

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	DAY LABOR	MCLEAN	3	1
		ILLINOIS	PROJECT NO. 19G518	

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 2

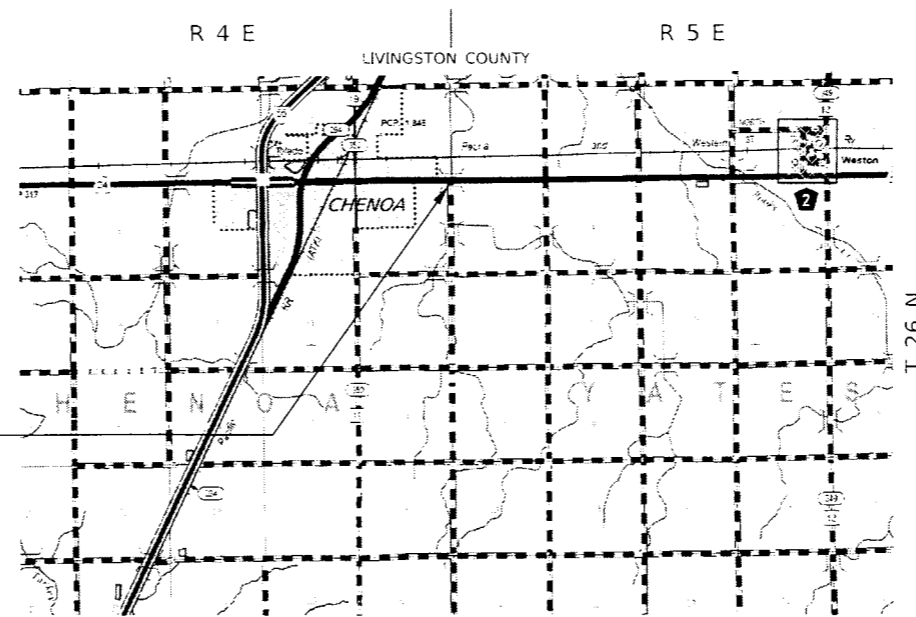
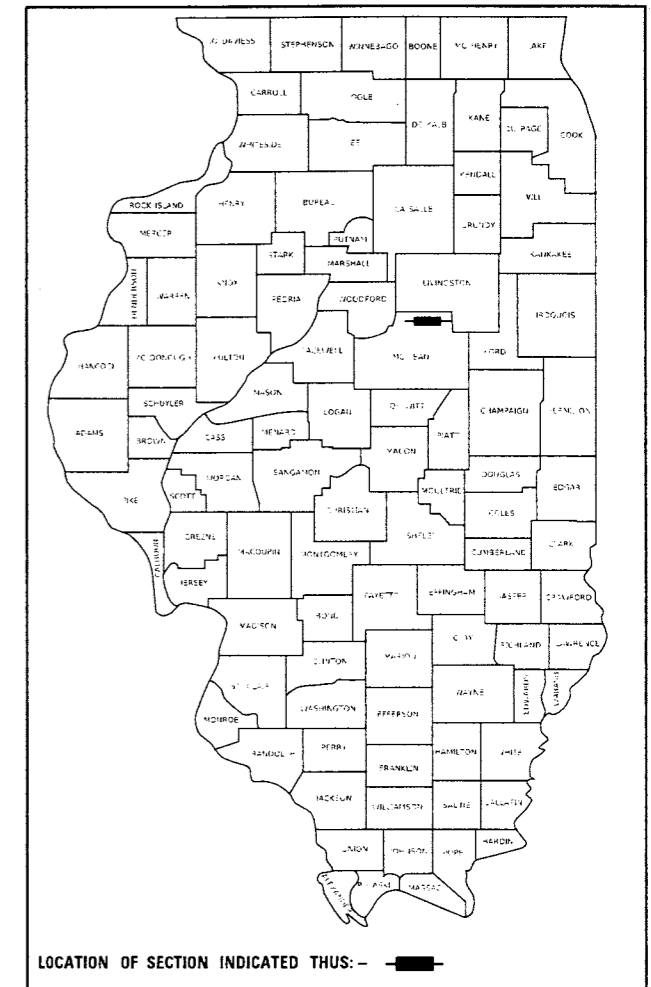
PROPOSED HIGHWAY PLANS

~~STATE OF ILLINOIS~~
DAY LABOR
PROJECT NUMBER 19G518
STRUCTURE STEEL REPAIRS
F.A.P. 317 (U.S. 24) OVER STREAM
MCLEAN COUNTY

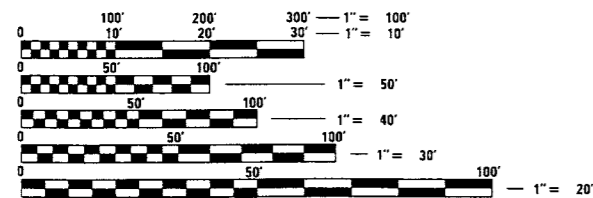
**CURRENT
TRAFFIC DATA**

U.S. 24

2017 ADT = 4,200
2032 ADT = 4,640
PU+PC % = 81.55
SU % = 6.55
MU % = 11.91

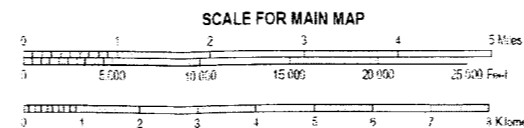


S.N. 057-0071
U.S. 24 OVER STREAM
STA. 43+93.00



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811 YATES TOWNSHIP



GROSS LENGTH = 105.3 FT. = 0.020 MILE
NET LENGTH = 105.3 FT. = 0.020 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 4/19 2019

REGIONAL ENGINEER

_____ 20 _____
ENGINEER OF DESIGN AND ENVIRONMENT

_____ 20 _____
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

PROJECT NUMBER: 19G518

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	COVER SHEET
2	INDEX OF SHEETS
2	LIST OF STANDARDS
2	GUIDE BRIDGE SPECIAL PROVISIONS
2	SUMMARY OF QUANTITIES
3	REPAIR PLANS 057-0071

SUMMARY OF QUANTITIES

CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	510.0
67100100	MOBILIZATION	L SUM	1.0
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1.0
DL0031	PROJECT SUPERVISION	L SUM	1.0
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	500.0
Z0001905	STRUCTURAL STEEL REPAIR	POUND	250.0

LIST OF HIGHWAY STANDARDS

<u>STANDARD NO.</u>	<u>DESCRIPTION</u>
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701901-04	TRAFFIC CONTROL DEVICES

GUIDE BRIDGE SPECIAL PROVISIONS

<u>GBSP NO.</u>	<u>TITLE</u>
# 21	CLEANING AND PAINTING CONTACT SURFACE AREAS OF EXISTING STEEL STRUCTURES

MODEL: \\MODELS\NAME1
 FILE NAME: \\planning\dot\illinois\gov\PIBDOT\Documents\DOT_Offices\City\rel_5\proj\rel\Day_Labor\CAD\day\project\2019\19G518\05_19G518-1H-CMAA.dgn

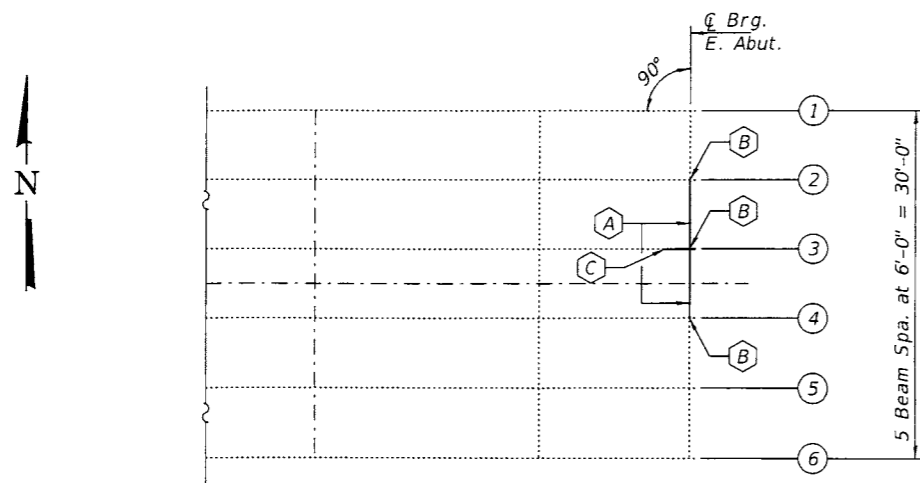
USER NAME = piersonbr	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 1/ in.	CHECKED -	REVISED -
PLOT DATE = 4/19/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, LIST OF STANDARDS,
SUMMARY OF QUANTITIES & GUIDE BRIDGE SPECIAL PROVISIONS**

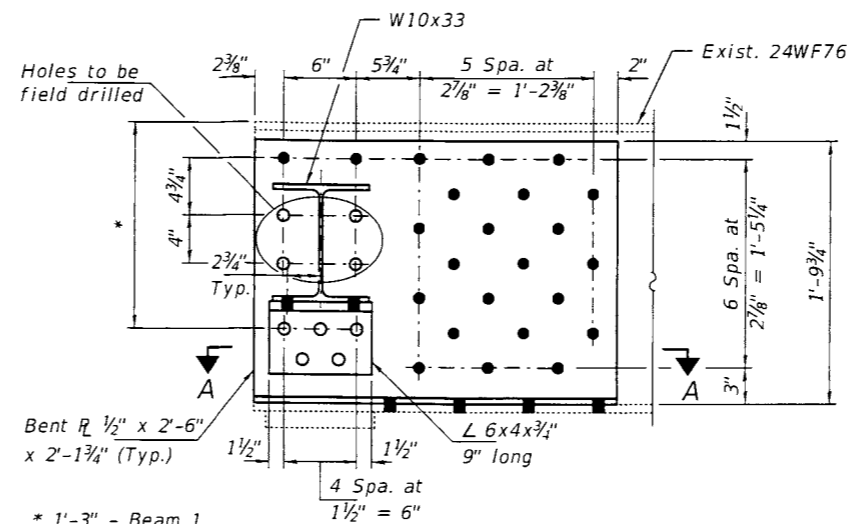
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	DAY LABOR	MCLEAN	3	2
PROJECT NO. 19G518				
ILLINOIS FED. AID PROJECT				



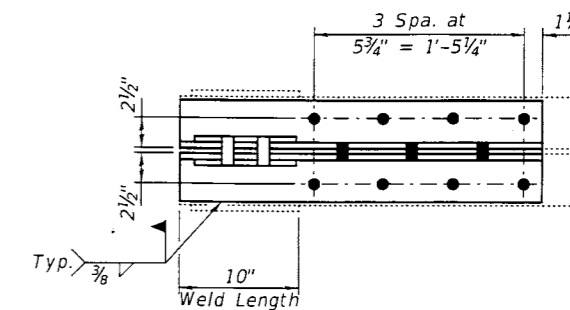
PARTIAL PLAN

- (A) - Remove and Replace Diaphragms
- (B) - Remove and Replace Clip Angles
- (C) - Beam End Repair

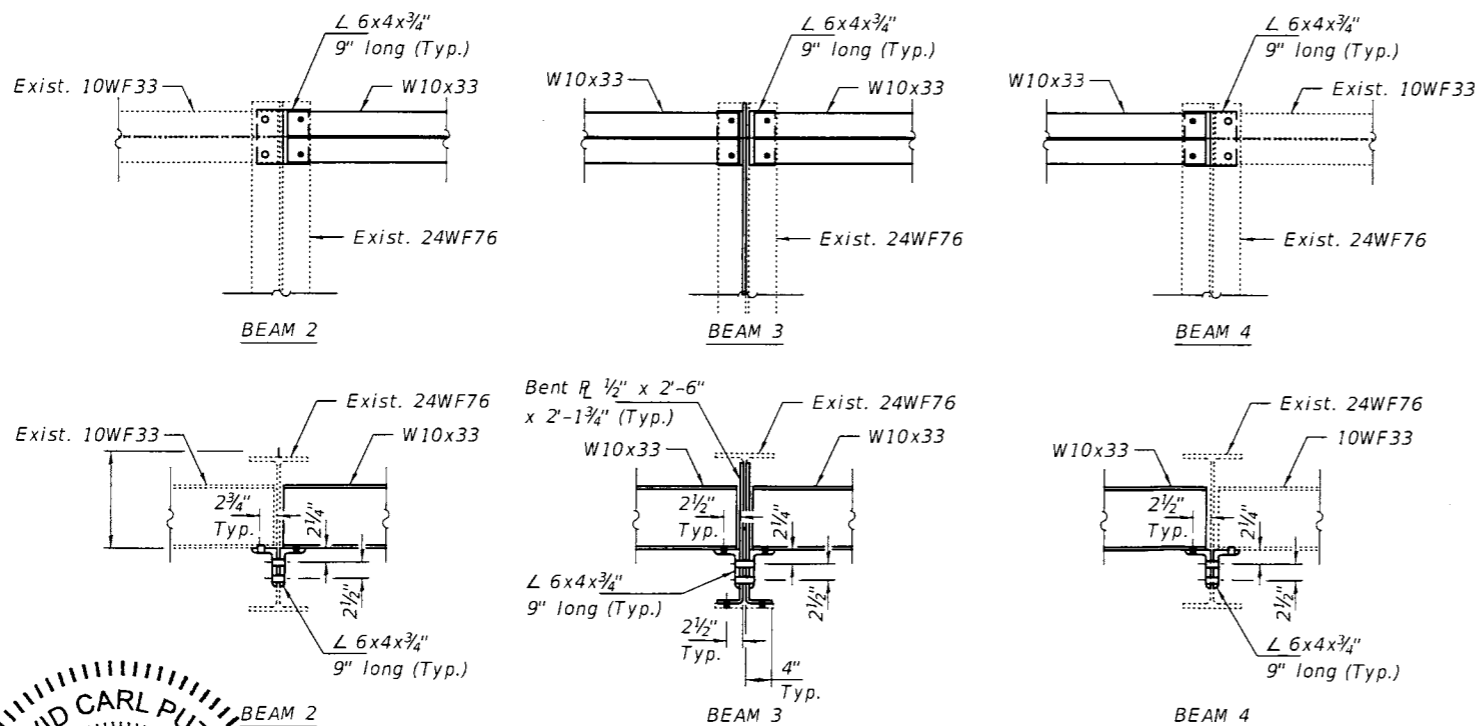


- * 1'-3" - Beam 1
- 1'-4 3/8" - Beam 2
- 1'-5 1/8" - Beam 3

BEAM END REPAIR
(Beam 3)



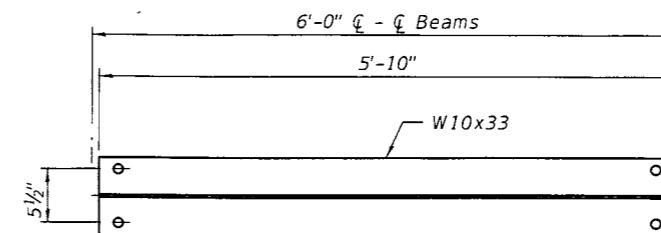
SECTION A-A



DIAPHRAGM DETAILS

Notes:

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 All new structural steel shall be hot-dip galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel."
 Fasteners shall be high strength bolts. Bolts 3/4"Ø, open holes 1 3/16"Ø, unless otherwise noted.
 Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the special provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 The existing concrete diaphragm adjacent to the beam 3 web will have to be removed to fit 1/2" bent plates on web. Replacement of concrete along with removal will be included in the Structural Steel Repair quantity.



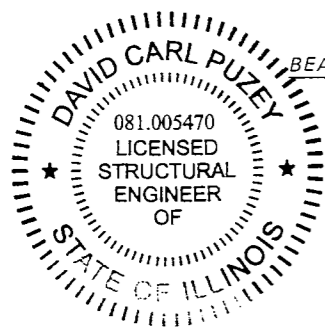
END DIAPHRAGM
(2 Req'd.)

BOLT HOLE LEGEND

- - Field drill using existing steel as template, except as noted.
- - Use holes in new steel as template.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	510
Structural Steel Removal	Pound	500
Structural Steel Repair	Pound	250



EXPIRES 11-30-2020

DESIGNED - <i>V. Ch...</i>	EXAMINED - <i>Tim A. ...</i>	DATE - APRIL 3, 2019
CHECKED - <i>Step...</i>	PASSED - <i>David Carl Puzey</i>	REVISIONS -
DRAWN - <i>daburdell</i>		
CHECKED - <i>V. Ch...</i>		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
FAP 317 (US 24) OVER STREAM
SN 057-0071

F.A.P. RTE. 317	SECTION DAY LABOR	COUNTY McLEAN	TOTAL SHEETS 3	SHEET NO. 3
SHEET NO. 1 OF 1 SHEETS				CONTRACT NO. 146518

ILLINOIS FED. AID PROJECT

4400-290

SCANNED

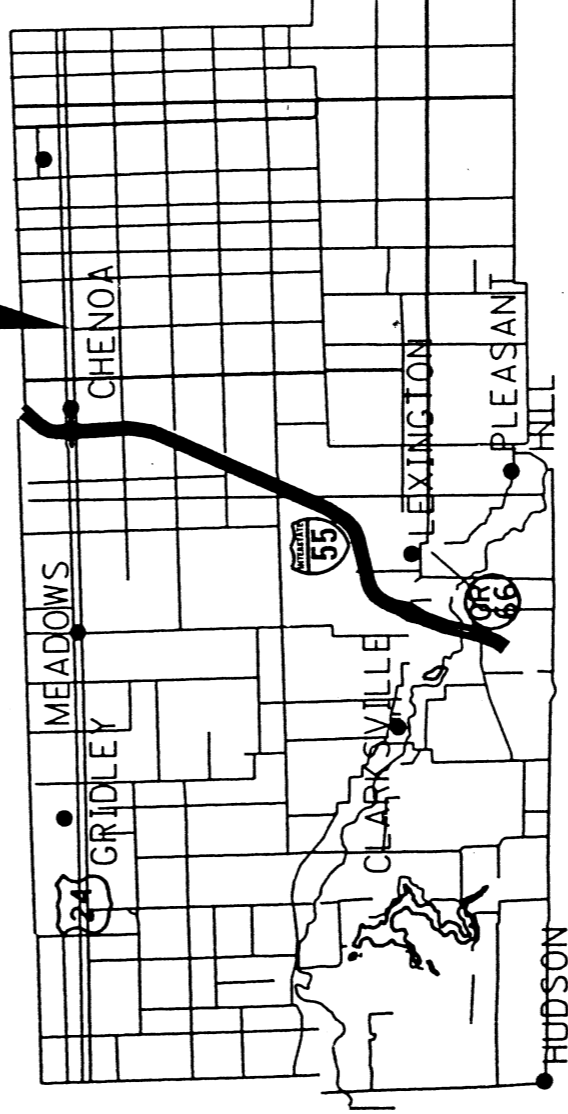
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

100%
7-13-2002

F.A.P. 317 (US 24)
SECTION (28 BR) I
MCLEAN COUNTY
C-93-038-02

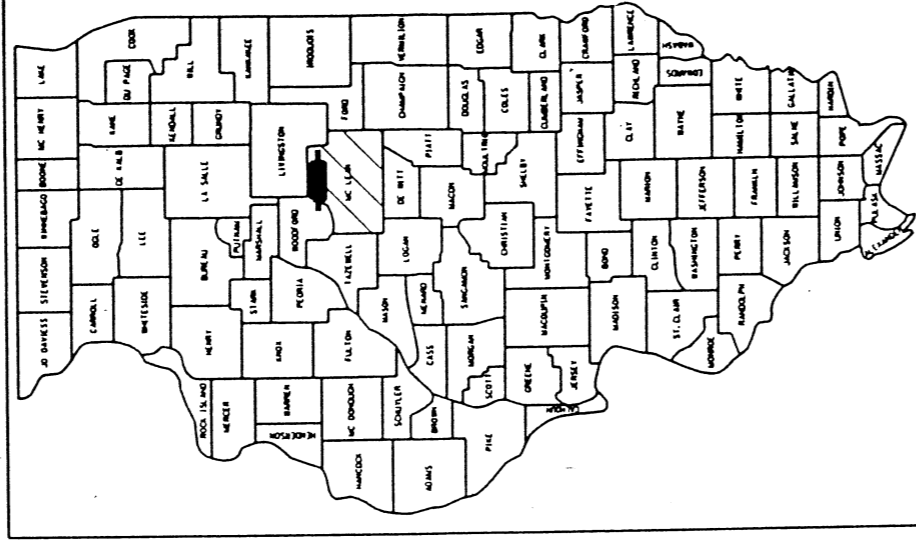
SN 057-0071

STA 43+40 TO STA 44+46



D-93-012-02

F.A.I. RTE. FAP 317 (US 24)	SECTION (28 BR) I	COUNTY MCLEAN	TOTAL SHEETS 14	SHEET NO. 1
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT		



LOCATION OF SECTION INDICATED THUS

ADT 4400 %P.V. 79.0 %S.U. 7.0 %M.U. 14.0

INDEX OF SHEETS

- 1 COVER SHEET
- 2 SIGNATURE SHEET
- 3 GENERAL NOTES/
- 4 SUMMARY OF QUANTITIES
- 5 SCHEDULES
- 6 SCHEDULE
- 7 TRAFFIC CONTROL DETAILS ST I
- 8 TRAFFIC CONTROL DETAILS ST II
- 9 PLAN VIEWS STAGE I & II
- 10 DECK X-SECTIONS - STAGE I
- 11 DECK X-SECTIONS - STAGE II
- 12 SECTION A - A (WEST ABUT)
- 13 SECTION B - B (EAST ABUT)
- 14 EXISTING CURB DETAILS
- 15 PROPOSED CURB DETAILS

STANDARDS

- 701001 OFF-RD OPERATIONS 2L, 2W,
4.5 M (15') MIN. AWAY FOR
SPEEDS > 45 MPH
- 701006-01 OFF-RD OPERATIONS 2L, 2W,
4.5 M (15') TO PAVEMENT
EDGE FOR SPEEDS > 45MPH
- 701011 OFF-RD MOVING OPERATION
2L, 2W, DAY ONLY FOR
SPEEDS > 45 MPH
- 701316-02 LANE CLOSURE 2L, 2W
BRIDGE REPAIR FOR SPEEDS
> 45 MPH
- 701311-02 LANE CLOSURE 2L, 2W MOVING
OPERATIONS- DAY ONLY
- 702001-02 TRAFFIC CONTROL DEVICES

DISTRICT NO. 815-434-6131
 JULIE 1-800-892-0123
 PROJECT ENGINEER : TOM SCHAEFER
 UNIT CHIEF : RON WOODSHANK
 TOWNSHIPS: CHENOA
 CONTRACT NO. 66240

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAP 317 (US 24)	(28 BR)I	MCLEAN	14	4
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

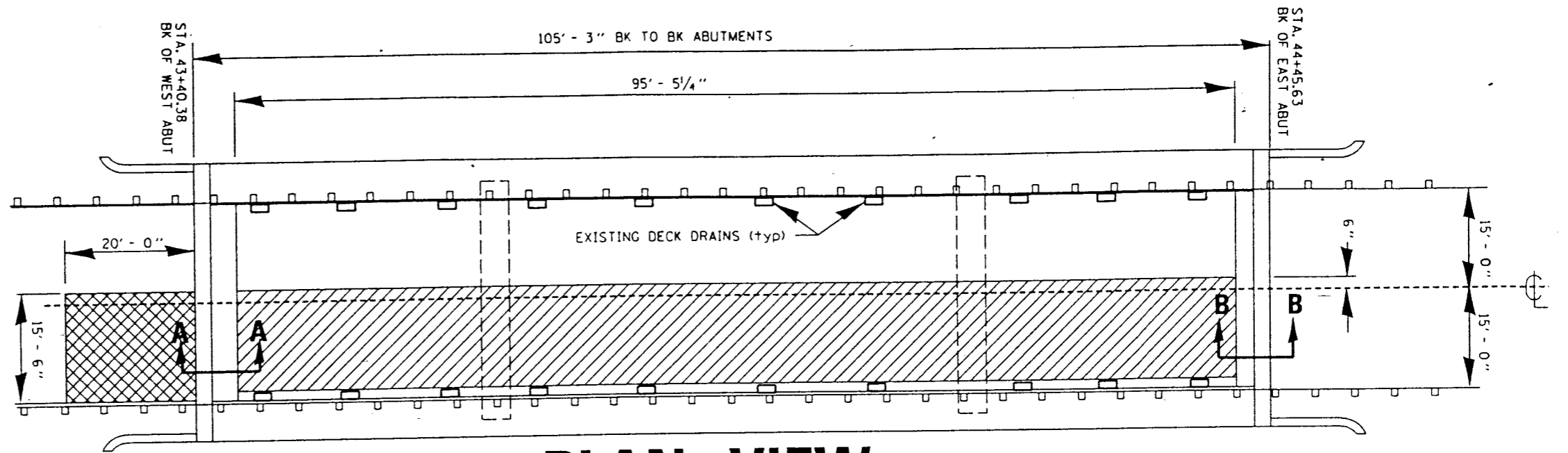
PG GRADE	SUPERPAVE SURFACE
MAX % RAP ALLOWABLE**	PG64-22
DESIGN AIR VOIDS	15%
MIXTURE COMPOSITION	4.0% @ N50
FRICTION AGGREGATE	IL 12.5 or IL 9.5
	MIXTURE C

CONCRETE SCHEDULE

LOCATION	CONCRETE BRIDGE DECK SCARIFICATION	DECK SLAB REPAIR
	SQ.YD.	SQ.YD.
STAGE I		
BRIDGE DECK	161	40
STAGE II		
BRIDGE DECK	151	40
TOTAL	312	80

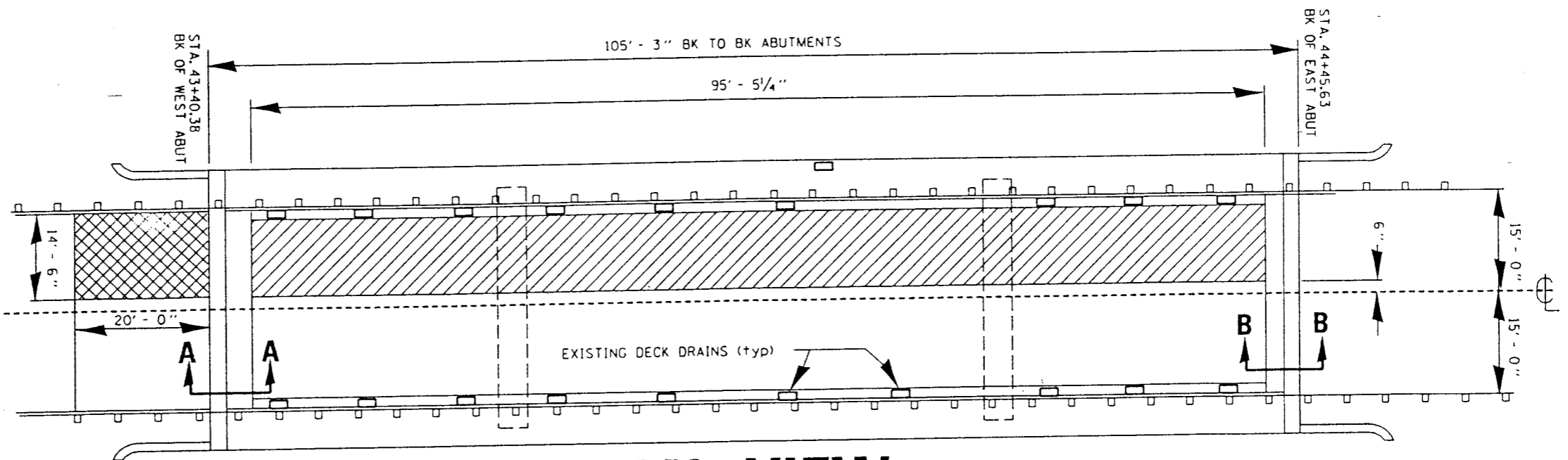
SCHEDULE

LOCATION	BITUMINOUS SURFACE REMOVAL 1 1/2"	BIT CONC SURF (SUPERPAVE) MIX C, N50	BIT MAT'LS (P.C.)	AGG (P.C.)
	SQ.YD.	TONS	GAL	TON
STAGE I				
BRIDGE DECK		19	12	0.4
APPROACH SLAB	35	3	3	0.1
STAGE II				
BRIDGE DECK		19	12	0.4
APPROACH SLAB	33	3	3	0.1
TOTAL	68	44	30	1



PLAN VIEW STAGE I

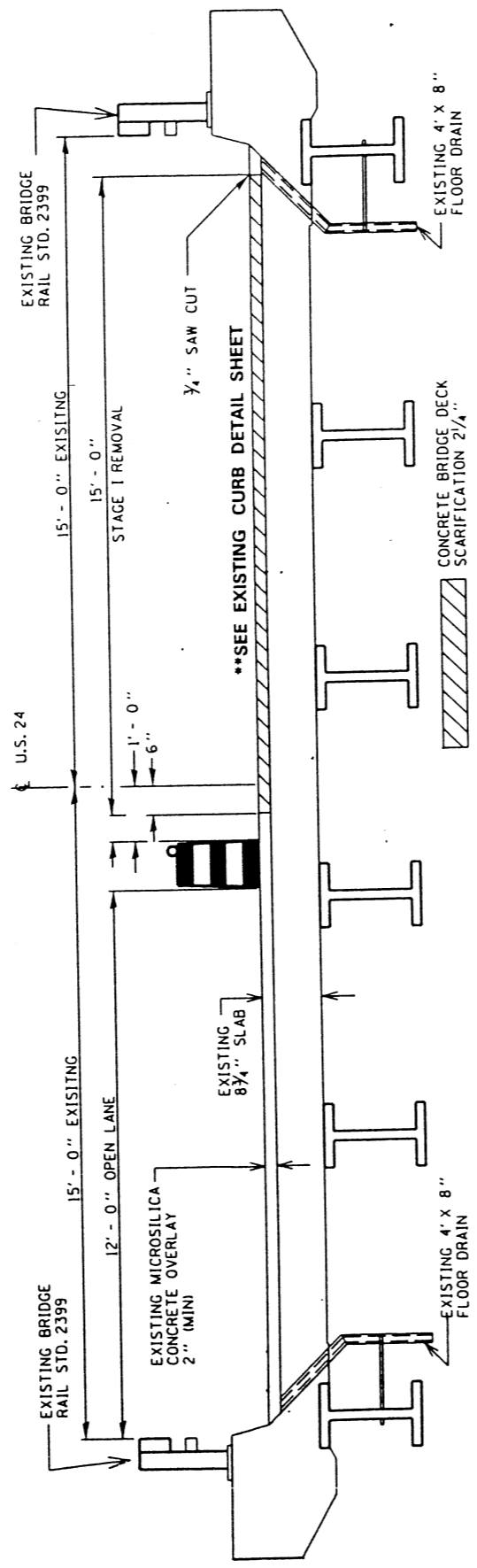
- CONCRETE BRIDGE DECK SCARIFICATION 2 1/4"
- BITUMINOUS SURFACE REMOVAL 1 1/2"



PLAN VIEW STAGE II

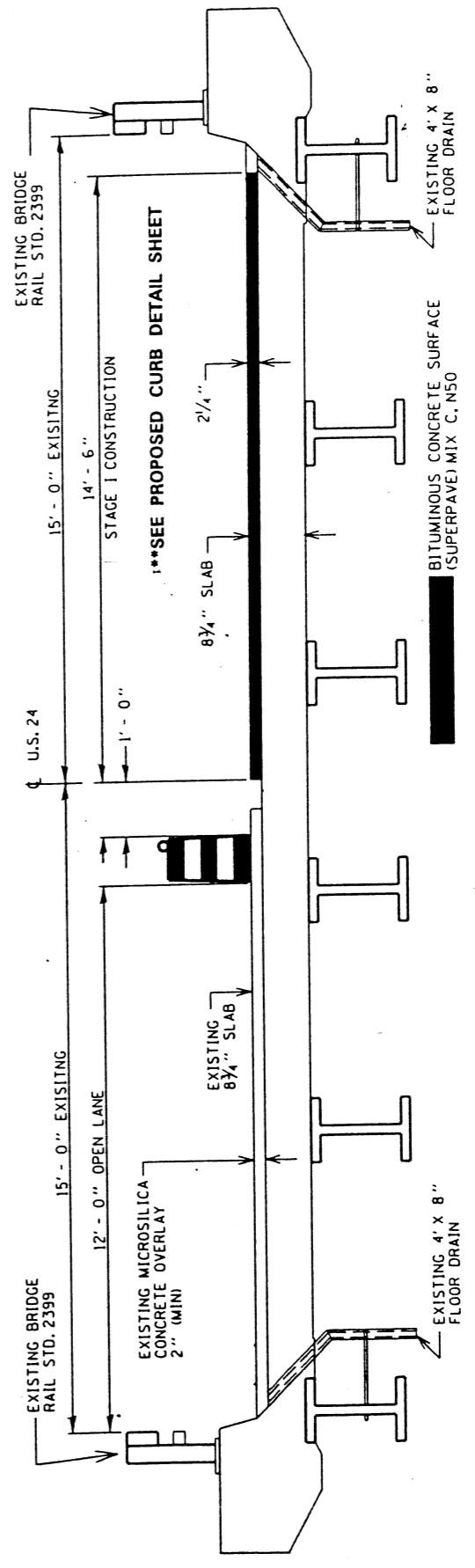
FED. ROAD DIST. NO.	F.A.I. RITE:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
	FAP 317 (US 24)	(28 BR)	MCCLEAN	14	8
ILLINOIS		FED. AID PROJECT			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAP 317 (US 24)	(28 BR)	MCLEAN	14	9
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



