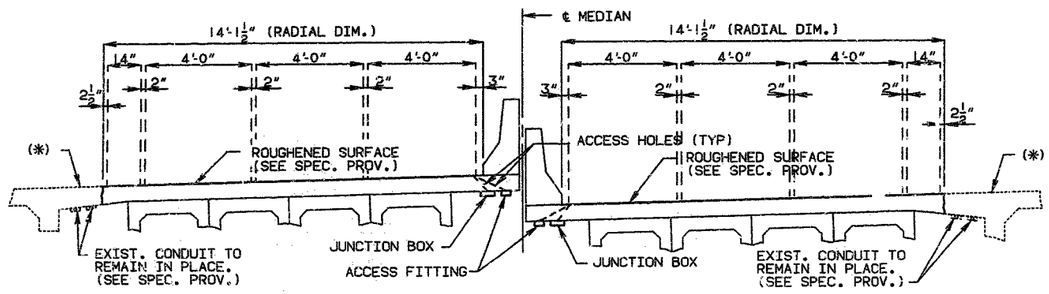
DETAILED APR. 1992
CHECKED MAY 1992

JACKSON COUNTY A-1240R1

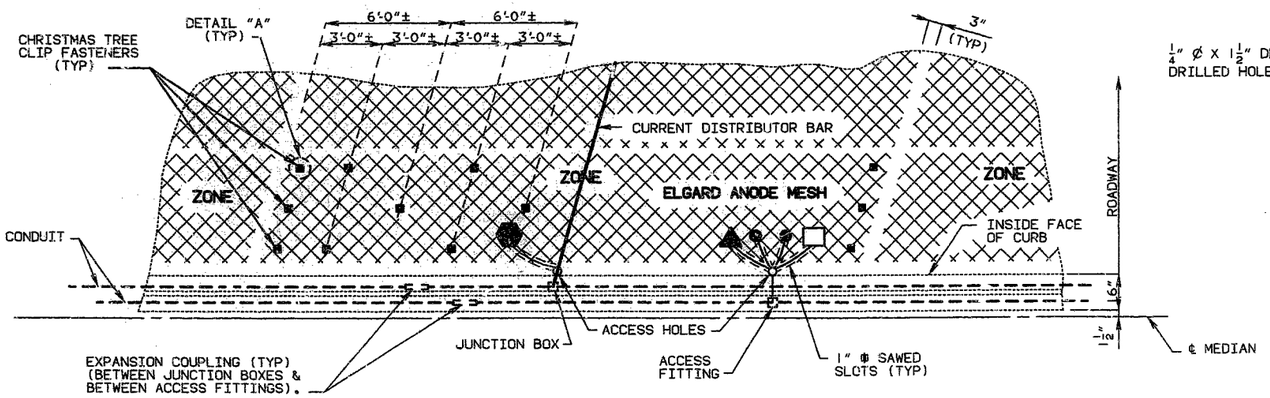
STATE	PROJ. NO.	SHEET NO.
MO.		41



PART PLAN OF SLAB, AT NEW MEDIAN WIDENING, SHOWING ELGARD ANODE MESH CATHODIC PROTECTION SYSTEM (ALTERNATE "B")



SECTION A-A

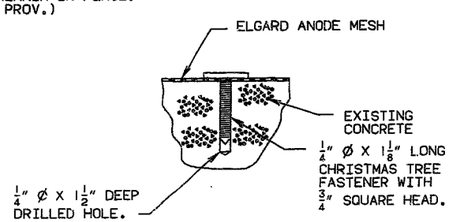


TYPICAL ZONE LAYOUT EXCEPT AS NOTED

NOTE:
FOR PART PLAN SHOWING LOCATION OF NEW RECTIFIER AND RELOCATION OF EXISTING RECTIFIER, SEE SHEET NO. 30.

DIMENSIONS ARE ALONG CENTERLINE OF MEDIAN (END TO END OF SLAB). ACTUAL ANODE LENGTHS FOR EACH ZONE ARE THE RESPONSIBILITY OF THE CONTRACTOR.

(*)-EXISTING CATHODIC PROTECTION SYSTEM TO REMAIN IN PLACE. (SEE SPEC. PROV.)



DETAIL "A"
(CHRISTMAS TREE CLIP)

DENOTATIONS

- ELGARD ANODE MESH
- SYSTEM NEGATIVES CONNECTION
- REFERENCE CELL
- REBAR PROBE (CORROSOMETER)
- GROUNDS
- CONDUIT

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.

REFERENCE CELL GROUND SHALL BE WELDED TO TOP REBAR WITHIN ONE FOOT OF REFERENCE CELL.

ALL ZONES ARE SIMILAR WITH VARYING WIDTHS (SEE SECTION THRU SLAB)

ANODE ASSEMBLY NUMBER MUST MATCH ZONE NUMBER.

ESTIMATED QUANTITIES FOR INFORMATION ONLY

ITEM	UNIT	QUANTITY
ELGARD ANODE MESH (210)	SQ.FT.	5400
REFERENCE CELLS	EACH	10
REBAR PROBES	EACH	10
THERMITE WELDS	EACH	30
CONDUIT 2" ⌀ PVC	LIN.FT.	1100 **

** QUANTITY DOES NOT INCLUDE CONDUIT FOR RELOCATING EXISTING RECTIFIER CONTROLLER.

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

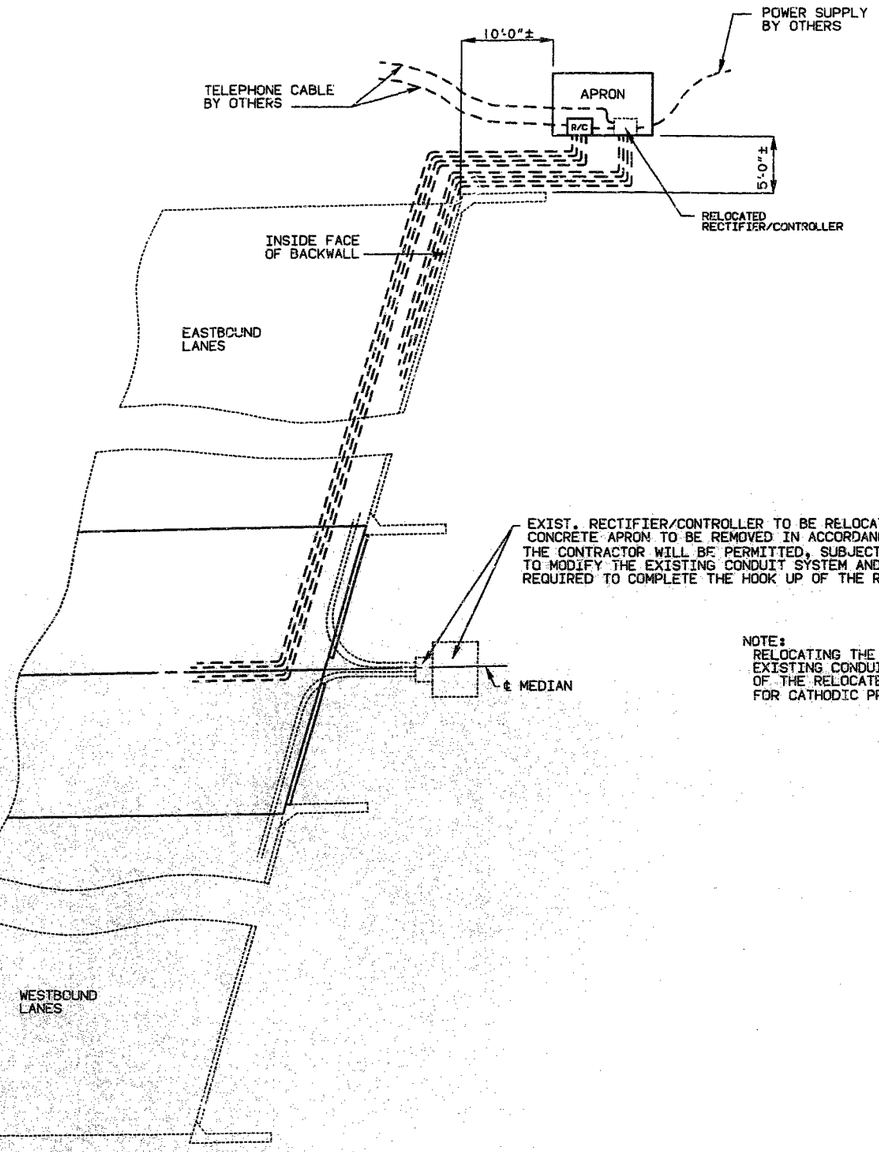
36

DETAILED APR. 1992
CHECKED MAY 1992

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

JACKSON COUNTY A-1240R1

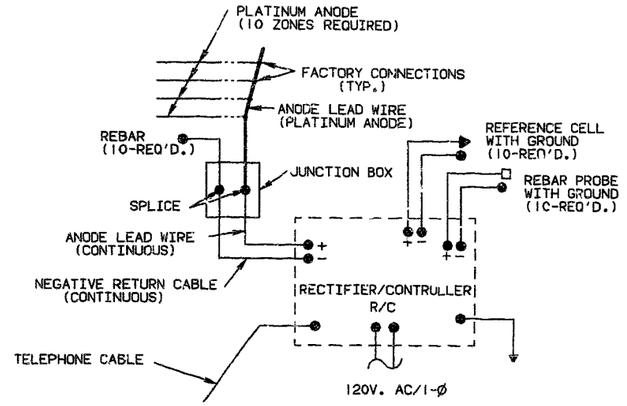
STATE	PROJ. NO.	SHEET NO.
MD.		42



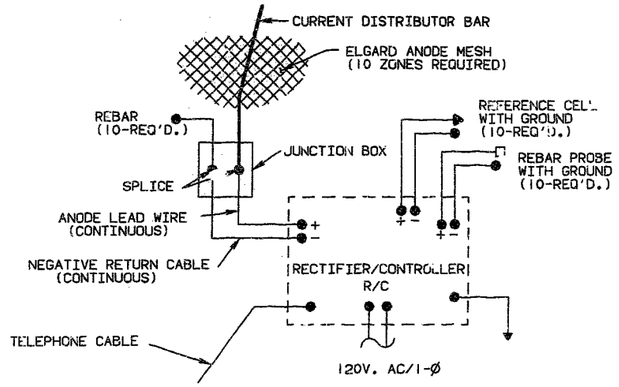
PART PLAN SHOWING LOCATION OF NEW RECTIFIER AND RELOCATION OF EXISTING RECTIFIER

EXIST. RECTIFIER/CONTROLLER TO BE RELOCATED AND THE EXISTING CONCRETE APRON TO BE REMOVED IN ACCORDANCE WITH STD. SPEC. 202. THE CONTRACTOR WILL BE PERMITTED, SUBJECT TO APPROVAL BY THE ENGINEER, TO MODIFY THE EXISTING CONDUIT SYSTEM AND/OR SHALL PROVIDE NEW CONDUIT AS REQUIRED TO COMPLETE THE HOOK UP OF THE RELOCATED RECTIFIER.

NOTE:
RELOCATING THE EXISTING RECTIFIER, REMOVING THE EXISTING CONCRETE APRON, MODIFYING EXISTING CONDUIT AND/OR PROVIDING NEW CONDUIT AS REQUIRED TO COMPLETE THE HOOK-UP OF THE RELOCATED RECTIFIER SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, PER LUMP SUM, FOR CATHODIC PROTECTION SYSTEM.



PARTIAL SCHEMATIC (ALTERNATE "A")



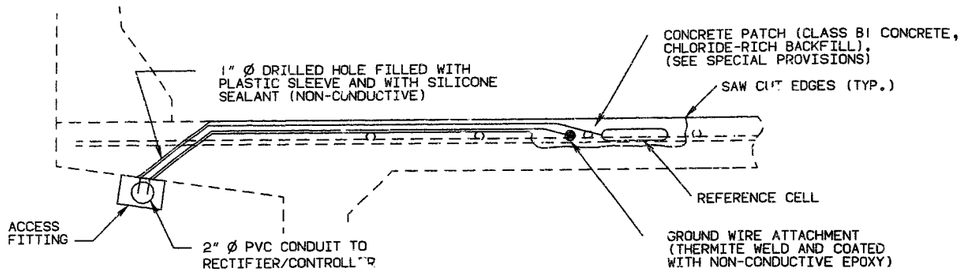
PARTIAL SCHEMATIC (ALTERNATE "B")

DETAILED APR. 1992
CHECKED MAY 1992

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

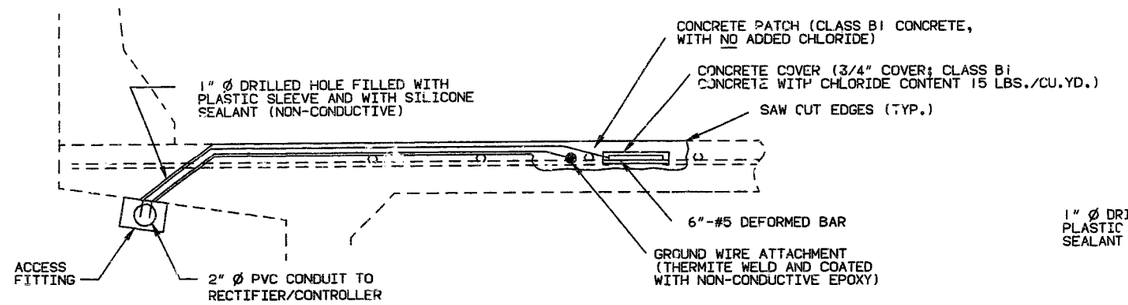
JACKSON COUNTY A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		43

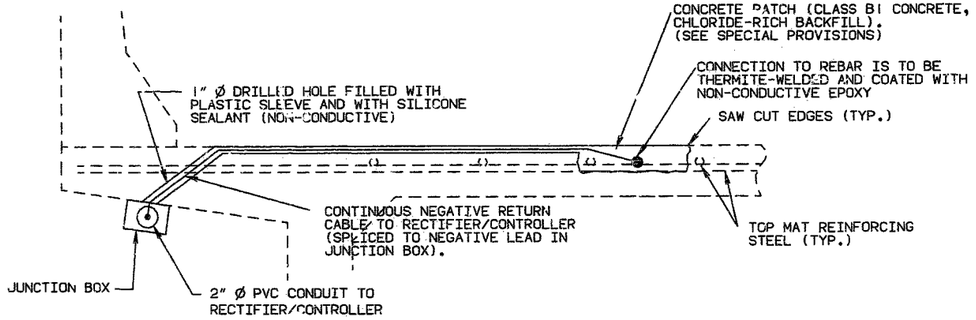


REFERENCE CELL DETAILS

NOTE: THE REFERENCE CELL SHALL BE PLACED IN THE EXCAVATED AREA WITHIN 1" BUT NOT IN DIRECT CONTACT WITH TOP MAT REINFORCING STEEL.



REBAR PROBE DETAILS



SYSTEM NEGATIVE CONNECTION DETAILS

NOTE:

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 AT ABOUT 5'-0" CTS., (GALV./AASHTO M111).

WEEPHOLES SHALL BE PROVIDED AT APPROPRIATE LOCATIONS TO DRAIN ANY MOISTURE IN THE CONDUIT LINES.

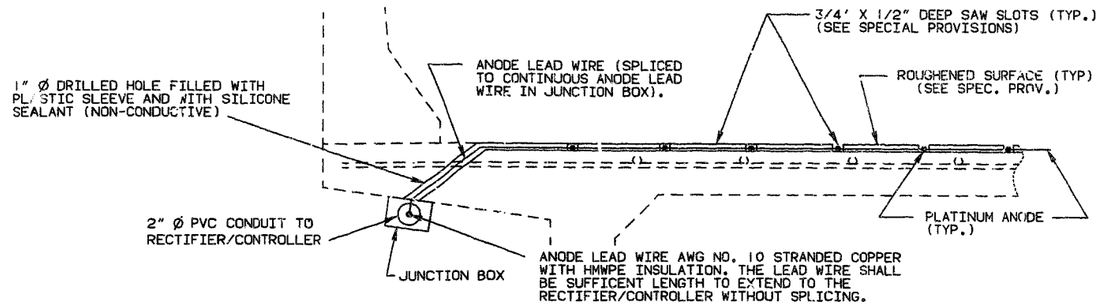
EXPANSION COUPLINGS SHALL BE INSTALLED ON CONDUIT LINES BETWEEN ALL JUNCTION BOXES & ACCESS FITTINGS AS APPROVED BY THE ENGINEER.

THE LOCATION AND DIRECTION OF CONDUIT MAY BE SHIFTED TO MEET FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

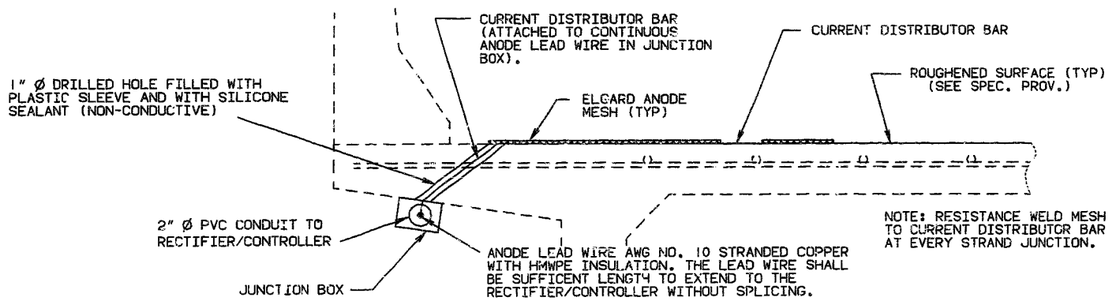
ALL JUNCTION BOXES SHALL BE PVC MOLDED, SURFACE MOUNTED, SIZE 6" X 6" X 4" AND EQUAL TO CARLON ELECTRICAL CONSTRUCTION PRODUCTS OR TRIANGLE CONDUIT AND CABLE COMPANY, INC. THE TERMINATIONS SHALL BE PERMANENT OR SEPARABLE.

THE TERMINATIONS AND COVERS SHALL BE OF WATERTIGHT CONSTRUCTION.

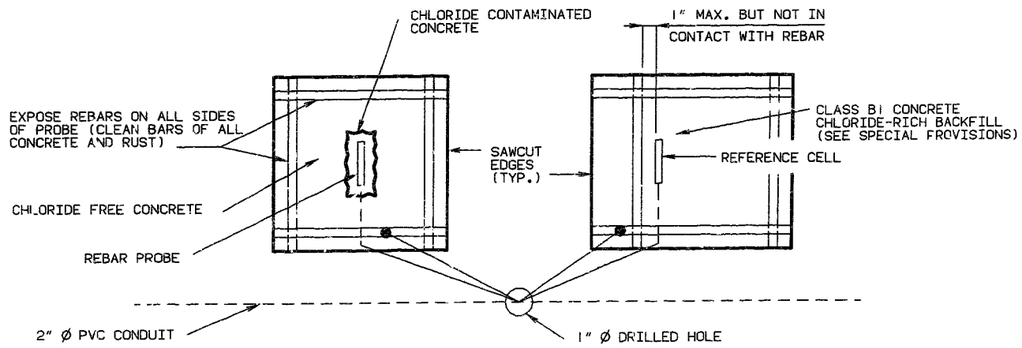
ALL CONCRETE REMOVAL SHALL BE INITIATED BY SAW CUTTING THE FIRST $\frac{1}{2}$".



PLATINUM ANODE TO ANODE LEAD WIRE DETAIL (ALTERNATE "A")



DISTRIBUTOR BAR TO ANODE LEAD WIRE DETAIL (ALTERNATE "B")



PLAN OF REBAR PROBE AND REFERENCE CELL

REVISED:

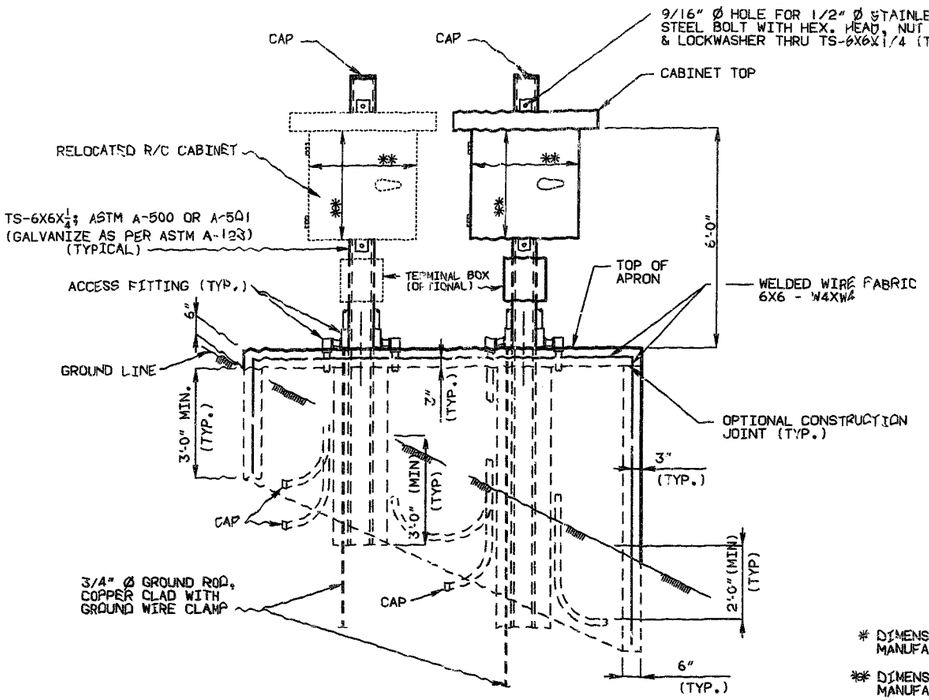
DETAILED APR. 1992
CHECKED MAY 1992

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

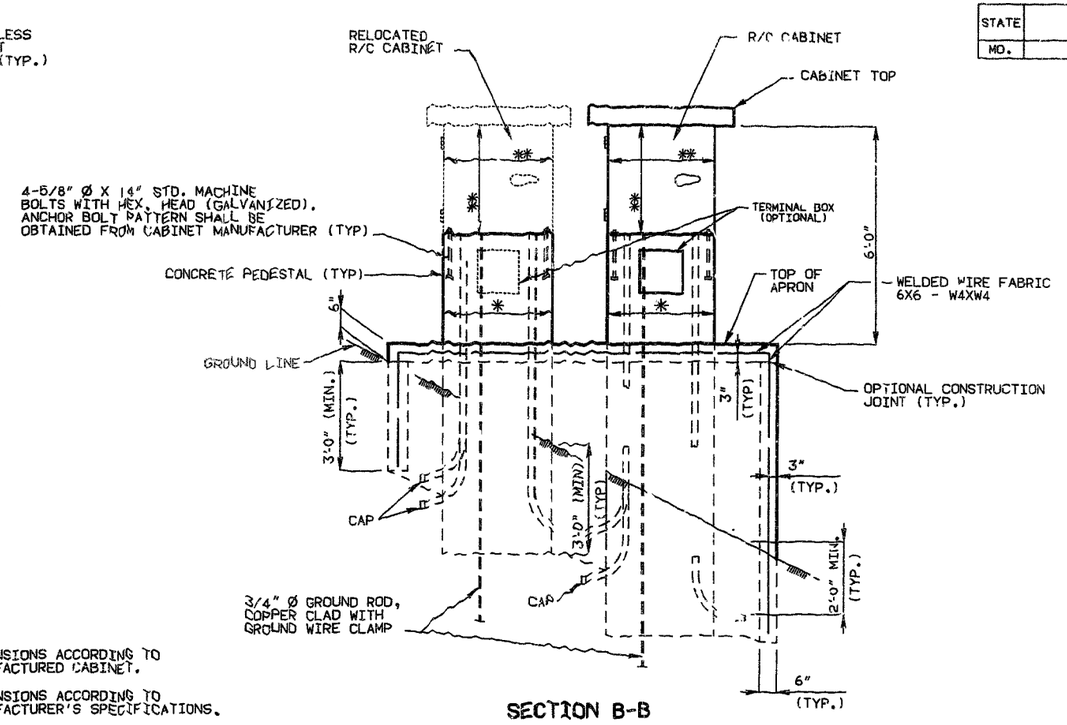
JACKSON COUNTY

A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		44



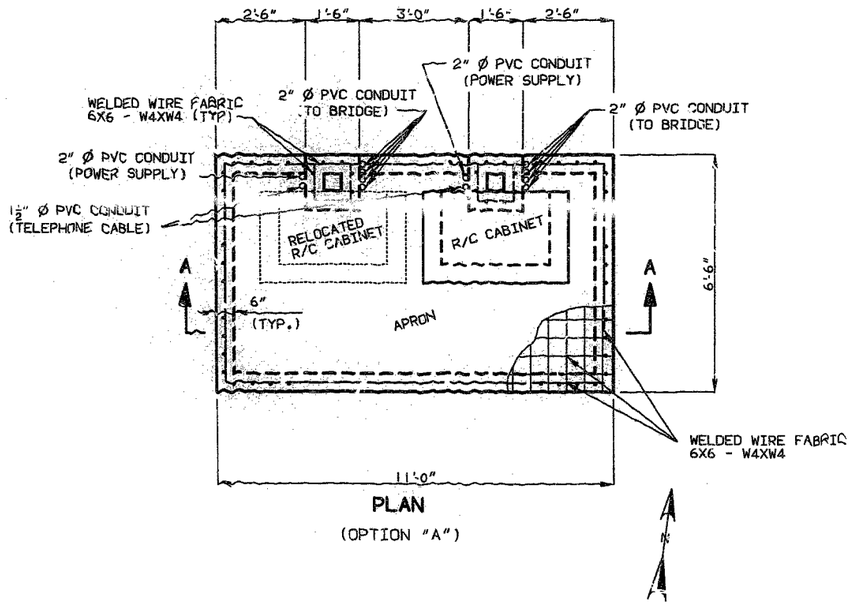
SECTION A-A



SECTION B-B

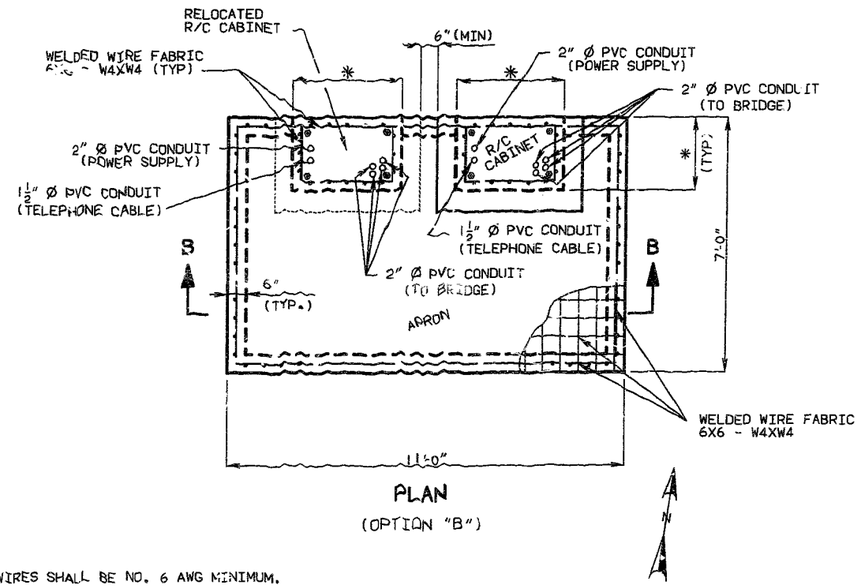
* DIMENSIONS ACCORDING TO MANUFACTURED CABINET.

** DIMENSIONS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.



PLAN

(OPTION "A")



PLAN

(OPTION "B")

NOTE:

GROUND WIRES SHALL BE NO. 6 AWG MINIMUM.

THE 3/4" Ø GROUND RODS SHALL BE SUFFICIENT LENGTH TO EXTEND A MINIMUM OF 10'-0" BELOW BOTTOM OF CONCRETE PEDESTAL.

KNOCKOUTS OR DRILLED HOLES SHALL BE PROVIDED IN CABINETS FOR ALL CONDUITS. LOCATION OF THESE HOLES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND CABINET MANUFACTURER.

A-1235

REVISED:

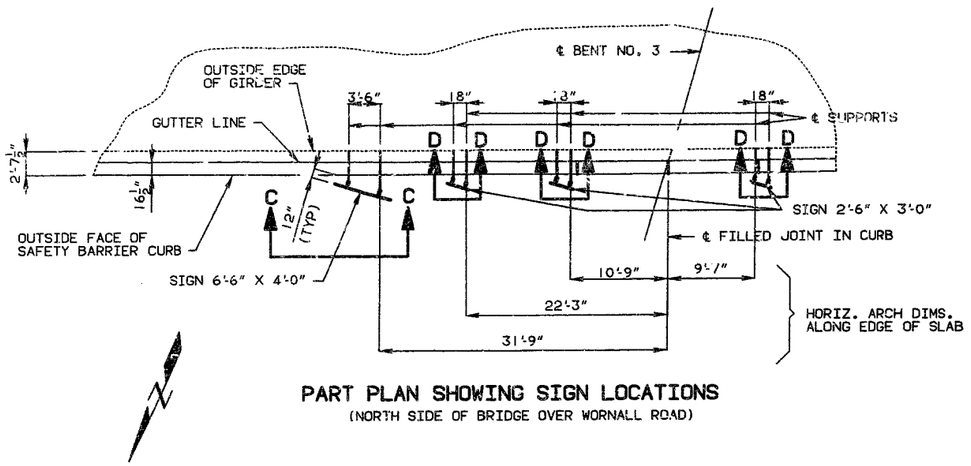
DETAILED APR. 1991
CHECKED MAY 1991

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

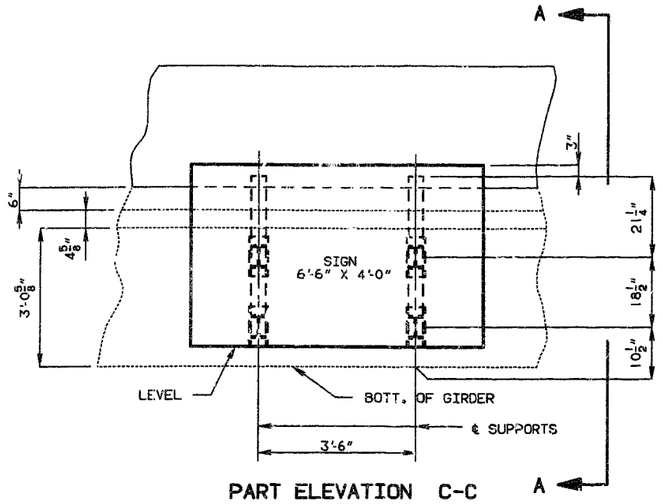
JACKSON COUNTY

A-1240R1

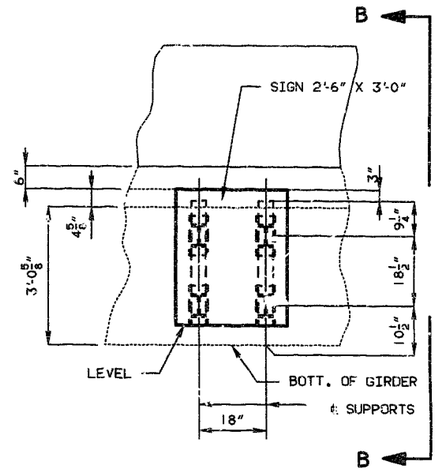
STATE	PROJ. NO.	SHEET NO.
MO.		45



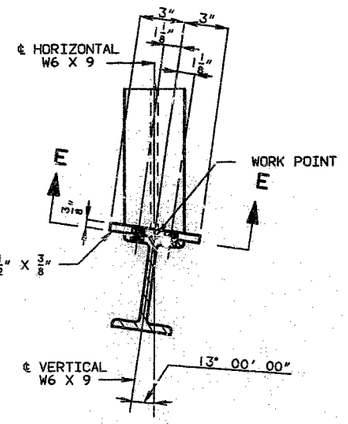
PART PLAN SHOWING SIGN LOCATIONS
(NORTH SIDE OF BRIDGE OVER WORNALL ROAD)



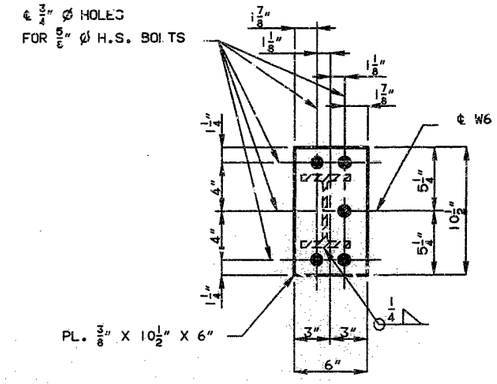
PART ELEVATION C-C



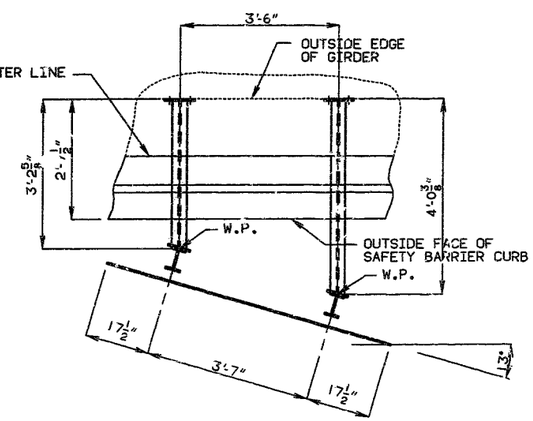
PART ELEVATION D-D



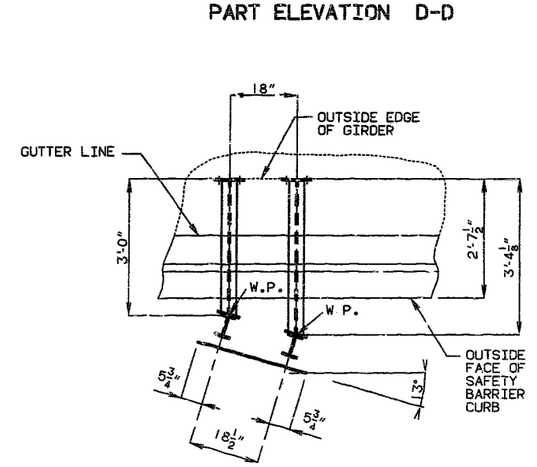
DETAIL "D"



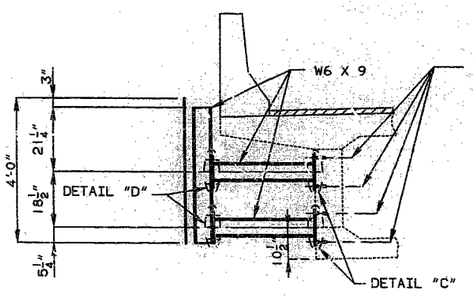
SECTION E-E



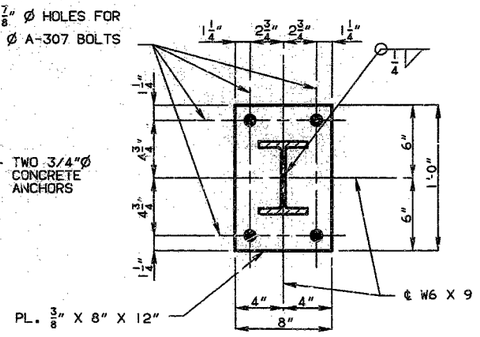
PART PLAN SHOWING DIMENSIONS AT 6'-6" X 4'-0" SIGN



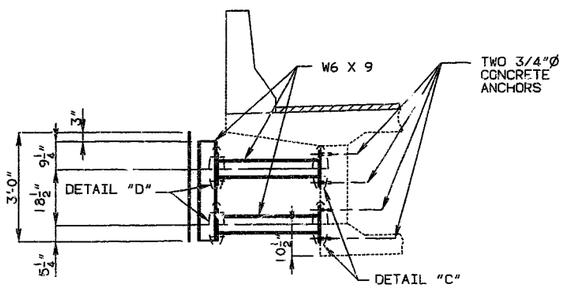
PART PLAN SHOWING DIMENSIONS AT 2'-6" X 3'-0" SIGNS



SECTION A-A



DETAIL "C"



SECTION B-B

GENERAL NOTES:

CENTER AND LEVEL SIGNS ON BRACKET.

ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

ALL STRUCTURAL STEEL SHALL BE A.S.T.M. A36, GALVANIZED.

OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY LINES INDICATE NEW WORK.

CONCRETE ANCHORS SHALL BE THE NON-DRILLING EXPANSION TYPE. THEY SHALL HAVE A CERTIFIED CONCRETE PULLOUT STRENGTH (ULTIMATE LOAD) OF AT LEAST 12,100 POUNDS IN 4000 PSI CONCRETE. THE HOLE SHALL BE PRE-DRILLED WITH A CONVENTIONAL CARBIDE MASONRY BIT.

THE COST OF FURNISHING AND ERECTING THE SIGN SUPPORTS, INCLUDING THE CONCRETE ANCHORS COMPLETE-IN-PLACE, SHALL BE PAID FOR AS FABRICATED SIGN SUPPORT BRACKETS, LUMP SUM.

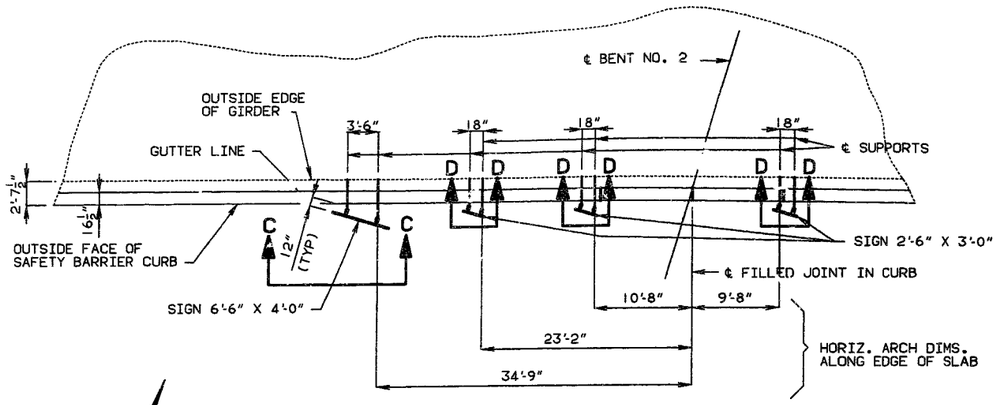
DETAILED JUNE 1992
CHECKED JUNE 1992

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

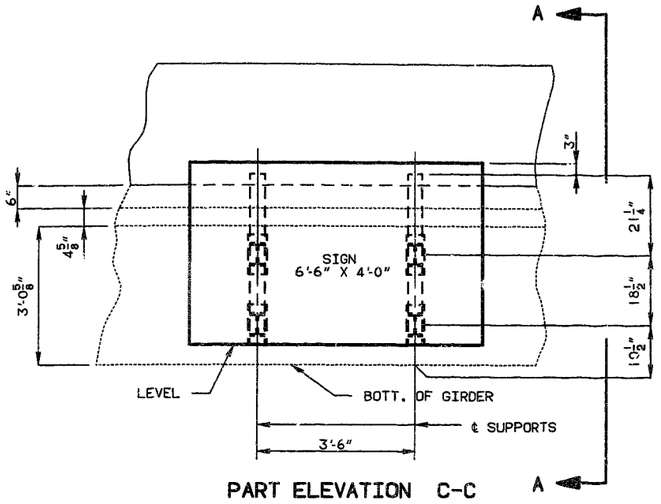
JACKSON COUNTY

A-1240R1

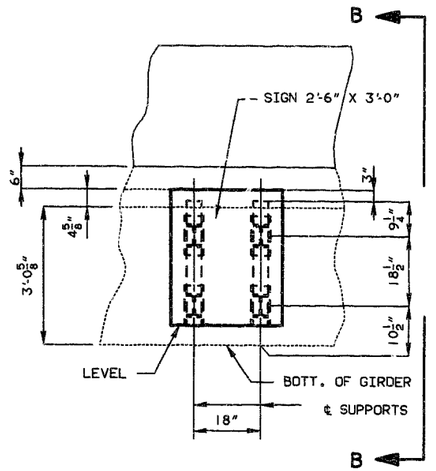
STATE	PROJ. NO.	SHEET NO.
MD.		4-6



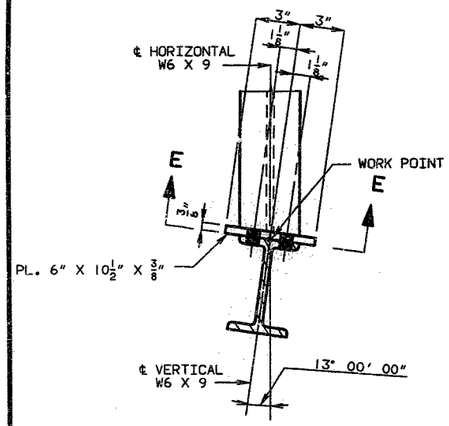
PART PLAN SHOWING SIGN LOCATIONS
(SOUTH SIDE OF BRIDGE OVER WORNALL ROAD)



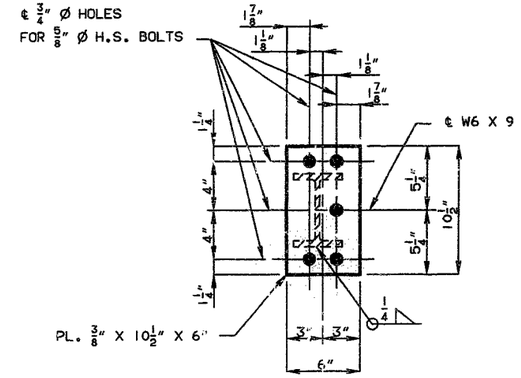
PART ELEVATION C-C



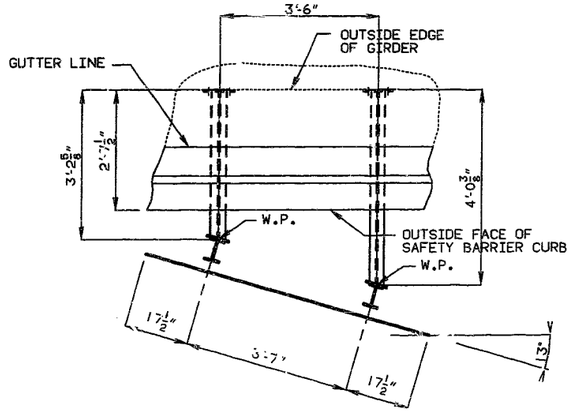
PART ELEVATION D-D



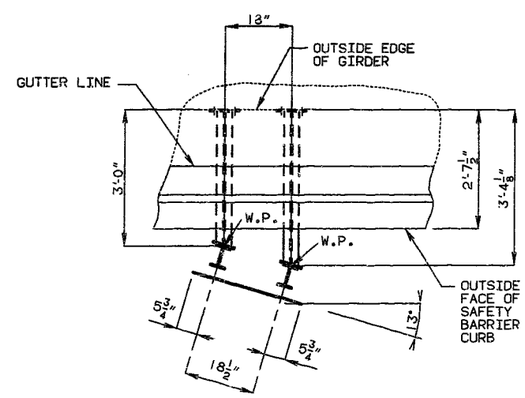
DETAIL "D"



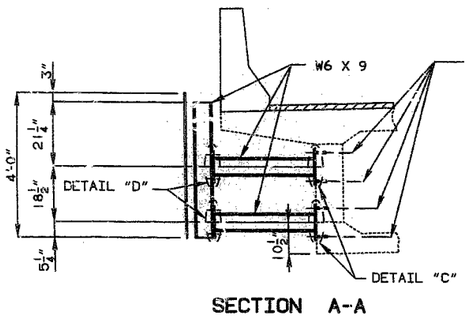
SECTION E-E



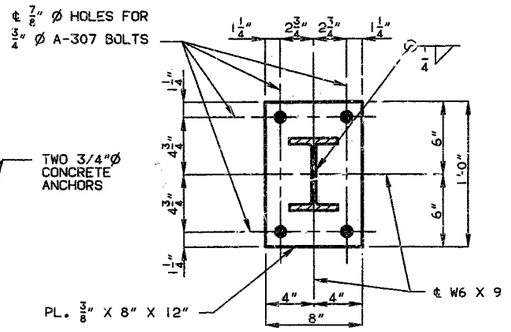
PART PLAN SHOWING DIMENSIONS AT 6'-6" X 4'-0" SIGN



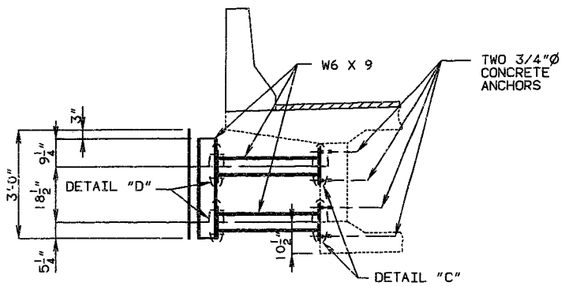
PART PLAN SHOWING DIMENSIONS AT 2'-6" X 3'-0" SIGNS



SECTION A-A



DETAIL "C"



SECTION B-B

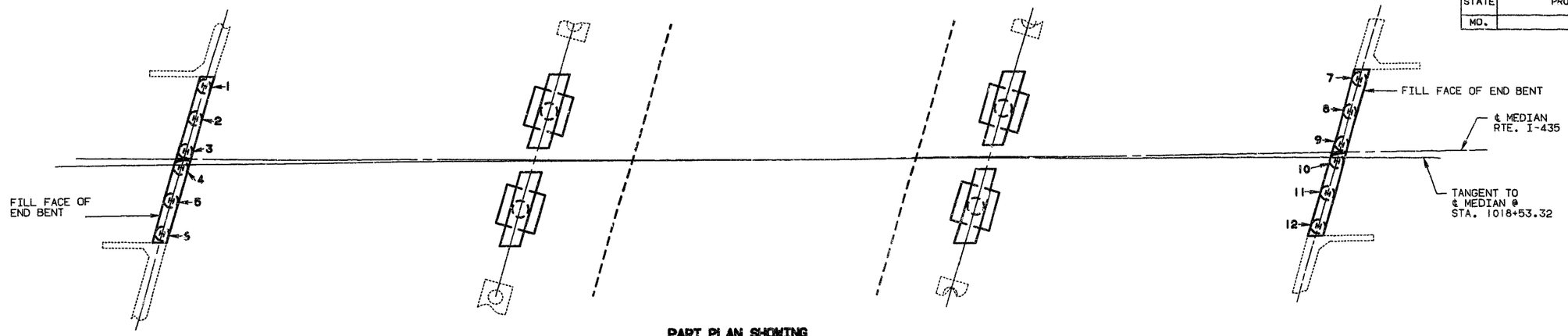
DETAILED JUNE 1992
CHECKED JUNE 1992

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

JACKSON COUNTY

A-1240R1

STATE	PROJ. NO.	SHEET NO.
MO.		47



PART PLAN SHOWING
PILE NUMBERING FOR RECORDING
"AS BUILT PILE" DATA

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
			END BENT NO. 1
1			
2			
3			
4			
5			
6			
			END BENT NO. 4
7			
8			
9			
10			
11			
12			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS

NOTE: INDICATE IN REMARK COLUMN:
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TC BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

MISC. PILES IN PLACE MAY 1992

REVISED:

DETAILED MAY 1992
CHECKED MAY 1992

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

AS BUILT PLANS

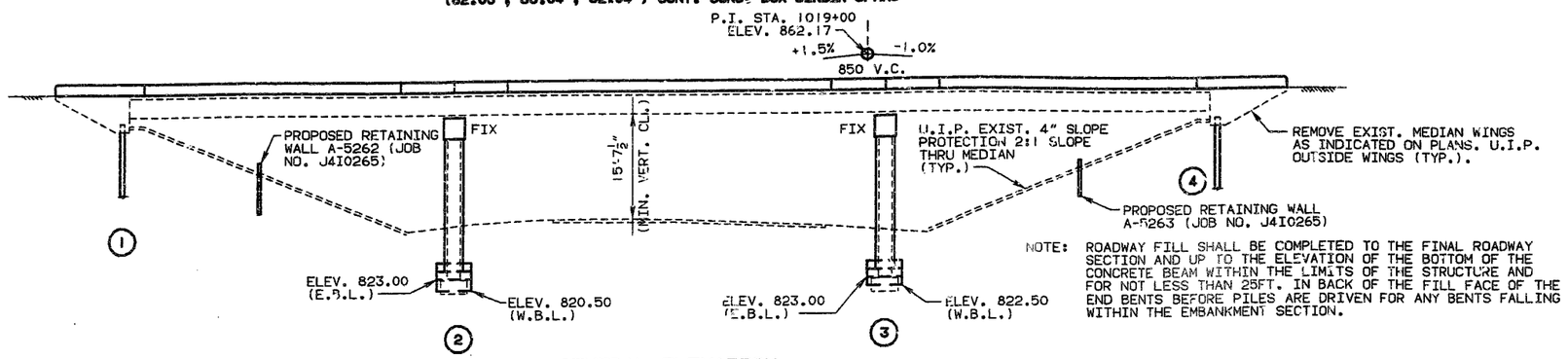
JACKSON COUNTY A-1240R1

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ. NO.	SHEET NO.
MO.	F.A.I.-435-1(254)	15
SEC. 31,32	TWP. 48N RGE. 33W	

FINAL PLAN

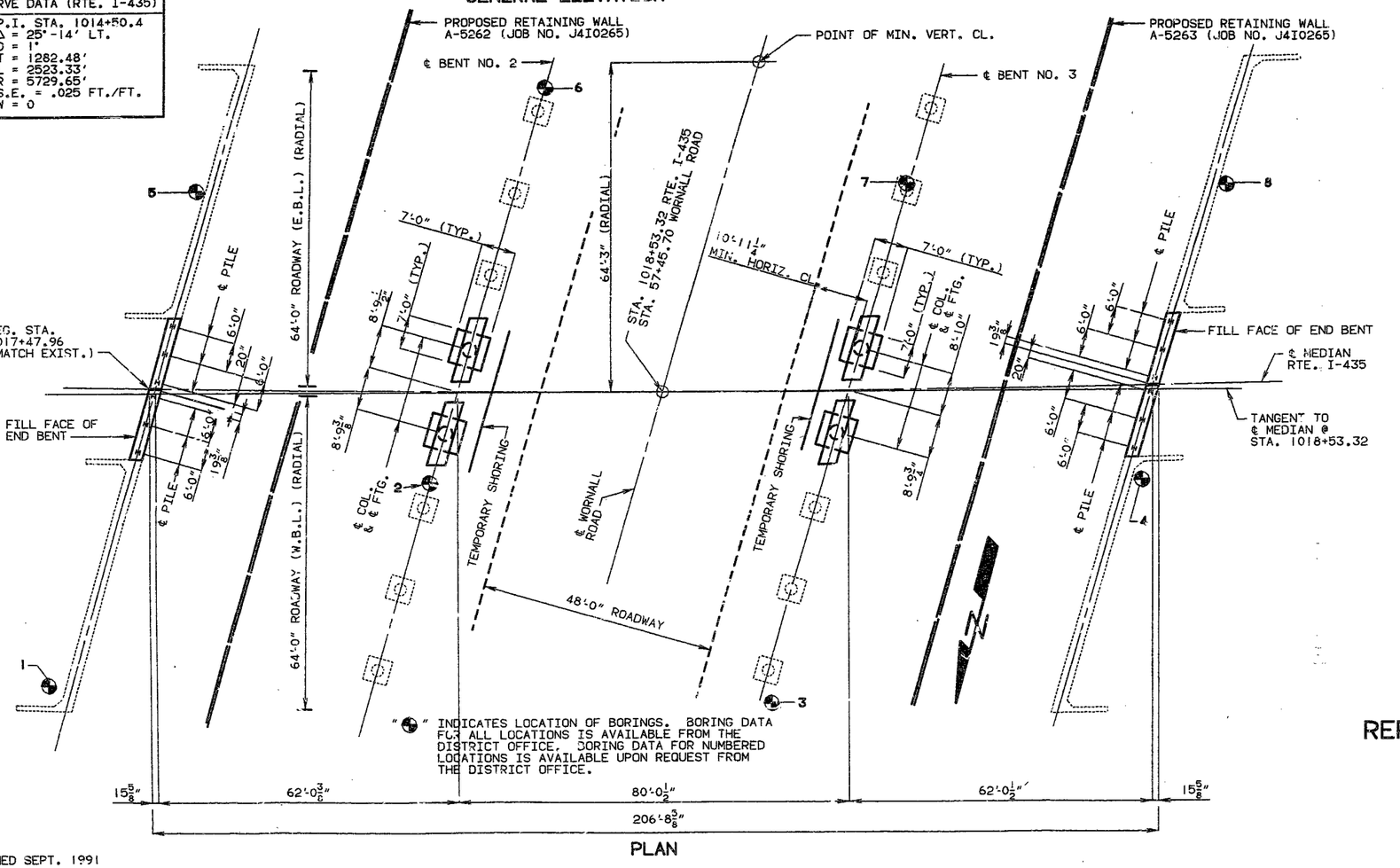
WIDEN MEDIAN RT. AND LT. - U.I.P. EXISTING TWIN (62.03', 80.04', 62.04') CONT. CONC. BOX GIRDER SPANS



NOTE: ROADWAY FILL SHALL BE COMPLETED TO THE FINAL ROADWAY SECTION AND UP TO THE ELEVATION OF THE BOTTOM OF THE CONCRETE BEAM WITHIN THE LIMITS OF THE STRUCTURE AND FOR NOT LESS THAN 25FT. IN BACK OF THE FILL FACE OF THE END BENTS BEFORE PILES ARE DRIVEN FOR ANY BENTS FALLING WITHIN THE EMBANKMENT SECTION.

CURVE DATA (RTE. I-435)
P.I. STA. 1014+50.4
Δ = 25°-14' LT.
D = 1°
T = 1282.48'
L = 2523.33'
R = 5729.65'
S.E. = .025 FT./FT.
W = 0

GENERAL ELEVATION



"⊕" INDICATES LOCATION OF BORINGS. BORING DATA FOR ALL LOCATIONS IS AVAILABLE FROM THE DISTRICT OFFICE. BORING DATA FOR NUMBERED LOCATIONS IS AVAILABLE UPON REQUEST FROM THE DISTRICT OFFICE.

15⅝" | 62'-0⅜" | 80'-0½" | 62'-0½" | 15⅝"

206'-8⅝"

PLAN

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1989 AND INTERIM 1990. LOAD FACTOR DESIGN. A.A.S.H.T.O.-1983 GUIDE SPECIFICATIONS FOR SEISMIC DESIGN. PERFORMANCE CATEGORY A.

DESIGN LOADING:

HS20-44 35# FUTURE WEARING SURFACE
MODIFIED 24,000# TANDEM AXLE
EARTH 120#/CU. FT., EQUIVALENT FLUID PRESSURE 45#/CU. FT.

SUPERSTRUCTURE: SIMPLY-SUPPORTED, NON-COMPOSITE FOR DEAD LOAD. CONTINUOUS COMPOSITE FOR LIVE LOAD.

DESIGN UNIT STRESSES:

CLASS B CONCRETE (SUBSTRUCTURE) F'C=3,000 PSI

CLASS B2 CONCRETE (SUPERSTRUCTURE, EXCEPT PRESTRESSED GDRS. AND SAFETY BARRIER CURB) F'C=4,000 PSI

CLASS B1 CONCRETE (SAFETY BARRIER CURB) F'C=4,000 PSI

REINFORCING STEEL (GRADE 60) FY=60,000 PSI

STEEL PILE FB=9,000 PSI

FOR PRESTRESSED GIRDER STRESSES, SEE SHT. NOS. 11, 12 AND 13.

NEOPRENE BEARING PADS: BEARINGS SHALL BE 60 DUROMETER NEOPRENE PADS. THE NEOPRENE PAD SHALL BE BONDED TO THE BEARING SEAT WITH AN EPOXY ADHESIVE AS APPROVED BY THE BEARING MANUFACTURER FOR BONDING NEOPRENE TO CONCRETE.

JOINT FILLER: ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1057.2.4, EXCEPT AS NOTED.

REINFORCING STEEL: MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2", UNLESS OTHERWISE SHOWN.

BARS BONDED IN OLD CONCRETE NOT REMOVED SHALL BE CLEANLY STRIPPED AND EMBEDDED INTO NEW CONCRETE WHERE POSSIBLE. IF LENGTH IS AVAILABLE, OLD BARS SHALL EXTEND INTO NEW CONCRETE AT LEAST 30 DIAMETERS FOR DEFORMED BARS, UNLESS OTHERWISE NOTED.

CONSTRUCTION CLEARANCE: A MINIMUM VERTICAL CLEARANCE OF 14'-9" FROM CROWN OF EXISTING LANES AND A MINIMUM LATERAL CLEARANCE OF 28'-0" CENTERED ON EXISTING LANES SHALL BE MAINTAINED DURING CONSTRUCTION.

TRAFFIC MAINTAINED: TRAFFIC OVER STRUCTURE TO BE MAINTAINED DURING CONSTRUCTION. (SEE ROADWAY PLANS)

EXISTING STRUCTURE: OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY LINES INDICATE NEW WORK.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW MATERIALS.

RESIN ANCHOR SYSTEMS: THE CONTRACTOR SHALL USE ONE OF THE RESIN ANCHOR SYSTEMS LISTED IN THE SPECIAL PROVISIONS. THESE ANCHOR SYSTEMS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS EXCEPT AS MODIFIED BY THE JOB SPECIAL PROVISIONS AND THAT A PLAIN, #5, GRADE 60 REINFORCING BAR 2'-3" LONG SHALL BE SUBSTITUTED FOR THE THREADED ROD STUD.

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.

COST OF FURNISHING AND INSTALLING THE ANCHOR SYSTEM COMPLETE IN PLACE SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF SAFETY BARRIER CURB.

ALL BENTS ARE PARALLEL.

ROADWAY SURFACING ADJACENT TO BRIDGE ENDS TO MATCH BRIDGE OVERLAY (ROADWAY ITEM).

B.M. ELEV. 861.53 A-1240 □ IN END N. WING BT. #1 LT. LANE (E.B.L.) I-435 @ STA. 1017+55± @ 15' ± LT/O ℄ MED.

REPAIRS TO: BRIDGE OVER WORNALL ROAD

STATE ROAD INTERSTATE ROUTE 435
ABOUT 5 MILES NORTH OF MARTIN CITY
PROJECT NO. F.A.I-435-1(254) STA. 1017+47.96
JOB NO. J4I0080?8 RTE. I-435
JACKSON COUNTY
DATE: 8/10/92

STD. 611.60
STD. 617.00
STD. 706.35
A-1240R1

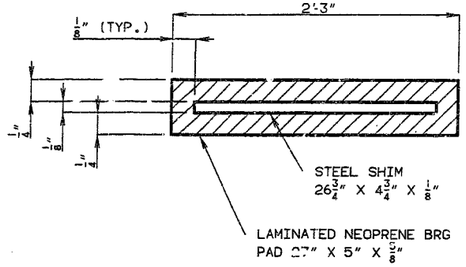
DESIGNED SEPT. 1991
DETAILED SEPT. 1991
CHECKED MAY 1992

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

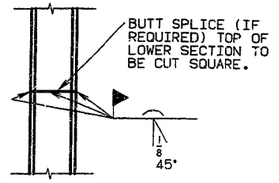
SHEET NO. 14 OF 35.

46 43

NOTE: THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYERS OF ELASTOMER AND MOLDED TOGETHER TO FORM AN INTERGRAL UNIT.



DETAILS OF LAMINATED NEOPRENE BEARING PAD



DETAIL OF STEEL PILE SPLICE

FINAL QUANTITIES

	ITEM		SUBSTR.	SUPERSTR.	TOTAL
	CURB REMOVAL (BRIDGES)	LIN. FT.		899	899
	PARTIAL REMOVAL OF SUBSTR. CONCRETE	LUMP SUM			1
	PARTIAL REMOVAL OF EXIST. BRIDGE DECK	SQ. FT.		414	414
	CLASS I EXCAVATION	CU. YD.	237		237
	TEMPORARY SHORING	LUMP SUM			1
	STRUCTURAL STEEL PILES (10")	LIN. FT.	366		366
	CLASS B CONCRETE (SUBSTR.)	CU. YD.	94.2		94.2
	CLASS B2 CONC.(SUPSTR.) CONC. ON BOX GDR.	CU. YD.		191.8	191.8
	SAFETY BARRIER CURB	LIN. FT.		414	414
*	16-1\2" SAFETY BARRIER CURB	LIN. FT.		450	450
	PLAIN NEOPRENE BEARING PADS	EACH		16	16
	LAMINATED NEOPRENE BEARING PADS	EACH		32	32
	SLAB EDGE REPAIR (BRIDGES)	LIN. FT.		85	85
	SUPERSTRUCTURE REPAIR (UNFORMED)	SQ. FT.		0	0
	LATEX CONC. WEARING SURFACE	SQ. YD.		666	666
	P/S CONC. BOX GDR. (62' SPAN)	EACH		16	16
	P/S CONC. BOX GDR. (80' SPAN)	EACH		8	8
	REINFORCING STEEL (BRIDGES)	POUND	11,980	37,740	49,720
	CATHODIC PROTECTION SYSTEM	LUMP SUM			1
	SLAB DRAINS	EACH		10	10
	FABRICATED SIGN SUPPORT BRACKETS (STEEL)	LUMP SUM			1
	CONTINGENT ITEMS TEST HOLES		16		16
	502.03 REPAIR EXISTING CABLE CAT. PROT. S.		1		1

PILE AND FOOTING DATA

BENT NUMBER		1 EBL	1 WBL	2 EBL	2 WBL	3 EBL	3 WBL	4 EBL	4 WBL
BEARING PILE	PILE TYPE AND SIZE	HP10X42	HP10X42					HP10X42	HP10X42
	NUMBER	3	3					3	3
	APPROXIMATE LENGTH (FT.)	31	31					31	31
	DESIGN BEARING (TONS)	49	49					49	49
	HAMMER ENERGY REQ'D. (FT/LBS)	11,000	11,000					11,000	11,000
SPREAD FOOTINGS	FOUNDATION MATERIAL			ROCK	ROCK	ROCK	ROCK		
	DESIGN BEARING TONS/SQ. FT.			10.6	10.6	10.6	10.6		

NOTE: MINIMUM ENERGY REQUIREMENT OF HAMMER BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES. ALL PILE SHALL BE DRIVEN TO PRACTICAL REFUSAL.

NOTE: ALL CONCRETE ABOVE THE CONSTRUCTION JOINT IN END BENTS IS INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

ALL REINFORCEMENT IN THE END BENTS IS INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

THE COST OF FURNISHING, FABRICATING AND INSTALLING NEOPRENE BEARING PADS, COMPLETE-IN-PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR PLAIN AND LAMINATED NEOPRENE BEARING PADS PER EACH.

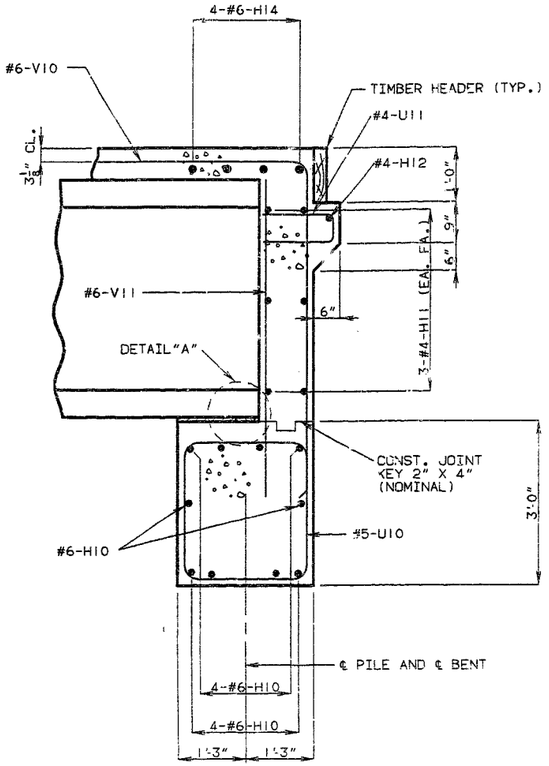
* SAFETY BARRIER CURB SHALL BE CAST-IN-PLACE OR SLIP-FORM OPTION.

COST OF FURNISHING AND INSTALLING RESIN ANCHOR SYSTEMS, COMPLETE IN PLACE, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE.

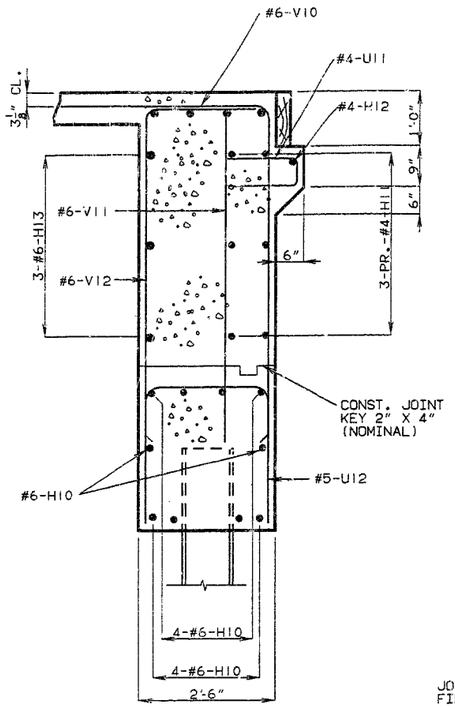
47 44

STATE	PROJ. NO.	SHEET NO.
MO.	J410807B	17

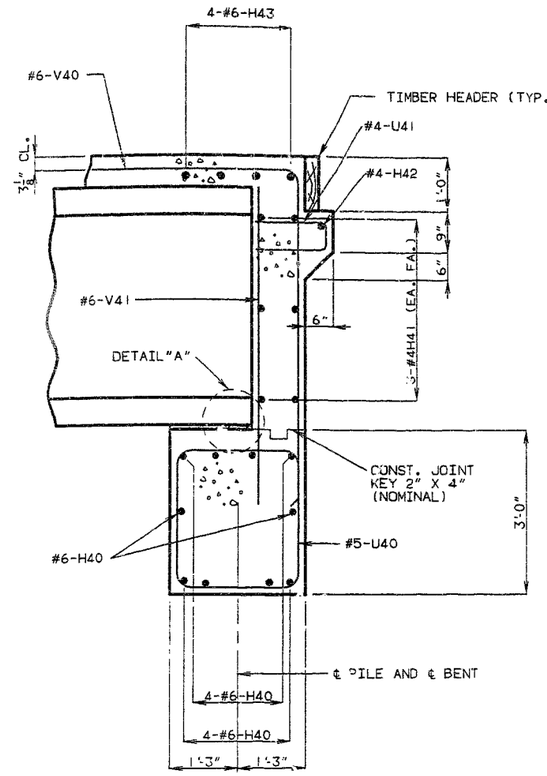
FINAL PLANS



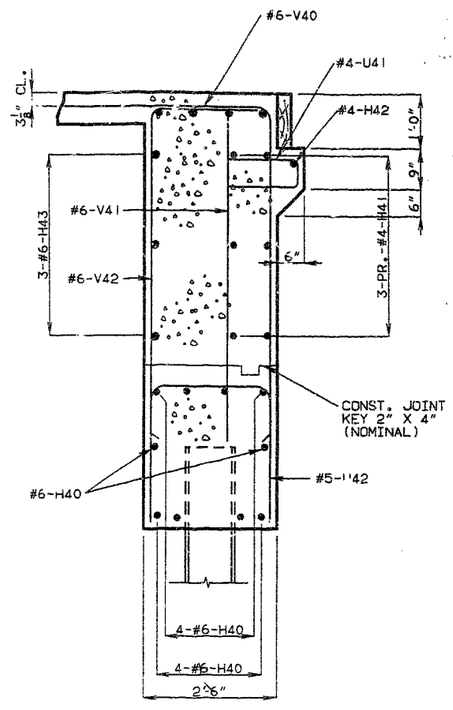
SECTION A-A



SECTION B-B



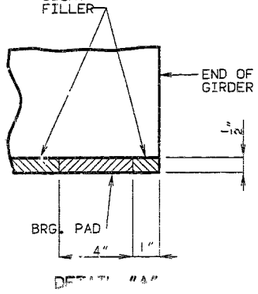
SECTION C-C



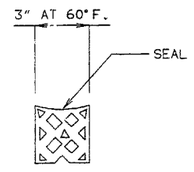
SECTION D-D

SECTIONS AT END BENT NO. 1

* SUBSTRUCTURE QUANTITY TABLE FOR END BENT NO. 1		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	18
STRUCTURAL STEEL PILE (10IN.)	LIN. FT.	179
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	8.3



DETAIL "A"



PART CROSS SECTION THRU COMP. JOINT SEAL

NOTE: DEPTH OF SEAL SHALL NOT BE LESS THAN WIDTH OF SEAL.

SECTIONS AT END BENT NO. 4

* SUBSTRUCTURE QUANTITY TABLE FOR END BENT NO. 4		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	17
STRUCTURAL STEEL PILE (10IN.)	LIN. FT.	187
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	8.4

NOTE:
FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 4.
FOR LOCATION OF SECTION C-C AND D-D SEE SHEET NO. 10.
FOR DETAILS OF TIMBER HEADER SEE SHEET NO. 24.
FOR DETAIL OF STEEL PILE SPLICE, SEE SHEET NO. 2.
* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.

DETAILED SEPT. 1991
CHECKED MAY 1992

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

JACKSON COUNTY A-1240RI

STATE	PROJ. NO.	SHEET NO.
MO.	J4108078	18

FINAL PLANS

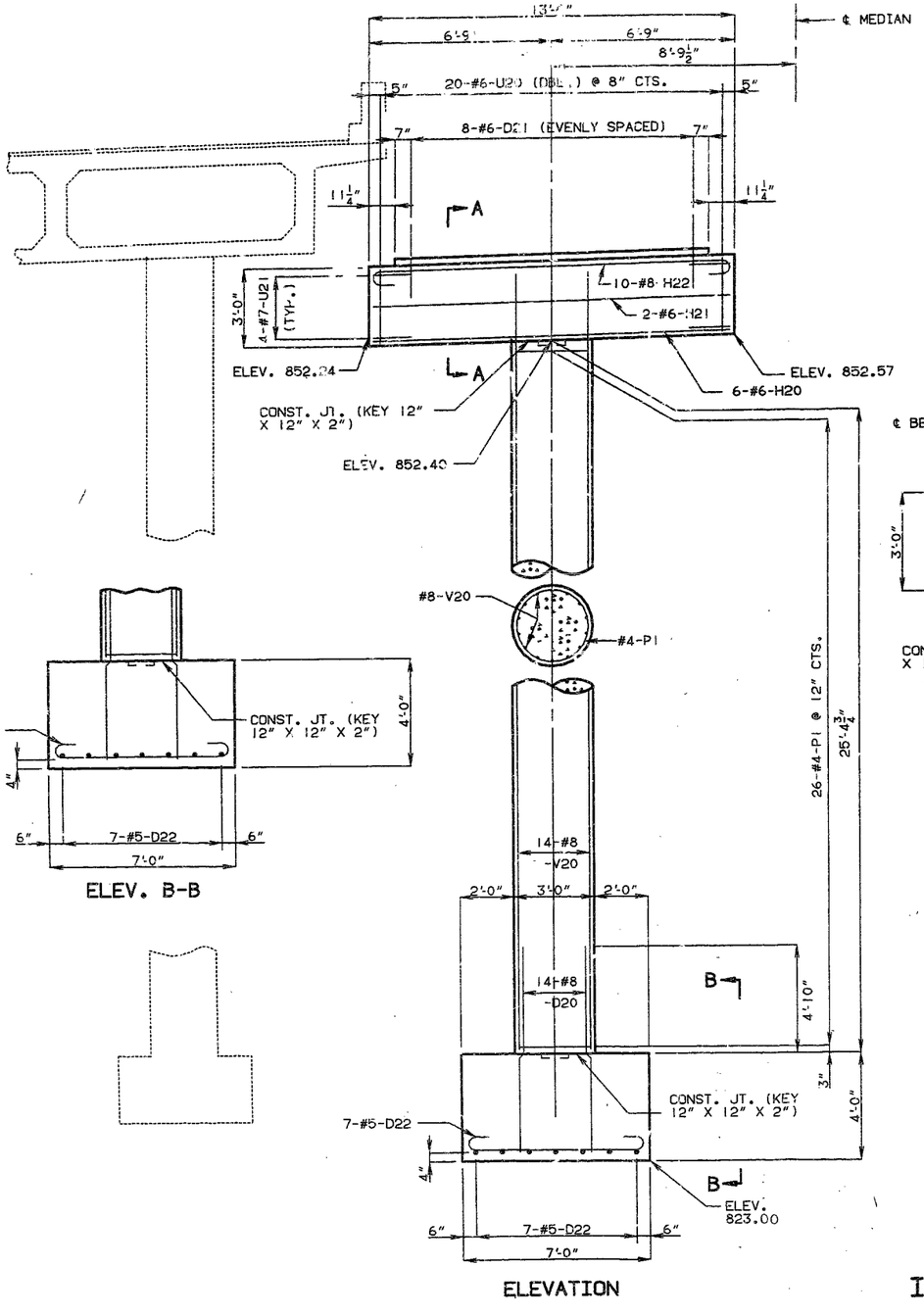
NOTE:

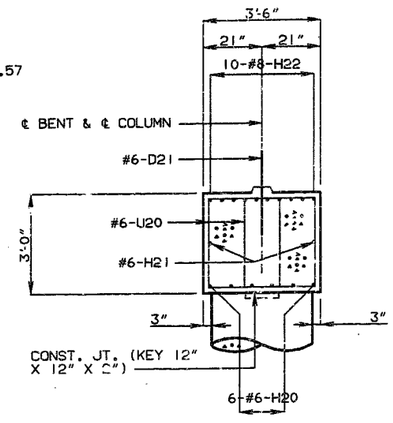
FOR SECTION THRU KEY SEE SHEET NO. 7.
FOR DETAILS OF LAMINATED NEOPRENE BEARING PAD, SEE SHEET NO. 2.

① 1-LAYER OF 50# ROOFING FELT BETWEEN JOINT FILLER.

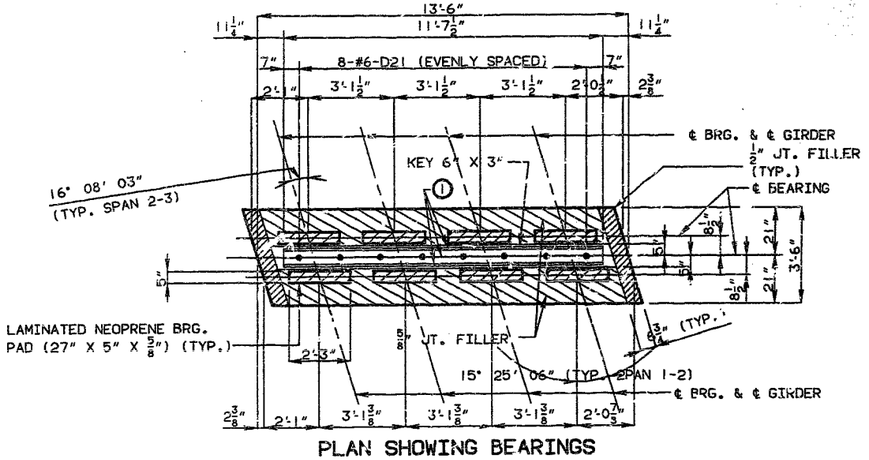
* SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2 (E.B.L.)		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	40
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	19.2
REINFORCING STEEL	LBS.	2,960

* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.

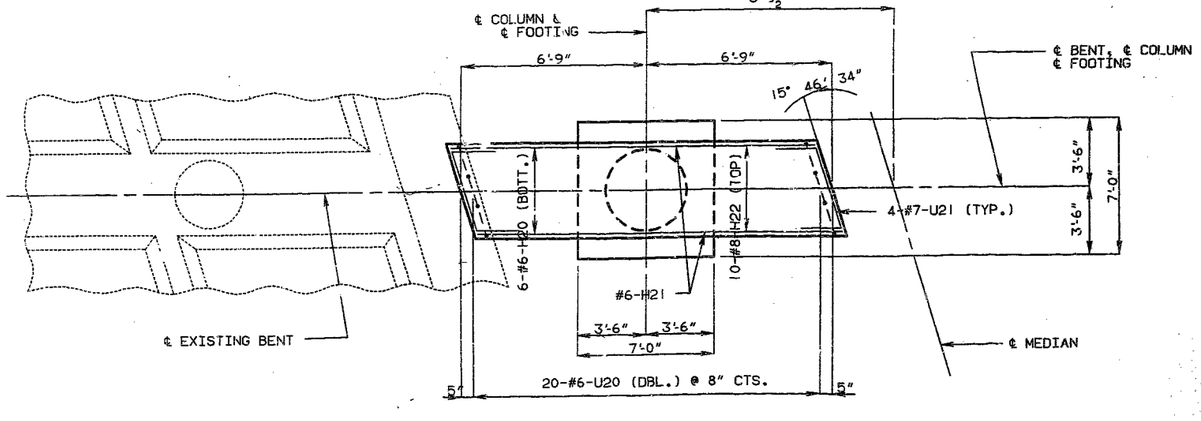




SECTION A-A



PLAN SHOWING BEARINGS



PLAN SHOWING REINFORCEMENT

INT. BT. 2 E.B.L.

DETAILED SEPT. 1991
CHECKED MAY 1992

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

SHEET NO. 6A OF 35.

JACKSON COUNTY A-1240RI

5-96

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807B	19

FINAL PLANS

NOTE:

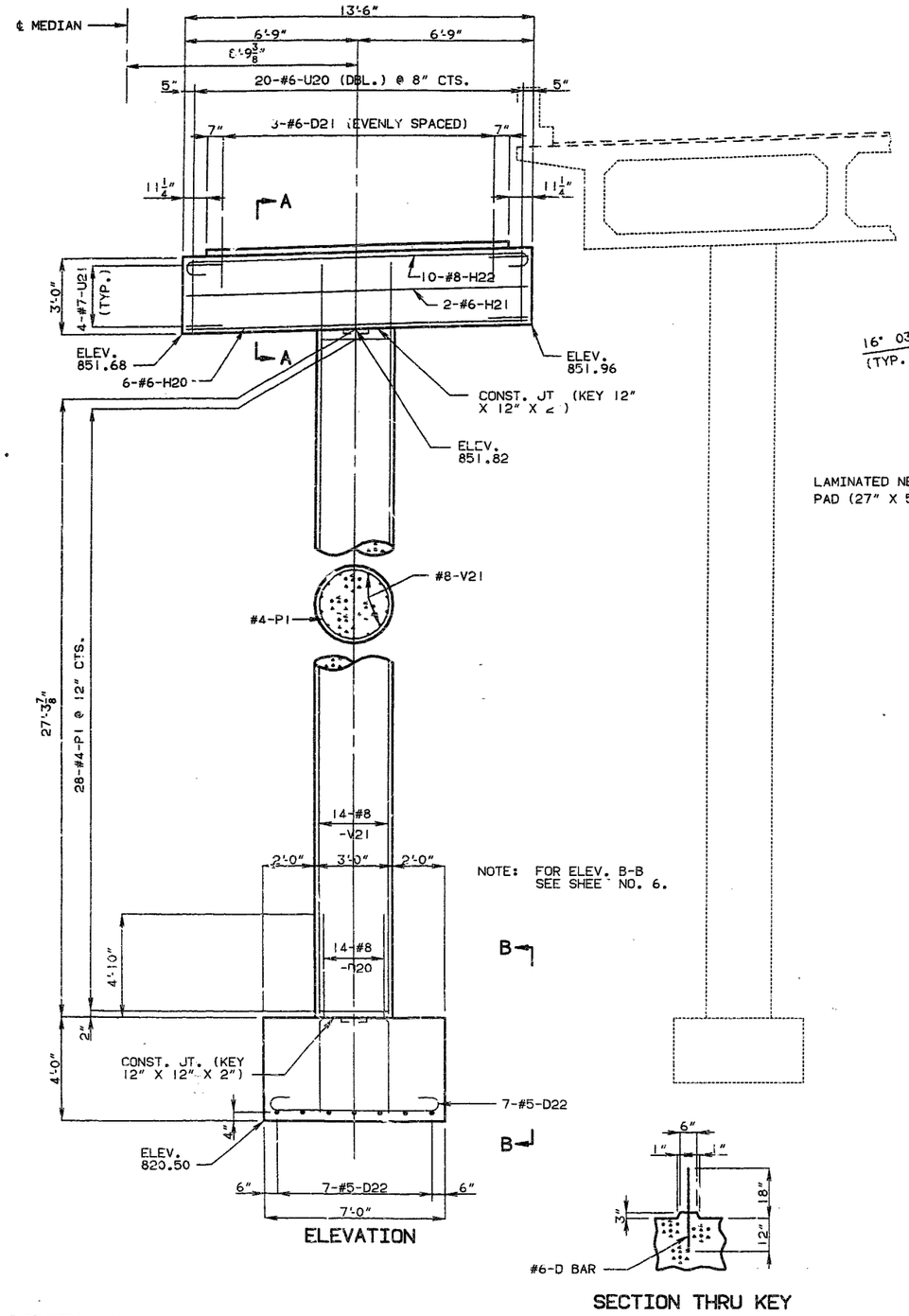
FOR DETAILS OF LAMINATED NEOPRENE BEARING PAD SEE SHEET NO. 2.

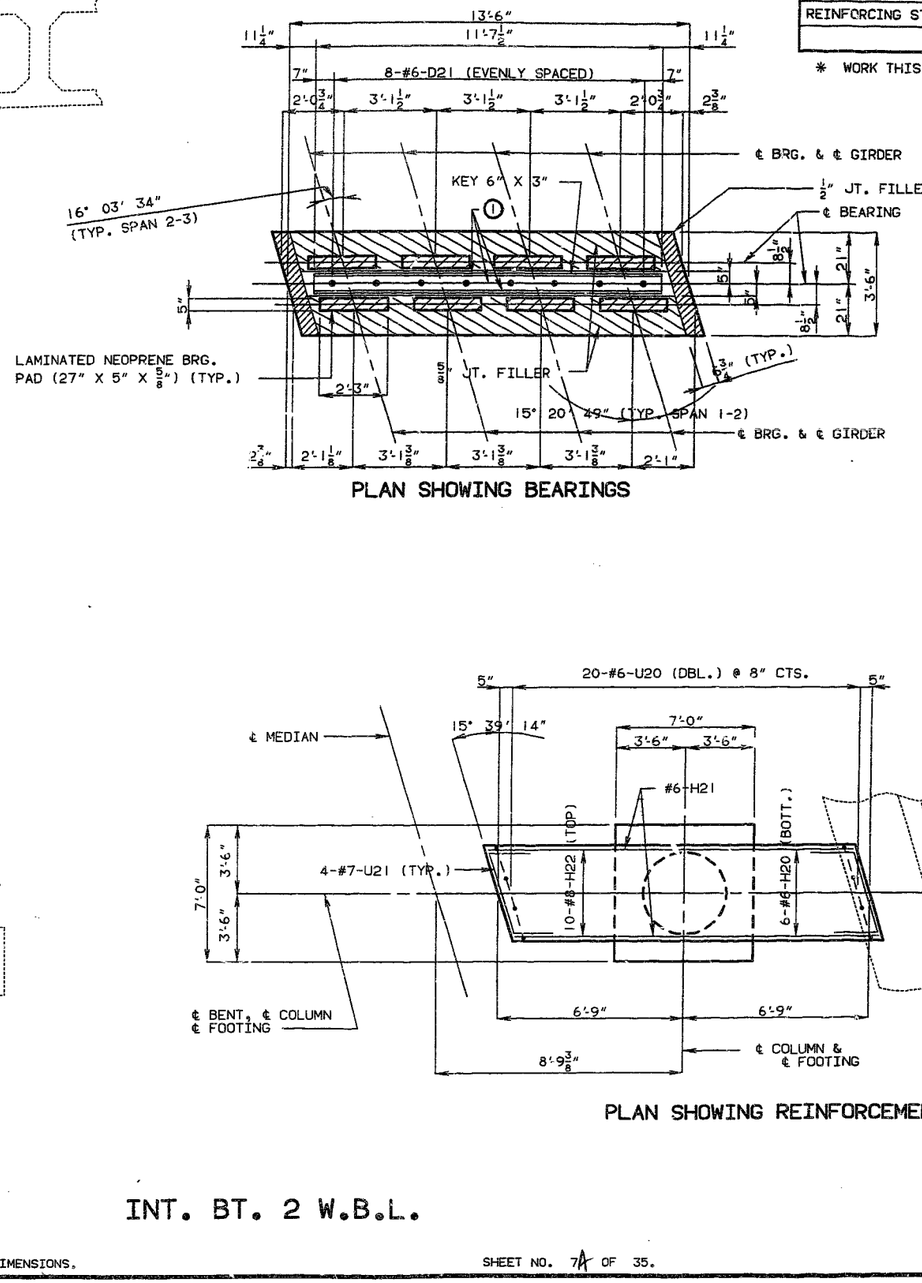
① 1-LAYER OF 50# ROOFING FELT BETWEEN JOINT FILLER.

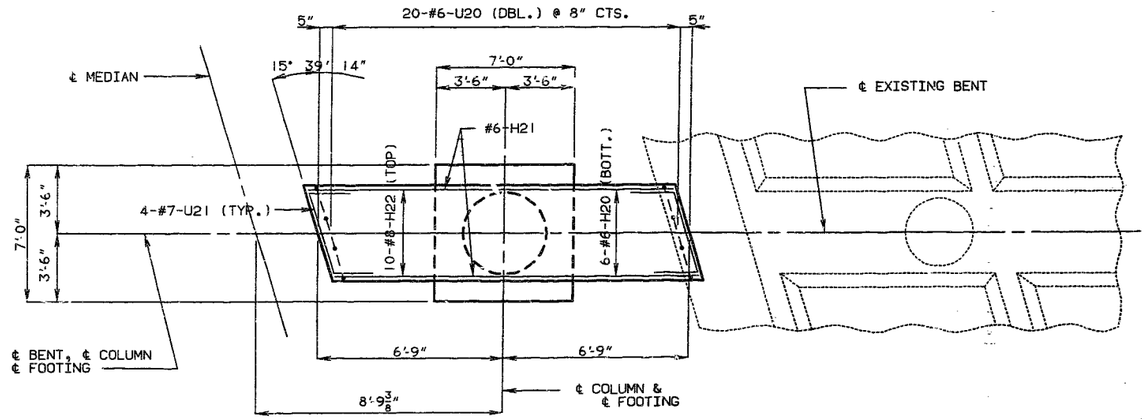
*** SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2 (W.B.L.)**

ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	55
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	19.7
REINFORCING STEEL	LBS.	3,060

* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.







INT. BT. 2 W.B.L.

57 47

DETAILED SEPT. 1991
CHECKED MAY 1992

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

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807B	20

FINAL PLAN

NOTE:

FOR DETAILS OF LAMINATED NEOPRENE BEARING PAD SEE SHEET NO. 2.

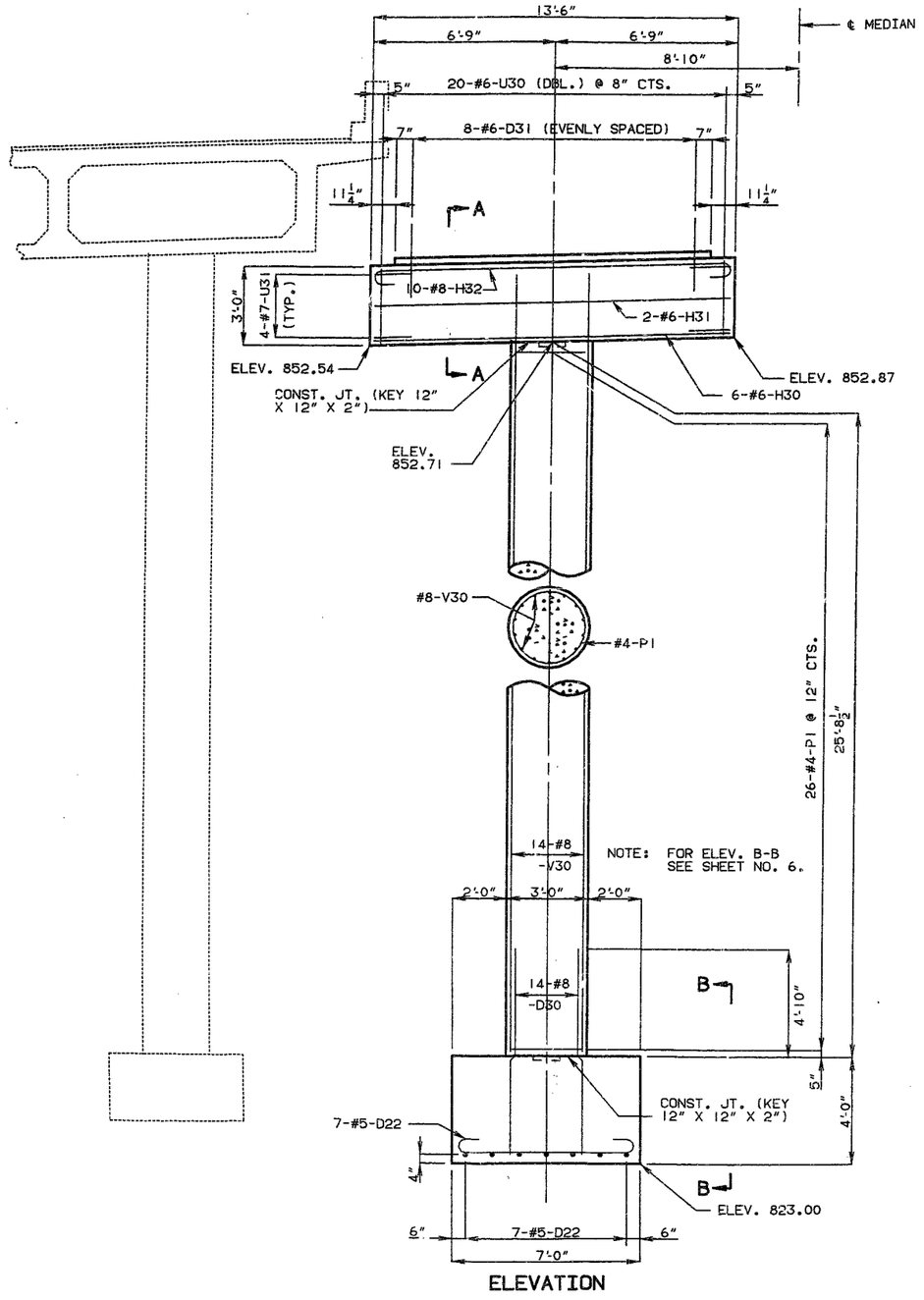
FOR SECTION THRU KEY SEE SHEET NO. 7.

① 1-LAYER OF 50# ROOFING FELT BETWEEN JOINT FILLER.

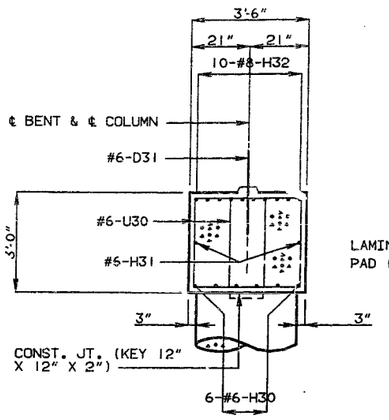
*** SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3 (E.B.L.)**

ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	52
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	19.3
REINFORCING STEEL	LBS.	2,980

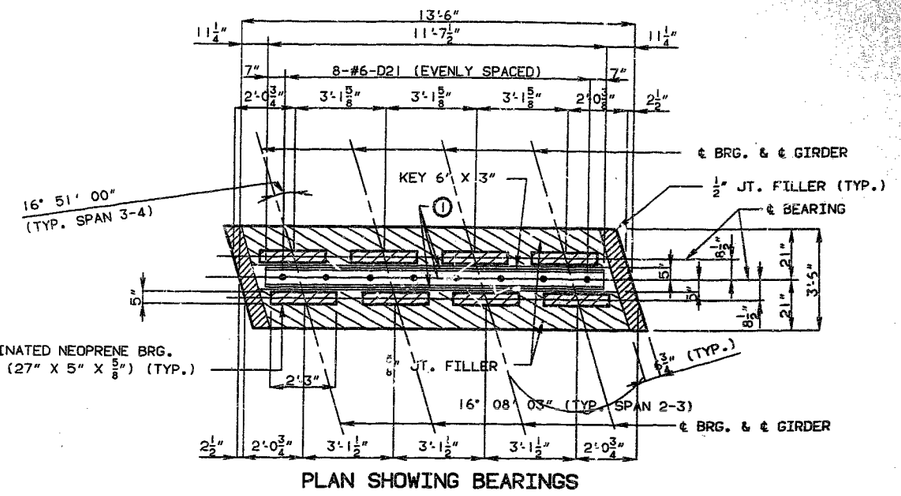
* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.



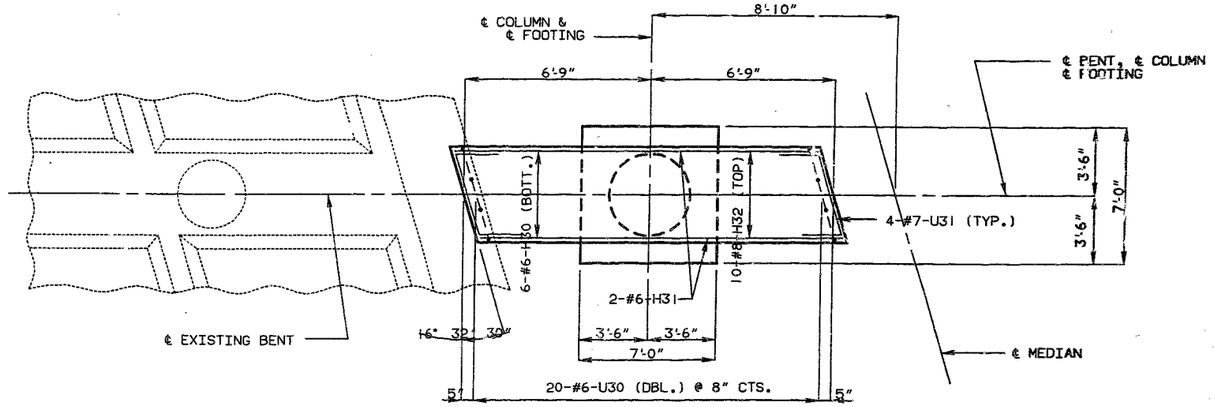
ELEVATION



SECTION A-A



PLAN SHOWING BEARINGS



PLAN SHOWING REINFORCEMENT

INT. BT. 3 E.B.L.

53 48

DETAILED SEPT. 1991
CHECKED MAY 1992

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

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807B	21

FINAL PLANS

NOTE:

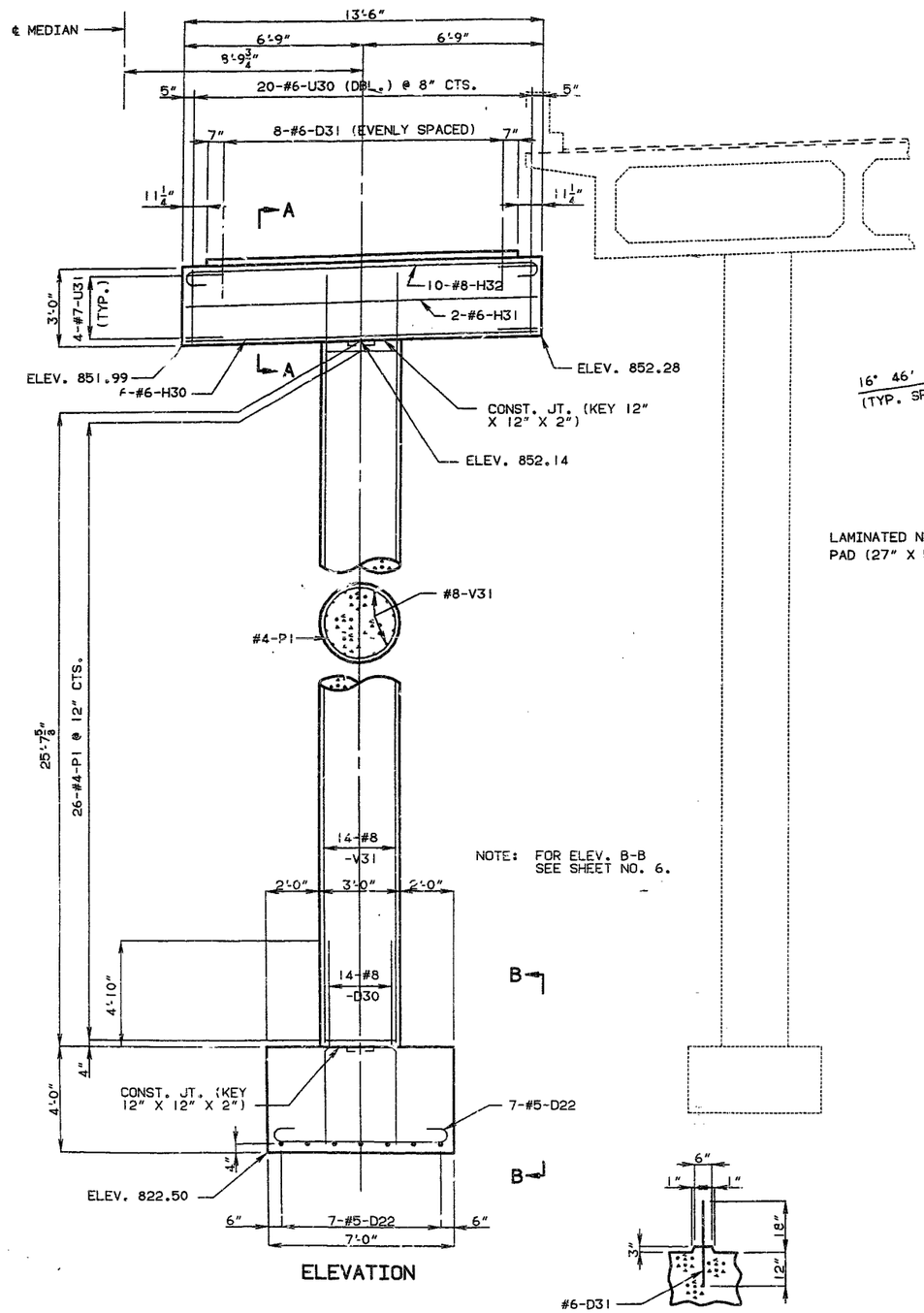
FOR DETAILS OF LAMINATED NEOPRENE BEARING PAD SEE SHEET NO. 2.

① 1-LAYER OF 50# ROOFING FELT BETWEEN JOINT FILLER.

*** SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3 (W.B.L.)**

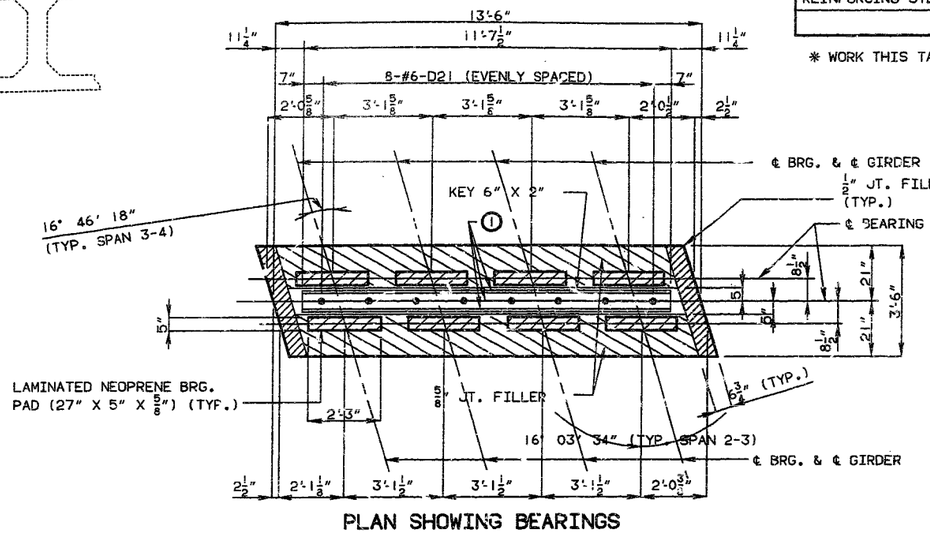
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	50
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	19.3
REINFORCING STEEL	LBS.	2,980

* WORK THIS TABLE WITH THE ESTIMATED QUANTITIES ON SHEET NO. 2.

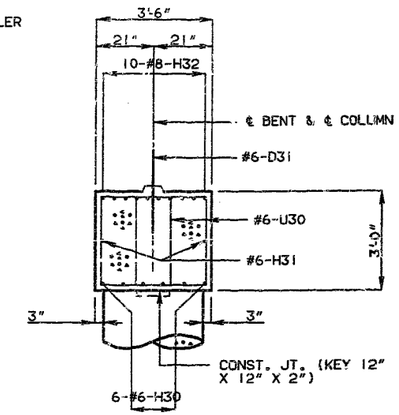


ELEVATION

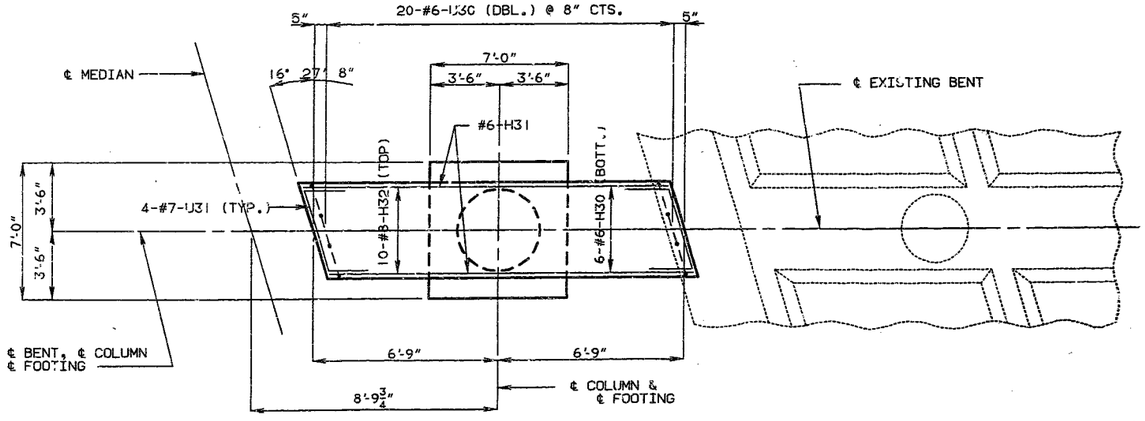
SECTION THRU KEY



PLAN SHOWING BEARINGS



SECTION A-A



PLAN SHOWING REINFORCEMENT

54-89

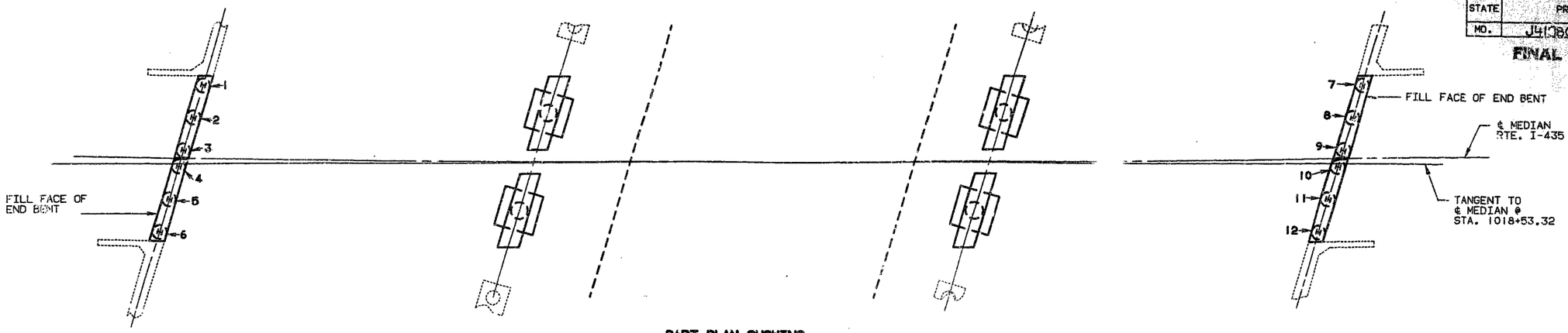
INT. BT. 3 W.B.L.

DETAILED SEPT. 1991
CHECKED MAY 1992

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

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807B	47

FINAL PLANS



PART PLAN SHOWING
PILE NUMBERING FOR RECORDING
"AS BUILT PILE" DATA

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
			END BENT NO. 1
1	30	120	HP 10X42
2	30	120	
3	31	133	
4	29	120	
5	29	133	
6	30	120	
			END BENT NO. 4
7	32	120	HP 10X42
8	32	100	
9	31	120	
10	30	100	
11	30	120	
12	32	100	
			* ALL PILE DRIVEN TO PRACTICAL REFUSAL

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS

NOTE: INDICATE IN REMARK COLUMN:
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

MISC. PILES IN PLACE	REVISED:
MAY 1992	

DETAILED MAY 1992
CHECKED MAY 1992

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

JACKSON COUNTY A-1240R1

KC

Safe & Sound =

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A1240**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A1240** 1022	STRUCTURE STATUS :	A-OPEN	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	38000 KANSAS CITY CITY
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	1-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	RICHARD KINGERY (STATE), TERRY WILSON (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	10/11/2011
FACILITY CARRIED :	**IS 435 N**	DEFICIENT CODE :		LANES ON STRUCTURE	3	INSPECTION FREQUENCY :	24
CURB TO CURB :	64 Ft. 0 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	4	LATITUDE :	38 56 25.22 (DMS)
STRUCTURE LENGTH :	207 FEET	YEAR BUILT :	1966	BEGINNING COMPASS DIRECTION :	WEST	LONGITUDE :	94 35 48 (DMS)
FEATURE INTERSECTED :	**CST WORNALL RD**	RECONSTRUCTION YEAR	1993	ENDING COMPASS DIRECTION :	EAST	SCOUR EVALUATION TYPE :	

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-1 LIMITS : NO POSTING REQUIRED NO POSTING REQUIRED
FIELD POSTING CATEGORY : S-1 LIMITS : NO POSTING REQUIRED NO POSTING REQUIRED
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 62562 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :
PIN : DATE :	PIN : DATE :	PIN : DATE :	PIN : DATE :
CATEGORY :	CATEGORY :	CATEGORY :	CATEGORY :
METHODS :	METHODS :	METHODS :	METHODS :
INSPECTORS :	INSPECTORS :	INSPECTORS :	INSPECTORS :
COMMENTS :	COMMENTS :	COMMENTS :	COMMENTS :

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (62'-80'-62') CONT CONC BOX GDR SPANS

RATINGS :					
(ITEM 58) DECK RATING : 6-SATISFACTORY CONDITION	10/31/2011	**(ITEM 59) SUPERSTRUCTURE RATING :** 5-FAIR CONDITION	10/31/2011	**(ITEM 60) SUBSTRUCTURE RATING :** 6-SATISFACTORY CONDITION	10/31/2011
COMMENTS :		**COMMENTS :**		**COMMENTS :**	

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN REINFORCED CONCRETE BOX GIR-CIP SINGLE CELL NUMBER OF SPANS : 3
TOTAL NUMBER OF SPANS : 3

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	0 DOESNT MEET CURRNT STND	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :
COMPONENT : BRIDGE RAILING REINFORCED CONCRETE SAFETY BARRIER CURB DIRECTION : BOTH

(ITEM 36B) TRANSITION RAILING :
COMPONENT : TRANSITION RAILING GALVANIZED STEEL THRIE BEAM TO W-BEAM DIRECTION : BOTH-SOUTH

(ITEM 36C) APPROACH RAILING :
COMPONENT : APPROACH RAILING GALVANIZED STEEL W-BEAM DIRECTION : BOTH-SOUTH

(ITEM 36D) RAIL END TREATMENT :
COMPONENT : RAIL END TREATMENT GALVANIZED STEEL BREKAWAY SYSTEM MANUFACTURE : BCT DIRECTION : BOTH-SOUTH

APPROACH PAVEMENT :

Design_No = A1240

COMPONENT : APPROACH PAVEMENT ASPHALT BITUMINOUS MAT DIRECTION : BOTH

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

DECK COMPONENTS

MAIN SPANS 1

COMPONENT : DECK	REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : LEACHING	OVERHANGS	MODERATE	
CONDITION : PATCHES	OVERHANGS	FEW	
CONDITION : SATURATION	OVERHANGS	MODERATE	
CONDITION : TRANSVERSE CRACKS	OVERHANGS	MANY	

MAIN SPANS 2

COMPONENT : DECK	REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : LEACHING	OVERHANGS	MODERATE	
CONDITION : PATCHES	OVERHANGS	FEW	
CONDITION : SATURATION	OVERHANGS	MODERATE	
CONDITION : TRANSVERSE CRACKS	OVERHANGS	MANY	

MAIN SPANS 3

COMPONENT : DECK	REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : LEACHING	OVERHANGS	MODERATE	
CONDITION : PATCHES	OVERHANGS	FEW	
CONDITION : SATURATION	OVERHANGS	MODERATE	
CONDITION : TRANSVERSE CRACKS	OVERHANGS	MANY	

DRAINAGE COMPONENTS

DRAINAGE 0

COMPONENT : DRAINAGE	GALVANIZED STEEL	FLOOR DRAIN

PROTECTIVE COMPONENTS

MAIN SERIES 1

COMPONENT : WEARING SURFACE	PLAIN CONCRETE	LATEX MODIFIED	OVERALL CONDITION : POOR	
CONDITION : DEBONDING	THROUGHOUT	HEAVY		
CONDITION : TRANSVERSE CRACKS	THROUGHOUT	MANY		
CONDITION : PATCHES	THROUGHOUT	MANY		
COMPONENT : DECK PROTECTION	CARBON	CATHODIC PROTECTION		
COMPONENT : MEMBRANE	LIQUID SEALANT	BUILT-UP		
COMPONENT : SECONDARY DECK PROTECTION	LIQUID SEALANT	INTERNALLY SEALED	MANUFACTURE : STAR MACRO	YEAR APPLIED : 2009

RAILING COMPONENTS

BRIDGE RAILING 0

COMPONENT : BRIDGE RAILING	REINFORCED CONCRETE	SAFETY BARRIER CURB
COMPONENT : TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM
COMPONENT : APPROACH RAILING	GALVANIZED STEEL	W-BEAM
COMPONENT : RAIL END TREATMENT	GALVANIZED STEEL	BREKAWAY SYSTEM

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 5-FAIR CONDITION

MAIN SERIES 1 CONTINUOUS SPAN REINFORCED CONCRETE BOX GIR-CIP SINGLE CELL NUMBER OF SPANS : 3

APPROACH ROADWAY WIDTH : 54 FOOT 0 INCH CURB TO CURB : 64 FOOT 0 INCH OUT TO OUT : 66 FOOT 9.6 INCH LEFT CURB WIDTH : 0 FOOT 7.2 INCH RIGHT CURB WIDTH : 0 FOOT 7.2 INCH

MAIN SPANS 1	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	BOX GIR-CIP SINGLE CELL	LENGTH : 62 FOOT 0 INCH	WEATHERING IND : N
COMMENTS : MANY T CRACKS AND SPALLS AND FEW PATCHES ON SPANS 1-3						
CONDITION : SATURATION		MODERATE	THROUGHOUT			
CONDITION : VERTICAL CRACKS		FEW	THROUGHOUT			
CONDITION : VERTICAL CRACKS		FEW	GIRDER ENDS			
MAIN SPANS 2	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	BOX GIR-CIP SINGLE CELL	LENGTH : 80 FOOT 1 INCH	WEATHERING IND : N
CONDITION : SPALLS		MINOR	EDGE			
CONDITION : SATURATION		MODERATE	THROUGHOUT			
CONDITION : VERTICAL CRACKS		FEW	THROUGHOUT			
MAIN SPANS 3	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	BOX GIR-CIP SINGLE CELL	LENGTH : 62 FOOT 1 INCH	WEATHERING IND : N
CONDITION : SATURATION		MODERATE	THROUGHOUT			

CONDITION :	VERTICAL CRACKS	FEW	THROUGHOUT
CONDITION :	VERTICAL CRACKS	FEW	GIRDER ENDS

TOTAL NUMBER OF SPANS 3

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

ABUTMENT	1	LABEL :			REINFORCED CONCRETE	INTEGRAL
LEFTADVAN SKEW : 16 DEGREES 0		LENGTH : 70 FOOT 3 INCH				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		
BENT	2	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LEFTADVAN SKEW : 16 DEGREES 0						
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	SPREAD		
BENT	3	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LEFTADVAN SKEW : 16 DEGREES 0						
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	SPREAD		
ABUTMENT	4	LABEL :			REINFORCED CONCRETE	INTEGRAL
LEFTADVAN SKEW : 16 DEGREES 0		LENGTH : 70 FOOT 3 INCH				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : N-NOT APPLIC NO WATRWAY

SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : N-NOT APPLIC NOT WATERW

WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : NOT APPLICABLE

APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD

SLOPE PROTECTION

PLAIN CONCRETE PAVEDSLOPE BOTH

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION RUST AMOUNT : STEEL TONS :

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

CREW : LAYER : DATE :

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED

PROGRAM RECOMMENDATIONS

KC

Safe & Sound =

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A1240**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A1240** 1021	STRUCTURE STATUS :	A-OPEN	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	38000 KANSAS CITY CITY
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	1-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	RICHARD KINGERY (STATE), TERRY WILSON (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	10/11/2011
FACILITY CARRIED :	**IS 435 S**	DEFICIENT CODE :		LANES ON STRUCTURE	2	INSPECTION FREQUENCY :	24
CURB TO CURB :	64 Ft. 0 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	4	LATITUDE :	38 56 25.92 (DMS)
STRUCTURE LENGTH :	207 FEET	YEAR BUILT :	1966	BEGINNING COMPASS DIRECTION :	WEST	LONGITUDE :	94 35 48.07 (DMS)
FEATURE INTERSECTED :	**CST WORNALL RD**	RECONSTRUCTION YEAR	1993	ENDING COMPASS DIRECTION :	EAST	SCOUR EVALUATION TYPE :	

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-1 LIMITS : NO POSTING REQUIRED NO POSTING REQUIRED
FIELD POSTING CATEGORY : S-1 LIMITS : NO POSTING REQUIRED NO POSTING REQUIRED
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 64192 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :
PIN : DATE :	PIN : DATE :	PIN : DATE :	PIN : DATE :
CATEGORY :	CATEGORY :	CATEGORY :	CATEGORY :
METHODS :	METHODS :	METHODS :	METHODS :
INSPECTORS :	INSPECTORS :	INSPECTORS :	INSPECTORS :
COMMENTS :	COMMENTS :	COMMENTS :	COMMENTS :

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (62'-80'-62') CONT CONC BOX GDR SPANS (WIDENED WITH ADJACENT BOX GIRDERS

RATINGS : **(ITEM 58) DECK RATING :** 6-SATISFACTORY CONDITION 05/18/2001 **(ITEM 59) SUPERSTRUCTURE RATING :** 6-SATISFACTORY CONDITION 05/18/2001 **(ITEM 60) SUBSTRUCTURE RATING :** 7-GOOD CONDITION 05/18/2001

COMMENTS : **COMMENTS :** **COMMENTS :**

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN REINFORCED CONCRETE BOX GIR-CIP SINGLE CELL NUMBER OF SPANS : 3

TOTAL NUMBER OF SPANS : 3

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	0 DOESNT MEET CURRNT STND	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :
COMPONENT : BRIDGE RAILING REINFORCED CONCRETE SAFETY BARRIER CURB DIRECTION : BOTH

(ITEM 36B) TRANSITION RAILING :
COMPONENT : TRANSITION RAILING GALVANIZED STEEL THRIE BEAM TO W-BEAM DIRECTION : BOTH-NORTH

(ITEM 36C) APPROACH RAILING :
COMPONENT : APPROACH RAILING GALVANIZED STEEL W-BEAM DIRECTION : BOTH-NORTH

(ITEM 36D) RAIL END TREATMENT :
COMPONENT : RAIL END TREATMENT GALVANIZED STEEL OTHER DIRECTION : BOTH-NORTH

APPROACH PAVEMENT :

Design_No = A1240

COMPONENT : APPROACH PAVEMENT		ASPHALT	BITUMINOUS MAT	DIRECTION : BOTH
CONDITION :	PATCHES	THROUGHOUT	MANY	
CONDITION :	SPALLS	THROUGHOUT	MANY	

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

DECK COMPONENTS

MAIN SPANS 1				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
MAIN SPANS 2				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
MAIN SPANS 3				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	

DRAINAGE COMPONENTS

DRAINAGE 0				
COMPONENT : DRAINAGE		GALVANIZED STEEL	FLOOR DRAIN	

PROTECTIVE COMPONENTS

MAIN SERIES 1				
COMPONENT : WEARING SURFACE		PLAIN CONCRETE	LATEX MODIFIED	OVERALL CONDITION : POOR
CONDITION :	TRANSVERSE CRACKS	THROUGHOUT	MANY	
CONDITION :	DEBONDING	THROUGHOUT	MODERATE	
CONDITION :	PATCHES	THROUGHOUT	LARGE	
CONDITION :	SPALLS	THROUGHOUT	FEW	
COMPONENT : DECK PROTECTION		CARBON	CATHODIC PROTECTION	
COMPONENT : MEMBRANE		LIQUID SEALANT	BUILT-UP	
COMPONENT : SECONDARY DECK PROTECTION		LIQUID SEALANT	INTERNALLY SEALED	MANUFACTURE : STAR MACRO YEAR APPLIED : 2009

RAILING COMPONENTS

BRIDGE RAILING 0			
COMPONENT : BRIDGE RAILING	REINFORCED CONCRETE	SAFETY BARRIER CURB	
COMPONENT : TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM	
COMPONENT : APPROACH RAILING	GALVANIZED STEEL	W-BEAM	
COMPONENT : RAIL END TREATMENT	GALVANIZED STEEL	OTHER	

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

MAIN SERIES 1 CONTINUOUS SPAN REINFORCED CONCRETE BOX GIR-CIP SINGLE CELL NUMBER OF SPANS : 3

COMMENTS : SHEAR AND TENSION CRACKS THROUGHOUT BOX GIRDERS

APPROACH ROADWAY WIDTH : 54 FOOT 0 INCH CURB TO CURB : 64 FOOT 0 INCH OUT TO OUT : 66 FOOT 9.6 INCH

MAIN SPANS 1	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	BOX GIR-CIP SINGLE CELL	LENGTH : 62 FOOT 0 INCH	WEATHERING IND : N
COMMENTS : MANY T CRACKS, FEW SPALLS, AND PATCHES ON SPANS 1-3						
MAIN SPANS 2	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	BOX GIR-CIP SINGLE CELL	LENGTH : 80 FOOT 1 INCH	WEATHERING IND : N
MAIN SPANS 3	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	BOX GIR-CIP SINGLE CELL	LENGTH : 62 FOOT 1 INCH	WEATHERING IND : N
CONDITION : DIAGONAL CRACKS		MINOR	AT ABUTMENTS			

TOTAL NUMBER OF SPANS 3

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 7-GOOD CONDITION

ABUTMENT 1 LABEL : REINFORCED CONCRETE INTEGRAL

LEFTADVAN SKEW : 16 DEGREES 0 LENGTH : 70 FOOT 3 INCH

BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE
CONDITION : EFFLORESCENCE		FRONT FACE	MINOR	
CONDITION : MAP CRACKS		FRONT FACE	FINE	
PILING			STEEL	H-SHAPE
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE
CONDITION : DELAMINATION		THROUGHOUT	MEDIUM	
CONDITION : EFFLORESCENCE		THROUGHOUT	MEDIUM	

CONDITION : MAP CRACKS		THROUGHOUT	MEDIUM			
CONDITION : SPALLS		THROUGHOUT	MEDIUM			
BENT	2	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LEFTADVAN SKEW : 16 DEGREES 0						
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
CONDITION : VERTICAL CRACKS		THROUGHOUT	FINE			
FOOTING			REINFORCED CONCRETE	SPREAD		
BENT	3	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LEFTADVAN SKEW : 16 DEGREES 0						
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	SPREAD		
ABUTMENT	4	LABEL :			REINFORCED CONCRETE	INTEGRAL
LEFTADVAN SKEW : 16 DEGREES 0		LENGTH : 70 FOOT 3 INCH				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : SPALLS		THROUGHOUT	MEDIUM			
CONDITION : REBAR EXPOSED		THROUGHOUT	FEW			
CONDITION : SATURATION		THROUGHOUT	MODERATE			

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : N-NOT APPLIC NO WATRWAY

SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : N-NOT APPLIC NOT WATERW

WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : NOT APPLICABLE

APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD

SLOPE PROTECTION

PLAIN CONCRETE PAVEDSLOPE BOTH

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION RUST AMOUNT : STEEL TONS :

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

CREW : LAYER : DATE :

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED
DISTRICT ROUTINE	APPROACH ROADWAY	SEAL JOINTS - HOT POUR	3	02/08/2006
	ROADWAY SURFACE	CLEAN AND FLUSH	3	10/01/2009
CONTRACT	SEE COMMENT	REM/REP LOOSE SEAL OR MAT	2	10/11/2011

COMMENTS : REMOVE DENSE CONCRETE OVERLAY - REPLACE

PROGRAM RECOMMENDATIONS

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

August 1, 2013
10:53:16am

COUNTY : JACKSON **BRIDGE NO.** A1240 R1 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	1021
27	Year Built	1966
106	Year Reconstructed	1993
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 S
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006042
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	02
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 31 T 48 N R 33 W
11	Milepoint	54.34 miles
16	Latitude	38 D 56 M 26 S
17	Longitude	94 D 35 M 48 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	64192
30	AADT Year	2012
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	18%
114	Future AADT	86659
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	CST WORNALL RD
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	04
54A	Vert. Clearance Ref.	HIGHWAY
54B	Vert. Clearance	14 Ft. 7 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	5 Ft. 10 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	54 Ft. 1 In.
34	Skew	16.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	65 Ft. 3 In.
48	Maximum Span Length	79 Ft. 12 In.
49	Structure Length	206 Ft. 0 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	63 Ft. 11 In.
52	Deck Width (Out-Out)	66 Ft. 10 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A1240 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

August 1, 2013
10:53:16am

COUNTY : JACKSON **BRIDGE NO.** A1240 R1 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

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	100 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	45 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	92.9 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	DOES NOT MEET ACCEPT STND
67	Struc Eval App. Rating	6
68	Deck Geometry App. Rating	9
69	Underclearance App. Rating	4
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	N

APPROVED POSTING INFORMATION

Approved Posting Categor 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.	3 LATEX CONCRETE
108B	Membrane Mat/Constr.	1 BUILT UP
108C	Deck Protect Mat/Constr.	4 CATHODIC

CONDITION RATING INFORMATION

58	Deck Cond. Rating	6
59	Superstructure Cond. Rating	6
60	Substructure Cond. Rating	7
61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	10 / 11	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Insp. Dat	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 = A1240 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

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RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	1022
27	Year Built	1966
106	Year Reconstructed	1993
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	RIGHT
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 N
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006039
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 31 T 48 N R 33 W
11	Milepoint	0.64 miles
16	Latitude	38 D 56 M 25 S
17	Longitude	94 D 35 M 48 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	62562
30	AADT Year	2012
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	18%
114	Future AADT	84458
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	CST WORNALL RD
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	04
54A	Vert. Clearance Ref.	HIGHWAY
54B	Vert. Clearance	14 Ft. 7 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	5 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	54 Ft. 1 In.
34	Skew	16.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	65 Ft. 3 In.
48	Maximum Span Length	79 Ft. 12 In.
49	Structure Length	206 Ft. 0 In.
50A	Left Curb/Sidewalk Width	0 Ft. 7 In.
50B	Right Curb/Sidewalk Width	0 Ft. 7 In.
51	Curb to Curb Br. Width	63 Ft. 11 In.
52	Deck Width (Out-Out)	66 Ft. 10 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A1240 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

Missouri Department of Transportation
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RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

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	100 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	45 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	81.5 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	DOES NOT MEET ACCEPT STND
67	Struc Eval App. Rating	5
68	Deck Geometry App. Rating	9
69	Underclearance App. Rating	4
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	N

APPROVED POSTING INFORMATION

Approved Posting Categor 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.	3 LATEX CONCRETE
108B	Membrane Mat/Constr.	1 BUILT UP
108C	Deck Protect Mat/Constr.	4 CATHODIC

CONDITION RATING INFORMATION

58	Deck Cond. Rating	6
59	Superstructure Cond. Rating	5
60	Substructure Cond. Rating	6
61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	10 / 11	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Insp. Dat	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 = A1240 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

KC

Safe & Sound = N

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A1427**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A1427** 1184	STRUCTURE STATUS :	P-POSTLOAD	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	77506 WASHINGTON
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	1-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	RICHARD KINGERY (STATE), TERRY WILSON (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	10/11/2011
FACILITY CARRIED :	**IS 435 N**	DEFICIENT CODE :		LANES ON STRUCTURE	4	INSPECTION FREQUENCY :	24
CURB TO CURB :	71 Ft. 10.8 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	3	LATITUDE :	38 56 22.96 (DMS)
STRUCTURE LENGTH :	318 FEET	YEAR BUILT :	1966	BEGINNING COMPASS DIRECTION :	EAST	LONGITUDE :	94 34 2.62 (DMS)
FEATURE INTERSECTED :	**CST 104TH ST. UP RR**	RECONSTRUCTION YEAR	1994	ENDING COMPASS DIRECTION :	WEST	SCOUR EVALUATION TYPE :	

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-C3 LIMITS : Ton1 : 50 WEIGHT LIMIT 50 TONS.
FIELD POSTING CATEGORY : S-C3 LIMITS : Ton1 : 60 WEIGHT LIMIT 60 TONS.
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 65342 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI :	FREQUENCY :	NBI :	FREQUENCY :
PIN :	DATE :	PIN :	DATE :
CATEGORY :		CATEGORY :	
METHODS :		METHODS :	
INSPECTORS :		INSPECTORS :	
COMMENTS :		COMMENTS :	

NBI :	FREQUENCY :	NBI :	FREQUENCY :
PIN :	DATE :	PIN :	DATE :
CATEGORY :		CATEGORY :	
METHODS :		METHODS :	
INSPECTORS :		INSPECTORS :	
COMMENTS :		COMMENTS :	

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (46'-72'-72'-58'-55') CONT COMP WF GDR SPANS

RATINGS : **(ITEM 58) DECK RATING :** 6-SATISFACTORY CONDITION 10/31/2011 **(ITEM 59) SUPERSTRUCTURE RATING :** 7-GOOD CONDITION 05/18/2001 **(ITEM 60) SUBSTRUCTURE RATING :** 6-SATISFACTORY CONDITION 05/18/2001

COMMENTS : **COMMENTS :** **COMMENTS :**

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN STEEL WIDE FLANGE GIRDERS NUMBER OF SPANS : 5

TOTAL NUMBER OF SPANS : 5

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	1 MEETS CURRENT STANDARDS	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :
COMPONENT : BRIDGE RAILING REINFORCED CONCRETE SAFETY BARRIER CURB DIRECTION : BOTH

(ITEM 36B) TRANSITION RAILING :
COMPONENT : TRANSITION RAILING GALVANIZED STEEL THRIE BEAM TO W-BEAM DIRECTION : BOTH-SOUTH

(ITEM 36C) APPROACH RAILING :
COMPONENT : APPROACH RAILING GALVANIZED STEEL W-BEAM DIRECTION : BOTH-SOUTH

(ITEM 36D) RAIL END TREATMENT :
COMPONENT : RAIL END TREATMENT GALVANIZED STEEL BREKAWAY SYSTEM MANUFACTURE : ET-2000 DIRECTION : SOUTHWEST

APPROACH PAVEMENT :

Design_No = A1427

COMPONENT : APPROACH PAVEMENT ASPHALT BITUMINOUS MAT DIRECTION : BOTH

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

DECK COMPONENTS

MAIN SPANS 1				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	FEW	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : SATURATION		THROUGHOUT	MINOR	
MAIN SPANS 2				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	FEW	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
MAIN SPANS 3				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	FEW	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
MAIN SPANS 4				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	FEW	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
MAIN SPANS 5				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : EFFLORESCENCE		THROUGHOUT	FEW	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	

DRAINAGE COMPONENTS

DRAINAGE 0			
COMPONENT : DRAINAGE		GALVANIZED STEEL	FLOOR DRAIN

PROTECTIVE COMPONENTS

MAIN SERIES 1				
COMPONENT : WEARING SURFACE		PLAIN CONCRETE	LATEX MODIFIED	OVERALL CONDITION : POOR
CONDITION : DEBONDING		THROUGHOUT	MODERATE	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : PATCHES		THROUGHOUT	MANY	
COMPONENT : DECK PROTECTION		CARBON	CATHODIC PROTECTION	
COMPONENT : MEMBRANE		LIQUID SEALANT	BUILT-UP	
COMPONENT : SECONDARY DECK PROTECTION		LIQUID SEALANT	INTERNALLY SEALED	MANUFACTURE : STAR MACRO YEAR APPLIED : 2009

RAILING COMPONENTS

BRIDGE RAILING 0			
COMPONENT : BRIDGE RAILING		REINFORCED CONCRETE	SAFETY BARRIER CURB
COMPONENT : TRANSITION RAILING		GALVANIZED STEEL	THRIE BEAM TO W-BEAM
COMPONENT : APPROACH RAILING		GALVANIZED STEEL	W-BEAM
COMPONENT : RAIL END TREATMENT		GALVANIZED STEEL	BREKAWAY SYSTEM

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 7-GOOD CONDITION

MAIN SERIES 1 CONTINUOUS SPAN STEEL WIDE FLANGE GIRDERS NUMBER OF SPANS : 5

APPROACH ROADWAY WIDTH : 73 FOOT 0 INCH CURB TO CURB : 71 FOOT 10.8 INCH OUT TO OUT : 74 FOOT 8.4 INCH LEFT CURB WIDTH : 0 FOOT 7.2 INCH RIGHT CURB WIDTH : 0 FOOT 7.2 INCH

MAIN SPANS 1	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 46 FOOT 9 INCH	LENGTH : 72 FOOT 0 INCH	WEATHERING IND : N
CONDITION : DIAGONAL CRACKS		MINOR	GIRDER ENDS				
COMMENTS : AT ABUTS							
MAIN SPANS 2	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 72 FOOT 0 INCH		WEATHERING IND : N
MAIN SPANS 3	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 72 FOOT 0 INCH		WEATHERING IND : N
MAIN SPANS 4	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 72 FOOT 0 INCH		WEATHERING IND : N
MAIN SPANS 5	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 55 FOOT 8 INCH		WEATHERING IND : N
CONDITION : DIAGONAL CRACKS		MINOR	GIRDER ENDS				

Design_No = A1427

COMMENTS : AT ABUTS

TOTAL NUMBER OF SPANS 5

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

ABUTMENT	1	LABEL :			REINFORCED CONCRETE	NON-INTEGRAL
LEFTADVAN SKEW : 8 DEGREES 0		LENGTH : 66 FOOT 5 INCH				
BACKWALL			REINFORCED CONCRETE	CAST-IN-PLACE		
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING			STEEL	ROCKER	OVERALL CONDITION:	
BENT	2	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 63 FOOT 8 INCH		LEFTADVAN SKEW : 8 DEGREES 0				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
BENT	3	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LEFTADVAN SKEW : 8 DEGREES 0		LENGTH : 63 FOOT 8 INCH				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
FIXED BEARING			STEEL	PEDESTAL(ROTATING)	OVERALL CONDITION:	
BENT	4	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LEFTADVAN SKEW : 8 DEGREES 0		LENGTH : 63 FOOT 8 INCH				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
FIXED BEARING			STEEL	PEDESTAL(ROTATING)	OVERALL CONDITION:	
BENT	5	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 67 FOOT 3 INCH						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
FOOTING			REINFORCED CONCRETE	SPREAD		
EXPANSION BEARING			STEEL	ROCKER	OVERALL CONDITION:	
ABUTMENT	6	LABEL :			REINFORCED CONCRETE	NON-INTEGRAL
LENGTH : 67 FOOT 2 INCH						
BACKWALL			REINFORCED CONCRETE	CAST-IN-PLACE		
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : VERTICAL CRACKS		THROUGHOUT	FEW			
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : N-NOT APPLIC NO WATRWAY

SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : N-NOT APPLIC NOT WATERW

WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : NOT APPLICABLE

APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD

SLOPE PROTECTION

PLAIN CONCRETE PAVEDSLOPE BOTH

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION GOOD

RUST AMOUNT : 9=.03% OF SURFACE RUSTED

STEEL TONS : 282

ORIGINAL PAINT		CONTRACT REPAINT		DEPARTMENT REPAINT			
PAINT TYPE :	F SYSTEM	PAINT TYPE :		PAINT TYPE :		MANUFACTURE :	
NAME :	HIGH SOLIDS ZINC	NAME :		NAME :		SURFACE PREPARATION :	
PAINT COLOR :	GREEN	PAINT COLOR :		PAINT COLOR :			
PAINT YEAR :	1995	PAINT YEAR :	0	PAINT YEAR :	0		
MILS :	0	MILS :	0	MILS :	0		
CREW :		LAYER :		DATE :			

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED
CONTRACT	SEE COMMENT	REM/REP LOOSE SEAL OR MAT	2	10/11/2011
COMMENTS :	REPLACE DENSE OVERLAY			
DISTRICT ROUTINE	SEE COMMENT	MISCELLANEOUS	2	10/11/2011
COMMENTS :	CORRECT POSTING SIGN - SHOULD BE 50 TONS (SIGNED AT 60)			

PROGRAM RECOMMENDATIONS

KC

Safe & Sound = N

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A1427**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A1427** 1183	STRUCTURE STATUS :	P-POSTLOAD	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	77506 WASHINGTON
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	1-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	RICHARD KINGERY (STATE), TERRY WILSON (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	10/11/2011
FACILITY CARRIED :	**IS 435 S**	DEFICIENT CODE :		LANES ON STRUCTURE	4	INSPECTION FREQUENCY :	24
CURB TO CURB :	63 Ft. 10.8 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	2	LATITUDE :	38 56 23.59 (DMS)
STRUCTURE LENGTH :	296 FEET	YEAR BUILT :	1966	BEGINNING COMPASS DIRECTION :	EAST	LONGITUDE :	94 34 2.77 (DMS)
FEATURE INTERSECTED :	**CST 104TH ST. UP RR**	RECONSTRUCTION YEAR	1994	ENDING COMPASS DIRECTION :	WEST	SCOUR EVALUATION TYPE :	

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-C3 LIMITS : Ton1 : 50 WEIGHT LIMIT 50 TONS.
FIELD POSTING CATEGORY : S-C3 LIMITS : Ton1 : 60 WEIGHT LIMIT 60 TONS.
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 65560 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :
PIN : DATE :	PIN : DATE :	PIN : DATE :	PIN : DATE :
CATEGORY :	CATEGORY :	CATEGORY :	CATEGORY :
METHODS :	METHODS :	METHODS :	METHODS :
INSPECTORS :	INSPECTORS :	INSPECTORS :	INSPECTORS :
COMMENTS :	COMMENTS :	COMMENTS :	COMMENTS :

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (46'-72'-72'-72'-55') CONT COMP WF GDR SPANS

RATINGS : **(ITEM 58) DECK RATING :** 6-SATISFACTORY CONDITION 10/31/2011 **(ITEM 59) SUPERSTRUCTURE RATING :** 7-GOOD CONDITION 05/18/2001 **(ITEM 60) SUBSTRUCTURE RATING :** 7-GOOD CONDITION 05/18/2001

COMMENTS : **COMMENTS :** **COMMENTS :**

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN STEEL WIDE FLANGE GIRDERS NUMBER OF SPANS : 5

TOTAL NUMBER OF SPANS : 5

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	1 MEETS CURRENT STANDARDS	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :

COMPONENT :	BRIDGE RAILING	REINFORCED CONCRETE	SAFETY BARRIER CURB	DIRECTION : BOTH

(ITEM 36B) TRANSITION RAILING :

COMPONENT :	TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM	DIRECTION : BOTH-NORTH

(ITEM 36C) APPROACH RAILING :

COMPONENT :	APPROACH RAILING	GALVANIZED STEEL	W-BEAM	DIRECTION : BOTH-NORTH

(ITEM 36D) RAIL END TREATMENT :

COMPONENT :	RAIL END TREATMENT	GALVANIZED STEEL	BREKAWAY SYSTEM	MANUFACTURE : ET-2000	DIRECTION : NORTHEAST

APPROACH PAVEMENT :

Design_No = A1427

COMPONENT : APPROACH PAVEMENT ASPHALT BITUMINOUS MAT DIRECTION : BOTH
CONDITION : SPALLS THROUGHOUT MANY

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

DECK COMPONENTS

MAIN SPANS 1				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	
MAIN SPANS 2				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	
MAIN SPANS 3				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	
MAIN SPANS 4				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	
MAIN SPANS 5				
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : EFFLORESCENCE		THROUGHOUT	MINOR	

DRAINAGE COMPONENTS

DRAINAGE 0			
COMPONENT : DRAINAGE		GALVANIZED STEEL	FLOOR DRAIN

PROTECTIVE COMPONENTS

MAIN SERIES 1				
COMPONENT : WEARING SURFACE		PLAIN CONCRETE	LATEX MODIFIED	OVERALL CONDITION : FAIR
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : LONGITUDINAL CRACKS		THROUGHOUT	MEDIUM	
CONDITION : PATCHES		THROUGHOUT	FEW	
COMMENTS : SPANS 1 AND 5				
COMPONENT : DECK PROTECTION		CARBON	CATHODIC PROTECTION	
COMPONENT : MEMBRANE		LIQUID SEALANT	BUILT-UP	
COMPONENT : SECONDARY DECK PROTECTION		LIQUID SEALANT	INTERNALLY SEALED	MANUFACTURE : STAR MACRO YEAR APPLIED : 2009

RAILING COMPONENTS

BRIDGE RAILING 0			
COMPONENT : BRIDGE RAILING		REINFORCED CONCRETE	SAFETY BARRIER CURB
COMPONENT : APPROACH RAILING		GALVANIZED STEEL	W-BEAM
COMPONENT : RAIL END TREATMENT		GALVANIZED STEEL	BREKAWAY SYSTEM
COMPONENT : TRANSITION RAILING		GALVANIZED STEEL	THRIE BEAM TO W-BEAM

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 7-GOOD CONDITION

MAIN SERIES 1 CONTINUOUS SPAN STEEL WIDE FLANGE GIRDERS NUMBER OF SPANS : 5

APPROACH ROADWAY WIDTH : 65 FOOT 0 INCH CURB TO CURB : 63 FOOT 10.8 INCH OUT TO OUT : 66 FOOT 8.4 INCH LEFT CURB WIDTH : 0 FOOT 7.2 INCH RIGHT CURB WIDTH : 0 FOOT 7.2 INCH

MAIN SPANS 1	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 46 FOOT 9 INCH	LENGTH : 72 FOOT 0 INCH	WEATHERING IND :
MAIN SPANS 2	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 72 FOOT 0 INCH		WEATHERING IND :
MAIN SPANS 3	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 72 FOOT 0 INCH		WEATHERING IND :
MAIN SPANS 4	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 72 FOOT 0 INCH		WEATHERING IND :
MAIN SPANS 5	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 55 FOOT 8 INCH		WEATHERING IND :
CONDITION : DELAMINATION		MINOR	GIRDER ENCASEMENT				
CONDITION : DIAGONAL CRACKS		MINOR	GIRDER ENCASEMENT				

Design_No = A1427

CONDITION : LEACHING MINOR GIRDER ENCASEMENT

TOTAL NUMBER OF SPANS 5

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 7-GOOD CONDITION

ABUTMENT	1	LABEL :			REINFORCED CONCRETE	NON-INTEGRAL
LEFTADVAN SKEW : 8 DEGREES 0		LENGTH : 74 FOOT 6 INCH				
BACKWALL			REINFORCED CONCRETE	CAST-IN-PLACE		
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		
BENT	2	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 71 FOOT 6 INCH		LEFTADVAN SKEW : 8 DEGREES 0				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : SPALLS		THROUGHOUT	MINOR			
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
EXPANSION BEARING			STEEL	ROCKER	OVERALL CONDITION:	
BENT	3	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LEFTADVAN SKEW : 8 DEGREES 0		LENGTH : 71 FOOT 6 INCH				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
FIXED BEARING			STEEL	PEDESTAL(ROTATING)	OVERALL CONDITION:	
BENT	4	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LEFTADVAN SKEW : 8 DEGREES 0		LENGTH : 71 FOOT 6 INCH				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
FIXED BEARING			STEEL	PEDESTAL(ROTATING)	OVERALL CONDITION:	
BENT	5	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 75 FOOT 4 INCH						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
EXPANSION BEARING			STEEL	ROCKER	OVERALL CONDITION:	
ABUTMENT	6	LABEL :			REINFORCED CONCRETE	NON-INTEGRAL
LENGTH : 74 FOOT 8 INCH						
BACKWALL			REINFORCED CONCRETE	CAST-IN-PLACE		
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : DELAMINATION		THROUGHOUT	MINOR			
CONDITION : HORIZONTAL CRACKS		THROUGHOUT	MEDIUM			
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : N-NOT APPLIC NO WATRWAY

SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : N-NOT APPLIC NOT WATERW

WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : NOT APPLICABLE

APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD

SLOPE PROTECTION

PLAIN CONCRETE PAVEDSLOPE BOTH

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION GOOD

RUST AMOUNT : 9=.03% OF SURFACE RUSTED

STEEL TONS : 282

ORIGINAL PAINT		CONTRACT REPAINT		DEPARTMENT REPAINT			
PAINT TYPE :	F SYSTEM	PAINT TYPE :		PAINT TYPE :		MANUFACTURE :	
NAME :	HIGH SOLIDS ZINC	NAME :		NAME :		SURFACE PREPARATION :	
PAINT COLOR :	GREEN	PAINT COLOR :		PAINT COLOR :			
PAINT YEAR :	1995	PAINT YEAR :	0	PAINT YEAR :	0		
MILS :	0	MILS :	0	MILS :	0		
CREW :		LAYER :		DATE :			

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED
DISTRICT ROUTINE	SEE COMMENT	MISCELLANEOUS	2	10/11/2011
COMMENTS :	REPLACE 60 TON POSTING SIGN WITH 50 TON			
CONTRACT	SEE COMMENT	REM/REP LOOSE SEAL OR MAT	2	10/11/2011
COMMENTS :	REPLACE DENSE OVERLA			

PROGRAM RECOMMENDATIONS

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

August 1, 2013
10:55:27am

COUNTY : JACKSON **BRIDGE NO.** A1427 R1 **REVIEW STATUS :** APPROVED **NBI STATUS :** P

RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	1183
27	Year Built	1966
106	Year Reconstructed	1994
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 S
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006042
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	04
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	WASHINGTON
	Code	77506
9	Location	S 33 T 48 N R 33 W
11	Milepoint	52.76 miles
16	Latitude	38 D 56 M 24 S
17	Longitude	94 D 34 M 3 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	65560
30	AADT Year	2012
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	18%
114	Future AADT	88506
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	CST 104TH ST, UP RR
42B	Type of Service Under	HIGHWAY-RAILROAD
28B	Lanes Under Structure	02
54A	Vert. Clearance Ref.	RAIL ROAD
54B	Vert. Clearance	22 Ft. 6 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	10 Ft. 2 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	64 Ft. 11 In.
34	Skew	8.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	65 Ft. 7 In.
48	Maximum Span Length	71 Ft. 9 In.
49	Structure Length	295 Ft. 0 In.
50A	Left Curb/Sidewalk Width	0 Ft. 7 In.
50B	Right Curb/Sidewalk Width	0 Ft. 7 In.
51	Curb to Curb Br. Width	63 Ft. 11 In.
52	Deck Width (Out-Out)	66 Ft. 7 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A1427 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

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RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

LOAD RATING AND POSTING INFORMATION

31	Design Load	HS 20
41	Structure Status	P - POSTED FOR LOAD
63	Oper. Rating Meth.	LOAD FACTOR
64	Operating Rating	49 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	27 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	86.1 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	6
68	Deck Geometry App. Rating	5
69	Underclearance App. Rating	6
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	N

APPROVED POSTING INFORMATION

Approved Posting Categor S-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	50		

General Text for Posting Sign

WEIGHT LIMIT 50 TONS.

