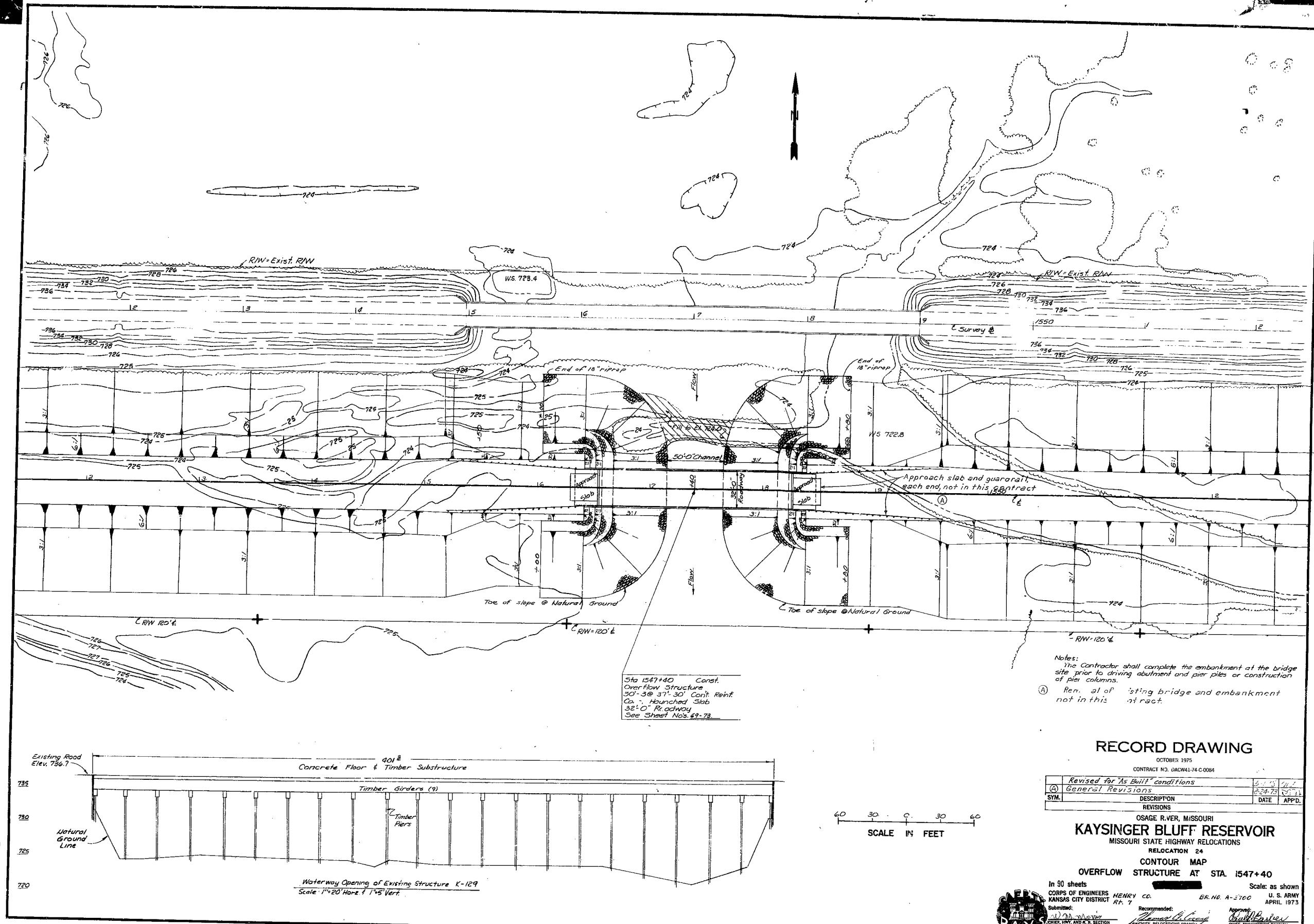




493

862 29 TO 1

RECORD DRAWING
 OCTOBER 1975
 CONTRACT NO. DACW41-74-C-0084

SYMBOL	DESCRIPTION	DATE	APPD.
(A)	Revised for As-Built conditions	10/1/75	JRL
(B)	General Revisions	10/24/75	JRL

OSAGE RIVER, MISSOURI
KAYSINGER BLUFF RESERVOIR
 MISSOURI STATE HIGHWAY RELOCATIONS
 RELOCATION 24
 CONTOUR MAP
 OVERFLOW STRUCTURE AT STA. 1547+40

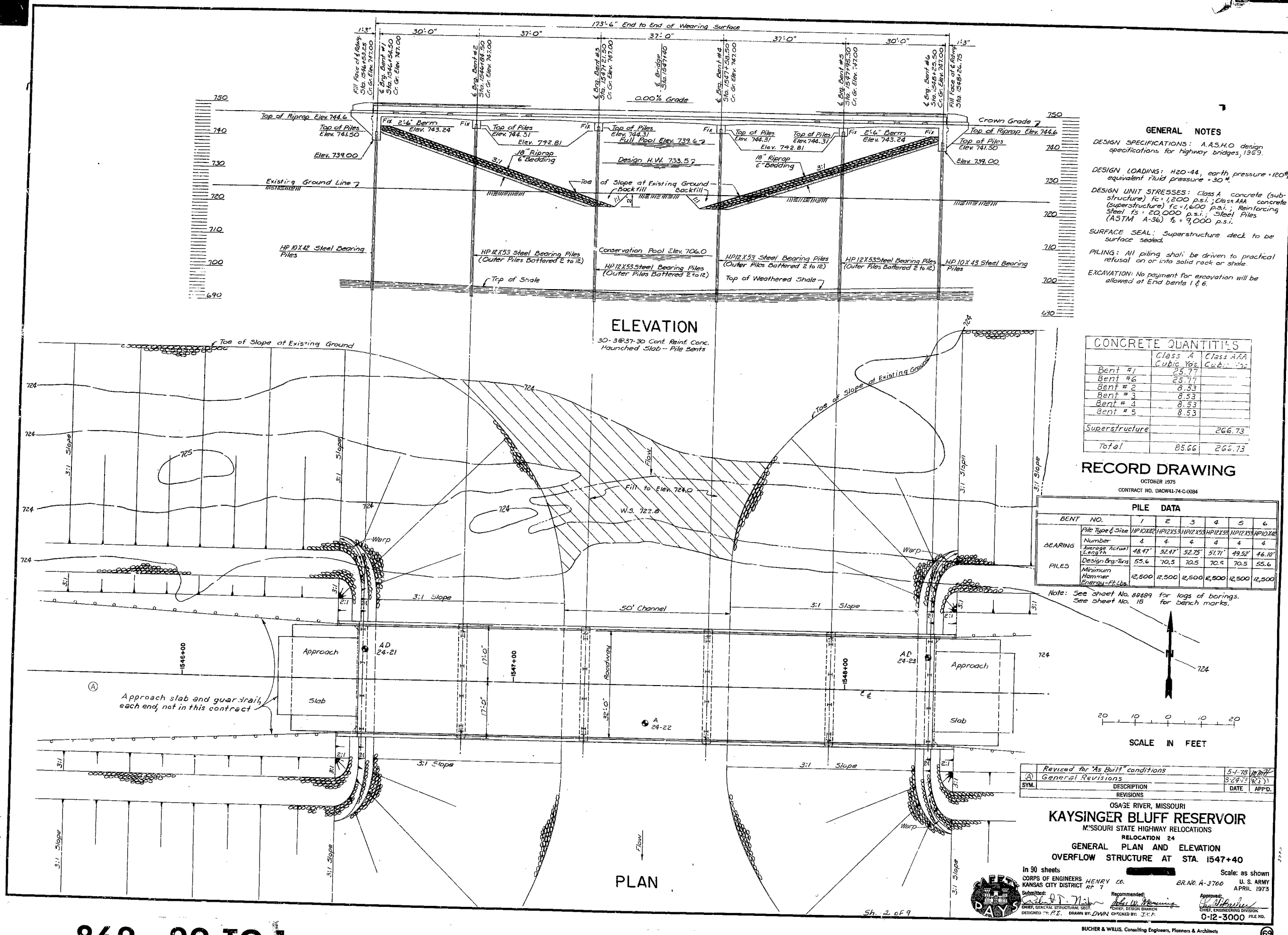
In 90 sheets
 CORPS OF ENGINEERS HENRY CO.
 KANSAS CITY DISTRICT RT. 7
 Submitted: [Signature]
 Recommended: [Signature]
 Checked by: JRL
 Drawn by: JRL

Scale: as shown
 U. S. ARMY
 APRIL 1973
 BR. NO. A-5700
 0-12-2939
 FILE NO.