EXISTING DECK CROSS SECTION

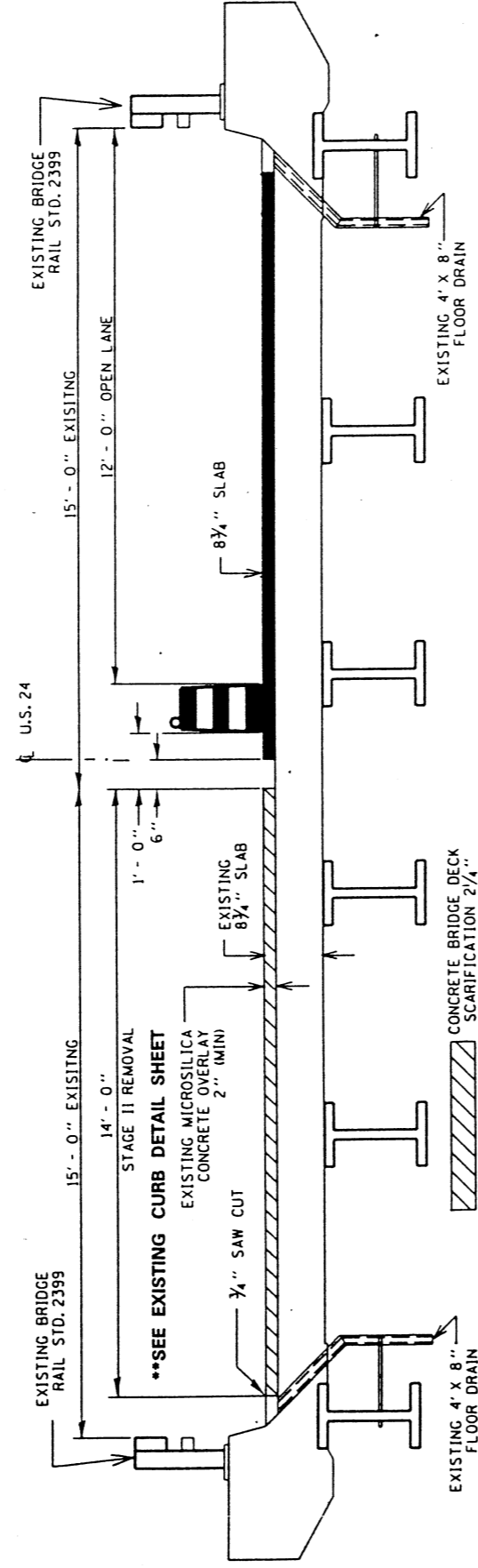
**STAGE I
(LOOKING EAST)**



PROPOSED DECK CROSS SECTION

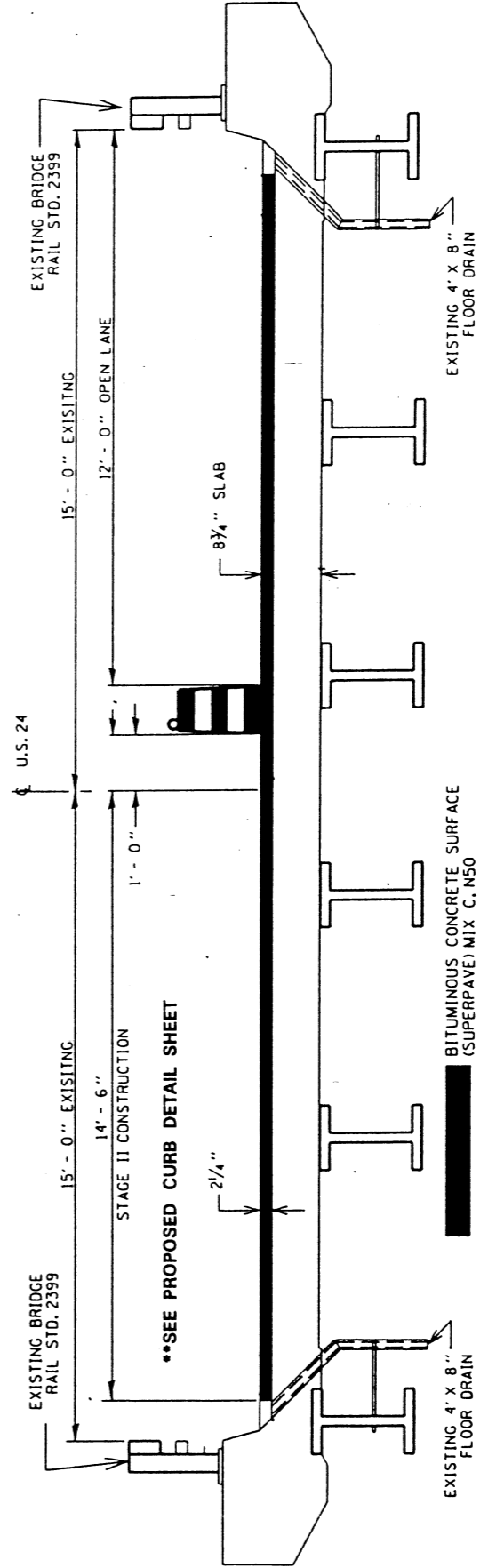
**STAGE I
(LOOKING EAST)**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAP 317 (US 24)	(28 BR1)	MCLEAN	14	10
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING DECK CROSS SECTION

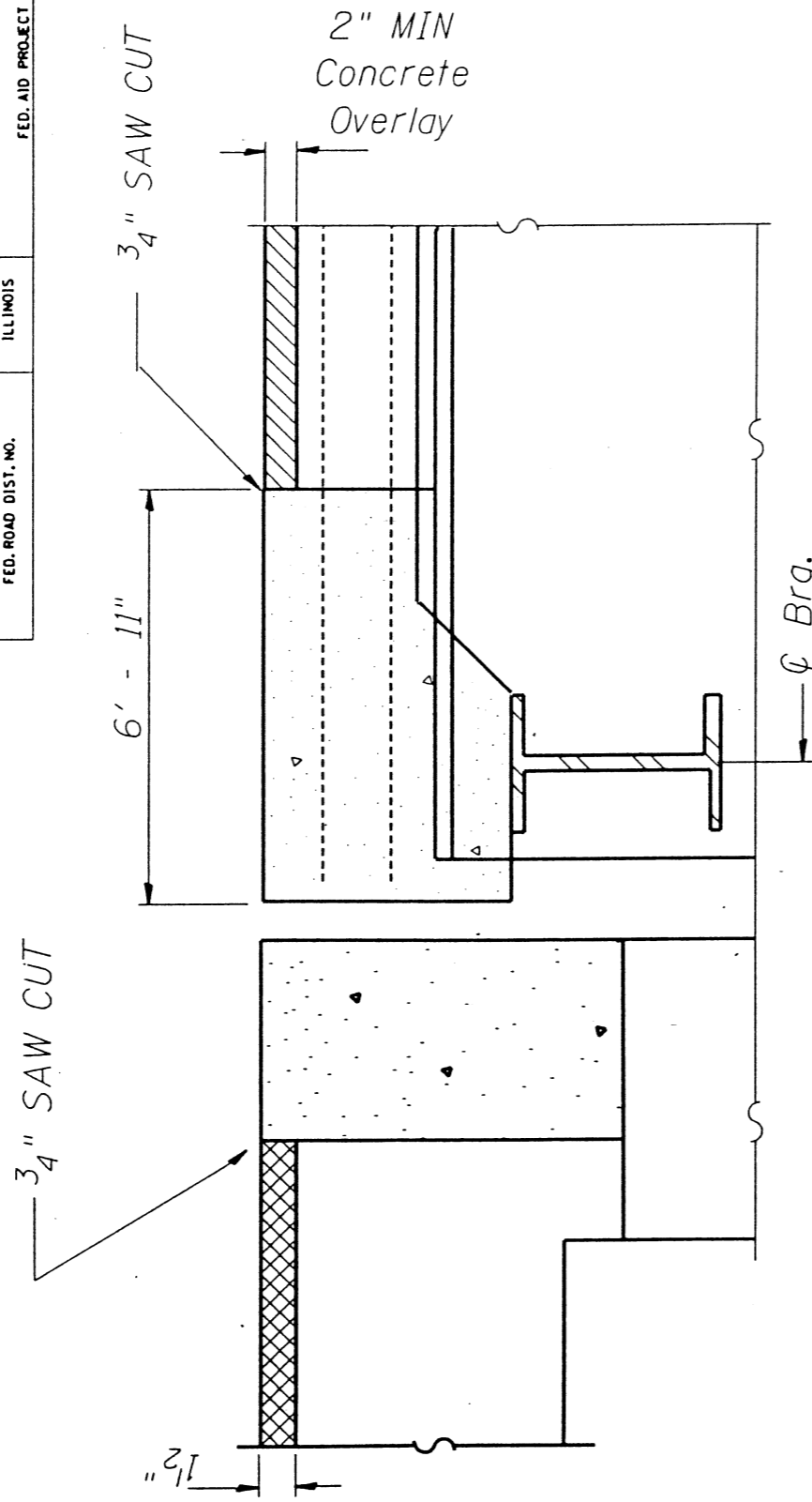
STAGE II (LOOKING EAST)



PROPOSED DECK CROSS SECTION

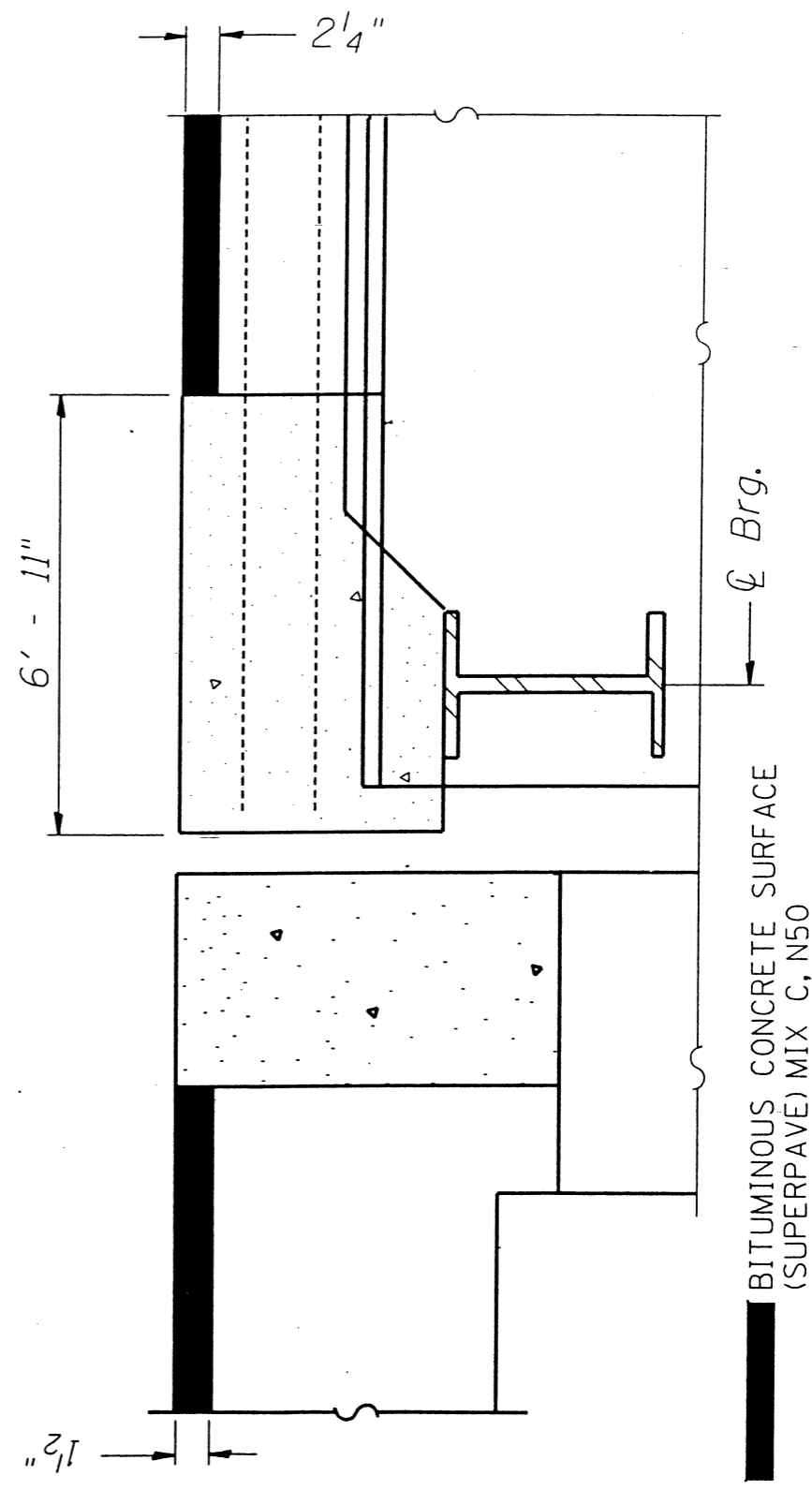
STAGE II (LOOKING EAST)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAP 317 (US 24)	(28 BRJ)	MCLEAN	14	11
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



- CONCRETE BRIDGE DECK
- SCARIFICATION 2/4"
- BITUMINOUS SURFACE REMOVAL 1 1/2"

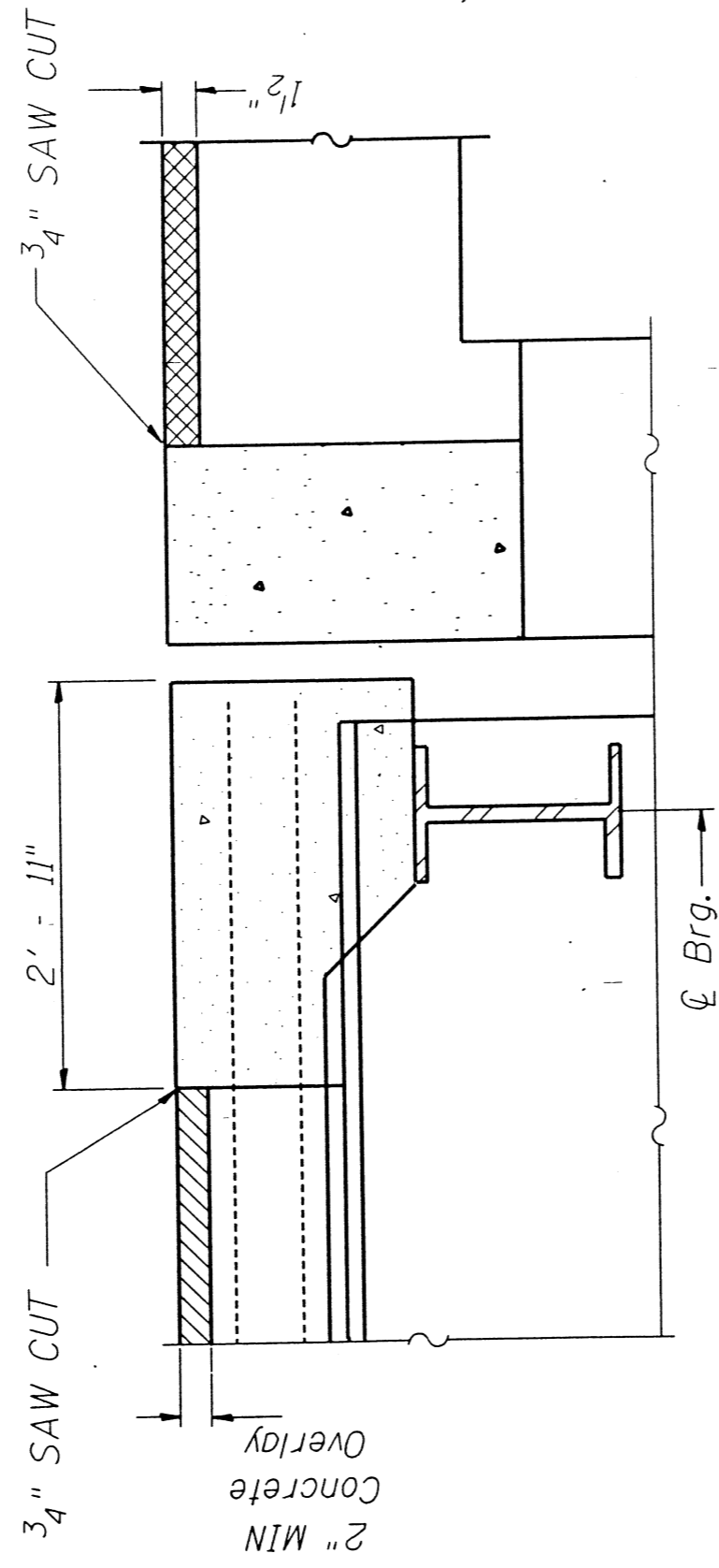
EXISTING SECTION A - A
WEST ABUTMENT

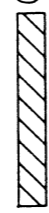
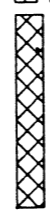


- BITUMINOUS CONCRETE SURFACE (SUPERPAVE) MIX C, N50

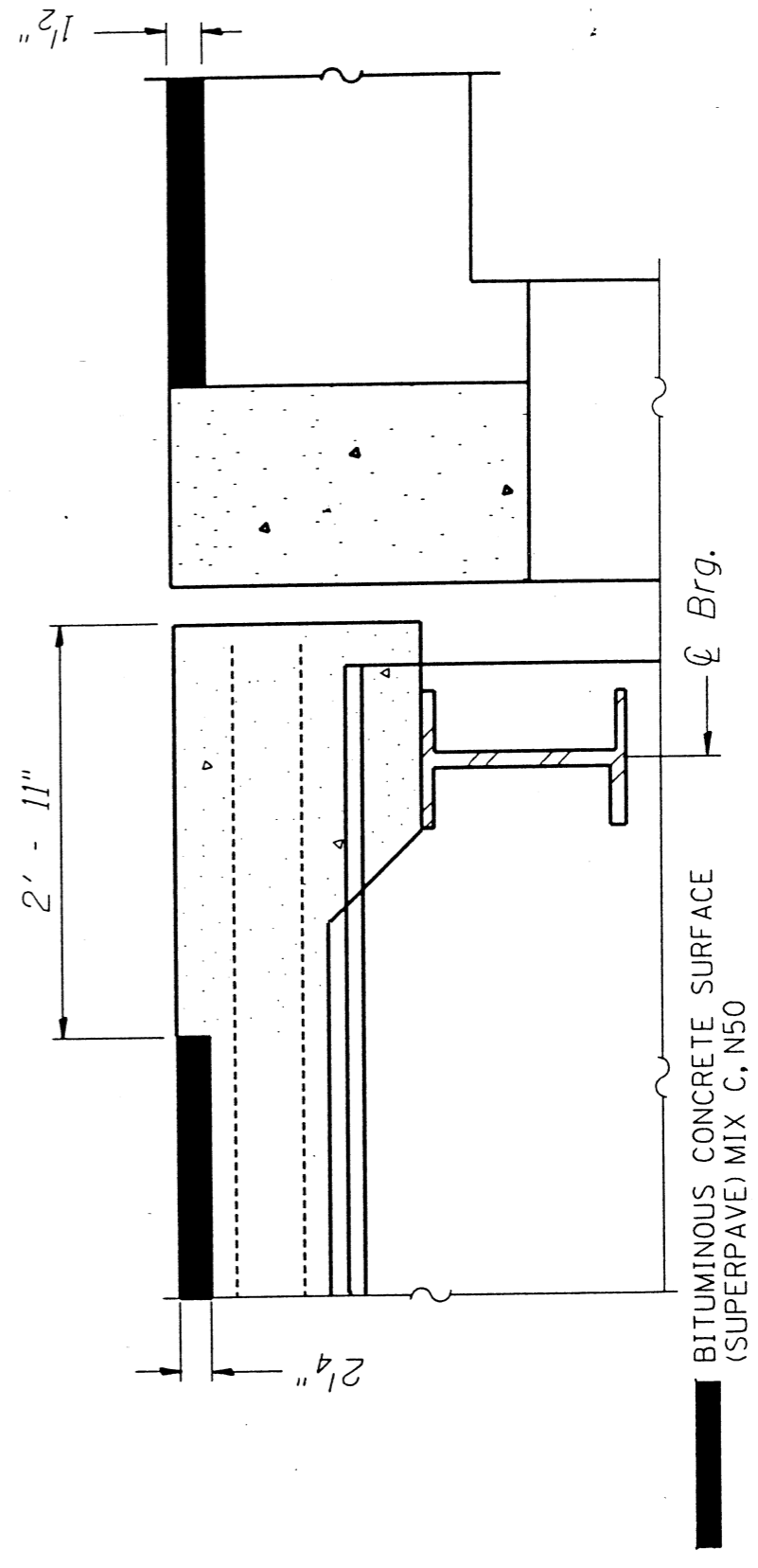
PROPOSED SECTION A - A
WEST ABUTMENT

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAP 317 (US 24)	(28 BR)I	MCLEAN	14	12
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



 CONCRETE BRIDGE DECK SCARIFICATION 2 1/4"
 BITUMINOUS SURFACE REMOVAL 1 1/2"

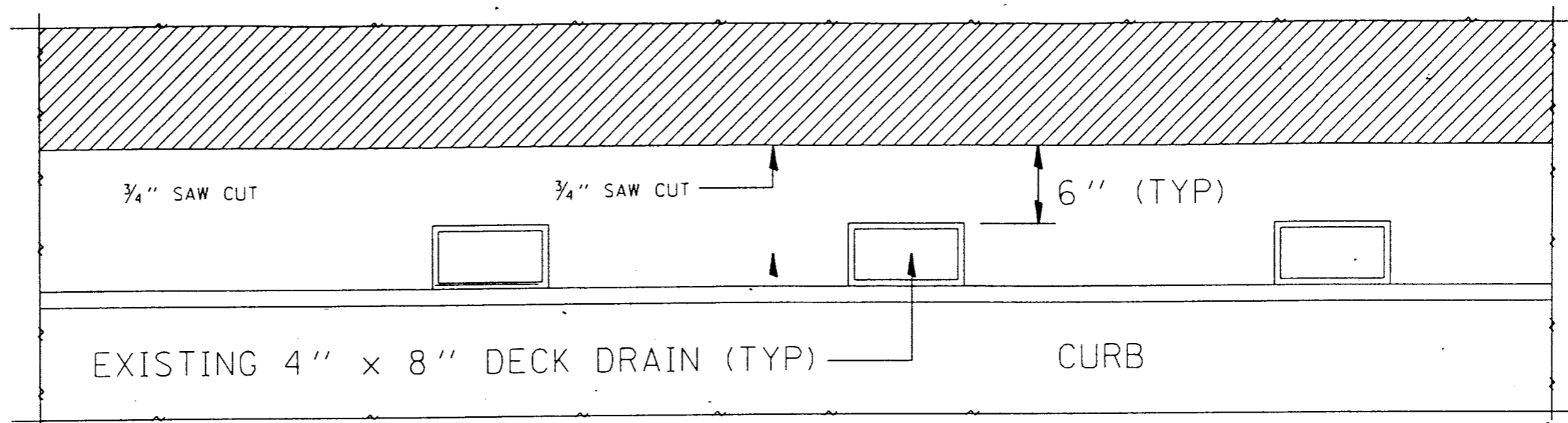
EXISTING SECTION B - B
EAST ABUTMENT



 BITUMINOUS CONCRETE SURFACE (SUPERPAVE) MIX C, N50

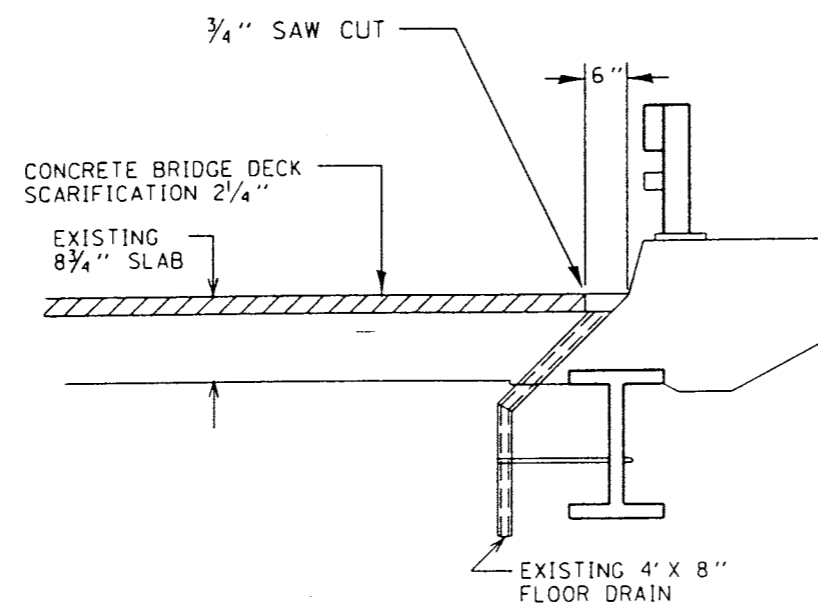
PROPOSED SECTION B - B
EAST ABUTMENT

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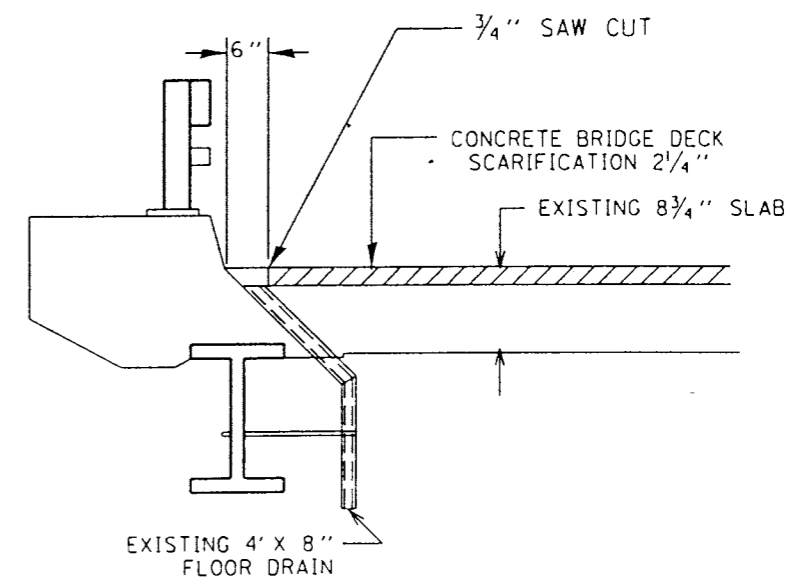


PLAN VIEW

CONCRETE BRIDGE DECK SCARIFICATION 2 1/4"



**EXISTING CURB DETAIL
STAGE I**

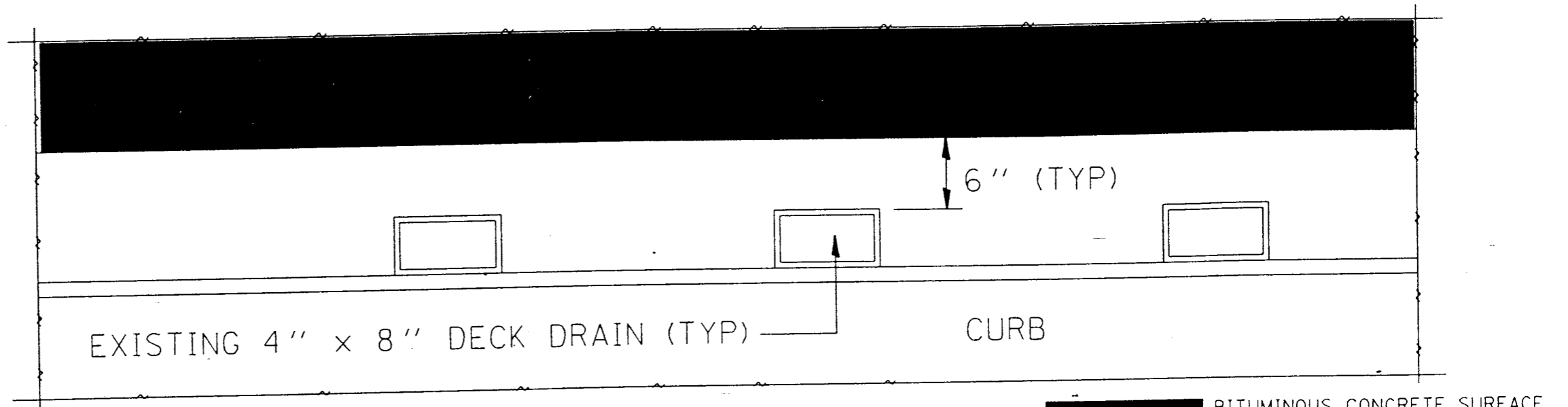


**EXISTING CURB DETAIL
STAGE II**

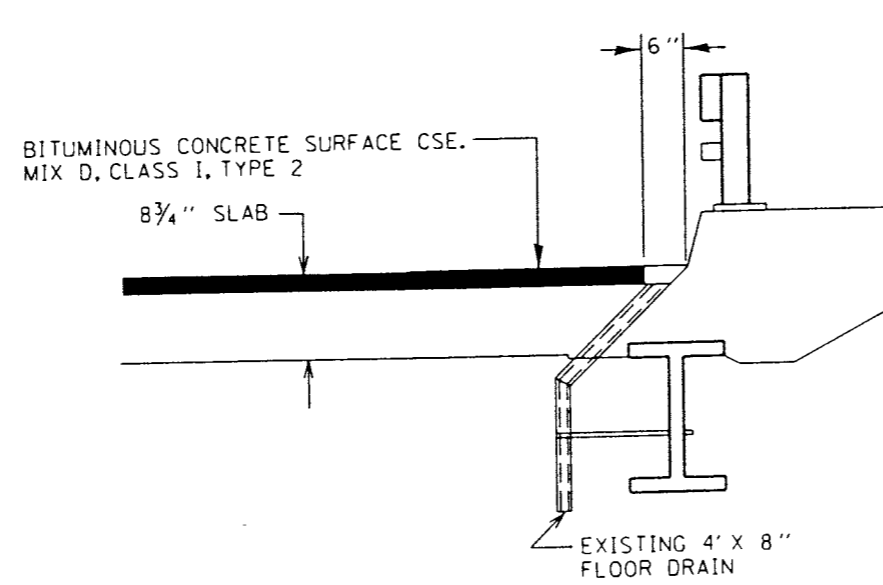
EXISTING CURB DETAILS

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
F.A.I. RTE.	SECTION	COUNTY
FAP 317 (US 24)	(28 BR) I	MCCLEAN
TOTAL SHEETS	14	SHEET NO
		13

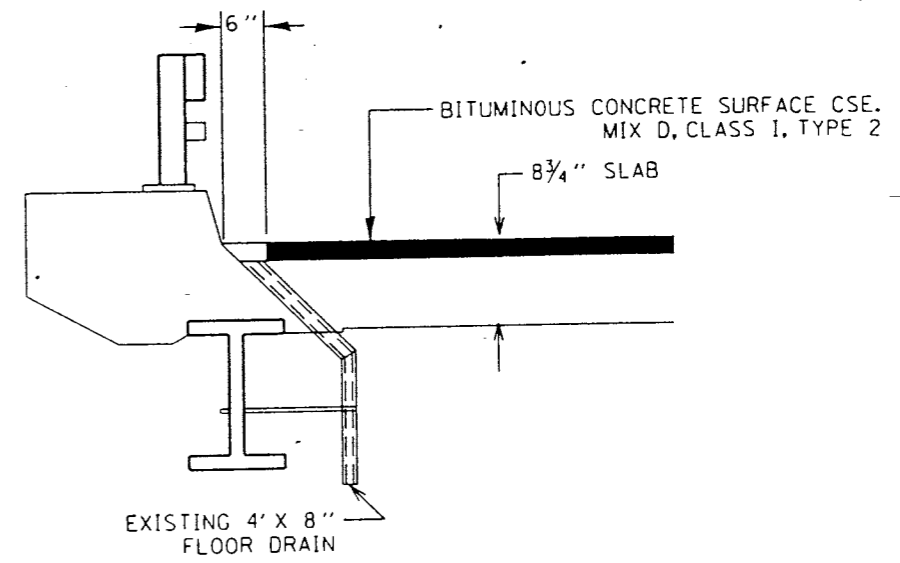
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PLAN VIEW



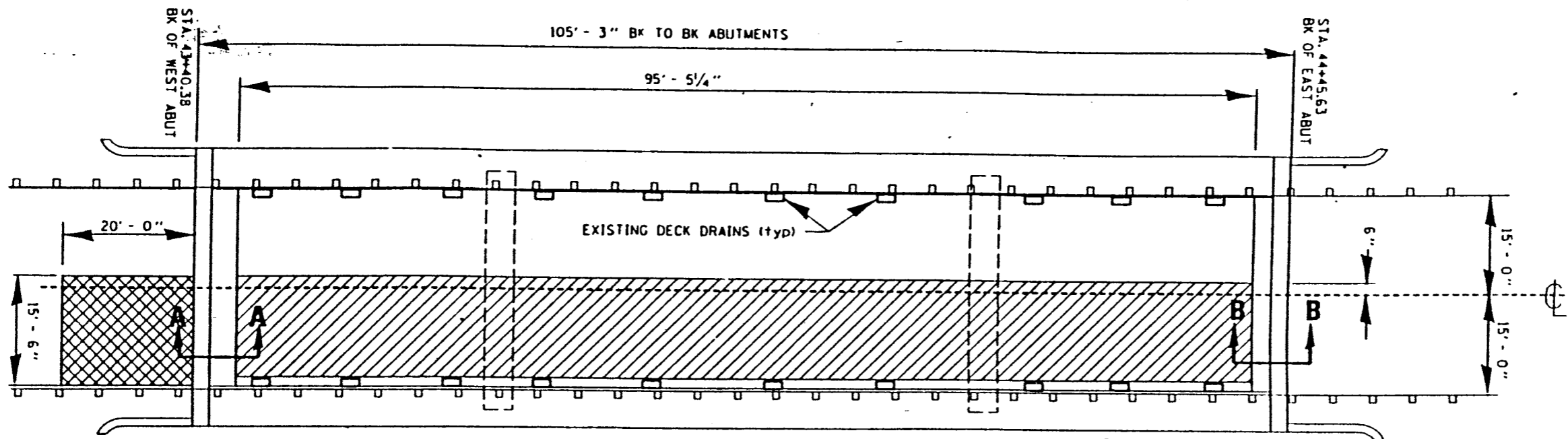
**PROPOSED CURB DETAIL
STAGE II**



**PROPOSED CURB DETAIL
STAGE II**

PROPOSED CURB DETAILS

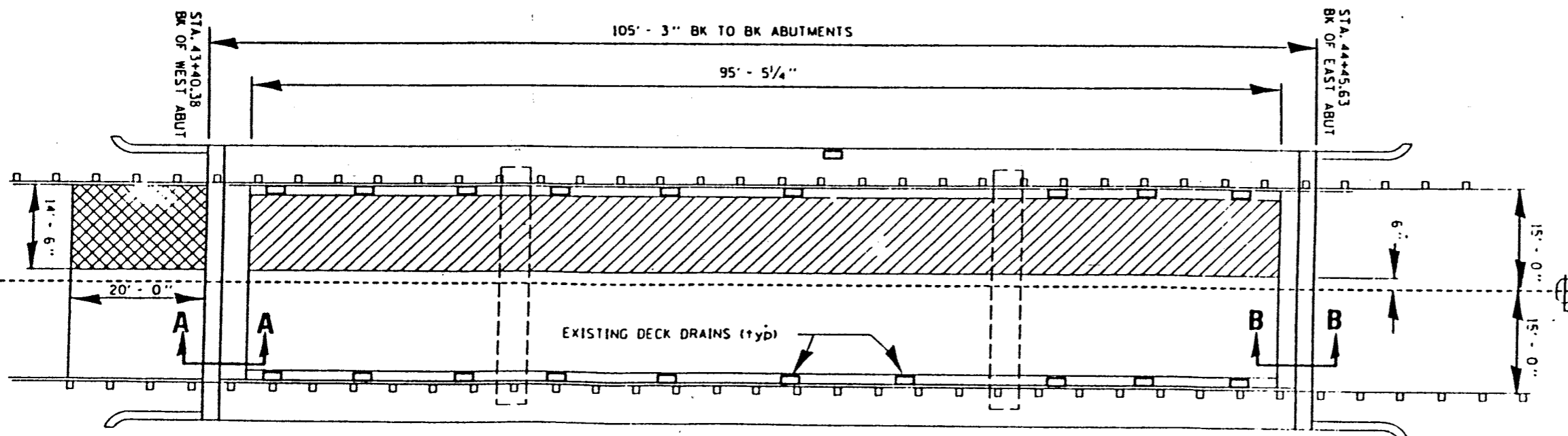
FED. ROAD DIST. NO.	FED. AID PROJECT		
ILLINOIS			
FAP 317 (US 24)	(28 BR)	MCCLEAN	
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS
			14
			14
			SHEET NO.



