

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
BRIDGE PAINTING**

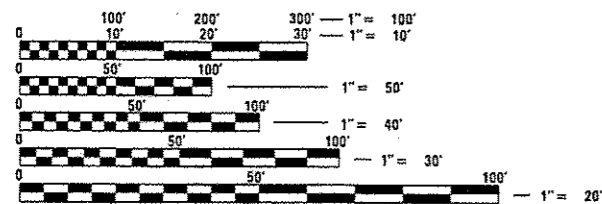
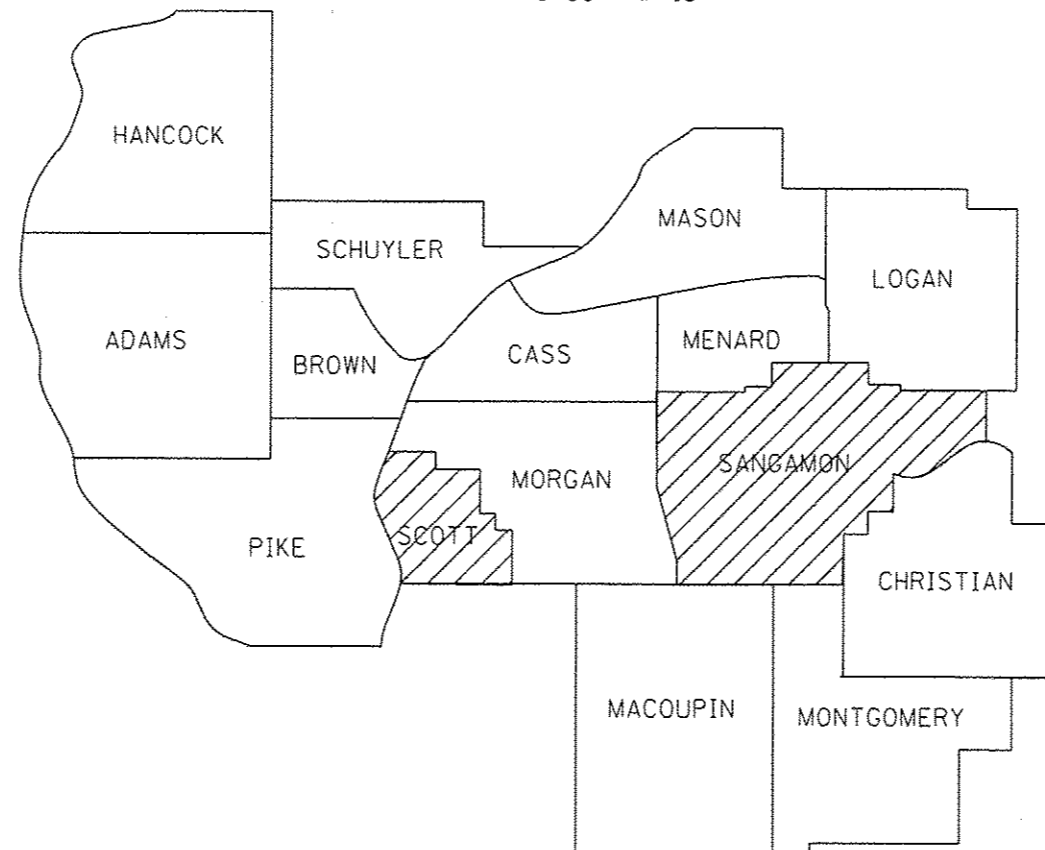
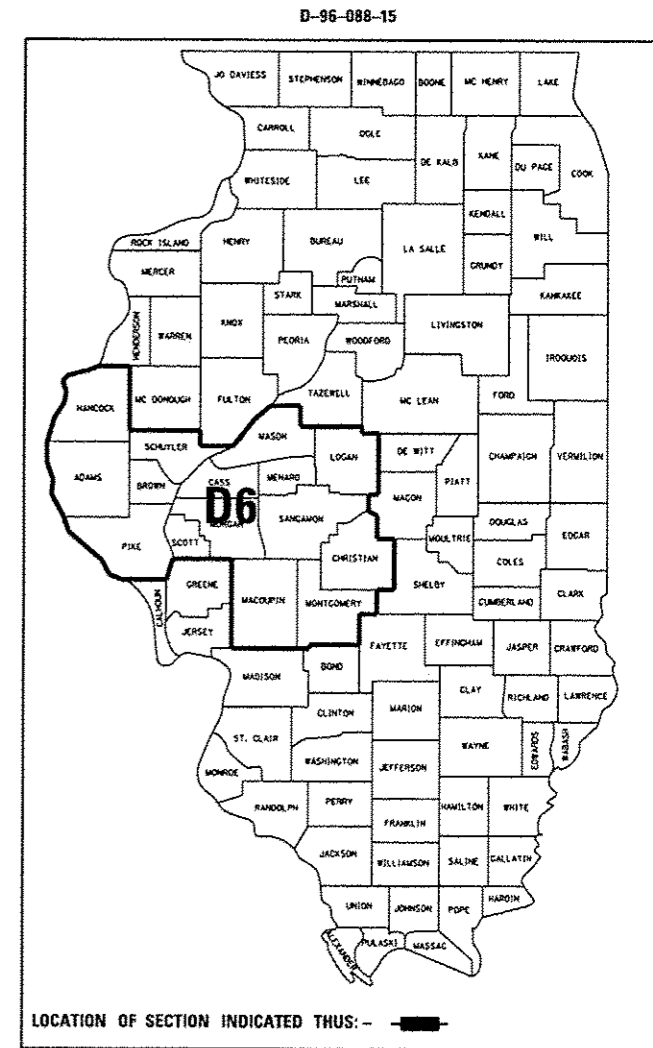
VARIOUS ROUTES
SECTION D6 BDGE PAINTING 2016-1

BRIDGE PAINTING
SANGAMON & SCOTT COUNTIES

C-96-065-15

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D6 BDGE PAINTING 2016-1	•	17	1
• SANGAMON & SCOTT ILLINOIS		CONTRACT NO. 72H88		

FOR INDEX OF SHEETS, SEE SHEET NO. 2



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
OR 811

BRIDGE MAINTENANCE ENGINEER – BRANDON DUDLEY (217) 785-9290
BRIDGE INSPECTION ENGINEER – DAVE COPENBARGER (217) 785-5306

GROSS LENGTH = NA
NET LENGTH = NA

CONTRACT NO. 72H88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 8 20 15
Ryan E. Smith
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Aug 14 20 15
John D. Baranzelli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

Aug 14 20 15
Ormer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, GENERAL NOTES, SIGNATURES, & SUMMARY OF QUANTITIES
- 3-4 BRIDGE LOCATION MAPS
- 5-17 EXISTING BRIDGE PLANS (FOR INFORMATION ONLY)

HIGHWAY STANDARDS

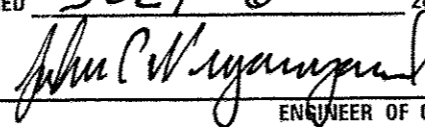
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- 701106-02
- 701400-08
- 701401-09
- 701901-04


GENERAL NOTES:

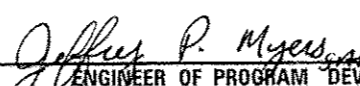
1. STRUCTURES TO BE PAINTED SHALL BE AS SPECIFIED ON THE PLAN SHEETS. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". THE AREAS TO BE PAINTED ON EACH BRIDGE SHALL BE AS SPECIFIED ON THE PLAN SHEETS. ALL AREAS TO BE PAINTED SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL EXISTING STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR EACH BRIDGE SHALL BE AS SPECIFIED ON THE PLAN SHEETS. THE COLORS SPECIFIED ON THE PLAN SHEETS SHALL CORRESPOND WITH THE COLOR SPECIFICATIONS SHOWN IN THE TABLE ON THIS PAGE.
2. THE USE OF AIR MONITORS WILL BE REQUIRED AT STRUCTURES SPECIFIED ON THE PLAN SHEETS. A MINIMUM OF 2 MONITORS WILL BE REQUIRED AT EACH SPECIFIED BRIDGE TO MONITOR ABRASIVE BLASTING OPERATIONS AT THOSE SITES, SEE SPECIAL PROVISIONS FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".
3. THE "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES" PAY ITEMS SHALL BE APPLICABLE AS CALLED OUT IN THE PLAN NOTES FOR EACH INDIVIDUAL STRUCTURE.
4. THE SSPC-QP-1 AND SSPC-QP2 PAINTING CONTRACTOR CERTIFICATIONS WILL BE REQUIRED FOR THESE BRIDGES.
5. CARE SHALL BE TAKEN NOT TO DAMAGE RUBBER BEARING OR JOINT COMPONENTS DURING BLASTING AND CLEANING OPERATIONS. ANY DAMAGE TO THESE COMPONENTS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. UPON COMPLETION OF PAINTING OPERATIONS AT EACH LOCATION, THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM PIER OR ABUTMENT CAPS UPON WHICH PAINTING OPERATIONS TOOK PLACE. FINAL CLEANUP SHALL BE CONSIDERED INCIDENTAL TO THE PAINT PAY ITEM FOR THE RESPECTIVE LOCATION. THE ENGINEER SHALL HAVE THE RIGHT TO WITHHOLD PAYMENT UNTIL SATISFACTORY CLEANUP IS ACHIEVED.

COLOR SPECIFICATION TABLE	
COLOR SPECIFIED	COLOR SPECIFICATION
GRAY	MUNSELL 5B 7/1
GREEN	MUNSELL 7.5G 4/8

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6**

EXAMINED July 6th 20 15

 ENGINEER OF OPERATIONS

EXAMINED June 29 20 15

 ENGINEER OF PROJECT IMPLEMENTATION

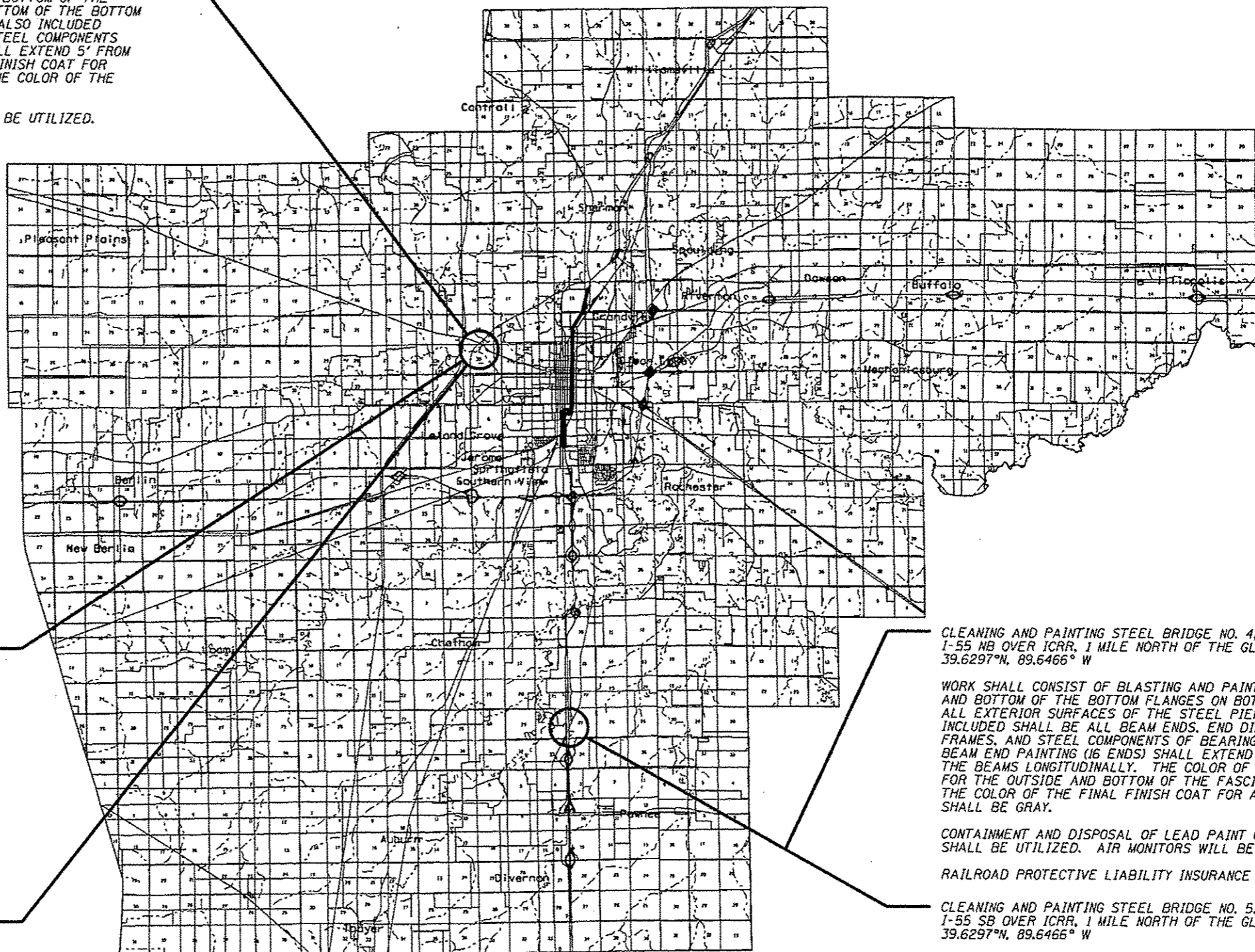
EXAMINED July 1 20 15

 ENGINEER OF PROGRAM DEVELOPMENT

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				100% STATE BRIDGE 0014 VARIOUS
67100100	MOBILIZATION	L SUM	1	1
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1
X7010410	SPEED DISPLAY TRAILER	CAL MO	2	2
20007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
20007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	1
20007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1	1
20007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1	1
20007105	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1	1
20007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM	1	1
20007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1	1
20010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
20010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1
20010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1	1
20010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1	1
20010505	CLEANING AND PAINTING STEEL BRIDGE NO. 5	L SUM	1	1
20010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM	1	1
20010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1	1
2004B065	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1