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	STEEL CONTINUOUS
43B	Main struc Constr. Type	STRINGER/MULTIBEAM - GRD
45	# of Main Spans	5
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.	3 LATEX CONCRETE
108B	Membrane Mat/Constr.	1 BUILT UP
108C	Deck Protect Mat/Constr.	4 CATHODIC

CONDITION RATING INFORMATION

58	Deck Cond. Rating	6
59	Superstructure Cond. Rating	7
60	Substructure Cond. Rating	7
61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	10 / 11	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Insp. Dat	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-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	60		

General Text for Posting Sign

WEIGHT LIMIT 60 TONS.

Design_No = A1427 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

Missouri Department of Transportation
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GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	1184
27	Year Built	1966
106	Year Reconstructed	1994
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	RIGHT
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 N
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006039
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	04
100	STRAHNET Designation	ON A DEFENSE HWY
104	National Highway System	ON NHS
105	Federal Lands Highway	NOT APPLICABLE
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28B	Lanes Under Structure	03
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54B	Vert. Clearance	20 Ft. 2 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	10 Ft. 2 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	73 Ft. 1 In.
34	Skew	8.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	73 Ft. 9 In.
48	Maximum Span Length	71 Ft. 9 In.
49	Structure Length	317 Ft. 0 In.
50A	Left Curb/Sidewalk Width	0 Ft. 7 In.
50B	Right Curb/Sidewalk Width	0 Ft. 7 In.
51	Curb to Curb Br. Width	71 Ft. 9 In.
52	Deck Width (Out-Out)	74 Ft. 9 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

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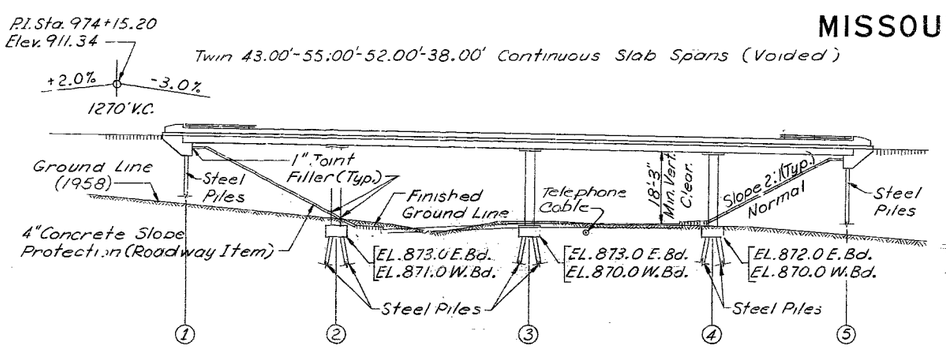
General Text for Posting Sign

WEIGHT LIMIT 60 TONS.

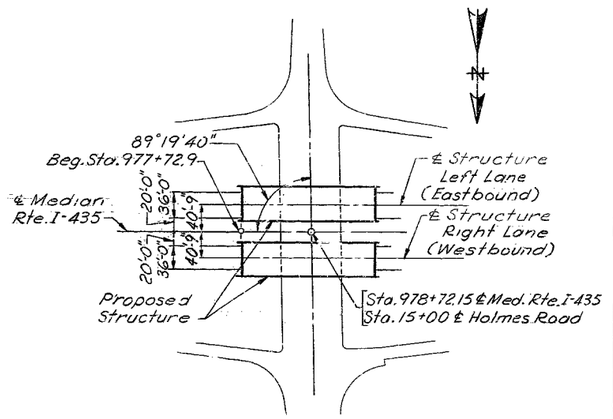
Design_No = A1427 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

MISSOURI STATE HIGHWAY DEPARTMENT

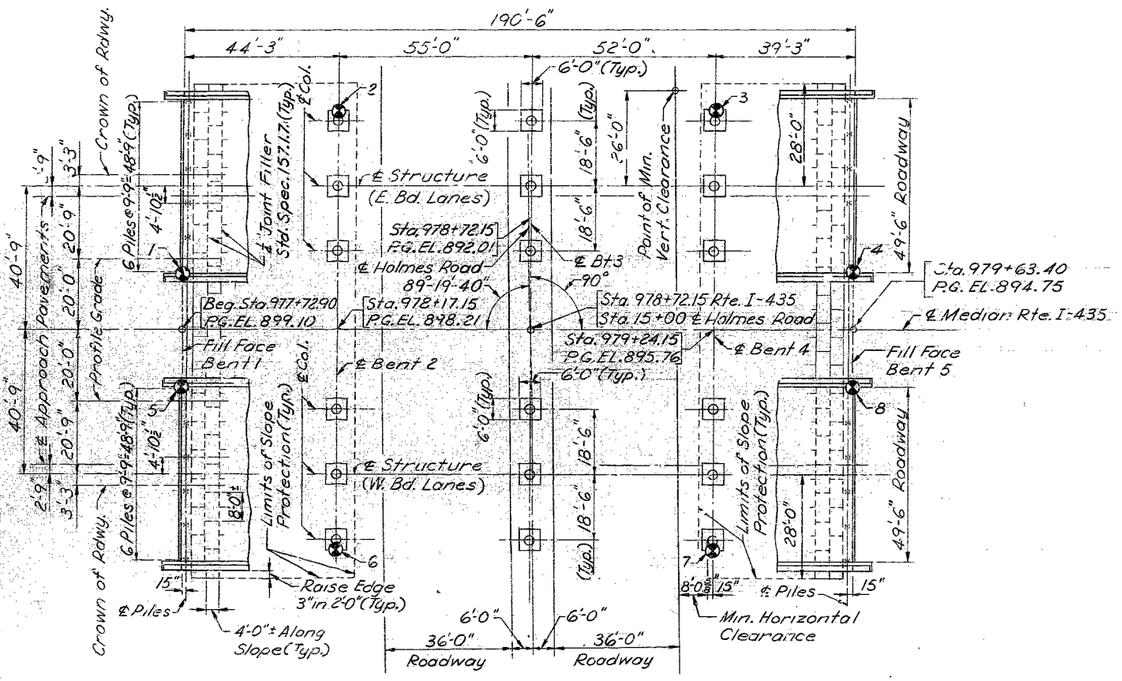
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	131	



GENERAL ELEVATION



LOCATION SKETCH



PLAN

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.O. - 1961

DESIGN LOADING:
HS 20-44; 15 #/sq. ft. Future Wearing Surface;
Modified 24,000 # Tandem Axle;
Earth 120#; Equivalent Fluid Pressure 30#.

DESIGN UNIT STRESSES:
Class B Concrete (Substructure) fc = 1,200 p.s.i.
Class B1 Concrete (Superstructure) fc = 1,600 p.s.i.
Reinforcing Steel fs = 20,000 p.s.i.
Steel Pile (A.S.T.M. A36-62T) fb = 9,000 p.s.i.

SURFACE SEAL: Superstructure deck to be surface sealed.

FALSEWORK:
Falsework over existing lanes shall be constructed with a minimum vertical clearance of 13'-0" from crown of existing lanes and a minimum lateral clearance of 28'-0" centered on existing lanes.

ESTIMATED QUANTITIES

Item		Substr.	Superstr.	Total
Class I Excavation For Structures	Cu. Yd.	145	—	145
10" Steel Piles in Place	Lin. Ft.	1146	—	1146
10" Steel Pile Cut Offs	Lin. Ft.	144	—	144
12" Steel Piles in Place	Lin. Ft.	696	—	696
12" Steel Pile Cut Offs	Lin. Ft.	144	—	144
Class B Concrete	Cu. Yd.	72.0	—	72.0
Class B1 Concrete	Cu. Yd.	—	1346.0	1346.0
Reinforcing Steel	Lb.	2000	314,690	316,690
Bridge Rail (Single Tube Type)	Lin. Ft.	—	761	761

Note: All concrete and reinforcement above footings is included in superstructure quantities.
No payment for excavation will be allowed at End Bents No. 1 & 5.
Excavation for Bents No. 2 & 4 will be paid for from the finished ground line.

PILE DATA

BENT NO.		1		2		3		4		5	
LANE		E.Bd.	W.Bd.	E.Bd.	W.Bd.	E.Bd.	W.Bd.	E.Bd.	W.Bd.	E.Bd.	W.Bd.
Pile Type and Size		10 BP 42		12 BP 53		12 BP 53		10 BP 42		10 BP 42	
Numbe.-		6	6	12	12	12	12	12	12	6	6
Approximate Length	Ft.	25	30	15	15	20	20	20	20	40	40
Design Bearing Value	Ton	38	38	57	57	57	57	54	54	38	38
* Hammer Energy Req'd.	Ft. Lbs	8500	8500	12800	12800	12800	12800	12100	12100	8500	8500

PILE NOTES:
All pile shall be driven to practical refusal at 1.9 times the design bearing value.
* Minimum Energy Requirement of hammer based on plan length and design bearing value of pile.

Note. For location of existing utility conduits see Road Plans.

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.

BORING DATA:
For Boring Data see Sheet No. 7 of 8.
"⊗" Indicates location of boring.

BENCH MARK:
B.M. 103 Elev. 864.17
□ On North Headwall Culvert 200' Rt. Sta. 980+30.

STATE OF MISSOURI — REGISTERED PROFESSIONAL ENGINEER — EUGENE L. FIELDHAMMER — NUMBER E-10795

SUBMITTED BY
REGISTERED PROFESSIONAL ENGINEER
MISSOURI NO. E-10795

BRIDGE OVER HOLMES ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 4 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 977+72.9

JACKSON **COUNTY**

SUBMITTED BY D. B. Gunderson BRIDGE ENGINEER DATE 5/20/66

APPROVED BY: M. J. Smith CHIEF ENGINEER DATE 5/20/66

STD. 54.00
A-1662

DESIGNED OCT. 1965 BY J. PARIKH
DETAILED OCT. 1965 BY VIEHLAND
CHECKED NOV. 1965 BY MISSLER

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 1 of 8.

A-1662

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	132	

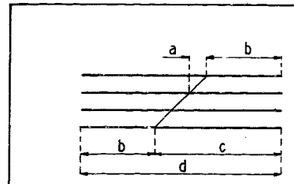
COMPLETE BILL OF REINFORCING STEEL

NO.	SIZE	LENGTH	MARK	LOCATION
SUPERSTR. (E.Bd. & W.Bd. Lanes)				
1768	#5	26'-6"	S1	Slab
140	#5	29'-9"	S3	"
72	#11	30'-3"	S4	"
68	#11	20'-0"	S5	"
68	#10	10'-0"	S6	"
140	#5	26'-0"	S7	"
72	#11	30'-9"	S8	"
68	#11	19'-6"	S9	"
68	#10	10'-9"	S10	"
280	#5	27'-6"	S11	"
72	#11	23'-9"	S12	"
68	#10	15'-6"	S13	"
68	#8	8'-3"	S14	"
264	#4	2'-3"	S15	"
72	#11	44'-6"	S16	"
68	#9	32'-3"	S17	"
68	#8	20'-0"	S18	"
72	#11	57'-9"	S19	"
68	#9	32'-6"	S20	"
68	#8	20'-6"	S21	"
72	#10	54'-3"	S22	"
68	#9	30'-0"	S23	"
68	#8	19'-6"	S24	"
72	#9	40'-3"	S25	"
68	#9	30'-3"	S26	"
68	#7	17'-9"	S27	"
8	#4	25'-3"	S28	"
760	#5	3'-6"	C1	Curbs
16	#5	22'-6"	C2	"
16	#5	28'-0"	C3	"
16	#5	26'-6"	C4	"
16	#5	20'-0"	C5	"
48	#5	3'-0"	C6	"
16	#6	5'-0"	C7	"
48	#5	4'-9"	R1	End Posts
8	#5	5'-6"	R2	"
8	#5	6'-3"	R3	"
8	#5	6'-9"	R4	"
8	#5	7'-0"	R5	"
16	#5	7'-3"	R6	"
912	#5	5'-3"	R7	Parapets
16	#5	33'-9"	R8	"
96	#5	9'-6"	R9	"
16	#5	34'-6"	R10	"
16	#5	31'-6"	R11	"
16	#5	28'-9"	R12	"
SUPERSTR. End Bents (E.Bd. & W.Bd.)				
48	#6	51'-6"	H1	Beams
392	#5	9'-6"	U1	"
280	#6	7'-9"	S2	"
32	#6	10'-0"	H2	Wings
16	#6	7'-0"	H3	"
40	#4	8'-0"	V1	"
16	#6	10'-0"	T1	"

NO.	SIZE	LENGTH	MARK	LOCATION
SUPERSTR. Int. Bents (E.Bd. & W.Bd.)				
84	#9	51'-0"	G1	Beams
76	#11	54'-0"	G2	"
18	#11	13'-0"	G3	"
512	#5	8'-6"	U2	"
208	#5	9'-9"	U3	"
371	#3	7'-9"	V3	Columns
16	#9	23'-0"	V4	"
16	#9	21'-6"	V5	"
24	#9	23'-3"	V6	"
32	#9	21'-9"	V7	"
24	#9	25'-0"	V8	"
8	#9	25'-3"	V9	"
8	#9	23'-9"	V10	"
16	#9	24'-9"	V11	"
SUB STR. Int. Bents (E.Bd. & W.Bd.)				
144	#5	2'-6"	D1	Footing
144	#6	7'-6"	D2	"

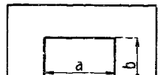
NO.	SIZE	LENGTH	MARK	LOCATION

BENDING SKETCHES & CUTTING DIAGRAMS

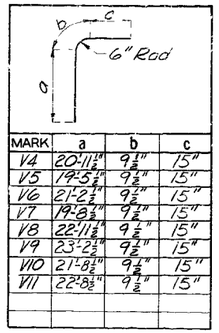


CUTTING SCHEDULE

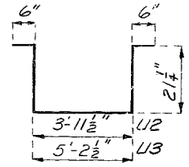
REMARKS	a	b	c	d
5 V1 Cut 40	10⅛"	2'-3"	5'-9"	8'-0"
4 H2 Cut 32	16"	3'-0"	7'-0"	10'-0"



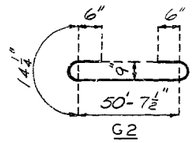
MARK	a	b
U1	2'-2¼"	3'-7⅜"
D2	15"	3'-1⅛"



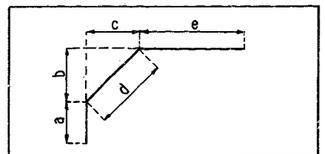
MARK	a	b	c
V4	20'-11⅛"	9½"	15"
V5	19'-5½"	9½"	15"
V6	21'-2½"	9½"	15"
V7	19'-8½"	9½"	15"
V8	22'-11⅛"	9½"	15"
V9	23'-2⅝"	9½"	15"
V10	21'-8½"	9½"	15"
V11	22'-8½"	9½"	15"



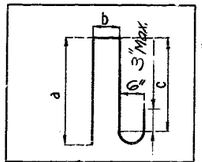
U2 - U3



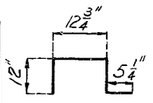
G2



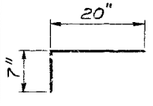
MARK	a	b	c	d	e
T1	17"	4'-3½"	5'-0"	6'-7"	2'-0"



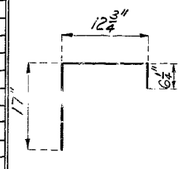
MARK	a	b	c
R2	2'-1"	7½"	22"
R3	2'-5½"	7½"	2'-2½"
R4	2'-8½"	7½"	2'-5½"
R5	2'-10"	7½"	2'-7"
R6	2'-11½"	7½"	2'-8½"
R7	23½"	7½"	20½"



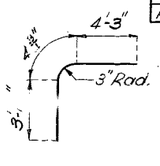
C1



S15

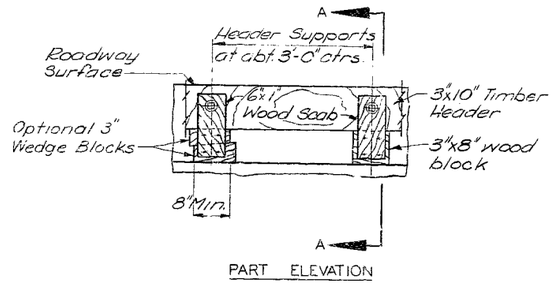


C6

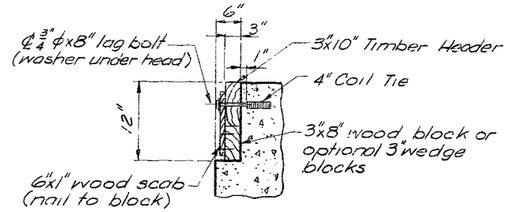


S2

V3



PART ELEVATION



SECTION A-A

TIMBER HEADER DETAIL

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

BRIDGE OVER HOLMES ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 4 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE.I-435) **STA.** 977+72.9
JACKSON **COUNTY**

A-1662

No.	Date	Revised
904	Aug. 1963	Dec. 1964

DETAILED SEPT. 1965 BY HERD
CHECKED OCT. 1965 BY R. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST
ST. LOUIS 1, MISSOURI

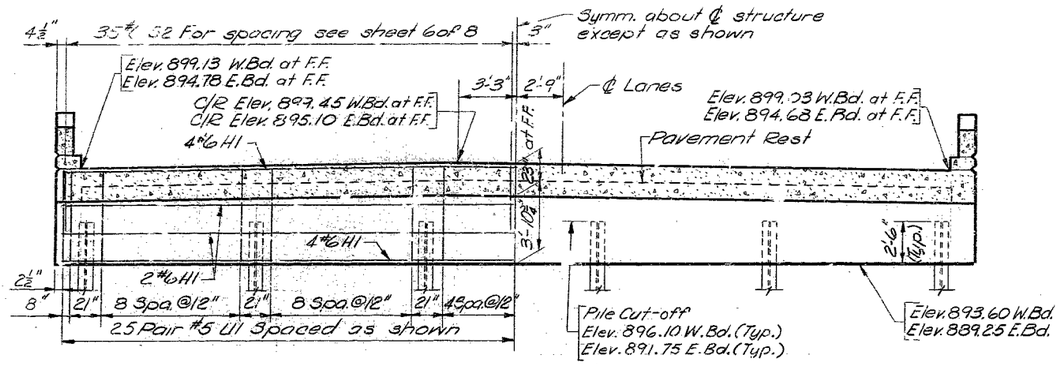
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 8.

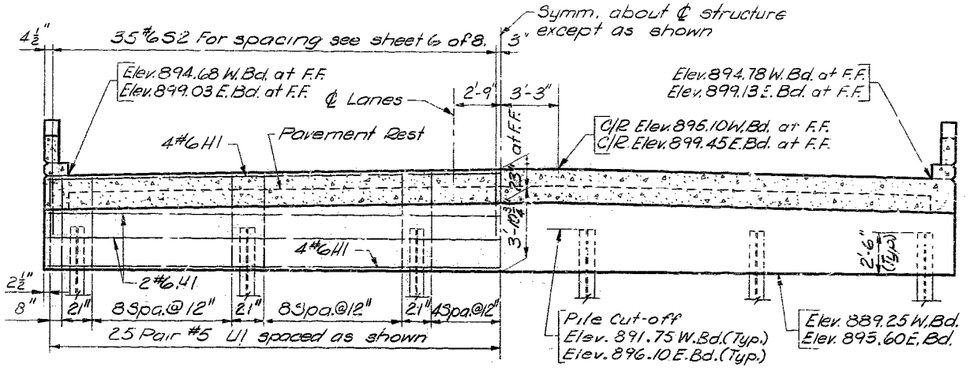
495

MISSOURI STATE HIGHWAY DEPARTMENT

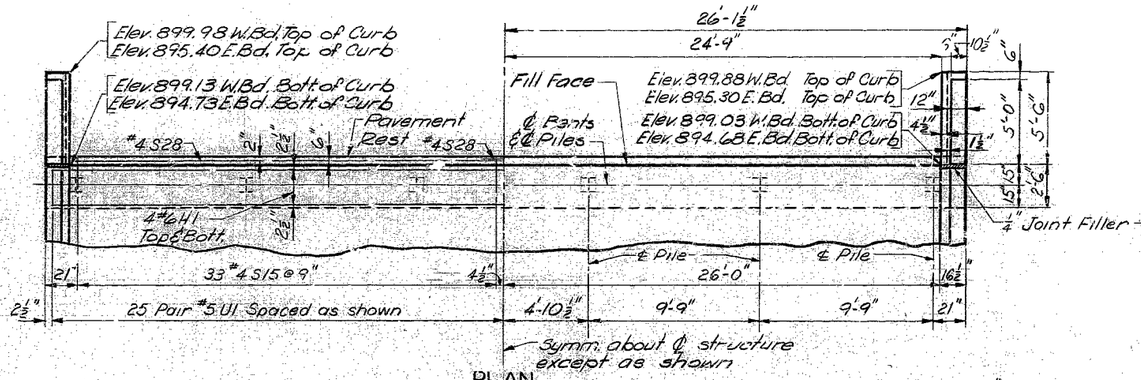
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAP	SHEET NO.	TOTAL SHEETS
5	MO.		19	133	



ELEVATION

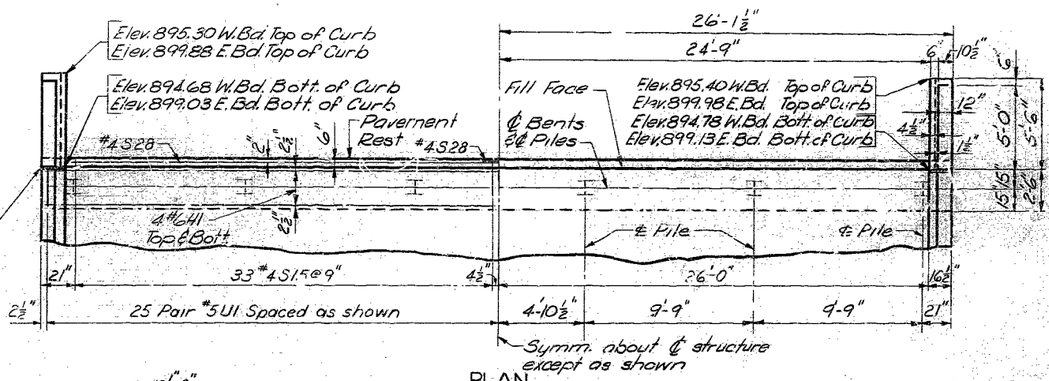


ELEVATION



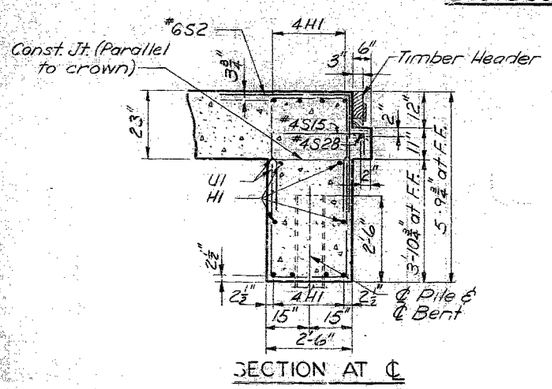
PLAN

WESTBOUND END BENT 1
EASTBOUND END BENT 5

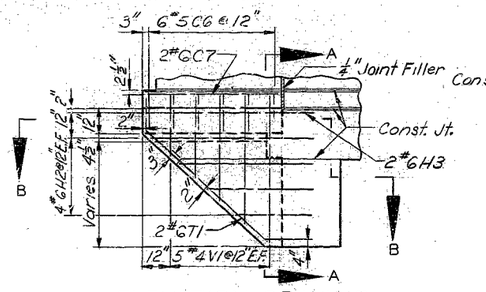


PLAN

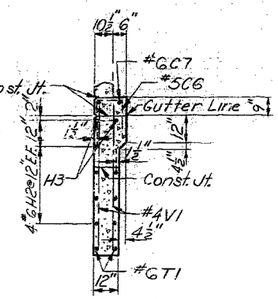
WESTBOUND END BENT 5
EASTBOUND END BENT 1



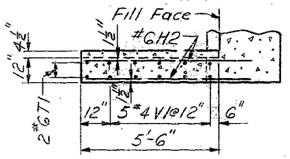
SECTION AT ℄



ELEVATION OF WING



SECTION A-A



SECTION B-B

NOTES:
Fill of end bents shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.
For Timber Header Detail see sheet No. 2 of 8.
For Steel Pile Splice see Sheet No. 5 of 8.

BRIDGE OVER HOLMES ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 4 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53) (RTE I-435) **STA.** 977+72.9
JACKSON **COUNTY**

A-1662

4866

DETAILED SEPT. 1965 BY HERD
CHECKED NOV. 1965 BY B. PARIKH

R. W. BOOKER & ASSOCIATES
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

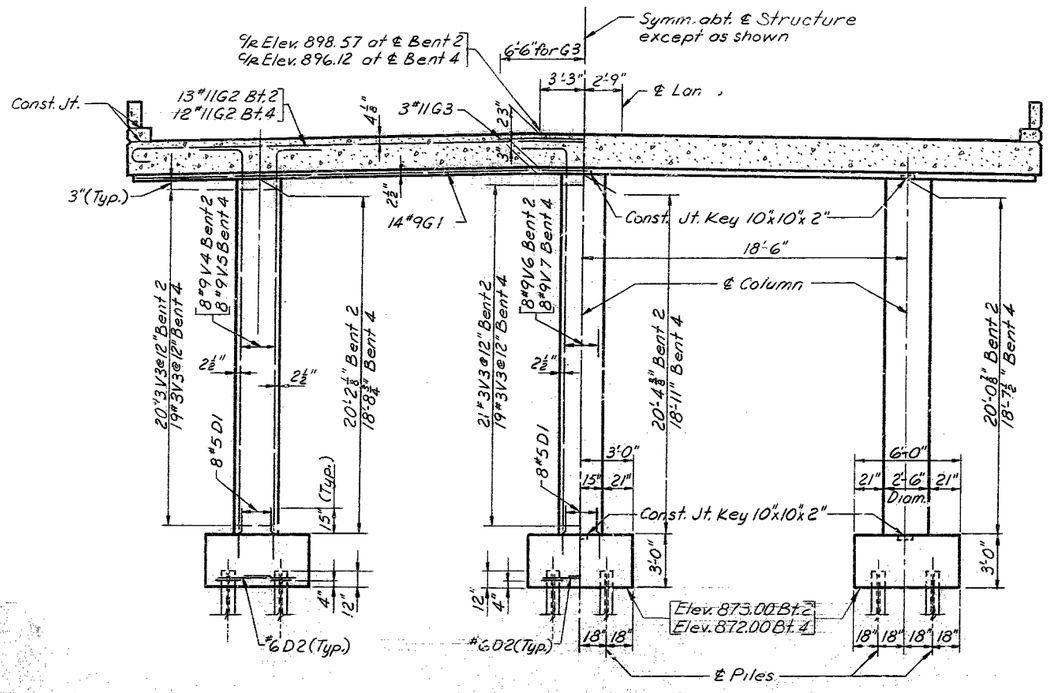
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 8.

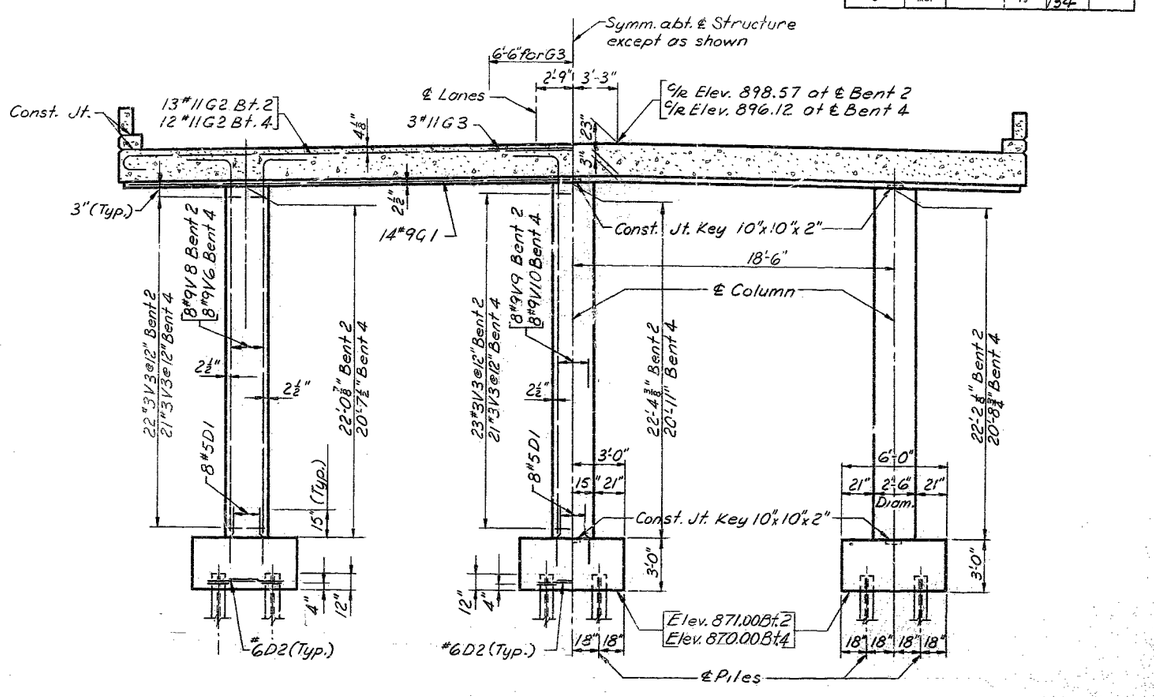
NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

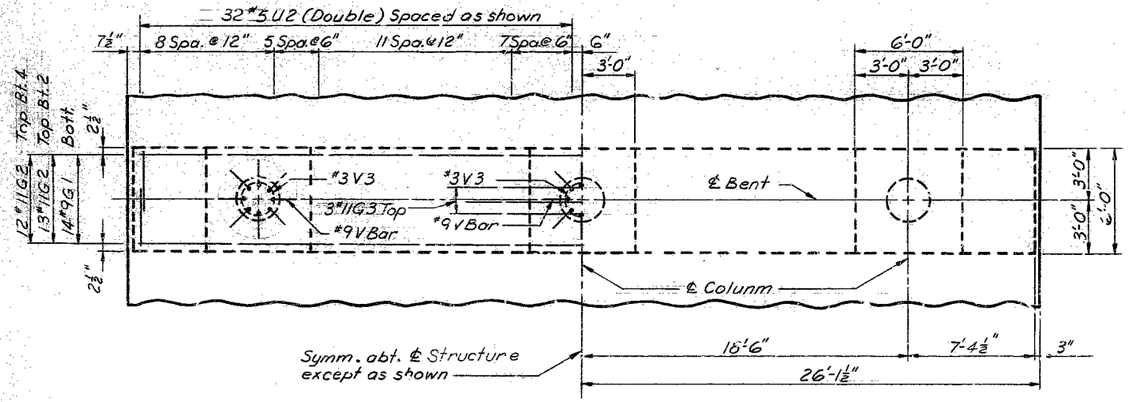
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	134	



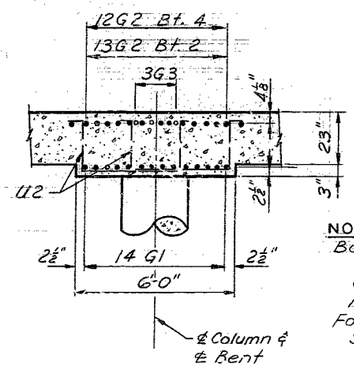
EASTBOUND ELEVATION



WESTBOUND ELEVATION

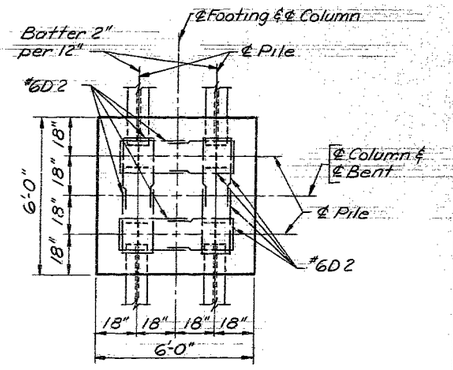


PLAN



SECTION AT ℄

NOTE:
Bottom of drop panel to be parallel to top of slab both longitudinally and transversely. For Steel Pile Splice see Sheet 5 of 8.



FOOTING PLAN

INTERMEDIATE BENTS NO. 2 & 4

BRIDGE OVER HOLMES ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 4 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE I-435) **STA.** 977+72.9
JACKSON COUNTY

DETAILED SEPT. 1965 BY VIEHLAND
CHECKED OCT. 1965 BY R. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

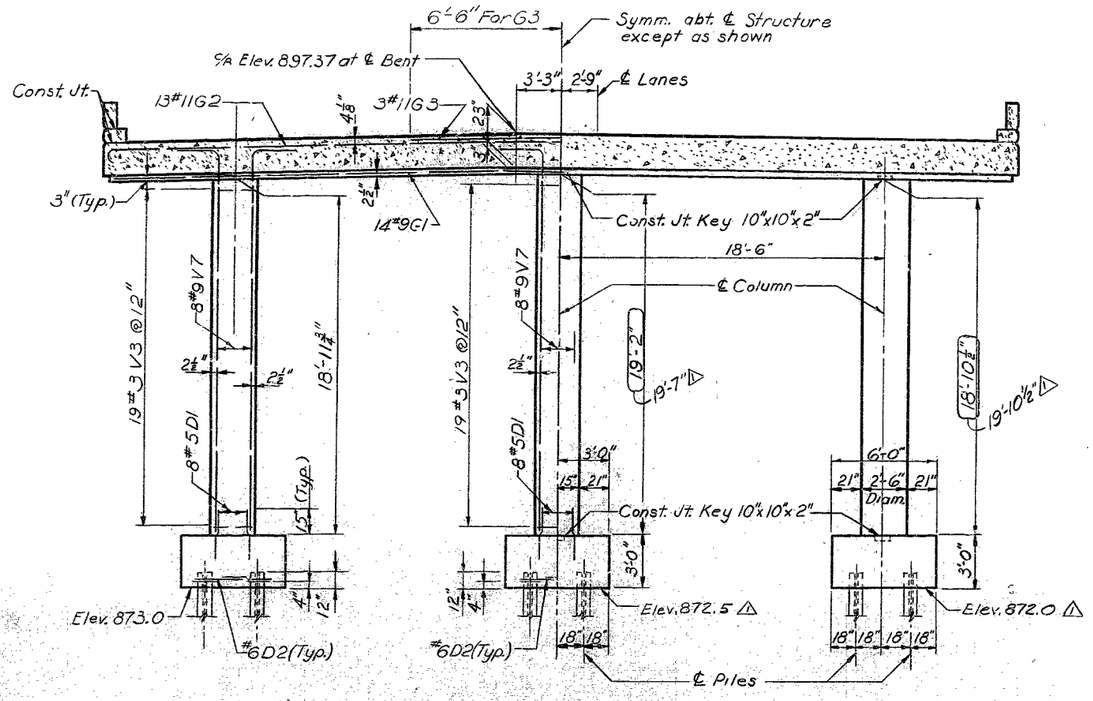
Sheet No. 4 of 8.

A-1662

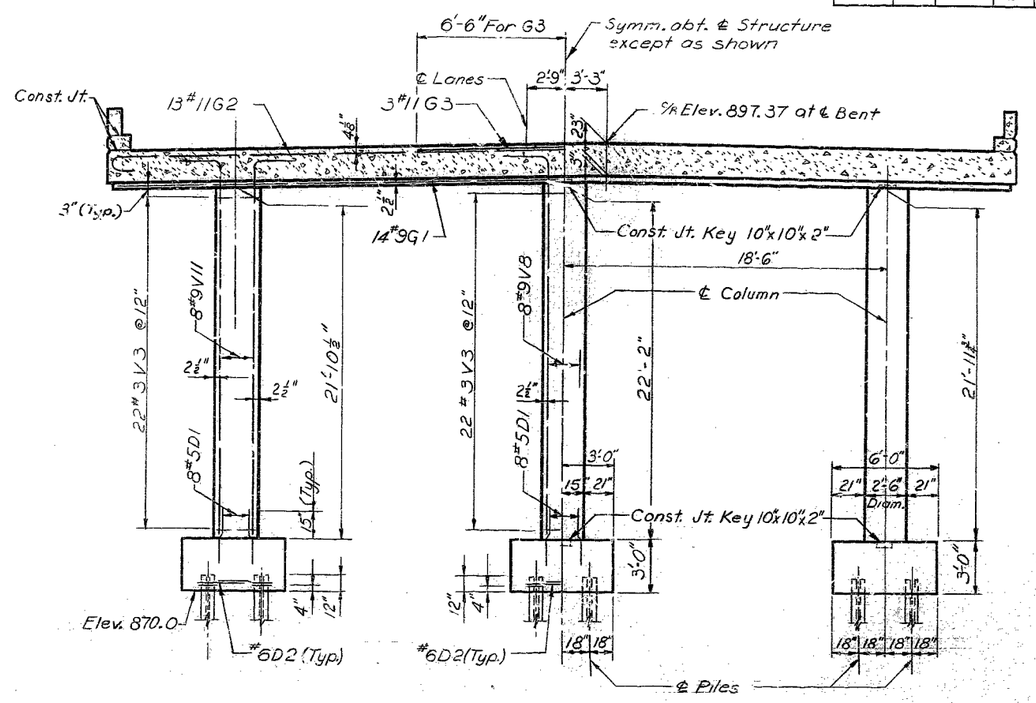
4287

MISSOURI STATE HIGHWAY DEPARTMENT

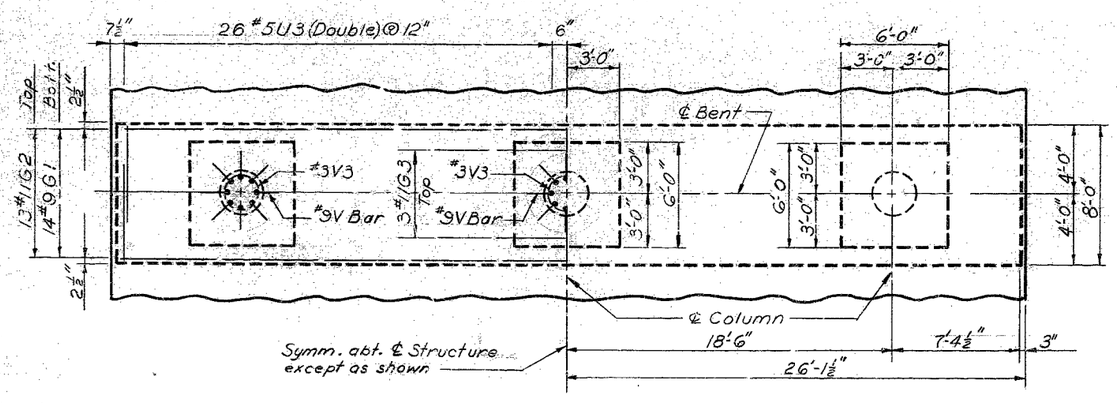
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	135	



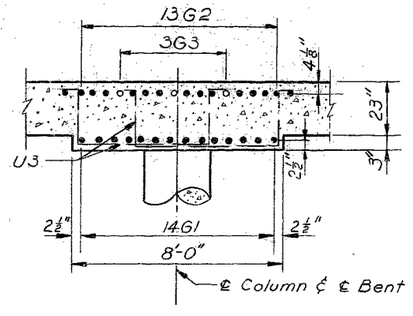
EASTBOUND ELEVATION



WESTBOUND ELEVATION

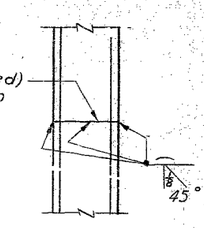


PLAN



SECTION AT ℄

NOTE:
For Footing Plan see Sheet No. 4 of 8.



STEEL PILE SPLICE

NOTE:
Bottom of drop panel to be parallel to top of slab both longitudinally and transversely.

INTERMEDIATE BENT NO.3

BRIDGE OVER HOLMES ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 4 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE I-435) **STA.** 977+72.9
JACKSON **COUNTY**

DETAILED SEPT. 1965 BY HOHLT
CHECKED OCT. 1965 BY A. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

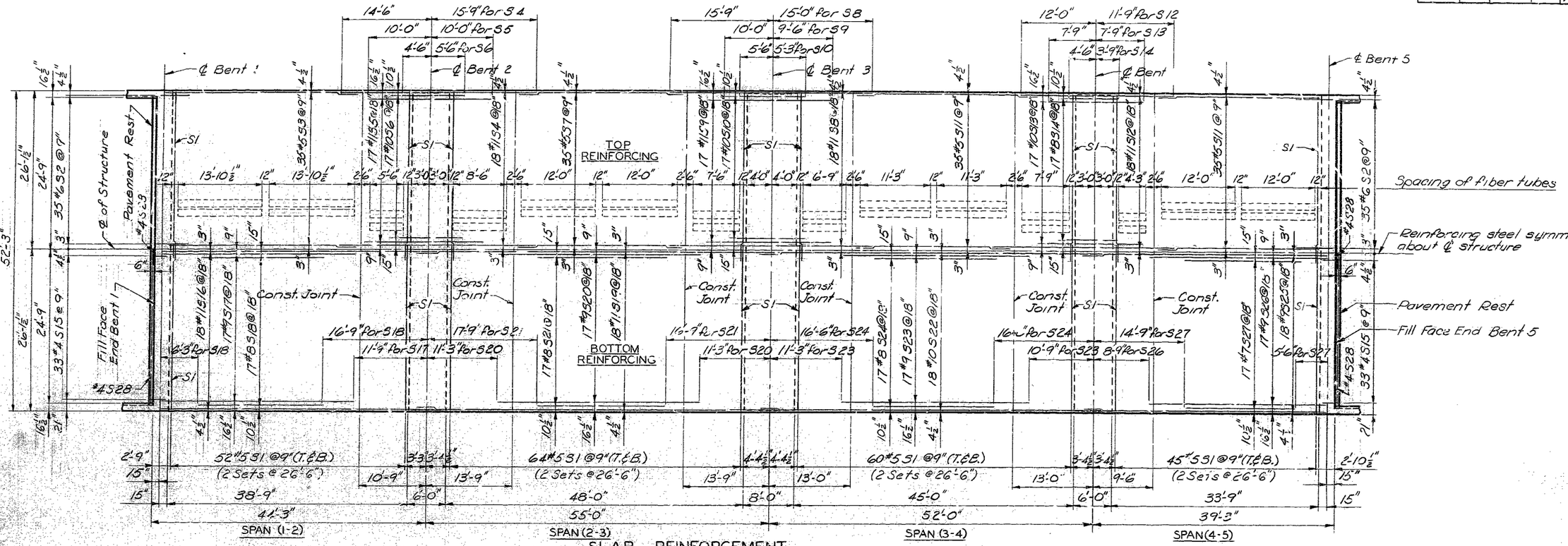
⚠ Const. Change

Sheet No. 5 of 8.

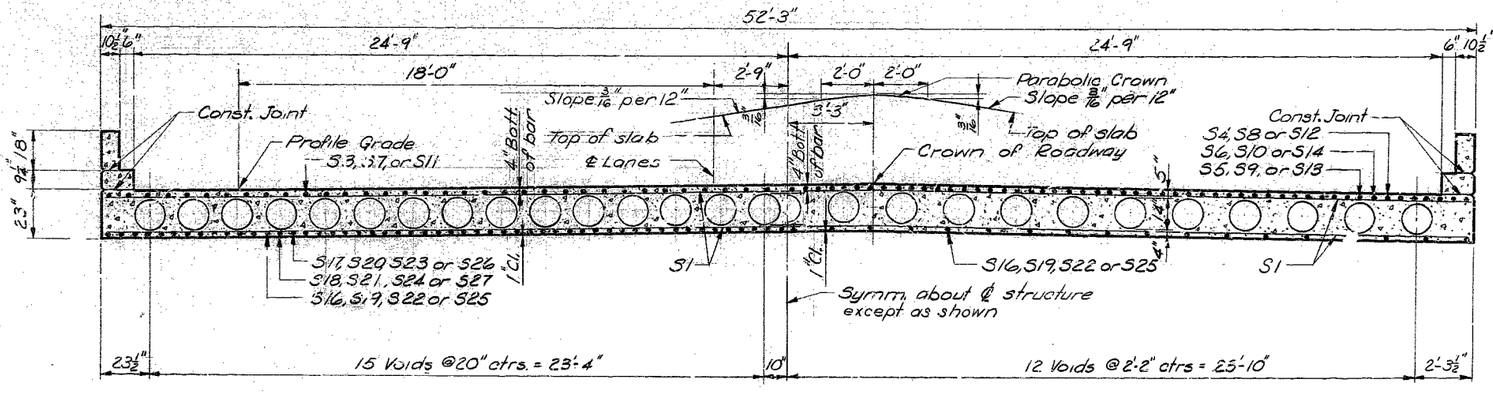
A-1662

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	136	



SLAB REINFORCEMENT



HALF SECTION AT CENTER OF SPAN

HALF SECTION NEAR INT. BENT

WESTBOUND LANES

(Eastbound Lanes opposite hand)

NOTE:
For detail of weephole, construction joint key and Notes see sheet 7 of 8.
Minimum lap for reinforcing steel shall be 24 dia.

BRIDGE OVER HOLMES ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 4 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 977+72.9
JACKSON COUNTY

DETAILED SEPT. 1965 BY HERD
CHECKED NOV. 1965 BY R. PARIAH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

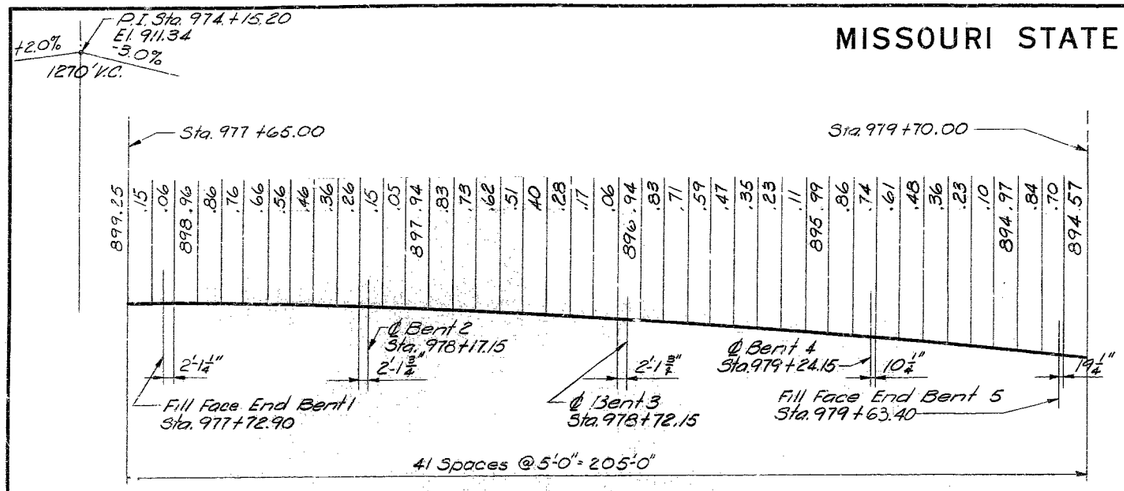
A-1662

NO CONSTRUCTION CHANGES

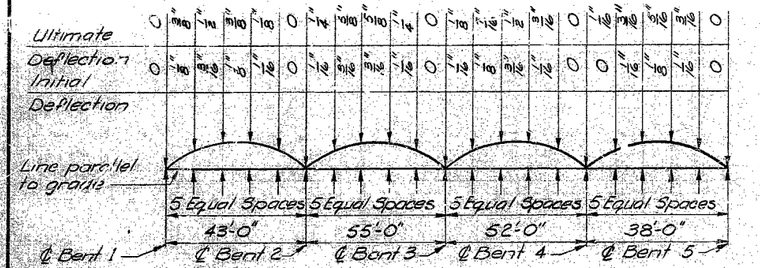
489

MISSOURI STATE HIGHWAY DEPARTMENT

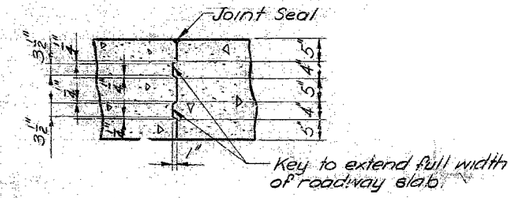
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	137	



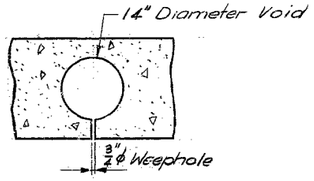
PROFILE GRADE ELEVATIONS



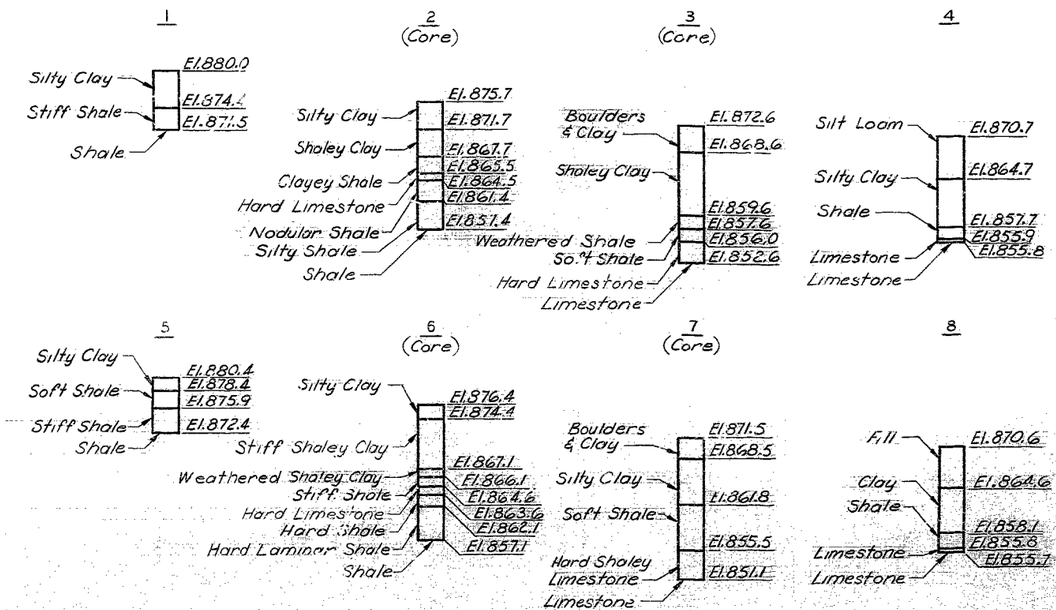
CAMBER DIAGRAM



CONST. JOINT KEY



WEEPHOLE DETAIL



BOR'NG DATA

NOTES:

Core drill equipment: Double Tube Core Bbl.

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

Finish each side of joint with 1/2" radius edging tool and fill flush with joint seal.

Fiber tubes for producing voids shall have an outside diameter of 14.0 and a wall thickness of 0.250 and shall be anchored to joists carrying the floor form at not more than 4'-0" centers. See Special Provisions for metal tube alternate for voids.

The contractor shall use an approved oscillating screed type, self-propelled mechanical finishing machine and shall pour and satisfactorily finish the roadway slab at a rate of not less than 46 cubic yards per hour. He shall observe the transverse construction joints shown on plans unless he can demonstrate to the satisfaction of the engineer that he is equipped to pour and satisfactorily finish the roadway slab at a rate which will permit a continuous pouring through some or all of these joints. Finishing machine load will not be permitted on concrete less than 48 hours old.

BRIDGE OVER HOLMES ROAD

STATE ROAD INTERSTATE ROUTE 435

ABOUT 4 MILES NORTH OF MARTIN CITY

PROJECT NO. I-IG-435-1(53)(RTE.I-435) **STA.** 977+72.9

JACKSON COUNTY

A-1662

DETAILED SEPT. 1965 BY H.S.R.D

CHECKED OCT. 1965 BY A.B. P.A.B./K.H.

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 7 of 8.

NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5	MO.		19	138	

GENERAL NOTES:

All handrail posts shall be set normal to grade.

Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet.

Aluminum washer shims between top of parapet and post base may be used for adjusting handrail alignment. Maximum thickness of shims to be 1/8". Where more tilting of post is required for proper alignment, concrete bearing areas shall be ground down.

All parts of handrail, except anchor bolts, nuts, washers, and set screws are to be of aluminum material.

The contract unit price per linear foot of "Bridge Rail" shall include furnishing and erecting the handrail complete with anchor bolts, shims and insulating compound.

All fillets 1/4" except as noted.

All drafts 5° except as noted.

Pipe rail to be fabricated in two or three panel lengths unless otherwise approved.

Omit set screw on side near filled joint in parapet at all expansion posts.

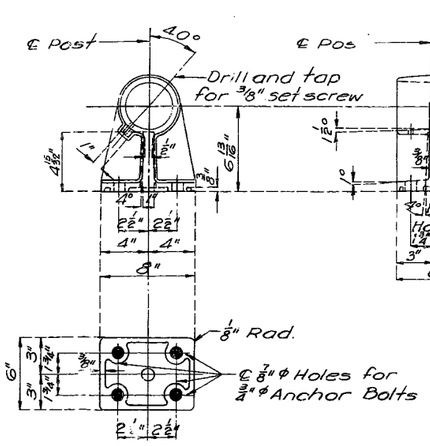
Top of curbs and parapets to be built parallel to grade with curb and parapet joints normal to grade.

Concrete end posts to be vertical.

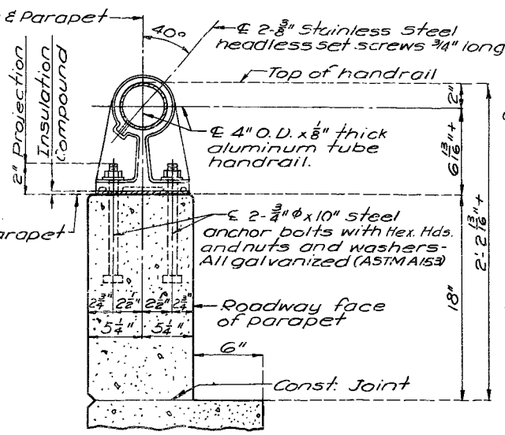
All exposed edges of end posts, parapets and curbs shall have 1/2" radius.

If the contractor desires, he may use drive fit cast aluminum end caps in lieu of welded aluminum closure plates.

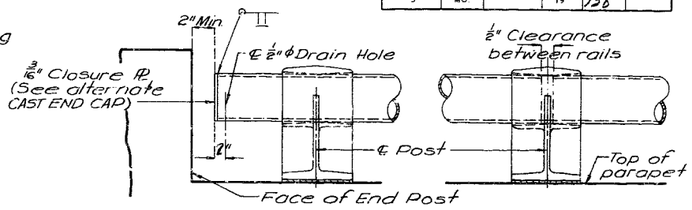
Integrally cast test coupons and a coat of clear lacquer specified in Std. Spec. 56.2.4 and 56.3.5 respectively will not be required for these rail posts.



POST DETAILS

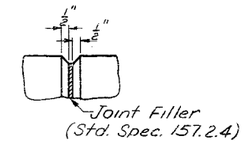


SECTION THRU HANDRAIL



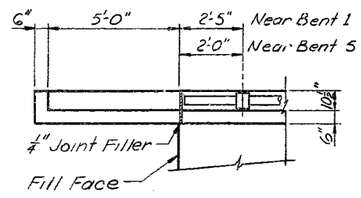
TYPICAL HANDRAIL DETAILS

SINGLE TUBE ALUMINUM RAILING

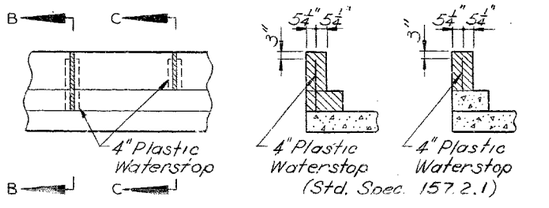


FILLED JOINT DETAILS

CURB & PARAPET ELEVATION



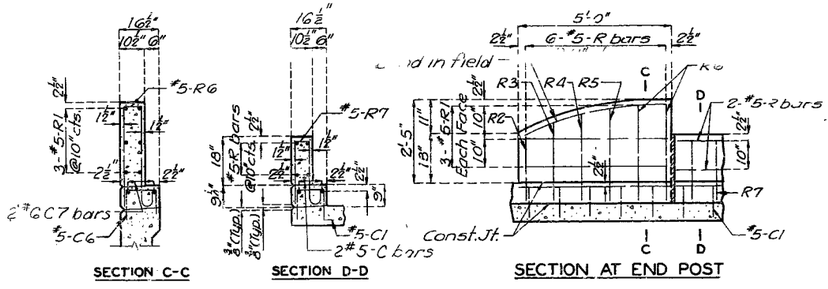
PLAN OF END POST



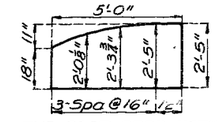
DETAIL A SECTION B-B SECTION C-C

PLASTIC WATERSTOPS

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



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



END POST ORDINATES

BRIDGE OVER HOLMES ROAD
STATE ROAD INTERSTATE ROUTE 435
ABOUT 4 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-1(53)(RTE. I-435) **STA.** 977+72.9
JACKSON COUNTY

A-1662

491

No.	Revised
1,5,2	May 1965
Nov 1965	

DETAILED SEPT. 1965 BY VIEHLAND
CHECKED OCT. 1965 BY P. PARIKH

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
715 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

Sheet No. 8 of 8.

FINAL PLANS

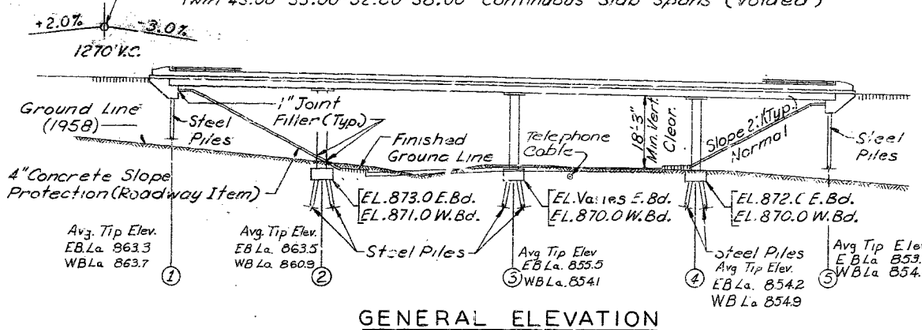
MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

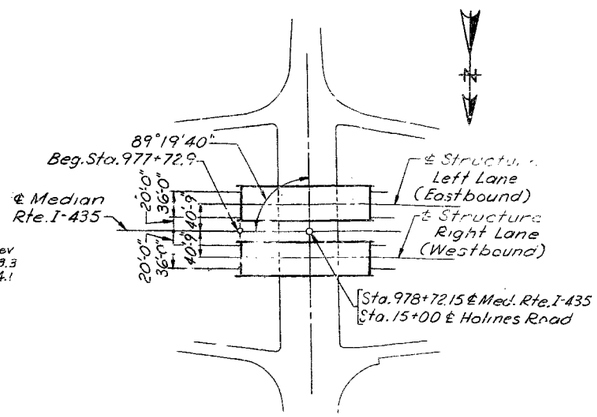
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	131	

P.I. Sta. 974+15.20
Elev. 911.34

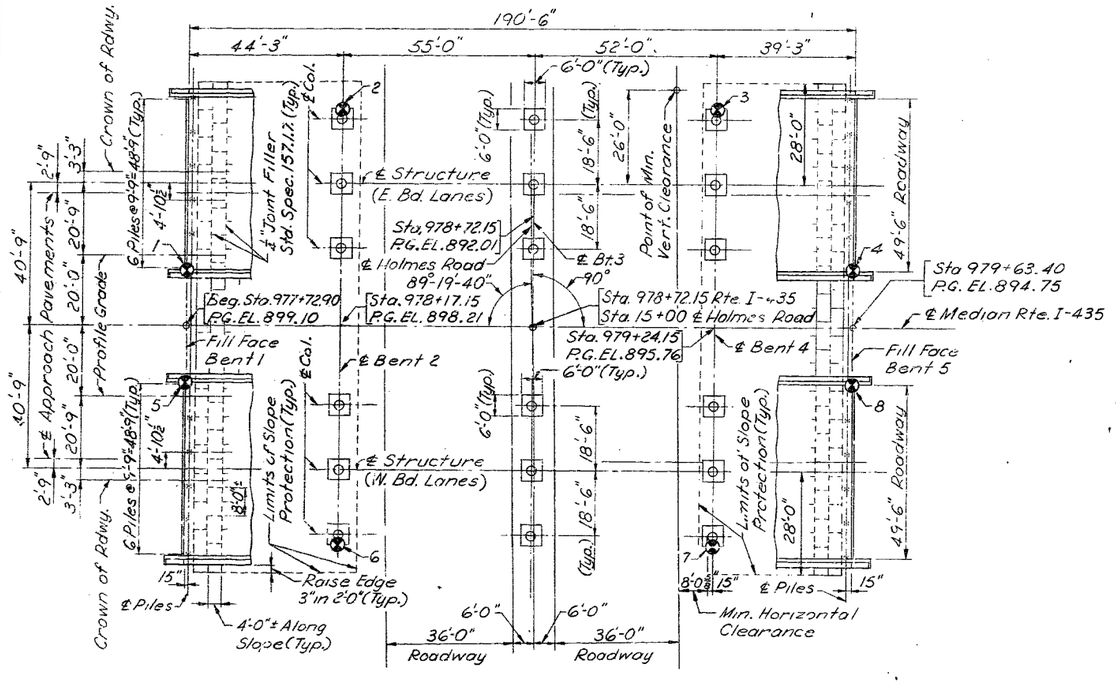
Twin 43.00'-55.00'-52.00'-38.00' Continuous Slab Spans (Voided)



GENERAL ELEVATION



LOCATION SKETCH



PLAN

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.O. - 1961

DESIGN LOADING:
HS 20-44; 15 #/sq. ft. Future Wearing Surface;
Modified 24,000 # Tandem Axle;
Earth 120#; Equivalent Fluid Pressure 30#.

DESIGN UNIT STRESSES:
Class B Concrete (Substructure) f_c = 1,200 p.s.i.
Class B1 Concrete (Superstructure) f_c = 1,600 p.s.i.
Reinforcing Steel f_s = 20,000 p.s.i.
Steel Pile (A.S.T.M. A36-62T) f_b = 9,000 p.s.i.

SURFACE SEAL: Superstructure deck surface sealed.

FALSEWORK:
Falsework over existing lanes constructed with a minimum vertical clearance of 13'-0" from crown of existing lanes and a minimum lateral clearance of 15'-0" centered on By Pass lanes.

Item		QUANTITIES Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yd.	246.5	—	246.5
10" Steel Piles in Place	Lin. Ft.	1232	—	1232
10" Steel Pile Cut Offs	Lin. Ft.	146	—	146
12" Steel Piles in Place	Lin. Ft.	629	—	629
12" Steel Pile Cut Offs	Lin. Ft.	211	—	211
Class B Concrete	Cu. Yd.	72.0	—	72.0
Class B1 Concrete	Cu. Yd.	—	1346.3	1346.3
Reinforcing Steel	Lb.	2000	314860	316,860
Bridge Rail (Single Tube Type)	Lin. Ft.	—	761	761
Cont. ITEMS: Bridge Anchors 6" Curb	Each		5	5
Class 1 +25%	Cu. Yd.	4.5		4.5

Note: No payment for excavation allowed at End Bents No. 1 & 5.
Excavation for Bents No. 2 & 4 paid for from the finished ground line.
All concrete and reinforcement above footings included in superstructure quantities

BENT NO.		PILE DATA 1		2		3		4		5	
LANE		E.Bd.	W.Bd.	E.Bd.	W.Bd.	E.Bd.	W.Bd.	E.Bd.	W.Bd.	E.Bd.	W.Bd.
Pile Type and Size		10 BP 42		12 BP 53		12 BP 53		10 BP 42		10 BP 42	
Number		6	6	12	12	12	12	12	12	6	6
Approximate Length	Ft.	25	30	15	15	20	20	20	20	40	40
Design Bearing Value	Ton	38	38	57	57	57	57	54	54	38	38
* Hammer Energy Req'd.	Ft. Lbs.	8500	8500	12800	12800	12800	12800	12100	12100	8500	8500

PILE NOTES:
All pile driven to practical refusal at 1.9 times the design bearing value.
* Minimum Energy Requirement of hammer based on plan length and design bearing value of pile.

Note. For location of existing utility conduits see Road Plans.

Compacted roadway fill (full roadway width) placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bents before steel piles driven.

BORING DATA:
For Boring Data see Sheet No. 7 of 8.
"⊗" Indicates location of boring.

BENCH MARK:
B.M. PK Nail in Rt. Wing of Rt. La. Bent No. 1
Elev. 900.04

BRIDGE OVER HOLMES ROAD

STATE ROAD INTERSTATE ROUTE 435
ABOUT 4 MILES NORTH OF MARTIN CITY
PROJECT NO. I-IG-435-5(3)(RTE. I-435) **STA.** 977+72.9

JACKSON COUNTY

FINISHED

SUBMITTED BY ____ BRIDGE ENGINEER DATE FINISHED

APPROVED BY ____ CHIEF ENGINEER DATE 5/20/66

FINISHED

STD. 54.00
A-1662

492

DESIGNED OCT. 1965 BY J. PARIKH
DETAILED OCT. 1965 BY VIEHLAND
CHECKED NOV. 1965 BY MISSLER

R. W. BOOKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
215 NORTH ELEVENTH ST.
ST. LOUIS 1, MISSOURI

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

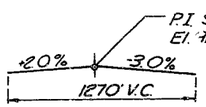
EUGENE E. FREIHAMMER NUMBER E-10795 REGISTERED PROFESSIONAL ENGINEER

SUBMITTED BY

REGISTERED PROFESSIONAL ENGINEER
MISSOURI NO. E-10795

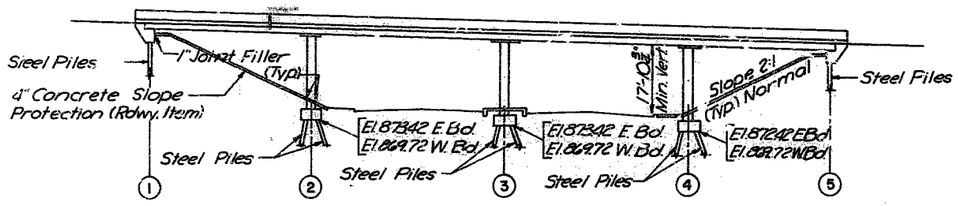
Sheet No. 1A of 1.

FINAL PLANS

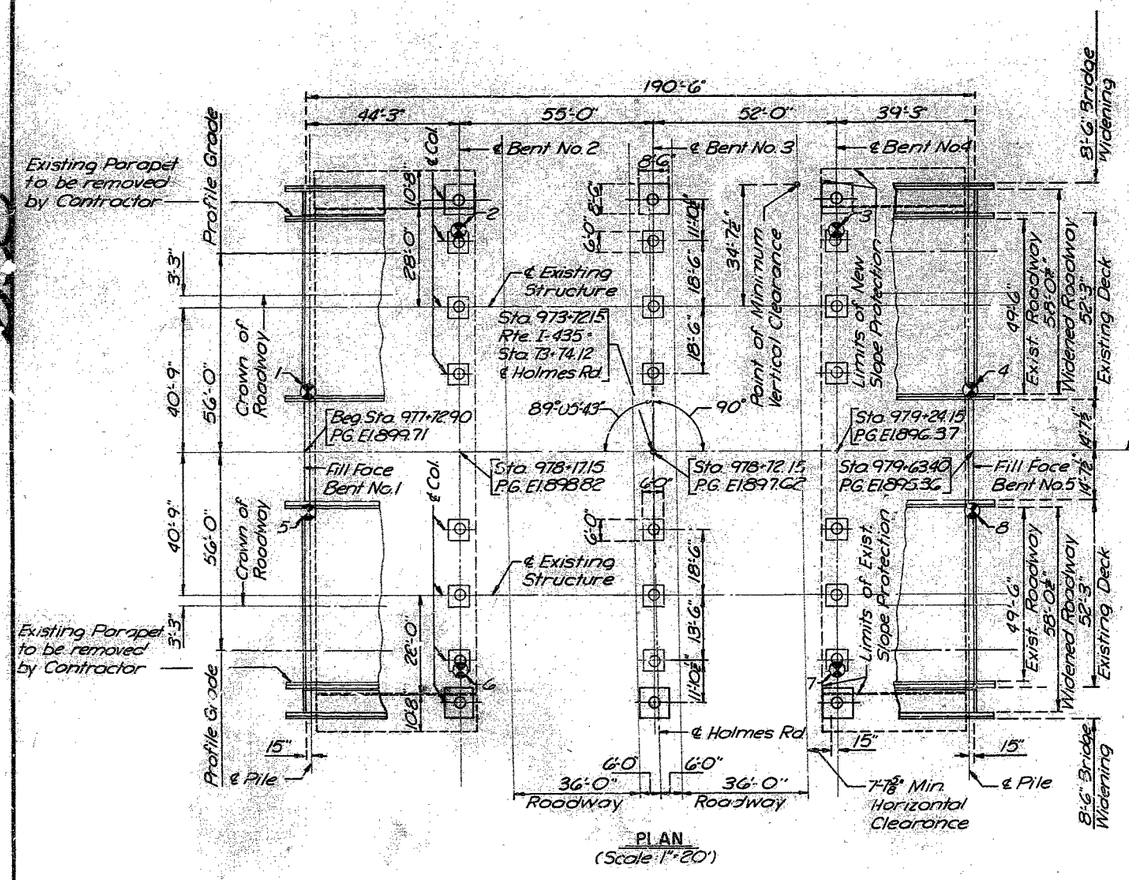


Twin 43.00'-55.00'-52.00'-38.00' Continuous Slob Spans (Voided)

NOTE : This contract includes the Westbound structure only. All work related to the Eastbound structure is not included in this contract.



GENERAL ELEVATION
(Scale: 1"=20')



PLAN
(Scale 1"=20')

253

GENERAL NOTES

Design Specifications:
A.A.S.H.T.O.-1977, Interim '78, '79, '80, '81
Working Stress Design

Design Loading:
HS20-44 / 15#/sq.ft. Future Wearing Surface
Modified 24,000# Tandem Axle
Earth 120#, Equivalent Fluid Pressure 30#

Design Unit Stresses:
Class B1 Concrete (substructure & barrier curb) f'_c=4,000p.s.i.
Class B2 Concrete (deck slab) f'_c=4000 p.s.i.
Reinforcing Steel (Grade 60) f_y=60,000 p.s.i.
Steel Pile f_b=9,000 p.s.i.

Boring Data:
For Boring Data see Boring Data and Estimated Quantities Sheet
"⊗" Indicates location of boring.

Bench Mark:
Elev. 192.77 Kansas City, Missouri Standard
Horizontal Control Monument #199 = Elev. 915.07 U.S.G.S. Datum.
Plan Elevations shown are U.S.G.S. Datum.

Removal of Existing Structure:
Outline of old work is indicated by light dashed lines on the detail sheets. Heavy lines indicate new work. Removal Limits of existing structure are shown in crosshatching. After removing existing barrier curb, saw cut slab 2" deep along a line 16½" from the outside of the deck. The contractor shall leave all existing deck reinforcement in place.

Excavation:
Pay limits for excavation quantities are measured from the existing ground line.

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

Concrete Voided Slab:
The contractor shall pour and satisfactorily finish the concrete roadway slab at a rate of not less than 25 cubic yards per hour.
If the contractor cannot place the slab in one continuous pour, construction joints shall be placed at locations as approved by the Engineer.
Finish each side of the optional joint with ¼" edging tool.
Tubes for producing voids shall have an outside diameter of 14.0" and shall be anchored at not more than 4'-0" centers. Fiber tubes shall have a wall thickness of not less than 0.250".
One ⅜"ø weephole shall be provided near the ends of each void. Weepholes shall be placed in straight lines parallel to bent.
The cross-slope and elevation of the 23" uniform slab shall be varied as required to match the existing slab and provide a uniform wearing surface across the junction of the new and existing slabs. The thickness of the new drop panel may vary as required by maintaining the top of column elevation as shown on the plans and providing the necessary drop panel thickness to accommodate the resulting bottom of new deck elevation.

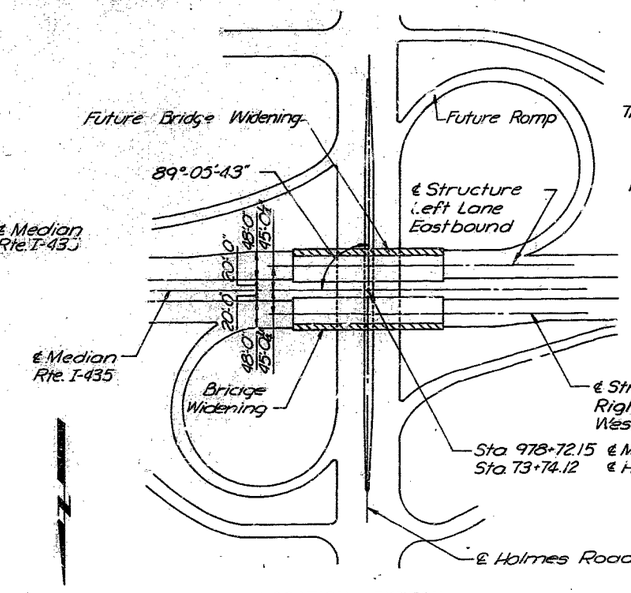
Construction Specifications:
Current issue of Missouri Standard Specifications for Highway Construction.

Safety Barrier Curb:
Top of safety barrier curb shall be built parallel to grade with barrier curb joints normal to grade.
All exposed edges of safety barrier curb shall have ½" radius or ¾" bevel unless otherwise noted.
Plastic waterstop shall be placed in all safety barrier curb filled joints.
Cost of plastic waterstop complete in place shall be included in the bid price for concrete.

Surface Seal:
Superstructure deck surface shall be sealed in accordance with Section 703.3.18 of the Standard Specifications.
Surface to be sealed also includes the area under the existing parapet and curb that is to be replaced.

Traffic Maintained:
Traffic over structure to be maintained during construction.

Falsework:
Falsework over existing lanes should be constructed with a minimum vertical clearance of 14' from crown of existing lanes and a minimum lateral clearance of 2 feet beyond edge of pavement.



LOCATION SKETCH
(No Scale)

BRIDGE OVER HOLMES ROAD

STATE ROAD FROM KANSAS STATE LINE TO RTE. 71
ABOUT 1.4 MILES EAST OF KANSAS STATE LINE
PROJECT NO. IR-435-1(202) STA. 977+72.90
JOB NO. 4-I435-691B RTE. I-435
JACKSON COUNTY
DATE March 29, 1984

A-1662R

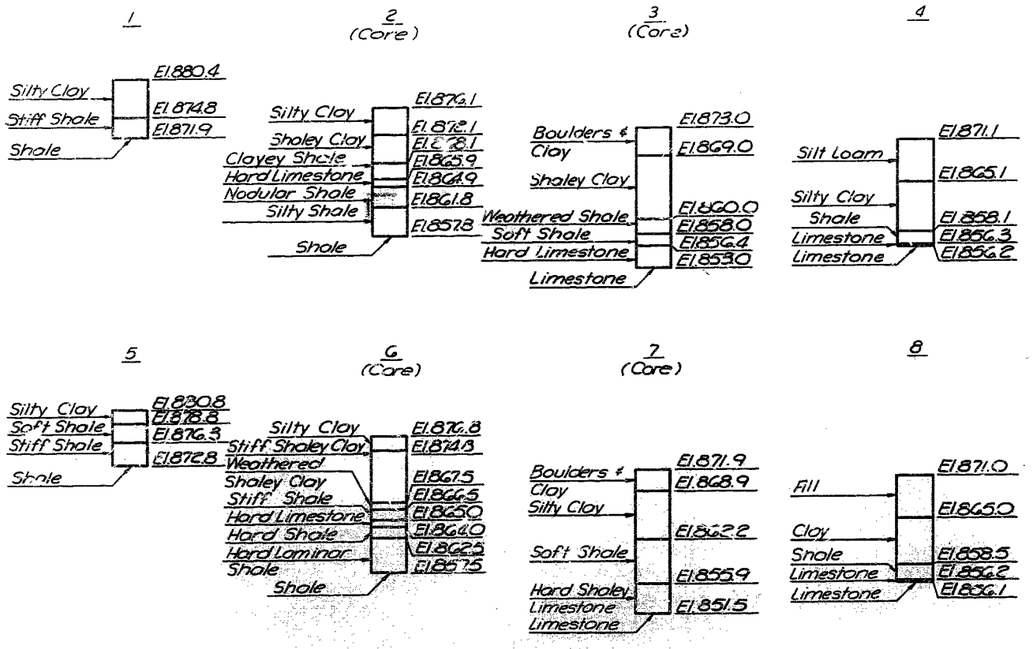
JACKSON COUNTY, MISSOURI

GENERAL PLAN AND ELEVATION
Project IR-435-1(202) Job # 4-I-435 691B

HOLMES ROAD BRIDGE NO. A-1662R

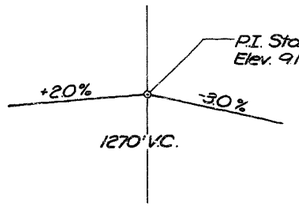
BUCHER | WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

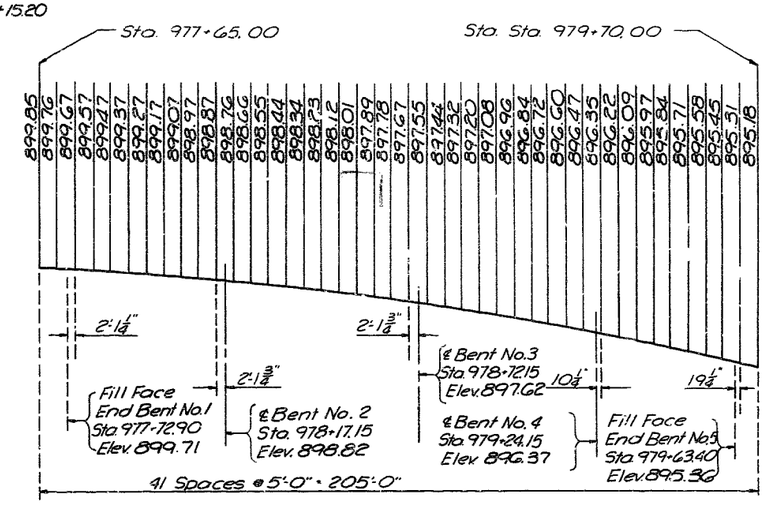
MADE S.D.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-16-83 SCALE As Noted



BORING DATA

Note: For location of Borings see General Plan & Elevation Sheet





PROFILE GRADE ELEVATIONS

Note: The profile grade shown is the theoretical profile grade of I-435 as obtained from the original construction plans. These elevations should not be used for construction as the existing elevations do not agree with this profile.

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PILE DATA

BENT NO.		END BENT NO.1		INT. BENT NO.2		INT. BENT NO.3		INT. BENT NO.4		END BENT NO.5	
LANE		E.Bd	W.Bd	E.Bd	W.Bd	E.Bd	W.Bd	E.Bd	W.Bd	E.Bd	W.Bd
Pile Type and Size		HP10×42		HP10×42		HP10×42		HP10×42		HP10×42	
Number		2	2	4	4	4	4	4	4	2	2
Approximate Length	Ft.	33	33	12	12	19	19	19	19	39	39
Design Bearing	Tons	29	29	66	48	48	48	66	66	29	29
Hammer Energy Reqd.	Ft.Lbs	7000	7000	14900	14900	10800	10800	14900	14900	7000	7000

Note: Minimum energy requirement of the hammer based on plan length and design bearing value of the piles.
All piles shall be driven to practical refusal.

NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

* Removal of Concrete shall include detailed removal of existing wings, curbs, parapets, slab, and other areas as ...ed by the engineer. Removal and placement of concrete for full depth repair and half-soling shall be included in contract unit price bid for these items.

ESTIMATED QUANTITIES

	ITEM		EASTBOUND	WESTBOUND	TOTAL
*	Removal & Replacement of Det. Conc.	Sq. Ft.	22	17	39
*	Removal of Concrete	Cu. Yd.	23.4	23.4	46.8
	Class I Excavation	Cu. Yd.	71.0	78.0	149.0
	Structural Steel Pile (10")	Lin. Ft.	344	344	688
	Class B1 Concrete	Cu. Yd.	59.5	61.3	120.8
	Class B2 Concrete	Cu. Yd.	100.0	100.0	200.0
	Elastomeric Expansion Joint Seal	Lin. Ft.	191	191	382
	Reinforcing Steel (Grade 60)	Lbs.	19,800	20,360	40,160
	Reinforcing Steel (Gr. 60) Epoxy Coated	Lbs.	14,610	14,610	29,220
	Epoxy Resin Crack Repair	Lin. Ft.	13	10	23
	Full Depth Repair	Sq. Ft.		94	94
	Repairing Conc. Deck (Half-soling)	Sq. Ft.		189	189
	Low Slump Conc. Wearing Surface	Sq. Yd.		1043	1043

JACKSON COUNTY, MISSOURI

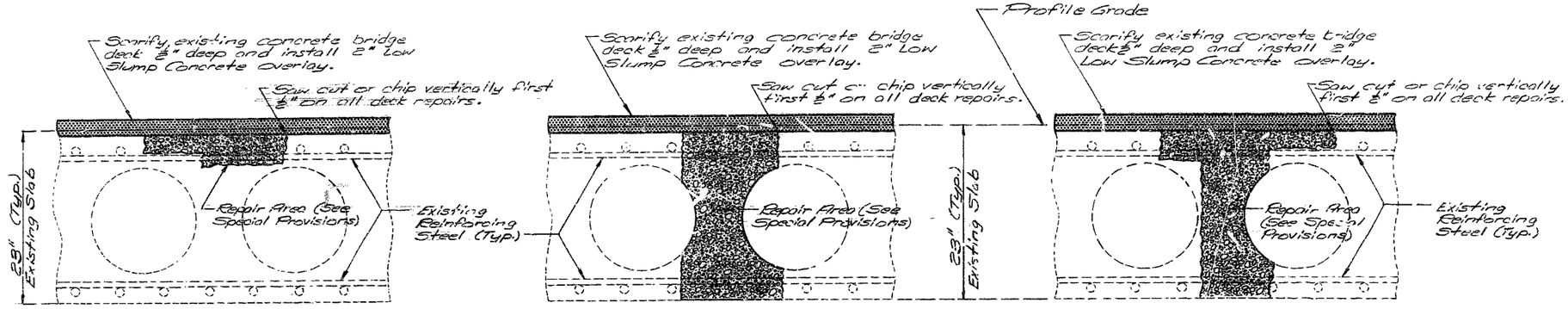
BORING DATA AND ESTIMATED QUANTITIES

HOLMES ROAD — BRIDGE NO. A-1662R

BUCHER & WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE S.A.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.K.H. DATE 2-16-83 SCALE No Scale

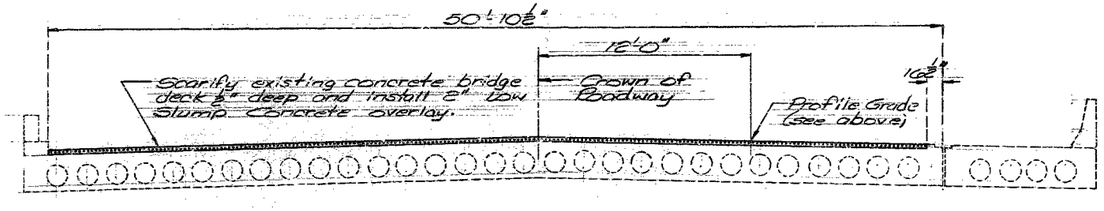
FED. HWY. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		



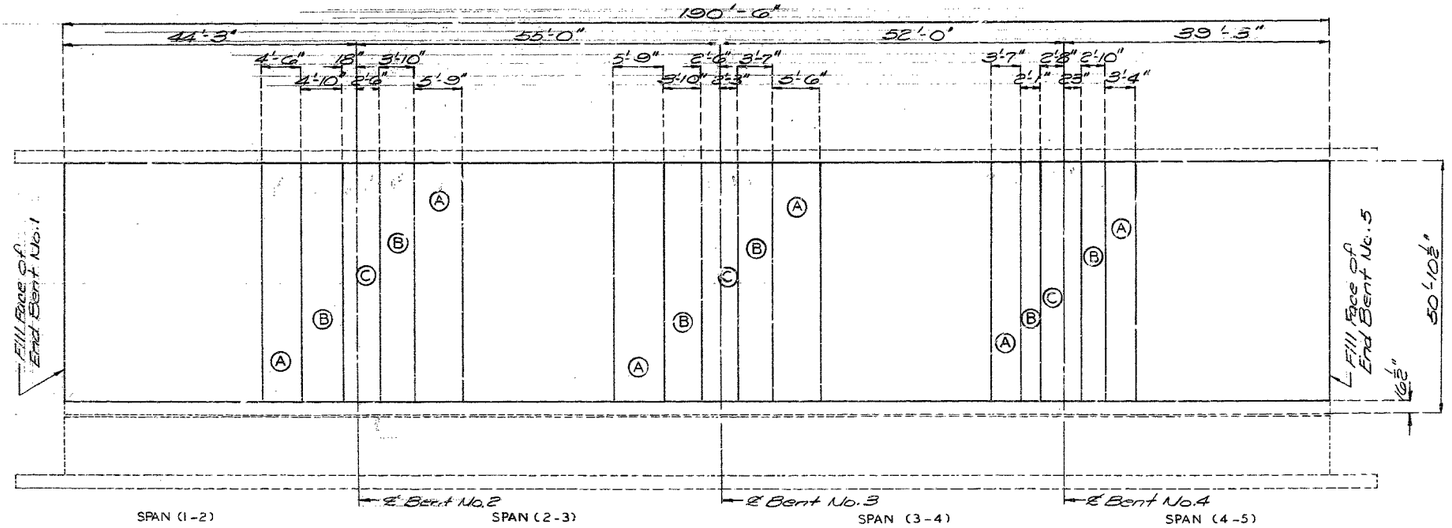
HALF SOLE REPAIR

FULL DEPTH REPAIR

FULL DEPTH REPAIR
IN
HALF SOLE AREA



SECTION THRU SLAB



PLAN

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

JOB NO. 4-I435-691

SPECIAL REPAIR AREAS

Sheet 3 of 10 JACKSON **COUNTY**

A-1662R

255

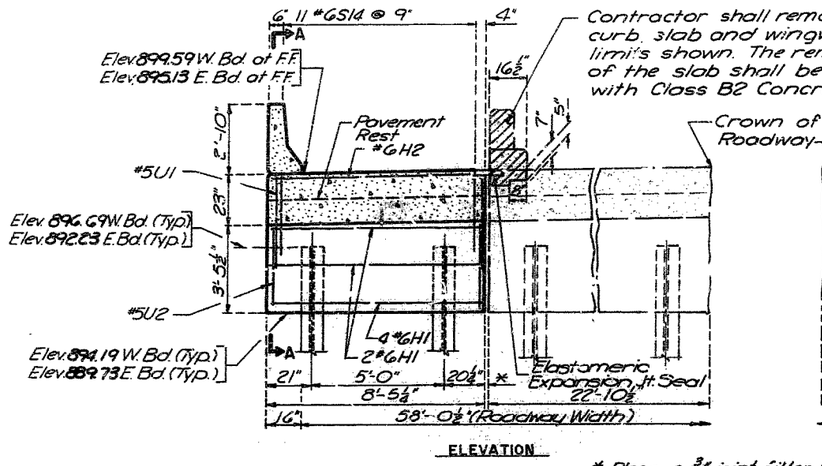
DETAILED March 19 84
CHECKED March 19 84

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

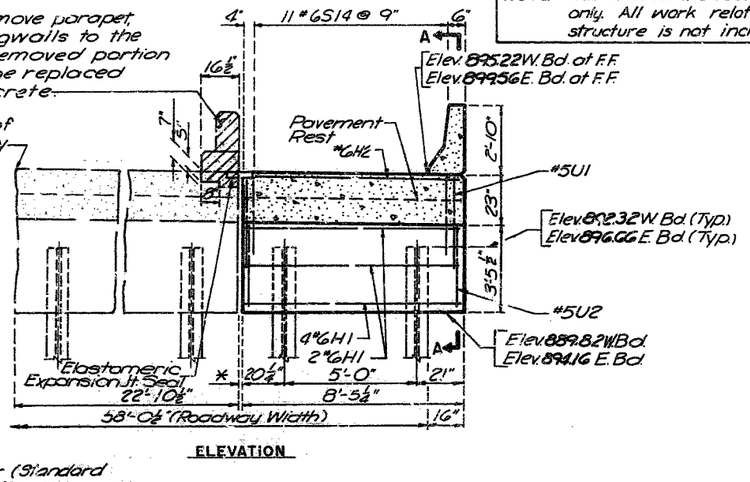
Sheet No. 30

256

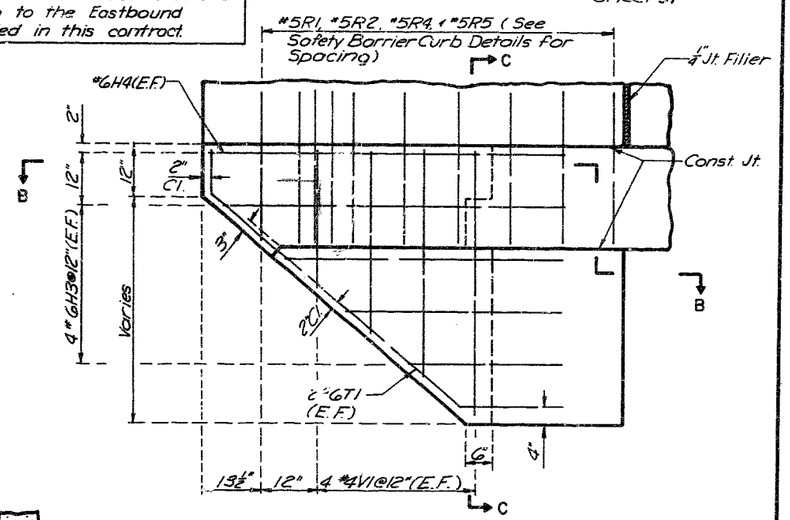
NOTE: This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.



ELEVATION

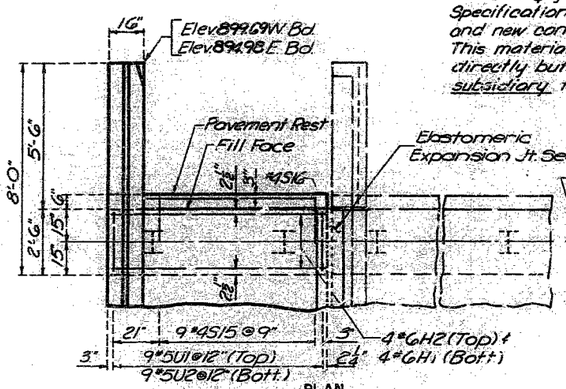


ELEVATION



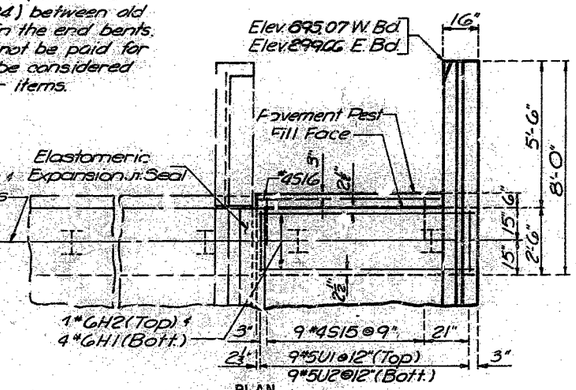
ELEVATION OF WING
(Scale: ¾"=1'-0")

* Place a ¾" joint filler (Standard Specification 1057.2.4) between old and new concrete in the end bents. This material shall not be paid for directly but shall be considered subsidiary to other items.



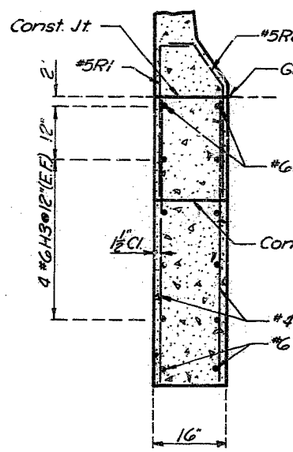
PLAN

WESTBOUND END BENT NO. 1
EASTBOUND END BENT NO. 5
(Scale: ⅜"=1'-0")

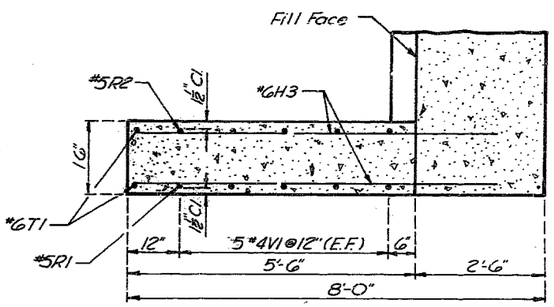


PLAN

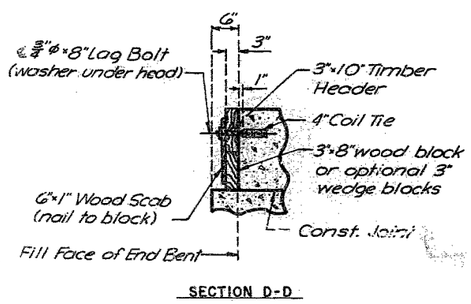
WESTBOUND END BENT NO. 5
EASTBOUND END BENT NO. 1
(Scale: ⅜"=1'-0")



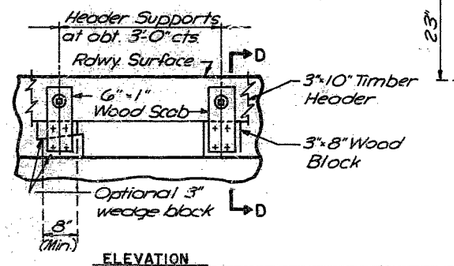
SECTION C-C
(Scale: ¾"=1'-0")



SECTION B-B
(Scale: ¾"=1'-0")



SECTION D-D

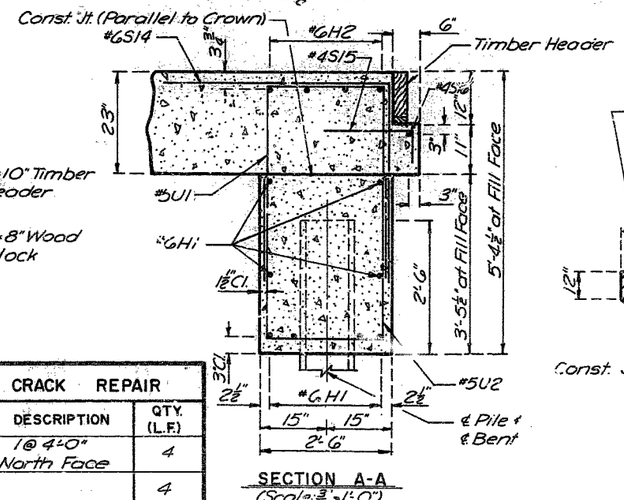


ELEVATION

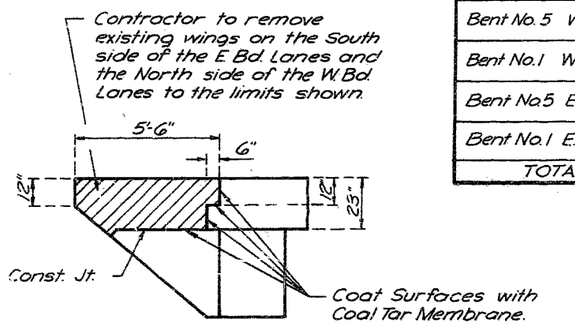
TIMBER HEADER
(No Scale)

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

EPOXY RESIN CRACK REPAIR		
LOCATION	DESCRIPTION	QTY. (L.F.)
Bent No. 5 W. Bd. Br.	1@4'-0" North Face	4
TOTAL		4



SECTION A-A
(Scale: ¾"=1'-0")



WINGWALL REMOVAL
(Scale: ⅜"=1'-0")

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE		
LOCATION	DESCRIPTION	QUANTITY (S.F.)
Bent No. 5 W. Bd. Br.	2'-0"×18" South Face	3.0
Bent No. 1 W. Bd. Br.	2'-0"×40" South Face 12"×12" North Face	9.0
Bent No. 5 E. Bd. Br.	4'-0"×16" South Face 20"×20" North Face	8.1
Bent No. 1 E. Bd. Br.	20"×3'-0" South Face 2'-3"×2'-6" North Face	10.6
TOTAL		30.7

JACKSON COUNTY, MISSOURI

END BENTS NO. 1 AND NO. 5 DETAILS

HOLMES ROAD — BRIDGE NO. A-1662R

BUCHER & WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE D.A.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

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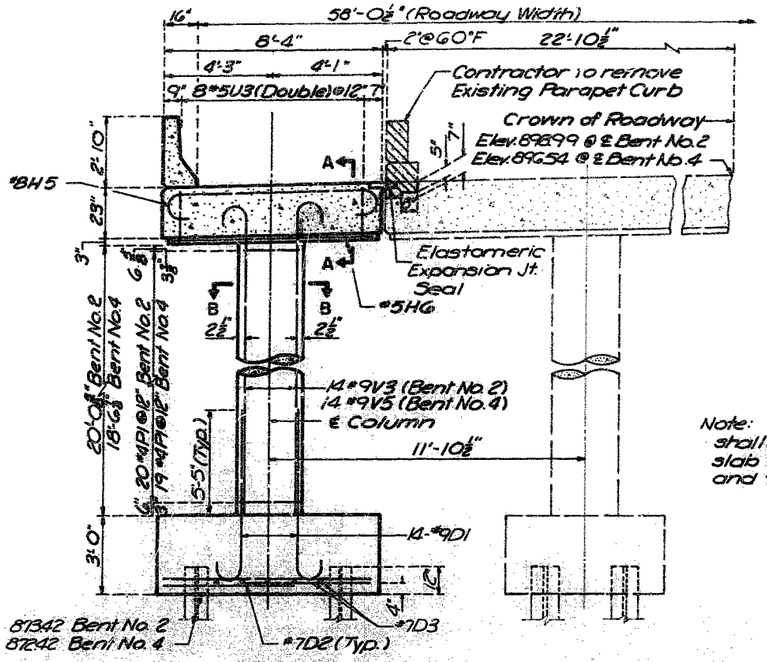
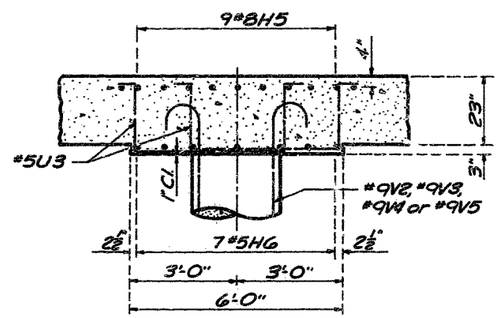
Note: Dimensions pertaining to column heights & reinforcement are taken at the ℄ of the column.

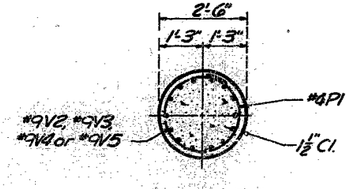


ELEVATION

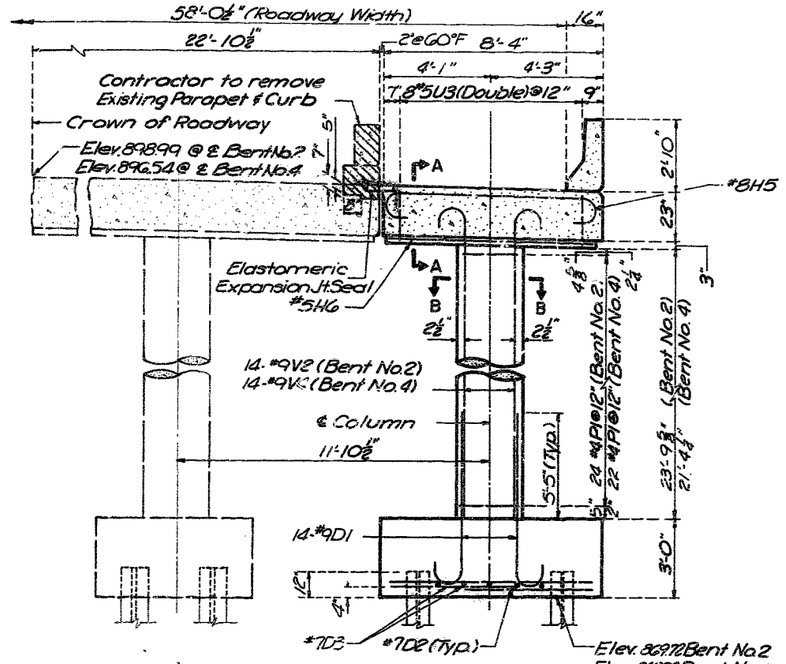


SECTION A-A
(Scale: ½" = 1'-0")

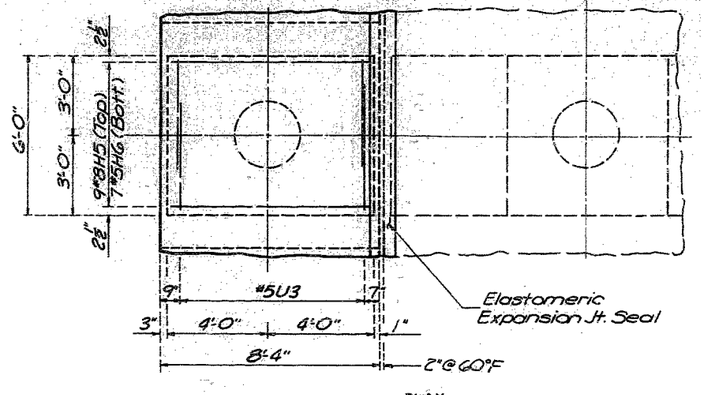
Note: Bottom of drop panel shall be parallel to top of slab both longitudinally and transversely.



SECTION B-B
(Scale: ½" = 1'-0")



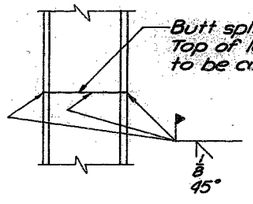
ELEVATION



PLAN

EASTBOUND LANES
(Scale: ⅜" = 1'-0")

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE		
LOCATION	DESCRIPTION	QUANTITY (S.F.)
Bent No. 2 E. Bd. Br.	6" x 3'-0" South Face	1.5
Bent No. 2 W. Bd. Br.	12" x 12" South Face	1.0
TOTAL		2.5

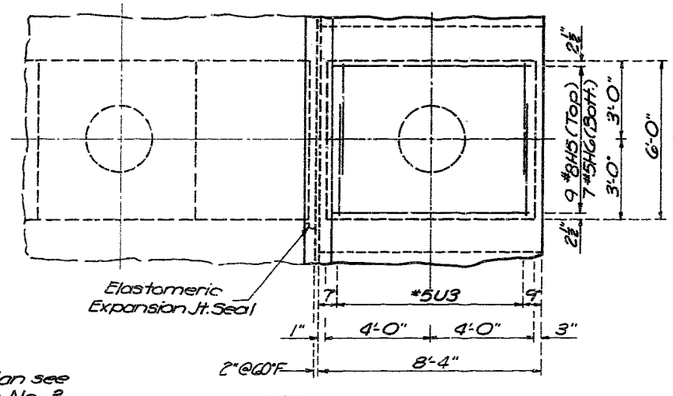


STEEL PILE SPLICE
(No Scale)

EPOXY RESIN CRACK REPAIR		
LOCATION	DESCRIPTION	QTY. (L.F.)
Bent No. 4 W. Bd. Br.	1 @ 3'-0" South Face	3
Bent No. 2 W. Bd. Br.	1 @ 18" South Face 1 @ 12" North Face	3
Bent No. 4 E. Bd. Br.	1 @ 12" South Face 1 @ 12" North Face	2
Bent No. 2 E. Bd. Br.	1 @ 12" South Face 1 @ 4'-6" North Face	6
TOTAL		14

Note: For Pile Cap Plan see Intermediate Bent No. 3 Detail Sheet.

NOTE: This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.



PLAN

WESTBOUND LANES
(Scale: ⅜" = 1'-0")

JACKSON COUNTY, MISSOURI

INTERMEDIATE BENTS NO. 2 AND NO. 4 DETAILS

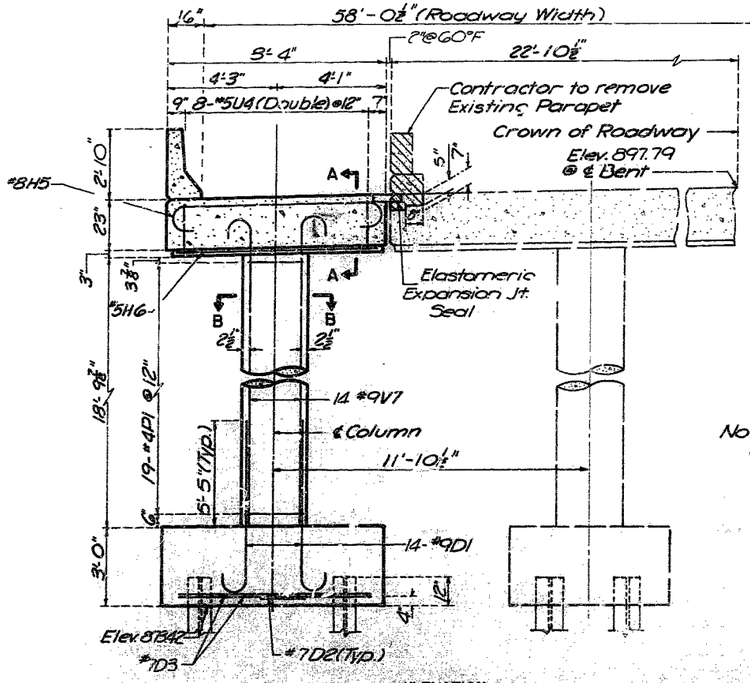
HOLMES ROAD BRIDGE NO. A-1662R

BEKHER & WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

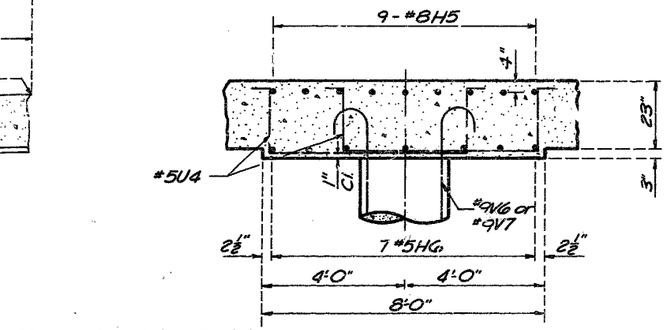
MADE S.K.H. DATE 2-15-83 TRACED D.M.B. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

Note: Dimensions pertaining to column heights & reinforcement are taken at the ℄ of the column.

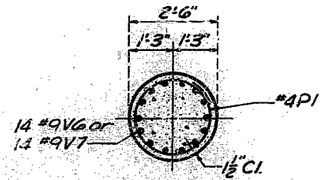


ELEVATION

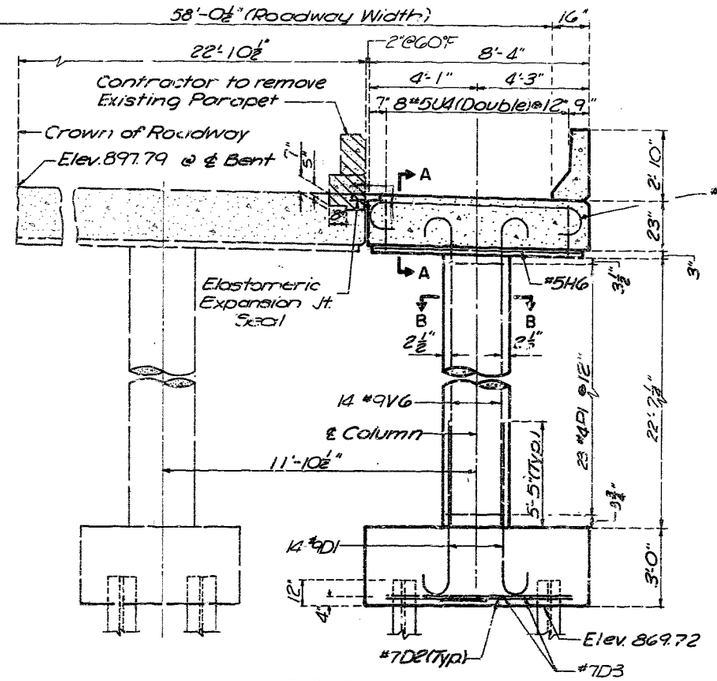


SECTION A-A
(Scale: ½" = 1'-0")

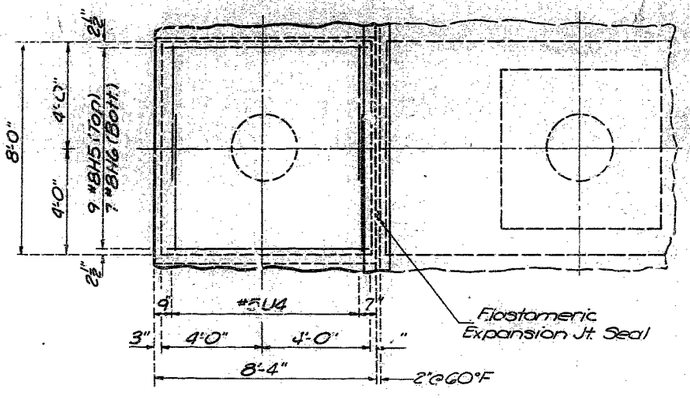
Note: Bottom of drop panel shall be parallel to top of slab both longitudinally and transversely.



SECTION B-B
(Scale: ½" = 1'-0")

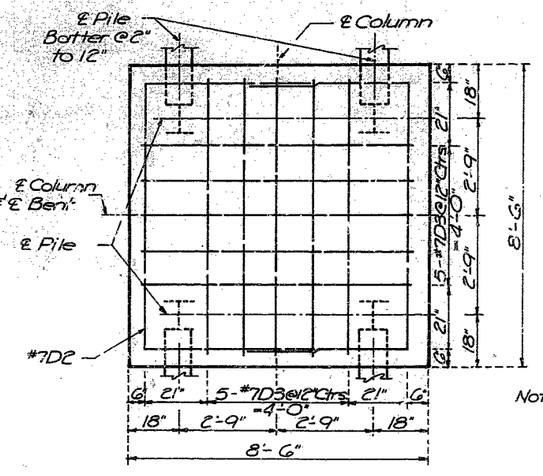


ELEVATION



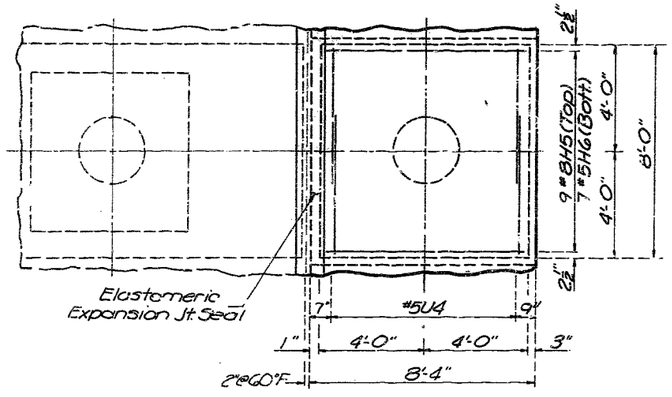
PLAN

EASTBOUND BENT NO. 3
(Scale ⅜" = 1'-0")



PILE CAP PLAN
(Scale: ½" = 1'-0")

Note: For Steel Pile Splice see Intermediate Bents No. 2 & No. 4 Detail Sheet.



PLAN

WESTBOUND BENT NO. 3
(Scale: ⅜" = 1'-0")

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE			
LOCATION	DESCRIPTION		QUANTITY (S.F.)
Bent No. 3 W. Bd. Br.	18" × 2'-0"	South Face	3.9
	16" × 8"	North Face	
Bent No. 3 E. Bd. Br.	4'-0" × 6"	South Face	2.0
TOTAL			5.9

EPOXY RESIN CRACK REPAIR		
LOCATION	DESCRIPTION	QTY. (L.F.)
Bent No. 3 Eastbound Br.	1@ 5'-0" North Face	5
TOTAL		5

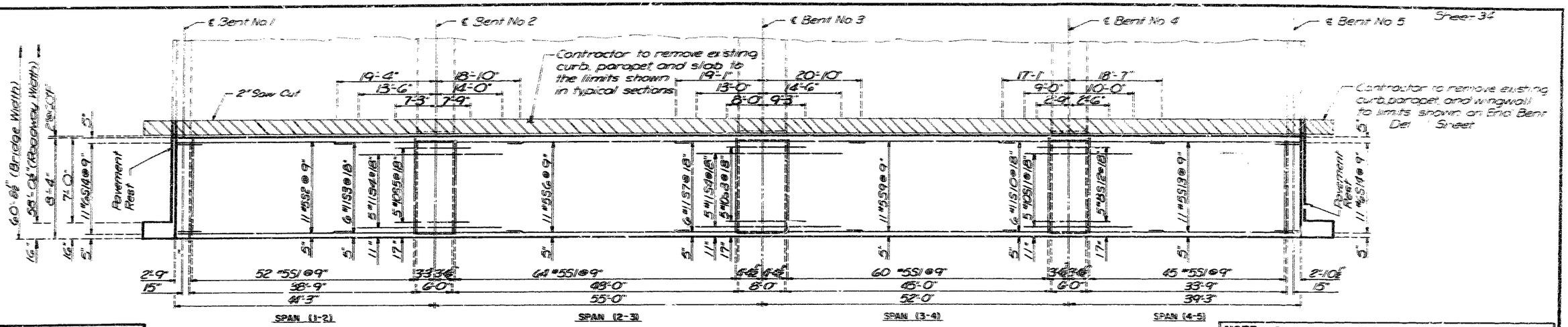
JACKSON COUNTY, MISSOURI

INTERMEDIATE BENT NO. 3 DETAILS

HOLMES ROAD — BRIDGE NO. A-1662R

BOUCHER & WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA — HAYS — KANSAS CITY

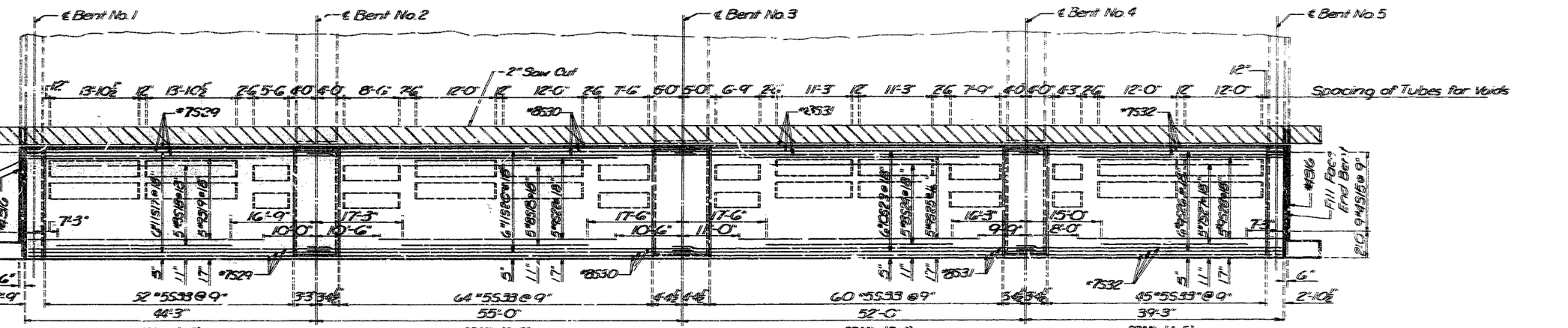
MADE SKH DATE 2-15-83 TRACED DMB DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted



SLAB PLAN SHOWING TOP REINFORCING STEEL
(No Scale)

MINIMUM BAR LAPS		
SIZE	TOP BAR	OTHER THAN TOP BAR
#5	2'-5"	2'-2"
#7		2'-7"
#8		3'-5"
#9		3'-3"
#10		4'-1"
#11		5'-1"

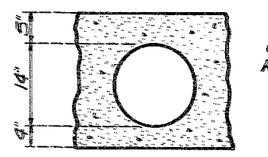
NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.



