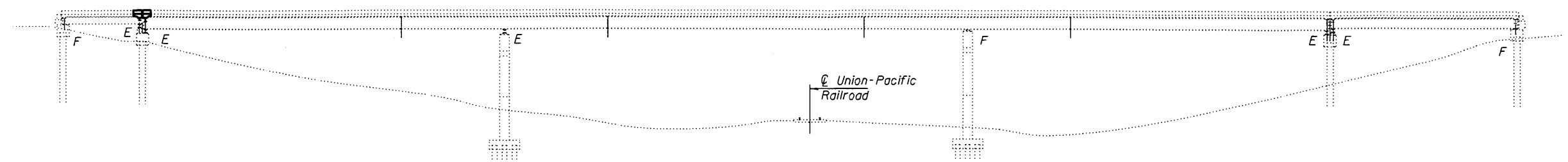
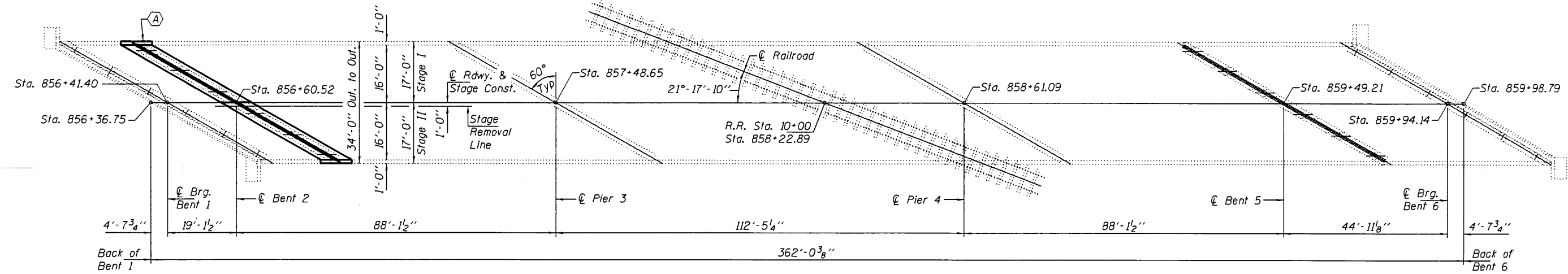
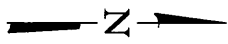


UNIT COPY



ELEVATION



PLAN

- (A) - Remove existing Neoprene Exp. Jt. and install Silicone Joint Sealer
- (B) - Remove & Replace End Diaphragms at Bent 2. (See Sheet 2 of 6.)
- (C) - Strengthen Beam Ends. (For locations and details see sheets 2 & 3 of 6.)

GENERAL 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.

Fasteners shall be high strength bolts. Bolts  $\frac{3}{4}$ " $\phi$ , open holes  $\frac{13}{16}$ " $\phi$ , unless otherwise noted.

Diaphragm connection holes shall be  $\frac{15}{16}$ " $\phi$  for  $\frac{3}{4}$ " $\phi$  bolts. Two hardened washers shall be required at diaphragm connections.

Reinforcement bars designated (E) shall be epoxy coated.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat shall be Gray, Munsell No. 5B 7/1.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

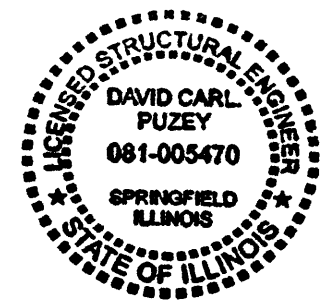
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

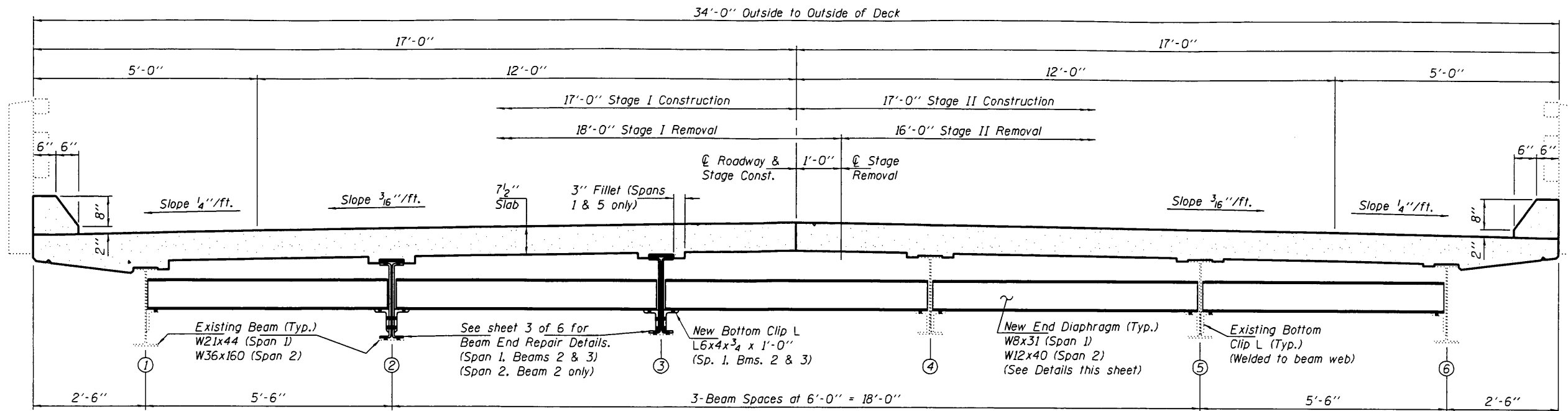
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	8.3
Concrete Superstructure	Cu. Yd.	8.3
Polymer Concrete	Cu. Ft.	4.7
Silicone Joint Sealer, 2"	Foot	66
Structural Steel Removal	Pound	4370
Furnishing & Erecting Structural Steel	Pound	4990
Reinforcement Bars, Epoxy Coated	Pound	1870
Bar Splicers	Each	16



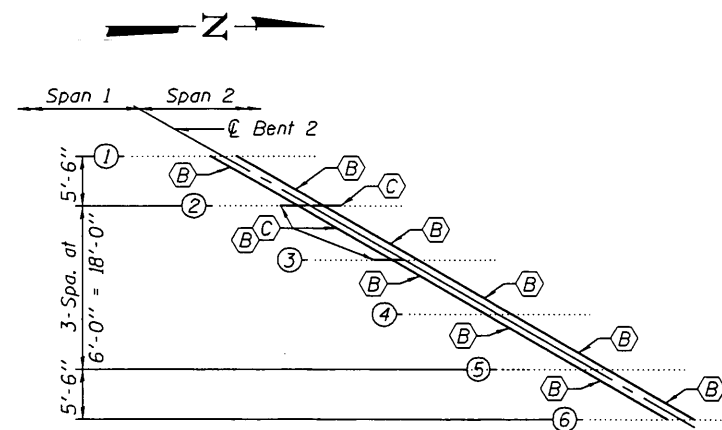
Expires: November 30, 2016

DESIGNED - <i>[Signature]</i>	DATE - APRIL 27, 2016	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN &amp; ELEVATION</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - <i>[Signature]</i>	REVISED		ILLINOIS ROUTE 49 OVER THE UNION-PACIFIC RAILROAD		840	-	VERMILION	-	-
DRAWN - Kyle M. Schaffner	REVISED		SN 092-0101		CONTRACT NO.				
CHECKED - <i>[Signature]</i>			SHEET NO. 1 OF 6 SHEETS		ILLINOIS FED. AID PROJECT				



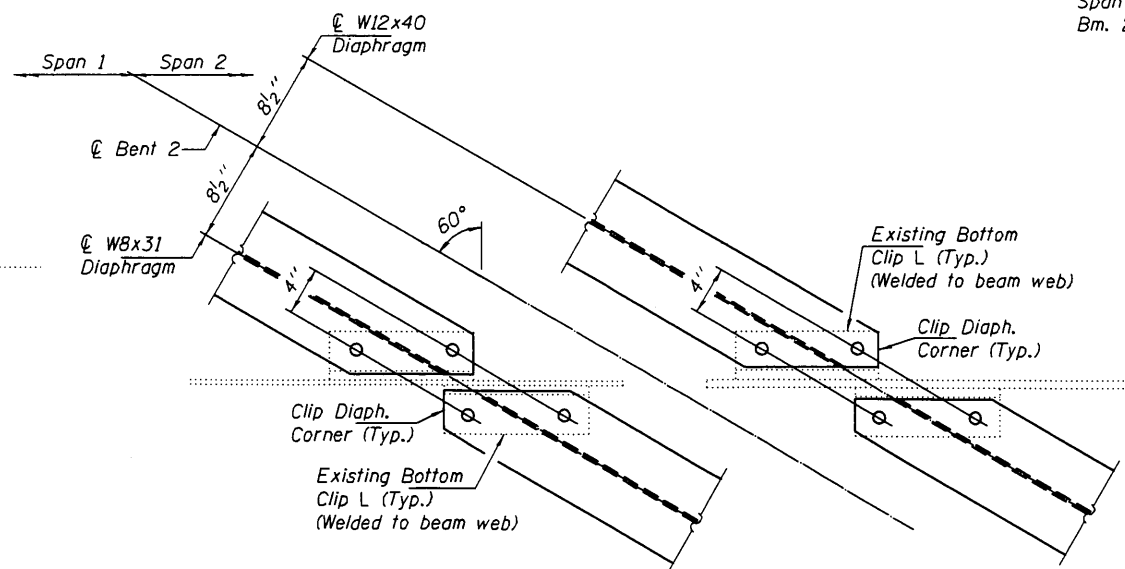
**CROSS SECTION THRU BRIDGE DECK**

(Looking North)  
(Span 1 shown, Span 2 similar except as noted.)

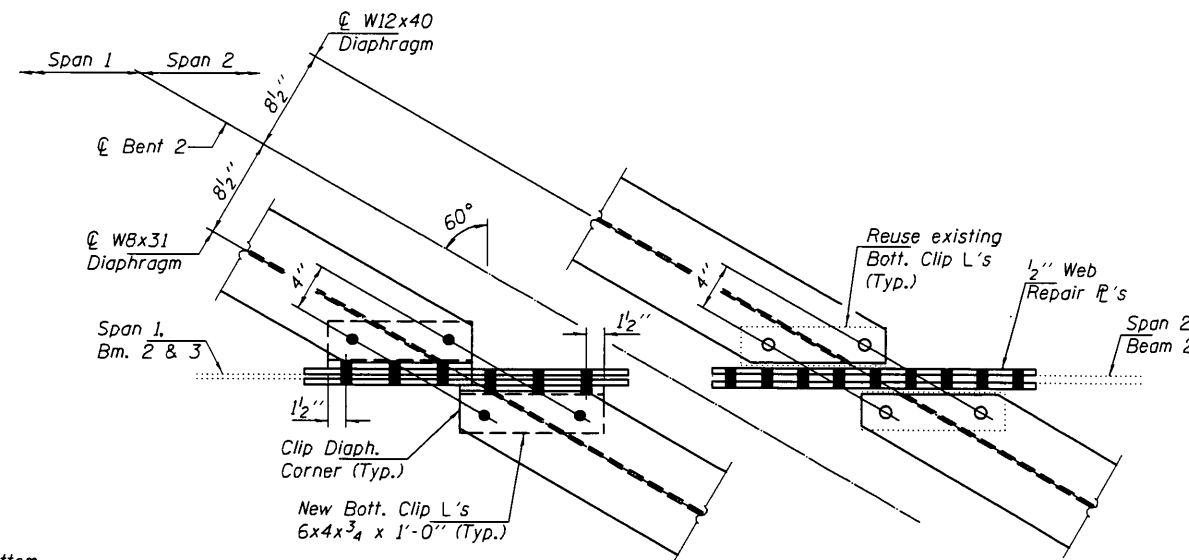


**PARTIAL FRAMING PLAN**

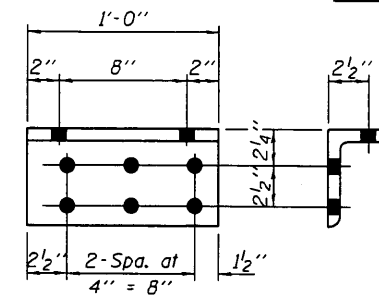
- (B) - Remove & Replace End Diaphragms.
- (C) - Strengthen Beam Ends.  
(For details see sheet 3 of 6.)



**DIAPHRAGM CONNECTION DETAIL FOR  
SPAN 1, BEAMS 1 & 4 THRU 6 AND  
SPAN 2, BEAMS 1 & 3 THRU 6**



**DIAPHRAGM CONNECTION DETAIL FOR  
SPAN 1, BEAMS 2 & 3 AND  
SPAN 2, BEAM 2**



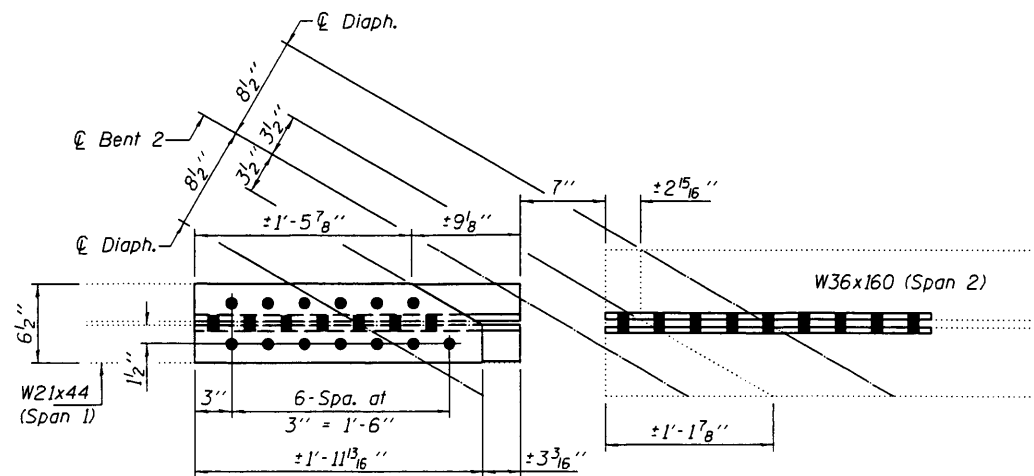
**NEW BOTTOM CLIP L**  
L 6x4x<sup>3</sup>/<sub>4</sub> x 1'-0" (4-Required)

**BOLT LEGEND**

- Field drill holes in new steel using existing holes as template.
- Shop drilled holes in new steel. (Use as template to field drill holes in new or existing steel.)

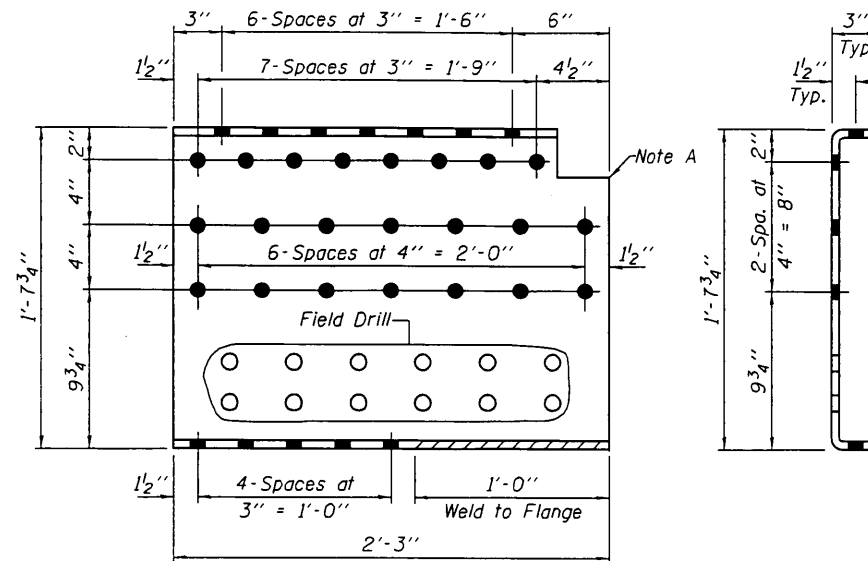
DESIGNED - CCC	DATE - APRIL 27, 2016	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTION AND DIAPHRAGM REPLACEMENT DETAILS</b> SN 092-0101	F.A.P. -	SECTION -	COUNTY -	TOTAL SHEETS -	SHEET NO. -	
CHECKED - JCY	REVISOR -			840		VERMILION	-	-	
DRAWN - Kyle M. Steffen	REVISOR -					CONTRACT NO.			
CHECKED - CCC JCY	REVISOR -					ILLINOIS FED. AID PROJECT			
PASSED <i>[Signature]</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES				SHEET NO. 2 OF 6 SHEETS					

Note A:  
Trim Bent P's to match existing web & top flange.



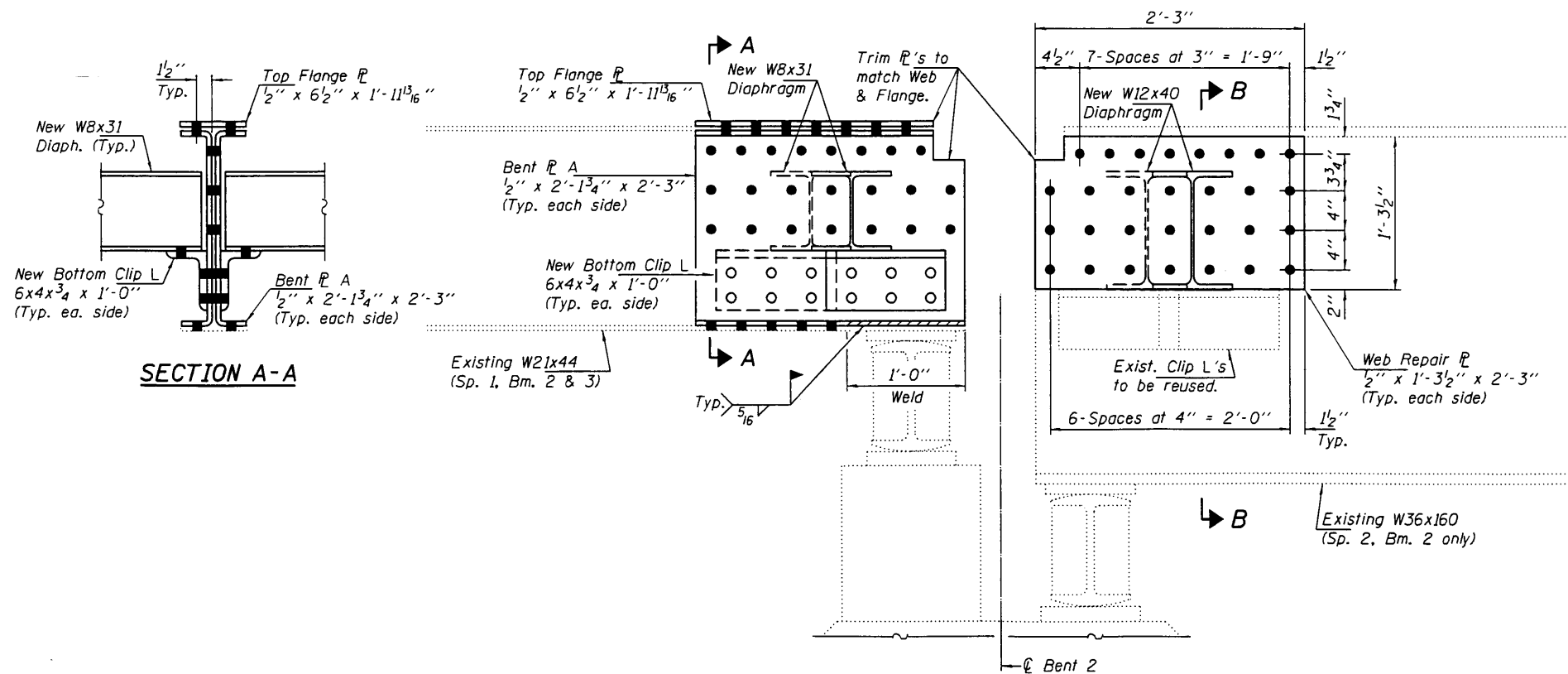
**TOP FLANGE DETAILS**

Diaphragms not shown for clarity.



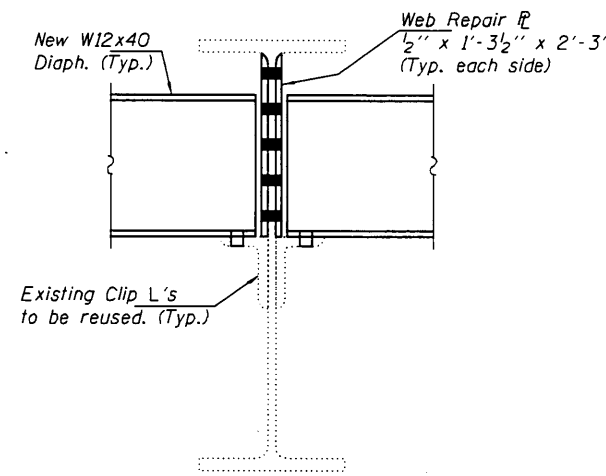
**BENT P A DETAILS**

Bent P 1/2" x 2'-1 3/4" x 2'-3"  
(2-Req'd; 1-as shown, 1-opposite-hand)



**BEAM REPAIR DETAILS**

Span 1 - Beams 2 & 3;  
Span 2 - Beam 2 Only



**SECTION B-B**

**BOLT LEGEND**

- Field drill holes in new steel using existing holes as template.
- Shop drilled holes in new steel. (Use as template to field drill holes in new or existing steel.)

DESIGNED - CCC  
CHECKED - JGY  
DRAWN - Kyle M. Steffen  
CHECKED - CCC JGY

PASSED  
*A. Carl Perry*  
ACTING ENGINEER OF BRIDGES AND STRUCTURES

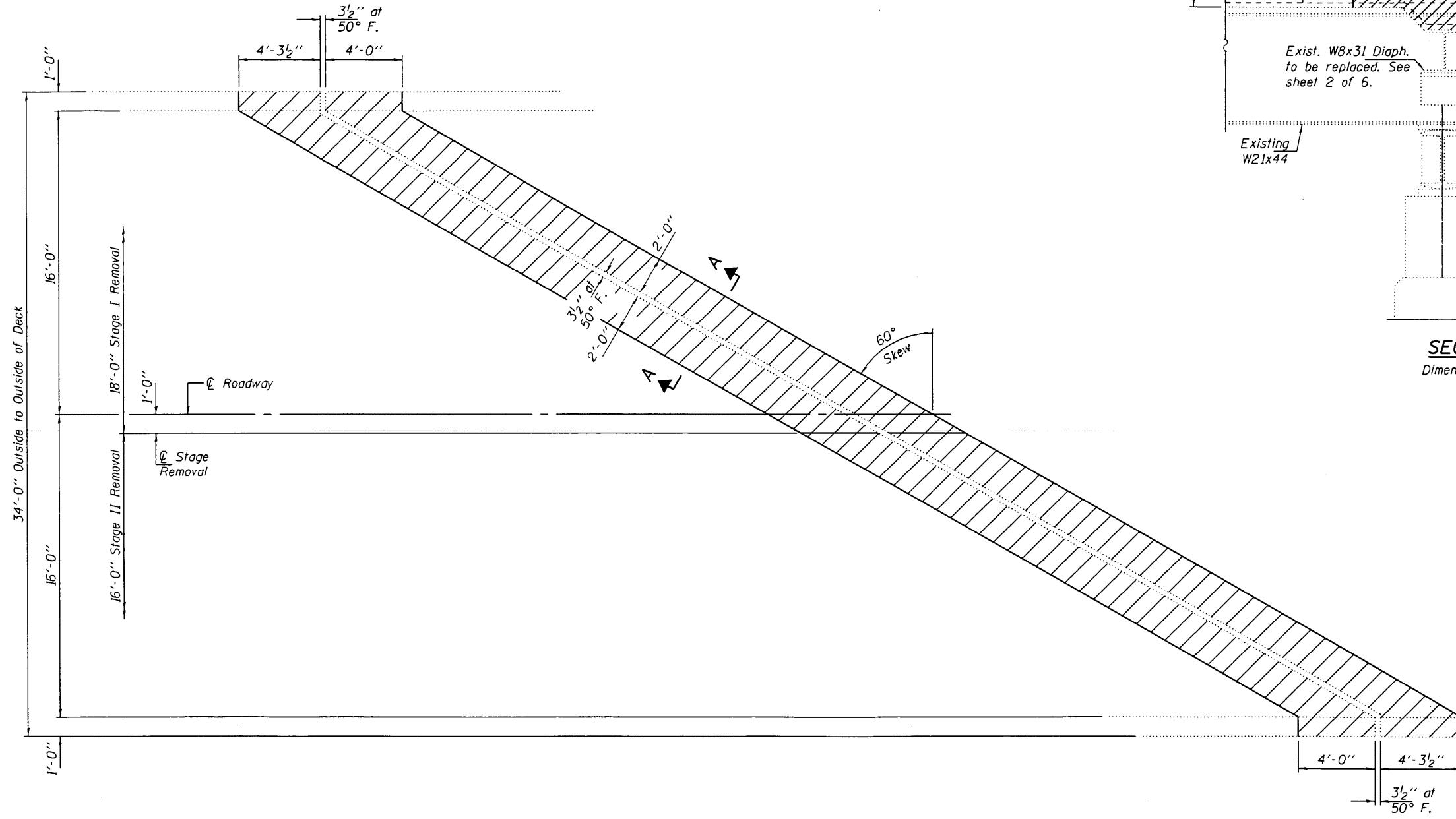
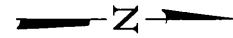
DATE - APRIL 27, 2016  
REVISED  
REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

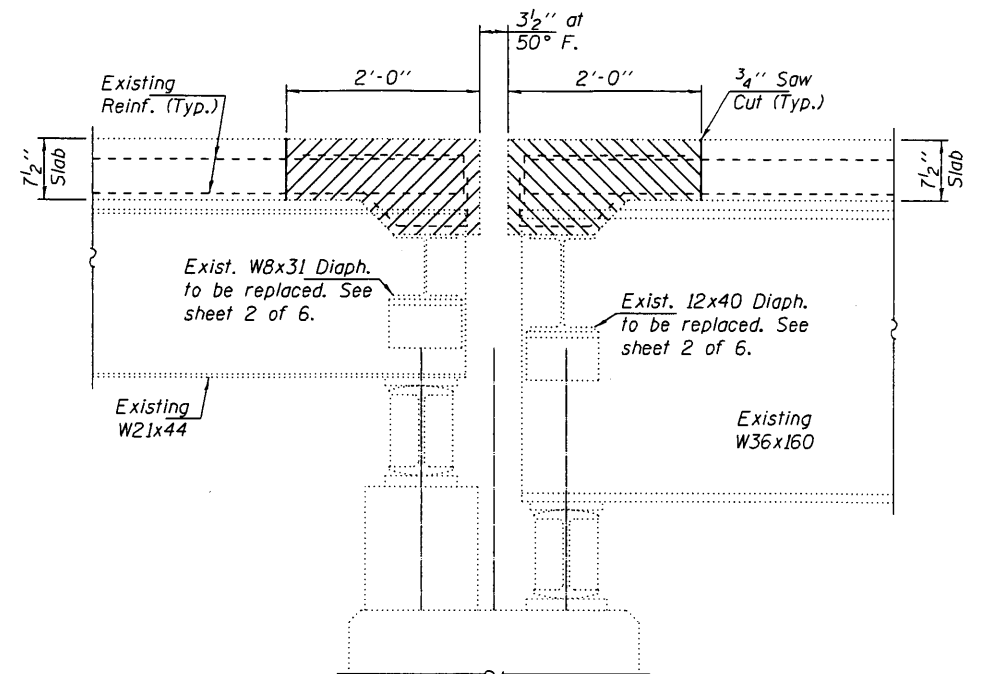
BEAM END REPAIR DETAILS  
SN 092-0101

SHEET NO. 3 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
B40	-	VERMILION	-	-
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



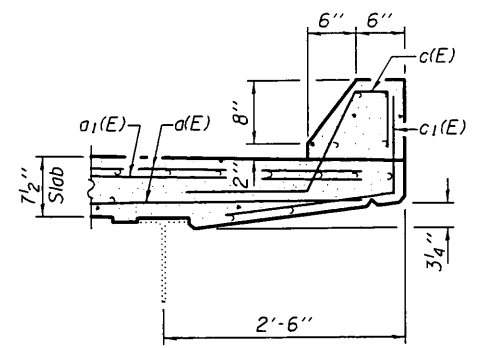
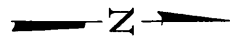
**CONCRETE REMOVAL PLAN**



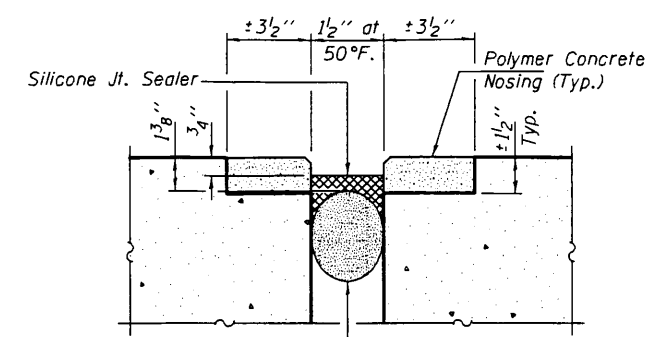
**SECTION A-A**  
Dimensions at Rt. L's

DESIGNED - CCC	DATE - APRIL 27, 2016	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>BENT 2 JOINT REMOVAL DETAILS</b>		F.A.P. -	SECTION -	COUNTY -	TOTAL SHEETS -	SHEET NO. -
CHECKED - JGY			SN 092-0101		840	-	VERMILION	-	-
DRAWN - Kyle M. Steffen	PASSED <i>Carl P...</i>		SHEET NO. 4 OF 6 SHEETS		ILLINOIS FED. AID PROJECT				
CHECKED - CCC JGY	ACTING ENGINEER OF BRIDGES AND STRUCTURES				CONTRACT NO.				



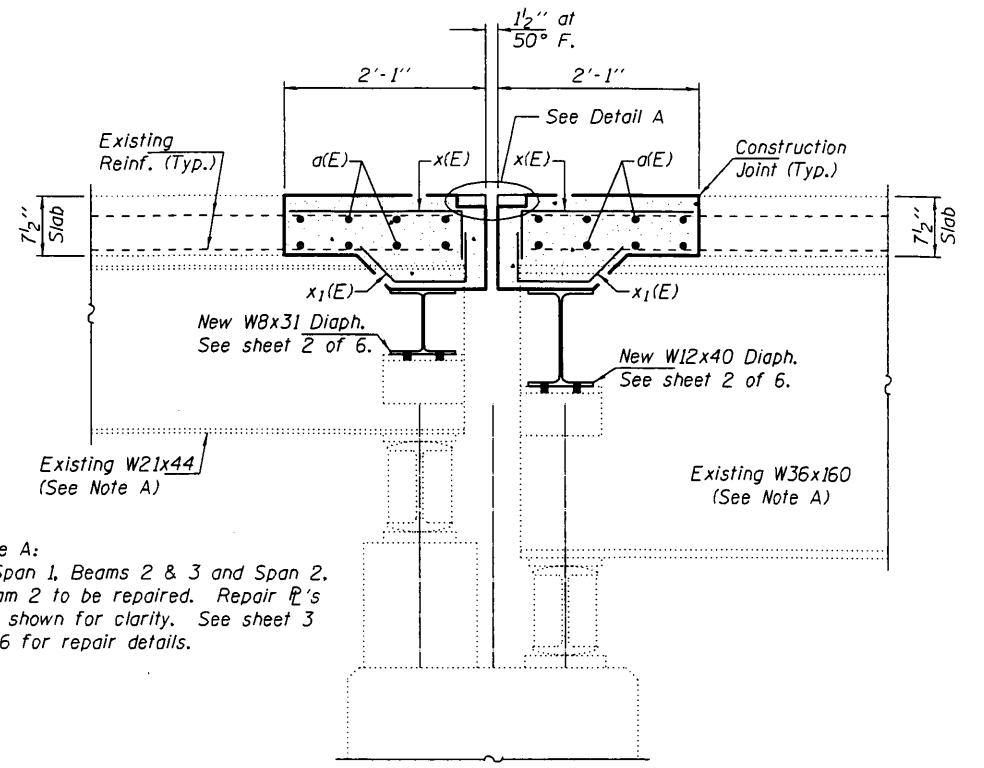


**CURB DETAIL**



**DETAIL A**

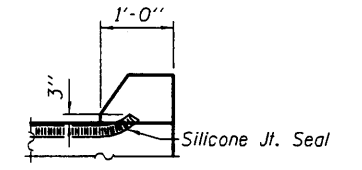
Dimensions at Rt. L's



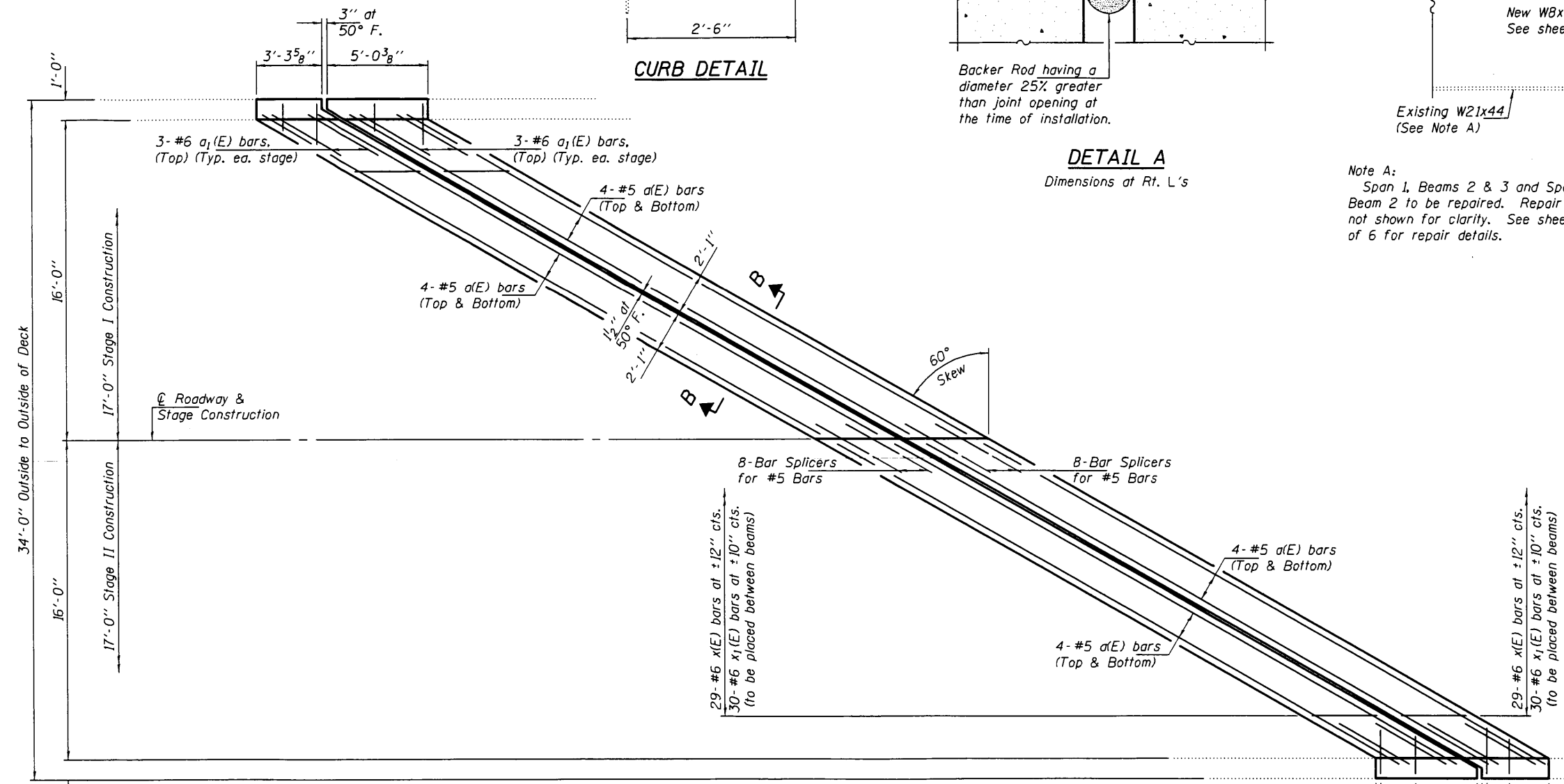
**SECTION B-B**

Dimensions at Rt. L's

Note A:  
Span 1, Beams 2 & 3 and Span 2, Beam 2 to be repaired. Repair R's not shown for clarity. See sheet 3 of 6 for repair details.



**TYPICAL END OF SEAL TREATMENTS**

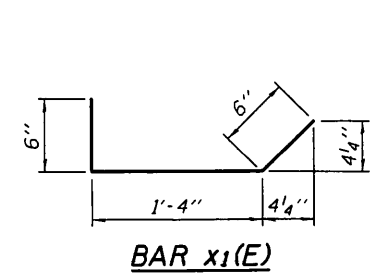


29- #6 x(E) bars at ±12" c/s.  
30- #6 x1(E) bars at ±10" c/s.  
(to be placed between beams)

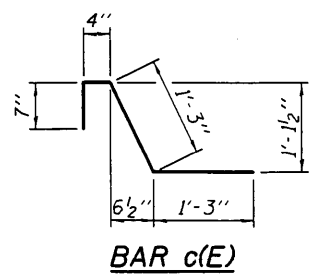
29- #6 x(E) bars at ±12" c/s.  
30- #6 x1(E) bars at ±10" c/s.  
(to be placed between beams)

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
a(E)	32	#5	33'-4"	—	
a1(E)	12	#6	4'-0"	—	
c(E)	14	#5	3'-5"	┌	
c1(E)	14	#5	2'-11"	└	
x(E)	58	#6	4'-4"	┌	
x1(E)	60	#6	2'-4"	└	
Concrete Removal				Cu. Yd.	8.3
Concrete Superstructure				Cu. Yd.	8.3
Bar Splicers				Each	16
Reinforcement Bars, Epoxy Coated				Pound	1870

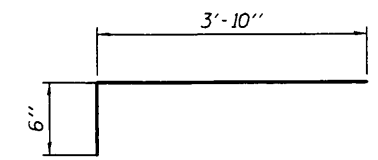


**BAR x1(E)**

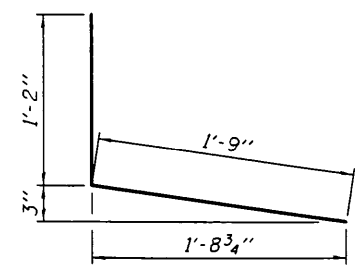


**BAR c(E)**

**CONCRETE REPLACEMENT PLAN**



**BAR x(E)**



**BAR c1(E)**

DESIGNED - CCC  
CHECKED - JGY  
DRAWN - Kyle M. Steffen  
CHECKED - CCC JGY

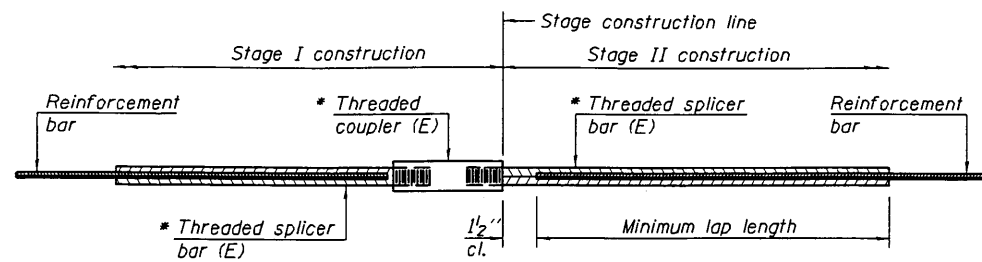
DATE - APRIL 27, 2016  
PASSED  
*A. Carl Boyer*  
ACTING ENGINEER OF BRIDGES AND STRUCTURES

REVISED  
REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BENT 2 JOINT REPLACEMENT DETAILS  
SN 092-0101  
SHEET NO. 5 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	-	VERMILION	-	-
ILLINOIS FED. AID PROJECT			CONTRACT NO.	