PLAN VIEW STAGE I



- CONCRETE BRIDGE DECK SCARIFICATION 2 1/4"
- BITUMINOUS SURFACE REMOVAL 1 1/2"



PLAN VIEW STAGE II

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS
FAP 317 (US 24)	(28 SR)	MCCLEAN	14
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	8

Z 0016200 DECK SLAB REPAIR (PARTIAL) SQ YD					
STAGE	I				
PATCH #	⑤ W. JOINT	⑤ S. PARAPET	L	W	AREA
#1 OK	21'	4.3	4.4 ✓	3.5 ✓	1.7 ✓
			5.8 ✓	4.7 ✓	3.0 ✓
			2.5 ✓	2.0 ✓	.6 ✓
			5.0 ✓	3.6 ✓	2.0 ✓
			3.2 ✓	6.5 ✓	2.3 ✓
			3.7 ✓	9.0 ✓	3.7 ✓
#2 OK	21'	15'	2.3 ✓	.6 ✓	.2 ✓
#3 OK	40	10	1.6 ✓	1.0 ✓	.2 ✓
			3.4 ✓	1.9 ✓	.7 ✓
#4 OK	44	12	3.5 ✓	2.0 ✓	.8 ✓
#5 OK	48	9	2.1 ✓	1.8 ✓	.4 ✓
5A OK	48	15	2.0 ✓	1.0 ✓	.2 ✓
#6 OK	49	1.5	2.5 ✓	1.2 ✓	.3 ✓
#7 OK	52	6.2	5.0 ✓	1.9 ✓	1.1 ✓
			5.6 ✓	4.2 ✓	2.0 ✓
			3.4 ✓	2.2 ✓	0.8 ✓
			2.1 ✓	1.9 ✓	.4 ✓
TOTAL					7.10 SQ

MEAS. JUN 6-6-02		MEAS CHECKED JUN 6-7-02	
CALL NO	NO 6-7-02	✓	NO 6-10-02
DEATH CHECK			
.2	.15		
.1	.12		.14
.15			
.2	.25		
.15			
.20			
.15			
.12			
.15			
.20			
.16			
.08			
.17			
.15			
.20			

Z0016200		DECK SLAB		REPAIR (PARTIAL)		
STAGE	L		L	W	AREA	
8	OK	65	8.9	1.5 ✓	1.5 ✓	.3 sy ✓
9	OK	64	14.3	2.2 ✓	1.1 ✓	.3 ✓
10	OK	66	2.4	3.4 ✓	2.1 ✓	.8 ✓
11	OK	69	6.7	2.0 ✓	3.6 ✓	.8 ✓
12	OK	67	10.4	3.0 ✓	1.8 ✓	.4 ✓
13	OK	69	12.3	3.0 ✓	2.2 ✓	.7 ✓
14	OK	71	2.5	5.4 ✓	2.5 ✓	1.6 ✓
15	OK	74	10.8	2.7 ✓	1.8 ✓	.5 ✓
16	OK	77	4.3	2.9 ✓	2.3 ✓	.7 ✓
				2.7 ✓	2.0 ✓	.6 ✓
17	OK	82	2.6	1.8	1.5	.3 ✓
18	OK	87	5.2	1.7 ✓	1.5 ✓	.3 ✓
					PAGE TOTAL	7.5 sy ✓

MEAS JW 6-6-02		MEAS CHECK NP 6-7-02	
CALL NO	4-7-02	✓ NP	6-10-02
DATA CLACK			
.10			
.15			
.20, .23	TOBEY	RESAW	3.4 x 2.7
.15, .20			
.12, .10			
.10			
.15, .20			
.15, .14			
.20, .25	TOBEY	RESAW	3.1 x 2.3
.15			
.15			

20014200 DECK SLAB REPAIR (PARTIAL)					
STAGE I			L	W	AREA
19	OK	91	2.1	2.6	1.4
20	OK	93	5.9	6.6	3.2
			3.3	1.1	.4
			PAGE TOTAL		3.1 sy

MEAS JUN 6-6-02

MEAS CHECK MP 6-7-02

CALL MP 6-7-02	✓ MP 6-10-02
DEPTH CHECK	
.12	.10
.15	
.13	
SUMMARY	
PAGE 4	2.1. 0sy ✓
5	7.5 sy ✓
6	3.1 sy ✓
TOTAL	31.6 sy ✓
	DA* 5 X
	6-10-02
$T \text{ MED CONC} = 31.6 \times 9 \times \text{AVE DEPTH } \frac{.2}{27} = 2.11 \text{ sy}$	

STAGE	W. JOINT	S. PARASET	L	W.	AREA
1A	7.0	2.6	1.3 FT	5.6 FT	.8 sy
1	10.4	1.7	1.8 FT	7.1 FT	1.4 sy
2	15.2	1.7	2.6 ✓	3.2 ✓	.9 ✓
			1.9	4.4	.9 ✓
3	19.8	3.5	2.9	4.5	1.5 ✓
			4.8	4.8	2.6 ✓
			2.4	3.5	.9 ✓
			2.0	7.0	1.6 ✓
4	31.0	9.5	2.0 ✓	1.4 ✓	.3 ✓
5	24.0	1.7	6.9 ✓	2.0 ✓	1.5 ✓
			12.5 ✓	3.0 ✓	4.2 ✓
			2.6	2.6	.8 ✓
6	40.0	2.5	2.0 ✓	4.5 ✓	1.0 ✓
7	45.0	3.8	2.9 ✓	2.7 ✓	.9 ✓
8	48.0	7.7	2.5 ✓	4.0 ✓	1.1 ✓
9	50.	3.8	3.3 ✓	2.8	1.0 ✓

9

6-17-02

MEAS	INSTR	CALC	MP	MP 6-18-02
DEATH CHECK				
.15	.22			
.14	.08			
.23	.22	.10		
.17				
.16				
.20				
.20				
.22				TOBEY RESAW .2.0 x 1.6
.17				
.32				
.15				
.20				
.15				
.20				

20016200	DECK	SLAB REPAIR (PARTIAL)			
10	.55.	1.7	3.0 FT	9.5 FT	3.25 FT
11	66.2	3.8	6.3	2.5	1.8 FT
			4.0	6.6	2.9 FT
12	84	8.5	1.8	1.8	.4 FT
13	83.3	1.7	5.9	2.0	1.3 FT
			2.8	2.8	.9 FT
14	92.7	1.7	3.5	6.9	2.7 FT
6A	34.0	10.5	5.0	1.9	1.1 FT
			1.9	1.9	.4 FT
			TOTAL		36.15 FT
		DQ# 13	X	6-19-02	
X9300400	DECK	SLAB REPAIR (FULL DEPTH)			
6A	39	10.5	1.9	1.9	.4 FT
		DQ# 25	X	6-14-02	

6-17-02

MEAS.	INSP.	CHECK	MP	UNIT	DATE
.70	.10		TOBBY RESAW	30	6-18-02
.15	.19		TOBBY RESAW	7.2	6-18-02
			TOBBY RESAW	4.5	6-18-02
.25	.15				
.13	.10				
.16					
.13	.20				
.20					
6-19-02					
$TREQ = \frac{36.11 \times 9 \times .2}{27} = 2.4$					
$.4 \times 9 \times .64 = .1$					
Total 2.5cy					
Delivered 3.0cy					
FULL DEPTH - 6"					

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES
- 3 TYPICAL CROSS SECTIONS 28BR
- 4 TYPICAL CROSS SECTIONS 27BR
- 5 MISCELLANEOUS DETAILS
- 6-7 SUMMARY OF QUANTITIES
- 8 SCHEDULES
- 9 PLAN & PROFILE 28BR
- 10 PLAN & PROFILE 27BR
- 11 TRAFFIC STAGING & MISC. DETAILS 28BR
- 12 TRAFFIC STAGING & MISC. DETAILS 27BR
- 13&14 BRIDGE APPROACH PAVT
- 15 TEMPORARY CONCRETE BARRIER
- 16-24 BRIDGE PLANS 28BR (S.N. 057-0071)
- 25-43 BRIDGE PLANS 27BR (S.N. 057-0230)
- 44-49 CROSS SECTIONS

97%
12-10-94

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISIONS OF HIGHWAYS
**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

F.A.P. 317 (US ROUTE 24)
SECTION 27 BR & 28 BR
MCLEAN COUNTY

PROJ BRF-STPF-
317 (19)

C 93-032-94

STANDARDS

1686-4	SYMBOLS AND ABBREVIATIONS
2113-2	NAME PLATE FOR BRIDGES
2135	PERMANENT SURVEY MARKERS
2225-10	REINFORCEMENT FOR CONTINUOUSLY REINFORCED P.C.C. PAVEMENT
2228-4	METAL END SECTION FOR PIPE CULVERTS
2230-16	STEEL PLATE BEAM GUARDRAIL
2298-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2299-13	DESIGN OF TRAFFIC CONTROL DEVICES
2300-3	FLAGMAN TRAFFIC CONTROL SIGN
2302-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TWO-LANE, TWO-WAY, RURAL, DAY OR NIGHT
2305-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES RURAL, MOVING OPERATION, DAY
2306-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES RURAL, MOVING OPERATION, DAY
2307-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES SHORT-TIME OPERATION, DAY OR NIGHT
2308-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (CASE VIII), RURAL, MOVING OPERATION, MULTILANE DIV., DAY
2311-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TWO-LANE, TWO-WAY, RURAL, WIDENING, DAY OR NIGHT
2323-13	PAVEMENT JOINTS
2336-4	TRAFFIC BARRIER TERMINAL, TYPE 1 AND 1A
2340-4	TRAFFIC BARRIER TERMINAL, TYPE 5 & 5A
2341-5	TRAFFIC BARRIER TERMINAL, TYPE 6
2370-1	DETAILS OF DETECTOR INSTALLATIONS
2383-3	TEMPORARY CONCRETE BARRIER
2388-1	TRAFFIC BARRIER TERMINAL, TYPE 11
2394	TYPICAL LAYOUT FOR DETECTOR LOOPS
2396	TYPICAL PAVEMENT MARKINGS
2399-2	STEEL RAIL RETROFIT FOR BRIDGES
2409-1	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TWO LANE, TWO-WAY, RURAL, ONE-LANE CLOSURE ON BRIDGE DECK, DAY OR NIGHT OPERATIONS
2426-3	CLASS B PATCHES
2443-1	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
BLR-21-2	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TWO-LANE, TWO-WAY, RURAL, OVER ONE DAY

2381
MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____

JULIE 1-800-892-0123

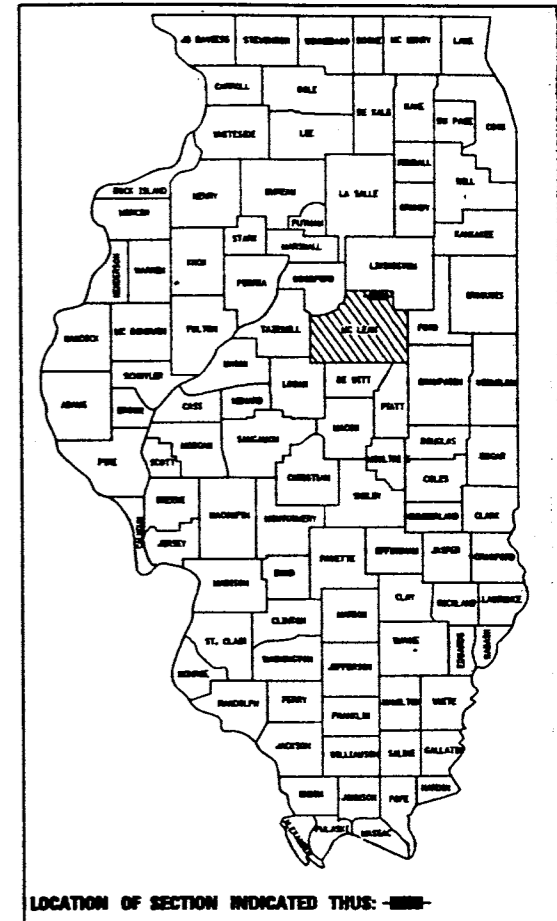
DISTRICT 3 NO. (815) 434-6131

PROJECT ENGINEER: WAYNE ALDRICH
SQUAD LEADER: MIKE PUBENTZ
TOWNSHIP: YATES

CONTRACT NO. 86489

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS
317	27BR & 28BR	MCLEAN	49
TOTAL SHEETS			1

P-93-050-90
D-93-065-93

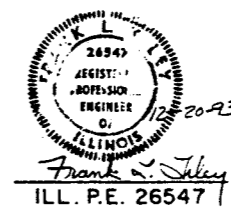


1991 ADT 3300
P.V. = 86.3 S.U. = 4.6 M.U. = 9.1

**FUNCTIONAL CLASSIFICATION
PRINCIPAL ARTERIAL (N.H.S.)**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED JAN 3 19 94
Raymond Dalton
DISTRICT ENGINEER
PASSED JAN 28 19 94
David Smith
ENGINEER OF DESIGN AND ENVIRONMENT
APPROVED JAN 28 19 94
Ronald C. Weber
DIRECTOR, DIVISION OF HIGHWAYS

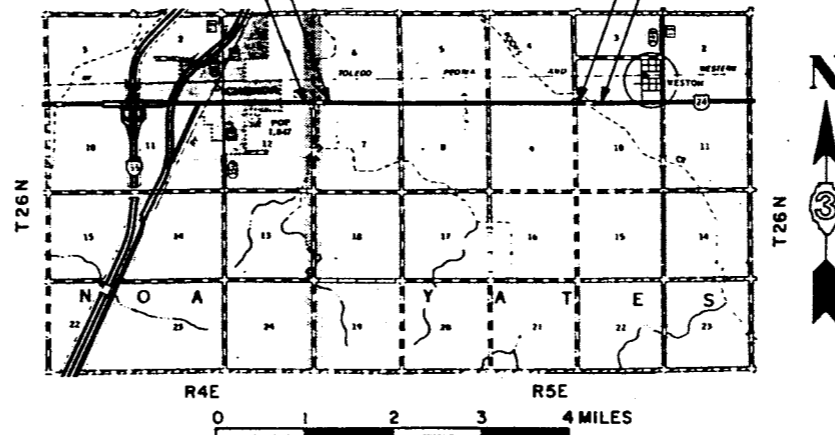


SEC.28 BR ENDS
AT STA 47+45.63

SEC.28 BR BEGINS
AT STA 40+40.38

SEC.27 BR BEGINS
AT STA. 206+08.00

SEC.27 BR ENDS
AT STA. 213+63.00



LAYOUT SCALE
0 1 2 3 4 MILES

PROJECT LENGTH
SEC. 28BR 705.25 FT. = 0.134 MILES
SEC. 27BR 755.00 FT. = 0.143 MILES
NET LENGTH
OF PROJECT 1460.25 FT. = 0.277 MILES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	28BR	McLEAN	49	16
			ILLINOIS	FED AID PROJECT

SHEET 1 OF 9

DESIGN SPECIFICATIONS

AASHTO 1992
 FUTURE WEARING SURFACE = NO ALLOWANCE

EXISTING DESIGN STRESSES

$f_c = 1400$ P.S.I. (SUPER. & SUB)
 $V = 75$ PSI (FOOTING)
 MAX SOIL PRESSURE = 4.24 K/SQ FT
 $f_s = 20,000$ P.S.I. REINF.
 $f_s = 18,000$ P.S.I. STRUCT.
 $n = 10$

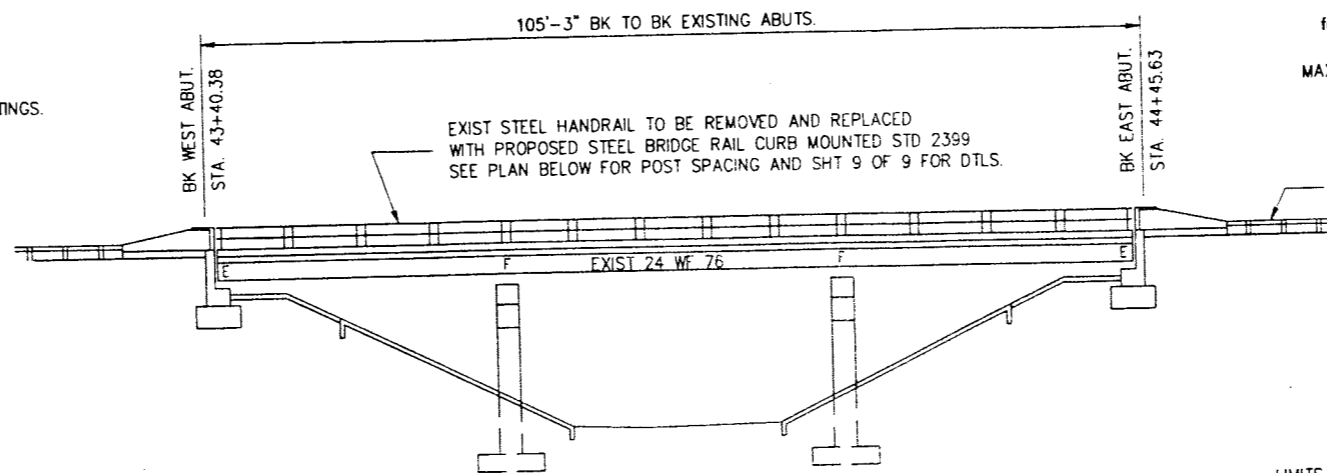
EXISTING GUARDRAIL TO BE REMOVED AND REPLACED SEE RDWY PLANS

BENCH MARK: S.E. CORNER TOP OF CURB STA. 44+44 RT.
 BRASS MONUMENT ASSUME EL. 100.00

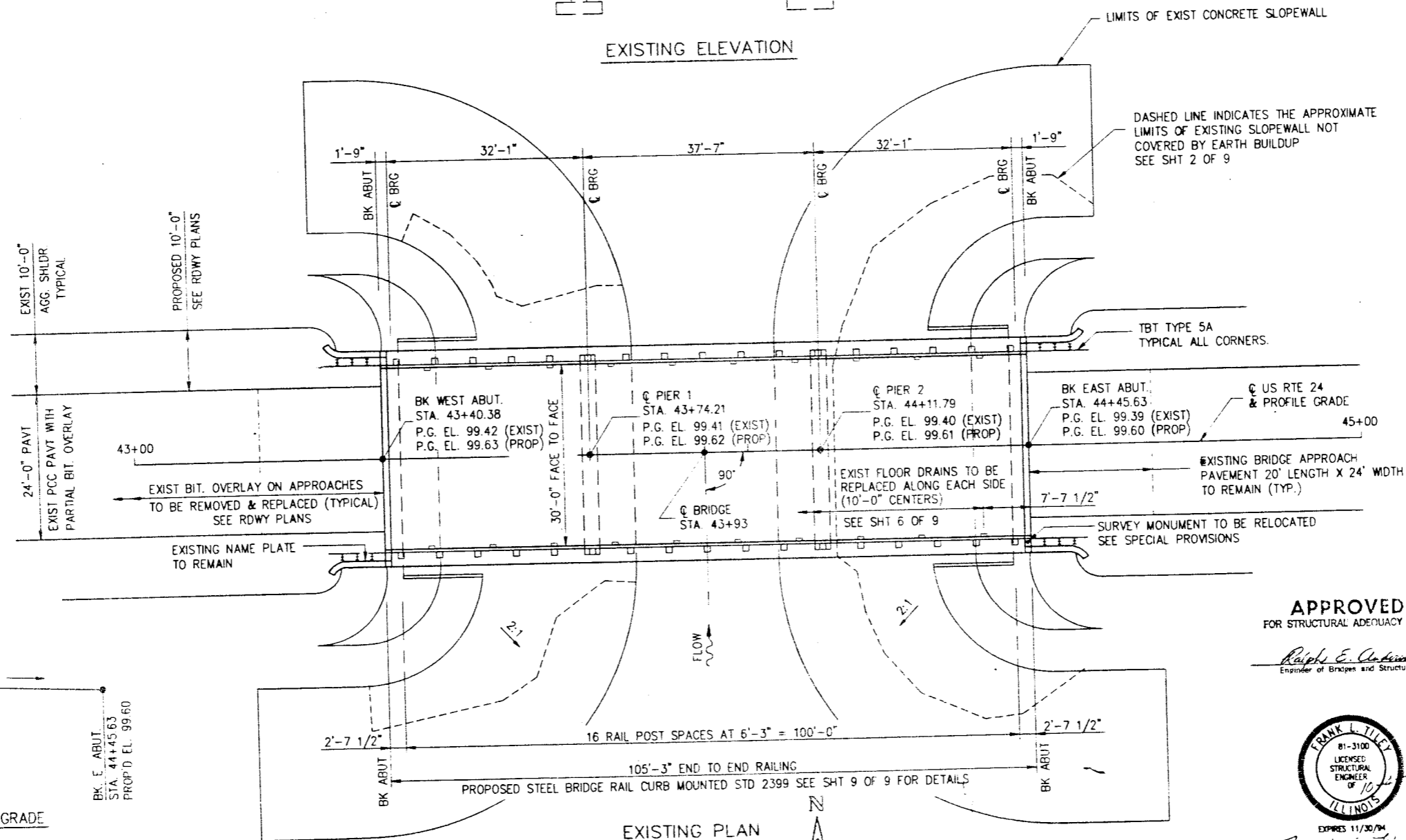
EXIST STRUCTURE 057-0071: STA. 43+93.00, SBI RTE 8, SEC. 28BR
 BUILT 1959, 7" CONC. SLAB, 3 SPAN CONTINUOUS ROLLED STEEL BEAMS
 35'-8" O.-O. DECK, 105'-3" BK. TO BK. ABUTS. SOLID CONC. PIERS ON
 SPREAD FOOTINGS, SPILL THRU ABUTS ON UNKNOWN TYPE PILE SUPPORTED FOOTINGS.

EXISTING GUARDRAIL, BITUMINOUS SURFACE ON APPROACHES & BRIDGERAIL SHALL BE REMOVED AND REPLACED. THE EXISTING BRIDGE DECK SURFACE SHALL BE SCARIFIED, REPAIRED & OVERLAID ACCORDING TO THE SPECIAL PROVISIONS (METHOD 2) EXPANSION JOINTS AT EACH ABUTMENT SHALL BE REPLACED WHICH INCLUDES PARTIAL SUPERSTRUCTURE REPLACEMENT LIMITED CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL IS REQUIRED. LIMITED REPAIR OF ABUTMENT SEAT AND BACKWALL IS REQUIRED.

TRAFFIC SHALL BE MAINTAINED UTILIZING STAGE CONSTRUCTION.



EXISTING ELEVATION



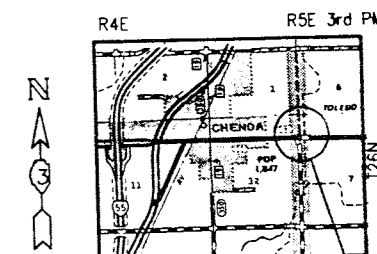
EXISTING PLAN

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
 Engineer of Bridges and Structures



Frank L. Tiley
 ILLINOIS STRUCT. NO. 3100



GENERAL PLAN & ELEVATION
 BRIDGE OVER TRIBUTARY ROOKS CR.
 FAP 317 (US 24)
 SECT. 28BR
 McLEAN COUNTY
 STA. 43+93
 S.N. 057-0071

LOADING HS20-44

GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 M-42 OR M-53 GRADE 60

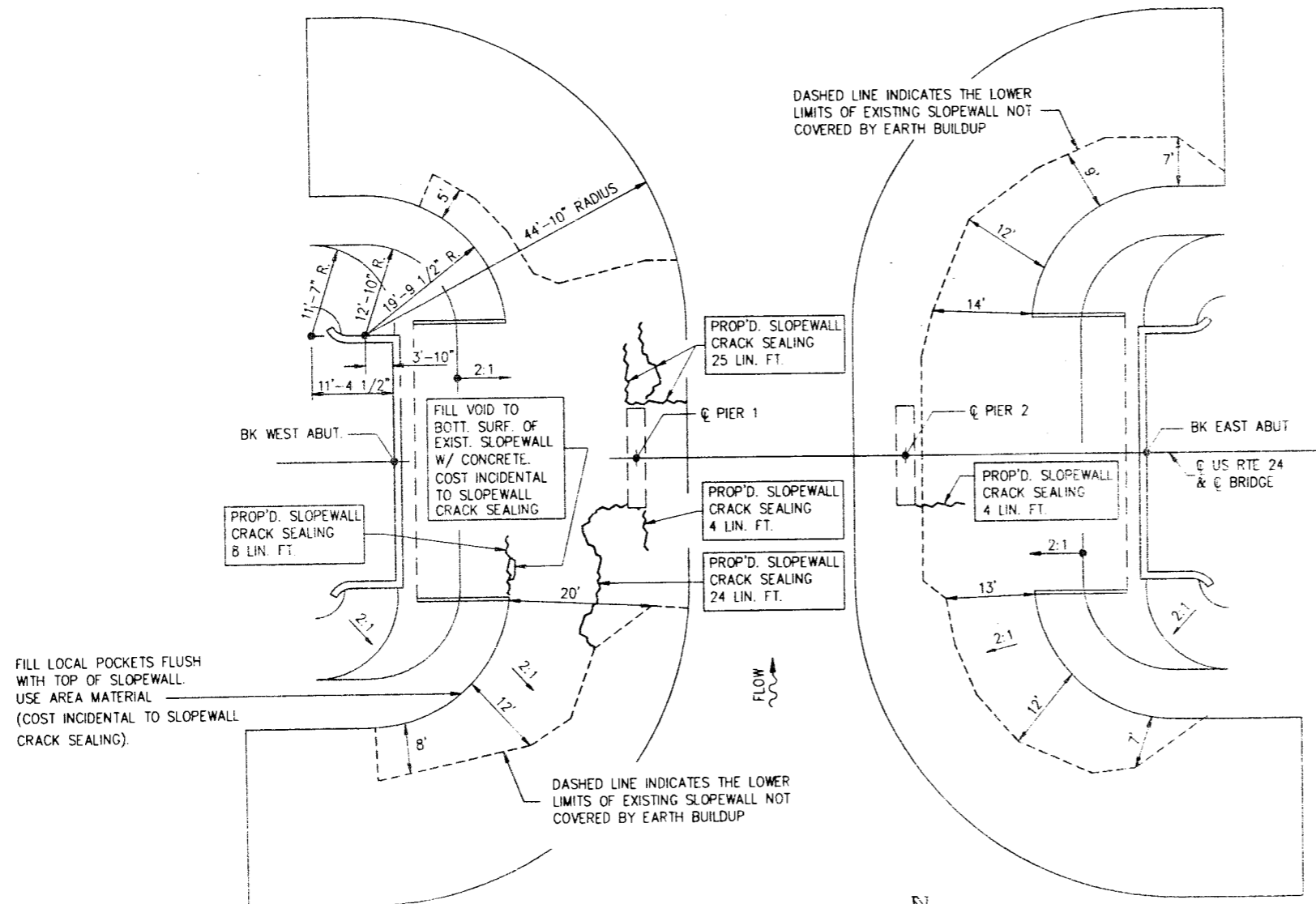
ALL EXISTING STRUCTURAL STEEL INCLUDING GRDERS, DIAPHRAGMS, BEARINGS AND ACCESSORIES LOCATED WITHIN 5'-0" OF THE BACK OF EACH ABUTMENT SHALL BE CLEANED PER THE REQUIREMENTS OF SSPC SURFACE PREPARATION SPECIFICATIONS SP3, FOR POWER TOOL CLEANING AND SHALL BE PAINTED USING THE LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM. PAINT COLOR SHALL BE MUNSELL #10Y 7/1 LIGHT GREY.

ALL PROPOSED STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH THE INORGANIC ZINC-SILICATE/ACRYLIC/ACRYLIC PAINT SYSTEM FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED. THE COLOR OF THE ACRYLIC FINISH COAT SHALL BE LIGHT GREY, MUNSELL NO. 10Y 7/1. FOR SLOPEWALL CRACK SEALING, USE ELASTIC JOINT FILLER.

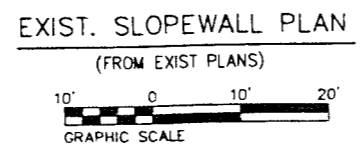
TOTAL BILL OF MATERIALS

CODE NO.	ITEM	UNIT	TOTAL
* 50104100	BRIDGE HANDRAIL REMOVAL	LIN FT	206
* 50300540	FLOOR DRAINS (SPECIAL)	EACH	20
50801001	STEEL BRIDGE RAIL	LIN FT	211
51200200	REINFORCEMENT BARS EPOXY COATED	POUNDS	2080
50800120	PREFORMED JOINT SEAL 2 1/2"	LIN FT	74
* Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	9
* Z0006110	BRIDGE DECK MICROSILICA CONCRETE OVERLAY	SQ YD	319.3
* Z0012100	CONCRETE BRIDGE DECK SCARIFICATION (1/4 INCH)	SQ YD	319.3
* 50102400	CONCRETE REMOVAL	CU YD	11.5
50300250	CLASS X CONCRETE SUPERSTRUCTURE	CU YD	13.4
* Z0016200	DECK SLAB REPAIR, (PARTIAL)	SQ YD	91.0
50700400	FURNISHING & ERECTING STRUCTURAL STEEL	POUNDS	2760
*	POWER TOOL CLEANING RESIDUE CONTAINMENT & DISPOSAL	L SUM	1
* X0587100	CLEANING AND PAINTING EXISTING STEEL STRUCTURES (SP3)	L SUM	1
* Z0002600	BAR SPICERS	EACH	38
*	SLOPEWALL CRACK SEALING	LIN FT	65
* Z0053700	RESETTING SURVEY MONUMENTS	EACH	1
* 50401245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	20

* SEE SPECIAL PROVISIONS.