BUCHER & WILLIS, Consulting Engineers, Planners & Architects

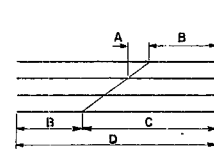
494

862 29 TO 1



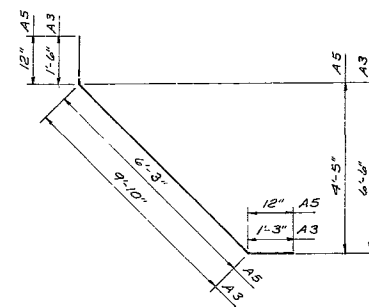
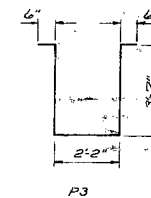
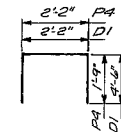
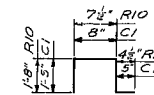
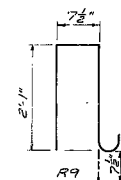
NO.	SIZE	LENGTH	MARK	LOCATION	NO.	SIZE	LENGTH	MARK	LOCATION
END L NTS					NO. 1 & 6				
240	5	11'-2"	D1	Beam					
32	6	33'-8"	D2	"					
24	6	9'-4"	A1	Wingwall					
24	4	8'-10"	A2	"					
8	6	12'-7"	A3	"					
4	5	4'-0"	A4	"					
12	5	8'-3"	A5	"					
8	6	6'-2"	A6	"					
8	5	5'-9"	R1	End Post					
16	5	5'-6"	R2	"					
12	5	6'-4"	R3	"					
4	5	6'-3"	R4	"					
4	5	6'-0"	R5	"					
4	5	5'-6"	R6	"					
4	5	4'-10"	R7	"					
8	5	6'-3"	C4	Curb					
28	5	3'-10"	C5	"					
BENTS NO. 2, 3, 4, & 5									
32	8	33'-8"	P1	Cap Beam					
8	6	33'-8"	P2	"					
140	5	10'-4"	P3	"					
16	7	5'-8"	P4	"					
SUPERSTRUCTURE									
66	10	10'-0"	S1	Slab					
68	7	19'-9"	S2	"					
120	10	26'-0"	S3	"					
40	11	26'-0"	S4	"					
116	10	16'-0"	S5	"					
102	7	14'-6"	S6	"					
58	10	21'-0"	S7	"					
20	11	26'-0"	S8	"					
70	8	25'-0"	S9	"					
87	10	15'-0"	S10	"					
30	11	25'-0"	S11	"					
70	8	26'-0"	S12	"					
47	4	33'-6"	S13	"					
60	10	26'-0"	S14	"					
90	10	25'-0"	S15	"					
8	5	12'-6"	R8	Parapet					
382	5	5'-5"	R9	"					
36	5	4'-8"	R10	"					
16	5	19'-9"	R11	"					
16	5	10'-9"	R12	"					
32	5	11'-6"	R13	"					
16	5	10'-6"	R14	"					
16	5	14'-0"	R15	"					
382	5	3'-11"	C1	Curb					
8	6	31'-0"	C2	"					
12	6	36'-6"	C3	"					

BENDING AND CUTTING DIAGRAMS



REMARKS	A	B	C	D
6A1, Cut 24	1'-2"	1'-9"	7'-7"	9'-4"
6A2, Cut 24	9"	2'-4"	6'-6"	9'-10"

MARK	A	B
R3	$2'10\frac{1}{2}"$	$7\frac{1}{2}"$
R4	$2'9\frac{3}{4}"$	$7\frac{1}{2}"$
R5	$2'8\frac{1}{2}"$	$7\frac{1}{2}"$
R6	$2'5\frac{1}{4}"$	$7\frac{1}{2}"$
R7	$2'1\frac{1}{4}"$	$7\frac{1}{2}"$
C5	$1'-7"$	$8"$



NOTE: All dimensions are shown
out to out of bars.

RECORD DRAWING

OCTOBER 1975

CONTRACT NO. DACW41-74-C-0084

Revised for "As Built" conditions		5-1-78	2/2/78
SYM.	DESCRIPTION	DATE	APP.
REVISIONS			

OSAGE RIVER, MISSOURI

KAYSINGER BLUFF RESERVOIR

MISSOURI STATE HIGHWAY RELOCATIONS

RELOCATION 24

BILL OF REINFORCING STEEL
OVERFLOW STRUCTURE AT STA. 1547+40

OVERFLOW STRUCTURE AT STA. 1547+40

In 90 sheets

Scale: as shown

CORPS OF ENGINEERS
KANSAS CITY DISTRICT

ERS HENRY CO.
RICT R# 7

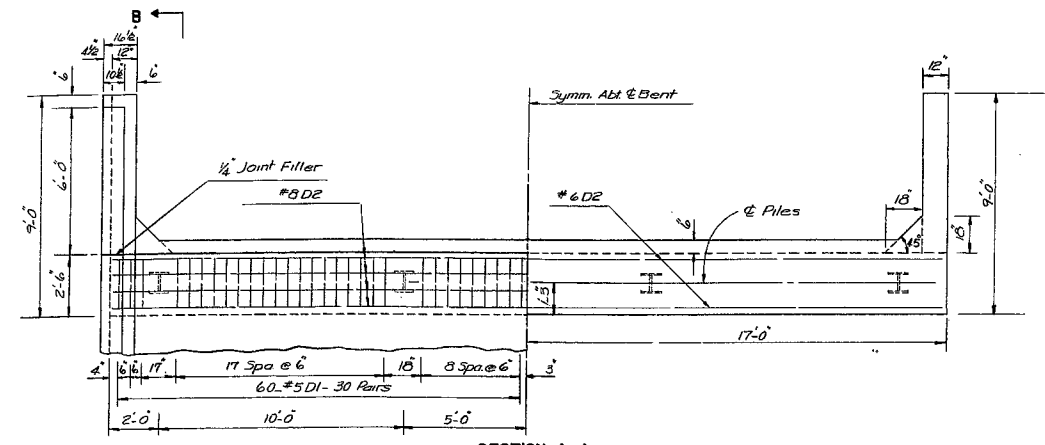
ER, NC, A-2100

U. S. ARMY
APRIL 1973

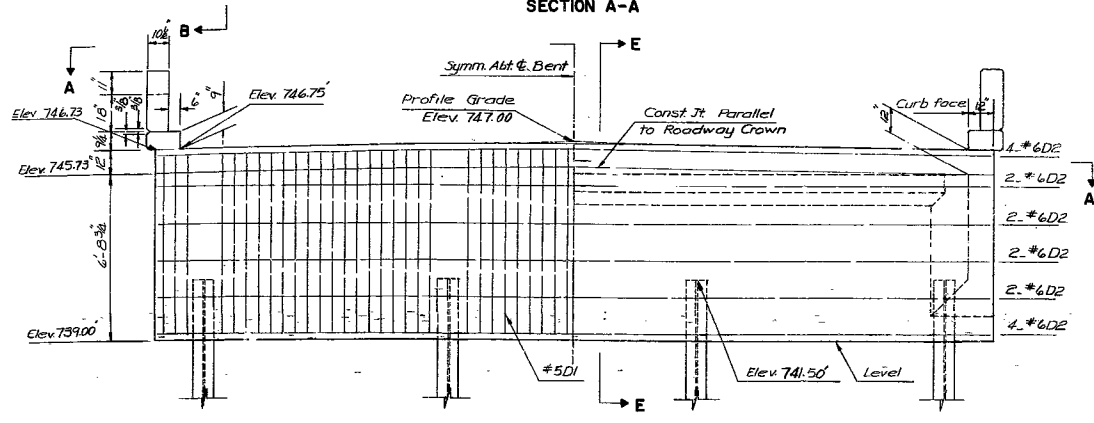
BUCHER & WILLIS, Consulting Engineers, Planners & Architects