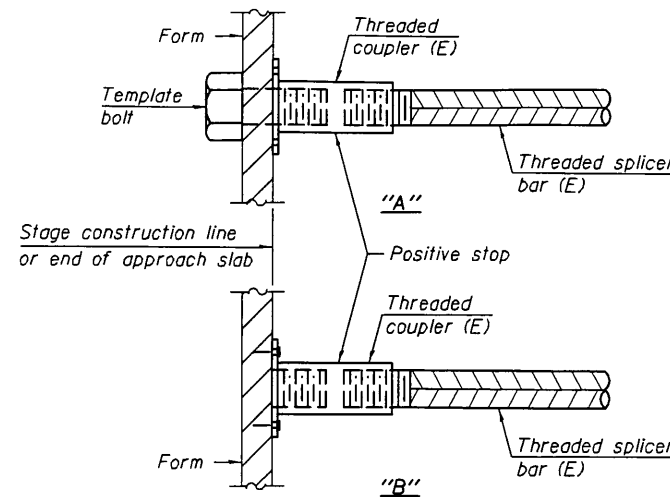


**STANDARD BAR SPLICER ASSEMBLY**

Threaded splicer bar length = min. lap length + 1/2" + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Span 1	#5	8	3'-6"
Span 2	#5	8	3'-6"

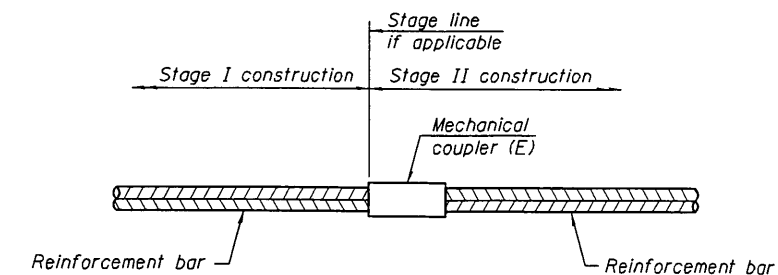


**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.

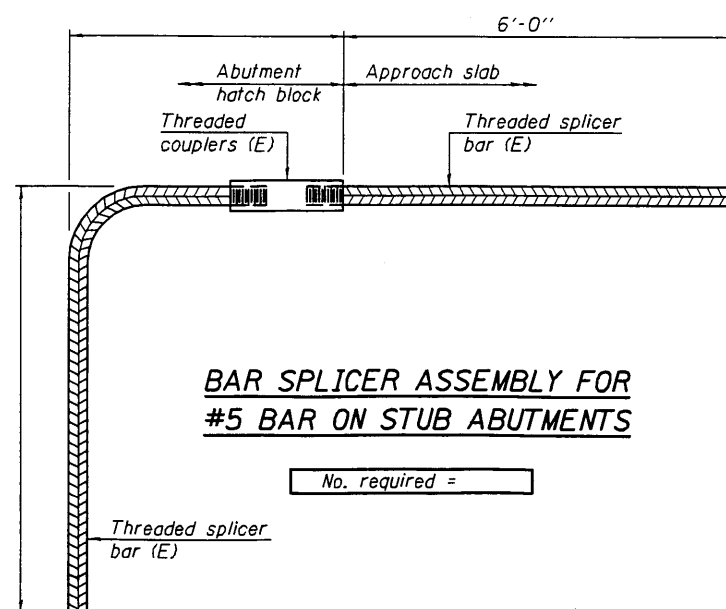
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 6-8-15

DESIGNED - CCC	DATE - APRIL 27, 2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JGY	PASSED <i>Carl Perry</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES		REVISED	REVISED	B40	-	VERMILION	-	-
DRAWN - Kyle M. Steffen					CONTRACT NO.				
CHECKED - CCC JGY					ILLINOIS FED. AID PROJECT				



70128

VERMILION

IGR

#124

CONTRACT NO. 70128

F.A.P. RYE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121,122)RS-3	VERMILION	89	1

+4  
93

1-18-08 Letting, Item 124

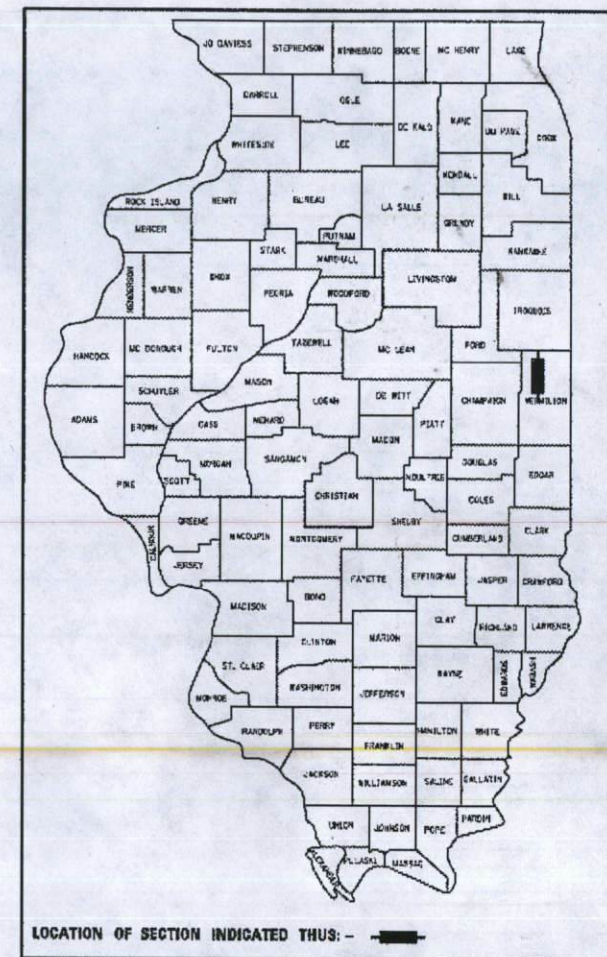
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 840 (IL 49)  
SECTION (121,122)RS-3  
VERMILION COUNTY  
PROJECT NO. ACF-0840(057)

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4

D-95-058-00



99.9%  
9-27-08

C-95-120-00

RESURFACING (3P) FROM FAST CREEK 2.1 MI. (S) OF  
IROQUIOS CO. LINE TO US 136 (W) AND  
BRIDGE REPAIR S.N. 092-0101  
OVER UP RR 1.8 MI N OF US 136

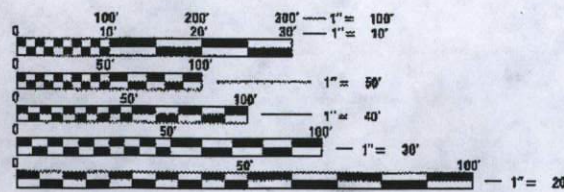
092-0101

(217)465-4181

ENGINEER: KEVIN TRAPP

CURRENT ADT  
MINOR ARTERIAL  
FAP 840 (IL 49) = 1,400 (2006)

DESIGN DESIGNATION  
N/A



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 EXCAVATION  
1-800-892-0123

CONTRACT NO. 70128

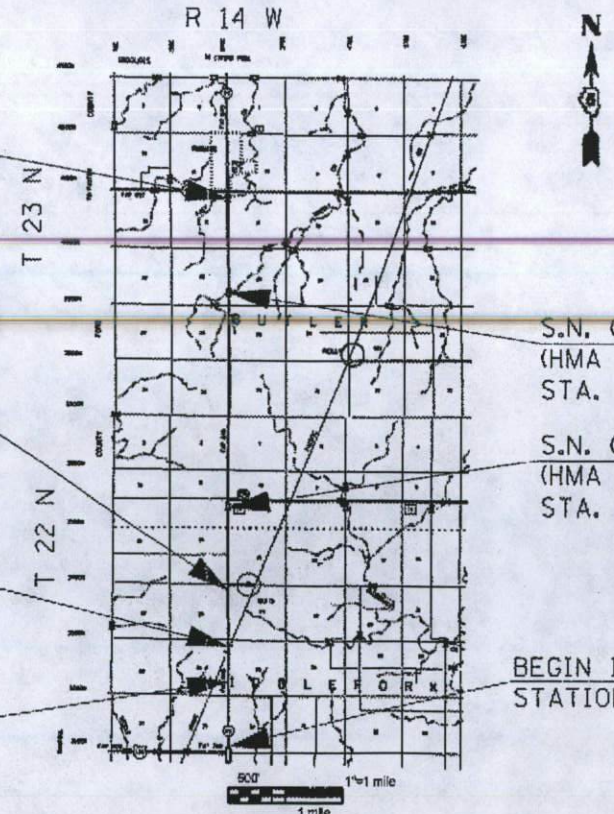
092-0101

END IMPROVEMENT  
STA. 1280+10

STATION EQUATION  
STA. 870+00(BK)=STA. 870+71(AH)

S.N. 092-0101 (BRIDGE REPAIR)  
STA. 854+78 - 861+60

STATION EQUATION  
STA. 837+24(BK)=STA. 837+20(AH)



S.N. 092-2026  
(HMA RESURFACING)  
STA. 1194+24

S.N. 092-2035  
(HMA RESURFACING)  
STA. 991+00

BEGIN IMPROVEMENT  
STATION 765+00

TOTAL LENGTH = 51443.00 ft = 9.743 miles  
NET LENGTH = 50761.00 ft = 9.614 miles

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 11/16 20 07

*Joseph E. Crowell*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 7, 20 07  
*Eric E. Haron*  
ENGINEER OF DESIGN AND ENVIRONMENT

Dec 7, 20 07  
*Christine M. Reed*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS



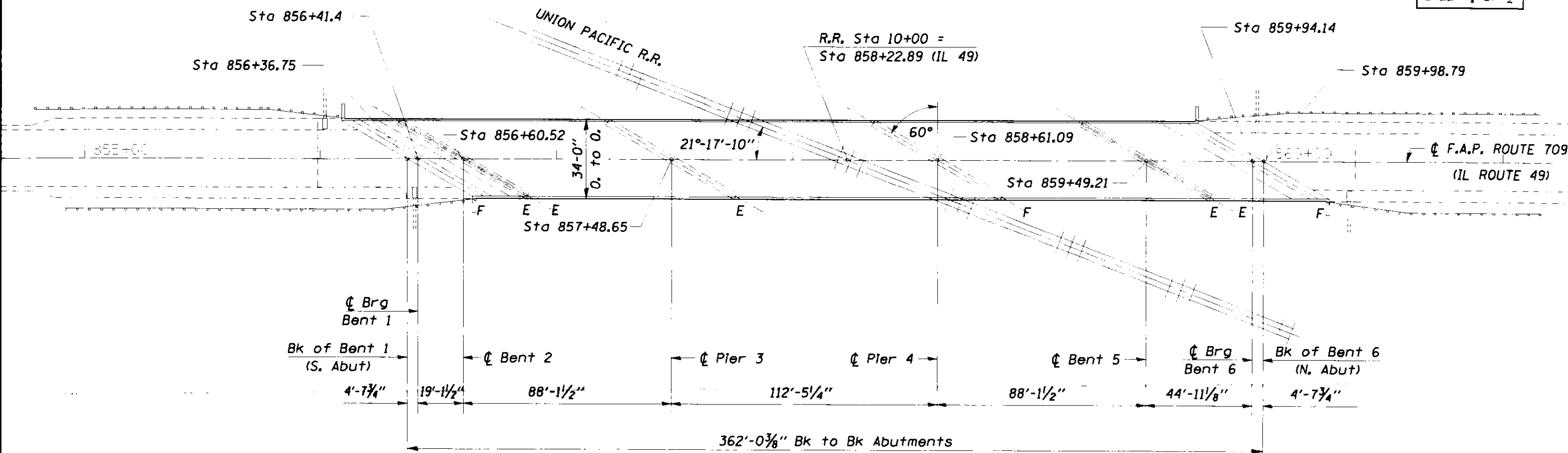
# GENERAL PLAN

## S.N. 092-0101



CONTRACT NO. 70128			
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.
840	(121,122)RS-3	VERMILION	89 38
STA. 858+00		TO STA. 861+00	
ILLINOIS FED. AID PROJECT			

SHEET 1 OF 1



PLAN VIEW  
S. N. 092-0101

### GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE 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 BASED UPON THE UNIT PRICE BID FOR THE WORK.

### TOTAL BILL OF MATERIALS

ITEM	UNITS	QTY.
POLYMER CONCRETE	CU FT	24.0
SILICONE JOINT SEALER 2"	FOOT	196.0
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL OR LESS THAN 5")	SO FT	18.0
RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1.0
TRAFFIC CONTROL & PROTECTION, STANDARD 701201	L SUM	1.0
NEOPRENE EXPANSION JOINT, 4"	FOOT	66.0

SN 092-0101

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

F.A.P. ROUTE 840  
SECTION (121,122)RS-3  
VERMILION COUNTY

SCALE: 1" = 20'  
DATE: 05-14-07

DRAWN BY: JRP  
CHECKED BY:

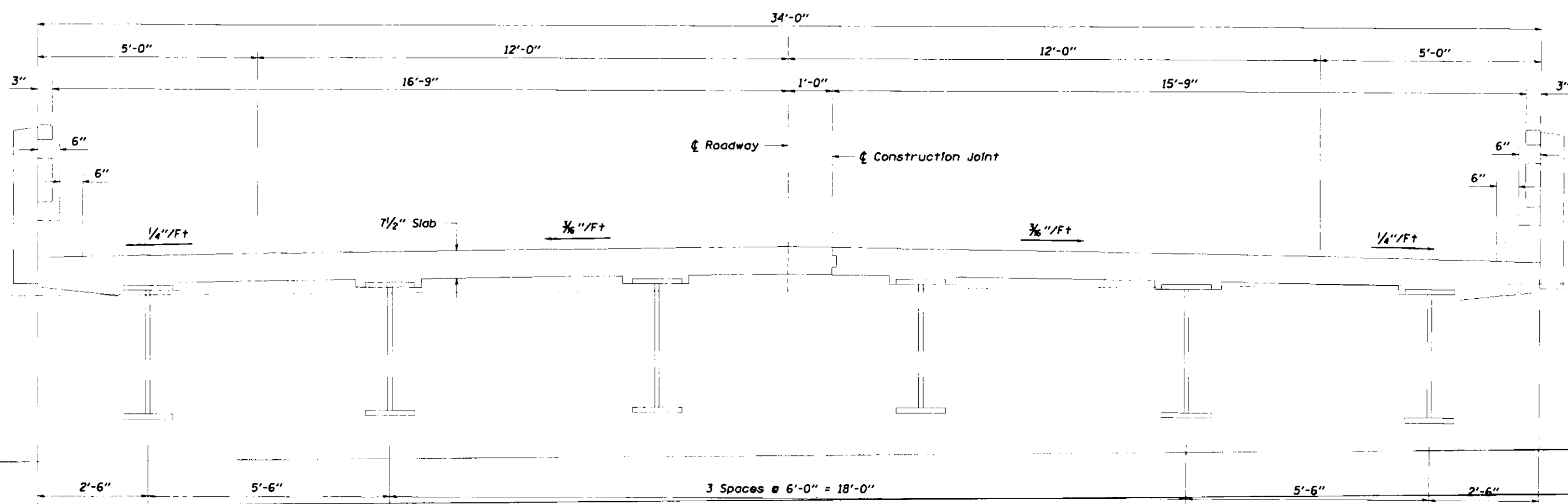
PLOT DATE: 5/14/07  
 FILE NAME: 092-0101-01.dwg  
 PLOT SCALE: 1" = 20'  
 USER NAME: jrp

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121,122)RS-3	VERMILION	89	39
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

# EXISTING TYPICAL CROSS SECTION

## S.N. 092-0101

SHEET 2 OF 7



PLOT DATE: 11/14/07  
 FILE NAME: 092-0101-02.dwg  
 PLOT SCALE: 1/8" = 1'-0"  
 USER: jrp

SN 092-0101

ILLINOIS DEPARTMENT OF TRANSPORTATION

**EXISTING TYPICAL CROSS SECTION**

F.A.P. ROUTE 840  
SECTION (121,122)RS-3  
VERMILION COUNTY

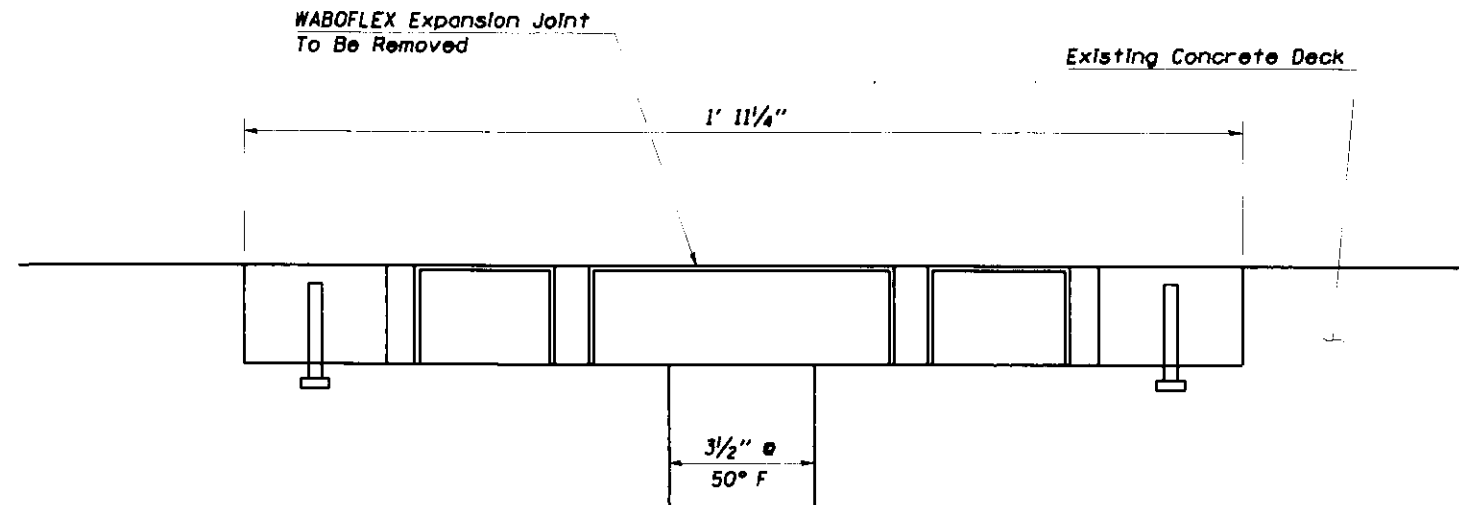
SCALE: AS SHOWN      DRAWN BY: JRP/JRP  
DATE: 05-15-07      CHECKED BY:



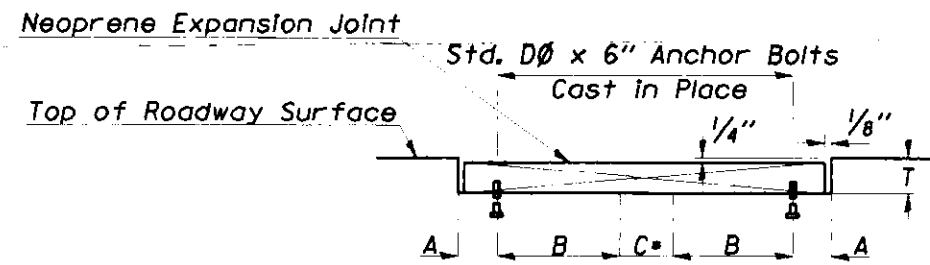
# BENT 2 EXPANSION JOINT DETAILS

# DETAIL OF END SEAL TREATMENT

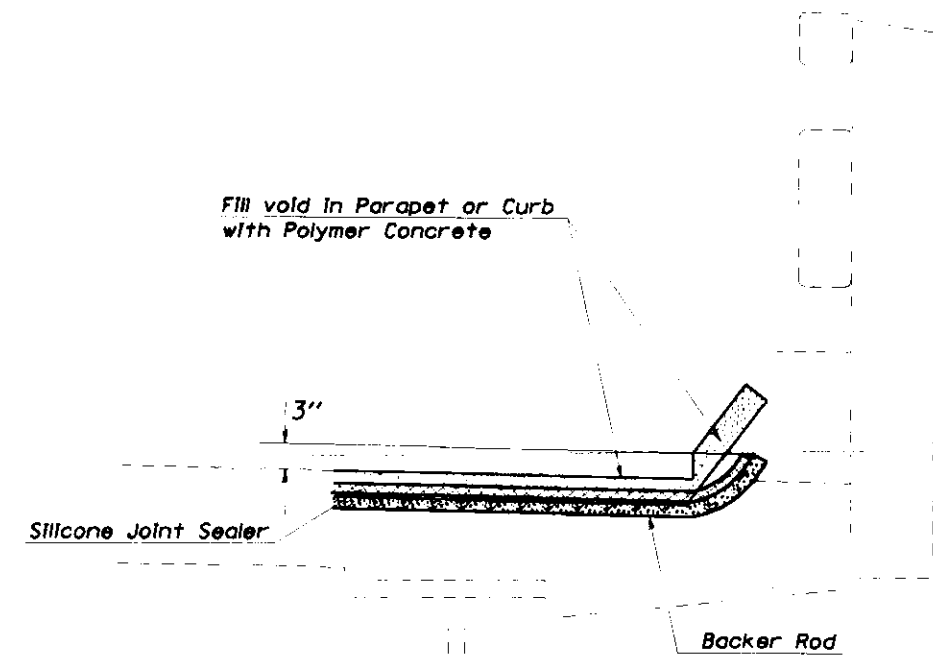
SHEET 5 OF 7



EXISTING JOINT



CROSS SECTION  
 • Ø 50° F.  
 Dimensions are at right angles



NEOPRENE EXPANSION JOINTS (See Special Provisions)						
SUPPLIER	MODEL	4" JOINT (BENT 2)				
		A	B	C	D	T
GENERAL TIRE COMPANY	TRANSFLEX 400-A	1 15/16"	7 15/16"	3 1/2"	3/4"	2 3/8"
WATSON BOWMAN ACME	WABOFLEX SR-4A	1 15/16"	7 15/16"	3 1/2"	3/4"	2 3/8"

PROPOSED JOINT

**NOTES:**  
 EXISTING ANCHOR BOLTS WILL BE GROUND FLUSH TO EXISTING CONCRETE. NEW ANCHOR BOLTS WILL BE STAGGERED TO MISS EXISTING ANCHOR BOLTS.

SN 092-0101

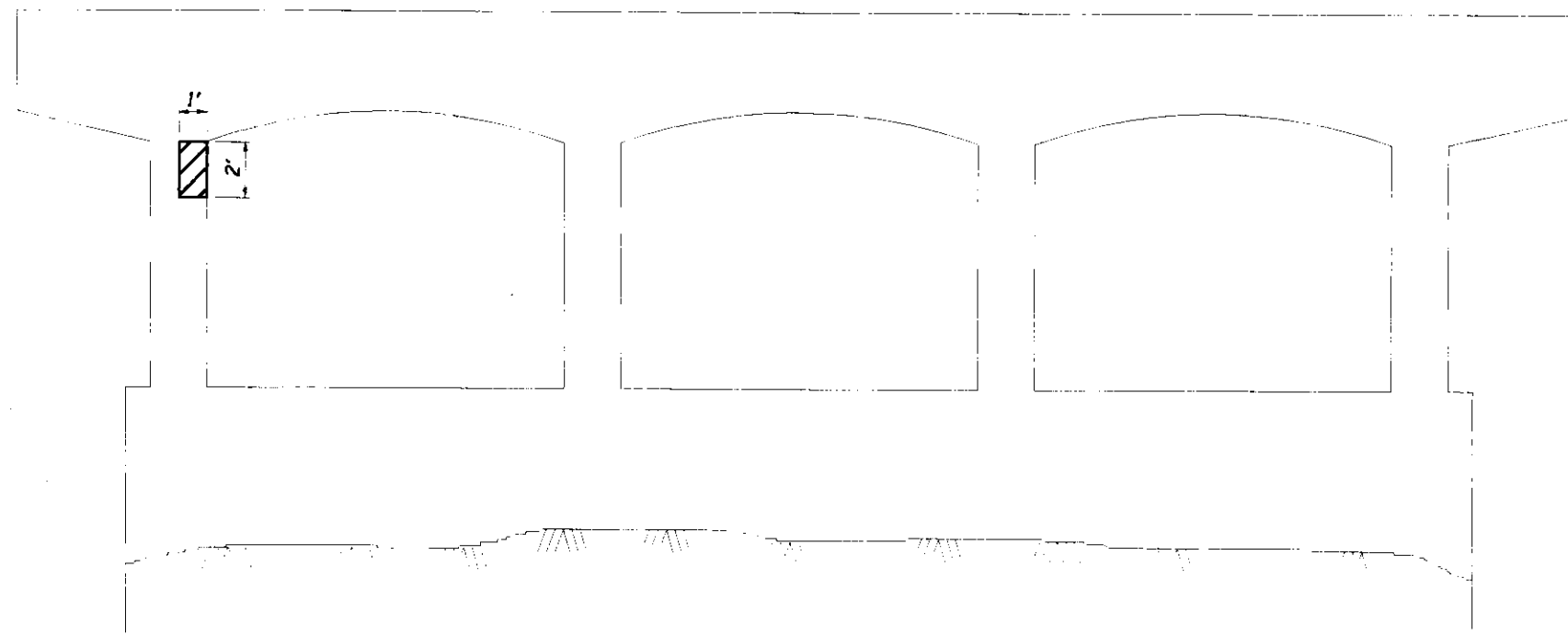
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**JOINT DETAILS**  
 F.A.P. ROUTE 840  
 SECTION (121,122)RS-3  
 VERMILION COUNTY  
 SCALE: NA  
 DATE: 05-17-07  
 DRAWN BY: JW/JRP  
 CHECKED BY:

DATE: 5/17/07  
 PLOT DATE: 5/17/07  
 PLOT SCALE: 1/8" = 1'-0"  
 USER NAME: jw/jrp

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121,122)RS-3	VERMILION	89	43
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

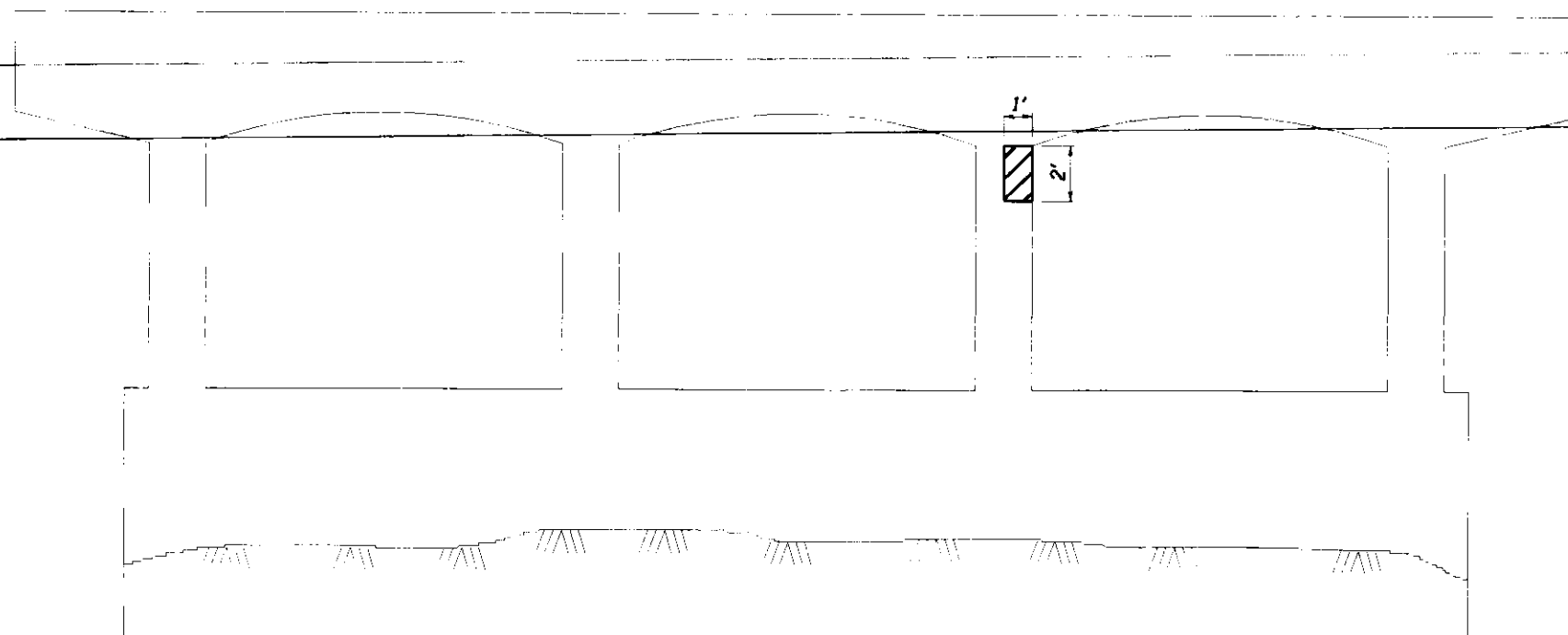
**STRUCTURAL REPAIR OF CONCRETE NORTH FACE OF PIER 3**  
**S.N. 092-0101**

SHEET 6 OF 7



**STRUCTURAL REPAIR OF CONCRETE SOUTH FACE OF PIER 3**  
**S.N. 092-0101**

*Note:*  
 See Special Provision for  
 Structural Repair of Concrete.



SN 092-0101

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**STRUCTURAL REPAIR OF CONCRETE**  
**PIER 3**  
 F.A.P. ROUTE 840  
 SECTION (121,122)RS-3  
 VERMILION COUNTY

SCALE: NA  
 DATE: 05-15-07  
 DRAWN BY: JH/SP  
 CHECKED BY:

PLT DATE: 5/15/07  
 PLOT SCALE: 1/8" = 1'-0"  
 PLOT SCALE: 1/8" = 1'-0"  
 PLOT SCALE: 1/8" = 1'-0"

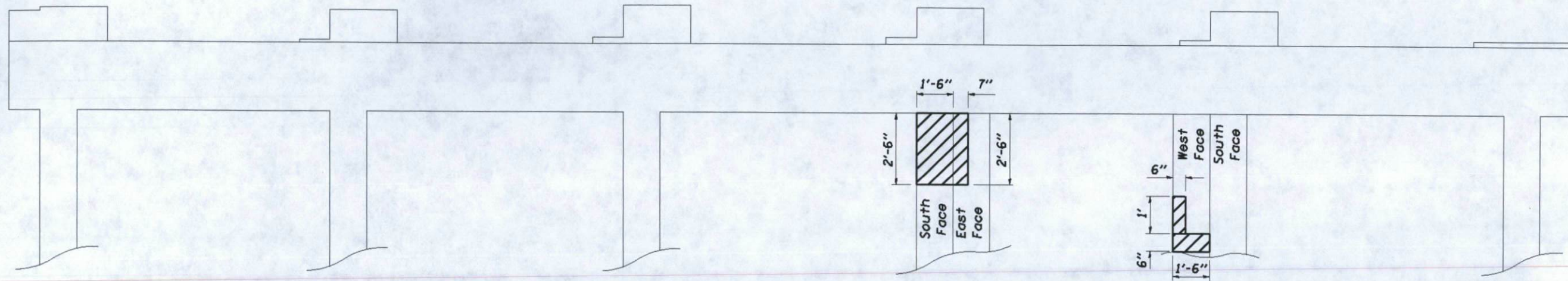


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121,122)RS-3	VERMILION	89	44
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

# STRUCTURAL REPAIR OF CONCRETE SOUTH FACE OF BENT 5

## S.N. 092-0101

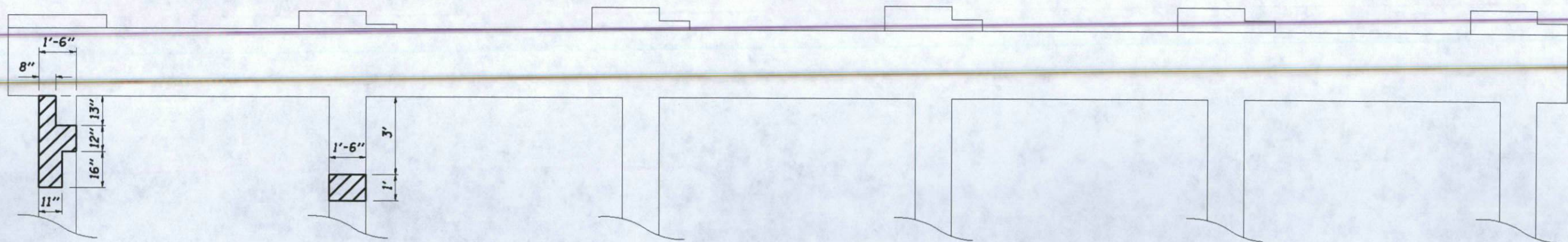
SHEET 1 OF 1



# STRUCTURAL REPAIR OF CONCRETE NORTH FACE OF BENT 5

## S.N. 092-0101

*Note:*  
See Special Provision for  
Structural Repair of Concrete.



SN 092-0101

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**STRUCTURAL REPAIR OF CONCRETE**  
**BENT 5**  
F.A.P. ROUTE 840  
SECTION (121,122)RS-3  
VERMILION COUNTY

SCALE: NA      DRAWN BY: JW/JRP  
DATE: 05-15-07      CHECKED BY:

PLOT DATE: 11/16/2007  
 FILE NAME: s:\projects\0920101\0920101.dwg  
 PLOT SCALE: 42.2500' / 1" PL  
 USER NAME: collins



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

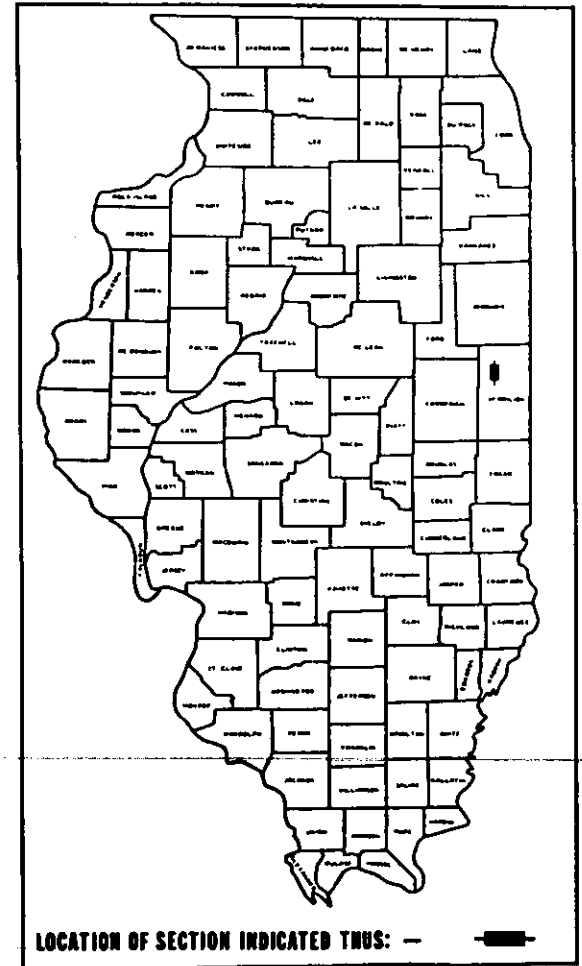
FOR INDEX OF SHEETS, SEE SHEET NO. 7  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 8

SCALES  
PLAN 1"=20'  
PROFILE HORIZ. 1"=20'  
PROFILE VERT. 1"=2'  
CROSS SECTIONS HORIZ. 1"=20', VERT. 1"=5'

F.A. ROUTE 840, SECTION 122VBR, VERMILION COUNTY  
PROJECT BR-F-840(11)  
BRIDGE RECONSTRUCTION  
C-95-065-79

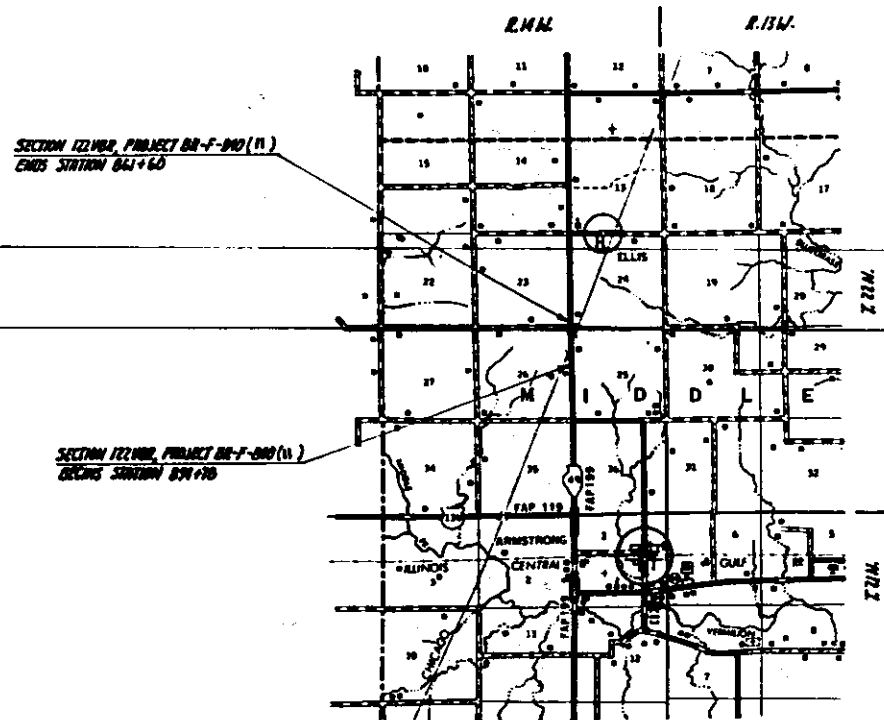
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	122VBR	VERMILION	39	1
F.A.A. PROJ.		ILLINOIS PROJECT		

P-55-196-70



LOCATION OF SECTION INDICATED THUS: — [shaded box]

092-0101



SECTION 122VBR, PROJECT BR-F-840(11)  
ENDS STATION 841+60

SECTION 122VBR, PROJECT BR-F-840(11)  
ENDS STATION 841+70

STRUCTURE 122VBR: A FIVE SPAN STRUCTURE CARRYING  
F.A.A. ROUTE 840 OVER THE PASADENA PACIFIC RAILROAD  
AT STATION 841+13.75 CONSISTING OF A 75' ARCH REINFORCED  
CONCRETE ARCH ON STEEL I-BEAMS ON ARCHES AND REINFORCED  
CONCRETE ABUTMENTS AND PIERS. SPANS 1 @ 17'-11", 1 @  
88'-11", 1 @ 117'-5 1/2", 1 @ 88'-11" & 1 @ 97'-10"; RAILROAD  
WIDTH 36'-0" & 60' WIDE.

TOTAL LENGTH OF SECTION 122VBR = 642.00 FEET = 0.175 MILES  
TOTAL LENGTH OF PROJECT BR-F-840(11) = 642.00 FEET = 0.175 MILES  
NET LENGTH OF SECTION 122VBR = 642.00 FEET = 0.175 MILES  
NET LENGTH OF PROJECT BR-F-840(11) = 642.00 FEET = 0.175 MILES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 7-27 1979  
A. E. Christ DISTRICT ENGINEER

EXAMINED 8-23 1979  
A. J. Wilson CHIEF OF PLANS AND CONTRACTS

PROCESSED 8-23 1979  
Thomas R. Bostick ENGINEER OF RECORD

APPROVED 8-23 1979  
J. W. Harrison DISTRICT ENGINEER OF RECORD

5-108

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED \_\_\_\_\_  
DIVISION ADMINISTRATOR DATE

092-0101  
CONTRACT NO. 34037

ROUTE NO. S.A.	SECTION 122VBR	COUNTY VERMILION	TOTAL SHEETS 30	SHEET NO. 74
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INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.-6. (INC.)	TYPICAL CROSS SECTIONS
7, 7A	INDEX OF SHEETS, GENERAL NOTES & SUMMARY OF EARTHWORK
8	SUMMARY OF QUANTITIES
9.-11 (INC.)	PLAN & PROFILE: F.A.P. ROUTE 840
12.-14 (INC.)	STAGE CONSTRUCTION DETAILS: F.A.P. ROUTE 840
* 15 - 24. (INC.)	STRUCTURE PLANS: SECTION 122VBR
25	SPECIAL TRANSITION FROM STABILIZED SHOULDER TO V GUTTER
35.A	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR ROAD CLOSURE
36 - 39. (INC.)	STATION CROSS SECTIONS: F.A.P. ROUTE 840

\* Includes Sheets 21A & 22A.  
and 24A.

STANDARD NUMBERS:

1686-4	SYMBOLS & ABBREVIATIONS
1766-7	LONGITUDINAL JOINT
2111-1	RAIL PLATE
2221-4	METAL FILE END SECTION
2320-13	GUARD RAIL
2328-1	TRAFFIC CONTROL
2329-7	TRAFFIC CONTROL
2301-1	TRAFFIC CONTROL
2301-2	TRAFFIC CONTROL
2302-3	TRAFFIC CONTROL

2307-1	TRAFFIC CONTROL
2307-2	TRAFFIC CONTROL
2307-3	TRAFFIC CONTROL
2307-4	TRAFFIC CONTROL
2321-1	PAVEMENT JOINTS
2321-4	BRIDGE APPROACH SHLD. PAVT.
2321-5	TRAP BARRIER TERM. 5 SA
2321-6	BRIDGE APPROACH PAVEMENT
2321-7	SUBSURFACE DRAINS
2321-8	CONCRETE HEADWALL FOR PIPE DRAIN

GENERAL NOTES

WHERE SECTION OR SUB-SECTION MARKERS ARE ENCOUNTERED THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MARKERS ARE REMOVED OR COVERED UP. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MARKERS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS

PAVEMENT MARKING TAPE SHALL BE APPLIED TO THE BITUMINOUS MATERIALS (PRIME COAT) AND EACH SUBSEQUENT LIFT OF BITUMINOUS CONCRETE. RESURFACING AS DIRECTED BY THE ENGINEER.

ESTIMATED QUANTITY:

48 LIN FT. PAVEMENT MARKING TAPE

SHOULDERS, DITCHES, SIDE SLOPES, BACK SLOPES AND OTHER PORTIONS OF THE RIGHT OF WAY HAVING INSUFFICIENT VEGETATION SHALL BE SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

SEEDING MIXTURES FROM THE SPECIFIED CLASSES SHALL BE DESIGNATED BY THE ENGINEER BASED ON THE SEASON OF THE YEAR WHEN SEEDING OPERATIONS ARE PERFORMED. SPRING SEEDING SHALL BE ACCOMPLISHED BETWEEN JANUARY 1 AND MARCH 30 AND FALL SEEDING SHALL BE ACCOMPLISHED BETWEEN JULY 1 AND DECEMBER 31

ESTIMATED QUANTITIES:

0.10 ACRES	SEEDING CLASS II
0.10 ACRES	MULCH
10 POUNDS	NITROGEN FERTILIZER NUTRIENT @ 60 POUNDS PER ACRE
25 POUNDS	PHOSPHORUS FERTILIZER NUTRIENT @ 200 POUNDS PER ACRE
10 POUNDS	POTASSIUM FERTILIZER NUTRIENT @ 60 POUNDS PER ACRE
	EMULSIFIED ASPHALT @ 75 GALLON PER TON OF MULCH

SUMMARY OF EARTHWORK

STATION	TO	STATION	WART. EXCAVATION	EMBANKMENT
854+78.00		856+37.75	80	0
850+07.79		861+60	102	0
		TOTAL	182 CU. YDS.	0 CU. YDS.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DISTRICT FIVE

REVIEWED BY: DISTRICT ENGINEER OF DESIGN

DATE:

EXAMINED BY: *Joseph P. ...*  
DISTRICT ENGINEER OF MAINT.

DISTRICT ENGINEER OF MAINT.