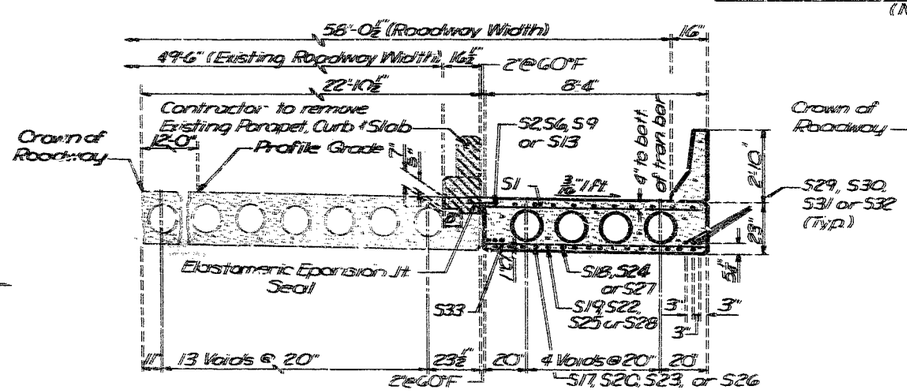
Note: Contractor to remove parapet, curb and slab to the limits shown. Removed portion of slab shall be replaced as Class B2 Concrete.

SLAB PLAN SHOWING BOTTOM REINFORCING STEEL
(No Scale)

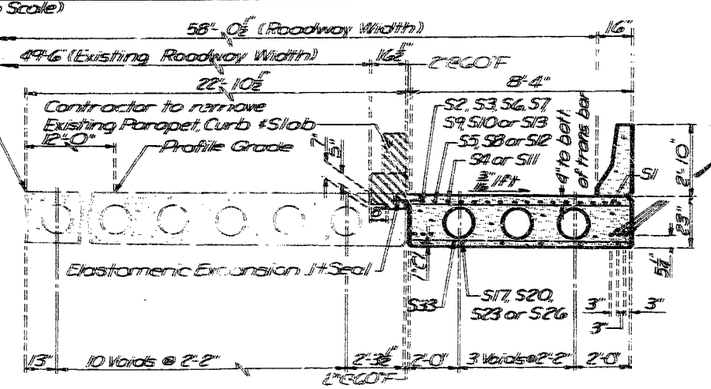
Note: For detail of weephole and optional construction joint see Safety Barrier Curb and Misc. Details Sheet.
For slab notes see General Plan & Elevation Sheet.
Steel shown for westbound bore Steel for eastbound bore will be reflective of the steel shown.
See Intermediate & End Bent detail sheets for additional steel at Bents.



TYPICAL VOID DETAIL
(Scale: 1"-1'-0")



HALF SECTION AT CENTER OF SPAN
(Scale: 3/4"-1'-0")



HALF SECTION NEAR INTERIOR BENT
(Scale: 3/4"-1'-0")

JACKSON COUNTY, MISSOURI

SLAB DETAILS

HOLMES ROAD — BRIDGE NO. A-1662R

BIRGER : WILLS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA — KANSAS CITY

DESIGN S.K.H. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

Sheet 7 of 10

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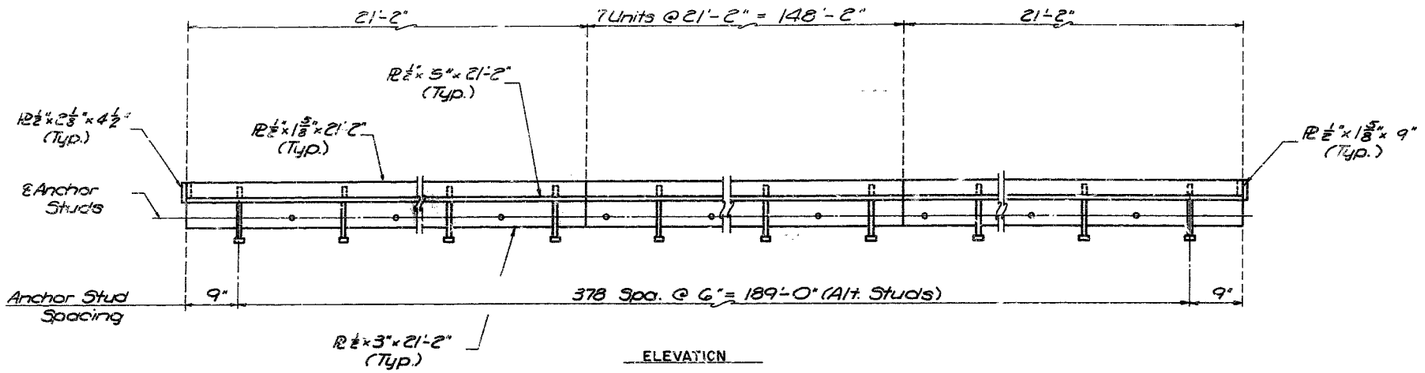
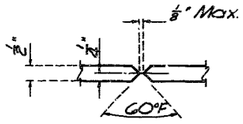
NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

Note: Dimensions of the expansion device armor may vary with the type of expansion device selected. The actual dimensions used shall be those recommended by the manufacturer and approved by the Engineer. The top of the device shall be placed flush with the top of the slab.

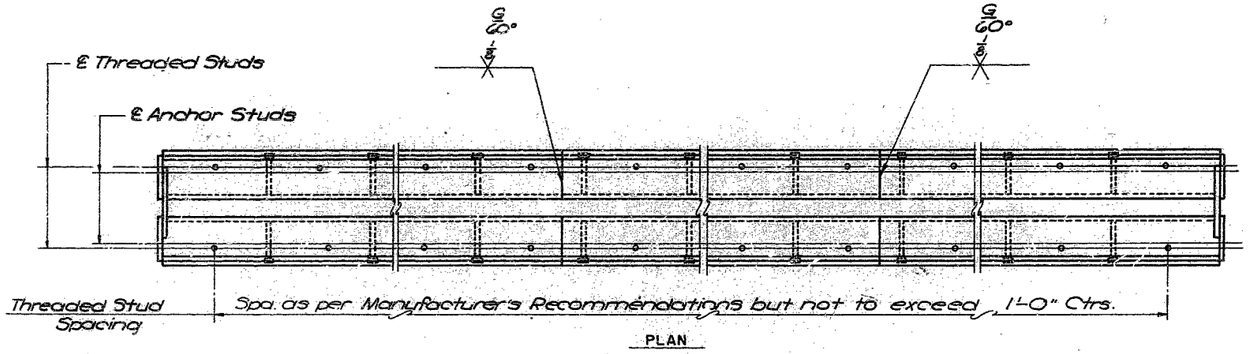


ELEVATION



TYPICAL BEVEL WELD DETAIL
(No Scale)

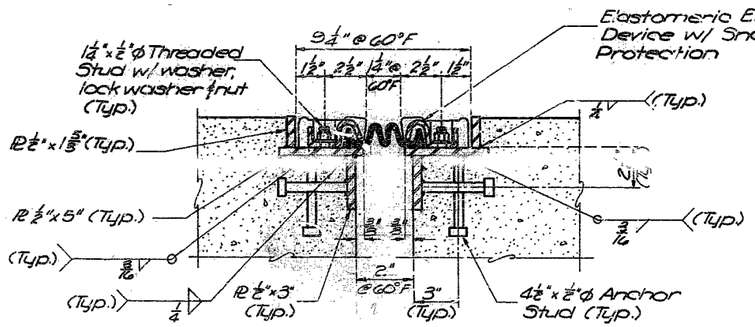
TEMP. TABLE	
TEMP. (°F)	GAP (IN)
110	1.90
100	1.92
90	1.94
80	1.96
70	1.98
60	2.00
50	2.02
40	2.04
30	2.06
20	2.08
10	2.10
0	2.12



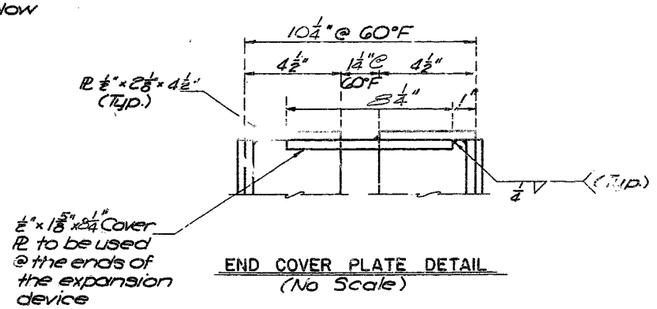
PLAN

ARMOR DETAILS

Note: All ½" Plate, ½"ø Anchor Studs and ½"ø Threaded Studs shall be subsidiary to the bid item "Elastomeric Expansion Joint Seal."



TYPICAL SECTION
(Scale: 3" = 1'-0")



END COVER PLATE DETAIL
(No Scale)

Elastomeric expansion device shall be one of the following:

Acme Trojan TR300
Gen-Strip CCLE"
On-Flex 25 (E-Last-on Panel)
Pel-Span T30 CS

JACKSON COUNTY, MISSOURI

EXPANSION DEVICE DETAILS

HOLMES ROAD BRIDGE NO A-1662R

BUCHER & WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE D.M.B. DATE 12-14-82 TRACED DMB/RPB DATE 12-14-82
CHECKED R.W.P. DATE 12-14-82 SCALE As Noted

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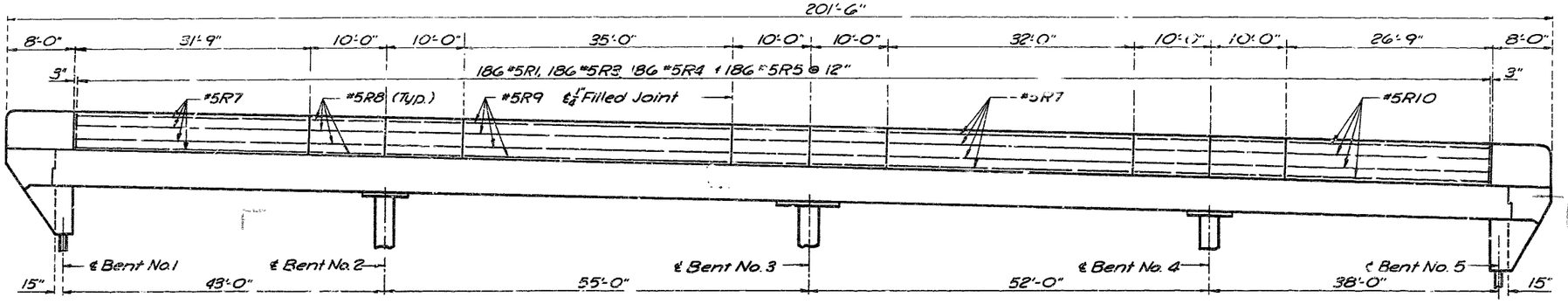
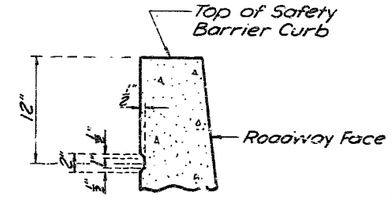
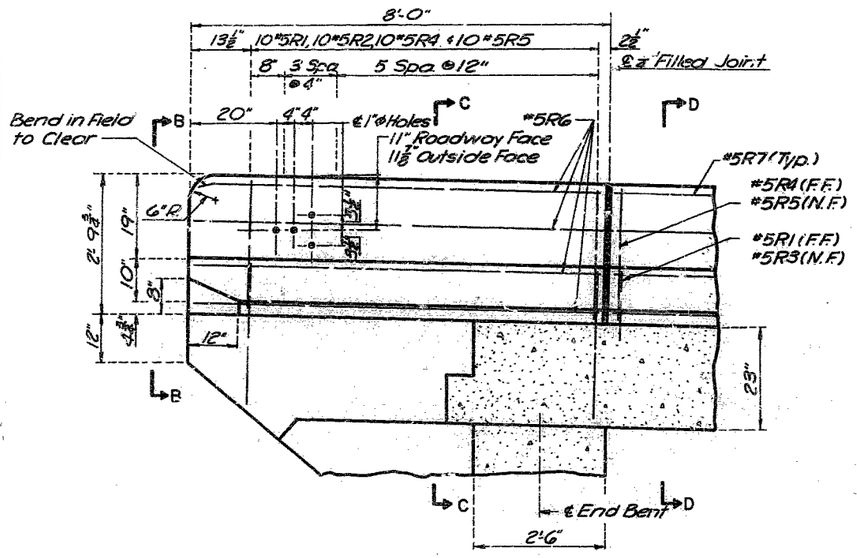


SAFETY BARRIER CURB ELEVATION
(No Scale)

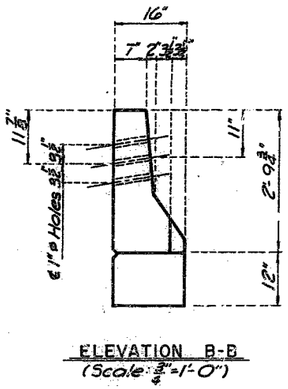


SAFETY BARRIER CURB RUSTICATION DETAILS
(Scale: 1½"=1'-0")

Note: Rustication shall end 3" from ¢ ¼" joints and 4'-0" from the ends of the wingwalls.

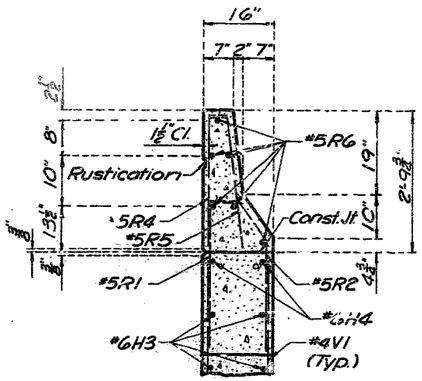


LONGITUDINAL SECTION AT END OF SAFETY BARRIER CURB
(Scale: ¾"=1'-0")

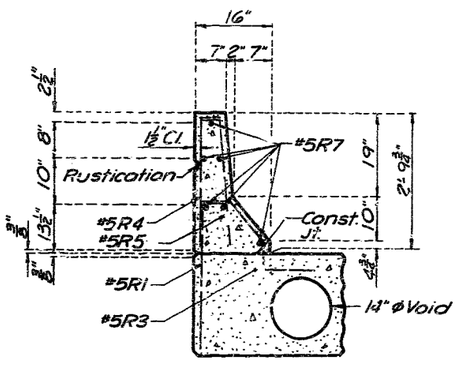


ELEVATION B-B
(Scale: ¾"=1'-0")

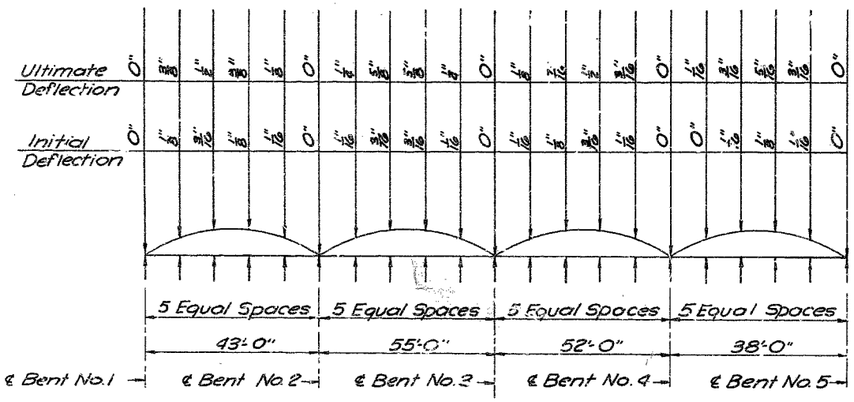
Note: For Safety Barrier Curb general notes see General Plan and Elevation Sheet.



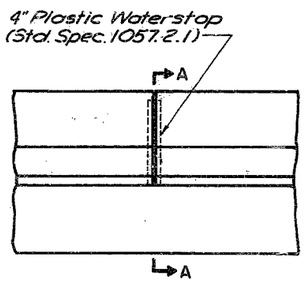
SECTION C-C
(Scale: ¾"=1'-0")



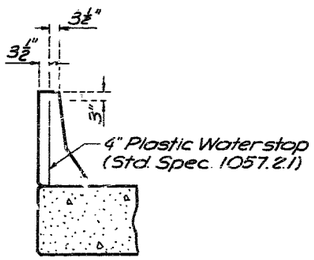
SECTION D-D
(Scale: ¾"=1'-0")



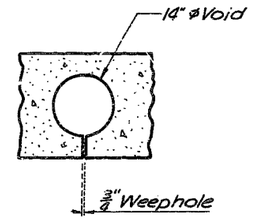
CAMBER DIAGRAM



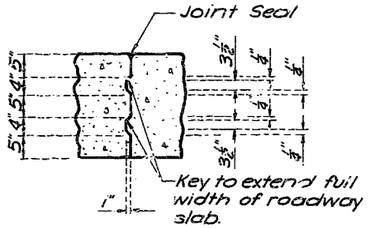
SAFETY BARRIER CURB ELEVATION



SECTION A-A



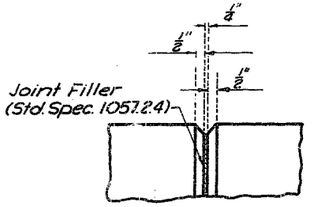
WEEPHOLE DETAIL
(Scale: ¾"=1'-0")



CONSTRUCTION JOINT KEY
(No Scale)

PLASTIC WATERSTOPS
(Scale: ½"=1'-0")

NOTE: This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.



FILLED JOINT DETAIL
(Scale: 3"=1'-0")

JACKSON COUNTY, MISSOURI

SAFETY BARRIER CURB AND MISCELLANEOUS DETAILS

HOLMES ROAD — BRIDGE NO. A-1662R

BIKER & WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA — HAYS — KANSAS CITY

MADE RPB DATE 2-15-83 TRACED RPB DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

COMPLETE BILL OF REINFORCING (WESTBOUND LANES)

NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			END BENTS				
16	#6	H1	Brg. Beam		—	8'-1"	194
8	#6	H2	Brg. Beam	E	—	8'-1"	97
5	#6	H3 *	Wingwall		—	8'-11"	107
4	#6	H4	Wingwall		—	7'-0"	42
4	#6	T1	Wingwall			9'-2"	55
18	#5	U1	Brg. Beam	E		9'-1"	171
18	#5	U2	Brg. Beam			9'-1"	171
8	#4	V1 *	Wingwall		—	7'-3"	39
			INT. BENTS				
42	#9	D1	Batt. of Col.			9'-2"	1309
6	#7	D2	Pile Caps			17'-0"	208
30	#7	D3	Pile Caps		—	8'-0"	491
27	#8	H5	Bent Caps	E		9'-10"	709
21	#5	H6	Bent Caps		—	7'-8"	168
69	#4	P1	Columns			8'-3"	380
32	#5	U3	Bent Caps	E		8'-11"	298
16	#5	U4	Bent Caps	E		9'-11"	165
14	#9	V2	Bent 2 Col.			26'-8"	1269
14	#9	V4	Bent 4 Col.			24'-3"	1154
14	#9	V6	Bent 3 Col.			25'-6"	1211
			SUPERSTRUCTURE				
221	#5	S1	Slab	E	—	8'-0"	1844
11	#5	S2	Slab	E	—	26'-7"	305
6	#11	S3	Slab	E	—	38'-2"	1217
10	#11	S4	Slab	E	—	27'-6"	1461
5	#10	S5	Slab	E	—	15'-0"	323
11	#5	S6	Slab	E	—	20'-9"	238
6	#11	S7	Slab	E	—	39'-11"	1273
5	#10	S8	Slab	E	—	17'-3"	371
11	#5	S9	Slab	E	—	17'-9"	204
6	#11	S10	Slab	E	—	35'-8"	1137
5	#10	S11	Slab	E	—	19'-0"	409
5	#8	S12	Slab	E	—	5'-3"	70
11	#5	S13	Slab	E	—	22'-4"	256
22	#6	S14	Slab	E		8'-0"	264
18	#4	S15	Pvmt. Rest			2'-3"	27
2	#4	S16	Pvmt. Rest		—	8'-0"	11
6	#11	S17	Slab		—	40'-8"	1488
10	#8	S18	Slab		—	19'-0"	507
5	#9	S19	Slab		—	34'-1"	579
6	#11	S20	Slab		—	60'-1"	915
5	#9	S22	Slab		—	34'-0"	578
6	#10	S23	Slab		—	36'-1"	1448
5	#8	S24	Slab		—	18'-3"	244
5	#9	S25	Slab		—	31'-3"	531
6	#9	S26	Slab		—	40'-9"	831
5	#7	S27	Slab		—	15'-9"	161
5	#9	S28	Slab		—	31'-1"	528
6	#7	S29	Edge Beam		—	45'-5"	557
6	#8	S30	Edge Beam		—	58'-0"	929
6	#8	S31	Edge Beam		—	55'-0"	881
6	#7	S32	Edge Beam		—	40'-5"	496
221	#5	S33	Slab		—	8'-0"	1844

* Series "S" Bar

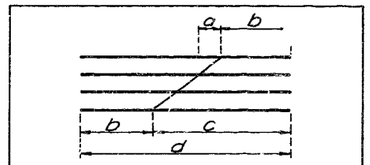
NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			BARRIER CURB				
206	#5	R1	Bar. Curb	E		3'-4"	716
20	#5	R2	Bar. Curb	E		3'-6"	73
186	#5	R3	Bar. Curb	E		3'-1"	598
206	#5	R4	Bar. Curb	E		2'-9"	591
206	#5	R5	Bar. Curb	E		2'-9"	591
12	#5	R6	Bar. Curb	E	—	7'-8"	96
12	#5	R7	Bar. Curb	E	—	31'-5"	393
36	#5	R8	Bar. Curb	E	—	9'-8"	363
6	#5	R9	Bar. Curb	E	—	34'-8"	217
6	#5	R10	Bar. Curb	E	—	26'-5"	165

COMPLETE BILL OF REINFORCING (EASTBOUND LANES)

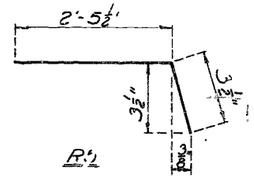
NOTE: The Bill of Reinforcing Steel for the Eastbound Lanes is identical to the Bill of Reinforcing Steel for the Westbound Lanes, except for the following:
Delete the #4P1, #9V2, #9V4 & #9V6 bars as shown and add the following bars:

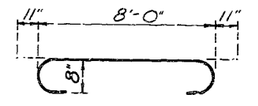
NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			INT. BENTS				
58	#4	P1	Columns			8'-3"	320
14	#9	V3	Bent 2 Col.			22'-10"	1087
14	#9	V5	Bent 4 Col.			21'-3"	1019
14	#9	V7	Bent 3 Col.			21'-8"	1031

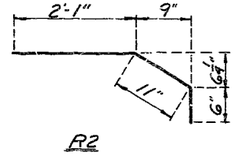
BENDING DIAGRAMS

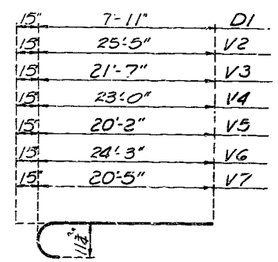


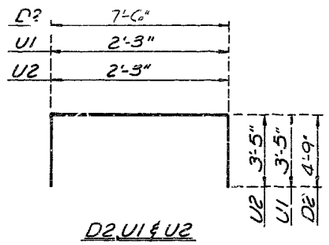
REMARKS	a	b	c	d
4 H3 Cut 16	13"	2'-10"	6'-1"	8'-11"
4 V1 Cut 20	11"	2'-3"	5'-0"	7'-3"

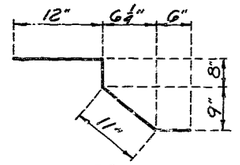


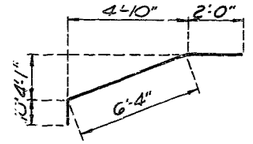


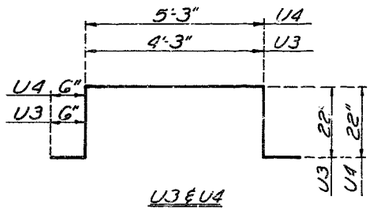


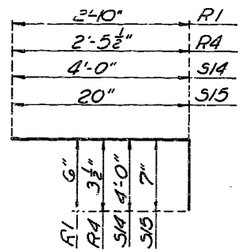


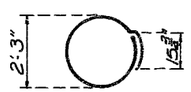












Note: All dimensions are out to out of bar unless otherwise noted.
Quantities shown are for widening of the Westbound lanes except as noted.

NOTE: This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

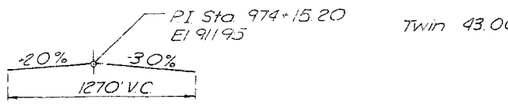
JACKSON COUNTY, MISSOURI

BILL OF REINFORCING STEEL

HOLMES ROAD BRIDGE NO. A-1662R

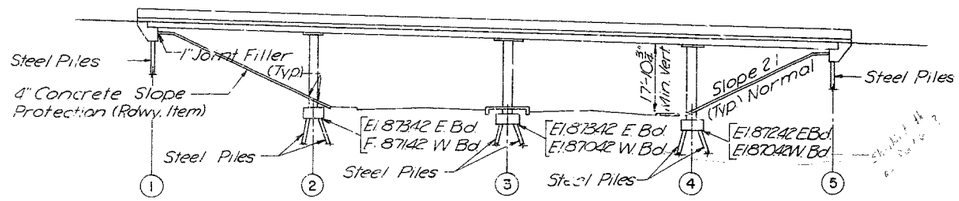
BAKER & WILLS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE S.K.H. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE None

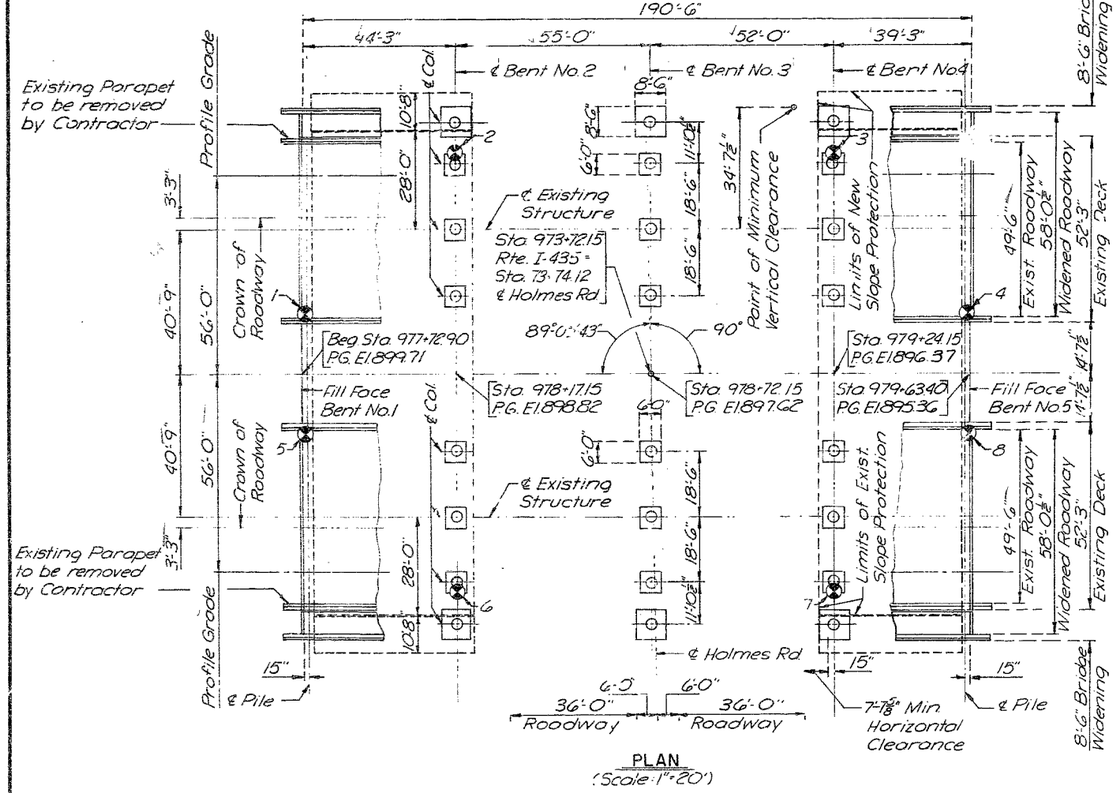


Twin 43.00'-55.00'-52.00'-38.00' Continuous Slab Spans (Voided)

NOTE : This contract includes the Westbound structure only. All work related to the Eastbound structure is not included in this contract.



GENERAL ELEVATION
(Scale: 1"=20')



PLAN
(Scale: 1"=20')

GENERAL NOTES

Design Specifications:
A.A.S.H.T.O.-1977, Interim '78, '79, '80, '81
Working Stress Design

Design Loading:
HS20-44 / 15#/sq.ft. Future Wearing Surface
Modified 24,000# Tandem Axle
Earth 120#/ Equivalent Fluid Pressure 30#

Design Unit Stresses:
Class B1 Concrete (substructure & barrier curb) f'_c = 4,000 p.s.i.
Class B2 Concrete (deck slab) f'_c = 4,000 p.s.i.
Reinforcing Steel (Grade 60) f_y = 60,000 p.s.i.
Steel Pile f_b = 9,000 p.s.i.

Boring Data:
For Boring Data see Boring Data and Estimated Quantities Sheet.
"⊕" Indicates location of boring.

Bench Mark:
Elev. 192.77 Kansas City, Missouri Standard Horizontal Control Monument #199 = Elev. 915.07 U.S.G.S. Datum.
Plan Elevations shown are U.S.G.S. Datum.

Removal of Existing Structure:
Outline of old work is indicated by light dashed lines on the detail sheets. Heavy lines indicate new work. Removal Limits of existing structure are shown in crosshatching.

Excavation:
Pay limits for excavation quantities are measured from the existing ground line.

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

Concrete Voided Slab:
The contractor shall pour and satisfactorily finish the concrete roadway slab at a rate of not less than 25 cubic yards per hour.
If the contractor cannot place the slab in one continuous pour, construction joints shall be placed at locations as approved by the Engineer.
Finish each side of the optional joint with ¼" edging tool.
Tubes for producing voids shall have an outside diameter of 14.0" and shall be anchored at not more than 4'-0" centers. Fiber tubes shall have a wall thickness of not less than 0.250".
One ¾" ø weephole shall be provided near the ends of each void. Weepholes shall be placed in straight lines parallel to bent.
The cross-slope and elevation of the 23" uniform slab shall be varied as required to match the existing slab and provide a uniform wearing surface across the junction of the new and existing slabs. The thickness of the new drop panel may vary as required by maintaining the top of column elevation as shown on the plans and providing the necessary drop panel thickness to accommodate the resulting bottom of new deck elevation.

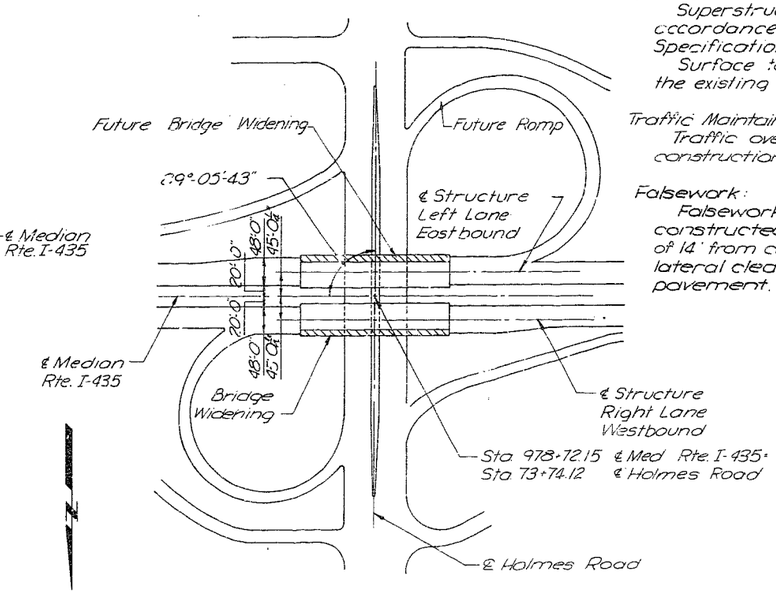
Construction Specifications:
Current issue of Missouri Standard Specifications for Highway Construction.

Safety Barrier Curb:
Top of safety barrier curb shall be built parallel to grade with barrier curb joints normal to grade.
All exposed edges of safety barrier curb shall have ¾" radius or ¾" bevel unless otherwise noted.
Plastic waterstop shall be placed in all safety barrier curb filled joints.
Cost of plastic waterstop complete in place shall be included in the bid price for concrete.

Surface Seal:
Superstructure deck surface shall be sealed in accordance with Section 409 of the Standard Specifications.
Surface to be sealed also includes the ... the existing parapet and curb that is to be replaced.

Traffic Maintained:
Traffic over structure to be maintained during construction.

Falsework:
Falsework over existing lanes should be constructed with a minimum vertical clearance of 14' from crown of existing lanes and a minimum lateral clearance of 2 feet beyond edge of pavement.



LOCATION SKETCH
(No Scale)

#341013

A-1462 RI W.B. Lanes

JACKSON COUNTY, MISSOURI

GENERAL PLAN AND ELEVATION

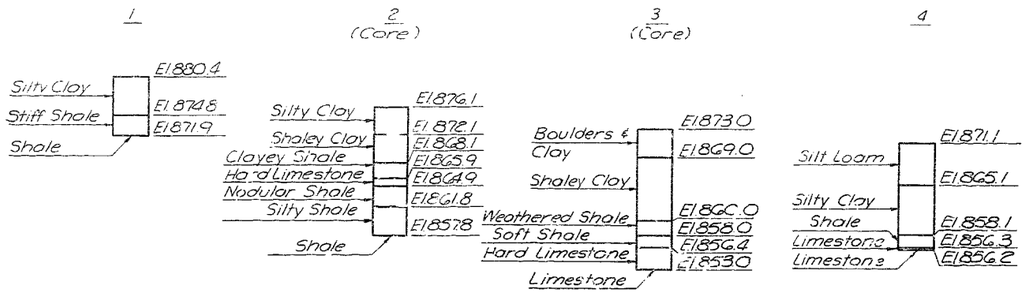
HOLMES ROAD Jackson Co.

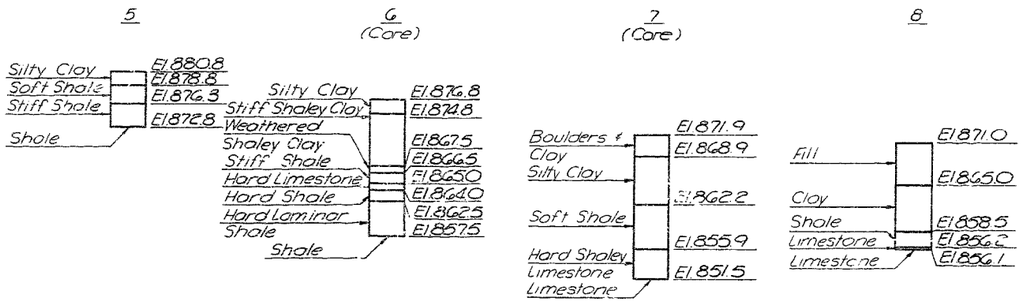
BUCKER & WILLIS
CONSULTING ETGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE S.D.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

117

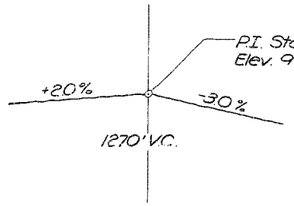
A-1462 RI

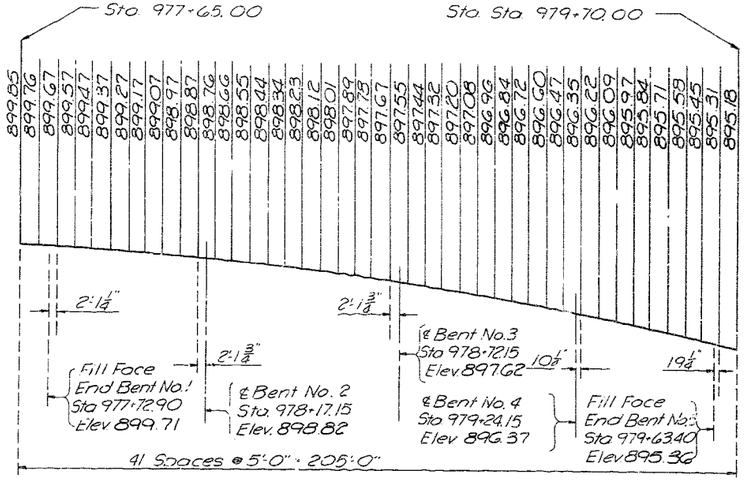




BORING DATA

Note: For location of Borings see General Plan & Elevation Sheet





PROFILE GRADE ELEVATIONS

Note: The profile grade shown is the theoritical profile grade of 1-435 as obtained from the original construction plans. These elevations should not be used for construction as the existing elivations do not agree with this profile.

NOTE : This contact includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

PILE DATA

BENT NO.	END BENT NO.1		INT. BENT NO.2		INT. BENT NO.3		INT. BENT NO.4		END BENT NO.5	
LANE	E. Bd	W. Bd	E. Bd	W. Bd	E. Bd	W. Bd	E. Bd	W. Bd	E. Bd	W. Bd
Pile Type and Size	HP 10×42		HP 10×42		HP 10×42		HP 10×42		HP 10×42	
Number	2	2	4	4	4	4	4	4	2	2
Approximate Length Ft.	33	33	12	12	19	19	19	19	39	39
Design Bearing Tons	29	29	66	48	48	48	66	66	29	29
Hammer Energy Regd Ft. Lbs.	7000	7000	14900	14900	10800	14800	14900	14900	7000	7000

Note: Minimum energy requirement of the hammer based on plan length and design bearing value of the piles.
All piles shall be driven to practical refusal.

ESTIMATED QUANTITIES

ITEM		EASTBOUND	WESTBOUND	TOTAL
Removal & Replacement of Det. Conc.	Cu. Ft.	6	4	10
Removal of Concrete	Cu. Yd.	24.2	24.2	48.4
Class I Excavation	Cu. Yd.	71.0	61.0	132.0
Structural Steel Pile (10")	Lin. Ft.	344	344	688
Class B1 Concrete	Cu. Yd.	59.4	60.6	120.0
Class B2 Concrete	Cu. Yd.	100.7	100.7	201.4
Steel Reinforced Elast. Exp. Jt. Seal	Lin. Ft.	191	191	382
Reinforcing Steel (Grade 60)	Lbs.	19,800	20,170	39,970
Reinforcing Steel (Gr. 60) Epoxy Coated	Lbs.	14,610	14,610	29,220
Epoxy Resin Crack Repair	Lin. Ft.	13	10	23

Note: All concrete and reinforcing steel (Grade 60) above the lower construction joint in the End Bents and Wingwalls and above the tops of the columns in the Intermediate Bents shall be included in the Superstructure Quantities.

JACKSON COUNTY, MISSOURI

BORING DATA AND ESTIMATED QUANTITIES

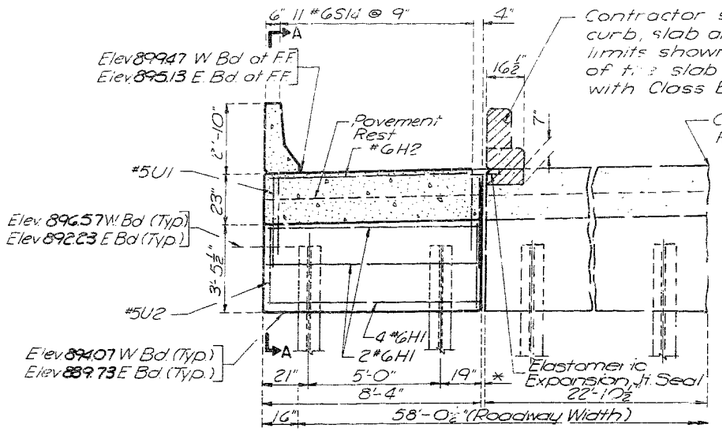
HOLMES ROAD

BUCHER & WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

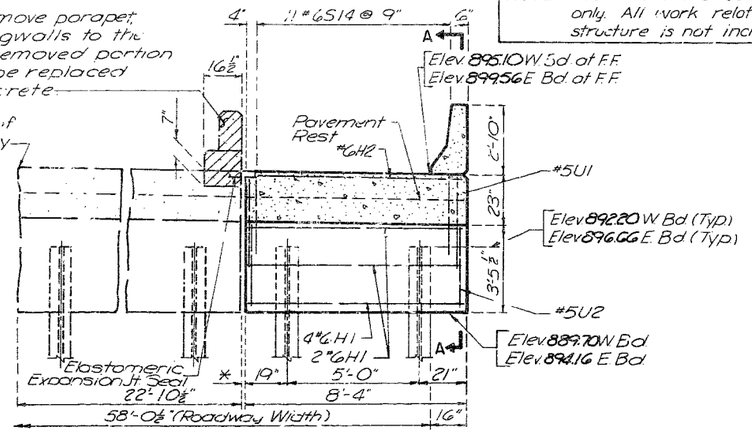
MADE S.A.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.K.H. DATE 2-16-83 SCALE No Scale

118

NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract



ELEVATION



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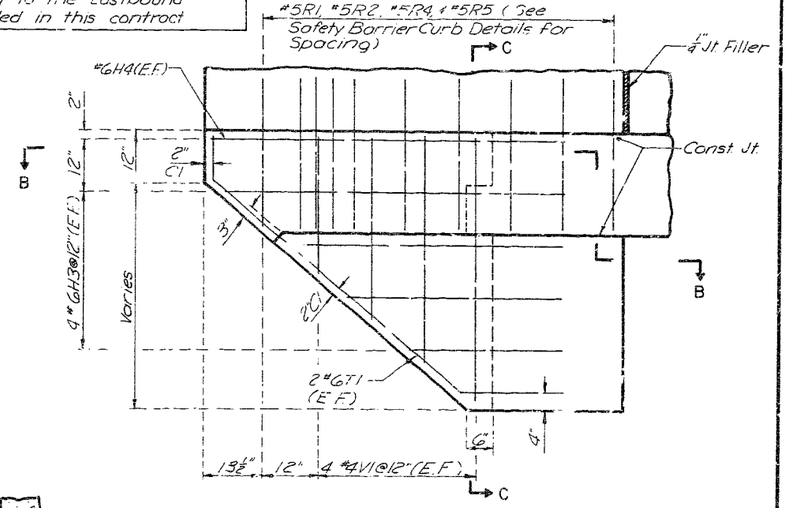
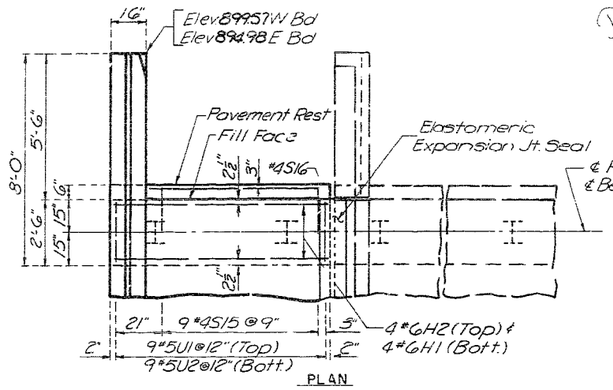
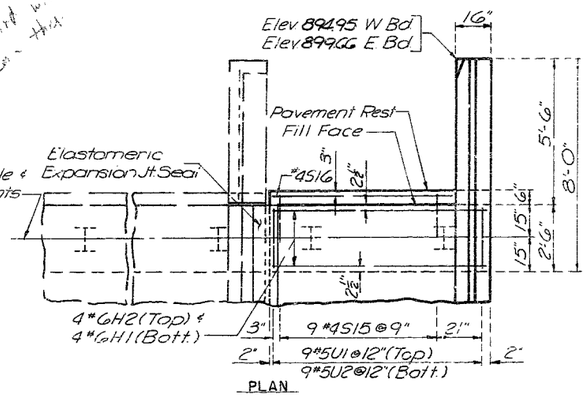




PLAN

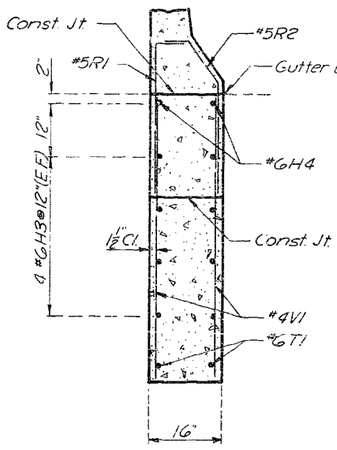
WESTBOUND END BENT NO. 1
EASTBOUND END BENT NO. 5
(Scale: ⅜" = 1'-0")

* 2" @ 60°F!
Drill in this Con - Hole



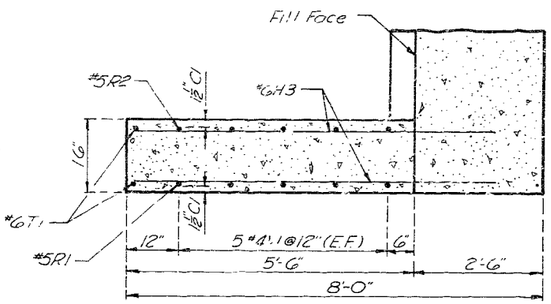
PLAN

WESTBOUND END BENT NO. 5
EASTBOUND END BENT NO. 1
(Scale: ⅜" = 1'-0")

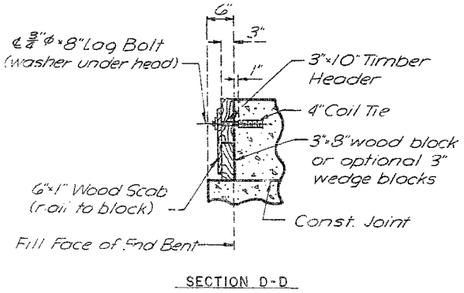


SECTION C-C
(Scale: ¾" = 1'-0")

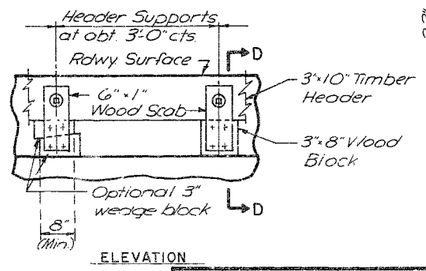
ELEVATION OF WING
(Scale: ¾" = 1'-0")



SECTION B-B
(Scale: ¾" = 1'-0")



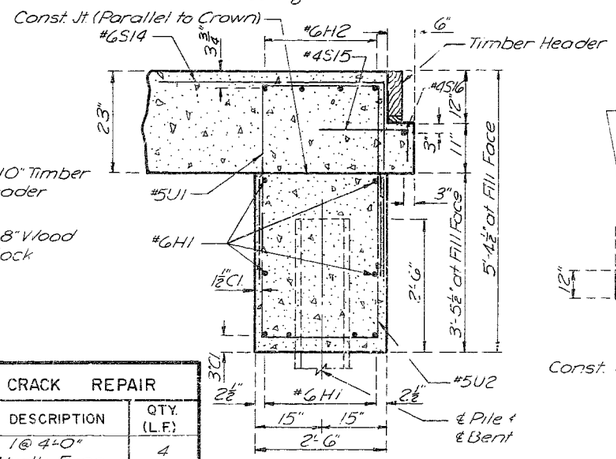
SECTION D-D



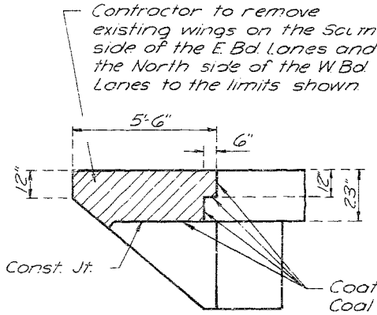
ELEVATION

TIMBER HEADER
(No Scale)

Note: Cost of timber headers complete in place shall be included in the bid price for concrete



SECTION A-A
(Scale: ¾" = 1'-0")



WINGWALL REMOVAL
(Scale: ⅜" = 1'-0")

EPOXY RESIN CRACK REPAIR

LOCATION	DESCRIPTION	QTY. (L.F.)
Bent No. 5 W. Bd. Br.	16 @ 4'-0" North Face	4
TOTAL		4

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE

LOCATION	DESCRIPTION	QUANTITY (C.F.)
Bent No. 5 W. Bd. Br.	20" x 18" x 3" South Face	0.6
Bent No. 1 W. Bd. Br.	2'-0" x 4'-0" x 3" South Face 12" x 12" x 3" North Face	2.3
Bent No. 5 E. Bd. Br.	4'-0" x 16" x 3" South Face 20" x 20" x 3" North Face	2.0
Bent No. 1 E. Bd. Br.	20" x 3'-0" x 3" South Face 2'-3" x 2'-6" x 3" North Face	2.7
TOTAL		7.6

JACKSON COUNTY, MISSOURI

END BENTS NO. 1 AND NO. 5 DETAILS

HOLMES ROAD

BUCHER, WILLIS & RATZ
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE D.A.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-16-83 SCALE As Noted

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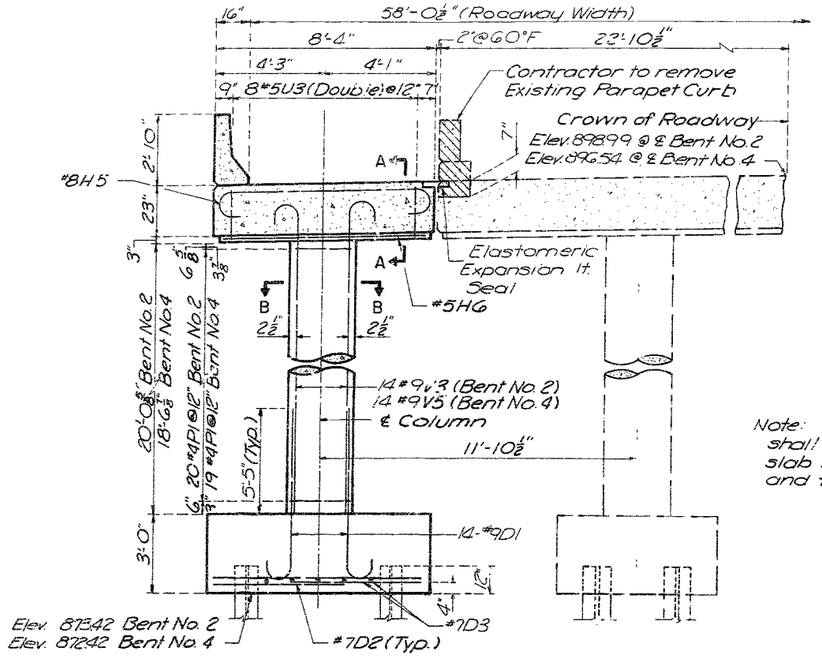
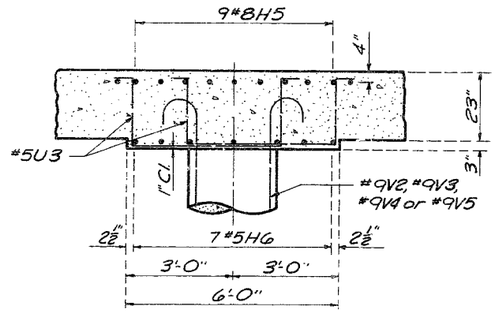
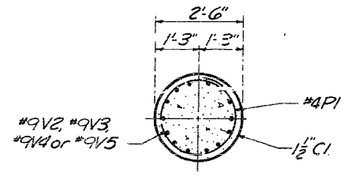


ELEVATION

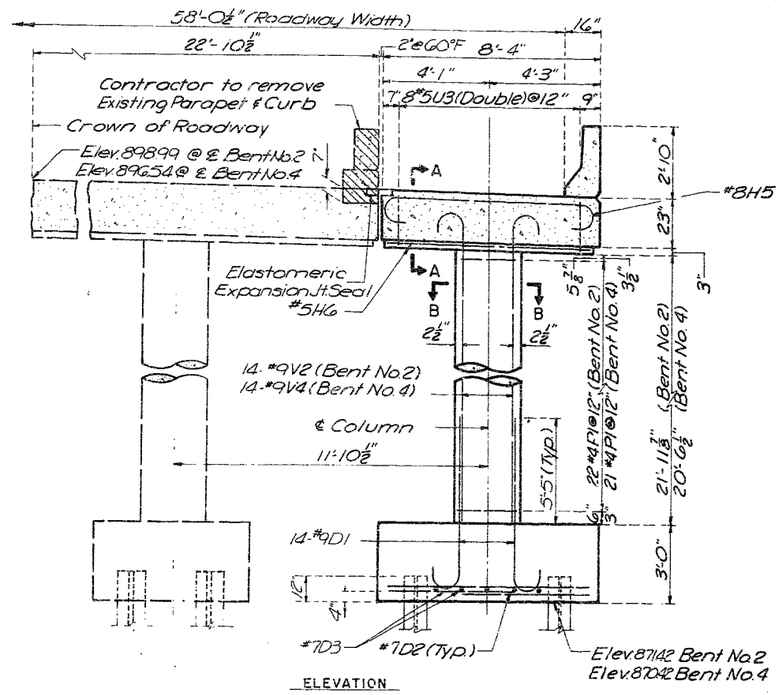


SECTION A-A
(Scale: ½" = 1'-0")

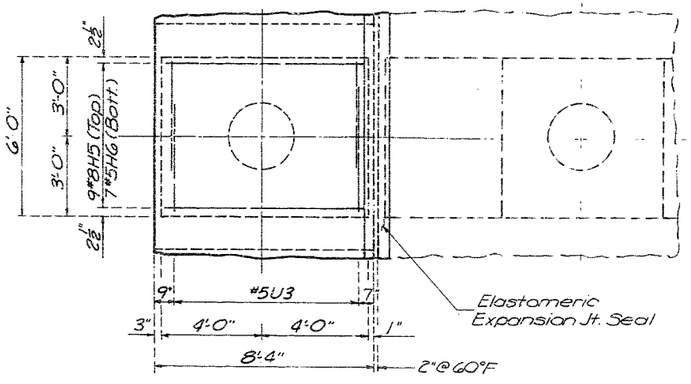
Note: Bottom of drop panel shall be parallel to top of slab both longitudinally and transversely.



SECTION B-B
(Scale: ½" = 1'-0")

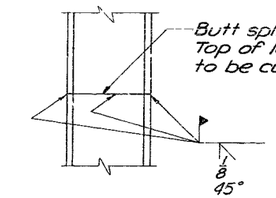


ELEVATION



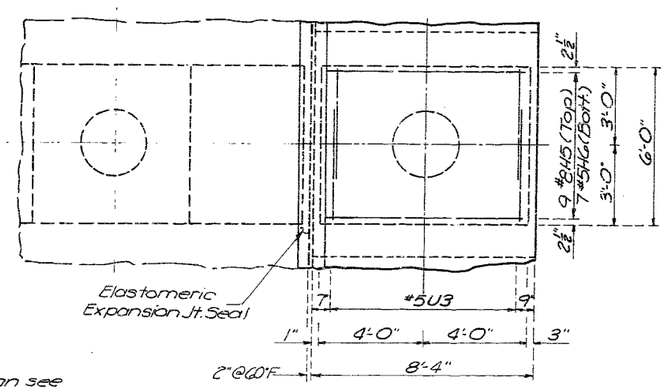
PLAN

EASTBOUND LANES
(Scale: ⅜" = 1'-0")



STEEL PILE SPLICE
(No Scale)

Note: For Pile Cap Plan see Intermediate Bent No. 3 Detail Sheet.



PLAN

WESTBOUND LANES
(Scale ⅜" = 1'-0")

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE		
LOCATION	DESCRIPTION	QUANTITY (C.F.)
Bent No. 2 E. Bd. Br.	6" × 3'-0" × 3" South Face	0.4
Bent No. 2 W. Bd. Br.	12" × 12" × 3" South Face	0.3
TOTAL		0.7

EPOXY RESIN CRACK REPAIR		
LOCATION	DESCRIPTION	QTY. (L.F.)
Bent No. 4 W. Bd. Br.	1 @ 3'-0" South Face	3
Bent No. 2 W. Bd. Br.	1 @ 18" South Face 1 @ 12" North Face	5
Bent No. 4 E. Bd. Br.	1 @ 12" South Face 1 @ 12" North Face	2
Bent No. 2 E. Bd. Br.	1 @ 12" South Face 1 @ 4'-6" North Face	6
TOTAL		14

NOTE: This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

JACKSON COUNTY, MISSOURI

INTERMEDIATE BENTS NO. 2 AND NO. 4 DETAILS

HOLMES ROAD

BUCKNER & WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE S.K.H. DATE 2-15-83 TRACED D.M.B. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

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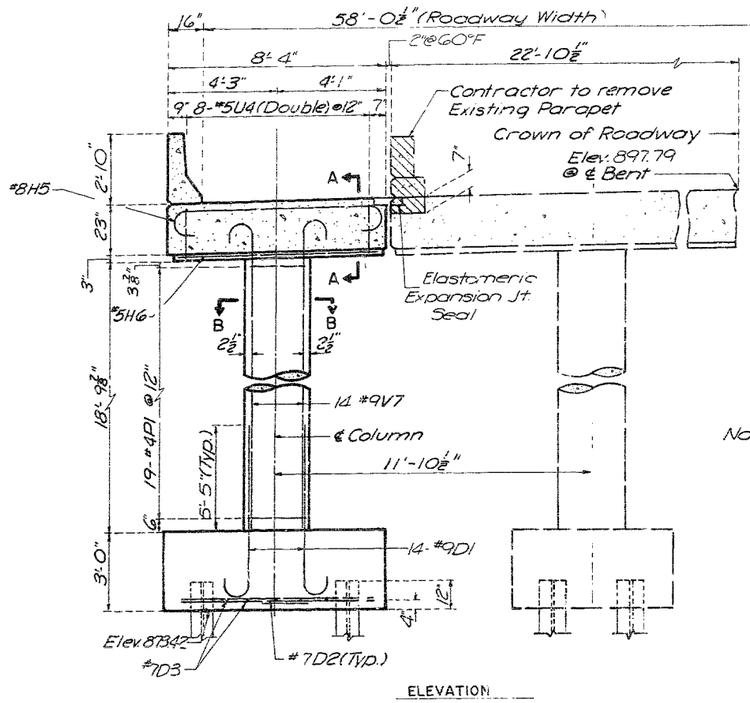
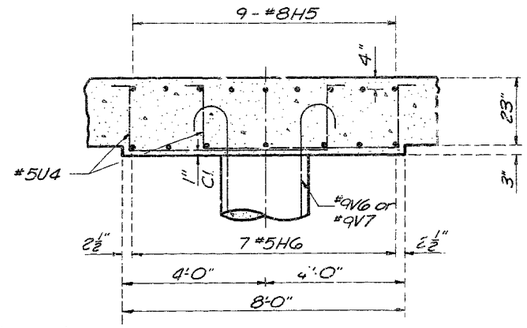
NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

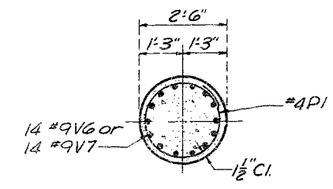


ELEVATION

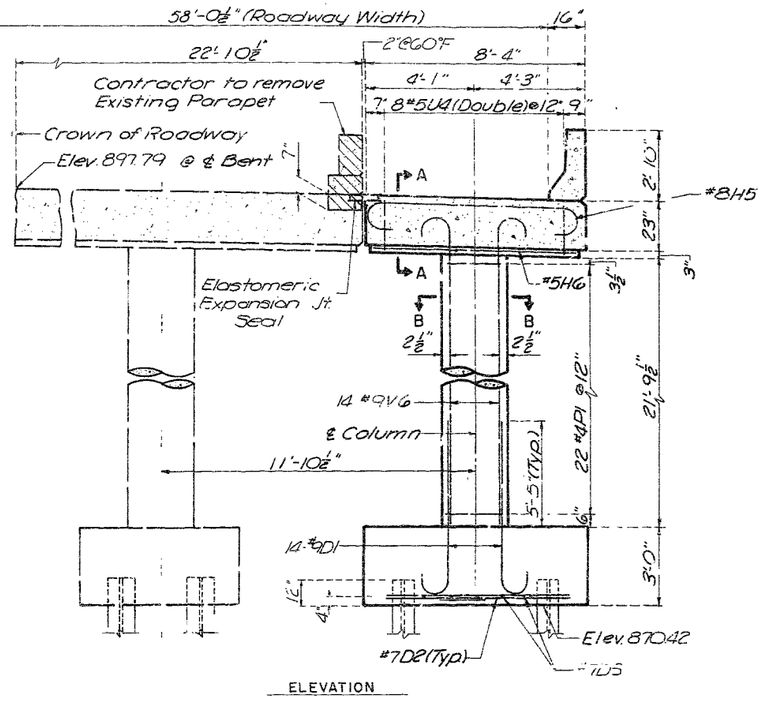


SECTION A-A
(Scale: ½"=1'-0")

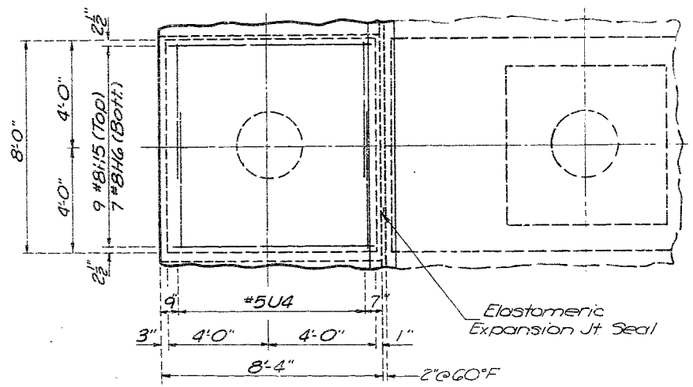
Note: Bottom of drop panel shall be parallel to top of slab both longitudinally and transversely.



SECTION B-B
(Scale: ½"=1'-0")

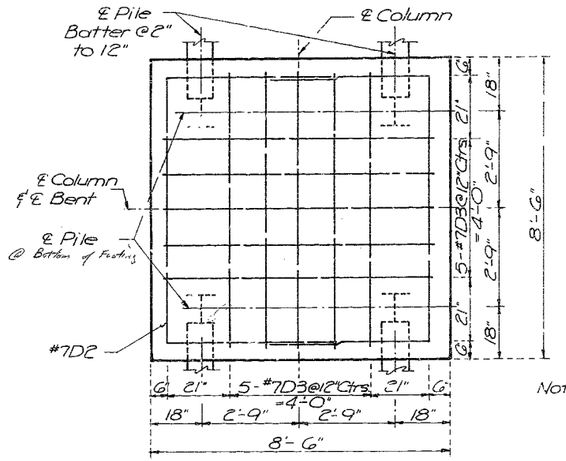


ELEVATION



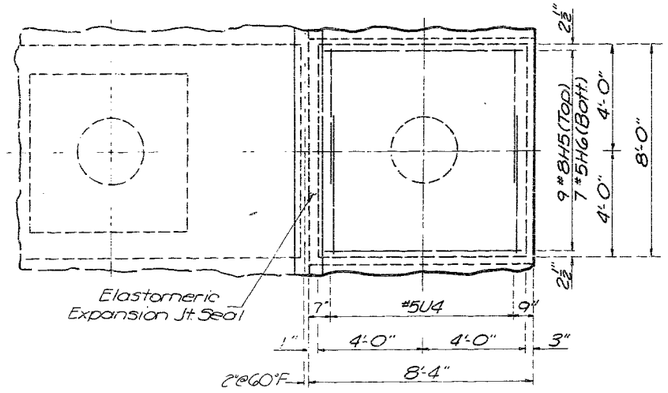
PLAN

EASTBOUND BENT NO. 3
(Scale: ⅜"=1'-0")



PILE CAP PLAN
(Scale: ½"=1'-0")

Note: For Steel Pile Splice see Intermediate Bents No. 2 & No. 4 Detail Sheet.



PLAN

WESTBOUND BENT NO. 3
(Scale: ⅜"=1'-0")

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE		
LOCATION	DESCRIPTION	QUANTITY (C.F.)
Bent No. 3 W. Bd Br.	18"×2'-0"×3" South Face 16"×8"×3" North Face	1.0
Bent No. 3 E. Bd Br.	4'-0"×6"×3" South Face	0.5
TOTAL		1.5

EPOXY RESIN CRACK REPAIR		
LOCATION	DESCRIPTION	QTY. (L.F.)
Bent No. 3 Eastbound Br.	1@5'-0" North Face	5
TOTAL		5

JACKSON COUNTY, MISSOURI

INTERMEDIATE BENT NO. 3 DETAILS

HOLMES ROAD

BUCHER : WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE SKH DATE 2-15-83 TRACED DMB DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

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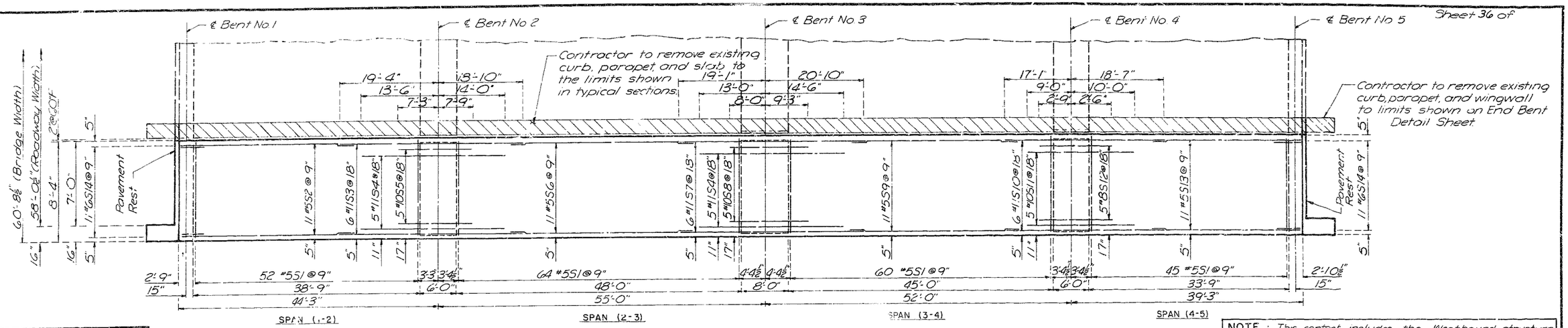
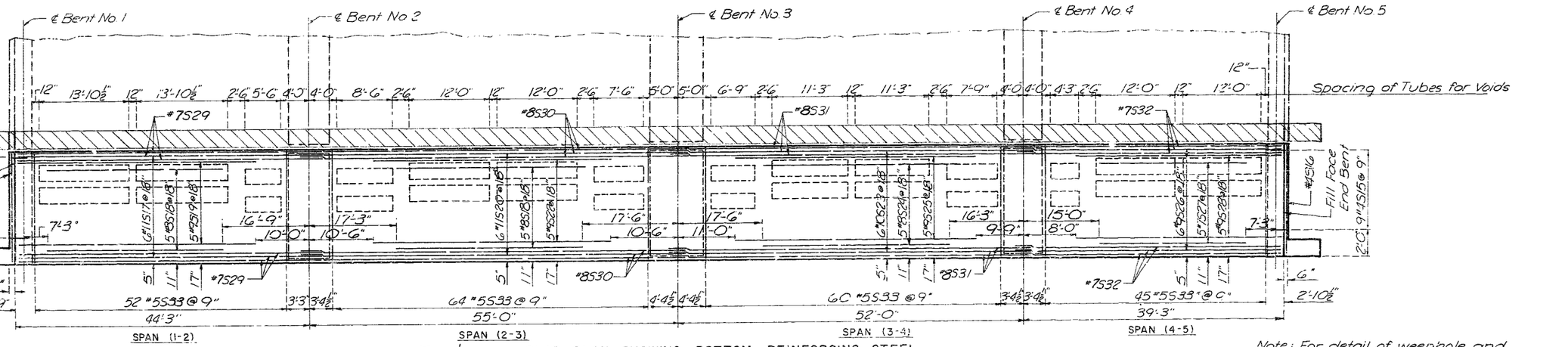


SLAB PLAN SHOWING TOP REINFORCING STEEL
(No Scale)

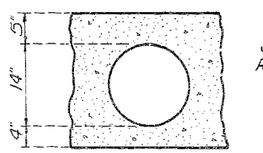
NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

MINIMUM BAR LAPS		
SIZE	TOP BAR	OTHER THAN TOP BAR
#5	2'-5"	2'-2"
#7		2'-7"
#8		3'-5"
#9		3'-3"
#10		4'-1"
#11		5'-1"

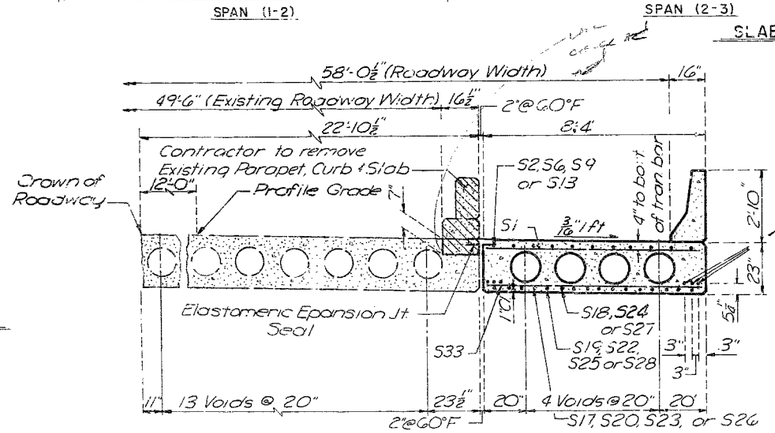


SLAB PLAN SHOWING BOTTOM REINFORCING STEEL
(No Scale)

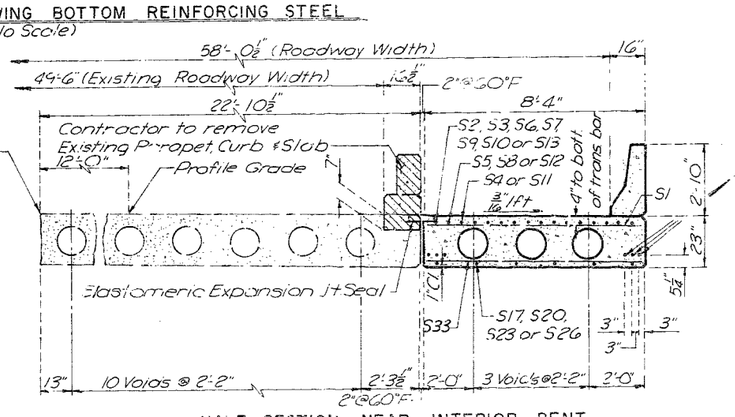
Note: For detail of weephole and optional construction joint see Safety Barrier Curb and Misc. Details Sheet.
For slab notes see General Plan & Elevation Sheet.
Steel shown is for westbound lane. Steel for eastbound lane will be reflective of the steel shown.
See Intermediate & End Bent detail sheets for additional steel at Bents.



TYPICAL VOID DETAIL
(Scale 1"=1'-0")



HALF SECTION AT CENTER OF SPAN
(Scale ⅜"=1'-0")



HALF SECTION NEAR INTERIOR BENT
(Scale ⅜"=1'-0")

JACKSON COUNTY, MISSOURI

SLAB DETAILS

HOLMES ROAD

BUCHER : WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE S.K.H. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

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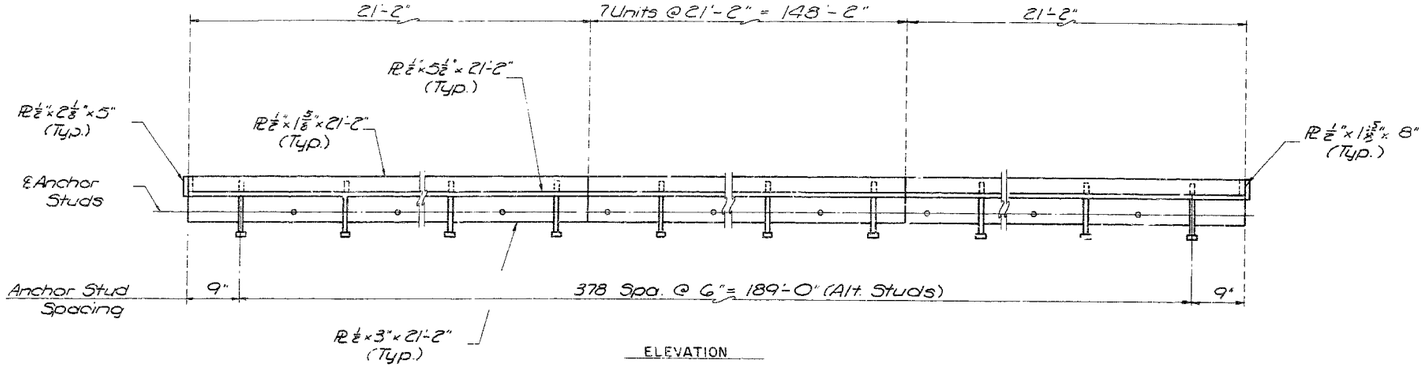
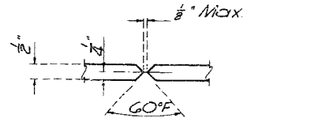
NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

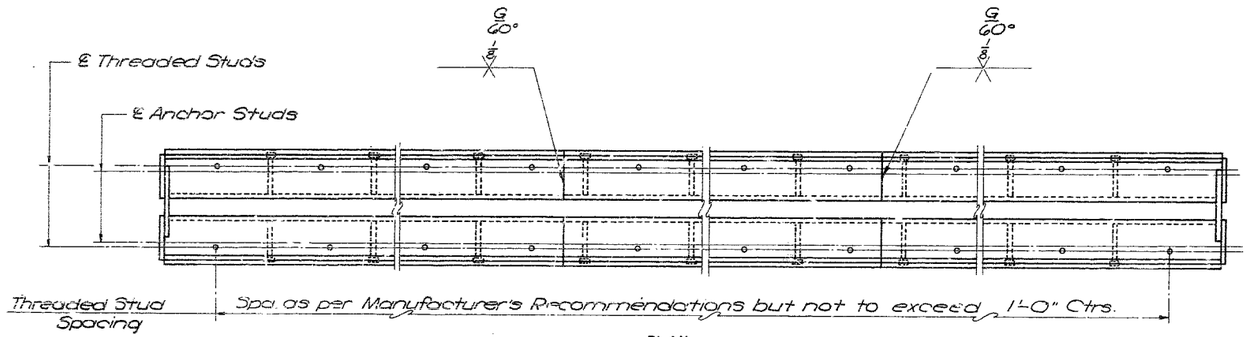


ELEVATION



TYPICAL BEVEL WELD DETAIL
(No Scale)

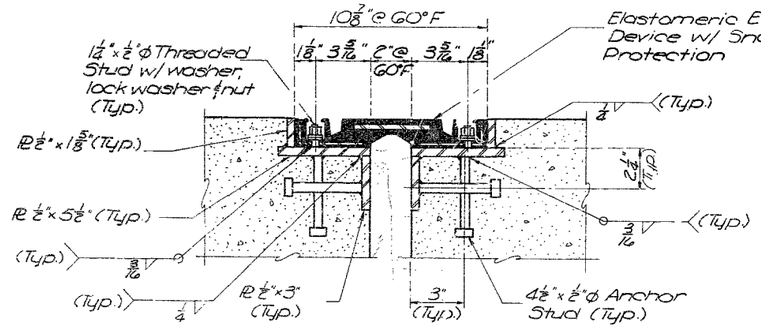
TEMP. TABLE	
TEMP. (°F)	GAP (IN.)
110	1.90
100	1.92
90	1.94
80	1.96
70	1.98
60	2.00
50	2.02
40	2.04
30	2.06
20	2.08
10	2.10
0	2.12



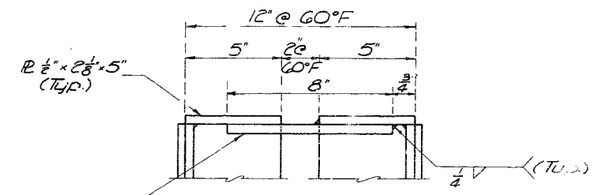
PLAN

ARMOR DETAILS

Note: All ½" Plate, ½"ø Anchor Studs and ½"ø Threaded Studs shall be subsidiary to the bid item "Steel Reinforced Elastomeric Expansion Joint Seal".



TYPICAL SECTION
(Scale: 3"=1'-0")



END COVER PLATE DETAIL
(No Scale)

Elastomeric expansion device shall be one of the following:

Acme Trojan TR300
Gen-Strip CCLE"
On-Flex 25
WABO Bendoflex 250

JACKSON COUNTY, MISSOURI

EXPANSION DEVICE DETAILS

HOLMES ROAD

BOGNER & WELLS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE D.M.B DATE 12-14-82 TRACED D.M.B/R.P.B DATE 12-14-82
CHECKED R.W.P. DATE 12-14-82 SCALE As Noted

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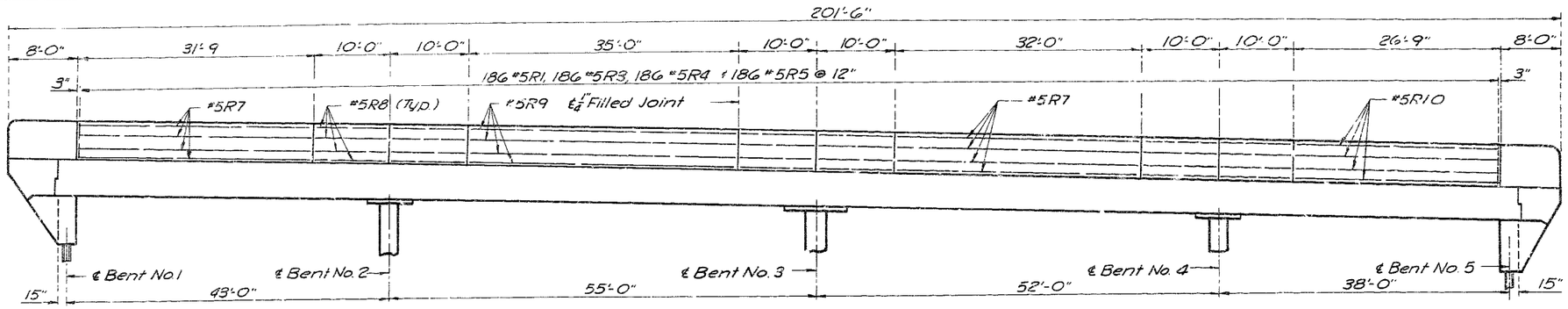
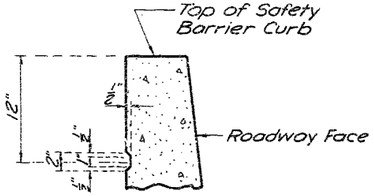
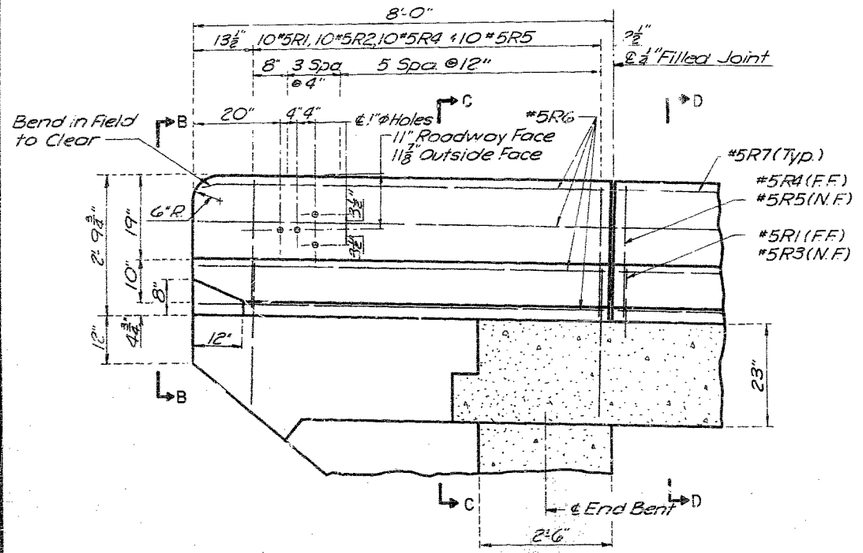


SAFETY BARRIER CURB ELEVATION
(No Scale)

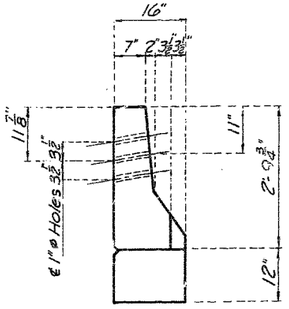


SAFETY BARRIER CURB RUSTICATION DETAILS
(Scale: 1½"=1'-0")

Note: Rustication shall end 3" from ℄ 1" joints and 4'-0" from the ends of the wingwalls.

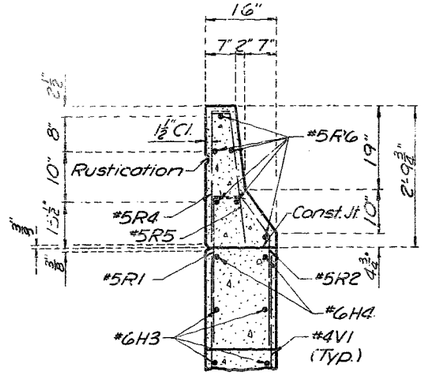


LONGITUDINAL SECTION AT END OF SAFETY BARRIER CURB
(Scale: ¾"=1'-0")

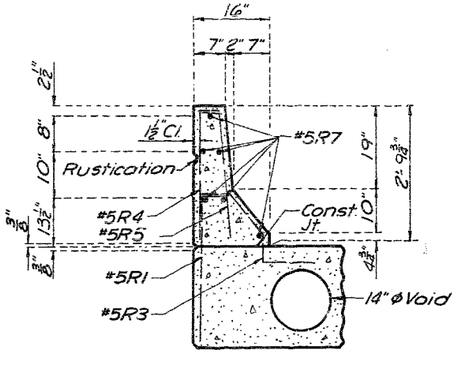


ELEVATION B-B
(Scale: ¾"=1'-0")

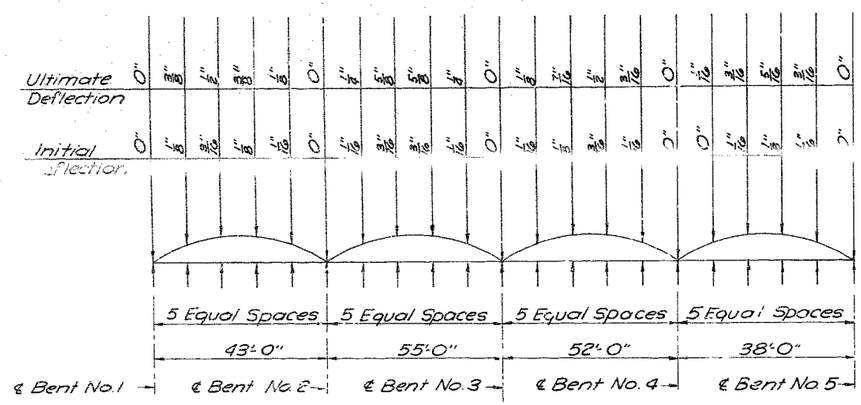
Note: For Safety Barrier Curb general notes see General Plan and Elevation Sheet.



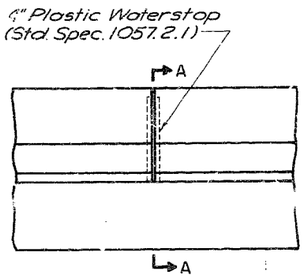
SECTION C-C
(Scale: ¾"=1'-0")



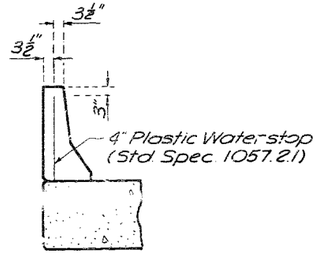
SECTION D-D
(Scale: ¾"=1'-0")



CAMBER DIAGRAM

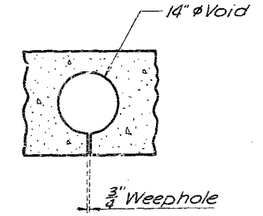


SAFETY BARRIER CURB ELEVATION

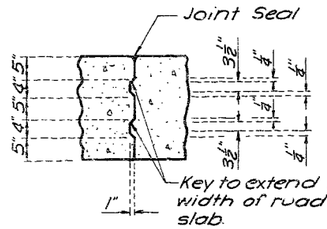


SECTION A-A

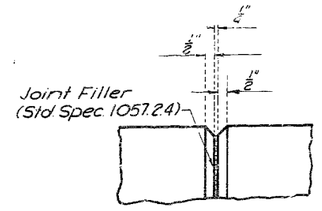
PLASTIC WATERSTOPS
(Scale: ½"=1'-0")



WEEPHOLE DETAIL
(Scale: ¾"=1'-0")



CONSTRUCTION JOINT KEY
(No Scale)



FILLED JOINT DETAIL
(Scale: 3"=1'-0")

NOTE : This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

JACKSON COUNTY, MISSOURI

SAFETY BARRIER CURB AND MISCELLANEOUS DETA

HOLMES ROAD

BUCHER & WILLIS
CONSULTING ENGINEERS, PLANNEP
SALINA HAYS

MADE R.F.B DATE 2-15-83 TRACED
CHECKED S.A.C. DATE 2-18-83

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COMPLETE BILL OF REINFORCING (WESTBOUND LANES)

NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			END BENTS				
16	#6	H1	Brg. Beam		—	8'-0"	192
8	#6	H2	Brg. Beam	E	—	8'-0"	96
8	#6	H3 *	Wingwall		—	8'-11"	107
4	#6	H4	Wingwall		—	7'-0"	42
6	#6	T1	Wingwall		⌒	9'-2"	55
18	#5	U1	Brg. Beam	E	⊓	9'-1"	171
18	#5	U2	Brg. Beam		⊓	9'-1"	171
8	#4	V1 *	Wingwall		—	7'-3"	39
			INT. BENTS				
42	#9	D1	Batt. at Col.		⌐	9'-2"	1309
6	#7	D2	Pile Caps		⊓	17'-0"	208
30	#7	U3	Pile Caps		—	8'-0"	491
27	#8	H5	Bent Caps	E	⊓	9'-10"	709
21	#5	H6	Bent Caps		—	7'-8"	168
65	#4	P1	Columns		○	8'-3"	358
32	#5	U3	Bent Caps	E	⊔	8'-11"	298
16	#5	U4	Bent Caps	E	⊔	9'-11"	165
14	#9	V2	Bent 2 Col.		⌐	24'-10"	1182
14	#9	V4	Bent 4 Col.		⌐	23'-5"	1115
14	#9	V6	Bent 3 Col.		⌐	24'-8"	1174
			SUPERSTRUCTURE				
221	#5	S1	Slab	E	—	8'-0"	1844
11	#5	S2	Slab	E	—	26'-7"	305
6	#11	S3	Slab	E	—	38'-2"	1217
10	#11	S4	Slab	E	—	27'-6"	1461
3	#10	S5	Slab	E	—	15'-0"	323
11	#5	S6	Slab	E	—	20'-9"	238
6	#11	S7	Slab	E	—	39'-11"	1273
3	#10	S8	Slab	E	—	17'-3"	371
11	#5	S9	Slab	E	—	17'-9"	204
6	#11	S10	Slab	E	—	35'-8"	1137
3	#10	S11	Slab	E	—	19'-0"	409
3	#8	S12	Slab	E	—	5'-3"	70
11	#5	S13	Slab	E	—	22'-4"	256
22	#6	S14	Slab	E	⌐	8'-0"	264
18	#4	S15	Pvmt. Rest		⌐	2'-3"	27
2	#4	S16	Pvmt. Rest		—	8'-0"	11
6	#11	S17	Slab		—	42'-8"	1488
10	#8	S18	Slab		—	19'-0"	507
3	#9	S19	Slab		—	34'-1"	579
6	#11	S20	Slab		—	60'-1"	1915
3	#9	S22	Slab		—	34'-0"	578
6	#10	S23	Slab		—	36'-1"	1448
3	#8	S24	Slab		—	18'3"	244
3	#9	S25	Slab		—	31'-3"	531
6	#9	S26	Slab		—	40'-9"	831
3	#7	S27	Slab		—	15'-9"	161
3	#9	S28	Slab		—	31'-1"	528
6	#7	S29	Edge Beam		—	45'-5"	557
6	#8	S30	Edge Beam		—	58'-0"	929
6	#8	S31	Edge Beam		—	55'-0"	881
6	#7	S32	Edge Beam		—	40'-5"	496
221	#5	S33	Slab		—	8'-0"	1844

* Series Bar

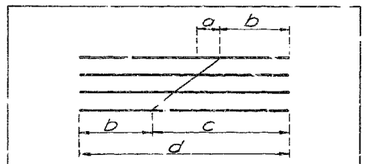
NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			BARRIER CURB				
206	#5	R1	Bar. Curb	E	⌐¬	3'-4"	716
20	#5	R2	Bar. Curb	E	⌐¬	3'-6"	73
186	#5	R3	Bar. Curb	E	⌐¬	3'-1"	598
206	#5	R4	Bar. Curb	E	⌐¬	2'-9"	591
206	#5	R5	Bar. Curb	E	⌐¬	2'-9"	591
12	#5	R6	Bar. Curb	E	—	7'-8"	96
12	#5	R7	Bar. Curb	E	—	31'-5"	393
36	#5	R8	Bar. Curb	E	—	9'-8"	363
6	#5	R9	Bar. Curb	E	—	34'-8"	217
6	#5	R10	Bar. Curb	E	—	26'-5"	165

COMPLETE BILL OF REINFORCING (EASTBOUND LANES)

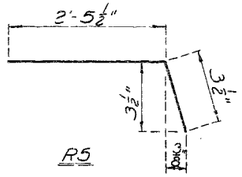
NOTE: The Bill of Reinforcing Steel for the Eastbound Lanes is identical to the Bill of Reinforcing Steel for the Westbound Lanes, except for the following:
Delete the #4P1, #9V2, #9V4 & #9V6 bars as shown and add the following bars:

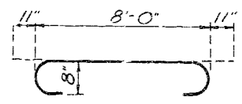
NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			INT. BENTS				
58	#4	P1	Columns		○	8'-3"	320
14	#9	V3	Bent 2 Col.		⌐	22'-10"	1087
14	#9	V5	Bent 4 Col.		⌐	21'-5"	1019
14	#9	V7	Bent 3 Col.		⌐	21'-8"	1031

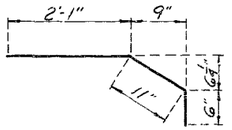
BENDING DIAGRAMS

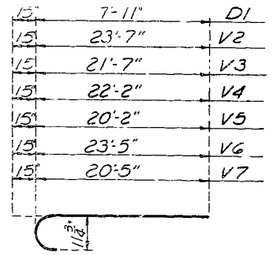


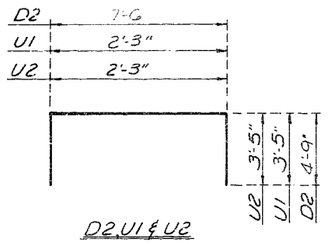
REMARKS	a	b	c	d
4 H3 Cut 16	13"	2'-10"	6'-1"	8'-11"
4 V1 Cut 20	11"	2'-3"	5'-0"	7'-3"

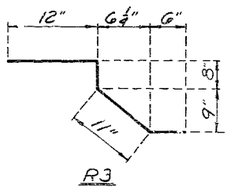


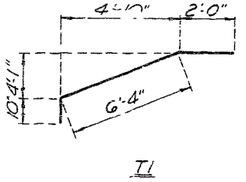


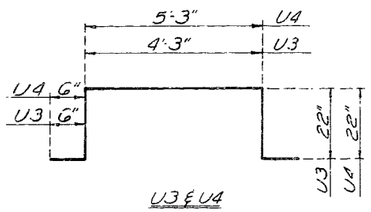


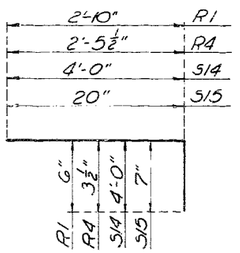












Note: All dimensions are out to out of bar unless otherwise noted.
Quantities shown are for widening of the Westbound lanes except as noted.

NOTE: This contract includes the Westbound structure only. All work relating to the Eastbound structure is not included in this contract.

JACKSON COUNTY, MISSOURI

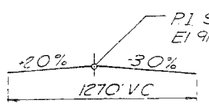
BILL OF REINFORCING STEEL

HOLMES ROAD

BUCHER : WILLIS
CONSULTING ENGINEERS, PLANNERS, & ARCHITECTS
SALINA HAYS KANSAS CITY

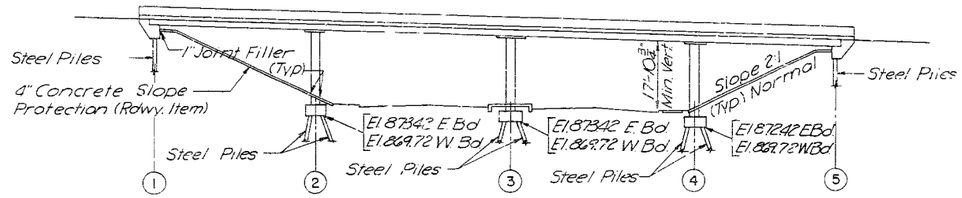
MADE SKH DATE 2-15-83 TRACED D A C DATE 2-16-83
CHECKED P.A.C. DATE 2-18-83 SCALE None

135

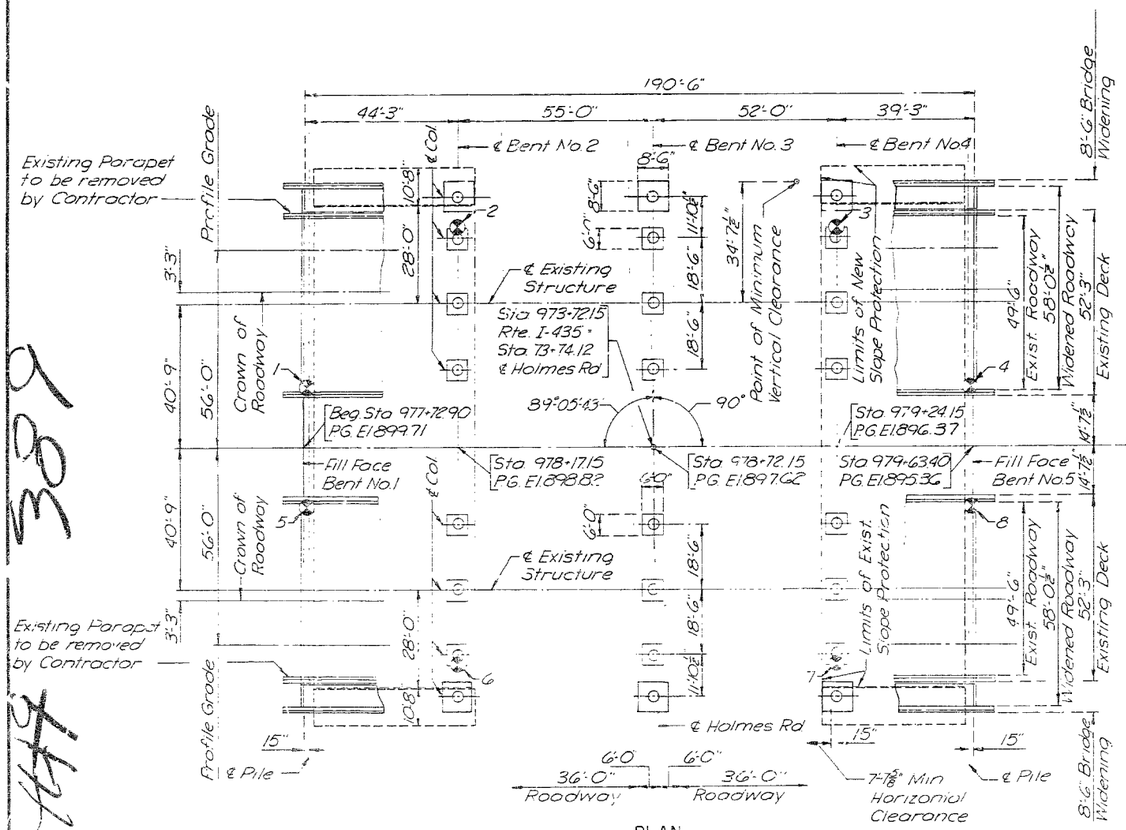


Twin 43.00'-55.00'-52.00'-39.00' Continuous Slab Spans (Voided)

NOTE : This contract includes the Eastbound structure only. All work related to the Westbound structure is not included in this contract.



GENERAL ELEVATION
(Scale: 1"=20')



PLAN
(Scale 1"=20')

GENERAL NOTES

Design Specifications:
A.A.S.H.T.O.-1977, Interim '78, '79, '80, '81
Working Stress Design

Design Loading:
HS20-44
Modified 24,000# Tandem Axle
Earth 120#, Equivalent Fluid Pressure 30#

Design Unit Stresses:
Class B1 Concrete (substructure & barrier curb) f'_c = 4,000 p.s.i.
Class B2 Concrete (deck slab) f'_c = 4,000 p.s.i.
Reinforcing Steel (Grade 60) f_y = 60,000 p.s.i.
Steel Pile f_b = 9,000 p.s.i.

Boring Data:
For Boring Data see Boring Data and Estimated Quantities Sheet
"⊗" Indicates location of boring.

Bench Mark:
Elev. 912.77 Kansas City, Missouri Standard Horizontal Control Monument #199 = Elev. 915.07 U.S.G.S. Datum.
Plan Elevations shown are U.S.G.S. Datum.

Removal of Existing Structure:
Outline of old work is indicated by light dashed lines on the detail sheets. Heavy lines indicate new work. Removal Limits of existing structure are shown in crosshatching. After removing existing barrier curb, saw cut slab 2" deep along a line 16½" from the outside of the deck. The contractor shall leave all existing deck reinforcement in place.

Excavation:
Pay limits for excavation quantities are measured from the existing ground line.

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

Concrete Voided Slab:
The contractor shall pour and satisfactorily finish the concrete roadway slab at a rate of not less than 25 cubic yards per hour.
If the contractor cannot place the slab in one continuous pour, construction joints shall be placed at locations as approved by the Engineer.
Finish each side of the optional joint with ¼" edging tool.
Tubes for producing voids shall have an outside diameter of 14.0" and shall be anchored at not more than 4'-0" centers. Fiber tubes shall have a wall thickness of not less than 0.250".
One ¾" ø weephole shall be provided near the ends of each void. Weepholes shall be placed in straight lines parallel to bent.
The cross-slope and elevation of the 2'-1" uniform slab shall be varied as required to match the overlaid existing slab and provide a uniform wearing surface across the junction of the new and existing slabs. The thickness of the new drop panel may vary as required by maintaining the top of column elevation as shown on the plans and providing the necessary drop panel thickness to accommodate the resulting bottom of new deck elevation.

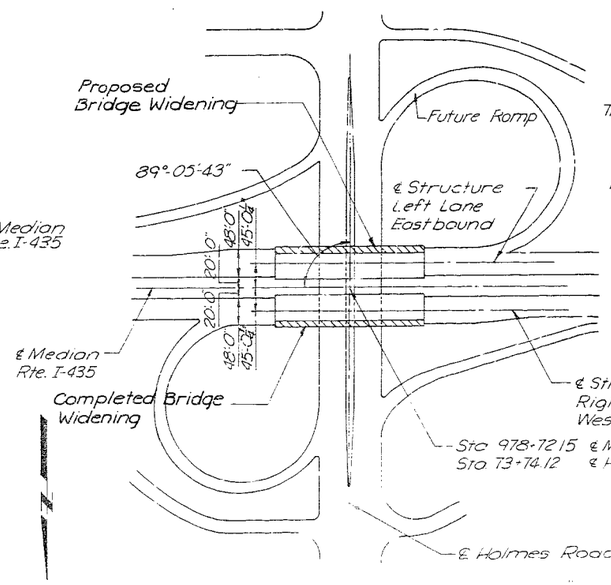
Construction Specifications:
Current issue of Missouri Standard Specifications for Highway Construction.

Safety Barrier Curb:
Top of safety barrier curb shall be built parallel to grade with barrier curb joints normal to grade.
All exposed edges of safety barrier curb shall have ½" radius or ¾" bevel unless otherwise noted.
Plastic waterstop shall be placed in all safety barrier curb filled joints.
Cost of plastic waterstop complete in place shall be included in the bid price for concrete.

Surface Seal:
Superstructure deck surface shall be sealed in accordance with Section 703.3.18 of the Standard Specifications.

Traffic Maintained:
Traffic over structure to be maintained during construction.

Falsework:
Falsework over existing lanes should be constructed with a minimum vertical clearance of 14' from crown of existing lanes and a minimum lateral clearance of 2 feet beyond edge of pavement.



LOCATION SKETCH
(No Scale)

BRIDGE OVER HOLMES ROAD

STATE ROAD FROM KANSAS STATE LINE TO RTE. 71
ABOUT 1.4 MILES EAST OF KANSAS STATE LINE
PROJECT NO. STA. 977+72.90
JOB NO. 4-I435-713 RTE. I-435
JACKSON COUNTY
DATE 2/15/83

A-1662RI

JACKSON COUNTY, MISSOURI

GENERAL PLAN AND ELEVATION

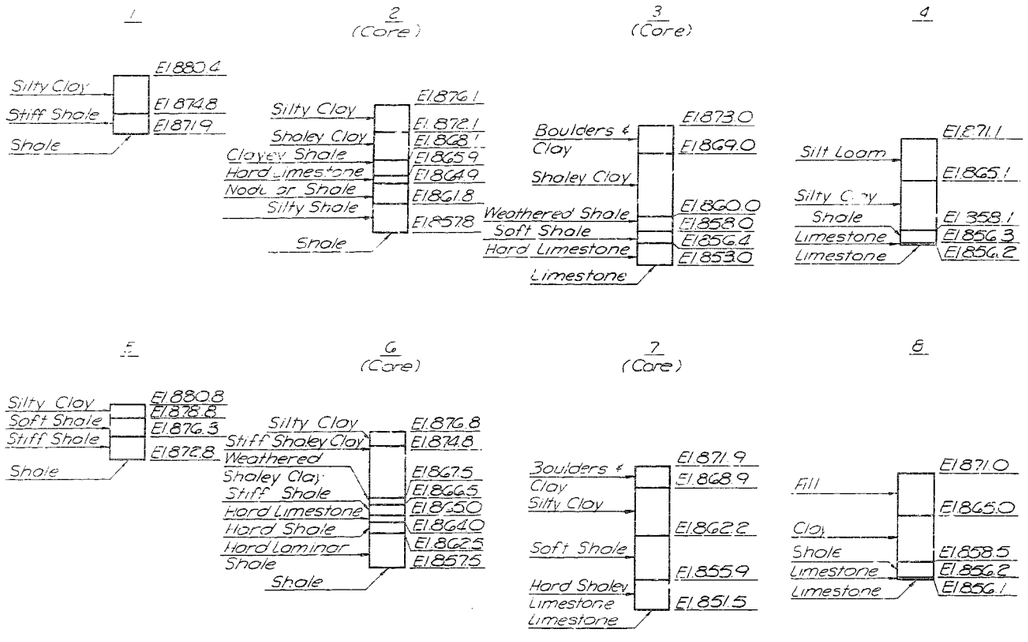
HOLMES ROAD BRIDGE NO. A-1662RI

BUCHER, WILLIS & RATZ
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE SDC DATE 2-15-83 TRACED DAC DATE 2-16-83
CHECKED SAC DATE 2-18-83 SCALE As Noted

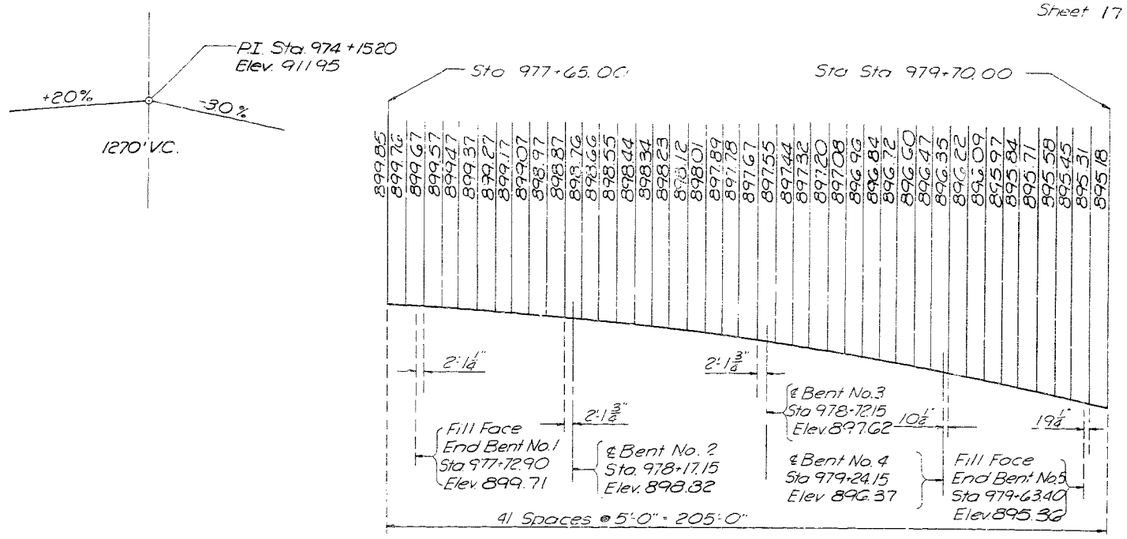
SHEET NO. 1 of 10

File No. 217-9



BORING DATA

Note: For location of Borings see General Plan & Elevation Sheet



PROFILE GRADE ELEVATIONS

Note: The profile grade shown is the theoretical profile grade of I-435 as obtained from the original construction plans. These elevations should not be used for construction as the existing elevations do not agree with this profile.

NOTE · This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.

* Removal of Concrete shall include detailed removal of existing wings, curbs, parapets, slab, and other areas as directed by the engineer. Removal and placement of concrete for full depth repair and half-scaling shall be included in contract unit price bid for these items.

PILE DATA

BENT NO.	END BENT NO.1		INT. BENT NO.2		INT. BENT NO.3		INT. BENT NO.4		END BENT NO.5	
LANE	E Bd	W Bd	E Bd	W Bd	E Bd	W Bd	E Bd	W Bd	E Bd	W Bd
Pile Type and Size	HP10×42		HP10×42		HP10×42		HP10×42		HP10×42	
Number	2	2	4	4	4	4	4	4	2	2
Approximate Length Ft	33	33	12	12	19	19	19	19	39	39
Design Bearing Value Tons	90	90	40	40	40	40	40	40	90	90
Hammer Energy Reqd. Ft. LBS	10000	10000	14900	14900	10800	10800	14900	14900	10000	10000

Note: Minimum energy requirement of the hammer based on plan length and design bearing value of the piles.
All piles shall be driven to practical refusal

ESTIMATED QUANTITIES

ITEM		EASTBOUND	WESTBOUND	TOTAL
Removal & Replacement of Det. Conc.	Sq. Ft	51		
Removal of Concrete	Cu. Yd	21.8		
Class I Excavation	Cu. Yd	71.0		
Structural Steel Pile (10")	Lin. Ft	344		
Class B1 Concrete	Cu. Yd	581		
Class [illegible] Concrete	Cu. Yd	109.8		
Elastomeric Expansion Joint Seal	Lin. Ft	91		
Reinforcing Steel (Grade 60)	Lbs	21,023		
Reinforcing Steel (Gr 60) Epoxy Coated	Lbs	15,152		
Epoxy Resin Crack Repair	Lin. Ft	14		
Repairing Conc. Deck (Half-scaling)	Sq. Ft.	253		
Low Slump Conc. Wearing Surface	Sq. Yd.	1048		

JACKSON COUNTY, MISSOURI

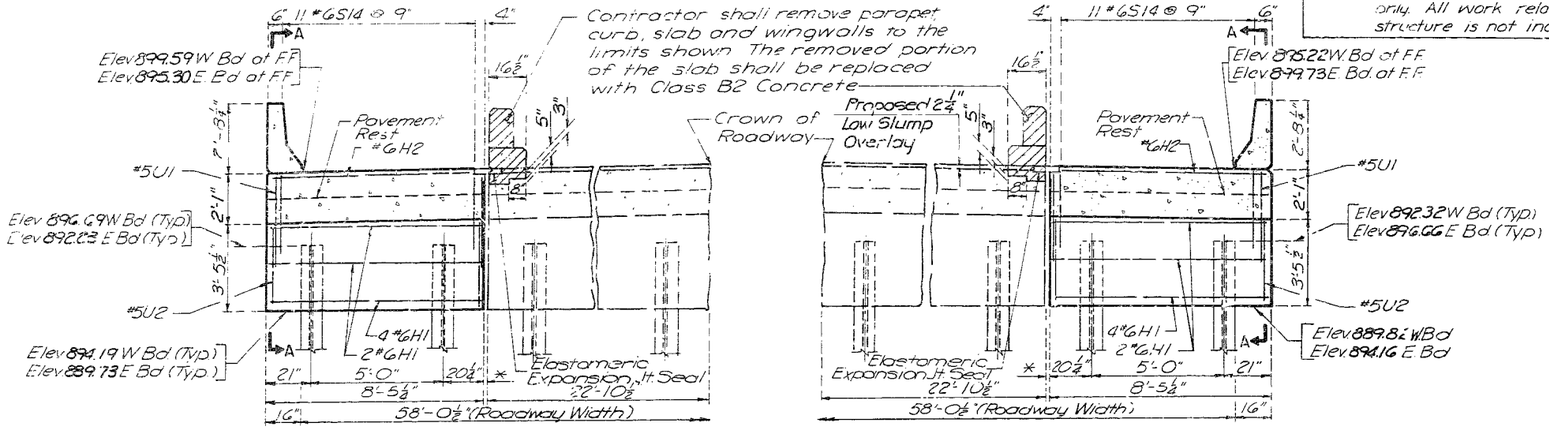
BORING DATA AND ESTIMATED QUANTITIES

HOLMES ROAD BRIDGE NO. A-1662RI

BOUCHER & WILLIS
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE S.A.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-16-83 SCALE NO SCALE

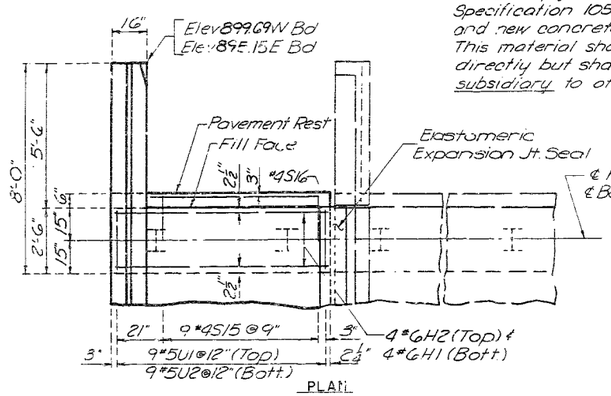
NOTE This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.



ELEVATION

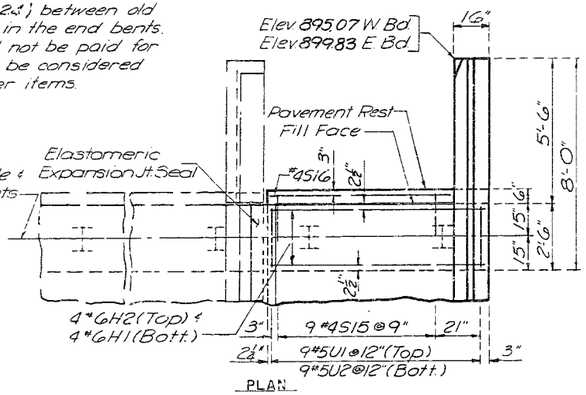
ELEVATION

NOTE: Place a ¾" joint filler (Standard Specification 1057.2.4) between old and new concrete in the end bents. This material shall not be paid for directly but shall be considered subsidiary to other items.



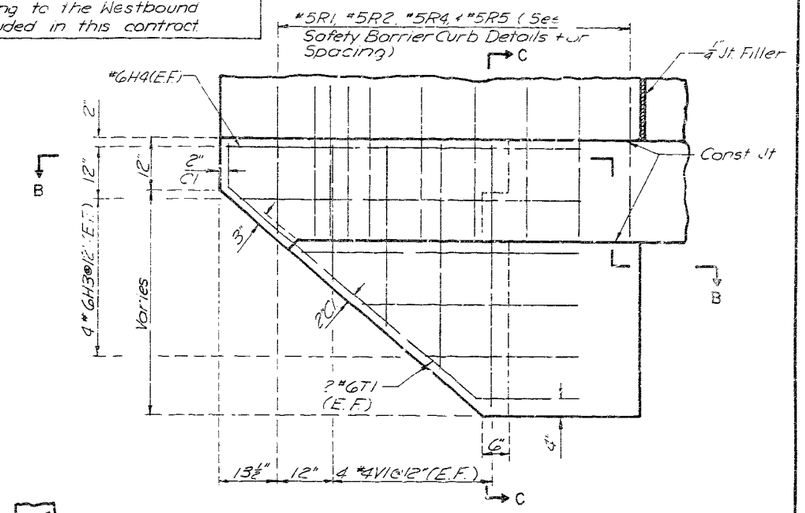
PLAN

~~WESTBOUND END BENT NO. 1~~
EASTBOUND END BENT NO. 5
(Scale ⅜" = 1'-0")

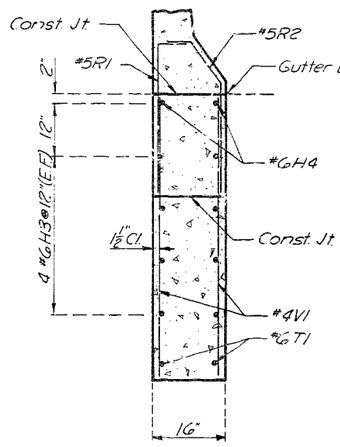


PLAN

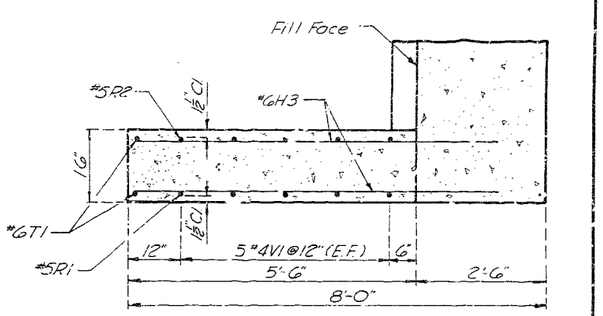
~~WESTBOUND END BENT NO. 5~~
EASTBOUND END BENT NO. 1
(Scale ⅜" = 1'-0")



ELEVATION OF WING
(Scale ¾" = 1'-0")

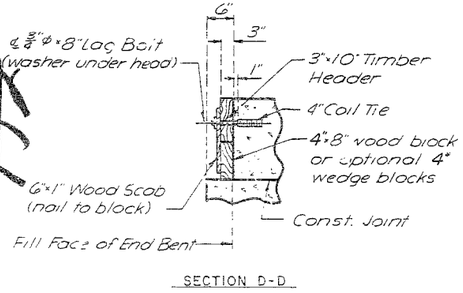


SECTION C-C
(Scale ¾" = 1'-0")

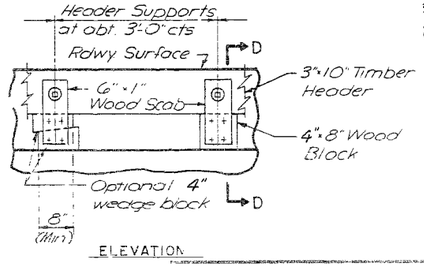


SECTION B-B
(Scale ¾" = 1'-0")

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE		
LOCATION	DESCRIPTION	QUANTITY (S.F.)
~~Bent No. 5 W. Bd. Br.~~	~~2'-0" x 3'-8" South Face~~	
~~Bent No. 1 W. Bd. Br.~~	~~2'-0" x 4'-0" South Face~~ ~~1'-6" x 1'-2" North Face~~	
Bent No. 5 E. Bd. Br.	4'-6" x 2'-0" South Face 3'-0" x 3'-8" North Face	20.0
Bent No. 1 E. Bd. Br.	2'-0" x 4'-0" South Face 2'-3" x 4'-0" North Face	17.0
TOTAL (E. Bd. Br.)		37.0



SECTION D-D

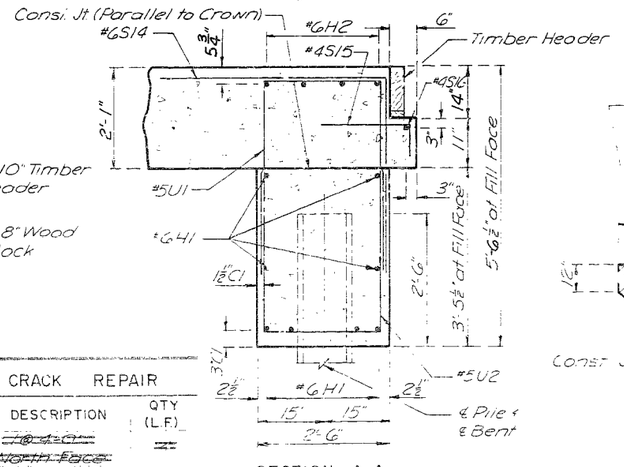


ELEVATION

TIMBER HEAD ℄
(No Scale)

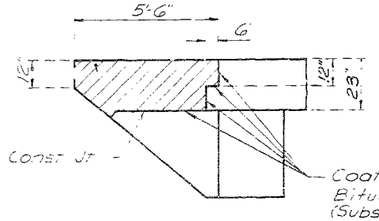
Note Cost of timber headers complete in place shall be included in the bid price for concrete.

EPOXY RESIN CRACK REPAIR		
LOCATION	DESCRIPTION	QTY (L.F.)
~~Bent No. 5 W. Bd. Pr.~~	~~North Face~~	~~—~~
TOTAL		—



SECTION A-A
(Scale ¾" = 1'-0")

Contractor to remove existing wings on the South side of the E Bd Lanes and the North side of the W Bd Lanes to the limits shown.



WINGWALL REMOVAL
(Scale ¾" = 1'-0")

JACKSON COUNTY, MISSOURI

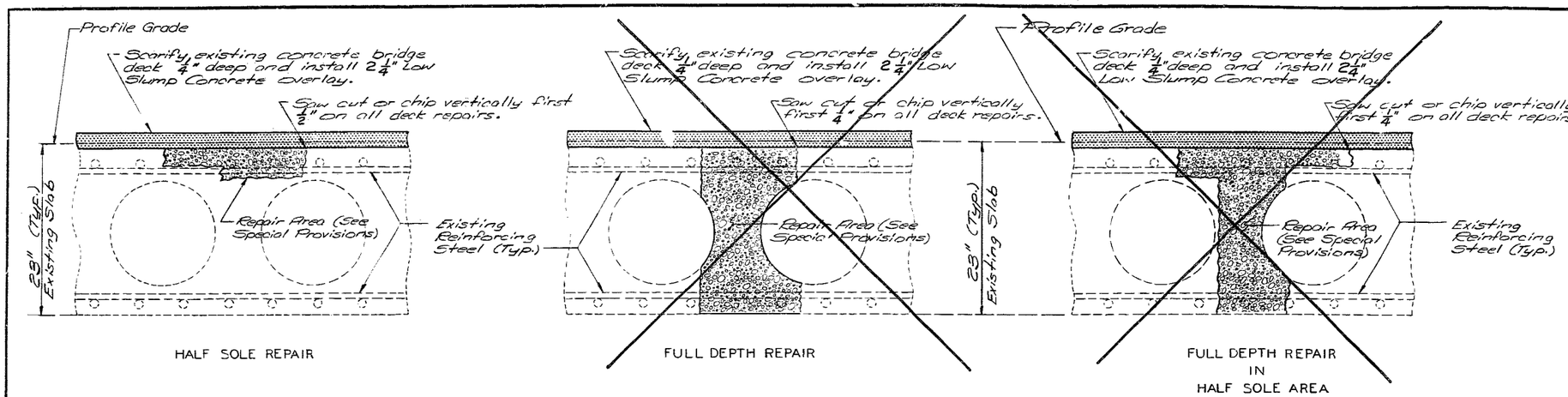
END BENTS NO. 1 AND NO. 5 DETAILS

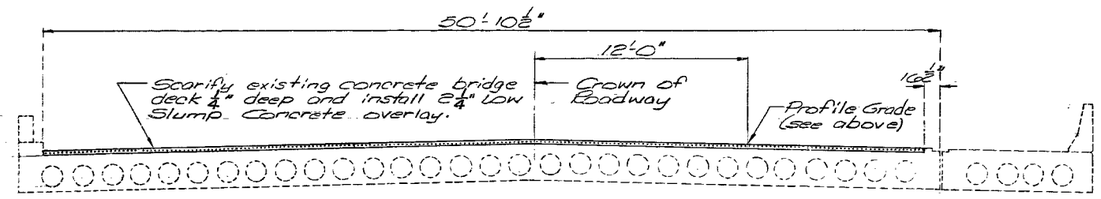
HOLMES ROAD — BRIDGE NO. A-1662RI

BUCHER, WILLIS & RATZ
CONSULTING ENGINEERS PLANNERS & ARCHITECTS
SALINA HAYS KANSAS CITY

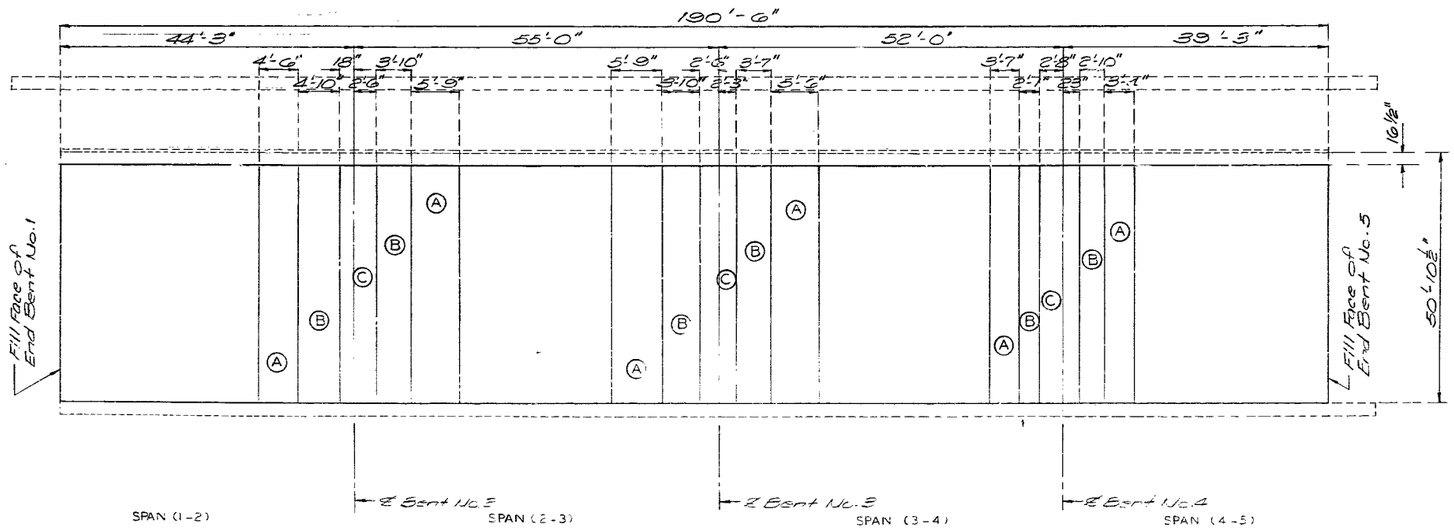
MADE D.A.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

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





SECTION THRU SLAB



PLAN

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

JOB NO. 4-I-435-713

SPECIAL REPAIR AREAS

JACKSON COUNTY

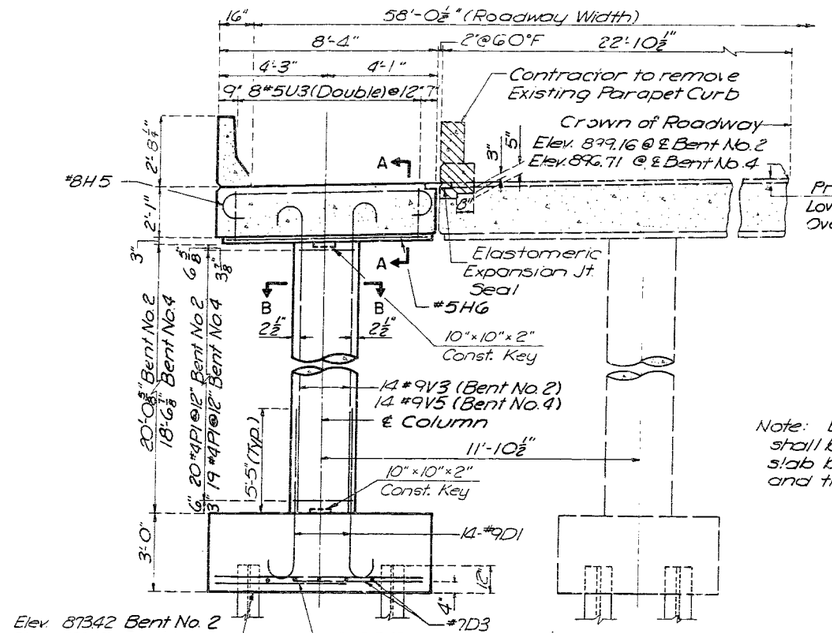
A-1662R1

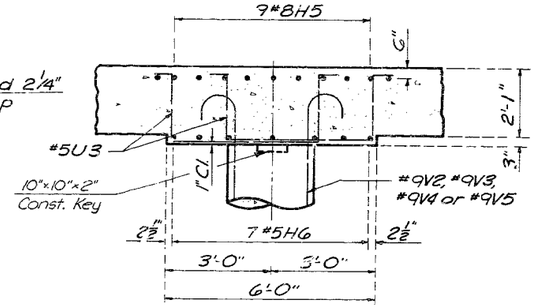
Note: This drawing is not to scale. Follow dimensions.

SHEET NO. 3 of 10.

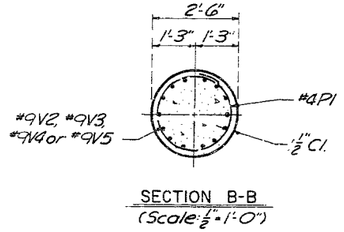
File No. 217-9

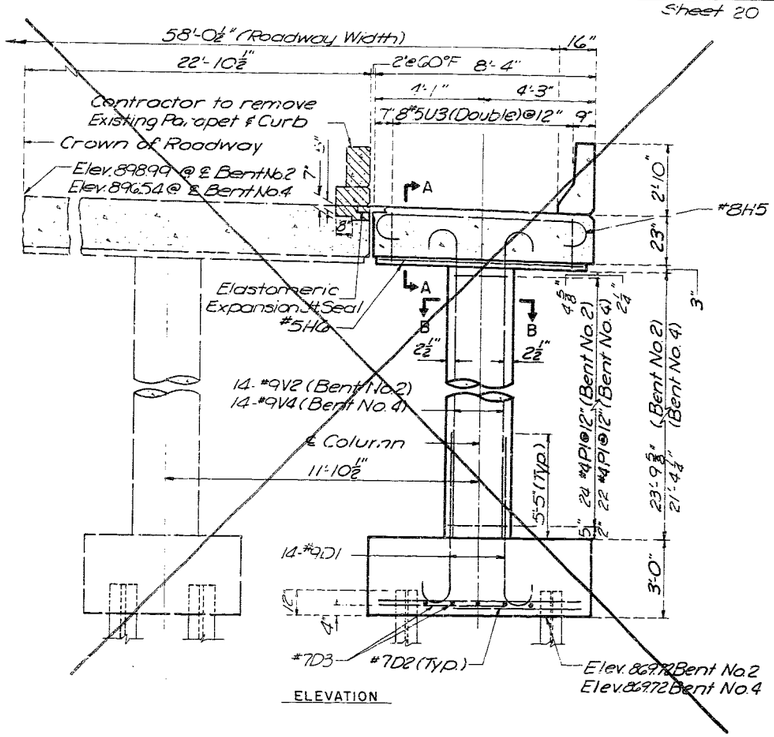
Note: Dimensions pertaining to column heights & reinforcement are taken at the ℄ of the column.

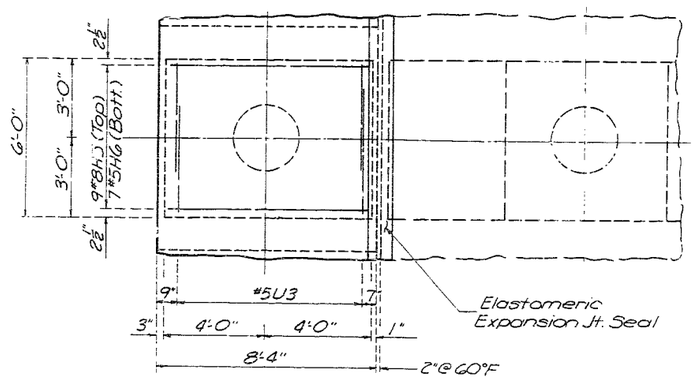




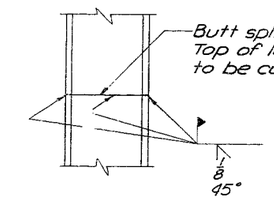
Note: Bottom of drop panel shall be parallel to top of slab both longitudinally and transversely.