70

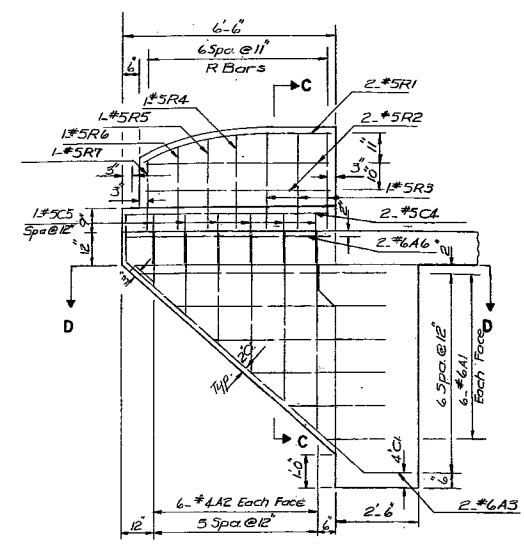
496



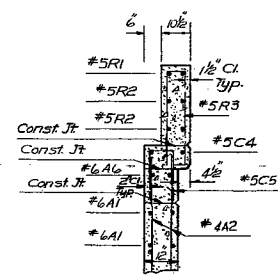
SECTION A-A



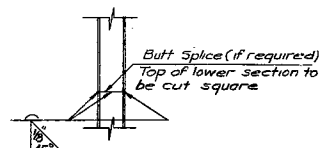
ELEVATION



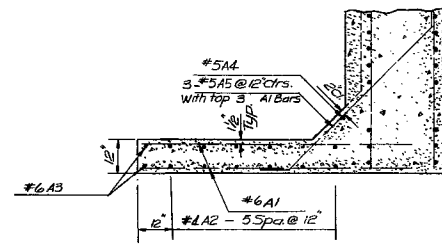
SECTION B-B



SECTION C-C

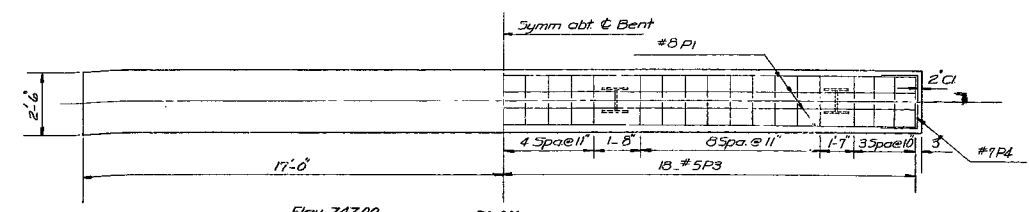


PILE SPICE DETAIL

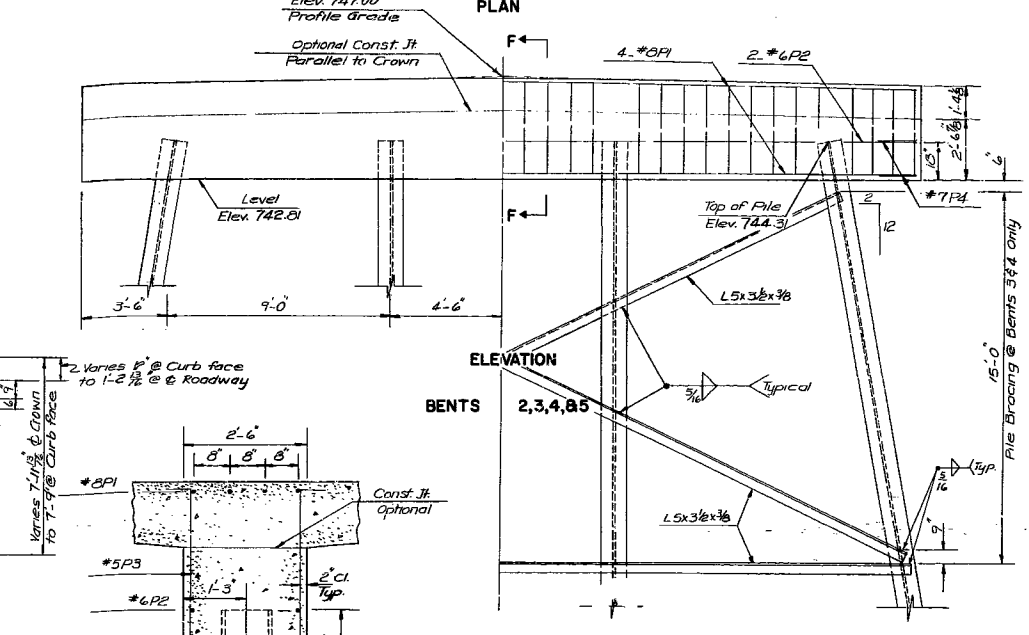


SECTION D-D

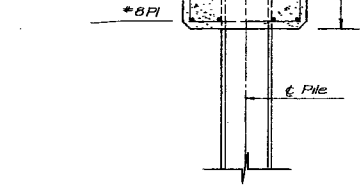
END BENTS 1&6



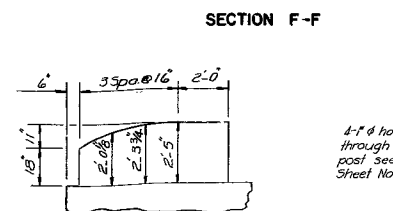
PLAN



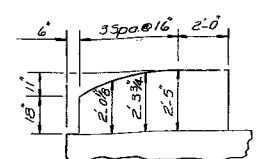
ELEVATION



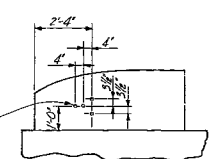
SECTION E-E



SECTION F-F



END POST



GUARDRAIL CONNECTION

GENERAL NOTES

For notes and details of railing see sheet No. 23.
Piles are to be HP 10X44 at end bents, and HP 12X53 at intermediate bents.
Fill at End bents No. 1 & 6 shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.
Compacted roadway fill (full roadway width) shall be placed in front of and not less than 100' in back of End Bents before steel piles are driven at Bents No. 1, No. 2, No. 5 and No. 6.

RECORD DRAWING

OCTOBER 1975
CONTRACT NO. DACW41-74-C-0034

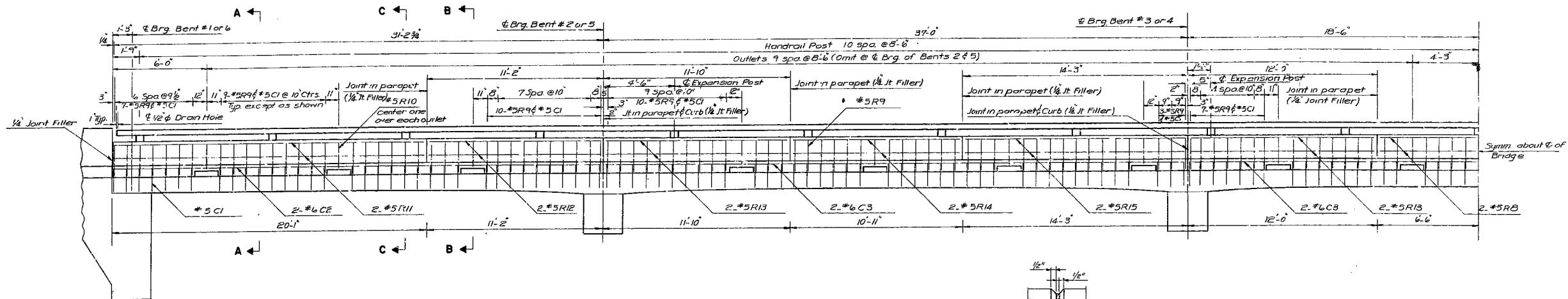
SYN.	DESCRIPTION	DATE	APP'D.
	Revised for "As Built" conditions	5-1-78	WJH

OSAGE RIVER, MISSOURI
KAYSINGER BLUFF RESERVOIR
MISSOURI STATE HIGHWAY RELOCATIONS
RELOCATION 24
BENTS 1,2,3,4,5 & 6
OVERFLOW STRUCTURE AT STA. 1547+4.0

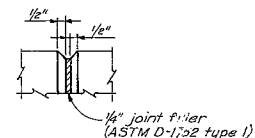
In 90 sheets
CORPS OF ENGINEERS HENRY CO.
KANSAS CITY DISTRICT Kp. 7
Submitted: *[Signature]*
Recommended: *[Signature]*
Chief, General Structural Sect. *[Signature]*
Chief, Design Branch *[Signature]*
Checked by: JRT
Scale: as shown
U. S. ARMY
APRIL 1975
Approved: *[Signature]*
Chief, Engineering Division
0-12-3002 FILE NO.