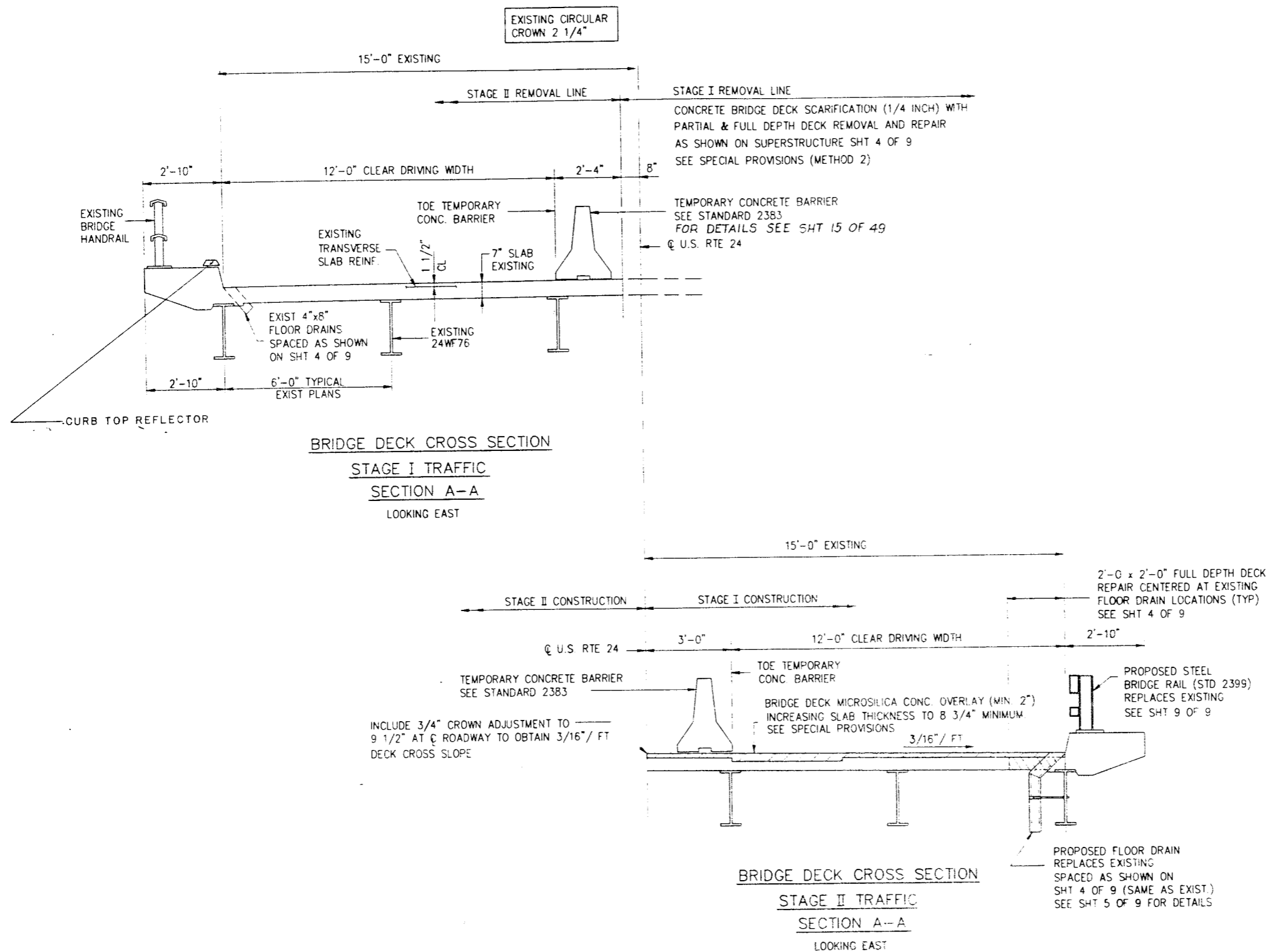
ADDITIONAL CRACK AND CONSTRUCTION JOINT SEALING MAY BE NEEDED AS DIRECTED BY THE ENGINEER



GENERAL NOTES, TOTAL BILL AND SLOPEWALL REPAIRS
BRIDGE OVER TRIBUTARY ROOKS CR.
FAP 317 (US 24)
SECT. 28BR
McLEAN COUNTY
STA. 43+93
S.N. 057-0071

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	28BR	McLEAN	49	16
ILLINOIS			FED AID PROJECT	

SHEET 3 OF 9



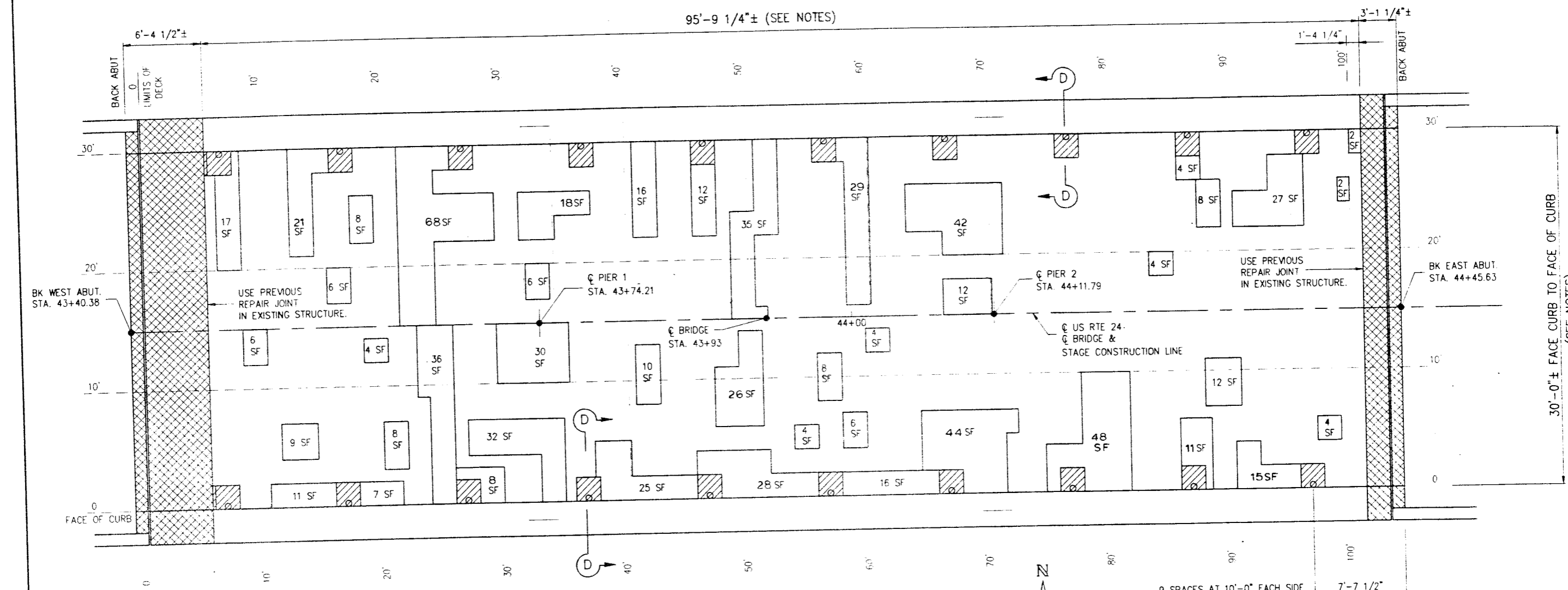
- STAGE I**
1. RESTRICT TRAFFIC TO WESTBOUND LANE AS INDICATED USING STD. 2409
 2. RECONSTRUCT EASTBOUND SUPERSTRUCTURE AND ALL NECESSARY WORK AS INDICATED AND DIRECTED BY THE ENGINEER.

- STAGE II**
1. RELOCATE TEMPORARY CONCRETE BARRIERS AND RESTRICT TRAFFIC TO EASTBOUND LANE AS INDICATED USING STD. 2409
 2. RECONSTRUCT WESTBOUND SUPERSTRUCTURE AND ALL NECESSARY WORK AS INDICATED AND DIRECTED BY THE ENGINEER.

STAGING DETAILS
BRIDGE OVER TRIBUTARY ROOKS CR.
FAP 317 (US 24)
SECT. 28BR
McLEAN COUNTY
STA. 43+93
S.N. 057-0071

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	28BR	McLEAN	49	19
			ILLINOIS	FED. AID PROJECT

SHEET 4 OF 9



KEY

- "DECK SLAB REPAIR (FULL DEPTH, TYPE 1)" - UNIT SQ. YD.
 2'-0" x 2'-0" CENTERED AS SHOWN AT DECK DRAIN REPLACEMENT LOCATIONS
 SEE SHEET 5 OF 9 FOR DETAIL D-D (FLOOR DRAIN DETAILS) & SPECIAL PROVISIONS
 BRIDGE DECK OVERLAY (METHOD 2). THE COST OF REMOVAL OF EXISTING FLOOR DRAINS
 IS INCIDENTAL TO THIS PAY ITEM. SEE SPECIAL PROVISIONS.
- "DECK SLAB REPAIR PARTIAL" - UNIT SQ. YD.
 INDICATES THE AREAS OF THE DECK WHERE ADDITIONAL SURFACE REMOVAL WILL
 EXCEED THE 1/4" SCARIFICATION REQD FOR THE COMPLETE CURB TO CURB DECK SURFACE.
 THE MAX DEPTH IN THESE AREAS SHALL NOT BE IN EXCESS OF 3 1/2" BELOW THE
 THE PREPARED DECK SURFACE. SEE SPECIAL PROVISIONS BRIDGE DECK OVERLAY (METHOD 2)
- "CONCRETE REMOVAL" - UNIT CU. YD.
 FOR RECONSTRUCTION OF EXPANSION JOINTS AT THE ABUTMENTS.
 SEE SUPERSTRUCTURE DTLS. SHTS 5 & 6 OF 9
 THE COST OF REMOVAL OF 1660 POUNDS OF EXISTING END ANGLES IS INCIDENTAL
 TO THIS PAY ITEM.

NOTES

1. LIMITS OF "CONCRETE BRIDGE DECK SCARIFICATION (1/4 INCH)" - UNIT SQ. YD.
 AND "BRIDGE DECK MICROSILICA CONCRETE OVERLAY" - UNIT SQ. YD. (MIN 2")
 SEE SPECIAL PROVISIONS BRIDGE DECK OVERLAY (METHOD 2).
2. A CROWN CORRECTION OF 3/4" SHALL BE MADE AT THE C OF THE ROADWAY
 TO PROVIDE 2" MINIMUM OVERLAY AS THE EXISTING CIRCULAR CROWN IS MODIFIED
 TO 3/16"/FT DECK CROSS SLOPES.
3. THE FINAL C OF ROADWAY ELEVATION WILL BE 2 1/2" HIGHER THAN THE EXISTING
 DECK ELEVATION.
4. SEE SHEET #5 OF 9 FOR SECTION D-D

SUPERSTRUCTURE
BRIDGE OVER TRIBUTARY ROOKS CR.
 FAP 317 (US 24)
 SECT. 28BR
 McLEAN COUNTY
 STA. 43+93
 S.N. 057-0071

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	28BR	McLEAN	49	20
		ILLINOIS	FED. AID PROJECT	

SHEET 5 OF 9

NOTE A
 PROPOSED BRIDGE DECK SURFACE REMOVAL (METHOD 2)
 WITH MICROSILICA OVERLAY SEE SPECIAL PROVISIONS
 & SUPERSTRUCTURE PLAN SHEET 4 OF 9 FOR LIMITS

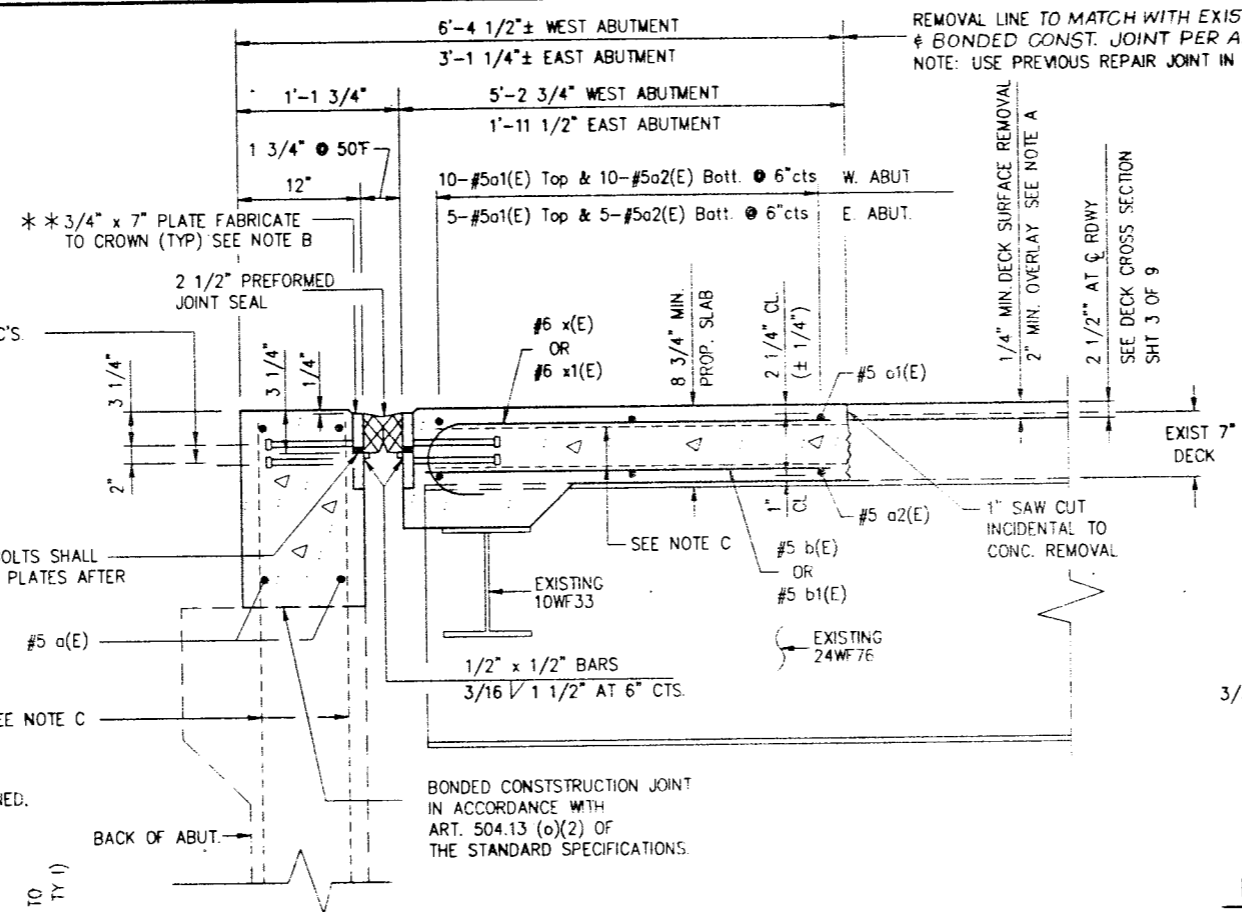
** AFTER FABRICATION, ALL SURFACES OF THE STEEL
 PLATES SHALL BE GIVEN ONE SHOP COAT OF PAINT
 SPECIFIED FOR STRUCTURAL STEEL. NO FIELD PAINTING
 REQUIRED.

3/4" x 8" GRANULAR OR SOLID FLUX FILLED HEADED
 STUDS CONFORMING TO ART. 710.38 OF THE STD. SPEC'S
 AUTOMATICALLY END WELDED AT 12" ALT. CTS.

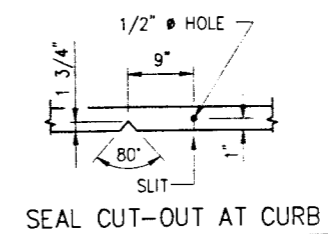
NOTE B
 FURNISH IN SEGMENTS OF 15'-0" (FIELD VERIFY LENGTH).
 SPACE BETWEEN STAGE I SEGMENTS & STAGE II
 SEGMENTS SHALL BE 3/16" SEAL SPACE WITH
 SILICONE SEALANT SUITABLE FOR STRUCTURAL STEEL.

7/16" HOLES AT 12" CTS. FOR 3/8" BOLTS. ALL BOLTS SHALL
 BE BURNED, SAWED OR CHIPPED OFF FLUSH WITH THE PLATES AFTER
 FORMS ARE REMOVED. (TYP)

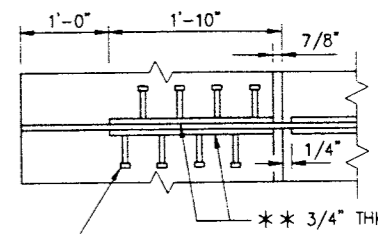
NOTE C
 EXISTING LONGITUDINAL REINFORCEMENT & ABUTMENT BACKWALL
 REINFORCEMENT EXTENDING INTO REMOVAL AREA SHALL BE CLEANED,
 STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION.
 EXISTING TRANSVERSE DECK REINFORCEMENT SHALL BE REMOVED.
 COST SHALL BE INCIDENTAL TO "CONCRETE REMOVAL".



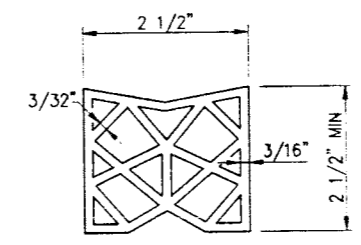
REMOVAL LINE TO MATCH WITH EXISTING REPAIR JOINT IN THE DECK
 & BONDED CONST. JOINT PER ART. 504.13(a)(2) OF THE STANDARD SPEC'S.
 NOTE: USE PREVIOUS REPAIR JOINT IN EXISTING STRUCTURE.



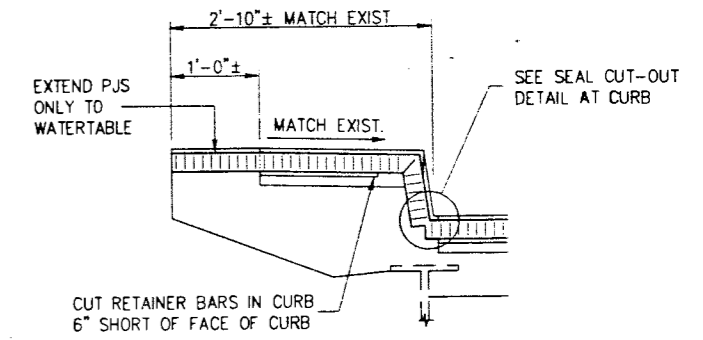
SEAL CUT-OUT AT CURB



PLAN

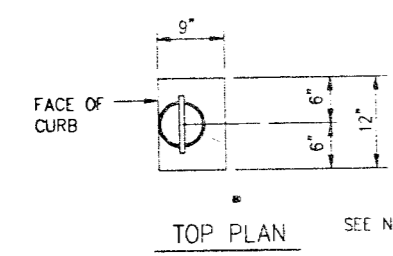


PREFORMED JOINT SEAL

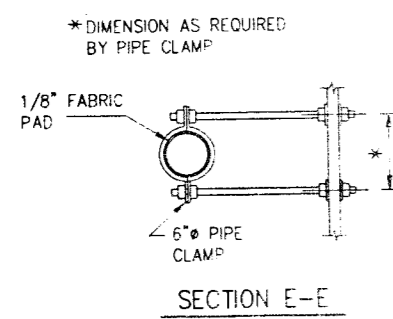


TYPICAL SEAL TREATMENT AT CURB

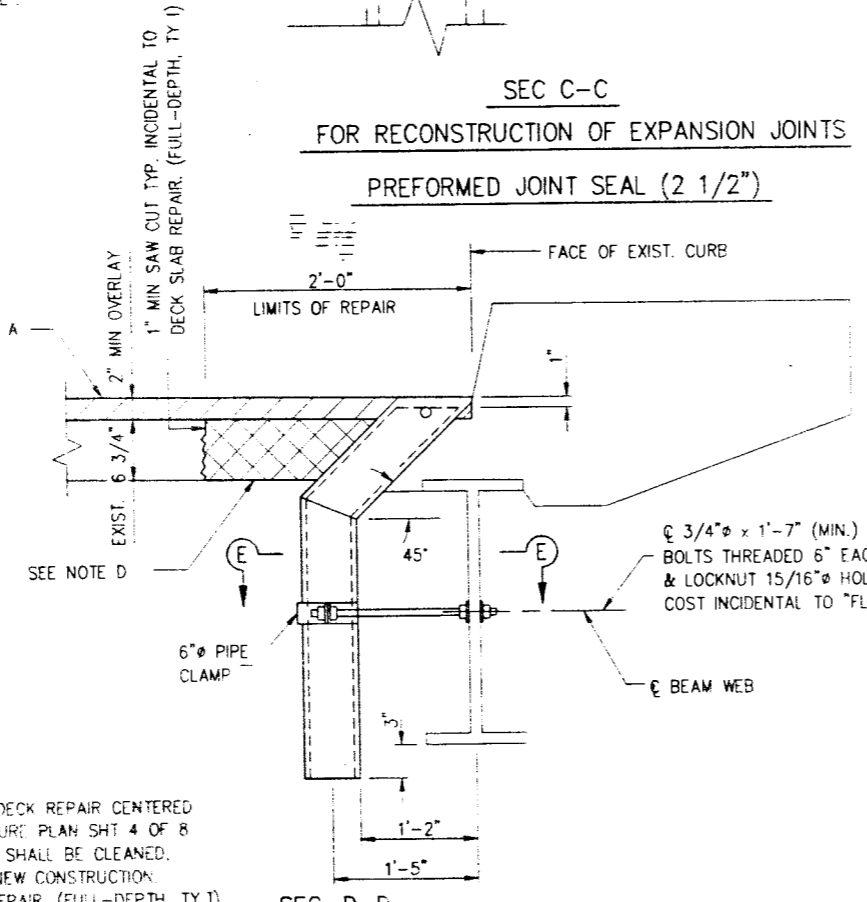
SEC C-C
 FOR RECONSTRUCTION OF EXPANSION JOINTS
 PREFORMED JOINT SEAL (2 1/2")



TOP PLAN

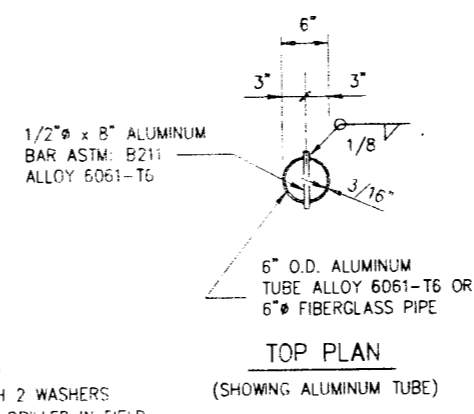


SECTION E-E

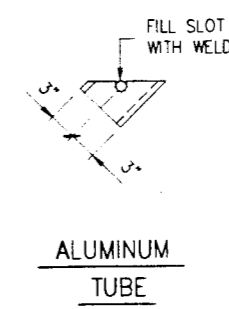


SEC D-D
 FLOOR DRAIN REPLACEMENT DETAIL

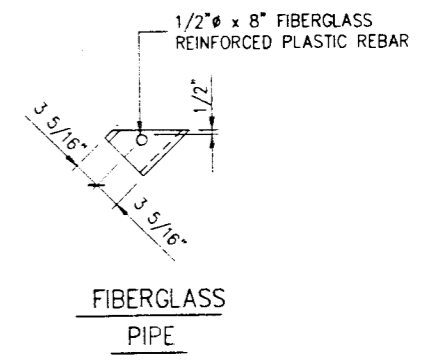
NOTE D
 DOUBLE HATCH AREA INDICATES FULL DEPTH DECK REPAIR CENTERED
 AT DECK DRAIN LOCATIONS SEE SUPERSTRUCTURE PLAN SHT 4 OF 8
 REINFORCEMENT EXTENDING INTO REPAIR AREA SHALL BE CLEANED,
 STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION.
 COST SHALL BE INCIDENTAL TO "DECK SLAB REPAIR, (FULL-DEPTH, TY 1)"
 SEE SPECIAL PROVISIONS



TOP PLAN
 (SHOWING ALUMINUM TUBE)



ALUMINUM
 TUBE



FIBERGLASS
 PIPE

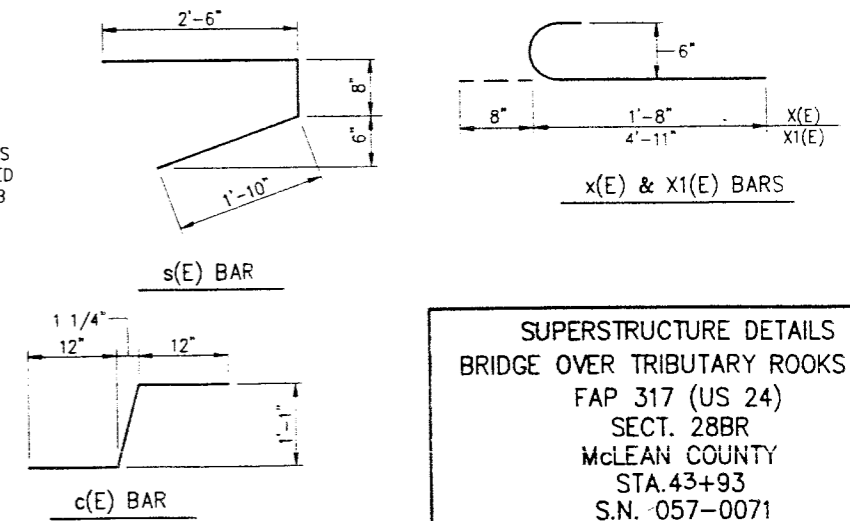
NOTE: FIBERGLASS PIPE SHALL CONFORM TO ASTM: D2996, WITH SHORT-TIME RUPTURE STRENGTH
 HOOP TENSILE STRESS OF 30,000 PSI MINIMUM
 THE SURFACE OF THE FIBERGLASS PIPE SHALL BE FREE OF BOND INHIBITING AGENTS.
 THE EXTERIOR SURFACES OF THE FLOOR DRAIN SHALL BE PAINTED WITH THE ACRYLIC PAINT
 SPECIFIED IN THE SPECIAL PROVISIONS. THE EXTERIOR SURFACES OF THE DRAIN SHALL BE CLEANED AND
 GIVEN A WASHCOAT PRETREATMENT IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL'S
 SPEC. SSPC-SPI & SSPC-PAINT 27 PRIOR TO PAINTING

SUPERSTRUCTURE DETAILS
 BRIDGE OVER TRIBUTARY ROOKS CR.
 FAP 317 (US 24)
 SECT. 28BR
 McLEAN COUNTY
 STA. 43+93
 S.N. 057-0071

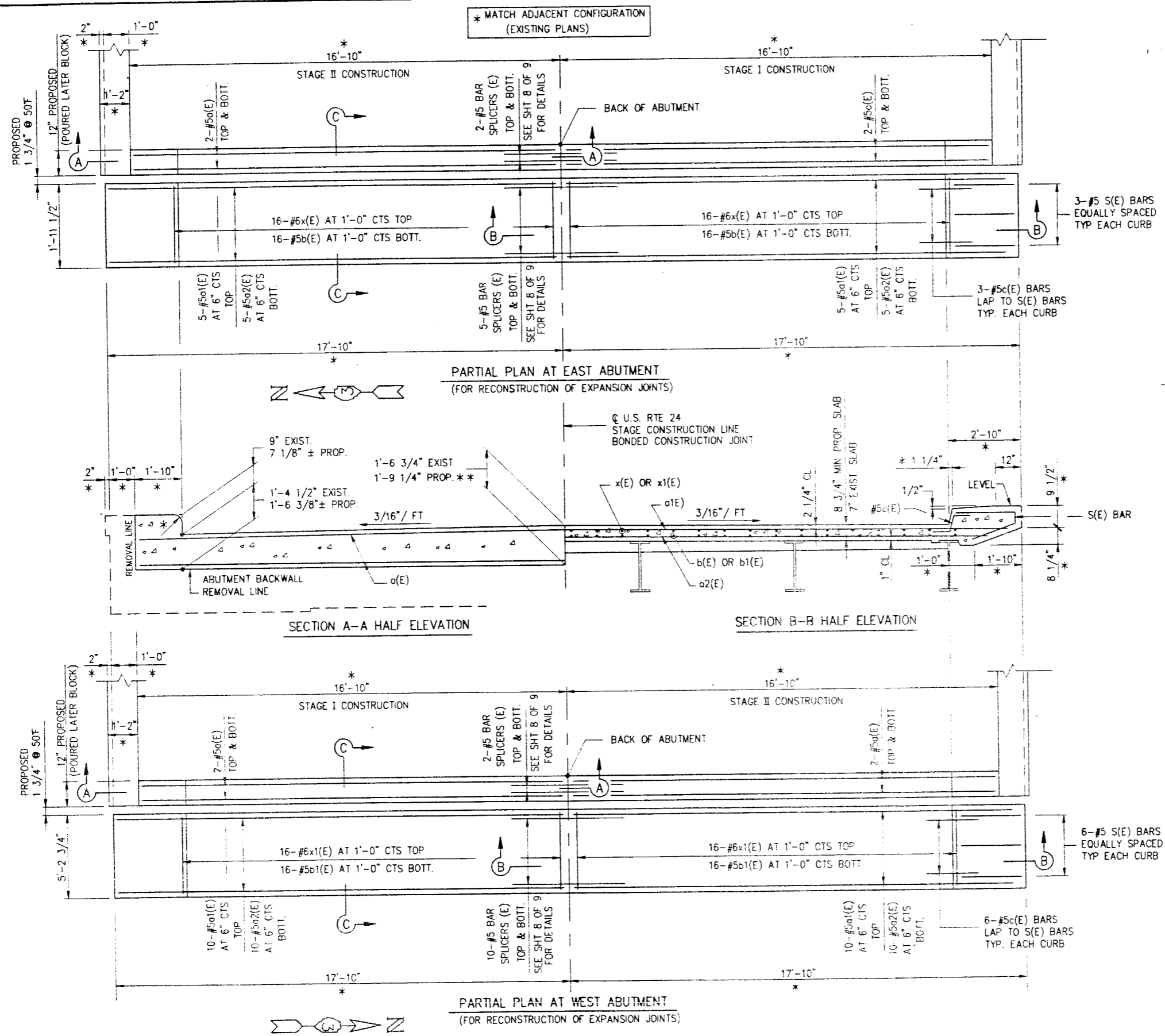
BILL OF MATERIALS
SUPERSTRUCTURE REPLACEMENT AT ABUTMENTS
(BOTH ABUTMENTS INCLUDED)

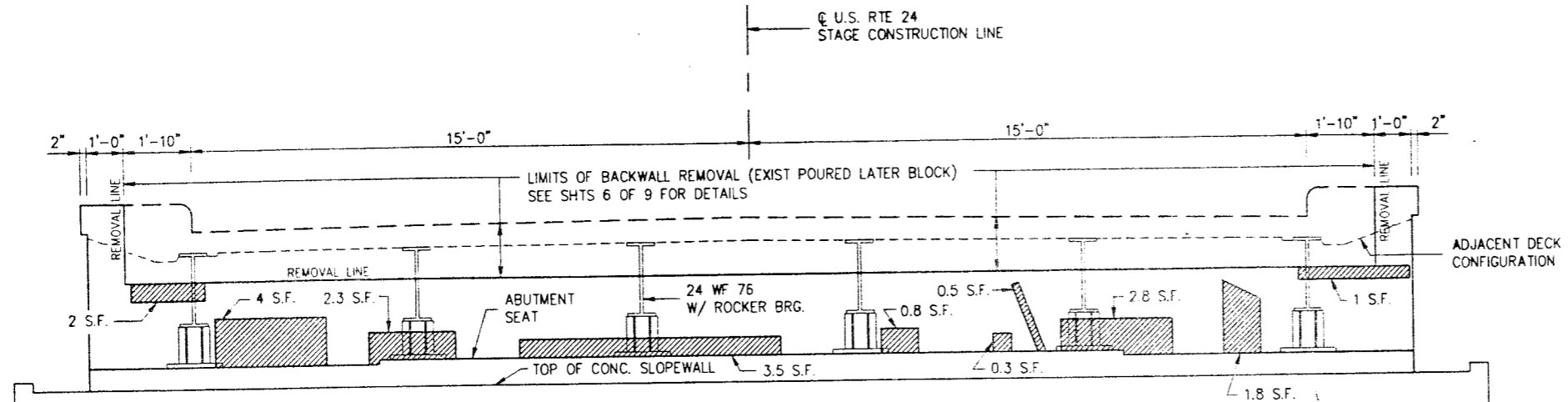
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	16	#5	16'-7"	—
a1(E)	30	#5	17'-1"	—
a2(E)	30	#5	16'-5"	—
b(E)	32	#5	1'-8"	—
b1(E)	32	#5	4'-11"	—
c(E)	18	#5	3'-1"	⌋
x(E)	32	#6	2'-4"	⌋
x1(E)	32	#6	5'-7"	⌋
S(E)	18	#5	5'-0"	⌋
REINFORCEMENT BARS EPOXY CTD.			POUNDS	2080
BAR SPLICERS			EACH	38
CONCRETE REMOVAL			CU YD	11.5
** CLASS X CONC SUPERSTRUCTURE			CU YD	13.4

NOTES:
 REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED
 HATCHED AREAS INDICATE LIMITS OF CONCRETE REMOVAL
 EXISTING LONGITUDINAL REINFORCEMENT & ABUTMENT BACKWALL REINFORCEMENT EXTENDING INTO REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION. EXISTING TRANSVERSE DECK REINFORCEMENT SHALL BE REMOVED. COST SHALL BE INCIDENTAL TO "CONCRETE REMOVAL".
 FOR SECTION C-C SEE SUPERSTRUCTURE DTLS SHT 5 OF 9
 ** POUR TO FINAL GRADE, INCLUDING CROWN CORRECTION. (CROWN CORRECTION IS INCLUDED IN PROPOSED PROFILE GRADE ELEVATIONS.)