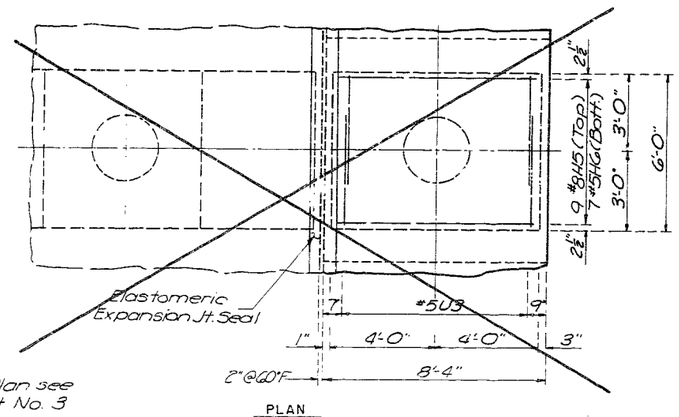




EASTBOUND LANES
(Scale: ⅜"=1'-0")



Note: For Pile Cap Plan see Intermediate Bent No. 3 Detail Sheet.



~~WESTBOUND LANES~~
(Scale: ⅜"=1'-0")

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE		
LOCATION	DESCRIPTION	QUANTITY (S.F.)
Bent No. 2 E. Bd. Br.	6"×3'-0" South Face	1.5
~~Bent No. 2 W. Bd. Br.~~	~~2'-12" South Face~~	
Bent No. 2 E. Bd. Br.	2'-6"×1'-0" North Face	2.5
TOTAL (E. Bd. Br.)		4.0

EPOXY RESIN CRACK REPAIR		
LOCATION	DESCRIPTION	QTY. (L.F.)
~~Bent No. 4 W. Bd. Br.~~	~~1@3'-0" South Face~~	
~~Bent No. 2 W. Bd. Br.~~	~~1@18" South Face~~ ~~1@12" North Face~~	
Bent No. 4 E. Bd. Br.	1@12" South Face 1@2'-0" North Face	3
Bent No. 2 E. Bd. Br.	1@12" South Face 1@4'-6" North Face	6
TOTAL (E. Bd. Br.)		9

NOTE: This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.

JACKSON COUNTY, MISSOURI

INTERMEDIATE BENTS NO. 2 AND NO. 4 DETAILS

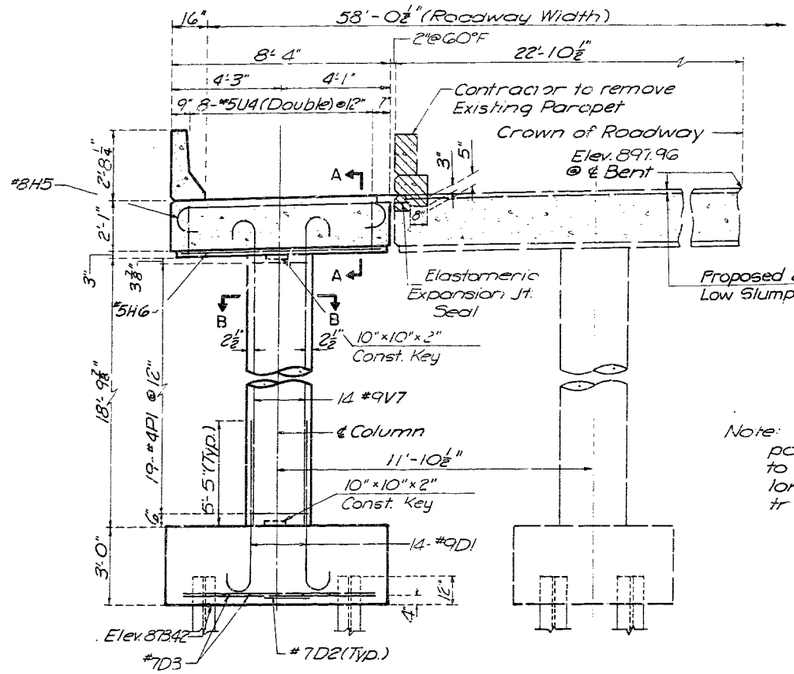
HOLMES ROAD BRIDGE NO. A-1662RI

BEVIER : WILLIS
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA HAYS KANSAS CITY

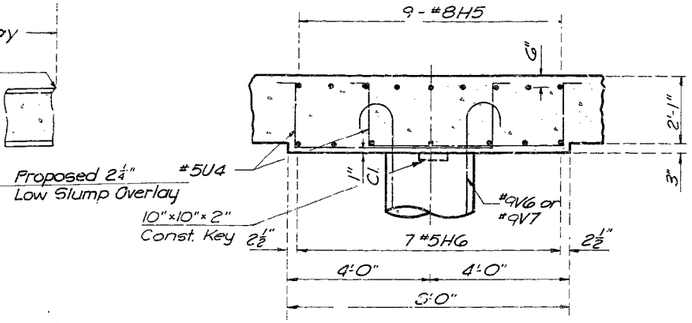
MADE S.K.H. DATE 2-15-83 TRACED D.M.B. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

NOTE : This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.

Note : Dimensions pertaining to column heights & reinforcement are taken at the ℄ of the column.

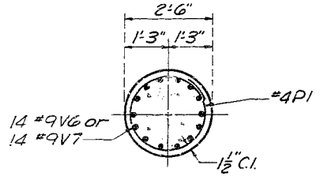


ELEVATION

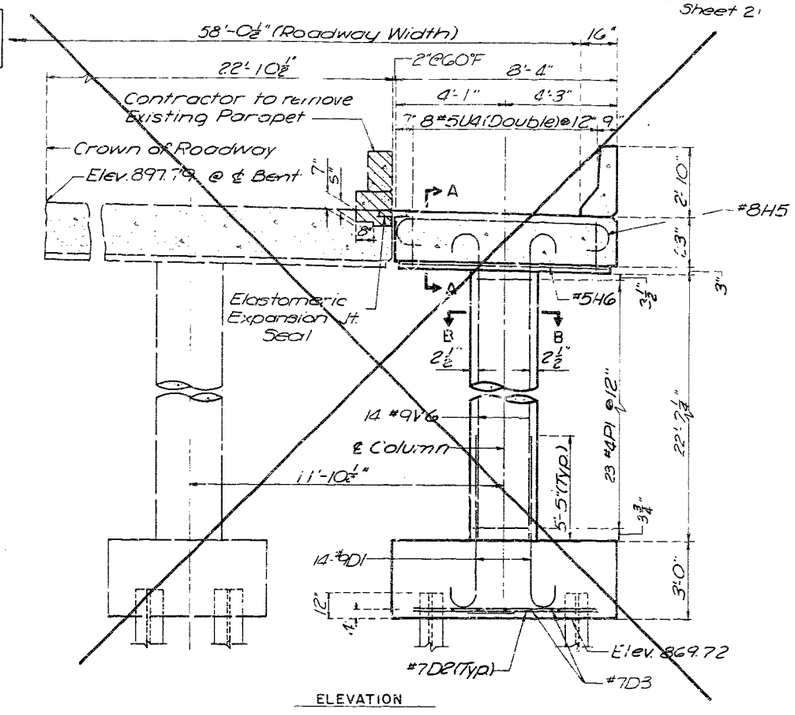


Note: Bottom of drop panel shall be parallel to top of slab both longitudinally and transversely.

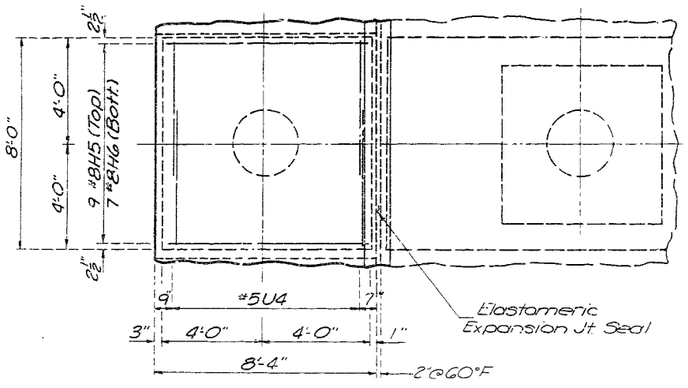
SECTION A-A
(Scale: ½"=1'-0")



SECTION B-B
(Scale: ½"=1'-0")

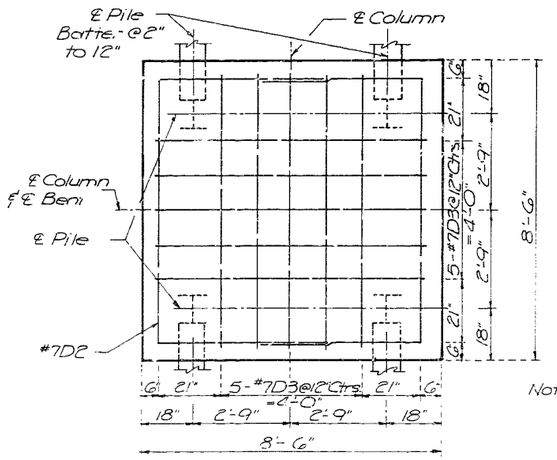


ELEVATION

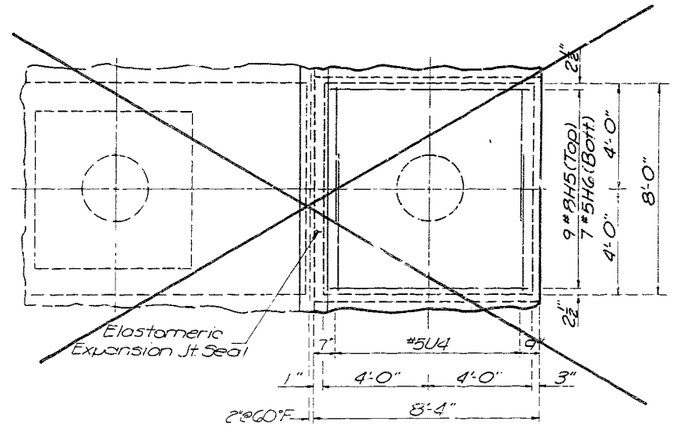


PLAN

EASTBOUND BENT NO. 3
(Scale: ⅜"=1'-0")



PILE CAP PLAN
(Scale: ½"=1'-0")



PLAN

~~WESTBOUND BENT NO. 3~~
(Scale: ⅜"=1'-0")

Note : For Steel Pile Splice see Intermediate Bents No 2 & No 4 Detail Sheet.

REMOVAL AND REPLACEMENT OF DETERIORATED CONCRETE			
LOCATION	DESCRIPTION		QUANTITY (S.F.)
~~Bent No. 3 W. Bd. Br.~~	~~18"×2'-0"~~	~~South Face~~	
	~~15"×8"~~	~~North Face~~	
Bent No. 3 E. Bd. Br.	4'-0"×2'-0"	South Face	10.0
	1'-0"×2'-0"	North Face	
TOTAL (E. Bd. Br.)			10.0

EPOXY RESIN CRACK REPAIR		
LOCATION	DESCRIPTION	QTY. (L.F.)
Bent No 3 Eastbound Br	1@5'-0" North Face	5
TOTAL (E.Bd.Br.)		5

SHEET NO. 6 of 10

JACKSON COUNTY, MISSOURI

INTERMEDIATE BENT NO. 3 DETAILS

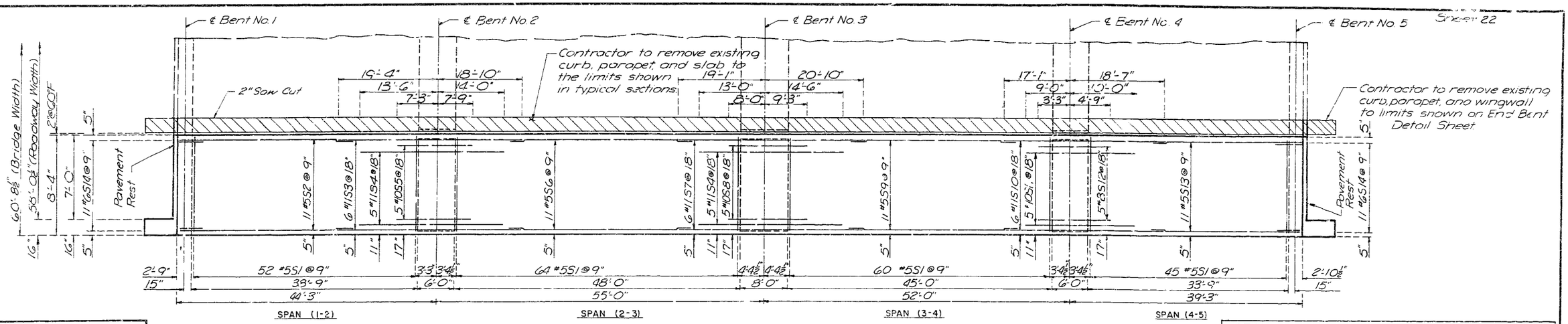
HOLMES ROAD BRIDGE NO. A-1662RI

BOUSFIELD & WILLIS
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE SKH DATE 2-15-83 TRACED DMB DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

File No. 217-9

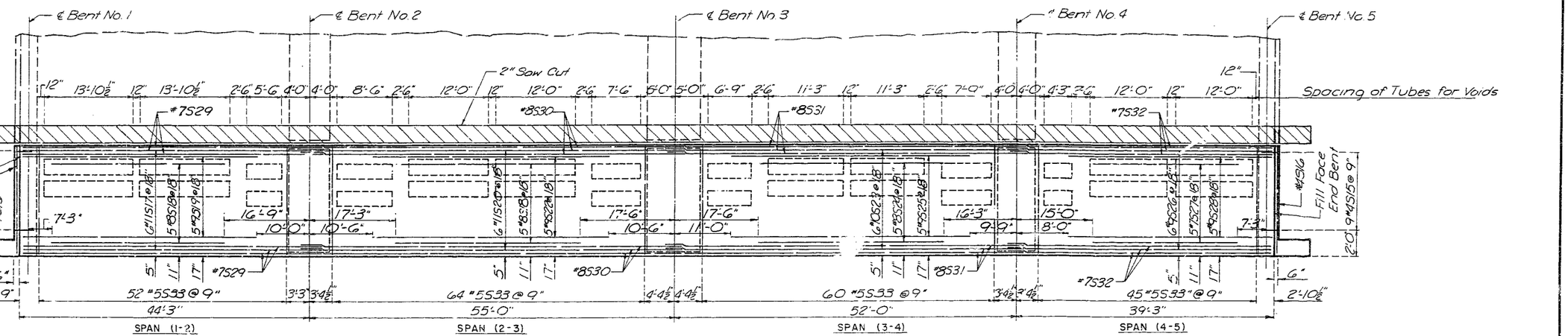
~~333 441~~



SLAB PLAN SHOWING TOP REINFORCING STEEL
(No Scale)

MINIMUM BAR LAPS		
SIZE	TOP BAR	OTHER THAN TOP BAR
#5	2'-5"	2'-2"
#7		2'-7"
#8		3'-3"
#9		3'-3"
#10		4'-1"
#11		5'-1"

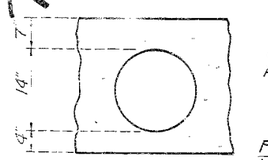
NOTE : This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.



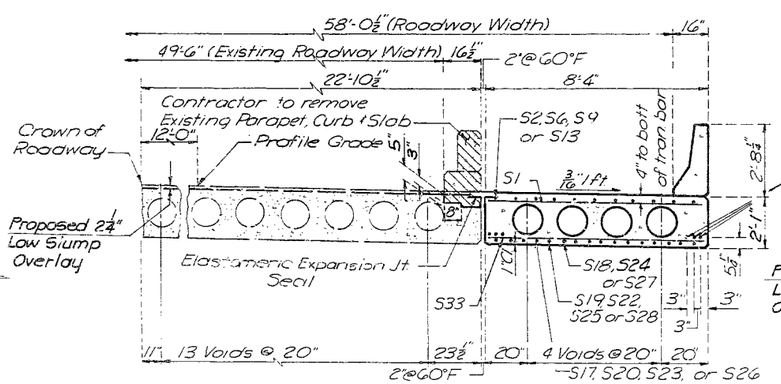
SLAB PLAN SHOWING BOTTOM REINFORCING STEEL
(No Scale)

Note: Contractor to remove parapet curb and slab to the limits shown. Removed portion of slab shall be replaced as Class B2 Concrete

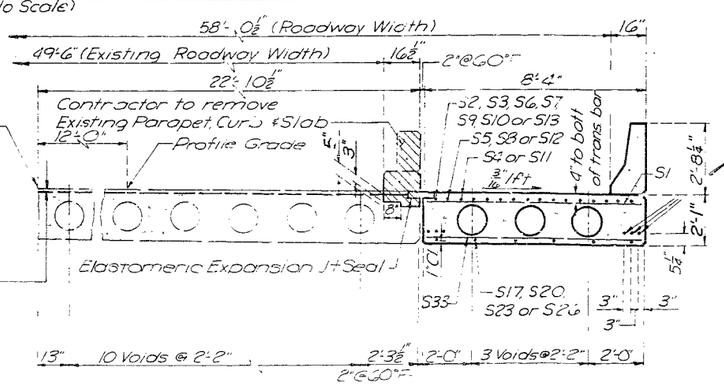
Note: For detail of weephole and optional construction joint see Safety Barrier Curb and Misc. Details Sheet.
For slab notes see General Plan & Elevation Sheet.
Steel shown is for westbound lane. Steel for eastbound lane will be reflective of the steel shown.
See Intermediate & End Bent detail sheets for additional steel at Bents.



TYPICAL VOID DETAIL
(Scale 1"=1'-0")



HALF SECTION AT CENTER OF SPAN
(Scale ⅜"=1'-0")



HALF SECTION NEAR INTERIOR BENT
(Scale ⅜"=1'-0")

SHEET NO. 7 of 10

JACKSON COUNTY, MISSOURI

SLAB DETAILS

HOLMES ROAD — BRIDGE NO. A-1662RI

BLOCHER & WILLS
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE S.K.H. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-18-83 SCALE As Noted

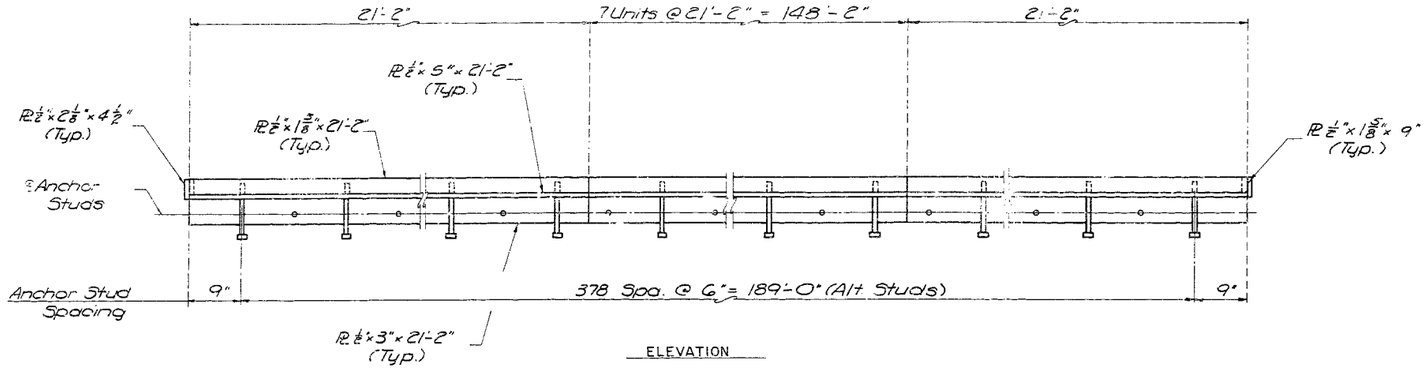
File No. 217-9

375

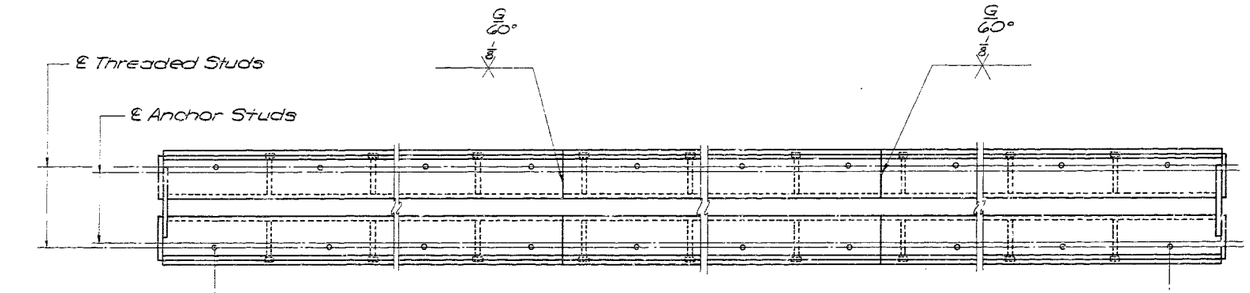
154

NOTE : This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.

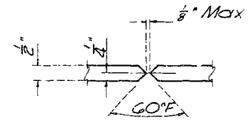
Note: Dimensions of the expansion device armor may vary with the type of expansion device selected. The actual dimensions used shall be those recommended by the manufacturer and approved by the Engineer. The top of the device shall be placed flush with the top of the slab.



ELEVATION



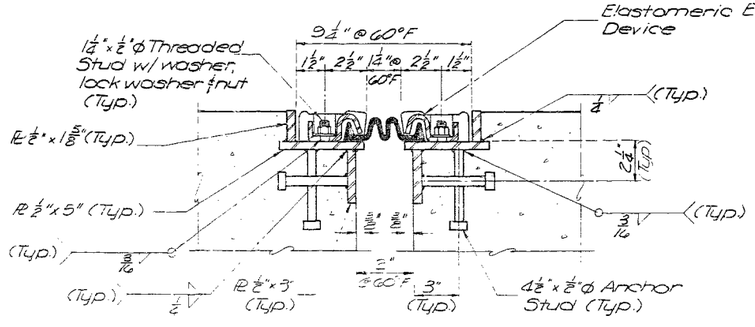
PLAN



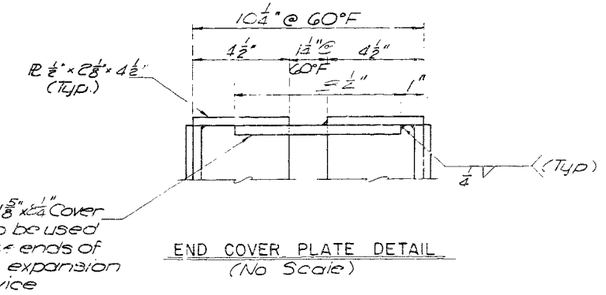
TYPICAL BEVEL WELD DETAIL
(No Scale)

TEMP. TABLE	
TEMP. (°F)	GAP (IN.)
110	1.90
100	1.92
90	1.94
80	1.96
70	1.98
60	2.00
50	2.02
40	2.04
30	2.06
20	2.08
10	2.10
0	2.12

Note: All ½" Plate, ½"ø Anchor Studs and ½"ø Threaded Studs shall be subsidiary to the bid item "Elastomeric Expansion Joint Seal."



TYPICAL SECTION
(Scale: 3" = 1'-0")



END COVER PLATE DETAIL
(No Scale)

Elastomeric expansion device shall be one of the following:

Acme Trojan TR300
Gen-Strip CCL2"
On-Flex 85 (E-Lastomer Panel)
Fel-Span T2.0 CS
Delastiflex LM200
Wabo-Bendoflex 250

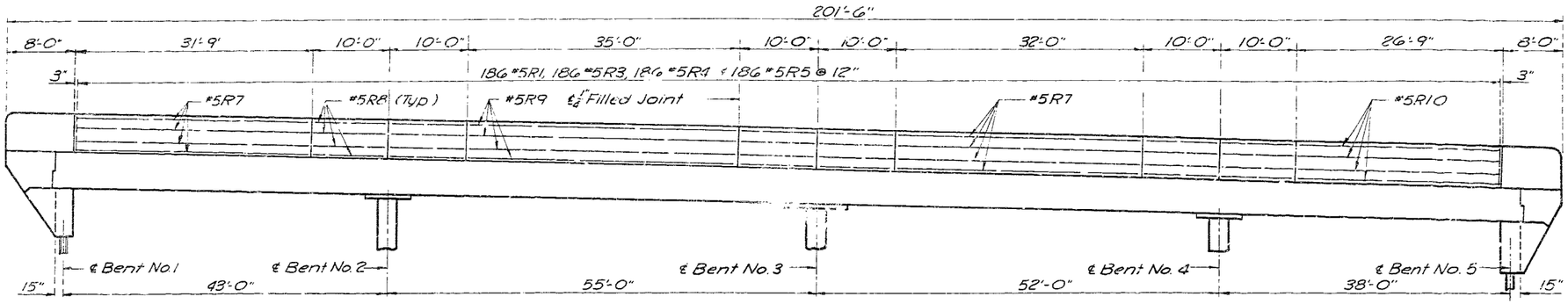
JACKSON COUNTY, MISSOURI

EXPANSION DEVICE DETAILS

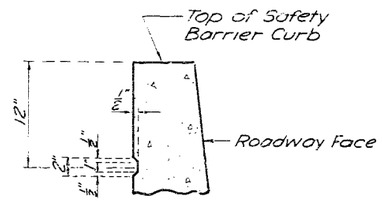
HOLMES ROAD BRIDGE NO. A-1662RI

BUCHER | WILLIS
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA MAYS KANSAS CITY

MADE DMB DATE 12-14-82 TRACED DMB/RPB DATE 12-14-82
CHECKED RWP DATE 12-14-82 SCALE As Noted

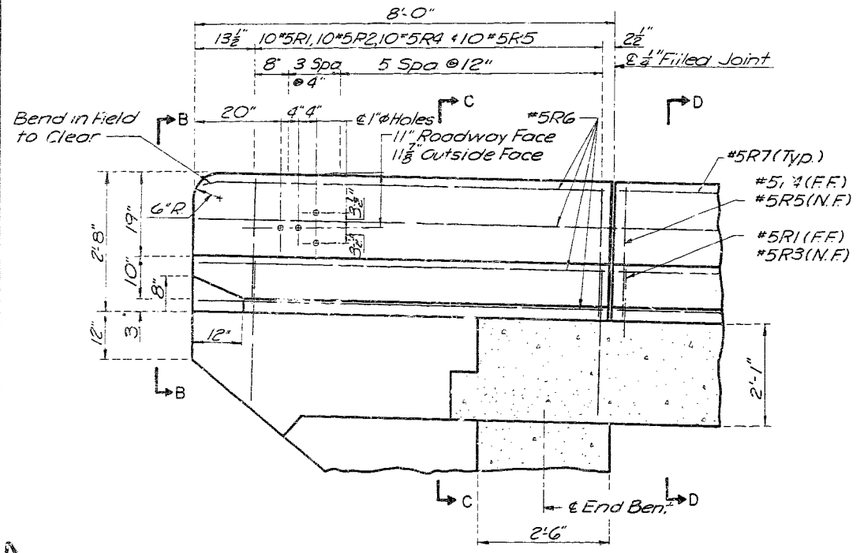


SAFETY BARRIER CURB ELEVATION
(No Scale)

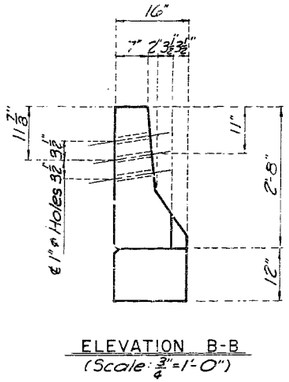


SAFETY BARRIER CURB RUSTICATION DETAILS
(Scale: 1 1/2" = 1'-0")

Note: Rusticution shall end 3" from ℄ 1/4" joints and 4'-0" from the ends of the wingwalls.

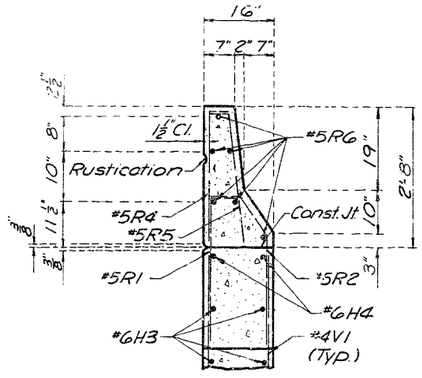


LONGITUDINAL SECTION AT END OF SAFETY BARRIER CURB
(Scale: 3/4" = 1'-0")

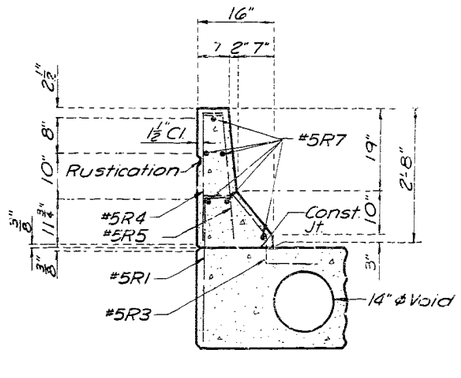


ELEVATION B-B
(Scale: 3/4" = 1'-0")

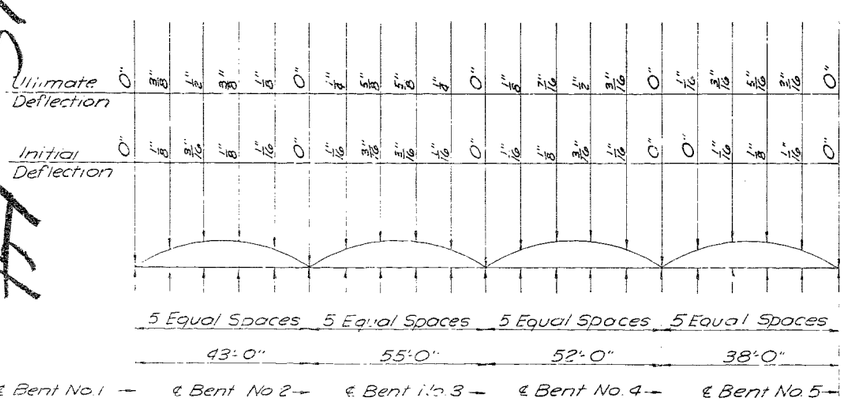
Note: For Safety Barrier Curb general notes see General Plan and Elevation Sheet.



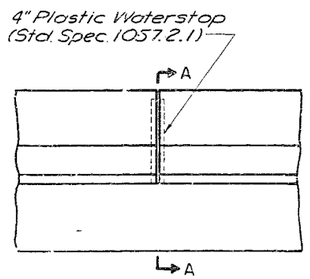
SECTION C-C
(Scale: 3/4" = 1'-0")



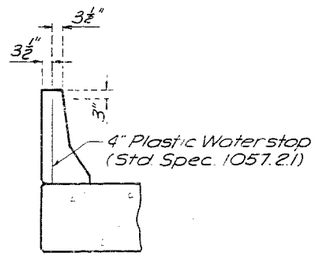
SECTION D-D
(Scale: 3/4" = 1'-0")



CAMBER DIAGRAM

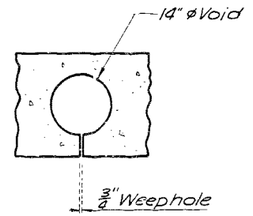


SAFETY BARRIER CURB ELEVATION

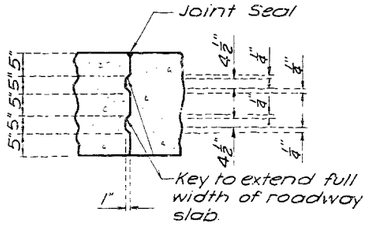


SECTION A-A

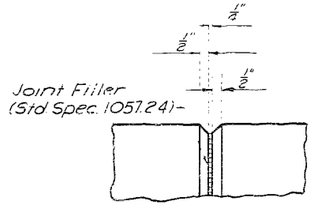
PLASTIC WATERSTOPS
(Scale: 1/2" = 1'-0")



WEEPHOLE DETAIL
(Scale: 3/4" = 1'-0")



CONSTRUCTION JOINT KEY
(No Scale)



FILLED JOINT DETAIL
(Scale 3" = 1'-0")

NOTE: This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.

JACKSON COUNTY, MISSOURI

SAFETY BARRIER CURB AND MISCELLANEOUS DETAILS

HOLMES ROAD — BRIDGE NO. A-1662RI

BUCHER, WILLIS & RATZ
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA — IAYS — KANSAS CITY

MADE RPB DATE 2-15-83 TRACED RPB DATE 2-16-83
CHECKED SAC DATE 2-18-83 SCALE As Noted

SHEET NO 9 of 10

File No. 217-9

COMPLETE BILL OF REINFORCING (WESTBOUND LANES)

NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			END PENTS				
18	#6	H1**	Brg Beam		—	8'-1"	219
10	#6	H2**	Brg Beam	E	—	8'-1"	121
8	#6	H3*	Wingwall		—	8'-11"	107
4	#6	H4	Wingwall		—	7'-0"	42
4	#6	T1	Wingwall		⌣	9'-2"	55
18	#5	U1	Brg Beam	E	⌐¬	9'-1"	171
18	#5	U2	Brg Beam		⌐¬	9'-1"	171
8	#4	V1 *	Wingwall		—	7'-3"	39
			INT. BENTS				
44	#9	D1**	Batt of Col		⌐	9'-2"	1372
6	#7	D2	Pile Caps		⌐¬	17'-0"	208
32	#7	D3**	Pile Caps		—	8'-0"	523
27	#8	H5	Bent Caps	E	⊂⊃	9'-10"	709
21	#5	H6	Bent Caps		—	7'-8"	168
69	#4	P1	Columns		○	8'-3"	390
32	#5	U3	Bent Caps	E	⌐¬	8'-11"	298
16	#5	U4	Bent Caps	E	⌐¬	9'-1"	165
14	#9	V2	Bent 2 Col		⊂	26'-8"	1269
14	#9	V4	Bent 4 Col		⊂	24'-3"	1154
14	#9	V6	Bent 3 Col		⊂	25'-6"	1214
			SUPERSTRUCTURE				
223	#5	S1**	Slab	E	—	8'-0"	1861
11	#5	S2	Slab	E	—	26'-7"	305
6	#11	S3	Slab	E	—	38'-2"	1217
12	#11	S4**	Slab	E	—	27'-6"	1753
7	#10	S5**	Slab	E	—	15'-0"	452
11	#5	S6	Slab	E	—	20'-9"	238
6	#11	S7	Slab	E	—	39'-11"	1273
5	#10	S8	Slab	E	—	17'-3"	371
11	#5	S9	Slab	E	—	17'-9"	204
6	#11	S10	Slab	E	—	35'-8"	1137
5	#10	S11	Slab	E	—	19'-0"	409
7	#8	S12**	Slab	E	—	8'-0"	149
11	#5	S13	Slab	E	—	22'-4"	256
22	#6	S14	Slab	E	⌐¬	8'-0"	264
18	#4	S15	Pvmt Rest		⌐¬	2'-3"	27
4	#4	S16**	Pvmt Rest		—	8'-0"	22
8	#11	S17**	Slab		—	46'-8"	1934
10	#8	S18	Slab		—	19'-0"	507
5	#9	S19	Slab		—	34'-1"	579
6	#11	S20	Slab		—	60'-1"	1115
5	#9	S22	Slab		—	34'-0"	578
8	#10	S23**	Slab		—	36'-1"	1930
7	#8	S24**	Slab		—	18'-3"	341
5	#9	S25	Slab		—	31'-3"	531
6	#9	S26	Slab		—	40'-9"	831
5	#7	S27	Slab		—	15'-9"	161
5	#9	S28	Slab		—	31'-1"	528
6	#7	S29	Edge Beam		—	45'-5"	557
6	#8	S30	Edge Beam		—	58'-0"	929
6	#8	S31	Edge Beam		—	55'-0"	881
6	#7	S32	Edge Beam		—	40'-5"	496
223	#5	S33**	Slab		—	8'-0"	1861

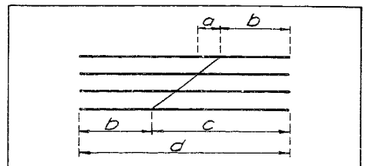
NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			BARRIER CURB				
206	#5	R1	Bar. Curb	E	⌐	3'-4"	716
20	#5	R2	Bar. Curb	E	⌐	3'-6"	73
186	#5	R3	Bar. Curb	E	⌐¬	3'-1"	598
206	#5	R4	Bar. Curb	E	⌐¬	2'-9"	591
206	#5	R5	Bar. Curb	E	⌐	2'-9"	591
12	#5	R6	Bar. Curb	E	—	7'-8"	96
12	#5	R7	Bar. Curb	E	—	31'-5"	393
36	#5	R8	Bar. Curb	E	—	9'-8"	363
6	#5	R9	Bar. Curb	E	—	34'-8"	217
6	#5	R10	Bar. Curb	E	—	26'-5"	165

COMPLETE BILL OF REINFORCING (EASTBOUND LANES)

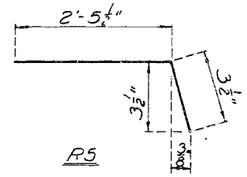
NOTE: The Bill of Reinforcing Steel for the Eastbound Lanes is identical to the Bill of Reinforcing Steel for the Westbound Lanes, except for the following:
Delete the *4P1, *9V2, *9V4 & *9V6 bars as shown and add the following bars:

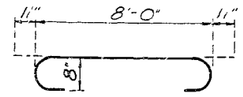
NO.	SIZE	MARK	LOCATION	EPOXY	SHAPE	LENGTH	WEIGHT
			INT. BENTS				
58	#4	P1	Columns		○	8'-3"	320
14	#9	V3	Bent 2 Col		⊂	22'-10"	1087
14	#9	V5	Bent 4 Col		⊂	21'-5"	1019
14	#9	V7	Bent 3 Col		⊂	21'-8"	1031

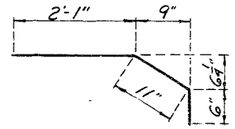
BENDING DIAGRAMS

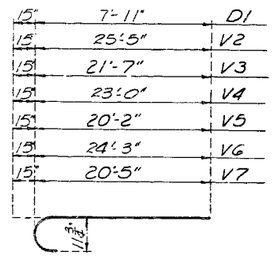


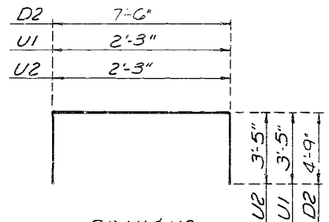
REMARKS	a	b	c	d
4 H3 Cut 16	13"	2'-10"	6'-1"	8'-11"
4 V1 Cut 20	11"	2'-3"	5'-0"	7'-3"

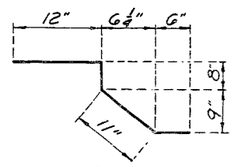


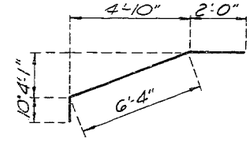


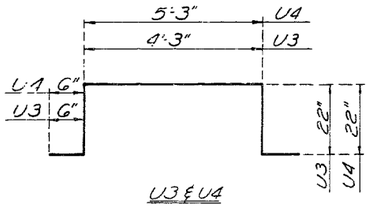


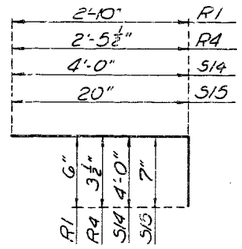












Note: All dimensions are out to out of bar unless otherwise noted
Quantities shown are for widening of the Westbound lanes except as noted.

NOTE: This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.

*Series Bar
** Two additional bars are included for testing purposes.

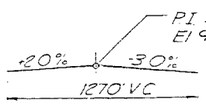
JACKSON COUNTY, MISSOURI

BILL OF REINFORCING STEEL

HOLMES ROAD — BRIDGE NO. A-1662RI

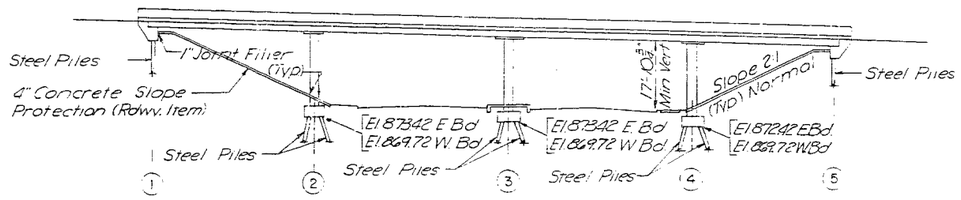
BURGETT & WALLS
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA HAYS KANSAS CITY

MADE SKH DATE 2-15-83 TRACED D A C DATE 2-16-83
CHECKED S A C DATE 2-18-83 SCALE None

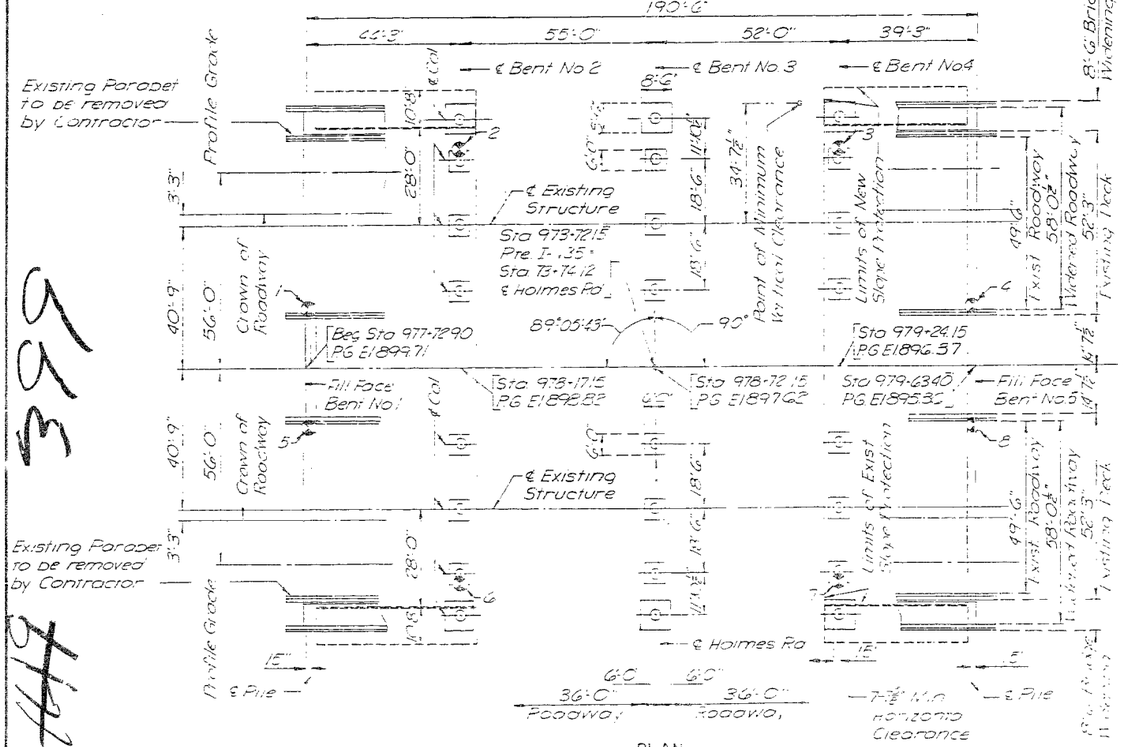


Twin 43.00'-55.00'-52.00'-38.00' Continuous Slab Spans (Voided)

NOTE : This contract includes the Eastbound structure only. All work related to the Westbound structure is not included in this contract.



GENERAL ELEVATION
(Scale 1"=20')



PLAN
(Scale 1"=20')

GENERAL NOTES

Design Specifications:
A.A.S.H.T.O. - 1977, Interim '78, '79, '80, '81
Working Stress Design

Design Loading:
HS20-44
Modified 24,000# Tandem Axle
Earth 120#, Equivalent Fluid Pressure 30#

Design Unit Stresses:
Class B1 Concrete (substructure & barrier curb) f'_c = 4,000 p.s.i.
Class B2 Concrete (deck slab) f'_c = 4000 p.s.i.
Reinforcing Steel (Grade 60) f_y = 60,000 p.s.i.
Steel Pile f_b = 9,000 p.s.i.

Boring Data:
For Boring Data see Boring Data and Estimated Quantities Sheet
"⊠" Indicates location of boring

Bench Mark:
Elev. 992.77 Kansas City, Missouri Standard
Horizontal Control Monument #199 = Elev. 915.07 USGS Datum.
Pier Elevations shown are USGS Datum.

Removal of Existing Structure:
Outline of old work is indicated by light dashed lines on the detail sheets. Heavy lines indicate new work. Removal Limits of existing structure are shown in crosshatching. After removing existing barrier curb, saw cut slab 2" deep along a line 16½" from the outside of the deck. The contractor shall leave all existing deck reinforcement in place.

Excavation:
Pay limits for excavation quantities are measured from the existing ground line.

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

Concrete Voided Slab:
The contractor shall pour and satisfactorily finish the concrete roadway slab at a rate of not less than 25 cubic yards per hour.
If the contractor cannot place the slab in one continuous pour, construction joints shall be placed at locations as approved by the Engineer.
Finish each side of the optional joint with a 4" edging tool.
Tubes for producing voids shall have an outside diameter of 14.0" and shall be anchored at not more than 4'-0" centers. Fiber tubes shall have a wall thickness of not less than 0.250".
One ¾" ø weephole shall be provided near the ends of each void. Weepholes shall be placed in straight lines parallel to bent.
The cross-slope and elevation of the 2'-1" uniform slab shall be varied as required to match the overlaid existing slab and provide a uniform wearing surface across the junction of the new and existing slabs. The thickness of the new drop panel may vary as required by maintaining the top of column elevation as shown on the plans and providing the necessary drop panel thickness to accommodate the resulting bottom of new deck elevation.

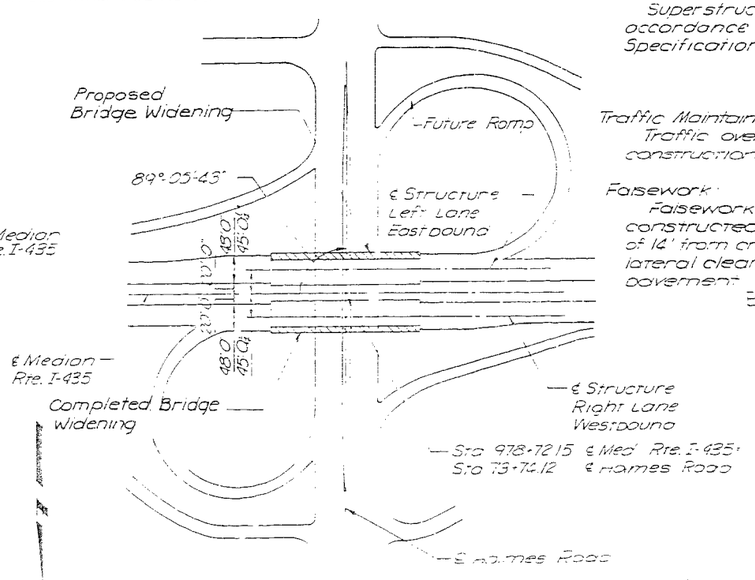
Construction Specifications:
Current issue of Missouri Standard Specifications for Highway Construction.

Safety Barrier Curb:
Top of safety barrier curb shall be built parallel to grade with barrier curb joints normal to grade.
All exposed edges of safety barrier curb shall have ¾" radius or ¾" bevel unless otherwise noted.
Plastic waterstop shall be placed in all safety barrier curb filled joints.
Cost of plastic waterstop complete in place shall be included in the bid price for concrete.

Surface Seal:
Superstructure deck surface shall be sealed in accordance with Section 703.3.18 of the Standard Specifications.

Traffic Maintained:
Traffic over structure to be maintained during construction.

Falsework:
Falsework over existing lanes should be constructed with a minimum vertical clearance of 14' from crown of existing lanes and a minimum lateral clearance of 2 feet beyond edge of pavement.



LOCATION SKETCH
No Scale

BRIDGE OVER HOLMES ROAD

STATE ROAD FROM KANSAS STATE LINE TO RTE. 71
ABOUT 1.4 MILES EAST OF KANSAS STATE LINE
PROJECT NO. 4-I-435-1(83)STA. 977+72.90
JOB NO. P 53435 H 7.3 RTE. I-435
JACKSON COUNTY
DATE 2-16-83

A-1662FI

JACKSON COUNTY, MISSOURI

GENERAL PLAN AND ELEVATION

HOLMES ROAD BRIDGE NO. A-1662RI

BSHM
CONSULTING ENGINEERS PLANNERS & ARCHITECTS
SALINA MAYS KANSAS CITY

MADE S.D.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.A.C. DATE 2-15-83 SCALE AS NOTED

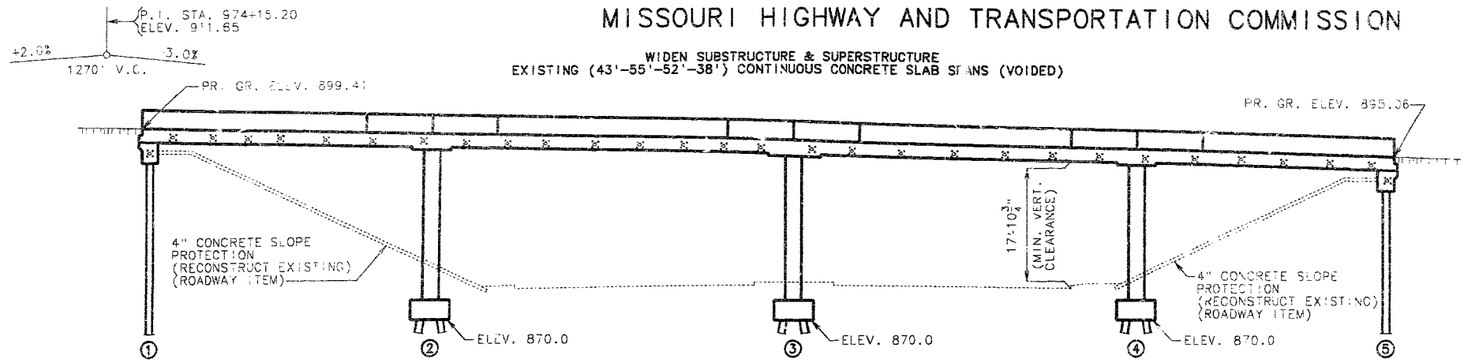
SHEET NO. 16 OF 40 SHEETS

File No. 217-9

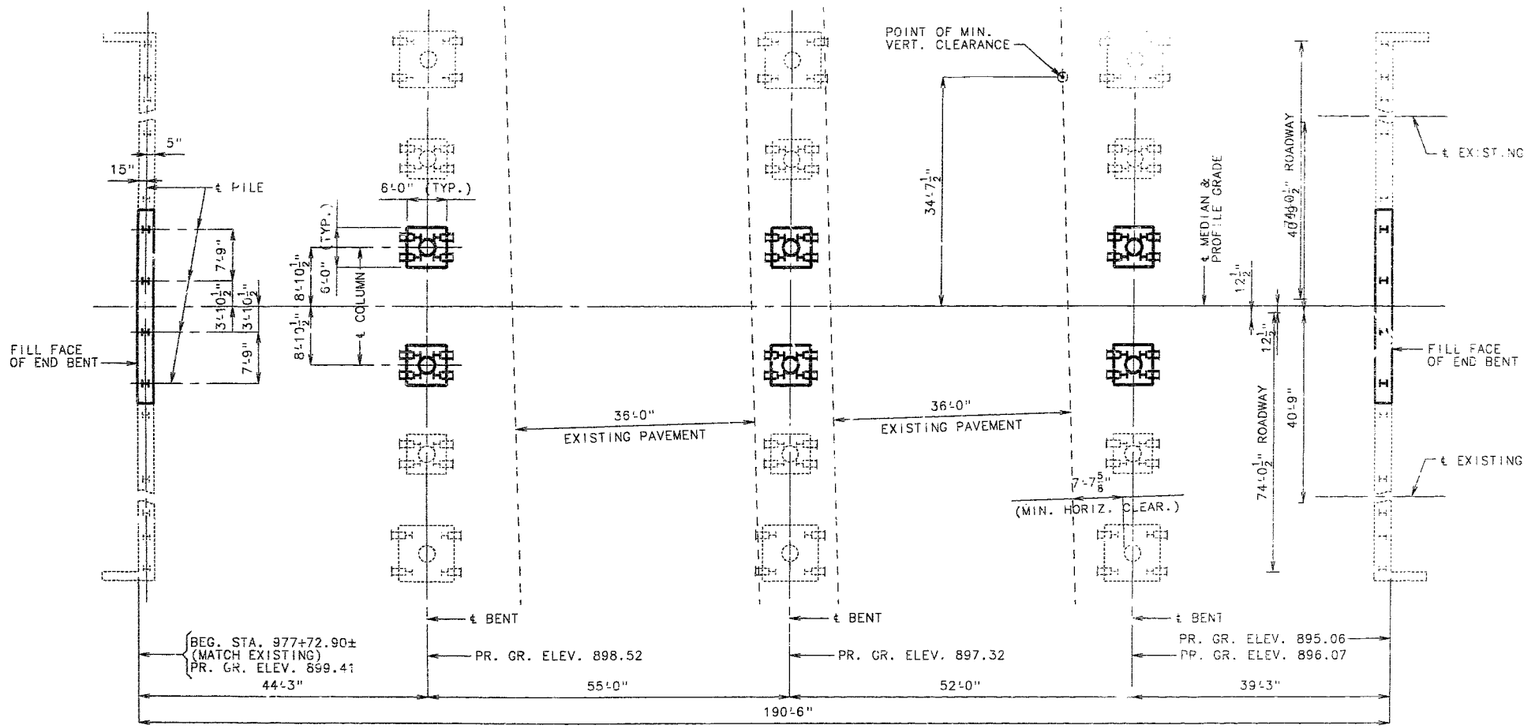
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ. NO.	SHEET NO.
MO.		143
SEC./SUR. 32	TWP. 48N	RGE. 33W

WIDEN SUBSTRUCTURE & SUPERSTRUCTURE
EXISTING (43'-55'-52'-38') CONTINUOUS CONCRETE SLAB SPANS (VOIDED)



SECTION NEAR ℄ MEDIAN



PLAN

NOTE: FOR GENERAL NOTES, ESTIMATED QUANTITIES AND PILE DATA, SEE SHEET NO. 2.
FOR BORING DATA AND LOCATION, SEE SHEETS NO. 1 & 7 OF THE ORIGINAL PLANS.

NOTE: ROADWAY FILL SHALL BE COMPLETED TO THE FINAL ROADWAY SECTION AND UP TO THE ELEVATION OF THE BOTTOM OF THE CONCRETE BEAM WITHIN THE LIMITS OF THE STRUCTURE AND FOR NOT LESS THAN 25' IN BACK OF THE FILL FACE OF THE END BENTS BEFORE PILES ARE DRIVEN FOR ANY BENTS FALLING WITH THE EMBANKMENT SECTION.

N

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA

THE LOCATIONS OF ALL SUBSURFACE BORINGS FOR THIS STRUCTURE ARE SHOWN ON SHEET NO. 1 OF THE EXISTING PLANS FOR BRIDGES NO. A-1662 & A-1662R1. BORING DATA FOR THE NUMBERED LOCATIONS IS SHOWN ON SHEET NO. 7 ON A-1662 AND SHEET NO. 2 ON A-1662R1. THE BORING DATA FOR ALL LOCATIONS, AS WELL AS ANY OTHER BORING LOGS OR OTHER FACTUAL RECORDS OF SUBSTRUCTURE DATA AND INVESTIGATIONS PERFORMED BY THE DEPARTMENT FOR THE DESIGN OF THE PROJECT, IS AVAILABLE FROM THE DISTRICT MATERIALS ENGINEER UPON WRITTEN REQUEST AS OUTLINED IN THE PROJECT SPECIAL PROVISIONS. NO GREATER SIGNIFICANCE OR WEIGHT SHOULD BE GIVEN TO THE BORING DATA DEPICTED ON THE PLAN SHEETS THAT TO SUBSURFACE DATA AVAILABLE FROM THE DISTRICT OR ELSEWHERE.

THE COMMISSION DOES NOT REPRESENT OR WARRANT THAT ANY SUCH BORING DATA ACCURATELY DEPICTS THE CONDITIONS TO BE ENCOUNTERED IN CONSTRUCTING THIS PROJECT. A CONTRACTOR ASSUMES ALL RISKS IT MAY ENCOUNTER IN BASING ITS BID PRICES, TIME OR SCHEDULE OF PERFORMANCE ON THE BORING DATA DEPICTED HERE OR THOSE AVAILABLE FROM THE DISTRICT, OR ON ANY OTHER DOCUMENTATION NOT EXPRESSLY WARRANTED, WHICH THE CONTRACTOR MAY OBTAIN FROM THE COMMISSION.

T.B.M. #21 ELEV. 900.36 CHISELED + ⊕ S.E. COR. BR. ABUT. W.B.L.
⊕ S.E. COR. BR. #A-1662R 15'± RT. 977+67±

REPAIRS TO BRIDGE OVER HOLMES ROAD

STATE ROAD FROM KANSAS STATE LINE TO RTE. 71
ABOUT 1.4 MILES EAST OF KANSAS STATE LINE

PROJECT NO. **STA. 977+72.90**
JOB NO. J410807 **RTE. I-435**

JACKSON COUNTY

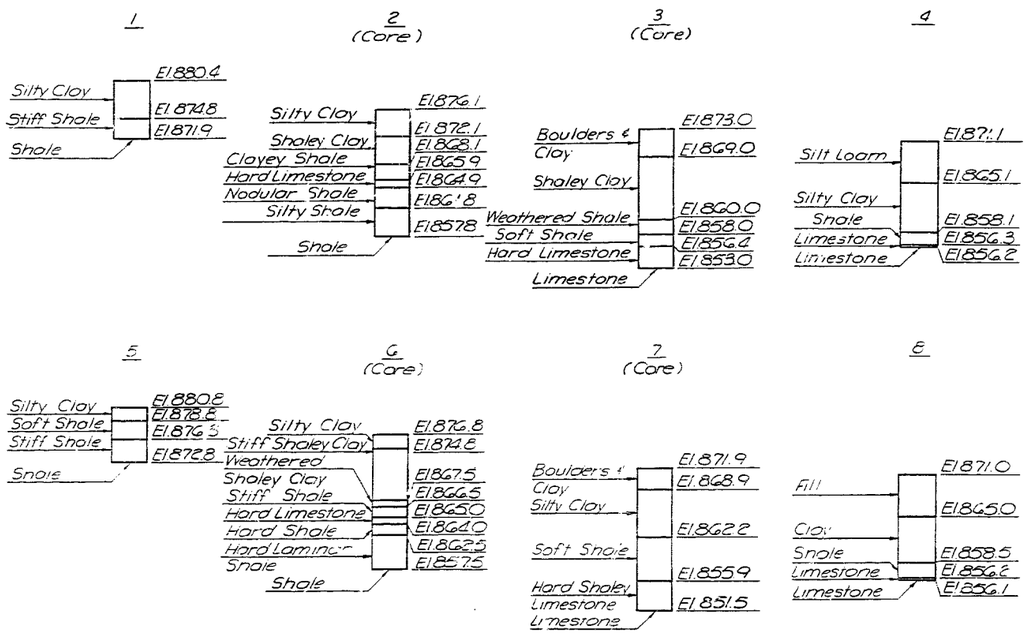
DATE 3/1/94

STD.
STD. 706.35
A-1662R2

DESIGNED DEC. 1991
DETAILED DEC. 1991
CHECKED JAN. 1992

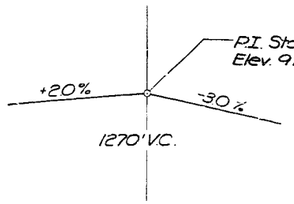
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

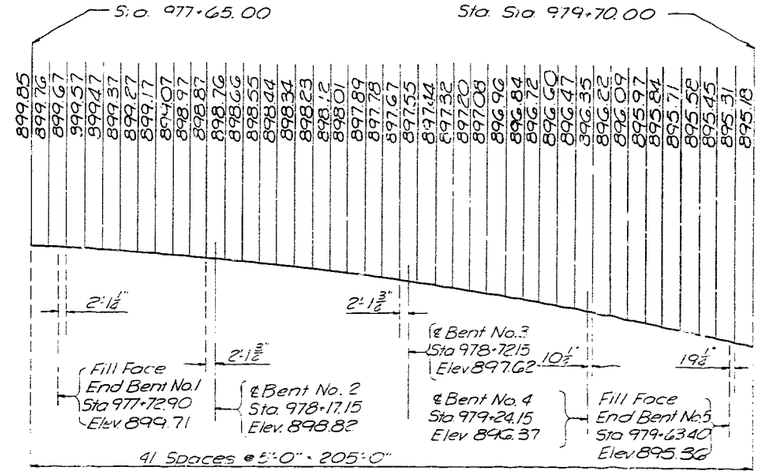
168-115



BORING DATA

Note: For location of Borings see General Plan & Elevation Sheet





PROFILE GRADE ELEVATIONS

Note The profile grade shown is the theoretical profile grade of I-435 as obtained from the original construction plans These elevations should not be used for construction as the existing elevations do not agree with this profile.

NOTE : This contract includes the Eastbound structure only. All work relating to the Westbound structure is not included in this contract.

* Removal of Concrete shall include detailed removal of existing wings, curbs, parapets, slab, and other areas as directed by the engineer. Removal and Replacement of concrete for full depth repair and half-scaling shall be included in contract unit price bid for these items.

** ontflex 25 w/Elastron Panels

PILE DATA

BENT NO.		END BENT NO.1		INT. BENT NO.2		INT. BENT NO.3		INT. BENT NO.4		END BENT NO.5	
LANE		E. Bd	W Bd	E Bd	W. Bd	E Bd	W Bd	E Bd	W Bd	E Bd	W Bd
Pile Type and Size		HP10×42		HP10×42		HP10×42		HP10×42		HP10×42	
Number		2	2	4	4	4	4	4	4	2	2
Approximate Length	Ft	33	33	12	12	19	19	19	19	39	39
Design Bearing	Tons	29	29	66	66	48	48	66	66	29	29
Hammer Energy Read	Ft Lbs	7000	7000	14900	14900	10800	10800	14900	14900	7000	7000

Note: Minimum energy requirement of the hammer based on plan length and design bearing value of the piles
All piles shall be driven to practical refusal

ESTIMATED QUANTITIES

	ITEM		EASTBOUND	WESTBOUND	TOTAL
	Removal & Replacement of Det. Conc.	Sq. Ft	23		
*	Removal of Concrete	Cu Yd	21.8		
	Class I Excavation	Cu Yd	70.0		
	Structural Steel Pile (10")	Lin. Ft	533		
	Class B1 Concrete	Cu Yd	58.1		
	Class B2 Concrete	Cu Yd	109.8		
**	Elastomeric Expansion Joint Seal	Lin. Ft	191		
	Reinforcing Steel (Grade 60)	Lbs	21,023		
	Reinforcing Steel (Gr. 60) Epoxy Coated	Lbs	15,156		
	Epoxy Resin Crack Repair	Lin. Ft	9		
	Repairing Conc. Deck (Half-Scaling)	Sq. Ft.	32		
	Low Slump Conc. Wearing Surface	Sq. Yd.	1048		
	Class I Excavation + 25%	Cu. yd	2.01		

Job No 4-I-435-713
Proj 4-I-435-713

JACKSON COUNTY, MISSOURI

BORING DATA AND ESTIMATED QUANTITIES

HOLMES ROAD BRIDGE NO. A-1662RI

BIKER & WILLS
CONSULTING ENGINEERS, PLANNERS & ARCHITECTS
SALINA NAYS KANSAS CITY

MADE S.A.C. DATE 2-15-83 TRACED D.A.C. DATE 2-16-83
CHECKED S.K.H. DATE 2-16-83 SCALE NO SCALE

SHEET NO. 2 Of 10

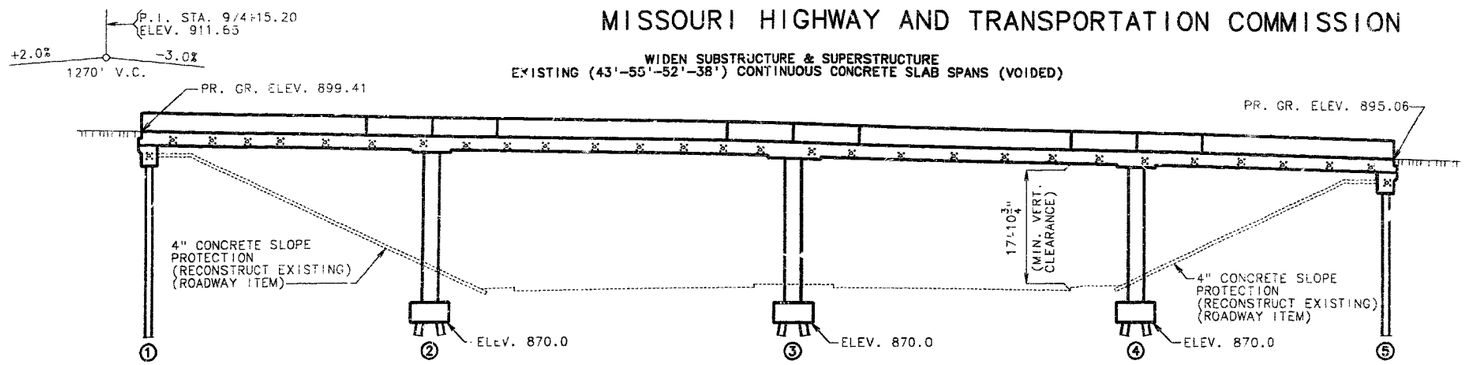
File No. 217-9

Ft 400

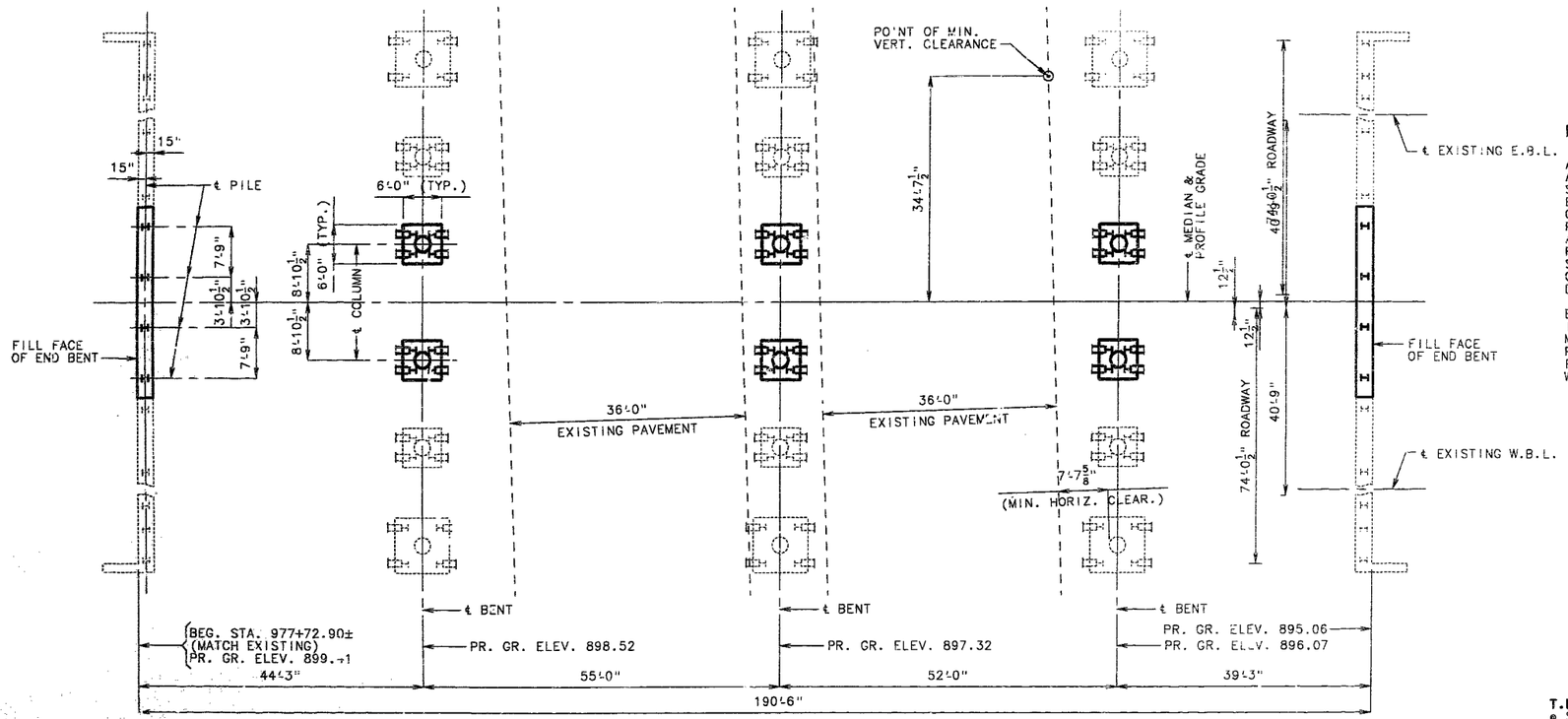
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ. NO.	SHEET NO.
MO.		143
SEC./SUR. 32 TWP. 48N RGE. 33W		

WIDEN SUBSTRUCTURE & SUPERSTRUCTURE
EXISTING (43'-55'-52'-38') CONTINUOUS CONCRETE SLAB SPANS (VOIDED)



SECTION NEAR ℄ MEDIAN



PLAN

NOTE: FOR GENERAL NOTES, ESTIMATED QUANTITIES AND PILE DATA, SEE SHEET NO. 2.
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N

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA

THE LOCATIONS OF ALL SUBSURFACE BORINGS FOR THIS STRUCTURE ARE SHOWN ON SHEET NO. 1 OF THE EXISTING PLANS FOR BRIDGES NO. A-1662 & A-1662R1. BORING DATA FOR THE NUMBERED LOCATIONS IS SHOWN ON SHEET NO. 7 ON A-1662 AND SHEET NO. 2 ON A-1662R1. THE BORING DATA FOR ALL LOCATIONS, AS WELL AS ANY OTHER BORING LOGS OR OTHER FACTUAL RECORDS OF SUBSTRUCTURE DATA AND INVESTIGATIONS PERFORMED BY THE DEPARTMENT FOR THE DESIGN OF THE PROJECT, IS AVAILABLE FROM THE DISTRICT MATERIALS ENGINEER UPON WRITTEN REQUEST AS OUTLINED IN THE PROJECT SPECIAL PROVISIONS. NO GREATER SIGNIFICANCE OR WEIGHT SHOULD BE GIVEN TO THE BORING DATA DEPICTED ON THE PLAN SHEETS THAT TO SUBSURFACE DATA AVAILABLE FROM THE DISTRICT OR ELSEWHERE.

THE COMMISSION DOES NOT REPRESENT OR WARRANT THAT ANY SUCH BORING DATA ACCURATELY DEPICTS THE CONDITIONS TO BE ENCOUNTERED IN CONSTRUCTING THIS PROJECT. A CONTRACTOR ASSUMES ALL RISKS IT MAY ENCOUNTER IN BASING ITS BID PRICES, TIME OR SCHEDULE OF PERFORMANCE ON THE BORING DATA DEPICTED HERE OR THOSE AVAILABLE FROM THE DISTRICT, OR ON ANY OTHER DOCUMENTATION NOT EXPRESSLY WARRANTED, WHICH THE CONTRACTOR MAY OBTAIN FROM THE COMMISSION.

T.B.M. #21 ELEV. 900.36 CHISELED + ⌀ S.E. COR. BR. ABUT. W.B.L.
⌀ S.E. COR. BR. #A-1662R 15'± RT. 977+67±

REPAIRS TO BRIDGE OVER HOLMES ROAD

STATE ROAD FROM KANSAS STATE LINE TO RTE. 71
ABOUT 1.4 MILES EAST OF KANSAS STATE LINE

PROJECT NO. **STA. 977+72.90**
JOB NO. J410807 **RTE. I-435**

JACKSON COUNTY

STD.
STD. 706.35
A-1662R2

DESIGNED DEC. 1991
DETAILED DEC. 1991
CHECKED JAN. 1992

DATE 3/1/94

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

SHEET NO. 1 OF 14.

168/115

STATE	PROJ. NO.	SHEET NO.
MO.		144

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1992
LOAD FACTOR DESIGN
SEISMIC PERFORMANCE CATEGORY A

DESIGN LOADING:
HS20-44 MODIFIED 24,000# TANDEM AXLE
NO FUTURE WEARING SURFACE
EARTH 120#/CU. FT., EQUIVALENT FLUID PRESSURE 45#/CU. FT.

DESIGN UNIT STRESSES:
CLASS B CONCRETE (FOOTINGS) F'C=3,000 PSI.
CLASS B1 CONCRETE (MEDIAN BARRIER CURB, INT. BT. COLUMNS AND END BENTS BELOW LOWER CONST. JOINT) F'C=4,000 PSI.
CLASS B2 CONCRETE (SUPERSTRUCTURE EXCEPT MEDIAN BARRIER CURB) F'C=4,000 PSI.
REINFORCING STEEL (GRADE 60) FY=60,000 PSI.
STEEL PILE FB=9,000 PSI.

REINFORCING STEEL:
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2", UNLESS OTHERWISE SHOWN.
BARS BONDED IN OLD CONCRETE NOT REMOVED SHALL BE CLEANLY STRIPPED AND EMBEDDED INTO NEW CONCRETE WHERE POSSIBLE. IF LENGTH IS AVAILABLE, OLD BARS SHALL EXTEND INTO NEW CONCRETE AT LEAST 40 DIAMETERS FOR SMOOTH BARS AND 30 DIAMETERS FOR DEFORMED BARS, UNLESS OTHERWISE NOTED.

TRAFFIC:
TRAFFIC OVER STRUCTURE TO BE MAINTAINED DURING CONSTRUCTION.

CONSTRUCTION CLEARANCE:
FALSEWORK OVER EXISTING LANES SHALL BE CONSTRUCTED WITH A MINIMUM VERTICAL CLEARANCE OF 14'9" FROM CROWN OF EXISTING LANES AND A MINIMUM LATERAL CLEARANCE OF 28'0" CENTERED ON EACH EXISTING LANE.

JOINT FILLER:
ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1057.2.4, EXCEPT AS NOTED.

NOTE: OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY LINES INDICATE NEW WORK.

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.

ESTIMATED QUANTITIES

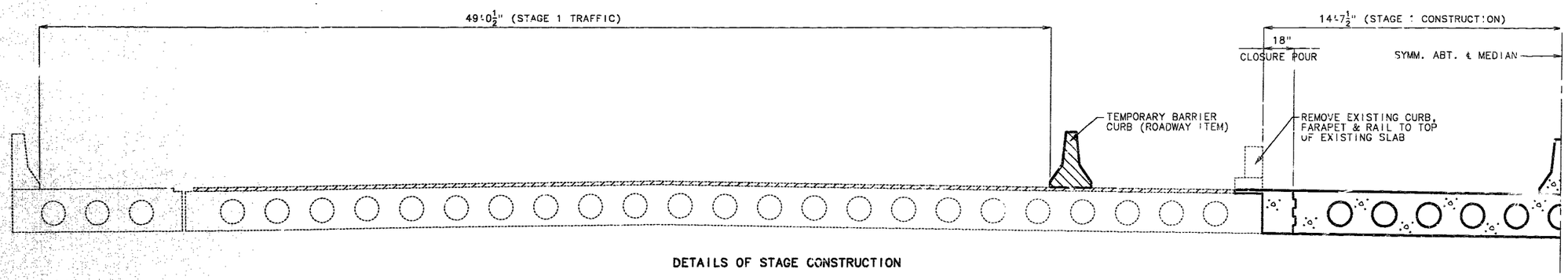
ITEM		SUBSTR.	SUPERSTR.	TOTAL
CURB REMOVAL (BRIDGES)	LIN. FT.		403	403
PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE	LUMP SUM			1
CLASS 1 EXCAVATION	CU. YD.	145		145
STRUCTURAL STEEL PILES (10")	LIN. FT.	632		632
CLASS B CONCRETE (SUBSTR.)	CU. YD.	24.0		24.0
CLASS B1 CONCRETE (SUPERSTR. VOIDED SLABS)	CU. YD.		43.1	43.1
CLASS B2 CONCRETE (SUPERSTR. VOIDED SLABS)	CU. YD.		361.4	361.4
* MEDIAN BARRIER CURB	LIN. FT.		191	191
REINFORCING STEEL (BRIDGES)	LB.	690	5,330	6,020
REINFORCING STEEL (EPOXY COATED)	LB.		83,730	83,730

NOTE: ALL REINFORCEMENT IN END BENTS AND IN COLUMNS AT INT. BENTS IS INCLUDED IN SUPERSTRUCTURE QUANTITIES.
* MEDIAN BARRIER CURB SHALL BE CAST-IN-PLACE OPTION OR SLIP-FORM OPTION.
ALL CONCRETE IN END BENTS AND INTERMEDIATE BENT COLUMNS IS INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

PILE DATA

BENT NO.		1	2	3	4	5
PILE TYPE AND SIZE		HP 10X42				
NUMBER		4	8	8	8	4
APPROXIMATE LENGTH	FT.	30	12	17	17	36
DESIGN BEARING	TONS	41	53	52	49	38
HAMMER ENERGY REQUIRED	FT.-LBS.	9,200	12,500	12,300	11,600	8,400

NOTE: MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.
ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.



DETAILS OF STAGE CONSTRUCTION

TS 114

DETAILED DEC. 1991
CHECKED JAN. 1992

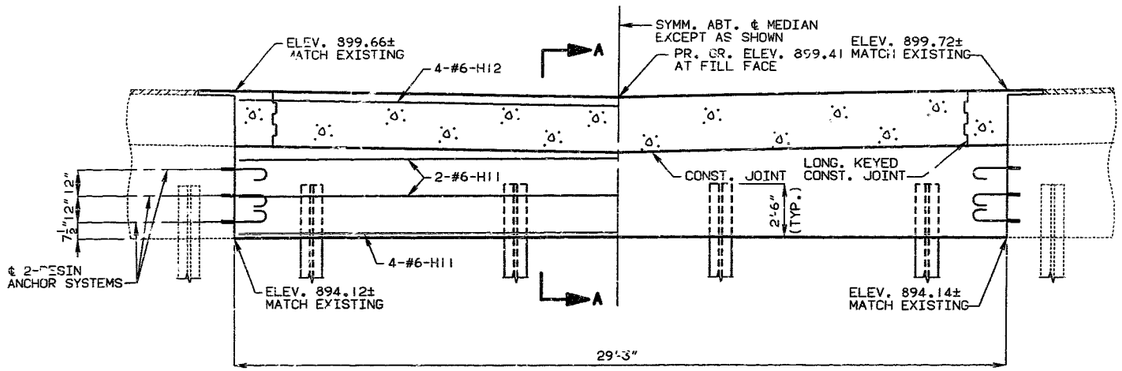
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

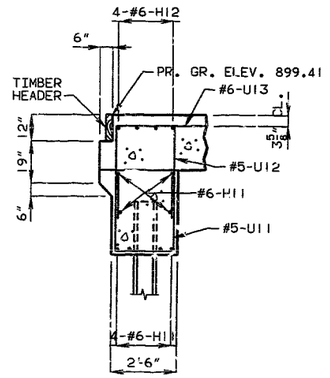
A-1662R2

STATE	PROJ. NO.	SHEET NO.
MO.		145

NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.

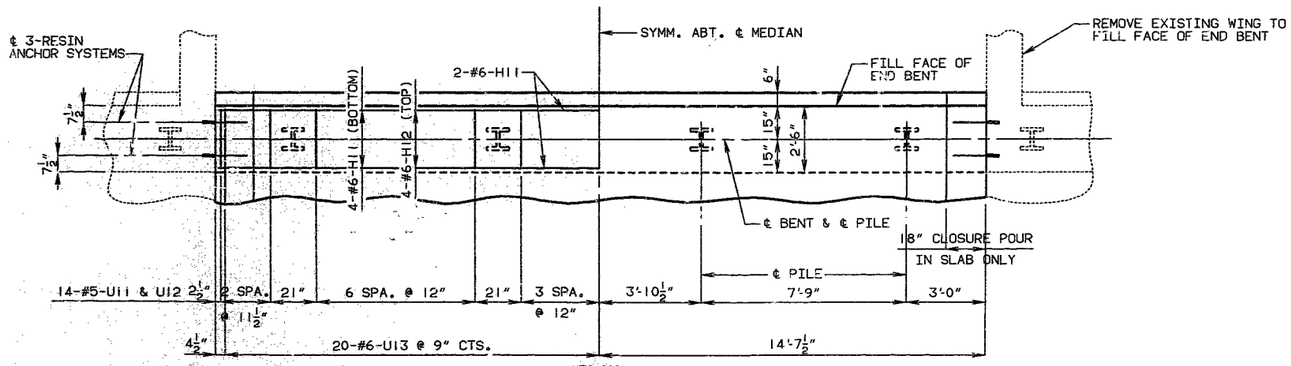


SECTION NEAR END BENT



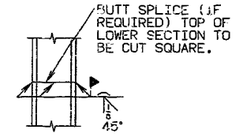
SECTION A-A

NOTE: FOR DETAILS OF TIMBER HEADER, SEE SHEET NO. 11.
FOR DETAIL OF RESIN ANCHOR SYSTEM, SEE SHEET NO. 8.



PLAN

DETAILS OF END BENT NO. 1



STEEL PILE SPLICE

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1

ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	10
STRUCTURAL STEEL PILES (10")	LIN. FT.	120

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

178-17

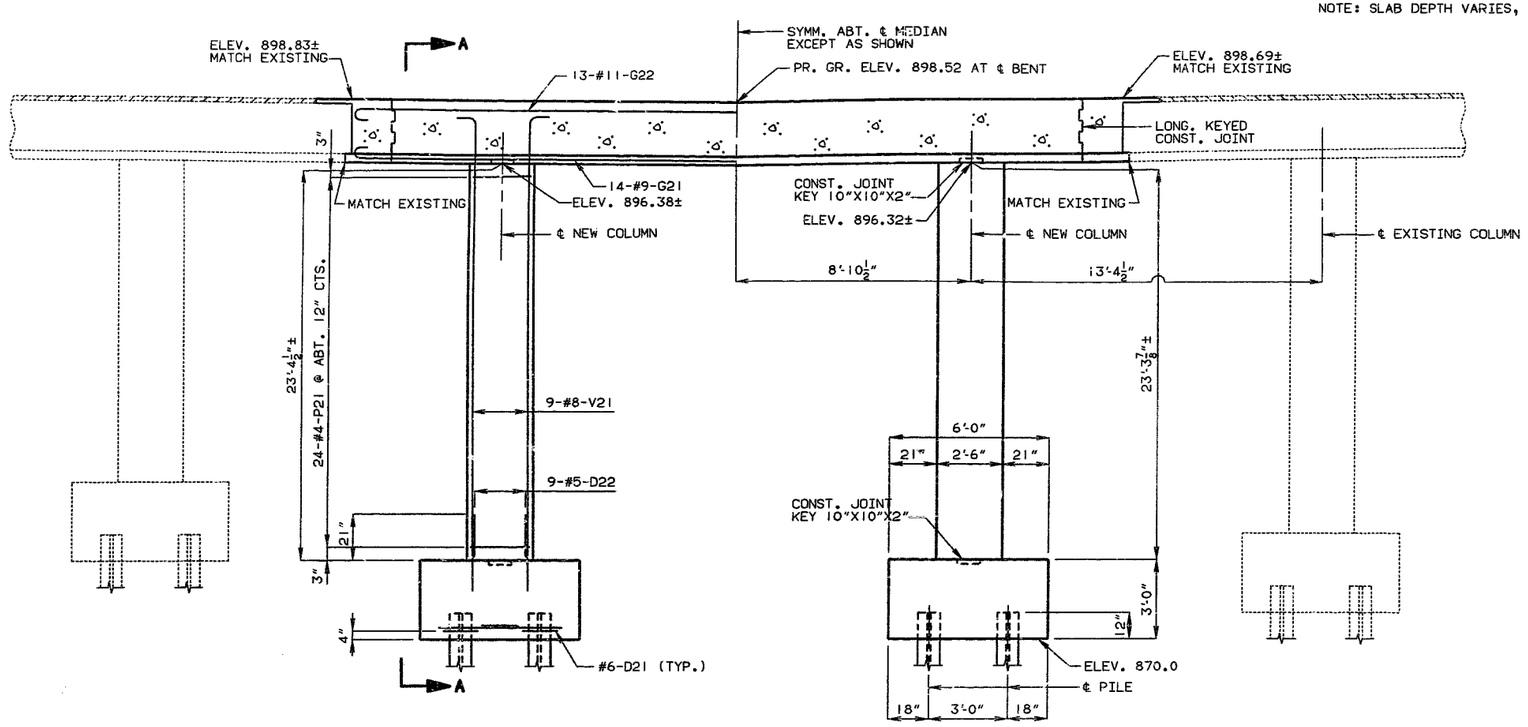
DETAILED DEC. 1991
CHECKED JAN. 1992

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

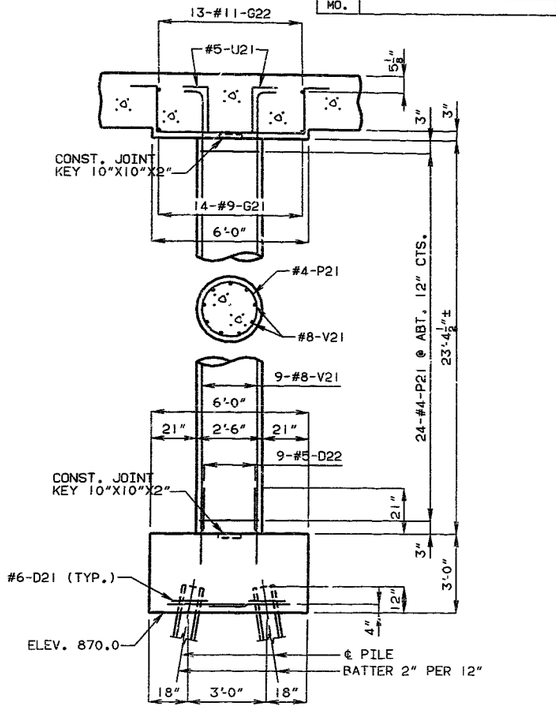
JACKSON COUNTY A-1662R2

STATE	PROJ. NO.	SHEET NO.
MO.		146

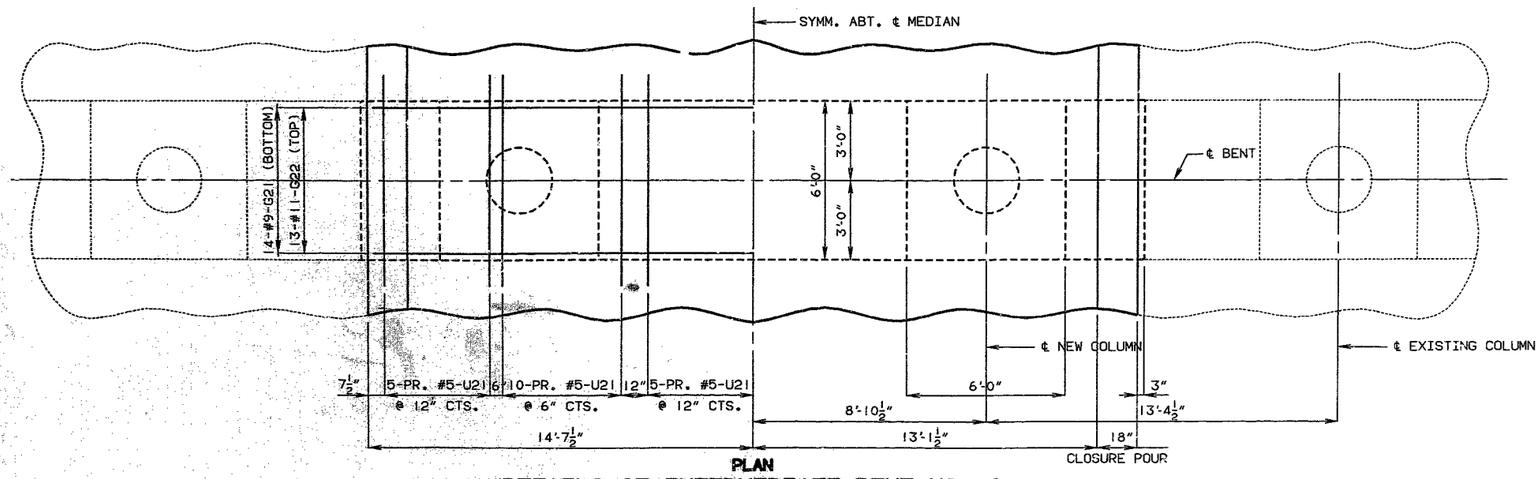
NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.



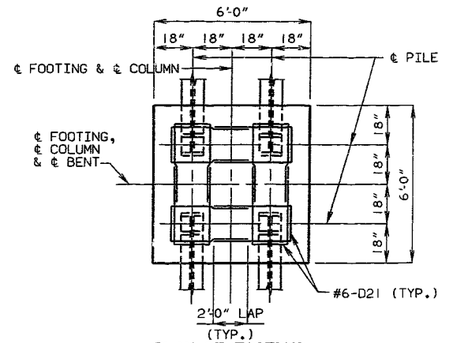
SECTION NEAR INTERMEDIATE BENT



SECTION A-A



PLAN



PLAN OF FOOTING SHOWING REINFORCEMENT

DETAILS OF INTERMEDIATE BENT NO. 2

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	50
STRUCTURAL STEEL PILES (10")	LIN. FT.	96
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	8.0
REINFORCING STEEL (BRIDGES)	LB.	230

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILED DEC. 1991
CHECKED JAN. 1992

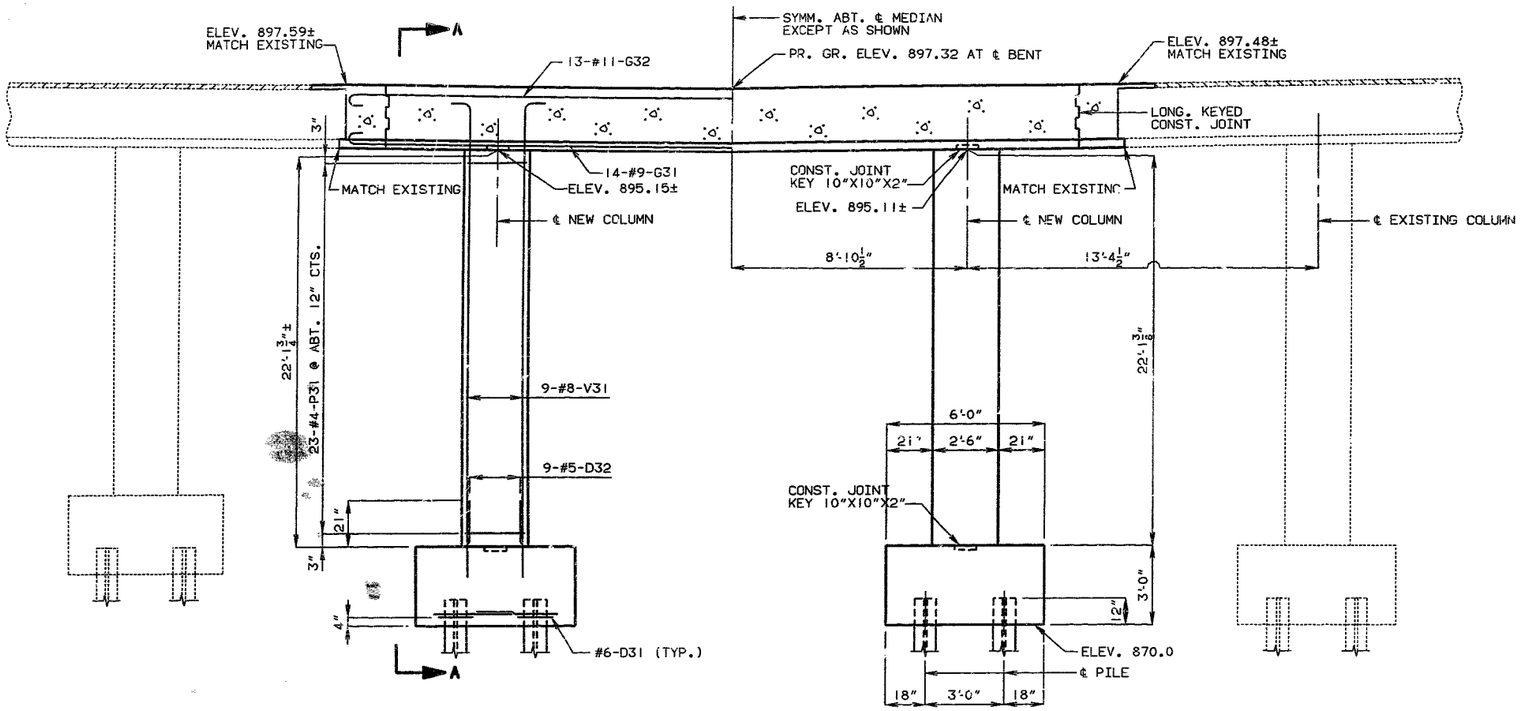
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1662R2

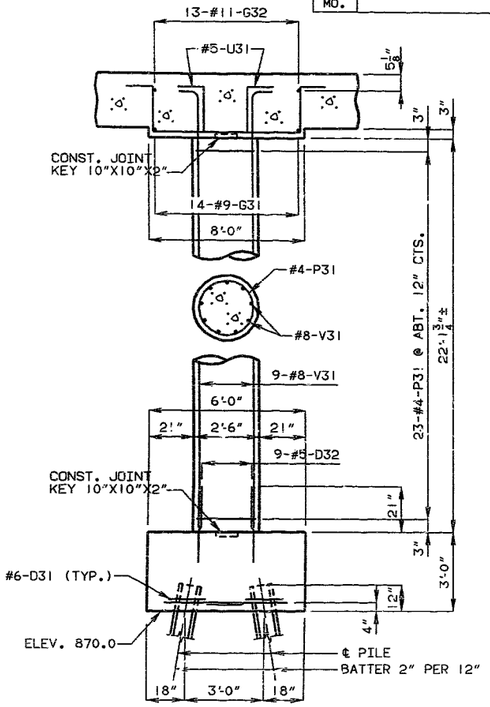
H 118

STATE	PROJ. NO.	SHEET NO.
MO.		147

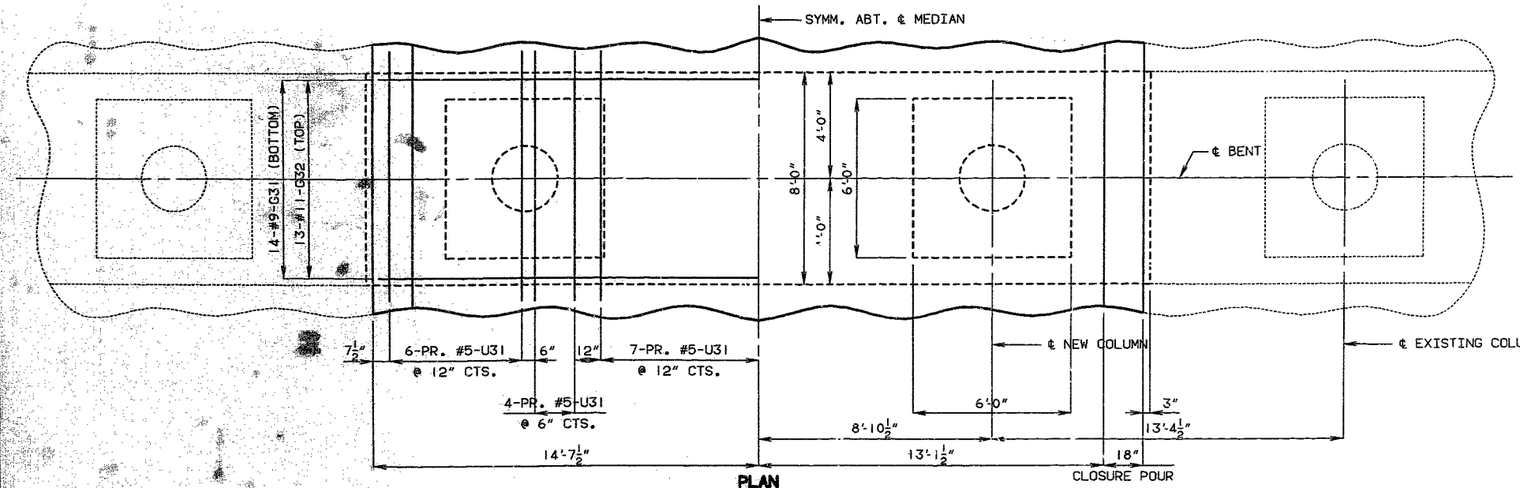
NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.



SECTION NEAR INTERMEDIATE BENT

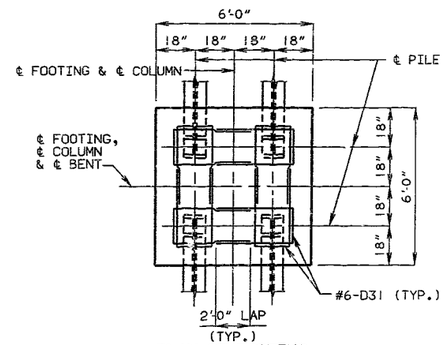


SECTION A-A



PLAN

DETAILS OF INTERMEDIATE BENT NO. 3



PLAN OF FOOTING SHOWING REINFORCEMENT

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	35
STRUCTURAL STEEL PILES (10")	LIN. FT.	136
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	8.0
REINFORCING STEEL (BRIDGES)	LB.	230

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILED DEC. 1991
CHECKED JAN. 1992

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

SHEET NO. 5 OF 14.

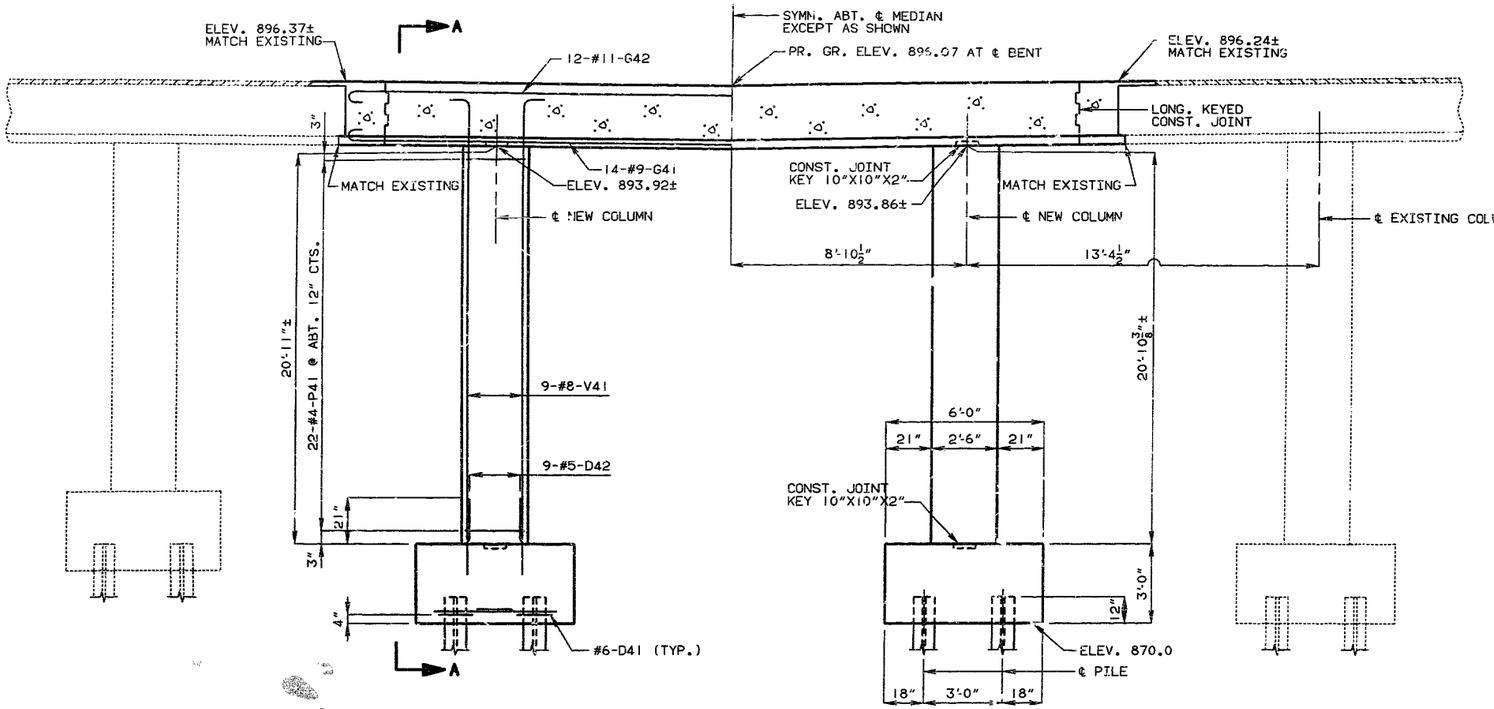
JACKSON COUNTY

A-1662R2

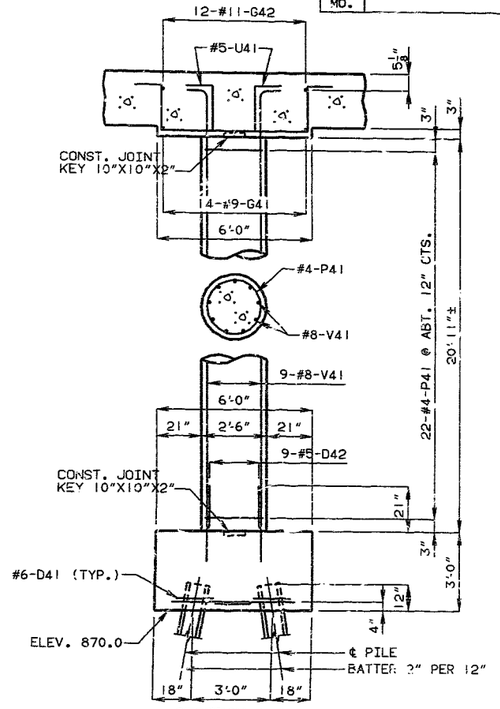
1992

NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.

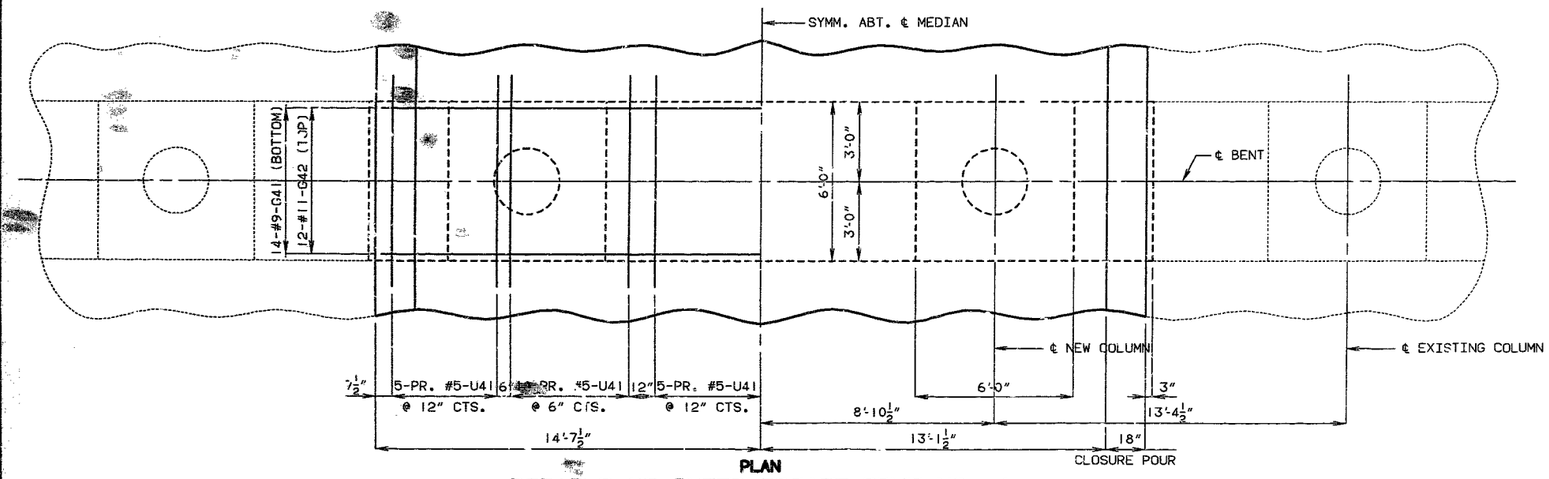
STATE	PROJ. NO.	SHEET NO.
MO.		148



SECTION NEAR INTERMEDIATE BENT

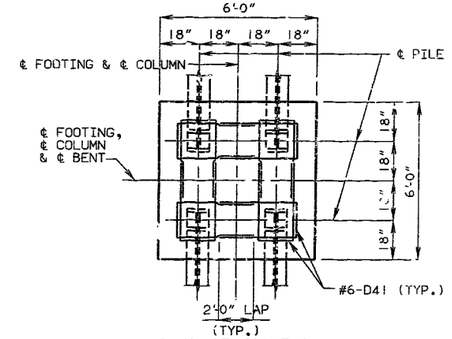


SECTION A-A



PLAN

DETAILS OF INTERMEDIATE BENT NO. 4



PLAN OF FOOTING
SHOWING REINFORCEMENT

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 4

ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	40
STRUCTURAL STEEL PILES (10")	LIN. FT.	136
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	8.0
REINFORCING STEEL (BRIDGES)	LB.	230

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILED DEC. 1991
CHECKED JAN. 1992

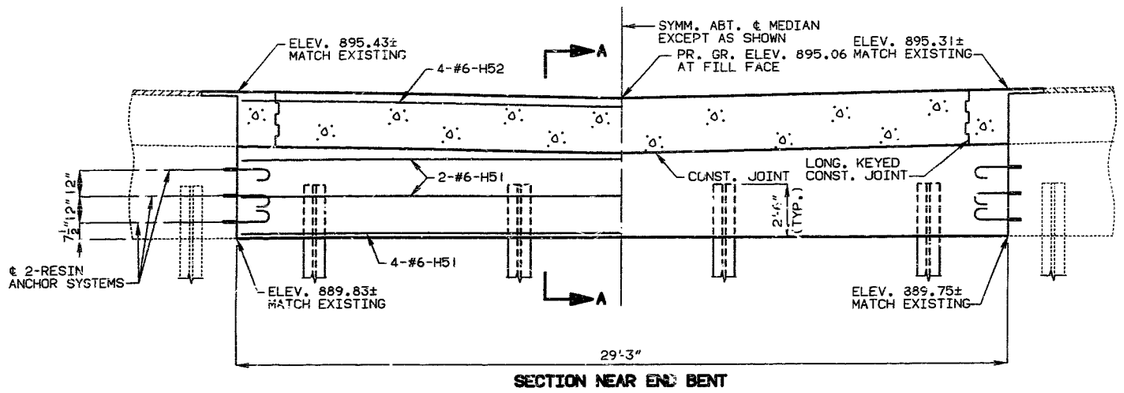
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1662R2

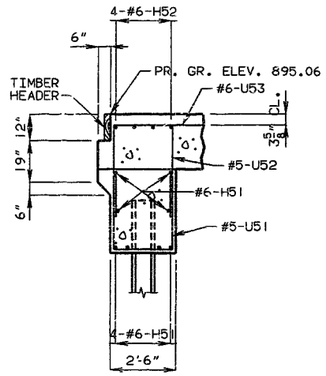
13-120

STATE	PROJ. NO.	SHEET NO.
MO.		149

NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.

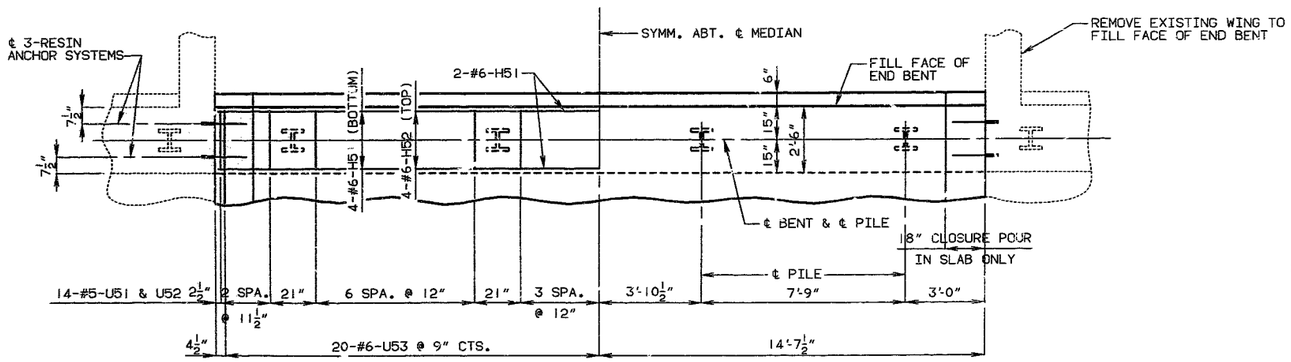


SECTION NEAR END BENT



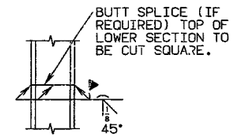
SECTION A-A

NOTE: FOR DETAILS OF TIMBER HEADER, SEE SHEET NO. 11.
FOR DETAIL OF RESIN ANCHOR SYSTEM, SEE SHEET NO. 8.



PLAN

DETAILS OF END BENT NO. 5



STEEL PILE SPLICE

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 5		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	10
STRUCTURAL STEEL PILES (10")	LIN. FT.	144

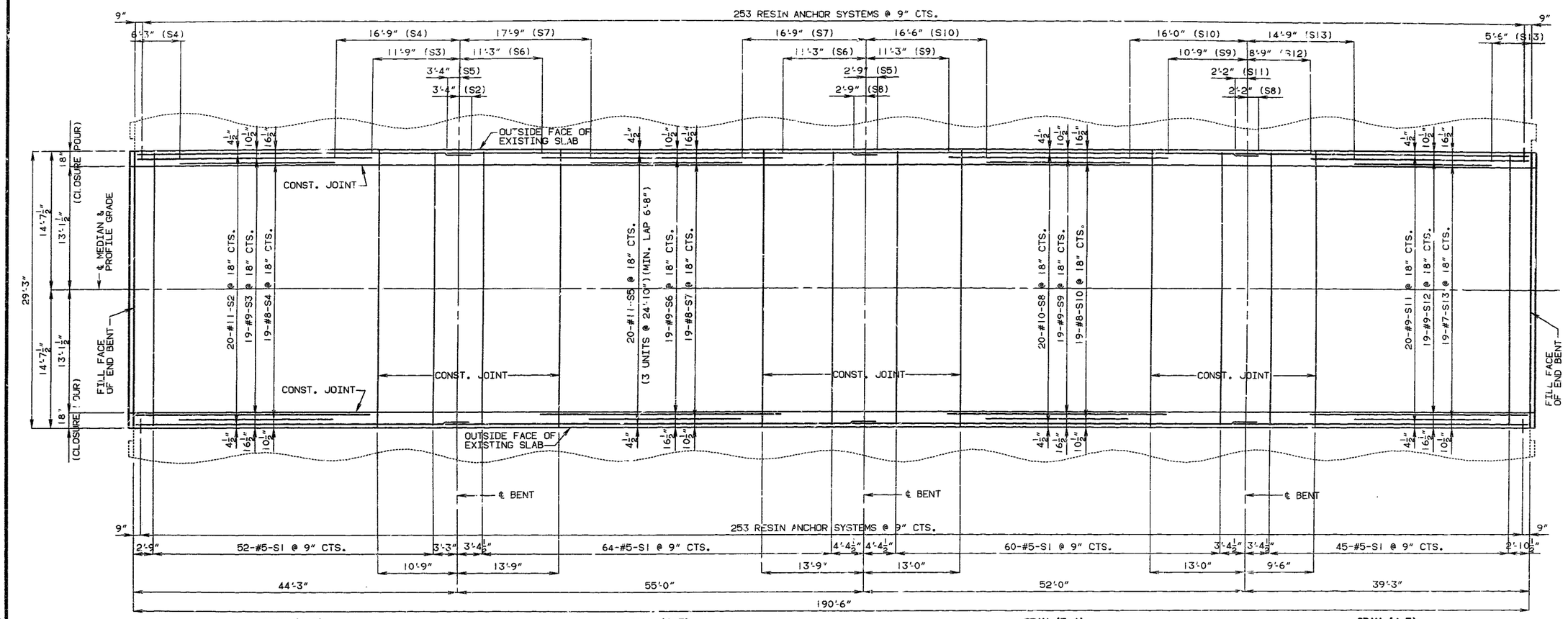
NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILED DEC. 1991
CHECKED JAN. 1992

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

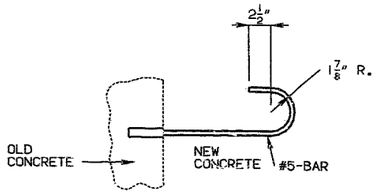
JACKSON COUNTY A-1662R2

STATE	PROJ. NO.	SHEET NO.
MO.		150



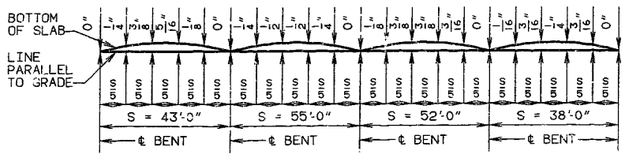
PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.
FOR SECTIONS THRU SLAB, SEE SHEET NO. 10
THE CONTRACTOR MAY USE AN APPROVED RETARDER TO RETARD THE SET OF THE CONCRETE TO 2.5 HOURS AND SHALL POUR AND SATISFACTORILY FINISH THE ROADWAY SLAB AT A RATE OF NOT LESS THAN 38 CUBIC YARDS PER HOUR. (THE CONTRACTOR SHALL OBSERVE THE TRANSVERSE CONSTRUCTION JOINTS SHOWN ON PLANS, UNLESS HE CAN DEMONSTRATE TO THE ENGINEER THAT HE IS EQUIPPED TO POUR AND SATISFACTORILY FINISH THE ROADWAY SLAB AT A RATE WHICH PERMITS A CONTINUOUS POURING THROUGH SOME OR ALL OF THESE JOINTS.)



DETAIL OF RESIN ANCHOR SYSTEM

NOTE: COST OF FURNISHING AND INSTALLING RESIN ANCHOR SYSTEMS FOR SLAB SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR CONCRETE. 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 AND THAT AN EPOXY COATED #5, GRADE 60 REINFORCING BAR, PROJECTING 15" INTO NEW CONCRETE, SHALL BE USED.



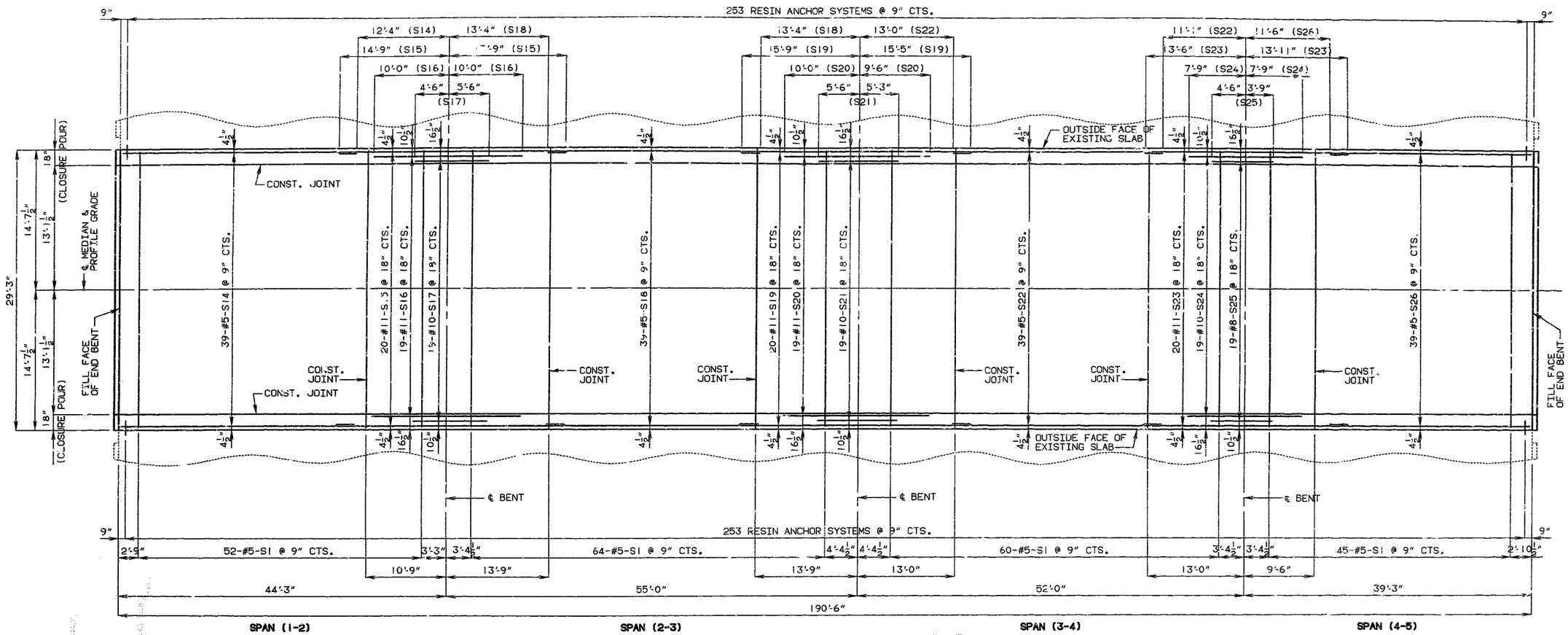
CAMBER DIAGRAM

DETAILED DEC. 1991
CHECKED DEC. 1991

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

JACKSON COUNTY A-1662R2

STATE	PROJ. NO.	SHEET NO.
MO.		151



PLAN OF SLAB SHOWING TOP REINFORCEMENT

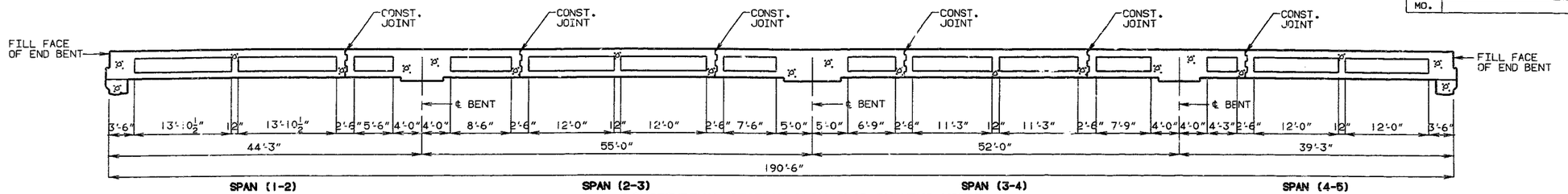
NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.
FOR SECTIONS THRU SLAB, SEE SHEET NO. 10.
FOR DETAIL OF RESIN ANCHOR SYSTEMS, SEE SHEET NO. 8.

DETAILED DEC. 1991
CHECKED DEC. 1991

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

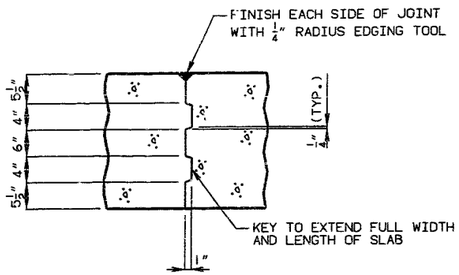
JACKSON COUNTY A-1662R2

STATE	PROJ. NO.	SHEET NO.
MO.		162

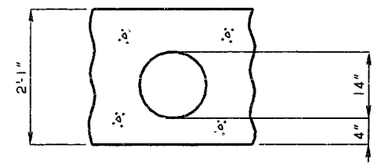


LONGITUDINAL SECTION THRU SLAB SHOWING VOIDS

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

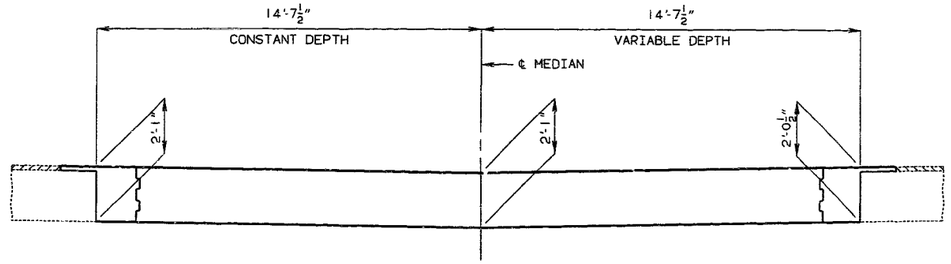


DETAIL OF SLAB CONSTRUCTION JOINT KEY

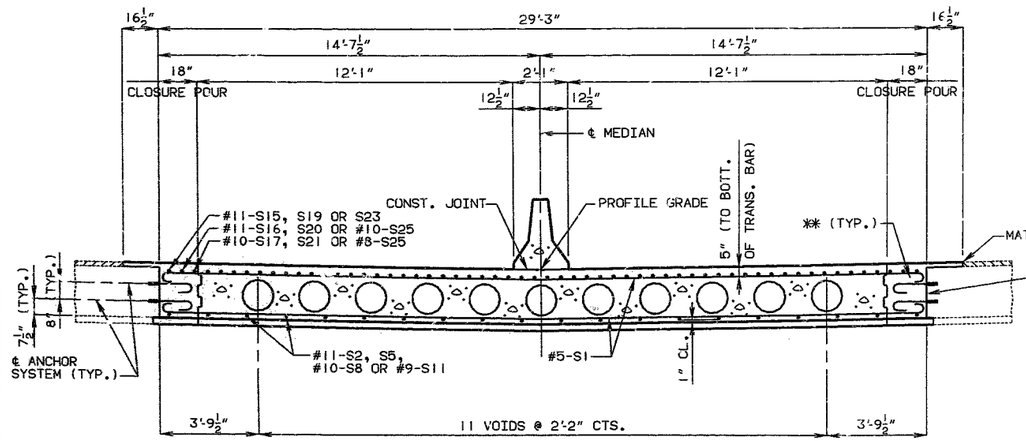


DETAIL OF VOID

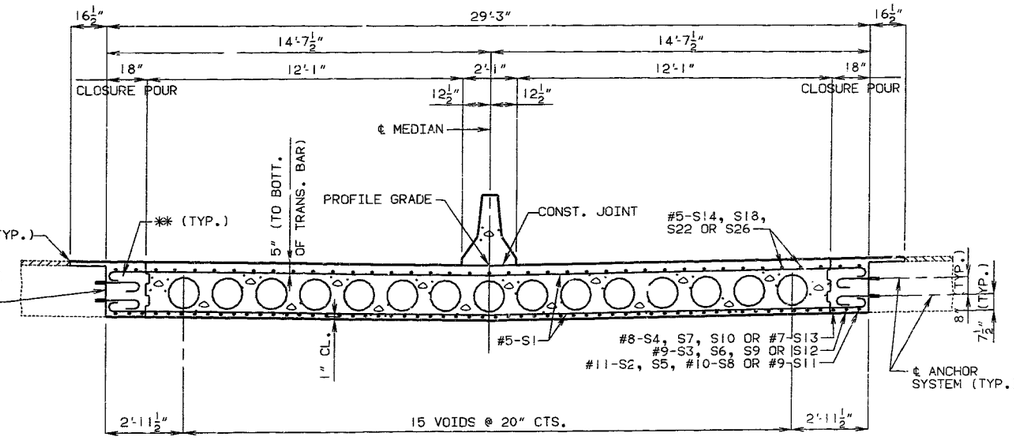
NOTE: TUBES FOR PRODUCING VOIDS SHALL HAVE AN OUTSIDE DIAMETER OF 14.0" AND SHALL BE ANCHORED AT NOT MORE THAN 4'-0" CENTERS. FIBER TUBES SHALL HAVE A WALL THICKNESS OF NOT LESS THAN .25".
** USE EXPANSIVE CLASS B2 CONCRETE IN CLOSURE POUR (SEE SPECIAL PROVISIONS). RELEASE FORMS BEFORE CLOSURE POUR IS PLACED.



PART SECTION THRU SLAB SHOWING SLAB DEPTH



PART SECTION THRU SLAB NEAR INT. BENTS



PART SECTION THRU SLAB NEAR CENTER OF SPANS

NOTE: ENTIRE ROADWAY NOT SHOWN FOR CLARITY, SEE SHEET NO. 2.
FOR DETAILS AND REINFORCEMENT OF MEDIAN BARRIER CURB, SEE SHEETS NO. 11 & 12.

DETAILED DEC. 1991
CHECKED DEC. 1991

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

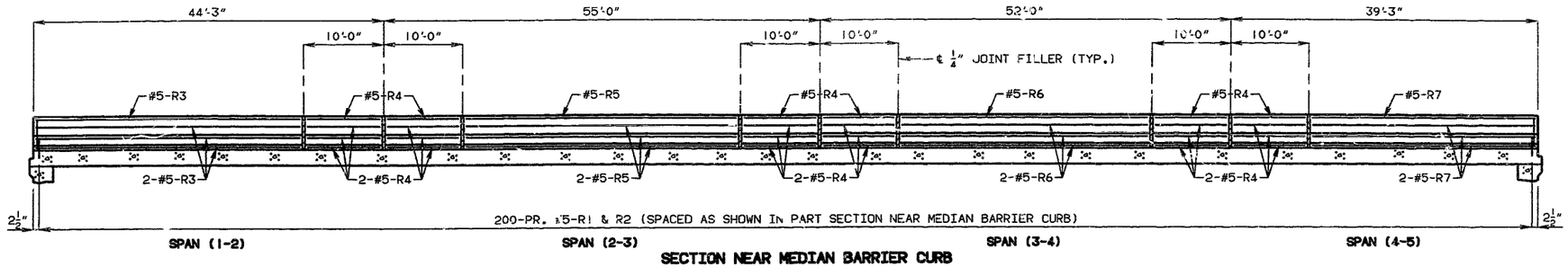
SHEET NO. 10 OF 14.

JACKSON COUNTY

A-1662R2

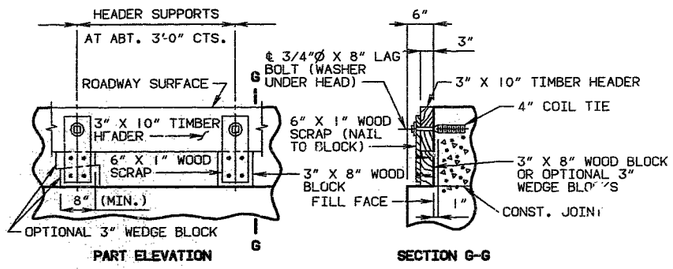
177 184

STATE	PROJ. NO.	SHEET NO.
MO.		153



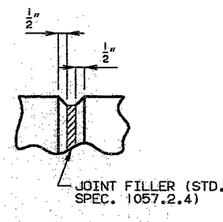
SECTION NEAR MEDIAN BARRIER CURB

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

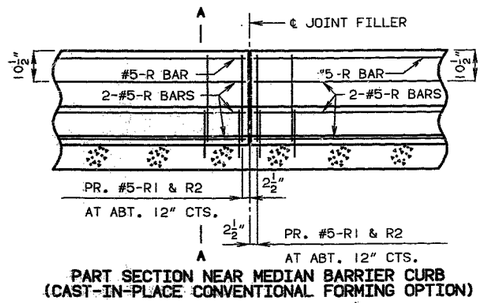


NOTE: COST OF TIMBER HEADERS COMPLETE IN PLACE TO BE INCLUDED IN CONTRACT UNIT PRICE FOR CONCRETE.

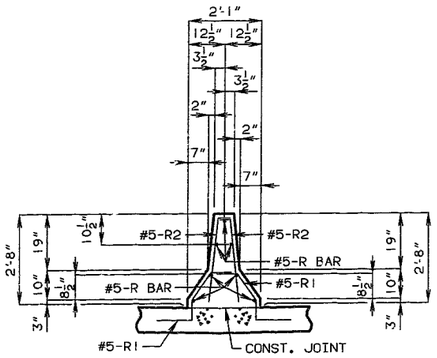
DETAILS OF TIMBER HEADER AT END BENTS



FILLED JOINT DETAIL



PART SECTION NEAR MEDIAN BARRIER CURB (CAST-IN-PLACE CONVENTIONAL FORMING OPTION)



PART SECTION A-A

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL MEDIAN BARRIER CURB BARS.
THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.96 SQ. FT.

NOTE:

TOP OF MEDIAN BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH MEDIAN BARRIER CURB JOINTS NORMAL TO GRADE.

ALL EXPOSED EDGES OF MEDIAN BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

WHEN THE MEDIAN BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE MEDIAN BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF MEDIAN BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE ℄ MEDIAN FROM FILL FACE OF END BENT TO FILL FACE OF END BENT.