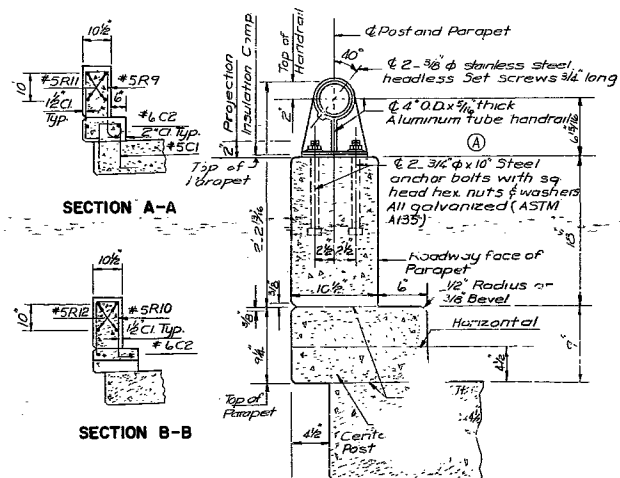
BUCHER & WELLS, Consulting Engineers, Planners & Architects



PARAPET DETAIL



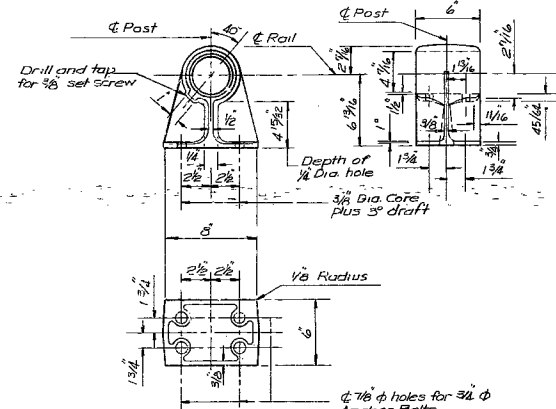
FILLED JOINT DETAIL



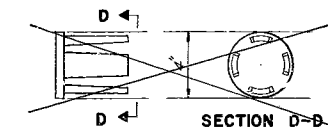
SECTION A-A

SECTION B-B

SECTION C-C

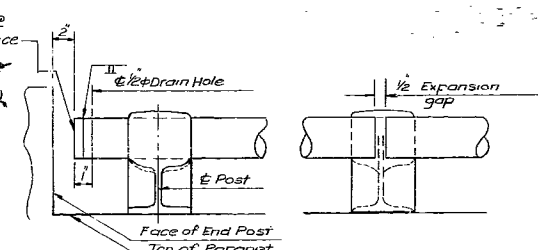


POST DETAIL



SECTION D-D

CAST END CAP (DRIVE FIT TYPE)



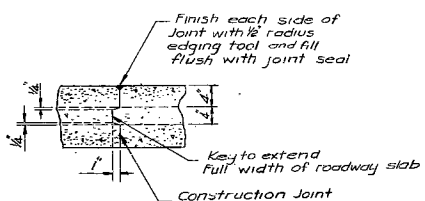
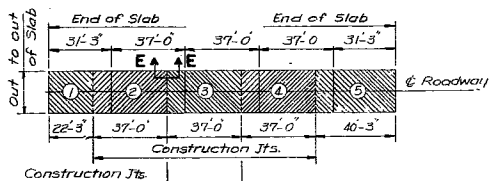
RAIL SPLICE OR EXPANSION POST DETAIL

GENERAL NOTES

- All handrail posts shall be set normal to grade.
- 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 filling 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.
- All fillets 1/2" except as noted.
- All drafts 3" except as noted.
- File 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.
- Vertical faces of end posts to be vertical.
- All exposed edges of end posts, parapets, and curbs shall have 1/8" radius or 3/8" bevel.
- Curbs shall be placed independently of slab and not sooner than five days after slab has been placed. Curb placement shall follow the same pouring sequence as the slab unless otherwise approved.

SEQUENCE OF POURS				
Direction				
Basic Sequence	1	2	3	4
Alternate "A" Pour	1 to 2	3 to 4	5 to 6	End to 4

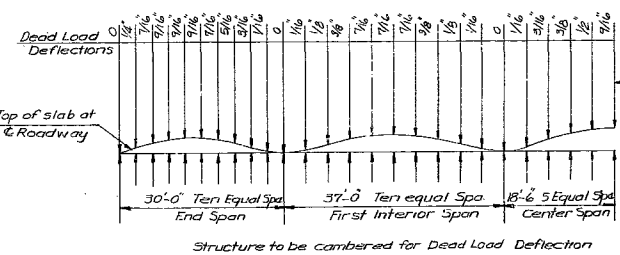
The contractor shall use an approved oscillating screed type, self propelled mechanical finishing machine and shall pour and satisfactorily finish the roadway slab at a rate of not less than 30 cubic yards per hour. He shall observe the transverse construction joints shown on plans unless he can demonstrate to the satisfaction of 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 loads will not be permitted on concrete less than 48 hours old.



SECTION E-E

SLAB POURING SEQUENCE

HANDRAIL DETAILS



CAMBER DIAGRAM

RECORD DRAWING

Revised for "As Built" conditions	5-1-79	2/22
(A) General Revisions	8-24-79	2/11
SYMBOL	DESCRIPTION	DATE
REVISIONS		

OSAGE RIVER, MISSOURI
KAYSINGER BLUFF RESERVOIR
MISSOURI STATE HIGHWAY RELOCATIONS
RELOCATION 24
PARAPET, HANDRAIL & MISCELLANEOUS DETAILS
OVERFLOW STRUCTURE AT STA. 1547+40

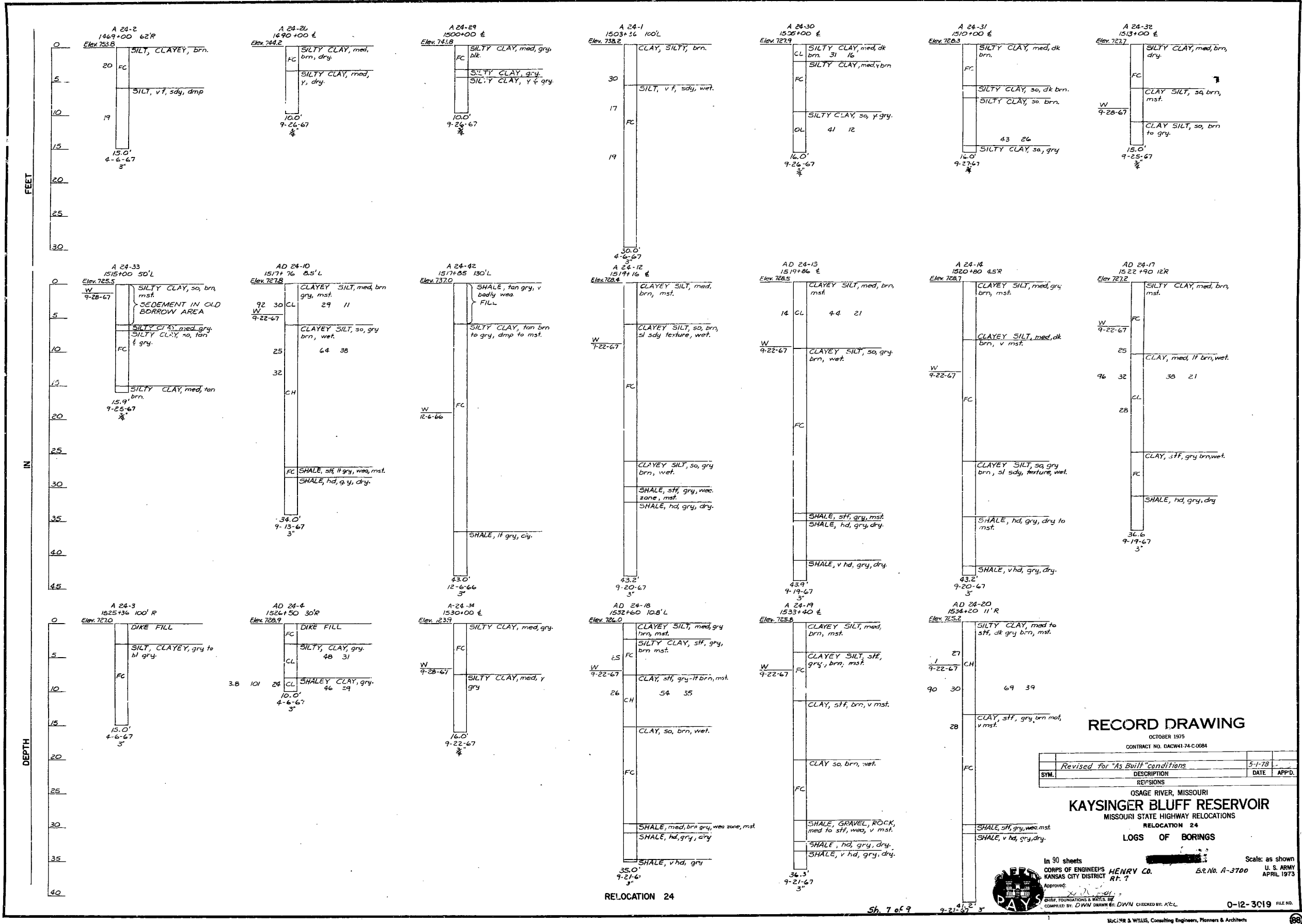
In 90 sheets
CORPS OF ENGINEERS HENRY CO.
KANSAS CITY DISTRICT RT. 1
DESIGNED BY P.I. DRAWN BY P.I.
CHECKED BY JRF
Scale: as shown
U. S. ARMY
APRIL 1973
ERNO. A-3706
CHIEF, ENGINEERING DIVISION
0-12-3004 FILE NO.