DISTRICT ENGINEER OF MAINTING

DISTRICT ENGINEER OF TRAFFIC

**AS REVISED**

**SUMMARY OF QUANTITIES**

ROUTE NO.		SECTION		COUNTY		SHEET	
R.A. 840		122 JBR		VERMILION		39	
F.A.P. ROUTE 840 STATION 654+70 TO STATION 661+60		STRUCTURE 122JBR		EDISON CENTRAL		TOTAL QUANTITIES	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	F.P. ROUTE 840 STATION 654+70 TO STATION 661+60	STRUCTURE 122JBR	EDISON CENTRAL	TOTAL QUANTITIES
				6707	X171	Y005	Y080
					CONSTRUCTION TYPE CODE		
					SAFETY CLASSIFICATION CODE 5-31		
202001	EARTH EXCAVATION	CU.YD.	402	182			
210003	SUB-BASE GRANULAR MATERIAL, TYPE A (4")	SQ.YD.	200	200			
304002	PORTLAND CEMENT CONCRETE BASE COURSE (7")	SQ.YD.	599	599			
306004	BITUMINOUS CONCRETE BASE COURSE WEARING (9")	SQ.YD.	390	390			
406001	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	65	65			
406003	AGGREGATE (PRIME COAT)	TON	5	5			
406007	BITUMINOUS CONCRETE BINDER COURSE	TON	85	85			
406003	BITUMINOUS CONCRETE SURFACE COURSE, FUTURE 0, CLASS I	TON	90	90			
503003	PROTECTIVE COAT	SQ.YD.	1,434	244	1,300		
X40012	BRIDGE APPROACH PAVEMENT (STANDARD 2302)	SQ.YD.	180	180			
400015	R.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT	SQ.YD.	56	56			
501015	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1			
501024	CONCRETE RETAINAL	CU.YD.	593		593		
501029	EXPANSION BOLTS, 3/4 INCH	EACH	150	150			
502001	STRUCTURE EXCAVATION	CU.YD.	108		108		
504003	CLASS X CONCRETE	CU.YD.	406.4	84	390		
507001	FURNISHING AND ERECTING STRUCTURAL STEEL	L.SUM	1	1			
507005	STEEL SHEAR CONNECTORS	EACH	2,646	2,646			
508009	STEEL RAILING, TYPE T	LN.FT.	712		712		
511799	END SECTIONS, 12"	EACH	4	4			
512001	REINFORCEMENT BARS	POUND	54,264	5,784	48,480		
512002	REINFORCEMENT BARS (EMPTY CAGES)	POUND	53,410		53,410		
514001	WAVE PLATES	EACH	1	1			
601004	RIPRAP	SQ.YD.	630		630		
607001	PIPE DRAINS, 4"	LN.FT.	108	108			
607005	PIPE DRAINS, 12"	LN.FT.	147	147			
607006	PIPE UNDERDRAINS, 4"	LN.FT.	564	564			
612010	TYPE C INLET BOX, STANDARD 2334	EACH	4	4			
617001	PAVEMENT REMOVAL	SQ.YD.	792	792			
617004	GUTTER REMOVAL	LN.FE.	648	648			
617009	BITUMINOUS CONCRETE DEMOVAL	SQ.YD.	26	26			
617010	BITUMINOUS CONCRETE SURFACE REMOVAL	SQ.YD.	60	60			
X62001	TRAFFIC BARRIER TERMINAL, TYPE 5 B	EACH	4	4			
613000	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL	LN.FT.	750	750			
642002	SEEDING, CLASS II	ACRE	0.10		0.10		
642004	NITROGEN FERTILIZER NUTRIENT	POUND	10		10		
642005	PHOSPHORUS FERTILIZER NUTRIENT	POUND	25		25		
642006	POTASSIUM FERTILIZER NUTRIENT	POUND	10		10		
X64002	MULCH	ACRE	0.10		0.10		
646004	ENGINEER'S FIELD OFFICE, TYPE A	CU.YD.	10	10			
647001	PAVEMENT MARKING TAPE	LN.FT.	48	48			
648001	TRAFFIC CONTROL AND PROTECTION, STANDARD 2309	EACH	1	1			
Z10279	NEOPRENE EXPANSION JOINT, 2"	LN.FE.	196		196		
Z10281	NEOPRENE EXPANSION JOINT, 4"	LN.FE.	66		66		
Z10375	REPAIR CONCRETE STRUCTURES	SQ.FE.	87		87		
X05728	TEMPORARY BULKHEAD	LN.FE.	362		362		
503004	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4	4			
X04748	MOBILIZATION	L.SUM	1	0.5			
Z10327	TRAINEES	HOUR	1,000		1,000		

BRUNING 44-131 37138

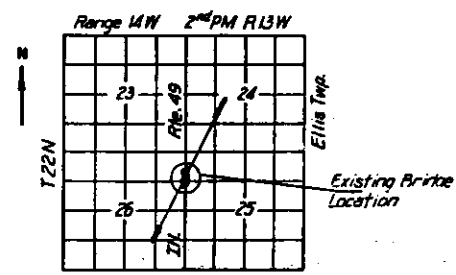
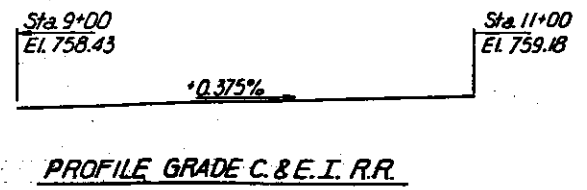
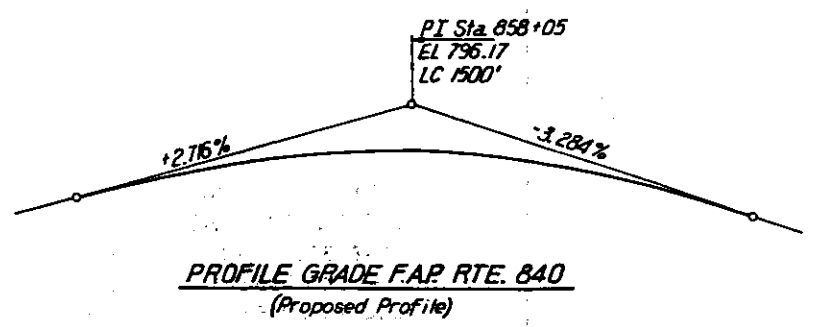
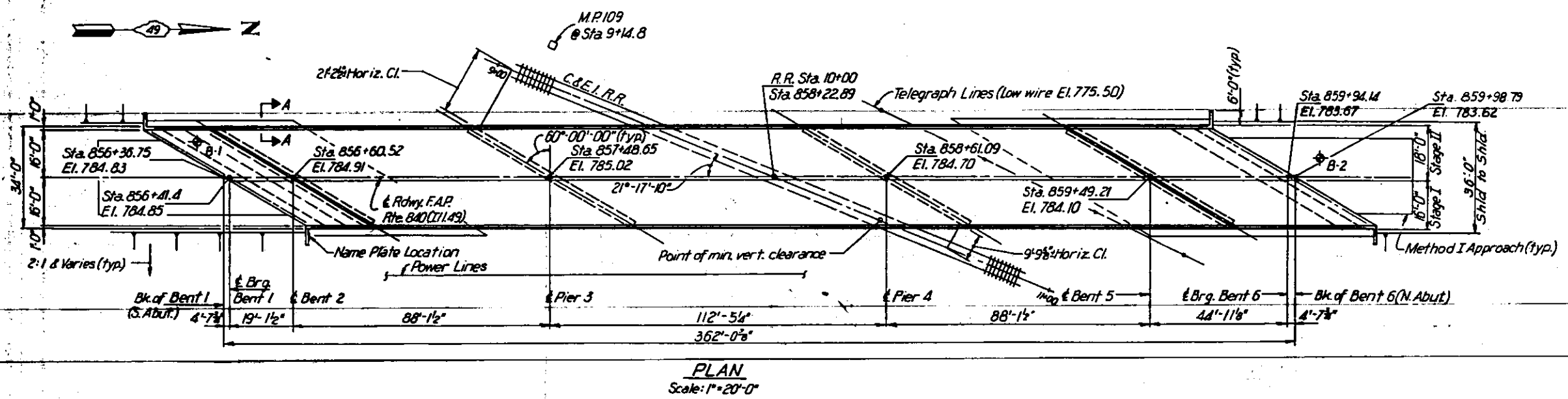
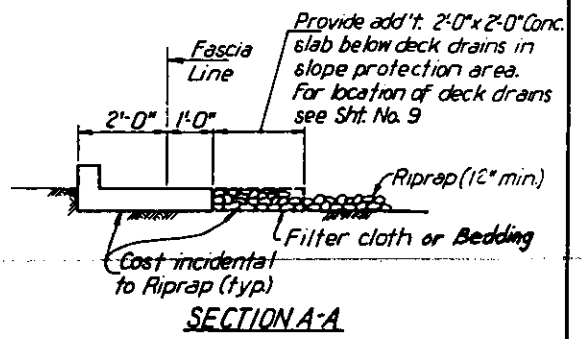
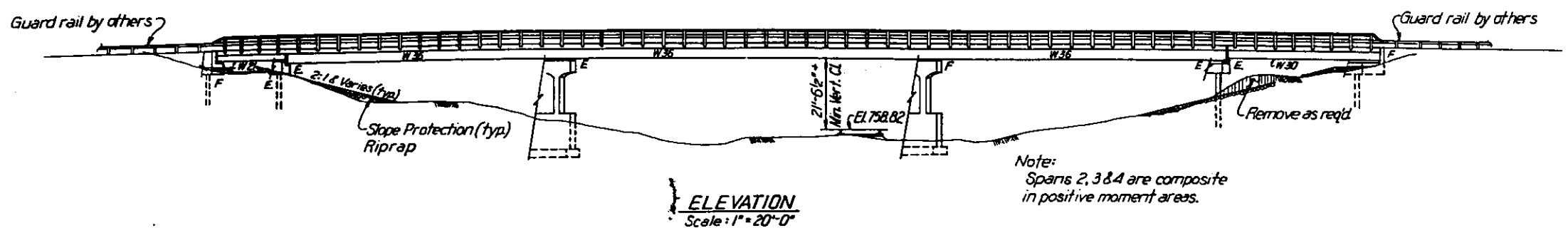
P.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	122 VBR	VERMILION	31	15
STA. 850+55		TO STA. 865+55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

**Bench Mark**  
 Top of rectangular concrete property post marked III, on one side. Located at 57'-0" on left of Sta. 858+16  
 Existing Super-structure to be removed and Sub-structure to be repaired.  
 No Salvage

STATION 858+22.89  
 RE-BUILT 197 BY  
 STATE OF ILLINOIS  
 F.A.P. RT. 840 (ILL. 49)  
 SEC. 122 VBR  
 F.A. PROJ. BR-F-840(11)  
 LOADING HS 20  
 \* STR. No. 092 01 01

\*Structure Number to be supplied by District

NAME PLATE



APPROVED  
 FOR STRUCTURAL ADEQUACY ONLY  
 [Signature]  
 Sander [Signature]

ILLINOIS DIVISION OF HIGHWAYS  
 GENERAL PLAN AND ELEVATION  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

REVISIONS	
NAME	DATE

SCALE VERT. 1" = 20'-0"  
 HORIZ. 1" = 20'-0"  
 DATE  
 DRAWN BY K.C.  
 CHECKED BY J.P.

SECTION	COUNTY	TOTAL	DATE
840 122 VBR	VERMILION	39	16
STA 850+55		TO STA 865+55	
FED. ROAD DIST. NO. 7		ILL. NO. 1	

**DESIGN SPECIFICATIONS:**

A.A.S.H.T.O. 1977 & Interim 1978 Standard Specifications for Highway Bridges.  
Standard Specifications for Road and Bridge Construction State of Illinois dated July 1, 1976.

**DESIGN CRITERIA:**

Load Factor Design (For Super-structure only)  
Live Load: HS 20-44

Lateral Load: 40 p.c.f. equivalent fluid pressure with 2 ft. height of surcharge

Allow 25 p.s.f. for future wearing surface

Allowable live load deflection =  $\frac{\text{Span length}}{800}$   
(Assuming entire deck to act as unit)

**DESIGN STRESSES:**

Reinforced Concrete

$f'_c = 3500$  psi Deck Slab

$f'_c = 1400$  psi Sub Structure

$f'_c = 1000$  psi with earth pressure

$f_v = 118$  psi

$n = 9$

**REINFORCEMENT:**

$f_s = 24,000$  psi Sub Structure

$f_y = 60,000$  psi Super Structure

**STRUCTURAL STEEL:**

$f_y = 50,000$  psi (A 222 Steel)

**CONSTRUCTION:**

Fasteners shall be high strength bolts. Bolts  $\frac{3}{4}$ "  $\phi$ , open holes

$\frac{3}{8}$ "  $\phi$ , unless otherwise noted

Calculated weight of Structural Steel = 406,660

All structural steel shall be AASHTO M222 unpainted.

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Reinforcement bars shall conform to A.A.S.H.T.O. M-31 or M-53 Grade 60.

It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

Expansion bolts shall consist of self drilling expansion anchors and  $\frac{3}{4}$ " x 12" hooked bolts.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $\frac{1}{8}$  inch. Adjustments shall be made either by grinding the surface or by shimming the bearing. Two  $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of the steel wide flange beams.

**TRAFFIC:**

All barricades, signs and other traffic control devices and their placement installed for the purpose of temporarily maintaining traffic during construction shall be in full conformance with the Illinois State Manual on Uniform Traffic Control Devices, unless otherwise noted.

The Contractor shall procure, install and remove all temporary pavement markings as per the traffic phasing shown on the plans or as directed by the Engineer.

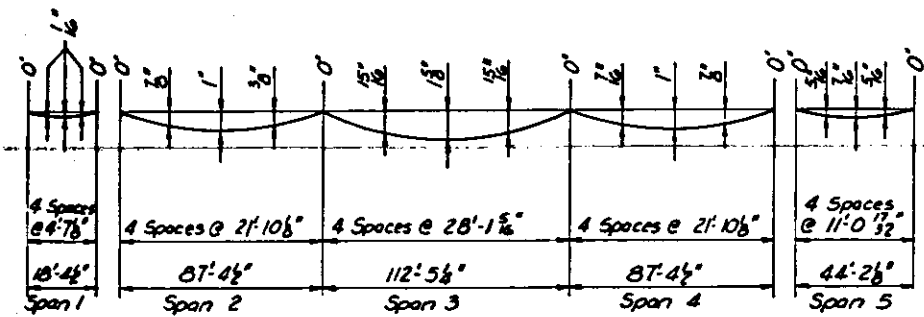
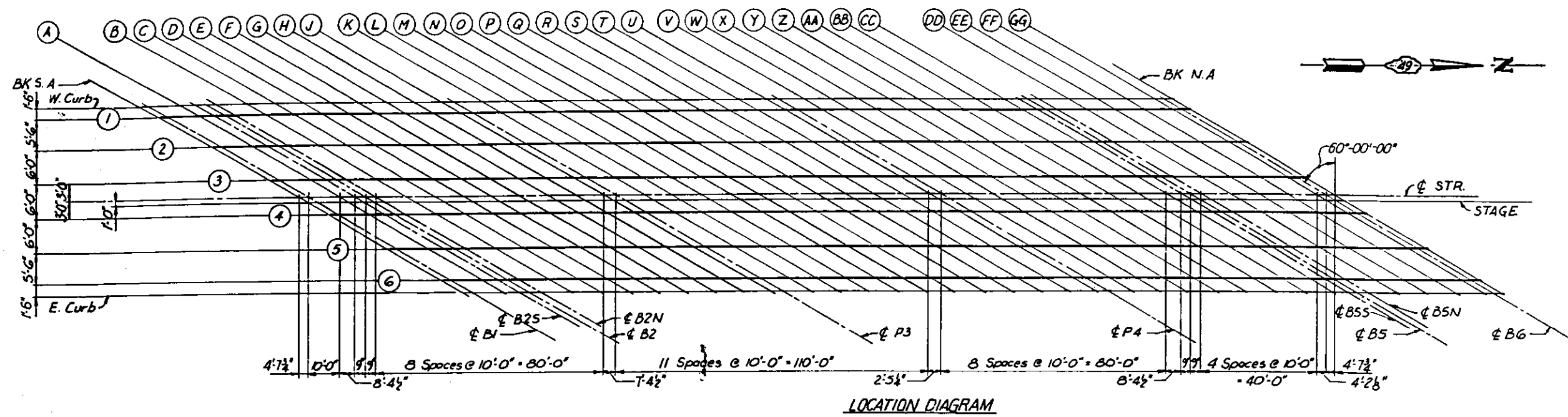
**BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructure	Each	1	—	1
Concrete Removal	Cu. Yds.	—	59.3	59.3
Expansion Bolts $\frac{3}{4}$ inch $\phi$	Each	—	150	150
Structure Excavation	Cu. Yds.	—	108	108
Protective Coat	Sq. Yds.	1380	—	1380
Class X Concrete	Cu. Yds.	317.6	80.4	398
Structural Steel	Lump Sum	1	—	1
Stud Shear Connector	Each	2646	—	2646
Steel Railing, Type T	Lin. Ft.	712	—	712
Reinforcement Bars	Lbs.	39,150	9,330	48,480
Reinforcement Bars (Epoxy Coated)	Lbs.	53,410	—	53,410
Name Plates	Each	1	—	1
Temporary Bridge Rail	Lin. Ft.	362	—	362
Neoprene Expansion Joint 2"	Lin. Ft.	196	—	196
Neoprene Expansion Joint 4"	Lin. Ft.	66	—	66
Repair Concrete Structures	Sq. Ft.	—	87	87
Riprap	Sq. Yd.	—	630	630

REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
GENERAL NOTES AND QUANTITIES  
F.A.P. ROUTE 840 (ILL. 49)  
SECTION 122 VBR  
VERMILION COUNTY

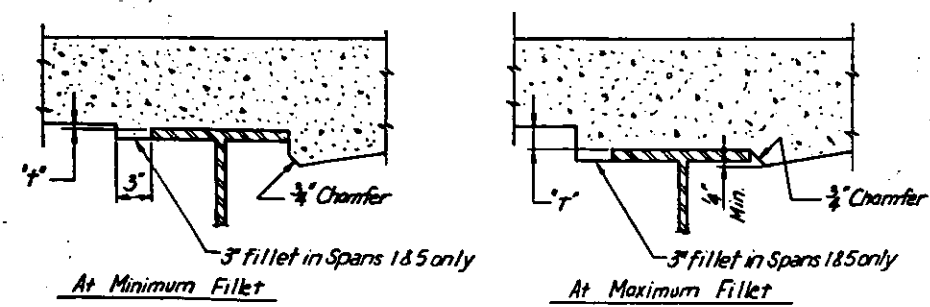
SCALE: VERT. NONE  
HORIZ. NONE  
DRAWN BY K.C.  
DATE  
CHECKED BY J.P.



Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

SPAN I						
LINE	BEAR - OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	
BK S.A	W CURB	85609.037	16.000	788.438	788.438	
	BH 1	85611.635	18.500	788.402	788.402	
	BH 2	85621.162	9.000	788.626	788.626	
	BH 3	85631.554	3.000	788.764	788.764	
	CL STR	85636.750	0.000	788.832	788.832	
	STAGE	85638.462	-1.000	788.823	788.823	
	BH 4	85641.946	-3.000	788.808	788.804	
CL B1	BH 5	85652.338	-9.000	788.747	788.747	
	BH 6	85661.465	-14.500	788.677	788.677	
	E CURB	85664.463	-16.000	788.653	788.653	
	CL B2S	W CURB	85613.687	16.000	788.460	788.460
		BH 1	85616.289	14.500	788.500	788.500
		BH 2	85625.812	9.000	788.646	788.646
		BH 3	85636.204	3.000	788.783	788.783
CL STR		85641.400	0.000	788.849	788.849	
STAGE		85643.132	-1.000	788.840	788.840	
BH 4		85646.896	-3.000	788.825	788.821	
CL B2N	BH 5	85656.988	-9.000	788.762	788.762	
	BH 6	85666.515	-14.500	788.690	788.690	
	E CURB	85669.113	-16.000	788.666	788.666	
	CL B5S	W CURB	85623.687	16.000	788.507	788.507
		BH 1	85626.285	14.500	788.549	788.549
		BH 2	85635.812	9.000	788.687	788.687
		BH 3	85646.204	3.000	788.820	788.820
CL STR		85651.400	0.000	788.884	788.884	
STAGE		85653.132	-1.000	788.874	788.874	
BH 4		85656.596	-3.000	788.856	788.856	
CL B5N	BH 5	85666.988	-9.000	788.790	788.790	
	BH 6	85676.515	-14.500	788.715	788.715	
	E CURB	85679.113	-16.000	788.690	788.690	
	CL B6	W CURB	85632.057	16.000	788.542	788.542
		BH 1	85634.655	14.500	788.584	788.584
		BH 2	85644.182	9.000	788.719	788.719
		BH 3	85654.574	3.000	788.849	788.849
CL STR		85659.770	0.000	788.911	788.911	
STAGE		85661.502	-1.000	788.900	788.900	
BH 4		85664.966	-3.000	788.879	788.879	

- LEGEND**
- BK S.A - Back of South Abutment (Bent 1)
  - CL B1 - CL Bent 1
  - CL B2S - CL Bearing - Bent 2 (South)
  - CL B2N - CL Bent 2
  - CL B2N - CL Bearing - Bent 2 (North)
  - P3 - Pier 3
  - P4 - Pier 4
  - CL B5S - CL Bearing - Bent 5 (South)
  - CL B5 - CL Bent 5
  - CL B5N - CL Bearing - Bent 5 (North)
  - CL B6 - CL Bent 6
  - BK N.A - Back of North Abutment (Bent 6)
  - CL STR - CL Structure
  - STAGE - Stage Line



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown. These elevations subtracted from the "Elevations Adjusted for Dead Load Deflection", minus slab thickness, equals the fillet heights "f" above top flange of beams.

REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
 TOP OF SLAB ELEVATIONS I  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

SCALE: VERT. NONE  
 HORIZ.                      DRAWN BY E.T.  
 DATE                              CHECKED BY J.P.

SPAN 2

LINE	BEAN OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL 2 2	W CURB	85632.807	16.000	788.545	788.545
	BN 1	85635.405	14.500	788.587	788.587
	BN 2	85644.932	9.000	788.722	788.722
	BN 3	85655.324	3.000	788.850	788.850
	CL STR	85660.520	0.000	788.913	788.913
	STAGE	85662.282	-1.000	788.902	788.902
	BN 4	85665.716	-3.000	788.881	788.881
	BN 5	85676.108	-9.000	788.813	788.813
	BN 6	85685.635	-14.500	788.734	788.734
E CURB	85688.233	-16.000	788.708	788.708	
CL 2 2H	W CURB	85633.557	16.000	788.588	788.551
	BN 1	85636.155	14.500	788.598	788.593
	BN 2	85645.682	9.000	788.724	788.727
	BN 3	85656.074	3.000	788.852	788.855
	CL STR	85661.270	0.000	788.915	788.918
	STAGE	85663.002	-1.000	788.904	788.907
	BN 4	85666.446	-3.000	788.883	788.886
	BN 5	85676.838	-9.000	788.815	788.818
	BN 6	85686.385	-14.500	788.736	788.739
E CURB	85689.983	-16.000	788.709	788.712	
B	W CURB	85643.557	16.000	788.588	788.627
	BN 1	85646.155	14.500	788.627	788.667
	BN 2	85655.682	9.000	788.750	788.788
	BN 3	85666.074	3.000	788.882	788.922
	CL STR	85671.270	0.000	788.942	788.983
	STAGE	85673.002	-1.000	788.931	788.971
	BN 4	85676.466	-3.000	788.908	788.948
	BN 5	85686.858	-9.000	788.836	788.876
	BN 6	85696.385	-14.500	788.753	788.793
E CURB	85698.983	-16.000	788.725	788.766	
C	W CURB	85653.557	16.000	788.621	788.690
	BN 1	85656.155	14.500	788.660	788.730
	BN 2	85665.682	9.000	788.787	788.856
	BN 3	85676.074	3.000	788.907	788.976
	CL STR	85681.270	0.000	788.965	789.035
	STAGE	85683.002	-1.000	788.953	789.023
	BN 4	85686.466	-3.000	788.929	788.998
	BN 5	85696.858	-9.000	788.853	788.922
	BN 6	85706.385	-14.500	788.766	788.835
E CURB	85708.983	-16.000	788.737	788.807	
D	W CURB	85663.557	16.000	788.651	788.735
	BN 1	85666.155	14.500	788.689	788.774
	BN 2	85675.682	9.000	788.812	788.897
	BN 3	85686.074	3.000	788.928	789.013
	CL STR	85691.270	0.000	788.984	789.068
	STAGE	85693.002	-1.000	788.972	789.056
	BN 4	85696.466	-3.000	788.948	789.030
	BN 5	85706.858	-9.000	788.885	789.950
	BN 6	85716.385	-14.500	788.775	788.860
E CURB	85718.983	-16.000	788.745	788.830	

SPAN 2

LINE	BEAN OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
E	W CURB	85673.557	16.000	788.677	788.761
	BN 1	85676.155	14.500	788.714	788.798
	BN 2	85685.682	9.000	788.838	788.917
	BN 3	85696.074	3.000	788.959	789.029
	CL STR	85701.270	0.000	788.999	789.083
	STAGE	85703.002	-1.000	788.986	789.070
	BN 4	85706.466	-3.000	788.958	789.043
	BN 5	85716.858	-9.000	788.878	788.958
	BN 6	85726.385	-14.500	788.780	788.864
E CURB	85728.983	-16.000	788.749	788.833	
F	W CURB	85683.557	16.000	788.699	788.768
	BN 1	85686.155	14.500	788.735	788.805
	BN 2	85695.682	9.000	788.851	788.920
	BN 3	85706.074	3.000	788.958	789.027
	CL STR	85711.270	0.000	788.996	789.080
	STAGE	85713.002	-1.000	788.984	789.065
	BN 4	85716.466	-3.000	788.968	789.037
	BN 5	85726.858	-9.000	788.879	788.948
	BN 6	85736.385	-14.500	788.781	788.850
E CURB	85738.983	-16.000	788.749	788.818	
C	W CURB	85693.557	16.000	788.717	788.762
	BN 1	85696.155	14.500	788.753	788.798
	BN 2	85705.682	9.000	788.864	788.909
	BN 3	85716.074	3.000	788.968	789.013
	CL STR	85721.270	0.000	789.018	789.063
	STAGE	85723.002	-1.000	789.003	789.048
	BN 4	85726.466	-3.000	788.979	789.018
	BN 5	85736.858	-9.000	788.880	788.925
	BN 6	85746.385	-14.500	788.778	788.823
E CURB	85748.983	-16.000	788.745	788.791	
H	W CURB	85703.557	16.000	788.731	788.751
	BN 1	85706.155	14.500	788.766	788.785
	BN 2	85715.682	9.000	788.873	788.893
	BN 3	85726.074	3.000	788.973	788.992
	CL STR	85731.270	0.000	789.021	789.040
	STAGE	85733.002	-1.000	789.008	789.028
	BN 4	85736.466	-3.000	788.974	788.993
	BN 5	85746.858	-9.000	788.877	788.896
	BN 6	85756.385	-14.500	788.771	788.791
E CURB	85758.983	-16.000	788.737	788.757	
J	W CURB	85713.557	16.000	788.742	788.744
	BN 1	85716.155	14.500	788.775	788.777
	BN 2	85725.682	9.000	788.879	788.881
	BN 3	85736.074	3.000	788.974	788.976
	CL STR	85741.270	0.000	789.024	789.022
	STAGE	85743.002	-1.000	789.004	789.006
	BN 4	85746.466	-3.000	788.971	788.973
	BN 5	85756.858	-9.000	788.870	788.872
	BN 6	85766.385	-14.500	788.768	788.762
E CURB	85768.983	-16.000	788.725	788.727	

SPAN 3

LINE	BEAN OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	
CL P 3	W CURB	85720.937	16.000	788.747	788.747	
	BN 1	85723.535	14.500	788.779	788.779	
	BN 2	85733.062	9.000	788.880	788.880	
	BN 3	85743.454	3.000	788.972	788.972	
	CL STR	85748.650	0.000	789.017	789.017	
	STAGE	85750.382	-1.000	789.000	789.000	
	BN 4	85753.846	-3.000	788.966	788.966	
	BN 5	85764.238	-9.000	788.862	788.862	
	BN 6	85773.765	-14.500	788.750	788.750	
	E CURB	85776.363	-16.000	788.714	788.714	
	K	W CURB	85730.937	16.000	788.750	788.767
		BN 1	85733.535	14.500	788.781	788.799
BN 2		85743.062	9.000	788.879	788.896	
BN 3		85753.454	3.000	788.966	788.984	
CL STR		85758.650	0.000	789.009	789.026	
STAGE		85760.382	-1.000	789.000	789.009	
BN 4		85763.846	-3.000	788.956	788.974	
BN 5		85774.238	-9.000	788.868	788.885	
BN 6		85783.765	-14.500	788.732	788.749	
E CURB		85786.363	-16.000	788.695	788.713	
L		W CURB	85740.937	16.000	788.749	788.799
		BN 1	85743.535	14.500	788.779	788.829
	BN 2	85753.062	9.000	788.873	788.922	
	BN 3	85763.454	3.000	788.957	789.005	
	CL STR	85768.650	0.000	789.000	789.046	
	STAGE	85770.382	-1.000	788.979	789.028	
	BN 4	85773.846	-3.000	788.942	788.972	
	BN 5	85784.238	-9.000	788.830	788.879	
	BN 6	85793.765	-14.500	788.710	788.759	
	E CURB	85796.363	-16.000	788.672	788.722	
	M	W CURB	85750.937	16.000	788.744	788.830
		BN 1	85753.535	14.500	788.774	788.859
BN 2		85763.062	9.000	788.863	788.949	
BN 3		85773.454	3.000	788.943	789.028	
CL STR		85778.650	0.000	789.001	789.066	
STAGE		85780.382	-1.000	789.002	789.061	
BN 4		85783.846	-3.000	788.924	789.010	
BN 5		85794.238	-9.000	788.808	788.893	
BN 6		85803.765	-14.500	788.684	788.769	
E CURB		85806.363	-16.000	788.645	788.731	
N		W CURB	85760.937	16.000	788.755	788.852
		BN 1	85763.535	14.500	788.784	788.880
	BN 2	85773.062	9.000	788.850	788.946	
	BN 3	85783.454	3.000	788.925	789.021	
	CL STR	85788.650	0.000	788.961	789.077	
	STAGE	85790.382	-1.000	788.942	789.058	
	BN 4	85793.846	-3.000	788.902	789.018	
	BN 5	85804.238	-9.000	788.782	788.898	
	BN 6	85813.765	-14.500	788.654	788.770	
	E CURB	85816.363	-16.000	788.614	788.730	
	O	W CURB	85770.937	16.000	788.723	788.857
		BN 1	85773.535	14.500	788.750	788.884
BN 2		85783.062	9.000	788.832	788.966	
BN 3		85793.454	3.000	788.903	789.038	
CL STR		85798.650	0.000	788.937	789.072	
STAGE		85800.382	-1.000	788.917	789.051	
BN 4		85803.846	-3.000	788.834	788.844	
BN 5		85814.238	-9.000	788.721	788.806	
BN 6		85823.765	-14.500	788.620	788.754	
E CURB		85826.363	-16.000	788.579	788.714	

SPAN 3

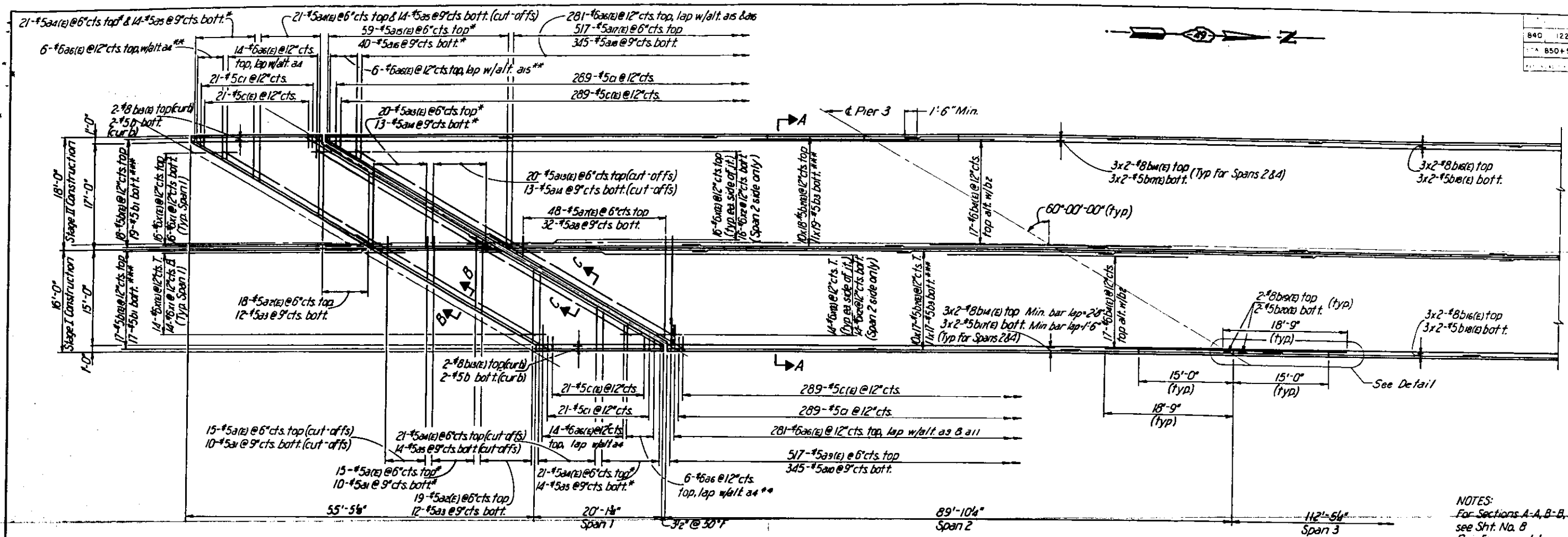
LINE	BEAN OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
P	W CURB	85780.937	16.000	788.706	788.842
	BN 1	85783.535	14.500	788.732	788.868
	BN 2	85793.062	9.000	788.810	788.947
	BN 3	85803.454	3.000	788.877	789.014
	CL STR	85808.650	0.000	788.909	789.046
	STAGE	85810.382	-1.000	788.889	789.025
	BN 4	85813.846	-3.000	788.846	789.003
	BN 5	85824.238	-9.000	788.717	788.853
	BN 6	85833.765	-14.500	788.582	788.718
	E CURB	85836.363	-16.000	7	



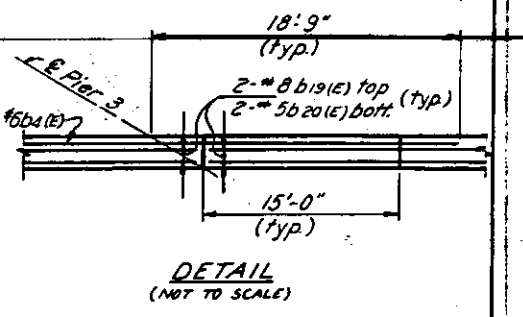
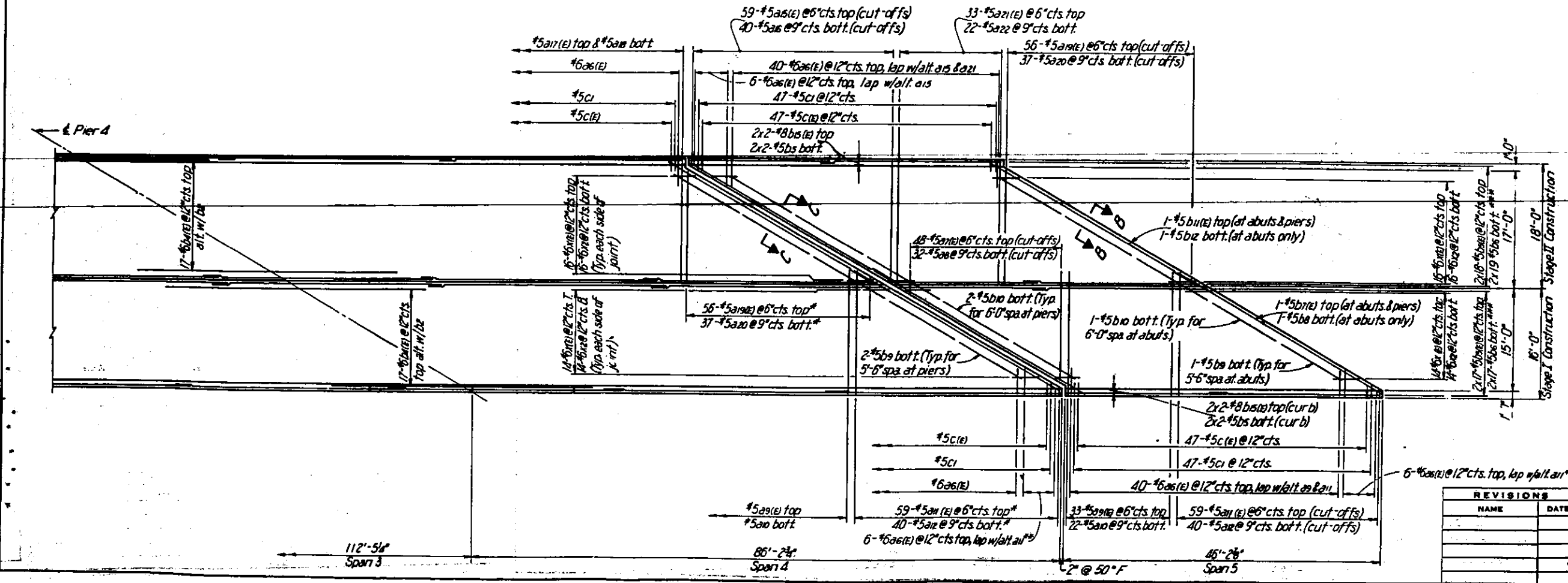
SPAN 4					
LINE	BEAN OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL 7 4	W CURB	85833.377	16.000	788.552	788.552
	BN 1	85835.975	14.500	788.573	788.573
	BN 2	85845.502	9.000	788.632	788.632
	BN 3	85855.894	3.000	788.677	788.677
	CL STR	85861.090	0.000	788.698	788.698
	STAGE	85862.822	-1.000	788.673	788.673
	BN 4	85866.286	-3.000	788.624	788.624
BN 5	85876.678	-9.000	788.473	788.473	
BN 6	85888.205	-14.500	788.318	788.318	
E CURB	85899.803	-16.000	788.271	788.271	
V	W CURB	85843.377	16.000	788.511	788.518
	BN 1	85845.975	14.500	788.530	788.538
	BN 2	85855.502	9.000	788.585	788.593
	BN 3	85865.894	3.000	788.626	788.634
	CL STR	85871.090	0.000	788.645	788.653
	STAGE	85872.822	-1.000	788.620	788.627
	BN 4	85876.286	-3.000	788.569	788.577
BN 5	85886.678	-9.000	788.418	788.426	
BN 6	85896.205	-14.500	788.255	788.263	
E CURB	85908.803	-16.000	788.207	788.214	
H	W CURB	85853.377	16.000	788.465	788.495
	BN 1	85855.975	14.500	788.484	788.514
	BN 2	85865.502	9.000	788.538	788.565
	BN 3	85875.894	3.000	788.571	788.602
	CL STR	85881.090	0.000	788.588	788.618
	STAGE	85882.822	-1.000	788.562	788.593
	BN 4	85886.286	-3.000	788.510	788.541
BN 5	85896.678	-9.000	788.351	788.381	
BN 6	85906.205	-14.500	788.188	788.218	
E CURB	85908.803	-16.000	788.139	788.169	
I	W CURB	85863.377	16.000	788.415	788.472
	BN 1	85865.975	14.500	788.433	788.490
	BN 2	85875.502	9.000	788.488	788.537
	BN 3	85885.894	3.000	788.513	788.570
	CL STR	85891.090	0.000	788.522	788.585
	STAGE	85892.822	-1.000	788.501	788.558
	BN 4	85896.286	-3.000	788.447	788.504
BN 5	85906.678	-9.000	788.284	788.381	
BN 6	85916.205	-14.500	788.117	788.174	
E CURB	85918.803	-16.000	788.067	788.124	
J	W CURB	85873.377	16.000	788.361	788.441
	BN 1	85875.975	14.500	788.378	788.457
	BN 2	85885.502	9.000	788.421	788.500
	BN 3	85895.894	3.000	788.450	788.529
	CL STR	85901.090	0.000	788.462	788.542
	STAGE	85902.822	-1.000	788.435	788.514
	BN 4	85906.286	-3.000	788.380	788.459
BN 5	85916.678	-9.000	788.213	788.282	
BN 6	85926.205	-14.500	788.042	788.121	
E CURB	85928.803	-16.000	787.991	788.070	

SPAN 4					
LINE	BEAN OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
I	W CURB	85883.377	16.000	788.304	788.393
	BN 1	85885.975	14.500	788.318	788.408
	BN 2	85895.502	9.000	788.359	788.448
	BN 3	85905.894	3.000	788.383	788.472
	CL STR	85911.090	0.000	788.394	788.483
	STAGE	85912.822	-1.000	788.366	788.455
	BN 4	85916.286	-3.000	788.309	788.398
BN 5	85926.678	-9.000	788.138	788.227	
BN 6	85936.205	-14.500	783.963	788.053	
E CURB	85938.803	-16.000	783.911	788.000	
AA	W CURB	85893.377	16.000	788.242	788.326
	BN 1	85895.975	14.500	788.257	788.340
	BN 2	85905.502	9.000	788.292	788.376
	BN 3	85915.894	3.000	788.312	788.396
	CL STR	85921.090	0.000	788.321	788.405
	STAGE	85922.822	-1.000	788.292	788.376
	BN 4	85926.286	-3.000	788.234	788.318
BN 5	85936.678	-9.000	788.059	788.143	
BN 6	85946.205	-14.500	783.881	783.925	
E CURB	85948.803	-16.000	783.827	783.911	
BB	W CURB	85903.377	16.000	788.176	788.239
	BN 1	85905.975	14.500	788.190	788.253
	BN 2	85915.502	9.000	788.221	788.285
	BN 3	85925.894	3.000	788.237	788.301
	CL STR	85931.090	0.000	788.244	788.307
	STAGE	85932.822	-1.000	788.215	788.278
	BN 4	85936.286	-3.000	788.156	788.219
BN 5	85946.678	-9.000	783.974	788.039	
BN 6	85956.205	-14.500	783.794	783.857	
E CURB	85958.803	-16.000	783.739	783.802	
CC	W CURB	85913.377	16.000	788.106	788.136
	BN 1	85915.975	14.500	788.119	788.148
	BN 2	85925.502	9.000	788.147	788.176
	BN 3	85935.894	3.000	788.159	788.188
	CL STR	85941.090	0.000	788.163	788.183
	STAGE	85942.822	-1.000	788.133	788.162
	BN 4	85946.286	-3.000	788.073	788.102
BN 5	85956.678	-9.000	783.888	783.918	
BN 6	85966.205	-14.500	783.703	783.732	
E CURB	85968.803	-16.000	783.647	783.677	
CL 8 5	W CURB	85921.897	16.000	788.047	788.089
	BN 1	85924.095	14.500	788.059	788.081
	BN 2	85933.622	9.000	788.085	788.105
	BN 3	85944.014	3.000	788.092	788.094
	CL STR	85949.210	0.000	788.095	788.097
	STAGE	85950.942	-1.000	788.068	788.066
	BN 4	85954.406	-3.000	788.002	788.004
BN 5	85964.798	-9.000	783.815	783.817	
BN 6	85974.325	-14.500	783.626	783.628	
E CURB	85976.923	-16.000	783.570	783.572	

SPAN 5					
LINE	BEAN OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL 8 5	W CURB	85921.897	16.000	788.047	788.047
	BN 1	85924.095	14.500	788.058	788.058
	BN 2	85933.622	9.000	788.083	788.083
	BN 3	85944.014	3.000	788.092	788.092
	CL STR	85949.210	0.000	788.095	788.095
	STAGE	85950.942	-1.000	788.064	788.064
	BN 4	85954.406	-3.000	788.002	788.002
BN 5	85964.798	-9.000	783.815	783.815	
BN 6	85974.325	-14.500	783.626	783.626	
E CURB	85976.923	-16.000	783.570	783.570	
CL 8 5	W CURB	85922.247	16.000	788.041	788.043
	BN 1	85924.845	14.500	788.053	788.055
	BN 2	85934.372	9.000	788.077	788.079
	BN 3	85944.764	3.000	788.086	788.087
	CL STR	85949.960	0.000	788.089	788.090
	STAGE	85951.692	-1.000	788.057	788.059
	BN 4	85955.156	-3.000	783.996	783.997
BN 5	85965.548	-9.000	783.808	783.810	
BN 6	85975.075	-14.500	783.619	783.621	
E CURB	85977.673	-16.000	783.562	783.564	
DB	W CURB	85932.247	16.000	783.964	783.988
	BN 1	85934.845	14.500	783.974	783.998
	BN 2	85944.372	9.000	783.995	784.019
	BN 3	85954.764	3.000	784.000	784.023
	CL STR	85959.960	0.000	784.000	784.023
	STAGE	85961.692	-1.000	783.968	783.992
	BN 4	85965.156	-3.000	783.905	783.929
BN 5	85975.548	-9.000	783.713	783.737	
BN 6	85985.075	-14.500	783.520	783.544	
E CURB	85987.673	-16.000	783.463	783.487	
EE	W CURB	85942.247	16.000	783.883	783.917
	BN 1	85944.845	14.500	783.892	783.926
	BN 2	85954.372	9.000	783.909	783.943
	BN 3	85964.764	3.000	783.909	783.943
	CL STR	85969.960	0.000	783.907	783.941
	STAGE	85971.692	-1.000	783.875	783.910
	BN 4	85975.156	-3.000	783.811	783.845
BN 5	85985.548	-9.000	783.615	783.649	
BN 6	85995.075	-14.500	783.418	783.452	
E CURB	85997.673	-16.000	783.360	783.394	
FF	W CURB	85952.247	16.000	783.797	783.826
	BN 1	85954.845	14.500	783.806	783.834
	BN 2	85964.372	9.000	783.819	783.847
	BN 3	85974.764	3.000	783.815	783.843
	CL STR	85979.960	0.000	783.811	783.839
	STAGE	85981.692	-1.000	783.778	783.806
	BN 4	85985.156	-3.000	783.712	783.741
BN 5	85995.548	-9.000	783.512	783.540	
BN 6	86005.075	-14.500	783.312	783.340	
E CURB	86007.673	-16.000	783.252	783.280	
GG	W CURB	85962.247	16.000	783.700	783.717
	BN 1	85964.845	14.500	783.715	783.724
	BN 2	85974.372	9.000	783.725	783.733
	BN 3	85984.764	3.000	783.716	783.725
	CL STR	85989.960	0.000	783.711	783.719
	STAGE	85991.692	-1.000	783.677	783.686
	BN 4	85995.156	-3.000	783.610	783.619
BN 5	86005.548	-9.000	783.405	783.414	
BN 6	86015.075	-14.500	783.201	783.210	
E CURB	86017.673	-16.000	783.141	783.149	
CL 8 6	W CURB	85966.427	16.000	783.670	783.670
	BN 1	85969.025	14.500	783.676	783.676
	BN 2	85978.552	9.000	783.680	783.684
	BN 3	85988.944	3.000	783.670	783.674
	CL STR	85994.140	0.000	783.667	783.667
	STAGE	85995.872	-1.000	783.634	783.634
	BN 4	85999.336	-3.000	783.566	783.566
BN 5	86009.728	-9.000	783.380	783.380	
BN 6	86019.255	-14.500	783.154	783.154	
E CURB	86021.853	-16.000	783.093	783.093	
HE 2 A	W CURB	85971.077	16.000	7	



**NOTES:**  
 For Sections A-A, B-B, C-C and B.II of Materials see Sht. No. 8  
 Reinforcement bars designated (e) shall be epoxy coated. See Special Provisions  
 Bars indicated thus 3x20-#5 etc. indicates 3 lengths with 20 lines of bars  
 \* Use remainder of cut-offs where indicated  
 \*\* Cut or bend in field to fit  
 \*\*\* For spacing see Section A-A Sht. No. 8  
 Bars b1a(e), b1a(e), b1a(e), b1a(e), b1a(e) & b20(e) do not pass thru joints in curb.  
 See Special Provisions for procedure on epoxy coated bars to be cut in the field.



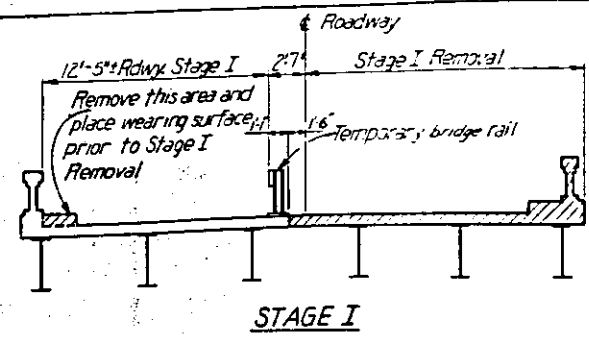
REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
 DECK REINFORCEMENT  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

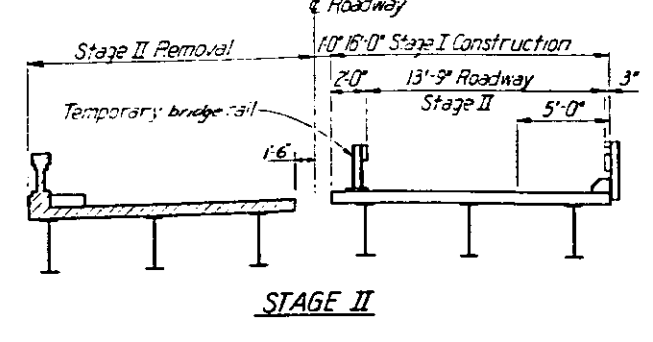
SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_  
 DATE \_\_\_\_\_

DRAWN BY K.C.  
 CHECKED BY J.P.

