

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
BRIDGE PAINTING**

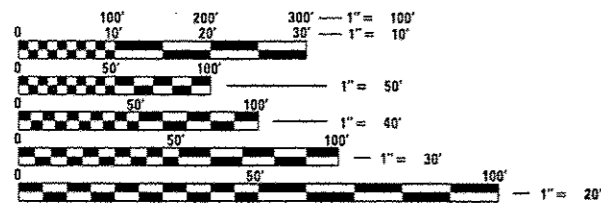
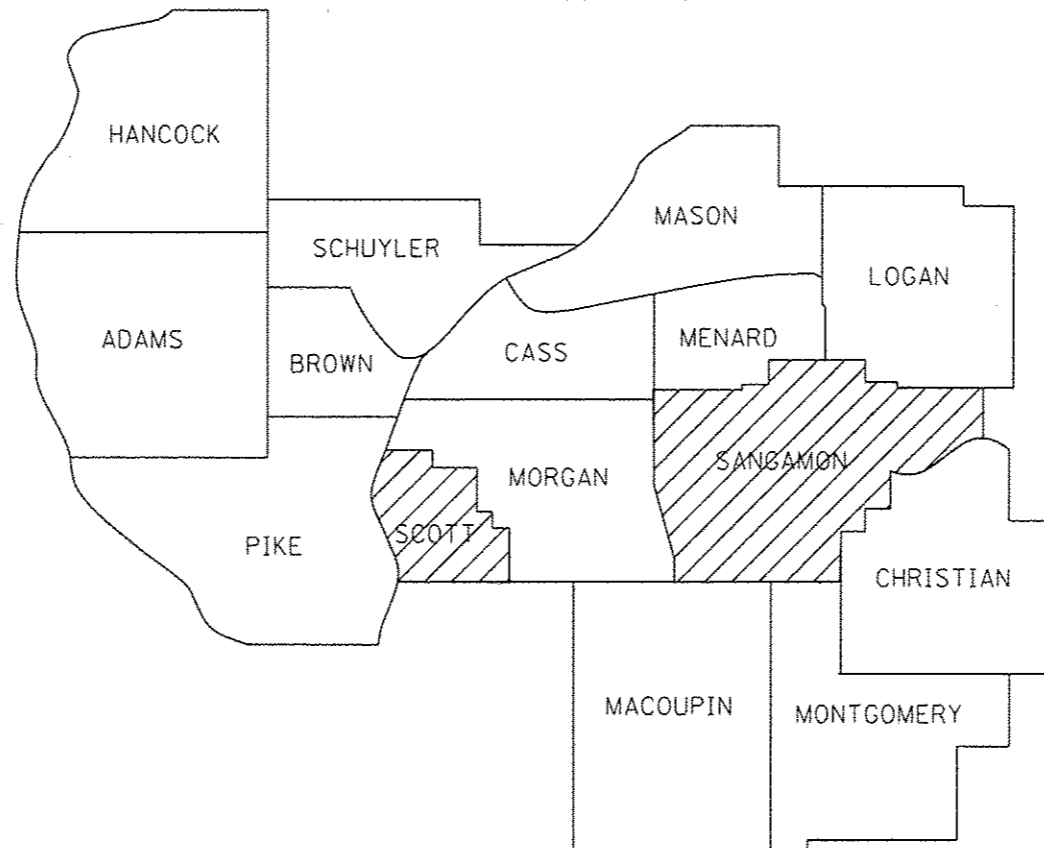
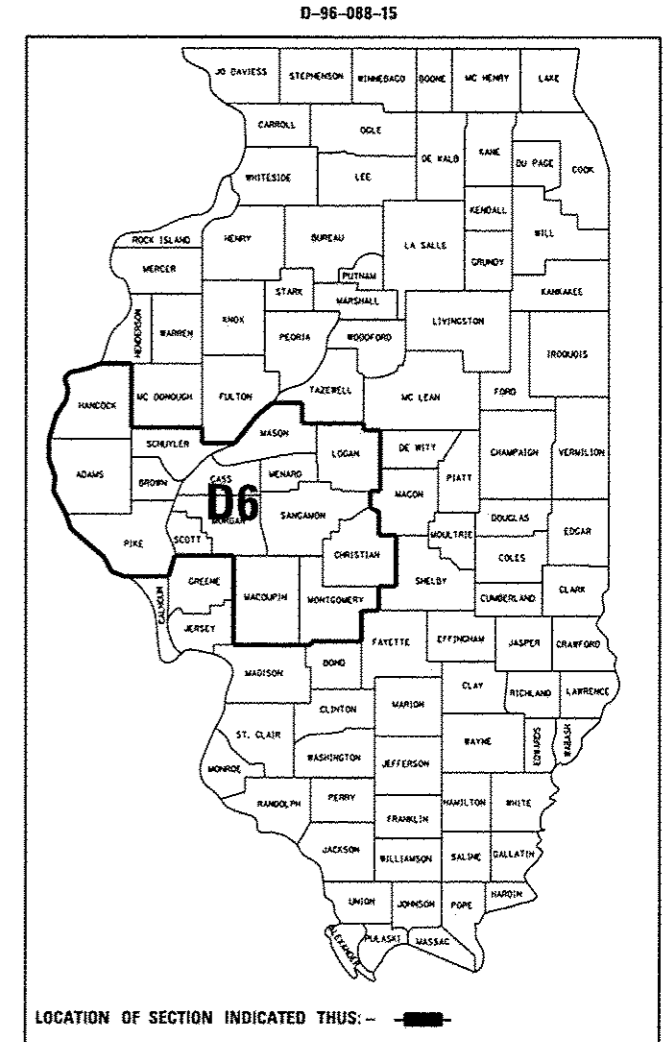
VARIOUS ROUTES
SECTION D6 BDGE PAINTING 2016-1