CLEANING AND PAINTING STEEL BRIDGE NO. 1, SN 084-0180
 IL 97 OVER SPRING CREEK, 0.1 MILES EAST OF IL 4 IN SPRINGFIELD, 39.8155°N, 89.7001° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS AND THE INNER HALF AND BOTTOM OF THE BOTTOM FLANGE ON BOTH BEAMS ADJACENT TO THE LONGITUDINAL DECK JOINT. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (28 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.



CLEANING AND PAINTING STEEL BRIDGE NO. 2, SN 084-0181
 IL 4 SB OVER SPRING CREEK, 0.3 MILES SOUTH OF
 IL 97 IN SPRINGFIELD, 39.8129°N, 89.7043° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (12 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.

CLEANING AND PAINTING STEEL BRIDGE NO. 3, SN 084-0182
 IL 4 NB OVER SPRING CREEK, 0.3 MILES SOUTH OF
 IL 97 IN SPRINGFIELD, 39.8129°N, 89.7043° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (12 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.

CLEANING AND PAINTING STEEL BRIDGE NO. 4, SN 084-0112
 I-55 NB OVER ICRR, 1 MILE NORTH OF THE GLENARM INTERCHANGE,
 39.6297°N, 89.6466° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS AND ALL EXTERIOR SURFACES OF THE STEEL PIER CAP AT PIER 2. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT PIERS 1 AND 3. BEAM END PAINTING (16 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.

RAILROAD PROTECTIVE LIABILITY INSURANCE WILL BE REQUIRED.

CLEANING AND PAINTING STEEL BRIDGE NO. 5, SN 084-0113
 I-55 SB OVER ICRR, 1 MILE NORTH OF THE GLENARM INTERCHANGE,
 39.6297°N, 89.6466° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS AND ALL EXTERIOR SURFACES OF THE STEEL PIER CAP AT PIER 2. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT PIERS 1 AND 3. BEAM END PAINTING (16 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.

RAILROAD PROTECTIVE LIABILITY INSURANCE WILL BE REQUIRED.

SANGAMON COUNTY

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SANGAMON COUNTY LOCATION MAP

FILE NAME *	USER NAME * dudmgjm	DESIGNED -	REVISED -
D:\OPERATIONS\Bridges\BridgOptions.CAD\72H88 - Sangamon & Scott County point 2016\p	DRAWN -	REVISIONS -	REVISIONS -
Default	PLOT SCALE * 100.0000 * / in	CHECKED -	REVISIONS -
	PLOT DATE * 7/7/2015	DATE -	REVISIONS -

SCALE: SHEET OF SHEETS STA. TO STA.

P.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 06	DB EDGE PAINTING 2016-1		17	3
* SANGAMON & SCOTT			CONTRACT NO. 72H88	
ILLINOIS FED. AID PROJECT				



SCOTT COUNTY

CLEANING AND PAINTING STEEL BRIDGE NO. 6, SN 086-0023
 I-72 EB OVER WALNUT CREEK, 1.2 MILES WEST OF THE SANGAMON COUNTY LINE,
 39.6812°N, 90.3952° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (14 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL NOT BE REQUIRED.

CLEANING AND PAINTING STEEL BRIDGE NO. 7, SN 086-0024
 I-72 WB OVER WALNUT CREEK, 1.2 MILES WEST OF THE SANGAMON COUNTY LINE,
 39.6812°N, 90.3952° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (14 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL NOT BE REQUIRED.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCOTT COUNTY LOCATION MAP

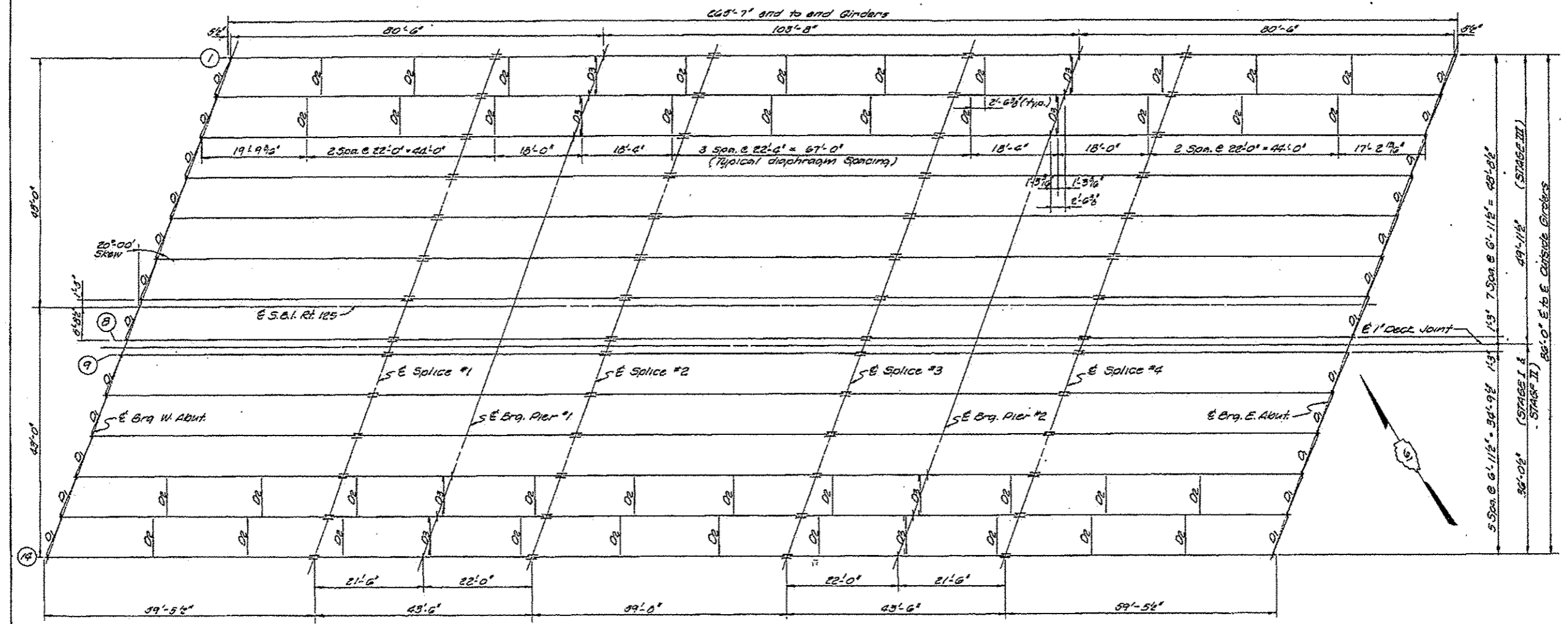
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	PLT SCALE * 100.0000 / 1 in.	DATE -	REVISED -
Default	PLT DATE * 7/7/2015		

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 06 BDGE PAINTING 2016-1	-	-	17	4
* SANGAMON & SCOTT			CONTRACT NO. 72HBB	
[ILLINOIS] FED. AID PROJECT				

Sheet No. 12
of 19 Sheets

DATE	REVISION	COUNTY	TOTAL SHEETS	SHEET NO.
04-07	5R-1	SANGAMON	10	58
	2R-1			



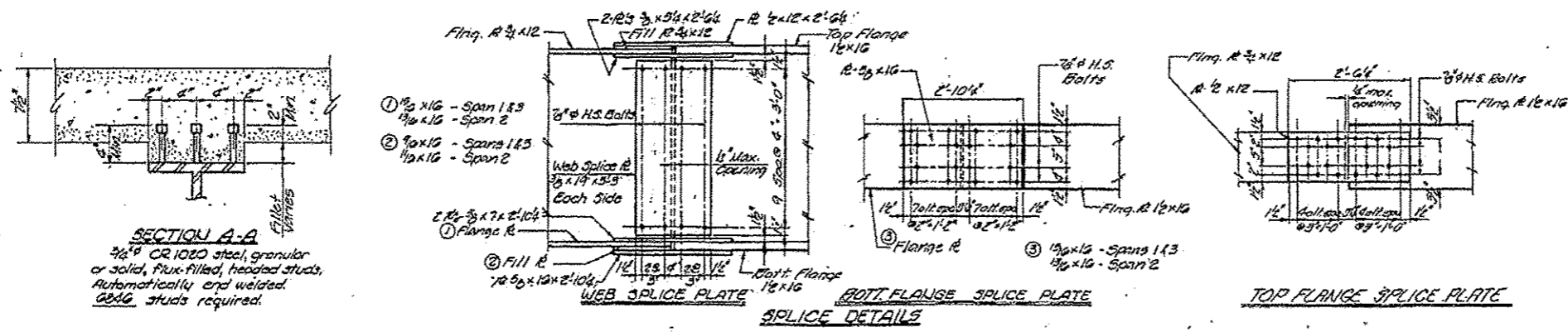
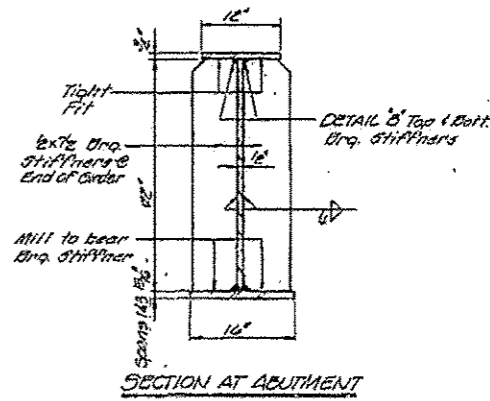
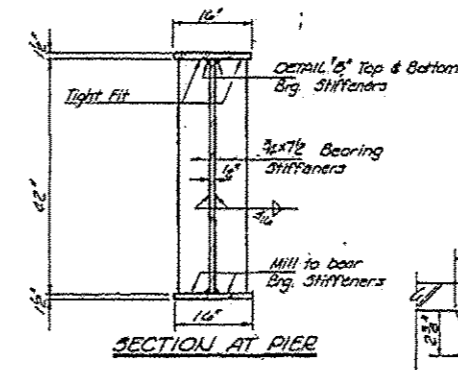
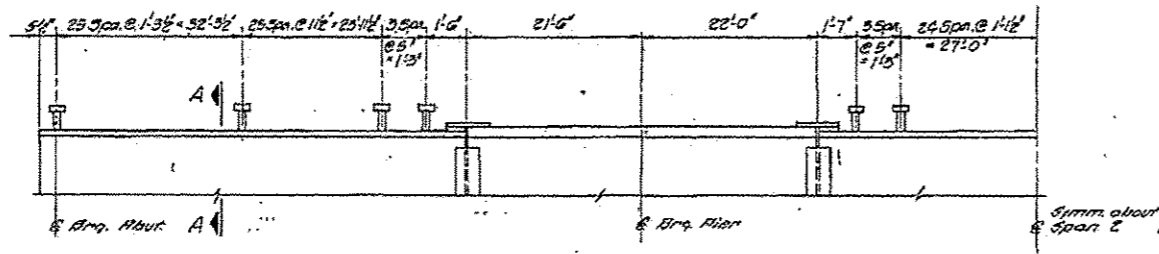
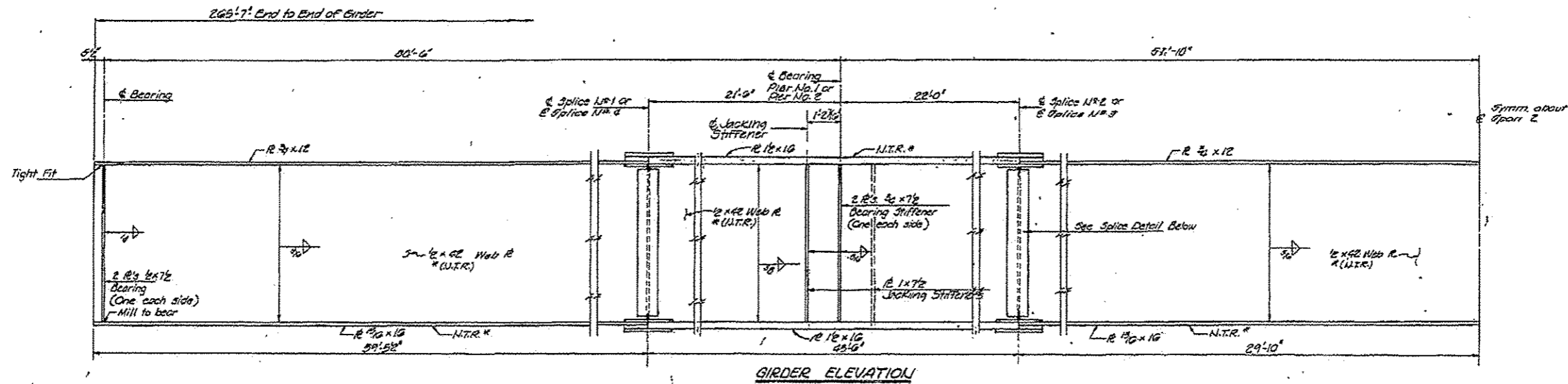
FRAMING PLAN
 All end diaphragms to be W16x40 - D1
 All diaphragms at Piers to be W53x116 - D2
 All other diaphragms to be W16x55 - D2
 See Sheet No. 14 for Top of Web Elevations.