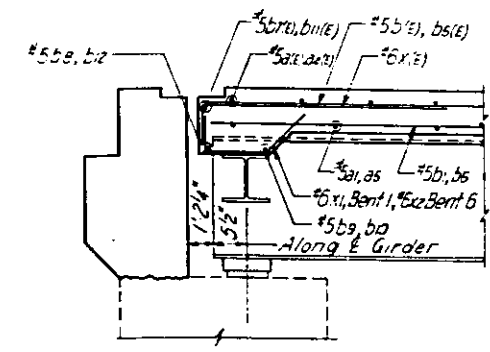




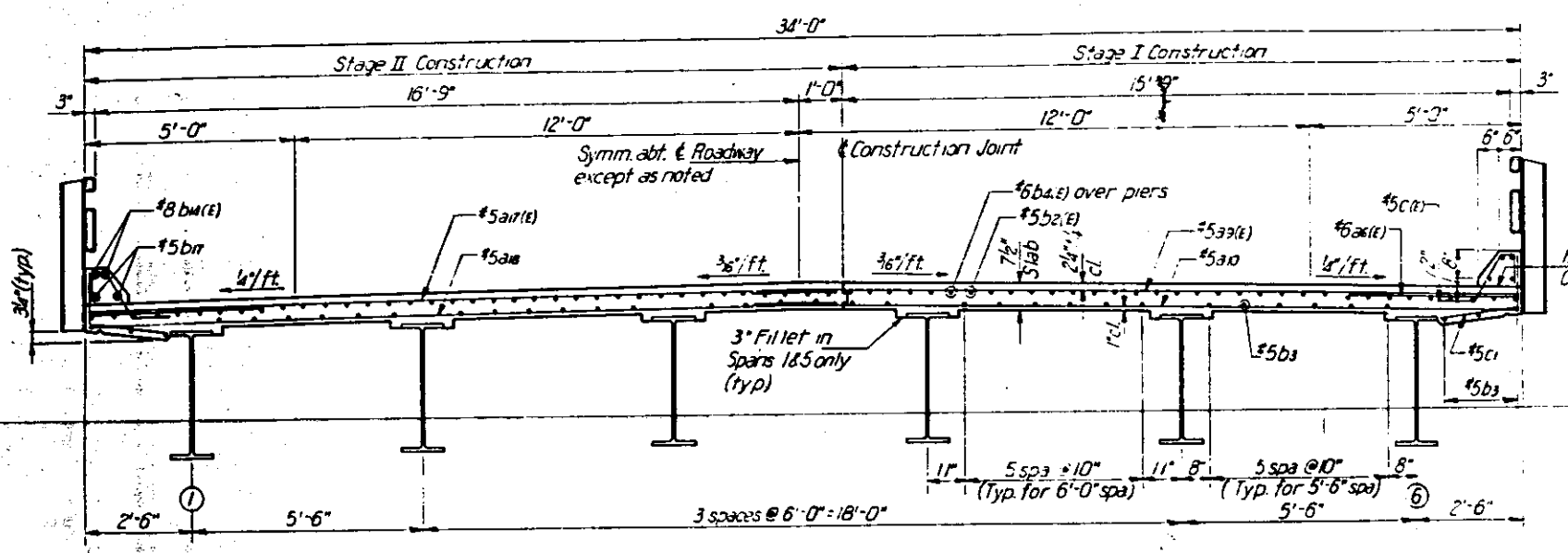
STAGE I



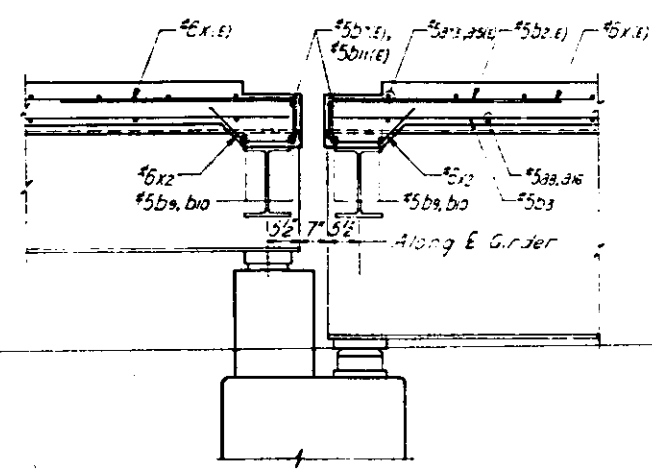
STAGE II



SECTION B-B

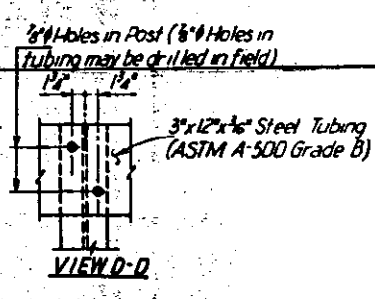


SECTION A-A

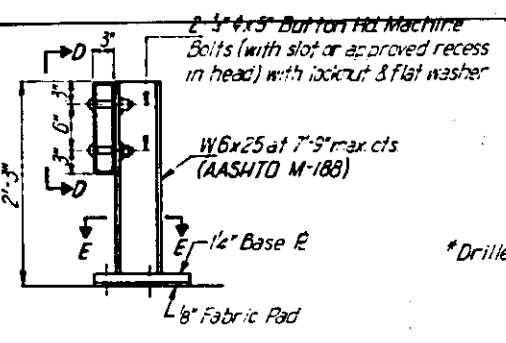


SECTION C-C

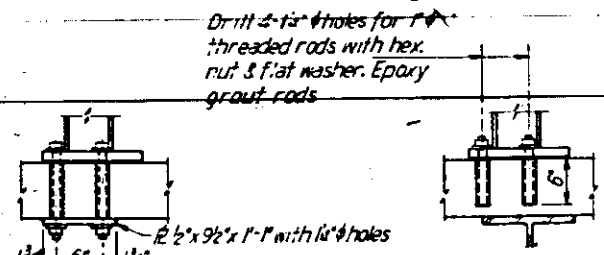
BILL OF MATERIALS				
BAR	No	SIZE	LENGTH	SHAPE
a1(E)	15	#5	13'-9"	—
a1	12	#5	13'-9"	—
a2(E)	37	#5	11'-4"	—
a3	24	#5	11'-4"	—
a4(E)	42	#5	13'-6"	—
a5	28	#5	13'-6"	—
a6	706	#6	4'-0"	—
a7(E)	48	#5	19'-1"	—
a8	32	#5	19'-1"	—
a9(E)	55	#5	18'-0"	—
a10	35	#5	18'-0"	—
a11(E)	59	#5	19'-0"	—
a12	40	#5	19'-0"	—
a13(E)	20	#5	12'-5"	—
a14	13	#5	12'-5"	—
a15(E)	50	#5	18'-9"	—
a16	40	#5	18'-9"	—
a17(E)	55	#5	17'-9"	—
a18	367	#5	17'-9"	—
a19(E)	56	#5	17'-9"	—
a20	37	#5	17'-9"	—
a21(E)	128	#5	2'-0"	—
b1(E)	39	#5	20'-1"	—
b1	36	#5	20'-1"	—
b2(E)	350	#5	29'-11"	—
b3	396	#5	27'-4"	—
b4(E)	68	#6	37'-6"	—
b5(E)	78	#5	23'-9"	—
b6	72	#5	23'-9"	—
b7(E)	6	#5	34'-0"	—
b8	2	#5	34'-0"	—
b9	20	#5	10'-6"	—
b10	30	#5	11'-6"	—
b11(E)	6	#5	35'-6"	—
b12	2	#5	35'-6"	—
b13(E)	4	#8	20'-1"	—
b14(E)	24	#8	28'-3"	—
b15(E)	8	#8	21'-2"	—
b16(E)	12	#8	28'-9"	—
b17(E)	2	#5	25'-9"	—
b18(E)	12	#5	28'-9"	—
b19(E)	16	#8	14'-9"	—
b20(E)	16	#5	14'-9"	—
c1	714	#5	3'-5"	—
c1	714	#5	2'-11"	—
x1(E)	130	#6	4'-2"	—
x1	60	#6	2'-2"	—
y2	120	#6	2'-4"	—
Superstructure Removal				
Class X Concrete	Each			1
Reinf. Bars epoxy coated	Cu Yds			317.6
Reinforcement Bars	Lbs			53,410



VIEW D-D



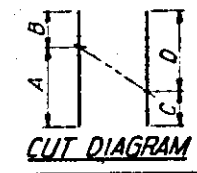
TEMPORARY BRIDGE RAIL DETAILS  
(See Special Provisions)



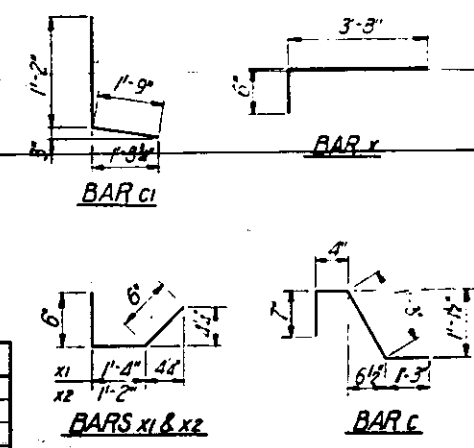
ANCHORAGE DETAILS

BAR	A	B	C	D
a1(E)	11'-5"	2'-4"	7'-1"	6'-8"
a1	11'-5"	2'-4"	7'-1"	6'-8"
a4(E)	12'-6"	1'-0"	6'-11"	6'-7"
a5	12'-6"	1'-0"	6'-11"	6'-7"
a7(E)	16'-9"	2'-4"	2'-4"	16'-9"
a8	16'-9"	2'-4"	2'-4"	16'-9"
a11(E)	18'-0"	1'-0"	1'-0"	18'-0"
a12	18'-0"	1'-0"	1'-0"	18'-0"
a13(E)	11'-5"	1'-0"	6'-5"	6'-0"
a14	11'-5"	1'-0"	6'-5"	6'-0"
a15(E)	17'-9"	1'-0"	1'-0"	17'-9"
a16	17'-9"	1'-0"	1'-0"	17'-9"
a19(E)	16'-9"	1'-0"	1'-0"	16'-9"
a20	16'-9"	1'-0"	1'-0"	16'-9"

Order bars full length, cut to fit as shown and use remainder of bars as indicated in the plans.



CUT DIAGRAM



BAR c1

BARS x1 & x2

BAR c

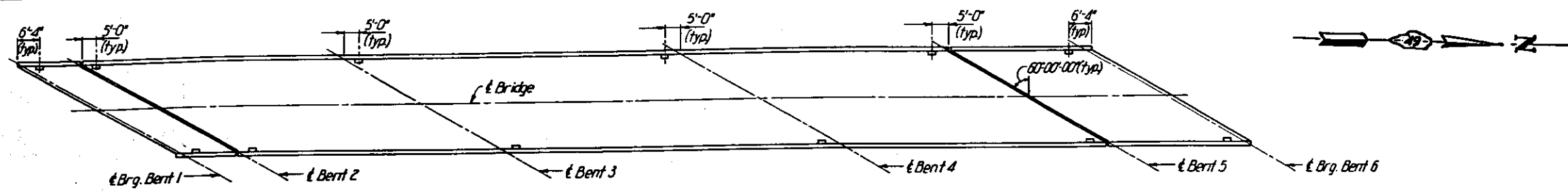
REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
DECK DETAILS I  
F.A.P. ROUTE 840 (ILL. 49)  
SECTION 122 VBR  
VERMILION COUNTY

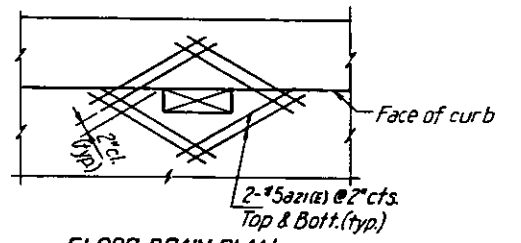
SCALE VERT. NONE HORIZ. DATE  
DRAWN BY K.C.  
CHECKED BY J.P.

AS REVISED

SECTION	COUNTY	FILE	NO.
840	VERMILION	34	22
STA 850+55	TO STA 865+55		
FED. ROAD DIST. NO. 1		FED. AID PROJ. NO.	

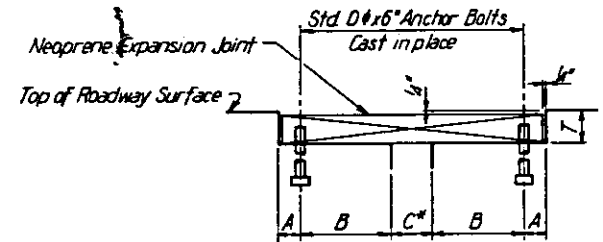


**DECK DRAIN LOCATION PLAN**



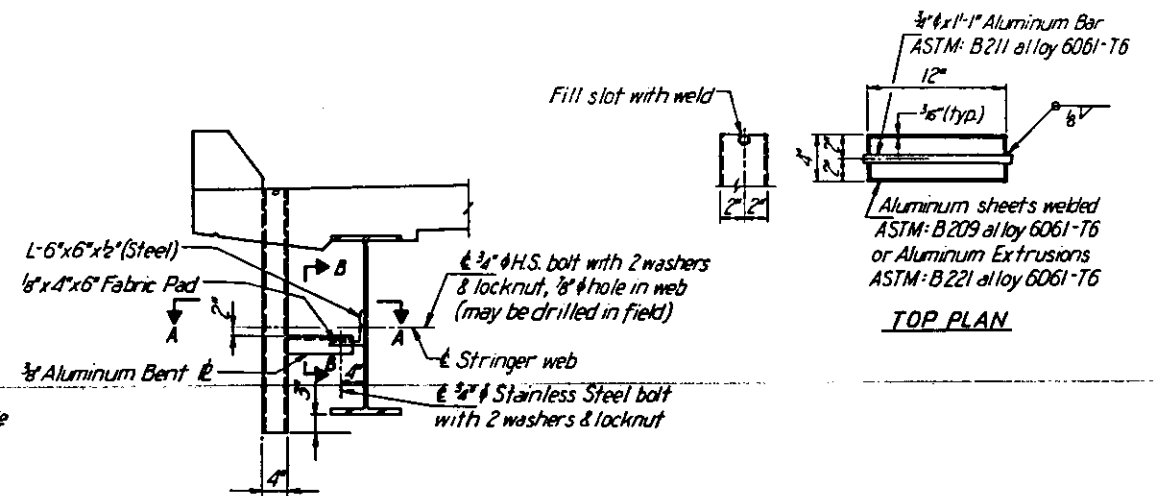
**FLOOR DRAIN PLAN**  
Showing additional reinforcing

NEOPRENE EXPANSION JOINTS (See Special Provisions)												
SUPPLIER	2" JOINT (BENT 5)					4" JOINT (BENTS 1,2&6)						
	MODEL	A	B	C	D	T	MODEL	A	B	C	D	T
GENERAL TIRE COMPANY	TRANSFLEX 200A	1 1/8"	3 1/8"	2"	1/2"	1 1/8"	TRANSFLEX 400-A	1 1/8"	8 1/8"	3 1/2"	3/4"	2 3/8"
WATSON BOWMAN ASSOC., INC.	WABOFLEX SR 2	1 1/4"	3 1/8"	2"	1/2"	1 1/8"	WABOFLEX SR-4	1 1/8"	8 1/8"	3 1/2"	3/4"	2 3/8"

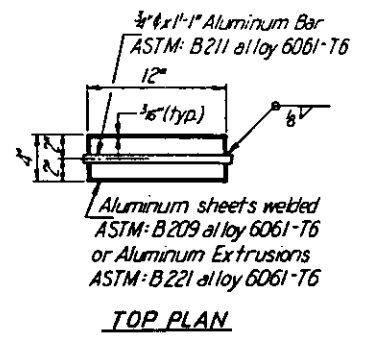


**CROSS SECTION**  
\*At 50° F  
Dimensions are at right angles

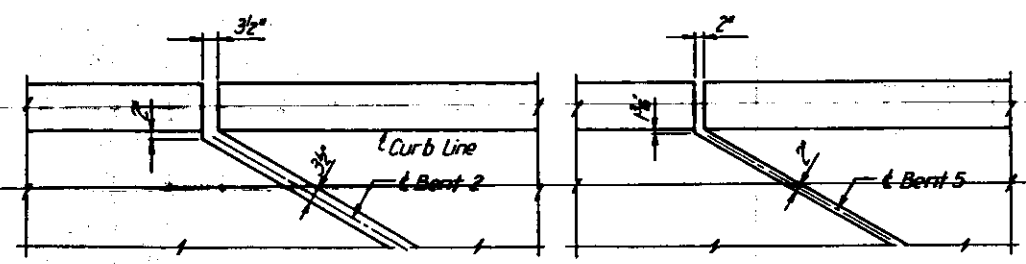
Note: Joint openings shall be adjusted in accordance with Article 503.07(c) of the Std. Specs. when the deck is poured at an ambient temperature other than 50°



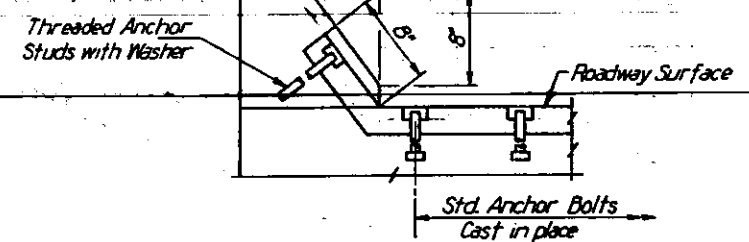
**SECTION AT CURB**



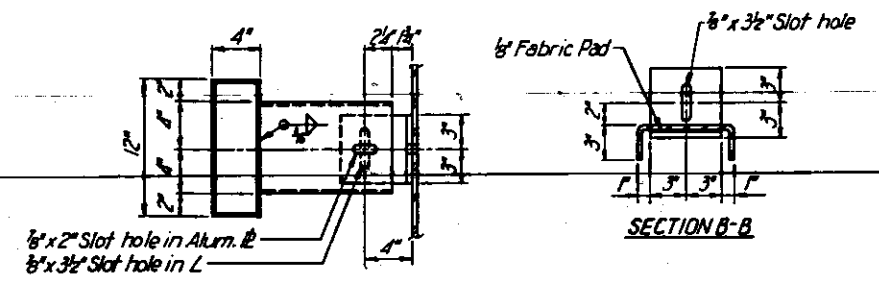
**TOP PLAN**



**JOINT DETAILS**



**CURB END TREATMENT**



**DECK DRAIN DETAILS**

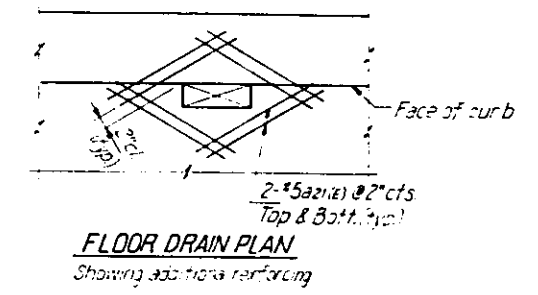
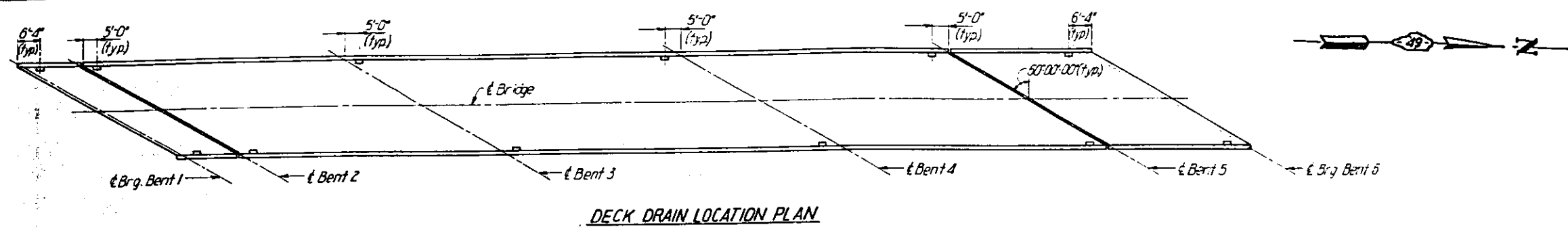
Note: The exterior surface of the aluminum drains shall be cleaned and given a washcoat pretreatment in accordance with the Steel Struct. Painting Council's Spec. SSPC-SP1 & SSPC-PT3 followed by painting with the Basic Lead Silico Chromate paint system specified in Art. 712.2B of the Standard Specifications, except the final field coat shall be maroon. See Special Provisions.

REVISIONS	
NAME	DATE

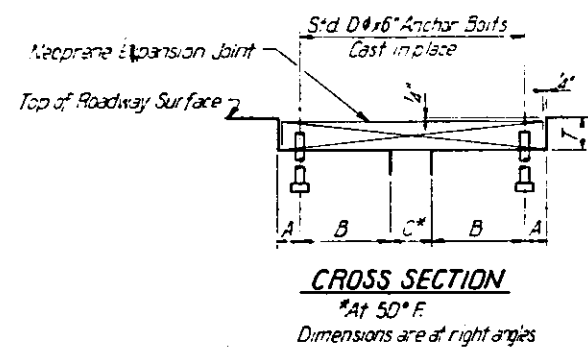
ILLINOIS DIVISION OF HIGHWAYS  
**DECK DETAILS II**  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

SCALE: VERT. NONE  
 HORIZ. NONE

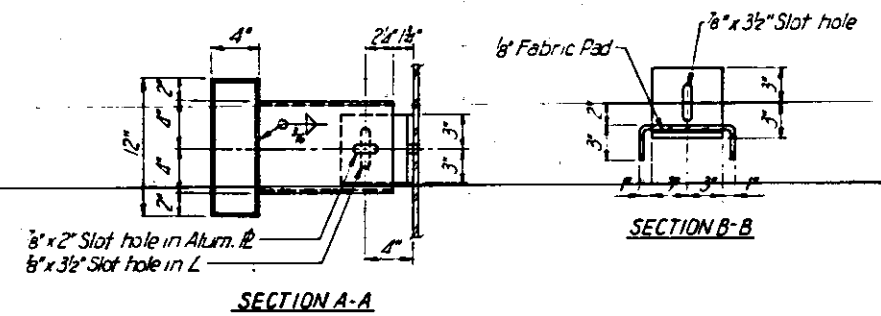
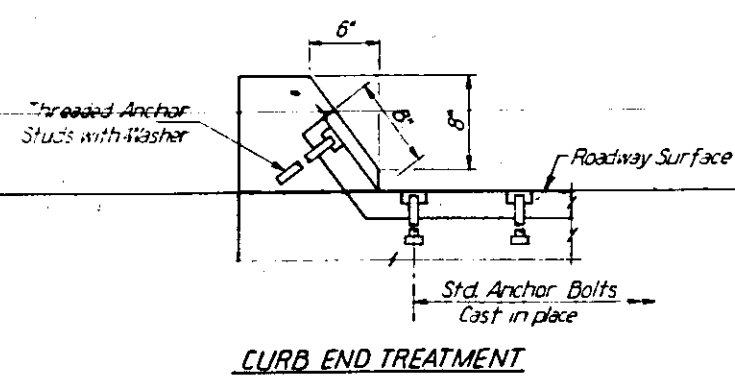
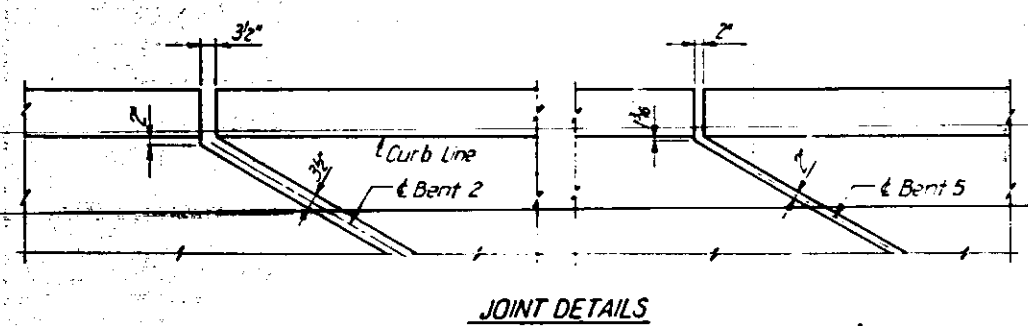
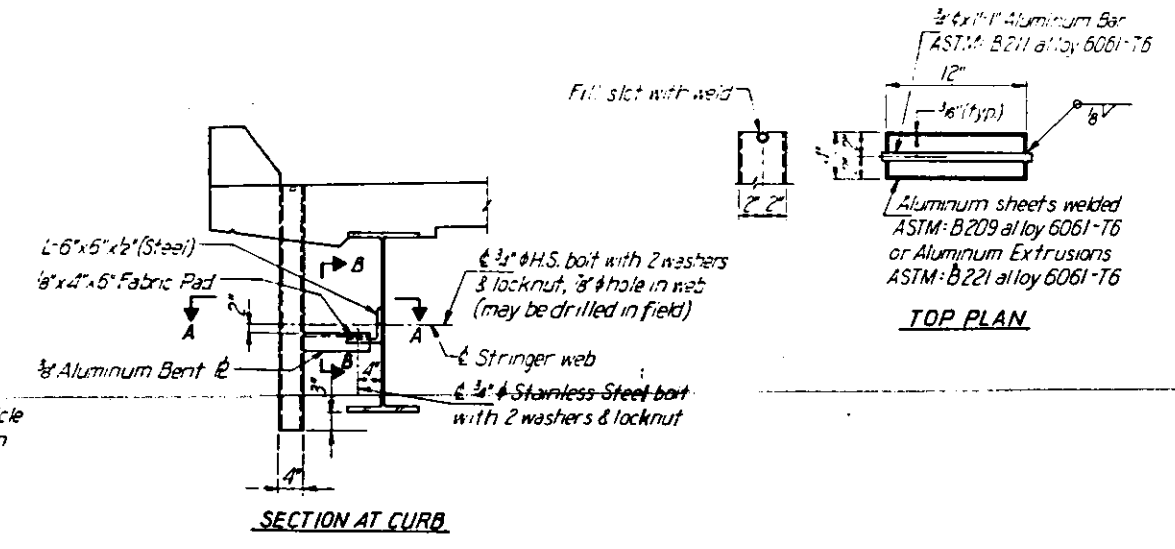
DRAWN BY K.C.  
 CHECKED BY J.P.



NEOPRENE EXPANSION JOINTS (See Special Provisions)												
SUPPLIER	2" JOINT (BENTS 1, 5 & 6)					4" JOINT (BENT 2)						
	MODEL	A	B	C	D	T	MODEL	A	B	C	D	T
GENERAL TIRE COMPANY	TRANSFLEX 200-A	1 1/8"	3 3/8"	2"	1/2"	1 1/8"	TRANSFLEX 400-A	1 1/8"	8 1/8"	3 1/2"	1/2"	2 3/8"
WATSON BOWMAN ASSOC., INC.	WABOFLEX SR-2	1 1/2"	3 3/8"	2"	1/2"	1 3/8"	WABOFLEX SR-4	1 1/8"	8 1/8"	3 1/2"	1/2"	2 3/8"



Note:  
Joint openings shall be adjusted in accordance with Article 523.07(c) of the Std. Specs when the deck is poured at an ambient temperature other than 50°



DECK DRAIN DETAILS

AS REVISED

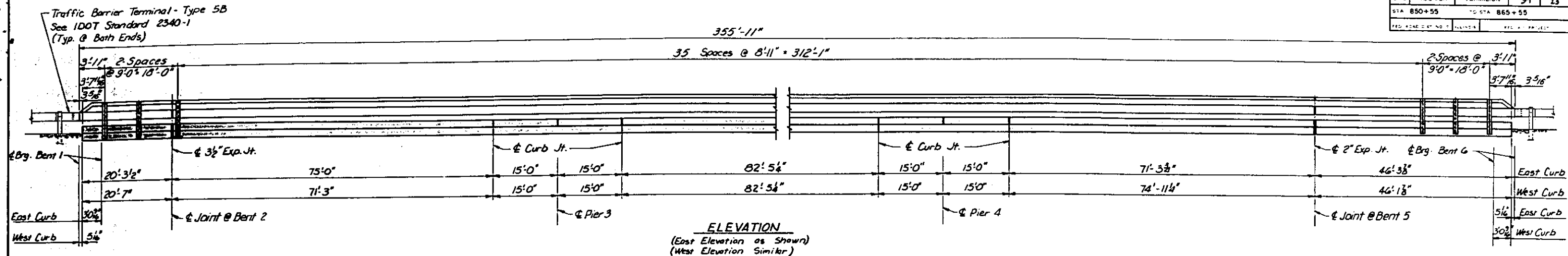
1. The exterior surface of the drainage...  
2. The exterior surface of the drainage...  
3. The exterior surface of the drainage...

REVISIONS	
NAME	DATE

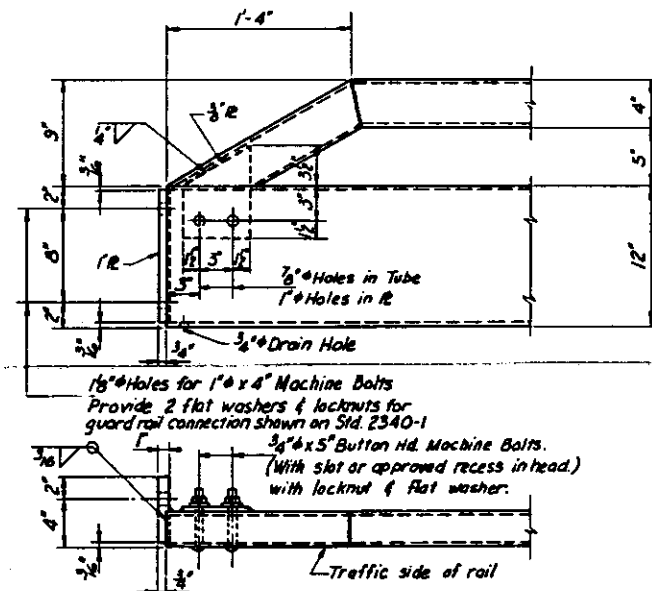
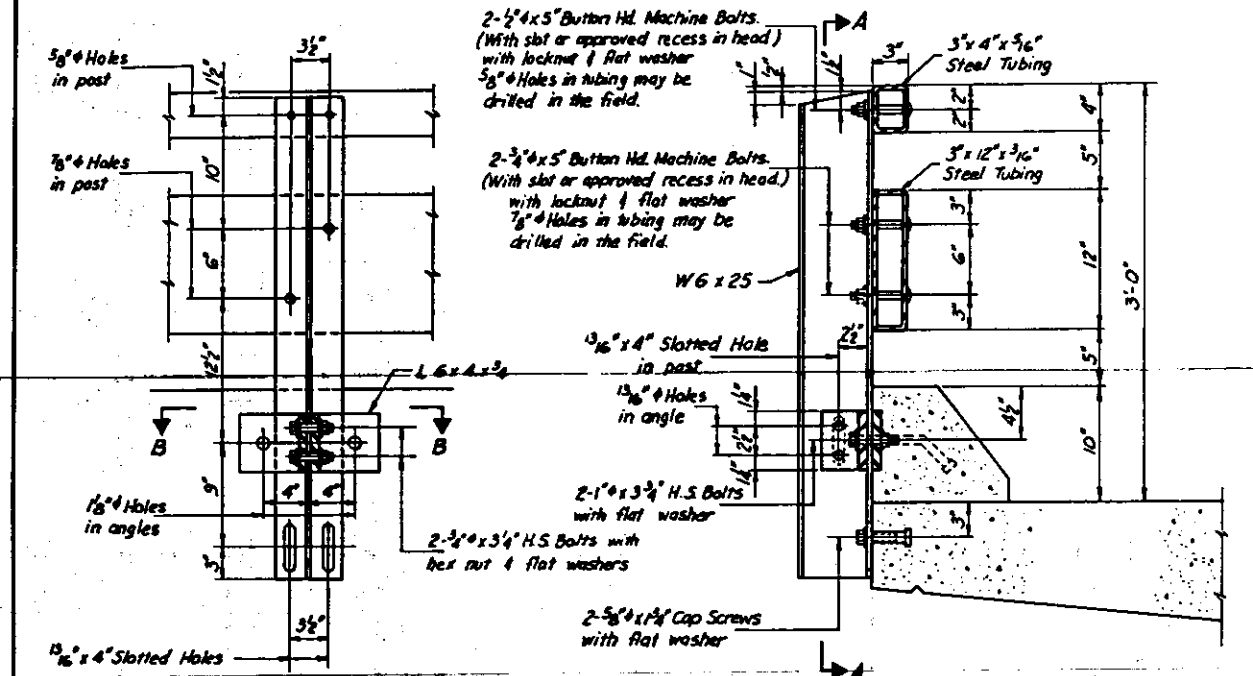
ILLINOIS DIVISION OF HIGHWAYS  
DECK DETAILS II  
F.A.P. ROUTE 840 (ILL. 49)  
SECTION 122 VBR  
VERMILION COUNTY

SCALE: NONE  
DATE: NONE  
DRAWN BY: K.C.  
CHECKED BY: J.P.

SECTION	QUANTITY	UNIT	PRICE	TOTAL
840 122 VBR	VERMILION	31	23	
STA 850+55		TO STA 865+55		



ELEVATION  
(East Elevation as Shown)  
(West Elevation Similar)



END OF RAIL DETAILS

**NOTES**

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B or A-501 Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. M-183 except posts & angles shall conform to A.A.S.H.T.O. M-223 Grade 50

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.

All posts, railing, rail spikes, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-11 and A.S.T.M. A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE T.

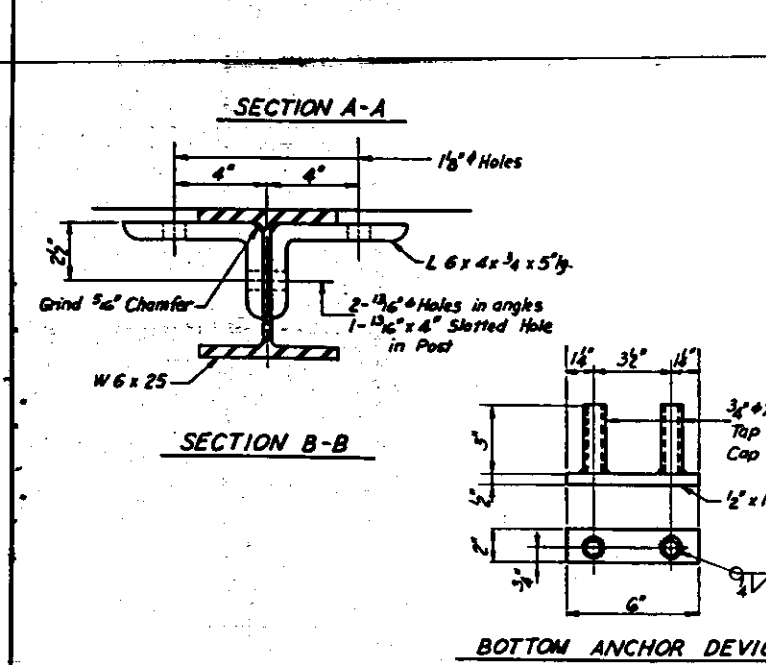
All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/8" fabric bearing pad between the post and concrete.

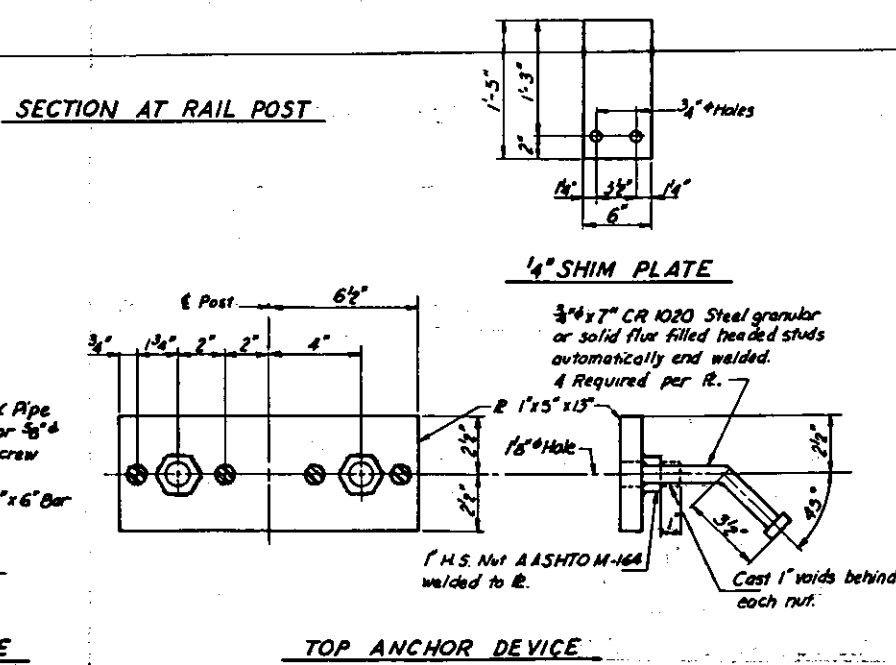
The 1/2" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn.

For multi-span bridges, sufficient 4" x 6" x 1-1/2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.

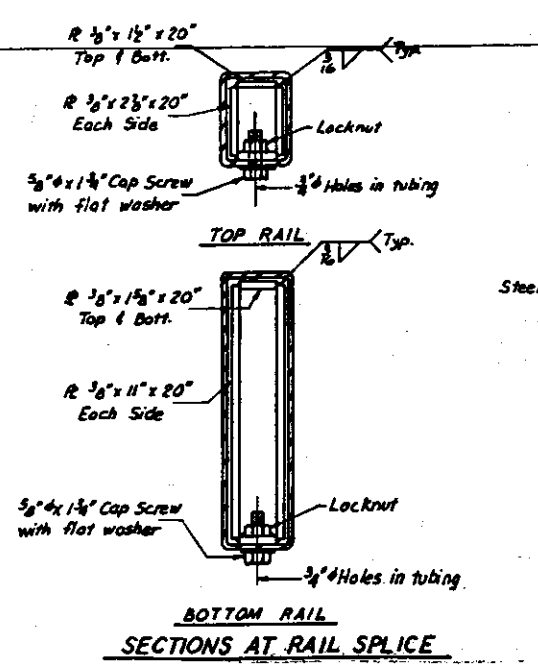
For reinforcement in curb see Steel No. 7



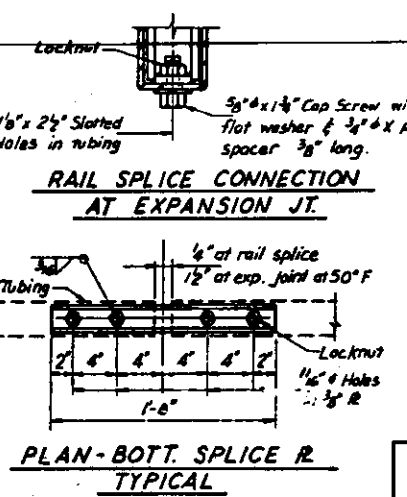
BOTTOM ANCHOR DEVICE



TOP ANCHOR DEVICE



SECTIONS AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.

PLAN - BOT. SPLICE R TYPICAL

**BILL OF MATERIAL**

Item	Unit
Steel Railing, Type T	Lin. Ft. 712

ILLINOIS DIVISION OF HIGHWAYS  
HANDRAIL DETAILS  
F.A.P. ROUTE 840 (ILL. 49)  
SECTION 122 VBR  
VERMILION COUNTY

SCALE: VERT. NONE  
HORIZ. DATE

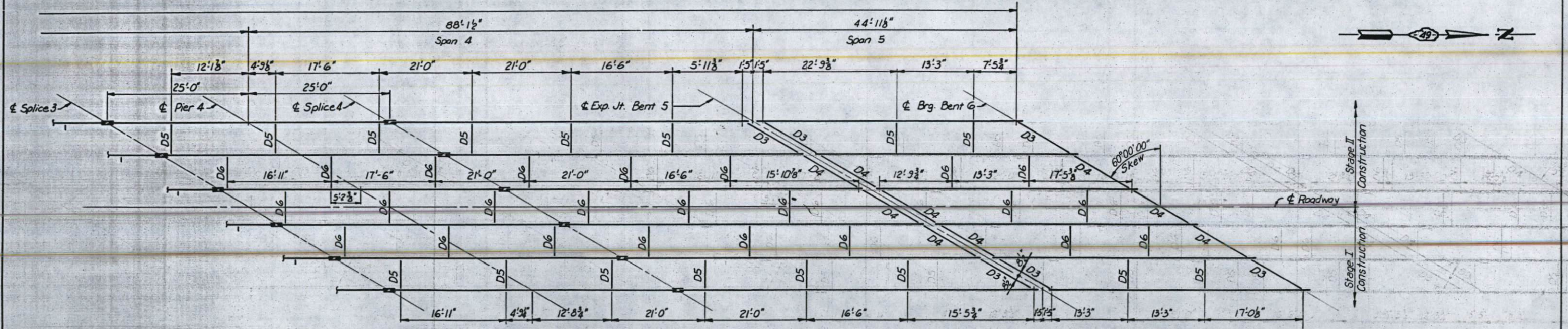
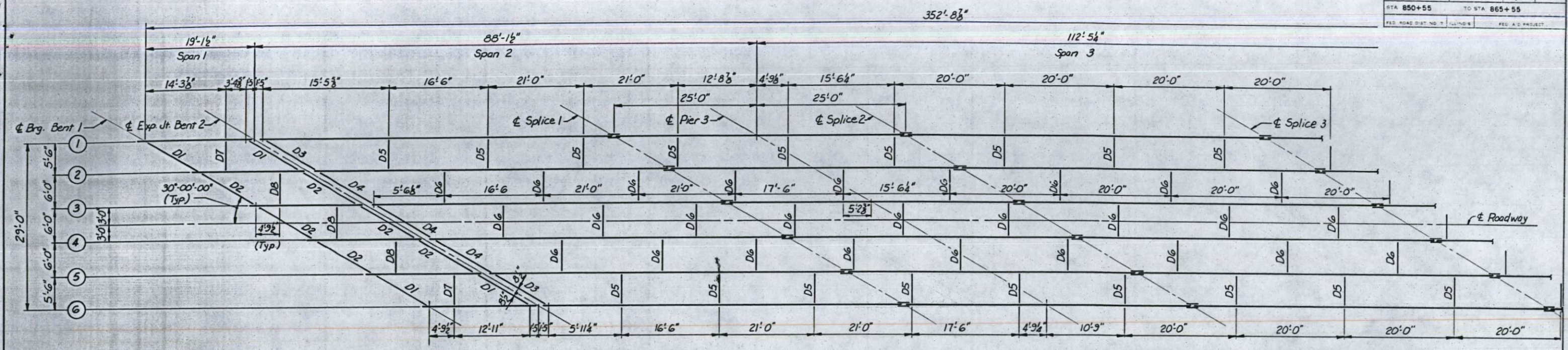
DRAWN BY E.M.T.  
CHECKED BY J.P.