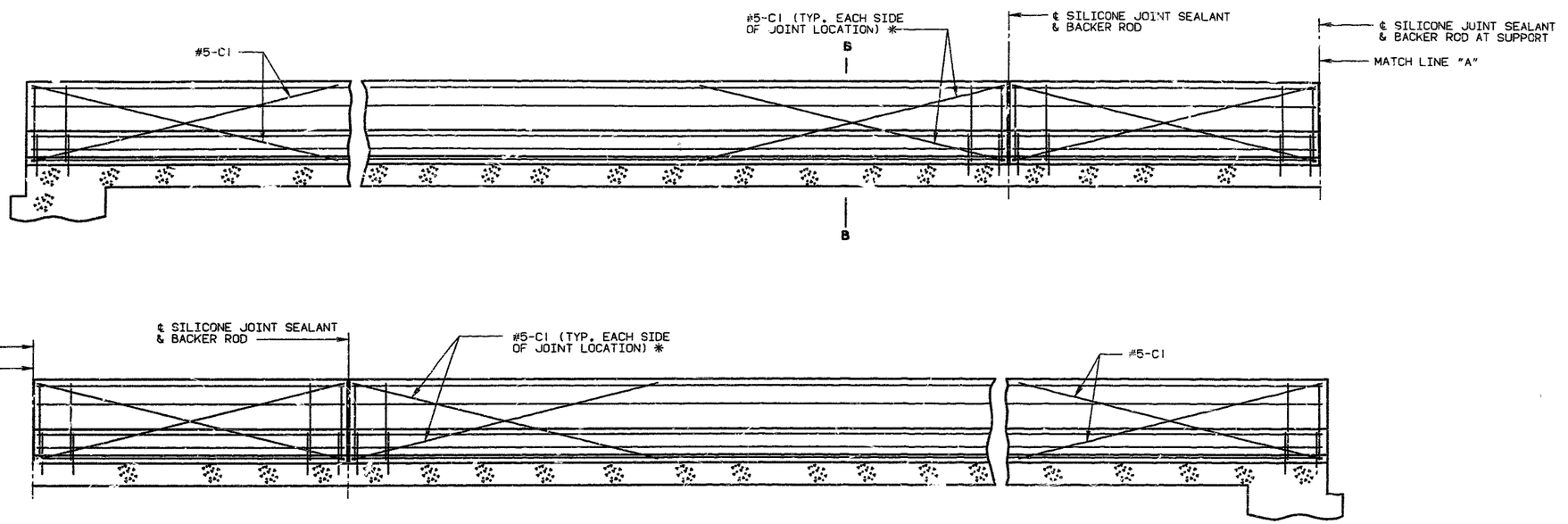
B/C EL 16.65 3.30		
BARRIER CURB ELEVATION	REVISED:	FEB. 1991
JAN. 1990		

DETAILED DEC. 1991
CHECKED DEC. 1991

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

JACKSON COUNTY A-1662R2

STATE	PROJ. NO.	SHEET NO.
MO.		154



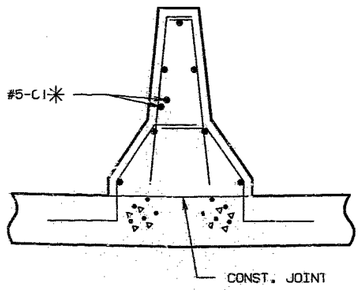
NOTE:

TOP OF MEDIAN BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH MEDIAN BARRIER CURB JOINTS NORMAL TO GRADE.

WHEN THE MEDIAN BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE MEDIAN BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF MEDIAN BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM FILL FACE OF END BENT TO FILL FACE OF END BENT.



PART SECTION B-B

NOTE: * EACH SIDE OF JOINT LOCATION AND AT END BENTS.

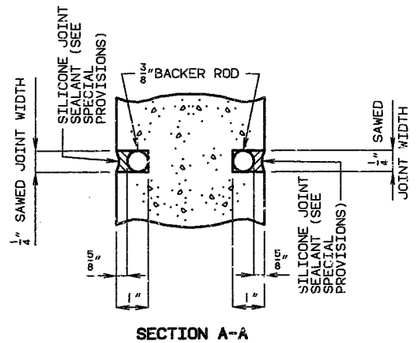
TYPICAL SECTION NEAR MEDIAN BARRIER CURB AT SUPPORT LOCATIONS (OPTIONAL SLIP-FORM BRIDGE MEDIAN BARRIER CURB)

NOTE:

JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE MEDIAN BARRIER CURBS INSTEAD OF JOINT FILLER.

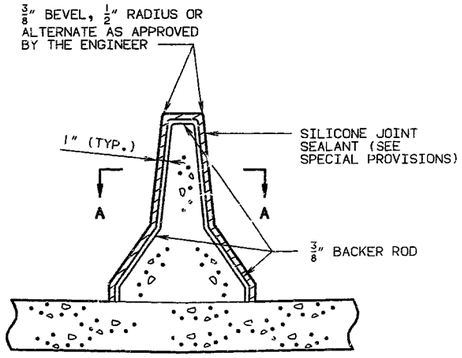
PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C1 BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE MEDIAN BARRIER CURB.



SECTION A-A

NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR MEDIAN BARRIER CURB.



SECTION THRU JOINT

OPTIONAL SLIP-FORM BRIDGE MEDIAN BARRIER CURB

REVISED:	BARRIER CURB ELEVATION	B/C SF16,GS 3.30, 1:A
FEB. 1991		

DETAILED DEC. 1991
CHECKED DEC. 1991

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

JACKSON COUNTY A-1662R2

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	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.
			SUBSTRUCTURE																
			INT BT NO 2																
16	6U21		FOOTING		10	S	X				3 2.000	16.000					7 8	7 4	176
18	5U22		FOOTING		20		X			2 9.000							2 9	2 9	52
			INT BT NO 3																
16	6D31		FOOTING		10	S	X				3 2.000	16.000					7 8	7 4	176
18	5D32		FOOTING		20		X			2 9.000							2 9	2 9	52
			INT BT NO 4																
16	6D41		FOOTING		10	S	X				3 2.000	16.000					7 8	7 4	176
18	5D42		FOOTING		20		X			2 9.000							2 9	2 9	52
			SUPERSTRUCT																
			END BT NO 1																
8	6H11		BEAM		20					29 0.000							29 9	29 0	348
6	6H12		SLAB	E	20					29 0.000							29 0	29 0	261
27	5U11		BEAM		10	S					3 0.000	2 3.000					8 3	8 1	220
27	5U12		BEAM	E	10	S					4 0.000	2 3.000					10 3	10 1	284
39	6U13		BEAM	E	19	S				3 0.000	4 1.000						7 1	6 11	405
			INT BT NO 2																
14	9621		DROP PANEL	E	18					29 0.000							31 6	31 6	1499
13	11622		SLAB	E	18					29 0.000							32 2	32 2	2222
48	4P21		COLUMN		16					2 3.000							7 11	7 11	254
78	5U25		SLAB	E	10	S				10.000	22.000	3 10.000	10.000				9 2	8 9	712
18	8V21		COLUMN		19					24 0.000	16.000						25 4	25 2	1210
			INT BT NO 3																
14	9631		DROP PANEL	E	18					29 0.000							31 5	31 6	1499
13	11632		SLAB	E	18					29 0.000							32 2	32 2	2222
46	4P31		COLUMN		16					2 3.000							7 11	7 11	243
66	5U31		SLAB	E	10	S				10.000	22.000	5 2.000	10.000				10 6	10 1	694
18	8V31		COLUMN		19					22 9.000	16.000						24 1	23 11	1149

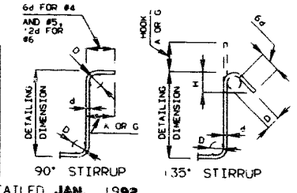
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	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.
			INT BT NO 4																
14	9641		DROP PANEL	E	18					29 0.000							31 6	31 6	1499
12	11642		SLAB	E	18					29 0.000							32 2	32 2	2051
44	6P41		COLUMN		16					2 3.000							7 11	7 11	233
78	5U41		SLAB	E	10	S				10.000	22.000	3 10.000	10.000				9 2	8 9	712
18	6V41		COLUMN		19					21 6.000	16.000						22 10	22 8	1089
			END BT NO 4																
8	6H51		BEAM		20					29 0.000							29 0	29 0	348
4	6H52		SLAB	E	20					29 0.000							29 0	29 0	174
27	5U51		BEAM		10	S					3 0.000	2 3.000					8 3	8 1	228
27	5U52		BEAM	E	10	S					4 0.000	2 3.000					10 3	10 1	284
39	6U53		BEAM	E	19	S				3 0.000	4 1.000						7 1	6 11	405
28	5C1		MEDIAN BARR.	E	20					10 0.000							10 0	10 0	292
400	5R1		MEDIAN BARR.	E	27	S					8.000	11.125	7.000	12.000	9.125	6.375	3 2	3 0	1252
400	5R2		MEDIAN BARR.	E	15	S				2 6.125	3.500				2 6.000	3.000	2 10	2 9	1147
7	5R3		MEDIAN BARR.	E	20					34 0.000							34 0	34 0	248
42	5R4		MEDIAN BARR.	E	20					9 9.000							9 9	9 9	427
7	5R5		MEDIAN BARR.	E	20					34 9.000							34 9	34 9	254
7	5R6		MEDIAN BARR.	E	20					31 9.000							31 9	31 9	232
7	5R7		MEDIAN BARR.	E	20					29 0.000							29 0	29 0	212
442	5S1		SLAB	E	18					29 0.000							30 2	30 2	13907
20	11S2		SLAB	E	20					47 5.000							47 5	47 5	9036
19	9S3		SLAB	E	20					32 5.000							32 5	32 5	2094
19	8S4		SLAB	E	20					21 3.000							21 3	21 3	1078
60	11S5		SLAB	E	20					24 10.000							24 10	24 10	7916
19	9S6		SLAB	E	20					32 6.000							32 6	32 6	2100
19	8S7		SLAB	E	20					20 6.000							20 6	20 6	1080
20	10S8		SLAB	E	20					56 11.000							56 11	56 11	4898
21	9S9		SLAB	E	20					30 0.000							30 0	30 0	2142
21	8S10		SLAB	E	20					19 6.000							19 6	19 6	1093
20	9S11		SLAB	E	20					41 4.000							41 4	41 4	2811
19	9S12		SLAB	E	20					30 5.000							30 5	30 5	1965
21	7S13		SLAB	E	20					19 0.000							19 0	19 0	816
39	5S14		SLAB	E	20					31 10.000							31 10	31 10	1295
20	11S15		SLAB	E	20					30 6.000							30 6	30 6	3241
19	11S16		SLAB	E	20					20 0.000							20 0	20 0	2019
19	10S17		SLAB	E	20					10 0.000							10 0	10 0	818
39	5S18		SLAB	E	20					28 4.000							28 4	28 4	1153
20	11S19		SLAB	E	20					31 2.000							31 2	31 2	3312
21	11S20		SLAB	E	20					19 6.000							19 6	19 6	2176
21	10S21		SLAB	E	20					10 9.000							10 9	10 9	971
39	5S22		SLAB	E	20					27 11.000							27 11	27 11	1136
20	11S23		SLAB	E	20					27 5.000							27 5	27 5	2913
19	10S24		SLAB	E	20					15 6.000							15 6	15 6	1267
19	8S25		SLAB	E	20					8 3.000							8 3	8 3	419
41	5S26		SLAB	E	20					27 8.000							27 8	27 8	1183

Two additional H12, S9, S10, S13, S20, S21 & S26 are included in the Bar Bill for testing.

180 137

STD 90.8	REVISED
MAY, 1974	OCT., 1991

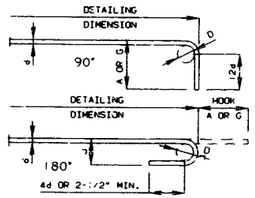


90° STIRRUP 135° STIRRUP

DETAILED JAN. 1992
CHECKED JAN. 1992

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



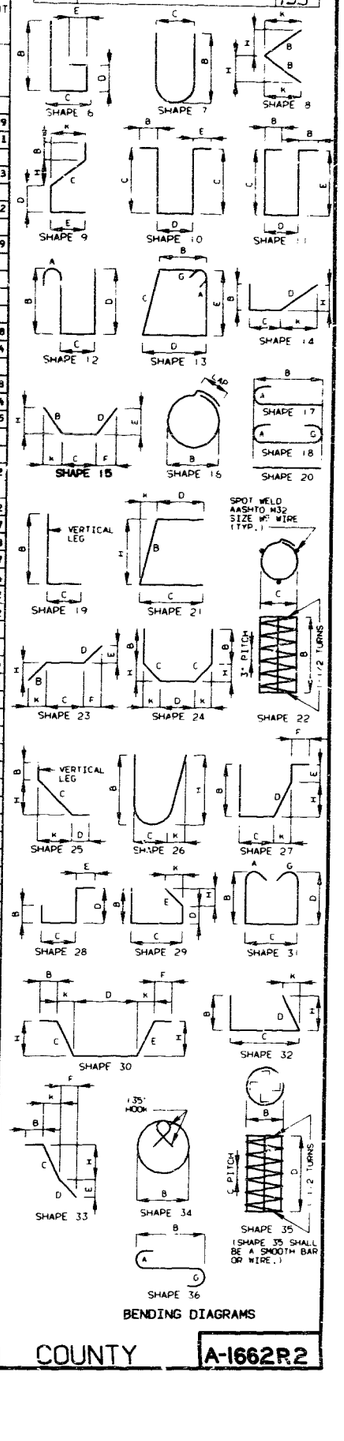
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL GRADES			
		180 HOOKS		90 HOOKS	
		A OR G	J	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"	

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 FABRICATORS 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.

SHEET NO. 13 OF 14.

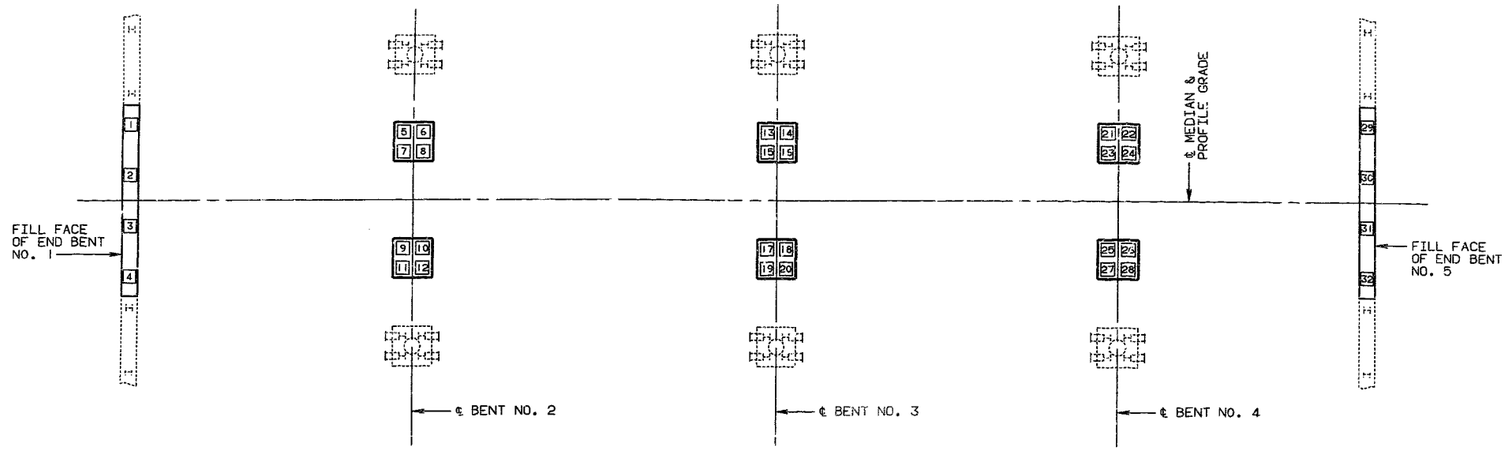
STATE NO.	PROJ. NO.	SHEET NO.
		155



BENDING DIAGRAMS

JACKSON COUNTY A-1662R2

STATE	PROJ. NO.	SHEET NO.
MO.		156



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT" PILE DATA

"AS BUILT" PILE DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
			END BENT NO. 1
1			
2			
3			
4			
			INTERMEDIATE BENT NO. 2
5			
6			
7			
8			
9			
10			
11			
12			
			INTERMEDIATE BENT NO. 3
13			
14			
15			
16			
17			
18			
19			
20			

"AS BUILT" PILE DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
			INTERMEDIATE BENT NO. 4
21			
22			
23			
24			
25			
26			
27			
28			
			END BENT NO. 5
29			
30			
31			
32			

NOTE: INDICATE IN REMARK COLUMN:
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

184-126

DETAILED SEPT. 1992
CHECKED SEPT. 1992

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

JACKSON COUNTY A-1662R2

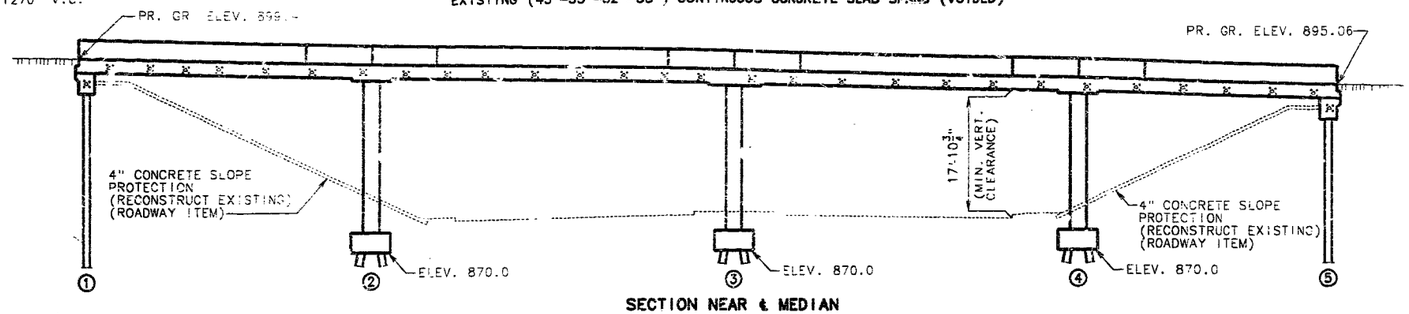
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ. NO.	NO.
MO.	J4I0807	43
SEC./SEC. 12	NP 48N	OF 53W

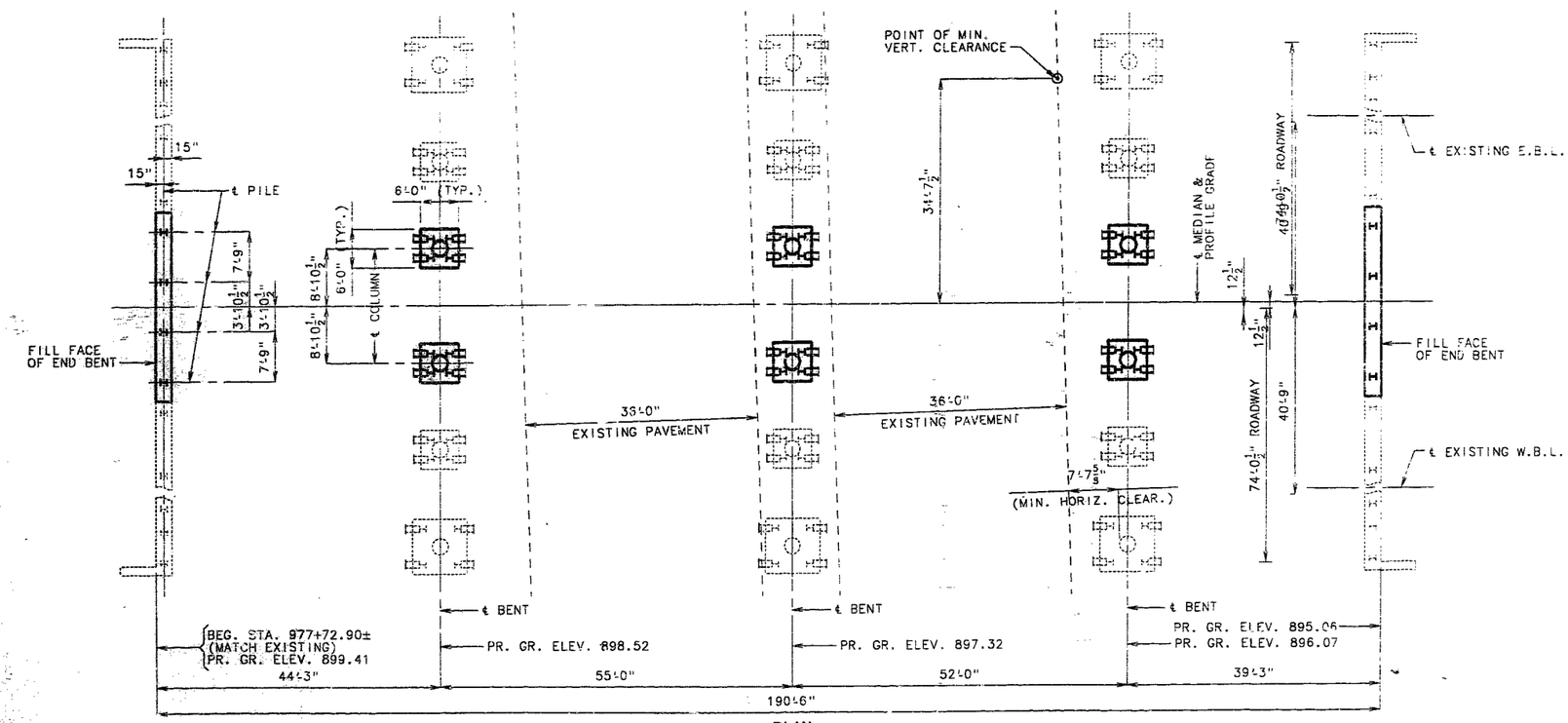
FINAL PLANS

P.I. STA. 974+15.20
ELEV. 911.65
+2.0% -3.0%
1270' V.C.

WIDEN SUBSTRUCTURE & SUPERSTRUCTURE
EXISTING (43'-55'-52'-38') CONTINUOUS CONCRETE SLAB SPANS (VOIDED)



SECTION NEAR ℄ MEDIAN



PLAN

NOTE: FOR GENERAL NOTES, ESTIMATED QUANTITIES AND PILE DATA, SEE SHEET NO. 2.
FOR BORING DATA AND LOCATION, SEE SHEETS NO. 1 & 7 OF THE ORIGINAL PLANS.

NOTE: ROADWAY FILL SHALL BE COMPLETED TO [illegible] SECTION AND UP TO THE ELEVATION OF THE BOTTOM OF BEAM WITHIN THE LIMITS OF THE STRUCTURE AND FOR [illegible] 25' IN BACK OF THE FILL FACE OF THE END BENTS BEFORE DRIVEN FOR ANY BENTS FALLING WITH THE EMBANKMENT.

N

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA

THE LOCATIONS OF ALL SUBSURFACE BORINGS FOR THIS STRUCTURE ARE SHOWN ON SHEET NO. 1 OF THE EXISTING PLANS FOR BRIDGES NO. A-1662 & A-1662R1. BORING DATA FOR THE NUMBERED LOCATIONS IS SHOWN ON SHEET NO. 7 ON A-1662 AND SHEET NO. 2 ON A-1662R1. THE BORING DATA FOR ALL LOCATIONS, AS WELL AS ANY OTHER BORING LOGS OR OTHER FACTUAL RECORDS OF SUBSTRUCTURE DATA AND INVESTIGATIONS PERFORMED BY THE DEPARTMENT FOR THE DESIGN OF THE PROJECT, IS AVAILABLE FROM THE DISTRICT MATERIALS ENGINEER UPON WRITTEN REQUEST AS OUTLINED IN THE PROJECT SPECIAL PROVISIONS. NO GREATER SIGNIFICANCE OR WEIGHT SHOULD BE GIVEN TO THE BORING DATA DEPICTED ON THE PLAN SHEETS THAT TO SUBSURFACE DATA AVAILABLE FROM THE DISTRICT OR ELSEWHERE.

THE COMMISSION DOES NOT REPRESENT OR WARRANT THAT ANY SUCH BORING DATA ACCURATELY DEPICTS THE CONDITIONS TO BE ENCOUNTERED IN CONSTRUCTING THIS PROJECT. A CONTRACTOR ASSUMES ALL RISKS IT MAY ENCOUNTER IN BASING ITS BID PRICES, TIME OR SCHEDULE OF PERFORMANCE ON THE BORING DATA DEPICTED HERE OR THOSE AVAILABLE FROM THE DISTRICT, OR ON ANY OTHER DOCUMENTATION NOT EXPRESSLY WARRANTED, WHICH THE CONTRACTOR MAY OBTAIN FROM THE COMMISSION.

B.M. ELEV. **902.54** CHISELED "□" e N.E. COR. BR. **PARAPET W.B.L.** BR. **#A-1662R2** 67' RT. 977+77±

REPAIRS TO BRIDGE OVER HOLMES ROAD

STATE ROAD FROM KANSAS STATE LINE TO RTE. 71
ABOUT 1.4 MILES EAST OF KANSAS STATE LINE

PROJECT NO. **STA. 977+72.90**
JOB NO. J410807 **RTE. I-435**

JACKSON COUNTY

DATE 3/1/94

STD.
STD. 706.35
A-1662R2

DESIGNED DEC. 1991
DETAILED DEC. 1991
CHECKED JAN. 1992

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

48 123

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	144

FINAL PLANS

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1992
LOAD FACTOR DESIGN
SEISMIC PERFORMANCE CATEGORY A

DESIGN LOADING:
HS20-44 MODIFIED 24,000# TANDEM AXLE
NO FUTURE WEARING SURFACE
EARTH 120#/CU. FT., EQUIVALENT FLUID PRESSURE 45#/CU. FT.

DESIGN UNIT STRESSES:
CLASS B CONCRETE (FOOTINGS) F'C=3,000 PSI.
CLASS B1 CONCRETE (MEDIAN BARRIER CURB, INT. BT. COLUMNS AND END BENTS BELOW LOWER CONST. JOINT) F'C=4,000 PSI.
CLASS B2 CONCRETE (SUPERSTRUCTURE EXCEPT MEDIAN BARRIER CURB) F'C=4,000 PSI.
REINFORCING STEEL (GRADE 60) FY=60,000 PSI.
STEEL PILE FB=9,000 PSI.

REINFORCING STEEL:
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-./2", UNLESS OTHERWISE SHOWN.
BARS BONDED IN OLD CONCRETE NOT REMOVED SHALL BE CLEANLY STRIPPED AND EMBEDDED INTO NEW CONCRETE WHERE POSSIBLE. IF LENGTH IS AVAILABLE, OLD BARS SHALL EXTEND INTO NEW CONCRETE AT LEAST 40 DIAMETERS FOR SMOOTH BARS AND 30 DIAMETERS FOR DEFORMED BARS, UNLESS OTHERWISE NOTED.

TRAFFIC:
TRAFFIC OVER STRUCTURE TO BE MAINTAINED DURING CONSTRUCTION.

CONSTRUCTION CLEARANCE:
FALSEWORK OVER EXISTING LANES SHALL BE CONSTRUCTED WITH A MINIMUM VERTICAL CLEARANCE OF 14'-9" FROM CROWN OF EXISTING LANES AND A MINIMUM LATERAL CLEARANCE OF 28'-0" CENTERED ON EACH EXISTING LANE.

JOINT FILLER:
ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1057.2.4, EXCEPT AS NOTED.

NOTE: OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY LINES INDICATE NEW WORK.

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.

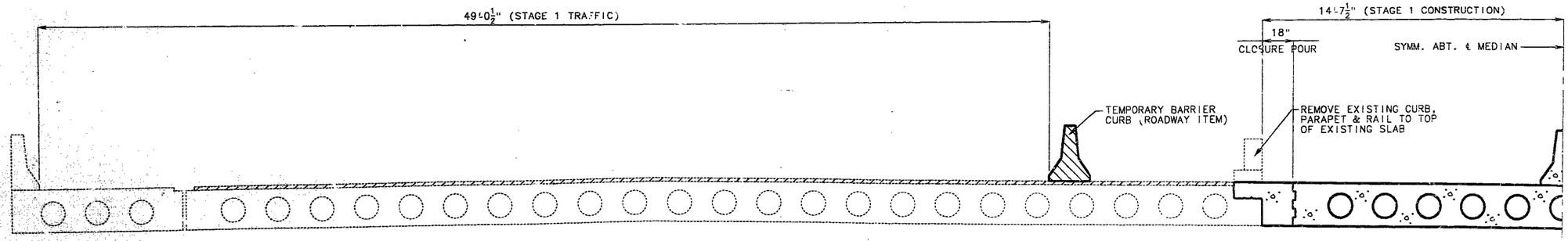
FINAL QUANTITIES

ITEM		SUBSTR.	SUPERSTR.	TOTAL
CURB REMOVAL (BRIDGES)	LIN. FT.		403	403
PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE	LUMP SUM			1
CLASS 1 EXCAVATION	CU. YD.	145.5		145.5
STRUCTURAL STEEL PILES (10")	LIN. FT.	617		617
CLASS B CONCRETE (SUBSTR.)	CU. YD.	24.0		24.0
CLASS B1 CONCRETE (SUPERSTR. VOIDED SLABS)	CU. YD.		43.1	43.1
CLASS B2 CONCRETE (SUPERSTR. VOIDED SLABS)	CU. YD.		361.4	361.4
*MEDIAN BARRIER CURB	LIN. FT.		191	191
REINFORCING STEEL (BRIDGES)	LB.	690	5,970	6,660
REINFORCING STEEL (EPOXY COATED)	LB.		83,730	83,730
Contingent Item				
Repairing Concrete Deck	Lump Sum		1	1

NOTE: ALL REINFORCEMENT IN END BENTS AND IN COLUMNS AT INT. BENTS IS INCLUDED IN SUPERSTRUCTURE QUANTITIES.
* MEDIAN BARRIER CURB SHALL BE CAST-IN-PLACE OPTION ~~OR SLIP-FORM OPTION~~.
ALL CONCRETE IN END BENTS AND INTERMEDIATE BENT COLUMNS IS INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

PILE DATA					
BENT NO.	1	2	3	4	5
PILE TYPE AND SIZE			HP 10X42		
NUMBER	4	8	8	8	4
APPROXIMATE LENGTH FT.	30	113	153	162	373
DESIGN BEARING TONS	41	53	52	49	38
HAMMER ENERGY REQUIRED FT.-LBS.	9,200	12,500	12,300	11,600	8,400

NOTE: MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.
ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.



DETAILS OF STAGE CONSTRUCTION

DETAILED DEC. 1991
CHECKED JAN. 1992

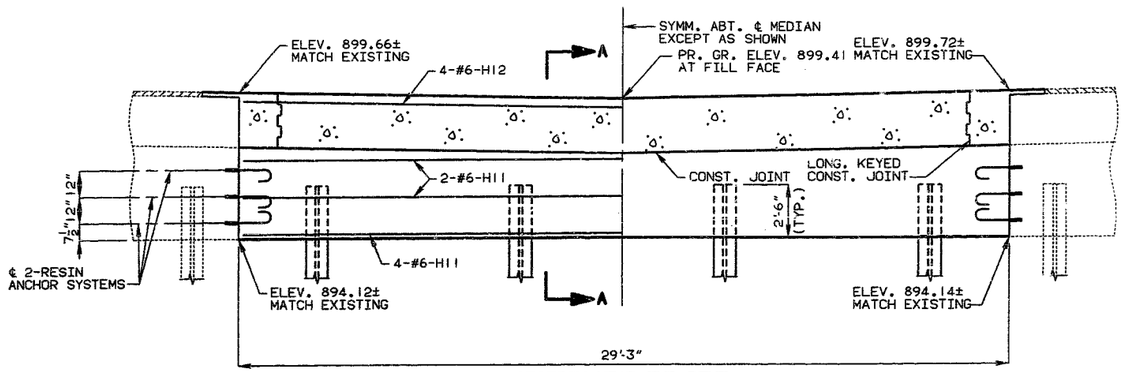
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1662R2

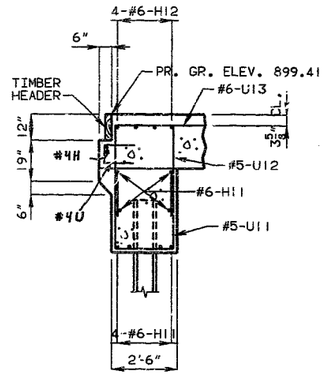
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	145

FINAL PLANS

NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.

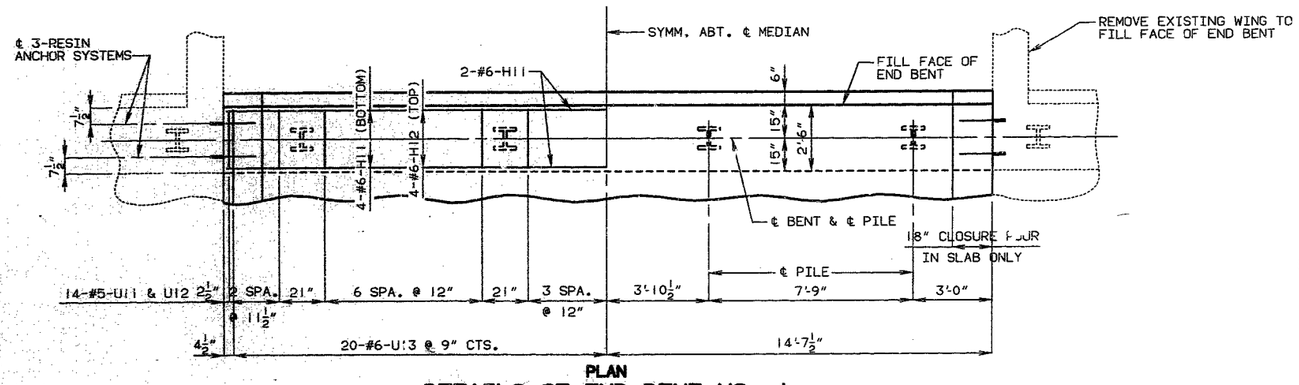


SECTION NEAR END BENT



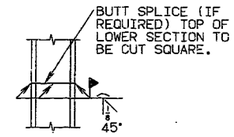
SECTION A-A

NOTE: FOR DETAILS OF TIMBER HEADER, SEE SHEET NO. 11.
FOR DETAIL OF RESIN ANCHOR SYSTEM, SEE SHEET NO. 8.



PLAN

DETAILS OF END BENT NO. 1



STEEL PILE SPLICE

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1

ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	11.1
STRUCTURAL STEEL PILES (10")	LIN. FT.	121

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILED DEC. 1991
CHECKED JAN. 1992

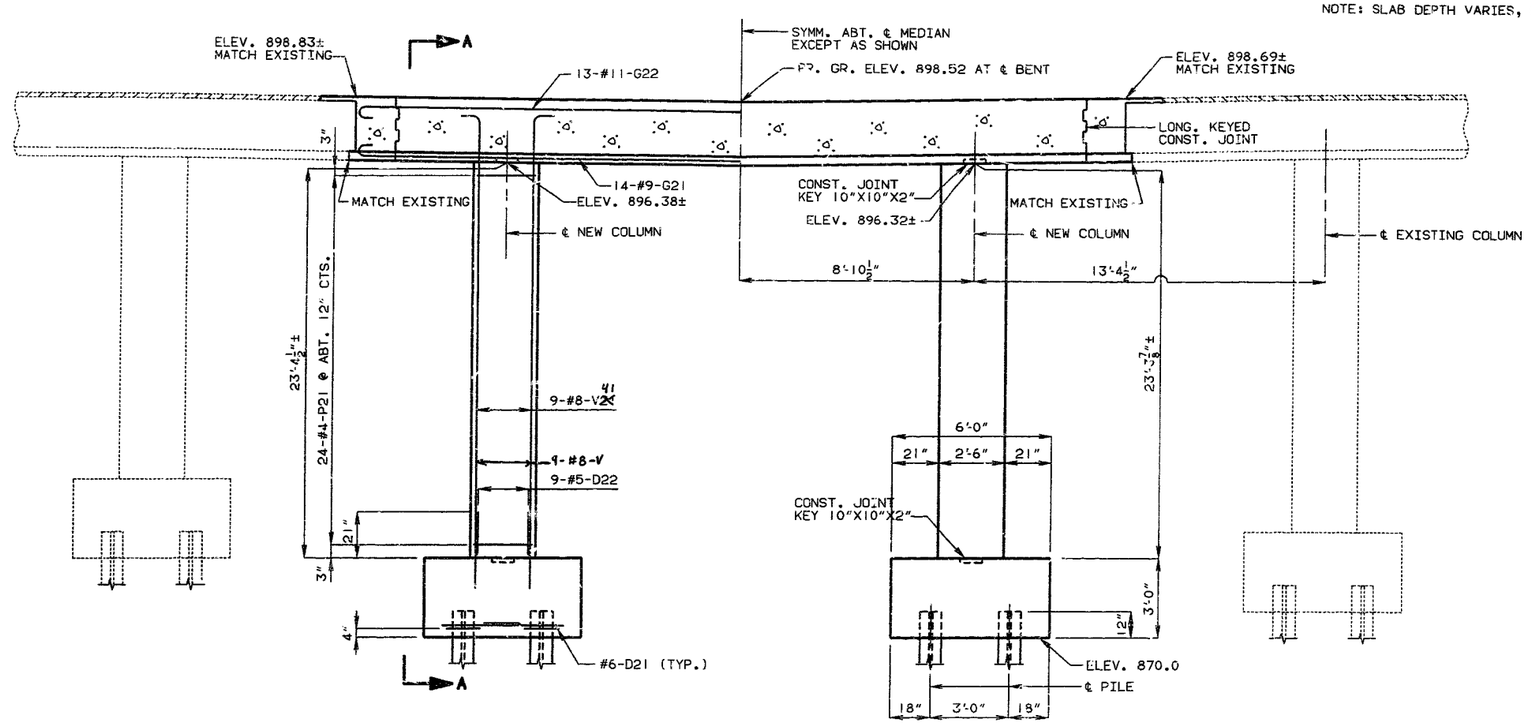
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1662R2

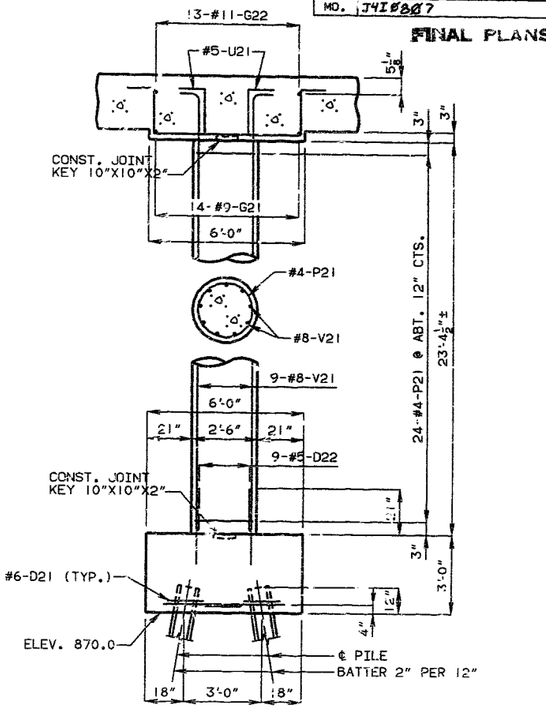
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	146

FINAL PLANS

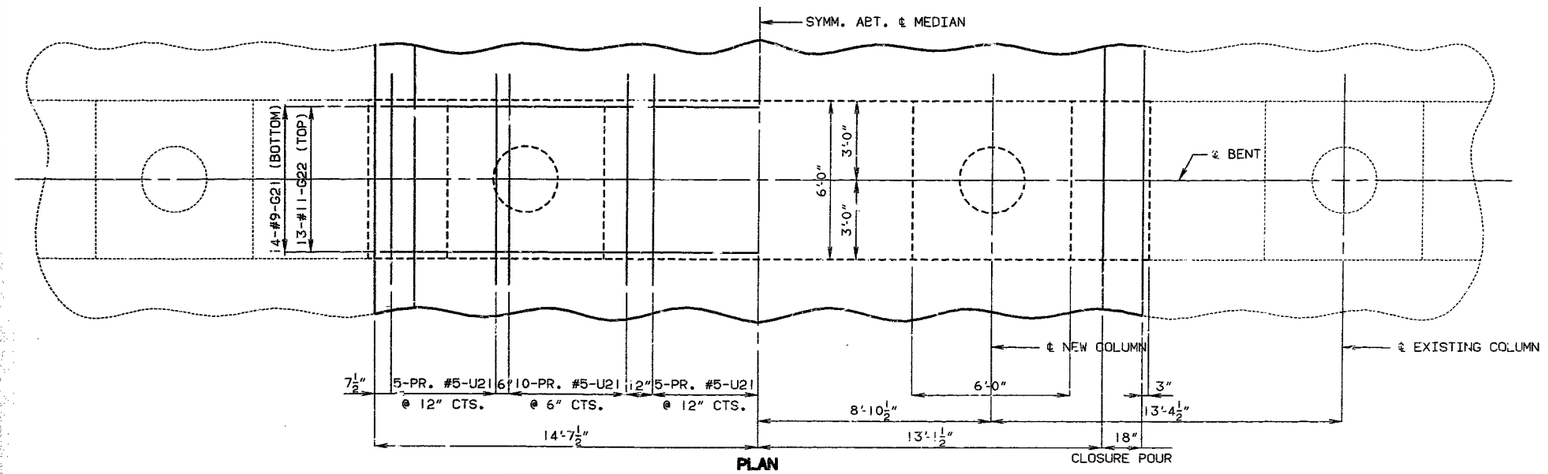
NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.



SECTION NEAR INTERMEDIATE BENT

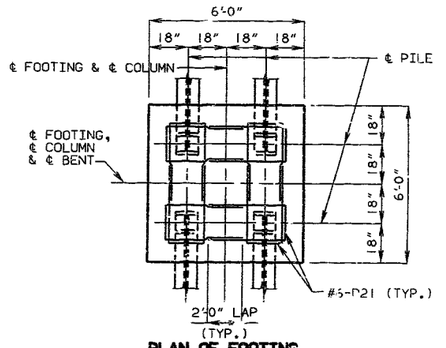


SECTION A-A



PLAN

DETAILS OF INTERMEDIATE BENT NO. 2



PLAN OF FOOTING SHOWING REINFORCEMENT

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	47.6
STRUCTURAL STEEL PILES (10")	LIN. FT.	103
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	8.0
REINFORCING STEEL (BRIDGES)	LB.	230

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILED DEC. 1991
CHECKED JAN. 1992

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

SHEET NO. 4 OF 1 .

JACKSON COUNTY

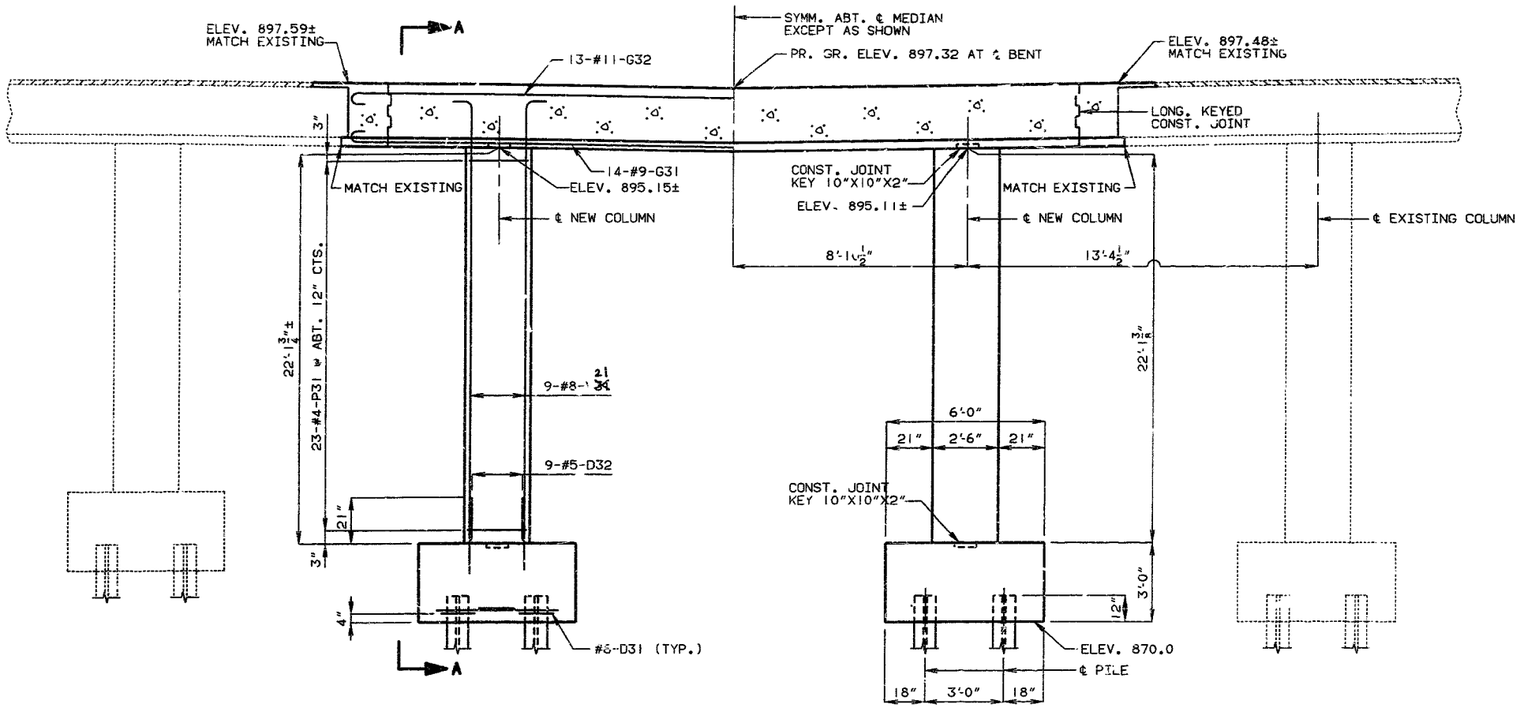
A-1662R2

14Y132

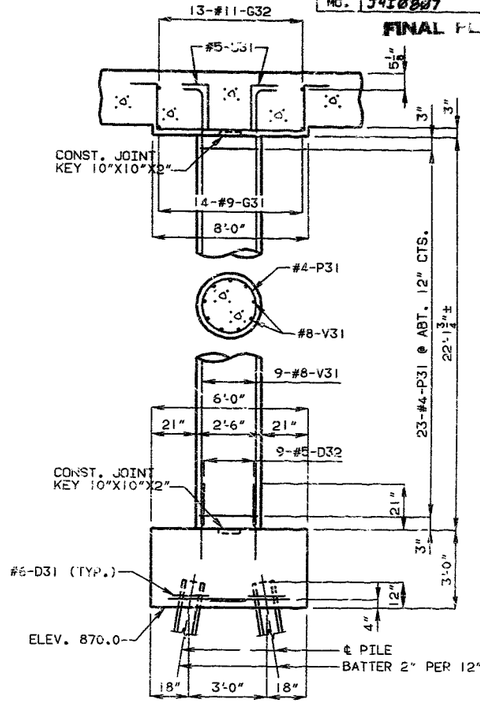
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	147

FINAL PLANS

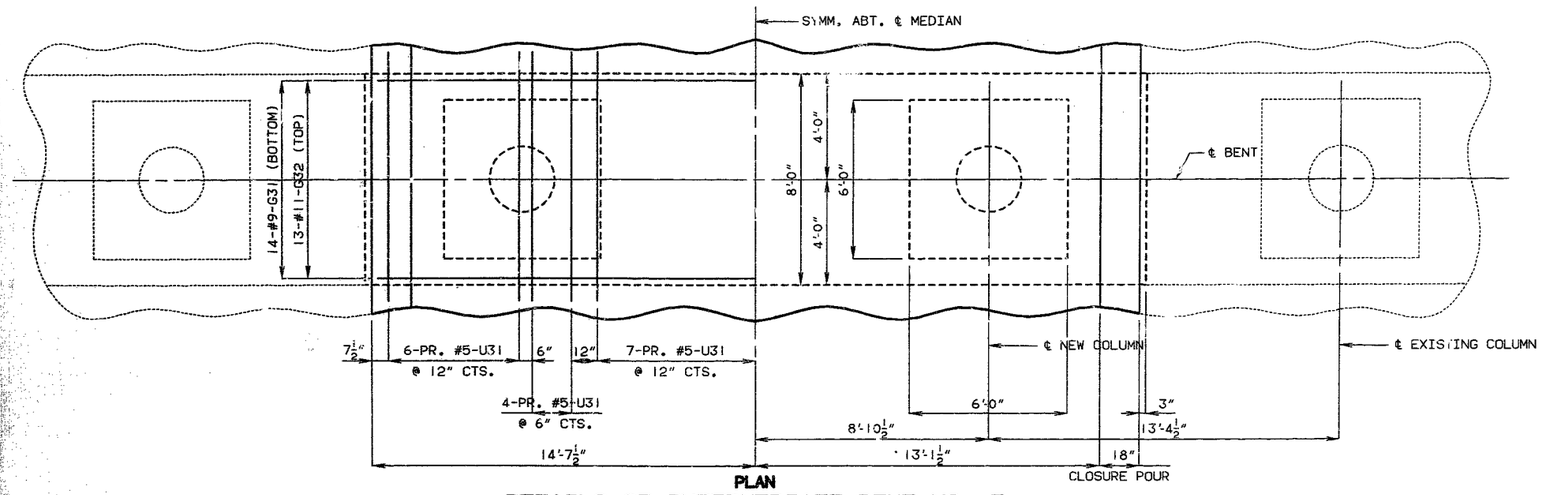
NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.



SECTION NEAR INTERMEDIATE BENT

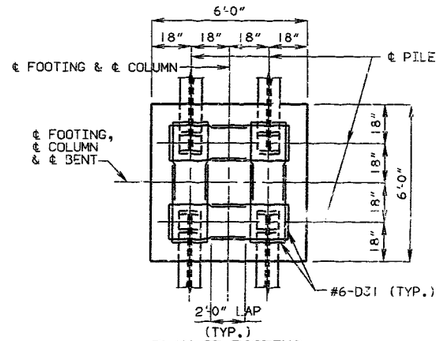


SECTION A-A



PLAN

DETAILS OF INTERMEDIATE BENT NO. 3



PLAN OF FOOTING SHOWING REINFORCEMENT

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	35.3
STRUCTURAL STEEL PILES (10")	LIN. FT.	118
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	8.0
REINFORCING STEEL (BRIDGES)	LB.	230

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

X32 13

DETAILED DEC. 1991
CHECKED JAN. 1992

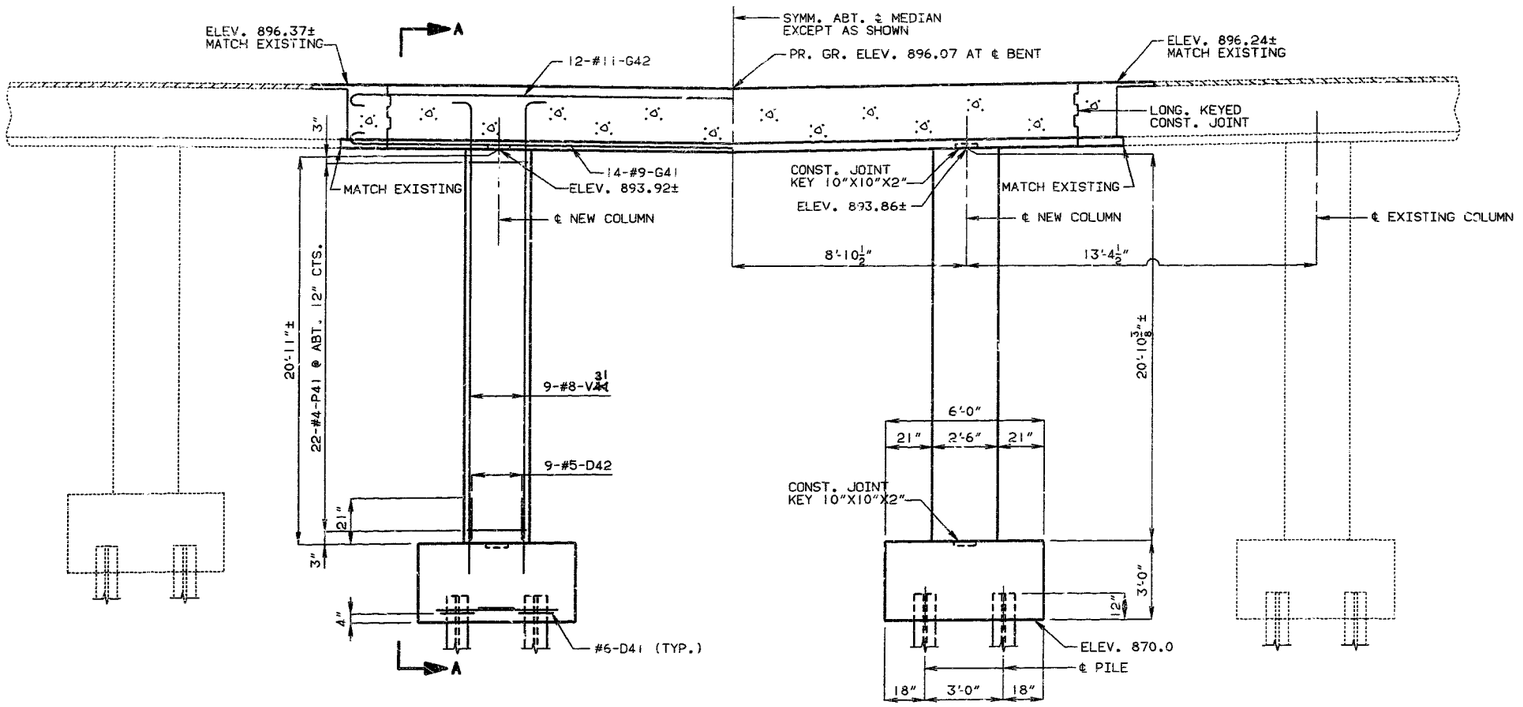
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1662R2

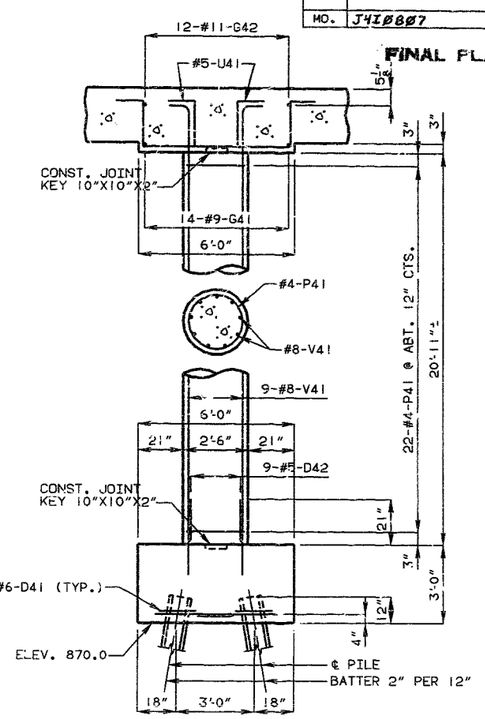
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	143

FINAL PLANS

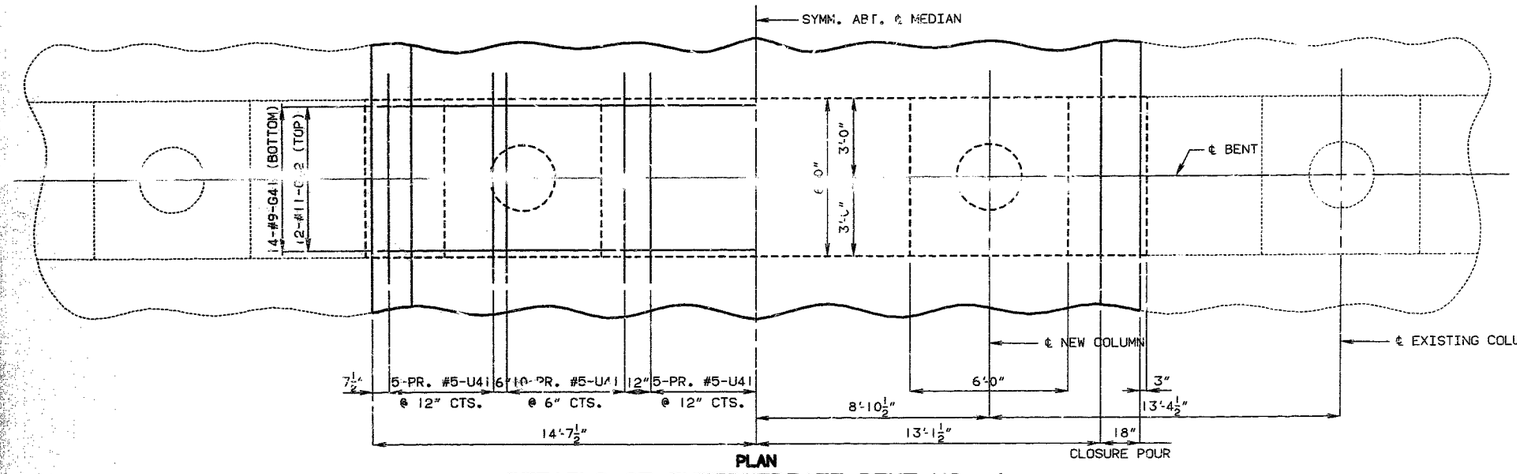
NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.



SECTION NEAR INTERMEDIATE BENT

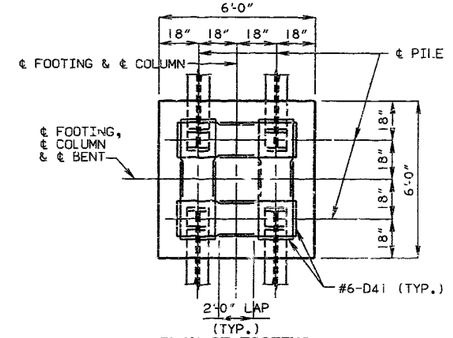


SECTION A-A



PLAN

DETAILS OF INTERMEDIATE BENT NO. 4



PLAN OF FOOTING SHOWING REINFORCEMENT

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 4		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	40!
STRUCTURAL STEEL PILES (10")	LIN. FT.	129
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	8.0
REINFORCING STEEL (BRIDGES)	LB.	230

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

DETAILED DEC. 1991
CHECKED JAN. 1992

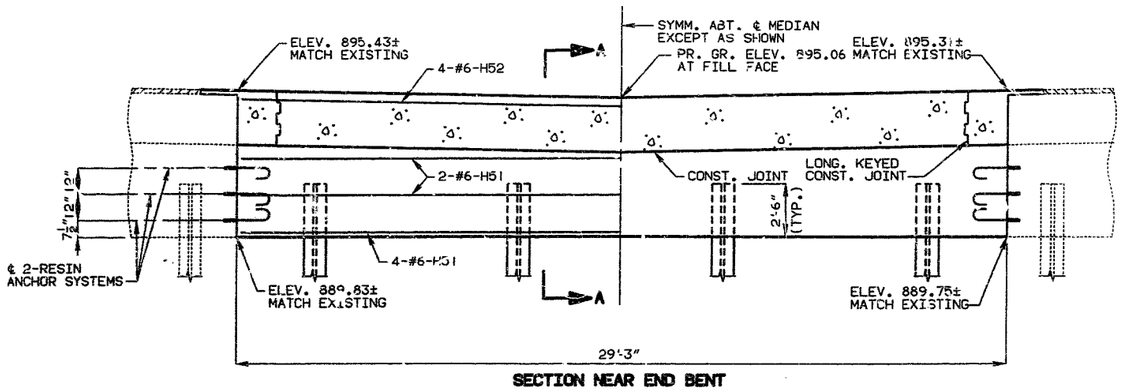
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-1662R2

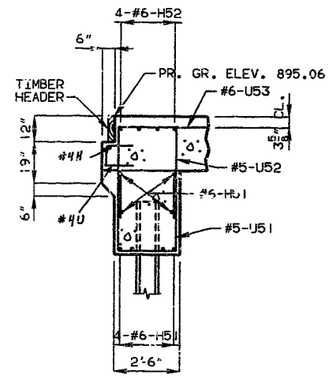
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	149

FINAL PLANS

NOTE: SLAB DEPTH VARIES, SEE SHEET NO. 10.

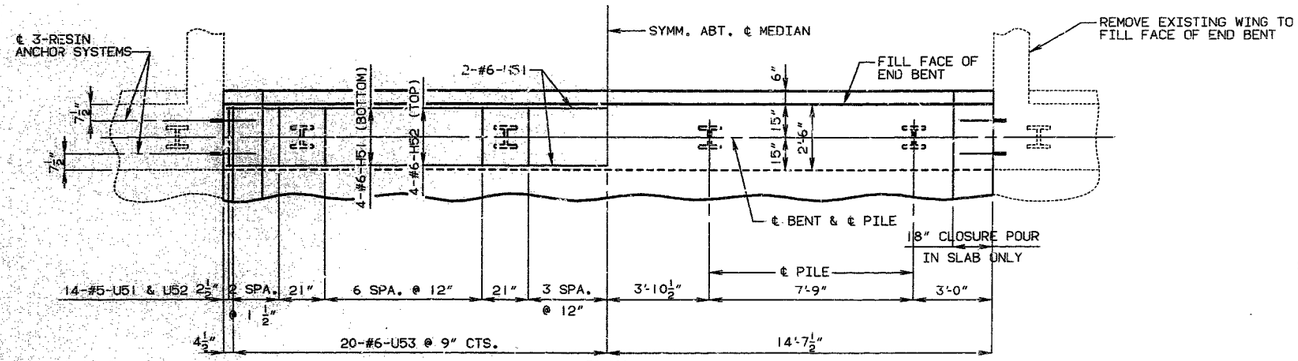


SECTION NEAR END BENT



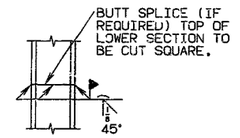
SECTION A-A

NOTE: FOR DETAILS OF TIMBER HEADER, SEE SHEET NO. 11.
FOR DETAIL OF RESIN ANCHOR SYSTEM, SEE SHEET NO. 8.



PLAN

DETAILS OF END BENT NO. 5



STEEL PILE SPLICE

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 5

ITEM		QUANTITY
CLASS I EXCAVATION	CU. YD.	11.4 ✓
STRUCTURAL STEEL PILES (10")	LIN. FT.	146 ✓

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 2.

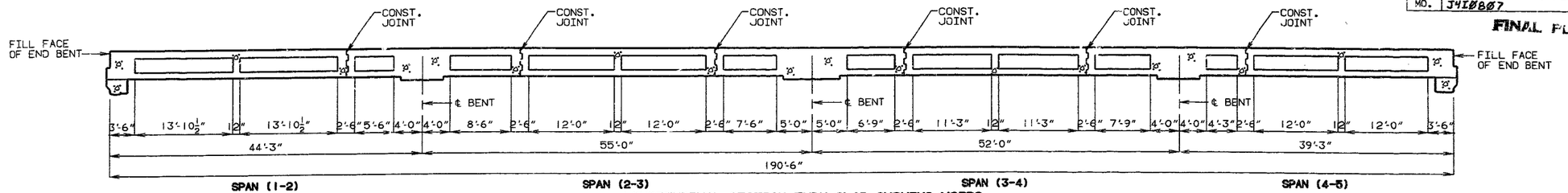
DETAILED DEC. 1991
CHECKED JAN. 1992

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

JACKSON COUNTY A-1662R2

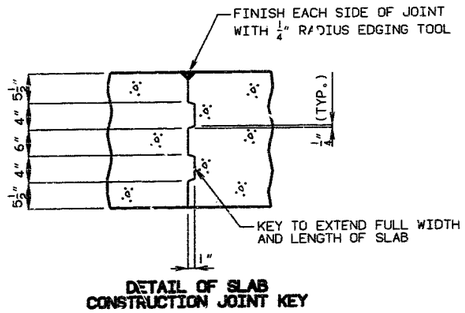
STATE	PROJ. NO.	SHEET NO.
MO.	J4IØBØ7	152

FINAL PLANS

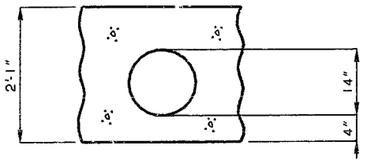


LONGITUDINAL SECTION THRU SLAB SHOWING VOIDS

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

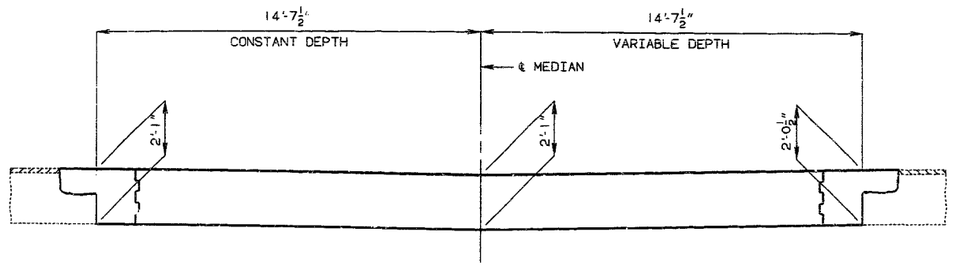


DETAIL OF SLAB CONSTRUCTION JOINT KEY

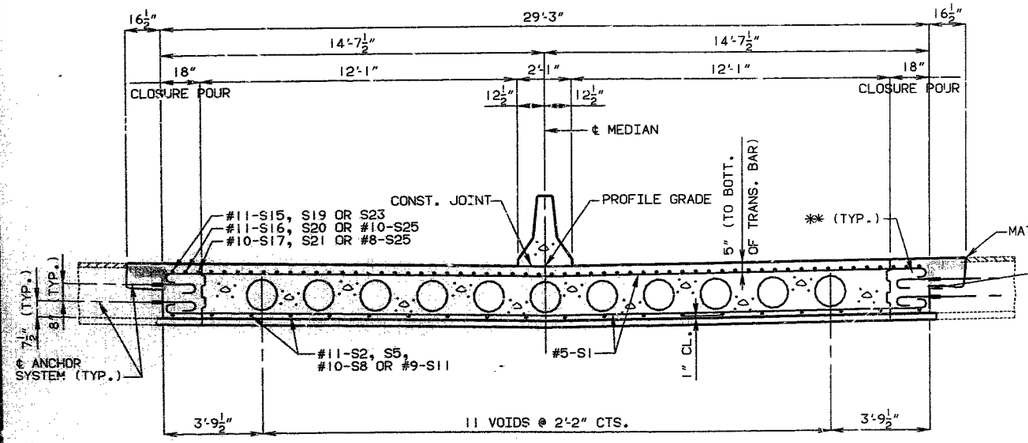


DETAIL OF VOID

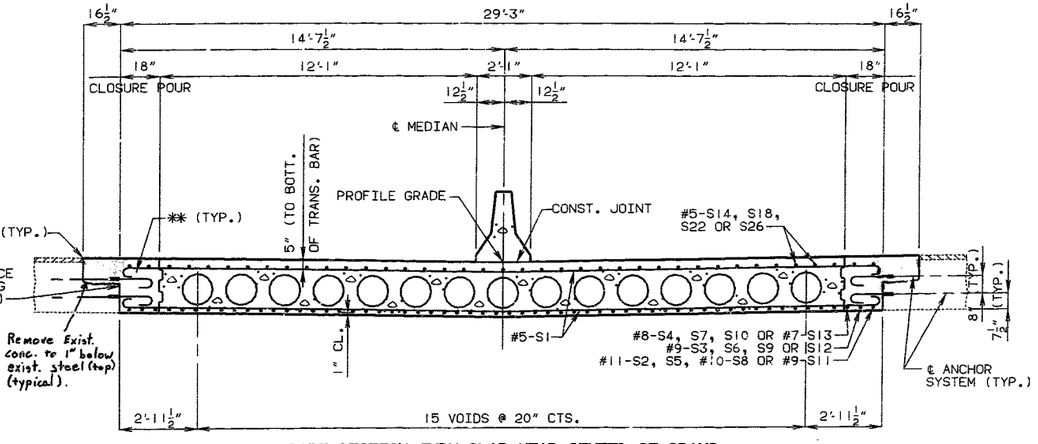
NOTE: TUBES FOR PRODUCING VOIDS SHALL HAVE AN OUTSIDE DIAMETER OF 14.0" AND SHALL BE ANCHORED AT NOT MORE THAN 4'-0" CENTERS. FIBER TUBES SHALL HAVE A WALL THICKNESS OF NOT LESS THAN .25".
** USE EXPANSIVE CLASS B2 CONCRETE IN CLOSURE POUR (SEE SPECIAL PROVISIONS). RELEASE FORMS BEFORE CLOSURE POUR IS PLACED.



PART SECTION THRU SLAB SHOWING SLAB DEPTH



PART SECTION THRU SLAB NEAR INT. BENTS



PART SECTION THRU SLAB NEAR CENTER OF SPANS

NOTE: ENTIRE ROADWAY NOT SHOWN FOR CLARITY, SEE SHEET NO. 2.
FOR DETAILS AND REINFORCEMENT OF MEDIAN BARRIER CURB, SEE SHEETS NO. 11 & 12.

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

DETAILED DEC. 1991
CHECKED DEC. 1991

SHEET NO. 10 OF 14.

JACKSON COUNTY

A-1662R2

FINAL PLANS

BILL OF REINFORCING STEEL

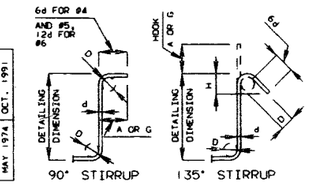
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
			SUBSTRUCTURE																
			INT BT NO 2																
16	6D21		FOOTING		10	S	X				3 2.000	16.000					7 8	7 4	176
18	5D22		FOOTING		20		X			2 9.000							2 9	2 9	52
			INT BT NO 3																
16	6D31		FOOTING		10	S	X				3 2.000	16.000					7 8	7 4	176
18	5D32		FOOTING		20		X			2 9.000							2 9	2 9	52
			INT BT NO 4																
16	6D41		FOOTING		10	S	X				3 2.000	16.000					7 8	7 4	176
18	5D42		FOOTING		20		X			2 9.000							2 9	2 9	52
			SUPERSTRUCT																
			END BT NO 1																
8	6N11		BEAM		20					29 0.000							29 0	29 0	348
6	6N12		SLAB	E	20					29 0.000							29 0	29 0	261
27	5U11		BEAM		10	S					3 0.000	2 3.000					8 3	8 1	228
27	5U12		BEAM	E	10	S					4 0.000	2 3.000					10 3	10 1	284
39	6U13		BEAM	E	19	S				3 0.000	4 1.000						7 1	6 11	405
1	4B	Haunch			20					29 0							29 0	29 0	19
20	4U	Haunch			10						17 5	0 6					4 4		58
			INT BT NO 2																
14	9G21		DROP PANEL	E	18					29 0.000							31 6	31 6	1499
13	11G22		SLAB	E	18					29 0.000							32 2	32 2	2222
48	4P21		COLUMN		16					2 3.000							7 11	7 11	254
78	5U21		SLAB	E	10	S				10.000	22.000	3 10.000	10.000				9 2	8 9	712
18	8V21		COLUMN		19					21 6.000	16.000						22 10	22 8	1089
18	8V	COLUMN			20					10 0							10 0	10 0	481
			INT BT NO 3																
14	9G31		DROP PANEL	E	18					29 0.000							31 6	31 6	1499
13	11G32		SLAB	E	18					29 0.000							32 2	32 2	2222
46	4P31		COLUMN		16					2 3.000							7 11	7 11	243
66	5U31		SLAB	E	10	S				10.000	22.000	5 2.000	10.000				10 6	10 1	694
18	8V21		COLUMN		19					24 0.000	16.000						25 4	25 2	1210

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	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.
			INT BT NO 4																
14	9G41		DROP PANEL	E	18					29 0.000							31 6	31 6	1499
12	11G42		SLAB	E	18					29 0.000							32 2	32 2	2051
44	4P41		COLUMN		16					2 3.000							7 11	7 11	233
78	5U41		SLAB	E	10	S				10.000	22.000	3 10.000	10.000				9 2	8 9	712
18	8V31		COLUMN		19					22 9.000	16.000						24 1	23 11	1149
			END BT NO X5																
8	6H51		BEAM		20					29 0.000							29 0	29 0	348
4	6H52		SLAB	E	20					29 0.000							29 0	29 0	174
1	4B	Haunch			20					29 0							29 0	29 0	19
27	5U51		BEAM		10	S					3 0.000	2 3.000					8 3	8 1	228
27	5U52		BEAM	E	10	S					4 0.000	2 3.000					10 3	10 1	284
39	6U53		BEAM	E	19	S				3 0.000	4 1.000						7 1	6 11	405
20	4U	Haunch			10						17 5	0 6					4 4		58
24	5C1		MEDIAN BARR.	E	20					10 0.000							10 0	10 0	292
400	5R1		MEDIAN BARR.	E	27	S					8.000	11.125	7.000	12.000	9.125	6.375	3 2	3 0	1252
400	5R2		MEDIAN BARR.	E	15	S				2 6.125	3.500				2 6.000	3.000	2 10	2 9	1147
7	5R3		MEDIAN BARR.	E	20					34 0.000							34 0	34 0	248
42	5R4		MEDIAN BARR.	E	20					9 9.000							9 9	9 9	427
7	5R5		MEDIAN BARR.	E	20					34 9.000							34 9	34 9	254
7	5R6		MEDIAN BARR.	E	20					31 9.000							31 9	31 9	232
7	5R7		MEDIAN BARR.	E	20					29 0.000							29 0	29 0	212
442	5S1		SLAB	E	18					29 0.000							30 2	30 2	13907
20	11S2		SLAB	E	20					47 5.000							47 5	47 5	5038
19	9S3		SLAB	E	20					32 5.000							32 5	32 5	2094
19	8S4		SLAB	E	20					21 3.000							21 3	21 3	1078
60	11S5		SLAB	E	20					24 10.000							24 10	24 10	7916
19	9S6		SLAB	E	20					32 6.000							32 6	32 6	2100
19	8S7		SLAB	E	20					20 6.000							20 6	20 6	1040
20	10S8		SLAB	E	20					56 11.000							56 11	56 11	4898
21	9S9		SLAB	E	20					30 0.000							30 0	30 0	2142
21	8S10		SLAB	E	20					19 6.000							19 6	19 6	1093
20	9S11		SLAB	E	20					41 4.000							41 4	41 4	2811
19	9S12		SLAB	E	20					30 5.000							30 5	30 5	1965
21	7S13		SLAB	E	20					19 0.000							19 0	19 0	816
39	9S14		SLAB	E	20					31 10.000							31 10	31 10	1295
20	11S15		SLAB	E	20					30 6.000							30 6	30 6	3241
19	11S16		SLAB	E	20					20 0.000							20 0	20 0	2019
19	10S17		SLAB	E	20					10 0.000							10 0	10 0	818
39	9S18		SLAB	E	20					28 4.000							28 4	28 4	1153
20	11S19		SLAB	E	20					31 2.000							31 2	31 2	3312
21	11S20		SLAB	E	20					19 6.000							19 6	19 6	2176
21	1 S21		SLAB	E	20					10 9.000							10 9	10 9	971
39	5S22		SLAB	E	20					27 11.000							27 11	27 11	1136
20	11S23		SLAB	E	20					27 5.000							27 5	27 5	2913
19	10S24		SLAB	E	20					15 6.000							15 6	15 6	1267
19	8S25		SLAB	E	20					8 3.000							8 3	8 3	419
41	5S26		SLAB	E	20					27 8.000							27 8	27 8	1183

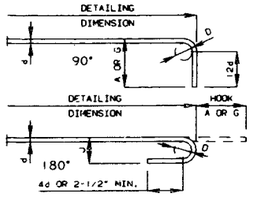
Two additional H12, S9, S10, S13, S20, S21 & S26 are included in the Bar Bill for testing.

180 137



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	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.

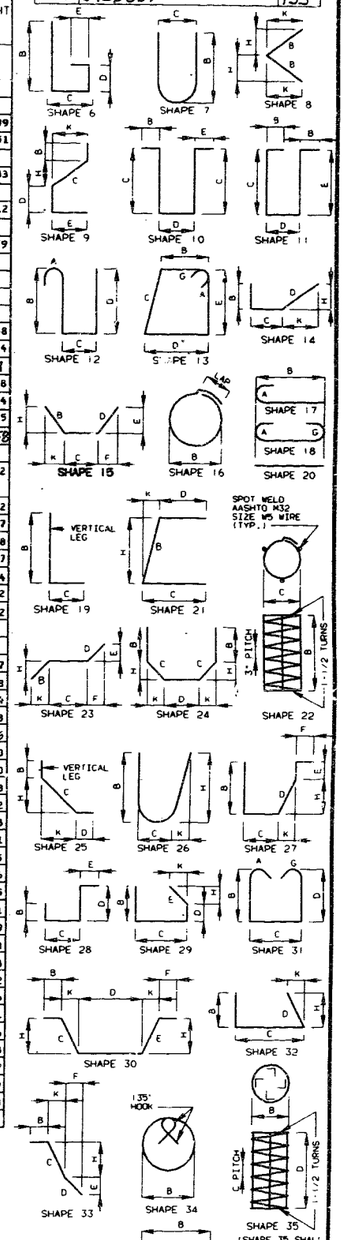


NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL GRADES			
		180 HOOKS		90 HOOKS	
		A OR G	J	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"	

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 FABRICATORS 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.

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	155



BENDING DIAGRAMS

REVISED	STD 90.8
OCT. 1991	MAY 1974

DETAILED JAN. 1992
CHECKED JAN. 1992

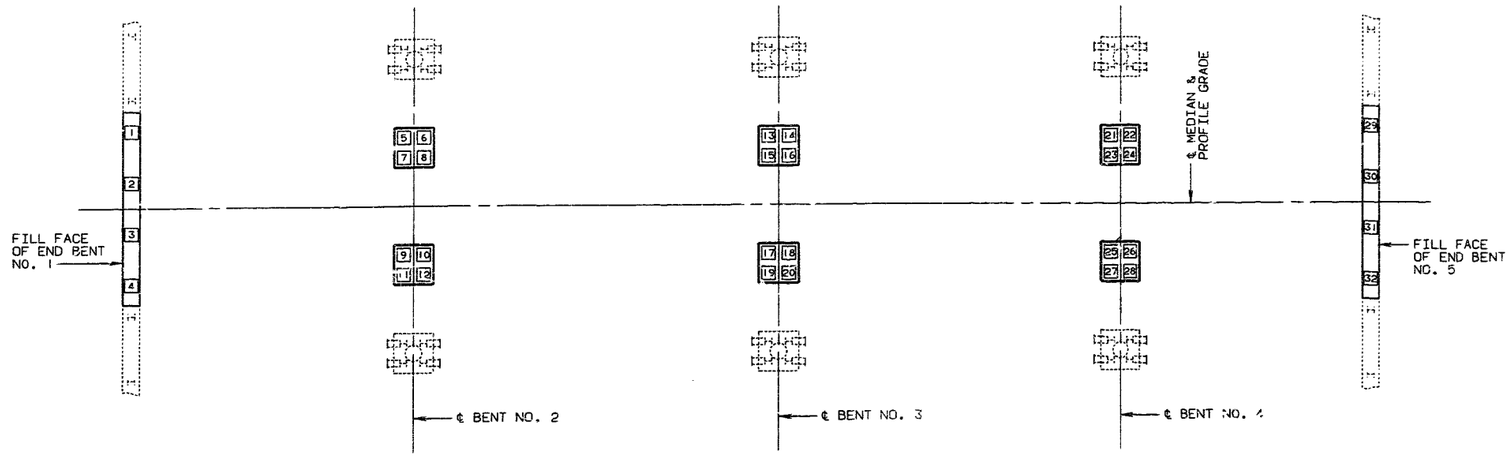
SHEET NO. 13 OF 14.

JACKSON COUNTY

A-1662R2

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	156

FINAL PLANS



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT" PILE DATA

"AS BUILT" PILE DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	Splice (Ft.)	REMARKS
				END BENT NO. 1
1	30'	147.5'	–	All pile driven to practical refusal HP 10x42
2	30'	107.3'	–	" " "
3	31'	112.2'	–	" " "
4	30'	78.7'	–	" " "
Subtotal	121'		0'	
				INTERMEDIATE BENT NO. 2
5	6'	225.8'	–	All pile driven to practical refusal HP 10x42
6	13'	112.9'	–	" " "
7	16'	102.6'	6'	" " "
8	14'	114.7'	–	" " "
9	6'	138.2'	–	" " "
10	19'	102.6'	8'	" " "
11	6'	225.8'	–	" " "
12	7'	188.2'	–	" " "
Subtotal	87'		16'	
				INTERMEDIATE BENT NO. 3
13	14'	141.1'	–	All pile driven to practical refusal HP 10x42
14	14'	173.7'	–	" " "
15	15'	173.7'	–	" " "
16	14'	173.7'	–	" " "
17	15'	161.3'	–	" " "
18	16'	161.3'	–	" " "
19	15'	141.1'	–	" " "
20	15'	141.1'	–	" " "
Subtotal	118'		0'	

"AS BUILT" PILE DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	Splice (Ft.)	REMARKS
				INTERMEDIATE BENT NO. 4
21	15'	141.1'	–	All pile driven to practical refusal HP 10x42
22	18'	141.1'	–	" " "
23	15'	161.3'	–	" " "
24	16'	141.1'	–	" " "
25	14'	188.2'	–	" " "
26	20'	102.6'	–	" " "
27	17'	141.1'	–	" " "
28	16'	141.1'	–	" " "
Subtotal	129'		0'	
				END BENT NO. 5
29	37'	147.5'	–	All pile driven to practical refusal HP 10x42
30	37'	147.5'	–	" " "
31	36'	131.1'	–	" " "
32	36'	118.0'	–	" " "
Subtotal	146'		0'	
Total	617'			

NOTE: INDICATE IN REMARK COLUMN:
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.
C.) TYPE OF PILING USED.

~~NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.~~

DETAILED SEPT. 1992
CHECKED SEPT. 1992

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

JACKSON COUNTY

A-1662R2

KC

Safe & Sound =

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A1662**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A1662** 1354	STRUCTURE STATUS :	P-POSTLOAD	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	77506 WASHINGTON
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	1-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	RICHARD KINGERY (STATE), TERRY WILSON (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	10/11/2011
FACILITY CARRIED :	**IS 435 N**	DEFICIENT CODE :		LANES ON STRUCTURE	5	INSPECTION FREQUENCY :	24
CURB TO CURB :	72 Ft. 10 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	6	LATITUDE :	38 56 25.5 (DMS)
STRUCTURE LENGTH :	191 FEET	YEAR BUILT :	1966	BEGINNING COMPASS DIRECTION :	EAST	LONGITUDE :	94 34 57.84 (DMS)
FEATURE INTERSECTED :	**CST HOLMES RD**	RECONSTRUCTION YEAR	1994	ENDING COMPASS DIRECTION :	WEST	SCOUR EVALUATION TYPE :	

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-C3 LIMITS : Ton1 : 60 WEIGHT LIMIT 60 TONS.
FIELD POSTING CATEGORY : S-C3 LIMITS : Ton1 : 60 WEIGHT LIMIT 60 TONS.
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 65303 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI :	FREQUENCY :	NBI :	FREQUENCY :
PIN :	DATE :	PIN :	DATE :
CATEGORY :		CATEGORY :	
METHODS :		METHODS :	
INSPECTORS :		INSPECTORS :	
COMMENTS :		COMMENTS :	

NBI :	FREQUENCY :	NBI :	FREQUENCY :
PIN :	DATE :	PIN :	DATE :
CATEGORY :		CATEGORY :	
METHODS :		METHODS :	
INSPECTORS :		INSPECTORS :	
COMMENTS :		COMMENTS :	

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (44'-55'-52'-39') CONT CONC VOIDED SLAB SPANS (WIDENED)

RATINGS : **(ITEM 58) DECK RATING :** 6-SATISFACTORY CONDITION 10/31/2011
COMMENTS : T CRACKS

(ITEM 59) SUPERSTRUCTURE RATING : 6-SATISFACTORY CONDITION 10/31/2011
COMMENTS : T CRACKS AND EDGE DETER

(ITEM 60) SUBSTRUCTURE RATING : 6-SATISFACTORY CONDITION 10/31/2011
COMMENTS : VERTICAL CRACKS AND LEACHING

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN REINFORCED CONCRETE VOIDED SLAB NUMBER OF SPANS : 4
TOTAL NUMBER OF SPANS : 4

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	0 DOESNT MEET CURRNT STND	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :
COMPONENT : BRIDGE RAILING REINFORCED CONCRETE SAFETY BARRIER CURB DIRECTION : BOTH

(ITEM 36B) TRANSITION RAILING :
COMPONENT : TRANSITION RAILING GALVANIZED STEEL W-BEAM DIRECTION : BOTH-SOUTH

(ITEM 36C) APPROACH RAILING :
COMPONENT : APPROACH RAILING GALVANIZED STEEL W-BEAM DIRECTION : BOTH-SOUTH

(ITEM 36D) RAIL END TREATMENT :
COMPONENT : RAIL END TREATMENT GALVANIZED STEEL BREKAWAY SYSTEM MANUFACTURE : BCT DIRECTION : SOUTHWEST
COMMENTS : CONTINUOUS CONCRETE - NORTH

Design_No = A1662

APPROACH PAVEMENT :

COMPONENT : APPROACH PAVEMENT ASPHALT BITUMINOUS MAT DIRECTION : BOTH

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

COMMENT S : T CRACKS

DECK COMPONENTS

MAIN SPANS 1			
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE
CONDITION : MAP CRACKS		THROUGHOUT	MANY
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY
MAIN SPANS 2			
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE
CONDITION : MAP CRACKS		THROUGHOUT	MANY
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY
MAIN SPANS 3			
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE
CONDITION : MAP CRACKS		THROUGHOUT	MANY
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY
MAIN SPANS 4			
COMPONENT : DECK		REINFORCED CONCRETE	CAST-IN-PLACE
CONDITION : MAP CRACKS		THROUGHOUT	MANY
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY

DRAINAGE COMPONENTS

DRAINAGE 0			
COMPONENT : DRAINAGE		REINFORCED CONCRETE	DRAIN BASIN-END BENT

PROTECTIVE COMPONENTS

MAIN SERIES 1				
COMPONENT : WEARING SURFACE		PLAIN CONCRETE	LOW SLUMP	OVERALL CONDITION : VERY POOR
CONDITION : DEBONDING		THROUGHOUT	MODERATE	
CONDITION : TRANSVERSE CRACKS		THROUGHOUT	MANY	
CONDITION : PATCHES		THROUGHOUT	MANY	
COMPONENT : DECK PROTECTION		NOTAPPLICABLE	NONE	
COMPONENT : MEMBRANE		LIQUID SEALANT	BUILT-UP	

RAILING COMPONENTS

BRIDGE RAILING 0			
COMPONENT : BRIDGE RAILING		REINFORCED CONCRETE	SAFETY BARRIER CURB
COMPONENT : TRANSITION RAILING		GALVANIZED STEEL	W-BEAM
COMPONENT : APPROACH RAILING		GALVANIZED STEEL	W-BEAM
COMPONENT : RAIL END TREATMENT		GALVANIZED STEEL	BREKAWAY SYSTEM
COMMENTS : CONTINUOUS CONCRETE - NORTH			

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

COMMENT S : T CRACKS AND EDGE DETER

MAIN SERIES 1 CONTINUOUS SPAN REINFORCED CONCRETE VOIDED SLAB NUMBER OF SPANS : 4

APPROACH ROADWAY WIDTH : 75 FOOT 2 INCH CURB TO CURB : 72 FOOT 10 INCH OUT TO OUT : 75 FOOT 2 INCH

MAIN SPANS 1	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	VOIDED SLAB	LENGTH : 44 FOOT 3 INCH	LENGTH : 55 FOOT 0 INCH WEATHERING IND :
CONDITION : EFFLORESCENCE		MINOR	THROUGHOUT			
CONDITION : TRANSVERSE CRACKS		FEW	THROUGHOUT			
CONDITION : DELAMINATION		MEDIUM	EDGE			
CONDITION : SPALLS		MEDIUM	EDGE			
MAIN SPANS 2	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	VOIDED SLAB	LENGTH : 55 FOOT 0 INCH	WEATHERING IND :
CONDITION : EFFLORESCENCE		MINOR	THROUGHOUT			
CONDITION : TRANSVERSE CRACKS		FEW	THROUGHOUT			
CONDITION : DELAMINATION		MEDIUM	EDGE			
CONDITION : SPALLS		MEDIUM	EDGE			
MAIN SPANS 3	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	VOIDED SLAB	LENGTH : 52 FOOT 0 INCH	WEATHERING IND :

CONDITION :	EFFLORESCENCE	MINOR	THROUGHOUT				
CONDITION :	TRANSVERSE CRACKS	FEW	THROUGHOUT				
CONDITION :	DELAMINATION	MEDIUM	EDGE				
CONDITION :	SPALLS	MEDIUM	EDGE				
MAIN SPANS 4	CONTINUOUS SPAN	NON-COMPOSITE	REINFORCED CONCRETE	VOIDED SLAB	LENGTH : 39 FOOT 3 INCH		WEATHERING IND :
CONDITION :	EFFLORESCENCE	MINOR	THROUGHOUT				
CONDITION :	TRANSVERSE CRACKS	FEW	THROUGHOUT				
CONDITION :	DELAMINATION	MEDIUM	EDGE				
CONDITION :	SPALLS	MEDIUM	EDGE				

TOTAL NUMBER OF SPANS 4

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION

COMMENT S : VERTICAL CRACKS AND LEACHING

ABUTMENT	1	LABEL :			REINFORCED CONCRETE	INTEGRAL
RIGHTADVAN LENGTH : 66 FOOT 10 INCH						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : LEACHING		THROUGHOUT	MEDIUM			
CONDITION : VERTICAL CRACKS		THROUGHOUT	MEDIUM			
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		
BENT	2	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
BENT	3	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
BENT	4	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
ABUTMENT	5	LABEL :			REINFORCED CONCRETE	INTEGRAL
RIGHTADVAN LENGTH : 66 FOOT 10 INCH						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS

COMMENTS : T CRACKS

COMMENTS : T CRACKS AND EDGE DETER

COMMENTS : VERTICAL CRACKS AND LEACHING

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : N-NOT APPLIC NO WATRWAY

SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : N-NOT APPLIC NOT WATERW

WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : NOT APPLICABLE

APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD

SLOPE PROTECTION

PLAIN CONCRETE PAVEDSLOPE BOTH

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION

RUST AMOUNT :

STEEL TONS :

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

CREW : LAYER : DATE :

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED

PROGRAM RECOMMENDATIONS

KC

Safe & Sound =

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A1662**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A1662** 1353	STRUCTURE STATUS :	P-POSTLOAD	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	77506 WASHINGTON
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	1-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	RICHARD KINGERY (STATE), TERRY WILSON (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	10/11/2011
FACILITY CARRIED :	**IS 435 S**	DEFICIENT CODE :		LANES ON STRUCTURE	5	INSPECTION FREQUENCY :	24
CURB TO CURB :	72 Ft. 10 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	6	LATITUDE :	38 56 26.32 (DMS)
STRUCTURE LENGTH :	191 FEET	YEAR BUILT :	1966	BEGINNING COMPASS DIRECTION :	EAST	LONGITUDE :	94 34 57.82 (DMS)
FEATURE INTERSECTED :	**CST HOLMES RD**	RECONSTRUCTION YEAR	1994	ENDING COMPASS DIRECTION :	WEST	SCOUR EVALUATION TYPE :	

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-C3 LIMITS : Ton1 : 60 WEIGHT LIMIT 60 TONS.
FIELD POSTING CATEGORY : S-C3 LIMITS : Ton1 : 60 WEIGHT LIMIT 60 TONS.
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 65560 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :
PIN : DATE :	PIN : DATE :	PIN : DATE :	PIN : DATE :
CATEGORY :	CATEGORY :	CATEGORY :	CATEGORY :
METHODS :	METHODS :	METHODS :	METHODS :
INSPECTORS :	INSPECTORS :	INSPECTORS :	INSPECTORS :
COMMENTS :	COMMENTS :	COMMENTS :	COMMENTS :

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (44'-55'-52'-39') CONT CONC VOIDED SLAB SPANS (WIDENED)

RATINGS : **(ITEM 58) DECK RATING :** 6-SATISFACTORY CONDITION 10/31/2011
COMMENTS : CRACKS AND SPALLS

(ITEM 59) SUPERSTRUCTURE RATING : 6-SATISFACTORY CONDITION 10/31/2011
COMMENTS : EDGE DETER AND DELAMS

(ITEM 60) SUBSTRUCTURE RATING : 7-GOOD CONDITION 10/31/2011
COMMENTS : CRACKING AT ABUTS.

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN REINFORCED CONCRETE VOIDED SLAB NUMBER OF SPANS : 4
TOTAL NUMBER OF SPANS : 4

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	0 DOESNT MEET CURRNT STND	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :
COMPONENT : BRIDGE RAILING REINFORCED CONCRETE SAFETY BARRIER CURB DIRECTION : BOTH

(ITEM 36B) TRANSITION RAILING :
COMPONENT : TRANSITION RAILING GALVANIZED STEEL THRIE BEAM TO W-BEAM DIRECTION : BOTH-NORTH

(ITEM 36C) APPROACH RAILING :
COMPONENT : APPROACH RAILING GALVANIZED STEEL W-BEAM DIRECTION : BOTH-NORTH

(ITEM 36D) RAIL END TREATMENT :
COMPONENT : RAIL END TREATMENT GALVANIZED STEEL BREKAWAY SYSTEM MANUFACTURE : BCT DIRECTION : BOTH-NORTH

APPROACH PAVEMENT :

Design_No = A1662

COMPONENT : APPROACH PAVEMENT ASPHALT BITUMINOUS MAT DIRECTION : BOTH
CONDITION : PATCHES DRIVING SURFACE MODERATE
CONDITION : SPALLS DRIVING SURFACE MODERATE

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION
COMMENT S : CRACKS AND SPALLS

DECK COMPONENTS

MAIN SPANS 1
COMPONENT : DECK REINFORCED CONCRETE CAST-IN-PLACE
MAIN SPANS 2
COMPONENT : DECK REINFORCED CONCRETE CAST-IN-PLACE
MAIN SPANS 3
COMPONENT : DECK REINFORCED CONCRETE CAST-IN-PLACE
MAIN SPANS 4
COMPONENT : DECK REINFORCED CONCRETE CAST-IN-PLACE

DRAINAGE COMPONENTS

DRAINAGE 0
COMPONENT : DRAINAGE REINFORCED CONCRETE DRAIN BASIN-END BENT
COMMENTS : LARGE AREA OF EROSION UNDER DRAIN BASIN AT NW CORNER

PROTECTIVE COMPONENTS

MAIN SERIES 1
COMPONENT : WEARING SURFACE PLAIN CONCRETE LOW SLUMP OVERALL CONDITION : POOR
CONDITION : DEBONDING THROUGHOUT MODERATE
CONDITION : MAP CRACKS THROUGHOUT MANY
CONDITION : PATCHES THROUGHOUT LARGE
CONDITION : SPALLS THROUGHOUT MEDIUM
COMPONENT : DECK PROTECTION NOTAPPLICABLE NONE
COMPONENT : MEMBRANE LIQUID SEALANT BUILT-UP

RAILING COMPONENTS

APPROACH RAILING 0
COMPONENT : APPROACH RAILING GALVANIZED STEEL W-BEAM
COMPONENT : BRIDGE RAILING REINFORCED CONCRETE SAFETY BARRIER CURB
COMPONENT : RAIL END TREATMENT GALVANIZED STEEL BREKAWAY SYSTEM MANUFACTURE : BCT
COMPONENT : TRANSITION RAILING GALVANIZED STEEL THRIE BEAM TO W-BEAM

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 6-SATISFACTORY CONDITION
COMMENT S : EDGE DETER AND DELAMS

MAIN SERIES 1 CONTINUOUS SPAN REINFORCED CONCRETE VOIDED SLAB NUMBER OF SPANS : 4
COMMENTS : 2 LONG EXPANSION DEVICES - LANES 1 AND 5 - FAIR CONDITION
APPROACH ROADWAY WIDTH : 75 FOOT 2 INCH CURB TO CURB : 72 FOOT 10 INCH OUT TO OUT : 75 FOOT 2 INCH
MAIN SPANS 1 CONTINUOUS SPAN NON-COMPOSITE REINFORCED CONCRETE VOIDED SLAB LENGTH : 44 FOOT 3 INCH LENGTH : 55 FOOT 0 INCH WEATHERING IND :
MAIN SPANS 2 CONTINUOUS SPAN NON-COMPOSITE REINFORCED CONCRETE VOIDED SLAB LENGTH : 55 FOOT 0 INCH WEATHERING IND :
CONDITION : DELAMINATION MODERATE EDGE
COMMENTS : OVER TRAFFIC
MAIN SPANS 3 CONTINUOUS SPAN NON-COMPOSITE REINFORCED CONCRETE VOIDED SLAB LENGTH : 52 FOOT 0 INCH WEATHERING IND :
CONDITION : DELAMINATION MODERATE EDGE
COMMENTS : OVER TRAFFIC
MAIN SPANS 4 CONTINUOUS SPAN NON-COMPOSITE REINFORCED CONCRETE VOIDED SLAB LENGTH : 39 FOOT 3 INCH WEATHERING IND :

TOTAL NUMBER OF SPANS 4

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 7-GOOD CONDITION
COMMENT S : CRACKING AT ABUTS.

ABUTMENT 1 LABEL : REINFORCED CONCRETE INTEGRAL
RIGHTADVAN LENGTH : 66 FOOT 10 INCH

Design_No = A1662

BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : DELAMINATION		THROUGHOUT	MINOR			
CONDITION : LEACHING		THROUGHOUT	MINOR			
CONDITION : VERTICAL CRACKS		THROUGHOUT	MEDIUM			
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		
BENT	2	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
BENT	3	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
BENT	4	LABEL :			REINFORCED CONCRETE	MULTIPLE COLUMN
COLUMN			REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE		
FOOTING			REINFORCED CONCRETE	H-PILE		
ABUTMENT	5	LABEL :			REINFORCED CONCRETE	INTEGRAL
RIGHTADVAN LENGTH : 66 FOOT 10 INCH						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : LEACHING		THROUGHOUT	MINOR			
CONDITION : VERTICAL CRACKS		THROUGHOUT	MINOR			
PILING			STEEL	H-SHAPE		
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS

COMMENTS : CRACKS AND SPALLS
COMMENTS : EDGE DETER AND DELAMS
COMMENTS : CRACKING AT ABUTS.

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : N-NOT APPLIC NO WATRWAY
SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : N-NOT APPLIC NOT WATERW
WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : NOT APPLICABLE
APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION RUST AMOUNT : STEEL TONS :

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

CREW : LAYER : DATE :

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED

PROGRAM RECOMMENDATIONS

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

August 1, 2013
10:50:28am

COUNTY : JACKSON **BRIDGE NO.** A1662 R2 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	1353
27	Year Built	1966
106	Year Reconstructed	1994
42A	Type of Service On	HIGHWAY
21	Structure Maintenance	STATE HIGHWAY AGENCY
22	Structure Owner	STATE HIGHWAY AGENCY
33	Br. Median Code	CLOSED MEDIAN(NO BARRIER)
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 S
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006042
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	05
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	WASHINGTON
	Code	77506
9	Location	S 32 T 48 N R 33 W
11	Milepoint	53.59 miles
16	Latitude	38 D 56 M 26 S
17	Longitude	94 D 34 M 58 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	65560
30	AADT Year	2012
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	18%
114	Future AADT	88506
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	CST HOLMES RD
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	06
54A	Vert. Clearance Ref.	HIGHWAY
54B	Vert. Clearance	18 Ft. 2 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	8 Ft. 2 In.
56	Left Lat Clearance	2 Ft. 11 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	75 Ft. 1 In.
34	Skew	0.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	74 Ft. 1 In.
48	Maximum Span Length	55 Ft. 1 In.
49	Structure Length	190 Ft. 0 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	72 Ft. 9 In.
52	Deck Width (Out-Out)	75 Ft. 1 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A1662 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

August 1, 2013
10:51:41am

COUNTY : JACKSON **BRIDGE NO.** A1662 R2 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

LOAD RATING AND POSTING INFORMATION

31	Design Load	HS 20
41	Structure Status	P - POSTED FOR LOAD
63	Oper. Rating Meth.	LOAD FACTOR
64	Operating Rating	60 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	36 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	83.5 Percent
	Deficiency Rating	FUNCTIONAL
	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	DOES NOT MEET ACCEPT STND
67	Struc Eval App. Rating	6
68	Deck Geometry App. Rating	4
69	Underclearance App. Rating	3
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	N

APPROVED POSTING INFORMATION

Approved Posting Categor S-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	60		

General Text for Posting Sign

WEIGHT LIMIT 60 TONS.

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	CONCRETE CONTINUOUS
43B	Main struc Constr. Type	SLAB
45	# of Main Spans	4
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.	1 BUILT UP
108C	Deck Protect Mat/Constr.	0 NONE

CONDITION RATING INFORMATION

58	Deck Cond. Rating	6
59	Superstructure Cond. Rating	6
60	Substructure Cond. Rating	7
61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	10 / 11	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Insp. Dat	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-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	60		

General Text for Posting Sign

WEIGHT LIMIT 60 TONS.

Design_No = A1662 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

August 1, 2013
10:51:41am

COUNTY : JACKSON **BRIDGE NO.** A1662 R2 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	1354
27	Year Built	1966
106	Year Reconstructed	1994
42A	Type of Service On	HIGHWAY
21	Structure Maintenance	STATE HIGHWAY AGENCY
22	Structure Owner	STATE HIGHWAY AGENCY
33	Br. Median Code	CLOSED MEDIAN(NO BARRIER)
37	Historical Significance	NOT ELIGIBLE FOR NR OF HP
101	Parallel Struc Desg	RIGHT
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 N
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006039
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	05
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	WASHINGTON
	Code	77506
9	Location	S 32 T 48 N R 33 W
11	Milepoint	1.39 miles
16	Latitude	38 D 56 M 26 S
17	Longitude	94 D 34 M 58 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	65303
30	AADT Year	2012
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	18%
114	Future AADT	88159
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	CST HOLMES RD
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	06
54A	Vert. Clearance Ref.	HIGHWAY
54B	Vert. Clearance	18 Ft. 2 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	8 Ft. 2 In.
56	Left Lat Clearance	2 Ft. 11 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	75 Ft. 1 In.
34	Skew	0.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	74 Ft. 1 In.
48	Maximum Span Length	55 Ft. 1 In.
49	Structure Length	190 Ft. 0 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	72 Ft. 9 In.
52	Deck Width (Out-Out)	75 Ft. 1 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A1662 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

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RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

LOAD RATING AND POSTING INFORMATION

31	Design Load	HS 20
41	Structure Status	P - POSTED FOR LOAD
63	Oper. Rating Meth.	LOAD FACTOR
64	Operating Rating	60 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	36 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	83.5 Percent
	Deficiency Rating	FUNCTIONAL
	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	DOES NOT MEET ACCEPT STND
67	Struc Eval App. Rating	6
68	Deck Geometry App. Rating	4
69	Underclearance App. Rating	3
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	N

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	CONCRETE CONTINUOUS
43B	Main struc Constr. Type	SLAB
45	# of Main Spans	4
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.	1 BUILT UP
108C	Deck Protect Mat/Constr.	0 NONE

CONDITION RATING INFORMATION

58	Deck Cond. Rating	6
59	Superstructure Cond. Rating	6
60	Substructure Cond. Rating	6
61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	10 / 11	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Insp. Dat	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.

APPROVED POSTING INFORMATION

Approved Posting Categor S-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	60		

General Text for Posting Sign

WEIGHT LIMIT 60 TONS.

FIELD POSTING INFORMATION

Field Posting Category S-C3

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	60		

General Text for Posting Sign

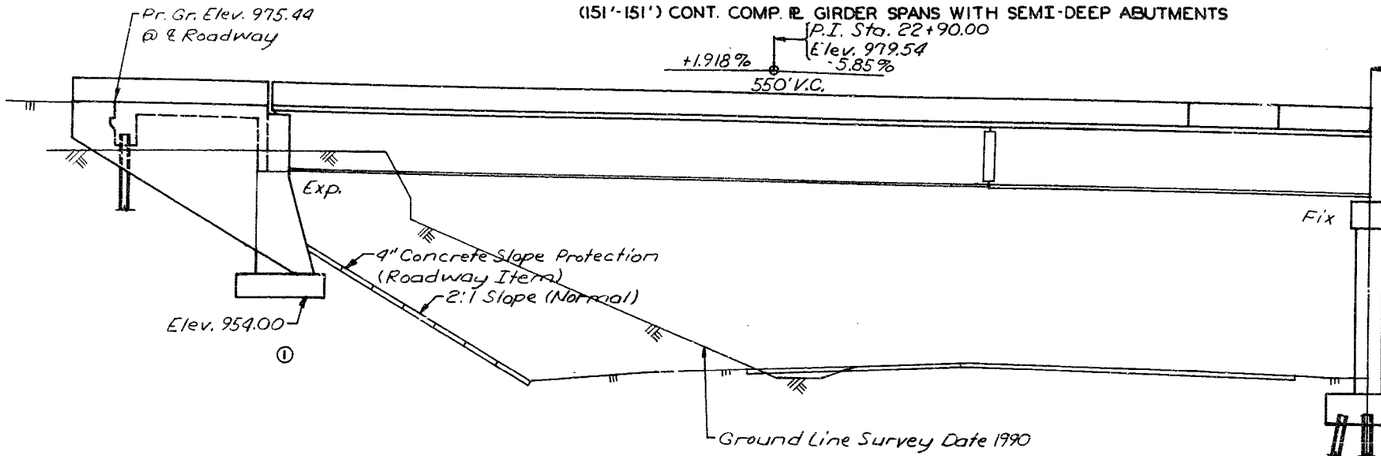
WEIGHT LIMIT 60 TONS.

Design_No = A1662 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ NO	SHEET NO
MO.		173
SEC / SUR 34	TWP 48N	RGE. 33W

(151'-151') CONT. COMP. ℄ GIRDER SPANS WITH SEMI-DEEP ABUTMENTS



Note; Cost of removal of existing footing shall be included in the cost of Removal of Bridges (A-1792).

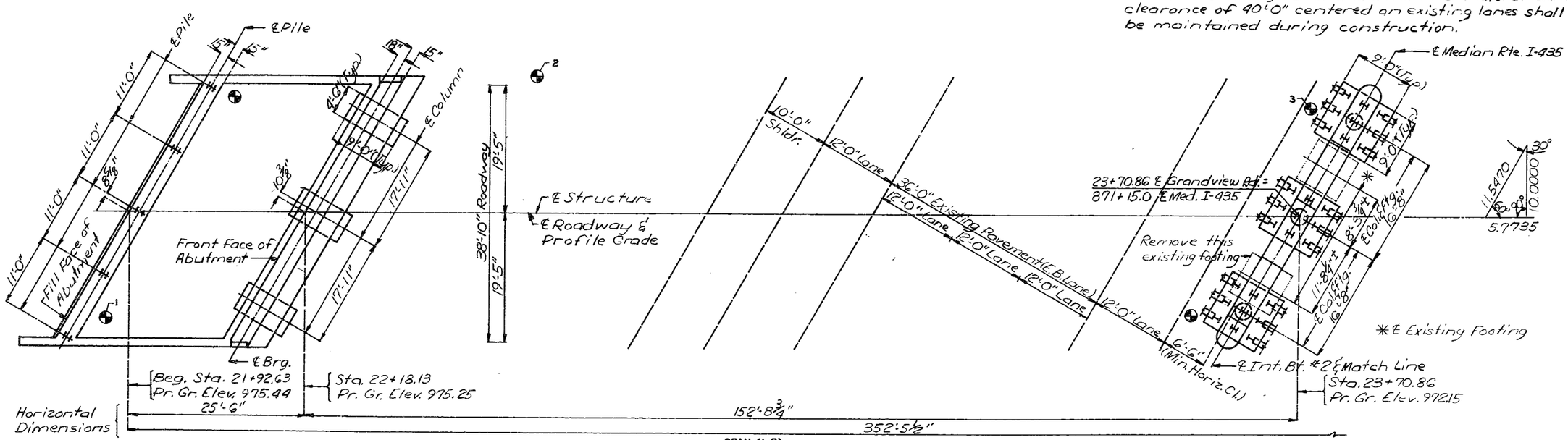
PART GENERAL ELEVATION

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA

The locations of all subsurface boring for this structure are shown on the bridge plan sheet(s) for this structure. Boring data for the numbered locations is shown on sheet(s) no.3 The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, is available from the district materials engineer upon written request as outlined in the project special provisions. No greater significance or weight should be given to the boring data depicted on the plan sheets than to subsurface data available from the district or elsewhere.

The commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the commission.

Note; A minimum vertical clearance of 15'0" from crown of existing lanes and a minimum lateral lateral clearance of 90'0" centered on existing lanes shall be maintained during construction.



PART PLAN

Note: "⊕" Indicates location of borings. Boring Data for all locations is available upon request from the District Office. Boring data for numbered locations is detailed on sheet No. 3

For General Notes, Estimated Quantities & Pile Data see sheet No. 4.

CURVE DATA GRANDVIEW RD.

P.I. 21.19.20	P.I. 28+04.32
Δ = 60°00' Rt.	Δ = 14°20' Rt
R = 150'	D = 12°
T = 86.60'	T = 60.16'
L = 157.08'	L = 119.44'
S.E. = Var.	S.E. = 0.02%
Ls = 150'	R = 478.3 Cord

B.M. T.B.M #2 Elev. 962.89 Chiseled □ On N.W. Cor. Br. Curb 17' ± Lt./o 25+19 ± ℄ N.W. Cor. Bridge A-1792

BRIDGE: GRANDVIEW ROAD UNDERPASS

STATE ROAD: INTERSTATE ROUTE 435

IN KANSAS CITY

PROJECT NO. **STA.** 871+15.0

JOB NO. J4I0807 **RTE.** I-435

JACKSON **COUNTY**

DATE 3/1/94

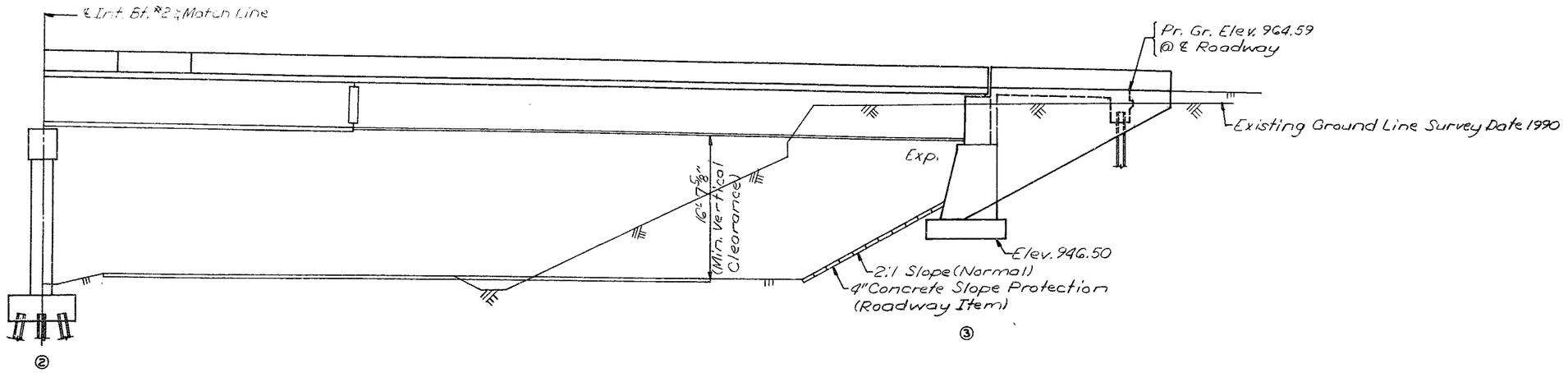
STD. 504.00
STD. 605.10
STD. 609.00
STD. 706.35
STD. 611.60
A-5249

DESIGNED JUN. 1992
DETAILED JUN. 1992
CHECKED July 1992

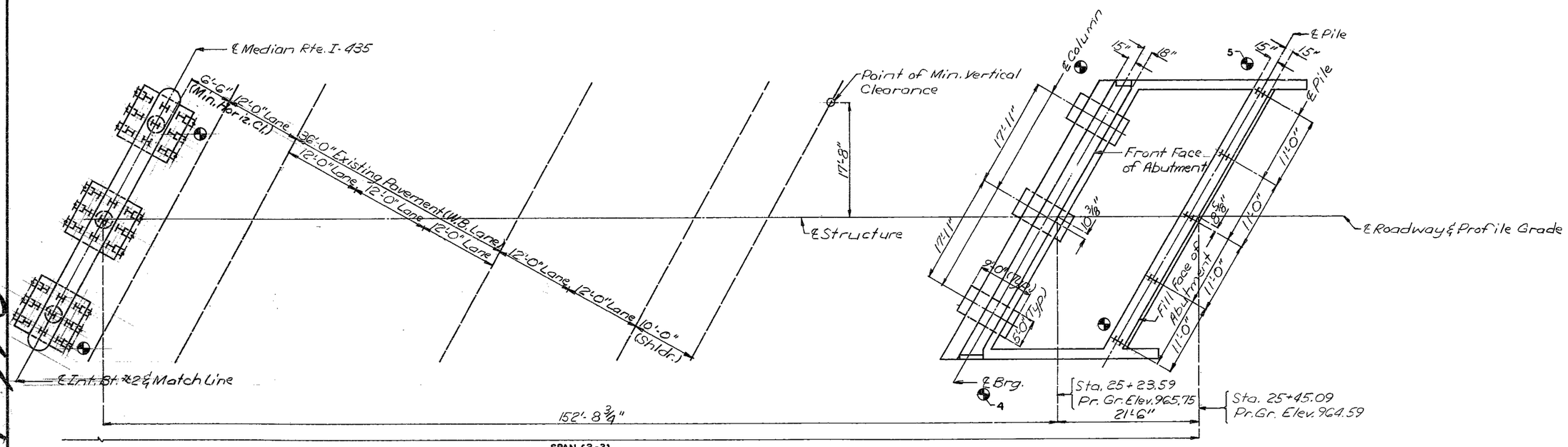
Note: This drawing is not to scale. Follow dimensions.

173

STATE	PROJ NO	SHEET NO
MO		174



PART GENERAL ELEVATION



SPAN (2-3)

PART PLAN

Note: "⊕" Indicates location of borings. Boring Data for all locations is available upon request from the District Office.
Boring data for numbered locations is detailed on sheet No. 3

DETAILED Jun. 1992
CHECKED July 1992

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

Sheet No. 2 *of* 33.

JACKSON **COUNTY**

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STATE	PROJ. NO.	SHEET NO.
MO.		175

STANDARD PENETRATION TEST

DEPTH	BLOWS/6"	PP,TSF
5.0'	6-11-13	1.5
12.6'	24-36-64 IN 1"	3.5

ELEV. 970.6
BROWN SILTY CLAY WITH LIGNITE PIECES, STIFF TO VERY STIFF.
ELEV. 963.3
GRAY TO TAN LIMESTONE, THIN BEDDED, MEDIUM GRAINED, MODERATELY HARD.
ELEV. 962.3
GRAY CLAYSTONE WITH OCCASIONAL SHALE PARTINGS, VERY STIFF.
ELEV. 956.9
GRAY LIMESTONE, FINE GRAINED, THIN TO MEDIUM BEDDED, MEDIUM HARD.
ELEV. 949.0
DARK GRAY CLAY SHALE, STIFF.
ELEV. 947.6

① CORE

ELEV. 968 ±
BROWN WEATHERED CLAY SHALE, STIFF.
ELEV. 963.0
HARD LIMESTONE. REFUSAL.
ELEV. 962.5

②

STANDARD PENETRATION TEST

DEPTH	BLOWS/6"	PP,TSF
5.0'	16-20-23	6.0
10.0'	100 IN 4"	6.0
15.5'	100 IN 3"	9.0

ELEV. 944.0
BROWN SILTY CLAY, DRY, STIFF.
ELEV. 941.0
BROKEN ROCK AND RUBBLE.
ELEV. 940.2
GRAY WEATHERED SHALE, MOIST.
ELEV. 936.3
REDDISH SHALE.
ELEV. 934.0
GRAY SHALE.
ELEV. 933.3
REDDISH CLAY SHALE.
ELEV. 930.0
GRAY CLAY SHALE, MOIST.
ELEV. 928.2
GRAY LIMESTONE WITH INTERMITTENT GRAY SHALEY SEAMS.
ELEV. 926.0
GRAY LIMESTONE, FINE-GRAINED WITH SCATTERED SHALEY SEAMS, HARD, THIN BEDDED.
ELEV. 923.2

③ CORE

STANDARD PENETRATION TEST

DEPTH	BLOWS/6"	PP,TSF
3.0'	6-15-18	4.0-4.5

ELEV. 962.5
BROWN SILTY CLAY.
ELEV. 959.8
OLIVE DRAB CLAY SHALE
ELEV. 958.0
LIGHT GRAY TO WHITE, HARD TO VERY HARD LIMESTONE, FINE GRAINED, MEDIUM BEDDED WITH SOME BROWN, MODERATELY HARD, SLIGHTLY WEATHERED SEAMS.
ELEV. 951.2
CLAY SEAM.
ELEV. 950.9
LIGHT GRAY LIMESTONE, HARD FINE GRAINED, MEDIUM BEDDED.
ELEV. 949.9
GRAY SHALE, VERY STIFF.
ELEV. 947.7

④ CORE

ELEV. 960.3
BROWN SILTY CLAY.
ELEV. 957.8
HARD LIMESTONE.
ELEV. 957.4

⑤

NOTE: FOR LOCATION OF BORINGS SEE SHEET NOS. 1 & 2.

BORING DATA

DETAILED MAY 1992
CHECKED JULY 1992

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

JACKSON COUNTY A-5249

STATE	PROJ. NO.	SHEET NO.
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ESTIMATED QUANTITIES					
	ITEM		SUBSTR.	SUPERSTR	TOTAL
	REMOVAL OF BRIDGES (A-1792)	LUMP SUM			1
	CLASS 1 EXCAVATION	CU. YD.	270		270
	BRIDGE APPROACH SLAB(BRIDGE)	SQ. YD.		221	221
	STRUCTURAL STEEL PILE (10 IN.)	LIN. FT.	444		444
	PRE-BORE FOR PILING	LIN. FT.	398		398
	CLASS B CONCRETE (SUBSTR.)	CU. YD.	274.2		274.2
	SLAB ON STEEL	SQ. YD.		1407	1407
**	SAFETY BARRIER CURB	LIN. FT.		726	726
	SLAB ON SEMI-DEEP ABUTMENT	SQ. YD.		217	217
	LAMINATED NEOPRENE BRG. PADS (STEEL STRUCTURES)	EACH		15	15
	PREFORMED COMPRESSION EXP. JT. SEAL (4.5")	LIN. FT.		90	90
	REINFORCING STEEL (BRIDGES)	POUND	40940		40940
	REINFORCING STEEL (EPOXY COATED)	POUND	2500		2500
	FABRICATED STRUCTURAL CARBON STEEL (PLT GDR)	POUND		263930	263930
	FABRICATED STEEL SIGN SUPPORT BRACKETS(STEEL)	LUMP SUM			1
	FABRICATED STR. LOW ALLOY STEEL (PLT GDR) A-572	POUND		189590	189590
	SLAB DRAINS	EACH		16	16
	CONDUIT SYSTEM ON STRUCTURE	LUMP SUM			1

NOTE: THE COST OF PAINTING STRUCTURAL STEEL SHALL BE INCLUDED IN PRICE BID FOR FABRICATED STRUCTURAL STEEL.

ALL CONCRETE AND REINFORCING STEEL BELOW TOP OF SLAB AND ABOVE CONSTRUCTION JOINT UNDER SLAB IN SEMI-DEEP ABUTMENTS ARE INCLUDED IN SUPERSTRUCTURE QUANTITIES FOR SLAB ON SEMI-DEEP ABUTMENTS.

THE PRESTRESSED PANEL QUANTITIES ARE NOT INCLUDED IN THE TABLE OF ESTIMATED QUANTITIES FOR ALTERNATE SLAB.

** SAFETY BARRIER CURB SHALL BE CAST-IN-PLACE OPTION OR SLIP-FORM OPTION.

ESTIMATED QUANTITIES FOR ALTERNATE SLABS		
TYPE OF SLABS	SLAB ON STEEL	
	REINF.(LBS.) EPOXY	CONC. (CU. YDS.)
CAST-IN-PLACE CONVENTIONAL FORMS	88010	347.7
PRECAST PANEL FORMS	56420	257.3

NOTE: THE TABLE OF ESTIMATED QUANTITIES FOR ALTERNATE SLABS REPRESENTS THE QUANTITIES USED BY THE STATE IN PREPARING THE COST ESTIMATE FOR CONCRETE SLABS. VARIATIONS MAY BE ENCOUNTERED IN THESE ESTIMATED QUANTITIES, BUT THESE VARIATIONS CANNOT BE USED FOR AN ADJUSTMENT IN THE CONTRACT UNIT PRICE PER SQUARE YARD OF ALTERNATE SLAB USED.

SEE SPECIAL PROVISIONS FOR ALTERNATE METHODS OF FORMING SLABS.

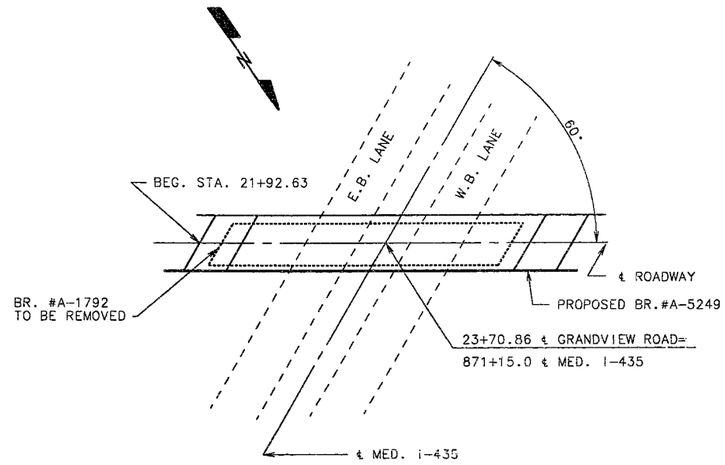
PRECAST PANEL QUANTITES ARE BASED ON SKEWED END PANELS.

PILE & FOOTING DATA							
	LOCATION		1 APP.	1 BRG.	2	3 BRG.	3 APP.
BEARING PILE	PILE TYPE AND SIZE		HP10x42		HP10x42		HP10x42
	NUMBER		5		27		5
	APPROXIMATE LENGTH	FT.	(1)		12		11
	DESIGN BEARING	TONS	40		52		34
	HAMMER ENERGY REQUIRED	FT.-LBS.	8,800				7,400
SPREAD FOOTING	FOUNDATION MATERIAL			ROCK		ROCK	
	DESIGN BEARING	TONS/SQ.FT.		6.7		5.8	

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.
ALL PILE SHALL BE DRIVEN TO PRACTICAL REFUSAL.
PREBORE FOR PILES AT BENTS 1, 2 & 3 TO ELEVATIONS (2), 928.00 AND 951.00 RESPECTIVELY.

(1) 11'LT., 15'RT.

(2) 961.50(LT.), 957.00(RT.)



LOCATION SKETCH

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1992
LOAD FACTOR DESIGN
SEISMIC PERFORMANCE CATEGORY A

DESIGN LOADING
HS20-44, MODIFIED 24,000# TANDEM AXLE
35#/SQ.FT. FUTURE WEARING SURFACE
EARTH 120#/CU. FT. EQUIVALENT FLUID PRESSURE 45#/CU. FT.
FATIGUE STRESS - CASE II

DESIGN UNIT STRESSES:
CLASS B CONCRETE (SUBSTRUCTURE) F'C=3,000 PSI
CLASS B1 CONCRETE (SAFETY BARRIER CURB) F'C=4,000 PSI
CLASS B2 CONCRETE (SUPERSTRUCTURE, EXCEPT SAFETY BARRIER CURB) F'C=4,000 PSI
REINFORCING STEEL (GRADE 60) FY=60,000 PSI
STRUCTURAL CARBON STEEL FY=36,000 PSI
STRUCTURAL STEEL (A.S.T.M. A572) GRADE 50 FY=50,000 PSI
STEEL PILE FB=9000 PSI
FOR PRECAST PRESTRESSED PANEL STRESSES, SEE SHEET 19.

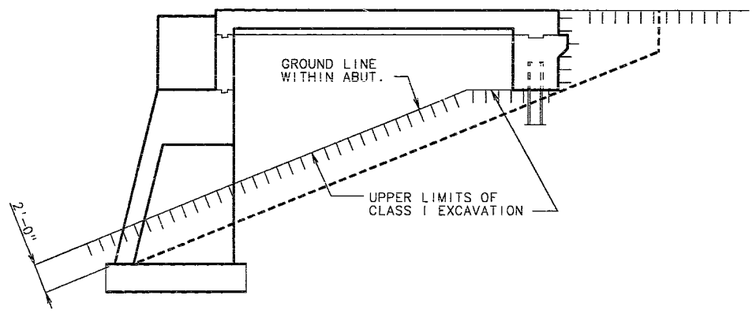
FABRICATED STEEL CONNECTIONS: FIELD CONNECTIONS, HIGH STRENGTH BOLTS 3/4"Ø, HOLES 13/16"Ø, EXCEPT AS NOTED.
HIGH STRENGTH BOLTS, NUTS AND WASHERS WILL BE SAMPLED FOR QUALITY ASSURANCE AS SPECIFIED IN STANDARD SPECIFICATION 106.

JOINT FILLER: ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1057.2.4, EXCEPT AS NOTED.

REINFORCING STEEL: MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2", UNLESS OTHERWISE SHOWN.
ALL REINFORCING BARS IN TOPS OF SUBSTRUCTURE BEAMS OR CAPS SHALL BE SPACED TO CLEAR ANCHOR BOLTS FOR BEARING BY AT LEAST $\frac{1}{2}$"

PAINT: SYSTEM E SHOP COATS (GRAY) IN ACCORDANCE WITH THE SPECIAL PROVISIONS. NO FIELD PAINTING EXCEPT FOR TOUCH UP.

SEE ROADWAY PLANS FOR REMOVAL, STORAGE AND INSTALLATION OF LIGHT FIXTURE SUPPORTS.



GROUND LINE AND PILING IN ABUTMENTS

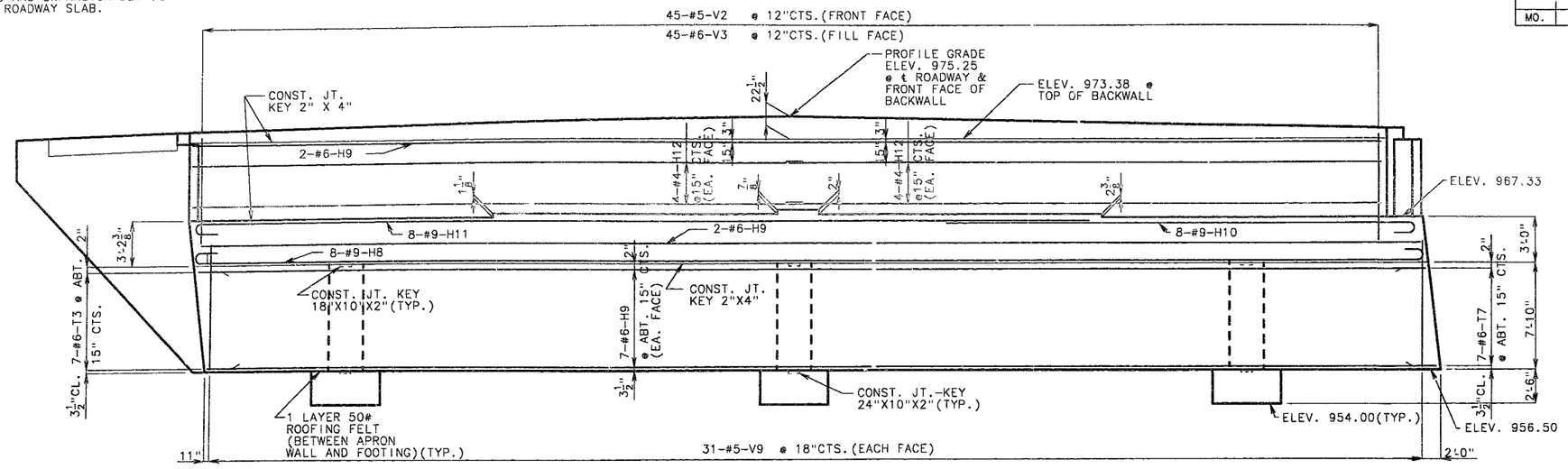
NOTE: IN NO CASE SHALL THE EARTH WITHIN ABUTMENTS NO.1 AND 3 BE ABOVE THE GROUND LINE SHOWN. FORMS SUPPORTING ABUTMENT SLAB MAY BE LEFT IN PLACE.

DETAILED JUN. 1992
CHECKED JULY 1992

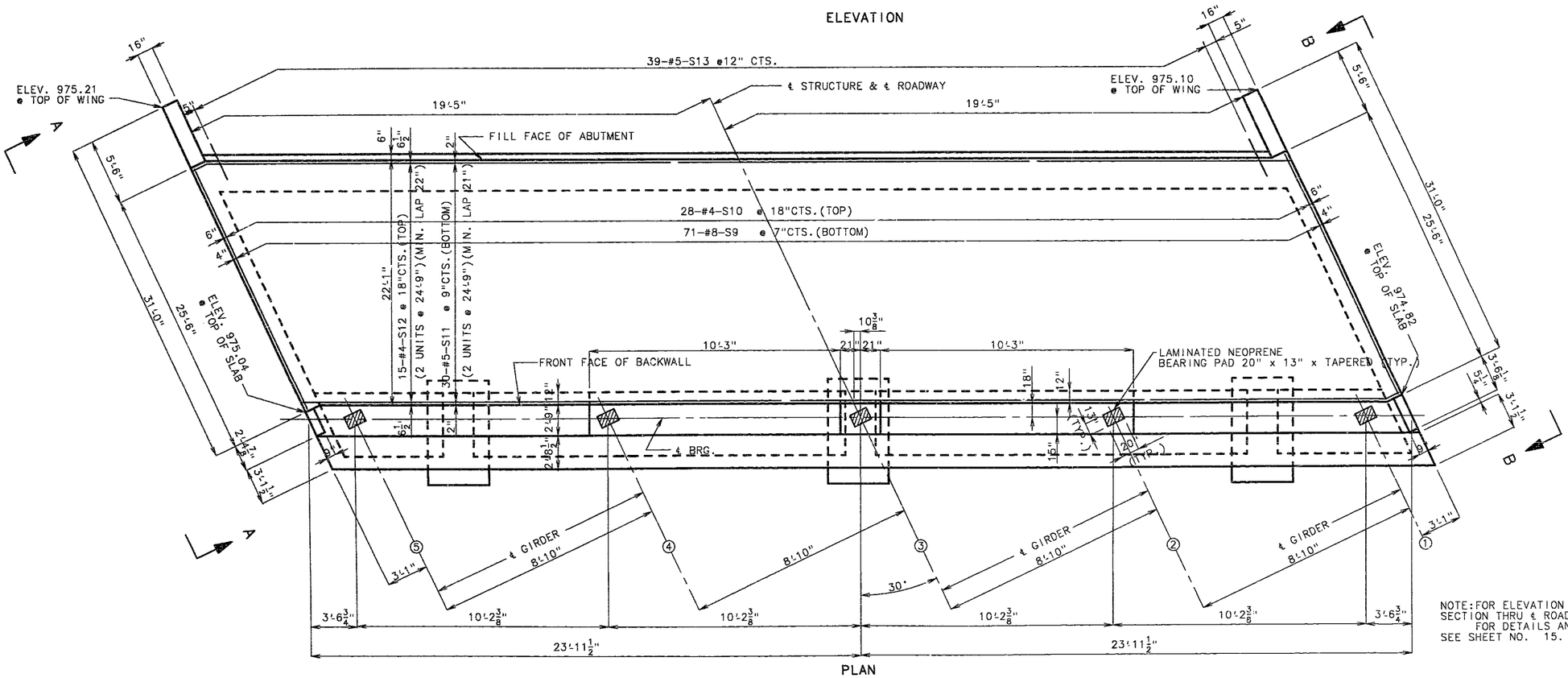
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

NOTE: TOP OF ABUTMENT SLAB AND EXPANSION DEVICE FOR ABUTMENT NO.1 SHALL CONFORM TO CROWN OF ROADWAY SLAB.