REVISIONS			DATE	BY	CHKD.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

STRUCTURAL STEEL FRAMING
 STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 S.B. 125 OVER SPRING CREEK
 P.A. 67 SECTION 5(B-1) PROJ.
 STA. 125+00 (S.B. 125) SANGAMON CO.
 HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 OSCEOLA, ILLINOIS

Sheet No. 13
of 19 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-67	S.R.-1	SANGAMON	110	59
CONTRACT NO.	SANGAMON PROJECT			



Note: The main load carrying member components subject to the Supplemental Requirements for Notch Toughness (Spec 2) are the flanges, webs and splice plates of the steel girders.

STRUCTURAL STEEL				
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				
S.B.I. 125 - OVER SPRING CREEK SECTION SUB-1) PROJ. STA. 125+00 (S.B.I. 125) SANGAMON CO.				
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS				
REVISIONS	NO.	DATE	BY	CHKD.
1				
2				
3				
4				
5				
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7				
8				
9				
10				

MOMENT TABLE - Composite & Span
(Composite in Positive Moment Areas only)

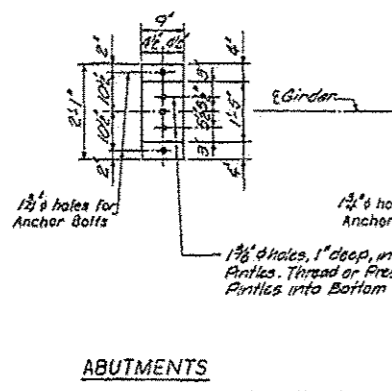
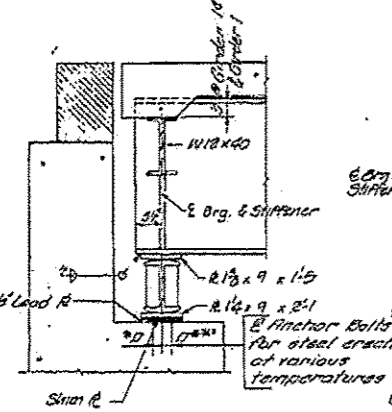
INTERIOR GIRDER MOMENT TABLE			
Span (ft)	Moment	Span (ft)	Moment
15.740	25,803	12.985	
36.315		55,672	
781	1147	655	
1007		919	
0.850	0.850	0.850	
319	-884	201	
5.3	92	5.2	
0.380	0.380	0.380	
143	-255	165	
616	-352	645	
150	-127	190	
909	-462	490	
106	49	126	
161	18.1	176	
522		48.0	

REACTION TABLE

INTERIOR GIRDER REACTION TABLE			
Span (ft)	Reaction	Span (ft)	Reaction
35.1	129.7		
39.6	62.1		
5.1	13.9		
61.8	200.7		

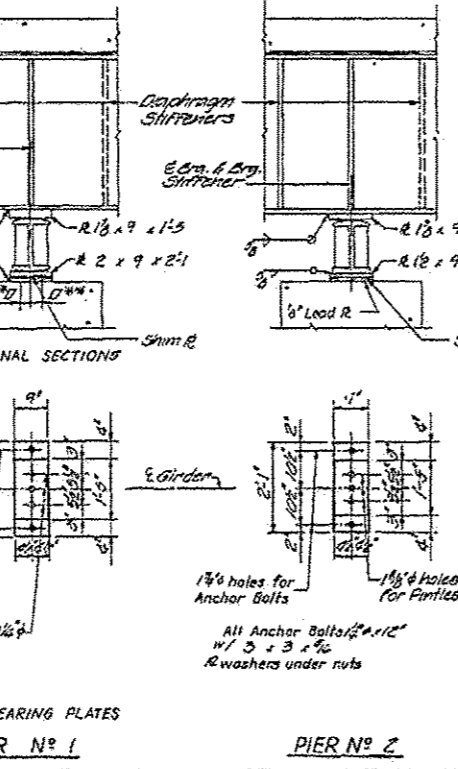
"Y" VALUES	
W. Abut.	0
Pier No. 1	780
Pier No. 2	780
E. Abut.	510

TOP RE BEVEL DETAILS



NOTES ON SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

- a) D¹ (Side of Brq. away from fixed Brq.)
D² (Side of Brq. toward fixed Brq.)
D¹ & D² are each 100' of expansion for every 15' fall below normal temperature of 50° F.
- b) After girders have been erected and dimensions D¹ or D² determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

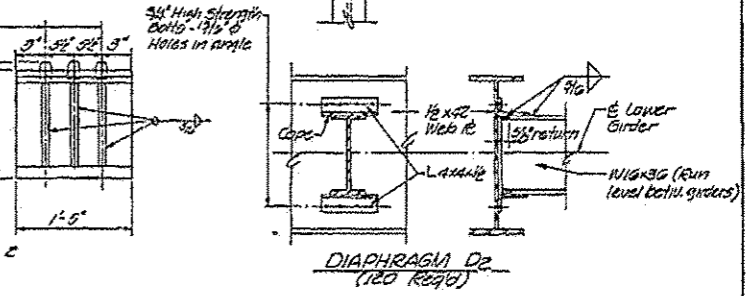
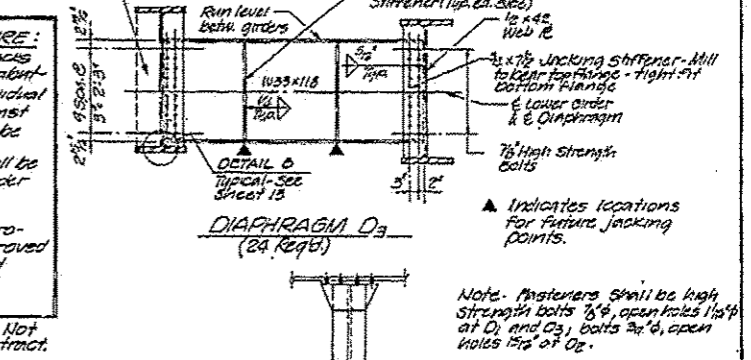
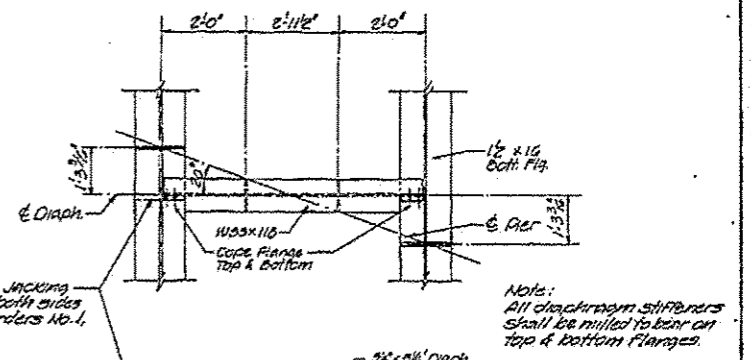
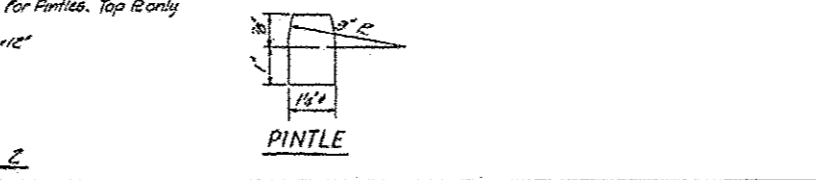
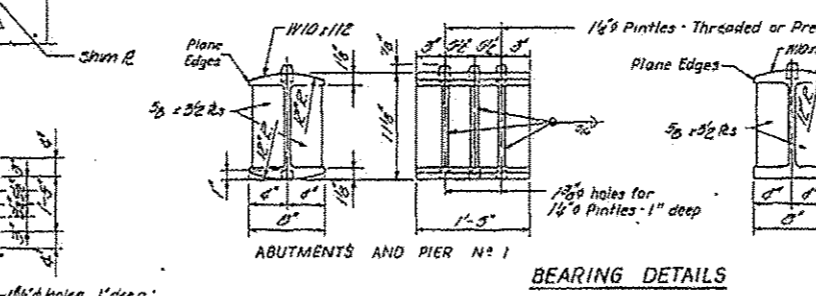
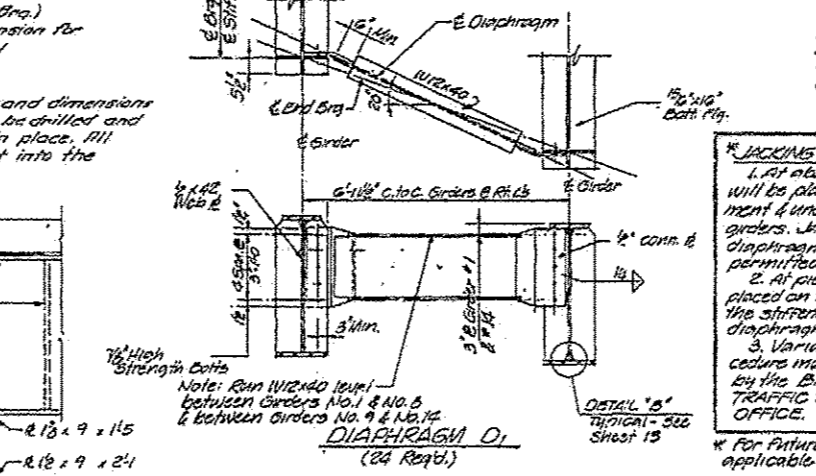


TOP OF WEB ELEVATION *

LOCATION	Brn. 1	Brn. 2	Brn. 3	Brn. 4	Brn. 5	Brn. 6	Brn. 7	Brn. 8	Brn. 9	Brn. 10	Brn. 11	Brn. 12	Brn. 13	Brn. 14
E. Brq. W. Abut.	546.007	546.072	546.138	546.203	546.270	546.337	546.405	546.472	546.540	546.608	546.676	546.744	546.812	546.880
E. Girders "1"	547.051	547.126	547.201	547.276	547.351	547.426	547.501	547.576	547.651	547.726	547.801	547.876	547.951	548.026
E. Brq. Pier "1"	547.609	547.684	547.759	547.834	547.909	547.984	548.059	548.134	548.209	548.284	548.359	548.434	548.509	548.584
E. Girders "2"	548.143	548.218	548.293	548.368	548.443	548.518	548.593	548.668	548.743	548.818	548.893	548.968	549.043	549.118
E. Brq. Pier "2"	549.649	549.724	549.799	549.874	549.949	550.024	550.099	550.174	550.249	550.324	550.399	550.474	550.549	550.624
E. Girders "3"	550.829	550.904	550.979	551.054	551.129	551.204	551.279	551.354	551.429	551.504	551.579	551.654	551.729	551.804
E. Brq. E. Abut.	552.300	552.375	552.450	552.525	552.600	552.675	552.750	552.825	552.900	552.975	553.050	553.125	553.200	553.275