**REVISIONS**

NAME	DATE



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840 122 VBR	VERMILION	39	24
STA 850+55		TO STA 865+55	
FED. ROAD DIST. NO. 1		FED. AID PROJECT	



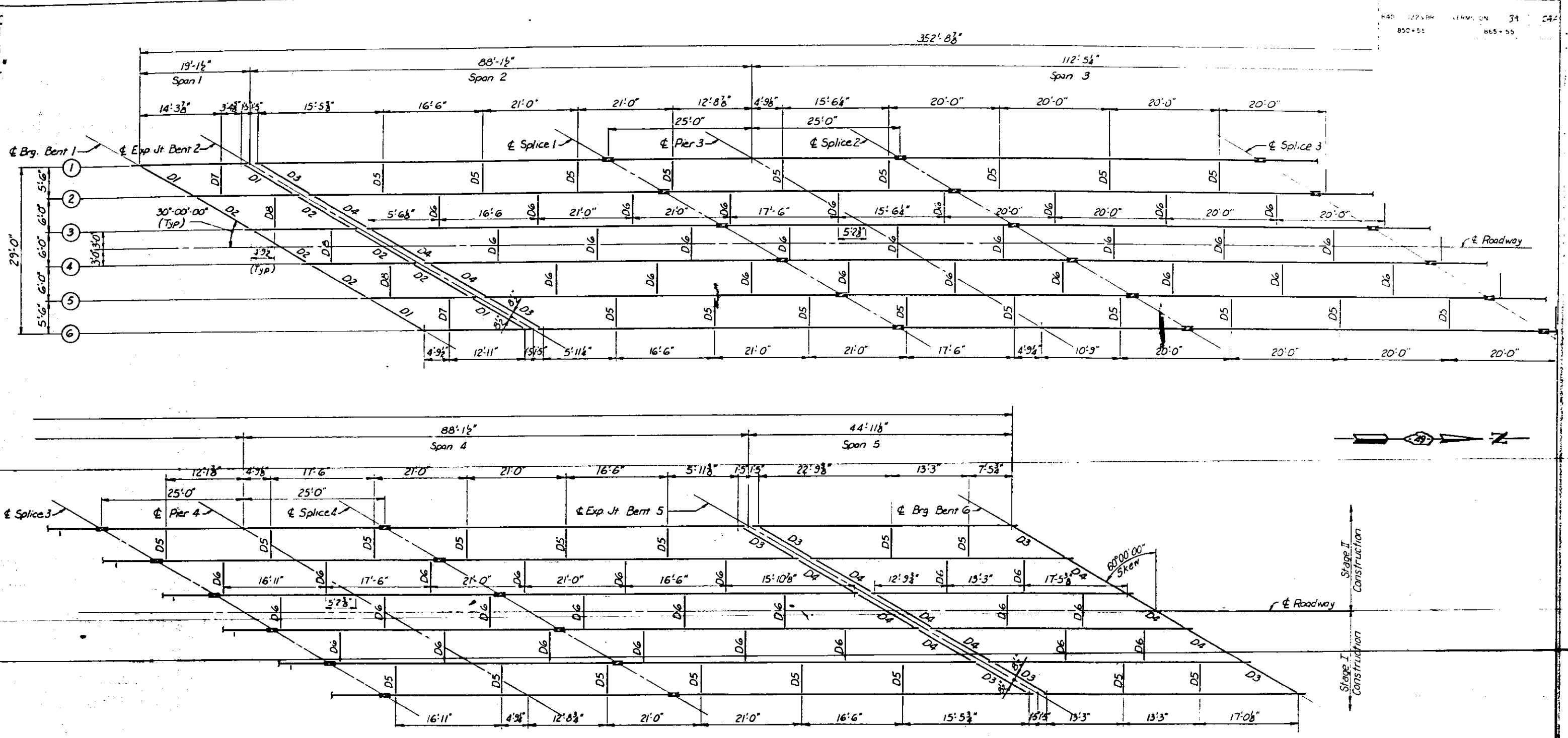
REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
 FRAMING PLAN  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

SCALE: VERT. 1/8"=1'-0"  
 HORIZ. 1"=1'-0"

DRAWN BY E.M.T.  
 CHECKED BY J.P.



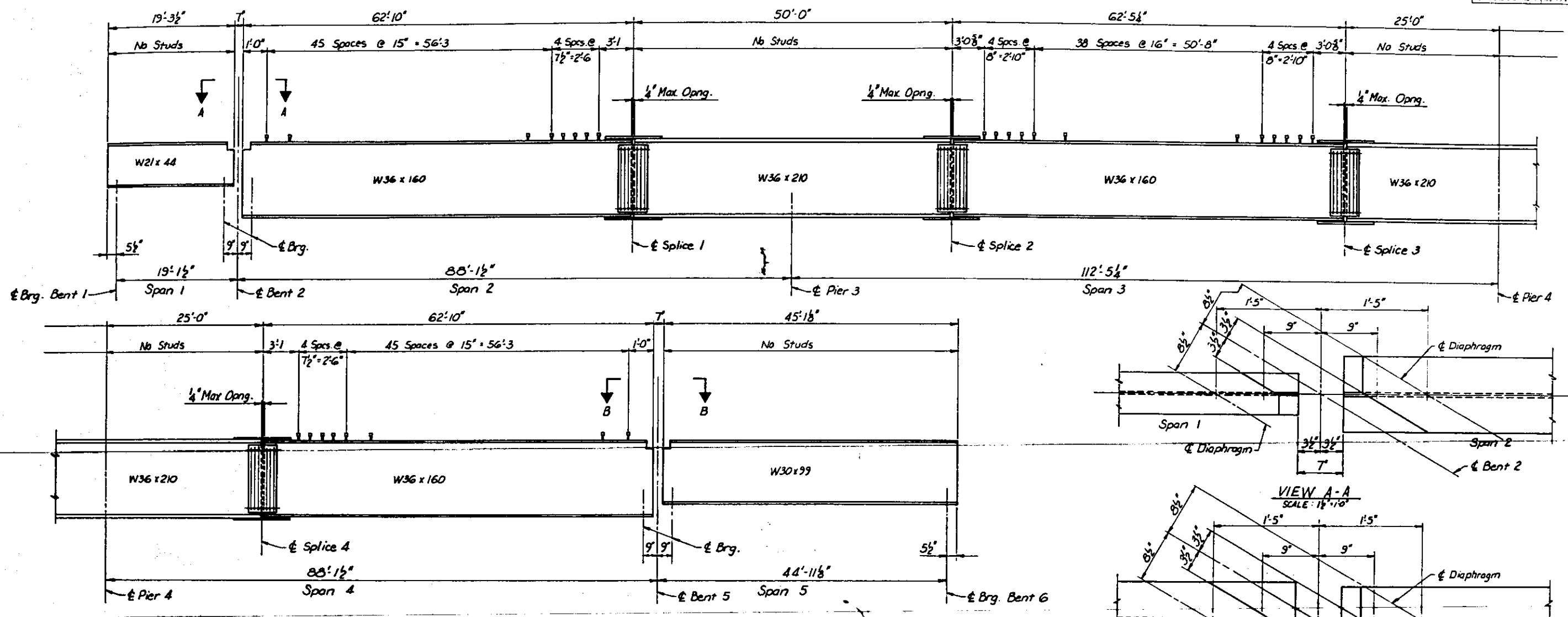


Note: The connections of all diaphragms between beams 3 and 4 should not be tightened until the Deck Slab has been completed for both stages.

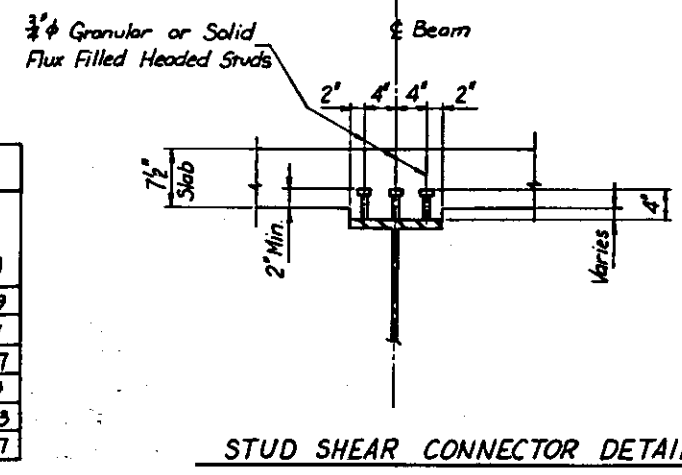
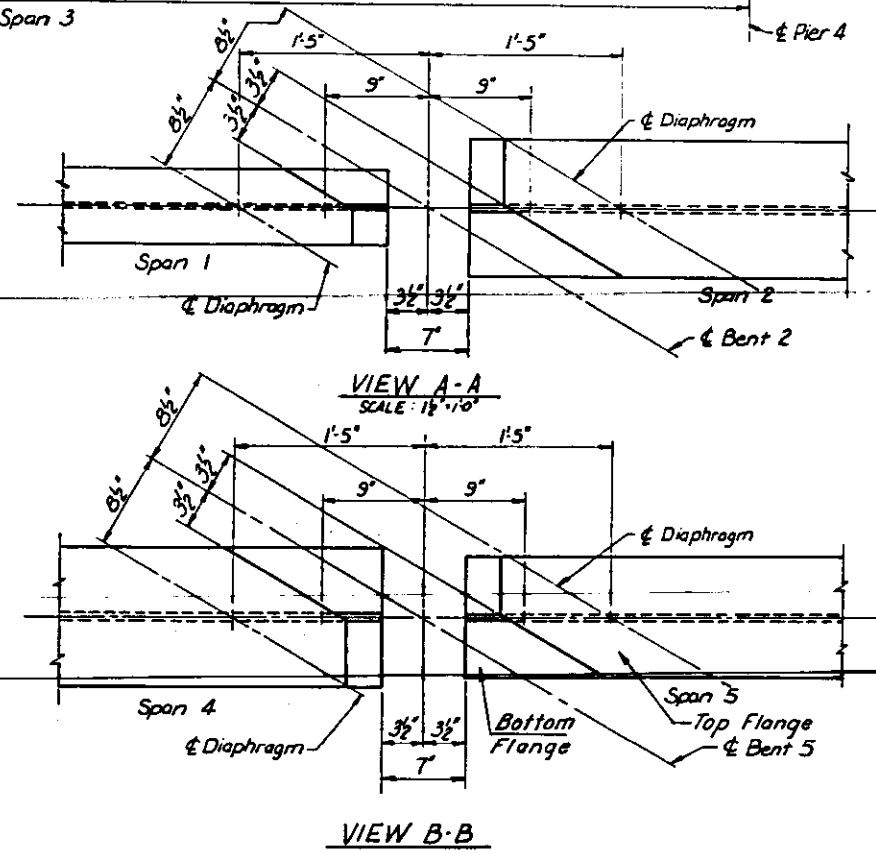
REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
 FRAMING PLAN  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

SCALE: VERT. 1/8"=1'-0"  
 HORIZ. 1"=1'-0"  
 DRAWN BY E.M.T.  
 CHECKED BY J.P.



**TYPICAL BEAM ELEVATION**  
SCALE: NONE



**STUD SHEAR CONNECTOR DETAILS**

TOP OF FLANGE ELEVATIONS												
Beam	€ Brg. Bent 1 (S. Abut.)	€ Brg. Bent 2 Span 1	€ Brg. Bent 2 Span 2	€ Splice 1	€ Brg. Pier 3	€ Splice 2	€ Splice 3	€ Brg. Pier 4	€ Splice 4	€ Brg. Bent 5 Span 4	€ Brg. Bent 5 Span 5	€ Brg. Bent 6 (N. Abut.)
1	783.837	783.917	783.923	784.011	784.022	784.032	784.129	783.906	783.685	783.392	783.386	783.009
2	783.979	784.052	784.057	784.121	784.123	783.985	783.875	783.762	783.416	783.416	783.410	783.017
3	784.116	784.181	784.185	784.224	784.214	784.206	784.041	783.920	783.798	783.425	783.419	783.007
4	784.154	784.212	784.216	784.228	784.209	784.189	783.999	783.867	783.735	783.335	783.329	782.899
5	784.095	784.144	784.148	784.134	784.104	784.074	783.858	783.715	783.572	783.148	783.141	782.693
6	784.023	784.066	784.069	784.031	783.993	783.952	783.712	783.561	783.408	782.959	782.952	782.487

REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
**FRAMING DETAILS I**  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

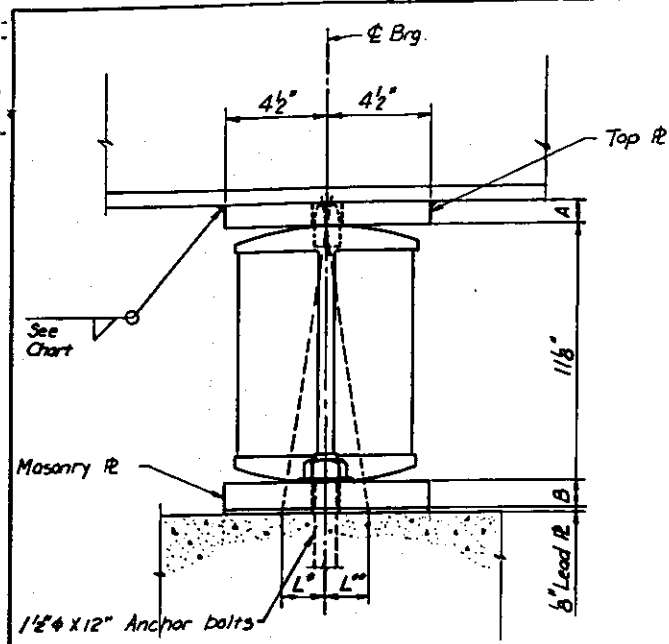
SCALE: VERT. AS SHOWN  
 HORIZ. AS SHOWN

DRAWN BY E.M.T.  
 CHECKED BY J.P.

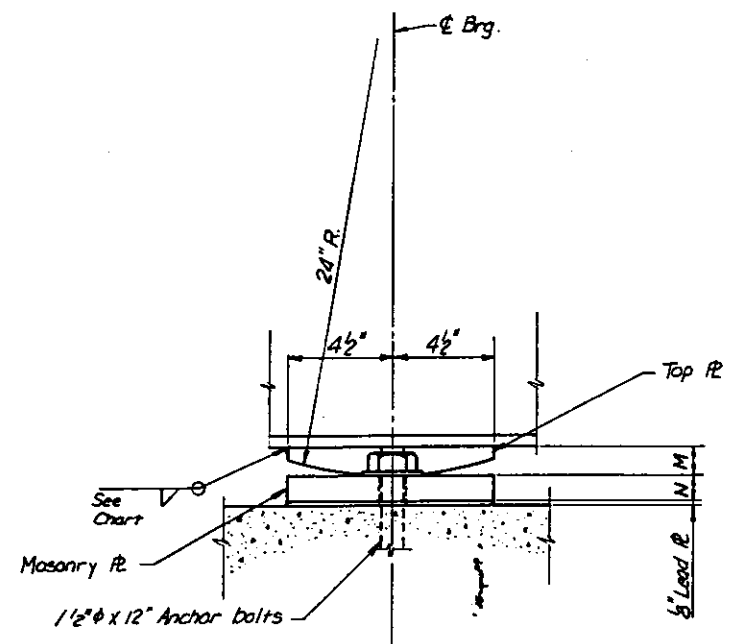




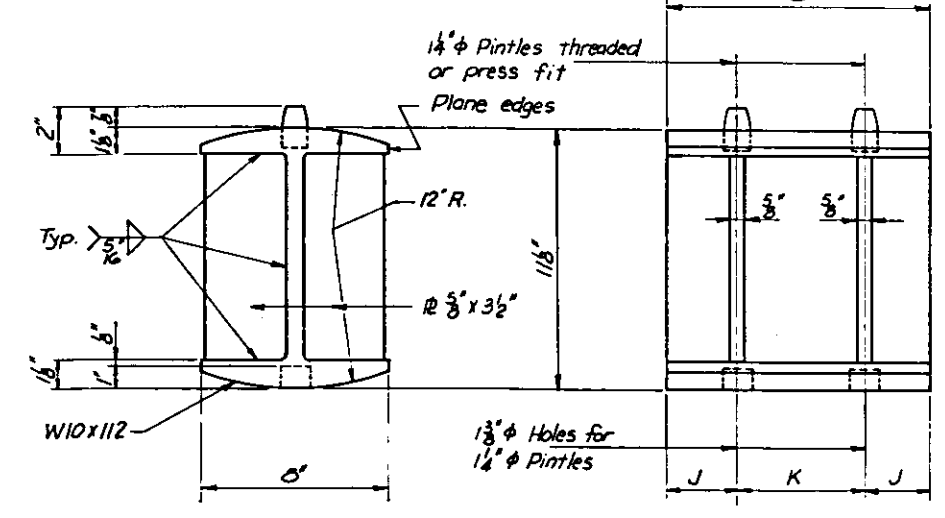




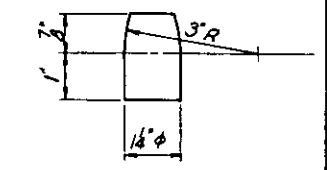
ELEVATION



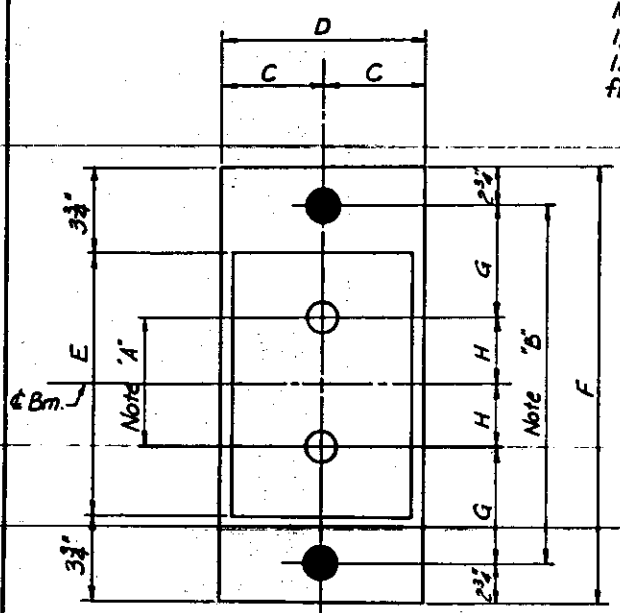
ELEVATION



ROCKER DETAIL

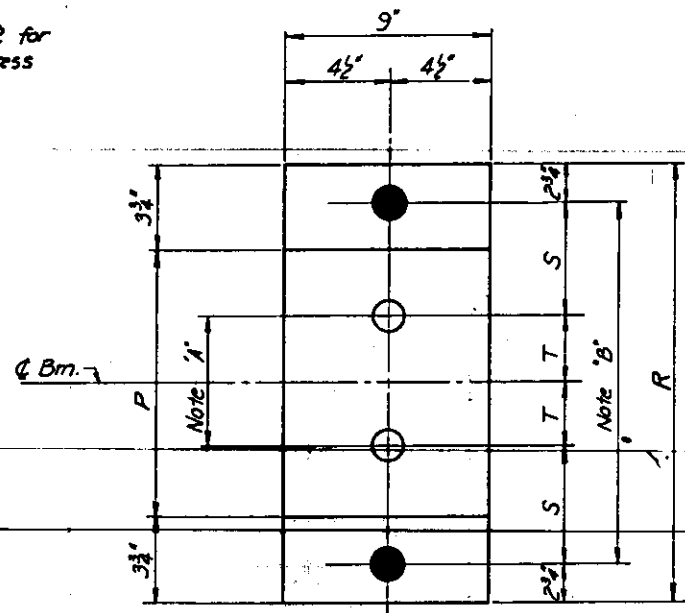


PINTLE



PLAN

Note 'A'  
1 3/8" Holes - 1" deep in top R for 1 3/8" Pintles. Thread or press fit pintles in bottom R.



PLAN

Note 'B'  
2" Holes for 1 1/2" Anchor Bolts.  
3/8" x 3" x 3" R Washers under nut

EXPANSION BEARINGS													
LOCATION	MASONRY R	TOP R	A	B	C	D	E	F	G	H	J	K	WELD
Bent 2 Span 1	R 14" x 9" x 15"	R 1" x 9" x 7 1/2"	1"	1 1/4"	4 1/2"	9"	7 1/2"	17"	4"	1 1/4"	2"	3 1/2"	3/8"
Bent 2 Span 2	R 13 1/2" x 10" x 21"	R 1" x 9" x 13 1/2"	1"	1 3/8"	5"	10"	13 1/2"	23"	5 1/2"	3 1/4"	3 1/2"	6 1/2"	5/8"
Pier 3	R 26" x 10" x 21"	R 13 1/2" x 9" x 10 1/2"	1 1/2"	2 1/2"	5"	10"	13 1/2"	23"	5 1/2"	3 1/4"	3 1/2"	6 1/2"	5/8"
Bent 5 Span 4	R 13 1/2" x 10" x 21"	R 1" x 9" x 13 1/2"	1"	1 3/8"	5"	10"	13 1/2"	23"	5 1/2"	3 1/4"	3 1/2"	6 1/2"	5/8"
Bent 5 Span 5	R 14" x 9" x 19"	R 1" x 9" x 11 1/2"	1"	1 1/4"	4 1/2"	9"	11 1/2"	21"	5"	2 3/4"	3"	5 1/2"	1/2"

FIXED BEARINGS									
LOCATION	MASONRY R	TOP R	M	N	P	R	S	T	WELD
Bent 1	R 14" x 9" x 15"	R 1" x 9" x 7 1/2"	1"	1 1/4"	7 1/2"	17"	4"	1 1/4"	3/8"
Pier 4	R 26" x 9" x 21"	R 13 1/2" x 9" x 13 1/2"	1 1/2"	2 1/2"	15 1/2"	23"	5 1/2"	3 1/4"	5/8"
Bent 6	R 14" x 9" x 19"	R 1" x 9" x 11 1/2"	1"	1 1/4"	11 1/2"	21"	5"	2 3/4"	1/2"

EXPANSION BEARING

FIXED BEARING

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) L' (Side of brg. away from fixed brg.) L' = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
- L'' (Side of brg. toward fixed brg.) L'' = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50° F.
- b) After beams have been erected and dimensions L' or L'' determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

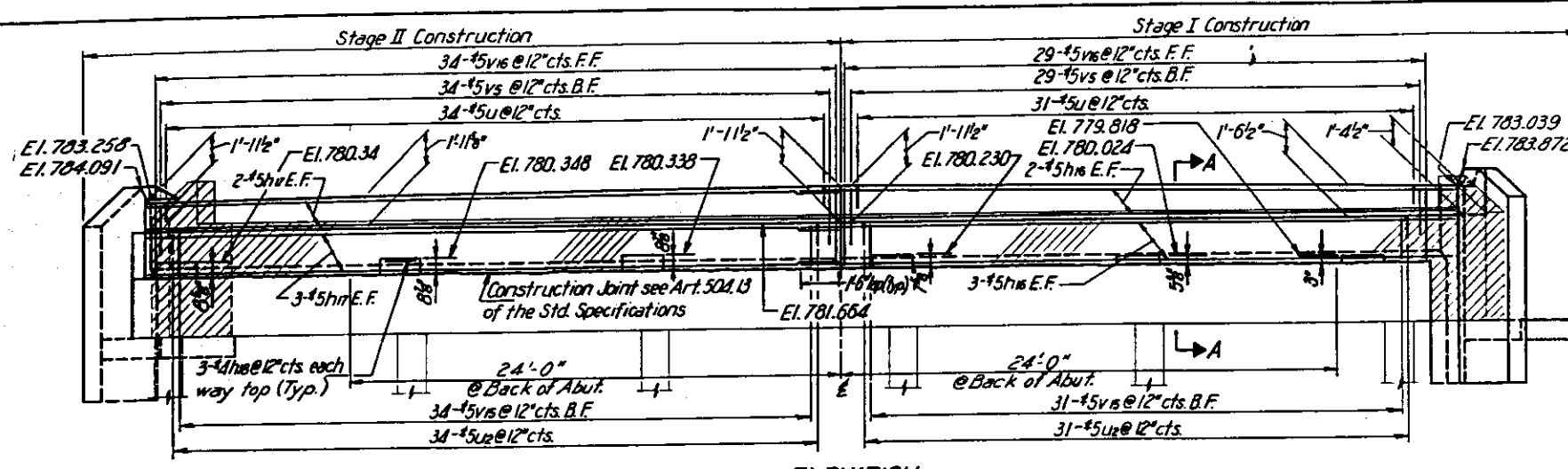
REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
 BEARING DETAILS  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

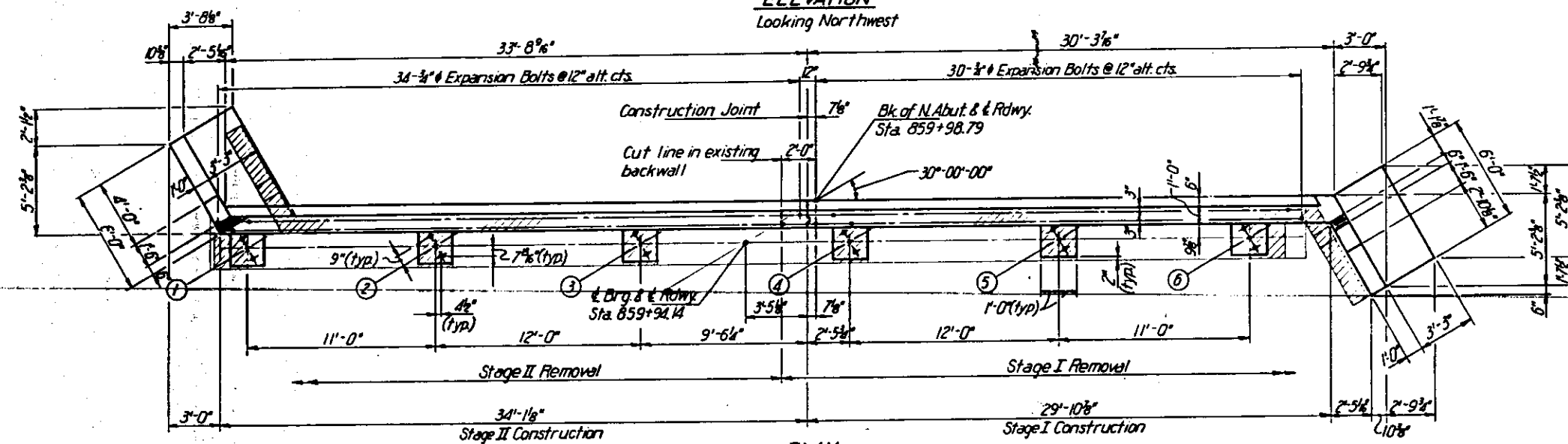
SCALE: VERT. NONE  
 HORIZ. NONE

DRAWN BY E.M.T.  
 CHECKED BY J.P.

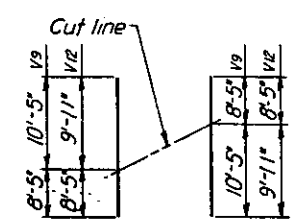




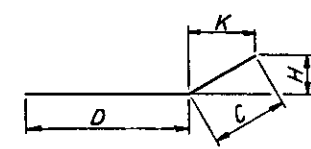
**ELEVATION**  
Looking Northwest



**PLAN**

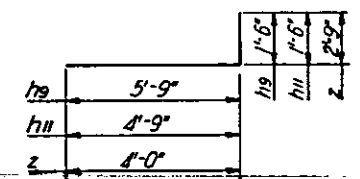


**BARS v9 & v2**

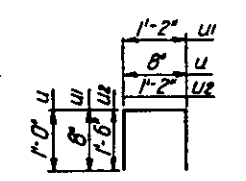


BAR	C	D	H	K
h4	1'-6"	5'-9"	1'-1/2"	9"
h6	1'-6"	3'-8"	1'-1/2"	9"
h8	1'-3"	4'-2"	5/8"	11"
h10	1'-3"	3'-0"	5/8"	11"
h11	1'-6"	1'-5"	1'-1/2"	9"
h12	2'-6"	1'-6"	1'-1/2"	9"
vs	7"	1'-5"	6"	3 1/2"

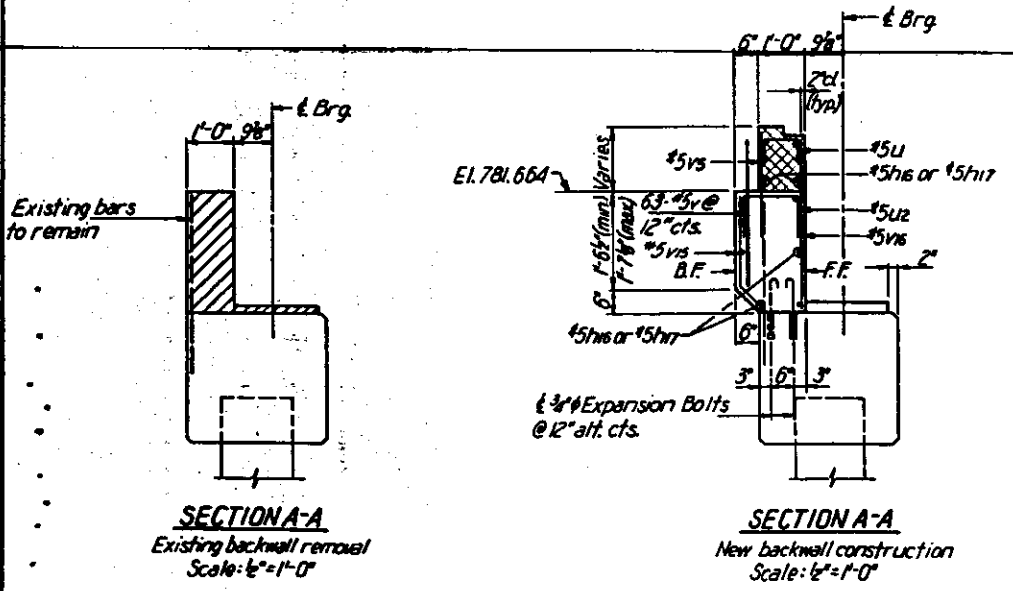
BILL OF MATERIAL				
BAR	No.	SIZE	LENGTH	SHAPE
h2	6	#4	4'-6"	—
h3	6	#4	5'-1"	—
h4	5	#4	7'-3"	—
h5	5	#4	6'-0"	—
h6	1	#4	5'-2"	—
h7	1	#4	3'-6"	—
h8	2	#4	5'-5"	—
h9	6	#4	7'-3"	—
h10	6	#4	5'-9"	—
h11	1	#4	6'-3"	—
h12	1	#4	4'-9"	—
h13	2	#4	4'-3"	—
h14	14	#4	2'-11"	—
h15	14	#4	3'-11"	—
h16	10	#5	31'-11"	—
h17	10	#5	33'-9"	—
h18	36	#4	1'-8"	—
h19	2	#4	2'-8"	—
h20	2	#4	2'-3"	—
u	65	#5	2'-8"	□
u2	65	#5	4'-2"	□
v5	125	#5	2'-10"	—
v9	5	#4	18'-10"	—
v10	2	#4	10'-5"	—
v11	2	#4	3'-9"	—
v12	4	#4	18'-4"	—
v13	4	#4	9'-11"	—
v14	8	#4	9'-0"	—
v15	65	#5	2'-0"	—
v16	63	#5	3'-0"	—
v18	2	#4	4'-7"	—
w	4	#4	5'-9"	—
w1	4	#4	6'-10"	—
z	15	#4	6'-9"	—
Class X Concrete		Cu. Yds.	11.6	
Reinforcement Bars		Lbs.	2430	
Expansion Bolts #3/4		Each	70	
Concrete Removal		Cu. Yds.	8.4	



**BARS h9, h11 & z**



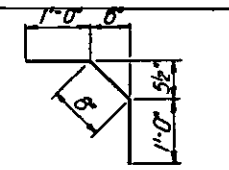
**BARS u, u1 & u2**



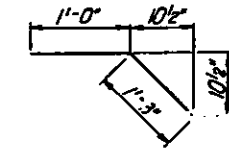
**SECTION A-A**  
Existing backwall removal  
Scale: 1/2" = 1'-0"

**SECTION A-A**  
New backwall construction  
Scale: 1/2" = 1'-0"

Notes:  
For Notes and Legend see Sht. No. 15  
For Wing Wall Details see Sht. No. 17



**BAR h19**



**BAR h20**

REVISIONS	
NAME	DATE

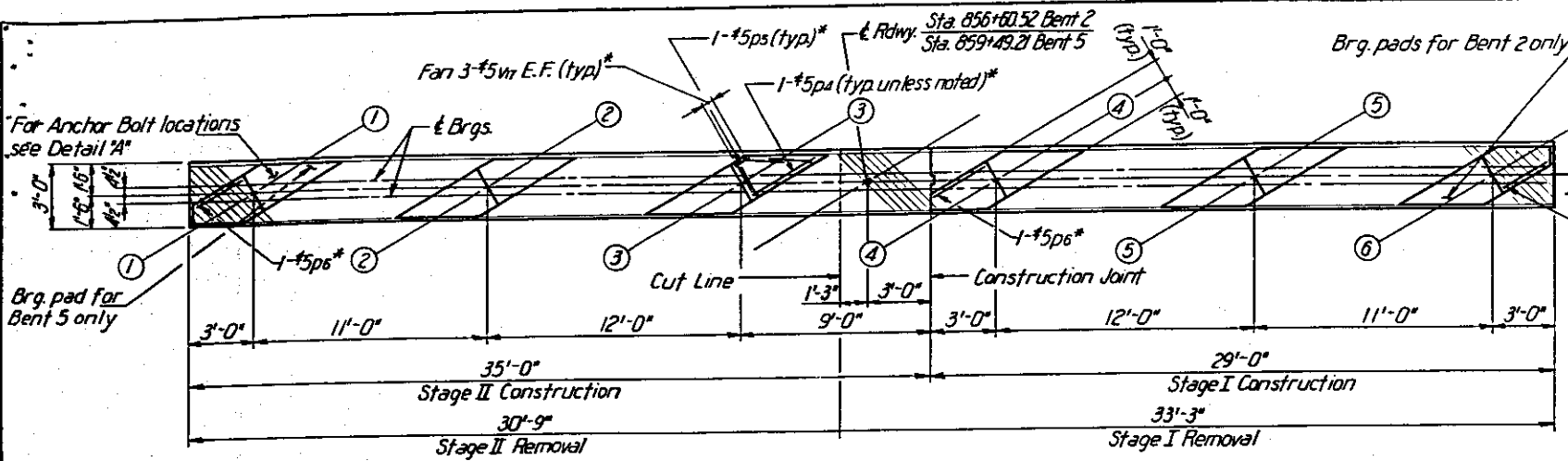
ILLINOIS DIVISION OF HIGHWAYS  
BENT 6  
F.A.P. ROUTE 840 (ILL. 49)  
SECTION 122 VBR  
VERMILION COUNTY

SCALE: VERT. 1/4" = 1'-0", U.N.  
HORIZ. 1" = 1'-0", U.N.

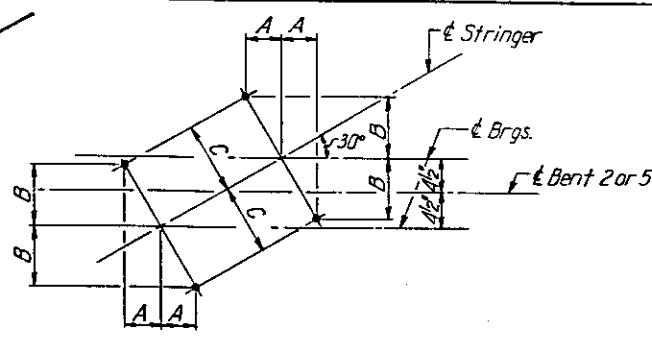
DRAWN BY K.C.  
CHECKED BY J.P.



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840 122 VBR	VERMILION	39	31
STA 850+55 TO STA 865+55			



PLAN - BENTS 2 & 5

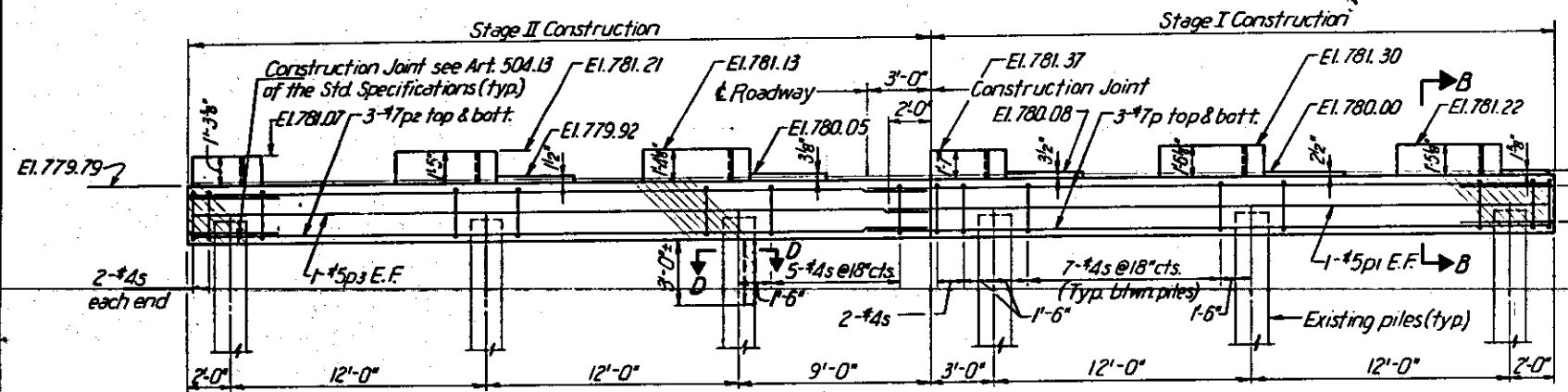


DETAIL 'A'

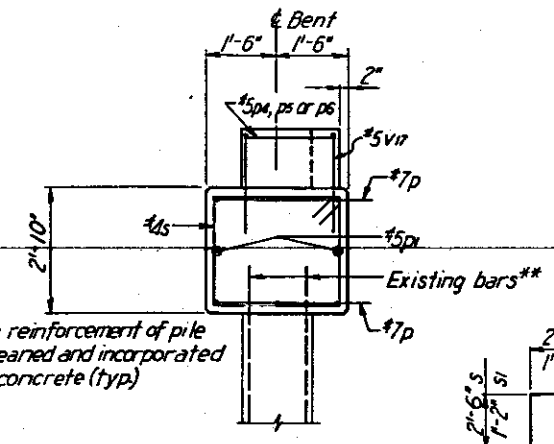
	A	B	C
Span 1			
Stringers 1-6	2'8"	5'	5'8"
Span 2			
Stringers 1-6	4'8"	7'6"	8'4"
Span 4			
Stringers 1-6	4'8"	7'6"	8'4"
Span 5			
Stringers 1-6	3'6"	6'8"	7'8"

BENT 2				
BAR	No.	SIZE	LENGTH	SHAPE
D	6	#7	32'-0"	—
D1	2	#5	31'-0"	—
D2	6	#7	34'-9"	—
D3	2	#5	34'-9"	—
D4	6	#5	3'-9"	—
D5	8	#5	1'-0"	—
D6	2	#5	2'-0"	—
S	39	#4	11'-1"	□
U3	6	#5	11'-8"	□
V11	48	#5	4'-3"	□

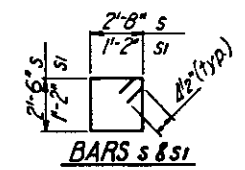
Class X Concrete	Cu. Yds.	22.0
Reinforcement Bars	Lbs.	1570
Concrete Removal	Cu. Yds.	20.4
Repair Conc. Structure	Sq. Ft.	3.0



ELEVATION - BENT 2  
(Looking Northwest)

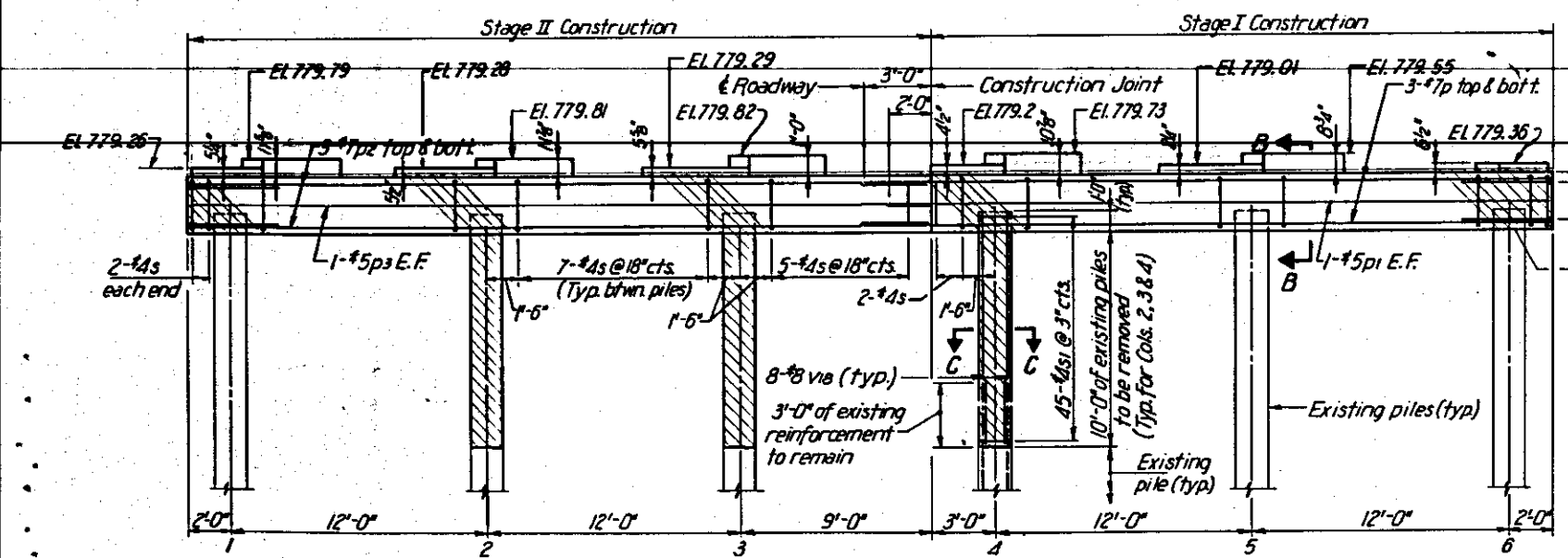


SECTION B-B  
Scale: 1/2"=1'-0"

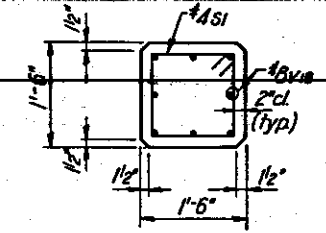


BENT 5				
BAR	No.	SIZE	LENGTH	SHAPE
D	6	#7	32'-0"	—
D1	2	#5	31'-0"	—
D2	6	#7	34'-9"	—
D3	2	#5	34'-9"	—
D4	8	#5	3'-9"	—
D5	10	#5	1'-0"	—
D6	2	#5	2'-0"	—
S	39	#4	11'-1"	□
S1	135	#4	5'-5"	□
U4	6	#5	11'-8"	□
V17	60	#5	4'-3"	□
V18	24	#5	11'-8"	□

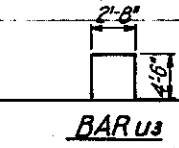
Class X Concrete	Cu. Yds.	24.0
Reinforcement Bars	Lbs.	2820
Concrete Removal	Cu. Yds.	22.2



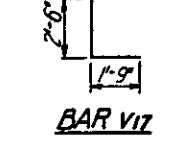
ELEVATION - BENT 5  
(Looking Northwest)



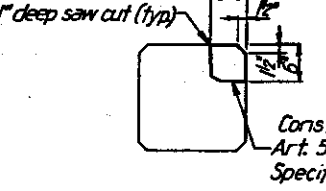
SECTION C-C  
Scale: 1/4"=1'-0"



BAR U3



BAR V17



SECTION D-D  
Scale: 3/4"=1'-0"

Note:  
For Legend see Sht. No. 19

REVISIONS	
NAME	DATE

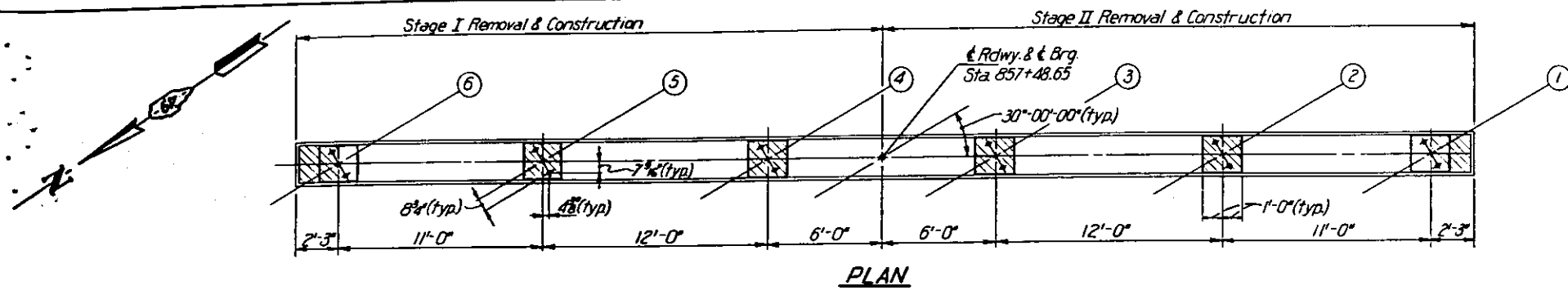
ILLINOIS DIVISION OF HIGHWAYS  
BENTS 2 AND 5  
F.A.P. ROUTE 840 (ILL. 49)  
SECTION 122 VBR  
VERMILION COUNTY

SCALE: VERT. 1/4"=1'-0", U.N.  
HORIZ. DATE

DRAWN BY K.C.  
CHECKED BY J.P.