STATE	PROJ. NO.	SHEET NO.
MO.		177



ELEVATION



PLAN

NOTE:FOR ELEVATION A-A,ELEVATION B-B, AND SECTION THRU ℄ ROADWAY, SEE SHEET NO. 7. FOR DETAILS AND PLAN OF ANCHOR BOLTS, SEE SHEET NO. 15.

DETAILS OF ABUTMENT NO. 1

DETAILED MAY 1992
CHECKED JULY 1992

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

SHEET NO. 5 OF 33.

JACKSON COUNTY

A-5249

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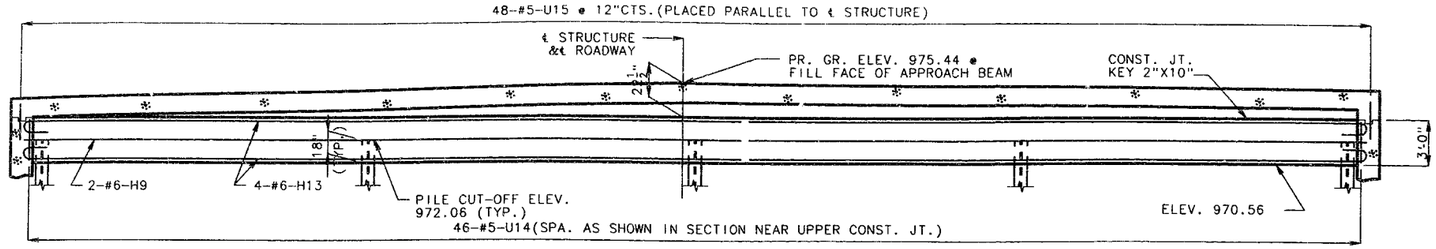
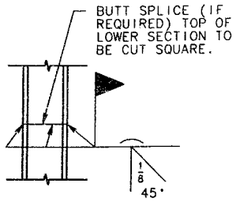
STATE	PROJ. NO.	SHEET NO.
MO.		178



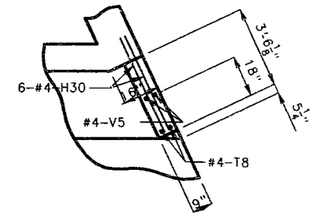
SECTION NEAR APPROACH BEAM

NOTE: FOR DETAILS AND REINFORCEMENT OF BARRIER CURB SEE SHEET NO. 24. #5-R BARS MUST BE IN PLACE BEFORE SLAB IS POURED.

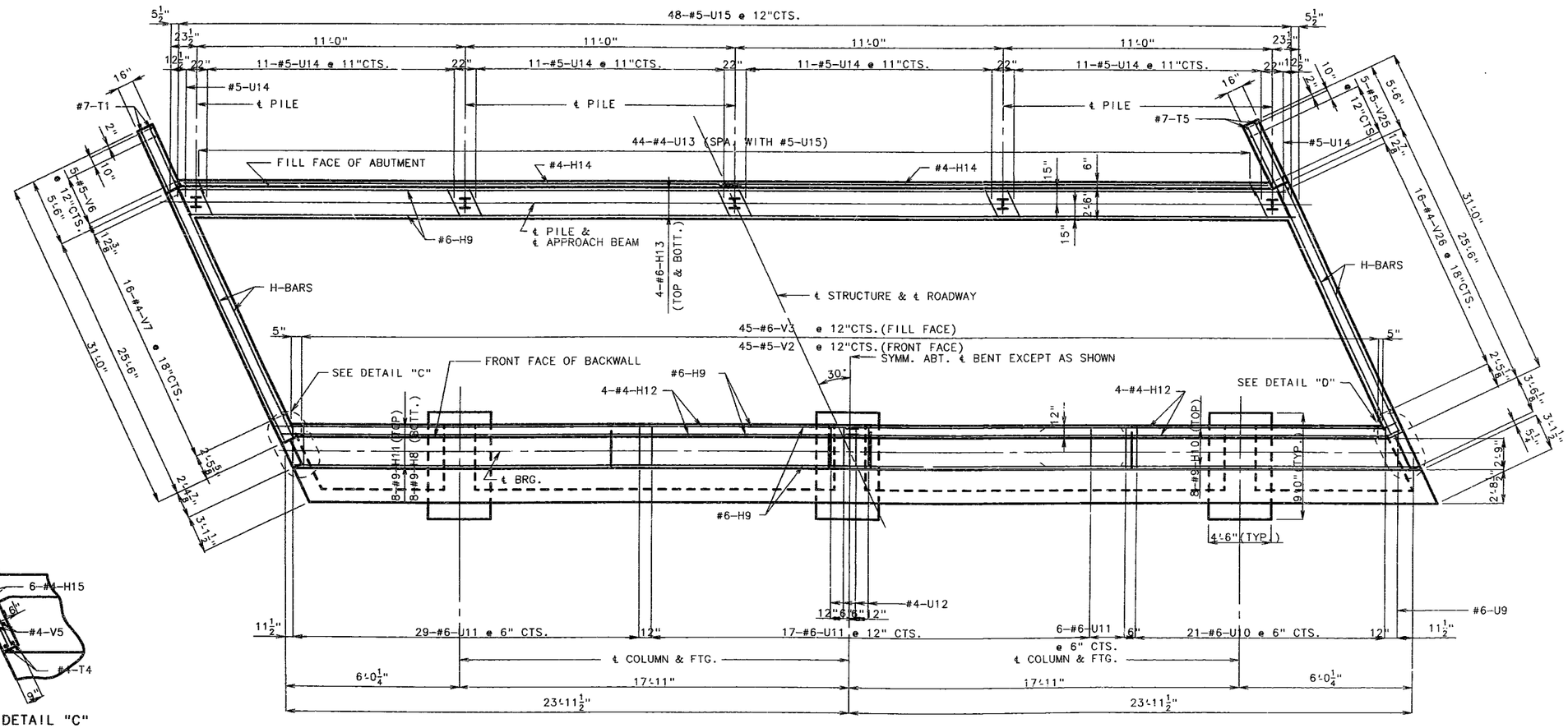
NOTE: FIELD BENDING SHALL BE REQUIRED AT WINGS FOR #6-H9 AND #4-H12



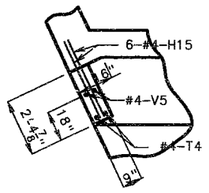
STEEL PILE SPLICE



DETAIL "D"



SECTION NEAR UPPER CONSTRUCTION JOINT



DETAIL "C"

DETAILS OF ABUTMENT NO. 1

DETAILED MAY 1991
CHECKED JULY 1992

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

SHEET NO. 6 OF 33. JACKSON COUNTY A-5249

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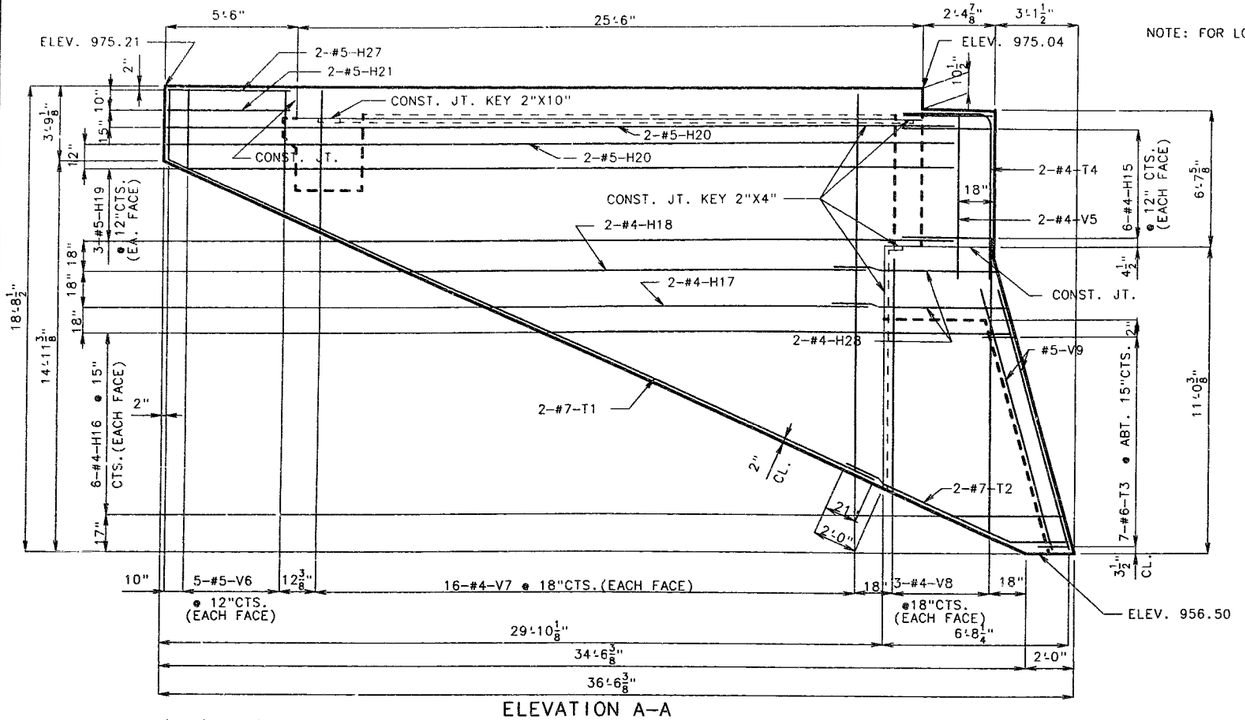
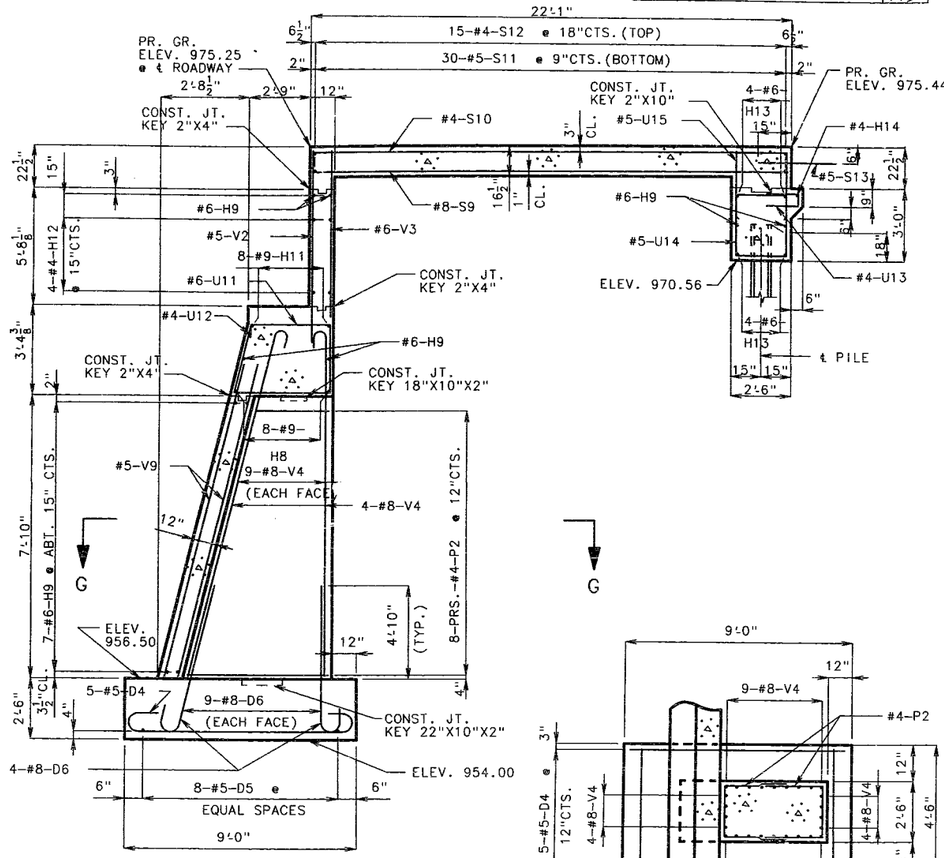
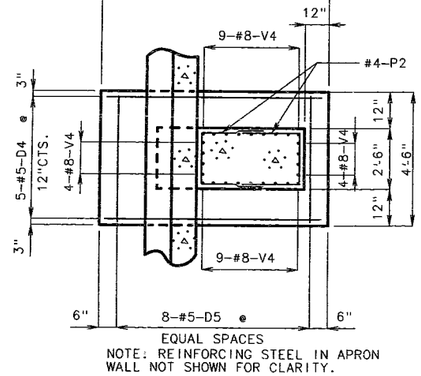
STATE	PROJ. NO.	SHEET NO.
MO.		179

NOTE: FOR LOCATION OF ELEVATION A-A & B-B SEE SHEET NO. 5.





NOTE: FOR DETAILS AND REINFORCEMENT OF BARRIER CURB SEE SHEET NO. 24. #5-R BARS MUST BE IN PLACE BEFORE SLAB IS POURED.



NOTE: REINFORCING STEEL IN APRON WALL NOT SHOWN FOR CLARITY.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1

ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YD.	100
STRUCTURAL STEEL PILE(10")	LIN. FT.	65
PRE-BORE FOR PILING	LIN. FT.	56
CLASS B CONCRETE(SUBSTRUCTURE)	CU. YD.	104.4
REINFORCING STEEL (BRIDGES)	LBS.	14300
REINFORCING STEEL (EPOXY COATED)	LBS.	1400

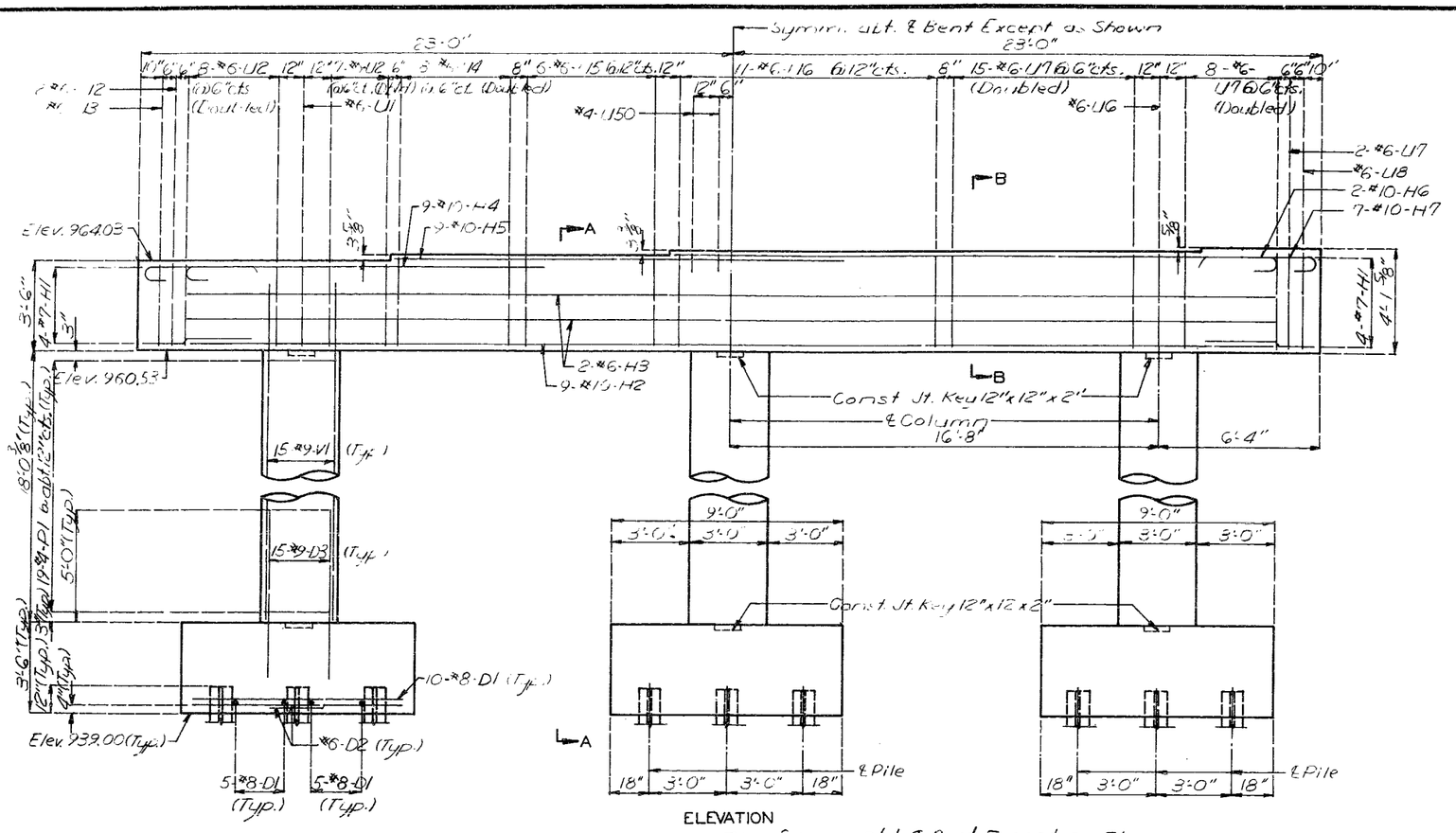
NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 4.

DETAILED MAY 1992
CHECKED JULY 1992

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

DETAILS OF ABUTMENT NO. 1

STATE	PROJ NO	SHEET NO
MO		180



Note: For location of Anchor Bolt Wells and details of Anchor Bolt Wells see sheet No. 15.

Note: For Section B-B see sheet No. 9. For details of Intermediate Bent No. 2 not shown, see sheet No. 9.

DETAILED JUN. 1992
CHECKED July 1992

DETAILS OF INTERMEDIATE BENT NO. 2

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

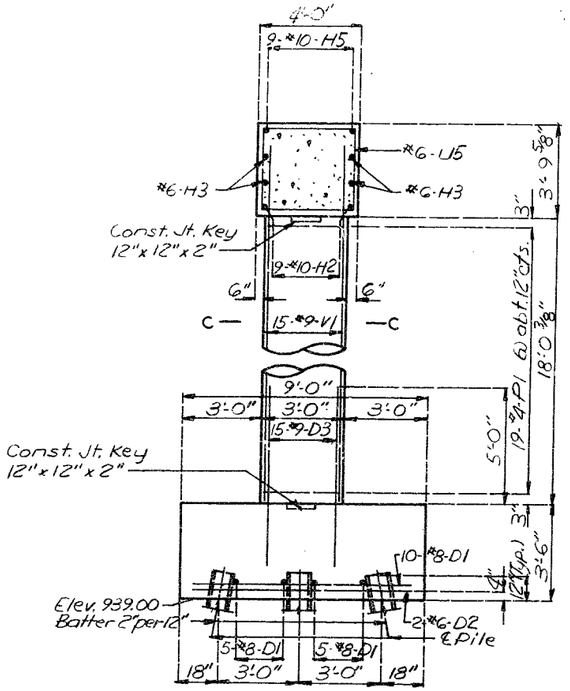
Sheet No. 8 of 33.

COUNTY

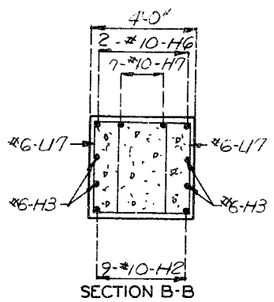
A-5249

285 1916

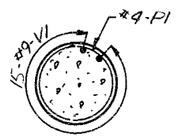
STATE	PROJ. NO.	SHEET NO.
MO.		181



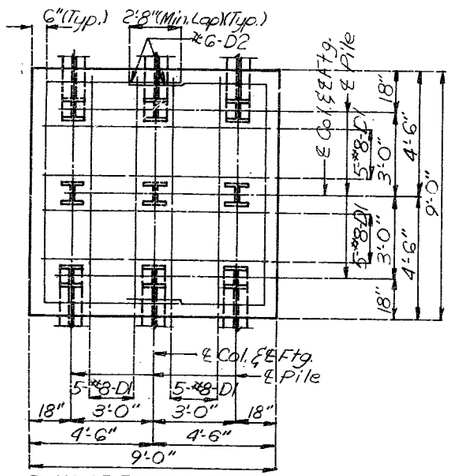
SECTION A-A



SECTION B-B



SECTION C-C



PLAN OF FOOTING SHOWING REINFORCEMENT

Note: For Detail of Pile Splice see sheet No. 6.

Note: For location of Section B-B see sheet No. 8.
For details of Intermediate Bent No. 2 not shown see sheet No. 8.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2		
ITEM		QUANTITY
Class I Excavation	Cu.Yds.	70
Structural Steel Pile (10")	Lin. Ft.	324
Pre-bore For Piling	Lin. Ft.	297
Class B Concrete (Substructure)	Cu. Yds	71.1
Reinforcing Steel	Lbs.	13620

Note: Work this table with estimated quantities as shown on sheet No. 4.

DETAILS OF INTERMEDIATE BENT NO. 2

288 197

QUALITY REPRO

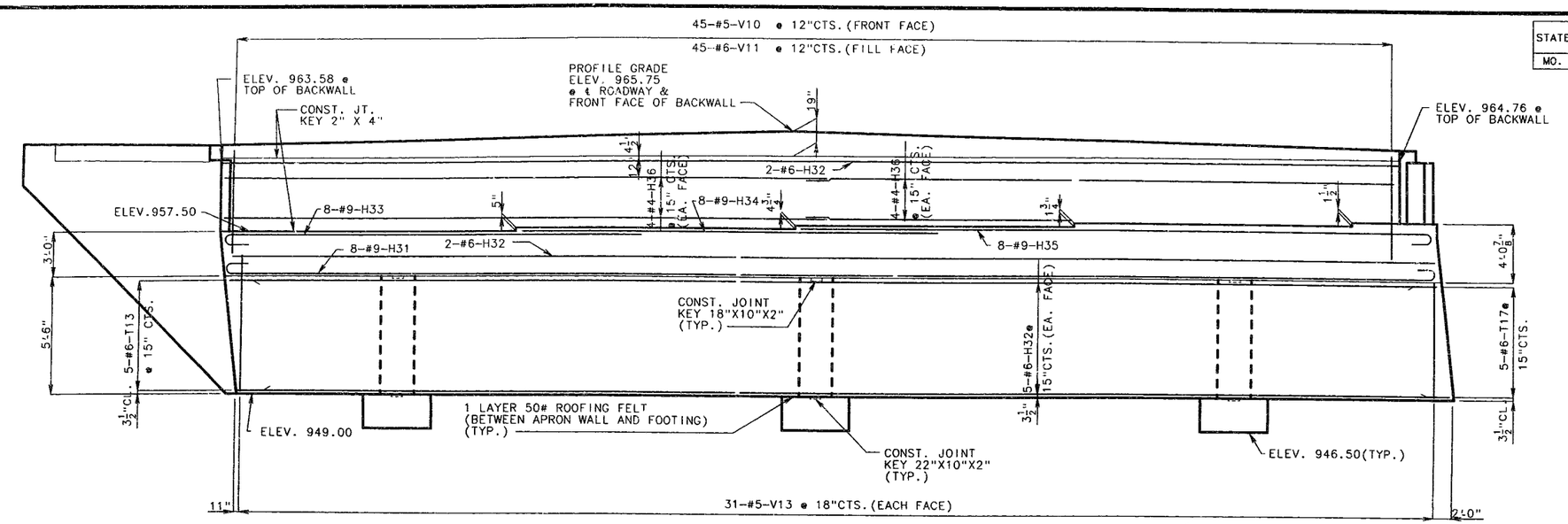
DETAILED JUN. 1992
CHECKED July 1992

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

JACKSON COUNTY

A-5249

STATE	PROJ. NO.	SHEET NO.
MO.		182



NOTE: TOP OF ABUTMENT SLAB AND EXPANSION DEVICE FOR ABUTMENT NO.1 SHALL CONFORM TO CROWN OF ROADWAY.

NOTE:FOR ELEVATION E-E,ELEVATION F-F, AND SECTION THRU ℄ ROADWAY SEE SHEET NO. 12. FOR DETAILS AND PLAN OF ANCHOR BOLTS SEE SHEET NO. 15.

DETAILS OF ABUTMENT NO. 3

DETAILED MAY 1991
CHECKED JULY 1992

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

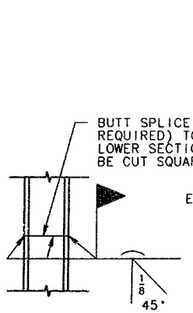
SHEET NO. 10 OF 33.

JACKSON COUNTY

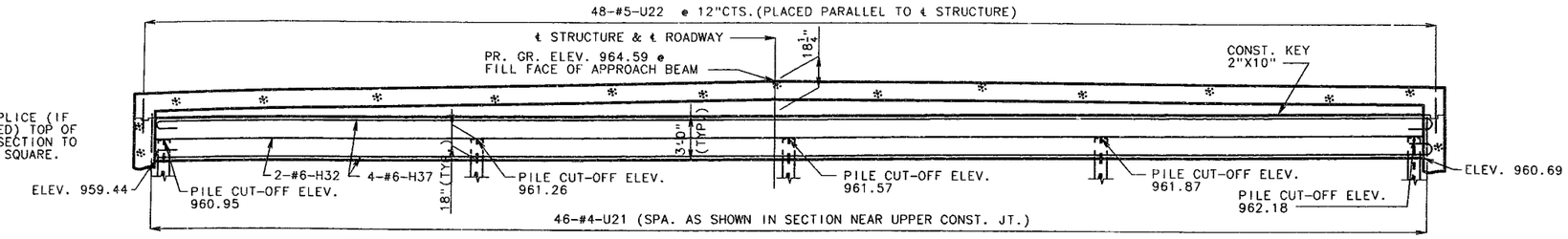
A-5249

207 148

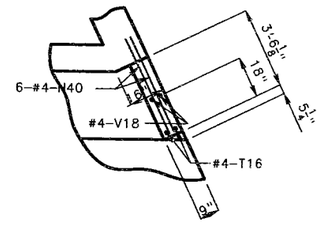
STATE	PROJ. NO.	SHEET NO.
MO.		183



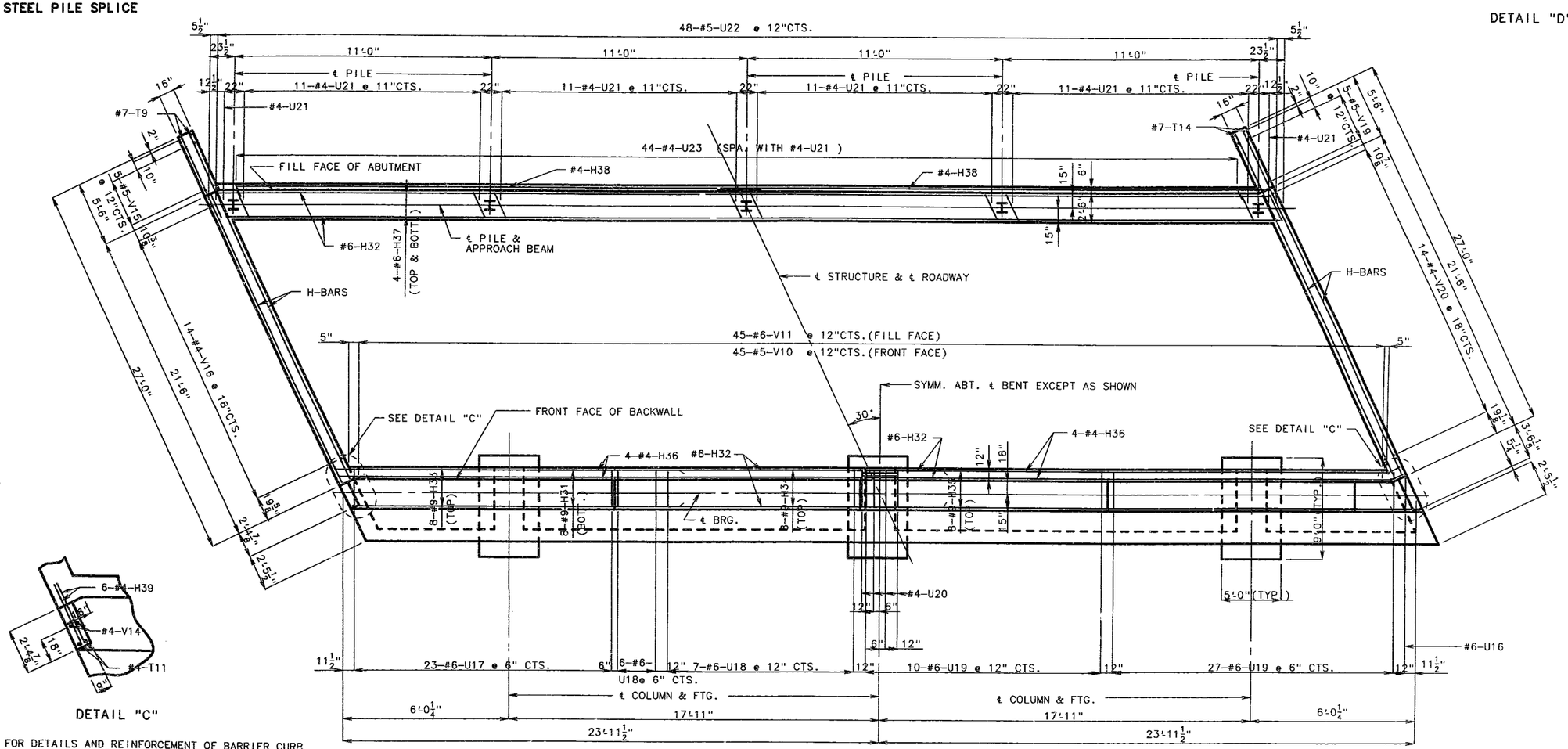
STEEL PILE SPLICE



SECTION NEAR APPROACH BEAM



DETAIL "D"



DETAIL "C"

SECTION NEAR UPPER CONSTRUCTION JOINT

NOTE: FOR DETAILS AND REINFORCEMENT OF BARRIER CURB SEE SHEET NO. 24. #5-R BARS MUST BE IN PLACE BEFORE SLAB IS POURED.

DETAILS OF ABUTMENT NO. 3

DETAILED MAY. 1992
CHECKED JULY 1992

NOTE: THIS DRAWING IS NOT TO SCALE FOLLOW DIMENSIONS.

SHEET NO. 11 OF 33.

JACKSON COUNTY

A-5249

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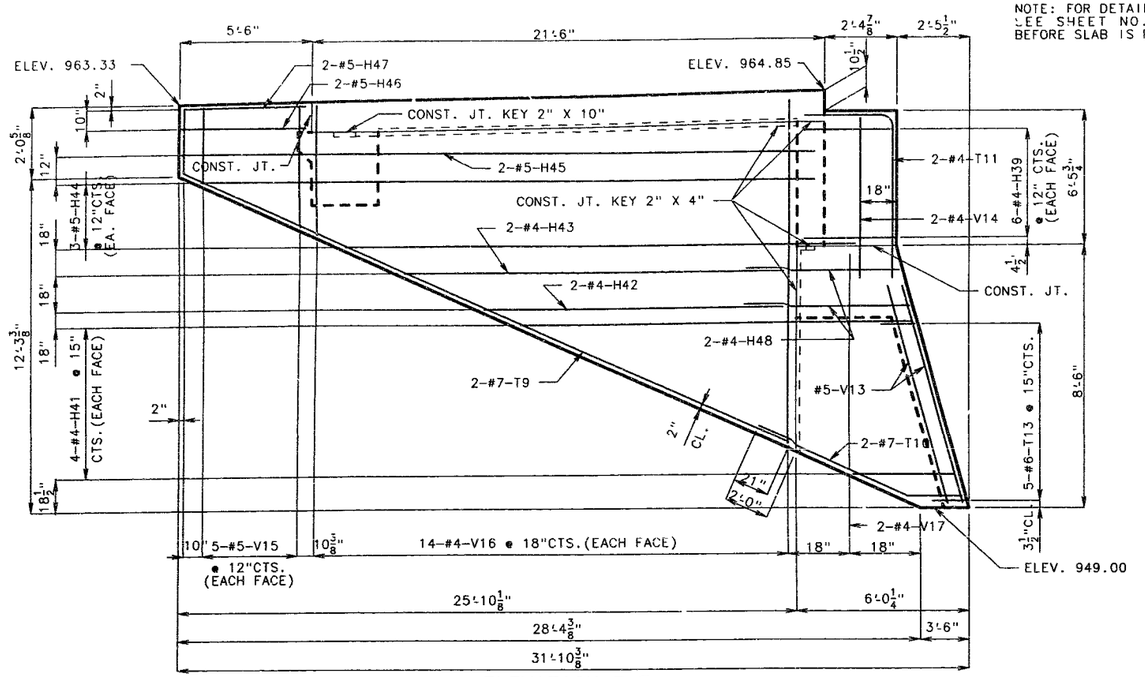
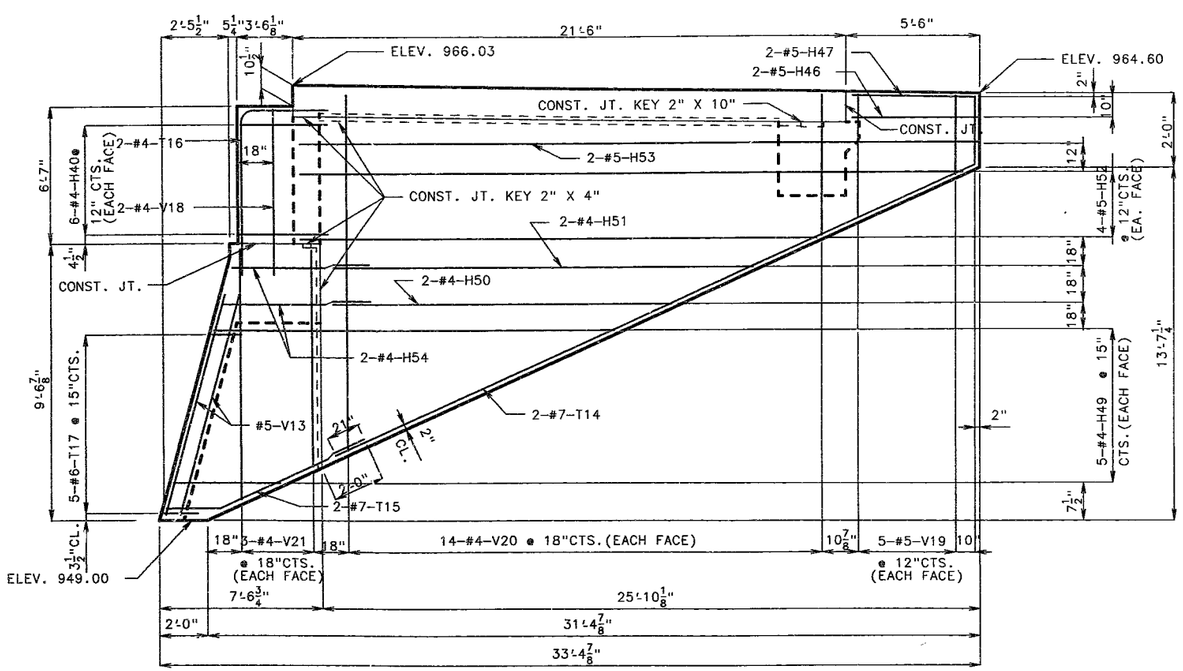
STATE	PROJ. NO.	SHEET NO.
MO.		184

NOTE: FOR DETAILS AND REINFORCEMENT OF BARRIER CURB SEE SHEET NO. 24. #5-R BARS MUST BE PLACED BEFORE SLAB IS POURED.

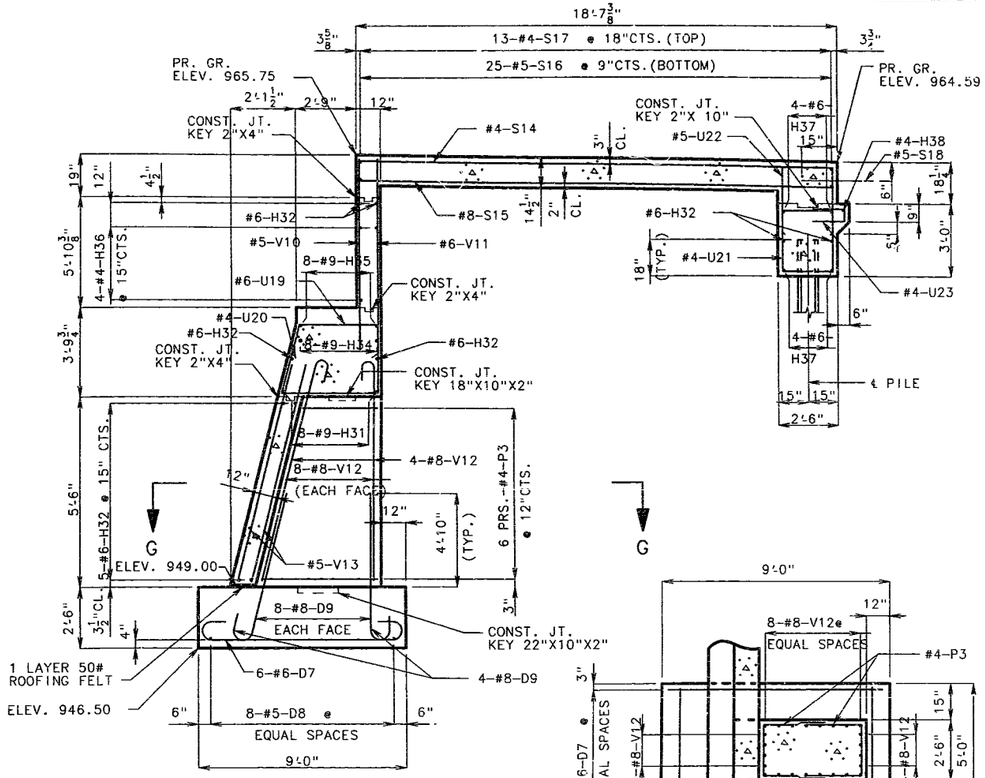


ELEVATION E-E



ELEVATION F-F

NOTE: FOR LOCATION OF ELEVATIONS E-E & F-F SEE SHEET NO. 10.



SECTION THRU ℄ ROADWAY (NORMAL TO BENT)

SECTION G-G

NOTE: REINFORCING STEEL IN APRON WALL NOT SHOWN FOR CLARITY.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YD.	100
STRUCTURAL STEEL PILE(10")	LIN. FT.	55
PRE-BORE FOR PILING	LIN. FT.	45
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	98.7
REINFORCING STEEL (BRIDGES)	LBS.	13020
REINFORCING STEEL (EPOXY COATED)	LBS.	1100

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 4.

DETAILS OF ABUTMENT NO. 3

DETAILED MAY 1992
CHECKED JULY 1992

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

12 of 33

STATE	PROJ NO	SHEET NO
MO		185

130 Shear Connector Units (Spaced as Shown)(Each Girder)

87 Shear Connector Units @ 14"cts. (2 Studs Per Unit)

3 Shear Connector Units @ 9"cts. (4 Studs Per Unit)

⚠ Web stiffner spacing as shown is incorrect. See revised change in Part Elevation of Girder, Detail "A"

87 Shear Connector Units @ 14"cts. (2 Studs Per Unit)

3 Shear Connector Units @ 9"cts. (4 Studs Per Unit)

5" 8'-10" 8'-10" 8'-10" 8'-10" 8'-10" 5"

End Diaph.

5'-1½" (Typ.)

Int. Diaph. (Typ.)

End Diaph.

30°

1.154701

5.7735

℄ Roadway

① ② ③ ④ ⑤

℄ Brg. Stiff.

℄ Field Splice

℄ Brg. Stiff.

℄ Field Splice

℄ Brg. Stiff.

20'-6⅝" 21'-0" 21'-0" 21'-0" 21'-0" 24'-0" 25'-0" 25'-0" 24'-0" 21'-0" 21'-0" 21'-0" 21'-0" 15'-5⅜" Int. Diaph. Spacing

102'-0" 49'-0" 49'-0" 102'-0"

302'-0"

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

PLAN OF STRUCTURAL STEEL

Note: Intermediate web stiffener plate and diaphragm spacing may vary from plan dimensions by a maximum of 3" for diaphragm to connect to the intermediate web stiffener plate.
For details of shear connectors, see sheet No. 14.

℄ Brg. Stiff. @ Ext. ℄

5'-9" 6'-0" 5'-9" 5'-3" 5'-0" 4'-9" 4'-6" 4'-3" 4'-0" 3'-9" 3'-9" 4'-0" 4'-3" 4'-6" 4'-9" 5'-0" 5'-3" 5'-9"

℄ Field Splice

℄ Field Splice

⚠ PART ELEVATION OF GIRDER, DETAIL "A"

11 ⚠ 6 PLs 5" x ⅜" (Spaced as Shown)(Each Girder)

11 ⚠ 6 PLs 5" x ⅜" (Spaced as Shown)(Each Girder)

8'-6" 18'-0" 100'-0" ⚠ 81'-3" 5'-6" 5'-6" 100'-0" ⚠ 81'-3" 18'-0" 8'-6"

6'-9" 6'-3" 6'-0" 6'-0" 6'-3" 6'-9"

⚠ Omit Spacing. See Part Elevation of Girder, Detail "A"

PL 12" x ¾"

PL 22" x 1¾" (A-572) ***

PL 12" x ¾"

6'-0" Web

½" Web PL

9/16" Web PL

⚠ ½"

½" Web PL

PL 14" x 1¼" (A-572) ***

PL 22" x 1¾" (A-572)

PL 14" x 1¼" (A-572) ***

*

℄ Brg. Stiff.

2 - PLs 10½" x 1¼"

℄ Brg. Stiff.

*

℄ Brg. Stiff.

℄ Field Splice

℄ Field Splice

Top Flange in Compression 102'-0"

Bottom Flange in Compression 49'-0"

Top Flange in Compression 102'-0"

13" 302'-0" 3½"

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

ELEVATION OF GIRDER

Note: Plate girder shall be fabricated to conform with camber diagram shown on sheet 20.
All web plates are subject to notch toughness requirements. Fabricated Structural Steel shall be A-36 except as shown.
Longitudinal dimensions are horizontal from ℄ Brg. to ℄ Brg.. See Part-Longitudinal Sections on sheet No. 15.
Transverse web stiffeners shall be located as shown in Plan of Structural Steel.

* PL 6½" x ¾" (Outside Exterior Gdrs.)
PL 7½" x ¾" (Inside Exterior Gdrs. and Both Sides of Interior Gdrs.)

*** Indicates flange plates subject to notch toughness requirements.

24015T

DETAILED JUN. 1992
CHECKED July 1992

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

⚠ Revised 8/15/94

Sheet No. 13 of 33.

JACKSON COUNTY

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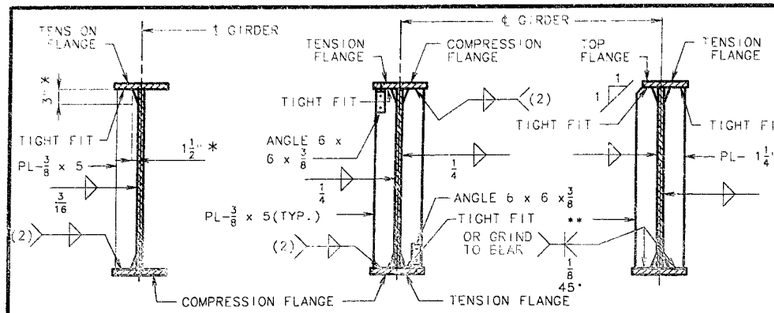
STATE	PROJ. NO.	SHEET NO.
MO.		186

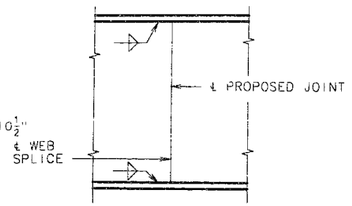


INT. WEB STIFF. (ONE SIDE ONLY) | INT. DIAPH. CONN. PLATE | END BRG. STIFF. | INT. BRG. STIFF.

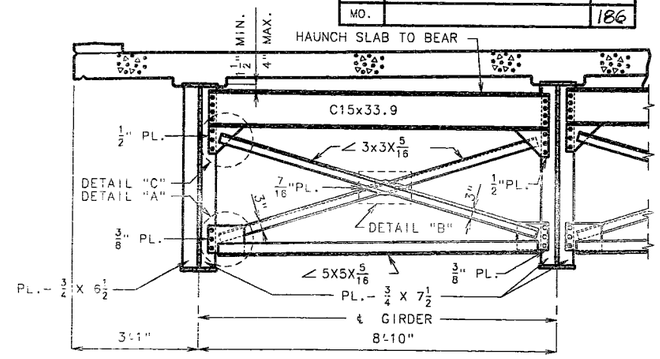
(2) WELD TO COMPRESSION FLANGE AS LOCATED ON ELEVATION OF GIRDER.

* TYPICAL FOR ALL INT. WEB STIFF., INT. DIAPH. CONN. PL. AND BRG. STIFF..

**PL $6\frac{1}{2}$"x$\frac{3}{4}$"(OUTSIDE EXTERIOR GIRDER)
PL $7\frac{1}{2}$x$\frac{3}{4}$"(INSIDE EXTERIOR GIRDERS AND BOTH SIDES OF INTERIOR GIRDERS)

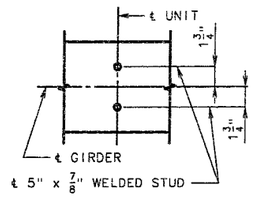


SHOP WEB SPLICE

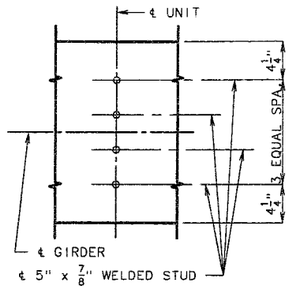


TYPICAL PART SECTION SHOWING END DIAPHRAGMS

WELDING DETAILS

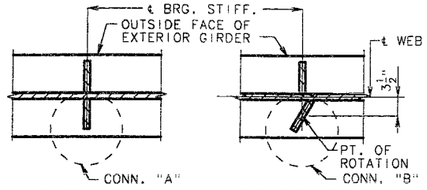


PLAN OF STUD CONN. (2 STUD UNIT)



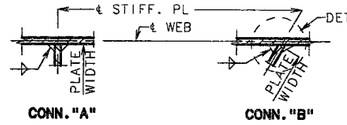
PLAN OF STUD CONN. (4 STUD UNIT)

NOTE: WEIGHT OF 1823 LBS. OF SHEAR CONNECTORS IS INCLUDED IN WEIGHT OF FABRICATED STRUCTURAL CARBON STEEL.



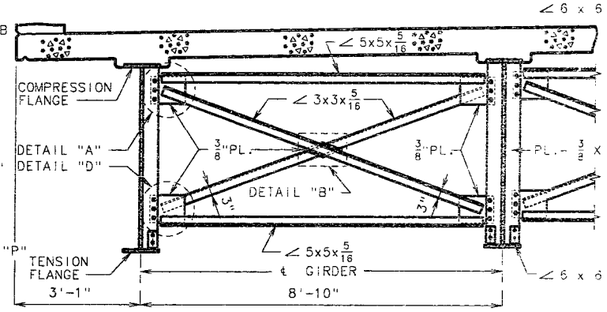
INT. BRG. STIFF. | END BRG. STIFF.

TYPICAL LOCATION DETAILS

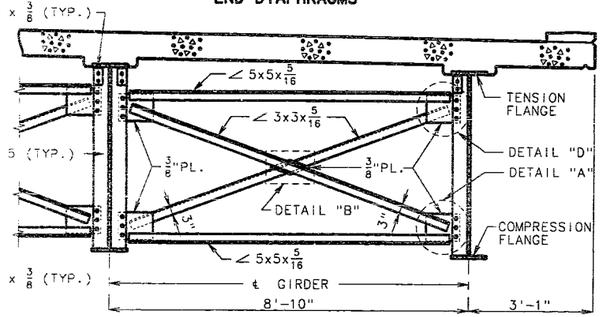


CONN."A" | CONN."B"

WELDING DETAILS

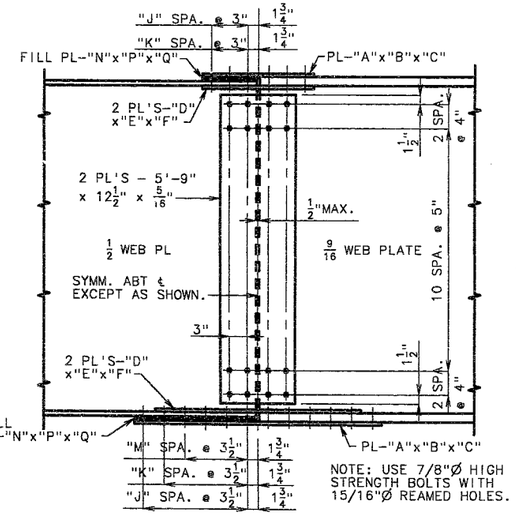


TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS BOTTOM FLANGE IN TENSION



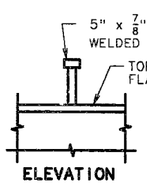
TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS TOP FLANGE IN TENSION

DETAIL OF SHEAR CONNECTORS

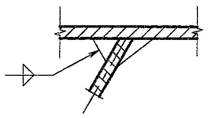


NOTE: USE 7/8"Ø HIGH STRENGTH BOLTS WITH 15/16"Ø REAMED HOLES.

DETAILS OF FIELD SPLICE

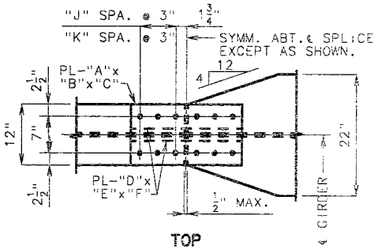


ELEVATION

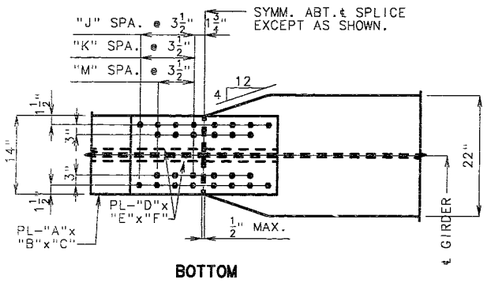


DETAIL "P"

SPLICE LOCATION	TABLE OF DIMENSIONS – FIELD SPLICE											
	"A"	"B"	"C"	"D"	"E"	"F"	"J"	"K"	"M"	"N"	"P"	"Q"
TOP	12"	3/8"	2'-0 1/2"	5"	1/2"	2'-0 1/2"	3	3	–	12"	1"	12"
BOTT	14"	1 1/8"	3'-5 1/2"	6"	1 1/8"	2'-10 1/2"	5	4	2	14"	1/2"	20 1/2"

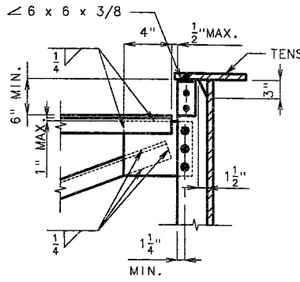


TOP

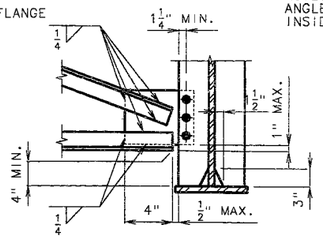


BOTTOM

PLAN OF FLANGES

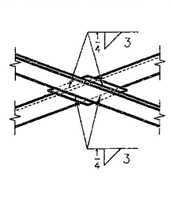


DETAIL "D"

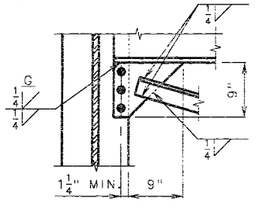


DETAIL "A"

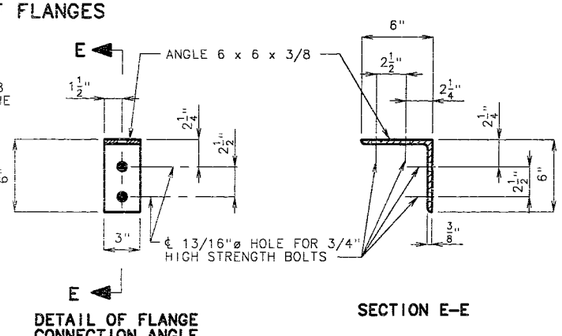
NOTE: THE TWO 3/4"Ø H.S. BOLTS THAT CONNECT THE 6 X 6 X 3/8 ANGLE TO THE TOP FLANGE SHALL BE PLACED SO THE NUT IS ON THE INSIDE OF FLANGE TOWARD THE WEB.



DETAIL "B"



DETAIL "C"



DETAIL OF FLANGE CONNECTION ANGLE | SECTION E-E

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

DETAILED MAY 1992
CHECKED JULY 1992

JACKSON COUNTY A-5249

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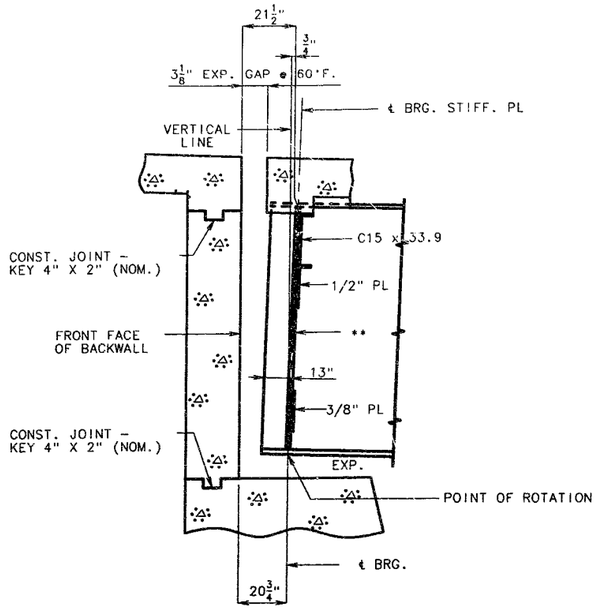
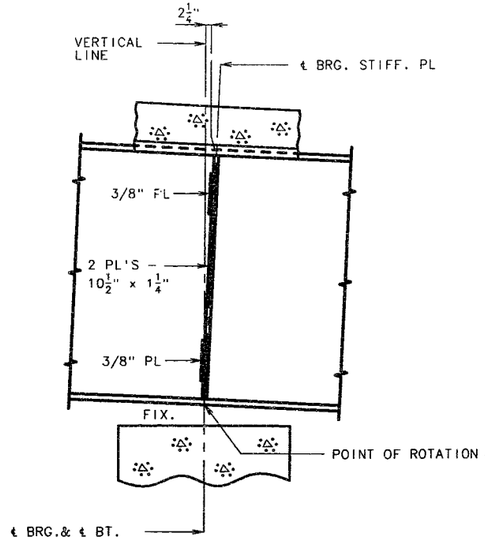
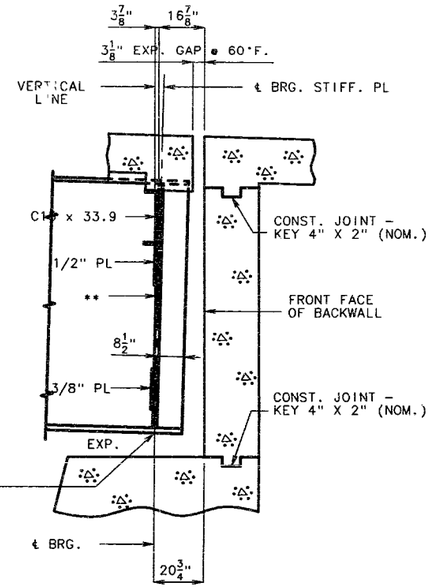
STATE	PROJ. NO.	SHEET NO.
MO.		187



①



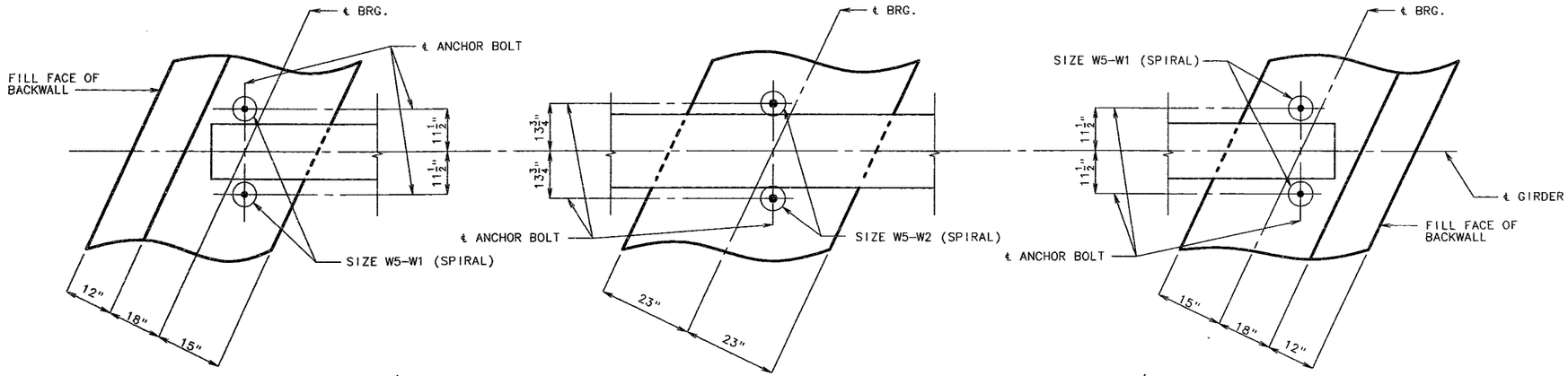
②



③

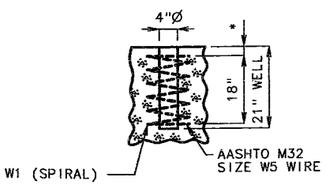
** ℙ $6\frac{1}{2}$ X $\frac{3}{4}$ (OUTSIDE EXTERIOR GDRS.)
ℙ $7\frac{1}{2}$ X $\frac{3}{4}$ (INSIDE EXTERIOR GDRS. AND BOTH SIDES OF INTERIOR GDRS.)

PART LONGITUDINAL SECTION

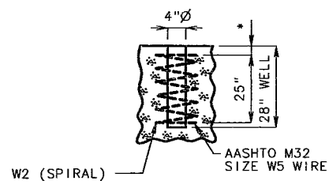


PART ANCHOR BOLT PLAN

* CLEAR TOP REINFORCEMENT (TIE TOP OF SPIRAL TO LONGITUDINAL REINFORCEMENT).



DETAIL OF ANCHOR BOLT WELL AT END ABUTMENTS



DETAIL OF ANCHOR BOLT WELL AT INT. BT. NO. 2

DETAILED MAY 1992
CHECKED JULY 1992

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

JACKSON COUNTY A-5249

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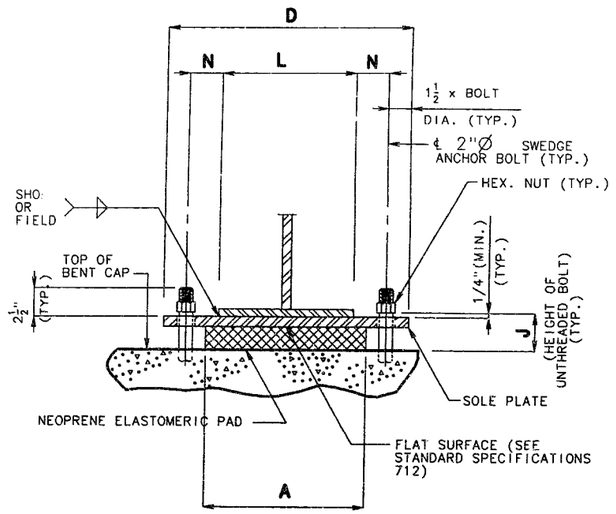
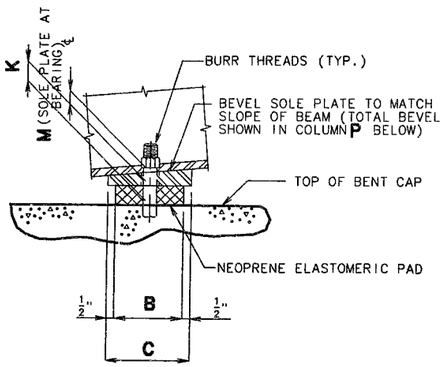
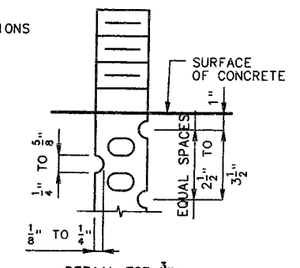


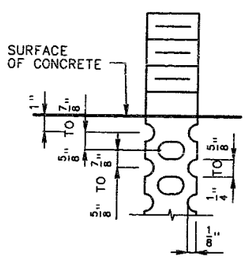
END VIEW



SIDE VIEW

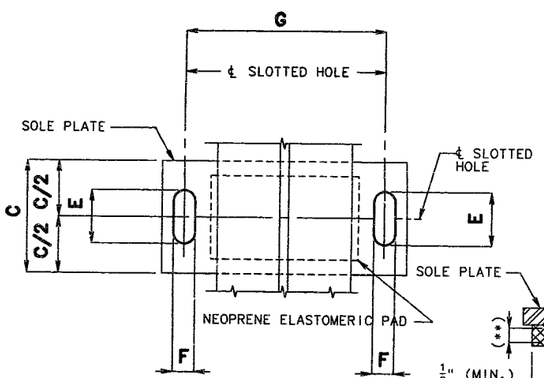


DETAIL FOR ¾"ø THRU 2½"ø ANCHOR BOLTS

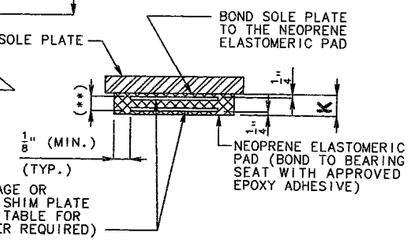


OPTIONAL DETAIL FOR 1⅜"ø THRU 2½"ø ANCHOR BOLTS

SWEDGE ANCHOR BOLT DETAILS

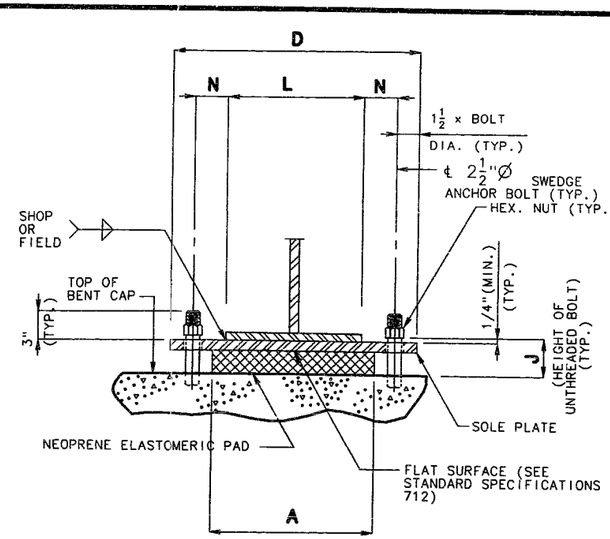


PART PLAN VIEW

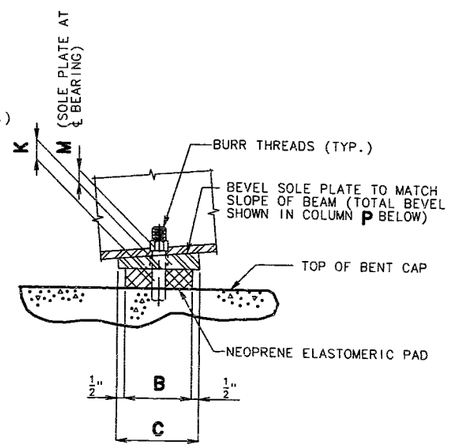


NEOPRENE ELASTOMERIC PAD

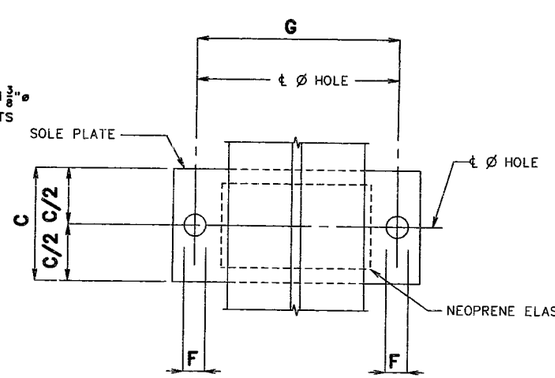
(**) LAYERS OF 1/2" ELASTOMER ALTERNATING WITH 11 GAGE OR 1/8" STEEL SHIM PLATE.



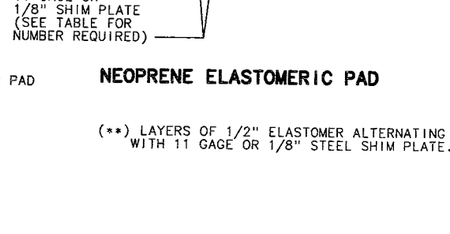
END VIEW



SIDE VIEW



PART PLAN VIEW



NEOPRENE ELASTOMERIC PAD

(**) LAYERS OF 1/2" ELASTOMER ALTERNATING WITH 11 GAGE OR 1/8" STEEL SHIM PLATE.

GENERAL NOTES:

ANCHOR BOLTS SHALL BE ① Ø A588 STEEL SWEDGED BOLTS AND SHALL EXTEND ② INTO THE CONCRETE WITH A194-2, 2H OR A563-C, C3, D, DH, DH3 HEAVY HEXAGON NUTS. ACTUAL MANUFACTURER'S CERTIFIED MILL TEST REPORTS (CHEMICAL AND MECHANICAL) SHALL BE PROVIDED. (SWEDGING SHALL BE 1" LESS THAN THE EXTENSION INTO THE CONCRETE.)

ALL STRUCTURAL STEEL FOR THE SOLE PLATE, ANCHOR BOLTS AND THE HEAVY HEXAGON NUTS SHALL BE PAINTED WITH 2 COATS (5 MILS MIN.) OF INORGANIC ZINC. WELD AREAS TO BE TOUCHED UP AFTER ASSEMBLY.

THE NEOPRENE ELASTOMERIC PADS SHALL BE 60 DUROMETER.

THE SOLE PLATE SHALL BE FURNISHED WITH THE BEARING AND FIELD OR SHOP WELDED TO THE GIRDERS.

STRUCTURAL STEEL FOR THE SOLE PLATE SHALL BE A-36.

PAYMENT FOR THE SOLE PLATE, ANCHOR BOLTS AND HEAVY HEXAGON NUTS SHALL BE INCLUDED IN THE COST OF THE BEARING ASSEMBLY. SEE SPECIAL PROVISIONS.

THE ACCEPTED QUANTITY OF THE ELASTOMERIC BEARING ASSEMBLIES, COMPLETE-IN-PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR LAMINATED NEOPRENE BEARING PADS (STEEL STRUCTURES), EACH.

① 2" ø BENT #1 & #3
2½" ø BENT #2

② 18" ø BENT #1 & #3
24" ø BENT #2

EXPANSION BEARINGS

BENT NO.	A	B	C	D	E	F	G	J	K	L	M	N	P	NUMBER OF SHIM PLATES(*)	NUMBER REQUIRED
1	20"	13"	14"	2'-5"	5"	2⅛"	23"	6⅛"	4⅜"	14"	1½"	4½"	⅛"	7	5
3	20"	13"	14"	2'-5"	5"	2⅛"	23"	6⅛"	4⅜"	14"	1½"	4½"	¾"	7	5
														TOTAL BEARINGS	10

(*) THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYERS OF ELASTOMER AND MOLDED TOGETHER TO FORM AN INTEGRAL UNIT.

FIXED BEARINGS

BENT NO.	GDR. NO.	A	B	C	D	F	G	J	K	L	M	N	P	NUMBER OF SHIM PLATES(*)	NUMBER REQUIRED
2	1,2,3&5	21"	2'-10"	2'-11"	2'-11"	2⅝"	2'-3½"	5 9/16"	3¾"	22"	1 9/16"	2¾"	1⅛"	6	4
2	4	21"	2'-10"	2'-11"	2'-11"	2⅝"	2'-3½"	5 15/16"	3¾"	22"	1 15/16"	2¾"	1⅛"	6	1
														TOTAL BEARINGS	5

(*) THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYERS OF ELASTOMER AND MOLDED TOGETHER TO FORM AN INTEGRAL UNIT.

BRG LAM .BRG3.31.STL, A	LAMINATED BRG.	JAN. 1980
	REVISED	MAY 1992

DETAILED MAY 1992
CHECKED JULY 1992

DETAILS OF LAMINATED NEOPRENE BEARINGS (STEEL STRUCTURES)

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

JACKSON COUNTY

A-5249

STATE	PROJ. NO.	SHEET NO.
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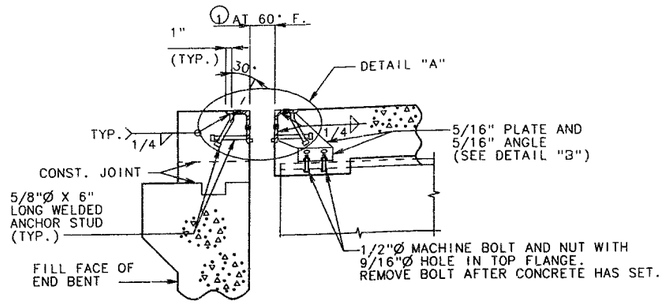
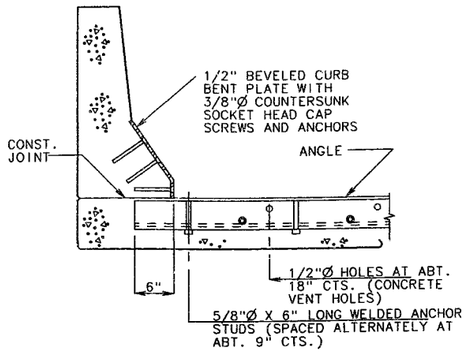
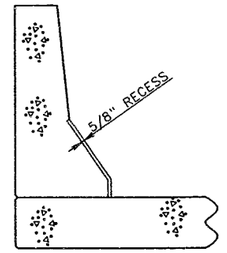


PART SECTION D-D



PART SECTION B-B



PART SECTION A-A

GENERAL NOTES:

STRUCTURAL STEEL FOR EXPANSION DEVICE SHALL BE FABRICATED IN ONE SECTION, EXCEPT THAT WHEN THE LENGTH IS OVER 50', SPLICING IS PERMISSABLE.

THE EXPANSION DEVICE SHALL BE BENT TO CONFORM TO CROWN AND GRADE OF ROADWAY.

STRUCTURAL STEEL FOR THE ARMORED JOINT SHALL BE GRADE A36.

ANCHORS FOR COMPRESSION SEAL ARMOR SHALL BE APPROVED STUD WELDED ANCHORS (C1010 THRU C1020).

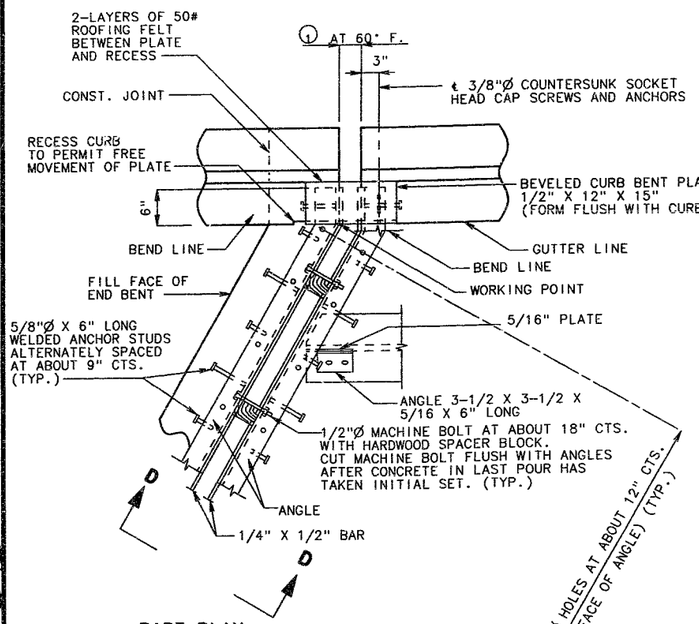
PLAN DIMENSIONS ARE BASED ON INSTALLATION AT 60°F.

DIMENSION ① SHALL BE INCREASED $\frac{1}{8}$" FOR EACH 10° FALL IN TEMPERATURE AND DECREASED $\frac{1}{8}$" FOR EACH 10° RISE IN TEMPERATURE AT INSTALLATION.

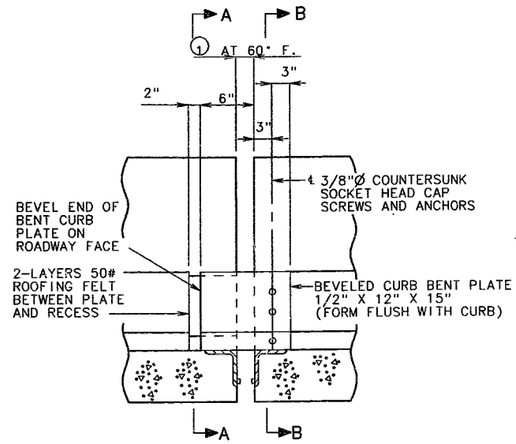
SEE SPECIAL PROVISIONS FOR THE REQUIREMENTS OF COMPRESSION JOINT SEAL.

FURNISHING, PAINTING AND INSTALLING THE STRUCTURAL STEEL ARMORED JOINT AND CURB PLATES SHALL BE INCLUDED IN CONTRACT UNIT PRICE FOR PREFORMED COMPRESSION JOINT SEAL.

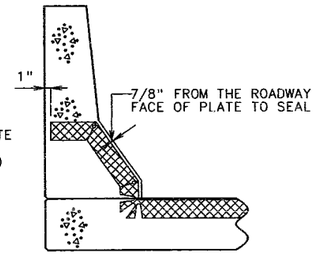
NEOPRENE EXTRUSIONS SHALL MEET A.S.T.M. D3542-83.



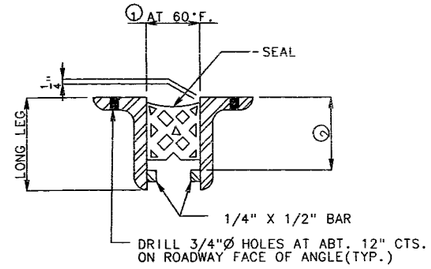
PART PLAN



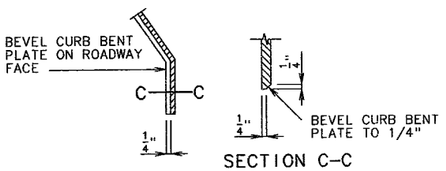
PART ELEVATION OF BARRIER CURB



PART SECTION THRU JOINT SEAL



PART CROSS SECTION THRU EXPANSION JOINT



SECTION C-C

PART ELEVATION AT END OF BEVELED CURB BENT PLATE

TABLE OF TRANSVERSE BRIDGE SEAL DIMENSIONS			
SEAL (WIDTH)	①	②	REQUIRED MOVEMENT RANGE
2.5"	1-5/8"	SEAL DEPTH + 3/4"	0.9"
3.0"	1-7/8"	SEAL DEPTH + 3/4"	1.0"
3.5"	2-1/4"	SEAL DEPTH + 3/4"	1.3"
4.0"	2-5/8"	SEAL DEPTH + 3/4"	1.6"
4.5"	2-3/4"	SEAL DEPTH + 3/4"	1.9"
5.0"	2-7/8"	SEAL DEPTH + 3/4"	2.0"

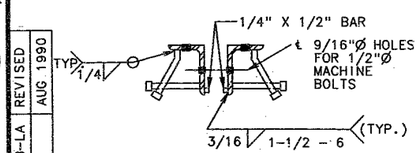
BT.#1&BT.#3

NOTE: DEPTH OF SEAL SHALL NOT BE LESS THAN WIDTH OF SEAL.

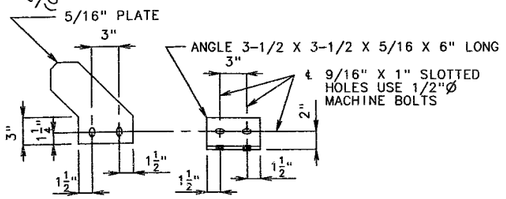
SIZE OF ARMOR JOINT

VERTICAL LEG OF ANGLE SHALL BE A MINIMUM OF DEPTH OF SEAL + 1-1/2". HORIZONTAL LEG OF ANGLE SHALL BE A MINIMUM OF 3". MINIMUM THICKNESS OF ANGLE SHALL BE 1/2"..

IF A SEAL SIZE LARGER THAN THAT INDICATED ON THE PLANS IS USED, THE MOVEMENT RANGE, THE OPENING AT 60° AND ALL DIMENSIONS FOR THE ARMOR ANGLES SHALL BE SHOWN ON THE SHOP DRAWINGS.



DETAIL "A"



DETAIL "B"

REVISED	AUG 1990
PCJS-STL EB-LA	OCT. 1973

DETAILS OF PREFORMED COMPRESSION JOINT SEAL AT BENT NO. 1 & 3

DETAILED MAY 1992
CHECKED JULY 1992

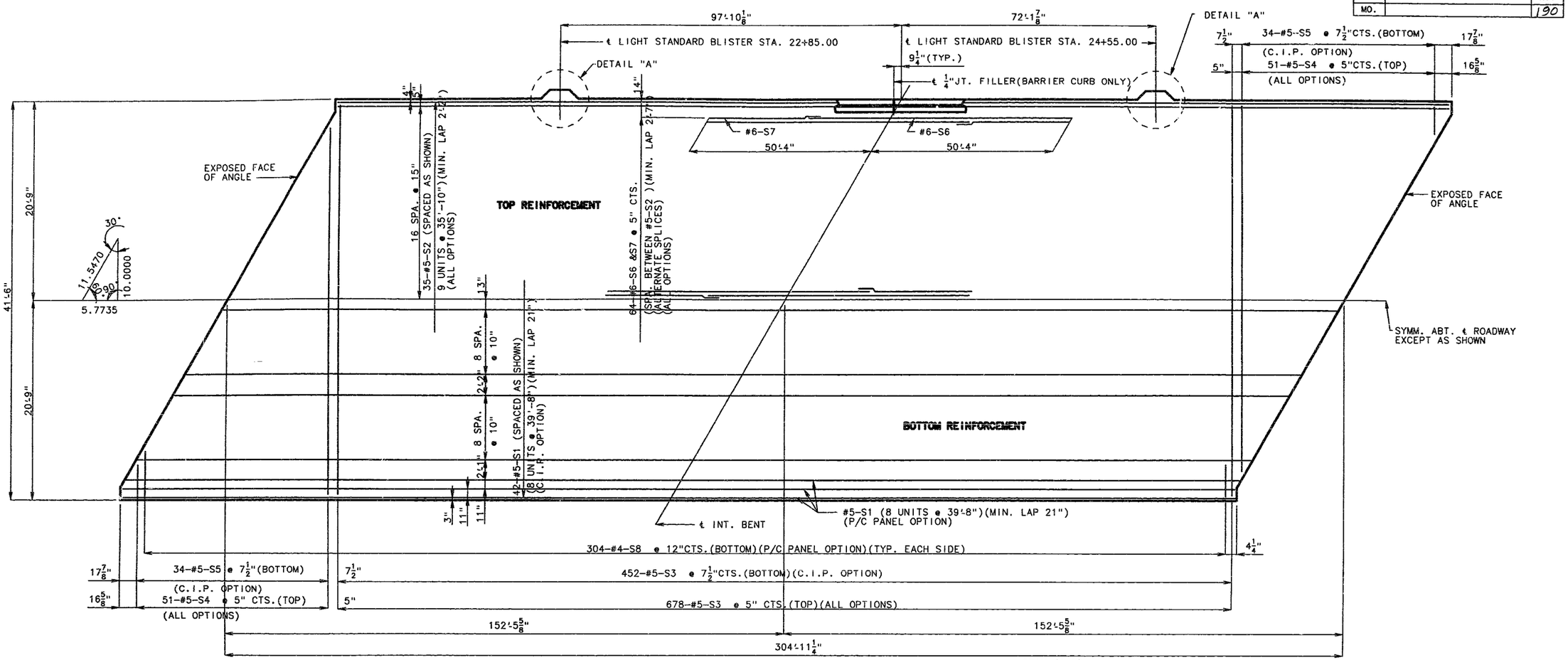
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 17 OF 33.

JACKSON COUNTY A-5249

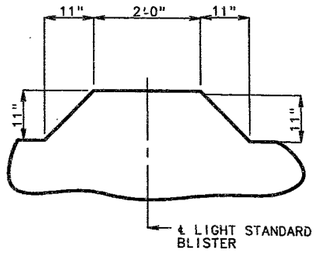
2454 153

STATE	PROJ. NO.	SHEET NO.
MO.		190



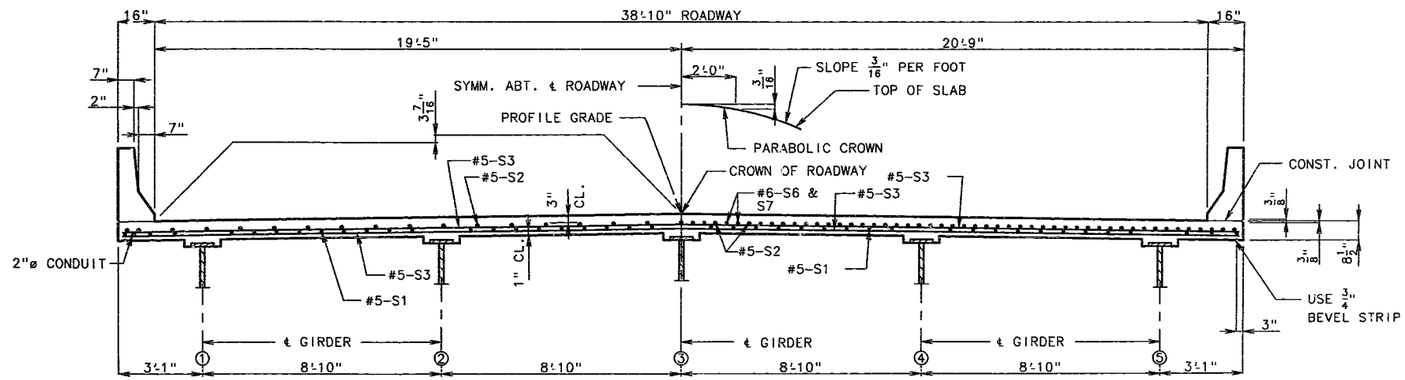
PLAN OF SLAB SHOWING REINFORCEMENT

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE HORIZONTAL.
FOR DETAILS OF SLAB DRAINS SEE SHEET NO. 21.
FOR DETAILS OF P/C PANEL OPTION SHOWN SEE SHEET NO. 19.
FOR SLAB POURING SEQUENCE SEE SHEET NO. 20.
FOR SLAB HAUNCHING DIAGRAM SEE SHEET NO. 20.
FOR DETAILS OF CONDUIT SYSEM SEE SHEET NO. 22.
LONGITUDINAL REINFORCING STEEL SHALL BE PLACED SO THAT ENDS SHALL NOT BE MORE THAN 1"± FROM VERTICAL LEG OF ANGLE AT EXPANSION DEVICE.



DETAIL "A"

NOTE: FOR REINFORCEMENT IN LIGHT STANDARD BLISTER SEE SHEET NO. 23.



HALF SECTION NEAR ℄ SPAN — HALF SECTION NEAR INT. BENT

REVISED	JUNE 1991
JAN. 1981	

DETAILED MAY 1992
CHECKED JULY 1992

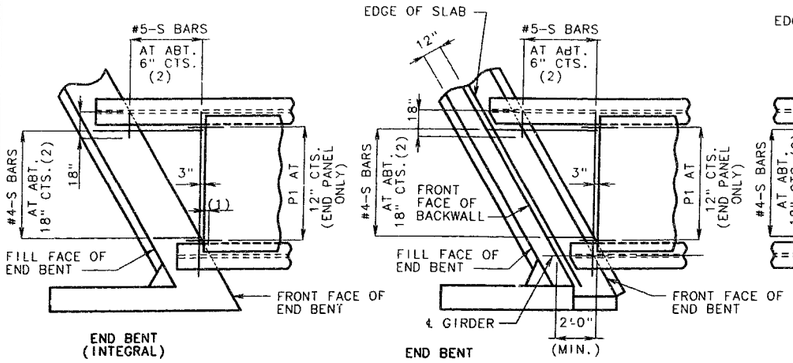
NOTE: FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NO. 23.
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

(C.I.P. OPTION SHOWN)

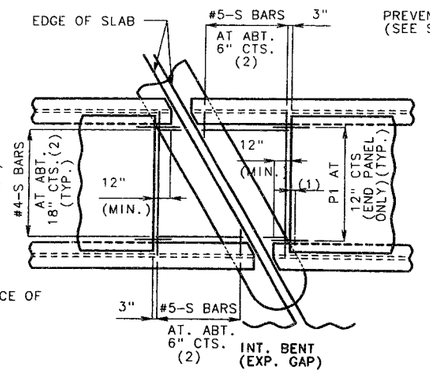
SHEET NO. 18 OF 33.

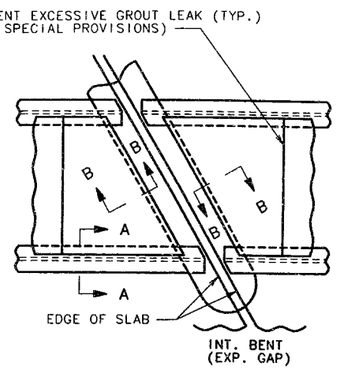
JACKSON COUNTY A-5249

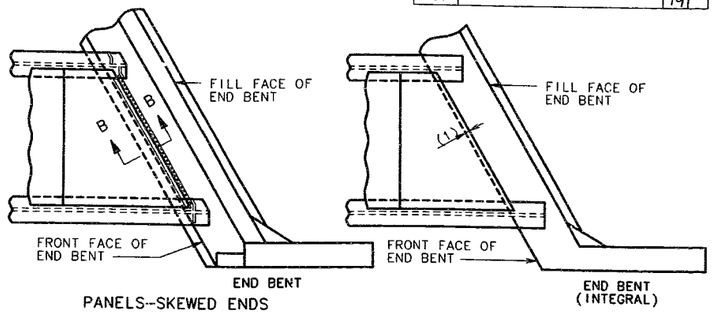
STATE	PROJ. NO.	SHEET NO.
MO.		191



PANELS-SQUARED ENDS

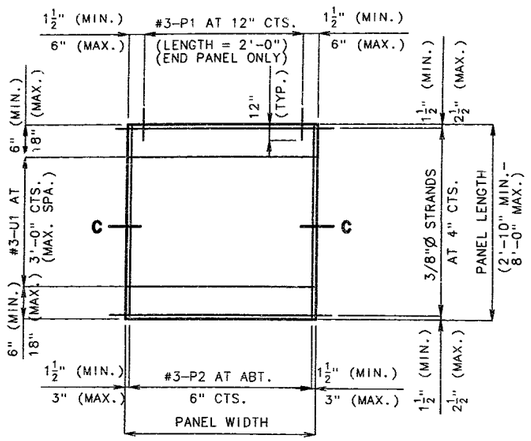




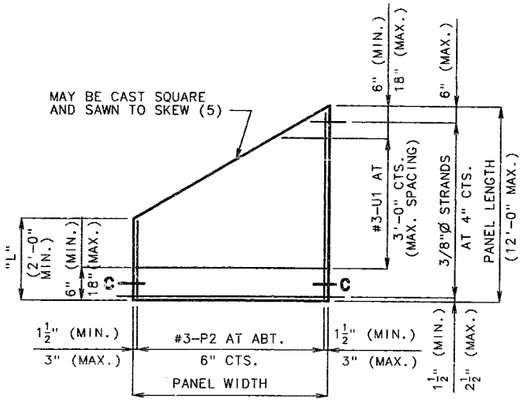


PANELS-SKEWED ENDS

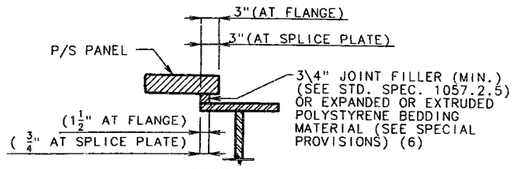
PLAN OF PRECAST PRESTRESSED PANELS PLACEMENT



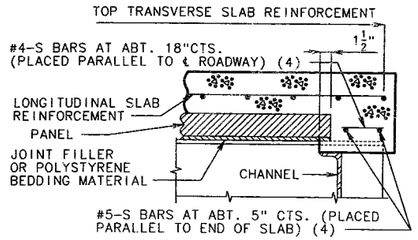
PLAN OF PRECAST PRESTRESSED PANEL



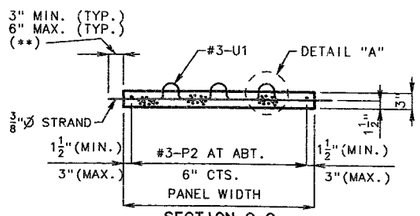
PLAN OF PRECAST PRESTRESSED PANEL (SKEWED END-OPTIONAL)



SECTION A-A

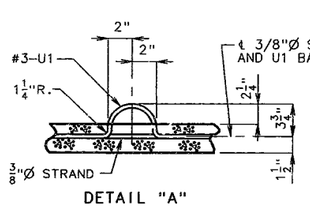


PART SECTION B-B

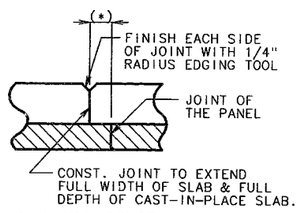


SECTION C-C

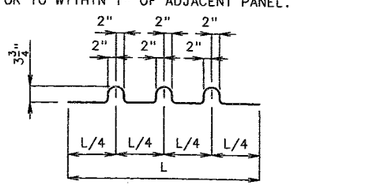
(**) PRESTRESSING STRANDS TO EXTEND 6" OR TO WITHIN 1" OF ADJACENT PANEL.



DETAIL "A"



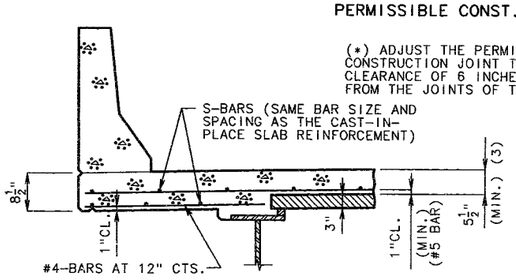
PERMISSIBLE CONST. JOINT



BENDING DIAGRAM FOR U1 BAR

(U1 BARS MAY BE ORIENTED AT RIGHT ANGLES TO LOCATION AND SPACING SHOWN. U1 BARS SHALL BE PLACED BETWEEN P1 BARS).

(*) ADJUST THE PERMISSIBLE CONSTRUCTION JOINT TO A CLEARANCE OF 6 INCHES MINIMUM FROM THE JOINTS OF THE PANELS.



SECTION THRU CANTILEVER

S.PAN 3/4"GS 3" P.S.STL.
3" PANEL (STEEL) REVISED: MARCH 1992
MAY 1985

DETAILED MAY 1992
CHECKED JULY 1992

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

NOTES:

(1) END PANELS TO BE DIMENSIONED 1-1/2 INCHES FROM THE INSIDE FACE OF DIAPHRAGM.

(2) S-BARS SHOWN ARE BOTTOM STEEL IN SLAB BETWEEN PANELS AND USED WITH SQUARED END PANELS ONLY.

COST OF S-BARS SHALL BE INCLUDED IN PRICE BID FOR SLAB PER SQUARE YARD.

S-BARS ARE NOT LISTED IN BILL OF REINFORCING.

SLAB EXTERIOR GIRDER HAUNCH SHALL BE THE SAME AS CAST-IN-PLACE.

(3) ADJUSTMENT IN THE SLAB THICKNESS, JOINT FILLER OR POLYSTYRENE BEDDING MATERIAL THICKNESS, OR GRADE, WILL BE NECESSARY IF THE GIRDER CAMBER AFTER ERECTION DIFFERS FROM PLAN CAMBER BY MORE THAN THE ¼ OF DEAD LOAD DEFLECTION DUE TO THE WEIGHT OF STRUCTURAL STEEL. NO PAYMENT WILL BE MADE FOR ADDITIONAL LABOR OR MATERIALS FOR THE ADJUSTMENT.

(4) S - BARS SHOWN ARE USED WITH SKEWED END PANELS, OR SQUARE END PANELS OF SQUARE STRUCTURES ONLY. THE #5 S - BARS SHALL EXTEND THE WIDTH OF SLAB (21 INCHES LAP IF NECESSARY) OR TO WITHIN 3 INCHES OF EXPANSION DEVICE ASSEMBLIES.

(5) ANY STRAND 2'-0" OR SHORTER SHALL HAVE A #4 REINFORCING BAR ON EACH SIDE OF IT CENTERED BETWEEN STRANDS. STRANDS 2'-0" OR SHORTER MAY THEN BE DEBONDED AT THE FABRICATORS OPTION.

(6) ALL PANEL SUPPORT PADS SHALL BE GLUED TO THE GIRDER. WHEN SUPPORT THICKNESS EXCEEDS 1-1/2", THE PADS SHALL BE GLUED TOP AND BOTTOM. THE GLUE USED SHALL BE THE TYPE RECOMMENDED BY THE PANEL SUPPORT PADS MANUFACTURER.

NOTE:

USE SLAB HAUNCHING DIAGRAM ON SHEET NO. 20 FOR DETERMINING THICKNESS OF JOINT FILLER OR POLYSTYRENE BEDDING MATERIAL WITHIN THE LIM.TS NOTED BELOW.

GENERAL NOTES:

PRESTRESSED PANELS:

CONCRETE FOR PRESTRESSED PANELS SHALL BE CLASS A1 WITH F'C = 5,000 PSI, F'CI = 3,500 PSI.

THE TOP SURFACE OF ALL PANELS SHALL RECEIVE A SCORED FINISH WITH A DEPTH OF SCORING OF 1/8 INCH PERPENDICULAR TO THE PRESTRESSING STRANDS IN THE PANELS (SEE SPECIAL PROVISIONS).

PRESTRESSING TENDONS SHALL BE HIGH-TENSILE STRENGTH UNCOATED SEVEN WIRE (7), LOW-RELAXATION STRANDS FOR PRESTRESSED CONCRETE CONFORMING TO AASHTO M203, EXCEPT THAT NOMINAL DIAMETER OF STRAND = 3/8 INCH AND NOMINAL AREA = 0.085 SQ. IN. AND MINIMUM ULTIMATE STRENGTH = 21,250 LBS. (250 KSI). LARGER STRANDS MAY BE USED WITH THE SAME SPACING AND INITIAL TENSION.

INITIAL PRESTRESSING FORCE = 14.9 KIPS/STRAND.

THE METHOD AND SEQUENCE OF RELEASING THE STRANDS SHALL BE SHOWN ON THE SHOP DRAWINGS.

SUITABLE ANCHORAGE DEVICES FOR LIFTING PANELS MAY BE CAST IN PANELS, PROVIDED THEY ARE SHOWN ON THE SHOP DRAWINGS AND APPROVED BY THE ENGINEER. PANEL LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR AND SHOWN ON THE SHOP DRAWINGS.

WHEN SQUARE END PANELS ARE USED AT SKEWED BENTS, IT IS REQUIRED THAT THE SKEWED PORTION BE CAST FULL DEPTH. NO SEPARATE PAYMENT WILL BE MADE FOR THE ADDITIONAL CONCRETE AND REINFORCING REQUIRED.

MINIMUM JOINT FILLER OR POLYSTYRENE BEDDING MATERIAL THICKNESS SHALL BE 3/4 INCH, EXCEPT OVER SPLICE PLATES WHERE MINIMUM THICKNESS SHALL BE 1/4 INCH. WHEN JOINT FILLER OR POLYSTYRENE BEDDING MATERIAL IS LESS THAN 1/2 INCH THICK OVER A SPLICE PLATE, MAKE THE WIDTH OF MATERIAL AT THE SPLICE THE SAME WIDTH AS PANEL ON SPLICE. THICKER MATERIAL MAY BE USED ON ONE OR BOTH SIDES OF THE GIRDER TO REDUCE CAST-IN-PLACE CONCRETE THICKNESS, WITHIN TOLERANCES. NO MORE THAN 2 INCHES TOTAL THICKNESS OF JOINT FILLER OR POLYSTYRENE BEDDING MATERIAL SHALL BE USED.

THE SAME THICKNESS OF JOINT FILLER MATERIAL SHALL BE USED UNDER ANY ONE EDGE OF ANY PANEL EXCEPT AT SPLICES, AND THE MAXIMUM CHANGE IN THICKNESS BETWEEN ADJACENT PANELS SHALL BE 1/4 INCH TO CORRECT FOR VARIATIONS FROM GIRDER CAMBER DIAGRAM. THE POLYSTYRENE BEDDING MATERIAL MAY BE CUT TO MATCH HAUNCH HEIGHT ABOVE TOP OF FLANGE.

SUPPORT FROM DIAPHRAGM FORMS IS REQUIRED UNDER THE OPTIONAL SKEWED END UNTIL CAST-IN-PLACE CONCRETE HAS REACHED 3,000 PSI COMPRESSIVE STRENGTH.

REINFORCING STEEL:

ALL DIMENSIONS ARE OUT TO OUT.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2 INCH, UNLESS OTHERWISE SHOWN.

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 ARE MEASURED ALONG CENTERLINE OF BAR TO THE NEAREST INCH.

THE PRESTRESSED PANEL QUANTITIES ARE NOT INCLUDED IN THE TABLE OF ESTIMATED QUANTITIES FOR ALTERNATE SLABS.

IF U1 BARS INTERFERE WITH PLACEMENT OF SLAB STEEL, U1 LOOPS MAY BE BENT OVER, AS NECESSARY, TO CLEAR SLAB STEEL.

WELDED WIRE FABRIC OR WELDED DEFORMED BAR MATS PROVIDING A MINIMUM AREA OF REINFORCING PERPENDICULAR TO STRANDS OF 0.22 SQ. IN./FT., WITH SPACING PARALLEL TO STRANDS SUFFICIENT TO INSURE PROPER HANDLING, MAY BE USED IN LIEU OF THE #3-P2 BARS SHOWN. WIRE OR BAR DIAMETER SHALL NOT BE LARGER THAN 0.375 INCHES.

THE REINFORCING STEEL SHALL BE TIED SECURELY TO THE 3/8" Ø STRANDS WITH THE FOLLOWING MAXIMUM SPACING IN EACH DIRECTION:
#3-P2 BARS AT 16 INCHES.
WELDED WIRE FABRIC OR WELDED DEFORMED BAR MATS AT 24 INCHES.

TIE THE #3-U1 BARS TO THE #3-P2 BARS, TO THE WELDED WIRE FABRIC OR THE WELDED DEFORMED BAR MATS AT ABOUT 36 INCH CENTERS.

ALL REINFORCEMENT OTHER THAN PRESTRESSING STRANDS SHALL BE EPOXY COATED.

DETAILS OF PRECAST PRESTRESSED PANELS

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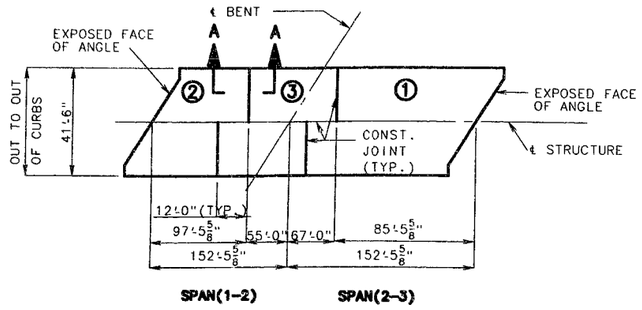
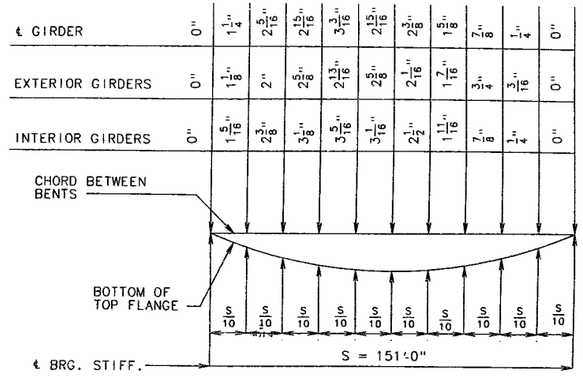


SLAB POURING SEQUENCE

	SEQUENCE OF POURS			MINIMUM RATE OF POUR (CUBIC YARDS PER HOUR)	
				WITH RETARDER	NO RETARDER
BASIC SEQUENCE	1	2	3	25	25
	EITHER DIRECTION				
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.					
ALTERNATE "A" POURS	1	3 + 2		40	66
	END TO 3	1 TO END			
ALTERNATE "B" POURS	1 + 3 + 2			40	66
	END TO END				

THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE SLAB POURS AT THE RATE GIVEN ABOVE. RETARDER, IF USED, SHALL BE AN APPROVED TYPE AND RETARD THE SET OF CONCRETE TO 2.5 HOURS.

IF THE PRECAST PRESTRESSED PANEL OPTION IS USED, THE VALUES SHOWN FOR THE MINIMUM RATE OF POUR MAY BE REDUCED BY 25%. HOWEVER, IN NO CASE SHALL THE MINIMUM RATE OF POUR BE LESS THAN 25 CU. YDS PER HOUR.



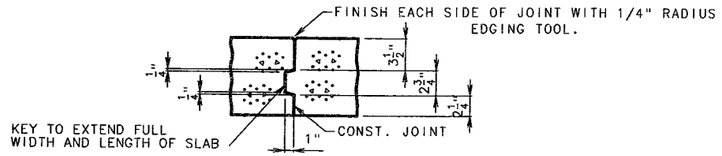
SPAN(1-2)(3-2)

DEAD LOAD DEFLECTION

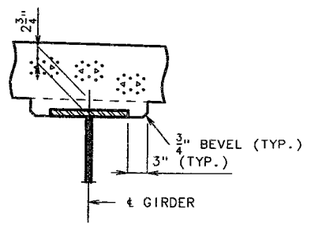
NOTE: ALL LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM ℄ BRG. TO ℄ BRG.

NOTE: * OF DEAD LOAD DEFLECTION IS DUE TO WEIGHT OF STRUCTURAL STEEL.

* 20% (GDR. #2, #3, & #4)
24% (GDR. #1 & #5)

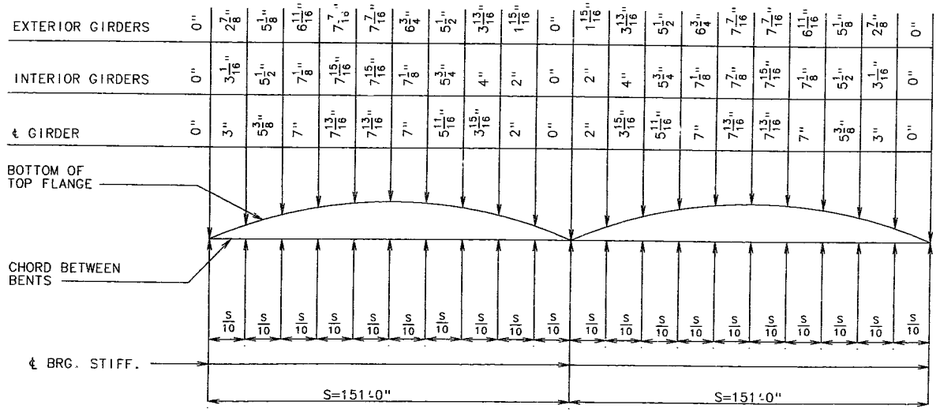


SECTION A-A



THEORETICAL SLAB HAUNCH

NOTE: HAUNCH DIMENSION MAY VARY IF THE GIRDER CAMBER AFTER ERECTION DIFFERS FROM PLAN CAMBER BY MORE THAN THE % OF D. L. DEFLECTION DUE TO THE WEIGHT OF STRUCTURAL STEEL. NO PAYMENT WILL BE MADE FOR ADDITIONAL FORMING OR CONCRETE REQUIRED FOR VARIATION IN HAUNCHING.



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

PLATE GIRDER CAMBER DIAGRAM

NOTE: CAMBER INCLUDES ALLOWANCE FOR VERTICAL CURVE, AND FOR DEAD LOAD DEFLECTION DUE TO CONCRETE SLAB, CURB AND STRUCTURAL STEEL.

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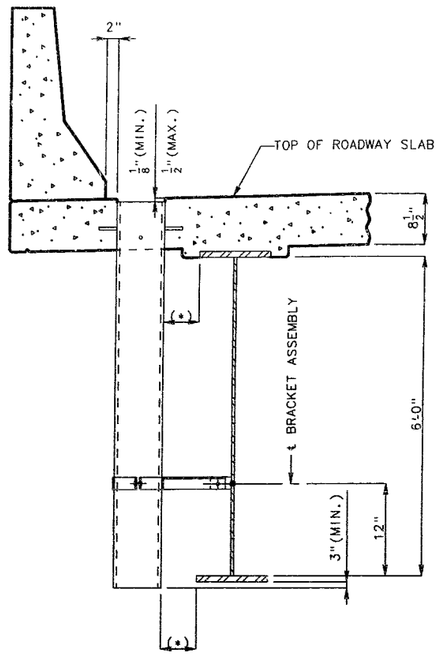
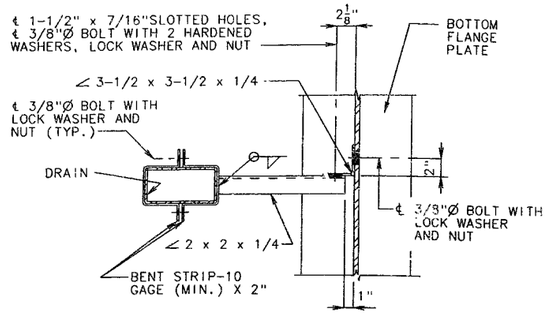
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

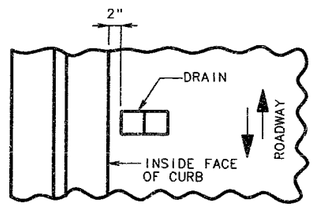


PART ELEVATION OF SLAB AT DRAIN

(*) IF DIMENSION IS LESS THAN 1", DRAINS SHALL BE PLACED PARALLEL TO ROADWAY, OTHERWISE PLACE DRAINS TRANSVERSE TO ROADWAY.

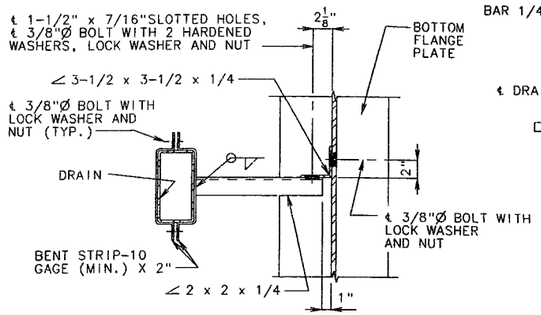


PART PLAN SHOWING BRACKET ASSEMBLY

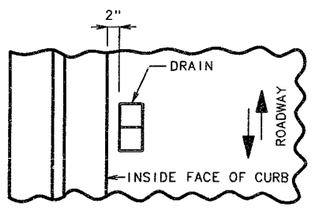


PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS TRANSVERSE TO ROADWAY

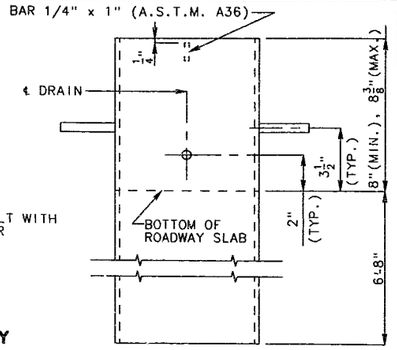


PART PLAN SHOWING BRACKET ASSEMBLY

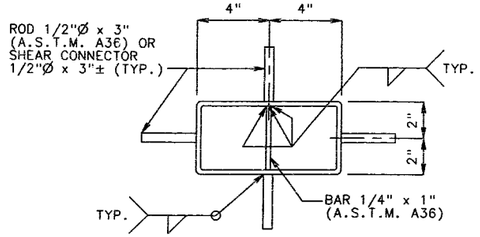


PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS PARALLEL TO ROADWAY



ELEVATION OF DRAIN



PLAN OF DRAIN

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GENERAL NOTES:

SLAB DRAINS MAY BE FABRICATED OF EITHER 1/4" WELDED SHEETS OF A.S.T.M. A36 STEEL OR FROM 1/4" STRUCTURAL STEEL TUBING A.S.T.M. A500 OR A501.

OUTSIDE DIMENSIONS OF DRAINS ARE 8" x 4".

LOCATE DRAINS IN THE SLAB BY DIMENSIONS SHOWN IN THE PART ELEVATION.

SHIFT REINFORCING IN FIELD WHERE NECESSARY TO CLEAR DRAINS.

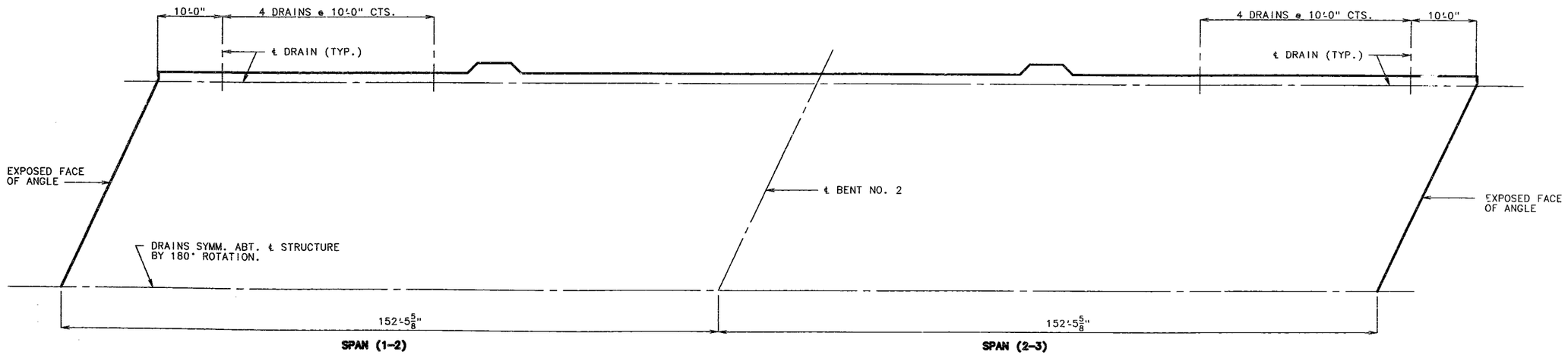
THE DRAINS AND BRACKET ASSEMBLY SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A123.

ALL BOLTS.HARDENED WASHERS, LOCK WASHERS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153.

THE BOLT HOLE FOR THE BRACKET ASSEMBLY ATTACHMENT SHALL BE LOCATED ON THE PLATE GIRDER SHOP DRAWINGS.

SHOP DRAWINGS WILL NOT BE REQUIRED FOR SLAB DRAINS AND THE BRACKET ASSEMBLY.

SLAB DRAIN DETAILS



HALF PLAN OF SLAB SHOWING LOCATION OF SLAB DRAINS

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE HORIZONTAL.

DRAIN .GS 3.30.STL. A	REVISED	OCT. 1988
STEEL GDR DRAIN		
	FEB. 1975	

DETAILED MAY 1991
CHECKED JULY 1992

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

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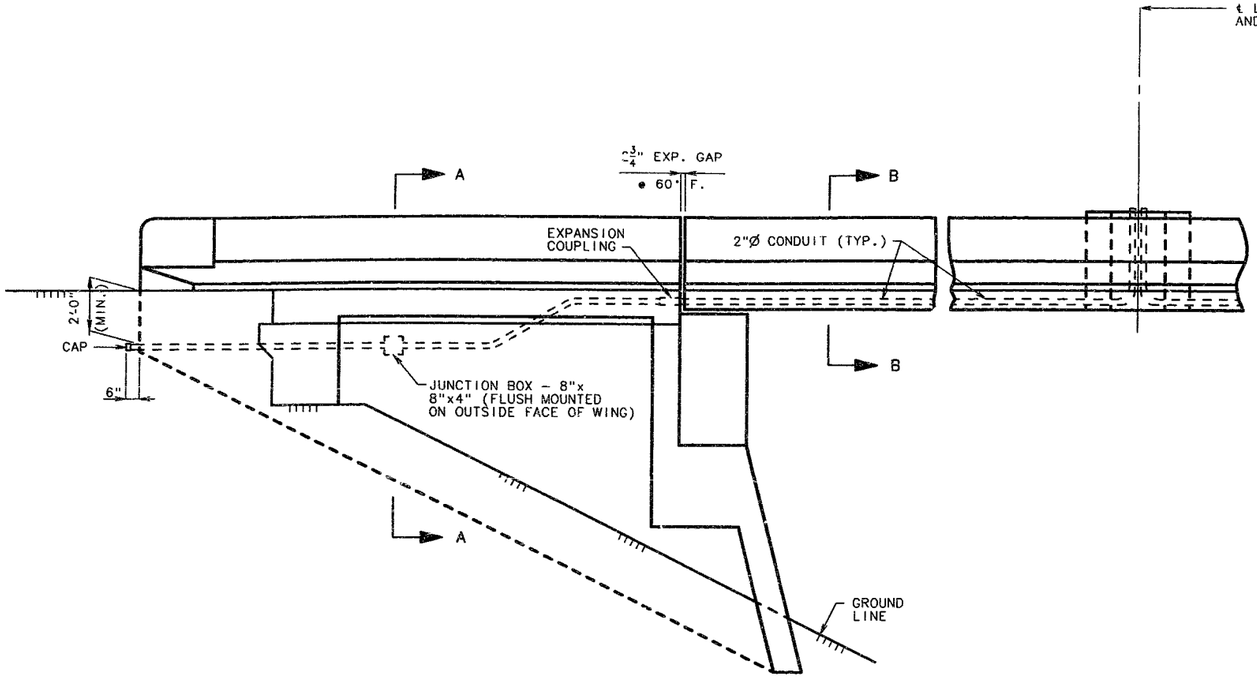
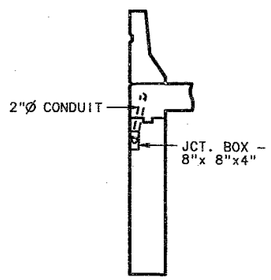
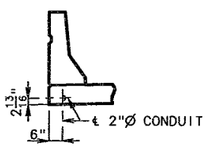


PART SECTION NEAR LEFT ABUTMENT WING SHOWING LOCATION OF 2" Ø CONDUIT
(ABUT. #1 SHOWN, ABUT. #3 OPPOSITE HAND.)

NOTE:
ALL CONDUIT SHALL BE RIGID NON-METALLIC SCHEDULE 40 HEAVY WALL PVC (POLYVINYL CHLORIDE PLASTIC) WITH 3" MINIMUM COVER IN CONCRETE WHERE POSSIBLE. EACH SECTION OF CONDUIT SHALL BEAR THE UNDERWRITERS' LABORATORIES, INC., (UL) LABEL.
SHIFT REINFORCING STEEL IN FIELD WHERE NECESSARY TO CLEAR CONDUIT AND JUNCTION BOXES.
EXPANSION FITTINGS SHALL PROVIDE A MINIMUM MOVEMENT IN EITHER DIRECTION OF 3" AT OPEN JOINTS. EXPANSION FITTINGS SHALL BE EQUAL TO CARLON ELECTRICAL CONSTRUCTION PRODUCTS OR TRIANGLE CONDUIT AND CABLE COMPANY, INC.
ALL END BENT JUNCTION BOXES SHALL BE PVC MOLDED FLUSH MOUNTED AND EQUAL TO CARLON ELECTRICAL CONSTRUCTION PRODUCTS OR TRIANGLE CONDUIT AND CABLE COMPANY, INC. THE CONDUIT TERMINATIONS SHALL BE PERMANENT OR SEPARABLE. THE TERMINATIONS AND COVERS SHALL BE OF WATERTIGHT CONSTRUCTION.
FOR DETAILS OF LIGHT STANDARDS AND WIRING, SEE ELECTRICAL PLANS.
WEEPHOLES SHALL BE PROVIDED AT APPROPRIATE LOCATIONS TO DRAIN ANY MOISTURE IN THE CONDUIT LINES.



SECTION A-A



SECTION B-B

DETAILS OF CONDUIT SYSTEM ON STRUCTURE

DETAILED JUN. 1992
CHECKED JULY 1992

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

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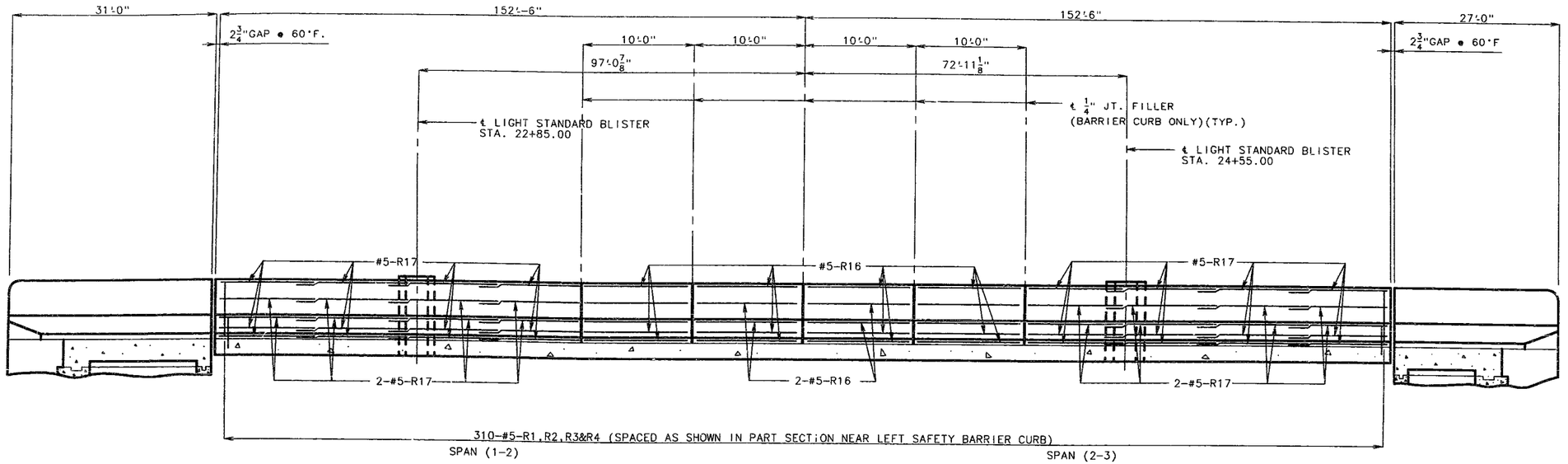
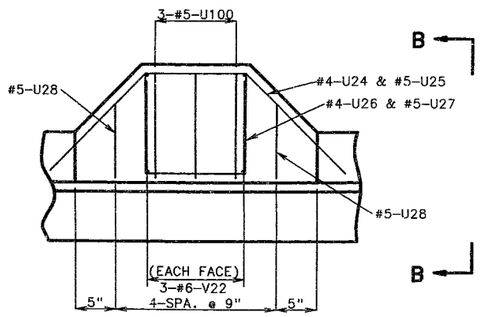


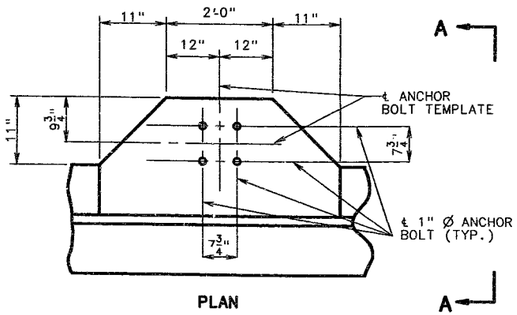
SECTION NEAR LEFT BARRIER CURB

NOTE: RIGHT CURB SIMILAR EXCEPT NO LIGHT BLISTERS ON RIGHT CURB.

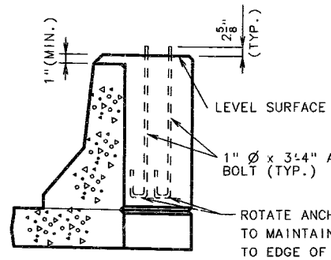
NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL AND ALONG TOP OF OUTSIDE EDGE OF SLAB. RUSTIFICATION NOT SHOWN FOR CLARITY.



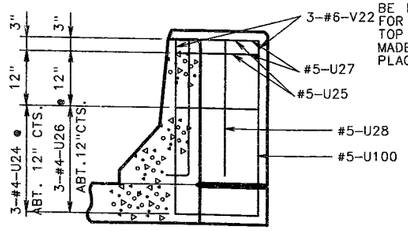
PLAN SHOWING REINFORCEMENT



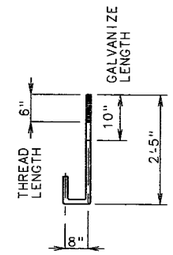
PLAN



SECTION A-A

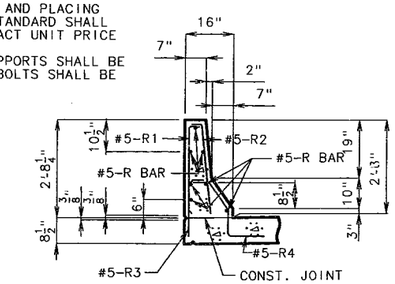


SECTION B-B



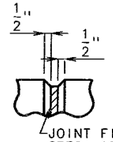
ANCHOR BOLT DETAIL

NOTE: COST OF FURNISHING AND PLACING ANCHOR BOLTS FOR LIGHT STANDARD SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR OTHER ITEMS. TOP OF LIGHT STANDARD SUPPORTS SHALL BE MADE HORIZONTAL; ANCHOR BOLTS SHALL BE PLACED VERTICALLY.

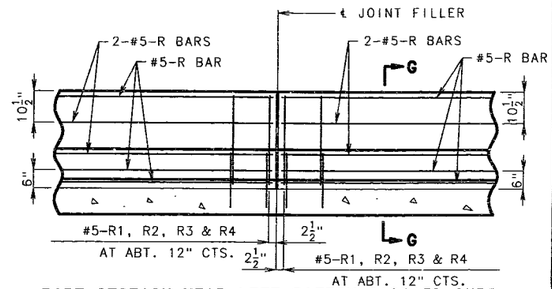


SECTION G-G

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS. THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.



FILLED JOINT DETAIL



PART SECTION NEAR LEFT SAFETY BARRIER CURB

DETAILS OF LIGHT STANDARD

NOTE: ADDITIONAL CONCRETE AND REINFORCEMENT IN BARRIER CURB AT LIGHT STANDARD SUPPORTS AND LIGHT SIGN SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR SAFETY BARRIER CURB PER LINEAR FOOT.

DETAILED JUN. 1992
CHECKED JULY 1992

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

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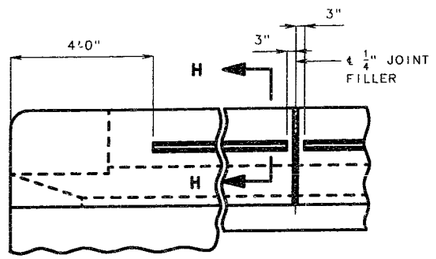
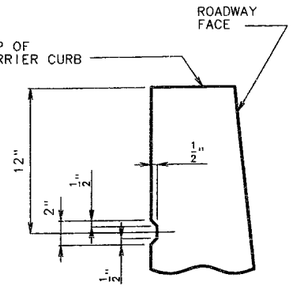
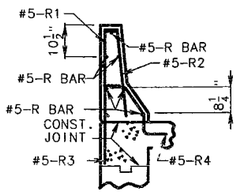


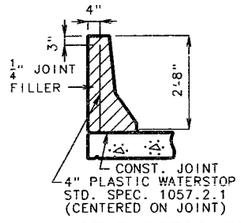
AT END OF WING AT JOINT FILLER



SECTION H-H



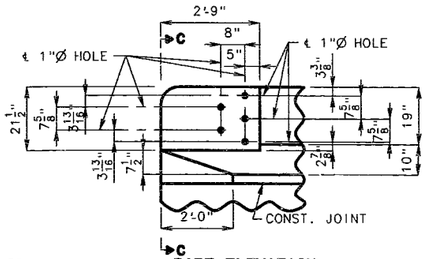
SECTION G-G



DETAIL OF PLASTIC WATERSTOP

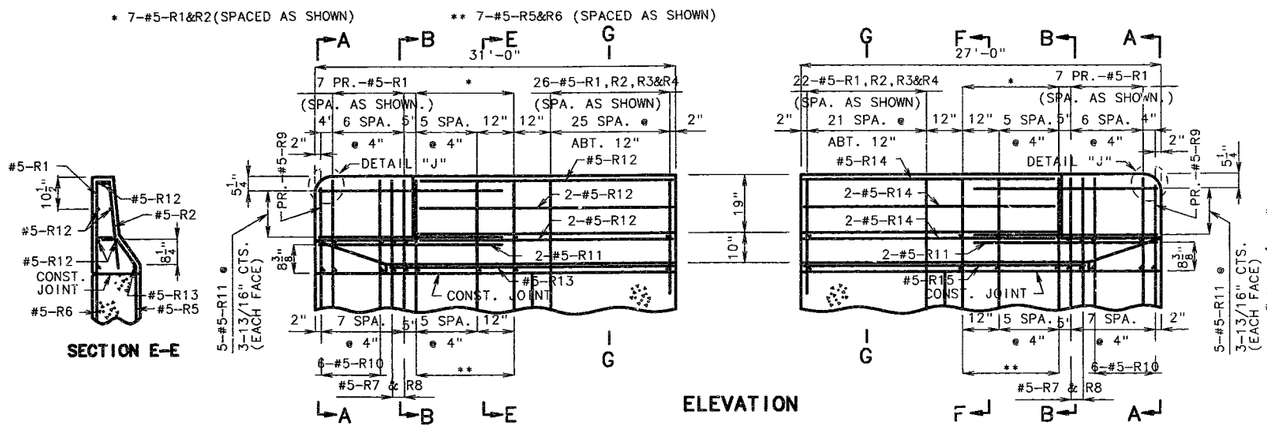
NOTE: PLASTIC WATERSTOP SHALL BE PLACED IN ALL SAFETY BARRIER CURB FILLED JOINTS.

COST OF PLASTIC WATERSTOP COMPLETE-IN-PLACE SHALL BE INCLUDED IN CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.



PART ELEVATION

DETAILS OF RUSTICATION



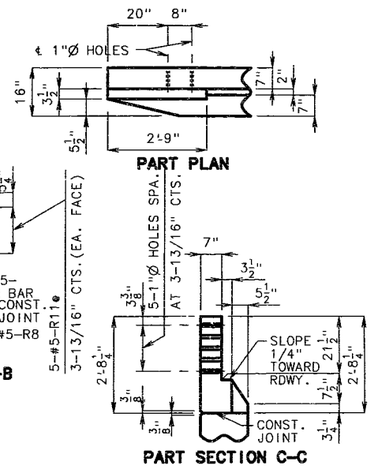
SECTION E-E

ELEVATION

SECTION F-F

SECTION A-A

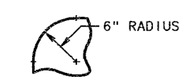
SECTION B-B



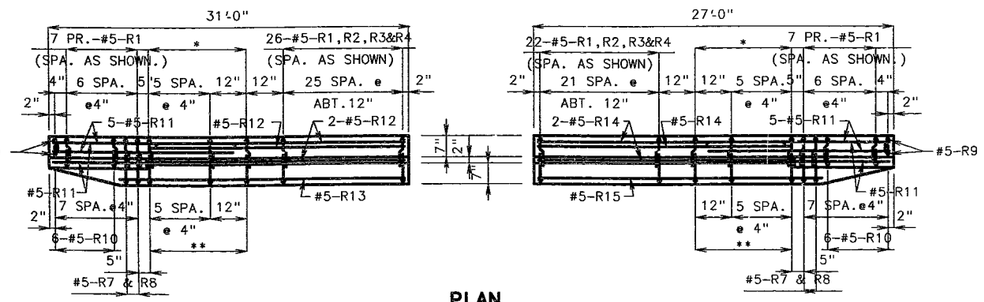
PART PLAN

PART SECTION C-C

DETAILS OF GUARD RAIL ATTACHMENT



DETAIL "J"



PLAN

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS. THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.