BUCHER & WILLIS, Consulting Engineers, Planners & Architects

73

499

862 29 TO 1

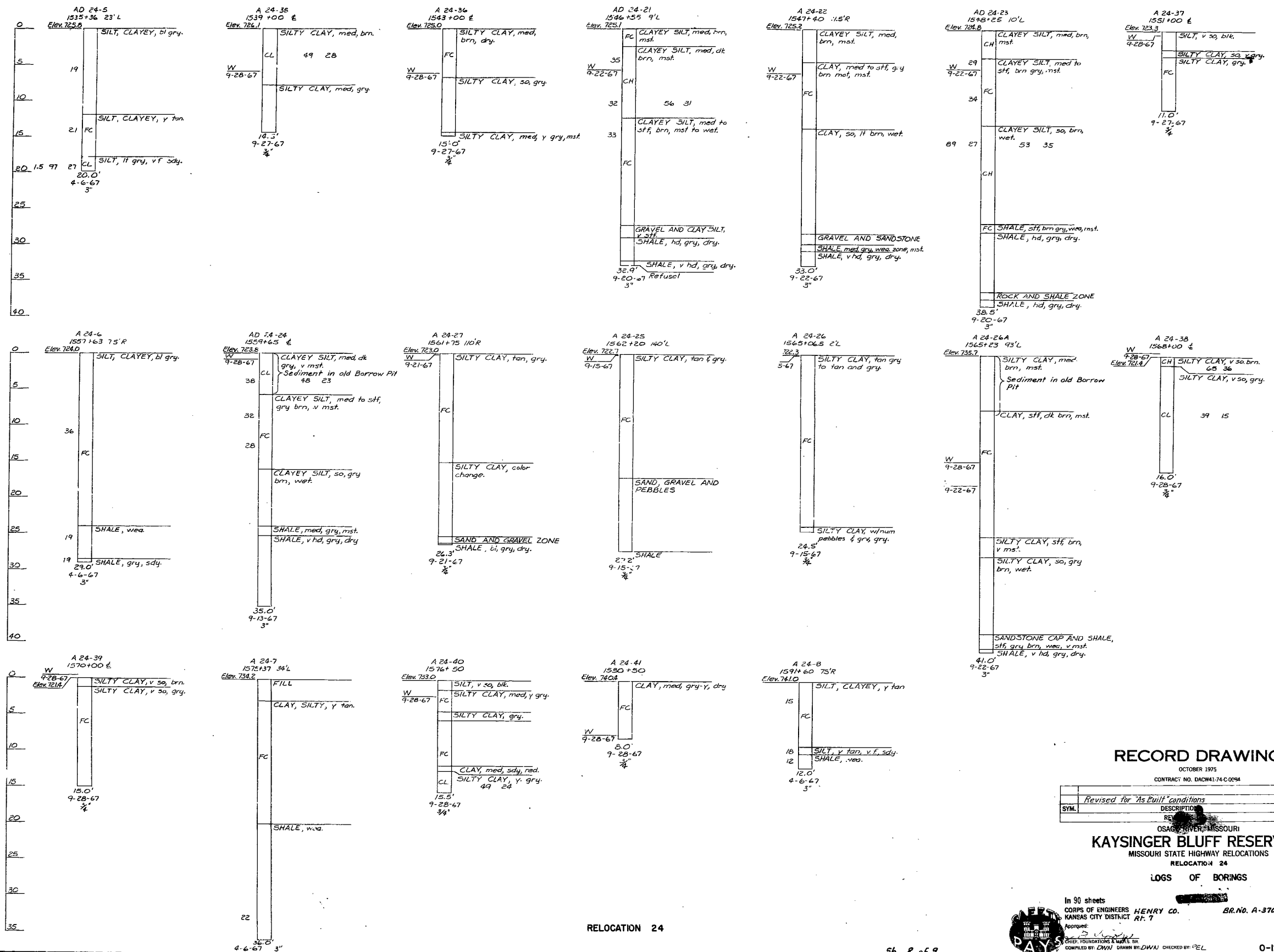


FEET

N

DEPTH

500



RELOCATION 24

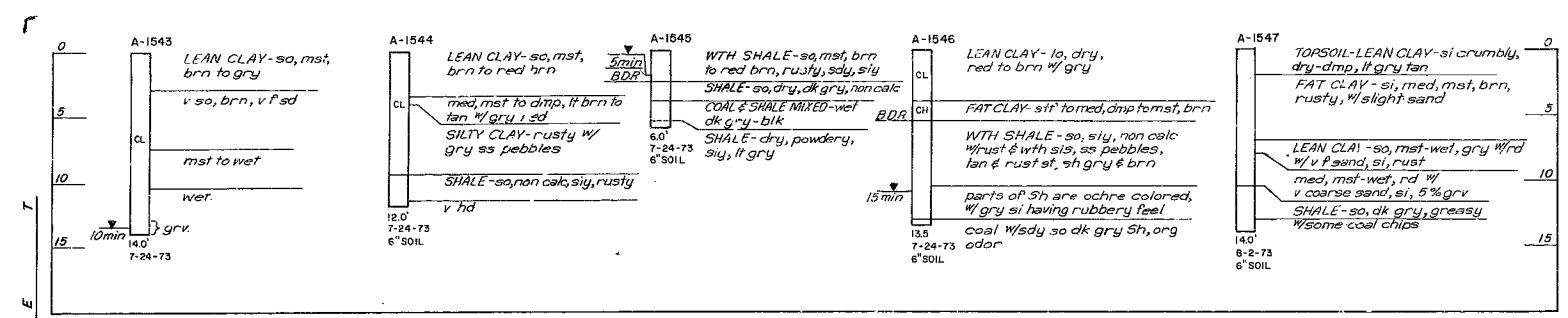
Sh. 8 of 9

RECORD DRAWING

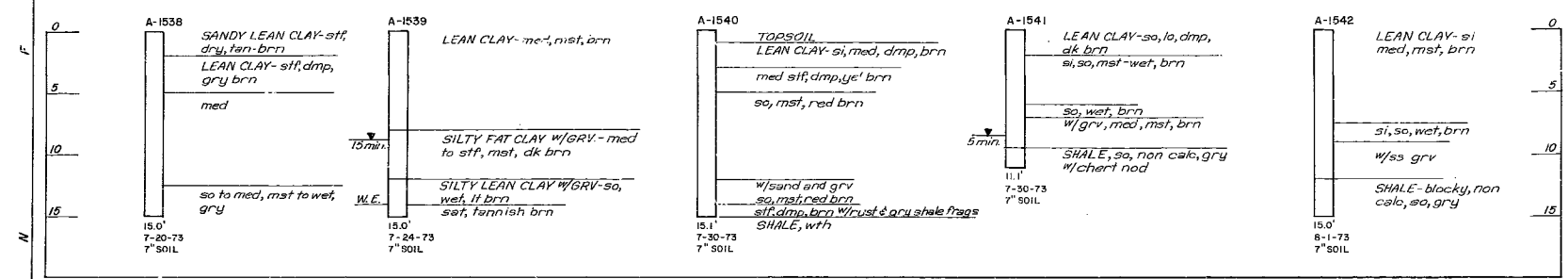
Revised for "As Built" conditions		5-1-78	
SYMBOL	DESCRIPTION	DATE	APPROVED
RE	REVISION		

OSAGE RIVER, MISSOURI
KAYSINGER BLUFF RESERVOIR
MISSOURI STATE HIGHWAY RELOCATIONS
RELOCATION 24
LOGS OF BORINGS

In 90 sheets
CORPS OF ENGINEERS HENRY CO. BR. NO. A-3700
KANSAS CITY DISTRICT RE. 7
Scale: as shown
U. S. ARMY
APRIL 1973
0-12-3020 FILE NO.
BUCHER & WILLIS Consulting Engineers, Planners & Architects