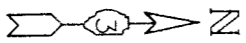


SUPERSTRUCTURE DETAILS
BRIDGE OVER TRIBUTARY ROOKS CR.
 FAP 317 (US 24)
 SECT. 28BR
 McLEAN COUNTY
 STA. 43+93
 S.N. 057-0071





WEST ABUTMENT
ELEVATION OF ABUTMENT BACKWALL SHOWING FORMED CONCRETE REPAIR
 (DEPTH EQUAL TO OR LESS THAN 5")
 (LOOKING WEST)

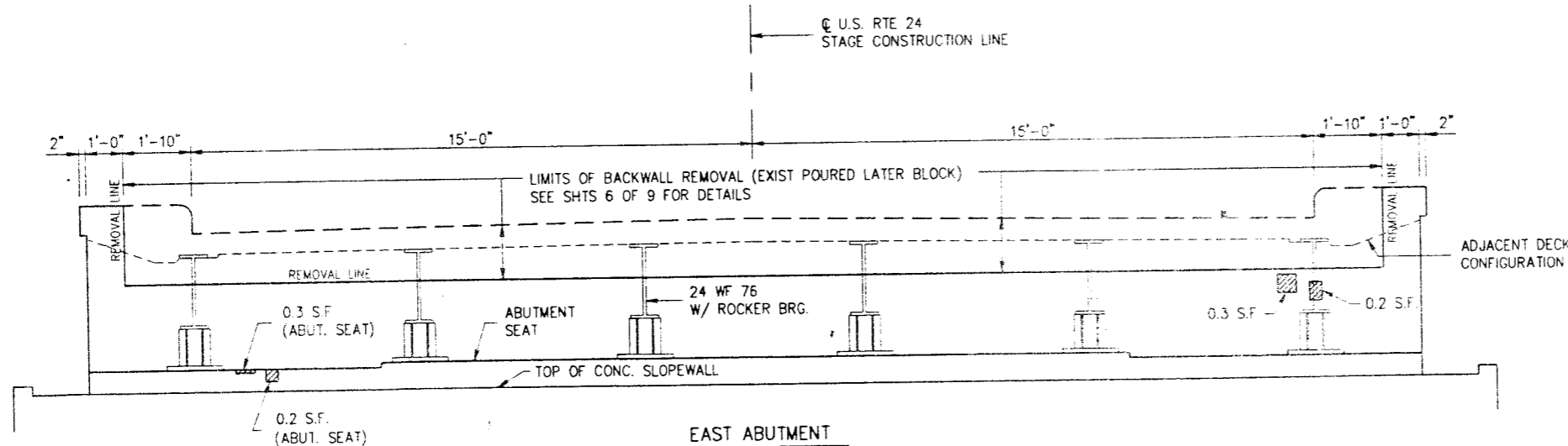


KEY

▨ *FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5") - UNIT SQ. FT.
 SEE SPECIAL PROVISIONS
 ADDITIONAL REPAIRS MAY BE NEEDED AS DIRECTED BY THE ENGINEER

BILL OF MATERIALS WEST ABUTMENT

FORMED CONCRETE REPAIR (DEPTH = TO OR < THAN 5")	SO FT	19
---	-------	----



EAST ABUTMENT
EXISTING ELEVATION OF ABUTMENT BACKWALL SHOWING FORMED CONCRETE REPAIR
 (DEPTH EQUAL TO OR LESS THAN 5")
 (LOOKING EAST)



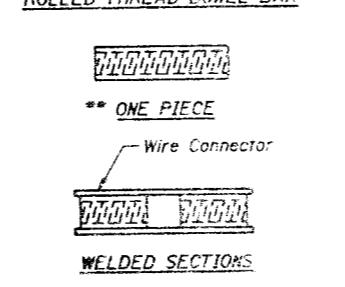
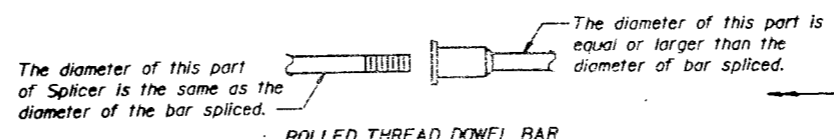
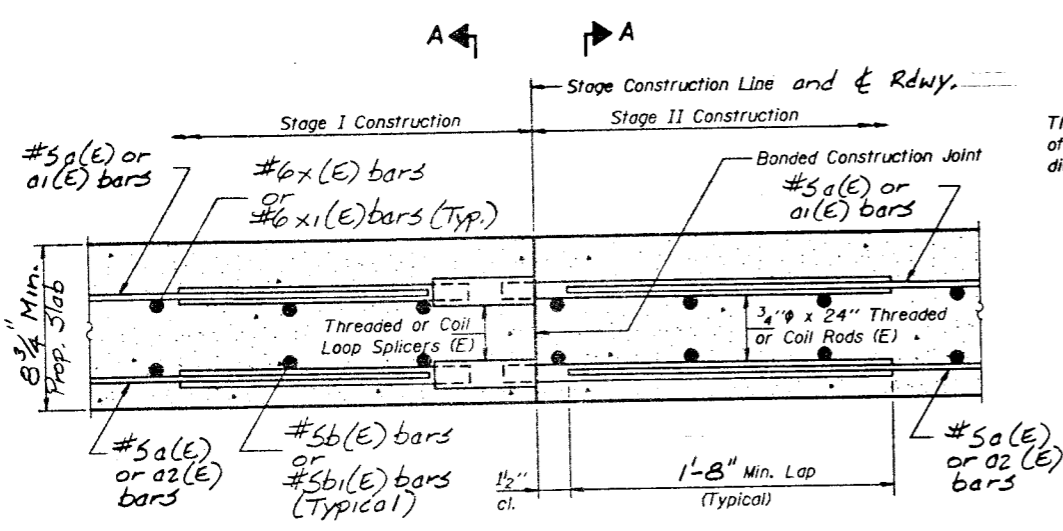
KEY

▨ *FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5") - UNIT SQ. FT.
 SEE SPECIAL PROVISIONS
 ADDITIONAL REPAIRS MAY BE NEEDED AS DIRECTED BY THE ENGINEER

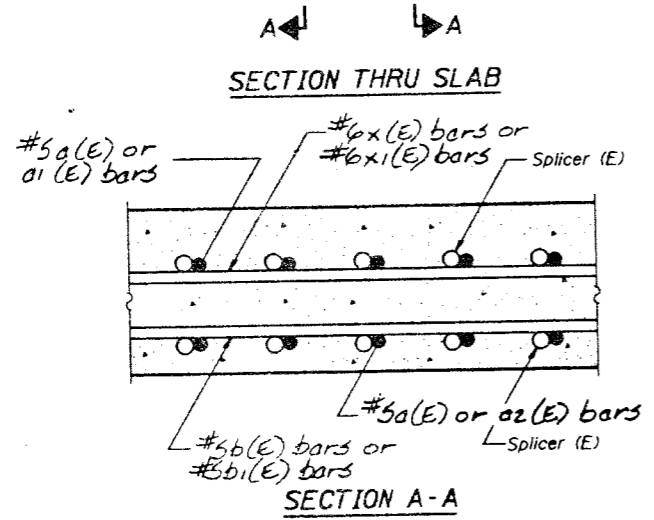
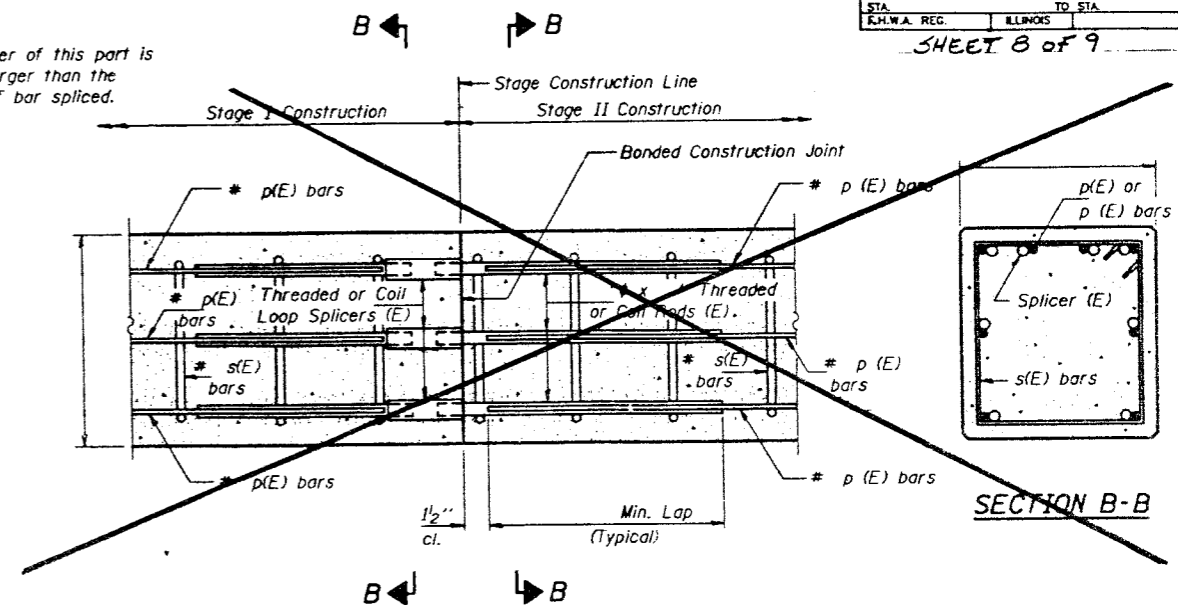
BILL OF MATERIALS EAST ABUTMENT

FORMED CONCRETE REPAIR (DEPTH = TO OR < THAN 5")	SO FT	1
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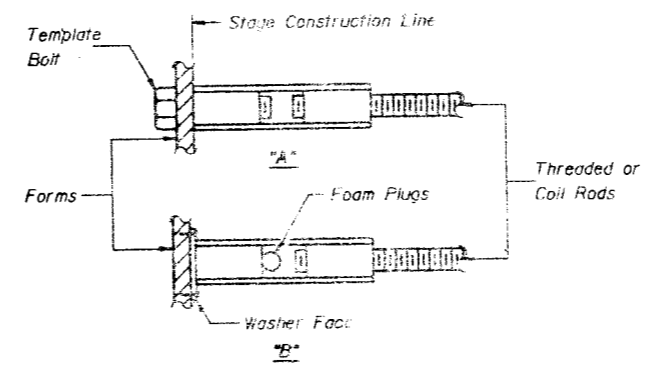
ABUTMENT REPAIRS
 BRIDGE OVER TRIBUTARY ROOKS CR.
 FAP 317 (US 24)
 SECT. 28BR
 McLEAN COUNTY
 STA. 43+93
 S.N. 057-0071



** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or D_H may be used.



SPLICER DETAILS



NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

- Minimum Capacity = $1.25 \times f_y \times A_s$
(Tension in kips)
- Minimum Pull-out Strength = $1.25 \times f_{sallow} \times A_s$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_s = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

In Slabs	#5 bar lap with 3/4" Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
	#6 bar lap with 7/8" Splicer (Coupler) x 2'-2" Splicer Rods	Minimum Capacity = 33.1 kips-tension Minimum Pull-out Strength = 13.3 kips-tension
In Sub-Structure	#7 bar lap with 1" Splicer (Coupler) x 3'-0" Splicer Rods	Minimum Capacity = 45.1 kips-tension Minimum Pull-out Strength = 18.0 kips-tension
	#8 bar lap with 1 1/4" Splicer (Coupler) x 4'-0" Splicer Rods	Minimum Capacity = 58.0 kips-tension Minimum Pull-out Strength = 23.6 kips-tension

BILL OF MATERIAL

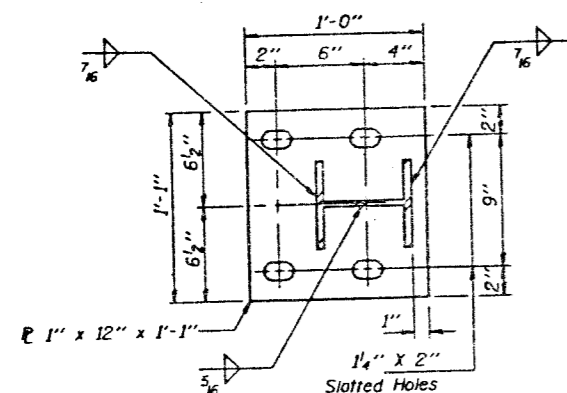
ITEM	UNIT	TOTAL
BAR SPLICERS	EACH	38

Bar Splicers shall be in accordance with Section 512 of the Standard Specifications, except as noted and will be paid for at the Contract Unit Price Each for "BAR SPLICERS".

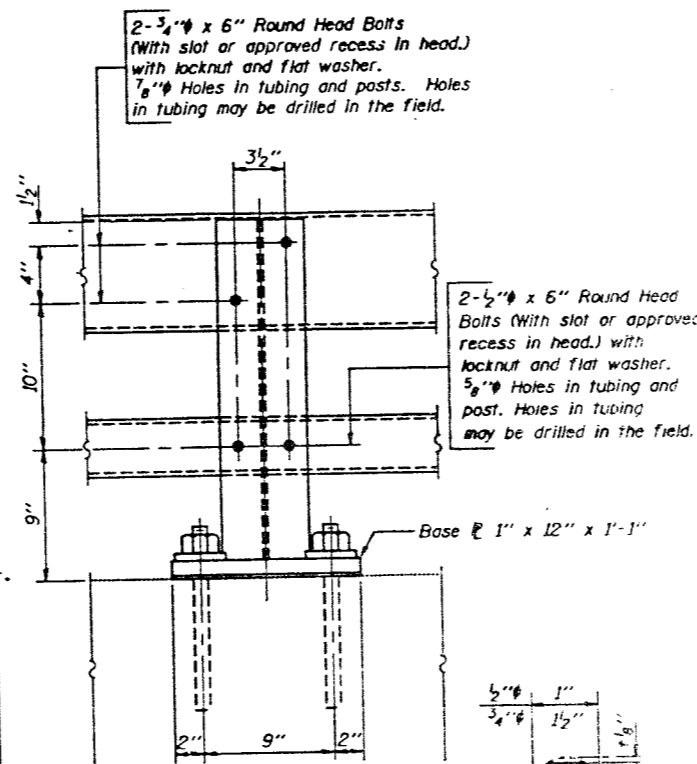
BAR SPLICER (COUPLER) DETAILS
 AT STAGE CONSTRUCTION
 BRIDGE OVER TRIBUTARY ROOKS CR.
 FAP 317 (US 24)
 SECT. 28BR
 McLEAN COUNTY
 STA. 4+93
 S.N. 057-0071

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	28BR	McLEAN	49	24
		ILLINOIS		FED. AID PROJECT

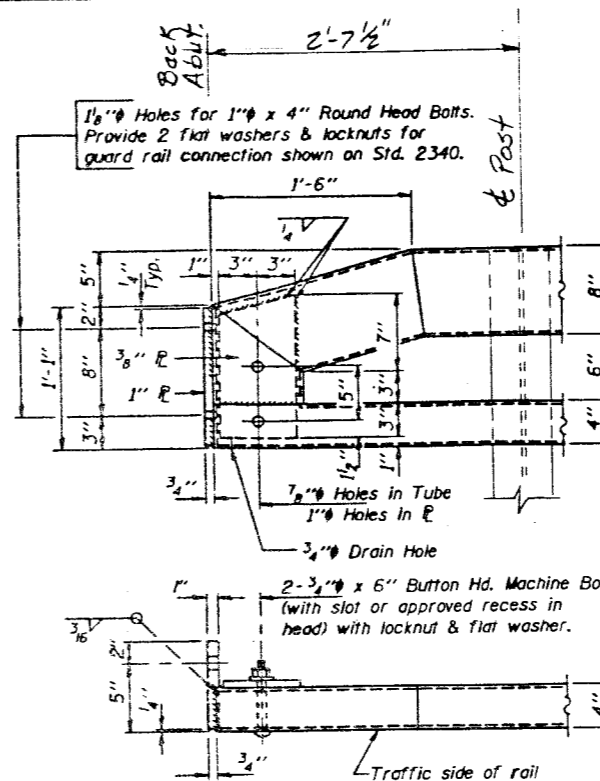
SHEET 9 OF 9



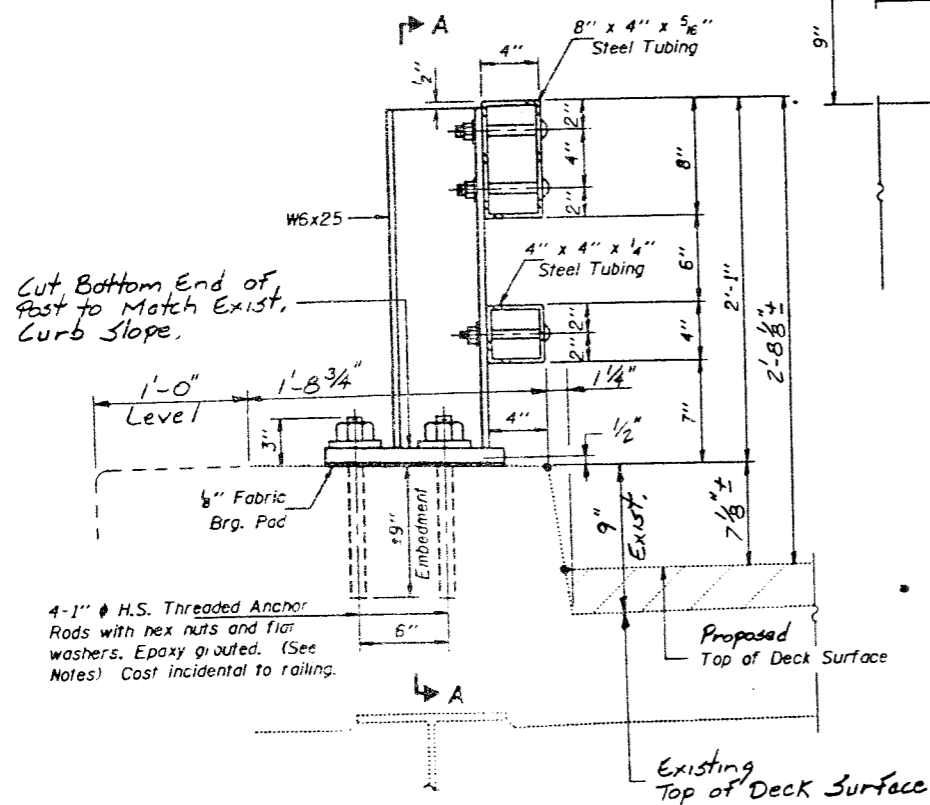
BASE PLATE DETAIL



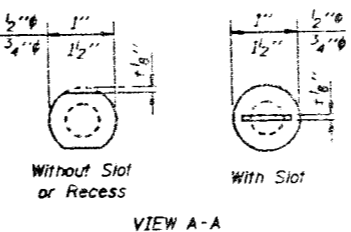
SECTION A-A



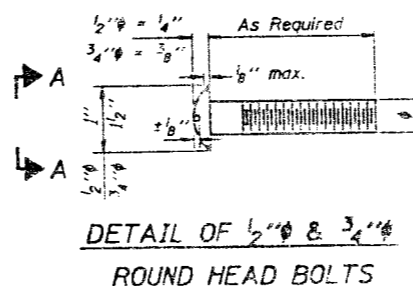
END OF RAIL DETAILS



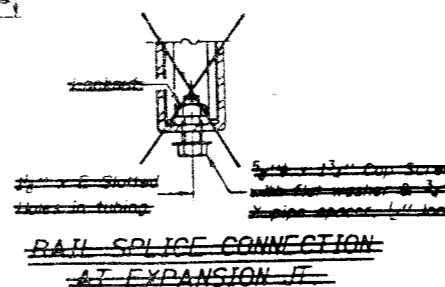
SECTION AT RAIL POST



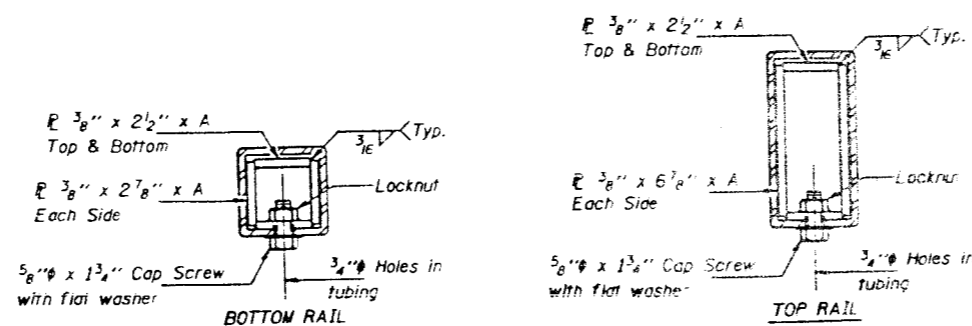
VIEW A-A



DETAIL OF 1/2" & 3/4" ROUND HEAD BOLTS

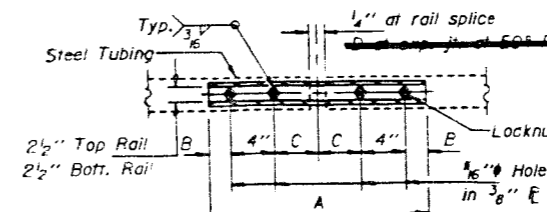


RAIL SPLICE CONNECTION AT EXPANSION JT



SECTIONS AT RAIL SPLICE

(6'-3" Maximum Post Spacing)



PLAN-BOTT. SPLICE TYPICAL

NOTES

- Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500, Grade B. Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft. lbs. at 0°F.
- All other steel shapes and plates shall conform to the requirements of AASHTO M-183 except posts shall conform to AASHTO M-223, Grade 50.
- Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A-307 except that threaded rods, nuts and washers shall conform to AASHTO M-164.
- All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.
- All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.
- Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per lined foot for STEEL BRIDGE RAIL.
- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
- STEEL BRIDGE RAIL expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Posts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
- Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
- Expansion joint width shall be "D" at 50°F and shall be adjusted for other temperatures according to Article 503.07(a) of the Engineering Specifications.
- The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.
- The capsule or the adhesive cartridge shall be a sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.
- Nuts for 1" threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional 1/8 turn.

See Sht 1 of 9 for Rail Post Spacing.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STEEL BRIDGE RAIL	LIN. FT.	211

SPLICE DIMENSIONS

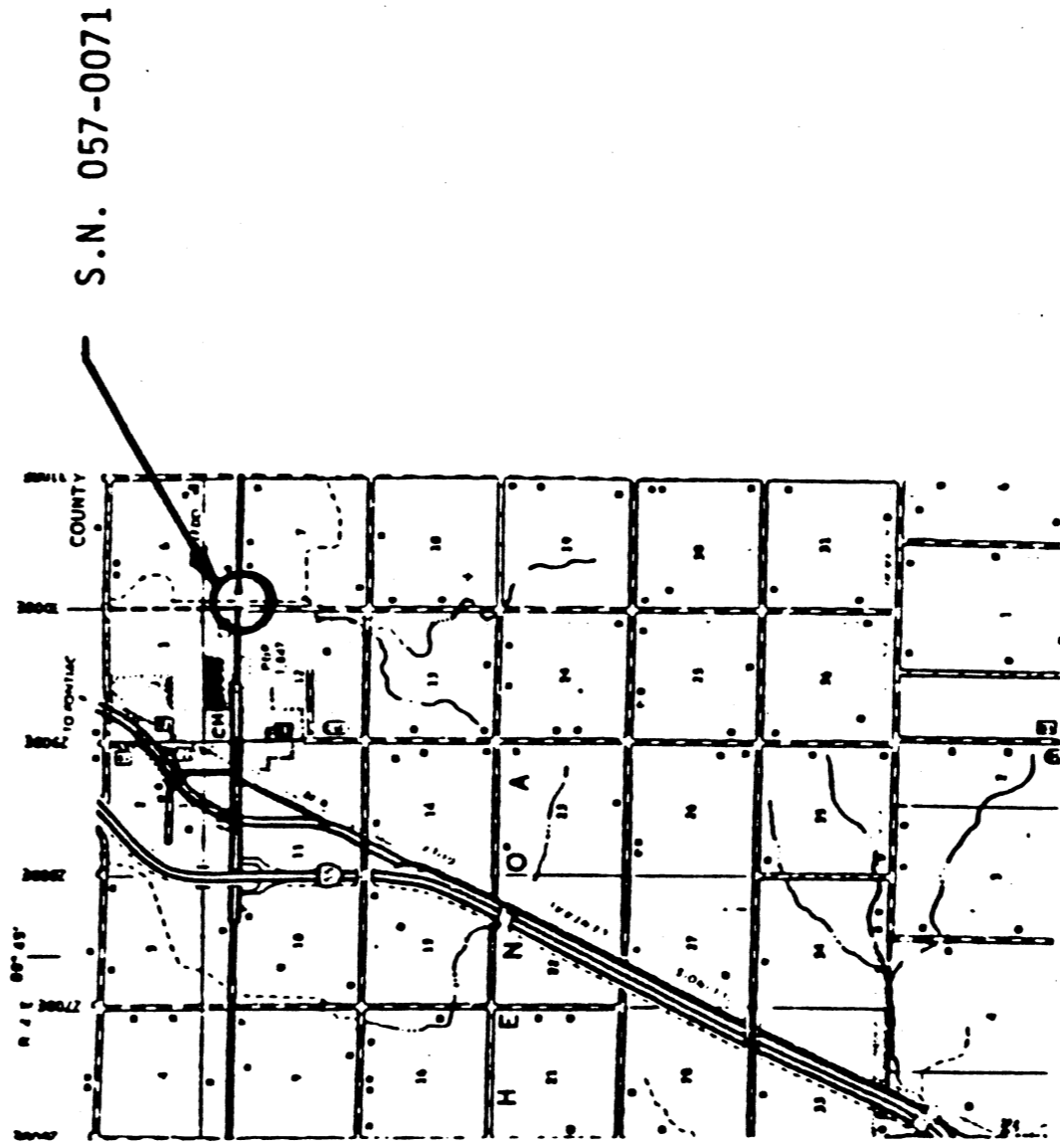
T	D	A	E	C	E
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"

T = Total movement at expansion joint as shown on the design plans

STEEL BRIDGE RAIL CURB MOUNTED
STANDARD 2399
BRIDGE OVER TRIBUTARY ROOKS CR.
FAP 317 (US 24)
SECT. 28BR
McLEAN COUNTY
STA. 43+93
S.N. 057-0071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

FY-87 Day Labor
S.N. 057-0071
S.B.I. Route 8
Section 28-BR
Station 43+93
McLean County



By: District 3 Bureau
Of Maintenance

BILL OF MATERIAL

	DESCRIPTION	NO. REQUIRED	AMOUNT
EXISTING BEAM	24 WF 76	4	912 LBS.*
CUT BEAM SECTION (NEW)	24 WF 76	4	102 LBS.*
TOP BEARING PLATE (NEW)	9"x1"x10"	8	56 EA.
BOLTS 3/4"x2 1/2" USED FOR DIAPHRAGMS	7/HANGER	4	32 EA.*
BOLTS 3/4"x2 3/4" USED AT WEB SPLICE PLATE	8/SPLICE	4	32 EA.*
BOLTS 7/8"x3" USED AT FLANGE PLATE	8/SPLICE	5	990 LBS.
DIAPHRAGMS	10 WF 33	8	190 LBS.
HANGERS	6"x4"x3/4"	8	322 LBS.*
WEB SPLICE PLATE	3/8"x18"x21"	8	510 LBS.*
FLANGE SPLICE PLATE	11/16"x9"x36 1/4"	8	
TOTAL WEIGHT PAID AS FURNISH & ERECT STRUCTURAL STEEL			1180 LBS.

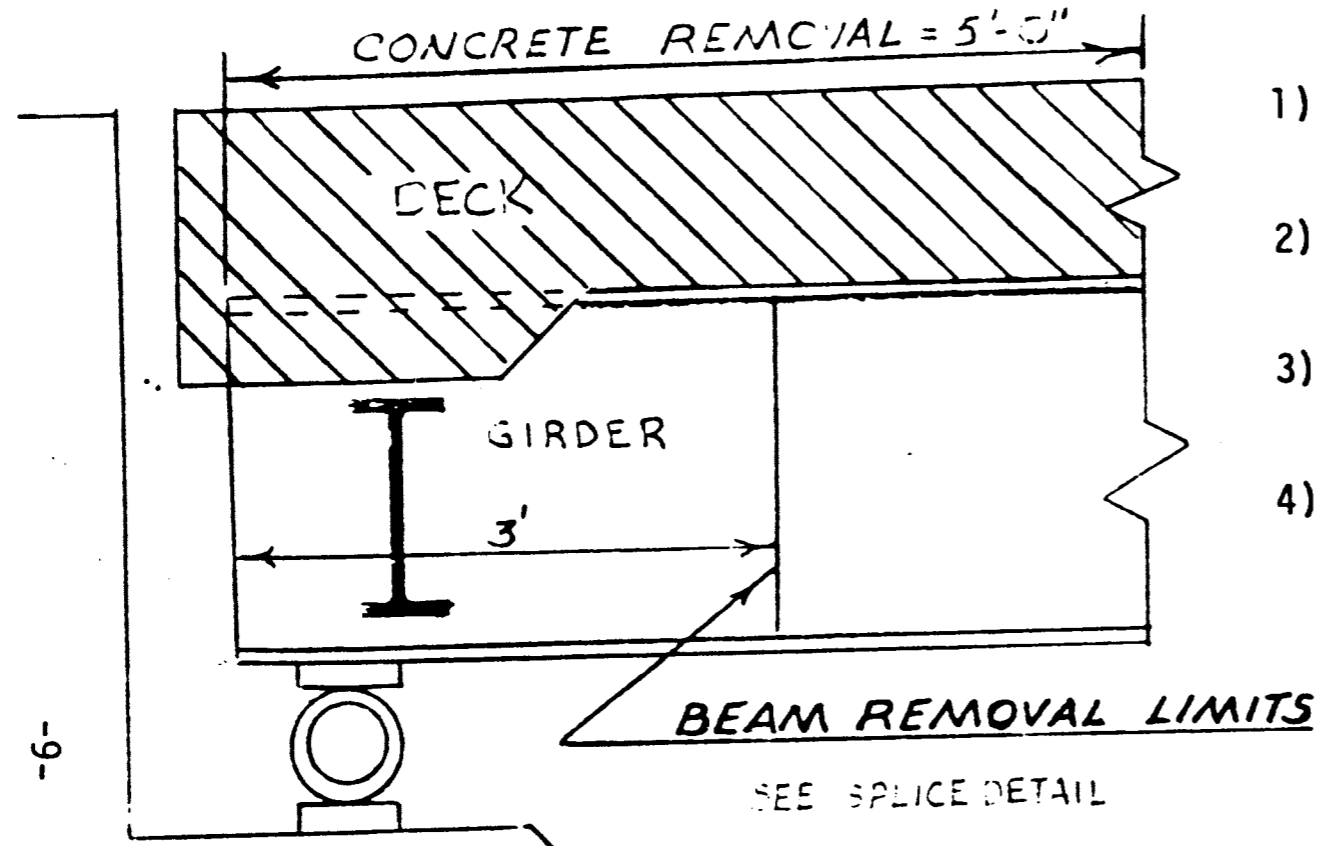
* Weight of this structural steel is included in STRUCTURAL STEEL BEAM END REPLACEMENT.

NOTES:

- 1) Bolts are incidental to FURNISH & ERECT STRUCTURAL STEEL.
- 2) New expansion angle to be paid for as PREFORMED JOINT SEAL (2 1/2"); See Special Provisions.

CONCRETE REMOVAL & REPLACEMENT

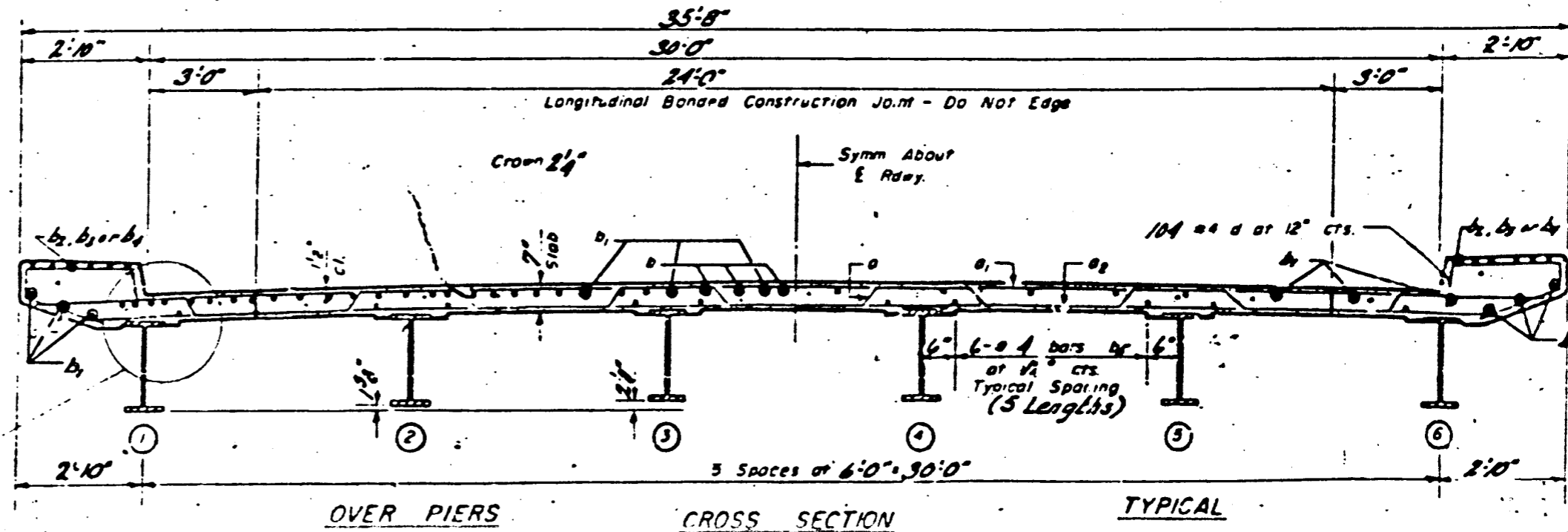
NOTES



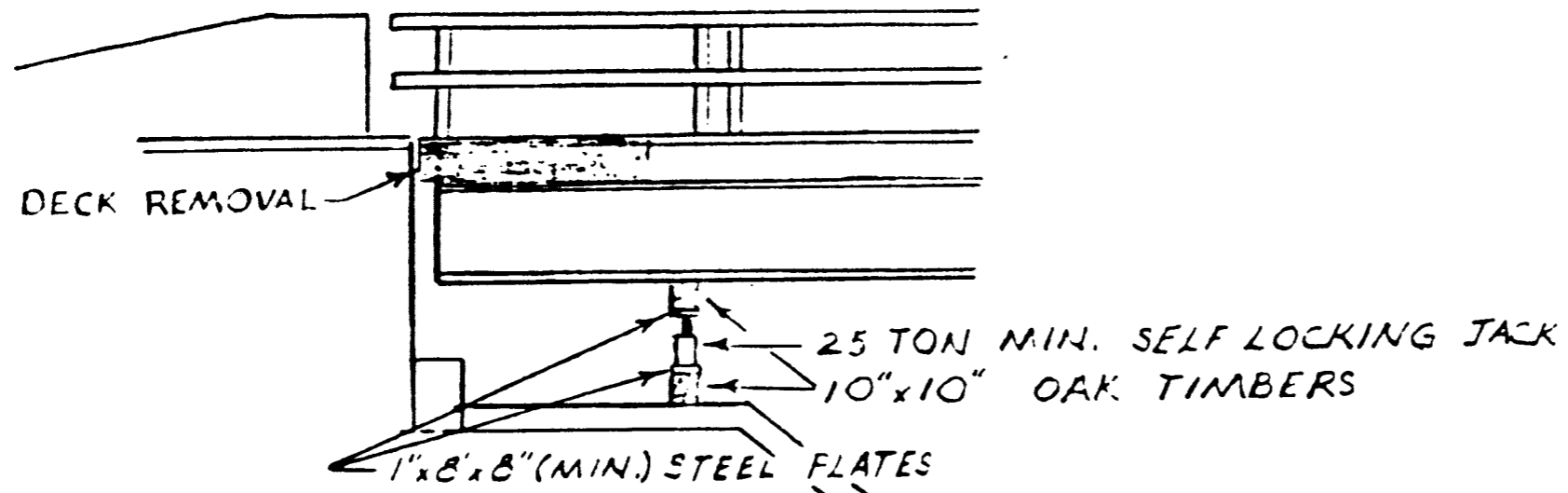
- 1) Remove east side of joint (7"x5'x30') along bridge deck and (18"x1'x2'-10") on east side of each curb.
- 2) Tack weld (1/4"x1/2") bar to existing angle, attached to abutment; and new angle to be installed along east side of joint.
- 3) Class "X" Concrete superstructure shall be used to replace removal areas.
- 4) Install (2 1/2") preformed joint seal.