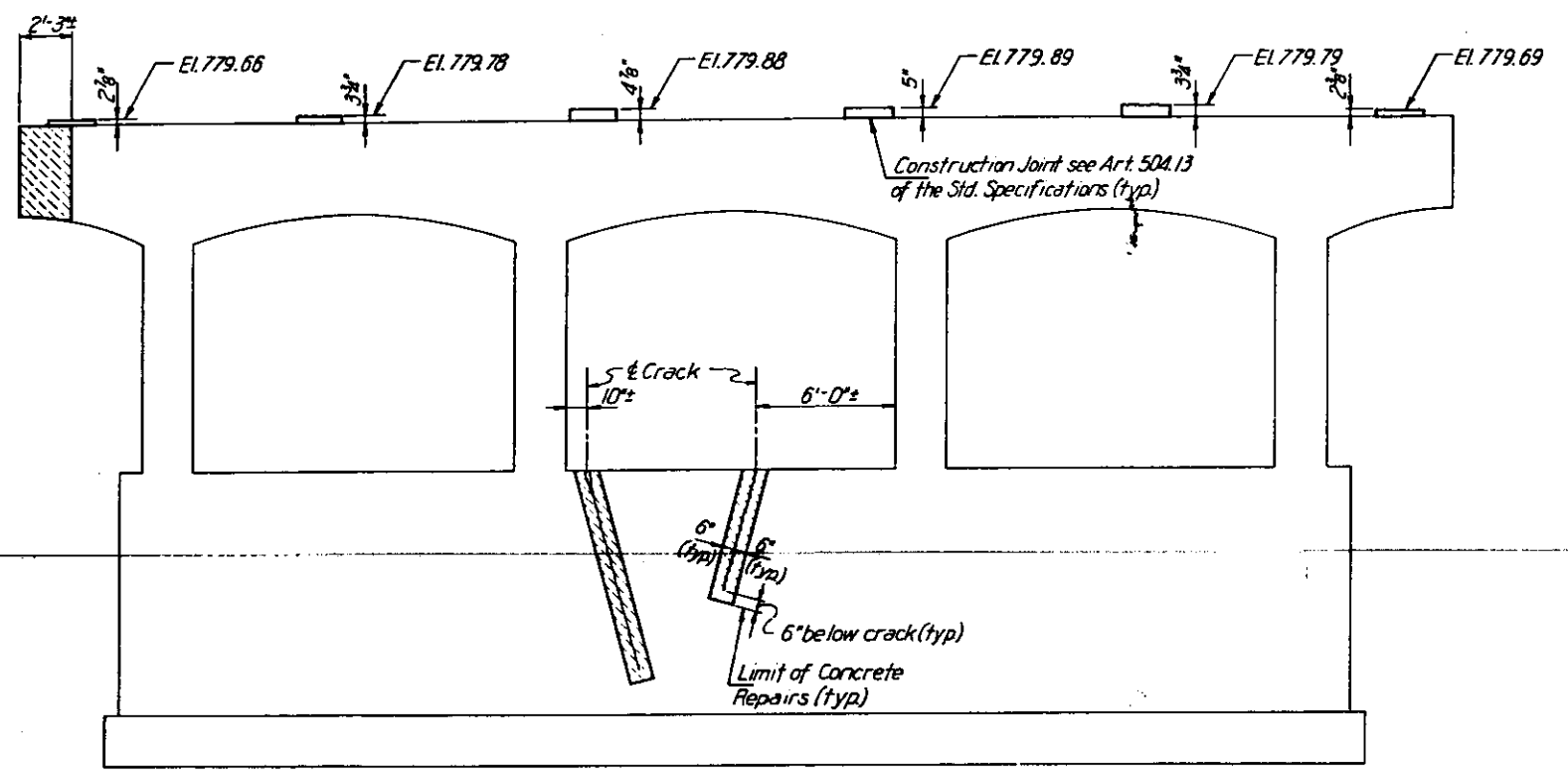


SECTION	COUNTY	PROJECT	SHEET
840 122 VBR	VERMILION	34	32
STA 850+55		TO STA 865+55	
FED. ROAD DIST. NO. 7	ILL. NO. 8	FED. AID PROJ. NO.	



**PLAN**

BILL OF MATERIAL				
BAR	No.	SIZE	LENGTH	SHAPE
P7	24	#4	1'-9"	—
Class X Concrete		Cu. Yds.	0.3	
Reinforcement Bars		Lbs.	30	
Repair Conc. Structure		Sq. Ft.	35	



**ELEVATION**  
(Looking South)

**LEGEND**

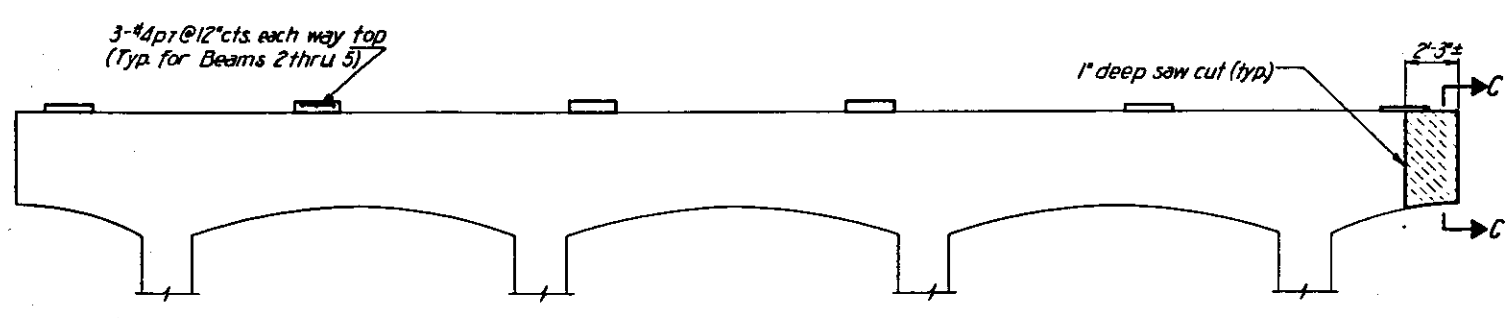
Indicates concrete removal. Reinforcement extending into removed area shall be cleaned and incorporated in the New Construction.

Indicates Repair Concrete Structure (See Special Provisions)

**NOTES:**

Expansion bolts shall be anchored into sound concrete

For Section C-C see Sht. No. 20



**PARTIAL ELEVATION**  
(Looking North)

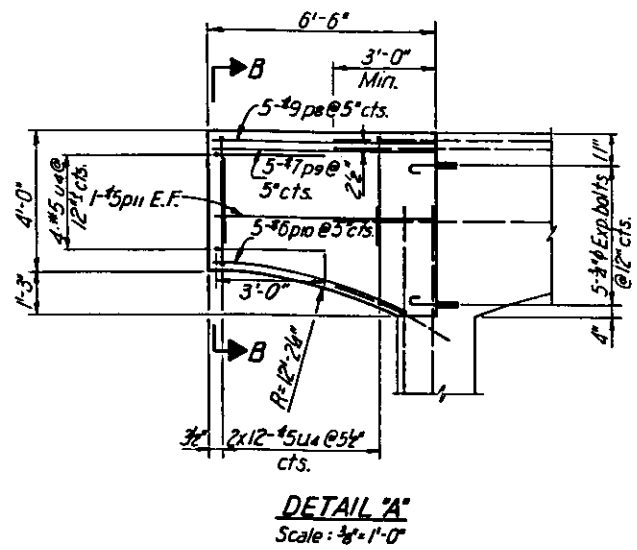
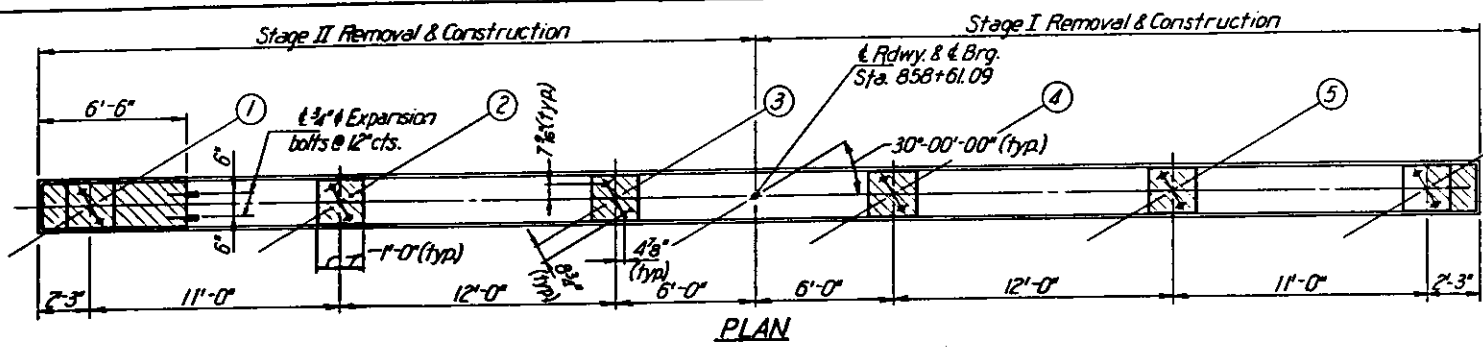
REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
**PIER 3**  
 F.A.P. ROUTE 840 (ILL. 49)  
 SECTION 122 VBR  
 VERMILION COUNTY

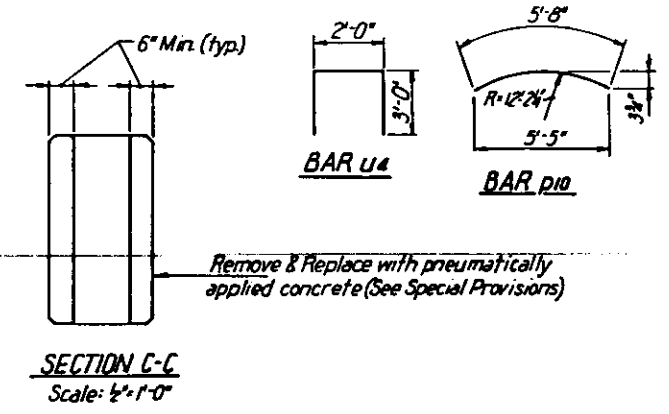
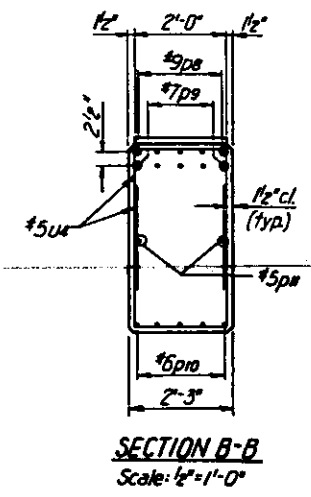
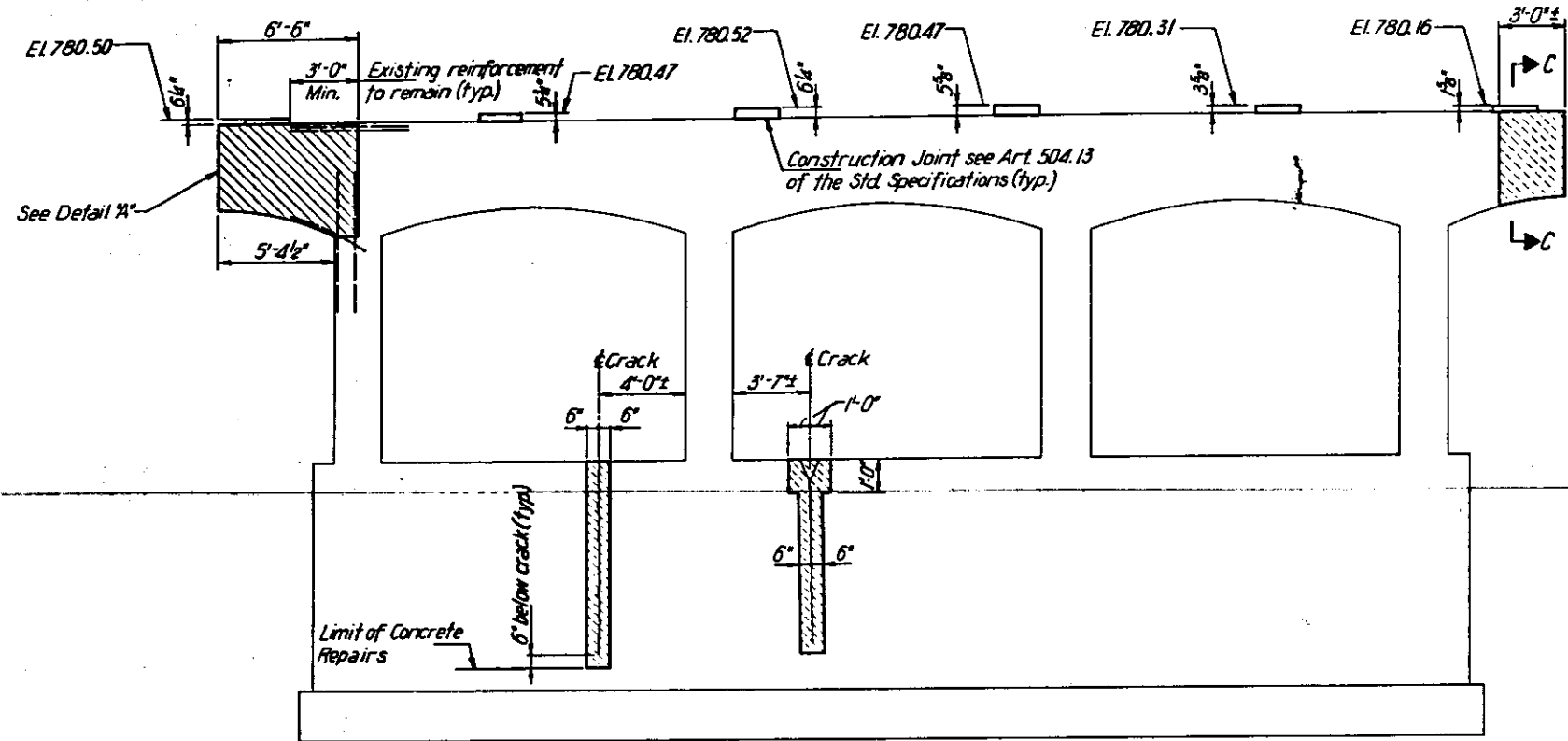
SCALE: VERT. 1/4"=1'-0"  
 HORIZ. 1"=1'-0"

DATE: \_\_\_\_\_ DRAWN BY: K.C.  
 CHECKED BY: J.P.

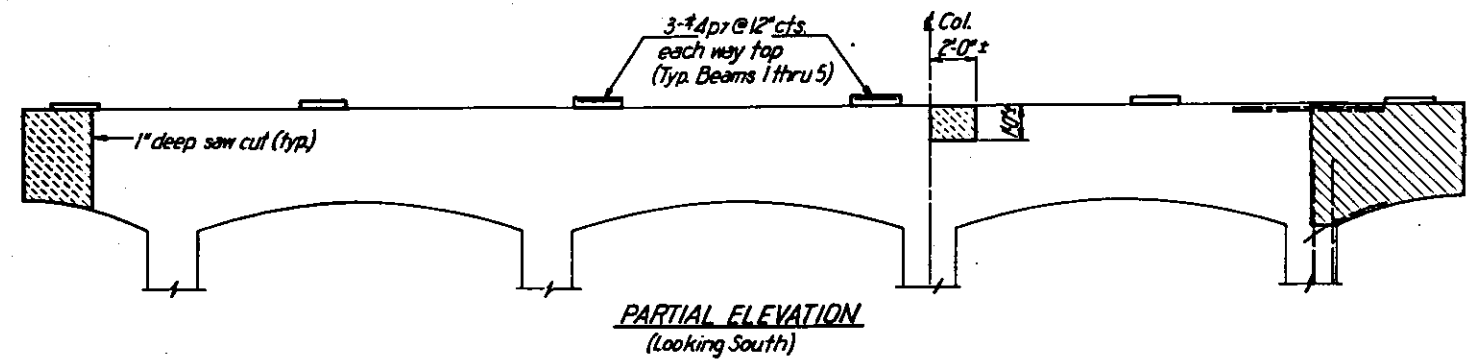
SECTION	COUNTY	DATE	NO.
B40	122 VBR	VERMILION	39
STA. 850+55	TC STA. 865+55		
FED. ROAD DIST. NO. 7	ILL. NO. 1	FED. A.C. PROJ. 1	



BILL OF MATERIAL				
BAR	No.	SIZE	LENGTH	SHAPE
p7	30	#4	1'-9"	—
p8	5	#9	6'-3"	—
p9	5	#7	6'-3"	—
p10	5	#6	5'-8"	—
p11	2	#5	6'-3"	—
u4	28	#5	8'-0"	□
Class X Concrete			Cu. Yds.	2.8
Reinforcement Bars			Lbs.	490
Expansion Bolts #4			Each	10
Concrete Removal			Cu. Yds.	2.7
Repair Conc. Structure			Sq. Ft.	49



NOTES:  
For Legend see Sht. No. 19



REVISIONS	
NAME	DATE

ILLINOIS DIVISION OF HIGHWAYS  
PIER 4  
F.A.P. ROUTE 840 (ILL. 49)  
SECTION 122 VBR  
VERMILION COUNTY

SCALE: VERT. 1/4" = 1'-0", U.M.  
HORIZ. 1/4" = 1'-0", U.M.

DRAWN BY K.C.  
CHECKED BY J.P.



INDEX to SHEETS

SEC. 122V

- Sheet No. 1 Title Page
- 2 Standard 1816, 1783, 1810
- 3 Typical Cross-section for Detour
- 4 Detail of Widening
- 5 Plan & Profile Sta 834+20 to 843+00
- 6 Plan & Profile Sta 843+00 to 872+00
- 7-19 incl. Cross-sections
- 20 Standards 1820, 1766, 1776
- 21 Standards 1744, 1635, 1536
- 22 Standards 1816, 1791
- 23 1688

SEC'S 122VB-122VF

- Sheet No. 1 Title Page
- 2 Plan & Profile Sta 843+00 to 872+00
- 3-17 incl. Special Bridge Design Sta 858+18.25
- 18-24 incl. Cross-sections

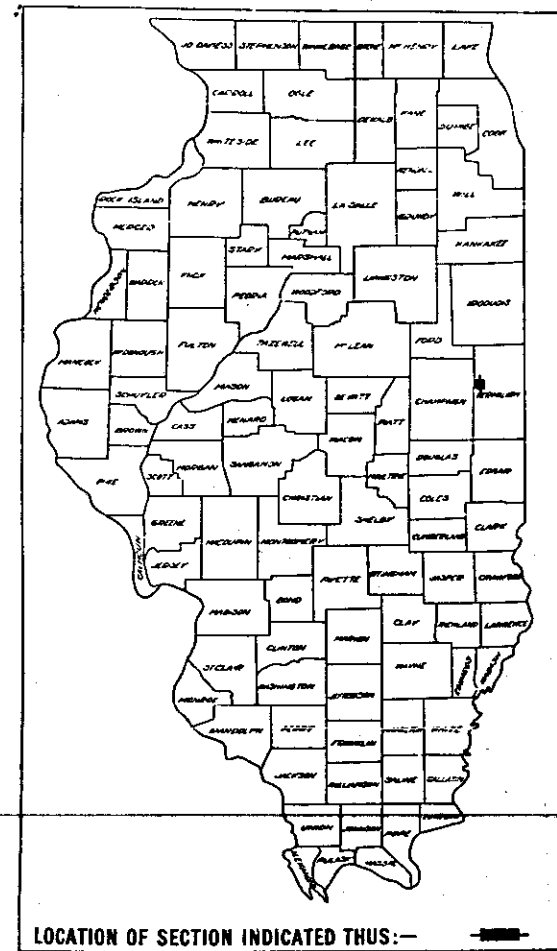
STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS AND BUILDINGS  
 DIVISION OF HIGHWAYS  
 PLANS FOR PROPOSED  
 STATE BOND ISSUE HIGHWAY

SCALES

PLAN	1 INCH	100 FT.
PROFILE, HOR.	1 INCH	100 FT.
PROFILE, VERT.	1 INCH	10 FT.
CROSS-SECTIONS	1 INCH	5 FT.

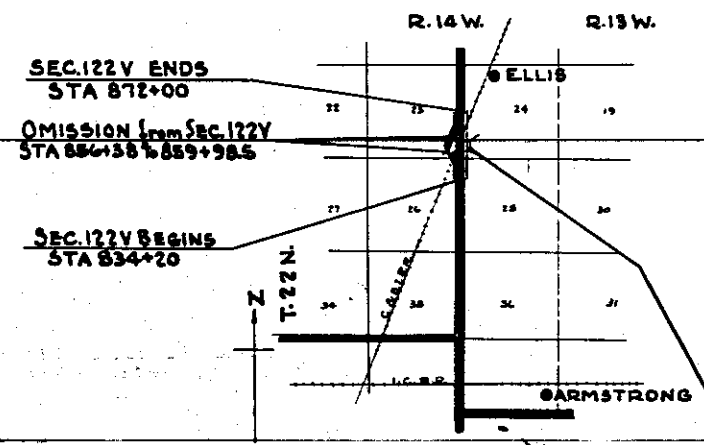
S.B.I. ROUTE 49, SEC'S. 122 <sup>V</sup>/<sub>VB</sub>, VERMILION CO.

From a point near the S.E. Cor. of N.E. 1/4 of Sec. 26, T. 22 N., R. 14 W. of the 2<sup>nd</sup> P.M.  
 To a point near the N.E. Cor. of the S.E. 1/4 of Sec. 23, T. 22 N., R. 14 W. of the 2<sup>nd</sup> P.M.



SUMMARY of QUANTITIES

- SEC. 122V
- 220 Units Hedge Removal (in units of 100 ft<sup>2</sup>)
  - 4548 Cu. Yds. Earth Excavation
  - 54000 Cu. Yds. Borrow Excavation
  - 5700 Sq. Yds. Earth Shoulders
  - 192 Sq. Yds. P.C.C. Pavement (10% - 10% - 10%)
  - 1052 Sq. Yds. P.C.C. Pavement
  - 6946 Sq. Yds. Pavement Fabric
  - 1300 Cu. Yds. Gravel or Crushed Stone Surface Course, Type A
  - 1840 Lbs. Cast Iron Grates
  - 94 Lin. Ft. Corrugated Metal Pipe 18 inch
  - 6 Lin. Ft. Storm Sewers, Type 1, (S.R.C.C.P.) 8 inch
  - 1 Each Catch Basin, Type C with Type B Grate
  - 1333 Lin. Ft. Plain Concrete Gutter, Type A
  - 8 Each Erecting Right of Way Markers
  - 18 Each Erecting Right of Way Markers
  - 123 Lin. Ft. Pipe Culverts, Type 1, (S.R.C.C.P.) 12 inch
  - 105 Lin. Ft. Pipe Culverts, Type 1, (S.R.C.C.P.) 18 inch
  - 93 Lin. Ft. Pipe Culverts, Type 2, (S.R.C.C.P.) 12 inch
  - 51 Lin. Ft. Pipe Culverts, Type 2, (Conc. Culv. Pps) 12 inch
  - 5 Each Salvaged Pipe Culverts
  - 641 Cu. Yds. Class X Concrete
  - 6300 Lbs. Reinforcement Bars
  - 4670 Sq. Yds. Pavement Removal
  - 720 Lin. Ft. Guard Rail Removal
  - 2890 Bbls. Portland Cement
  - 75 Sq. Yds. Pavement Replacement Entire
  - 110 Cu. Yds. Gravel or Crushed Stone Surface Course, Type A (Salvaged Material)
  - 580 Cu. Yds. Stockpiled Salvaged Material
- SEC. 122VB
- 4200 Cu. Yds. Borrow Excavation
  - 73 Lin. Ft. Corrugated Metal Pipe 8 inch
  - 240 Lin. Ft. Storm Sewer, Type 2 12 inch
  - 394 Cu. Yds. Handplaced Concrete
  - 424520 Lbs. Structural Steel
  - 1476 Lin. Ft. Furnishing Treated Piles up to 20' Long
  - 1476 Lin. Ft. Driving Timber Piles 18' Long
  - 108 Lin. Ft. Copper Bearing Steel Trough, 16 gauge
  - 2 Each Catch Basins, Type C with Type B Grate
  - 21 Each Test Piles (Timber)
  - 3358 Cu. Yds. Compaction by Watersoaking
  - 230 Units Hedge Removal (in Units of 100 Linear Ft.)
  - 64 Bbls. Portland Cement
- ALTERNATE A
- 6376 Cu. Yds. Class X Concrete
  - 112760 Lbs. Reinforcement Bars
  - 71 Each Test Piles (Concrete) 16'
  - 360 Lin. Ft. Furnishing Precast Concrete Piles 16'
  - 360 Lin. Ft. Furnishing Precast Concrete Piles 18'
  - 360 Lin. Ft. Driving Precast Conc. Piles 20' Long 16'
  - 360 Lin. Ft. Driving Precast Conc. Piles 30' Long 18'
  - 1106 Bbls. Portland Cement
- ALTERNATE B
- 115420 Lbs. Reinforcement Bars
  - 311 Each Test Piles (Metal Shells) 14'
  - 311 Each Test Piles (Metal Shells) 16'
  - 360 Lin. Ft. Furnishing Metal Pile Shells 14'
  - 192 Lin. Ft. Furnishing Metal Pile Shells 16'
  - 360 Lin. Ft. Driving & Filling Shells 20' Long 16'
  - 192 Lin. Ft. Driving & Filling Shells 16' Long 16'
  - 1084 Bbls. Portland Cement
- SEC. 122VF
- 424,520 Lbs. Structural Steel



**SEC. 122VB INCLUDES**  
 The construction of an I-Beam Railroad Overhead structure (C.&E.I.R.R.), 1 span at 23'-0", 2 spans at 28'-1 1/2", 1 span at 112'-6", and 1 span at 48'-9" at Sta 858+18.25, a point near the S.W. Cor. of Sec. 26, T. 22 N., R. 14 W. of the 2<sup>nd</sup> P.M., with the exception of furnishing and fabricating the structural steel, furnishing and applying the shop coat of paint and delivery of the structural steel f.o.b. Ellis.

**SEC. 122VF INCLUDES**  
 the furnishing & fabricating of structural steel, furnishing and applying the shop coat of paint and delivery f.o.b. Ellis of the structural steel for an I-Beam Railroad Overhead structure (C.&E.I.R.R.), 1 span at 23'-0", 2 spans at 28'-1 1/2", 1 span at 112'-6", and 1 span at 48'-9", at Sta 858+18.25, a point near the S.W. Cor. of Sec. 26, T. 22 N., R. 14 W. of the 2<sup>nd</sup> P.M.

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

SUBMITTED Feb. 17 1941

EXAMINED 3-28 1941 R.T. Cash DISTRICT ENGINEER

APPROVED 3-29 1941 E.H. Johnson CHIEF ENGINEER

APPROVED 3-29 1941 W.A. Johnson ACTING CHIEF ENGINEER

LAYOUT  
 Approximate Scale 1" = 1 mile  
 Net Length of Layout 3,419.5 Lin. Ft. = 0.6476 miles

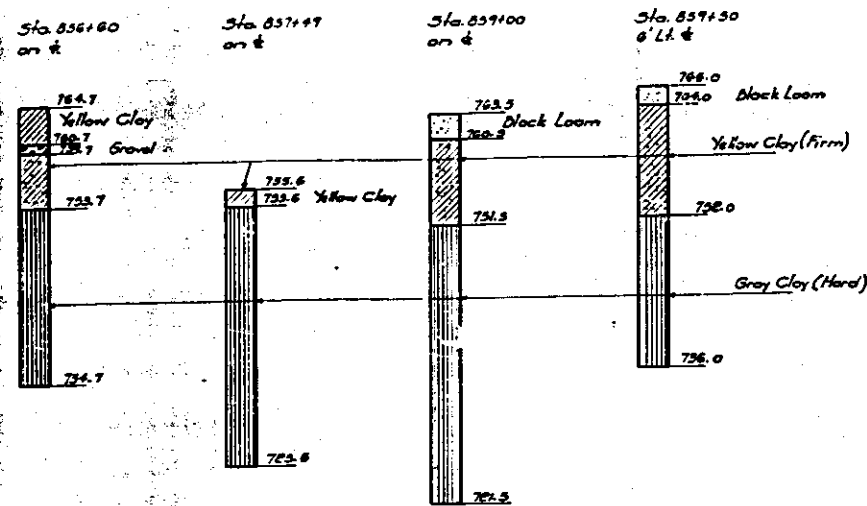
5-16





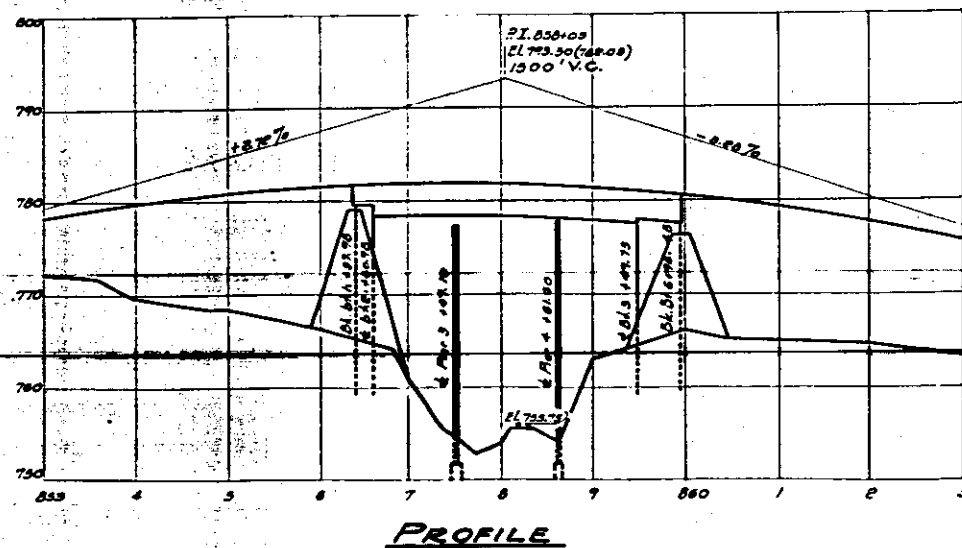
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROAD DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
49	122VB	Vermilion	24	4	15 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	PER JOB PROJECT			



**TOTAL BILL OF MATERIAL**

ITEM	Sec. 122 V.D.	Sec. 122 V.D.		Sec. 122 V.F.
		Alt. A	Alt. D	
Handrail Concrete	Cu. Yds.	37.4		
Class-X Concrete	Cu. Yds.		637.6	653.8
Reinforcement Bars	Lbs.		112750	254200
Structural Steel	Lbs.	424520		424520
18 Gage Copper Bearing Steel Trough	Lin. Ft.	100		
Catch Basin Type C with Type B Grate	Each	2		
6" Corrugated Metal Pipe	Lin. Ft.	75		
Storm Sewer Type E-18" diam.	Lin. Ft.	260		
Furnishing Treated Timber Piles (18"lg)	Lin. Ft.	1476		
Driving Treated Timber Piles (18"lg)	Lin. Ft.	1476		
Furnishing 16" Precast Concrete Piles (30'lg)	Lin. Ft.		360	
Driving 16" Precast Concrete Piles (30'lg)	Lin. Ft.		360	
Furnishing 18" Precast Concrete Piles (30'lg)	Lin. Ft.		360	
Driving 18" Precast Concrete Piles (30'lg)	Lin. Ft.		360	
14" Metal Shell Test Pile	Each		1	
Furnishing 14" Metal Pile Shells (30'lg)	Lin. Ft.		360	
Driving and Filling 14" Metal Pile Shells (30'lg)	Lin. Ft.		360	
16" Metal Shell Test Pile	Each		1	
Furnishing 16" Metal Pile Shells (16'lg)	Lin. Ft.		192	
Driving and Filling 16" Metal Pile Shells (16'lg)	Lin. Ft.		192	
Borrow Excavation	Cu. Yds.	4200		
Compaction by Water Soaking	Cu. Yds.	3358		
Hedge Removal	Units	2.5		
Timber Test Piles	Each	1		
16" Precast Concrete Test Piles	Each		1	
18" Precast Concrete Test Piles	Each		1	



**GENERAL NOTES**

Class-X Concrete shall be used throughout. The concrete floor shall be finished in accordance with Art. 37.56 of the Standard Specification. Transverse construction joints in the floor slab may be located as shown on Sheet 1. No additional construction joints will be permitted without the written permission of the Engineer. Concrete shall be poured continuously between the construction joints shown. Handrail concrete shall conform to Art. 34.76 of the Supplemental Specifications. Fibre joint filler shall be in accordance with Art. 105.66 of the Supplemental Specifications. Rivets 1/2" No. 10 except as noted. All field connections shall be riveted except as noted. All I beams for spans 25'+ shall be shop assembled to their proper alignment with or without diaphragms or cross frames and splices shall be sub-punched, reamed and re-marked. Rivets shall be inspected before reaming. For 1/2" rivets, sub-punch 1/2" ream 1/2". The tops of beams and shear lugs where concrete is in contact with them shall not be painted except over abutments and piers. Such surfaces shall be painted for a distance of five feet either way from bearing steel in contact with concrete and contact surfaces of shop riveted or shop welded structural steel shall not be painted except as noted. See Specifications for accessible surfaces. Structural steel shall be inspected by the Illinois Division of Highways before painting; it shall be given one shop coat of red lead paint to be furnished and applied by the Contractor for Sec. 122 V.F. The first field coat shall be limited red lead and the second field coat shall be black graphite. Both field coats shall be furnished and applied by the Contractor for Sec. 122 V.D. Before the Superstructure is placed the Contractor for Sec. 122 V.D. shall construct the embankments as shown in accordance with Sec. 13 of the Specifications. Both Mechanical compaction and water soaking shall be used. Timber test pile; 18" x 18" precast reinforced concrete test pile or 14" x 16" Metal Shell Test Pile, shall be driven in the field as directed by the Engineer before piling is cast or ordered. The cost of the Fibre Jt. Filler shall be included in the contract unit price per Cu. Yd. for Class-X Concrete.

STANDARD	COMPUTED	W. H. Sommers	EXAMINED	March 21 1947
	CHECKED	J. B. ...		
	DRAWN	W. H. S. S. P. ...	PASSED	...
	CHECKED	LB	APPROVED	...
SPECIAL	ASSEMBLED			
	CHECKED			

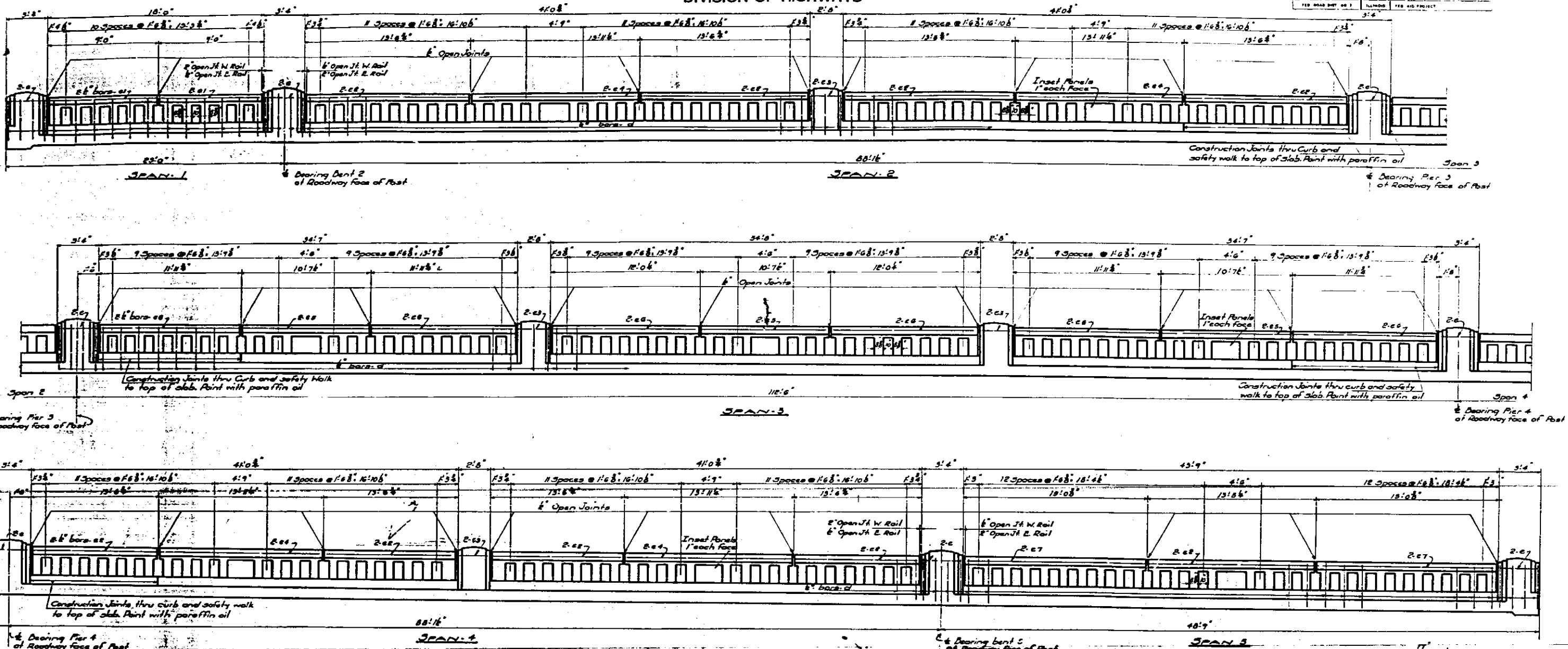
**DETAILS**  
**GRADE SEPARATION**  
**CHICAGO & EASTERN ILLINOIS R.R.**  
**NEAR ELLIS**  
**S.D.I. RTE. 49 - SEC. 122 V.D.F.**  
**VERMILION COUNTY**



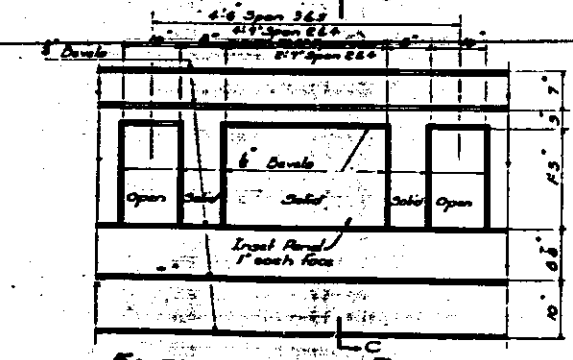


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

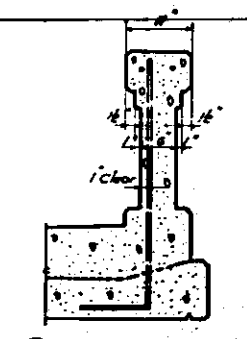
ROAD DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49	122V.B	Vermilion	24	6
FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT			15 SHEETS



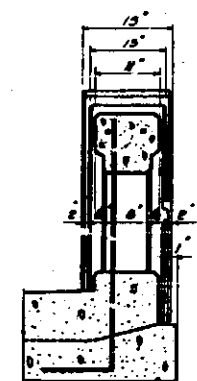
OUTSIDE ELEVATION OF HANDRAIL-LOOKING WEST



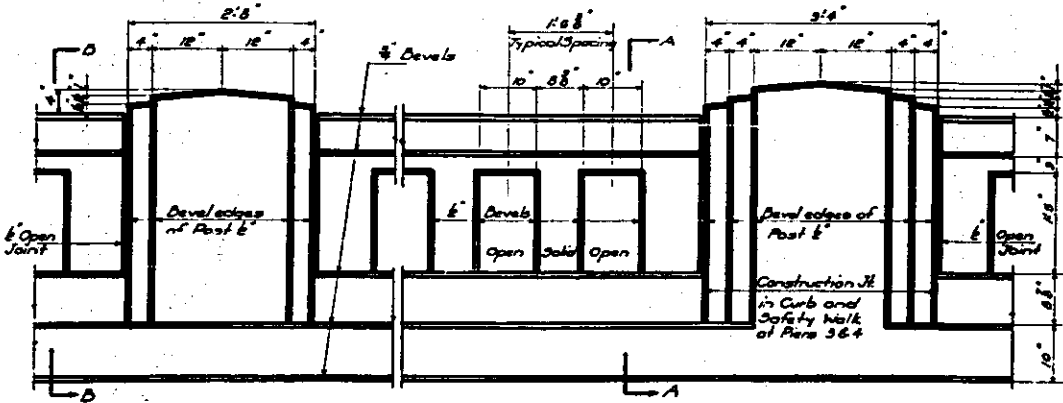
ELEVATION OF PANEL



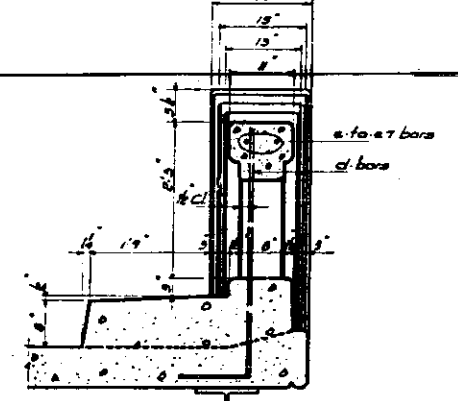
SECTION C-C



SECTION B-B



ELEVATION OF POSTS OVER BENTS OR PIERS

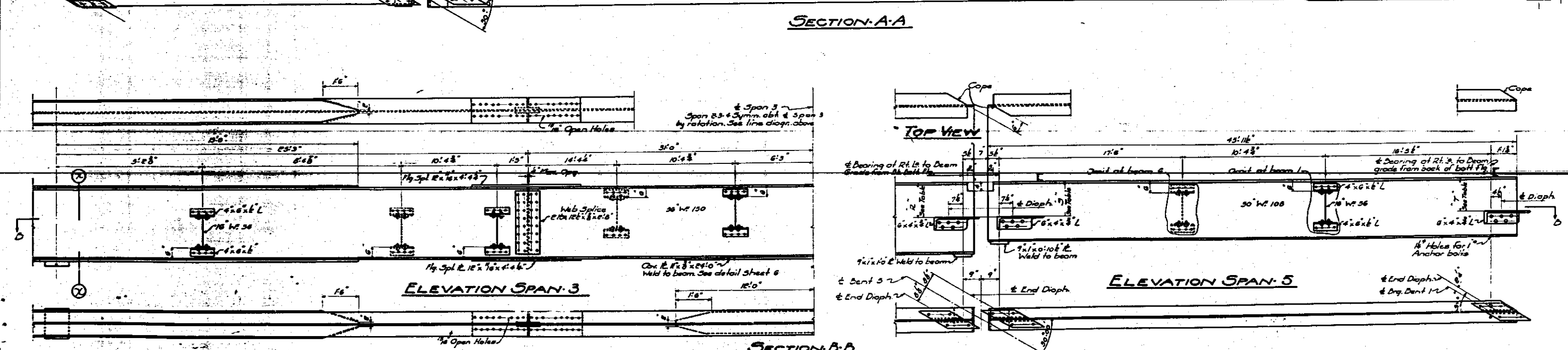
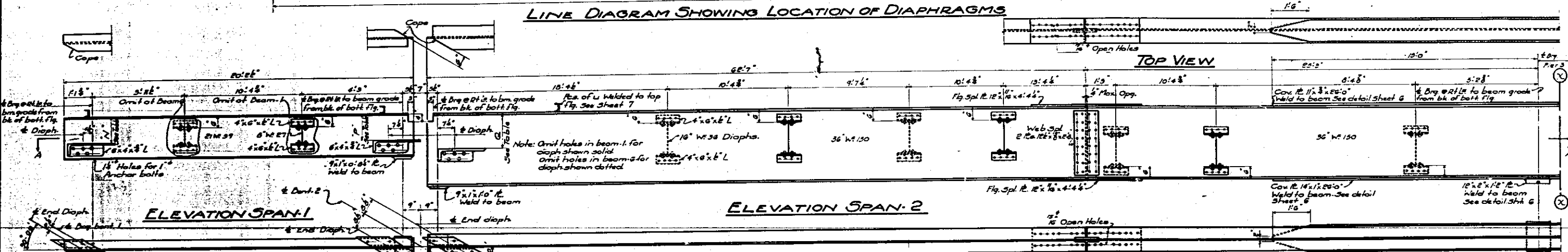
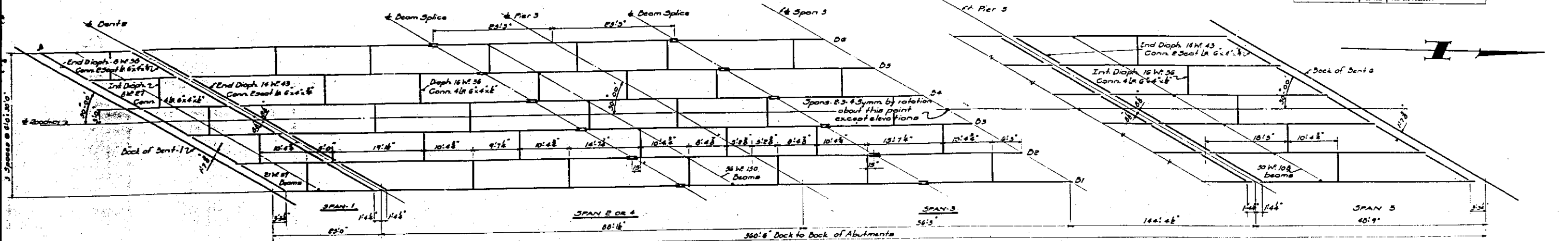