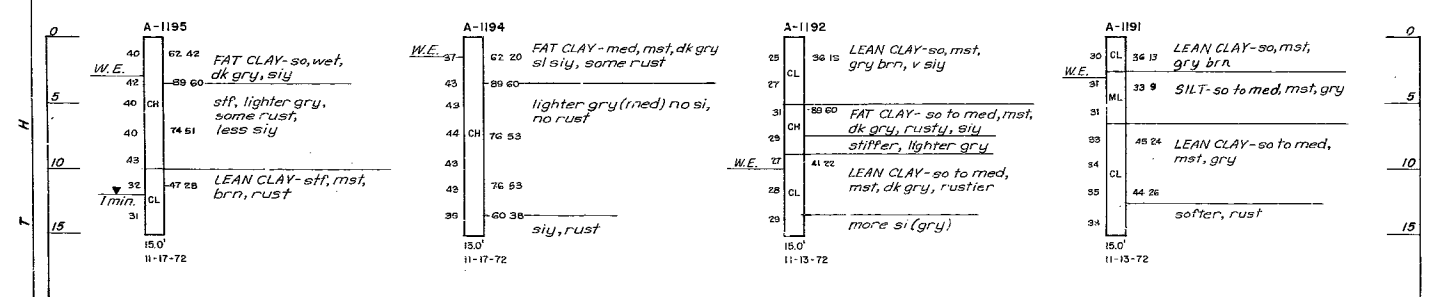


RELOCATION 12 BORROW AREA

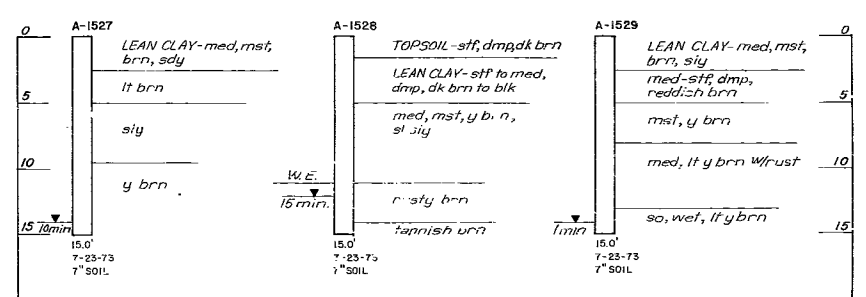


RELOCATION 23 BORROW AREA

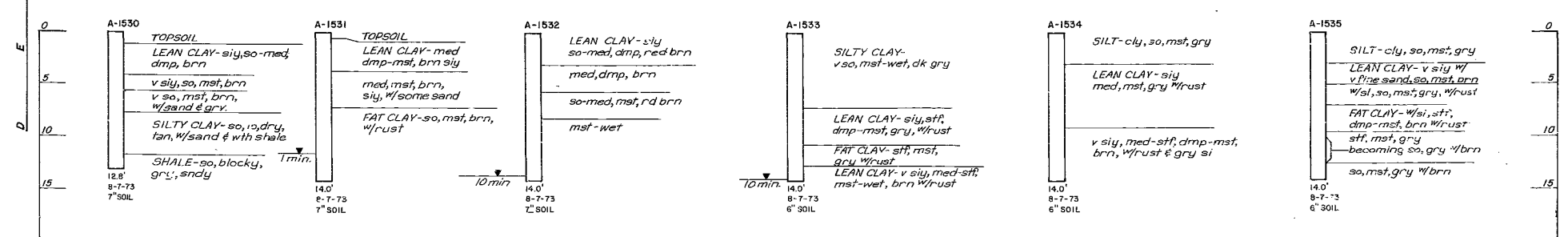
NOTES:
1. For location of borings for Relocation 23 & 24, see Sheet No. 1A
2. For location of borings for Relocation 12, see Sheet Nos. 23 & 24



RELOCATION 24 BORROW AREA



RELOCATION 24 BORROW AREA



RELOCATION 24 BORROW AREA

RECORD DRAWING

Revised for "As Built" conditions		5-1-78	JAS
General Revisions		6-24-73	R
SYM.	DESCRIPTION	DATE	APP'D.
	REVISIONS		

KAYSINGER BLUFF RESERVOIR

MISSOURI STATE HIGHWAY RELOCATIONS

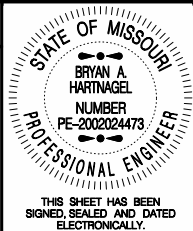
RELOCATION 12, 23 & 24

LOGS OF BORINGS

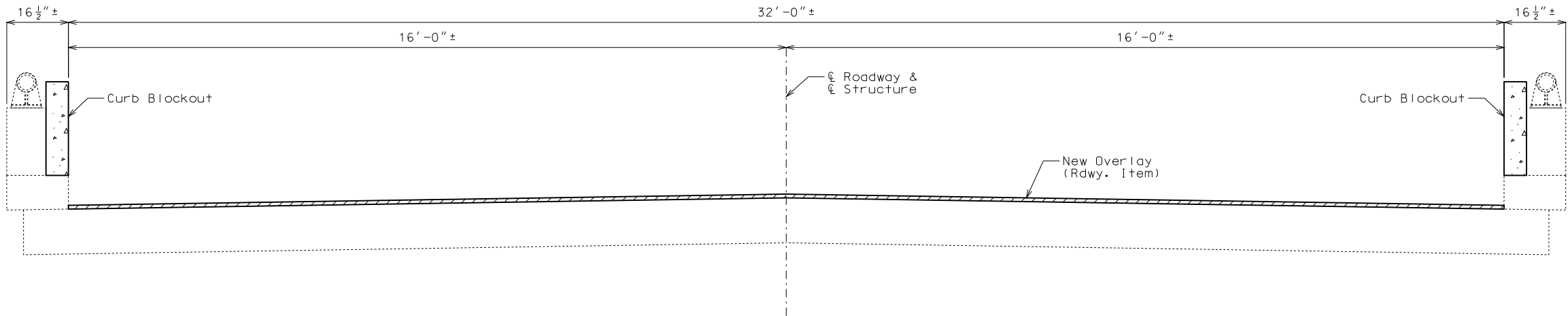
BORROW AREAS

In 90 sheets
CORPS OF ENGINEERS HENRY CO.
KANSAS CITY DISTRICT
Submitted by: [Signature]
Checked by: J.M.R. J.M.M. F.S.B.
Scale: as shown
U. S. ARMY
APRIL 1973
BR. No. A-3700
FILE NO.
0-12-3021

501



DATE PREPARED 8/17/2015	
ROUTE 7	STATE MO
DISTRICT BR	SHEET NO. 1
COUNTY HENRY	
JOB NO. J7P3047	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A37001	



SECTION THRU SLAB

GENERAL NOTES:

Design Specifications:
2002 AASHTO LFD (17th Ed.) Standard Specifications

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

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

All curb blackout steel shall be epoxy coated.

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

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

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

Cost of furnishing and installing the resin anchor system complete-in-place will be considered completely covered by the contract unit price for Curb Blockout.

Miscellaneous:
One lane of traffic shall remain open during construction. See Roadway plans for traffic control.

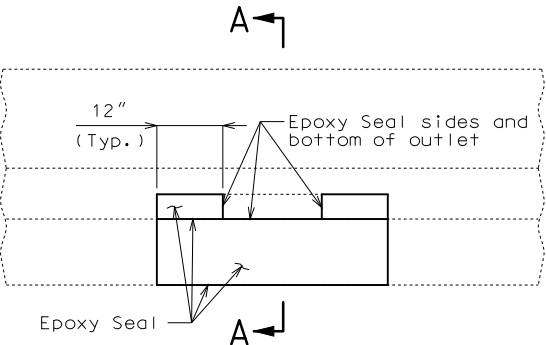
All exposed edges of curb blackout shall have either a 1/2" radius or a 3/8" bevel unless otherwise shown.

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

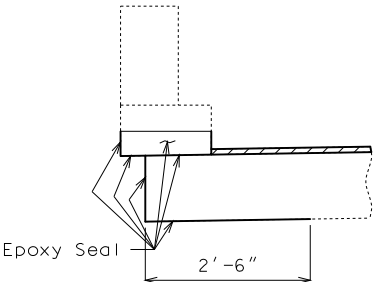
Contractor shall verify all dimensions in field before ordering new material.

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 plain bars and 30 diameters for deformed bars, unless otherwise noted.

Estimated Quantities		
Item		Total
Curb Blockout	linear foot	373
Clean and Epoxy Seal	sq. foot	629