NOTE: RIGHT BARRIER CURB SIMILAR.

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

MEASUREMENT OF THE SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

DETAILS OF LEFT SAFETY BARRIER CURB AT END BENTS

DETAILED JUN. 1992
CHECKED JULY 1992

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

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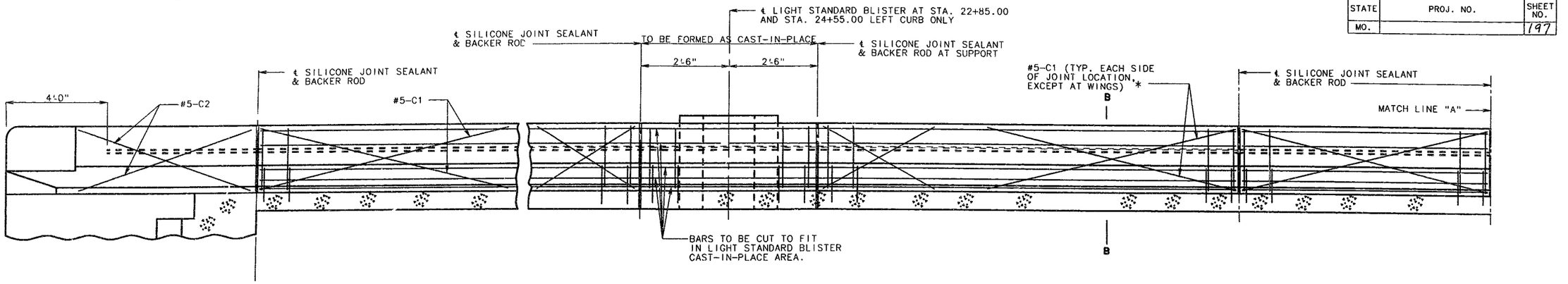


TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB AT SUPPORT LOCATIONS
(OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB)
(RIGHT CURB SIMILAR EXCEPT NO LIGHT BLISTERS ON RIGHT CURB.)

NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

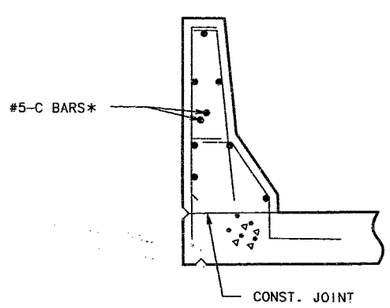
MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

NOTE:

JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE SAFETY BARRIER CURBS INSTEAD OF JOINT FILLER.

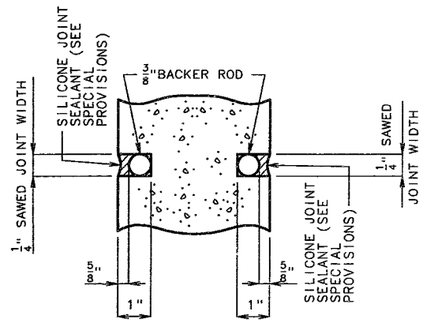
PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE SAFETY BARRIER CURB.



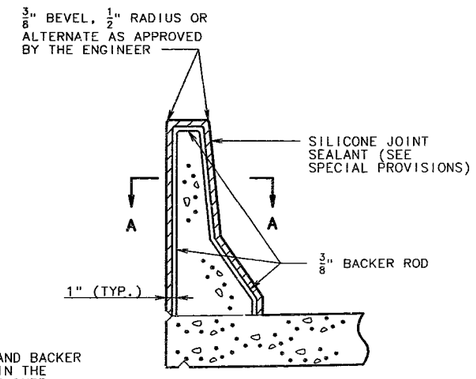
PART SECTION B-B

NOTE: * EACH SIDE OF JOINT LOCATION, EXCEPT SPAN SIDE AT END BENTS AND INSIDE AREA FOR LIGHT BLISTER.

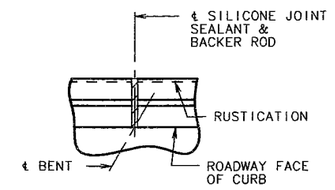


SECTION A-A

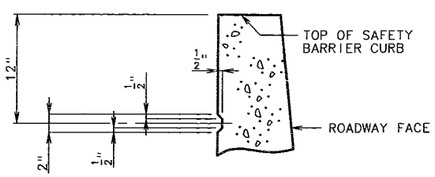
NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.



SECTION THRU JOINT



PART PLAN SHOWING SAFETY BARRIER CURB JOINT



PART SECTION SHOWING RUSTICATION DETAILS

RUSTICATION DETAIL
(USE ON HIGHWAY GRADE SEPARATION ONLY)

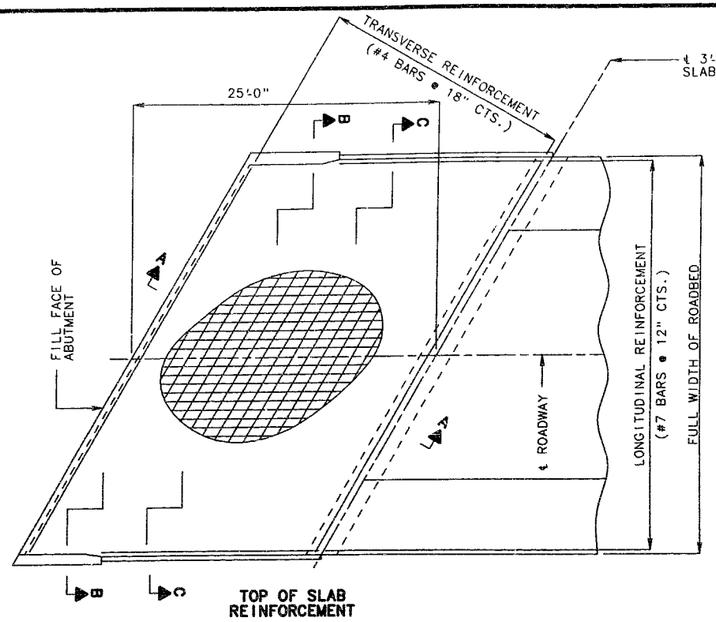
OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB

B/C SF16.0S 3.00	, A
BARRIER CURB ELIMINATION	REVISED
FEB. 1991	

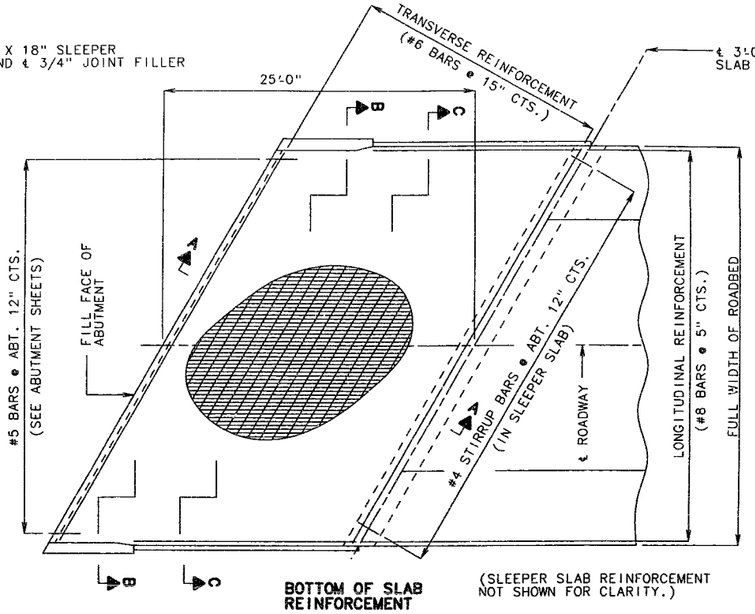
DETAILED MAY 1992
CHECKED JULY 1992

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

STATE	PROJ. NO.	SHEET NO.
MO.		198

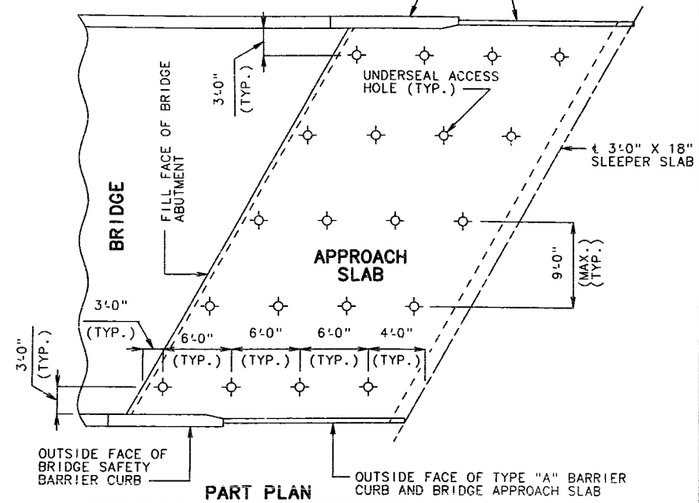


TOP OF SLAB REINFORCEMENT



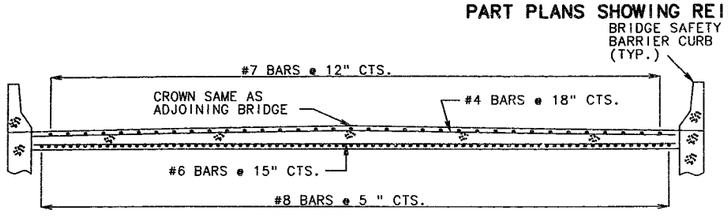
BOTTOM OF SLAB REINFORCEMENT

(SLEEPER SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.)

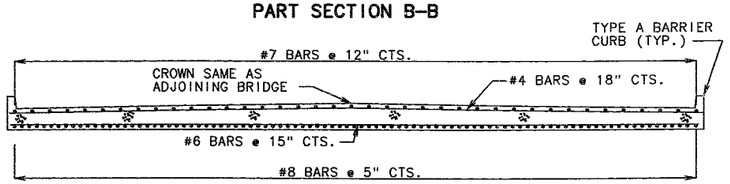


PART PLAN
(SHOWING TYPICAL UNDERSEAL ACCESS HOLE LOCATIONS)

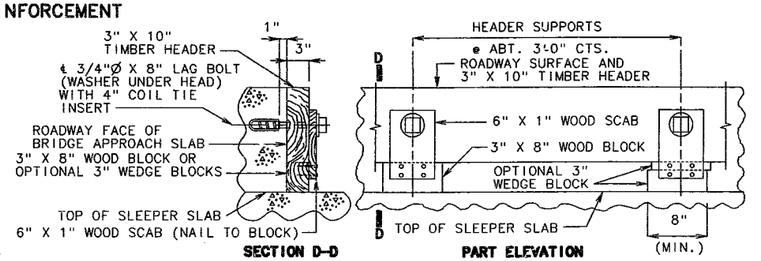
PART PLANS SHOWING REINFORCEMENT



PART SECTION B–B



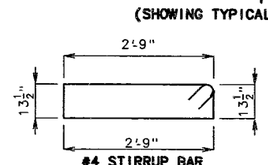
PART SECTION C–C



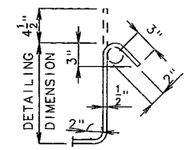
SECTION D–D **PART ELEVATION**

NOTE: REMOVE TIMBER HEADER WHEN CONCRETE PAVEMENT IS PLACED.

DETAILS OF TIMBER HEADER

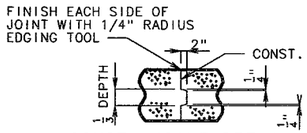


#4 STIRRUP BAR (ACTUAL LENGTH = 8'-3")

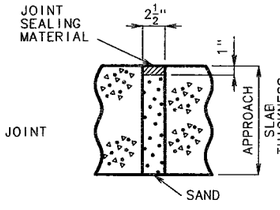


TYPICAL 135° STIRRUP HOOK DIMENSIONS BENDING DIAGRAM

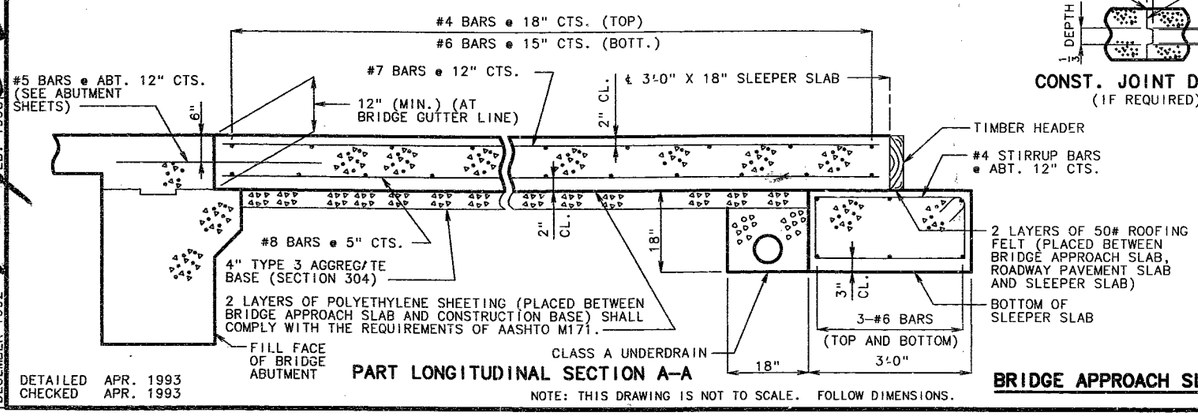
NOTE:
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAM AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)



CONST. JOINT DETAIL
(IF REQUIRED)



TYPICAL UNDERSEAL ACCESS HOLE DETAIL



PART LONGITUDINAL SECTION A–A

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

BRIDGE APPROACH SLAB

GENERAL NOTES:

ALL CONCRETE FOR THE BRIDGE APPROACH SLAB AND SLEEPER SLAB SHALL BE IN ACCORDANCE WITH SECTION 503 (f'c = 4,000 PSI).

ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF SECTION 1057.2.5, EXCEPT AS NOTED.

THE REINFORCING STEEL IN THE BRIDGE APPROACH SLAB AND THE SLEEPER SLAB SHALL BE EPOXY COATED GRADE 60 WITH FY = 60,000 PSI.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2", UNLESS OTHERWISE SHOWN.

THE REINFORCING STEEL IN THE BRIDGE APPROACH SLAB AND THE SLEEPER SLAB SHALL BE CONTINUOUS. THE TRANSVERSE REINFORCING STEEL MAY BE MADE CONTINUOUS BY LAP SPLICING THE #4 & #6 BARS 22" AND 34" RESPECTIVELY.

MECHANICAL BAR SPLICES WILL BE PERMITTED AND SHALL DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCING BARS BEING SPLICED. THE CONTRACTOR SHALL FURNISH THE ENGINEER THE MANUFACTURER'S CERTIFICATION THAT THIS REQUIREMENT IS MET AND IS REQUIRED TO FOLLOW THE MANUFACTURER'S RECOMMENDATION FOR INSTALLATION.

MECHANICAL BAR SPLICES SHALL BE EPOXY COATED.

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.

PLACE CLASS A UNDERDRAIN AT FACE OF SLEEPER SLAB UNDER BRIDGE APPROACH SLAB.

THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE BRIDGE SLAB BEFORE POURING THE BRIDGE APPROACH SLABS.

LONGITUDINAL CONSTRUCTION JOINTS IN APPROACH SLAB AND SLEEPER SLAB SHALL BE ALIGNED WITH LONGITUDINAL CONSTRUCTION JOINTS IN BRIDGE SLAB.

PAYMENT FOR FURNISHING ALL MATERIALS AND LABOR NECESSARY TO CONSTRUCT THE APPROACH SLAB AND TIMBER HEADER, COMPLETE IN PLACE, AS SHOWN ON THIS SHEET, SHALL BE CONSIDERED AS COMPLETELY COVERED UNDER THE CONTRACT UNIT PRICE FOR "BRIDGE APPROACH SLAB (BRIDGE)", PER SQ. YD.

GENERAL NOTES (CONT.):

SEE MISSOURI STANDARD PLANS DRAWING 504.00 FOR DETAILS OF CONCRETE APPROACH PAVEMENT.

SEE MISSOURI STANDARD PLANS DRAWING 605.10 FOR DETAILS OF CLASS A UNDERDRAIN.

SEE MISSOURI STANDARD PLANS DRAWING 609.00 FOR DETAILS OF TYPE A BARRIER CURB.

APP SLAB.GS 3.30.1 REVISED FEB. 1993
DECEMBER 1992

DETAILED APR. 1993
CHECKED APR. 1993

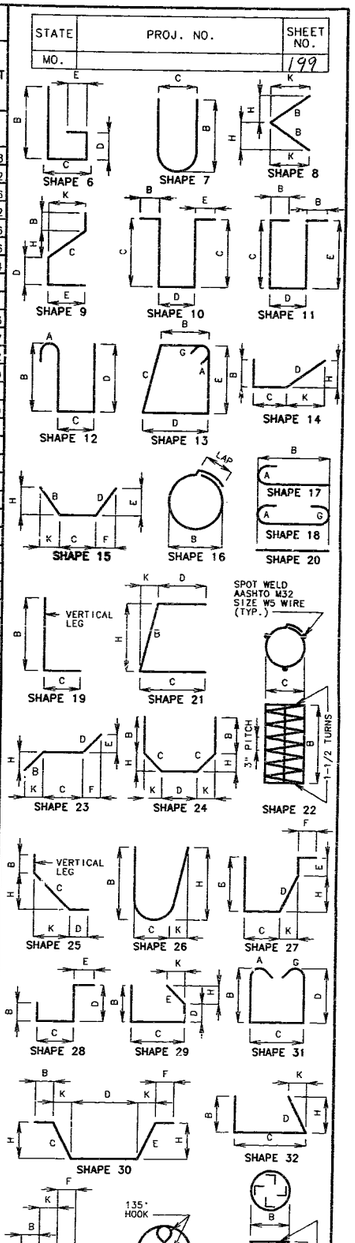
JACKSON COUNTY A-5249

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	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.
			SUBSTRUCTURE																
			ABUT. NO. 1																
15	5D4		FOOTINGS		18	X			8 8.000								9 10	9 10	154
24	5D5		FOOTINGS		20	X			4 2.000								4 2	4 2	104
78	8D6		FOOTINGS		17	X			6 2.000								7 1	7 1	1475
8	9H8		BEAM		18	X			47 7.000								50 1	50 1	1362
20	6H9		BEAM		20	X			47 7.000								47 7	47 7	1429
8	9H10		BEAM		17	X			19 7.000								20 10	20 10	567
8	9H11		BEAM		17	X	V	1	37 0.000								38 3	38 3	
			INCREMENT = 3.375 INCH						35 0.000								36 3	36 3	1013
16	4H12		BACKWALL		20	X			24 9.000								24 9	24 9	265
8	6H13		BEAM		18	X			47 7.000								48 11	48 11	588
2	4H14		APPROACH H.		20	X			23 3.000								23 3	23 3	31
12	4H15		CURTAIN WALL		20	X			3 3.000								3 3	3 3	26
12	4H16		WING		20	X	V	2	17 0.000								17 0	17 0	
			INCREMENT = 30.250 INCH						4 5.000								4 5	4 5	86
2	4H17		WING		20	X			16 0.000								16 0	16 0	21
2	4H18		WING		20	X			19 6.000								19 6	19 6	26
6	5H19		WING		20	X	V	2	28 9.000								28 9	28 9	
			INCREMENT = 28.000 INCH						24 1.000								24 1	24 1	165
4	5H20		WING		20	X			30 8.000								30 8	30 8	128
4	5H21		WING		20	X			5 3.000								5 3	5 3	22
12	4H22		WING		20	X	V	2	17 0.000								17 0	17 0	
			INCREMENT = 30.250 INCH						4 5.000								4 5	4 5	86
2	4H23		WING		20	X			14 5.000								14 5	14 5	19
2	4H24		WING		20	X			18 0.000								18 0	18 0	24
8	5H25		WING		20	X	V	2	29 6.000								29 6	29 6	
			INCREMENT = 28.000 INCH						22 6.000								22 6	22 6	217
2	5H26		WING		20	X			30 8.000								30 8	30 8	64
4	5H27		WING	E	20	X			5 3.000								5 3	5 3	22
4	4H28		WING		20	X			4 11.000								4 11	4 11	13
4	4H29		WING		20	X			6 5.000								6 5	6 5	17
12	4H30		CURTAIN WALL		20	X			4 5.000								4 5	4 5	35
48	4P2		COLUMNS		10	S	X	V	6	3 0.500	2 3.000						8 4	8 2	
			INCREMENT = 3.625 INCH							2 0.200	2 3.000						6 3	6 1	228
2	7T1		WING		23		X		32 1.750	3 6.375									
2	7T2		WING		23		X		6 8.000	2 1.750									
7	6T3		WING		23	S	X		2 0.125	2 0.000									
2	4T4		CURTAIN WALL		19	S	X		7 6.000	3 4.000									
2	7T5		WING		23	S	X		32 1.750	2 9.000									
2	7T6		WING		23		X		8 4.125	2 1.750									
7	6T7		WING		21	S	X		2 0.125	2 0.000									
2	4T8		CURTAIN WALL		19	S	X		7 6.000	4 5.000									

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	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.
1	6U9		BEAM		13	S	X			2 6.375	2 9.250	3 3.375	2 8.000				12 7	12 1	18
21	6U10		BEAM		13	S	X			3 6.000	2 9.250	4 3.000	2 8.000				14 6	14 0	442
52	6U11		BEAM		13	S	X			3 6.000	2 11.500	4 3.000	2 10.375				14 11	14 5	1126
4	4U12		BEAM		10	S	X				6.000	3 6.000					4 6	4 4	12
44	4U13		APPROACH H.		10	S	X				17.500	6.000					3 5	3 3	96
46	5U14		BEAM		13	S	X			2 7.125	2 8.000	2 7.125	2 8.000				11 5	11 2	536
48	5U15		BEAM	E	10	S	X				2 7.500	2 7.125					7 10	7 8	384
45	5V2		BACKWALL	E	20		X			8 7.000							8 7	8 7	403
45	6V3		BACKWALL	E	20		X			8 10.000							8 10	8 10	597
78	8V4		COLUMNS		17		X			9 5.000							10 4	10 4	2152
4	4V5		CURTAIN WALL		20		X			7 6.000							7 6	7 6	20
10	5V6		WING		20		X	V	2	5 7.000							5 7	5 7	
			INCREMENT = 4.750 INCH							4 0.000							4 0	4 0	50
32	4V7		WING		20		X	V	2	15 8.000							15 8	15 8	
			INCREMENT = 7.750 INCH							6 0.000							6 0	6 0	232
6	4V8		WING		20		X	V	2	10 1.000							10 1	10 1	
			INCREMENT = 8.000 INCH							8 9.000							8 9	8 9	38
62	5V9		CURTAIN WALL		20		X			9 2.000							9 2	9 2	593
10	5V25		WING		20		X	V	2	4 10.000							4 10	4 10	
			INCREMENT = 5.250 INCH							3 1.000							3 1	3 1	41
32	4V26		WING		20		X	V	2	14 10.000							14 10	14 10	
			INCREMENT = 7.625 INCH							5 3.000							5 3	5 3	215
8	4V27		WING		20		X	V	2	9 11.000							9 11	9 11	
			INCREMENT = 7.625 INCH							8 0.000							8 0	8 0	48
10	W5W1		A.B.WELLS		22		X			18.000	9.125						26 1	26 1	44
			INT. BT.NO.2																
60	8D1		FOOTINGS		20		X			8 8.000							8 8	8 8	1388
6	6D2		FOOTINGS		10	S	X				5 4.000	8 0.000					18 8	18 4	165
45	9D3		FOOTINGS		20		X			7 11.000							7 11	7 11	1211
8	7H1		BEAM		7		X			4 4.000	3 7.500						10 7	10 7	173
9	10H2		BEAM		20		X			42 0.000							42 0	42 0	1627
4	6H3		BEAM		20		X			42 0.000							42 0	42 0	252
9	10H4		BEAM		17		X			21 5.000							22 10	22 10	884
9	10H5		BEAM		20		X			21 4.000							21 4	21 4	826
2	10H6		BEAM		17		X			23 1.000							24 6	24 6	211
7	10H7		BEAM		17		X			24 3.000							25 8	25 8	773
57	4P1		COLUMNS		16		X			2 9.000							9 6	9 6	362
1	6U1		BEAM		13	S	X			3 9.000	3 3.000	3 9.000	3 3.000				15 4	14 10	22

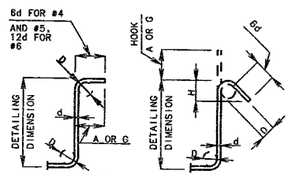


BENDING DIAGRAMS

STATE	PROJ. NO.	SHEET NO.
MO.		199

165 324

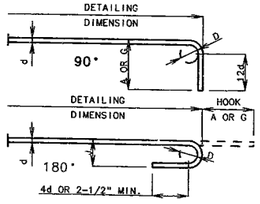
STD 80.8 REVISED	MAY 1974 OCT. 1991



DETAILED MAR. 1993
CHECKED MAR. 1993

STIRRUP HOOK DIMENSIONS			
GRADES 40 - 50 - 60 KSI			
BAR SIZE	D (IN.)	90° HOOK	135° HOOK
		HOOK A OR G	HOOK A OR G	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.



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

TWO ADDITIONAL

END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	ALL GRADES		
		180° HOOKS		90° HOOKS
		A OR G	J	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"

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 FABRICATORS 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.

JACKSON COUNTY

A-5249

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	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.
32	6U2	BEAM		13	S	X			2 9.750	3 3.000	2 9.750	3 3.000				13 6	13 0	625
1	6U3	BEAM		13	S	X			2 11.250	3 3.000	2 11.250	3 3.000				13 9	13 3	20
16	6U4	BEAM		13	S	X			2 9.750	3 6.625	2 9.750	3 6.625				14 1	13 7	326
6	6U5	BEAM		13	S	X			3 9.000	3 6.625	3 9.000	3 6.625				15 11	15 6	140
12	6U6	BEAM		13	S	X			3 9.000	3 10.000	3 9.000	3 10.000				16 6	16 0	288
48	6U7	BEAM		13	S	X			2 9.750	3 10.000	2 9.750	3 10.000				14 8	14 2	1021
1	6U8	BEAM		13	S	X			2 11.250	3 10.000	2 11.250	3 10.000				14 11	14 5	22
4	4U50	BEAM		10	S	X				6.000	3 9.000					4 9	4 7	12
45	9V1	COLUMNS		20		X			21 0.000							21 0	21 0	3213
10	W5W2	A.B.WELLS		22		X			2 1.000	9.125						33 2	33 2	55
		ABUT. NO. 3																
18	6D7	FOOTINGS		18		X			8 8.000							10 0	10 0	270
24	5D8	FOOTINGS		20		X			4 8.000							4 8	4 8	117
72	8D9	FOOTINGS		17		X			6 2.000							7 1	7 1	1362
8	9H31	BEAM		18		X			47 7.000							50 1	50 1	1362
14	6H32	BEAM		20		X			47 7.000							47 7	47 7	1001
8	9H33	BEAM		17		X			20 4.000							21 7	21 7	587
8	9H34	BEAM		20		X			18 11.000							18 11	18 11	515
8	9H35	BEAM		17		X	V	1	26 0.000							27 3	27 3	
		INCREMENT = 3.250 INCH							24 1.000							25 4	25 4	715
16	4H36	BACKWALL		20		X			24 9.000							24 9	24 9	265
8	6H37	BEAM		18		X			47 7.000							48 11	48 11	588
2	4H38	APPROACH H.		20		X			23 3.000							23 3	23 3	31
12	4H39	CURTAIN WALL		20		X			3 3.000							3 3	3 3	26
12	4H40	CURTAIN WALL		20		X			4 5.000							4 5	4 5	35
8	4H41	WING		20		X	V	2	13 7.000							13 7	13 7	
		INCREMENT = 30.375 INCH							6 0.000							6 0	6 0	52
2	4H42	WING		20		X			12 7.000							12 7	12 7	17
2	4H43	WING		20		X			16 1.000							16 1	16 1	21
6	5H44	WING		20		X	V	2	25 3.000							25 3	25 3	
		INCREMENT = 27.500 INCH							20 8.000							20 8	20 8	144
2	5H45	WING		20		X			26 8.000							26 8	26 8	56
4	5H46	WING		20		X			5 3.000							5 3	5 3	22
4	5H47	WING	E	20		X			5 3.000							5 3	5 3	22
4	4H48	WING		20		X			5 1.000							5 1	5 1	14
10	4H49	WING		20		X	V	2	12 9.000							12 9	12 9	
		INCREMENT = 30.250 INCH							2 8.000							2 8	2 8	51
2	4H50	WING		20		X			10 4.000							10 4	10 4	14
2	4H51	WING		20		X			13 9.000							13 9	13 9	18
8	5H52	WING		20		X	V	2	25 4.000							25 4	25 4	
		INCREMENT = 27.625 INCH							18 5.000							18 5	18 5	183
2	5H53	WING		20		X			26 8.000							26 8	26 8	56
4	4H54	WING		20		X			6 6.000							6 6	6 6	17

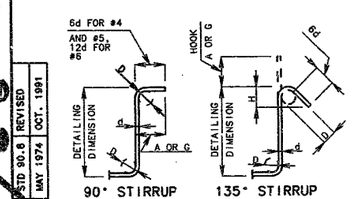
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	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.
36	4P3	COLUMNS		10	S	X	V	6		2 10.000	2 3.000					7 11	7 9	
		INCREMENT = 3.250 INCH								2 2.000	2 3.000					6 7	6 5	170
2	7T9	WING		23		X			27 9.625	21.875				25 6.125	11 0.625	29 8	29 6	121
2	7T10	WING		23		X			4 4.750	3 6.500				21.000	4 0.375	7 11	7 11	32
2	4T11	CURTAIN WALL		19	S	X			7 5.000	3 3.000						10 8	10 7	14
5	6T13	WING		23	S	X			2 0.125	2 0.000				21.000	12.000	4 0	3 11	29
2	7T14	WING		23		X			27 9.625	21.250				25 6.125	11 0.625	29 7	29 6	121
2	7T15	WING		23		X			7 8.500	2 0.500				3 0.750	7 0.875	9 9	9 9	40
2	4T16	CURTAIN WALL		19	S	X			7 6.000	4 5.000						11 11	11 10	16
5	6T17	WING		21	S	X			2 0.125	2 0.000				21.000	12.000	4 0	3 7	27
1	6U16	BEAM		13	S	X			2 6.375	3 6.750	3 3.375	3 5.750				14 2	13 8	21
23	6U17	BEAM		13	S	X			3 6.000	2 9.250	4 3.000	2 8.000				14 6	14 0	484
13	6U18	BEAM		13	S	X			3 6.000	3 2.125	4 3.000	3 1.000				15 4	14 10	290
37	6U19	BEAM		13	S	X			3 6.000	3 6.750	4 3.000	3 5.750				16 2	15 8	871
4	4U20	BEAM		10	S	X				6.000	3 6.000					4 6	4 4	12
46	4U21	BEAM		13	S	X			2 7.125	2 8.000	2 7.125	2 8.000				11 3	11 0	338
48	5U22	BEAM		10	S	X				2 3.250	2 7.125					7 2	6 11	346
44	4U23	APPROACH H.		10	S	X				17.500	6.000					3 5	3 3	96
		SUPERSTR.																
		SLAB ON SEMI-DEEP																
45	5V10	BACKWALL	E	20		X			9 0.000							9 0	9 0	422
47	6V11	BACKWALL	E	20		X			9 3.000							9 3	9 3	653
72	8V12	COLUMNS		17		X			6 11.000							7 10	7 10	1506
62	5V13	CURTAIN WALL		20		X			6 7.000							6 7	6 7	426
2	4V14	CURTAIN WALL		20		X			7 5.000							7 5	7 5	10
10	5V15	WING		20		X	V	2	4 2.000							4 2	4 2	
		INCREMENT = 6.000 INCH							2 2.000							2 2	2 2	33
28	4V16	WING		20		X	V	2	14 1.000							14 1	14 1	
		INCREMENT = 8.750 INCH							4 7.000							4 7	4 7	175
2	4V17	WING		20		X			7 6.000							7 6	7 6	10
2	4V18	CURTAIN WALL		20		X			7 7.000							7 7	7 7	10
10	5V19	WING		20		X	V	2	4 1.000							4 1	4 1	
		INCREMENT = 5.750 INCH							2 2.000							2 2	2 2	33
28	4V20	WING		20		X	V	2	14 0.000							14 0	14 0	
		INCREMENT = 8.750 INCH							4 6.000							4 6	4 6	173
6	4V21	WING		20		X	V	2	8 7.000							8 7	8 7	
		INCREMENT = 8.000 INCH							7 3.000							7 3	7 3	32
10	W5W1	A.B.WELLS		22		X				18.000	9.125					26 1	26 1	44

TWO ADDITIONAL #6-V11 ARE INCLUDED IN THE BAR BILL FOR TESTING.

REVISED	OCT. 1991
STD 90.6	MAY 1974

DETAILED MAR. 1993
CHECKED MAR. 1993

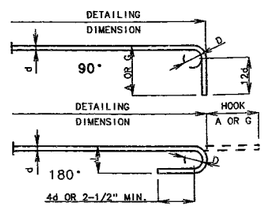


STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK: HOOK A OR G	135° HOOK: 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.



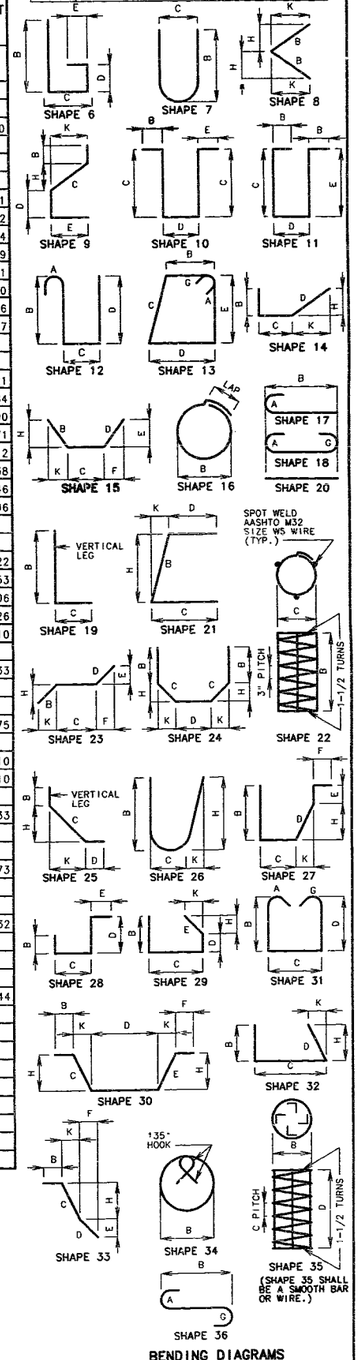
END HOOK DIMENSIONS

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"

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 FABRICATORS 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.

STATE	PROJ. NO.	SHEET NO.
MO.		200



BENDING DIAGRAMS

SHEET NO. 28 OF 33.

JACKSON COUNTY

A-5249

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			ABUTMENT																
			ABUT. NO. 1																
71		8S9	SLAB	E	20					25 2.000							25 2	25 2	4771
28		4S10	SLAB	E	20					25 2.000							25 2	25 2	471
60		5S11	SLAB	E	20					24 9.000							24 9	24 9	1549
30		4S12	SLAB	E	20					24 9.000							24 9	24 9	496
39		5S13	SLAB	E	20					2 6.000							2 6	2 6	102
			ABUT. NO. 3																
30		4S14	SLAB	E	20					21 2.000							21 2	21 2	424
64		8S15	SLAB	E	20					21 2.000							21 2	21 2	3617
50		5S16	SLAB	E	20					24 9.000							24 9	24 9	1291
26		4S17	SLAB	E	20					24 9.000							24 9	24 9	430
39		5S18	SLAB	E	20					2 6.000							2 6	2 6	102
			C.I.P. SLAB																
			OPTION																
336		5S1	SLAB	E	20					39 8.000							39 8	39 8	1 3901
315		5S2	SLAB	E	20					35 10.000							35 10	35 10	1 1773
1130		5S3	SLAB	E	20					41 3.000							41 3	41 3	4 8617
102		5S4	SLAB	E	20			V	2	39 5.000							39 5	39 5	
			INCREMENT =							3 4.000							3 4	3 4	2274
			8.625 INCH																
68		5S5	SLAB	E	20			V	2	39 3.000							39 3	39 3	
			INCREMENT =							3 6.000							3 6	3 6	1516
			13.000 INCH																
64		6S6	SLAB	E	20					60 0.000							60 0	60 0	5768
64		6S7	SLAB	E	20					43 3.000							43 3	43 3	4158
			P/C PANEL																
			OPTION																
48		5S1	SLAB	E	20					39 8.000							39 8	39 8	1986
315		5S2	SLAB	E	20					35 10.000							35 10	35 10	1 1773
678		5S3	SLAB	E	20					41 3.000							41 3	41 3	2 9170
102		5S4	SLAB	E	20			V	2	39 5.000							39 5	39 5	
			INCREMENT =							3 4.000							3 4	3 4	2274
			8.625 INCH																
64		6S6	SLAB	E	20					60 0.000							60 0	60 0	5768
64		6S7	SLAB	E	20					43 3.000							43 3	43 3	4158
608		4S8	SLAB	E	20					3 2.000							3 2	3 2	1286
*48		5C1	S/F CURB	E	20					10 0.000							10 0	10 0	501
*4		5C2	S/F CURB	E	20					28 1.000							28 1	28 1	117
*4		5C3	S/F CURB	E	20					24 1.000							24 1	24 1	100
600		5R1	BARRIER CURB	E	19	S				2 6.000	3.500						2 10	2 8	2225
744		5R2	BARRIER CURB	E	15	S				2 6.125	3.500				2 6.000	3.000	2 10	2 9	2134
716		5R3	BARRIER CURB	E	19	S				17.000	6.000						23	22	1369
716		5R4	BARRIER CURB	E	27	S					6.000	11.125	7.000	12.000	9.125	6.375	3 0	2 10	2116
28		5R5	BARRIER CURB	E	27	S					6.000	11.125	18.000		9.125	6.375	2 11	2 10	83
28		5R6	BARRIER CURB	E	19	S				2 2.500	6.000						2 9	2 7	75
8		5R7	BARRIER CURB	E	27	S					6.000	8.125	18.000		6.625	4.625	2 8	2 7	22
8		5R8	BARRIER CURB	E	19	S				2 1.000	6.000						2 7	2 6	21

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
8		5R9	BARRIER CURB	E	19	S				2 3.000	3.500						2 7	2 5	20
24		5R10	BARRIER CURB	E	10	S					2 1.000	7.500					4 10	4 7	115
48		5R11	BARRIER CURB	E	20					5 0.000							5 0	5 0	250
10		5R12	BARRIER CURB	E	20					28 0.000							28 0	28 0	292
2		5R13	BARRIER CURB	E	20					28 9.000							28 9	28 9	60
10		5R14	BARRIER CURB	E	20					24 0.000							24 0	24 0	250
2		5R15	BARRIER CURB	E	20					24 9.000							24 9	24 9	52
58		5R16	BARRIER CURB	E	20					9 9.000							9 9	9 9	590
112		5R17	BARRIER CURB	E	20					34 2.000							34 2	34 2	3991
6		4U24	BARRIER CURB	E	15	S				20.500	22.500	20.500	14.500	14.500	14.500	14.500	5 4	5 3	21
4		5U25	BARRIER CURB	E	15	S				20.500	22.500	20.500	14.500	14.500	14.500	14.500	5 4	5 3	22
6		4U26	BARRIER CURB	E	31	S				18.500	22.500	18.500					5 9	5 7	22
4		5U27	BARRIER CURB	E	31	S				18.500	22.500	18.500					5 9	5 7	23
4		5U28	BARRIER CURB	E	10	S				6.000	2 5.500	7.250					6 0	5 9	24
6		5U100	BARRIER CURB	E	10	S				6.000	2 5.500	14.000					6 7	6 3	39
12		6V22	BARRIER CURB	E	20					3 0.000							3 0	3 0	54
			END OF LIST																

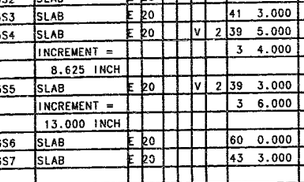
*SLIP FORM OPTION ONLY

TWO ADDITIONAL #4-S14, #8-S15 & #5-R16 ARE INCLUDED IN THE BAR BILL FOR TESTING.

STD 30.8 REVISED MAY 1974 OCT. 1991

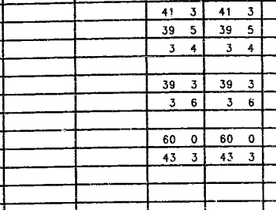
DETAILED MAR. 1993
CHECKED MAR. 1993

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



STIRRUP HOOK DIMENSIONS GRADES 40 - 50 - 60 KSI					
BAR SIZE	D (IN.)	90° HOOK		135° HOOK	
		HOOK A OR G		HOOK A OR G	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.



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

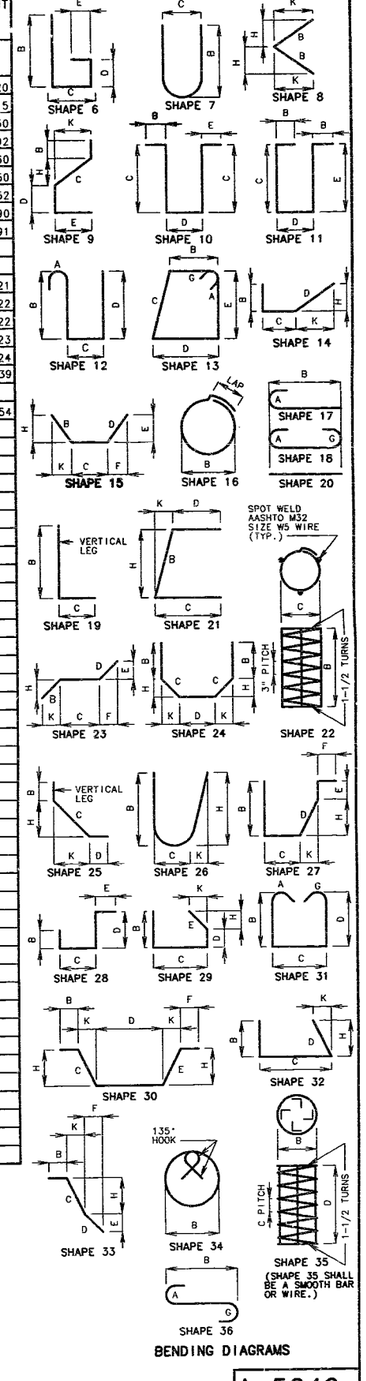
END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL GRADES			
		180° HOOKS		90° HOOKS	
		A OR G	J	A OR G	
#3	2-1/4"	5"	3"	6"	
#4	3"	6"	4"	8"	
#5	3-3/4"	7"	5"	10"	
#6	4-1/2"	8"	6"	12"	
#7	5-1/4"	10"	7"	14"	
#8	6"	11"	8"	16"	
#9	9-1/2"	15"	11-3/4"	19"	
#10	10-3/4"	17"	13-1/4"	22"	
#11	12"	19"	14-3/4"	2'-0"	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

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 FABRICATORS 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.

SHEET NO. 29 OF 33.

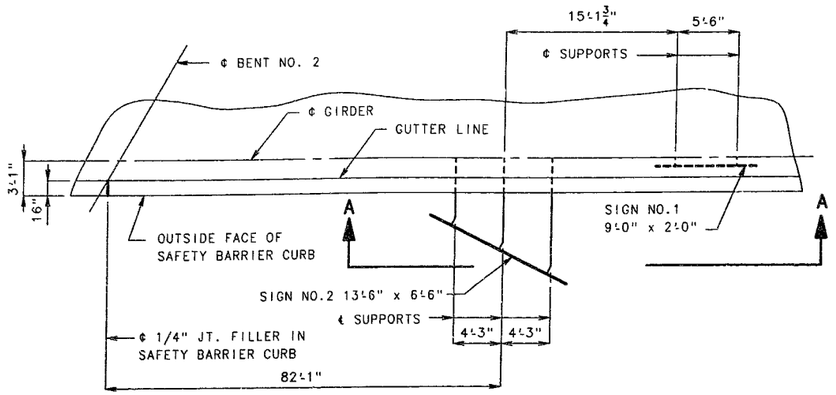
STATE	PROJ. NO.	SHEET NO.
MO.		201

BENDING DIAGRAMS



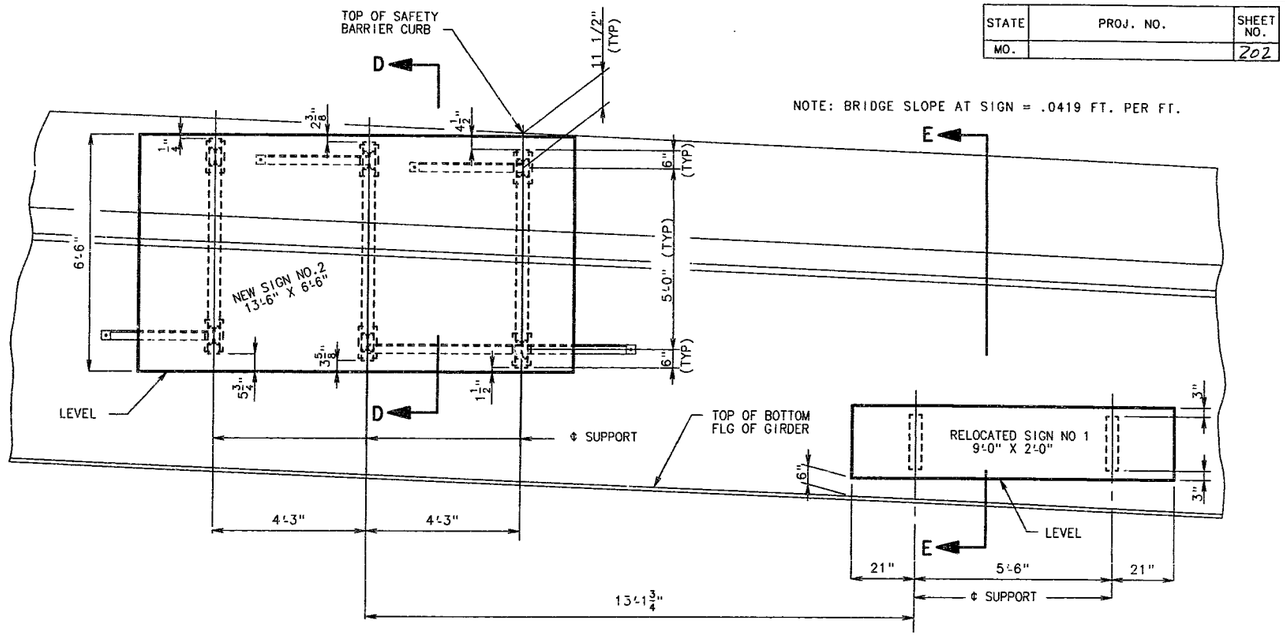
JACKSON COUNTY A-5249

STATE	PROJ. NO.	SHEET NO.
MO.		202

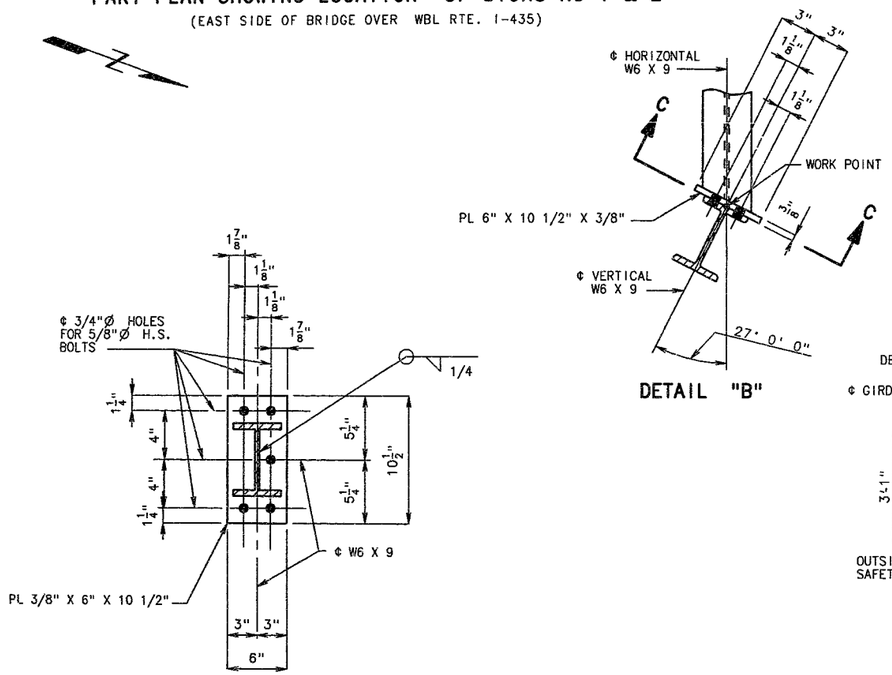


PART PLAN SHOWING LOCATION OF SIGNS NO 1 & 2

(EAST SIDE OF BRIDGE OVER WBL RTE. I-435)

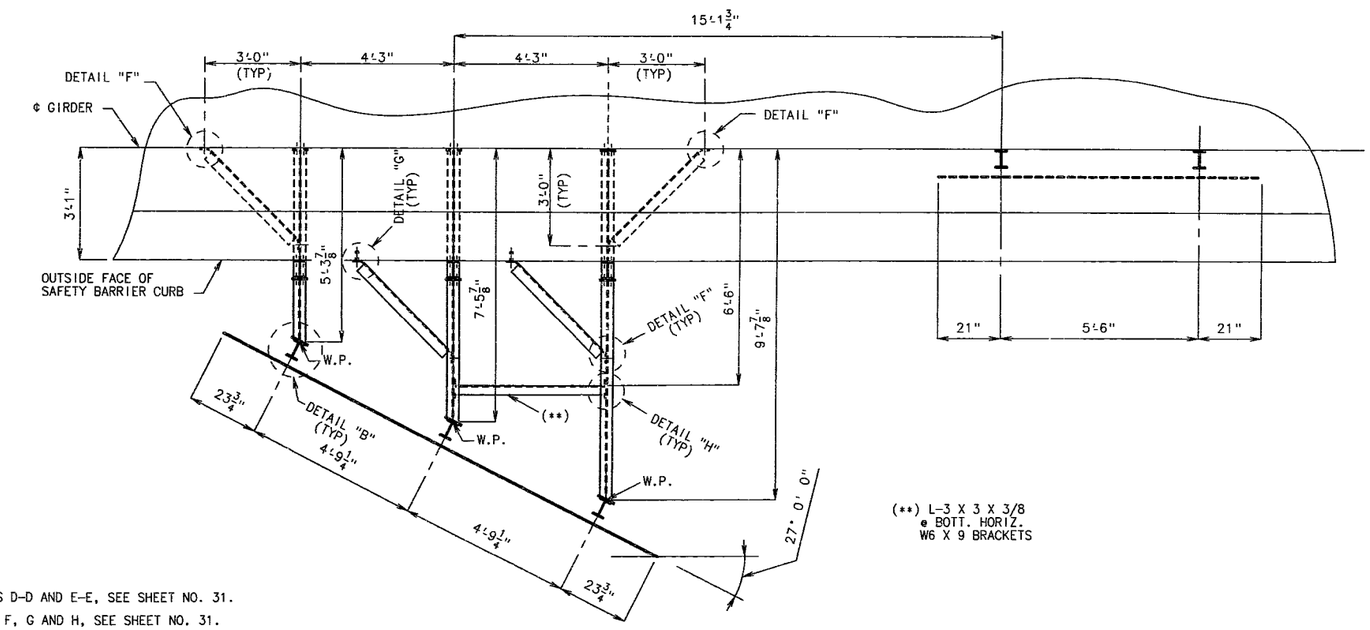


PART ELEVATION A-A



SECTION C-C

DETAIL "B"



(**) L-3 X 3 X 3/8 @ BOTT. HORIZ. W6 X 9 BRACKETS

PART PLAN SHOWING DIMENSIONS AND HORIZONTAL BRACING

GENERAL NOTES

CENTER AND LEVEL SIGNS ON BRACKETS.

ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

CONCRETE ANCHORS SHALL BE NON-DRILLING EXPANSION TYPE. THEY SHALL HAVE A CERTIFIED CONCRETE PULLOUT STRENGTH (ULTIMATE LOAD) OF AT LEAST 12,100 POUNDS IN 4000 PSI CONCRETE. THE HOLE SHALL BE PRE-DRILLED WITH A CONVENTIONAL CARBIDE MASONRY BIT.

ALL STRUCTURAL STEEL SHALL BE A.S.T.M. A36, GALVANIZED.

THE COST OF FURNISHING AND ERECTING THE SIGN SUPPORTS, INCLUDING THE CONCRETE ANCHORS COMPLETE-IN-PLACE, SHALL BE PAID FOR AS FABRICATED SIGN SUPPORT BRACKETS, LUMP SUM.

NOTE:

FOR SECTIONS D-D AND E-E, SEE SHEET NO. 31.

FOR DETAILS F, G AND H, SEE SHEET NO. 31.

SIGN SUPPORT BRACKETS FOR SIGNS NO. 1 & 2

DETAILED SEPT. 1992
CHECKED AUG. 1993

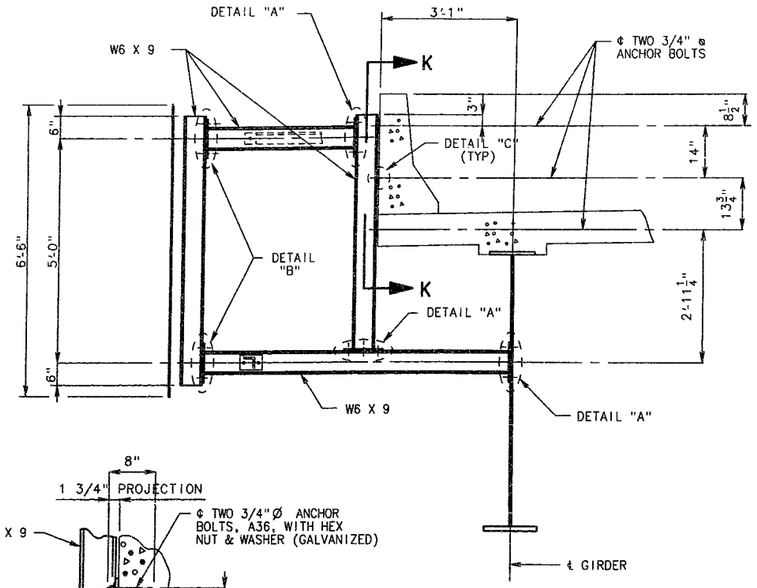
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

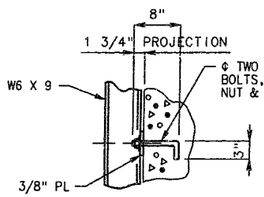
A-5249

18 227

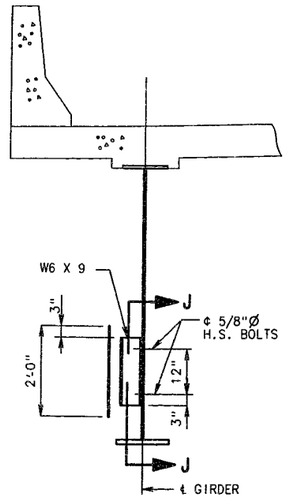
STATE	PROJ. NO.	SHEET NO.
MO.		203



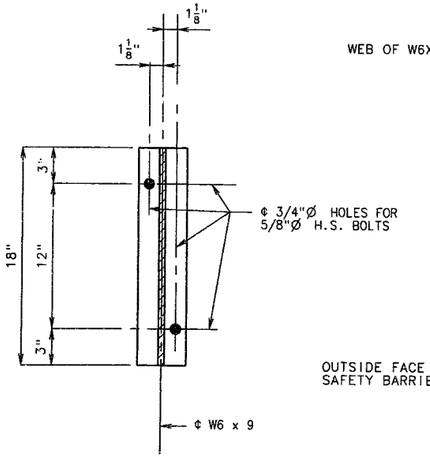
SECTION D-D



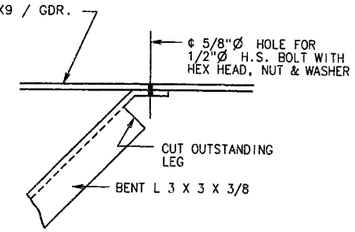
DETAIL "C"



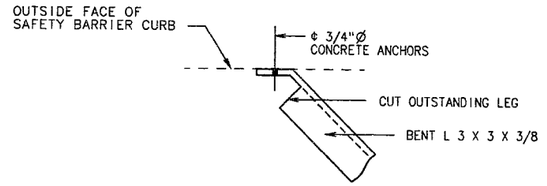
SECTION E-E



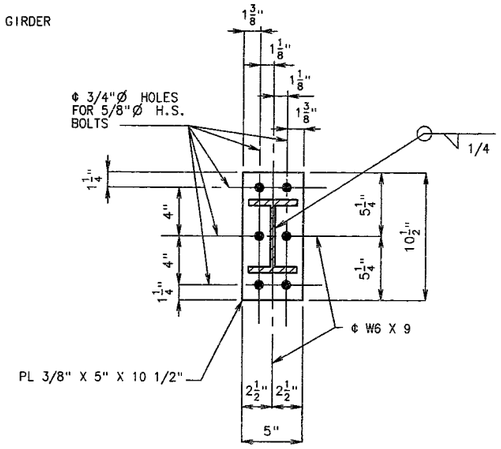
SECTION J-J



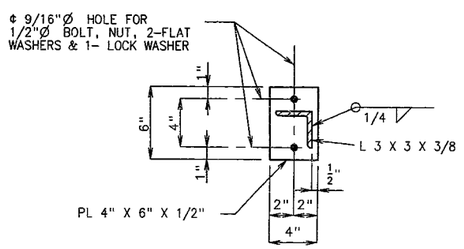
DETAIL "F"



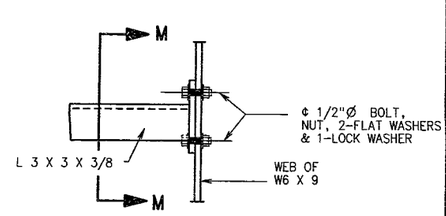
DETAIL "G"



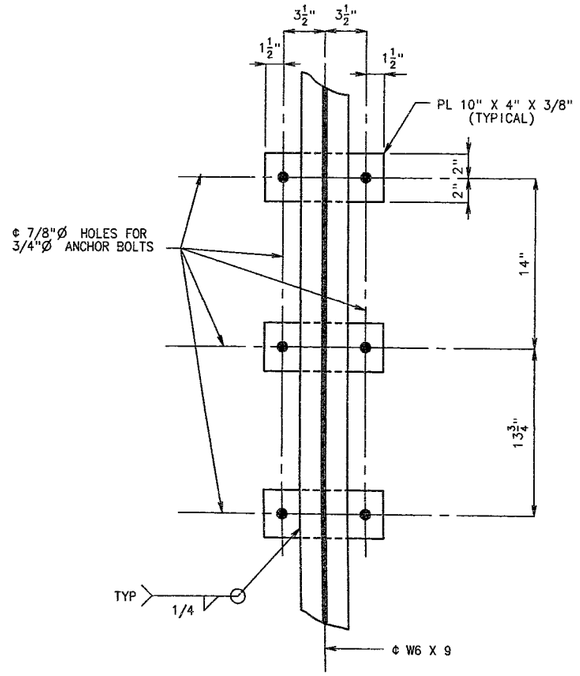
DETAIL "A"



SECTION M-M



DETAIL "H"



SECTION K-K

NOTE:

FOR LOCATION OF SECTIONS D-D AND E-E, SEE SHEET NO 30.
FOR LOCATION OF DETAILS "F", "G" AND "H", SEE SHEET NO 30.
FOR DETAIL "B", SEE SHEET NO. 30.

8/23/93

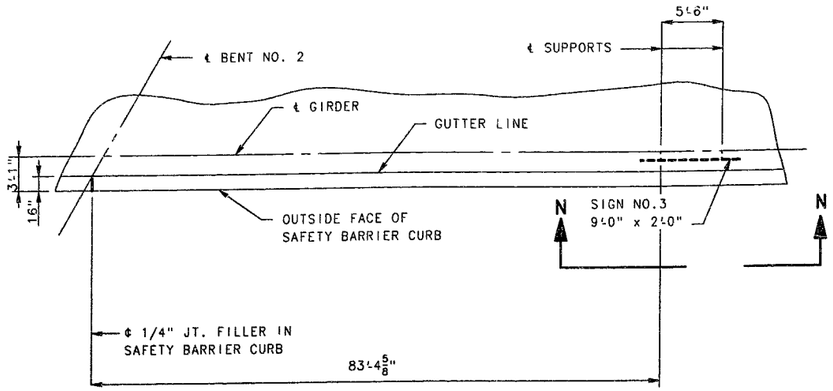
DETAILED SEPT.1992
CHECKED AUG.1993

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

JACKSON COUNTY

A-5249

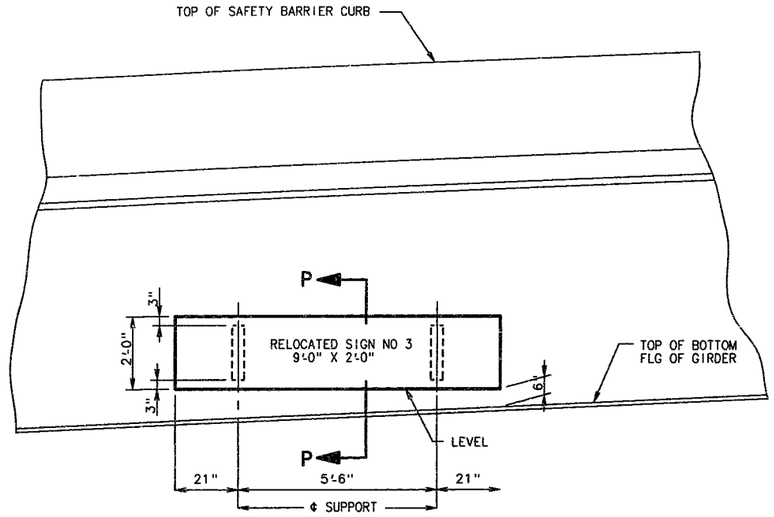
STATE	PROJ. NO.	SHEET NO.
MO.		204



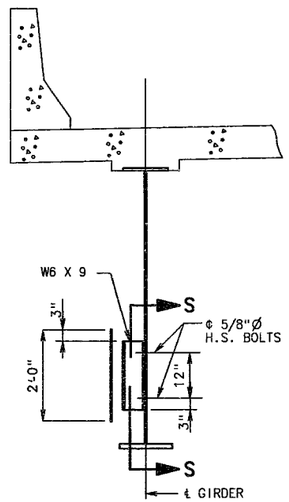
PART PLAN SHOWING LOCATION OF SIGN NO. 3

(WEST SIDE OF BRIDGE OVER EBL RTE. I-435)

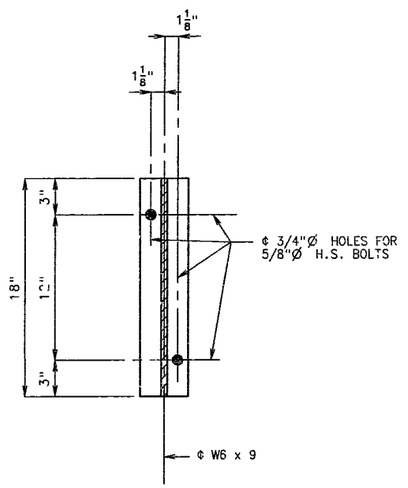
NOTE: BRIDGE SLOPE AT SIGN = .02077 FT. PER FT.



PART ELEVATION N-N



SECTION P-P



SECTION S-S

SIGN SUPPORT BRACKET
FOR SIGN NO. 3

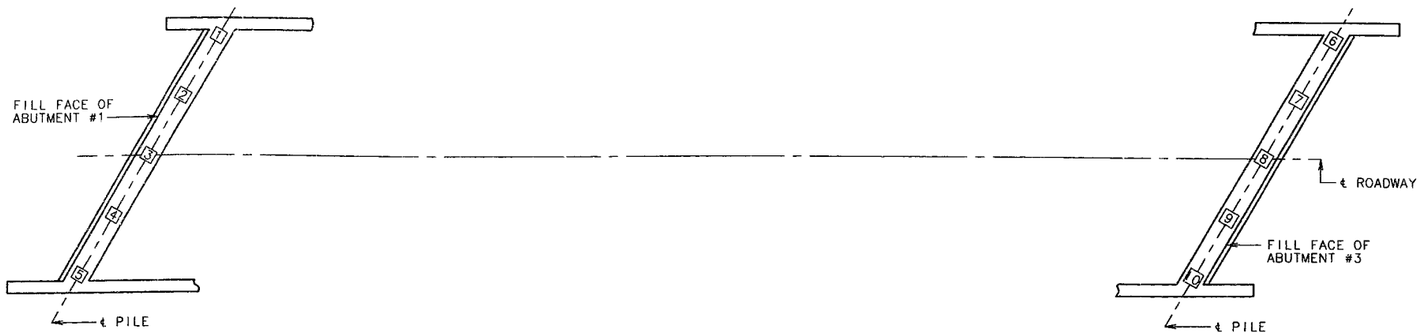
10 22

DETAILED SEPT. 1992
CHECKED AUG. 1993

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

JACKSON COUNTY A-5249

STATE	PROJ. NO.	SHEET NO.
MO.		205



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
			ABUTMENT #1
1			
2			
3			
4			
5			
			ABUTMENT #3
6			
7			
8			
9			
10			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS

NOTE: INDICATE IN REMARK C
A.) IF PILIN WERE DR
B.) PILE BATTER IF OT
C.) TYPE OF PILING US

NOTE: THIS SHEET TO BE

MISC. PILES IN PLA. A
PILES IN PLACE
REVISED:
MAY 1992

DETAILED MAR. 1993
CHECKED MAR. 1993

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

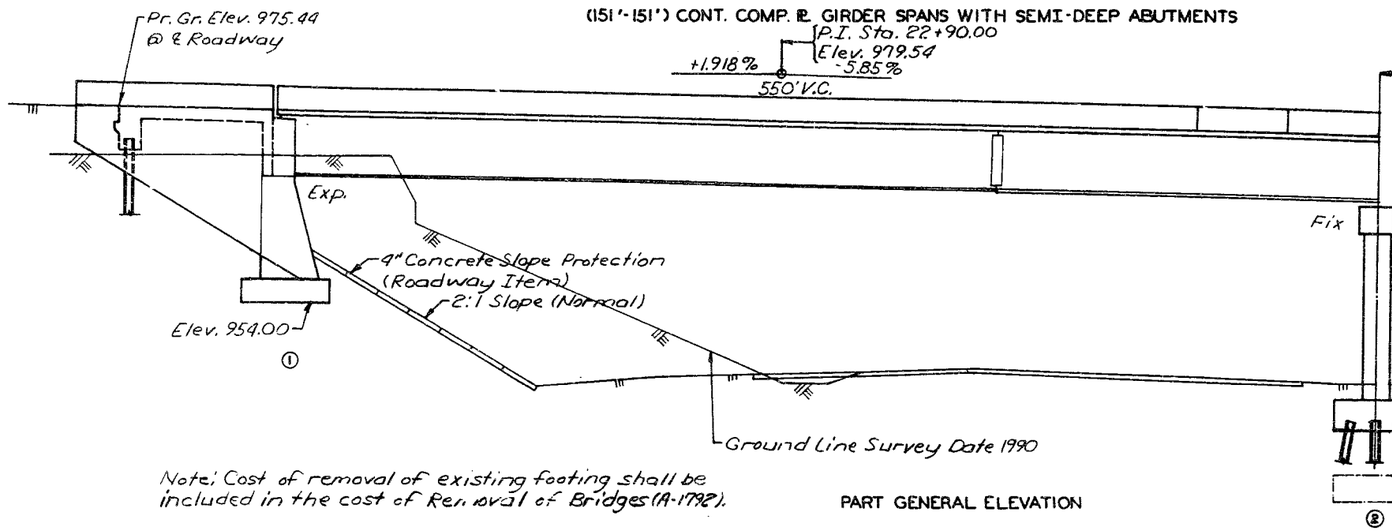
JACKSON

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ NO	SHEET NO
MO	J4I0807	173
SEC / SUR 34	TWP 48N	RGE 33W

FINAL PLANS

(151'-151') CONT. COMP. ℄ GIRDER SPANS WITH SEMI-DEEP ABUTMENTS



Note: Cost of removal of existing footing shall be included in the cost of Removal of Bridges (A-1792).

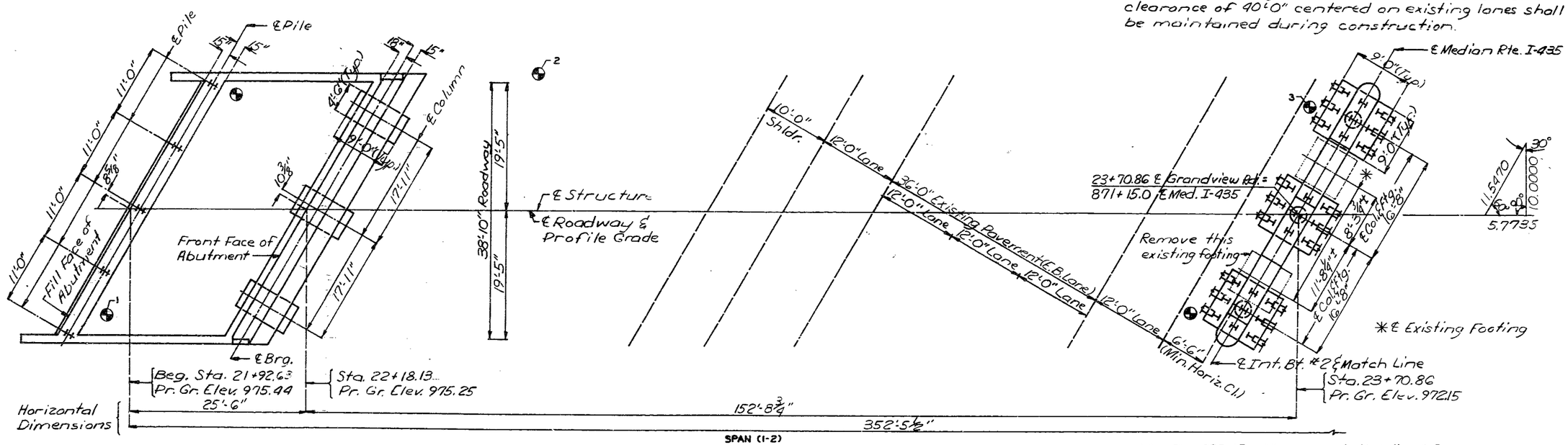
PART GENERAL ELEVATION

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA

The locations of all subsurface boring for this structure are shown on the bridge plan sheet(s) for this structure. Boring data for the numbered locations is shown on sheet(s) no. 3 The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, is available from the district materials engineer upon written request as outlined in the project special provisions. No greater significance or weight should be given to the boring data depicted on the plan sheets than to subsurface data available from the district or elsewhere.

The commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the commission.

Note: A minimum vertical clearance of 15'0" from crown of existing lanes and a minimum lateral lateral clearance of 90'0" centered on existing lanes shall be maintained during construction.



SPAN (1-2)
PART PLAN

Note: "⊕" Indicates location of borings. Boring Data for all locations is available upon request from the District Office.
Boring data for numbered locations is detailed on sheet No. 3
For General Notes, Estimated Quantities & Pile Data see sheet No. 9.

CURVE DATA GRANDVIEW RD.

P.I. 21.19.20	P.I. 28+04.32
Δ = 60°00' Rt.	Δ = 14°20' Rt
R = 150'	D = 12°
T = 86.60'	T = 60.16'
L = 157.08'	L = 119.44'
S.E. = Var.	S.E. = 0.02%
Ls = 150'	R = 478.3 Cord

B.M. Elev. 977.85 P.K. on parapet Abut. #1 S.E. corner Br. A-5249 Sta. 21+78 1/2 -, 38.5' 1/2 Rt.

BRIDGE: GRANDVIEW ROAD UNDERPASS

STATE ROAD: INTERSTATE ROUTE 435

IN KANSAS CITY

PROJECT NO. **STA.** 871+15.0

JOB NO. J4I0807 **RTE.** I-435

JACKSON **COUNTY**

DATE 3/1/94

STD. 504.00
STD. 605.10
STD. 609.00
STD. 706.35
STD. 611.60
A-5249

DESIGNED JUN. 1992
DETAILED JUN. 1992
CHECKED July 1992

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

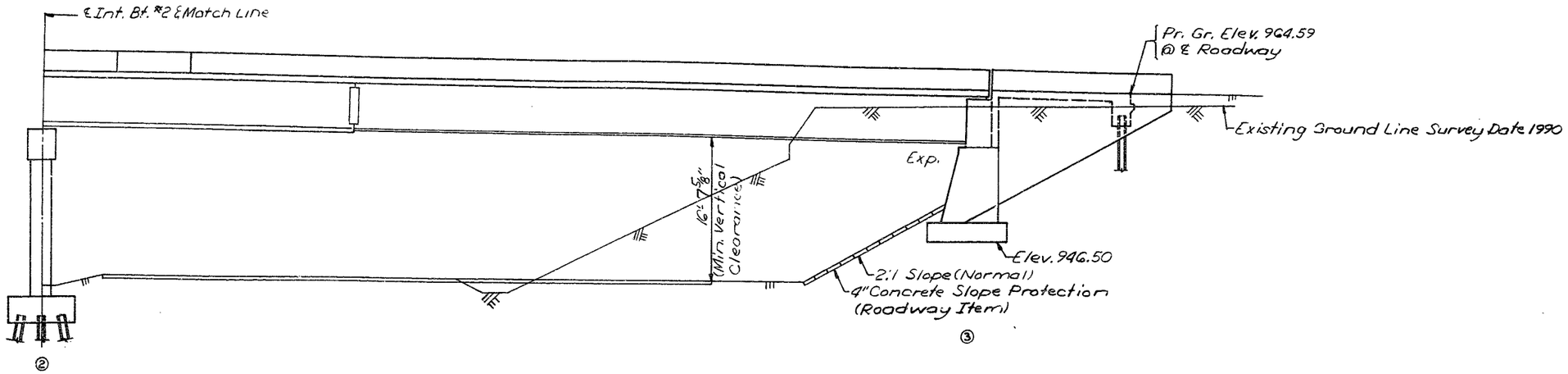
Sheet No. 1 of 33.

1992 172

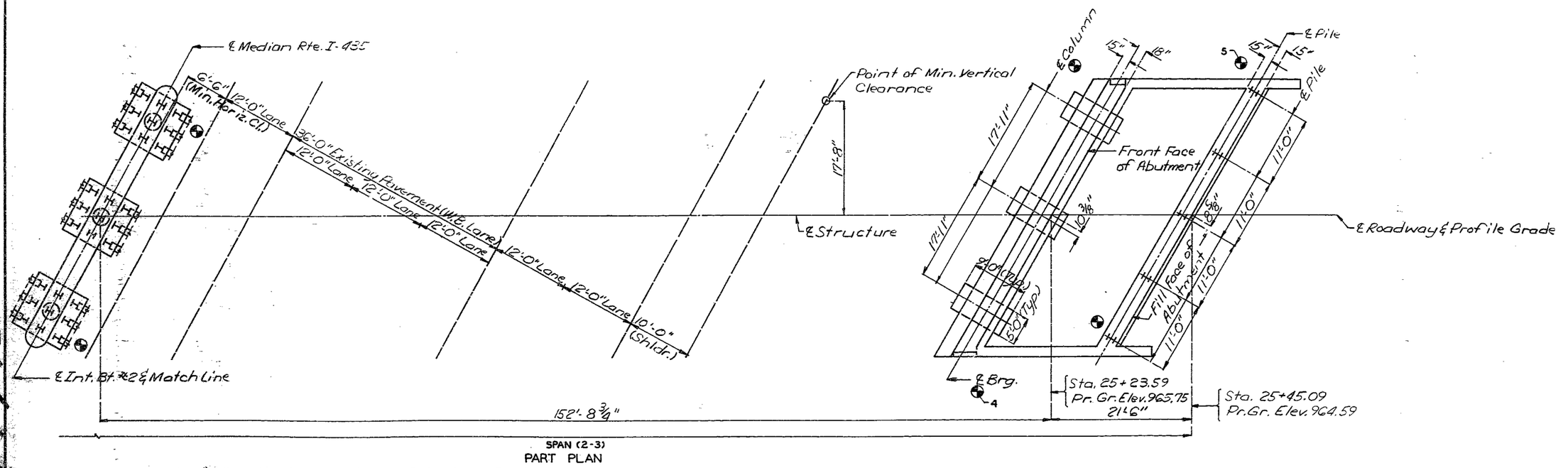
QUALITY ASPHALT

STATE	PROJ NO	SHEET NO
MO	J4I0807	174

FINAL PLANS



PART GENERAL ELEVATION



SPAN (2-3)
PART PLAN

Note: "●" Indicates location of borings. Boring Data for all locations is available upon request from the District Office.
Boring data for numbered locations is detailed on sheet No. 3

TR-173

DETAILED Jun. 1992
CHECKED July 1992

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

Sheet No. 2 of 33.

JACKSON COUNTY

A-5249

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	176

FINAL PLANS

FINAL QUANTITIES

ITEM		SUBSTR.	SUPERSTR	TOTAL
REMOVAL OF BRIDGES (A-1792)	LUMP SUM			1
CLASS 1 EXCAVATION	CU. YD.	239		239
BRIDGE APPROACH SLAB(BRIDGE)	SQ. YD.		221	221
STRUCTURAL STEEL PILE (10 IN.)	LIN. FT.	493		493
PRE-BORE FOR PILING	LIN. FT.	398		398
CLASS B CONCRETE (SUBSTR.)	CU. YD.	274.2		274.2
SLAB ON STEEL	SQ. YD.		1407	1407
** SAFETY BARRIER CURB	LIN. FT.		726	726
SLAB ON SEMI-DEEP ABUTMENT	SQ. YD.		217	217
LAMINATED NEOPRENE BRG. PADS (STEEL STRUCTURES)	EACH		15	15
PREFORMED COMPRESSION EXP. JT. SEAL (4.5")	LIN. FT.		90	90
REINFORCING STEEL (BRIDGES)	POUND	40940		40940
REINFORCING STEEL (EPOXY COATED)	POUND	2500		2500
FABRICATED STRUCTURAL CARBON STEEL (PLT GDR)	POUND		263930	263930
FABRICATED STEEL SIGN SUPPORT BRACKETS(STEEL)	LUMP SUM			1
FABRICATED STR. LOW ALLOY STEEL (PLT GDR) A-572	POUND		189590	189590
SLAB DRAINS	EACH		16	16
CONDUIT SYSTEM ON STRUCTURE	LUMP SUM			1
CONTINGENT ITEM				
50401 FOUNDATION TEST HOLES	LIN. FT.	24		24

NOTE: THE COST OF PAINTING STRUCTURAL STEEL SHALL BE INCLUDED IN PRICE BID FOR FABRICATED STRUCTURAL STEEL.

ALL CONCRETE AND REINFORCING STEEL BELOW TOP OF SLAB AND ABOVE CONSTRUCTION JT. NT UNDER SLAB IN SEMI-DEEP ABUTMENTS ARE INCLUDED IN SUPERSTRUCTURE QUANTITIES FOR SLAB ON SEMI-DEEP ABUTMENTS.

THE PRESTRESSED PANEL QUANTITIES ARE NOT INCLUDED IN THE TABLE OF ESTIMATED QUANTITIES FOR ALTERNATE SLAB.

** SAFETY BARRIER CURB SHALL BE ~~CAST IN PLACE~~ OPTION OR SLIP-FORM OPTION.

ESTIMATED QUANTITIES FOR ALTERNATE SLABS

TYPE OF SLABS	SLAB ON STEEL	
	REINF.(LBS.) EPOXY	CONC. (CU. YDS.)
~~CAST-IN-PLACE CONVENTIONAL FORMS~~	~~88010~~	~~347.7~~
PRECAST PANEL FORMS	56420	257.3

NOTE: THE TABLE OF ESTIMATED QUANTITIES FOR ALTERNATE SLABS REPRESENTS THE QUANTITIES USED BY THE STATE IN PREPARING THE COST ESTIMATE FOR CONCRETE SLABS. VARIATIONS MAY BE ENCOUNTERED IN THESE ESTIMATED QUANTITIES, BUT THESE VARIATIONS CANNOT BE USED FOR AN ADJUSTMENT IN THE CONTRACT UNIT PRICE PER SQUARE YARD OF ALTERNATE SLAB USED.

SEE SPECIAL PROVISIONS FOR ALTERNATE METHODS OF FORMING SLABS.

PRECAST PANEL QUANTITES ARE BASED ON SKEWED END PANELS.

PILE & FOOTING DATA

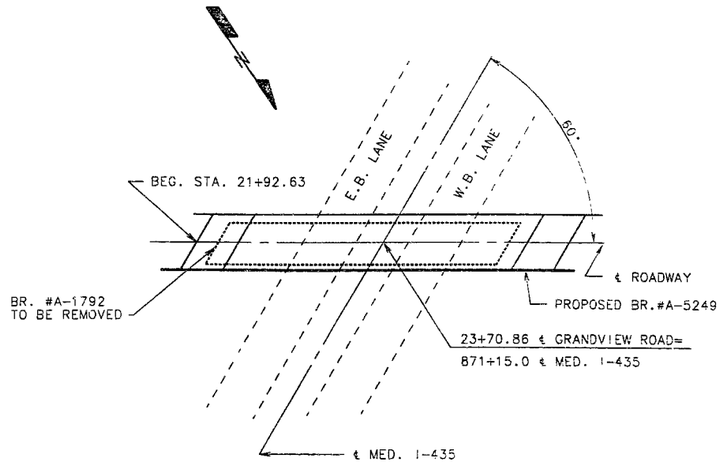
	LOCATION		1 APP.	1 BRG.	2	3 BRG.	3 APP.
BEARING PILE	PILE TYPE AND SIZE		HP10x42		HP10x42		HP10x42
	NUMBER		5		27		5
	APPROXIMATE LENGTH	FT.	(1)		13 14		9 14
	DESIGN BEARING	TONS	40		52		34
	HAMMER ENERGY REQUIRED	FT.-LBS.	8,800				7,400
SPREAD FOOTING	FOUNDATION MATERIAL			ROCK		ROCK	
	DESIGN BEARING	TONS/SQ.FT.		6.7		5.8	

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.
ALL PILE SHALL BE DRIVEN TO PRACTICAL REFUSAL.
PREBORE FOR PILES AT BENTS 1, 2 & 3 TO ELEVATIONS (2), 928.00 AND 951.00 RESPECTIVELY.

9' 14'

(1) 14'LT., 35'RT.

(2) 961.50(LT.), 957.00(RT.)



LOCATION SKETCH

GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1992
LOAD FACTOR DESIGN
SEISMIC PERFORMANCE CATEGORY A

DESIGN LOADING
HS20-44, MODIFIED 24,000# TANDEM AXLE
35#/SQ.FT. FUTURE WEARING SURFACE
EARTH 120#/CU. FT. EQUIVALENT FLUID PRESSURE 45#/CU. FT.
FATIGUE STRESS - CASE II

DESIGN UNIT STRESSES:
CLASS B CONCRETE (SUBSTRUCTURE) F'C=3,000 PSI
CLASS B1 CONCRETE (SAFETY BARRIER CURB) F'C=4,000 PSI
CLASS B2 CONCRETE (SUPERSTRUCTURE, EXCEPT SAFETY BARRIER CURB) F'C=4,000 PSI
REINFORCING STEEL (GRADE 60) FY=60,000 PSI
STRUCTURAL CARBON STEEL FY=36,000 PSI
STRUCTURAL STEEL (A.S.T.M. A572) GRADE 50 FY=50,000 PSI
STEEL PILE FB=9000 PSI
FOR PRECAST PRESTRESSED PANEL STRESSES, SEE SHEET 19.

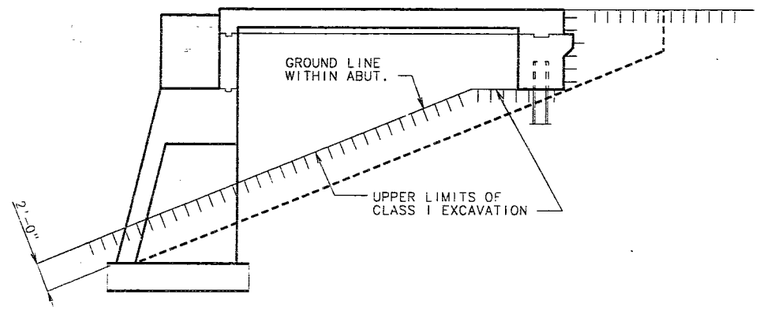
FABRICATED STEEL CONNECTIONS: FIELD CONNECTIONS, HIGH STRENGTH BOLTS 3/4"Ø, HOLES 13/16"Ø, EXCEPT AS NOTED.
HIGH STRENGTH BOLTS, NUTS AND WASHERS WILL BE SAMPLED FOR QUALITY ASSURANCE AS SPECIFIED IN STANDARD SPECIFICATION 106.

JOINT FILLER: ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC. 1057.2.4, EXCEPT AS NOTED.

REINFORCING STEEL: MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2", UNLESS OTHERWISE SHOWN.
ALL REINFORCING BARS IN TOPS OF SUBSTRUCTURE BEAMS OR CAPS SHALL BE SPACED TO CLEAR ANCHOR BOLTS FOR BEARING BY AT LEAST 1/2"

PAINT: SYSTEM F SHOP COATS (GRAY) IN ACCORDANCE WITH THE SPECIAL PROVISIONS. NO FIELD PAINTING EXCEPT FOR TOUCH UP.

SEE ROADWAY PLANS FOR REMOVAL, STORAGE AND INSTALLATION OF LIGHT FIXTURE SUPPORTS.



GROUND LINE AND PILING IN ABUTMENTS

NOTE: IN NO CASE SHALL THE EARTH WITHIN ABUTMENTS NO.1 AND 3 BE ABOVE THE GROUND LINE SHOWN. FORMS SUPPORTING ABUTMENT SLAB MAY BE LEFT IN PLACE.

394176

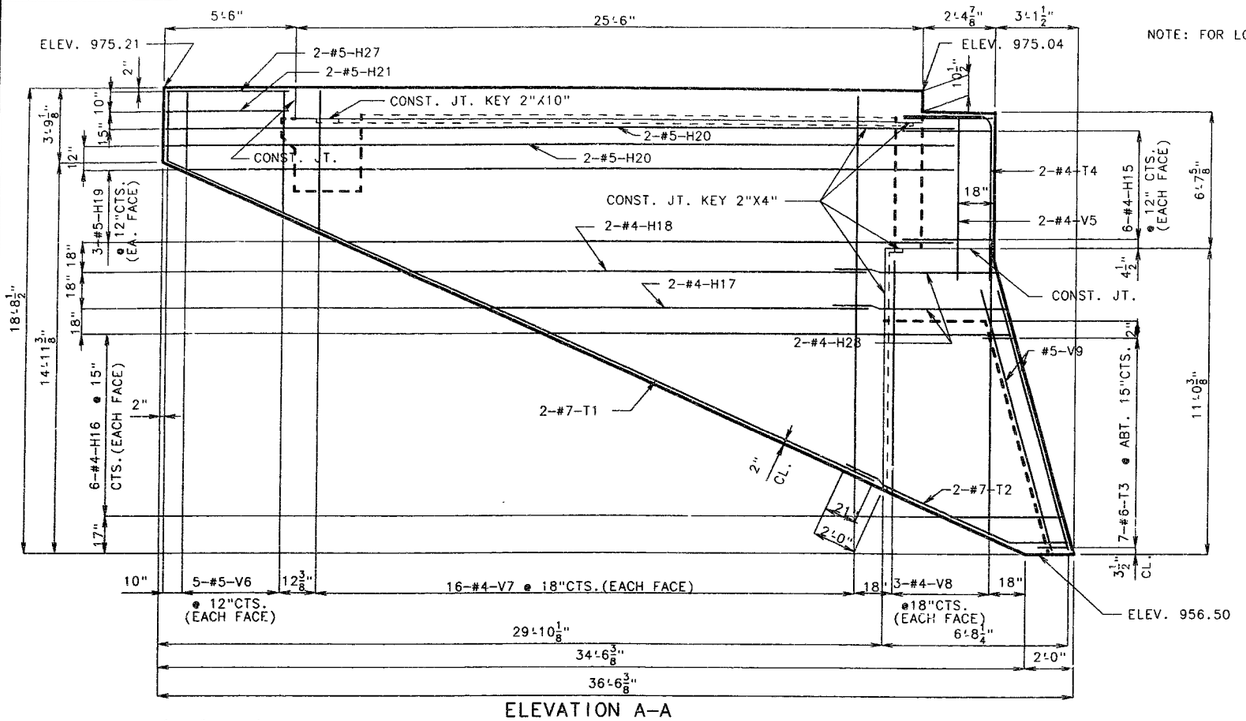
DETAILED JUN. 1992
CHECKED JULY 1992

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

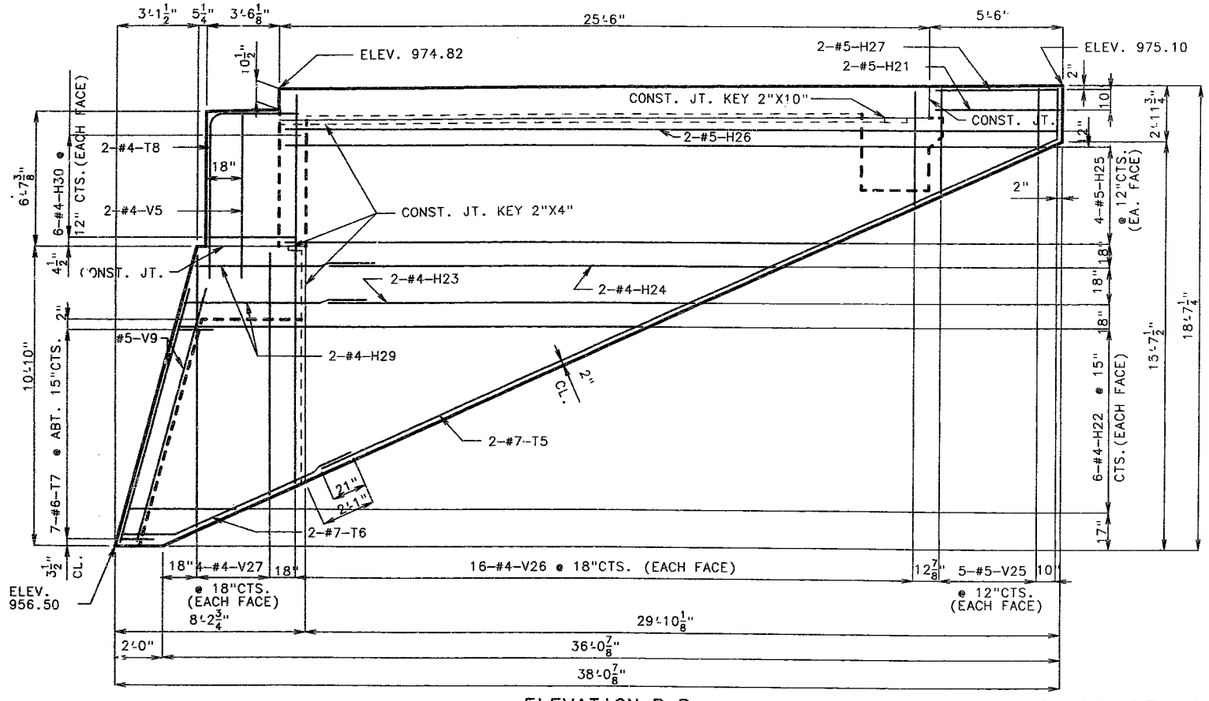
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	179

FINAL PLANS

NOTE: FOR LOCATION OF ELEVATION A-A & B-B SEE SHEET NO. 5.

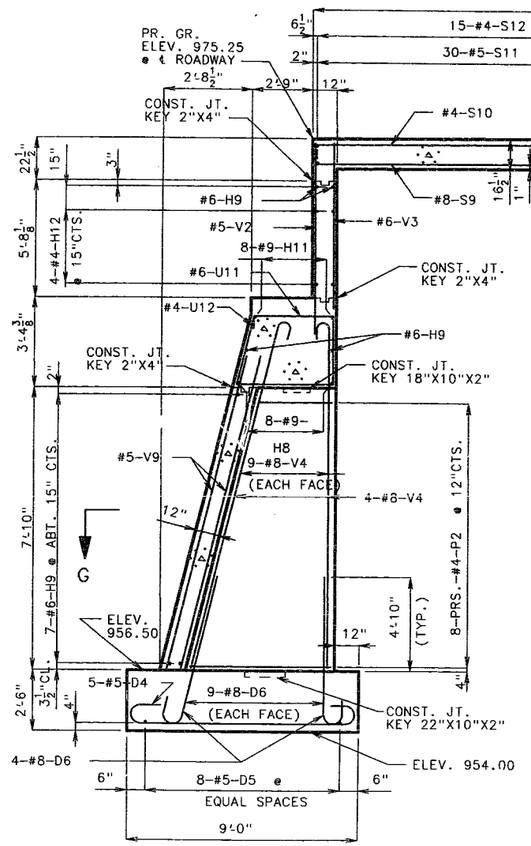


ELEVATION A-A



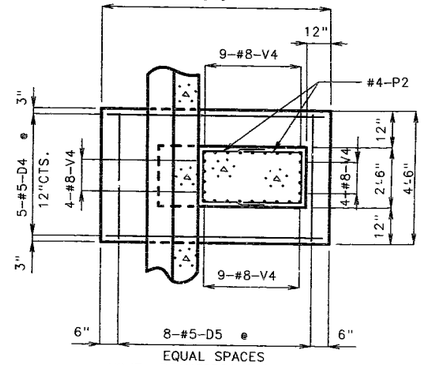
ELEVATION B-B

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



SECTION THRU ℄ ROADWAY (NORMAL TO BENT)

NOTE: FOR DETAILS AND REINFORCEMENT OF BARRIER CURB SEE SHEET NO. 24. #5-R BARS MUST BE IN PLACE BEFORE SLAB IS POURED.



NOTE: REINFORCING STEEL IN APRON WALL NOT SHOWN FOR CLARITY.

SECTION G-G

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO.1

ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YD.	120
STRUCTURAL STEEL PILE(10")	LIN. FT.	88
PRE-BORE FOR PILING	LIN. FT.	55
CLASS B CONCRETE(SUBSTRUCTURE)	CU. YD.	104.4
REINFORCING STEEL (BRIDGES)	LBS.	14300
REINFORCING STEEL (EPOXY COATED)	LBS.	1400
FOUNDATION TEST HOLES	LIN. FT.	12

NOTE: WORK THIS TABLE WITH ESTIMATED QUANTITIES AS SHOWN ON SHEET NO. 4.

DETAILED MAY 1992
CHECKED JULY 1992

DETAILS OF ABUTMENT NO. 1

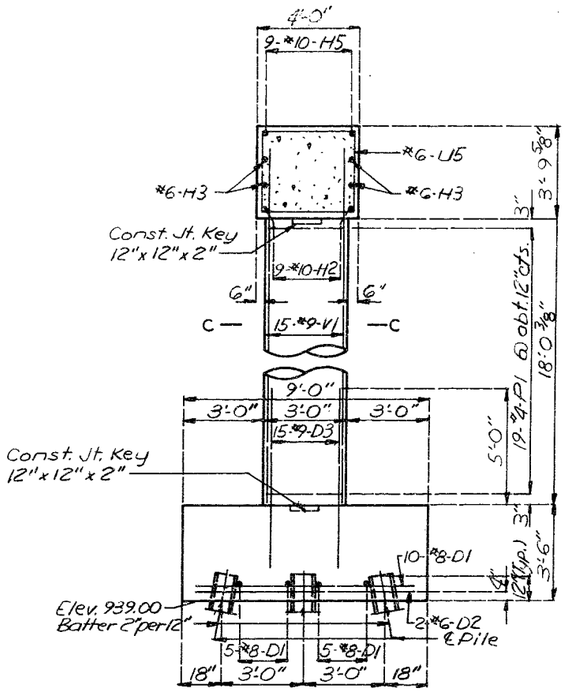
JACKSON COUNTY

A-5249

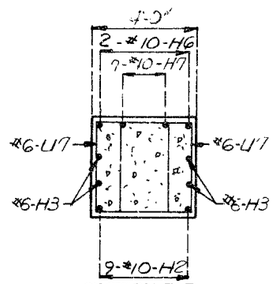
89-173

STATE	PROJ. NO.	SHEET NO
MO.	J4I0807	181

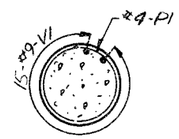
FINAL PLANS



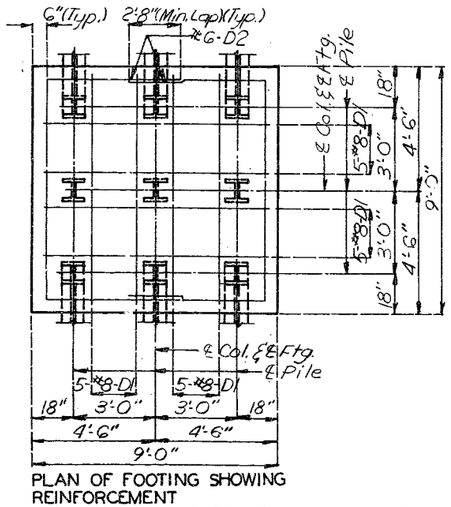
SECTION A-A



SECTION B-B



SECTION C-C



PLAN OF FOOTING SHOWING REINFORCEMENT

Note: For Detail of Pile Splice see sheet No. 6.

Note: For location of Section B-B see sheet No. 8.
For details of Intermediate Bent No. 2 not shown see sheet No. 8.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2		
ITEM		QUANTITY
Class 1 Excavation	Cu. Yds.	45
Structural Steel Pile (10")	Lin. Ft.	336
Pre-Lure For Piling	Lin. Ft.	297
Class B Concrete (Substructure)	Cu. Yds	71.1
Reinforcing Steel	Lbs.	13620

Note: Work this table with estimated quantities as shown on sheet No. 4.

DETAILS OF INTERMEDIATE BENT NO. 2

295/176

DETAILED JUN. 1992
CHECKED July 1992

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

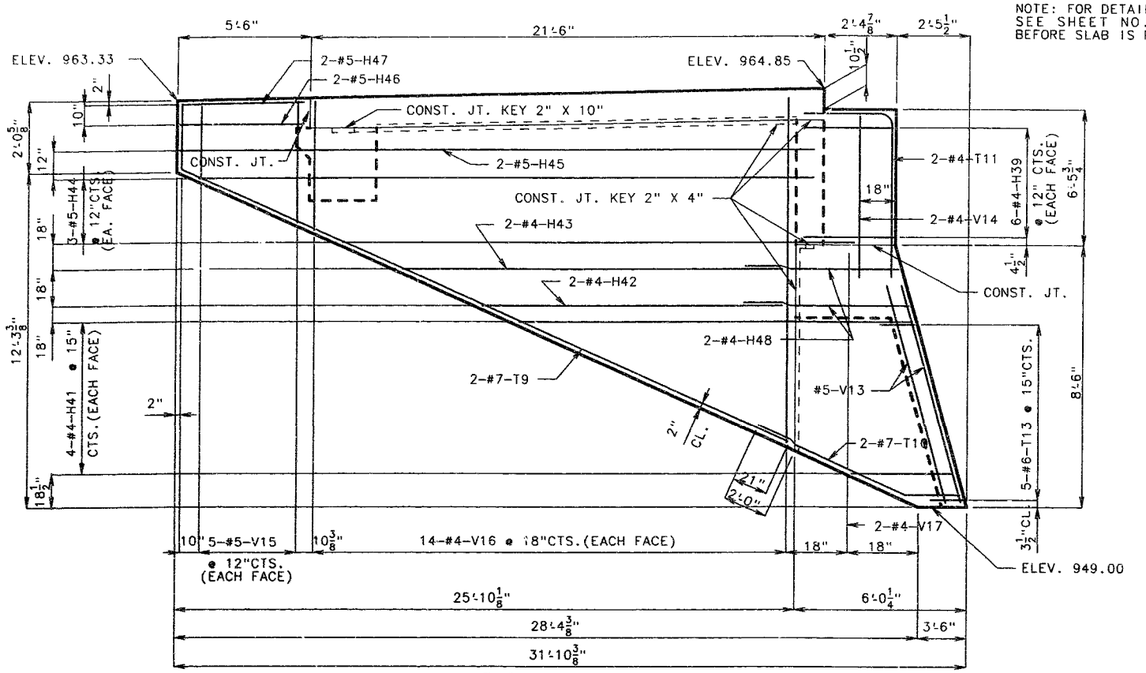
JACKSON COUNTY

A-5249

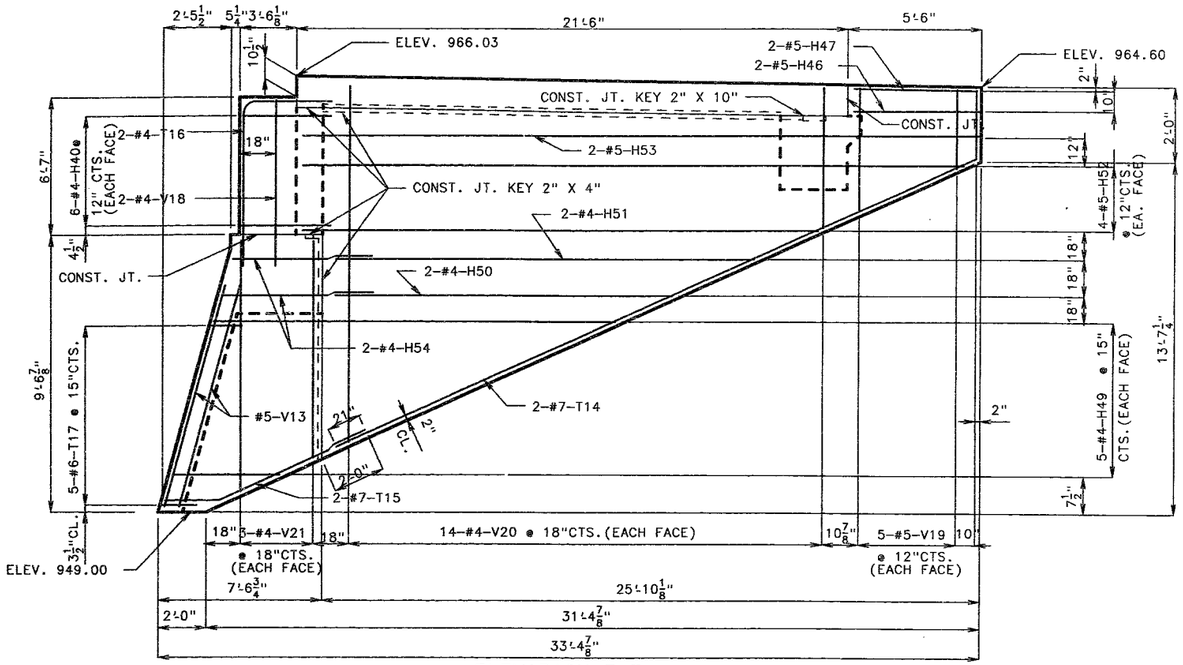
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	184

FINAL PLANS

NOTE: FOR DETAILS AND REINFORCEMENT OF BARRIER CURB SEE SHEET NO. 24. #5-R BARS MUST BE PLACED BEFORE SLAB IS POURED.

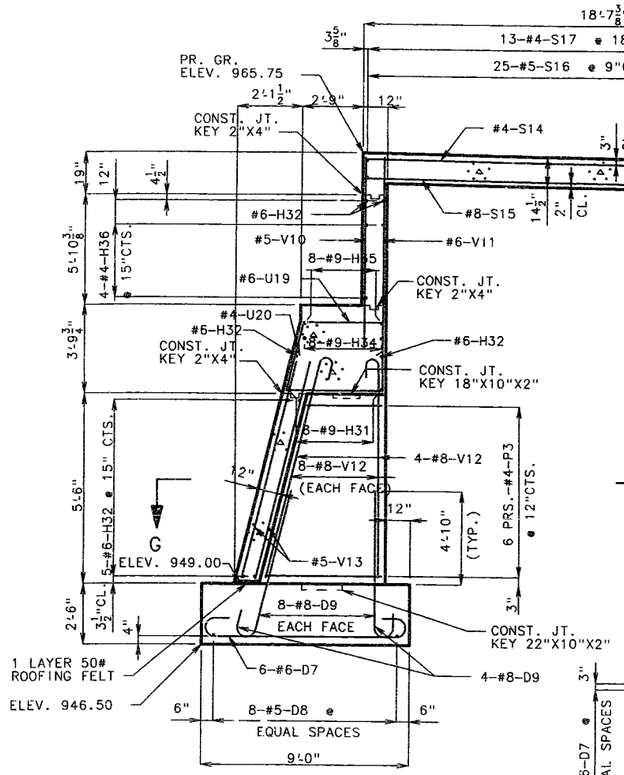


ELEVATION E-E

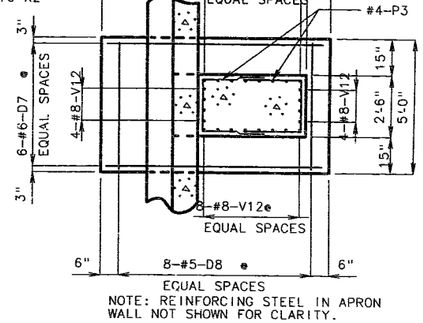


ELEVATION F-F

NOTE: FOR LOCATION OF ELEVATIONS E-E & F-F SEE SHEET NO. 10.



SECTION THRU ℄ ROADWAY (NORMAL TO BENT)



SECTION G-G

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YD.	74
STRUCTURAL STEEL PILE(10")	LIN. FT.	69
PRE-BORE FOR PILING	LIN. FT.	46
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	98.7
REINFORCING STEEL (BRIDGES)	LBS.	13020
REINFORCING STEEL (EPOXY COATED)	LBS.	1100
FOUNDATION TEST HOLES	LIN. FT.	12

DETAILS OF ABUTMENT NO. 3

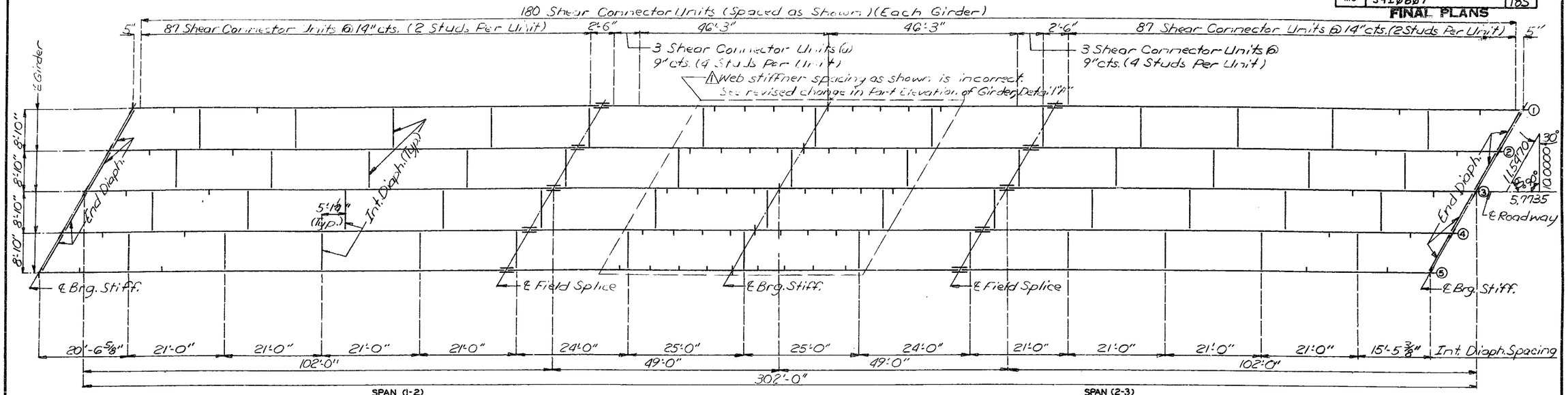
DETAILED MAY 1992
CHECKED JULY 1992

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

28817

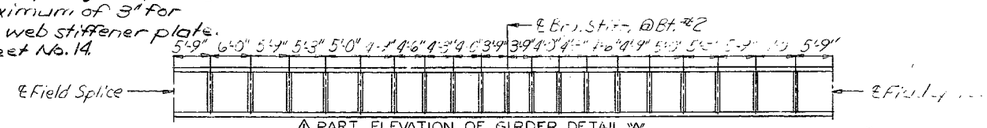
STATE	PROJ NO	SHEET NO
MO	J4I0807	185

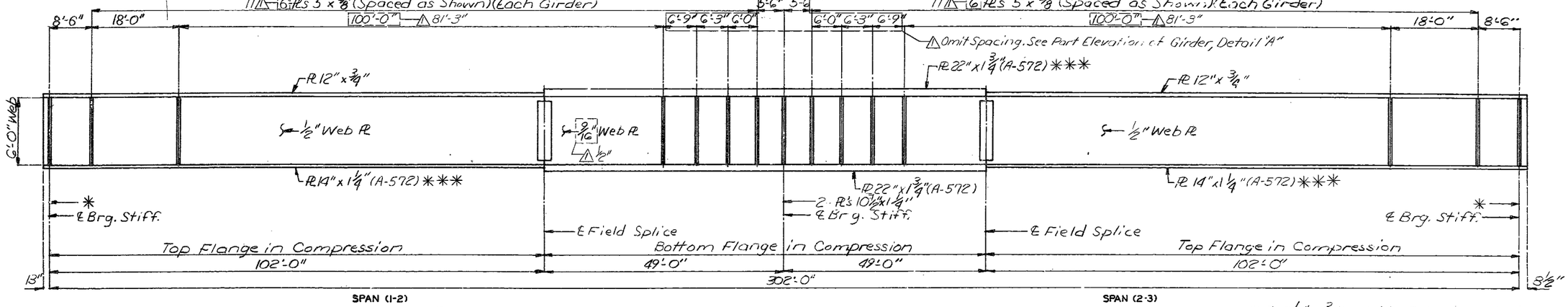
FINAL PLANS



PLAN OF STRUCTURAL STEEL

Note: Intermediate web stiffener plate and diaphragm spacing may vary from plan dimensions by a maximum of 3" for diaphragm to connect to the intermediate web stiffener plate. For details of shear connectors, see sheet No. 14.





ELEVATION OF GIRDER

Note: Plate girder shall be fabricated to conform with camber diagram shown on sheet 20.
All web plates are subject to notch toughness requirements. Fabricated Structural Steel shall be A-36 except as shown. Longitudinal dimensions are horizontal from ℄ Brg. to ℄ Brg.. See Part-Longitudinal Sections on sheet No. 15.
Transverse web stiffeners shall be located as shown in Plan of Structural Steel.

* Pl 6½" x ¾" (Outside Exterior Gdrs.)
Pl 7½" x ¾" (Inside Exterior Gdrs. and Both Sides of Interior Gdrs.)

*** Indicates flange plates subject to notch toughness requirements.

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DETAILED JUN. 1992
CHECKED July 1992

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

⚠ Revised 8/15/94

Sheet No. 13 of 33.

JACKSON COUNTY

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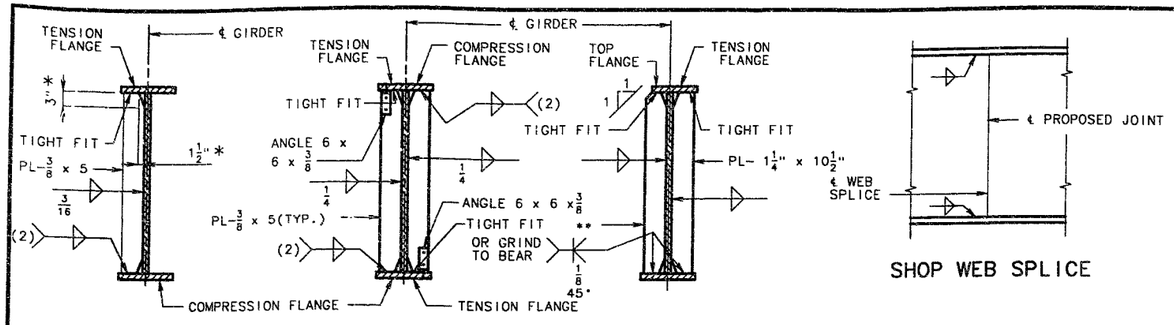


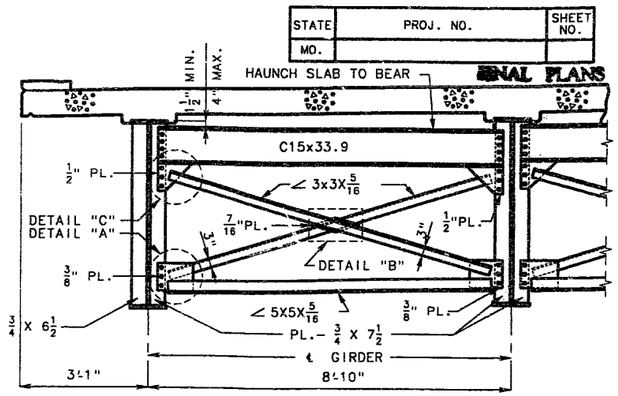
(2) WELD TO COMPRESSION FLANGE AS LOCATED ON ELEVATION OF GIRDER.

* TYPICAL FOR ALL INT. WEB STIFF., INT. DIAPH. CONN. PL. AND BRG. STIFF..

**PL 6 1/2"x3/4"(OUTSIDE EXTERIOR GIRDER)
PL 7 1/2x3/4"(INSIDE EXTERIOR GIRDERS AND BOTH SIDES OF INTERIOR GIRDERS)

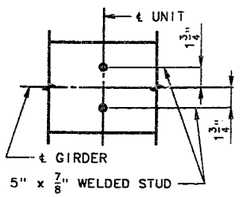
STATE	PROJ. NO.	SHEET NO.
MO.		

FINAL PLANS

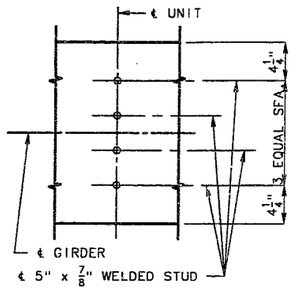


TYPICAL PART SECTION SHOWING END DIAPHRAGMS

WELDING DETAILS

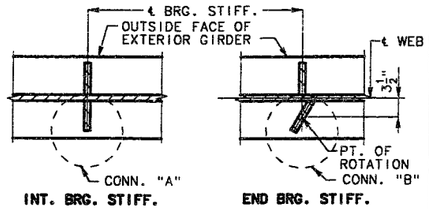


PLAN OF STUD CONN. (2 STUD UNIT)

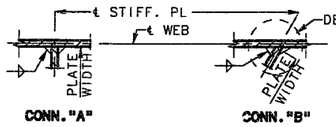


PLAN OF STUD CONN. (4 STUD UNIT)

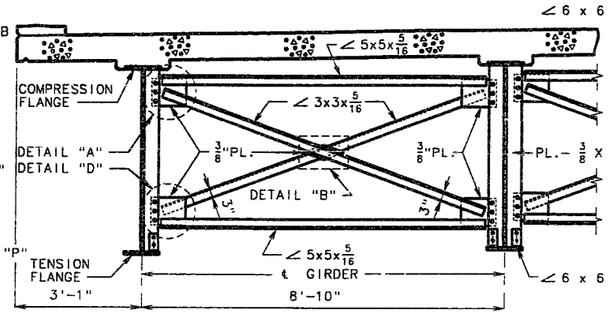
NOTE: WEIGHT OF 1823 LBS. OF SHEAR CONNECTORS IS INCLUDED IN WEIGHT OF FABRICATED STRUCTURAL CARBON STEEL.



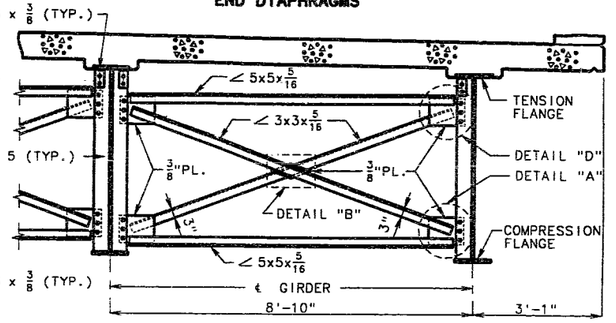
TYPICAL LOCATION DETAILS



WELDING DETAILS

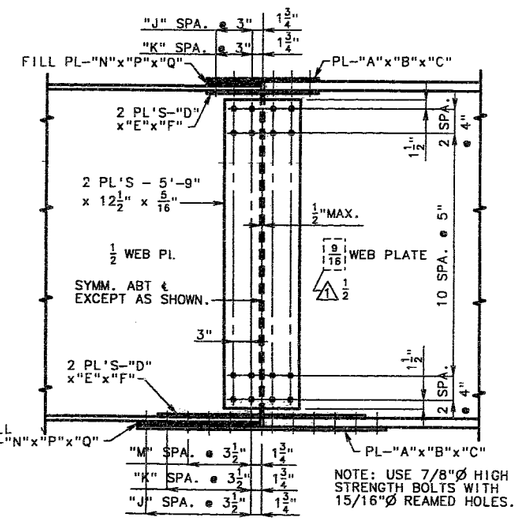


TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS BOTTOM FLANGE IN TENSION



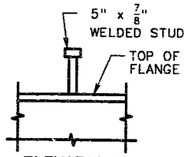
TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS TOP FLANGE IN TENSION

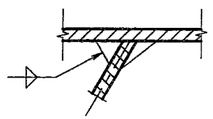
DETAIL OF SHEAR CONNECTORS



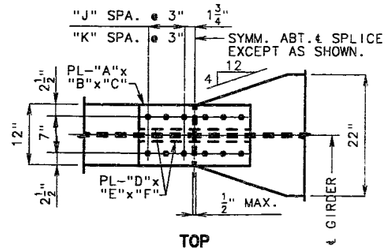
NOTE: USE 7/8"Ø HIGH STRENGTH BOLTS WITH 15/16"Ø REAMED HOLES.

DETAILS OF FIELD SPLICE

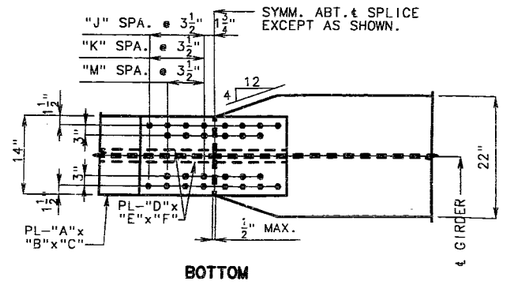




SPLICE LOCATION	TABLE OF DIMENSIONS – FIELD SPLICE											
	"A"	"B"	"C"	"D"	"E"	"F"	"J"	"K"	"M"	"N"	"P"	"Q"
TOP	12"	3/8"	2'-0 1/2"	5"	1/2"	2'-0 1/2"	3	3	–	12"	1"	12"
BOTT	14"	1 1/8"	3'-5 1/2"	6"	1 1/8"	2'-10 1/2"	5	4	2	14"	1/2"	20 1/2"

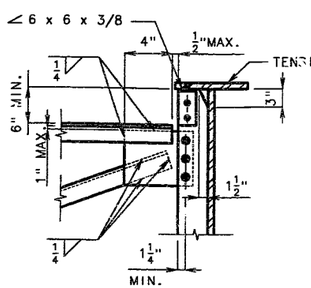


TOP

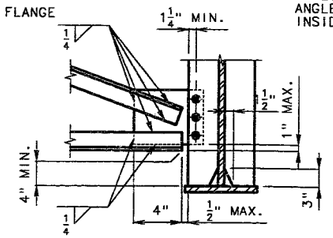


BOTTOM

PLAN OF FLANGES

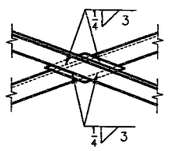


DETAIL "D"

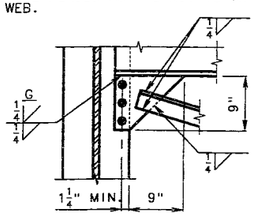


DETAIL "A"

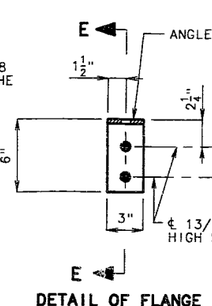
NOTE: THE TWO 3/4"Ø H.S. BOLTS THAT CONNECT THE 6 X 6 X 3/8 ANGLE TO THE TOP FLANGE SHALL BE PLACED SO THE NUT IS ON THE INSIDE OF FLANGE TOWARD THE WEB.



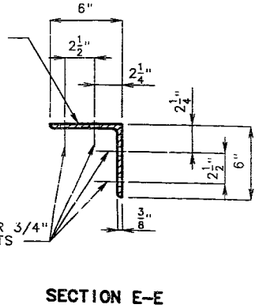
DETAIL "B"



DETAIL "C"



DETAIL OF FLANGE CONNECTION ANGLE



SECTION E-E

DETAILED MAY 1992
CHECKED JULY 1992

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

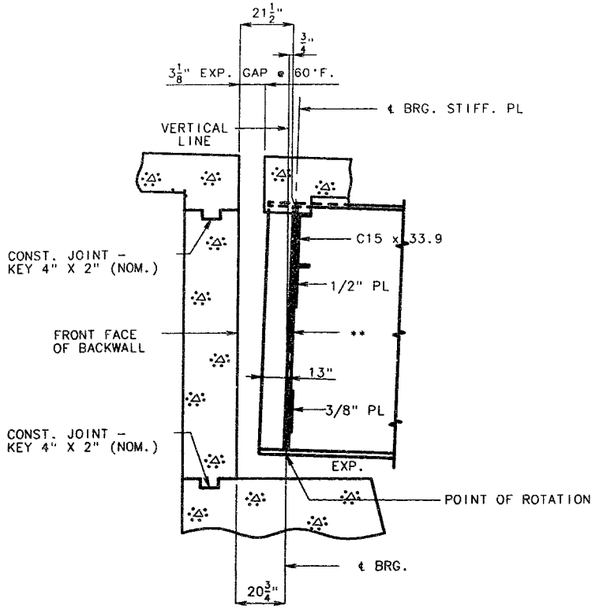
⚠ REVISED 8/15/94

JACKSON COUNTY

A-5249

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	187

FINAL PLANS



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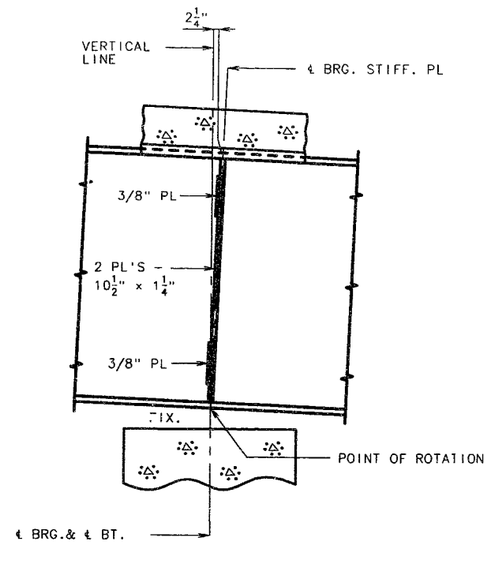

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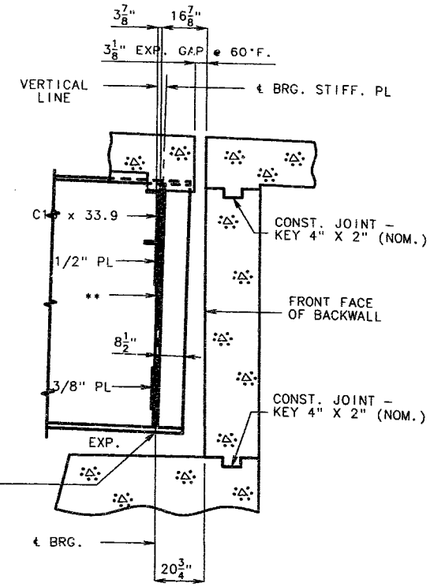
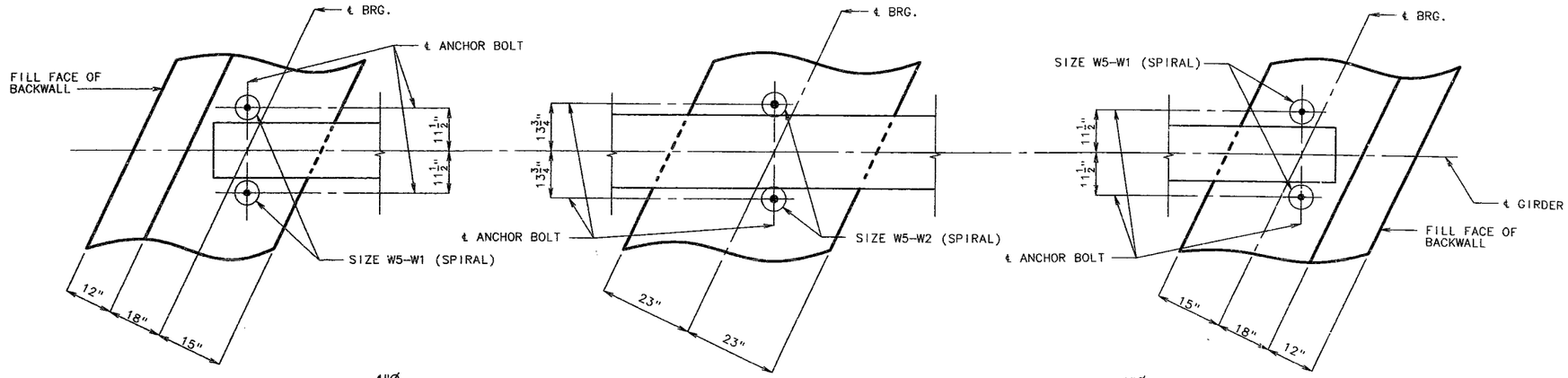


③

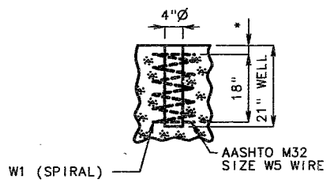
** ℄ $6\frac{1}{2}$ x $\frac{3}{4}$ (OUTSIDE EXTERIOR GDRS.)
℄ $7\frac{1}{2}$ x $\frac{3}{4}$ (INSIDE EXTERIOR GDRS. AND BOTH SIDES OF INTERIOR GDRS.)

PART LONGITUDINAL SECTION

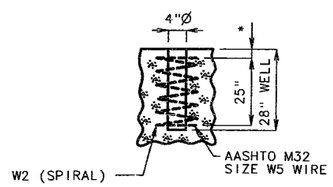


PART ANCHOR BOLT PLAN

* CLEAR TOP REINFORCEMENT (TIE TOP OF SPIRAL TO LONGITUDINAL REINFORCEMENT).