SHIM PLATE THICKNESS "t"								
LOCATION	Brn. 1	Brn. 2	Brn. 3	Brn. 4	Brn. 5	Brn. 6	Brn. 7	Brn. 8
W. Abut.	0	0	0	0	0	0	0	0
Pier "1"	0	0	0	0	0	0	0	0
Pier "2"	0	0	0	0	0	0	0	0
E. Abut.	0	0	0	0	0	0	0	0

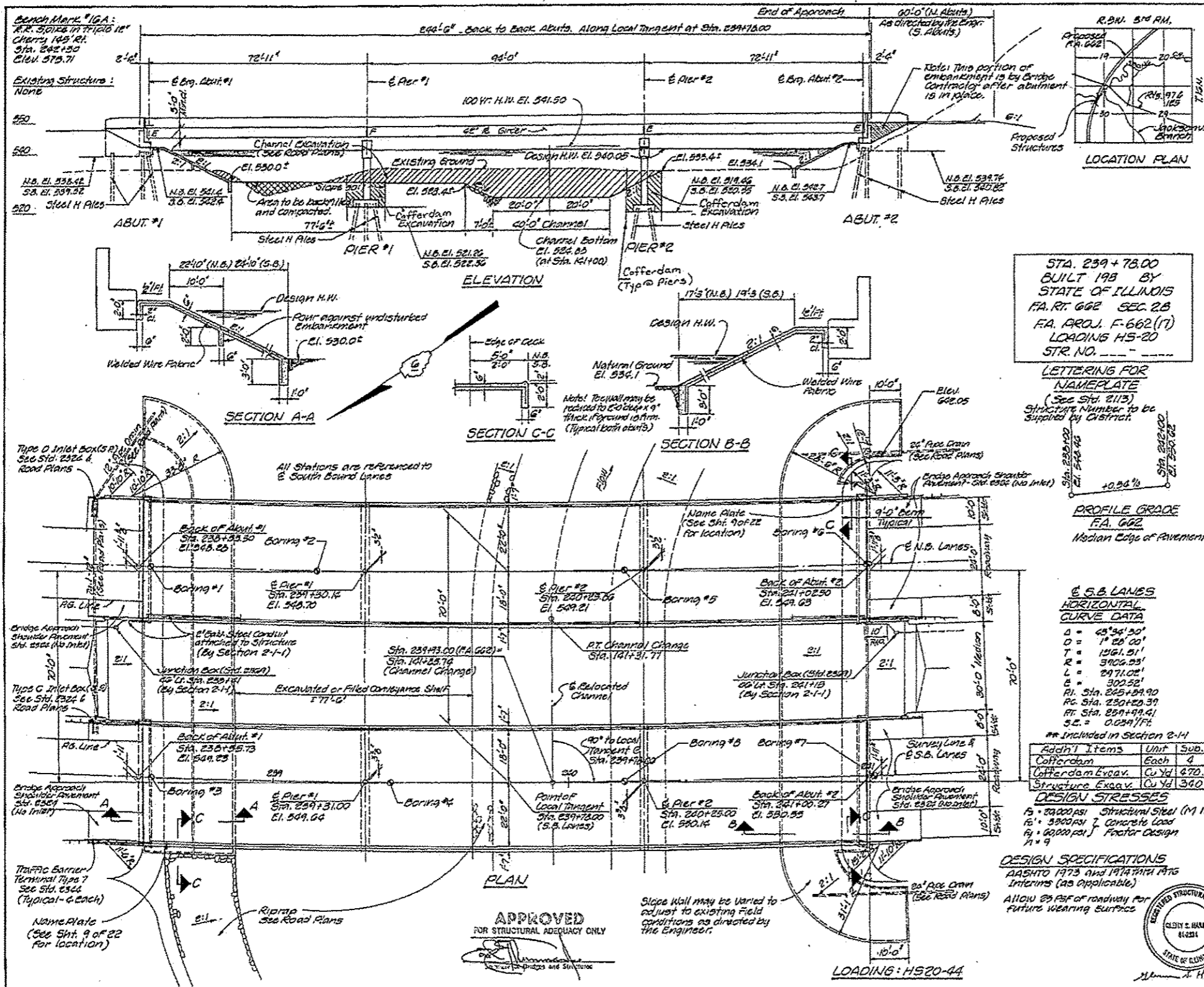
* For Fabrication only
ABUT. R's: 4"x9"x2.1"
PIER R's: 4"x9"x2.1"
Note: No Shim R's required at Girders 19 thru 14



STRUCTURAL STEEL DETAILS			
REVISIONS	DATE	BY	CHKD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
S.B. 1725 OVER SPRING CREEK
P.A. 67 SECTION 5(B-1) PROJ.
S.A. 755-HR-00 (S.B. 1725) SANGAMON CO.
HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
DECATUR, ILLINOIS

DESIGNED BY: JCH 10-77
CHECKED BY: BSH 10-77
PROJECT NO: 2250-20
SHEET NO: 60



Sheet No. 1 of 22 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-062	2B	SANGAMON	71	27

GENERAL NOTES

See Proposal for Boring Data.
 Fasteners shall be high strength bolts. Bolts 3/8", open holes 1/2", unless otherwise noted.
 Calculated weight of structural steel = 522,300 pounds.
 The basic lead silica chromate paint system shall be used for shop and field painting of structural steel, except where noted.
 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.
 Slope wall shall be reinforced with welded wire fabric 6"x6" W4.0 x W4.0 weighing 50 lbs. per 100 sq. ft.
 The Contractor shall drive four Steel Test Piles HP10 x 42 in permanent locations, one each of Abutment #1 (N.B.), Pier #1 (S.B.), Pier #2 (N.B.) and Abutment #2 (S.B.) as directed by the Engineer before ordering the remainder of the piles.
 Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.
 The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
 The concrete rail section above the mandatory construction joint at the top of the abutment shall be constructed of Class X concrete, except the aggregates shall conform to the requirements of Missouri Concrete.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2 inch adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates.
 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 girders.
 For Channel Excavation see Road Plans.

STA. 259 + 78.00
 BUILT 198 BY
 STATE OF ILLINOIS
 FA. RT. 662 SEC. 2B
 FA. PROJ. F-662 (1)
 LOADINGS HS-20
 STR. NO. ---

LETTERING FOR NAMEPLATE
 (See Sht. 2113)
 Structure Number to be supplied by District.

PROFILE GRADE
 FA. 662
 Median Edge of Pavement

6 S.B. LANES

HORIZONTAL CURVE DATA

Δ = 45° 34' 50"
D = 1° 25' 00"
T = 1561.51'
R = 3706.53'
L = 2971.02'
E = 302.52'
PI Sta. 245 + 04.90
PC Sta. 250 + 20.39
PT Sta. 259 + 49.41
S.C. = 0.02917%

** Included in Section 2-14

Item	Unit	Sub.	Total
Additional Items			
Cofferdam	Each	4	4
Cofferdam Excav.	Cu Yd	470	470
Structure Excav.	Cu Yd	360	360

DESIGN STRESSES

As 1800 PSI Structural Steel (M183)
 As 3000 PSI Concrete (C20)
 As 60000 PSI Floor Design

DESIGN SPECIFICATIONS
 AASHTO 1973 and 1974 Third Ed.
 Interims (as applicable)
 Allow 2% P.F. of roadway for future wearing surface

WATERWAY INFORMATION

Drainage Area	959 Sq. Mi.
Character	Cultivated, wooded
Required Opening (Below 50 Yr. H.W.)	2100 Sq. Ft.
Present Opening	None
Proposed Opening (Below 50 Yr. H.W.)	2115 Sq. Ft.
Ordinary Water	525.6'
Low Water	526.7'
Design Discharge Q ₅₀	8800 CFS
Created Head	0.15 Ft.
Design Discharge Q ₁₀₀	10,140 CFS
Created Head	0.20 Ft.

* Flood of Record Discharge - 6780 CFS at Gauging Station 0.100 mi
 * Gauging Station is located approx. 1.000' downstream.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
Protective Coat	Sq. Yd.	2569	---	2569
Class X Concrete	Cu. Yd.	618.3	489.0	1107.3
Structural Steel	Lump Sum	---	---	---
Steel Shear Connectors	Each	5724	---	5724
Reinforcement Bars	Pound	---	38,320	38,320
Reinforcement Bars (Welded Control)	Pound	163,190	---	163,190
Steel Piles HP10 x 42	Lin. Ft.	---	3937	3937
Test Pile Steel HP10 x 42	Each	---	4	4
Name Plates	Each	2	---	2
Slope Wall 6"	Sq. Yd.	---	1029	1029
Negative Expansion Joint 2"	Lin. Ft.	173	---	173
Galvanized Steel Conduit attached to Structure - 2'	Lin. Ft.	281	---	281
Drainage Steel Piles	Lin. Ft.	---	3437	3437
Floor Drains	Each	76	---	76

GENERAL PLAN AND ELEVATION

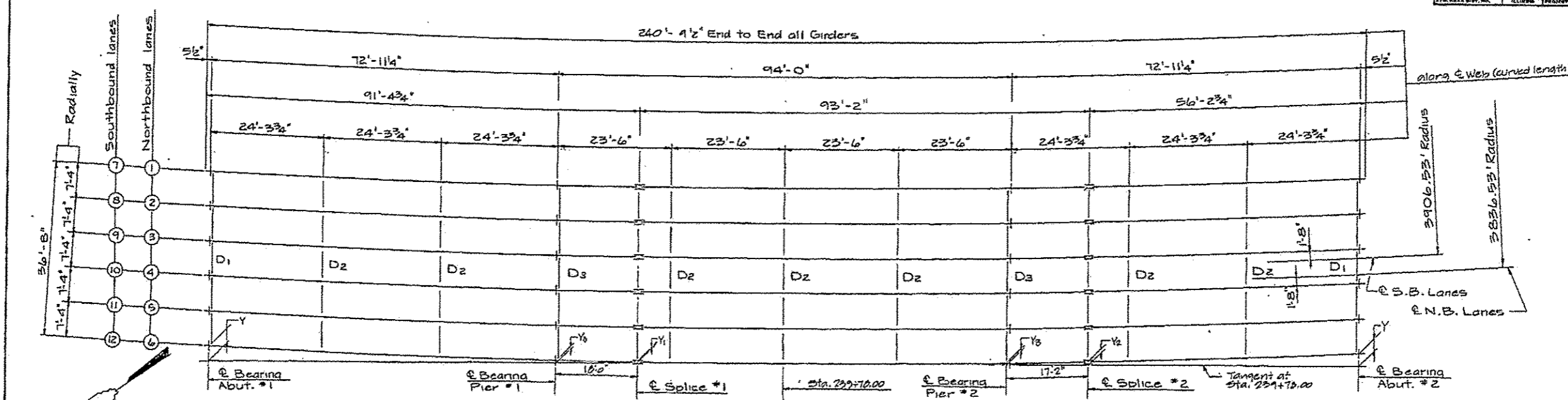
REVISIONS	DATE	BY	REVISION
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2			
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

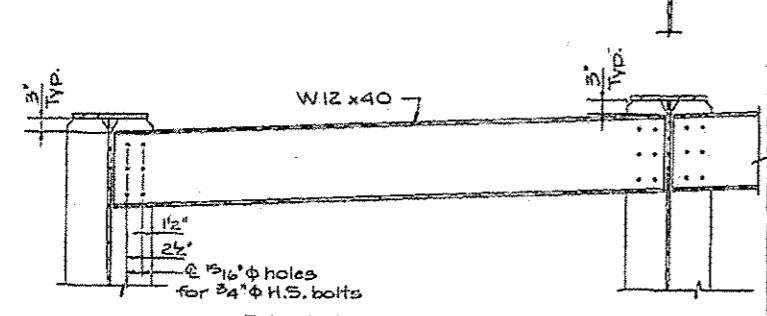
FA. 662 OVER SPAIN'S CREEK
 FA. PROJ. F-662 SECTION 2B
 STA. 259+78.00 (FA. 662) SANGAMON CO.

HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

NO.	SECTION	QUANTITY	TOTAL QUANTITY	DATE
24-02	20	SANGAMON	71	37

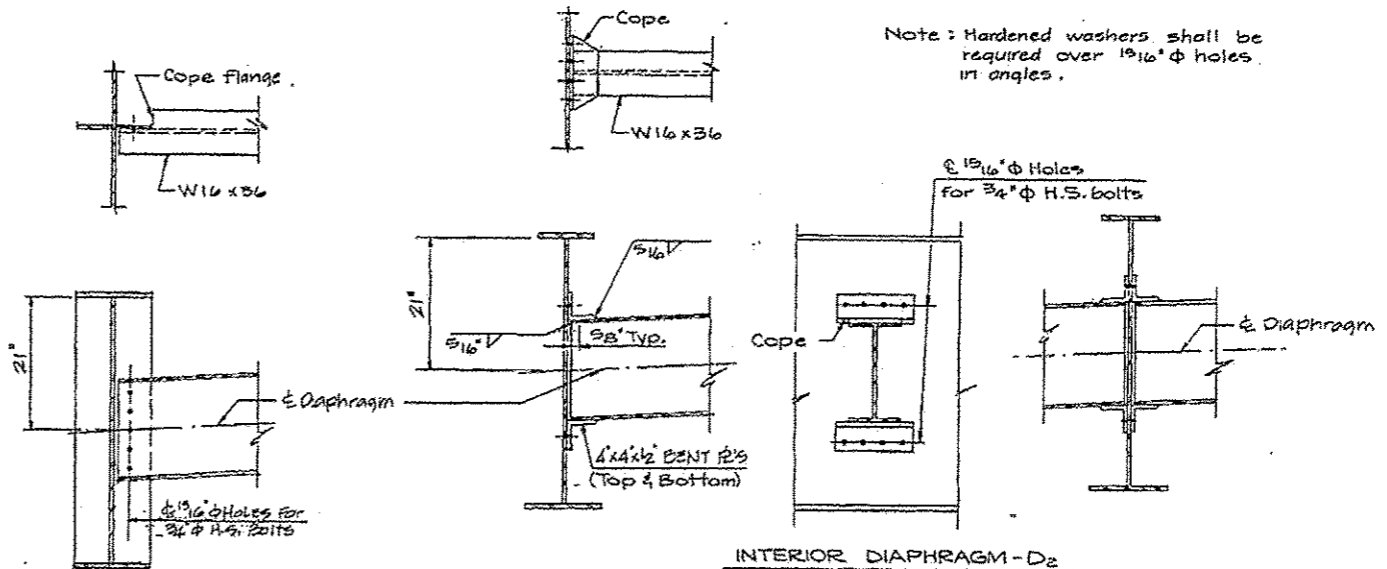


FRAMING PLAN
 All end diaphragms to be W12x40 (D1)
 All interior diaphragms to be W16x36 (D2)
 All Pier diaphragms to be W16x36 (D3)



Y' OFFSETS

GIRDER NO.	Y	Y1	Y2	Y3
1	1.020	0.110	0.540	0.220
2	1.001	0.110	0.535	0.220
3	1.077	0.110	0.597	0.205
4	1.075	0.110	0.596	0.200
5	1.050	0.109	0.595	0.207
6	1.025	0.109	0.594	0.207
7	1.040	0.108	0.594	0.204
8	1.045	0.108	0.593	0.203
9	1.061	0.108	0.597	0.203
10	1.030	0.107	0.595	0.202
11	1.035	0.107	0.595	0.202
12	1.051	0.107	0.594	0.201



TOP OF WEB ELEVATIONS*

GIRDER NO.	RADIUS	ABUT. 1	PIER 1	SPLICE 1	PIER 2	SPLICE 2	ABUT. 2
1	3816.20'	546.66	547.02	547.16	547.58	547.60	547.98
2	3823.53'	546.94	547.35	547.45	547.86	547.96	548.27
3	3830.86'	547.23	547.65	547.75	548.15	548.25	548.55
4	3838.20'	547.52	548.02	548.14	548.53	548.53	548.84
5	3845.53'	547.81	548.21	548.31	548.72	548.82	549.12
6	3852.86'	548.09	548.49	548.59	549.01	549.10	549.41
7	3860.20'	548.38	548.78	548.88	549.30	549.39	549.70
8	3867.53'	548.67	549.07	549.17	549.58	549.68	550.00
9	3874.86'	548.96	549.36	549.46	549.87	549.97	550.29
10	3882.20'	549.25	549.65	549.75	550.16	550.26	550.57
11	3889.53'	549.54	549.94	550.04	550.45	550.55	550.86
12	3896.86'	549.83	550.23	550.33	550.74	550.84	551.15

* For Fabrication only

FRAMING PLAN AND DIAPHRAGM DETAILS

REVISIONS	DATE	BY	CHKD	APP'D
1				
2				
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9				
10				
11				
12				

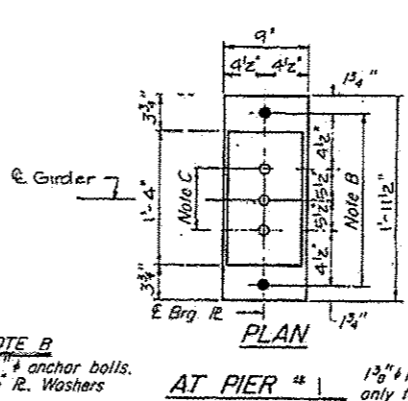
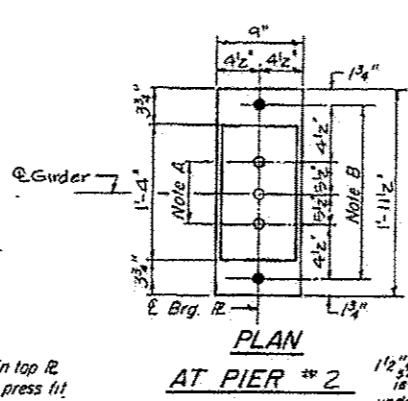
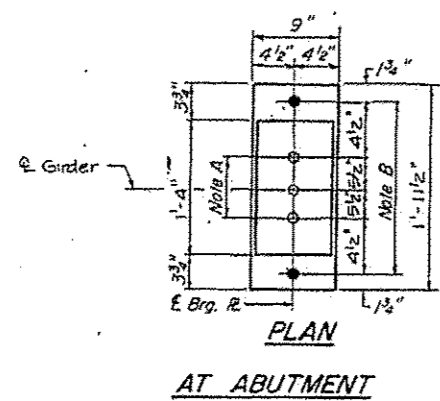
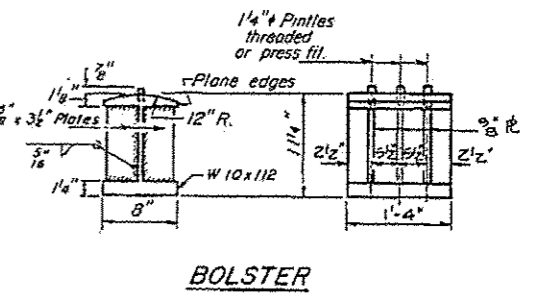
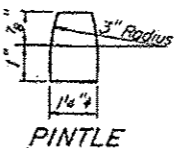
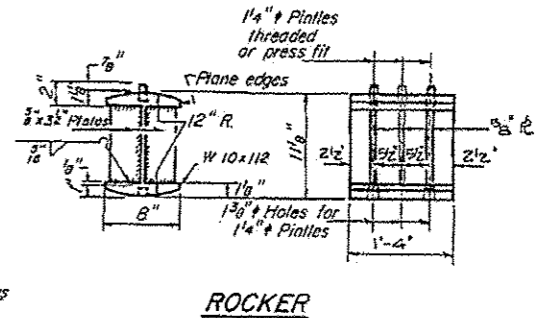
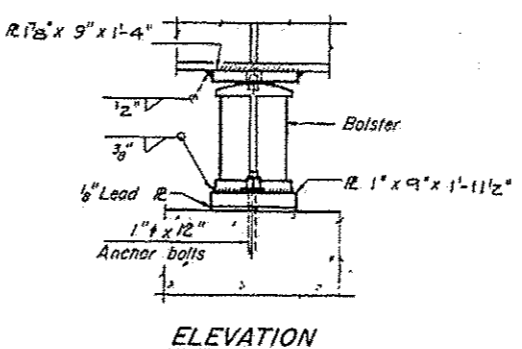
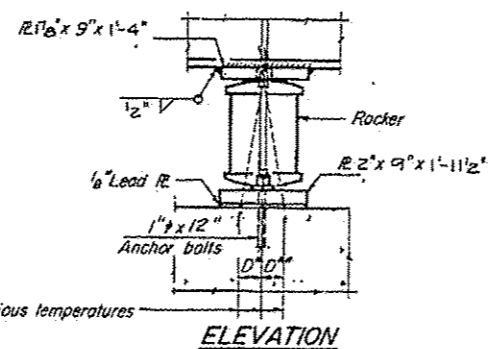
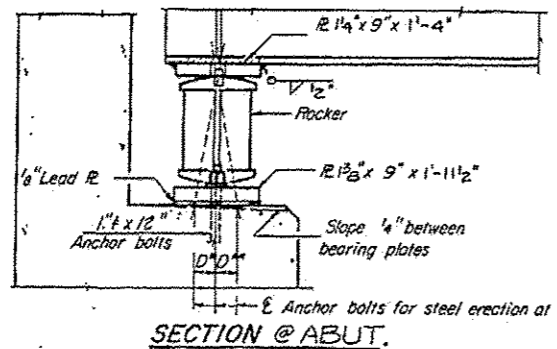
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

F.A. 002 OVER SPRING CREEK
 F.A. 008 SECTION 2.0 PROJ.
 STA. 239+76.00 (F.A. 002) SANGAMON CO.

HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

DESIGNED BY: DATE: 2-16-10
 CHECKED BY: DATE: 2-16-10
 DRAWN BY: DATE: 2-16-10
 SHEET NO.: 2250-10

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EA-002	2B	SANGAMON	71	59
FED. ROAD DIST. NO.	ALTITUDE	PROJECT		



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

NOTE B
 1 1/2" Holes for 1" anchor bolts. 16 x 2 1/2 x 2 1/2 R. Washers under nut.

NOTE C
 1 3/8" Holes 1" deep in top R only for 1 1/4" pintles

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

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

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing I_s total.
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing I_s total.
 VR is the maximum $\frac{1}{4}$ " impact shear range in span used to determine shear connector spacing.

BEARING ASSEMBLY DETAILS

DESIGN DATA

	0.4 SPAN 1	PIER	0.5 SPAN 2
I_s (in ⁴)	11,581	19,444	11,962
I_c (in ⁴)	29,937	—	31,215
S_s (in ³)	554	894	584
S_c (in ³)	781	—	820
R (k/ft)	.883	.883	.883
M_g (ft.k)	274	696	271
I_s -non-comp. (ksi)	5.94	9.34	5.56
SQ (ft.k)	.302	.302	.302
M_{sq} (ft.k)	115	193	140
M_u (ft.k)	581	459	631
M_{imp} (ft.k)	139	110	151
TOTAL (ft.k)	835	762	922
I_s -comp. (ksi)	12.83	10.23	13.49
I_s total (ksi)	18.77	19.57	19.07
VR (k)	54.0		

	ABUT.	PIER 1	PIER 2
R_g (k)	30.3	111.6	111.6
R_c (k)	41.0	62.6	62.6
Imp. (k)	9.9	15.0	15.0
R_{total} (k)	81.2	189.2	189.2

REVISIONS		BEARING DETAILS	
NO.	DATE	DESCRIPTION	BY
1	04-18-13	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CSH/A-48
2		F.A. 002 OVER SPRING CREEK	
3		F.A. 002 SECTION 2B PROJ.	
4		STA. 284+00 (F.A. 002) SANGAMON CO.	
5		PROJECT NO. 2250-10	
6		HOMER L. CHASTAIN & ASSOCIATES	
7		CONSULTING ENGINEERS	
8		DECATUR, ILLINOIS	

Reproduced from I.O.P.T. Base Sheet 1-3-5 6-1-70

B.M. #20 R.D. spike in T.P. Lt. 156' of Sta. 368+57 Elev. 598.76
 Existing Structures: Structure on S.D. Ete. 126 (U.S.G.G.) at
 Sta. 372+52.60. Built as Sec. 110X-3VB-VF(2) in 1954 to be re-
 moved by paving contractor after new structures are
 constructed. Existing I.B.M.s. to be salvaged.
 Structure on F.A. Ete. 5 (U.S.G.G.) at Sta. 372+52.60 Built
 as Sec. 110X-3VB-VF(3) in 1955 will remain in place and
 used as frontage road.