ABUT.

BARS TO BE
LAPPED 2 1/2'



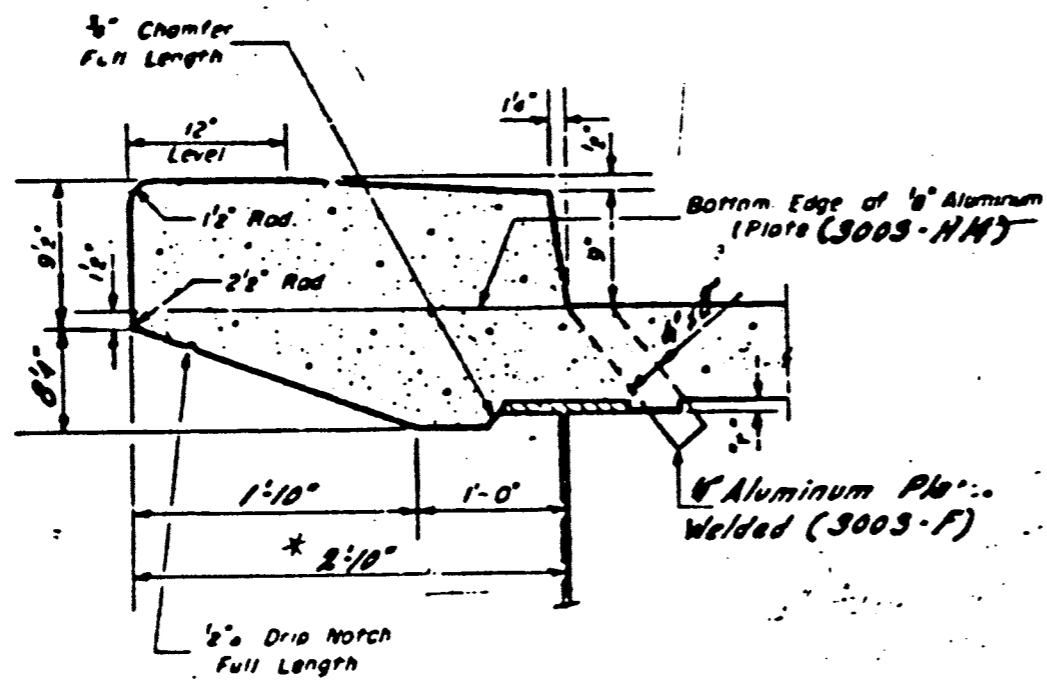
STRUCTURE NO.



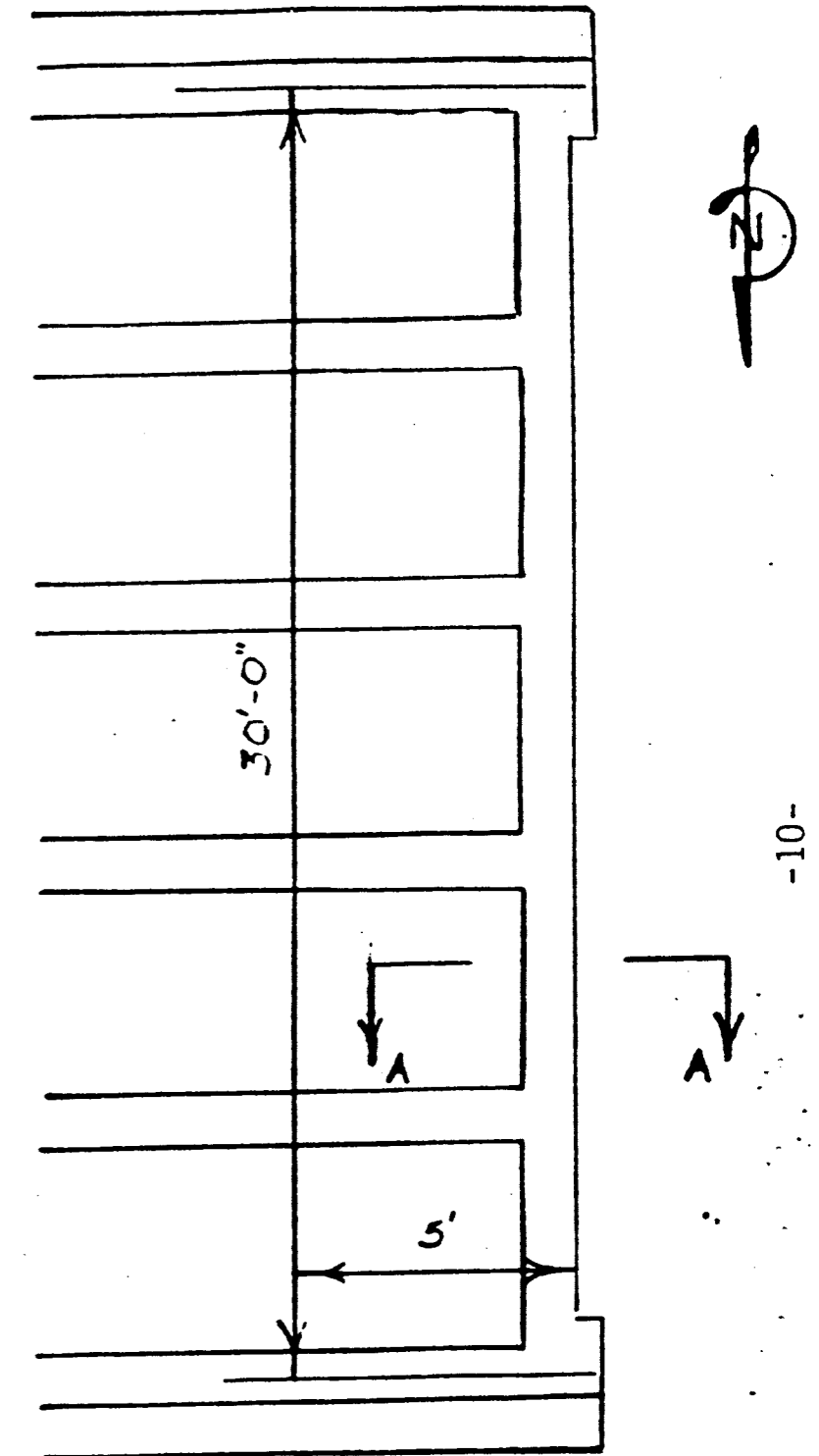
NOTES: FULL WIDTH OF DECK BEAM
 SIZE TO BE DETERMINED BY
 CONTRACTOR.
 CRIB LOCATIONS TO BE DETERMINED
 BY CONTRACTOR.

CRIBBING DETAIL

SECTION A-A

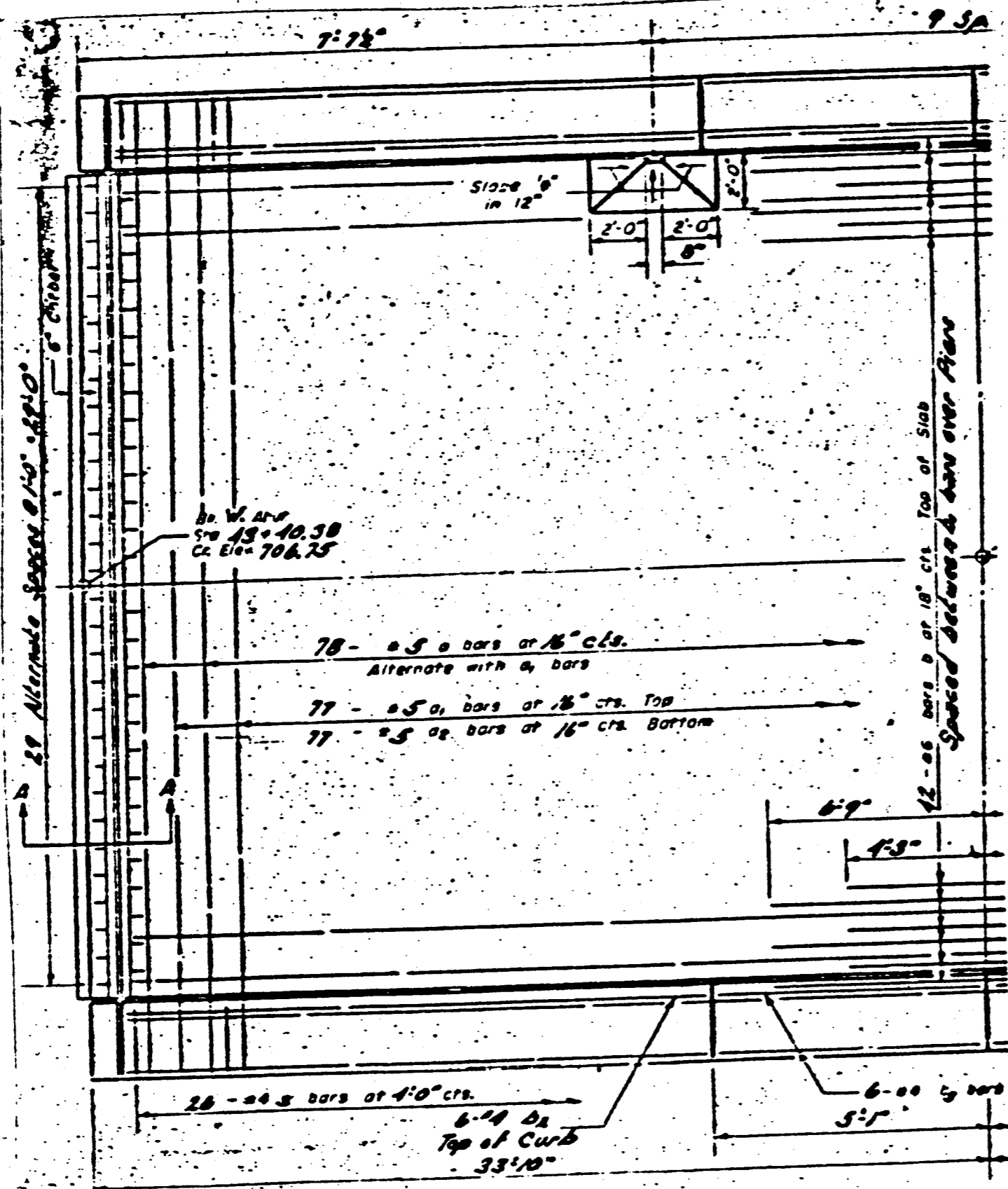


CURB DETAIL



*NOTE: TEMPORARY SHORING
 SHALL INCLUDE SUPPORT
 OF OUTSIDE 2'-10" OF
 CURB.

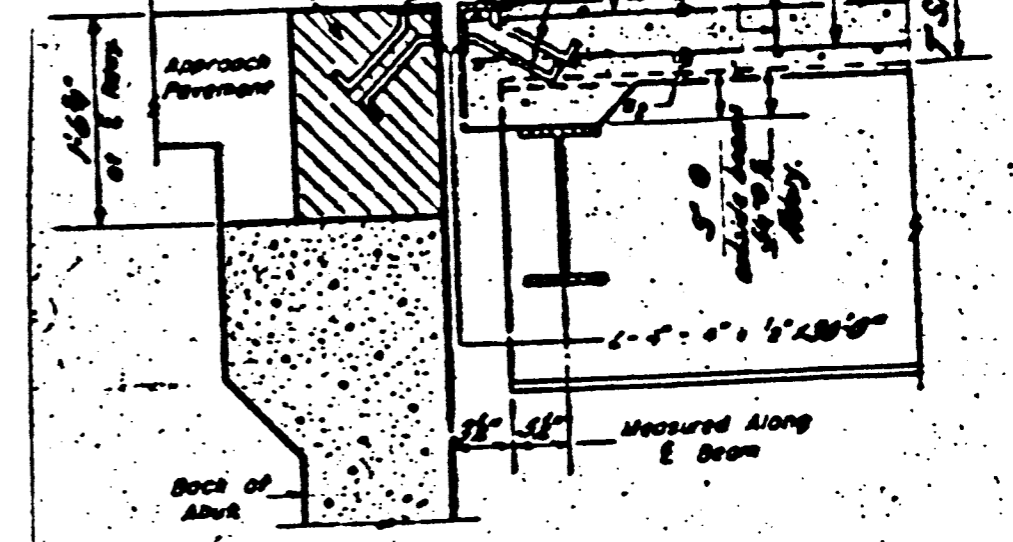
STRUCTURE NO. 057-0071



ELEVATION

1/2" holes at 12" cts for 1/2" bars
 All joints shall be burned, sawed
 or chipped off flush with back
 of angle after forms are removed.

Shaded area to be
 poured after super-
 structure formwork
 has been removed.
 Quantity of C 2 conc.
 included with Superite.

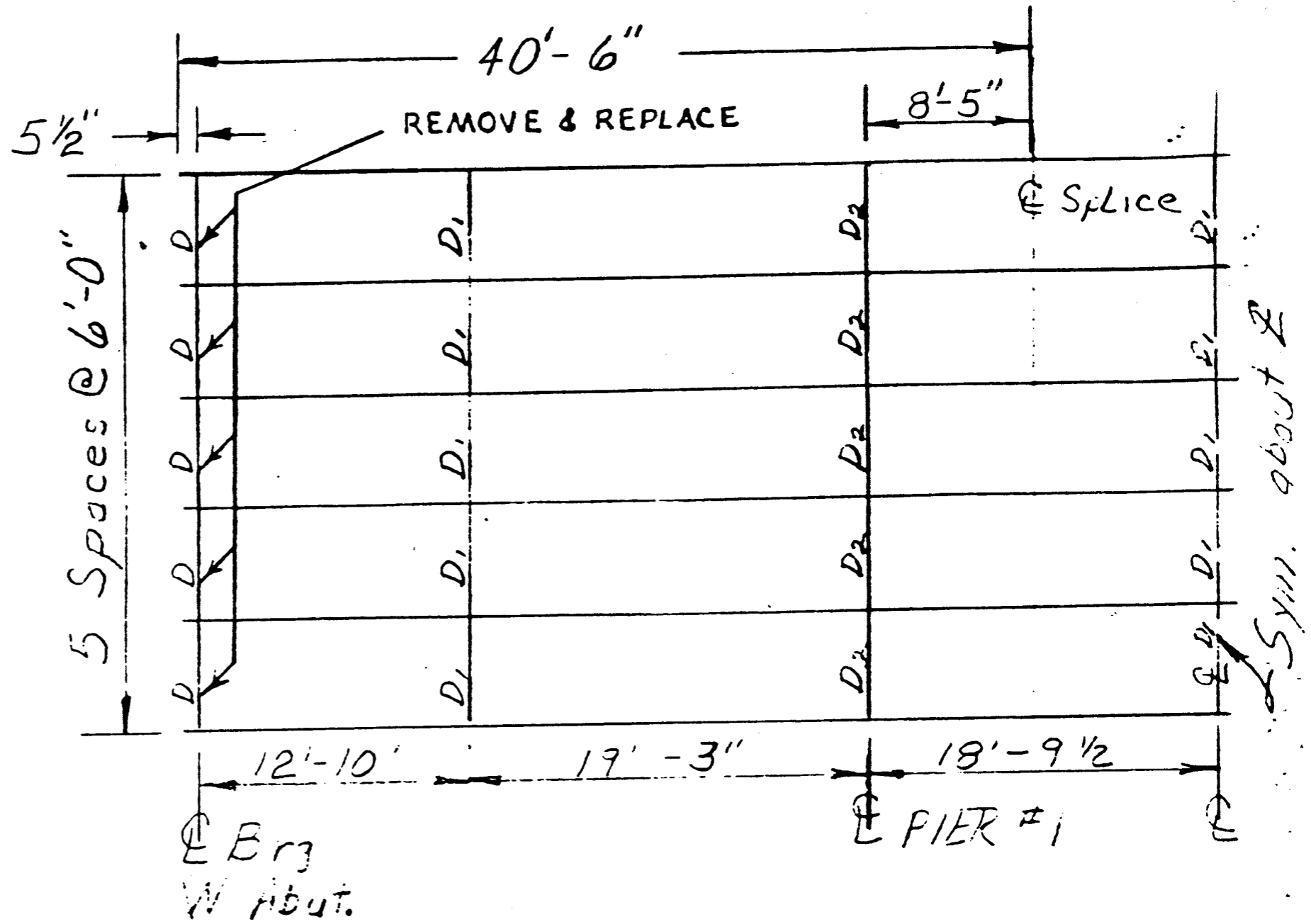


SECTION A-A

EXISTING SECTION AT ABUTMENT

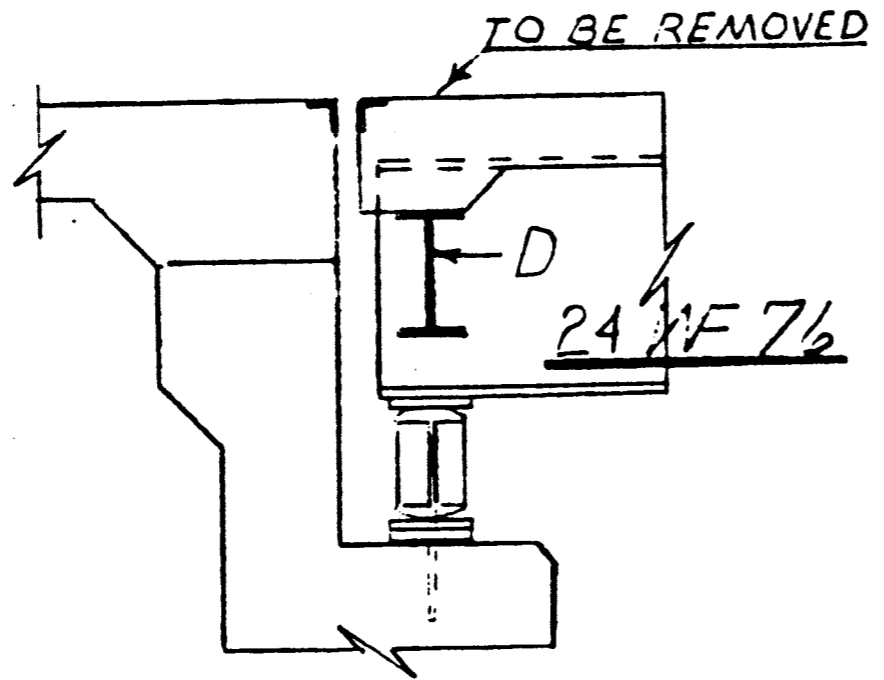
BAR	NO.	SIZE	LENGTH	SHAPE	POUNDS
a	2	#5	30'	—	63
a ₁	6	#5	30'	—	138
a ₂	4	#5	30'	—	125
TOTAL					376

NOTE: ALL LONGITUDINAL BARS TO REMAIN
 IN PLACE.

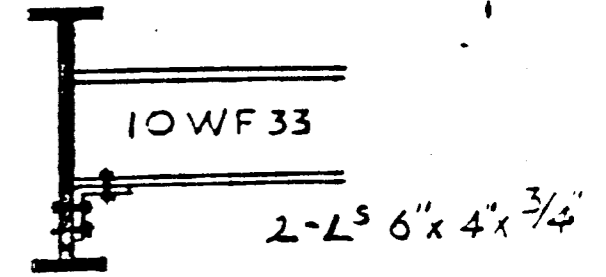
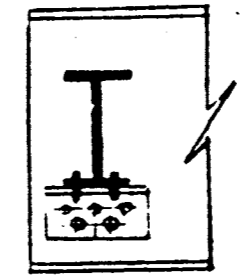


ALL Beams are 24 WF 76
ALL Diaphragms are 10 WF 33

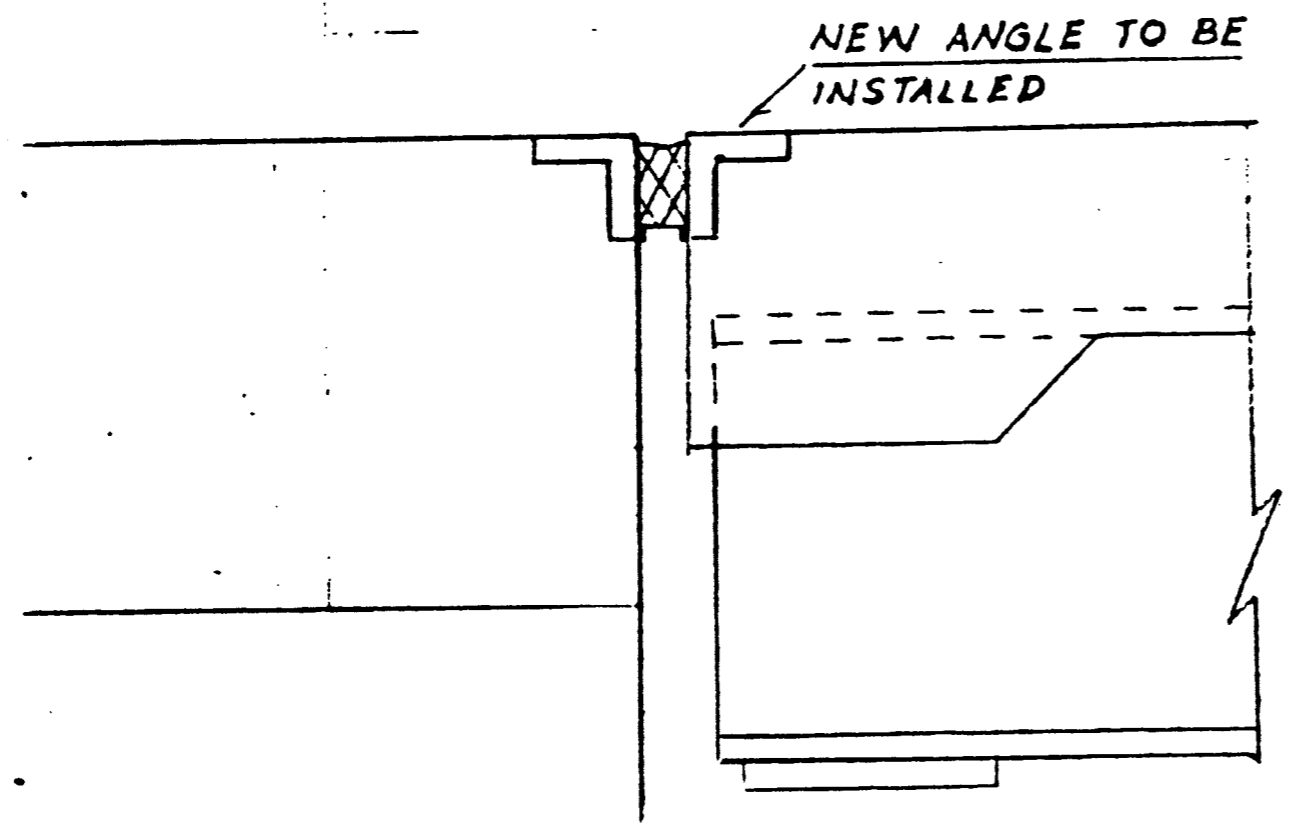
STRUCTURAL STEEL REPAIR



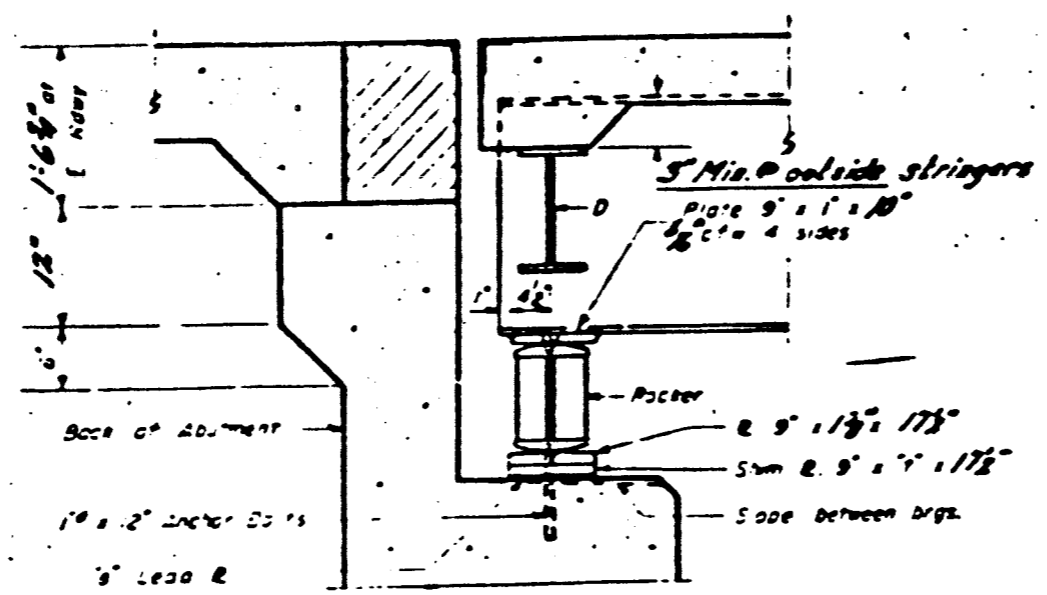
EXISTING SECTION



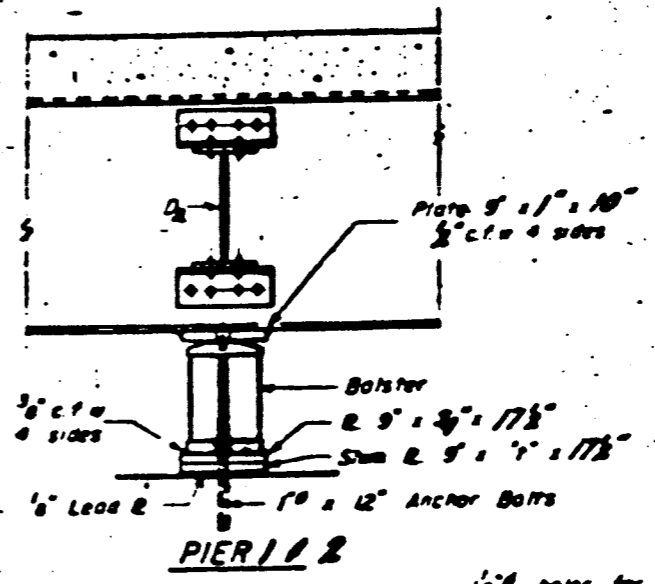
DIAPHRAM DETAILS



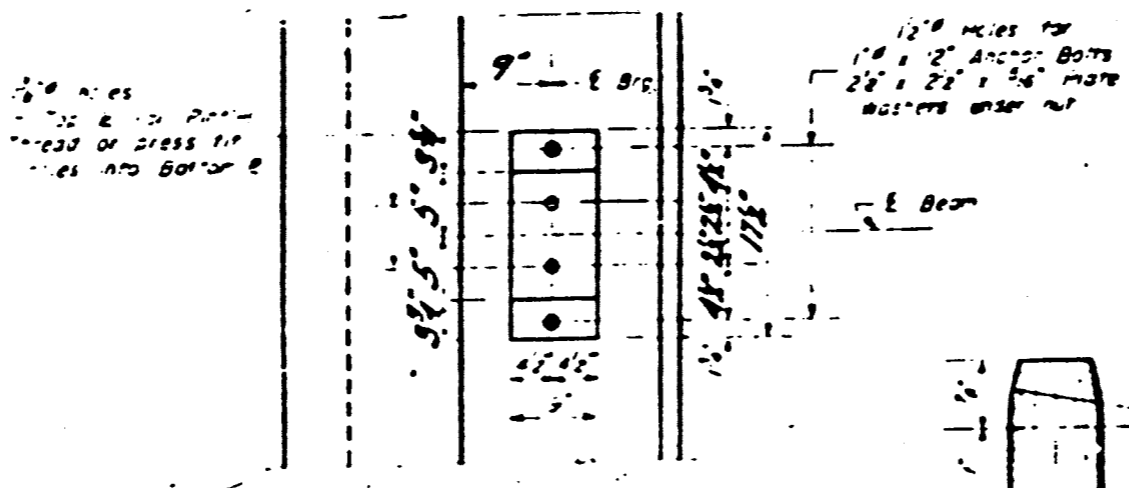
EXPANSION JOINT SEAL



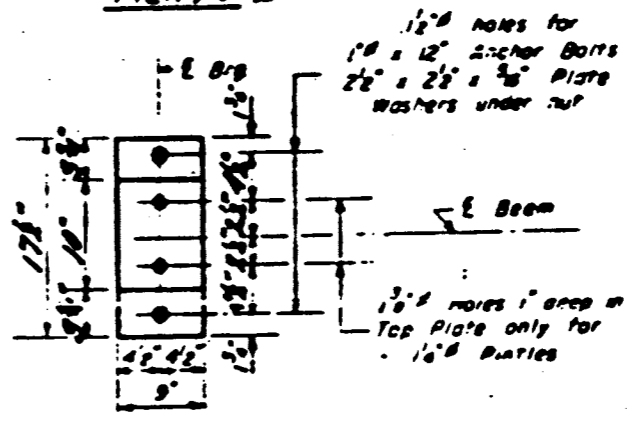
SECTION AT ABUTMENT



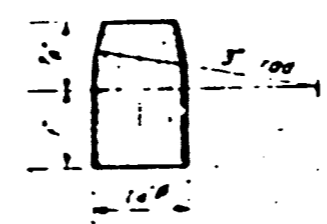
PIER 1 & 2



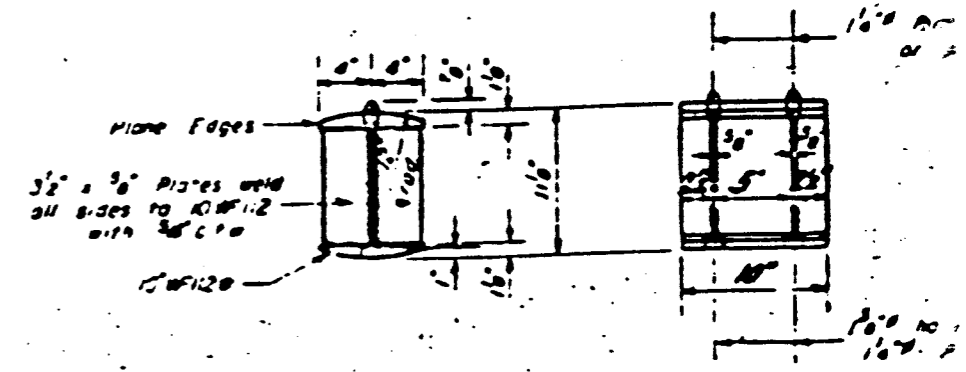
PLAN



PLAN



DETAIL OF PINTLE



DETAIL OF BEARING AT BOTH ABUTMENTS

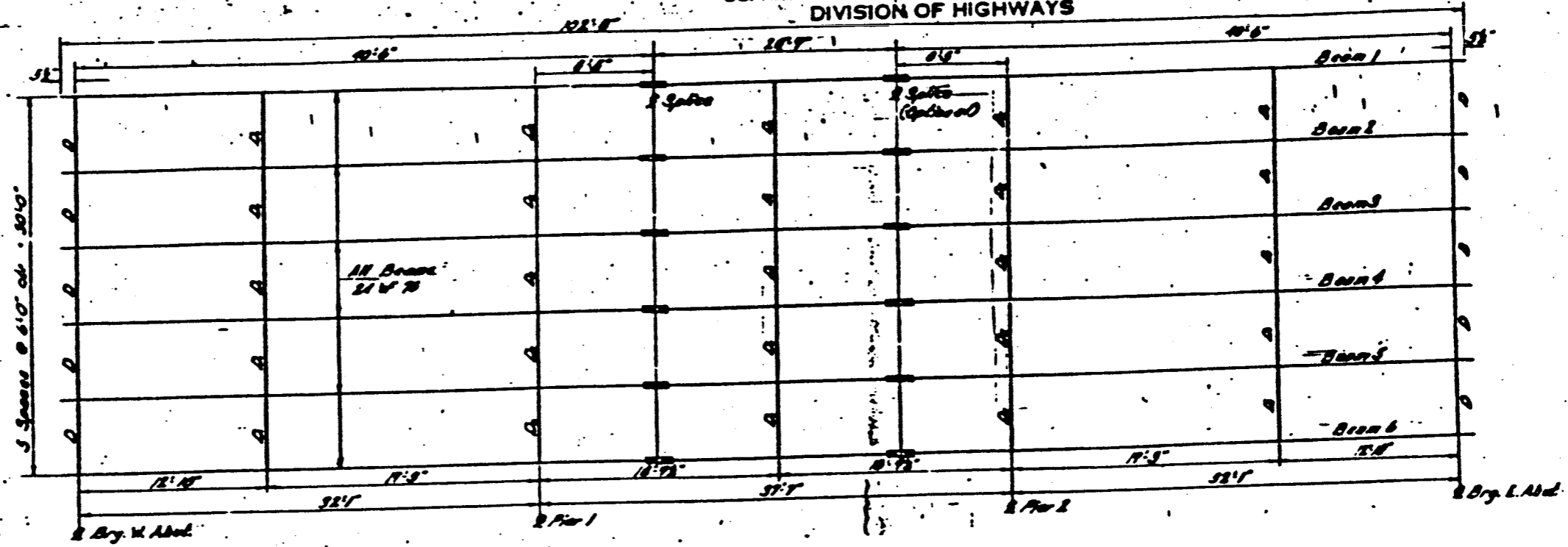
DESIGNED *Confortal*
 CHECKED *J. Taylor*
 TRK *P. Lawler*
 APPROVED *A. Kayard*