BRIDGE PAINTING
SANGAMON & SCOTT COUNTIES

C-96-065-15

FOR INDEX OF SHEETS, SEE SHEET NO. 2

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



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 5 20 15
Ray E. Dutton
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

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

Aug 14 20 15
Orren 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

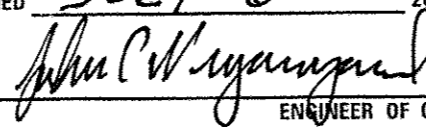
- 701101-04
- 701106-02
- 701400-08
- 701401-09
- 701901-04


GENERAL NOTES:

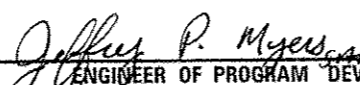
1. STRUCTURES TO BE PAINTED SHALL BE AS SPECIFIED ON THE PLAN SHEETS. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". THE AREAS TO BE PAINTED ON EACH BRIDGE SHALL BE AS SPECIFIED ON THE PLAN 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-OP-1 AND SSPC-OP2 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

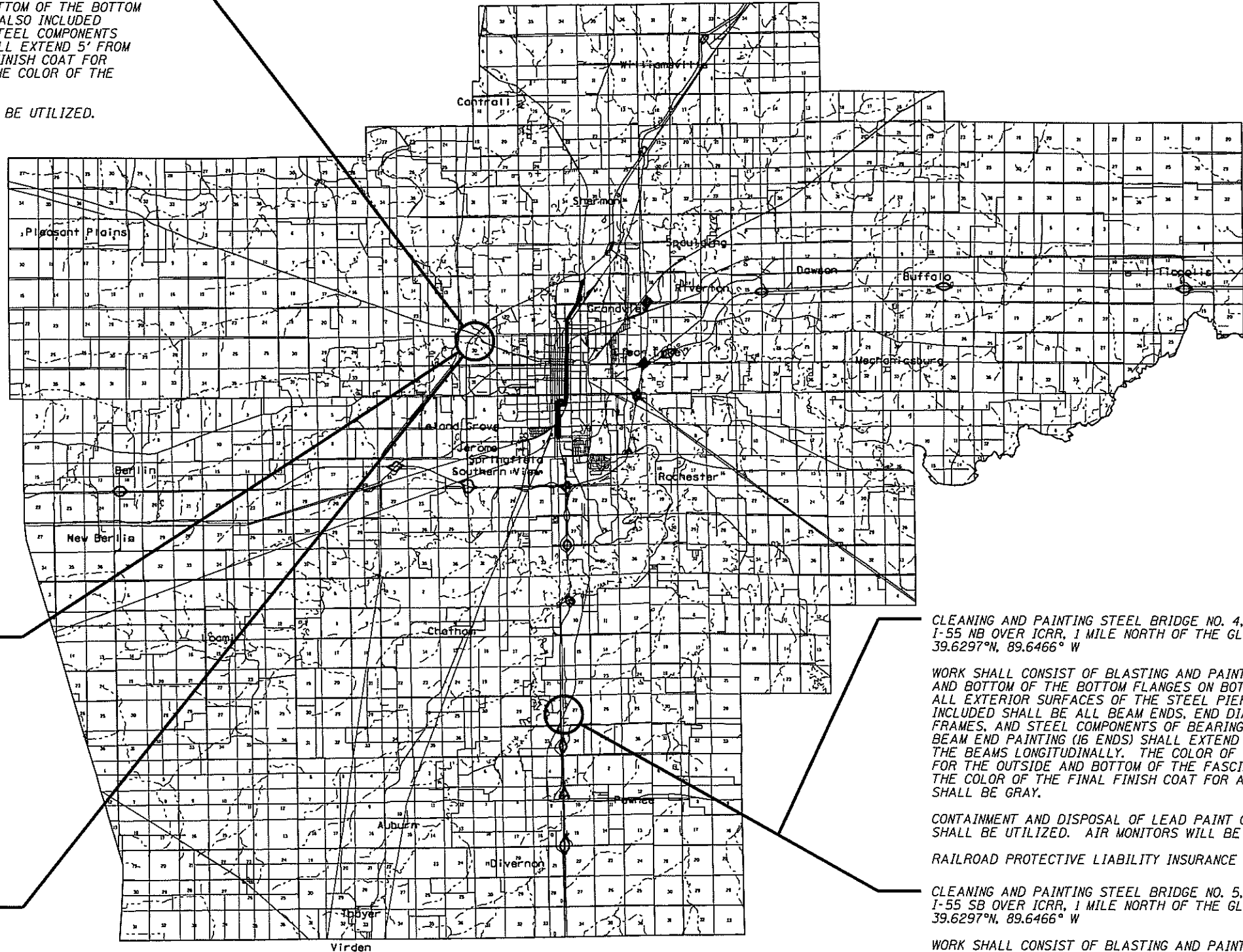
EXAMINED July 1 20 15

 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
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	1
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1	1
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1	1
Z0007105	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1	1