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

Station 368+33.95
 Built 197 By
 State of Illinois
 F.A.I. Ete. 55 Sec. 84-4-3VB
 FA PROJ. 1-55-3(62)
 Loading HS20(ALT)

DATE	BY	REVISION	TOTAL SHEETS	SHEET NO.
1-1-55	J.A.S.	SANGAMON	261	54
31 SHEETS				

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
 Field connections shall be bolted using high strength bolts. Bolts 3/8", open holes 1/8" unless otherwise noted.
 Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 sq. ft.
 The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.
 The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments, & Piers.
 The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.
 Field welding of Construction accessories will not be permitted to the bottom flange of longitudinal beam or transverse supporting Box Girder nor to the top flange of Box Girder for a distance of 4'-0" each side from column supports.
 The Contractor shall drive 6" steel lead piles one each in the permanent locations (See Table), as directed by the Engineer before ordering the remainder of piles.
 Bars indicated thus 55x7-#5 indicates 55 lines with 7 lengths per line.
 For Sec. @ Abut. & Substructural layout see sheet # 23
 The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.
 The interior surfaces of the supporting girder shall be given 2 shop coats of paint, and need not be field painted.

NAME PLATE
 See Std. 2113-1

TEST PILE LOCATIONS

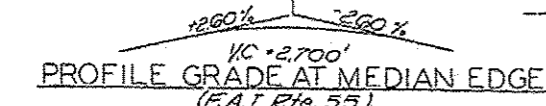
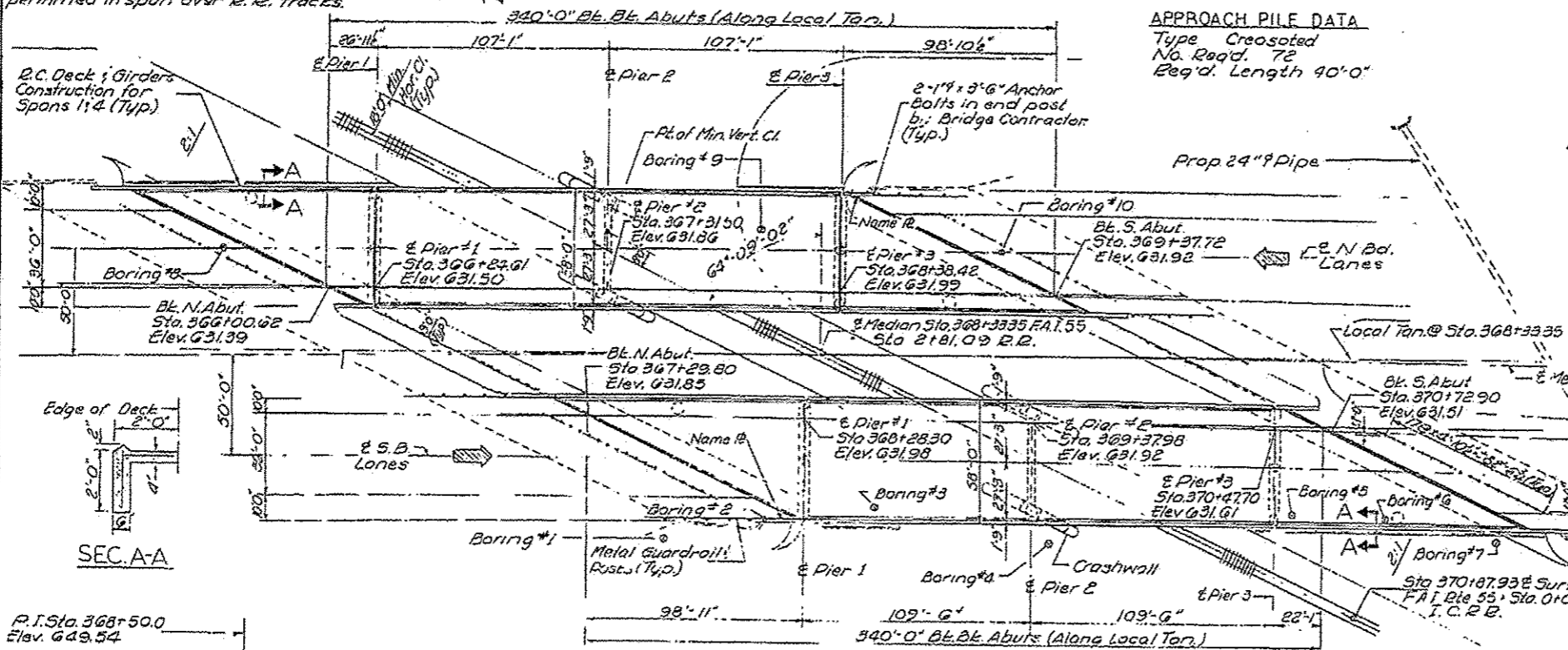
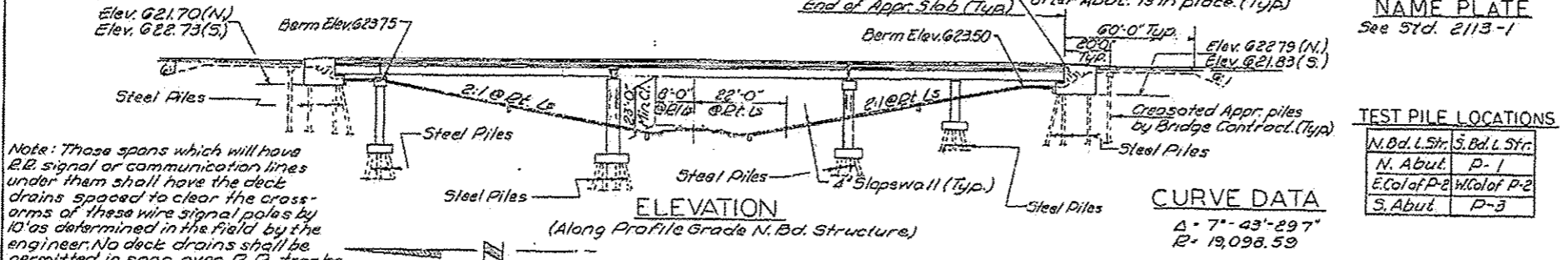
N. Bd. L. Str.	S. Bd. L. Str.
N. Abut.	P-1
E. Col. of P-2	W. Col. of P-2
S. Abut.	P-3

CURVE DATA

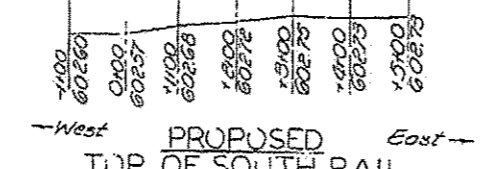
$\Delta = 7^{\circ} 43' 29.7''$
 $R = 19,098.59$

APPROACH PILE DATA

Type: Creosoted
 No. Req'd: 72
 Req'd. Length: 90'-0"



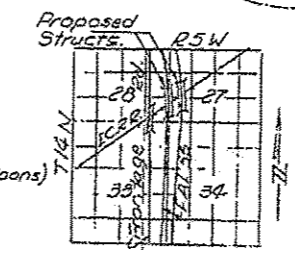
DESIGNED	W.A. HARRIS	EXAMINED	R.V. HARRIS
CHECKED	Harsh Singh	PASSED	
DRAWN	F. Mercado	APPROVED	
CHECKED	H.S.		



PLAN

DESIGN STRESSES

$f_c = 1,200$ psi. (Deck Slab)
 $f_c = 1,400$ psi. (Curb, Par. Sub. & Girders in Appr Spans)
 $f_s = 20,000$ psi. (Reinforcement)
 $f_s = 20,000$ psi. (Structure)
 $V_c = 75$ psi. @ 10'
 Allowable & Defl. L/1200 (Composite)
 Allow 25# per Sq Ft. for future W.S.
 LOADING HS20-44(ALT)



LOCATION PLAN

TOTAL BILL OF MATERIAL

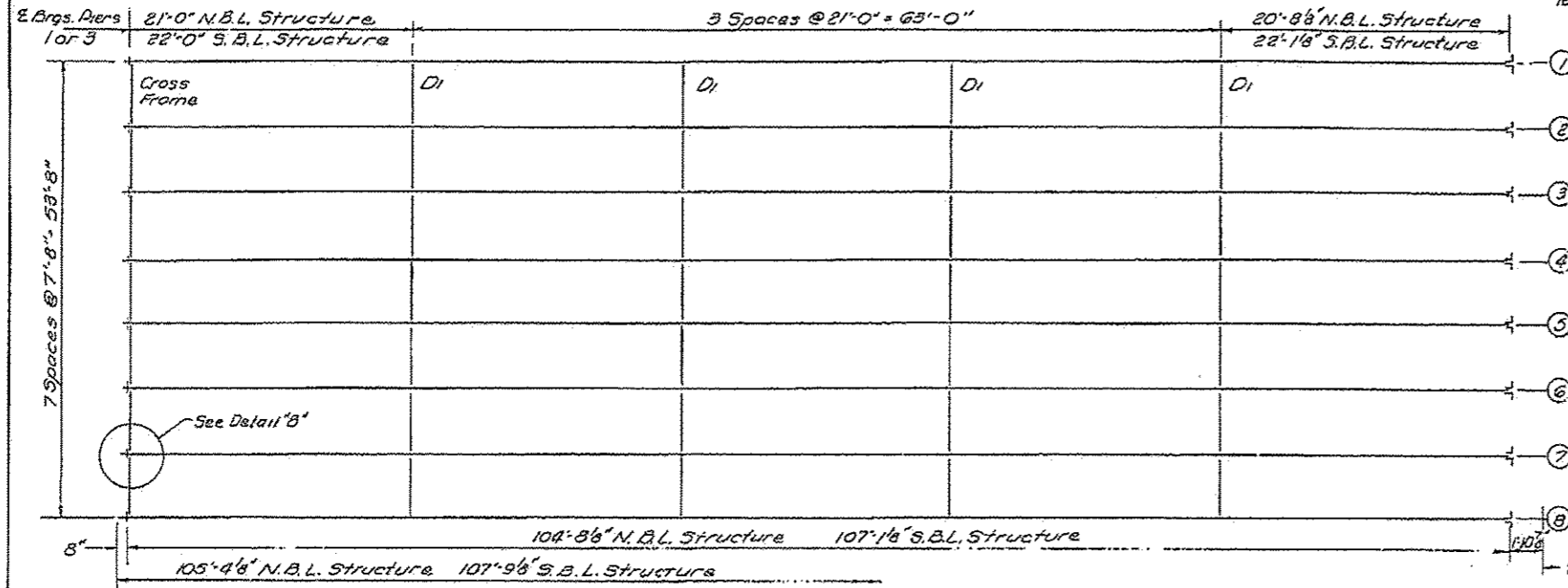
Item	Unit	Super	Sub	Total
Cl. A Excav. for Structs.	Cu.Yds.			180
Protective Coat	Sq.Yds.	5915		5915
Class X Concrete	Cu.Yds.	17271	10913	28184
Structural Steel	Lump Sum			1
Stud Shear Connectors	Each	6240		6240
Aluminum Railing	Lin. Ft.	1323		1323
Reinforcement Bars	Lbs.	408960	112970	521930
Creosoted Piles (738)	Lin. Ft.			2880
Steel Piles (12BP53)	Lin. Ft.		6398	6398
Steel Piles (10BP42)	Lin. Ft.		5288	5288
Test Piles Steel (12BP53)	Each		2	2
Test Piles Steel (10BP42)	Each		4	4
Name Plates	Each		2	2
Slope Walls (4')	Sq.Yds.			5220
Preformed Jt. Sealer	Lin. Ft.		232	232

Calculated Plan Weight of Structural Steel = 102,160 Lbs.
 *Including Excavation for Slope wall.