SECTION A-A

SUPERSTRUCTURE  
GRADE SEPARATION  
CHICAGO & EASTERN ILLINOIS R.R.  
NEAR ELLIS  
S.D.I. RTE. 49 - SEC. 122V.B.F.  
VERMILION COUNTY

STANDARD	COMPUTED	30. H. Summers	EXAMINED	March 24 1971
	CHECKED	L. B. B...		
	DRAWN	W. H. S.	PASSED	
	CHECKED	L.B.	APPROVED	
SPECIAL	ASSEMBLED			
	CHECKED			

Note: For quantities of Handrail Concrete and Reinforcement Bars see Bill of Material Sheet 3



STANDARD	COMPUTED	20.77. Summers	DESIGNED	March 1911
	CHECKED	A. B. ...	DRAWN	20.72. 2
	DRAWN	20.72. 2	CHECKED	11.1911
	CHECKED	...	ASSEMBLED	
SPECIAL	ASSEMBLED		CHECKED	

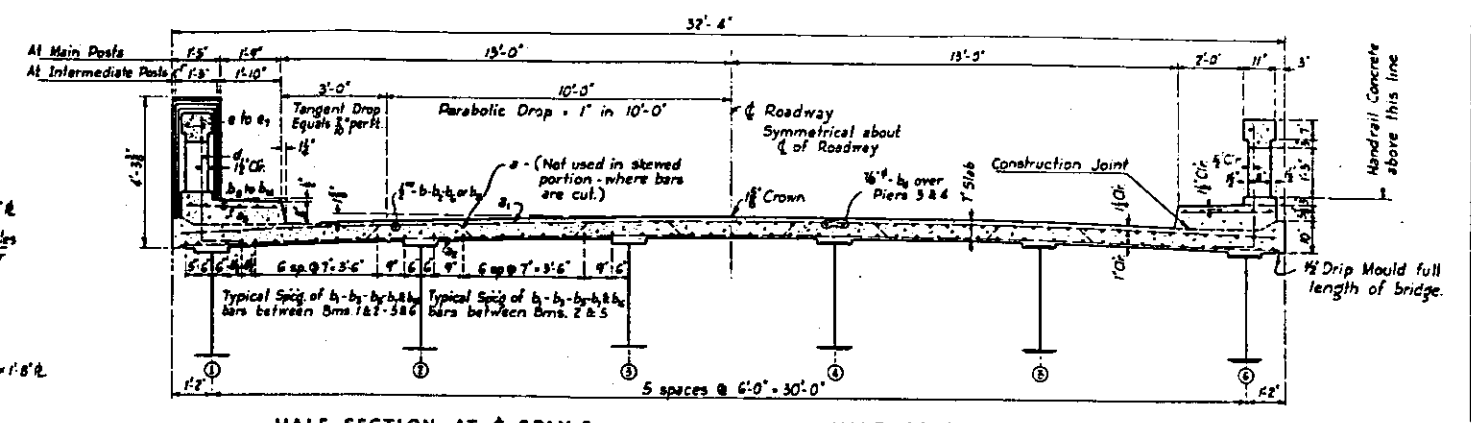
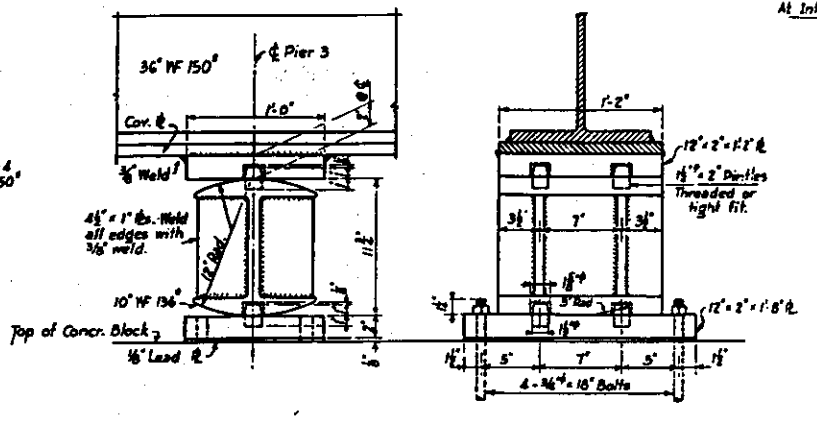
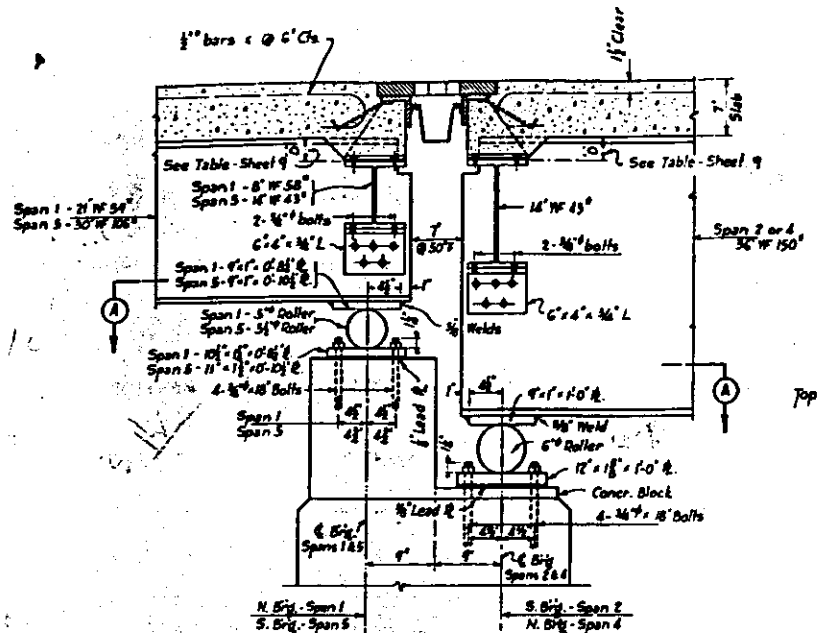
APPROVED: *[Signature]*

**TABLE OF DIMENSIONS**

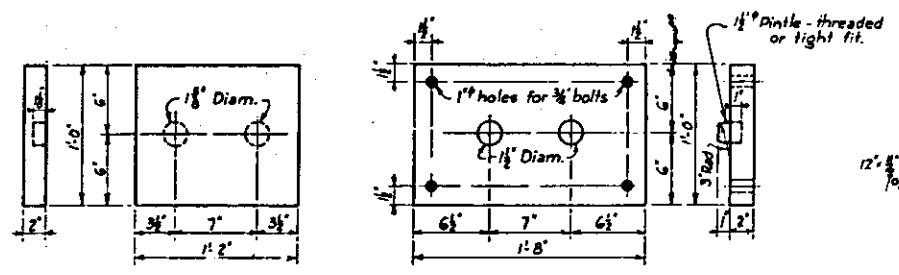
Beam No.	1	2	3	4	5	6
N'	F0 7/8"	F1 7/8"	F1 7/8"	F1 7/8"	F0"	0' 10 1/2"
P'	F0 7/8"	F1 7/8"	F1 7/8"	F1 7/8"	0' 11 7/8"	0' 10 1/2"
Q'	F4 7/8"	F5 7/8"	F6 7/8"	F5 7/8"	F4 7/8"	F5 7/8"
R'	F5 7/8"	F5 7/8"	F7 7/8"	F6 7/8"	F6 7/8"	F6 7/8"
S'	F5 7/8"	F5 7/8"	F7 7/8"	F6 7/8"	F6 7/8"	F6 7/8"
T'	F5 7/8"	F5 7/8"	F7 7/8"	F7 7/8"	F7 7/8"	F7 7/8"

Note: See detail of bearing of bents and piers on sheets 6 & 8. See detail of splices, cover plates and diaphragms on sheet 8.

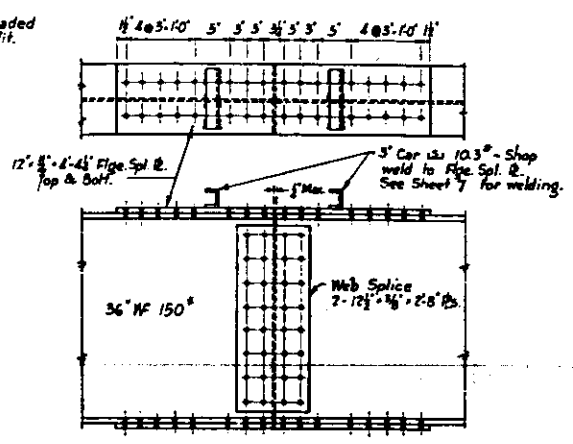
**DETAILS OF BEAMS & DIAPHRAGMS**  
**GRADE SEPARATION**  
**CHICAGO & EASTERN ILLINOIS R.R.**  
**NEAR ELLIS**  
**S.D.I. RTE 49 - SEC. 122V.D.F.**  
**VERMILION COUNTY**



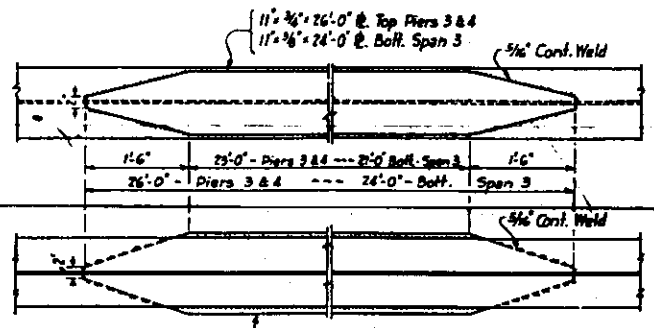
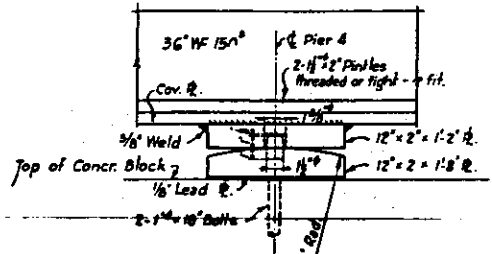
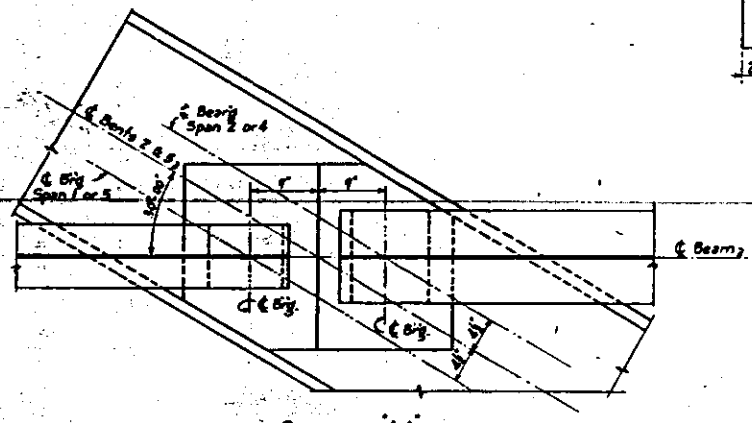
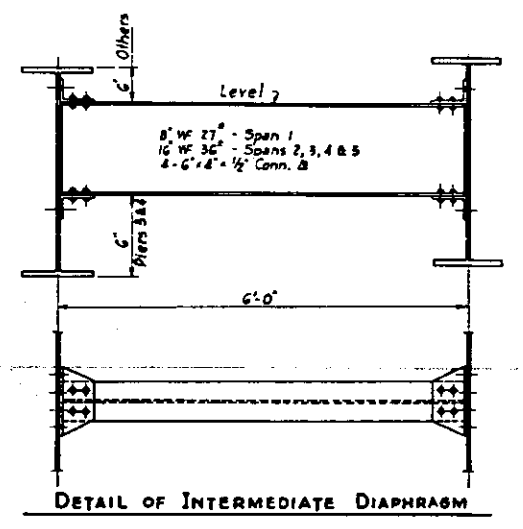
CROSS SECTION OF ROADWAY  
Note: Reinforcement over Piers 3 & 4 and that at C of other spans is as shown above - except as noted.



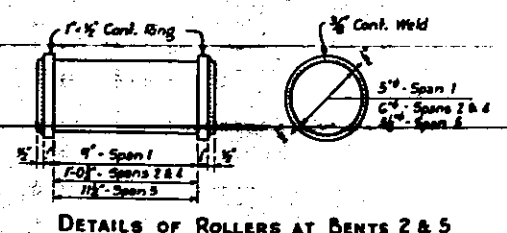
BEARING PLATES AT PIER 3



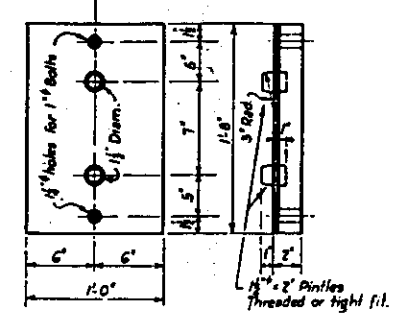
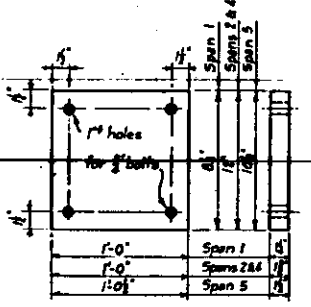
DETAIL OF BEAM SPlice  
Note: Use 3/8\"/>



DETAIL OF COVER PLATES  
Note: Continuous welding of cover plates to I-beams shall be made in such a manner as to prevent warping of the main material. The plate shall be clamped securely to the beam flanges before welding. The skip step method of welding or other effective means shall be used if necessary to obtain satisfactory results.



Note: Rollers may be built as shown or milled from the solid. If milled from the solid, 1/2\"/>



NOTES

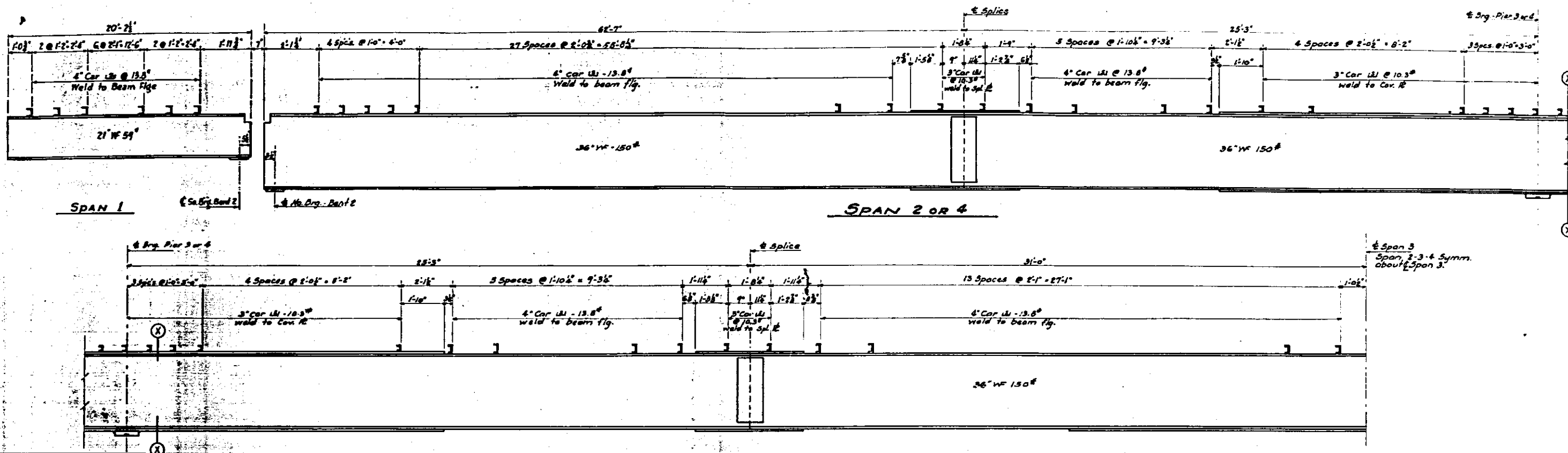
For all plates in contact with rollers, the edges adjacent to the rollers shall be rolled, cut square or finished.  
The weight of lead plates is included in Structural Steel; payment for same will be made at the contract unit price for Structural Steel.  
Estimated weight of rollers and plates is included in Bill of Material on Sheet 3 and will be paid for as Structural Steel.  
Estimated Weight - 10360 Lbs.

STANDARD	COMPUTED	W. H. Sommer
	CHECKED	A. B. ...
	DRAWN	C. ...
	CHECKED	...
SPECIAL	ASSEMBLED	...
	CHECKED	...

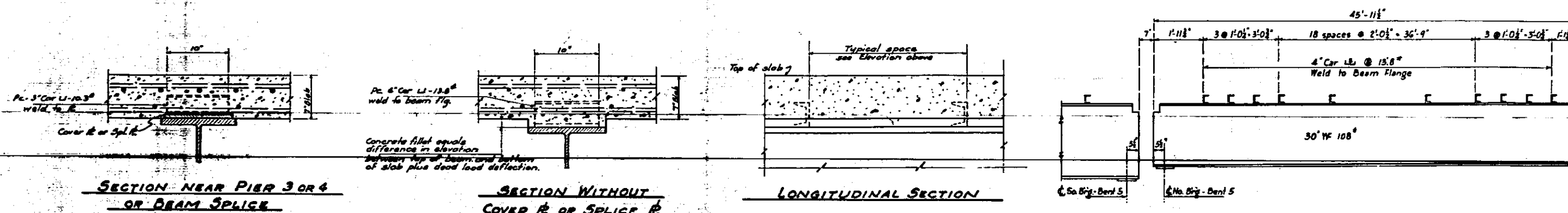
EXAMINED *March 11 1911*  
PASSED *[Signature]*  
APPROVED *[Signature]*

DETAILS  
GRADE SEPARATION  
CHICAGO & EASTERN ILLINOIS R.R.  
NEAR ELLIS  
S.D.I. RTE. 49 - SEC. 122 V.D.F.  
VERMILION COUNTY





ELEVATION SHOWING SPACING OF SHEAR LUGS IN SPANS 1-2-3-4



ELEVATION SHOWING SPACING OF LUGS IN SPAN 5



TOP VIEW SHOWING WELDING OF LUGS TO BEAM IN SPAN 1

TOP VIEW OF BEAM SHOWING WELDING OF LUGS IN SPANS 2-3-4-5

COMPUTED	20. H. Sommer	EXAMINED	March 20 1927
CHECKED	A. Bennett	DESIGNED	H. Bennett
DRAWN	20. H. Sommer	CHECKED	H. Bennett
CHECKED	A. B.	APPROVED	E. J. Silberman
SPECIAL	ASSEMBLED		
	CHECKED		

DETAILS  
GRADE SEPARATION  
CHICAGO & EASTERN ILLINOIS R.R.  
NEAR ELLIS  
S.B. RTE 49 - SEC 122 VB.F.  
VERMILION COUNTY

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

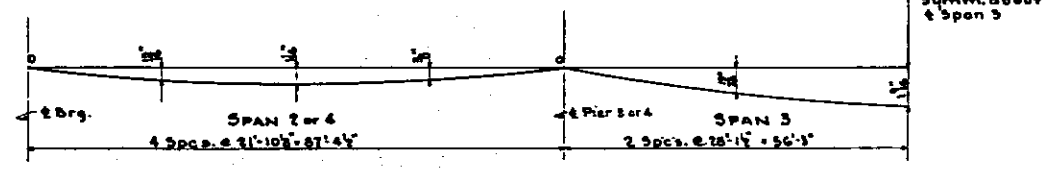
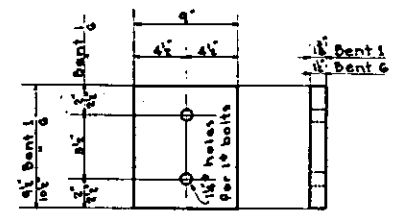
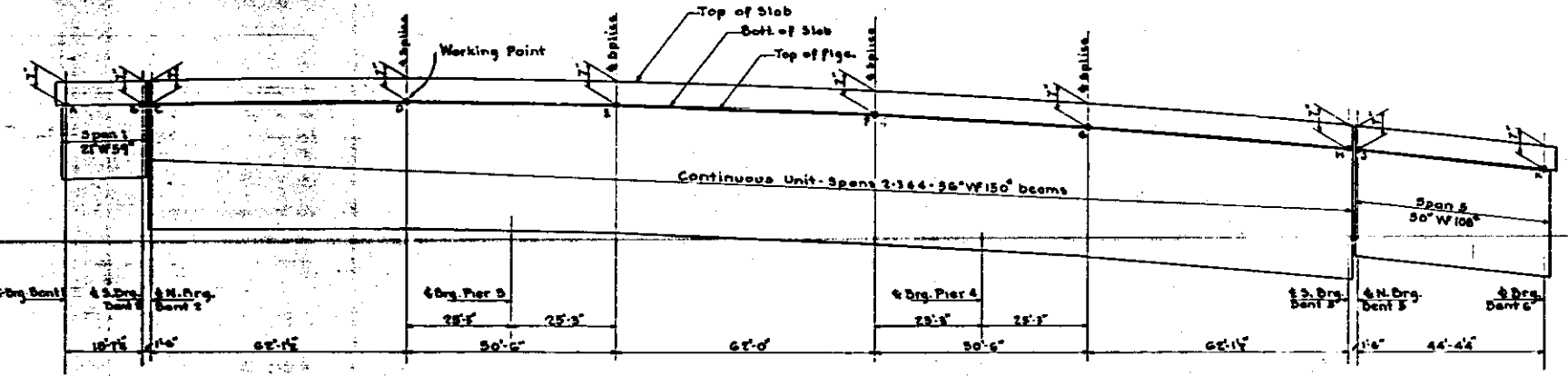
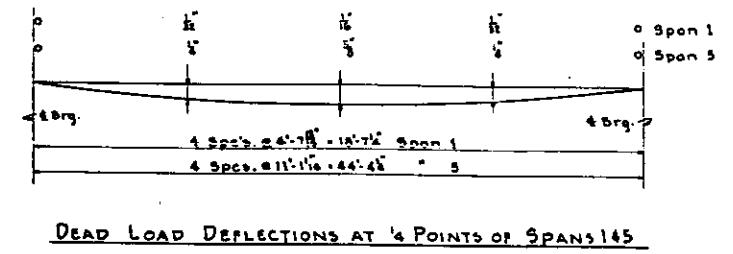
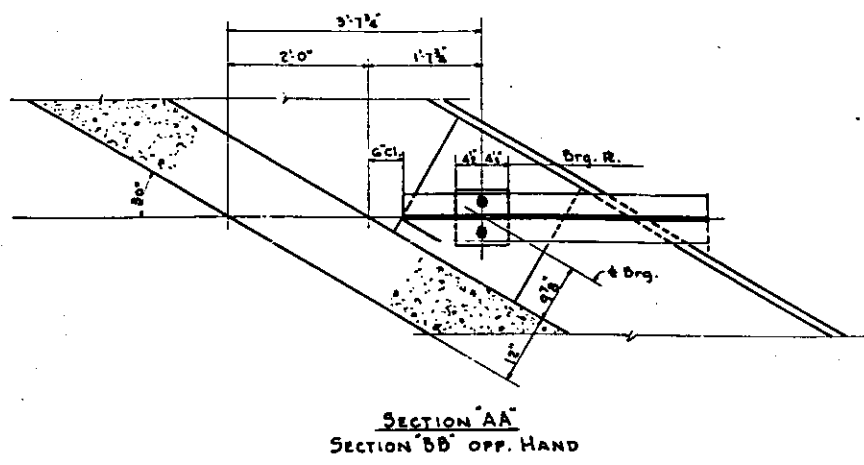
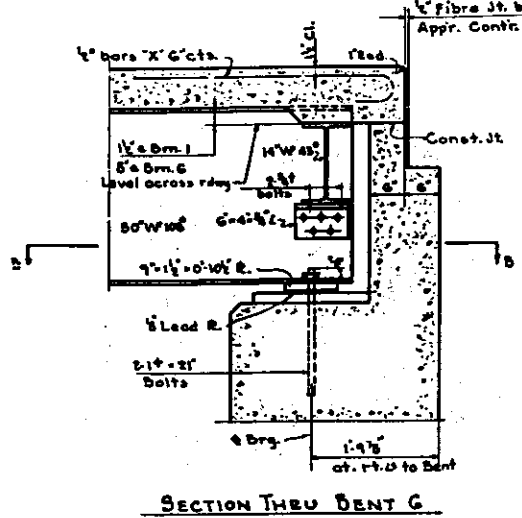
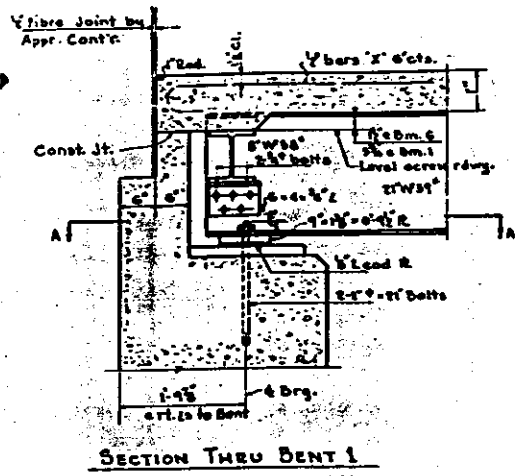
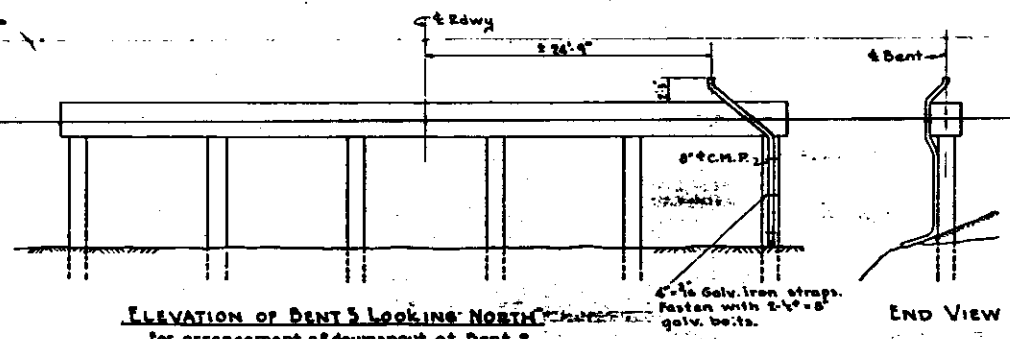


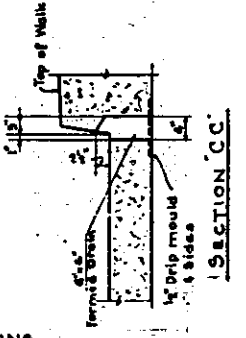
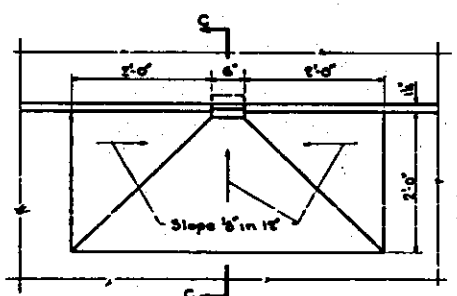
TABLE SHOWING ELEVATIONS OF WORKING POINTS

BEAM NO.	WORKING POINT									
	A	B	C	D	E	F	G	H	J	K
6	781.11	781.15	781.20	781.31	781.39	781.50	781.68	780.69	780.68	780.31
8	781.25	781.35	781.34	781.45	781.49	781.55	781.13	780.71	780.70	780.30
4	781.36	781.45	781.45	781.55	781.55	781.57	781.13	780.68	780.67	780.26
3	781.40	781.46	781.46	781.56	781.58	781.55	781.05	780.59	780.58	780.18
2	781.50	781.48	781.45	781.50	781.44	781.23	780.94	780.44	780.43	779.98
1	781.91	781.55	781.35	781.39	781.31	781.07	780.77	780.29	780.28	779.77

Note: Elevations are at top of beam flanges at working points and do not include D.L. Deflections.

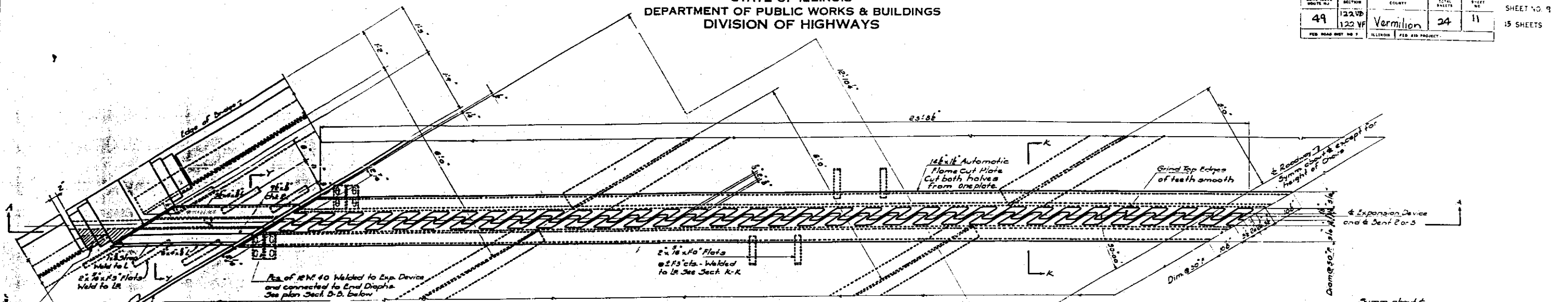


**ELEVATION OF DENT 5 LOOKING NORTH**  
For arrangement of downspout at Dent 5 see Sh. 1. All corr. metal pipe and fittings shall be 16 ga. metal and shall conform to the specs. covering metal pipe culverts.  
The cost of metal pipe straps, bolts, etc. shall be included in the unit price bid for 5\"/>

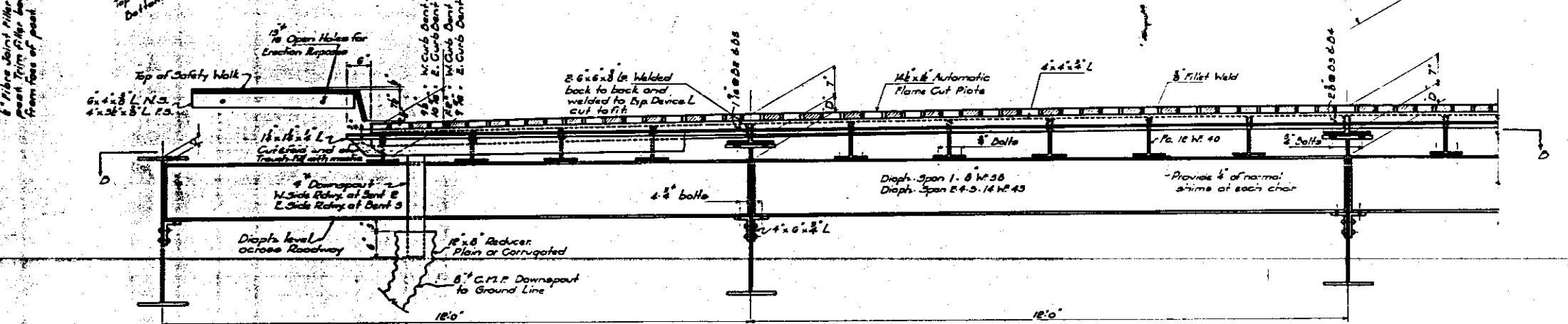


STANDARD	COMPUTED	<i>W. W. Brannen</i>	EXAMINED	<i>March 22, 1931</i>
	CHECKED	<i>W. W. Brannen</i>		<i>H. J. ...</i>
SPECIAL	DRAWN	<i>W. W. Brannen</i>	PASSED	<i>W. W. Brannen</i>
	CHECKED	<i>W. W. Brannen</i>		<i>W. W. Brannen</i>
	ASSEMBLED		APPROVED	<i>W. W. Brannen</i>
	CHECKED			

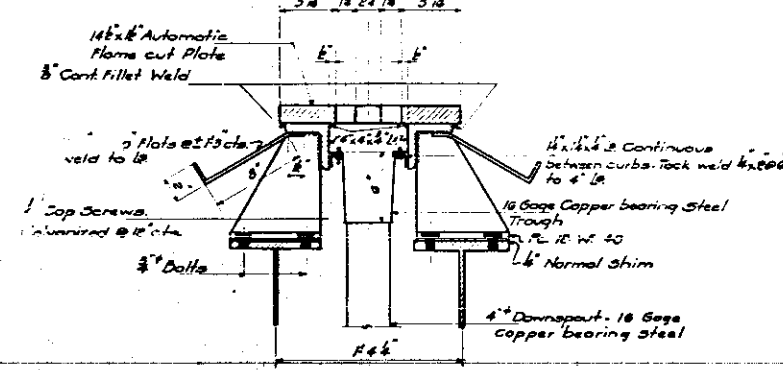
**DETAILS**  
**GRADE SEPARATION**  
**CHICAGO & EASTERN ILLINOIS R.R.**  
**NEAR ELLIS**  
**J.O.I. RTE. 49 - SEC. 122.V.B.F**  
**VERMILION COUNTY**



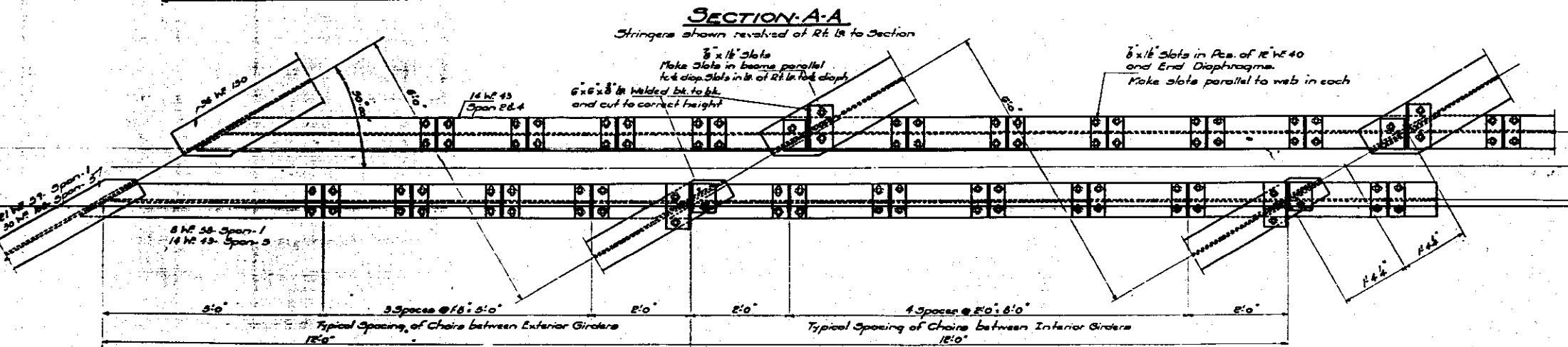
PLAN OF EXPANSION DEVICE AT BENTS 2 & 5



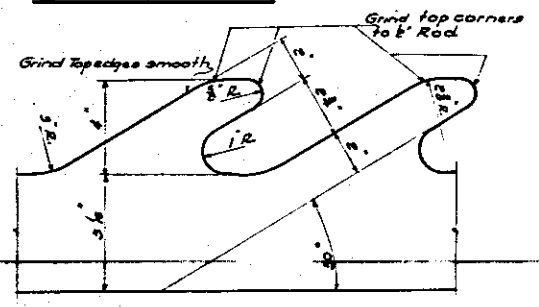
SECTION A-A



SECTION K-K



SECTION B-B



DETAIL OF TEETH

**NOTE**

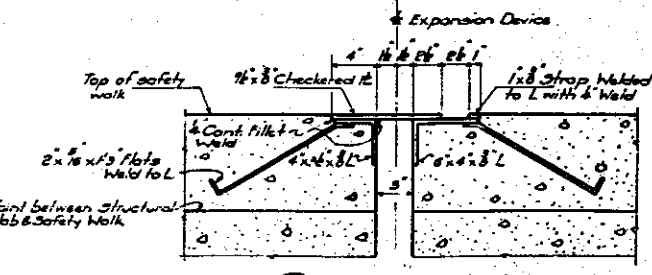
Expansion Device shall be bent to profile of roadway along center line of Device.  
The clear distances are for 50°F. These amounts shall be increased or decreased by the factor if the temperature is below or above 50°F when Expansion Device is set.  
The weight of the Expansion Device is included in the Bill of Material on Sheet 3 as Structural Steel.  
Estimated Weight = 13849 lbs.  
All screws, downspout and any other fittings for the 16 gage copper bearing steel trough shall be included in the contract unit price per linear foot bid for same. If trough is not in one piece it shall be welded or brazed.  
Estimated lin. feet of 16 gage Copper Bearing Steel Trough = 108.  
14x14, 12x12, 8x8, 6x6 and 4x4 shall be copper bearing steel.  
Copper bearing steel shall conform to the A.S.T.M. Standard Spec. A-7 for structural steel, except that 2% copper shall be added.  
Payment will be made at the contract unit price for Structural Steel.

TABLE SHOWING VALUES OF DIMENSION 'D'

Beam No.	1	2	3	4	5	6
3 Deaning Dents	38"	42"	46"	50"	54"	58"
N. Deaning Dents	37"	41"	45"	49"	53"	57"
N. Deaning Dent 5	16"	38"	58"	68"	78"	88"

COMPUTED	W. T. Sommer
CHECKED	V. J. ...
DRAWN	M. ...
CHECKED	V.M.
ASSEMBLED	
CHECKED	

DATE: March 28, 1917  
APPROVED: [Signature]  
[Signature]



SECTION Y-Y

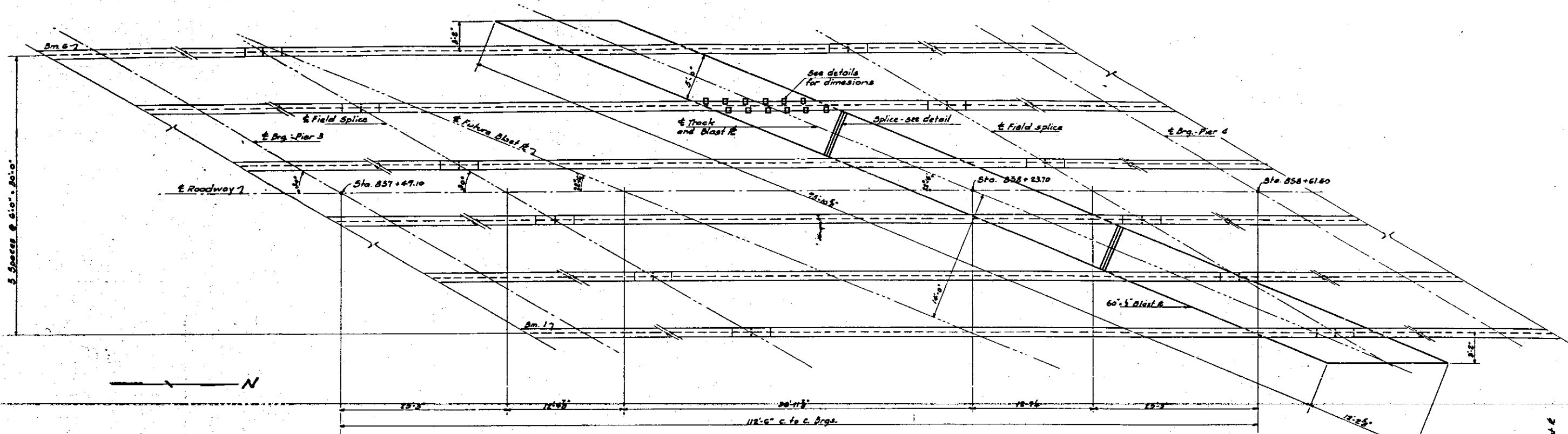
**EXPANSION DEVICES**  
**GRADE SEPARATION**  
**CHICAGO & EASTERN ILLINOIS R.R.**  
**NEAR ELLIS**  
**S.D.I. RTE. 49 - SEC. 122 V.D.F.**  
**VERMILION COUNTY**



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

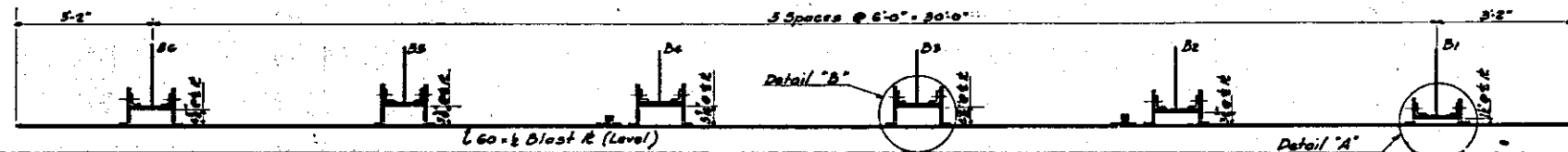
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49	122 V.B. 122 F.	Vermilion	24	12
SEE ROAD DIST. NO.	ALIGNMENT	PER. AND PROJECT		

SHEET NO. 10  
15 SHEETS

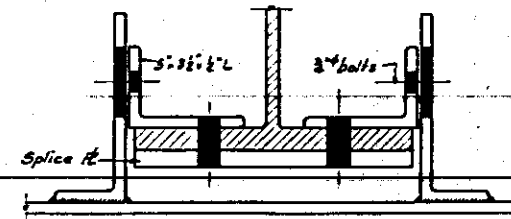


**PLAN OF BLAST PLATE**

Provide connection Ls on beams for future Blast R.

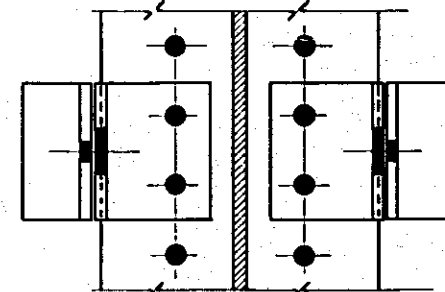


**ELEVATION OF BLAST PLATE**



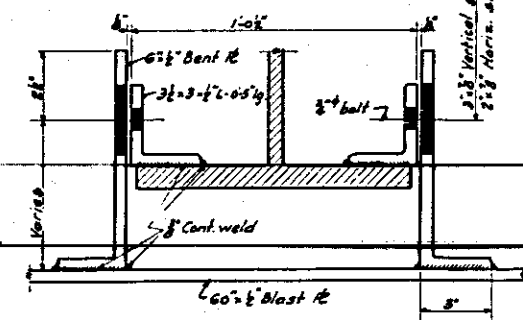
**DETAIL "A"**

Same as Detail "B" Except as noted



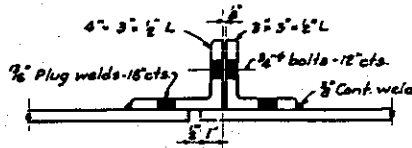
**PLAN DETAIL "A"**

Typical connection detail of beam splices



**DETAIL "B"**

**Note**  
Blast plates shall be 1/2" thick and shall conform to the A.S.T.M. Standard Specifications A-7-36 for structural steel, except that 0.2% copper shall be added.  
All connection plates and angles, splice angles, bolts and nuts shall be structural steel.  
Bolts and nuts shall be galvanized.  
All material shall be paid for as Structural Steel.  
Paint same as Structural Steel.  
Total estimated weight of Blast R's, etc., included in Bill of Material on sheet 3 = 12,620 Lbs.