TYPICAL ELEVATION OF EXISTING CURB OUTLET SHOWING LIMITS OF EPOXY SEAL



SECTION A-A

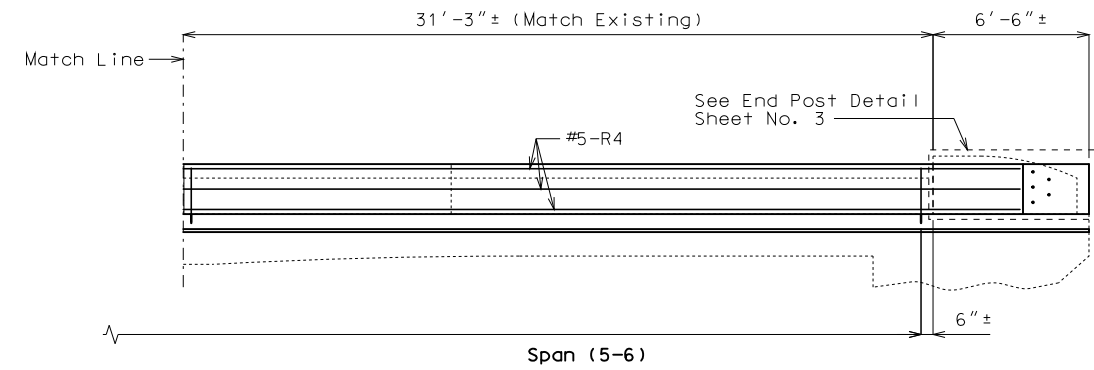
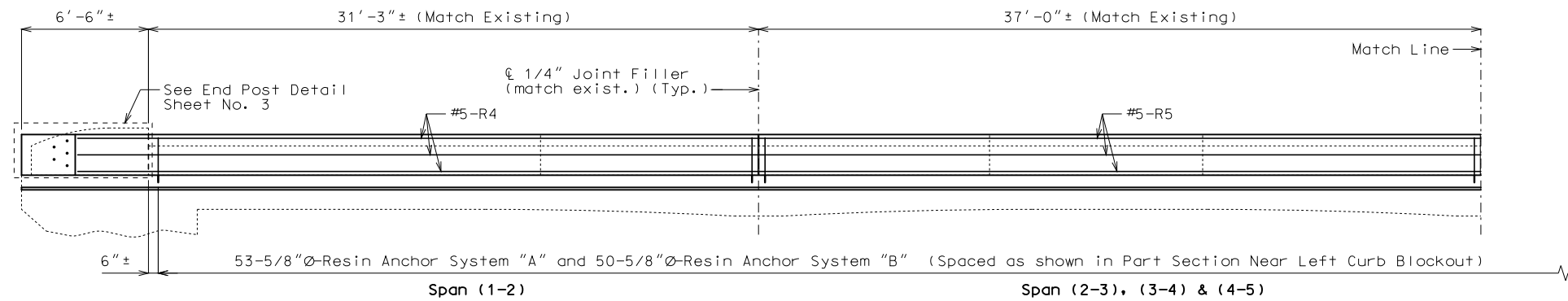
REPAIRS TO BRIDGE: ROUTE 7 OVER BIG CREEK OVERFLOW

ROUTE 7 FROM RTE. B TO RTE. D
ABOUT 1.6 MILES N.W. OF RTE. D
STA. 1546+53.25± (Match Existing)

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

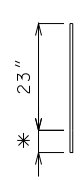
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

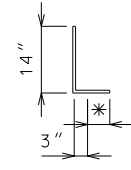


SECTION NEAR LEFT CURB BLOCKOUT
(Right curb blackout similar)

Note: Longitudinal dimensions shown are along grade and are taken at top outside edge of parapet.
Bridge rail not shown for clarity.



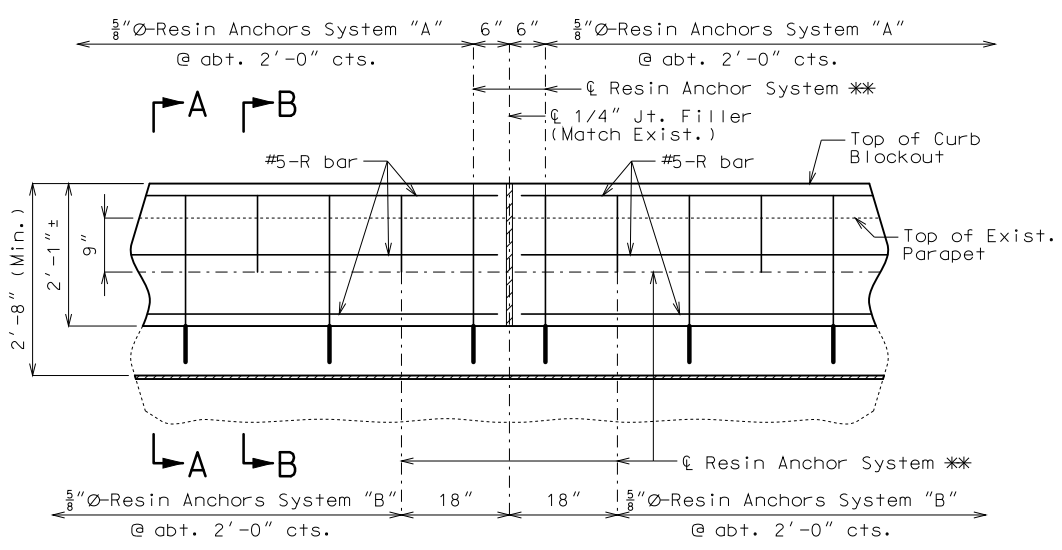
RESIN ANCHOR SYSTEM "A"
(222 req'd)
(Install in curb)



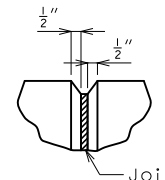
RESIN ANCHOR SYSTEM "B"
(172 req'd)
(Install in parapet)

* Use manufacturer's embedment length.
(5" minimum embedment)

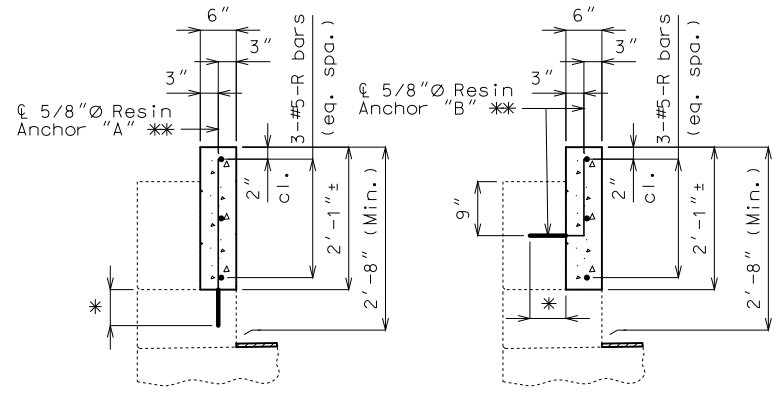
DETAILS OF RESIN ANCHORS



PART SECTION NEAR LEFT CURB BLOCKOUT



FILLED JOINT DETAIL



SECTION A-A

SECTION B-B

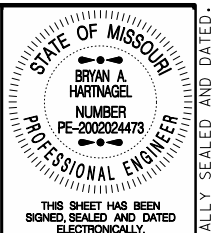
DETAILS OF LEFT CURB BLOCKOUT

Notes:
Concrete in curb blackout shall be Class B-1 with $f'c = 4000$ psi.
Measurement of curb blackout is to the nearest linear foot, measured at the top outside edge of parapet from end of wing to end of wing. (Match existing curb and parapet)
All exposed edges of curb blackout shall have 1/2" radius or 3/8" bevel unless otherwise shown.
Payment for concrete, reinforcing steel, resin anchors, and any other work incidental to the curb blackout, complete in place, will be included in the contract unit price for Curb Blockout per linear foot.
Cost of any concrete curb or parapet repair will be included in the contract unit price for Curb Blockout.
All reinforcement shall be epoxy coated.
** Shift resin anchors where necessary to clear existing anchor bolts for bridge rail, miss curb outlets (if present) and clear existing reinforcement.
Use a minimum lap of 2'-11" for #5 horizontal curb blackout bars.
Concrete traffic barrier delineators shall be placed on top of the curb blackout similarly as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators shall have retroreflective sheeting on side facing oncoming traffic only. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for "Curb Blockout".
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.
The minimum embedment depth in concrete with $f'c = 4,000$ psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".
An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8" $\emptyset$ threaded rod.