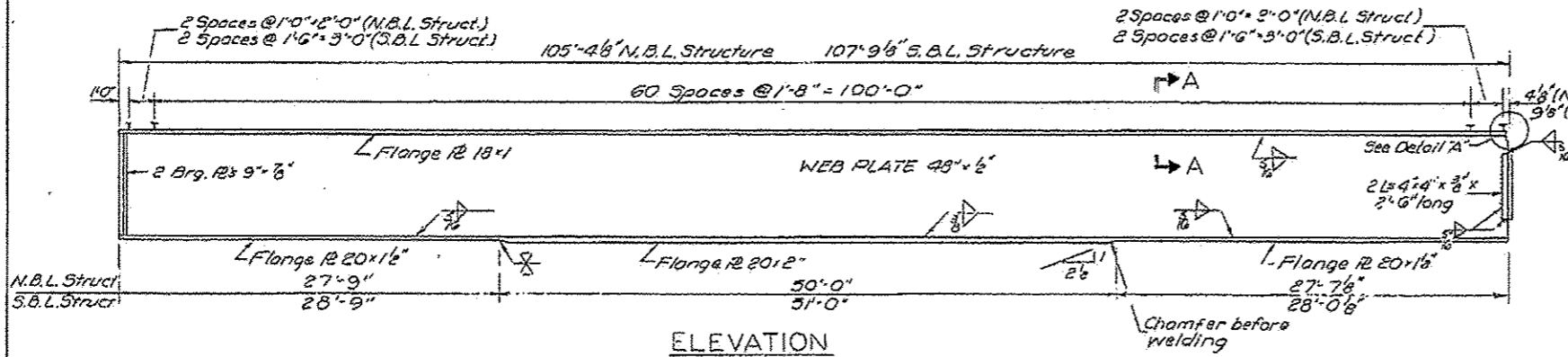
PROJ. 1-55-3(62)84
 GENERAL PLAN & ELEVATION
 F.A.I. RTE. 55 - N.E.R. ICHING GLEN ARM
 F.A.I. RTE. 55 SEC. 84-4-3VB
 SANGAMON COUNTY
 STA. 368+33.95

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

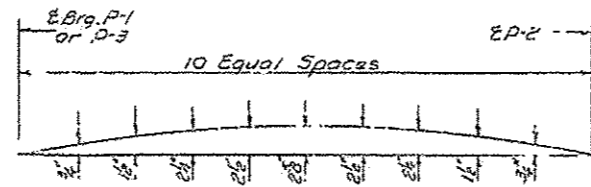
SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
84-4-3	3VB	SANGAMON	261	67
31 SHEETS				



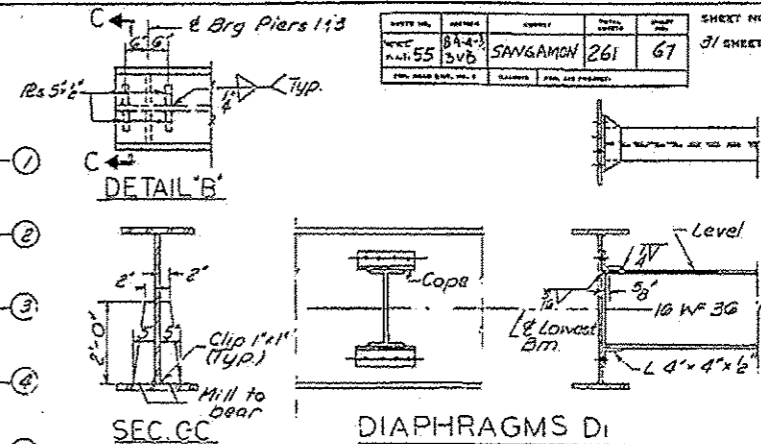
PLAN



ELEVATION



CAMBER DIAGRAM



PROPERTIES AT CENTERLINE OF BEAM

Steel Section	
I _s	36,600 in ⁴
S _{Ts}	1,150.2 in ³
S _{As}	1,908.2 in ³
Composite Section	
I _c	84,908.9 in ⁴
S _{Tc}	3,453.4 in ³
S _{Ac}	2,396.5 in ³

TABLE OF MOMENTS AND SHEARS - INTERIOR BEAMS

Steel Section	
D.L.	Max. Moment 1580'K
Composite Section	
S.D.L.	430'K
L.L.	1152'K
Imp.	252'K
Total	1836'K
Shear with Impact	
Supp. 1/4 Point	Point
+L.L.	359k 40.6 25.3k
-L.L.	0 10.1 25.3k
Total	55.9k 50.7 50.6k

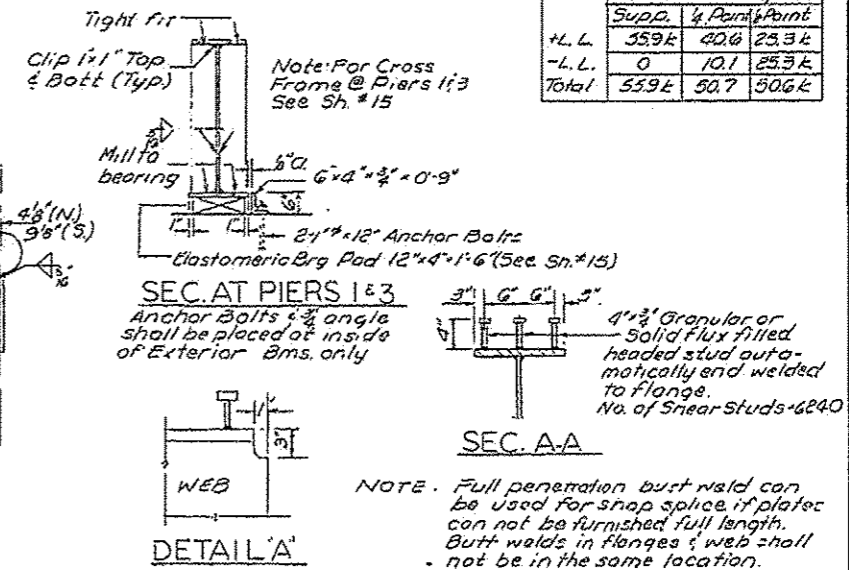
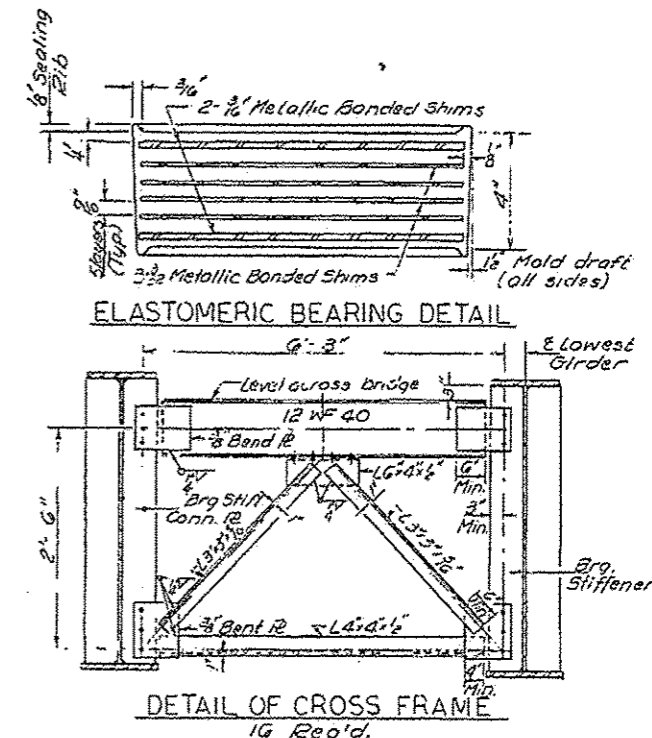
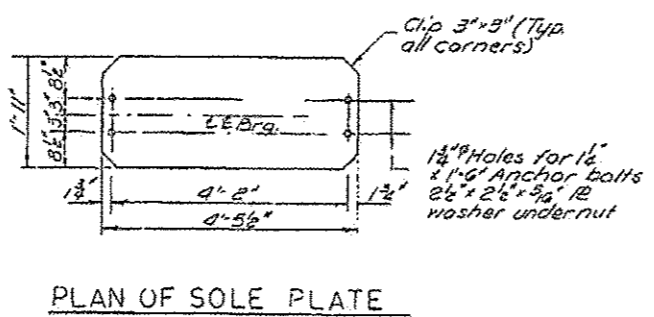
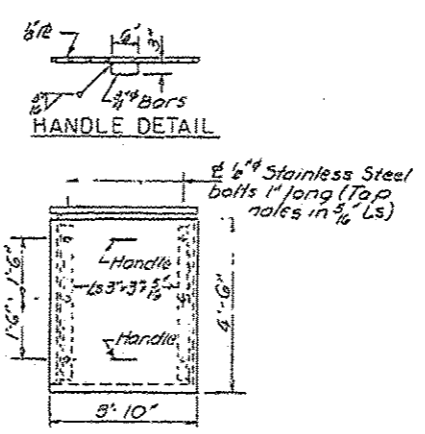
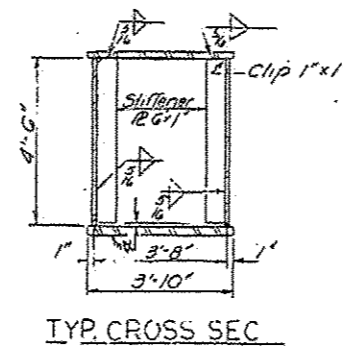
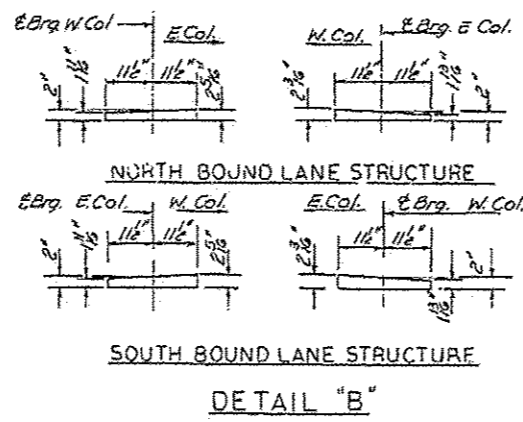
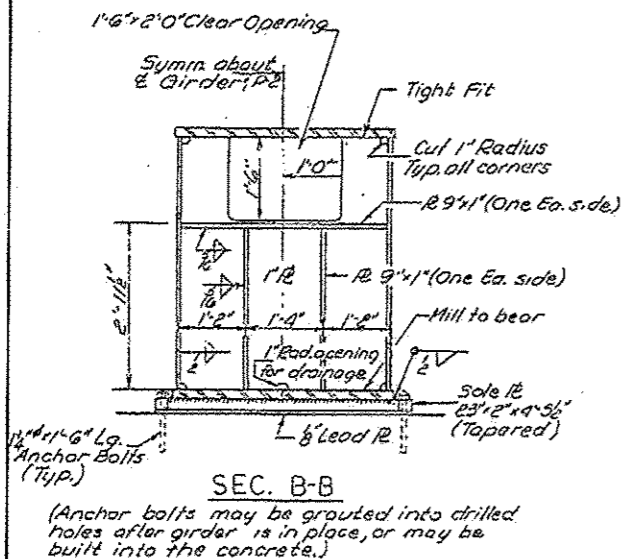
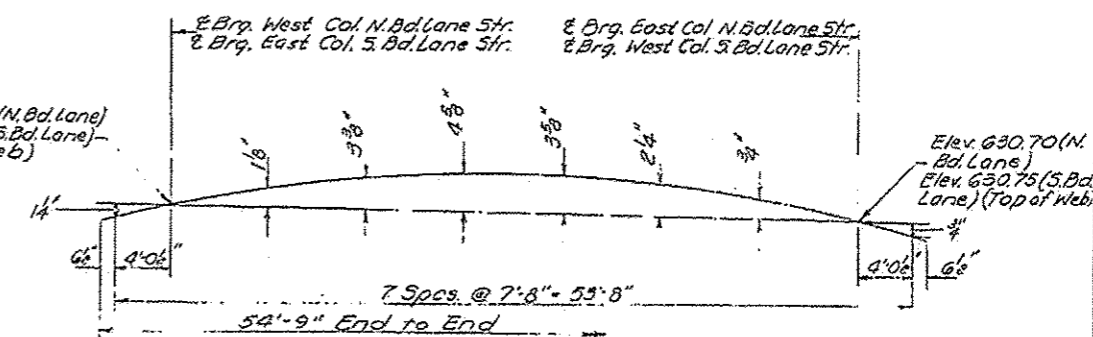
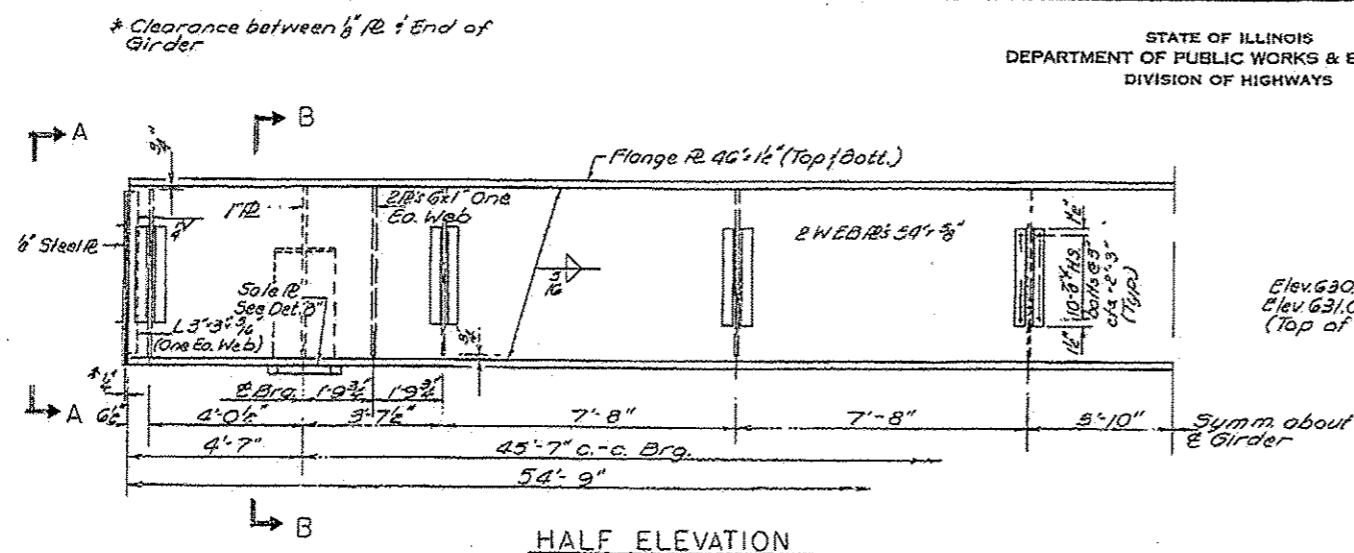