**DETAIL OF SPLICE**

STANDARD	COMPUTED	W. H. Sommer	EXAMINED	March 22, 1914		
	CHECKED	J. H. Mulheise		PASSED	J. H. Mulheise	
	DRAWN	P. S. Smith			APPROVED	J. H. Mulheise
	CHECKED	V. M.				J. H. Mulheise
SPECIAL	ASSEMBLED		APPROVED			W. H. Sommer
	CHECKED			W. H. Sommer		

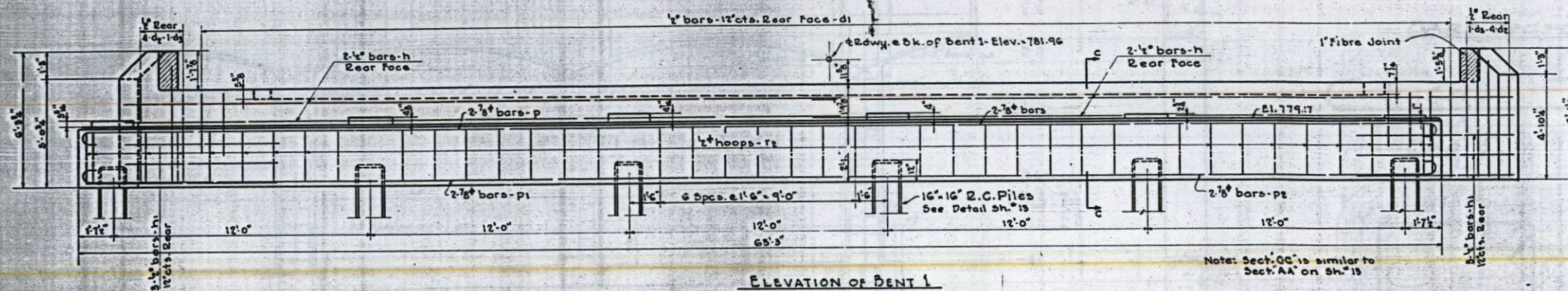
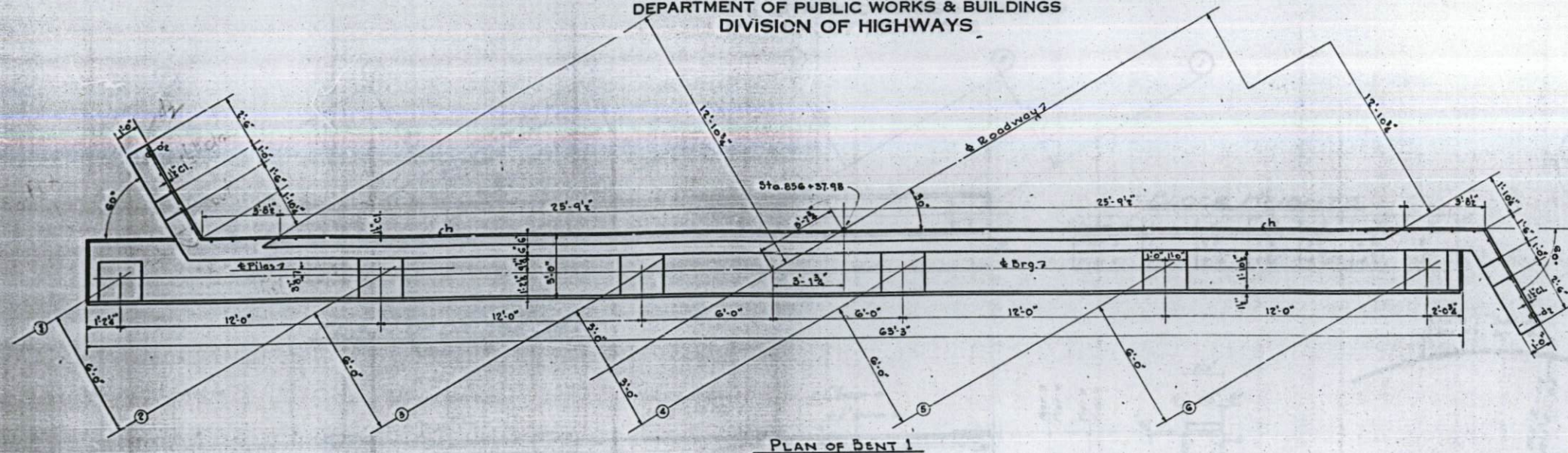
**BLAST PLATE  
GRADE SEPARATION  
CHICAGO & EASTERN ILLINOIS R.R.  
NEAR ELLIS  
S.D.L. RTE. 49 - SEC. 122 V.B.F.  
VERMILION COUNTY**



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

ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49	122VB	Vermilion	24	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11  
15 SHEETS



BILL OF MATERIAL - BENT 1

Bar	No.	Size	Length
d1	59	1/2"	2'-6"
d2	8	1/2"	5'-3"
d3	7	1/2"	4'-3"
h	4	1/2"	34'-9"
h1	6	1/2"	10'-0"
p	4	7/8"	33'-9"
p1	2	7/8"	39'-6"
p2	2	7/8"	27'-9"
r2	39	1/2"	11'-0"

Class X Concrete Cu.Yds. 25.1  
Reinforcement Bars Lbs. 1475  
16" x 16" R.C. Piles (30' Lg.) Lin. Ft. 180

BILL OF MATERIAL - BENTS 2 & 5

Bar	No.	Size	Length
d4	24	1/2"	3'-0"
d5	24	1/2"	2'-3"
p3	8	7/8"	34'-3"
p4	4	7/8"	40'-0"
p5	4	7/8"	28'-3"
r3	78	1/2"	10'-9"
r4	24	1/2"	3'-9"

Class X Concrete Cu.Yds. 36.8  
Reinforcement Bars Lbs. 1880  
18" x 18" R.C. Piles (30' Lg.) Lin. Ft. 360

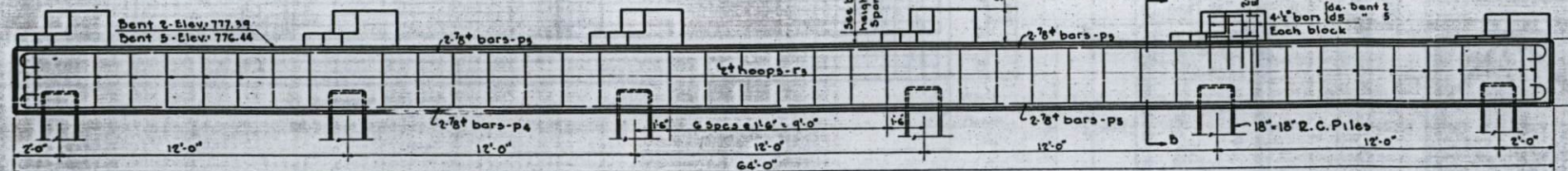
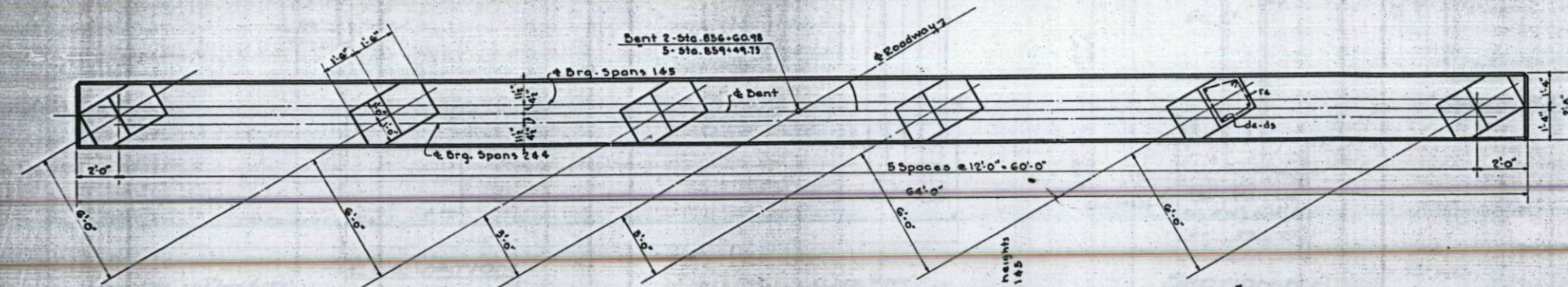
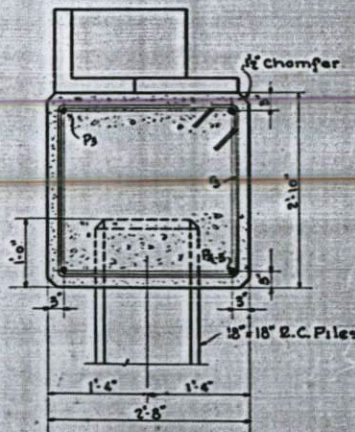


TABLE OF BLOCK HEIGHTS

BEAM No.	1	2	3	4	5	6
Bent 2	Span 1	11 1/2"	10 1/2"	10 1/2"	10 1/2"	10 1/2"
	Span 2	2 1/2"	3 1/2"	4 1/2"	3 1/2"	2 1/2"
Bent 5	Span 4	1'	3 1/2"	5 1/2"	6 1/2"	6 1/2"
	Span 5	7 1/2"	9 1/2"	11 1/2"	10 1/2"	10 1/2"



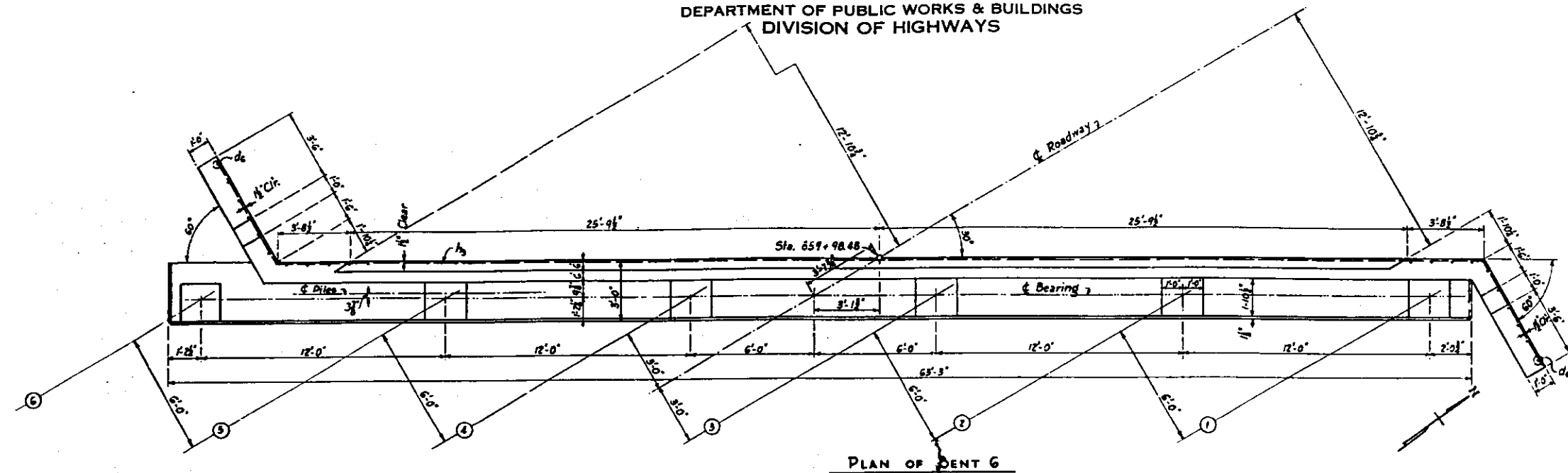
COMPUTED	G. Shimmy
CHECKED	W. H. Sanner
DRAWN	P. E. M. Moore
CHECKED	W. H. S.
SPECIAL	ASSEMBLED
	CHECKED

EXAMINED *March 20 1911*  
*H. H. Hensel*  
PASSED *W. H. Sanner*  
APPROVED *East*

Note: For bar details see SH. 15

ALTERNATE A  
BENTS 1 & 5  
GRADE SEPARATION  
CHICAGO & EASTERN ILLINOIS R.R.  
NEAR ELLIS  
S.D.I. RTE. 49 - SEC. 122 V.B.  
VERMILION COUNTY



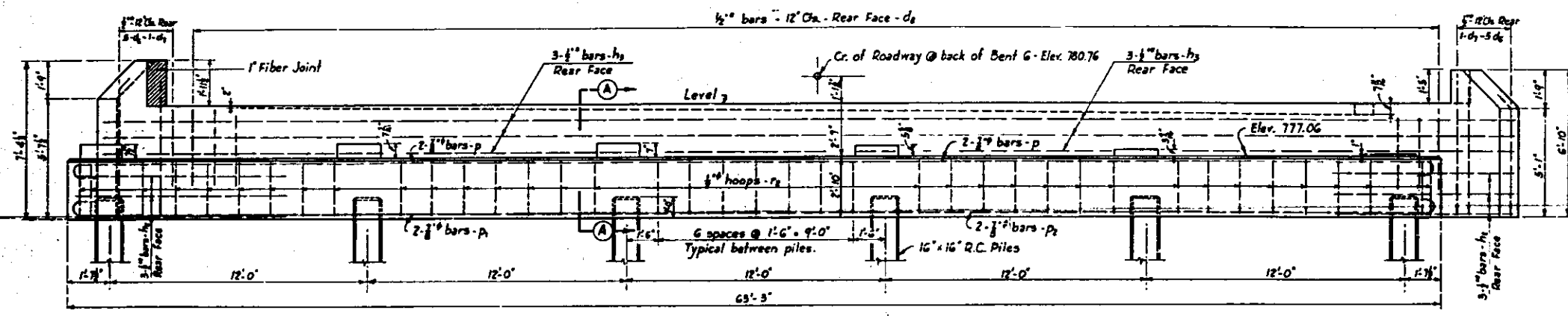


BILL OF MATERIAL --- BENT 6

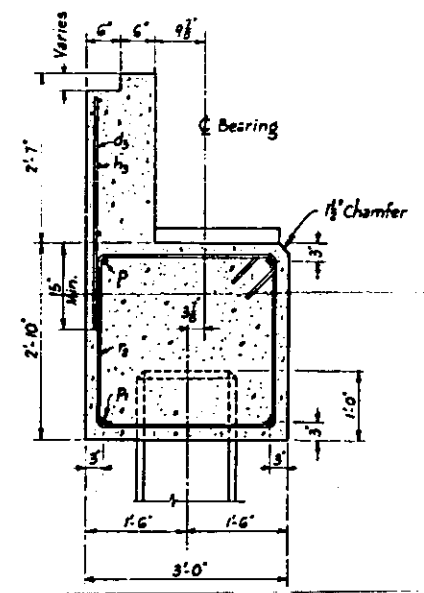
Bar	No.	Size	Length
d <sub>6</sub>	10	1/2"	6'-3"
d <sub>7</sub>	2	1/2"	5'-0"
d <sub>8</sub>	59	1/2"	3'-6"
d <sub>9</sub>	5	1/2"	5'-9"
h <sub>6</sub>	6	1/2"	11'-0"
h <sub>8</sub>	6	1/2"	36'-0"
P	4	7/8"	33'-7"
P <sub>1</sub>	2	7/8"	39'-6"
P <sub>2</sub>	2	7/8"	27'-9"
r <sub>2</sub>	37	1/2"	11'-0"

Class X Concrete ----- Cu. Yds. 27.9  
Reinforcement Bars ----- Lbs. 1340  
16" x 16" R.C. Piles (30'lg) --- Lin. Ft. 180

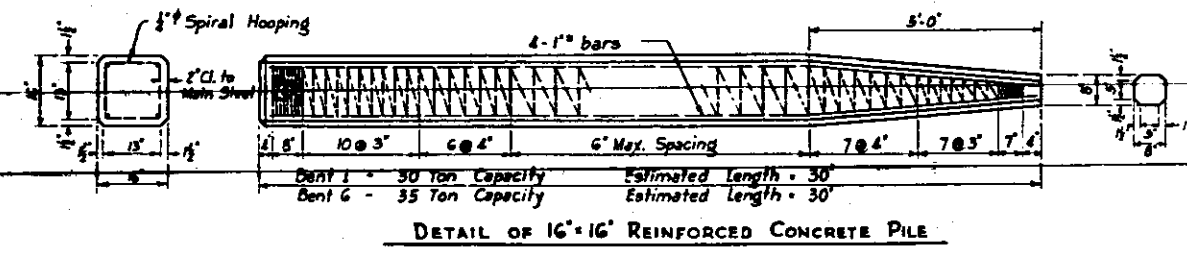
PLAN OF BENT 6



ELEVATION --- BENT 6

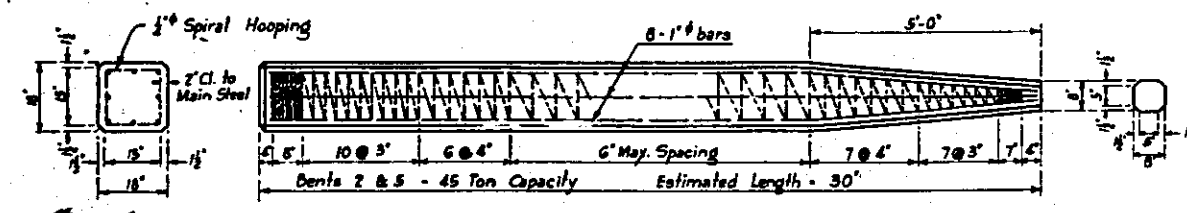


SECTION A-A  
Sec. CC - Sheet #11 Similar



DETAIL OF 16" x 16" REINFORCED CONCRETE PILE

P <sub>1</sub>	37'-2"
P <sub>2</sub>	37'-11"
P <sub>3</sub>	26'-2"
P <sub>4</sub>	32'-8"
P <sub>5</sub>	38'-5"
P <sub>6</sub>	26'-5"



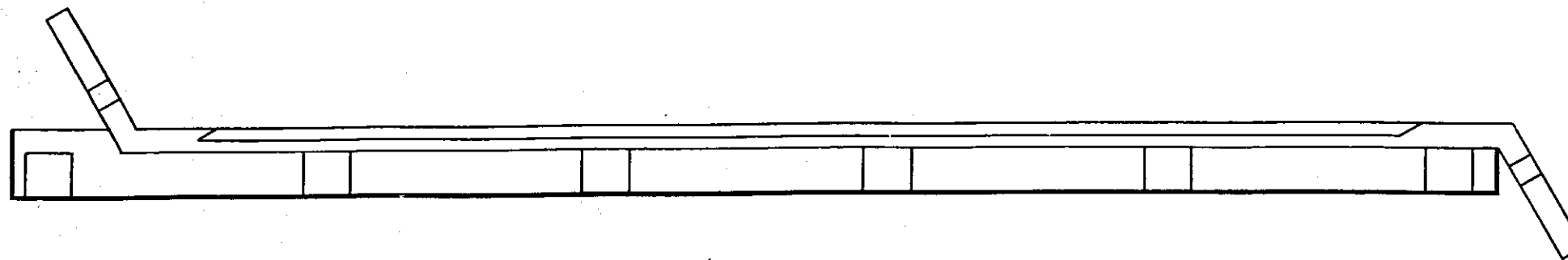
DETAIL OF 18" x 18" REINFORCED CONCRETE PILE

STANDARD	COMPUTED <i>G. Sweeney</i>
	CHECKED <i>N. W. Somers</i>
	DRAWN <i>P. E. ...</i>
	CHECKED <i>20 78.5.</i>
SPECIAL	ASSEMBLED
	CHECKED

EXAMINED *March 22 1937*  
*Thompson*  
PASSED *W. J. ...*  
APPROVED *Carl ...*

ALTERNATE A  
BENT-6  
GRADE SEPARATION  
CHICAGO & EASTERN ILLINOIS R.R.  
NEAR ELLIS  
S.D.I. RTE 49 - SEC. 122 V.B.  
VERMILION COUNTY





PLAN OF BENTS 1 & 6

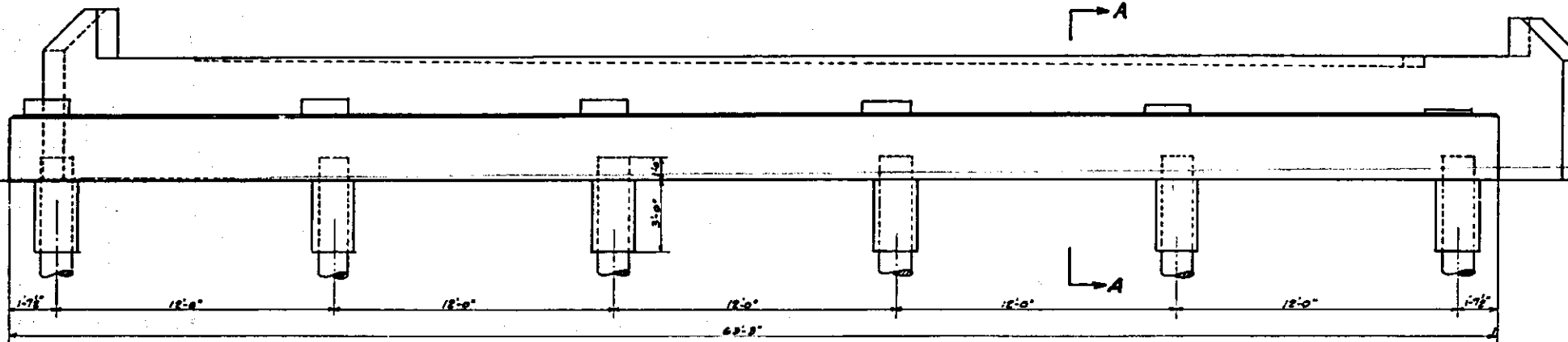
**BILL OF MATERIAL - BENT 1**

Class - X - Concrete	Cu. Yds.	26.2
Reinforcement Bars	Lbs.	1175
Furnishing metal shells for cast in place conc. piles (30'lg.)	Lin. Ft.	180
Driving and filling metal shells for cast in place conc. piles (30'lg.)	Lin. Ft.	180

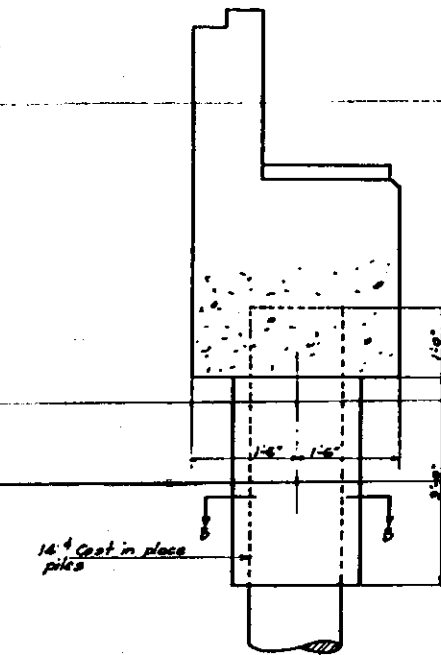
**BILL OF MATERIAL - BENT 6**

Class - X - concrete	Cu. Yds.	29.0
Reinforcement Bars	Lbs.	1340
Furnishing metal shells for cast in place concrete piles (30'lg.)	Lin. Ft.	180
Driving & filling metal shells for cast in place concrete piles (30'lg.)	Lin. Ft.	180

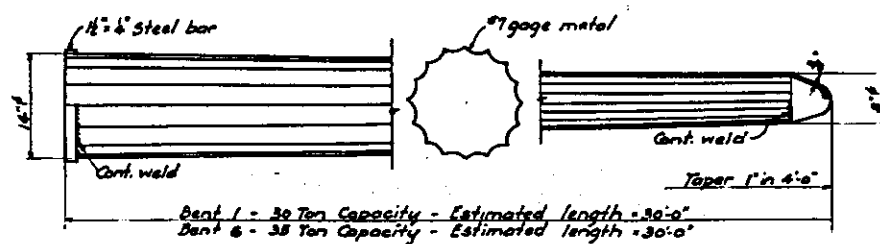
for discussion, elevations & reinf. steel for bents 1 & 6 are sheet 11



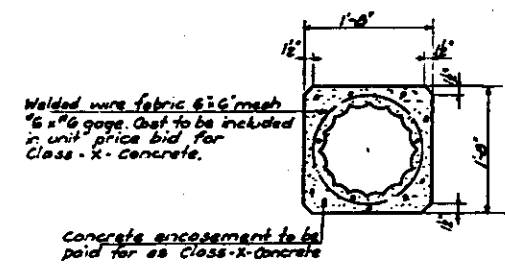
ELEVATION



SECTION A-A



DETAIL OF METAL SHELL FOR CAST IN PLACE CONG. PILES



SECTION B-B

14" Cast in place pile

Welded wire fabric 6"x6" mesh "6" x "6" gage. Cost to be included in unit price bid for Class - X - Concrete.

concrete encasement to be paid for as Class - X - Concrete

Bent 1 - 30 Ton Capacity - Estimated length - 30'-0"  
Bent 6 - 35 Ton Capacity - Estimated length - 30'-0"

STANDARD	COMPUTED	<i>P. Shimley</i>	EXAMINED	<i>March 28 1917</i>
	CHECKED	<i>W. H. Zommer</i>		<i>J. H. ...</i>
SPECIAL	DRAWN	<i>P. E. ...</i>	PASSED	<i>Macroman</i>
	CHECKED	<i>W. H. Z.</i>	APPROVED	<i>...</i>
	ASSEMBLED			
	CHECKED			

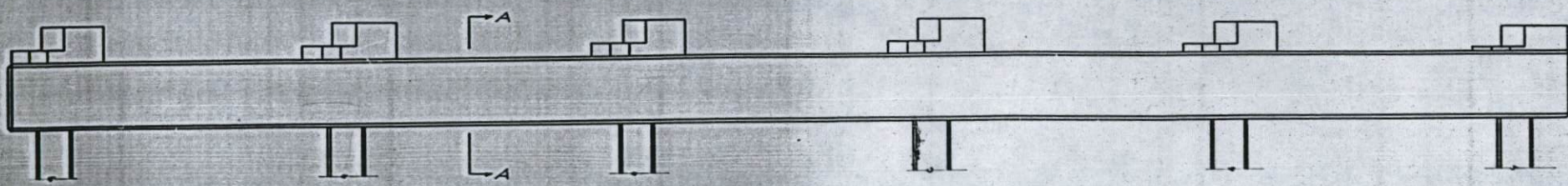
**ALTERNATE - B'**  
**BENTS 1 & 6**  
**GRADE SEPARATION**  
**CHICAGO & EASTERN ILLINOIS R. R.**  
**NEAR ELLIS**  
**S.B.I. RTE. 49 - SEC. 122 V.B.**  
**VERMILION COUNTY**





**TOP PLAN OF DENTS-2&5**

Same as Alternate A

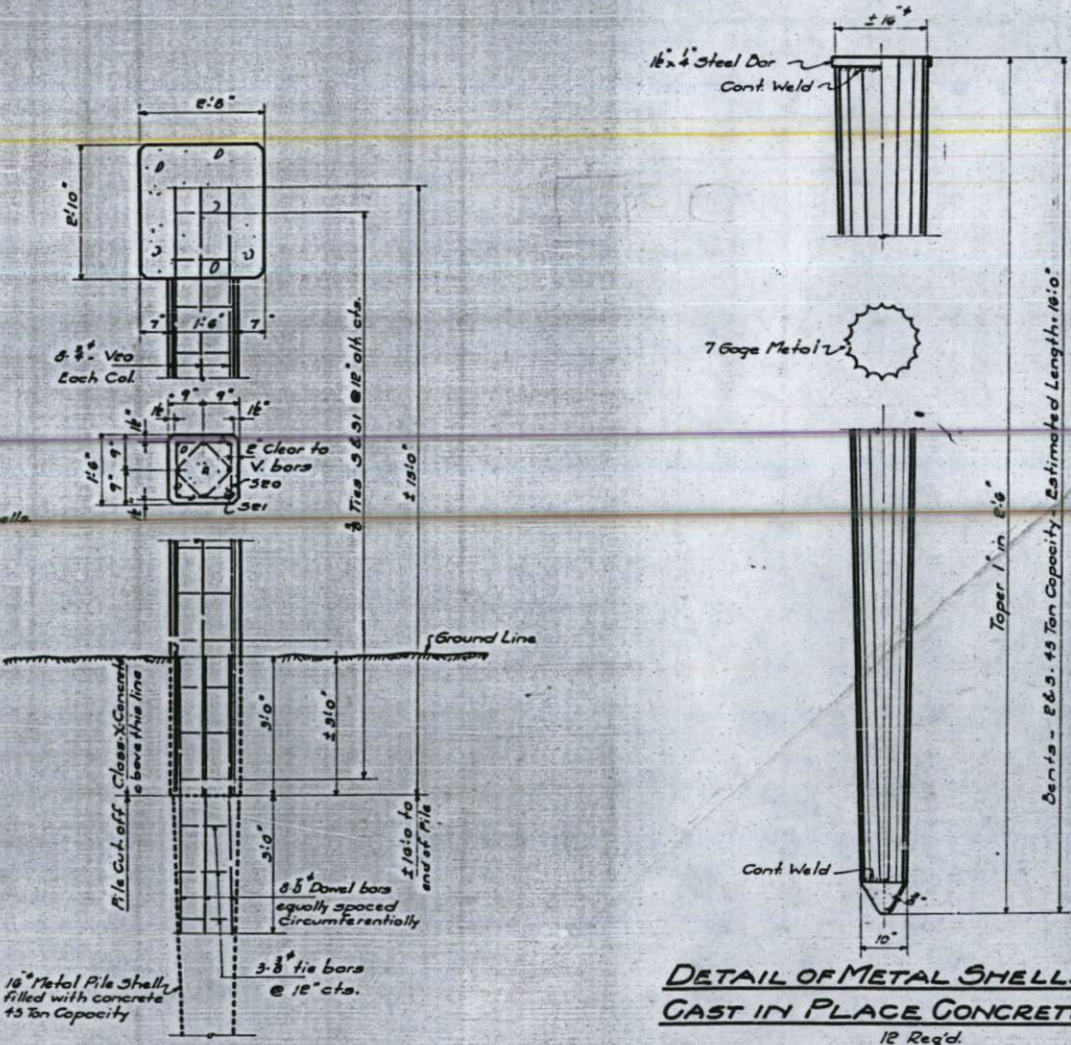


**ELEVATION OF DENTS-2&5**

Reinforcement and dimensions same as Alternate A except as shown See Sheet #11 for elevations and dimensions

**BILL OF MATERIAL DENTS 2&5**

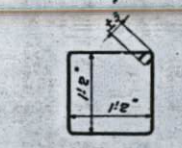
Bar	No.	Size	Length
d4	24	6"	3'0"
d5	24	6"	2'5"
p3	8	8"	34'3"
p4	4	8"	40'0"
p5	4	8"	28'3"
r3	78	6"	10'9"
r4	24	6"	3'9"
320	78	6"	3'6"
321	78	6"	4'0"
v20	96	3/4"	13'0"
Class-X Concrete		Cu Yds 50.0	
Reinforcement Bars		Lbs. 4550	
10" Metal Pile Shells (6'lg)		Lin. Ft 192	
Driving and Filling 16" Metal Pile Shells (6'lg)		Lin. Ft 192	



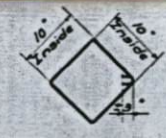
**DETAIL OF METAL SHELLS FOR CAST IN PLACE CONCRETE PILES**

12 Req'd.

Note:  
The 5" domels and 3/4" ties which are placed in concrete below pile cut off are to be included in the contract unit price for driving and filling pile shells.



**BAR-320**



**BAR-321**

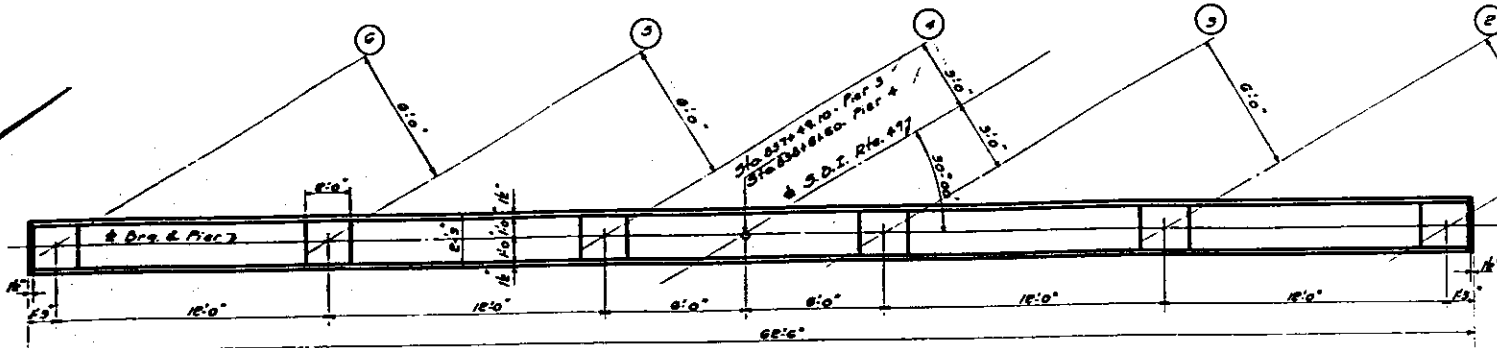
COMPUTED	W. H. Sommer
CHECKED	Of [Signature]
DRAWN	N. H. S. M. Miller
CHECKED	Of [Signature]
ASSEMBLED	
CHECKED	

EXAMINED	March 20 1941
PASSED	[Signature]
APPROVED	[Signature]

**SECTION-A-A**

**ALTERNATE B**  
**DENTS-2&5**  
GRADE SEPARATION  
CHICAGO & EASTERN ILLINOIS R.R.  
NEAR ELLIS  
S.D.I. P-49- SEC 122VB  
VERMILION COUNTY

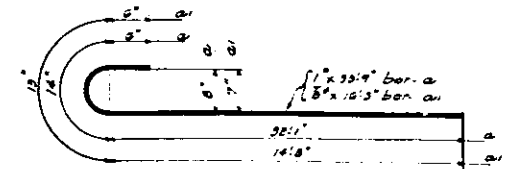




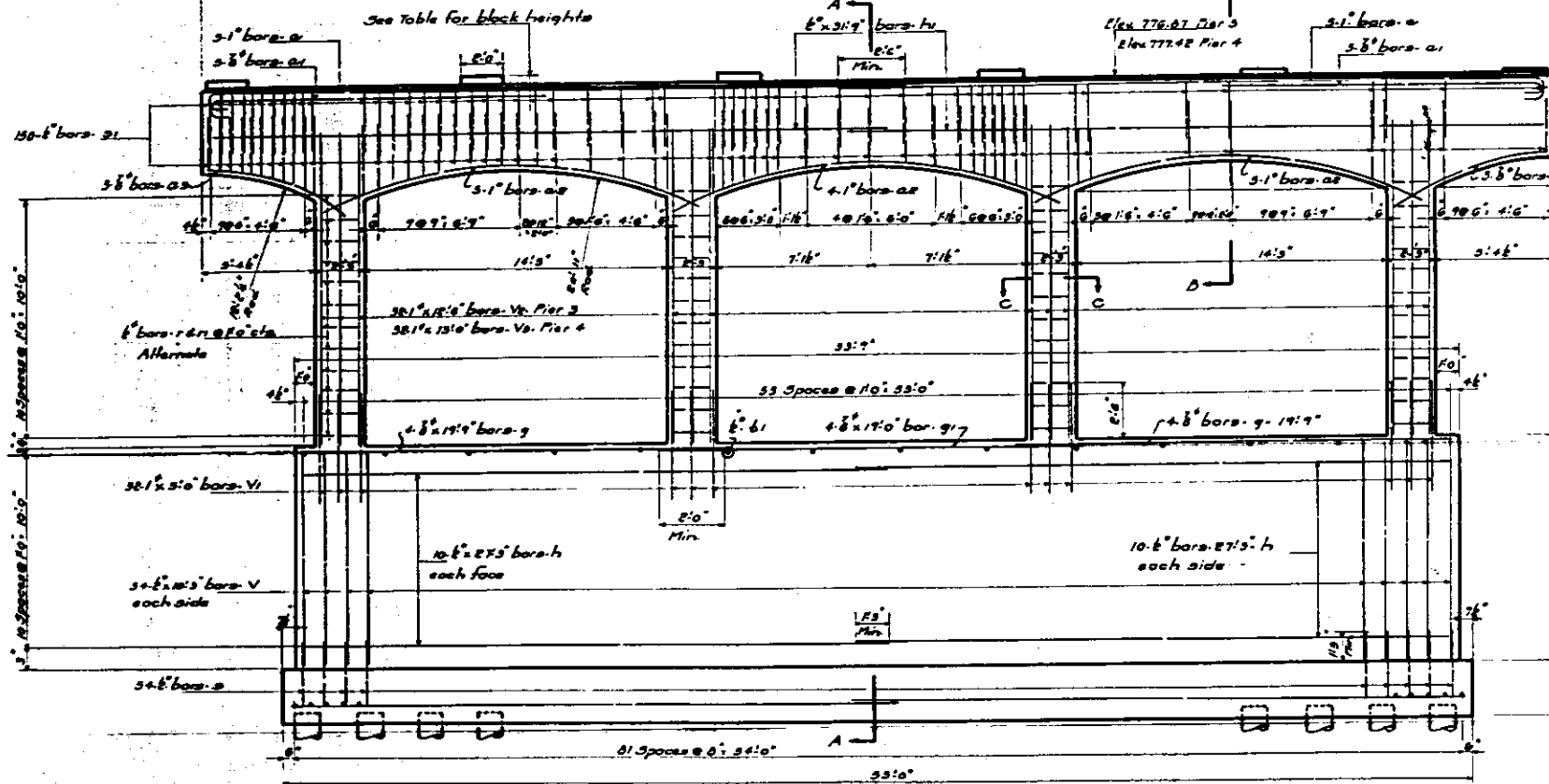
**PLAN OF BRIDGE SEAT**  
Scale: 1/4" = 1'-0"

**BLOCK HEIGHTS**

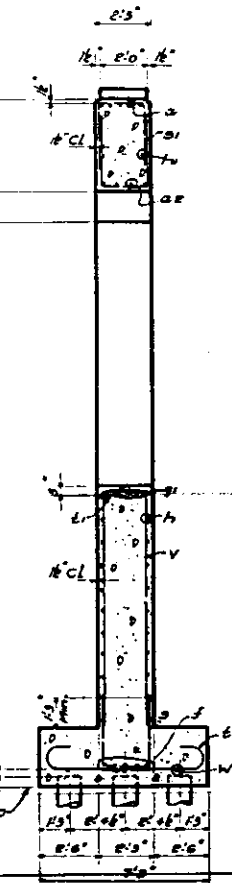
Beam No.	1	2	3	4	5	6
Pier 3	1"	2 1/2"	3 1/2"	3 1/2"	2 3/4"	1 1/2"
Pier 4	1"	2 1/2"	3 1/2"	4 1/2"	4 1/2"	4 1/2"



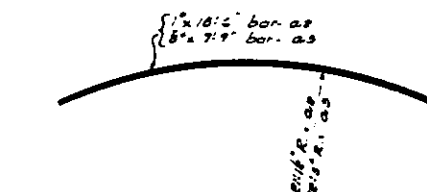
**BARS-3 & 4**



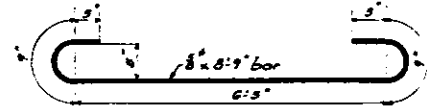
**ELEVATION**



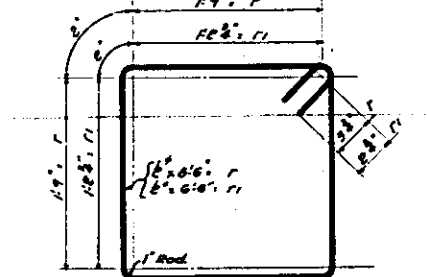
**SECTION A-A**



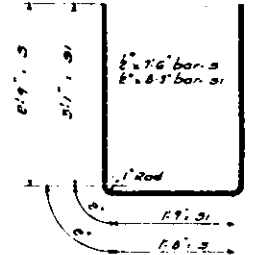
**BARS-3 & 4**



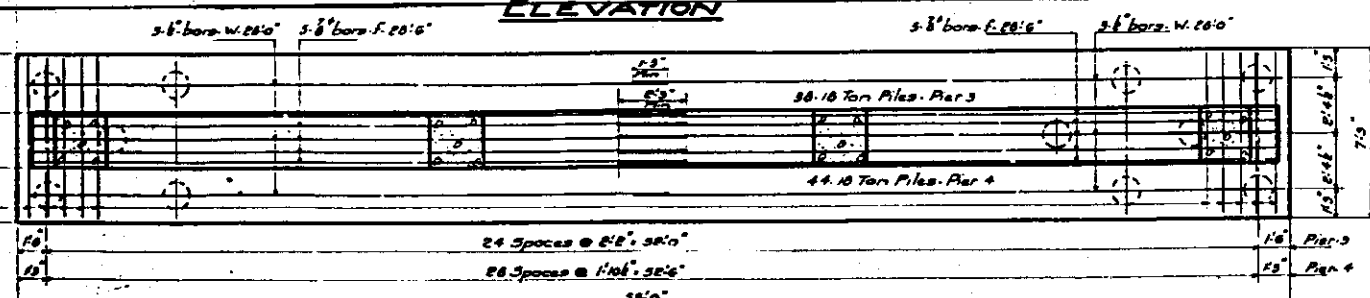
**BAR-5**



**BARS-6 & 7**

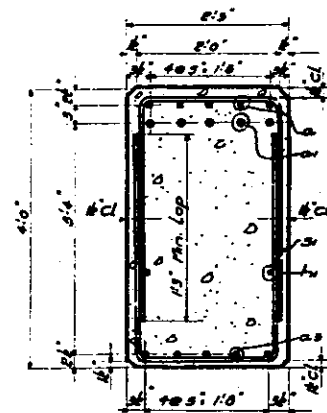


**BARS-8 & 9**

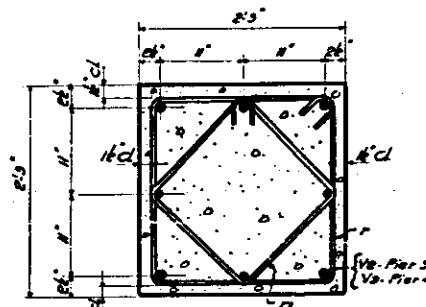


**FOOTING PLAN**

Indicates 18 Ton Treated Timber Piles - 62 Reg'd



**SECTION B-B**



**SECTION C-C**

**BILL OF MATERIAL 2 PIERS**

Bar	No.	Size	Length
a	20	1"	33.7"
a1	20	3/4"	18.5"
ae	20	1"	18.0"
as	12	3/4"	7.9"
f	20	3/4"	20.0"
g	16	3/4"	19.4"
g1	8	3/4"	17.0"
h	80	2"	27.5"
h1	8	2"	34.9"
i	40	2"	6.8"
i1	40	2"	6.6"
o	100	2"	7.8"
o1	300	2"	6.5"
e	164	3/4"	8.9"
e1	28	3/4"	8.0"
v	278	2"	10.5"
v1	64	1"	5.0"
v2	32	1"	12.0"
w	18	2"	28.0"

Class-X Concrete Cu Yds. 222.2  
Reinforcement Bars Lbs. 17085  
Treated Timber Piles (18") Lin. Ft. 1478

COMPUTED	W. F. O'Leary
CHECKED	W. H. Sommer
DRAWN	W. H. Sommer
CHECKED	W. H. Sommer
SPECIAL	ASSEMBLED
	CHECKED

EXAMINED	March 21, 1911
PASSED	W. H. Sommer
APPROVED	W. H. Sommer

**PIERS 3-4**  
**GRADE SEPARATION**  
**CHICAGO & EASTERN ILLINOIS R.R.**  
**NEAR ELLIS**  
**S.D.I. RTE. 49 - SEC. 122 V.B.**  
**VERMILION COUNTY**