DEC 11 1958
 DRAWN *M. Roman*
 CHECKED *E. S. ...*
 APPROVED *R. R. ...*

FOR INFORMATION ONLY

057-0071

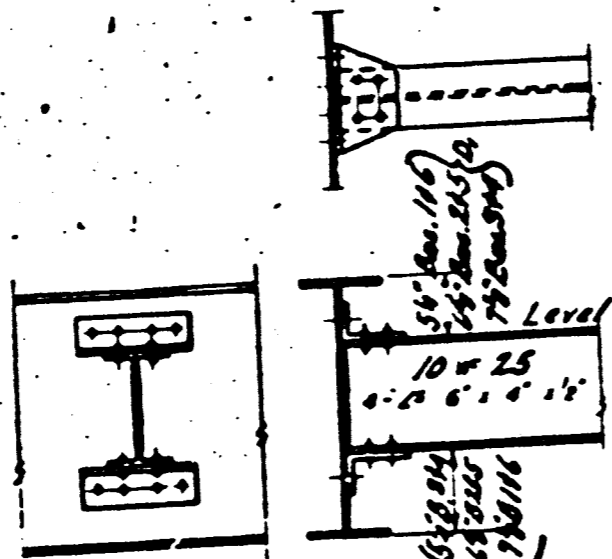
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS



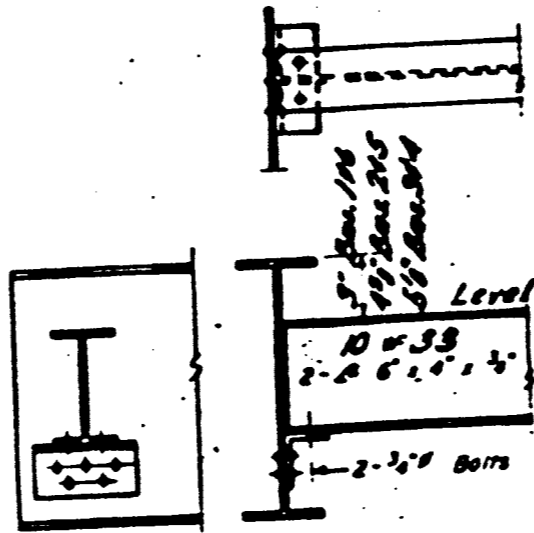
-17-

FOR INFORMATION ONLY

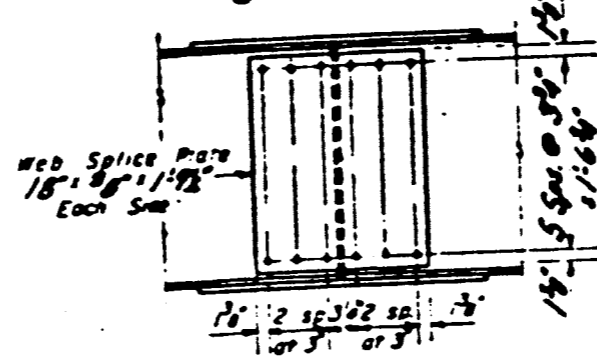
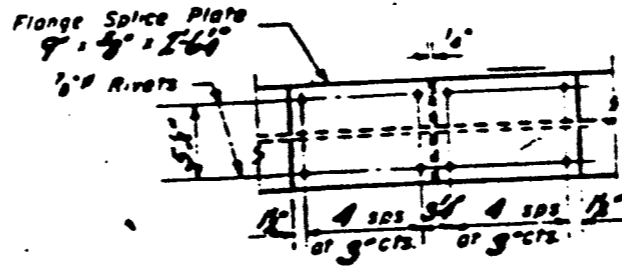
057-0071



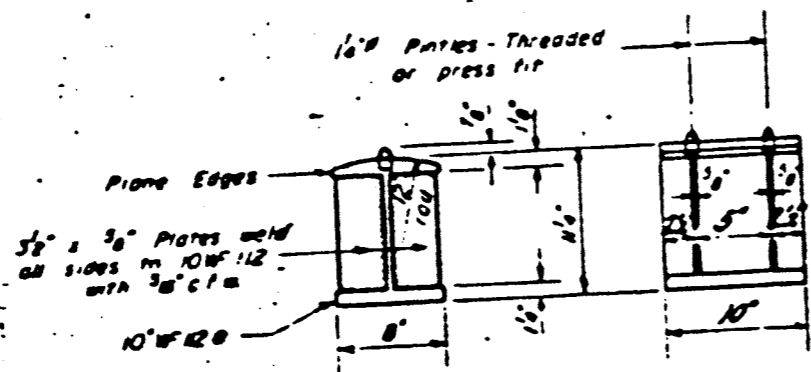
DIAPHRAGM D₁ & D₂
 15" D Required
 10" D₂



DIAPHRAGM D
 10" Required



DETAIL OF SPLICE



DETAIL OF BEARING AT PIER 1 & 2

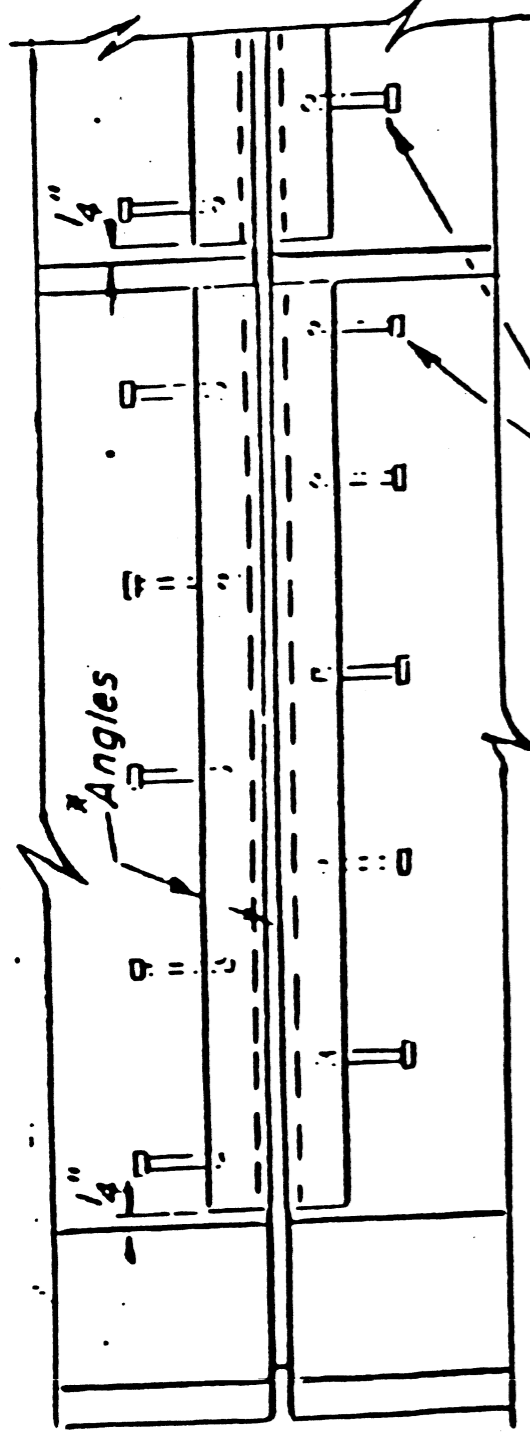
TABLE OF " DIMENSIONS

	Bar 1	Bar 2	Bar 3	Bar 4	Bar 5	Bar 6
W Abc	0"	0"	3/4"	3/4"	0"	0"
E Abc	0"	0"	3/4"	3/4"	0"	0"
Pier 1	0"	0"	4"	4"	0"	0"
Pier 2	0"	0"	4"	4"	0"	0"

STRUCTURAL STEEL
ROOKS CREEK
S.B.I. RT. 8 SEC. 28-BR.
MCLEAN COUNTY
STA. 1.3 + 93

057-0071

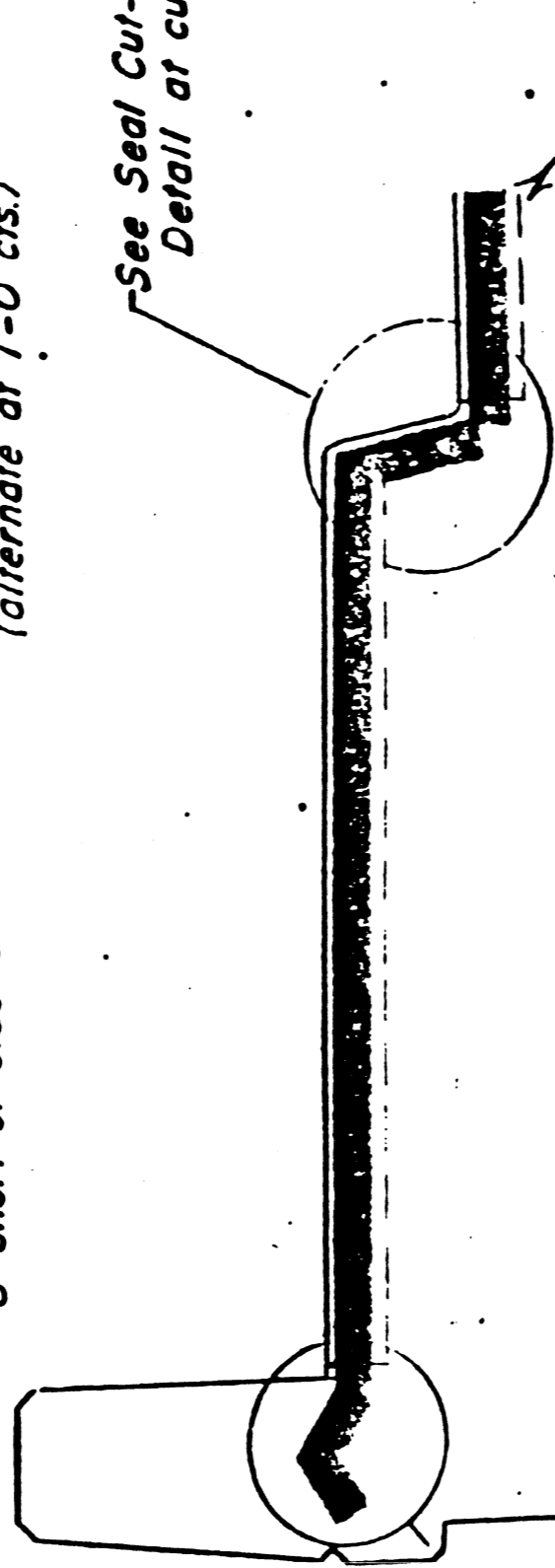
FOR INFORMATION ONLY



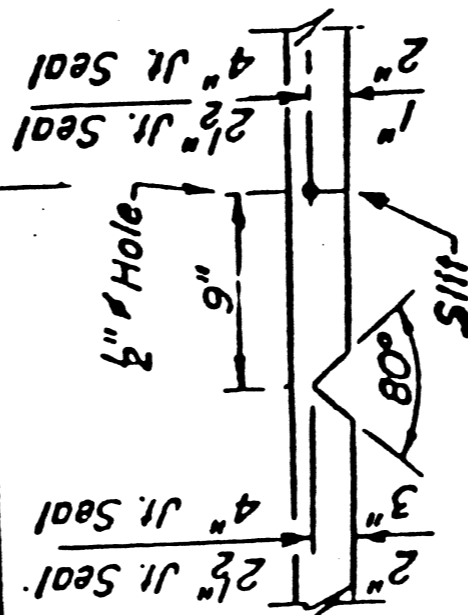
PLAN

$\frac{3}{4}$ " x 8" CR 1020 STL Granular
or solid flux filled headed studs
— automatically end welded
(alternate at 1'-0" cts.)

*Cut rebar in sidewalk
6" short of sidewalk face.



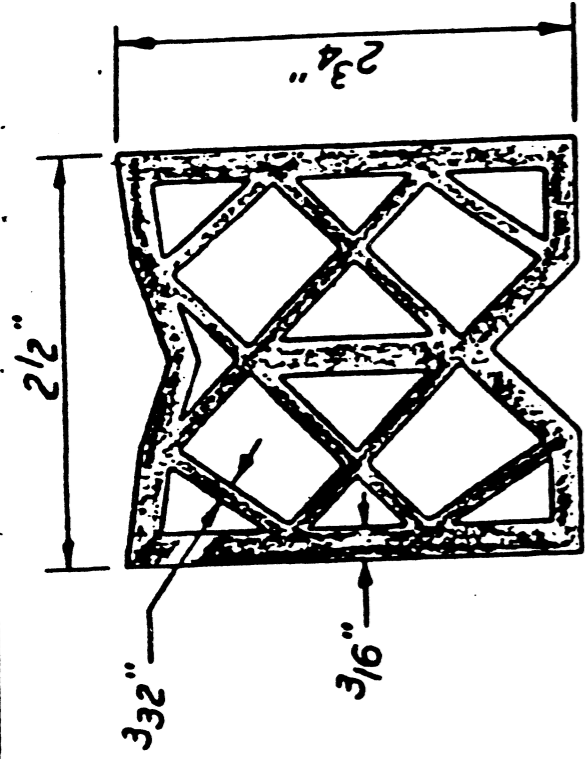
SECTION



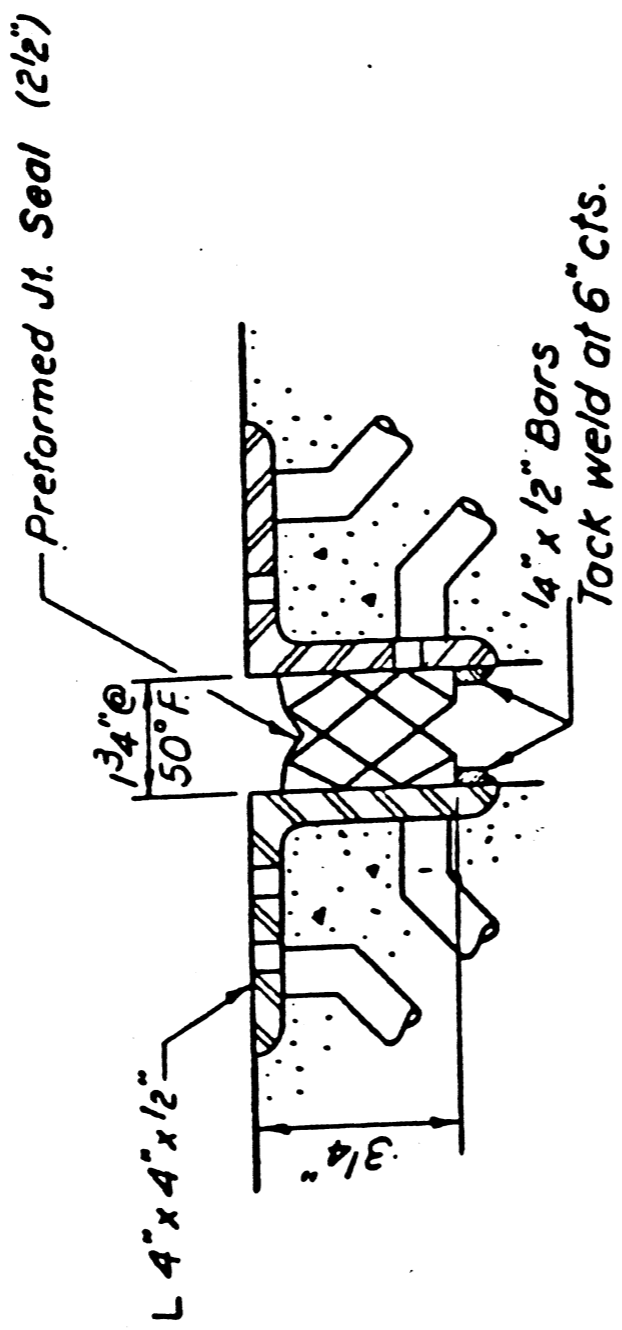
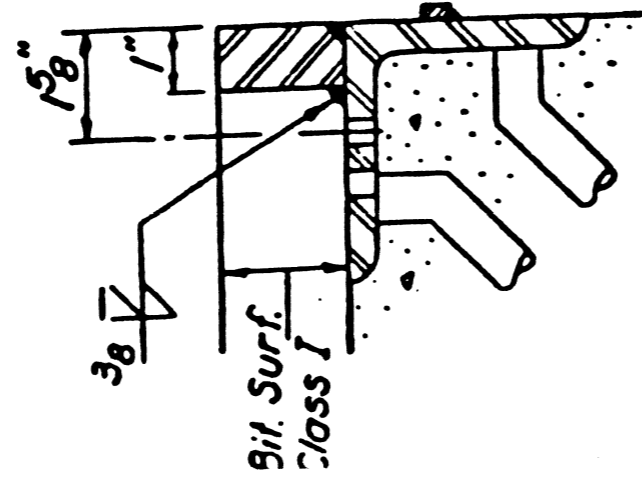
SEAL CUT-OUT at CURB

TYPICAL SEAL TREATMENTS of SIDEWALK

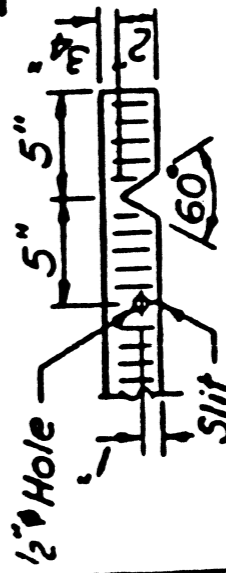
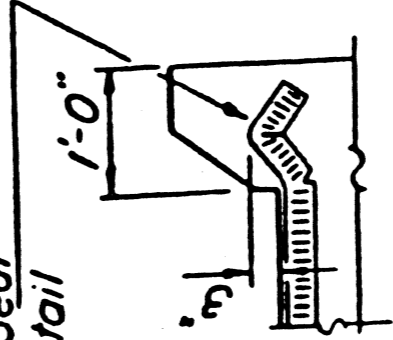
**PREFORMED JOINT
SEAL (2 1/2" x 4")**



PREFORMED JOINT SEAL (2 1/2")

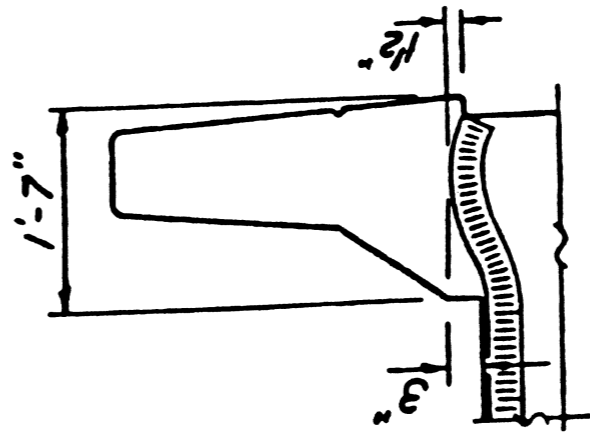


See End of Seal
Cut-Out Detail



SEAL CUT-OUT

TYPICAL END OF SEAL TREATMENTS



PREFORMED JOINT SEAL (2 1/2")



Estimate of Cost

Project _____
 SBI Route 8
 Section 28-BR
 McLean County

The proposed improvement begins at Station 43+93, a bridge approximately ~~0.00000~~ 0.5 miles east of Chenoa, carrying U.S. 24 over Rooks Creek (S.N. 057-0071)

and extends in _____ direction to station _____
 a total distance of _____ feet, of which _____ feet (_____ miles) are to be improved.
 Station _____ is approximately _____ miles by road from the _____ railroad siding at _____.
 Type _____ Width _____ Thickness _____ Shoulders _____
 Average Length of Haul _____ Maximum Grade _____

Quantity	Unit	Item	Code Number	Unit Price	Total Cost
4.0	EACH	STRUCTURAL STEEL BEAM END REPLACEMENT		\$1500.00	\$ 6,000.00
4.0	CU YD	CONCRETE REMOVAL	501024	\$ 500.00	\$ 2,000.00
4.0	CU YD	CLASS "X" CONCRETE	504003	\$ 600.00	\$ 2,400.00
1180.0	POUND	FURNISH AND ERECT STRUCTURAL STEEL	507004	\$ 2.00	\$ 2,360.00
376.0	POUND	REINFORCEMENT BARS	512001	\$ 2.00	\$ 752.00
1.0	EACH	TRAFFIC CONTROL & PROTECTION (#2309)	648018	\$3500.00	\$ 3,500.00
1.0	L SUM	MOBILIZATION	650001	\$3300.00	\$ 3,300.00
72.0	LIN FT	PREFORMED JOINT SEAL (2 1/2")	X50313	\$ 20.00	\$ 1,440.00
4.0	EACH	JACK EXISTING STRUCTURE (0'-10')	Z10262	\$ 750.00	\$ 3,000.00
Total estimated cost of work including all labor, materials and profits.				\$ 24,752.00	

Made by C. Reed Date 04/08/87 Examined _____, 19____ District Engineer

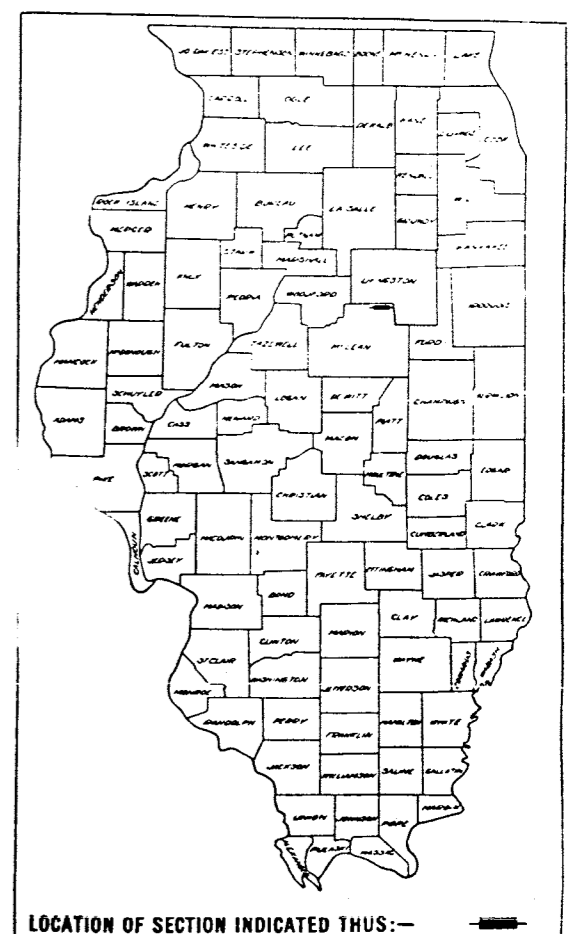
Check by _____ Date _____

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS PLANS FOR PROPOSED STATE BOND ISSUE HIGHWAY

ROUTE	SEC.	COUNTY	SECTION
S.B.I. 8	(27,28)BR	MCLEAN	17
PROJECT NO.	ILLINOIS PROJECT F-28(10)		

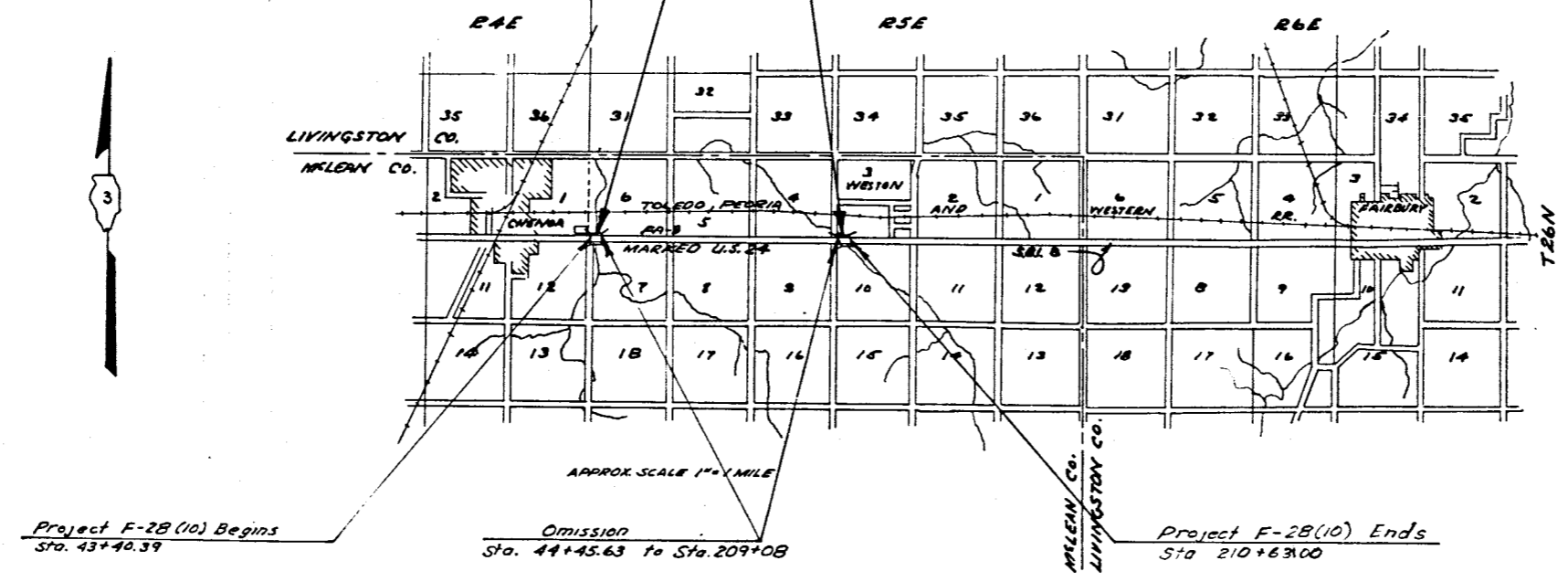
SCALES
 PLAN 1 INCH = 100 FT.
 PROFILE HOR. 1 INCH = 100 FT.
 PROFILE VERT. 1 INCH = 10 FT.
 CROSS SECTIONS 1 INCH = 10 FT. HORIZ. / 5 FT. VERT.

S.B.I. ROUTE 8 SEC. (27,28)BR PROJECT F-28(10) MCLEAN COUNTY



SECTION (27,28)BR INCLUDES THE CONSTRUCTION OF A 3 SPAN STEEL WF BEAM R.C. SLAB BRIDGE, SPANS 2 AT 32' AND 1 AT 37', ON SOLID R.C. PIERS AND OPEN ABUTMENTS ON R.C. PILE BENTS, STA. 43+93

SECTION (27,28)BR INCLUDES THE CONSTRUCTION OF A 3 SPAN STEEL WF BEAM R.C. SLAB BRIDGE, SPANS 2 AT 46' AND 1 AT 54' ON SOLID R.C. PIERS AND OPEN ABUTMENTS ON R.C. PILE BENTS, STA. 209+85.5

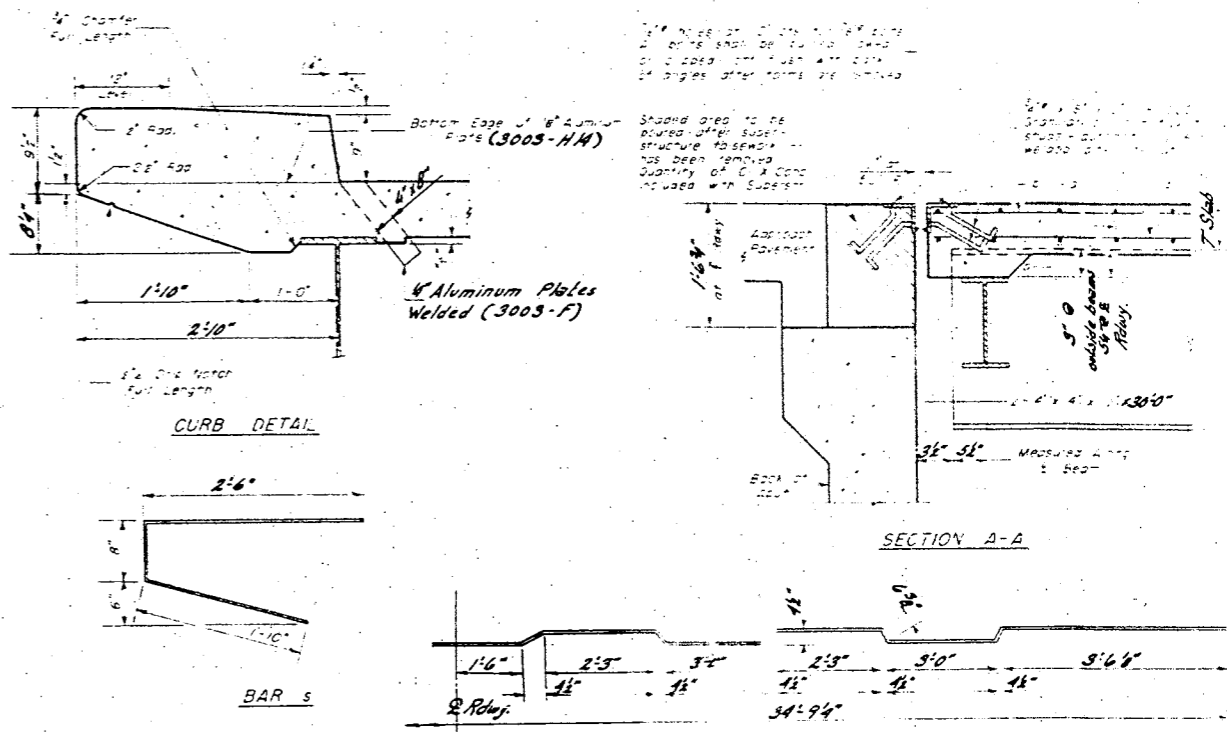
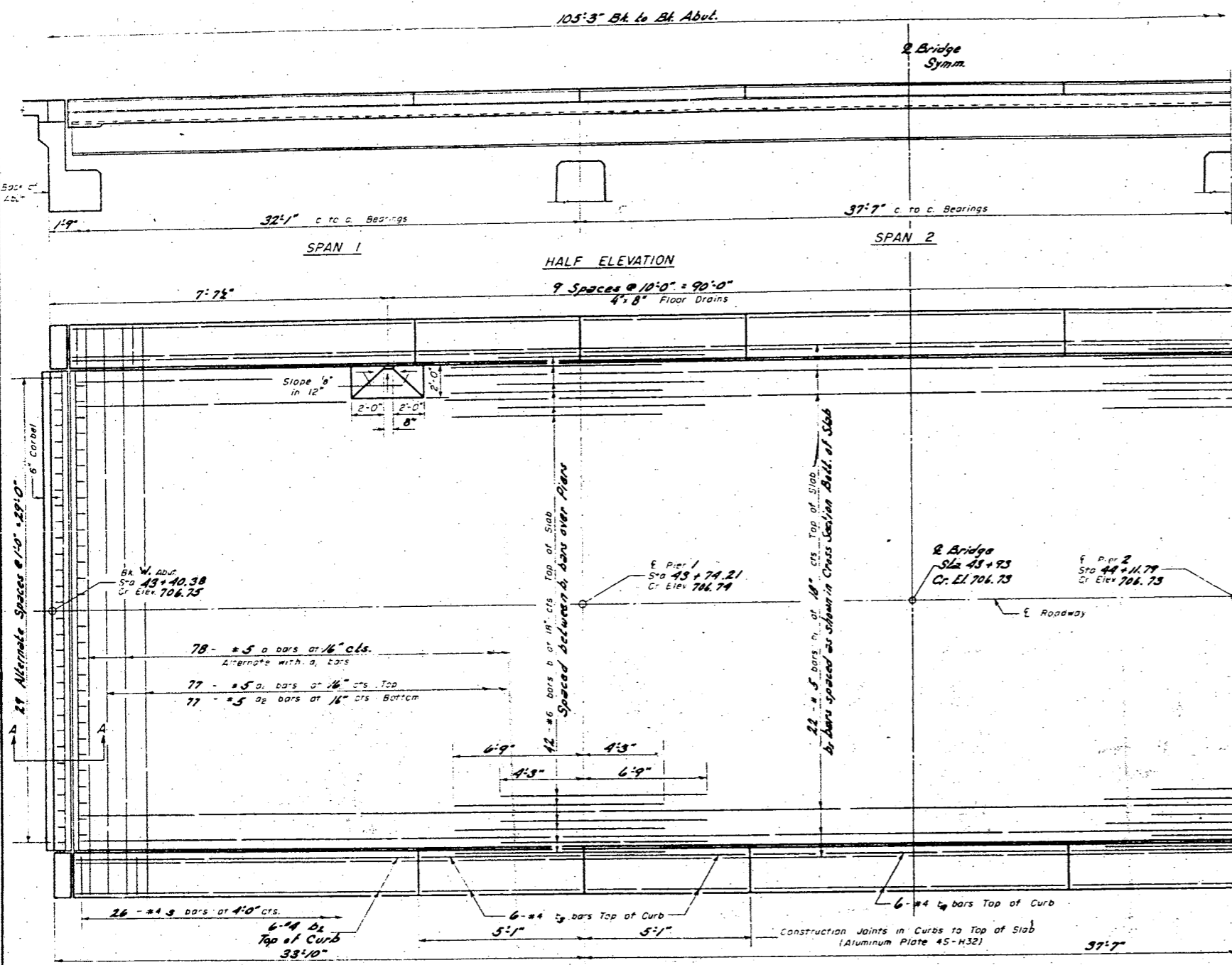


STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED	DATE RECEIVED
EXAMINED March 4, 1959	DATE
D. W. Randall ENGINEER IN CHARGE	
PASSED March 3, 1959	
APPROVED March 4, 1959	
M. A. Bostange CHIEF ENGINEER	
APPROVED March 4, 1959	

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS	
APPROVED	DATE
<input type="checkbox"/>	<input type="checkbox"/>
DIVISION ENGINEER	DATE

NET LENGTH OF Project = 260.25 FEET = 0.499 MILES

Reel 3-9 43+93 2883

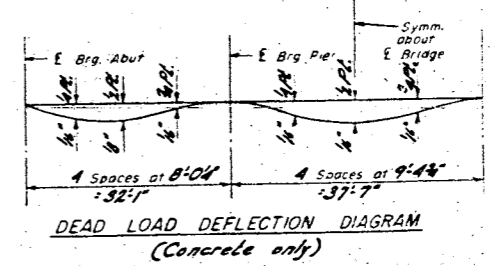
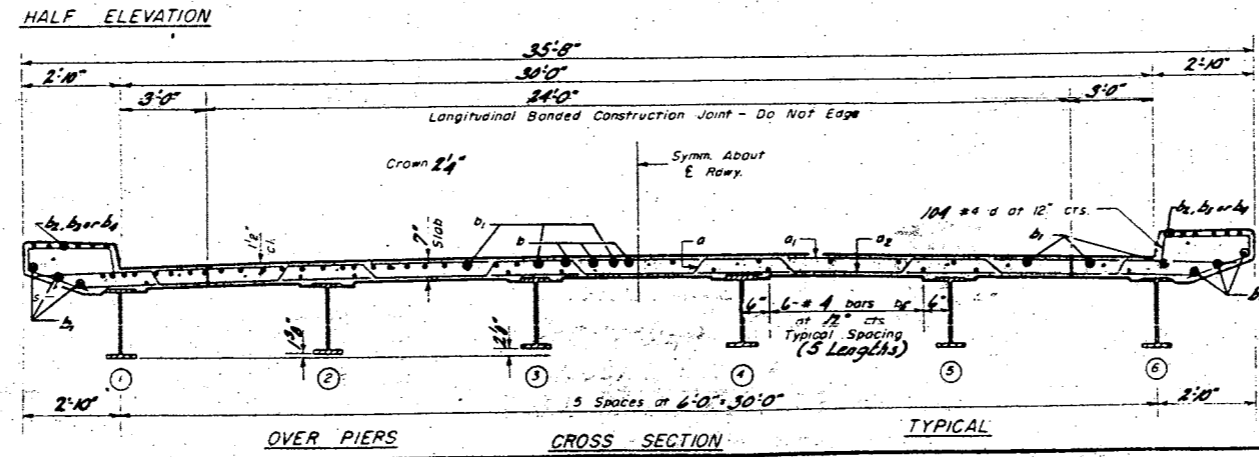


METHOD OF DETERMINING FILLET HEIGHT "f"
After all Structural Steel has been erected elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 Ft. From these elevations subtract the increment of deflections for these points, determined from the D.L. Deflection Diagram. The elevations so obtained subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet heights above top of beam.