Detailed Aug. 2015
Checked Aug. 2015

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

Sheet No. 2 of 4



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/17/2015

ROUTE: 7 STATE: MO

DISTRICT: BR SHEET NO.: 2

COUNTY: HENRY

JOB NO.: J7P3047

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A37001

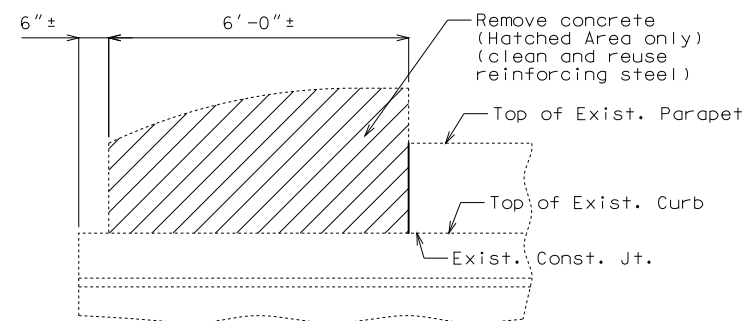
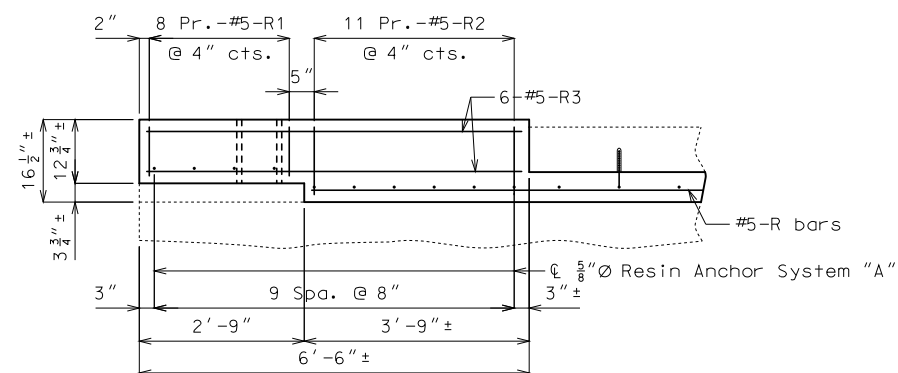
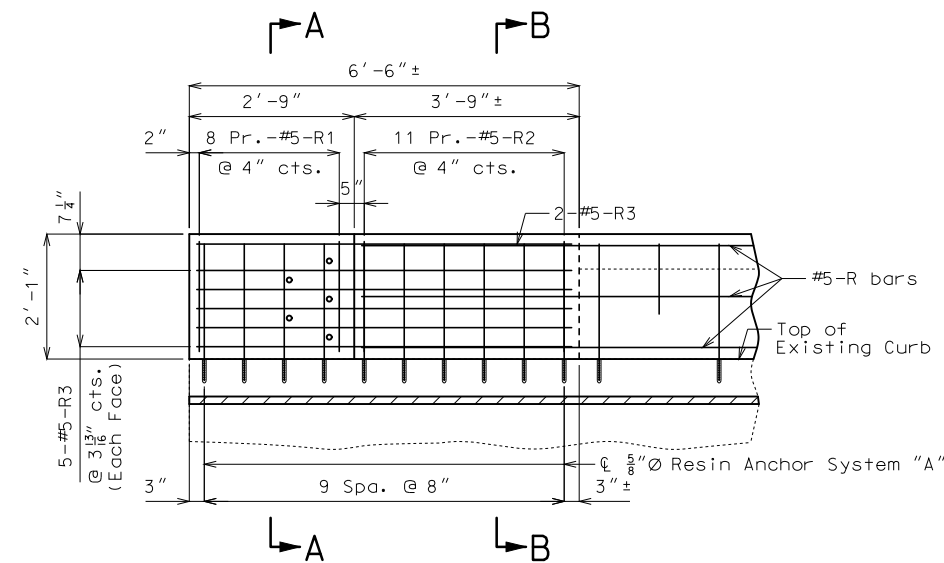
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

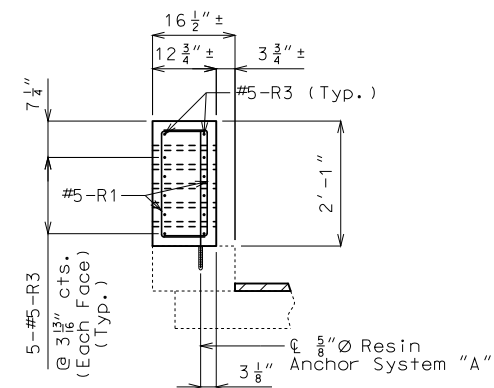
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

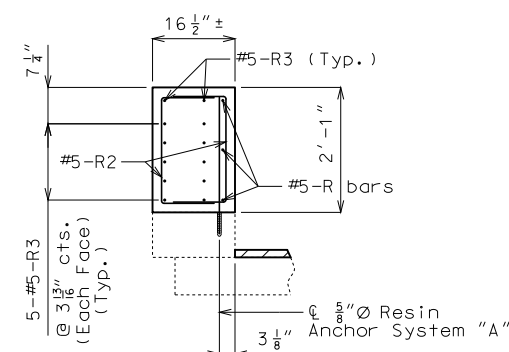


Note:

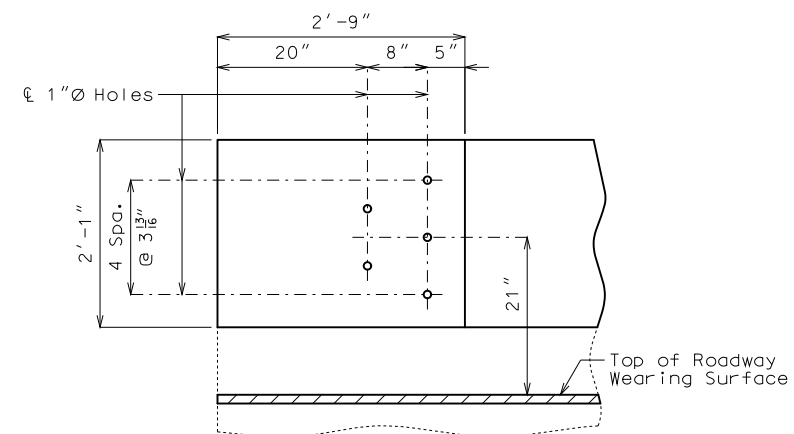
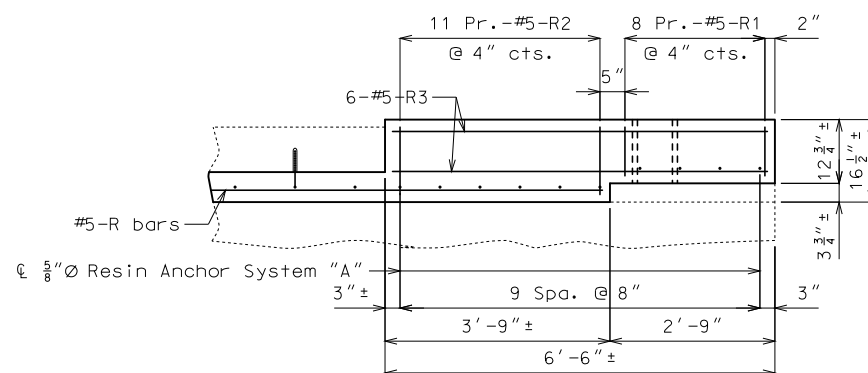
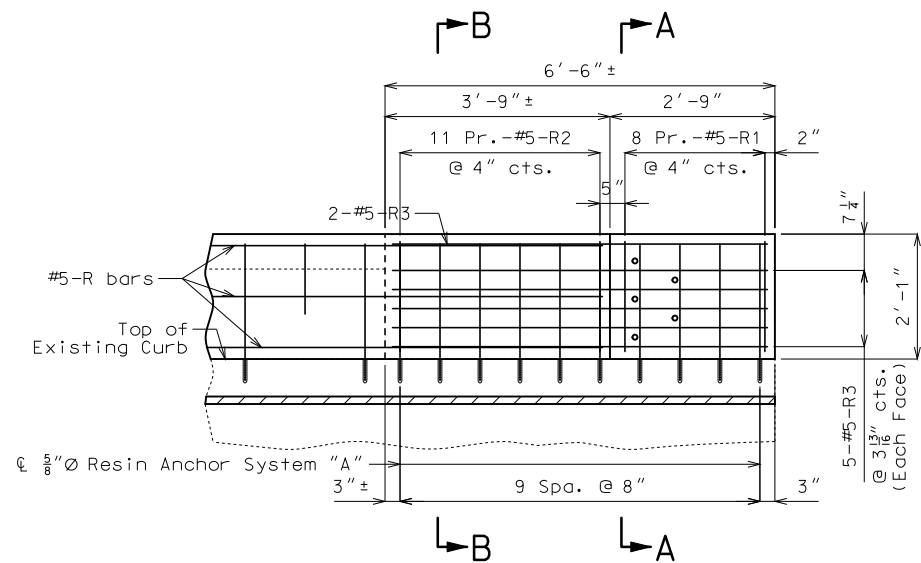
Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout.



SECTION A-A



SECTION B-B



DETAILS OF GUARD RAIL ATTACHMENT

Notes:

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

Payment for concrete, reinforcing steel, resin anchors, and any other work incidental to the curb blockout, complete in place, will be included in the contract unit price for Curb Blockout per linear foot.

Cost of any concrete curb or parapet repair will be included in the contract unit price for Curb Blockout.

Aluminum railing is not shown for clarity.

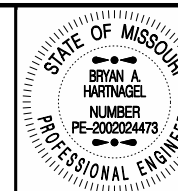
All reinforcement shall be epoxy coated.

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

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

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

DETAILS OF END POST AT END BENTS



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
8/17/2015

ROUTE	STATE
7	MO

DISTRICT	SHEET NO.
BR	3

COUNTY
HENRY

JOB NO.
J7P3047

CONTRACT ID.

PROJECT NO.	
BRIDGE NO.	

BRIDGE NO.
A37001

[illegible]


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 105 WEST CAPITOL
 JEFFERSON CITY, MO 65102

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