TABLE OF ELEVATIONS (TOP OF WEB)

	Bm#1	Bm#2	Bm#3	Bm#4	Bm#5	Bm#6	Bm#7	Bm#8
E Brg P	630.23	630.47	630.63	630.78	630.84	630.84	630.74	630.56
E P-2	630.28	630.84	631.00	631.15	631.27	631.20	631.08	630.92
S Brg P	630.82	630.98	631.14	631.28	631.40	631.33	631.21	630.98
S P-1	631.07	631.23	631.35	631.35	631.26	631.11	630.95	630.79
E P-2	630.99	631.15	631.28	631.32	631.20	631.05	630.89	630.75
S Brg P	630.67	630.83	630.94	631.03	630.91	630.78	630.60	630.36

GIRDER DETAILS
F.A.I. RTE 55 SEC. 84-4-3VB
SANGAMON COUNTY
STA. 368+33.35

DESIGNED	M.A. H. 10/12	EXAMINED	DEC. 12 10/12
CHECKED	H. S. 10/12	PASSED	
DRAWN	F. Mercado	APPROVED	
CHECKED	H.S.		



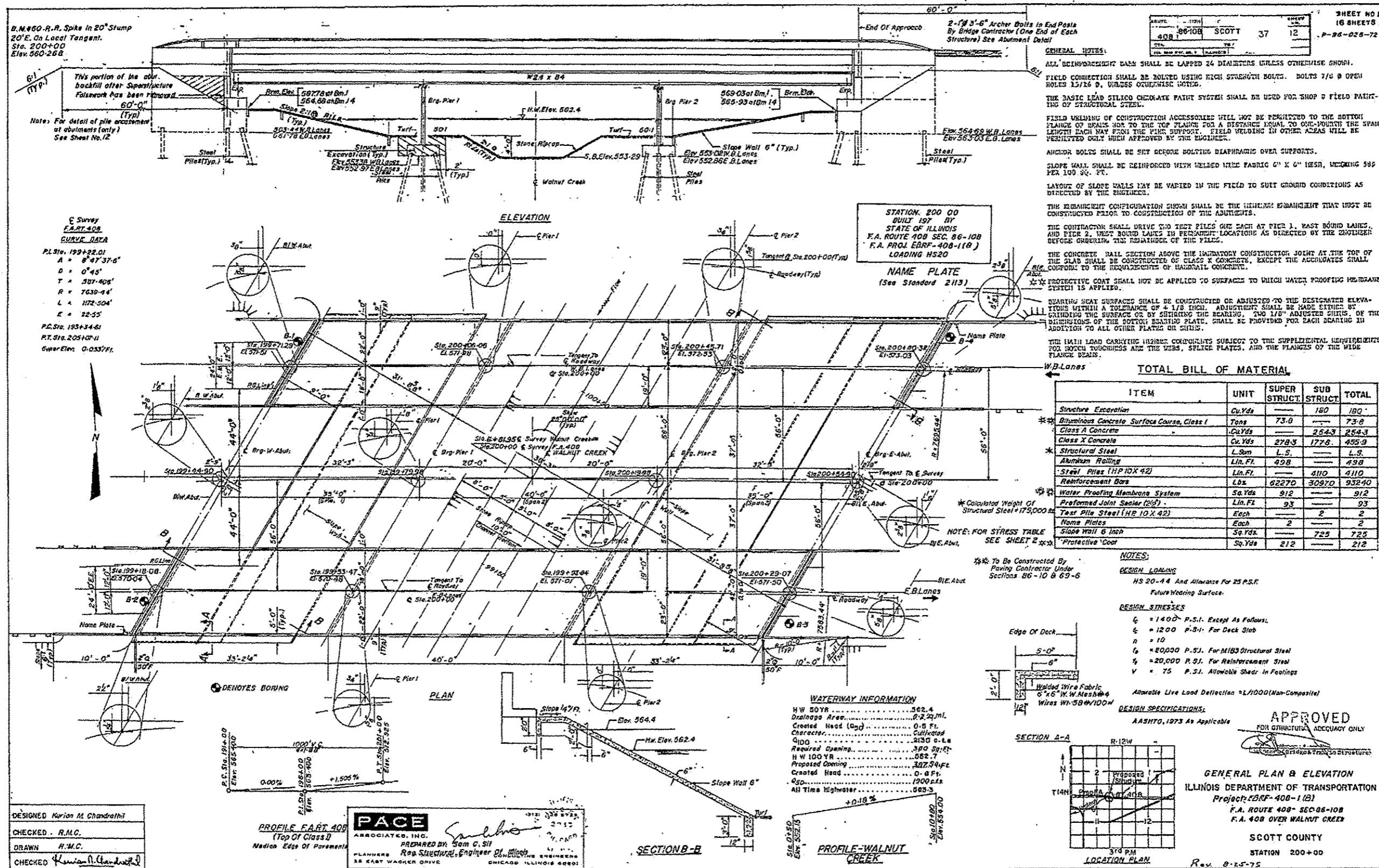
SUPPORTING GIRDER
FAI RTE. 55 SEC. 84-4-3 VB
SANGAMON COUNTY
STA. 368+33.35

DESIGNED	W. H. H.	DATE	12-17-1968
CHECKED	H. H. H.	EXAMINED	H. H. H.
DRAWN	F. Mercado	PAUSED	
CHECKED	H. H.	APPROVED	

B.M. 60-R.R. Spike in 20' Stump
20'E. On Local Tangent.
Sta. 200+00
Elev. 560.268

Note: For detail of pile placement at abutments (only) See Sheet No. 12

C Survey
F.A. RT. 408
CURVE DATA
P.L. Sta. 199+22.01
A = 8'47.37'6"
D = 0'45"
T = 507.406'
R = 7630.44'
L = 172.504'
E = 22.55'
P.C. Sta. 193+34.61
P.T. Sta. 205+10.11
Super Elev. 0.0537%



DATE	1978	SHEET	37	12
NO.	408	86-108	SCOTT	37
BY				
CHKD.				
APP. BY				

GENERAL NOTES:

- ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.
- FIELD CONNECTION SHALL BE BOLTED USING HIGH STRENGTH BOLTS. BOLTS 7/8" Ø OPEN HOLES 1 1/2" Ø. UNLESS OTHERWISE NOTED.
- THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP & FIELD PAINTING OF STRUCTURAL STEEL.
- FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-TENTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORT. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
- ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGM OVER SUPPORTS.
- SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" X 6" 16S8, MEETING 580 PER 100 SQ. FT.
- LAYOUT OF SLOPE WALLS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
- THE REBARRING CONFIGURATION SHOWN SHALL BE THE MINIMUM REBARRING THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.
- THE CONTRACTOR SHALL DRIVE TWO TEST PILES ONE EACH AT PIER 1, EAST BOUND LANES, AND PIER 2, WEST BOUND LANES IN PRESENT LOCATIONS AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REBARRING OF THE PILES.
- THE CONCRETE SHALL BE PLACED ABOVE THE INDICATED CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE ACCURATES SHALL CONFORM TO THE REQUIREMENTS OF STANDARD CONCRETE.
- PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATER PROOFING MEMBRANE SYSTEM IS APPLIED.
- BEARING SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8" INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTED 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 THE SUPPLEMENTAL REQUIREMENTS FOR JOINT STRENGTH AND THE WEBS, SPLICE PLATES, AND THE FLANGES OF THE WIDE FLANGE BEAMS.

STATION 200+00
BUILT BY
STATE OF ILLINOIS
F.A. ROUTE 408 SEC. 86-108
F.A. PROJ. EBRF-408-11(B)
LOADING HS20

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCT.	SUB STRUCT.	TOTAL
Structure Excavation	Cu.Yds	---	180	180
Bituminous Concrete Surface Course, Class I	Tons	73.8	---	73.8
Class A Concrete	Cu.Yds	---	254.3	254.3
Class X Concrete	Cu.Yds	278.3	177.6	455.9
Structural Steel	L.S.	---	---	L.S.
Aluminum Roofing	Lin.Ft.	498	---	498
Steel Piles (HP 10X 42)	Lin.Ft.	---	410	410
Reinforcement Bars	Lbs.	62270	30970	93240
Water Proofing Membrane System	Sq.Yds	912	---	912
Preformed Joint Sealer (287)	Lin.Ft.	93	---	93
Test Pile Steel (HP 10X 42)	Each	---	2	2
Name Plates	Each	---	2	2
Slope Wall 6" Insp	Sq.Yds	---	725	725
Protective Coat	Sq.Yds	---	212	212

- NOTE: FOR STRESS TABLE SEE SHEET 2
- DESIGN LOADS
HS 20-44 And Allowance For 25 P.S.F. Future Wearing Surface.
- DESIGN STRESSES
 $f_c = 1400$ P.S.I. Except As Follows:
 $f_c = 1200$ P.S.I. For Deck Slab
 $n = 10$
 $f_s = 20,000$ P.S.I. For M183 Structural Steel
 $f_s = 20,000$ P.S.I. For Reinforcement Steel
 $v = 75$ P.S.I. Allowable Shear in Footings
 Allowable Live Load Deflection = $L/1000$ (Non-Composite)

DESIGN SPECIFICATIONS:
AASHTO, 1973 As Applicable

APPROVED FOR STRUCTURAL ADEQUACY ONLY

GENERAL PLAN & ELEVATION
ILLINOIS DEPARTMENT OF TRANSPORTATION
Project: EBRF-408-11(B)
F.A. ROUTE 408 - SEC 86-108
F.A. 408 OVER WALNUT CREEK

SCOTT COUNTY
STATION 200+00
Rev. 8-25-75
Rev. 10-15-75

DESIGNED: Kurian M. Chandrasekhar
CHECKED: R.M.C.
DRAWN: R.M.C.
CHECKED: Kurian M. Chandrasekhar

PROFILE PART 408 (Top Of Class II) Median Edge Of Pavement

PACE ASSOCIATED, INC. PREPARED BY: Sam G. Shi
PLANNERS: R.M.C. STRUCTURAL ENGINEER OF ILLINOIS
35 EAST WAGNER DRIVE CHICAGO ILLINOIS 60601

SECTION B-B

WATERWAY INFORMATION
 HW 50 YR 562.4
 Drainage Area 2.2 Sq.Mi.
 Crested Head (Eqd) 0.5 Ft.
 Character Culminated
 Q100 2130 c.f.s.
 Required Opening 390 Sq.Ft.
 HW 100 YR 562.7
 Proposed Opening 387.94 Ft.
 Crested Head 0.6 Ft.
 Q50 1900 c.f.s.
 All Time Highwater 603.3