BILL OF MATERIAL

Bar	No.	Size	Length	Spade
a	78	#5	36'-4"	
a ₁	77	#5	34'-10"	
a ₂	77	#5	32'-0"	
b	84	#6	11'-0"	
b ₁	140	#5	21'-7"	
b ₂	150	#4	21'-6"	
b ₃	24	#4	27'-4"	
b ₄	48	#4	4'-9"	
b ₅	12	#4	27'-5"	
s	52	#4	5'-0"	
d	208	#4	1'-0"	
Class & Concrete				Cl. 13 99.0
Reinforcement Bars				16,140
Structural Steel				69,910
Name Plate				1

Weight of Rails, Rocks, Bearings, Etc. Lead Plates and Anchor Bars included at Structural Steel Est. Weight = 6,385



DESIGN STRESSES
As per Manual Structural Steel Reinforcement, McLean County Superstructure to Superstructure n = 10

SUPERSTRUCTURE
ROCKS CREEK
S.B.I. RT. 9 SEC. 28-BR
MCLEAN COUNTY
STA. 43+93

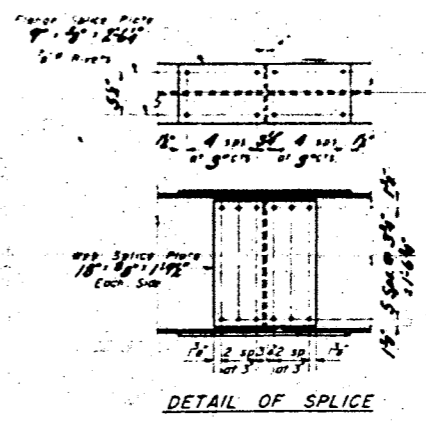
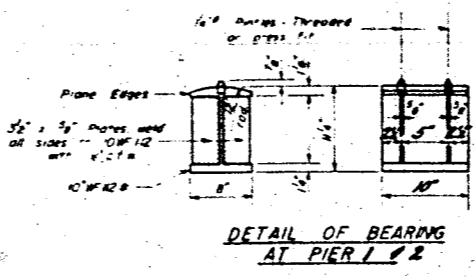
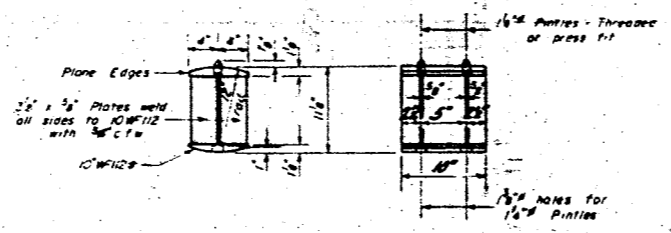
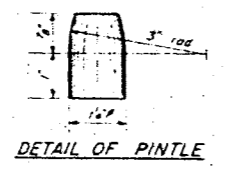
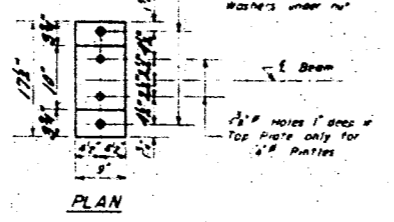
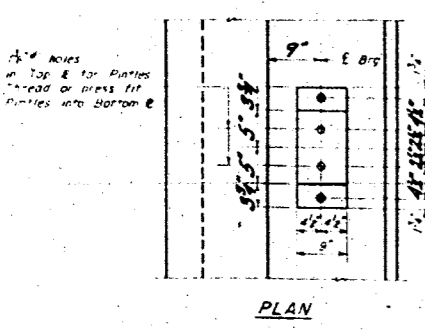
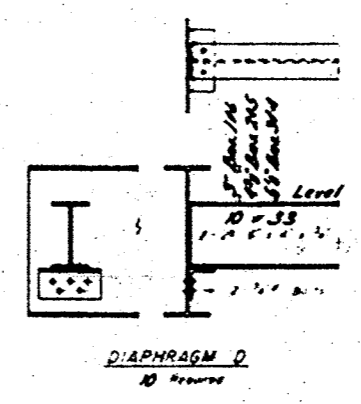
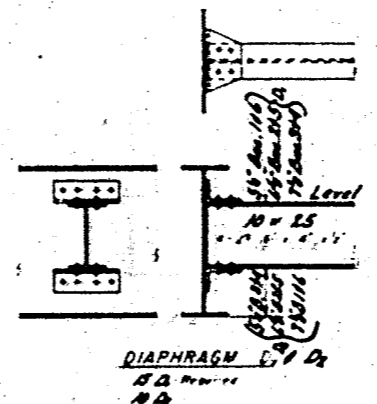
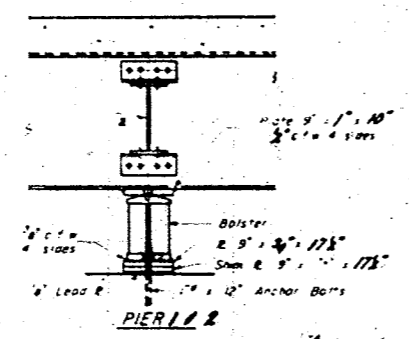
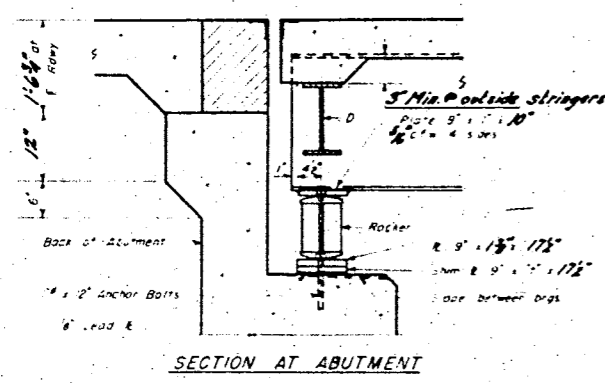
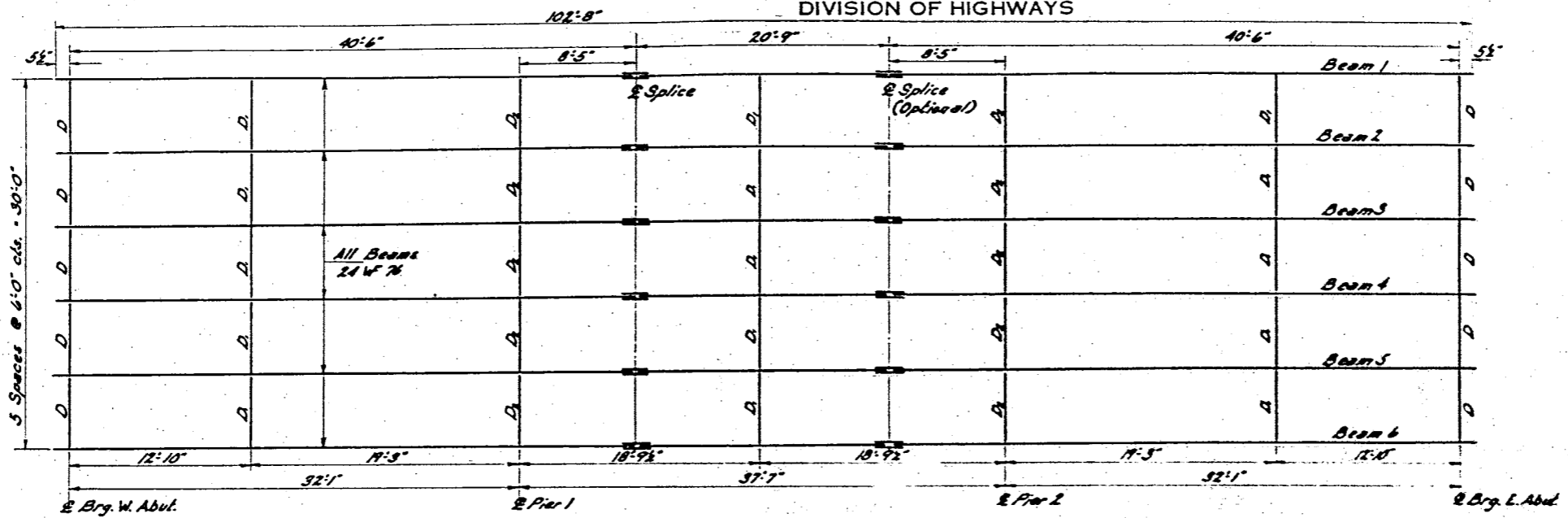
DESIGNED: Coufakadot
CHECKED: Hugo Kayano
DRAWN: T.K. P. Blawie
CHECKED: Hugo Kayano

EXAMINED: M. R. ...
APPROVED: P.R. ...

DEC. 11 1958

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

8 0128M McLean 27 7 7



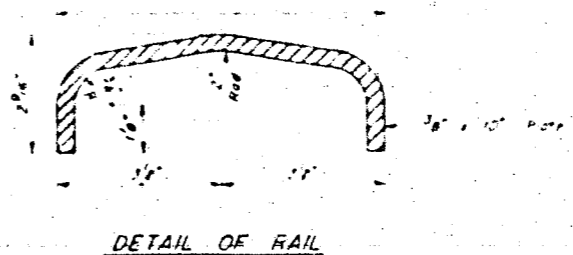
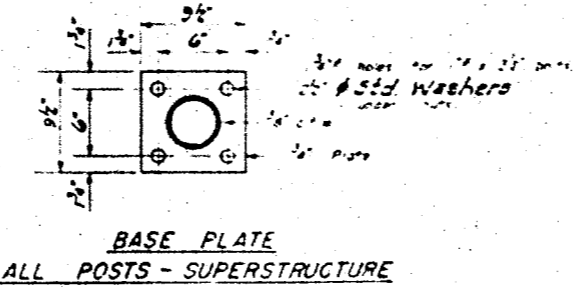
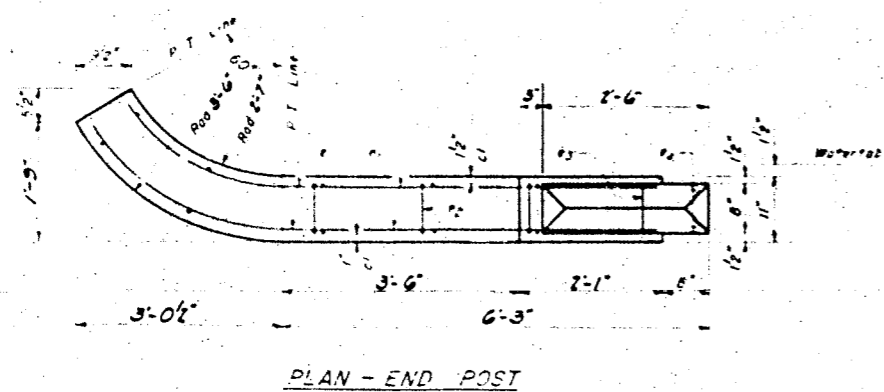
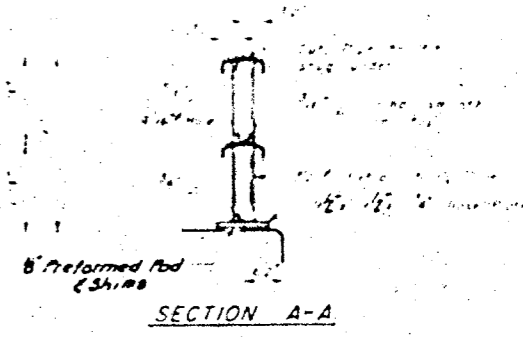
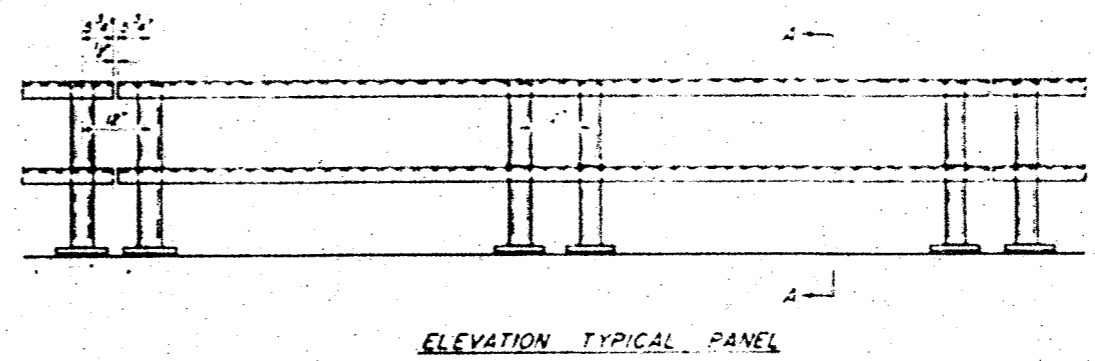
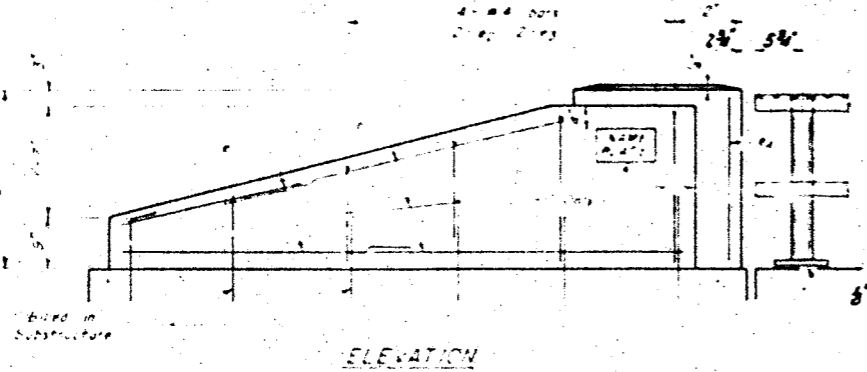
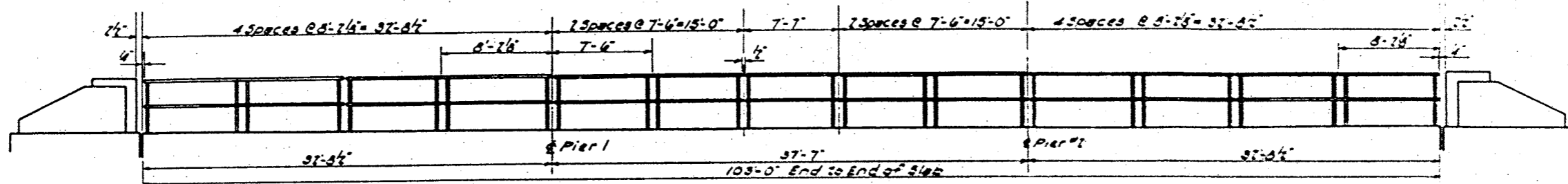
DESIGNED *Paul J. ...*
CHECKED *A. Kayans*
DRAWN *T.K. Plowler*
CHECKED *A. Kayans*
EXAMINED *Mr. Rommer*
PASSED *E. J. ...*
APPROVED *RR ...*

DEC. 11 19 58

TABLE OF "I" DIMENSIONS

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
Wahl	0"	0"	4"	4"	0"	0"
Edg	0"	0"	4"	4"	0"	0"
Pier 1	0"	0"	4"	4"	0"	0"
Pier 2	0"	0"	4"	4"	0"	0"

STRUCTURAL STEEL
ROOKS CREEK
S.B.I. RT. 8 SEC. 28-BR.
MCLEAN COUNTY
STA. 43+93



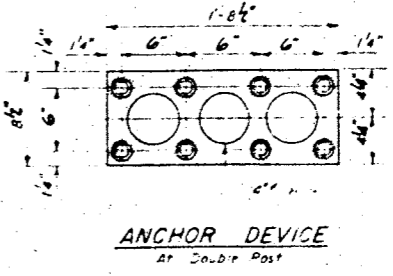
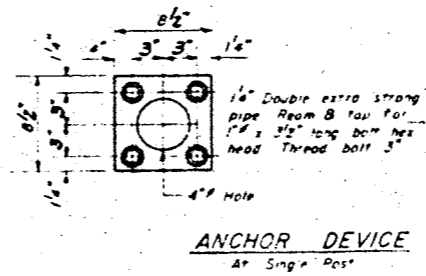
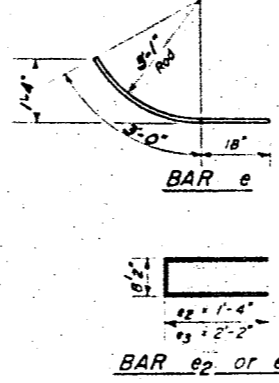
BILL OF MATERIAL

Handrail Concrete	Cu Yd	2.5
Reinforcement Bars	Lbs	190
Meta Handrail	Lbs	206

NOTE: All End Posts shall be Handrail Concrete. All Bolts and Washers shall be Hot Dipped Galvanized. Provide 1-6" and 2-1/2" Shims for 50% of the Posts.

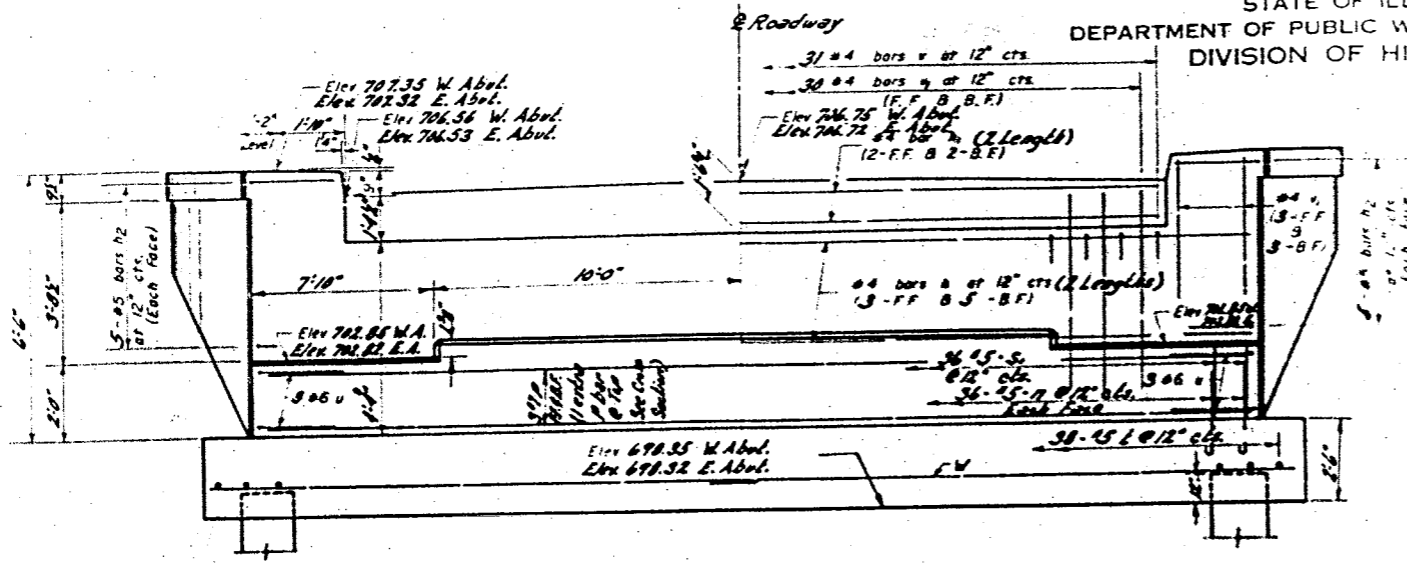
BILL OF REINFORCEMENT

Bar	No	Size	Length	Shape
e1	5	#4	4'-6"	
e2	4	#4	3'-0"	
e3	5	#4	3'-4"	
e4	5	#4	5'-0"	
e5	5	#4	2'-3"	

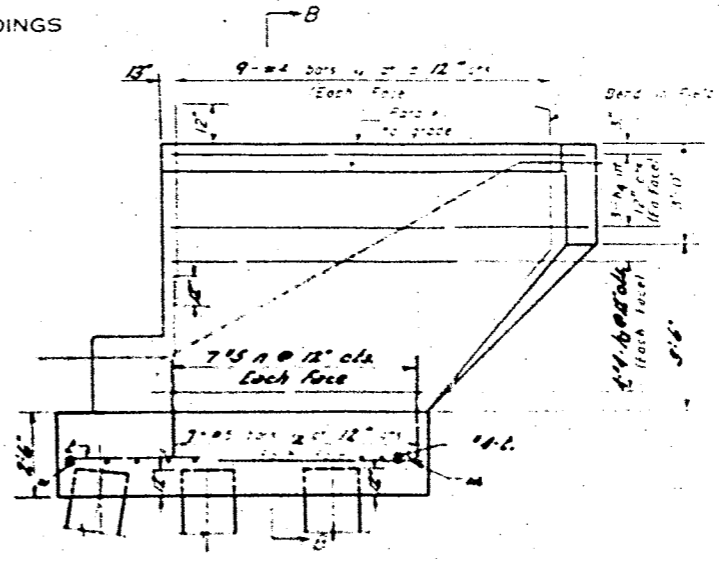


DETAILS of HANDRAIL
ROOKS CREEK
S.B.I. RT. 8 SEC. 28-BR
MCLEAN COUNTY
STA. 43+93

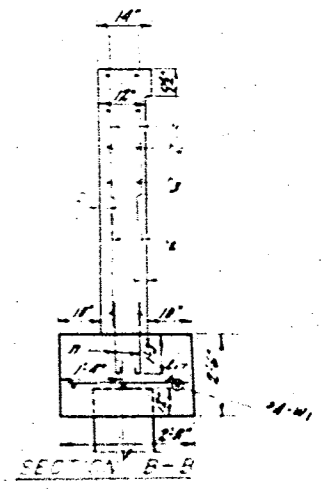
DEC. 11 58
A. Kaufman
A. Rogers
TK M. A. Sandoval
M. A. Sandoval
A. Rogers
RR Bartholomew



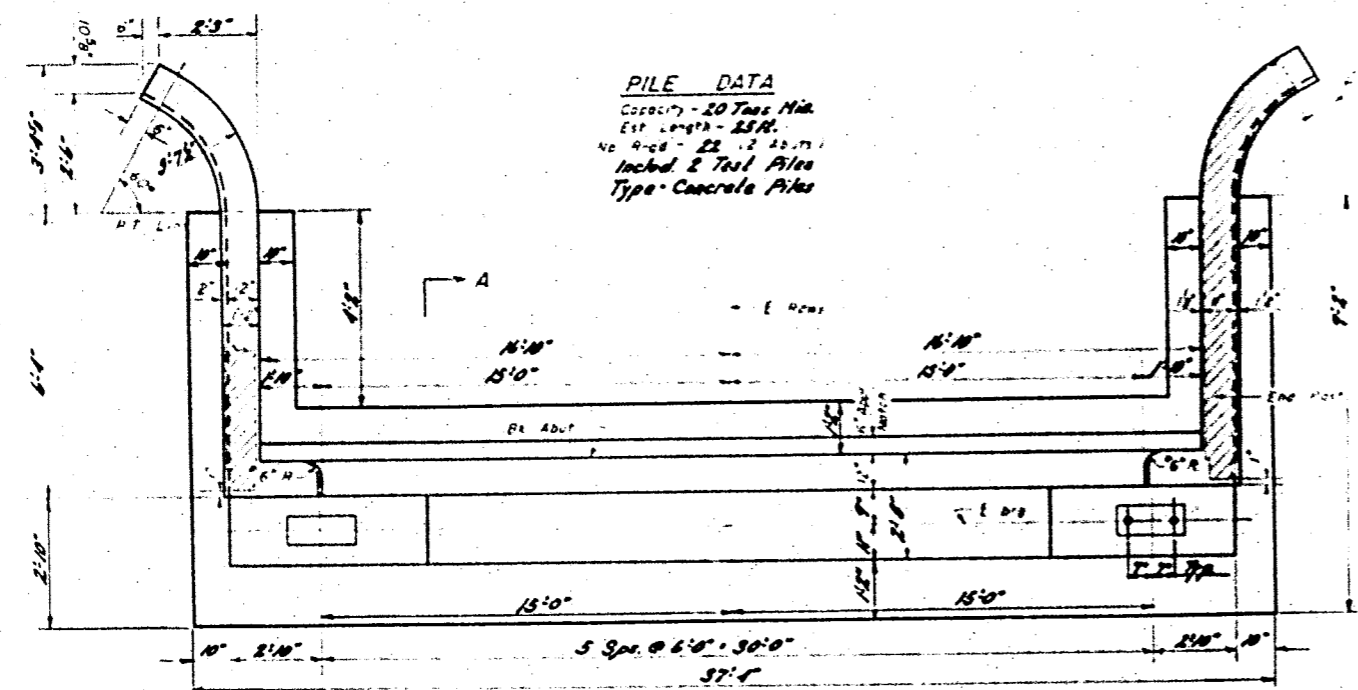
ELEVATION
At Right Angles to E Road



SIDE ELEVATION

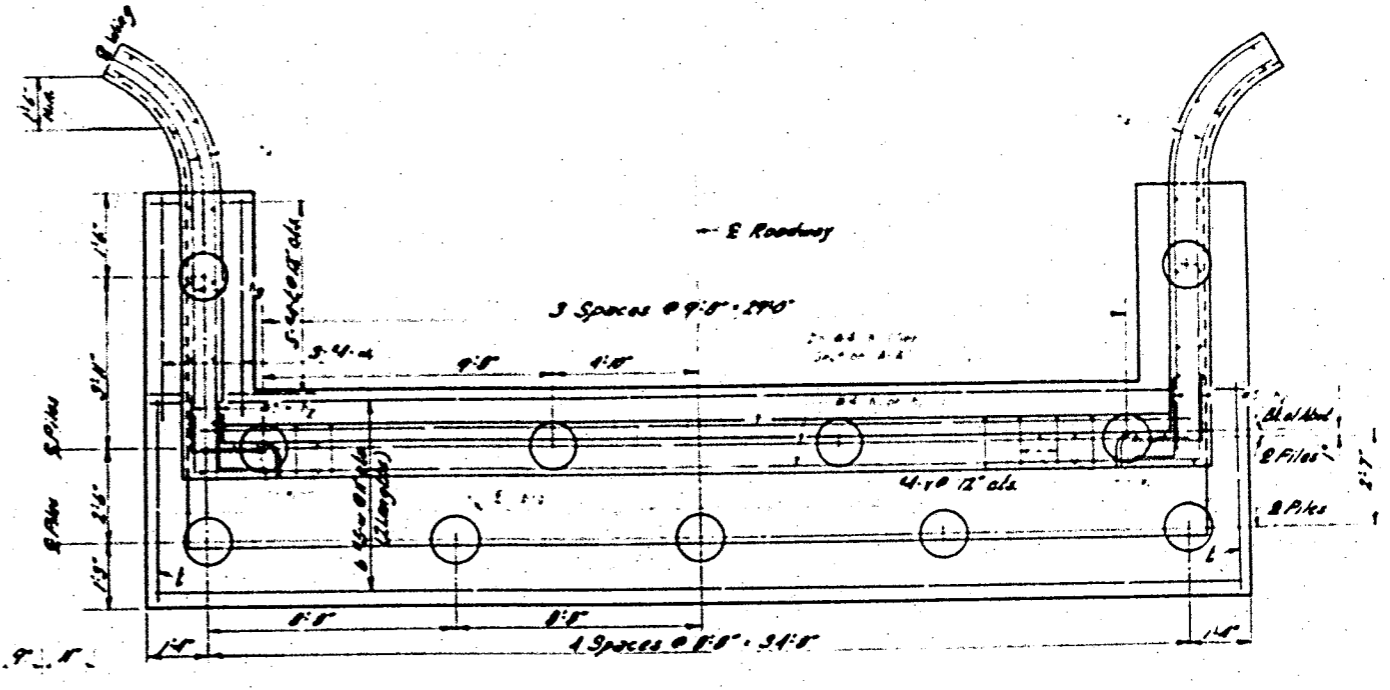


SECTION B-B



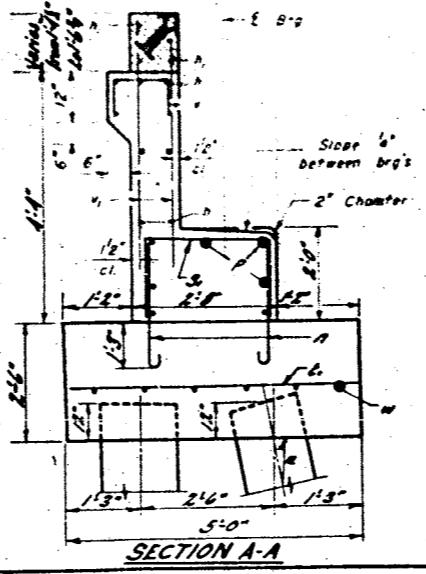
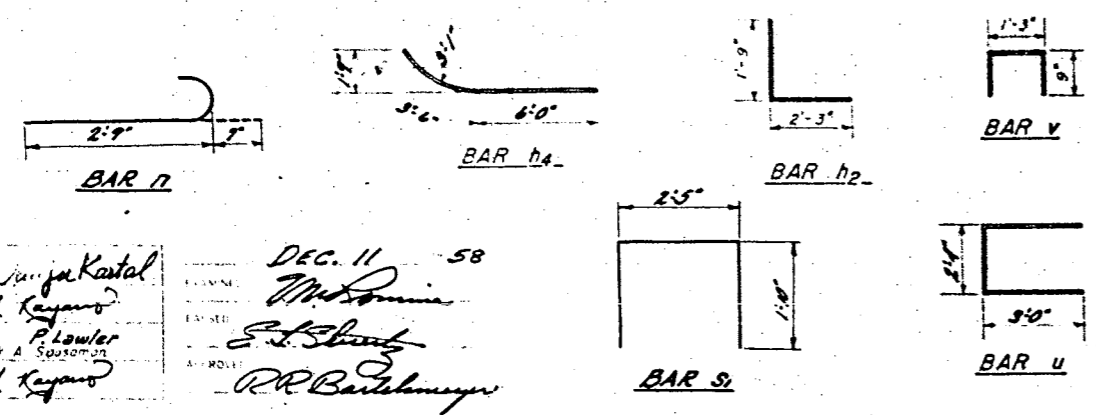
PILE DATA
Capacity - 20 Tons Min.
Est. Length - 25 ft.
No. Piles - 22 (2 test piles)
Incl. 2 Test Piles
Type - Concrete Piles

PLAN OF ABUTMENT



PLAN OF ABUTMENT
Reinforcement & Pile Spacing

Note: Contractor shall construct curb without radius when a curb & gutter are to be used on bridge approaches (See Road Plans)



SECTION A-A

BILL OF REINFORCEMENT

Bar No	Size	Length	Shape	Bar No	Size	Length	Shape
h	#4	18'-5"	A	200	#5	3'-4"	→
h1	#4	15'-5"					
h2	#5	2'-5"	L	14	#7	35'-4"	→
h3	#4	6'-10"	L	76	#5	4'-9"	→
h4	#5	9'-6"	L	20	#4	2'-6"	→
				62	#4	2'-9"	→
				216	#4	4'-10"	→
				56	#5	3'-9"	→
				12	#6	8'-4"	→
				24	#5	19'-0"	→
				18	#4	4'-6"	→
				72	#5	6'-1"	→

BILL OF MATERIAL

Item	Unit	Quantity
Class X Concrete	cu yd	677
Reinforcement Bars	Lb	5,370
Concrete Piles	Lin. Ft.	500
Test Piles (R.C.)	Each	2

E. & W. ABUTMENTS
ROCK CREEK
S.B.I. RT. 8 SEC. 28 BR
MCLEAN COUNTY
STA. 43+93

DESIGNED BY: *N. Kayano*
CHECKED BY: *N. Kayano*
DRAWN BY: *W. A. Soudon*
SCALE: *1/4" = 1'-0"*

DATE: DEC. 11 58
BY: *McLean*
CHECKED BY: *E. J. Shroy*
APPROVED BY: *R. R. Bachman*