DETAIL OF ANCHOR BOLT WELL AT END ABUTMENTS



DETAIL OF ANCHOR BOLT WELL AT INT. BT. NO. 2

DETAILED MAY 1992
CHECKED JULY 1992

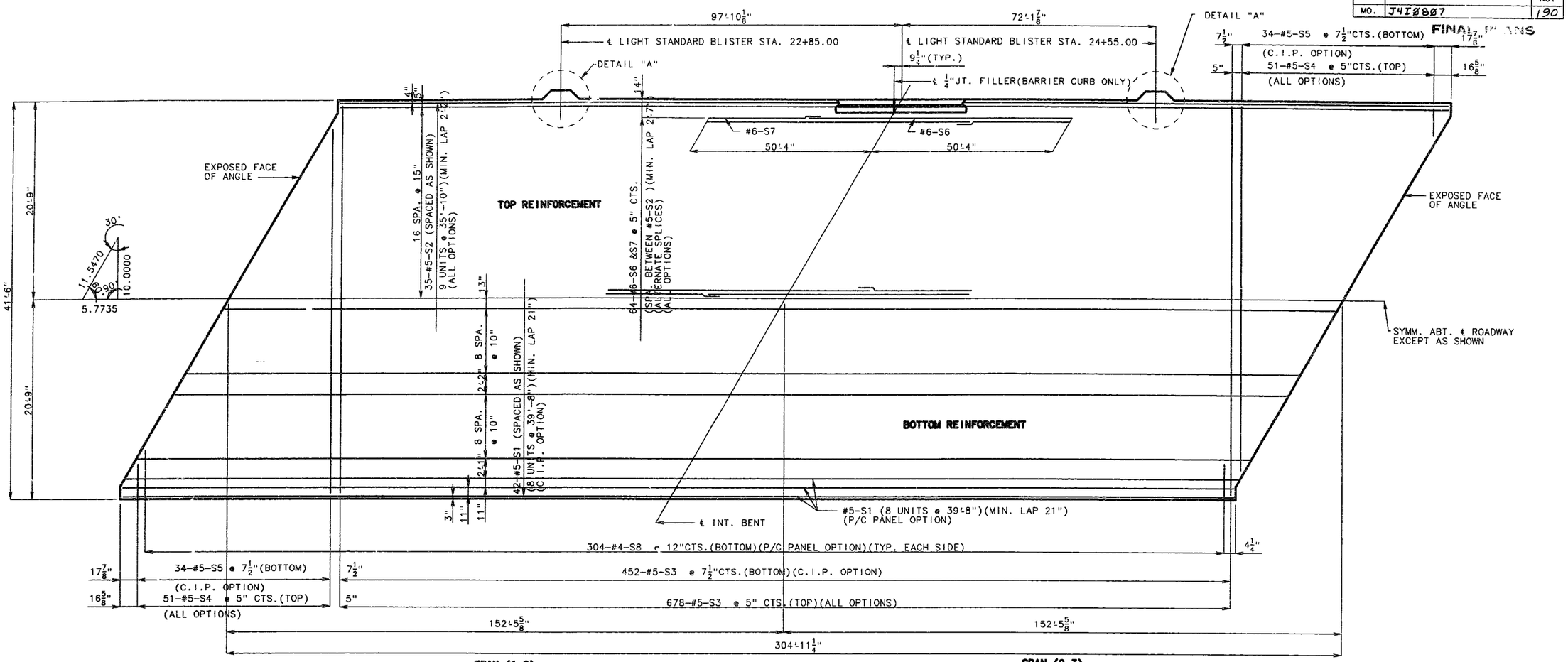
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY A-5249

2-12-92

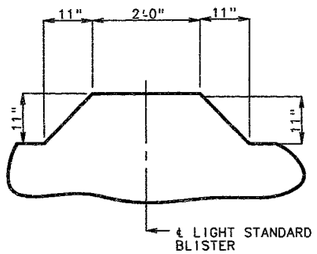
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	190

FINAL PLANS



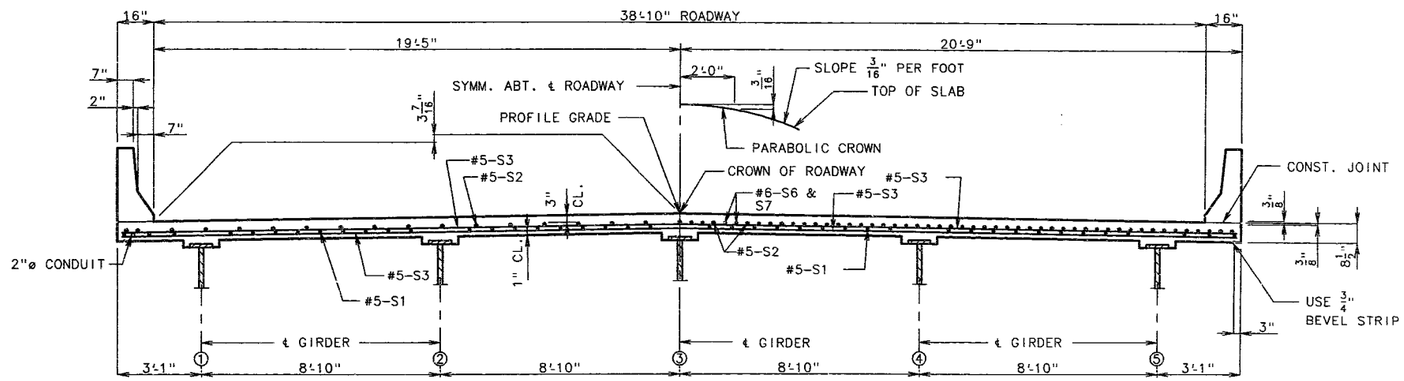
PLAN OF SLAB SHOWING REINFORCEMENT

NOTE: LONGITUDINAL DIMENSIONS SHOWN ARE HORIZONTAL.
FOR DETAILS OF SLAB DRAINS SEE SHEET NO. 21.
FOR DETAILS OF P/C PANEL OPTION SHOWN SEE SHEET NO. 19.
FOR SLAB POURING SEQUENCE SEE SHEET NO. 20.
FOR SLAB HAUNCHING DIAGRAM SEE SHEET NO. 20.
FOR DETAILS OF CONDUIT SYSEM SEE SHEET NO. 22.
LONGITUDINAL REINFORCING STEEL SHALL BE PLACED SO THAT ENDS SHALL NOT BE MORE THAN 1"+ FROM VERTICAL LEG OF ANGLE AT EXPANSION DEVICE.



DETAIL "A"

NOTE: FOR REINFORCEMENT IN LIGHT STANDARD BLISTER SEE SHEET NO. 23.



HALF SECTION NEAR ℄ SPAN

HALF SECTION NEAR INT. BENT

REVISED	JUNE 1991
JAN. 1981	

SLABS 38'-10" & 53'-30", SYM. 5 SPA.

DETAILED MAY 1992
CHECKED JULY 1992

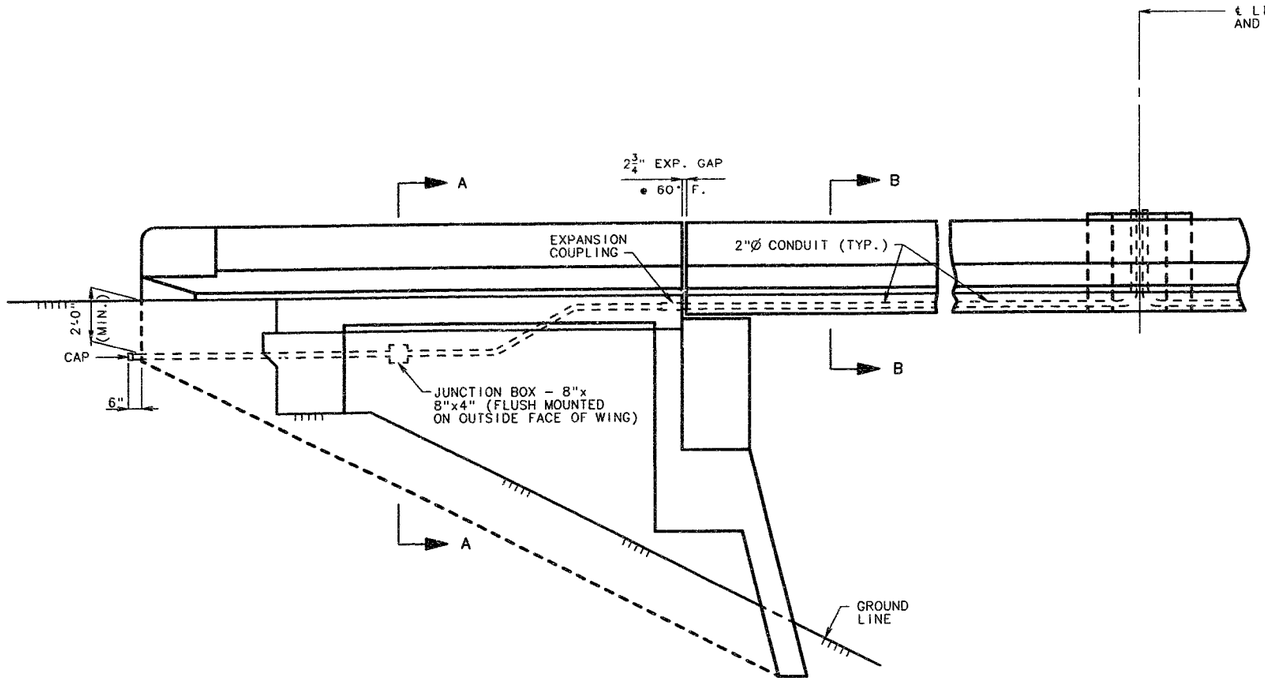
NOTE: FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NO. 23. (C.I.P. OPTION SHOWN)
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

JACKSON COUNTY

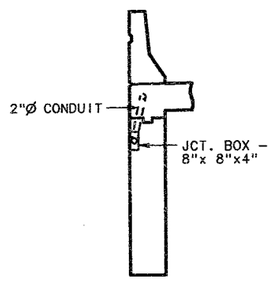
A-5249

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	194

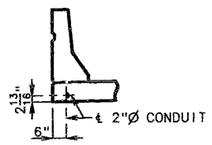
FINAL PLANS



PART SECTION NEAR LEFT ABUTMENT WING SHOWING LOCATION OF 2"Ø CONDUIT
(ABUT. #1 SHOWN, ABUT. #3 OPPOSITE HAND.)



SECTION A–A



SECTION B–B

NOTE:
ALL CONDUIT SHALL BE RIGID NON-METALLIC SCHEDULE 40 HEAVY WALL PVC (POLYVINYL CHLORIDE PLASTIC) WITH 3" MINIMUM COVER IN CONCRETE WHERE POSSIBLE. EACH SECTION OF CONDUIT SHALL BEAR THE UNDERWRITERS' LABORATORIIES, INC., (UL) LABEL.
SHIFT REINFORCING STEEL IN FIELD WHERE NECESSARY TO CLEAR CONDUIT AND JUNCTION BOXES.
EXPANSION FITTINGS SHALL PROVIDE A MINIMUM MOVEMENT IN EITHER DIRECTION OF 3" AT OPEN JOINTS. EXPANSION FITTINGS SHALL BE EQUAL TO CARLON ELECTRICAL CONSTRUCTION PRODUCTS OR TRIANGLE CONDUIT AND CABLE COMPANY, INC.
ALL END BENT JUNCTION BOXES SHALL BE PVC MOLDED FLUSH MOUNTED AND EQUAL TO CARLON ELECTRICAL CONSTRUCTION PRODUCTS OR TRIANGLE CONDUIT AND CABLE COMPANY, INC. THE CONDUIT TERMINATIONS SHALL BE PERMANENT OR SEPARABLE. THE TERMINATIONS AND COVERS SHALL BE OF WATERTIGHT CONSTRUCTION.
FOR DETAILS OF LIGHT STANDARDS AND WIRING, SEE ELECTRICAL PLANS.
WEEPHOLES SHALL BE PROVIDED AT APPROPRIATE LOCATIONS TO DRAIN ANY MOISTURE IN THE CONDUIT LINES.

182 338

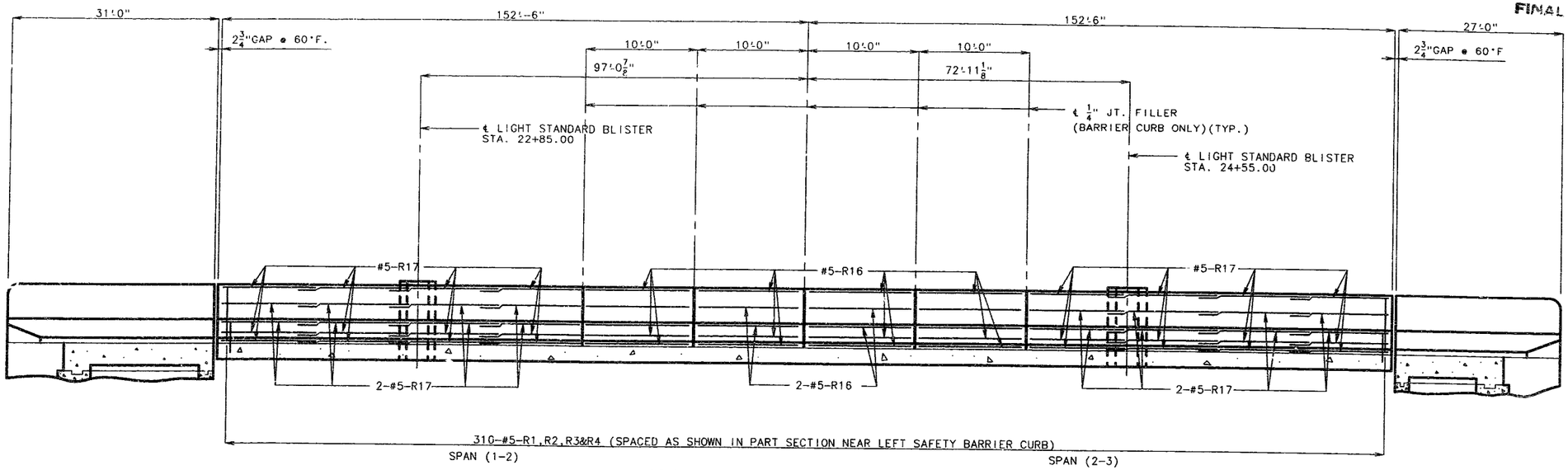
DETAILS OF CONDUIT SYSTEM ON STRUCTURE

DETAILED JUN 1992
CHECKED JULY 1992

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

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	195

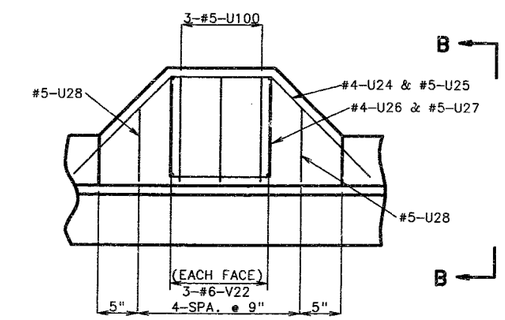
FINAL PLANS



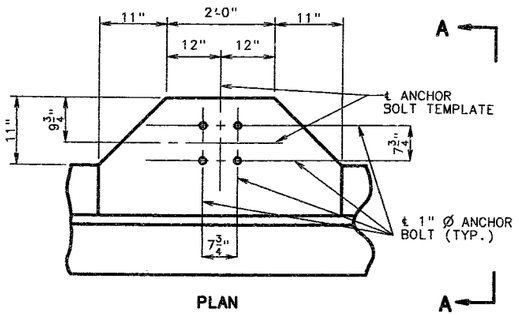
SECTION NEAR LEFT BARRIER CURB

NOTE: RIGHT CURB SIMILAR EXCEPT NO LIGHT BLISTERS ON RIGHT CURB.

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL AND ALONG TOP OF OUTSIDE EDGE OF SLAB. RUSTIFICATION NOT SHOWN FOR CLARITY.

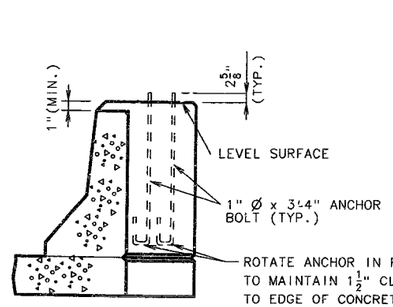


PLAN SHOWING REINFORCEMENT

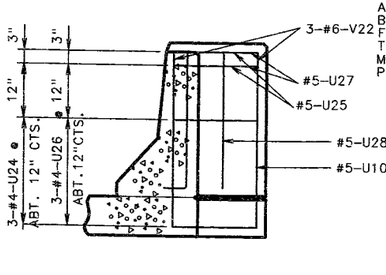


PLAN

DETAILS OF LIGHT STANDARD

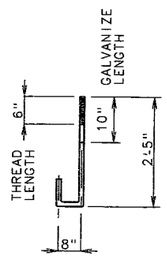


SECTION A-A



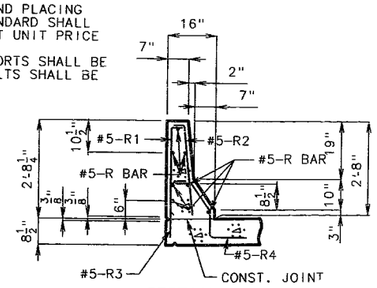
SECTION B-B

NOTE: ADDITIONAL CONCRETE AND REINFORCEMENT IN BARRIER CURB AT LIGHT STANDARD SUPPORTS AND LIGHT SIGN SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR SAFETY BARRIER CURB PER LINEAR FOOT.



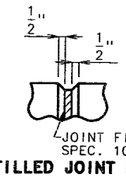
ANCHOR BOLT DETAIL

NOTE: COST OF FURNISHING AND PLACING ANCHOR BOLTS FOR LIGHT STANDARD SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR OTHER ITEMS.
TOP OF LIGHT STANDARD SUPPORTS SHALL BE MADE HORIZONTAL; ANCHOR BOLTS SHALL BE PLACED VERTICALLY.

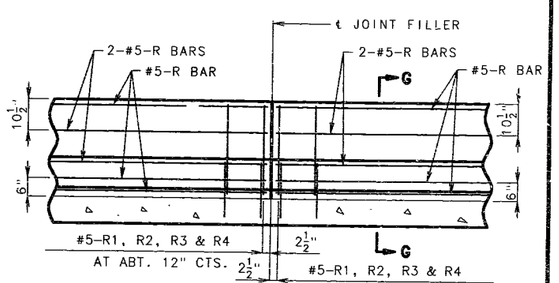


SECTION G-G

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS. THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.



FILLED JOINT DETAIL



PART SECTION NEAR LEFT SAFETY BARRIER CURB

B3-220

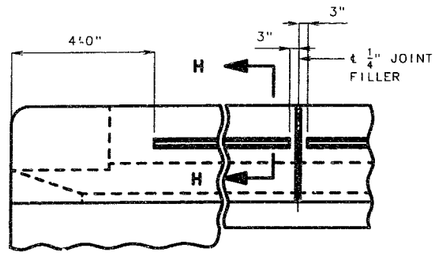
DETAILED JUN. 1992
CHECKED JULY 1992

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

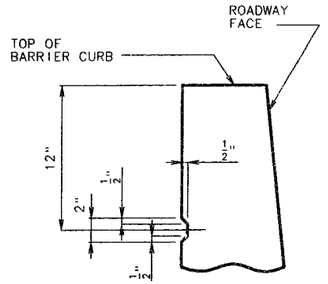
JACKSON COUNTY A-5249

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	196

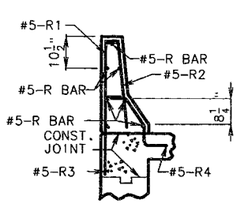
FINAL PLANS



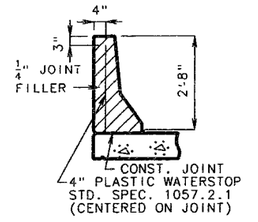
AT END OF WING AT JOINT FILLER



SECTION H-H



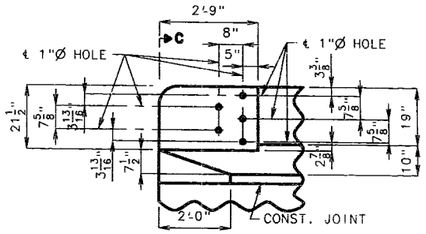
SECTION G-G



DETAIL OF PLASTIC WATERSTOP

NOTE: PLASTIC WATERSTOP SHALL BE PLACED IN ALL SAFETY BARRIER CURB FILLED JOINTS.

COST OF PLASTIC WATERSTOP COMPLETE-IN-PLACE SHALL BE INCLUDED IN CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.

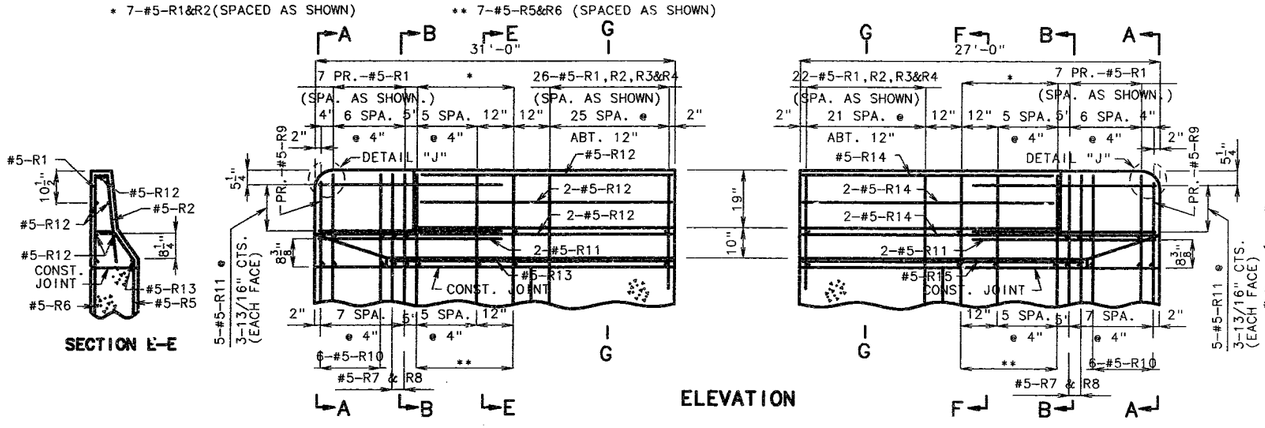


PART ELEVATION

DETAILS OF RUSTICATION

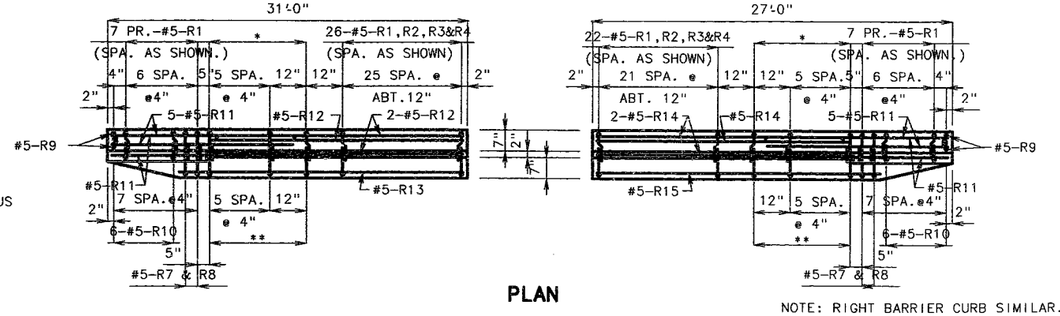
* 7-#5-R1&R2(SPACED AS SHOWN)

** 7-#5-R5&R6 (SPACED AS SHOWN)

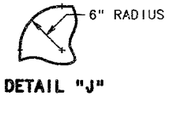


SECTION E-E

ELEVATION



PLAN



DETAIL "J"

NOTE:

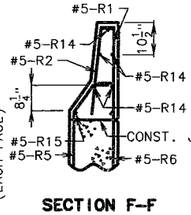
TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

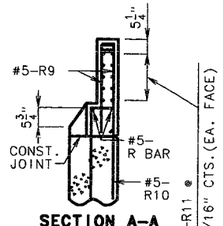
CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

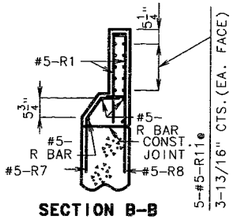
MEASUREMENT OF THE SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.



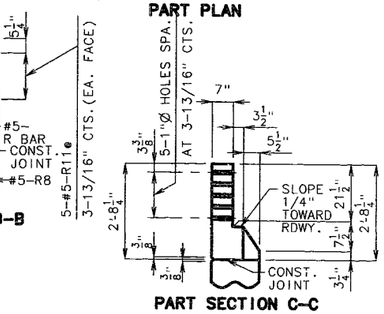
SECTION F-F



SECTION A-A



SECTION B-B



PART PLAN

PART SECTION C-C

DETAILS OF GUARD RAIL ATTACHMENT

NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS.

THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.

NOTE: RIGHT BARRIER CURB SIMILAR.

DETAILS OF LEFT SAFETY BARRIER CURB AT END BENTS

DETAILED JUN. 1992
CHECKED JULY 1992

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

SHEET NO. 24 OF 33.

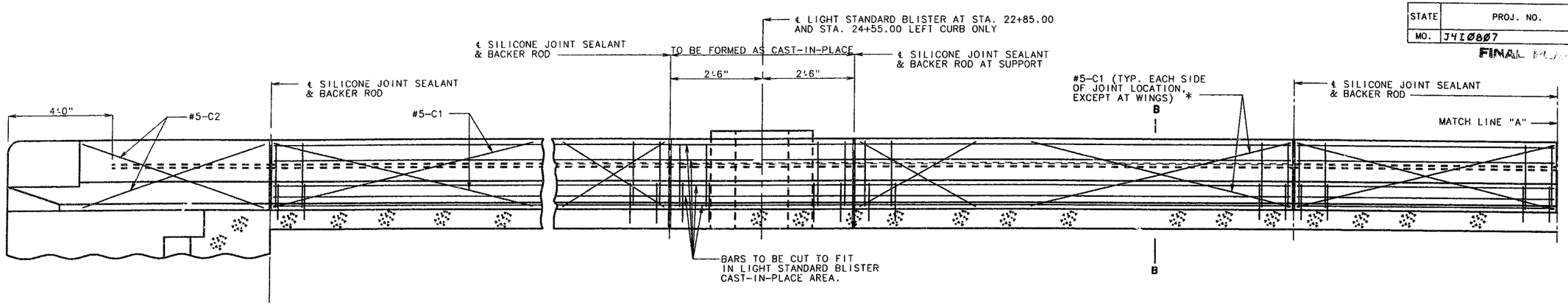
JACKSON COUNTY

A-5249

196 22x

STATE	PROJ. NO.	SHEET NO.
MO.	J4IØ8Ø7	197

FINAL PLANS



NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

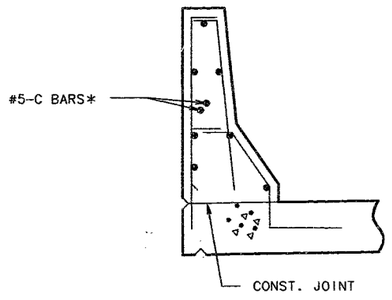
TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB AT SUPPORT LOCATIONS (OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB) (RIGHT CURB SIMILAR EXCEPT NO LIGHT BLISTERS ON RIGHT CURB.)

NOTE:

JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE SAFETY BARRIER CURBS INSTEAD OF JOINT FILLER.

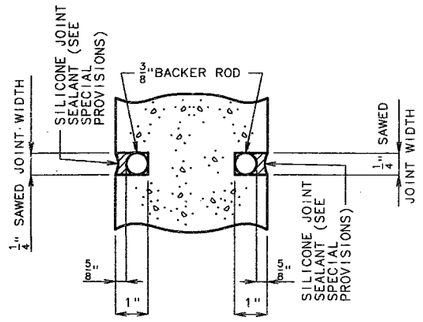
PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE SAFETY BARRIER CURB.



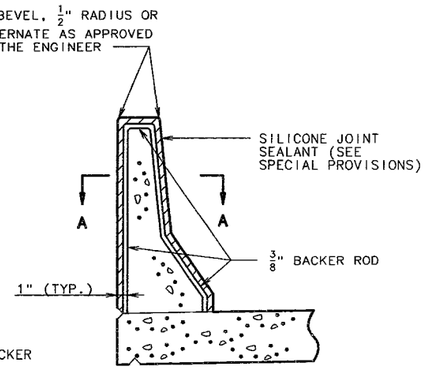
PART SECTION B-B

NOTE: * EACH SIDE OF JOINT LOCATION, EXCEPT SPAN SIDE AT END BENTS AND INSIDE AREA FOR LIGHT BLISTER.

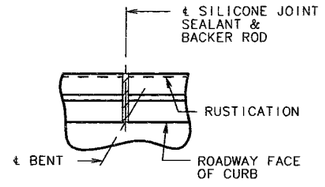


SECTION A-A

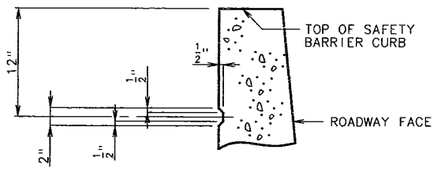
NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.



SECTION THRU JOINT



PART PLAN SHOWING SAFETY BARRIER CURB JOINT



PART SECTION SHOWING RUSTICATION DETAILS

RUSTICATION DETAIL

(USE ON HIGHWAY GRADE SEPARATION ONLY)

OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB

B/C SF16,GS 3.36 . A
BARRIER CURB REVISION RETAIN
FEB. 1991

DETAILED MAY 1992
CHECKED JULY 1992

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

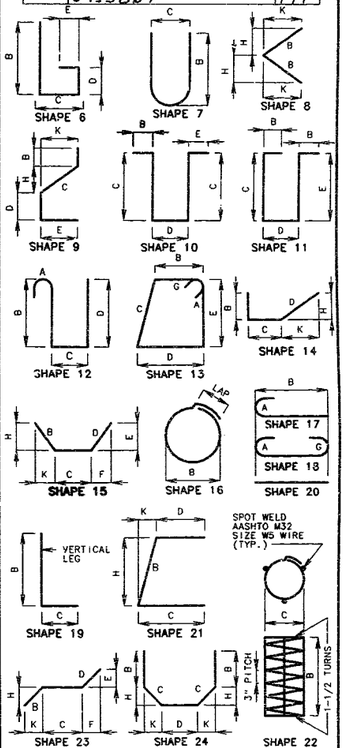
FINAL PLANS

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
			SUBSTRUCTURE																
			ABUT. NO. 1																
15	5D4		FOOTINGS		18		X			8 8.000							9 10	9 10	154
24	5D5		FOOTINGS		20		X			4 2.000							4 2	4 2	104
78	8D6		FOOTINGS		17		X			6 2.000							7 1	7 1	1475
8	9H8		BEAM		18		X			47 7.000							50 1	50 1	1362
20	6H9		BEAM		20		X			47 7.000							47 7	47 7	1429
8	9H10		BEAM		17		X			19 7.000							20 10	20 10	567
8	9H11		BEAM		17		X	V	1	37 0.000							38 3	38 3	
			INCREMENT = 3.375 INCH							35 0.000							36 3	36 3	1013
16	4H12		BACKWALL		20		X			24 9.000							24 9	24 9	265
8	6H13		BEAM		18		X			47 7.000							48 11	48 11	588
2	4H14		APPROACH H.		20		X			23 3.000							23 3	23 3	31
12	4H15		CURTAIN WALL		20		X			3 3.000							3 3	3 3	26
12	4H16		WING		20		X	V	2	17 0.000							17 0	17 0	
			INCREMENT = 30.250 INCH							4 5.000							4 5	4 5	86
2	4H17		WING		20		X			16 0.000							16 0	16 0	21
2	4H18		WING		20		X			19 6.000							19 6	19 6	26
6	5H19		WING		20		X	V	2	28 9.000							28 9	28 9	
			INCREMENT = 28.000 INCH							24 1.000							24 1	24 1	165
4	5H20		WING		20		X			30 8.000							30 8	30 8	128
4	5H21		WING		20		X			5 3.000							5 3	5 3	22
12	4H22		WING		20		X	V	2	17 0.000							17 0	17 0	
			INCREMENT = 30.250 INCH							4 5.000							4 5	4 5	86
2	4H23		WING		20		X			14 5.000							14 5	14 5	19
2	4H24		WING		20		X			18 0.000							18 0	18 0	24
8	5H25		WING		20		X	V	2	29 6.000							29 6	29 6	
			INCREMENT = 28.000 INCH							22 6.000							22 6	22 6	217
2	5H26		WING		20		X			30 8.000							30 8	30 8	64
4	5H27		WING	E	20		X			5 3.000							5 3	5 3	22
4	4H28		WING		20		X			4 11.000							4 11	4 11	13
4	4H29		WING		20		X			6 5.000							6 5	6 5	17
12	4H30		CURTAIN WALL		20		X			4 5.000							4 5	4 5	35
48	4P2		COLUMNS		10	S	X	V	6		3 0.500	2 3.000					8 4	8 2	
			INCREMENT = 3.625 INCH								2 0.200	2 3.000					6 3	6 1	228
2	7T1		WING		23		X			32 1.750	3 6.375				29 6.000	12 9.250	35 8	35 7	145
2	7T2		WING		23		X			6 8.000	2 1.750				2 7.750	6 1.375	8 10	8 10	36
7	6T3		WING		23	S	X			2 0.125	2 0.000				21.000	12.000	4 0	3 11	41
2	4T4		CURTAIN WALL		19	S	X			7 6.000	3 4.000						10 10	10 9	14
2	7T5		WING		23		X			32 1.750	2 9.000				29 6.000	12 9.375	34 11	34 10	142
2	7T6		WING		23		X			8 4.125	2 1.750				3 3.750	7 7.875	10 6	10 6	43
7	6T7		WING		21	S	X			2 0.125	2 0.000				21.000	12.000	4 0	3 7	38
2	4T8		CURTAIN WALL		19	S	X			7 6.000	4 5.000						11 11	11 10	16

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	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.
1	6U9		BEAM		13	S	X			2 6.375	2 9.250	3 3.375	2 8.000				12 7	12 1	18
21	6U10		BEAM		13	S	X			3 6.000	2 9.250	4 3.000	2 8.000				14 6	14 0	442
52	6U11		BEAM		13	S	X			3 6.000	2 11.500	4 3.000	2 10.375				14 11	14 5	1126
4	4U12		BEAM		10	S	X				6.000	3 6.000					4 6	4 4	12
44	4U13		APPROACH H.		10	S	X				17.500	6.000					3 5	3 3	96
46	5U14		BEAM		13	S	X			2 7.125	2 8.000	2 7.125	2 8.000				11 5	11 2	536
48	5U15		BEAM	E	10	S	X				2 7.500	2 7.125					7 10	7 8	384
45	5V2		BACKWALL	E	20		X			8 7.000							8 7	8 7	403
45	6V3		BACKWALL	E	20		X			8 10.000							8 10	8 10	597
78	8V4		COLUMNS		17		X			9 5.000							10 4	10 4	2152
4	4V5		CURTAIN WALL		20		X			7 6.000							7 6	7 6	20
10	5V6		WING		20		X	V	2	5 7.000							5 7	5 7	
			INCREMENT = 4.750 INCH							4 0.000							4 0	4 0	50
32	4V7		WING		20		X	V	2	15 8.000							15 8	15 8	
			INCREMENT = 7.750 INCH							6 0.000							6 0	6 0	232
6	4V8		WING		20		X	V	2	10 1.000							10 1	10 1	
			INCREMENT = 8.000 INCH							8 9.000							8 9	8 9	38
62	5V9		CURTAIN WALL		20		X			9 2.000							9 2	9 2	593
10	5V25		WING		20		X	V	2	4 10.000							4 10	4 10	
			INCREMENT = 5.250 INCH							3 1.000							3 1	3 1	41
32	4V26		WING		20		X	V	2	14 10.000							14 10	14 10	
			INCREMENT = 7.625 INCH							5 3.000							5 3	5 3	215
8	4V27		WING		20		X	V	2	9 11.000							9 11	9 11	
			INCREMENT = 7.625 INCH							8 0.000							8 0	8 0	48
10	W5W1		A.B.WELLS		22		X			18.000	9.125						26 1	26 1	44
			INT. BT.NO.2																
60	8D1		FOOTINGS		20		X			8 8.000							8 8	8 8	1388
6	6D2		FOOTINGS		10	S	X				5 4.000	8 0.000					18 8	18 4	165
45	9D3		FOOTINGS		20		X			7 11.000							7 11	7 11	1211
8	7H1		BEAM		7		X			4 4.000	3 7.500						10 7	10 7	173
9	10H2		BEAM		20		X			42 0.000							42 0	42 0	1627
4	6H3		BEAM		20		X			42 0.000							42 0	42 0	252
9	10H4		BEAM		17		X			21 5.000							22 10	22 10	884
9	10H5		BEAM		20		X			21 4.000							21 4	21 4	826
2	10H6		BEAM		17		X			23 1.000							24 6	24 6	211
7	10H7		BEAM		17		X			24 3.000							25 8	25 8	773
57	4P1		COLUMNS		16		X			2 9.000							9 6	9 6	362
1	6U1		BEAM		13	S	X			3 9.000	3 3.000	3 9.000	3 3.000				15 4	14 10	22

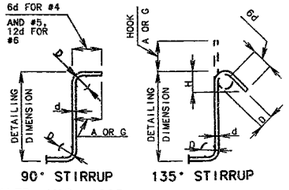


BENDING DIAGRAMS

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	199

STD 90.8	REVISED	OCT. 1991
MAY 1974		

DETAILED MAR. 1993
CHECKED MAR. 1993

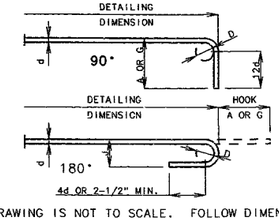


STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK HOOK A OR G	135° HOOK 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.



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

TWO ADDITIONAL ARE INCLUDED IN THE BAR BILL FOR TESTING.

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"

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 FABRICATORS 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.

SHEET NO. 27 OF 33.

JACKSON COUNTY A-5249

196 334

FINAL PLANS

BILL OF REINFORCING STEEL

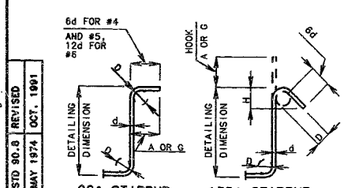
NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
32	6U2	BEAM		13	S	X			2 9.750	3 3.000	2 9.750	3 3.000				13 6	13 0	625
1	6U3	BEAM		13	S	X			2 11.250	3 3.000	2 11.250	3 3.000				13 9	13 3	20
16	6U4	BEAM		13	S	X			2 9.750	3 6.625	2 9.750	3 6.625				14 1	13 7	326
6	6U5	BEAM		13	S	X			3 9.000	3 6.625	3 9.000	3 6.625				15 11	15 6	140
12	6U6	BEAM		13	S	X			3 9.000	3 10.000	3 9.000	3 10.000				16 6	16 0	288
48	6U7	BEAM		13	S	X			2 9.750	3 10.000	2 9.750	3 10.000				14 8	14 2	1021
1	6U8	BEAM		13	S	X			2 11.250	3 10.000	2 11.250	3 10.000				14 11	14 5	22
4	4U50	BEAM		10	S	X				6.000	3 9.000					4 9	4 7	12
45	9V1	COLUMNS		20		X			21 0.000							21 0	21 0	3213
10	W5W2	A.B.WELLS		22		X			2 1.000	9.125						33 2	33 2	55
		ABUT. NO. 3																
18	6D7	FOOTINGS		18		X			8 8.000							10 0	10 0	270
24	5D8	FOOTINGS		20		X			4 8.000							4 8	4 8	117
72	8D9	FOOTINGS		17		X			6 2.000							7 1	7 1	1362
8	9H31	BEAM		18		X			47 7.000							50 1	50 1	1362
14	6H32	BEAM		20		X			47 7.000							47 7	47 7	1001
8	9H33	BEAM		17		X			20 4.000							21 7	21 7	587
8	9H34	BEAM		20		X			18 11.000							18 11	18 11	515
8	9H35	BEAM		17		X	V	1	26 0.000							27 3	27 3	
		INCREMENT = 3.250 INCH							24 1.000							25 4	25 4	715
16	4H36	BACKWALL		20		X			24 9.000							24 9	24 9	265
8	6H37	BEAM		18		X			47 7.000							48 11	48 11	588
2	4H38	APPROACH H.		20		X			23 3.000							23 3	23 3	31
12	4H39	CURTAIN WALL		20		X			3 3.000							3 3	3 3	26
12	4H40	CURTAIN WALL		20		X			4 5.000							4 5	4 5	35
8	4H41	WING		20		X	V	2	13 7.000							13 7	13 7	
		INCREMENT = 30.375 INCH							6 0.000							6 0	6 0	52
2	4H42	WING		20		X			12 7.000							12 7	12 7	17
2	4H43	WING		20		X			16 1.000							16 1	16 1	21
6	5H44	WING		20		X	V	2	25 3.000							25 3	25 3	
		INCREMENT = 27.500 INCH							20 8.000							20 8	20 8	144
2	5H45	WING		20		X			26 8.000							26 8	26 8	56
4	5H46	WING		20		X			5 3.000							5 3	5 3	22
4	5H47	WING	E	20		X			5 3.000							5 3	5 3	22
4	4H48	WING		20		X			5 1.000							5 1	5 1	14
10	4H49	WING		20		X	V	2	2 9.000							12 9	12 9	
		INCREMENT = 30.250 INCH							2 8.000							2 8	2 8	51
2	4H50	WING		20		X			10 4.000							10 4	10 4	14
2	4H51	WING		20		X			13 9.000							13 9	13 9	18
8	5H52	WING		20		X	V	2	25 4.000							25 4	25 4	
		INCREMENT = 27.625 INCH							18 5.000							18 5	18 5	183
2	5H53	WING		20		X			26 8.000							26 8	26 8	56
4	4H54	WING		20		X			6 6.000							6 6	6 6	17

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	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.
36	4P3	COLUMNS		10	S	X	V	6		2 10.000	2 3.000					7 11	7 9	
		INCREMENT = 3.250 INCH								2 2.000	2 3.000					6 7	6 5	170
2	7T9	WING		23		X			27 9.625	21.875				25 6.125	11 0.625	29 8	29 6	121
2	7T10	WING		23		X			4 4.750	3 6.500				21.000	4 0.375	7 11	7 11	32
2	4T11	CURTAIN WALL		19	S	X			7 5.000	3 3.000						10 8	10 7	14
5	6T13	WING		23	S	X			2 0.125	2 0.000				21.000	12.000	4 0	3 11	29
2	7T14	WING		23		X			27 9.625	21.250				25 6.125	11 0.625	29 7	29 6	121
2	7T15	WING		23		X			7 8.500	2 0.500				3 0.750	7 0.875	9 9	9 9	40
2	4T16	CURTAIN WALL		19	S	X			7 6.000	4 5.000						11 11	11 10	16
5	6T17	WING		21	S	X			2 0.125	2 0.000				21.000	12.000	4 0	3 7	27
1	6U16	BEAM		13	S	X			2 6.375	3 6.750	3 3.375	3 5.750				14 2	13 8	21
23	6U17	BEAM		13	S	X			3 6.000	2 9.250	4 3.000	2 8.000				14 6	14 0	484
13	6U18	BEAM		13	S	X			3 6.000	3 2.125	4 3.000	3 1.000				15 4	14 10	290
37	6U19	BEAM		13	S	X			3 6.000	3 6.750	4 3.000	3 5.750				16 2	15 8	871
4	4U20	BEAM		10	S	X				6.000	3 6.000					4 6	4 4	12
46	4U21	BEAM		13	S	X			2 7.125	2 8.000	2 7.125	2 8.000				11 3	11 0	338
48	5U22	BEAM		10	S	X				2 3.250	2 7.125					7 2	6 11	346
44	4U23	APPROACH H.		10	S	X				17.500	6.000					3 5	3 3	96
45	5V10	BACKWALL	E	20		X			9 0.000							9 0	9 0	422
47	6V11	BACKWALL	E	20		X			9 3.000							9 3	9 3	653
72	8V12	COLUMNS		17		X			6 11.000							7 10	7 10	1506
62	5V13	CURTAIN WALL		20		X			6 7.000							6 7	6 7	426
2	4V14	CURTAIN WALL		20		X			7 5.000							7 5	7 5	10
10	5V15	WING		20		X	V	2	4 2.000							4 2	4 2	
		INCREMENT = 6.000 INCH							2 2.000							2 2	2 2	33
28	4V16	WING		20		X	V	2	14 1.000							14 1	14 1	
		INCREMENT = 8.750 INCH							4 7.000							4 7	4 7	175
2	4V17	WING		20		X			7 6.000							7 6	7 6	10
2	4V18	CURTAIN WALL		20		X			7 7.000							7 7	7 7	10
10	5V19	WING		20		X	V	2	4 1.000							4 1	4 1	
		INCREMENT = 5.750 INCH							2 2.000							2 2	2 2	33
28	4V20	WING		20		X	V	2	14 0.000							14 0	14 0	
		INCREMENT = 8.750 INCH							4 6.000							4 6	4 6	173
6	4V21	WING		20		X	V	2	8 7.000							8 7	8 7	
		INCREMENT = 8.000 INCH							7 3.000							7 3	7 3	32
10	W5W1	A.B.WELLS		22		X			18.000	9.125						26 1	26 1	44
		SUPERSTR.																
		SLAB ON SEMI-DEEP																

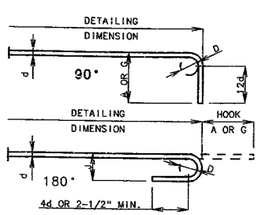
STD 90.0 REVISED MAY 1974 OCT. 1991

DETAILED MAR. 1993
CHECKED MAR. 1993



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.



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

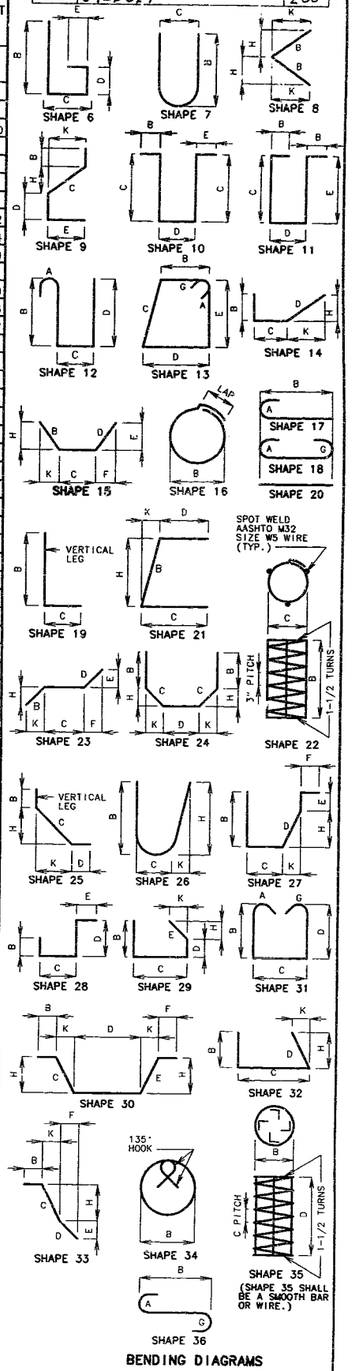
END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	ALL GRADES 180° HOOKS A OR G	180° HOOKS J	90° HOOKS A OR G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	12"
#7	5-1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9-1/2"	15"	11-3/4"	19"
#10	10-3/4"	17"	13-1/4"	22"
#11	12"	19"	14-3/4"	2'-0"
#14	18-1/4"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

TWO ADDITIONAL #6-V11 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 FABRICATORS 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.

SHEET NO. 28 OF 33.

BENDING DIAGRAMS



STATE	PROJ. NO.	SHEET NO.
MO.	J4I0887	200

JACKSON COUNTY A-5249

FINAL PLANS

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	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.
		ABUTMENT																
		ABUT. NO. 1																
71	8S9	SLAB	E	20					25 2.000							25 2	25 2	4771
28	4S10	SLAB	E	20					25 2.000							25 2	25 2	471
60	5S11	SLAB	E	20					24 9.000							24 9	24 9	1549
30	4S12	SLAB	E	20					24 9.000							24 9	24 9	496
39	5S13	SLAB	E	20					2 6.000							2 6	2 6	102
		ABUT. NO. 3																
30	4S14	SLAB	E	20					21 2.000							21 2	21 2	424
64	8S15	SLAB	E	20					21 2.000							21 2	21 2	3617
50	5S16	SLAB	E	20					24 9.000							24 9	24 9	1291
26	4S17	SLAB	E	20					24 9.000							24 9	24 9	430
39	5S18	SLAB	E	20					2 6.000							2 6	2 6	102
		C.I.P. SLAB																
		OPTION																
336	5S1	SLAB	E	20					39 8.000							39 8	39 8	1 3901
315	5S2	SLAB	E	20					35 10.000							35 10	35 10	1 1773
1130	5S3	SLAB	E	20					41 3.000							41 3	41 3	4 8617
102	5S4	SLAB	E	20			V	2	39 5.000							39 5	39 5	
		INCREMENT =							3 4.000							3 4	3 4	2274
		8.625 INCH																
68	5S5	SLAB	E	20			V	2	39 3.000							39 3	39 3	
		INCREMENT =							3 6.000							3 6	3 6	1516
		13.000 INCH																
64	6S6	SLAB	E	20					60 0.000							60 0	60 0	5768
64	6S7	SLAB	E	20					43 3.000							43 3	43 3	4158
		P/C PANEL																
		OPTION																
•48	5S1	SLAB	E	20					39 8.000							39 8	39 8	1986
315	5S2	SLAB	E	20					35 10.000							35 10	35 10	1 1773
678	5S3	SLAB	E	20					41 3.000							41 3	41 3	2 9170
102	5S4	SLAB	E	20			V	2	39 5.000							39 5	39 5	
		INCREMENT =							3 4.000							3 4	3 4	2274
		8.625 INCH																
64	6S6	SLAB	E	20					60 0.000							60 0	60 0	5768
64	6S7	SLAB	E	20					43 3.000							43 3	43 3	4158
608	4S8	SLAB	E	20					3 2.000							3 2	3 2	1286
•48	5C1	S/F CURB	E	20					10 0.000							10 0	10 0	501
•4	5C2	S/F CURB	E	20					28 1.000							28 1	28 1	117
•4	5C3	S/F CURB	E	20					24 1.000							24 1	24 1	100
800	5R1	BARRIER CURB	E	19	S				2 6.000	3.500						2 10	2 8	2225
744	5R2	BARRIER CURB	E	15	S				2 6.125	3.500				2 6.000	3.000	2 10	2 9	2134
716	5R3	BARRIER CURB	E	19	S				17.000	6.000						23	22	1369
716	5R4	BARRIER CURB	E	27	S					6.000	11.125	7.000	12.000	9.125	6.375	3 0	2 10	2116
28	5R5	BARRIER CURB	E	27	S					6.000	11.125	18.000		9.125	6.375	2 11	2 10	83
28	5R6	BARRIER CURB	E	19	S				2 2.500	6.000						2 9	2 7	75
3	5R7	BARRIER CURB	E	27	S					6.000	8.125	18.000		6.625	4.625	2 8	2 7	22
8	5R8	BARRIER CURB	E	19	S				2 1.000	6.000						2 7	2 6	21

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	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.
8	5R9	BARRIER CURB	E	19	S				2 3.000	3.500						2 7	2 5	20
24	5R10	BARRIER CURB	E	10	S					2 1.000	7.500					4 10	4 7	115
48	5R11	BARRIER CURB	E	20					5 0.000							5 0	5 0	250
10	5R12	BARRIER CURB	E	20					28 0.000							28 0	28 0	232
2	5R13	BARRIER CURB	E	20					28 9.000							28 9	28 9	60
10	5R14	BARRIER CURB	E	20					24 0.000							24 0	24 0	250
2	5R15	BARRIER CURB	E	20					24 9.000							24 9	24 9	52
58	5R16	BARRIER CURB	E	20					9 9.000							9 9	9 9	590
112	5R17	BARRIER CURB	E	20					34 2.000							34 2	34 2	3991
6	4U24	BARRIER CURB	E	15	S				20.500	22.500	20.500	14.500	14.500	14.500	14.500	5 4	5 3	21
4	5U25	BARRIER CURB	E	15	S				20.500	22.500	20.500	14.500	14.500	14.500	14.500	5 4	5 3	22
6	4U26	BARRIER CURB	E	31	S				18.500	22.500	18.500					5 9	5 7	22
4	5U27	BARRIER CURB	E	31	S				18.500	22.500	18.500					5 9	5 7	23
4	5U28	BARRIER CURB	E	10	S				6.000	2 5.500	7.250					6 0	5 9	24
6	5U100	BARRIER CURB	E	10	S				6.000	2 5.500	14.000					6 7	6 3	39
12	6V22	BARRIER CURB	E	20					3 0.000							3 0	3 0	54
		END OF LIST																
•SLIP FORM OPTION ONLY																		

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	201

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 · SHAPE 23 · SHAPE 24 · SHAPE 22 · SHAPE 25 · SHAPE 26 · SHAPE 27 · SHAPE 28 · SHAPE 29 · SHAPE 31 · SHAPE 30 · SHAPE 32 · SHAPE 33 · SHAPE 34 · SHAPE 35 · SHAPE 36

VERTICAL LEG

SPOT WELD AASHTO M32 SIZE W5 WIRE (TYP.)

3" PITCH

1-1/2 TURNS

(SHAPE 35 SHALL BE A SMOOTH BAR OR WIRE.)

LAP

135° HOOK

BENDING DIAGRAMS

REVISED	DATE
STD 90.8	OCT. 1991
MAY 1974	

DETAILED MAR. 1993
CHECKED MAR. 1993

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

90° STIRRUP

135° STIRRUP

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° · 180° · 4d OR 2-1/2" MIN. · HOOK A OR G

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

TWO ADDITIONAL #4-S14, #8-S15 & #5-R16 ARE INCLUDED IN THE BAR BILL FOR TESTING.

END HOOK DIMENSIONS				
		ALL GRADES		
BAR SIZE	D (IN.)	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"

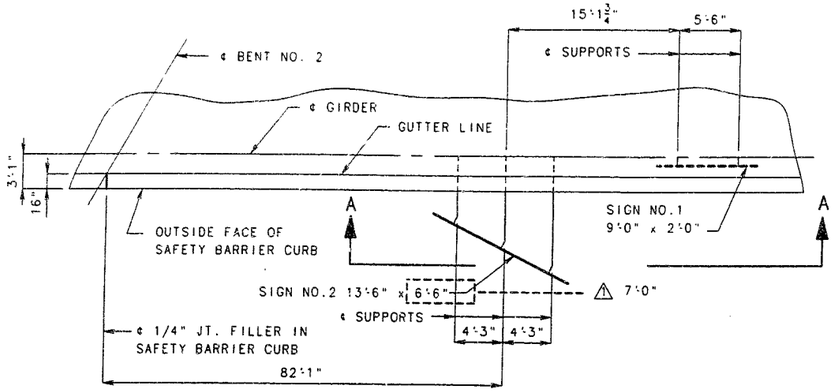
NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR 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 FABRICATORS 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.

SHEET NO. 29 OF 33.

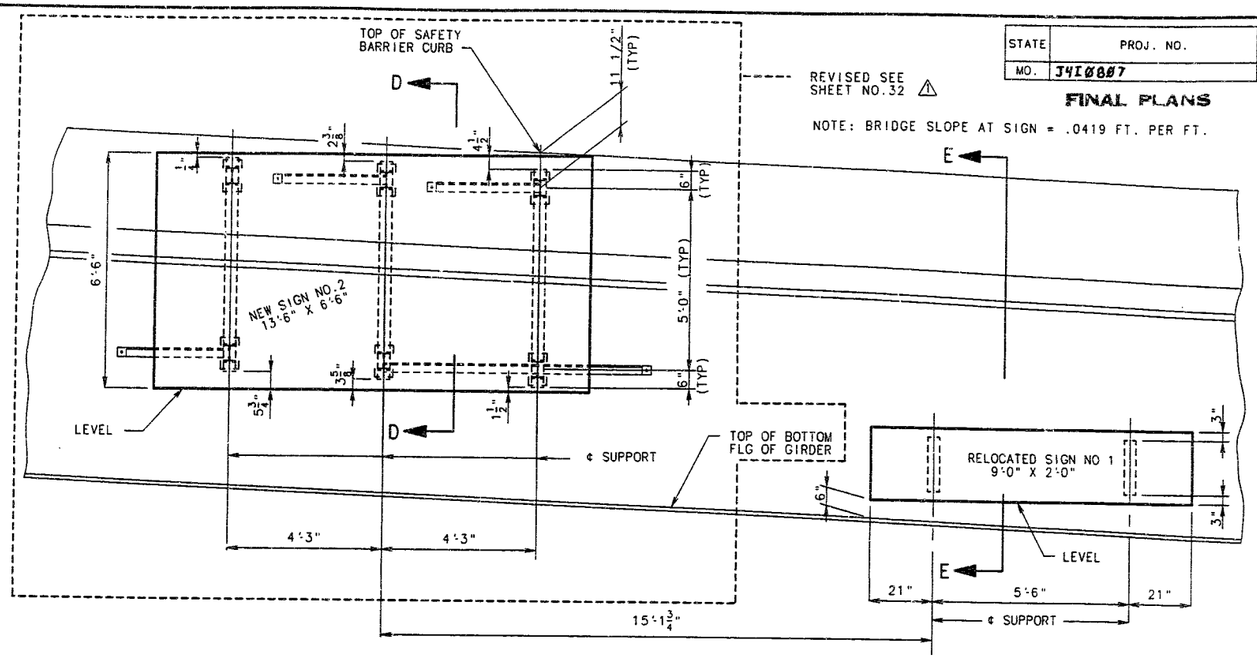
JACKSON COUNTY A-5249

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	

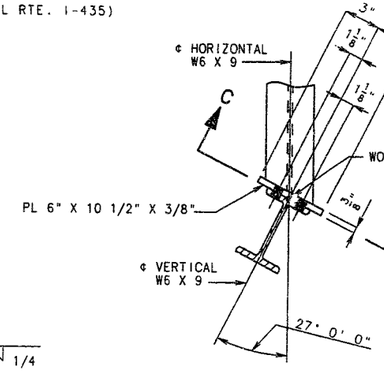
FINAL PLANS



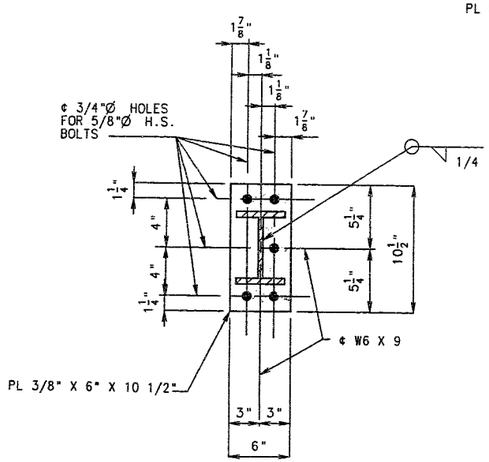
PART PLAN SHOWING LOCATION OF SIGNS NO 1 & 2
(EAST SIDE OF BRIDGE OVER WBL RTE. I-435)



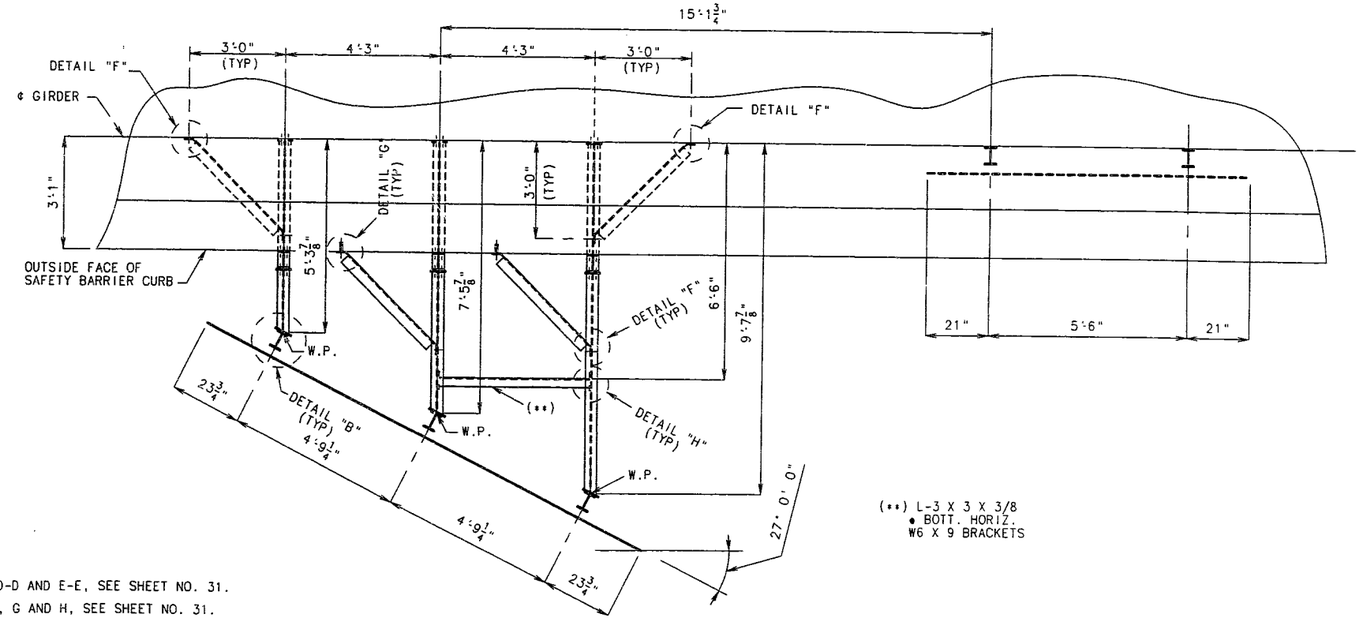
PART ELEVATION A-A



DETAIL "B"



SECTION C-C



(**) L-3 X 3 X 3/8
● BOTT. HORIZ. W6 X 9 BRACKETS

PART PLAN SHOWING
DIMENSIONS AND HORIZONTAL BRACING

GENERAL NOTES

CENTER AND LEVEL SIGNS ON BRACKETS.

ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

CONCRETE ANCHORS SHALL BE NON-DRILLING EXPANSION TYPE.THEY SHALL HAVE A CERTIFIED CONCRETE PULLOUT STRENGTH (ULTIMATE LOAD) OF AT LEAST 12,100 POUNDS IN 4000 PSI CONCRETE. THE HOLE SHALL BE PRE-DRILLED WITH A CONVENTIONAL CARBIDE MASONRY BIT.

ALL STRUCTURAL STEEL SHALL BE A.S.T.M. A36, GALVANIZED.

THE COST OF FURNISHING AND ERECTING THE SIGN SUPPORTS, INCLUDING THE CONCRETE ANCHORS COMPLETE-IN-PLACE, SHALL BE PAID FOR AS FABRICATED SIGN SUPPORT BRACKETS, LUMP SUM.

NOTE:

FOR SECTIONS D-D AND E-E, SEE SHEET NO. 31.

FOR DETAILS F, G AND H, SEE SHEET NO. 31.

SIGN SUPPORT BRACKETS FOR SIGNS NO. 1 & 2

DETAILED SEPT. 1992
CHECKED AUG. 1993

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

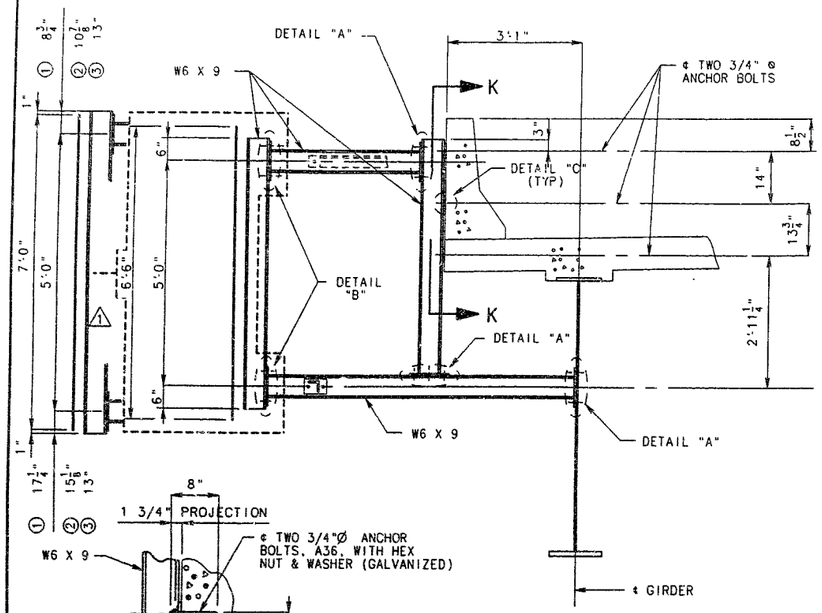
⚠ REVISED 2-8-1995

JACKSON COUNTY

A-5249

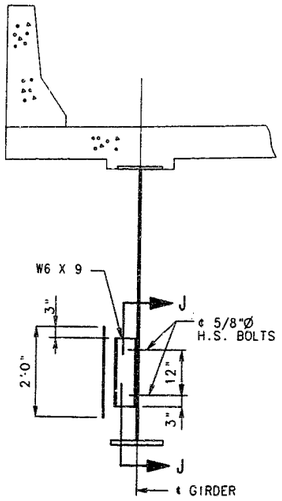
STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	

FINAL PLANS

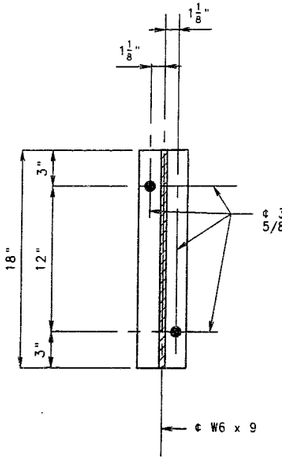


SECTION D-D

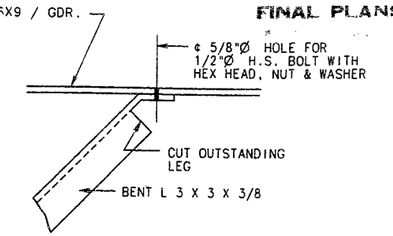
DETAIL "C"



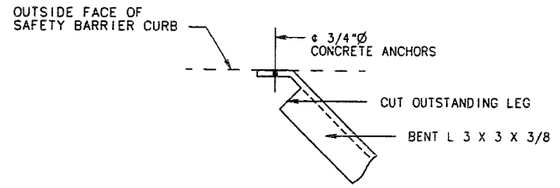
SECTION E-E



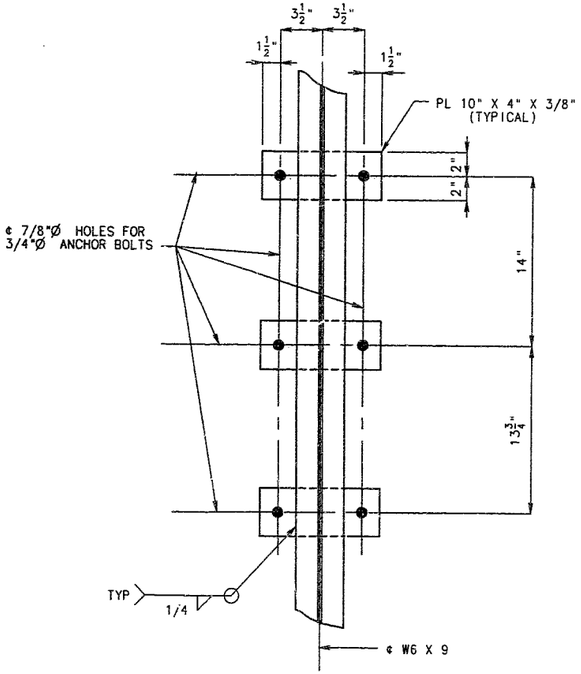
SECTION J-J



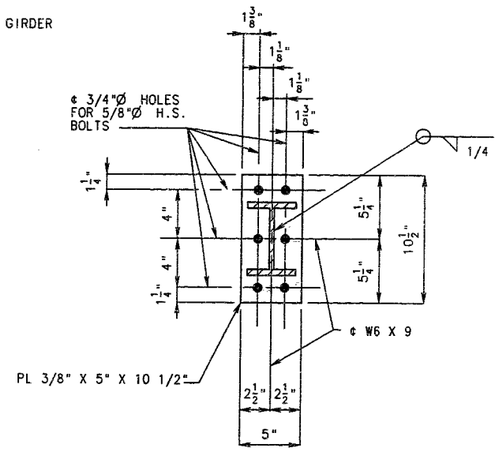
DETAIL "F"



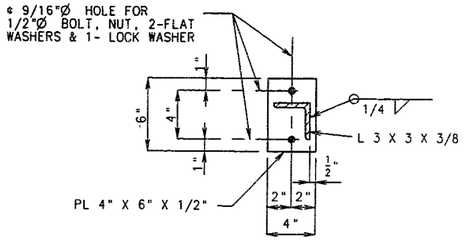
DETAIL "G"



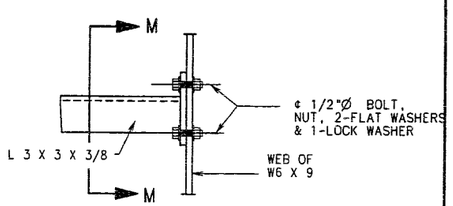
SECTION K-K



DETAIL "A"



SECTION M-M



DETAIL "H"

NOTE:

FOR LOCATION OF SECTIONS D-D AND E-E, SEE SHEET NO 30.
FOR LOCATION OF DETAILS "F", "G" AND "H", SEE SHEET NO 30.
FOR DETAIL "B", SEE SHEET NO. 30.

190

DETAILED SEPT.1992
CHECKED AUG.1993

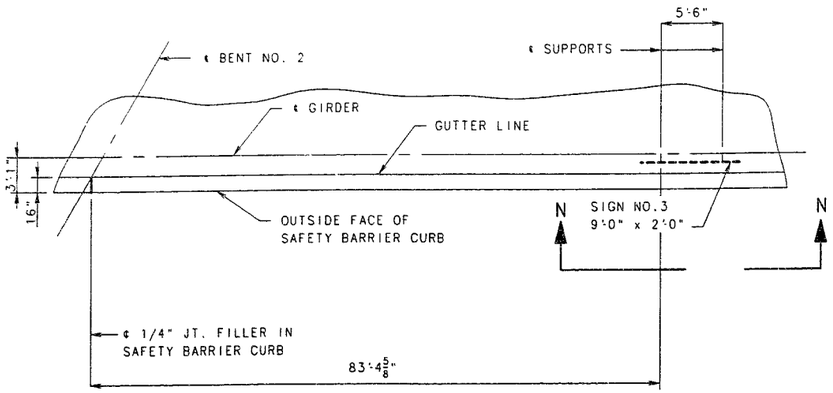
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

⚠1 REVISED 2-8-1995

JACKSON COUNTY A-5249

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	

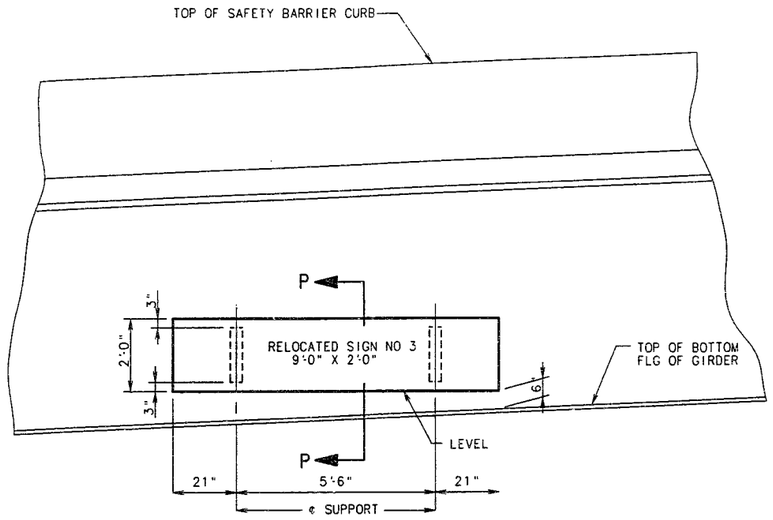
FINAL PLANS



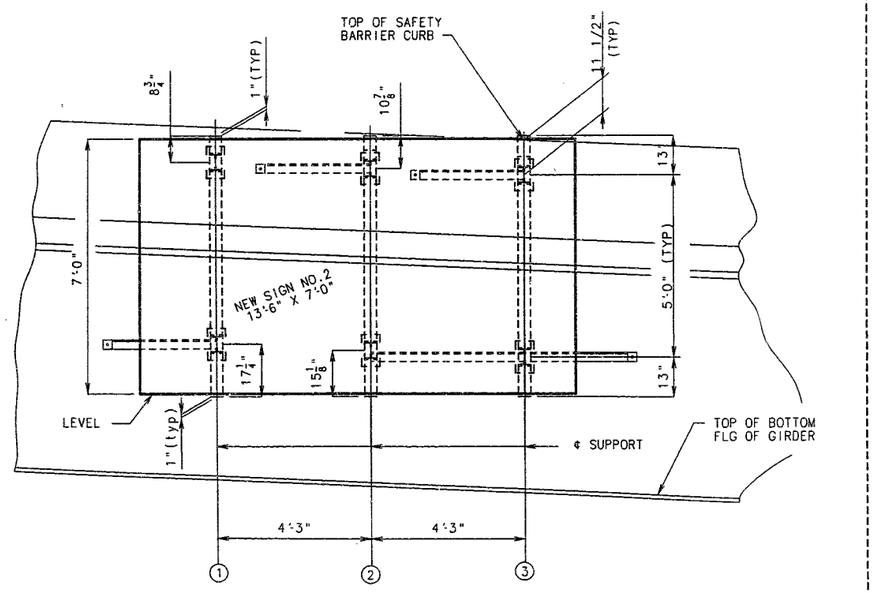
PART PLAN SHOWING LOCATION OF SIGN NO. 3

(WEST SIDE OF BRIDGE OVER EBL RTE. I-435)

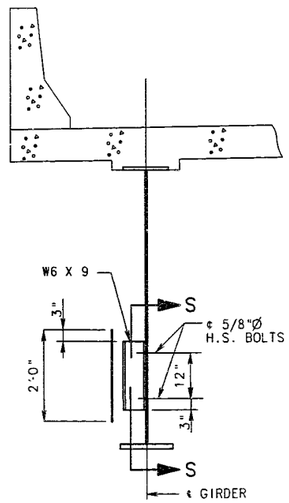
NOTE: BRIDGE SLOPE AT SIGN = .02077 FT. PER FT.



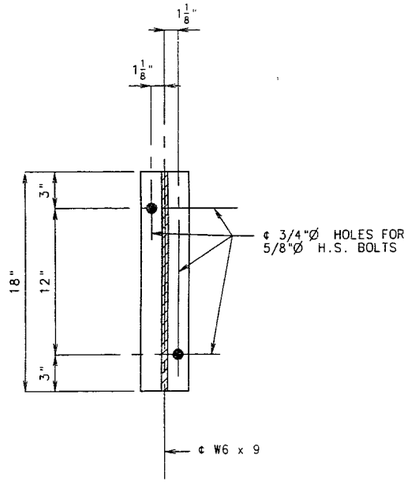
PART ELEVATION N-N



REVISED FROM SHEET NO. 30 ⚠1



SECTION P-P



SECTION S-S

SIGN SUPPORT BRACKET FOR SIGN NO. 3

12

DETAILED SEPT. 1992
CHECKED AUG. 1993

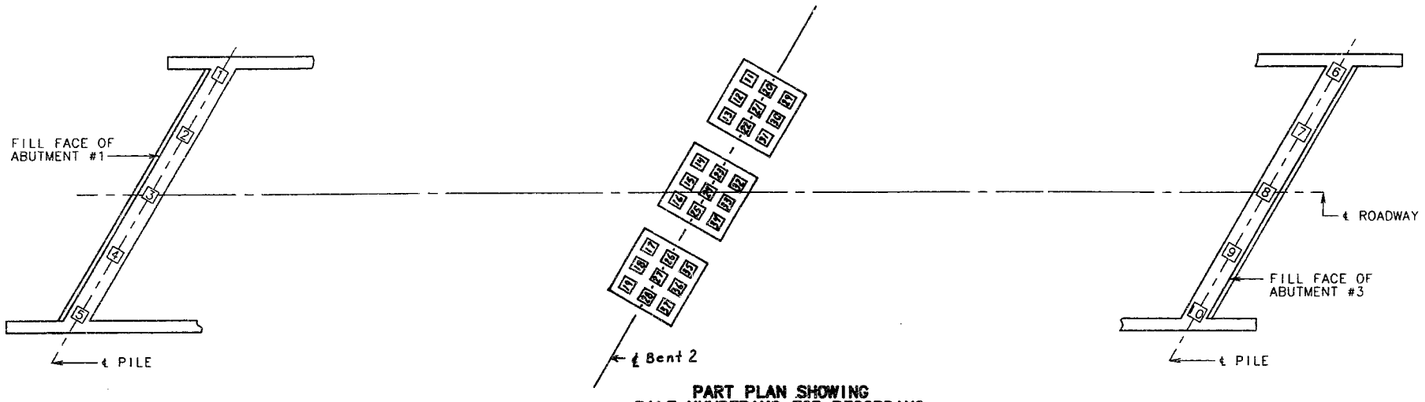
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

⚠1 REVISED 2-8-1995

JACKSON COUNTY A-5249

STATE	PROJ. NO.	SHEET NO.
MO.	J4I0807	205

FINAL PLANS



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	Pre-Bore (Ft)	REMARKS
				Abut #1
1	18	98.3	9	HP 10x42, All pile driven to practical refusal.
2	16	Abs. Ref.	9	" " "
3	16-48 Splice	98.3	9	" " "
4	15	Abs. Ref.	14	" " "
5	15	Abs. Ref.	14	" " "
	88	Subtotal	55	
				Abut #3
6	15	71.5	10	HP 10x42, All pile driven to practical refusal.
7	14	73.8	9	" " "
8	14	84.3	9	" " "
9	14	90.8	9	" " "
10	12	107.3	9	" " "
	69	Subtotal	46	

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	Pre-Bore (ft)	REMARKS
				Bent #2
11	11	243.8	11	HP 10x42, All pile driven to practical refusal.
12	11	243.8	11	" " "
13	11	203.2	11	" " "
14	13	Abs. Ref.	11	" " "
15	12	Abs. Ref.	11	" " "
16	13	Abs. Ref.	11	" " "
17	13	Abs. Ref.	11	" " "
18	14	121.9	11	" " "
19	13	135.5	11	" " "
20	11	254.8	11	" " "
21	11	254.8	11	" " "
22	11	243.8	11	" " "
23	13	Abs. Ref.	11	" " "
24	13	Abs. Ref.	11	" " "
25	12	Abs. Ref.	11	" " "
26	13	Abs. Ref.	11	" " "
27	15	106.2	11	" " "
28	16	Abs. Ref.	11	" " "
29	10	110.8	11	" " "
30	10	110.8	11	" " "
31	11	203.2	11	" " "
32	12	Abs. Ref.	11	" " "
33	13	Abs. Ref.	11	" " "
34	12	Abs. Ref.	11	" " "
35	15	110.8	11	" " "
36	13	203.2	11	" " "
37	14	101.6	11	" " "
	336	Subtotal	297	
	82	"	55	
	69	"	46	
	493	Total	398	

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS

NOTE: INDICATE IN REMARK COLUMN:
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.
C.) TYPE OF PILING USED.

~~NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.~~

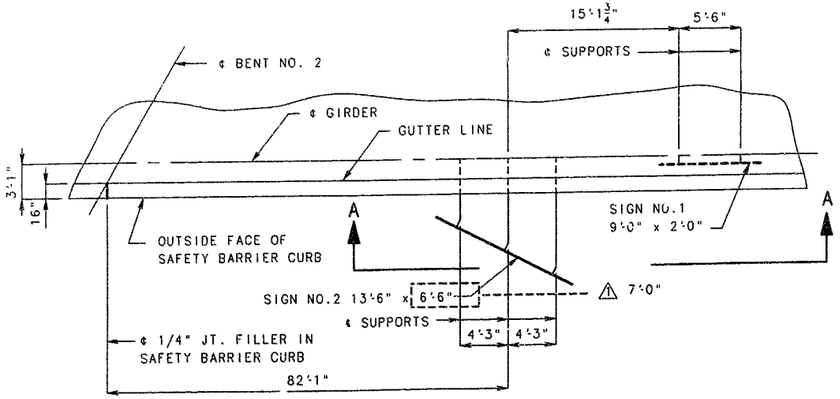
MISC. PILES - PLA. A
PILES IN PLACE
REVISED:
MAY 1993

DETAILED MAR. 1993
CHECKED MAR. 1993

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

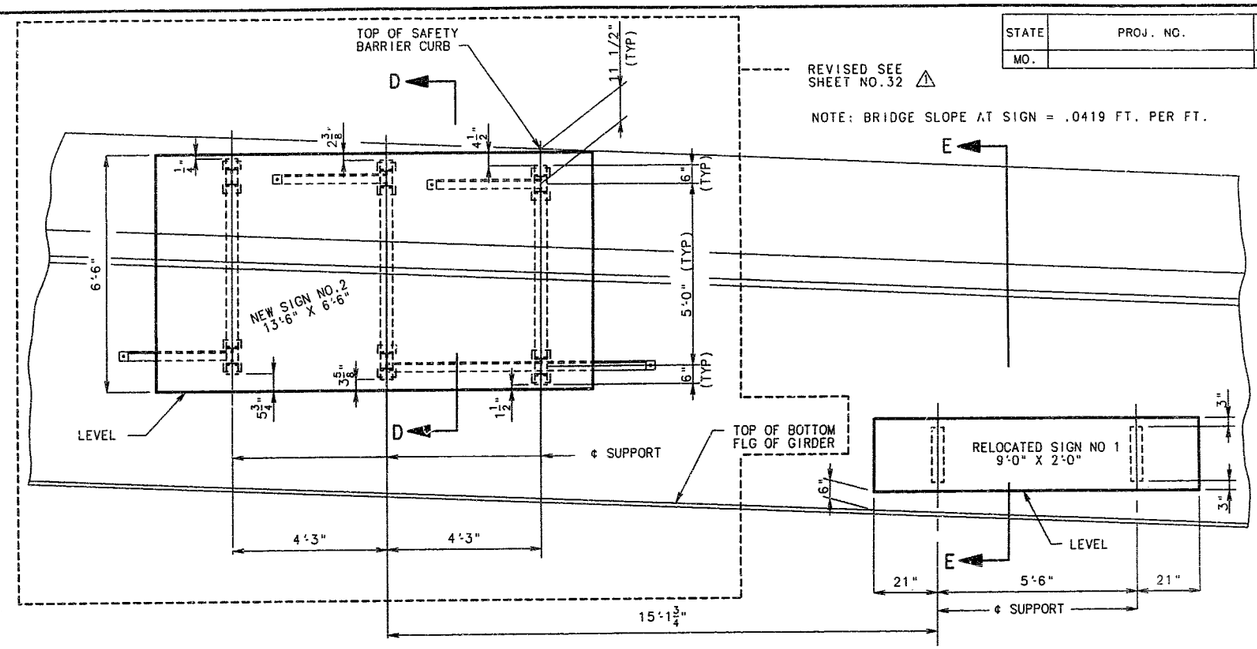
JACKSON COUNTY A-5249

STATE	PROJ. NO.	SHEET NO.
MO.		

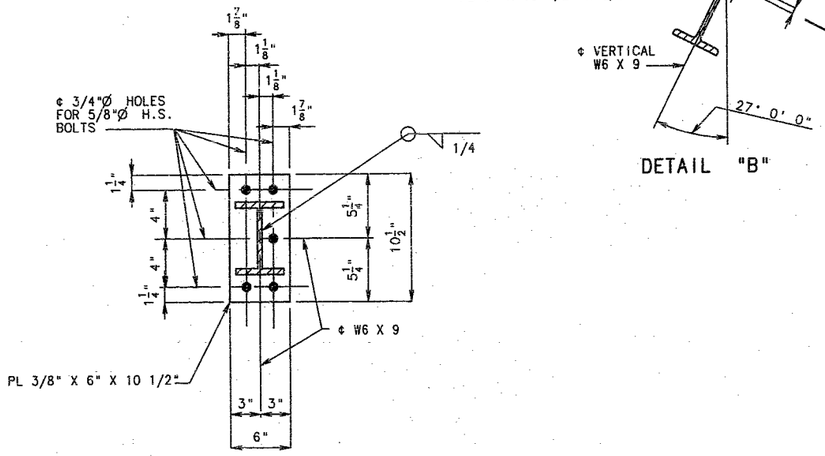


PART PLAN SHOWING LOCATION OF SIGNS NO 1 & 2

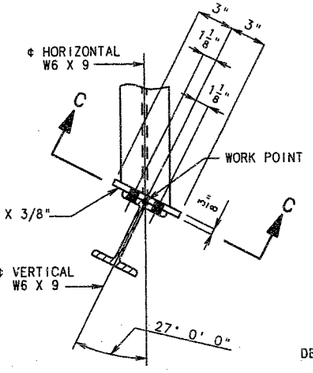
(EAST SIDE OF BRIDGE OVER WBL RTE. I-435)



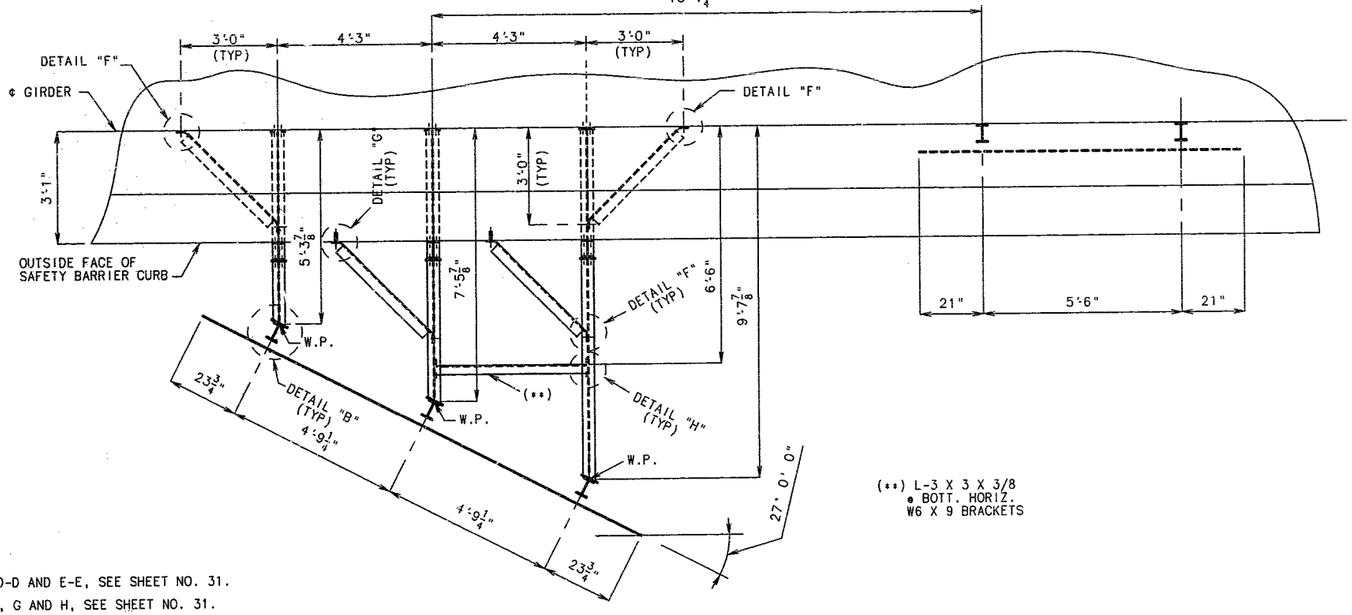
PART ELEVATION A-A



SECTION C-C



DETAIL "B"



PART PLAN SHOWING
DIMENSIONS AND HORIZONTAL BRACING

(**) L-3 X 3 X 3/8
℄ BOTT. HORIZ.
W6 X 9 BRACKETS

GENERAL NOTES

CENTER AND LEVEL SIGNS ON BRACKETS.

ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

CONCRETE ANCHORS SHALL BE NON-DRILLING EXPANSION TYPE.THEY SHALL HAVE A CERTIFIED CONCRETE PULLOUT STRENGTH (ULTIMATE LOAD) OF AT LEAST 12,100 POUNDS IN 4000 PSI CONCRETE. THE HOLE SHALL BE PRE-DRILLED WITH A CONVENTIONAL CARBIDE MASONRY BIT.

ALL STRUCTURAL STEEL SHALL BE A.S.T.M. A36, GALVANIZED.

THE COST OF FURNISHING AND ERECTING THE SIGN SUPPORTS, INCLUDING THE CONCRETE ANCHORS COMPLETE-IN-PLACE, SHALL BE PAID FOR AS FABRICATED SIGN SUPPORT BRACKETS, LUMP SUM.

NOTE:

FOR SECTIONS D-D AND E-E, SEE SHEET NO. 31.

FOR DETAILS F, G AND H, SEE SHEET NO. 31.

SIGN SUPPORT BRACKETS FOR SIGNS NO. 1 & 2

DETAILED SEPT. 1992
CHECKED AUG. 1993

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

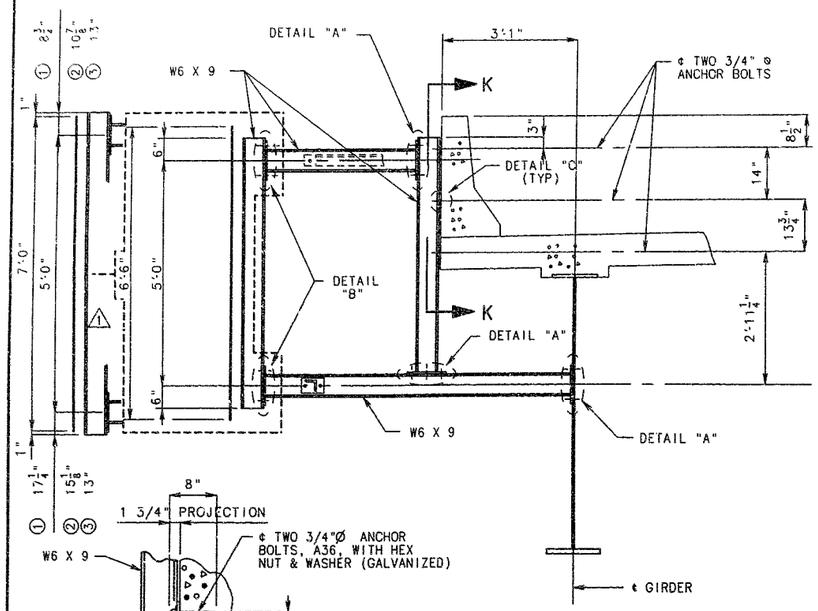
⚠ REVISED 2-8-1995

JACKSON COUNTY

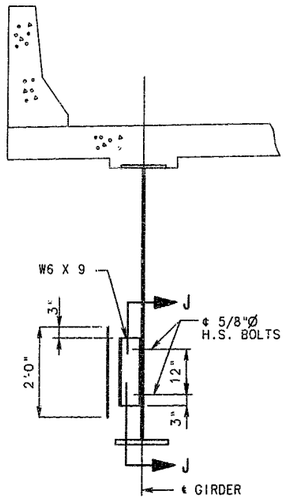
A-5249

475

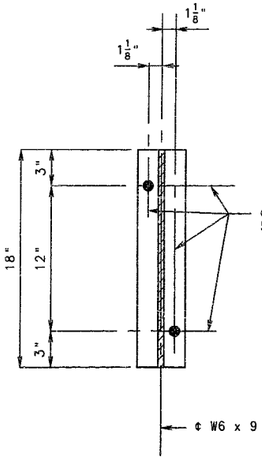
STATE	PROJ. NO.	SHEET NO.
MO.		



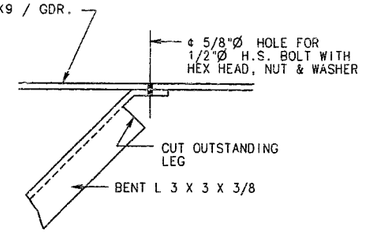
SECTION D-D



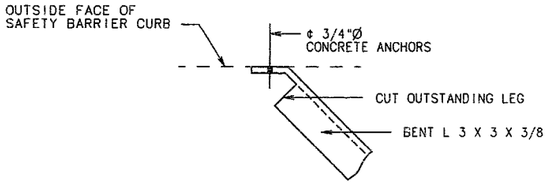
SECTION E-E



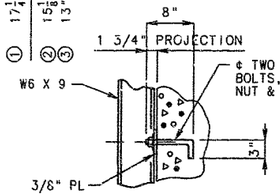
SECTION J-J



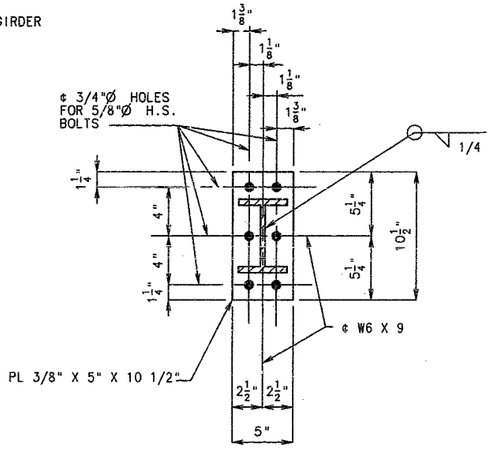
DETAIL "F"



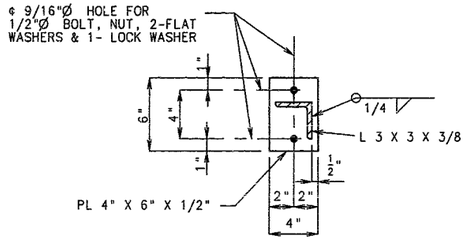
DETAIL "G"



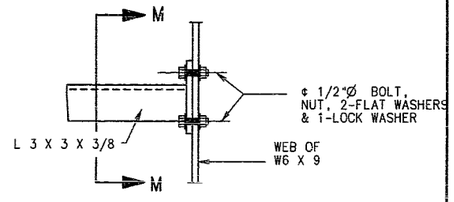
DETAIL "C"



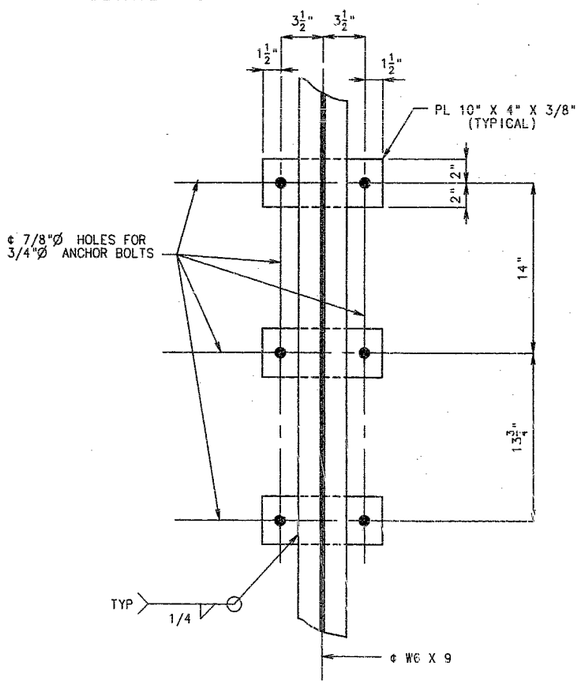
DETAIL "A"



SECTION M-M



DETAIL "H"



SECTION K-K

NOTE:

FOR LOCATION OF SECTIONS D-D AND E-E, SEE SHEET NO 30.
FOR LOCATION OF DETAILS "F", "G" AND "H", SEE SHEET NO 30.
FOR DETAIL "B", SEE SHEET NO. 30.

DETAILED SEPT.1992
CHECKED AUG.1993

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

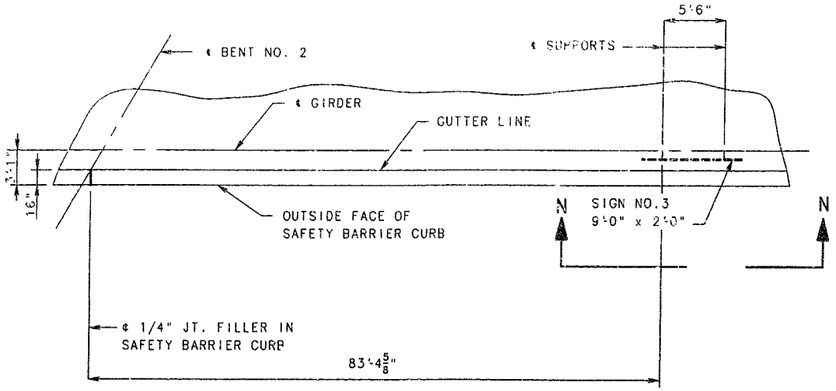
⚠1 REVISED 2-8-1995

JACKSON COUNTY

A-5249

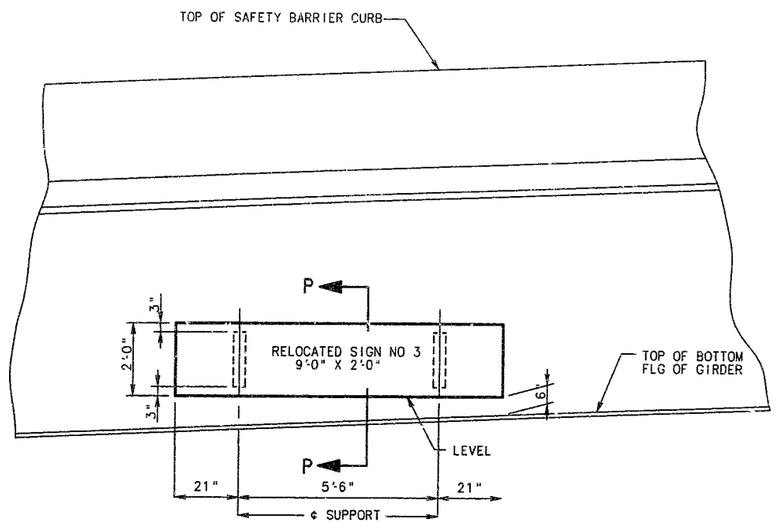
9/17

STATE	PROJ. NO.	SHEET NO.
MO.		

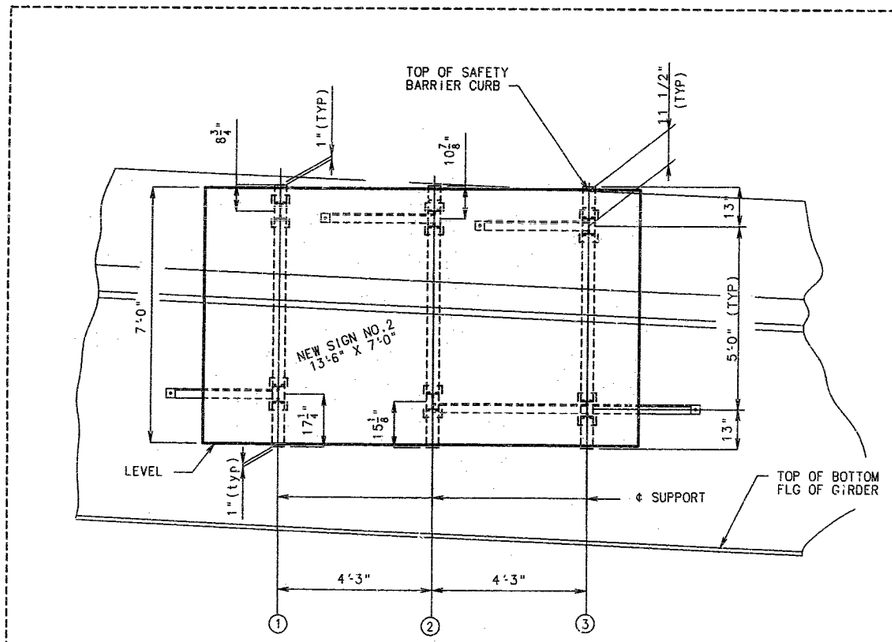


PART PLAN SHOWING LOCATION OF SIGN NO. 3
(WEST SIDE OF BRIDGE OVER EBL RTE. I-435)

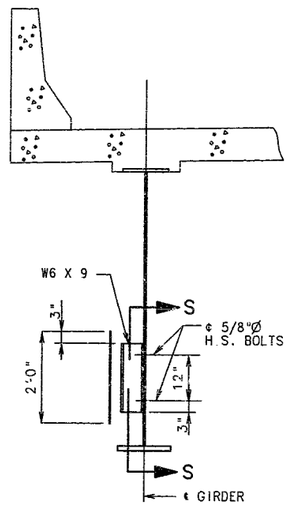
NOTE: BRIDGE SLOPE AT SIGN = .02077 FT. PER FT.



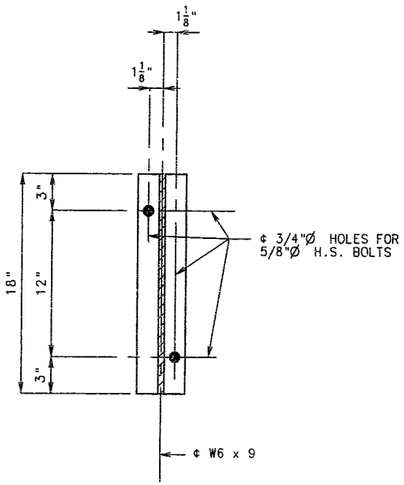
PART ELEVATION N-N



REVISED FROM SHEET NO. 30 ⚠1



SECTION P-P



SECTION S-S

SIGN SUPPORT BRACKET FOR SIGN NO. 3

474

DETAILED SEPT. 1992
CHECKED AUG. 1993

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

⚠1 REVISED 2-8-1995

JACKSON COUNTY A-5249

KC

Safe & Sound =

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A5249**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A5249** 4167	STRUCTURE STATUS :	A-OPEN	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	38000 KANSAS CITY CITY
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	2-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	JERRY GOODMAN, RICHARD KINGERY (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	MINOR ARTERIAL	INSPECTION DATE :	10/25/2011
FACILITY CARRIED :	**CST GRANDVIEW RD S**	DEFICIENT CODE :		LANES ON STRUCTURE	2	INSPECTION FREQUENCY :	24
CURB TO CURB :	38 Ft. 9.6 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	12	LATITUDE :	38 56 19.25 (DMS)
STRUCTURE LENGTH :	352 FEET	YEAR BUILT :	1994	BEGINNING COMPASS DIRECTION :	EAST	LONGITUDE :	94 32 42.02 (DMS)
FEATURE INTERSECTED :	**IS 435**	RECONSTRUCTION YEAR	0	ENDING COMPASS DIRECTION :	WEST	SCOUR EVALUATION TYPE :	

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-1 LIMITS : NO POSTING REQUIRED NO POSTING REQUIRED
FIELD POSTING CATEGORY : S-1 LIMITS : NO POSTING REQUIRED NO POSTING REQUIRED
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 2192 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013
PERMITTED VERTICAL CLEARANCE : 18'0" IS 435 N
PERMITTED VERTICAL CLEARANCE : 17'1" IS 435 S
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI : FREQUENCY :
PIN : DATE :
CATEGORY :
METHODS :
INSPECTORS :
COMMENTS :

NBI : FREQUENCY :
PIN : DATE :
CATEGORY :
METHODS :
INSPECTORS :
COMMENTS :

SPECIAL INFORMATION

NBI : NO FREQUENCY : 48
PIN : NO DATE : 08/24/2011
CATEGORY : SEMI DEEP-BEARING AREA
METHODS : LADDER
INSPECTORS : LARRY DIAZ
COMMENTS :

NBI : NO FREQUENCY : 99
PIN : NO DATE : 08/29/2012
CATEGORY : QUALITY ASSURANCE
METHODS :
INSPECTORS : PAT MARTEN
COMMENTS : FHWA QA REVIEW WITH KEN FOSTER.

NBI : FREQUENCY :
PIN : DATE :
CATEGORY :
METHODS :
INSPECTORS :
COMMENTS :

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : (25') SEMI-DEEP - (152'-152') CONT COMP PL GDR - (22') SEMI-DEEP SPANS

RATINGS : **(ITEM 58) DECK RATING :** 7-GOOD CONDITION 11/07/2011
COMMENTS : TRANS CRACKS

(ITEM 59) SUPERSTRUCTURE RATING : 8-VERY GOOD CONDITION 01/26/2006
COMMENTS :

(ITEM 60) SUBSTRUCTURE RATING : 7-GOOD CONDITION 08/31/2012
COMMENTS : VERTICAL CRACKING IN FACE OF SEMI-DEEP ABUTS.

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN STEEL PLATE GIRDERS NUMBER OF SPANS : 2
TOTAL NUMBER OF SPANS : 2

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	0 DOESNT MEET CURRNT STND	**COMMENT S :**
(ITEM 36A) BRIDGE RAILING :		

Design_No = A5249

COMPONENT : BRIDGE RAILING — REINFORCED CONCRETE — SAFETY BARRIER CURB — DIRECTION : BOTH

(ITEM 36B) TRANSITION RAILING :

COMPONENT : TRANSITION RAILING — GALVANIZED STEEL — THRIE BEAM TO W-BEAM — DIRECTION : ALL

(ITEM 36C) APPROACH RAILING :

COMPONENT : APPROACH RAILING — GALVANIZED STEEL — W-BEAM — DIRECTION : ALL

(ITEM 36D) RAIL END TREATMENT :

COMPONENT : RAIL END TREATMENT — GALVANIZED STEEL — BREKAWAY SYSTEM — MANUFACTURE : BCT — DIRECTION : ALL

APPROACH PAVEMENT :

COMPONENT : APPROACH PAVEMENT — REINFORCED CONCRETE — TIED SLAB — DIRECTION : BOTH

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 7-GOOD CONDITION

COMMENT S : TRANS CRACKS

DECK COMPONENTS

MAIN SPANS 1

COMPONENT : DECK — REINFORCED CONCRETE — CAST-IN-PLACE-P/C FORMS

CONDITION : TRANSVERSE CRACKS — THROUGHOUT — MANY

CONDITION : LONGITUDINAL CRACKS — THROUGHOUT — FEW

CONDITION : REFLECTIVE CRACKS — OVER PANEL — MANY

MAIN SPANS 2

COMPONENT : DECK — REINFORCED CONCRETE — CAST-IN-PLACE-P/C FORMS

CONDITION : TRANSVERSE CRACKS — THROUGHOUT — FEW

CONDITION : LONGITUDINAL CRACKS — THROUGHOUT — LARGE

CONDITION : REFLECTIVE CRACKS — OVER PANEL — MANY

DRAINAGE COMPONENTS

DRAINAGE 0

COMPONENT : DRAINAGE — GALVANIZED STEEL — FLOOR DRAIN

EXPANSION DEVICES

ABUTMENT 1

COMPONENT : CLOSED EXPANSION JOINT — ELASTOMERIC — COMPRESSION SEAL — OVERALL CONDITION : GOOD

ABUTMENT 3

COMPONENT : CLOSED EXPANSION JOINT — ELASTOMERIC — COMPRESSION SEAL — OVERALL CONDITION : GOOD

PROTECTIVE COMPONENTS

MAIN SERIES 1

COMPONENT : WEARING SURFACE — PLAIN CONCRETE — MONOLITHIC

COMPONENT : DECK PROTECTION — EPOXY POLYMER — COATED REBAR

COMPONENT : MEMBRANE — NOTAPPLICABLE — NONE

COMPONENT : SECONDARY DECK PROTECTION — LIQUID SEALANT — INTERNALLY SEALED — MANUFACTURE : STAR MACRO — YEAR APPLIED : 2009

RAILING COMPONENTS

BRIDGE RAILING 0

COMPONENT : BRIDGE RAILING — REINFORCED CONCRETE — SAFETY BARRIER CURB

COMPONENT : TRANSITION RAILING — GALVANIZED STEEL — THRIE BEAM TO W-BEAM

COMPONENT : APPROACH RAILING — GALVANIZED STEEL — W-BEAM

COMPONENT : RAIL END TREATMENT — GALVANIZED STEEL — BREKAWAY SYSTEM

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 8-VERY GOOD CONDITION

MAIN SERIES 1 CONTINUOUS SPAN STEEL PLATE GIRDERS NUMBER OF SPANS : 2

APPROACH ROADWAY WIDTH : 40 FOOT 0 INCH CURB TO CURB : 38 FOOT 9.6 INCH OUT TO OUT : 41 FOOT 6 INCH LEFT CURB WIDTH : 0 FOOT 7.2 INCH RIGHT CURB WIDTH : 0 FOOT 7.2 INCH

MAIN SPANS 1 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 152 FOOT 9 INCH LENGTH : 151 FOOT 0 WEATHERING IND :

MAIN SPANS 2 CONTINUOUS SPAN COMPOSITE STEEL PLATE GIRDERS LENGTH : 152 FOOT 9 INCH WEATHERING IND :

TOTAL NUMBER OF SPANS 2

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 7-GOOD CONDITION

COMMENT S : VERTICAL CRACKING IN FACE OF SEMI-DEEP ABUTS.

ABUTMENT 1 LABEL : REINFORCED CONCRETE SEMI-DEEP

LENGTH : 47 FOOT 11 INCH	LEFTADVAN SKEW : 30 DEGREES 0				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : VERTICAL CRACKS	RANDOM		MODERATE		
CONDITION : RUST STAINS	FRONT FACE		MINOR		
CONDITION : HONEY COMBS	THROUGHOUT		MINOR		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE	
PILING			STEEL	H-SHAPE	
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE	
CURTAIN WALL			REINFORCED CONCRETE	CAST-IN-PLACE	
APPROACH BEAM			REINFORCED CONCRETE	CAST-IN-PLACE	
SLAB			REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : LONGITUDINAL CRACKS	THROUGHOUT		LARGE		
FOOTING			REINFORCED CONCRETE	SPREAD	
BACKWALL			REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : VERTICAL CRACKS	RANDOM		FINE		
EXPANSION BEARING			ELASTOMERIC	PLAIN NEOPRENE	OVERALL CONDITION: FAIR
CONDITION : OTHER	THROUGHOUT		NOT APPLICABLE		
COMMENTS : STARTING TO DEBOND					
CLOSED EXPANSION JOINT			ELASTOMERIC	COMPRESSION SEAL	OVERALL CONDITION: GOOD
BENT 2	LABEL :				REINFORCED CONCRETE MULTIPLE COLUMN
LENGTH : 46 FOOT 0 INCH	LEFTADVAN SKEW : 30 DEGREES 0				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE	
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE	
FOOTING			REINFORCED CONCRETE	H-PILE	
EXPANSION BEARING			ELASTOMERIC	PLAIN NEOPRENE	OVERALL CONDITION:
ABUTMENT 3	LABEL :				REINFORCED CONCRETE SEMI-DEEP
LEFTADVAN SKEW : 30 DEGREES 0	LENGTH : 47 FOOT 11 INCH				
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : VERTICAL CRACKS	RANDOM		MANY		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE	
PILING			STEEL	H-SHAPE	
TURNED BACK WINGS			REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : VERTICAL CRACKS	THROUGHOUT		FINE		
CURTAIN WALL			REINFORCED CONCRETE	CAST-IN-PLACE	
APPROACH BEAM			REINFORCED CONCRETE	CAST-IN-PLACE	
SLAB			REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : LONGITUDINAL CRACKS	THROUGHOUT		LARGE		
COMMENTS : PLUS MAP CRACKING					
FOOTING			REINFORCED CONCRETE	SPREAD	
BACKWALL			REINFORCED CONCRETE	CAST-IN-PLACE	
CONDITION : VERTICAL CRACKS	RANDOM		MODERATE		
EXPANSION BEARING			ELASTOMERIC	PLAIN NEOPRENE	OVERALL CONDITION: FAIR
CONDITION : OTHER	THROUGHOUT		NOT APPLICABLE		
COMMENTS : STARTING TO DEBOND					
CLOSED EXPANSION JOINT			ELASTOMERIC	COMPRESSION SEAL	OVERALL CONDITION: GOOD

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS

COMMENTS : TRANS CRACKS

COMMENTS : VERTICAL CRACKING IN FACE OF SEMI-DEEP ABUTS.

COMMENTS : CURVE ON SOUTH END REQUIRES MINOR SPEED REDUCTION.

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : N-NOT APPLIC NO WATRWAY

SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : N-NOT APPLIC NOT WATERW

WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : NOT APPLICABLE

APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 6-SATISFACTORY

SLOPE PROTECTION

PLAIN CONCRETE PAVEDSLOPE BOTH

UTILITY ATTACHMENTS

STRUCTURAL SIGN MOUNTED

COMMENTS : LANE ENDS SIGN

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION GOOD RUST AMOUNT : 8=.1% OF SURFACE RUSTED STEEL TONS : 132

ORIGINAL PAINT		CONTRACT REPAINT		DEPARTMENT REPAINT			
PAINT TYPE :		PAINT TYPE :	E SYSTEM	PAINT TYPE :		MANUFACTURE :	
NAME :		NAME :	WATERBASED ZINC	NAME :		SURFACE PREPARATION :	
PAINT COLOR :		PAINT COLOR :	GRAY	PAINT COLOR :			
PAINT YEAR :	0	PAINT YEAR :	1994	PAINT YEAR :	0		
MILS :	0	MILS :	6	MILS :	0		

CREW : LAYER : DATE :

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED

PROGRAM RECOMMENDATIONS

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

August 1, 2013
10:57:12am

COUNTY : JACKSON **BRIDGE NO.** A5249 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	4167
27	Year Built	1994
106	Year Reconstructed	0
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	NONE EXISTS
103	Temporary Structure	NOT TEMPORARY
112	NBIS Bridge Length	YES

ROUTE DESIGNATION INFORMATION

5A	Record Type	ROUTE CARRIED 'ON' STRUCT
5B	Route Signing Prefix	CST
5C	Designated Level of Service	MAINLINE
5D	Route Number	00000
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	GRANDVIEW RD S
12	Base Hwy. Network	NO
13A	LRS Inventory Route No.	
13B	Subroute No.	
20	Toll Status	ON FREE ROAD
26	Functional Classification	16-URBAN MINOR ARTERIAL
28A	Lanes on Structure	02
100	STRAHNET Designation	RTE NOT A DEFENSE HWY
104	National Highway System	NOT ON NHS
105	Federal Lands Highway	NOT APPLICABLE
110	Designated Nat. Network	NO

STRUCTURE LOCATION INFORMATION

4	Place	KANSAS CITY CITY
	Code	38000
9	Location	S 34 T 48 N R 33 W
11	Milepoint	2.44 miles
16	Latitude	38 D 56 M 19 S
17	Longitude	94 D 32 M 42 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	2169
30	AADT Year	2012
102	Direction of Traffic	2-WAY TRAFFIC
109	AADT Truck Percent	10%
114	Future AADT	2928
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	IS 435
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	
54A	Vert. Clearance Ref.	HIGHWAY
54B	Vert. Clearance	17 Ft. 3 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	29 Ft. 10 In.
56	Left Lat Clearance	6 Ft. 6 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	8.06 miles
32	Approach Roadway Width	40 Ft. 0 In.
34	Skew	30.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	40 Ft. 0 In.
48	Maximum Span Length	152 Ft. 10 In.
49	Structure Length	351 Ft. 0 In.
50A	Left Curb/Sidewalk Width	0 Ft. 7 In.
50B	Right Curb/Sidewalk Width	0 Ft. 7 In.
51	Curb to Curb Br. Width	38 Ft. 8 In.
52	Deck Width (Out-Out)	41 Ft. 3 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A5249 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

August 1, 2013
10:57:12am

COUNTY : JACKSON **BRIDGE NO.** A5249 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

LOAD RATING AND POSTING INFORMATION

31	Design Load	HS 20+MOD
41	Structure Status	A - OPEN NO RESTRICTIONS
63	Oper. Rating Meth.	ALLOWABLE STRESS
64	Operating Rating	56 Tons.
65	Inventory Rating Meth	ALLOWABLE STRESS
66	Inventory Rating	22 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	81.8 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	DOES NOT MEET ACCEPT STND
67	Struc Eval App. Rating	5
68	Deck Geometry App. Rating	5
69	Underclearance App. Rating	9
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	6
113	Scour Assess App. Rating	N

APPROVED POSTING INFORMATION

Approved Posting Categor 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	STEEL CONTINUOUS
43B	Main struc Constr. Type	STRINGER/MULTIBEAM - GRD
45	# of Main Spans	2
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.	1 MONO CONCRETE
108B	Membrane Mat/Constr.	0 NONE
108C	Deck Protect Mat/Constr.	1 EPOXY

CONDITION RATING INFORMATION

58	Deck Cond. Rating	7
59	Superstructure Cond. Rating	8
60	Substructure Cond. Rating	7
61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	10 / 11	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Insp. Dat	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 = A5249 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

KC

Safe & Sound = N

Missouri Department of Transportation
Bridge Inspection Report

DISTRICT : KC **COUNTY : JACKSON** **A5904**

GENERAL STRUCTURE INFORMATION

STRUCTURE NUMBER :	**A5904** 4426	STRUCTURE STATUS :	A-OPEN	MAINTENANCE DISTRICT : KC	MAINTENANCE COUNTY : JACKSON	PLACE CODE :	38000 KANSAS CITY CITY
DISTRICT :	**KC**	DIRECTION OF TRAFFIC :	2-WAY TRAF	OWNED BY : MODOT	MAINTAINED BY : MODOT	INSPECTORS :	RICHARD KINGERY (STATE), TERRY WILSON (STATE)
COUNTY :	**JACKSON**	STRUCTURE CLASS :	STATBR	FUNCTIONAL CLASSIFICATION :	INTERSTATE	INSPECTION DATE :	10/11/2011
FACILITY CARRIED :	**IS 435 S**	DEFICIENT CODE :		LANES ON STRUCTURE	4	INSPECTION FREQUENCY :	24
CURB TO CURB :	68 Ft. 0 In.	SUB AREA :	7C32	LANES UNDER STRUCTURE :	3	LATITUDE :	38 56 14.05 (DMS)
STRUCTURE LENGTH :	243 FEET	YEAR BUILT :	1994	BEGINNING COMPASS DIRECTION :	WEST	LONGITUDE :	94 36 27.56 (DMS)
FEATURE INTERSECTED :	**CRD STATE LINE RD**	RECONSTRUCTION YEAR	0	ENDING COMPASS DIRECTION :	EAST	SCOUR EVALUATION TYPE :	

POSTING INFORMATION

APPROVED POSTING CATEGORY : S-1 LIMITS : NO POSTING REQUIRED NO POSTING REQUIRED
FIELD POSTING CATEGORY : S-1 LIMITS : NO POSTING REQUIRED NO POSTING REQUIRED
POSTING PROBLEM : DIRECTION :
COMMENTS :

ADVANCE SIGNING

SIGN TYPE :
PROBLEM :
DIRECTION :

FACILITY CARRIED INFORMATION

(ITEM 29) AVERAGE DAILY TRAFFIC : 72876 (ITEM 30) YEAR OF AVERAGE DAILY TRAFFIC : 2013 PERMITTED VERTICAL CLEARANCE :
(ITEM 53) VERTICAL CLEARANCE OVER DECK : DATE :

OTHER INSPECTION INFORMATION

NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :	NBI : FREQUENCY :
PIN : DATE :	PIN : DATE :	PIN : DATE :	PIN : DATE :
CATEGORY :	CATEGORY :	CATEGORY :	CATEGORY :
METHODS :	METHODS :	METHODS :	METHODS :
INSPECTORS :	INSPECTORS :	INSPECTORS :	INSPECTORS :
COMMENTS :	COMMENTS :	COMMENTS :	COMMENTS :

PROGRAM NOTES

PROGRAM YEAR : PROJECT NO. : LETTING MONTH LETTING YEAR :
COMMENTS :
PROGRAM ITEMS :

GENERAL COMMENTS : Comment 1: (45'-75'-75'-45') CONT COMP P.G.

RATINGS : **(ITEM 58) DECK RATING :** 7-GOOD CONDITION 10/31/2011 **(ITEM 59) SUPERSTRUCTURE RATING :** 8-VERY GOOD CONDITION 05/18/2001 **(ITEM 60) SUBSTRUCTURE RATING :** 7-GOOD CONDITION 10/31/2011

COMMENTS : MANY T-CRKS **COMMENTS :** **COMMENTS :** CRKING IN ABUT CAPS

SUMMARY COMPONENTS

MAIN SERIES 1 CONTINUOUS SPAN STEEL WIDE FLANGE GIRDERS NUMBER OF SPANS : 4

TOTAL NUMBER OF SPANS : 4

RAILING RATINGS :

(ITEM 36A) BRIDGE RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36B) TRANSITION RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36C) APPROACH RAILING :	1 MEETS CURRENT STANDARDS	**COMMENT S :**
(ITEM 36D) RAIL END TREATMENT :	1 MEETS CURRENT STANDARDS	**COMMENT S :**

(ITEM 36A) BRIDGE RAILING :

COMPONENT :	BRIDGE RAILING	REINFORCED CONCRETE	SAFETY BARRIER CURB	DIRECTION : BOTH
CONDITION :	EFFLORESCENCE	THROUGHOUT	MODERATE	
CONDITION :	TRANSVERSE CRACKS	THROUGHOUT	MANY	

(ITEM 36B) TRANSITION RAILING :

COMPONENT :	TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM	DIRECTION : BOTH-NORTH

(ITEM 36C) APPROACH RAILING :

COMPONENT :	APPROACH RAILING	GALVANIZED STEEL	W-BEAM	DIRECTION : BOTH-NORTH

(ITEM 36D) RAIL END TREATMENT :

Design_No = A5904

COMPONENT :	RAIL END TREATMENT	GALVANIZED STEEL	BREKAWAY SYSTEM	MANUFACTURE : ET-2000	DIRECTION : BOTH-NORTH

APPROACH PAVEMENT :

COMPONENT :	APPROACH PAVEMENT	REINFORCED CONCRETE	TIED SLAB	DIRECTION : BOTH
CONDITION :	SPALLS	THROUGHOUT	MINOR	

DECK / RAILING ELEMENTS

(ITEM 58) OVERALL CONDITION RATING : 7-GOOD CONDITION

COMMENT S : MANY T-CRKS

DECK COMPONENTS

MAIN SPANS 1

COMPONENT :	DECK	REINFORCED CONCRETE	CAST-IN-PLACE-P/C FORMS
CONDITION :	EFFLORESCENCE	THROUGHOUT	HEAVY
CONDITION :	TRANSVERSE CRACKS	THROUGHOUT	MANY
CONDITION :	LONGITUDINAL CRACKS	THROUGHOUT	MANY

MAIN SPANS 2

COMPONENT :	DECK	REINFORCED CONCRETE	CAST-IN-PLACE-P/C FORMS
CONDITION :	EFFLORESCENCE	THROUGHOUT	FEW
CONDITION :	TRANSVERSE CRACKS	THROUGHOUT	MANY
CONDITION :	LONGITUDINAL CRACKS	THROUGHOUT	MANY

MAIN SPANS 3

COMPONENT :	DECK	REINFORCED CONCRETE	CAST-IN-PLACE-P/C FORMS
CONDITION :	EFFLORESCENCE	THROUGHOUT	FEW
CONDITION :	TRANSVERSE CRACKS	THROUGHOUT	MANY
CONDITION :	LONGITUDINAL CRACKS	THROUGHOUT	MANY

MAIN SPANS 4

COMPONENT :	DECK	REINFORCED CONCRETE	CAST-IN-PLACE-P/C FORMS
CONDITION :	EFFLORESCENCE	THROUGHOUT	FEW
CONDITION :	TRANSVERSE CRACKS	THROUGHOUT	MANY
CONDITION :	LONGITUDINAL CRACKS	THROUGHOUT	FEW

DRAINAGE COMPONENTS

DRAINAGE 0

COMPONENT :	DRAINAGE	GEOTEXTILE FABRIC	VERTICAL DRAIN-END BENT

PROTECTIVE COMPONENTS

MAIN SERIES 1

COMPONENT :	WEARING SURFACE	PLAIN CONCRETE	MONOLITHIC		
COMPONENT :	DECK PROTECTION	EPOXY POLYMER	COATED REBAR		
COMPONENT :	MEMBRANE	NOTAPPLICABLE	NONE		
COMPONENT :	SECONDARY DECK PROTECTION	LIQUID SEALANT	INTERNALLY SEALED	MANUFACTURE : STAR MACRO	YEAR APPLIED : 2009

RAILING COMPONENTS

BRIDGE RAILING 0

COMPONENT :	BRIDGE RAILING	REINFORCED CONCRETE	SAFETY BARRIER CURB
CONDITION :	EFFLORESCENCE	THROUGHOUT	MODERATE
CONDITION :	TRANSVERSE CRACKS	THROUGHOUT	MANY
COMPONENT :	TRANSITION RAILING	GALVANIZED STEEL	THRIE BEAM TO W-BEAM
COMPONENT :	APPROACH RAILING	GALVANIZED STEEL	W-BEAM
COMPONENT :	RAIL END TREATMENT	GALVANIZED STEEL	BREKAWAY SYSTEM

SUPERSTRUCTURE ELEMENTS

(ITEM 59) OVERALL CONDITION RATING : 8-VERY GOOD CONDITION

MAIN SERIES 1 CONTINUOUS SPAN STEEL WIDE FLANGE GIRDERS NUMBER OF SPANS : 4

APPROACH ROADWAY WIDTH : 68 FOOT 0 INCH CURB TO CURB : 68 FOOT 0 INCH OUT TO OUT : 70 FOOT 9.6 INCH LEFT CURB WIDTH : 0 FOOT 0 INCH RIGHT CURB WIDTH : 0 FOOT 0 INCH

MAIN SPANS 1	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 45 FOOT 0 INCH	LENGTH : 75 FOOT 0 INCH	WEATHERING IND :
MAIN SPANS 2	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 75 FOOT 0 INCH		WEATHERING IND :
MAIN SPANS 3	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 75 FOOT 0 INCH		WEATHERING IND :
MAIN SPANS 4	CONTINUOUS SPAN	COMPOSITE	STEEL	WIDE FLANGE GIRDERS	LENGTH : 45 FOOT 0 INCH		WEATHERING IND :

TOTAL NUMBER OF SPANS 4

SUBSTRUCTURE ELEMENTS

(ITEM 60) OVERALL CONDITION RATING : 7-GOOD CONDITION

COMMENT S : CRKING IN ABUT CAPS

ABUTMENT	1	LABEL :			REINFORCED CONCRETE	INTEGRAL
LENGTH : 76 FOOT 5 INCH						
CONDITION : MODERATE LEACHING BEAM CAP MINOR VERTICAL CRACKS BEAM CAP						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
PILING			STEEL	H-SHAPE		
STRAIGHT WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		
CONDITION : VERTICAL CRACKS THROUGHOUT FEW						
EXPANSION BEARING			ELASTOMERIC	LAMINATED NEOPRENE/PTFE	OVERALL CONDITION:	
PIER	2	LABEL : PIER 1			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 74 FOOT 6 INCH						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
DRILLED SHAFT			REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING			ELASTOMERIC	LAMINATED NEOPRENE/PTFE	OVERALL CONDITION:	
PIER	3	LABEL : PIER 2			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 74 FOOT 6 INCH						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
DRILLED SHAFT			REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING			ELASTOMERIC	LAMINATED NEOPRENE/PTFE	OVERALL CONDITION:	
PIER	4	LABEL : PIER 3			REINFORCED CONCRETE	MULTIPLE COLUMN
LENGTH : 74 FOOT 6 INCH						
CONDITION : MINOR VERTICAL CRACKS COLUMN						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
COLUMN			REINFORCED CONCRETE	CAST-IN-PLACE		
DRILLED SHAFT			REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING			ELASTOMERIC	LAMINATED NEOPRENE/PTFE	OVERALL CONDITION:	
ABUTMENT	5	LABEL :			REINFORCED CONCRETE	INTEGRAL
LENGTH : 76 FOOT 5 INCH						
CONDITION : MINOR VERTICAL CRACKS BEAM CAP MINOR DELAMINATION BEAM CAP MINOR SPALLS BEAM CAP MODERATE LEACHING BEAM CAP						
BEAM CAP			REINFORCED CONCRETE	CAST-IN-PLACE		
PILING			STEEL	H-SHAPE		
STRAIGHT WINGS			REINFORCED CONCRETE	CAST-IN-PLACE		
EXPANSION BEARING			ELASTOMERIC	LAMINATED NEOPRENE/PTFE	OVERALL CONDITION:	

MISCELLANEOUS ITEMS

1 MEETS CURRENT STANDARDS

COMMENTS : MANY T-CRKS

COMMENTS : CRKING IN ABUT CAPS

CHANNEL PROTECTION (ITEM 61) CHANNEL CONDITION RATING : N-NOT APPLIC NO WATRWAY

SCOUR CONDITION (ITEM 113) OVERALL SCOUR CONDITION RATING : N-NOT APPLIC NOT WATERW

WATERWAY ADEQUACY (ITEM 71) WATERWAY ADEQUACY RATING : NOT APPLICABLE

APPROACH ROADWAY (ITEM 72) APPROACH ROADWAY ALIGNMENT RATING : 8-VERYGOOD

SLOPE PROTECTION

PLAIN CONCRETE PAVEDSLOPE BOTH

UTILITY ATTACHMENTS

STRUCTURE PAINT DETAILS

OVERALL PAINT CONDITION GOOD

RUST AMOUNT : 8=.1% OF SURFACE RUSTED

STEEL TONS : 339

ORIGINAL PAINT		CONTRACT REPAINT		DEPARTMENT REPAINT			
PAINT TYPE :		PAINT TYPE :	C SYSTEM	PAINT TYPE :		MANUFACTURE :	
NAME :		NAME :	INORGANIC ZINC/VINYL	NAME :		SURFACE PREPARATION :	
PAINT COLOR :		PAINT COLOR :	GREEN	PAINT COLOR :			
PAINT YEAR :	0	PAINT YEAR :	1995	PAINT YEAR :	0		
MILS :	0	MILS :	6	MILS :	0		

CREW : LAYER : DATE :

WORK

RESPONSIBILITY	LOCATION	WORK ITEM	PRIORITY	DATE REQUESTED

PROGRAM RECOMMENDATIONS

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

August 1, 2013
10:54:32am

COUNTY : JACKSON **BRIDGE NO.** A5904 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	4426
27	Year Built	1994
106	Year Reconstructed	0
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	NONE EXISTS
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	00435
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	IS 435 S
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000006042
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	11-UR PRNCPL ARTERIAL-IS
28A	Lanes on Structure	04
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 31 T 48 N R 33 W
11	Milepoint	54.97 miles
16	Latitude	38 D 56 M 14 S
17	Longitude	94 D 36 M 28 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	135438
30	AADT Year	2012
102	Direction of Traffic	2-WAY TRAFFIC
109	AADT Truck Percent	18%
114	Future AADT	182841
115	Future AADT Year	2033

UNDERRECORD INFORMATION

6	Features Intersected	CRD STATE LINE RD
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	03
54A	Vert. Clearance Ref.	HIGHWAY
54B	Vert. Clearance	16 Ft. 9 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	9 Ft. 6 In.
56	Left Lat Clearance	8 Ft. 10 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	67 Ft. 10 In.
34	Skew	0.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	50 Ft. 10 In.
48	Maximum Span Length	75 Ft. 1 In.
49	Structure Length	243 Ft. 0 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	67 Ft. 10 In.
52	Deck Width (Out-Out)	70 Ft. 10 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A5904 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012

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

August 1, 2013
10:54:32am

COUNTY : JACKSON **BRIDGE NO.** A5904 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 2/4/2013 **SUBMITTAL YEAR :** 2012

LOAD RATING AND POSTING INFORMATION

31	Design Load	HS 20+MOD
41	Structure Status	A - OPEN NO RESTRICTIONS
63	Oper. Rating Meth.	LOAD FACTOR
64	Operating Rating	63 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	38 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	87.3 Percent
	Deficiency Rating	FUNCTIONAL
	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	7
68	Deck Geometry App. Rating	6
69	Underclearance App. Rating	3
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	N

APPROVED POSTING INFORMATION

Approved Posting Categor 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	STEEL CONTINUOUS
43B	Main struc Constr. Type	STRINGER/MULTIBEAM - GRD
45	# of Main Spans	4
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.	1 MONO CONCRETE
108B	Membrane Mat/Constr.	0 NONE
108C	Deck Protect Mat/Constr.	1 EPOXY

CONDITION RATING INFORMATION

58	Deck Cond. Rating	7
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61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

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91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Insp. Dat	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	207
98B	Neighboring State % Respon	50
99	Neighboring State Struc. No.	999943500463131

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 = A5904 and Nbi_Status_with_Bridge = Permanent and Record_Type = ON and Inventory_Appraisal_Submittal_Year = 2012