Z0007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM	1	1
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1	1
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1	1
Z0010505	CLEANING AND PAINTING STEEL BRIDGE NO. 5	L SUM	1	1
Z0010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM	1	1
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1	1
Z004B665	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

FILE NAME =	USER NAME = dudlejbm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SANGAMON COUNTY LOCATION MAP			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\OPERATIONS\Bridges\Bridgplans\CAD\72H88 - Sangamon & Scott County point 2016\p	DRAWN by	REVISED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	VAR. D6 BDGE PAINTING 2016-1	17	3
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -								• SANGAMON & SCOTT		CONTRACT NO. 72H88
	PLOT DATE = 7/7/2015	DATE -	REVISED -								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.

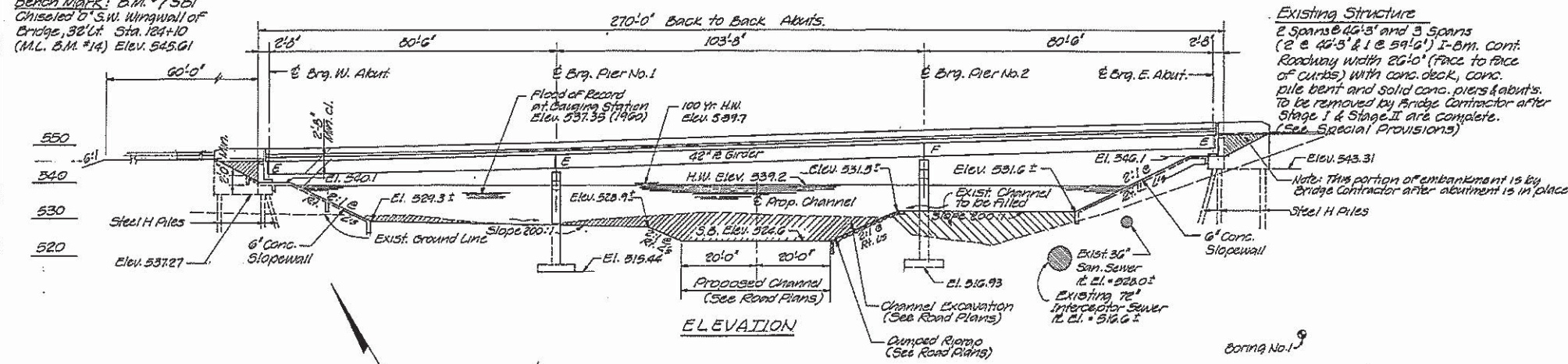
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL NOT BE REQUIRED.

FILE NAME *	USER NAME * dudleybn	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCOTT COUNTY LOCATION MAP				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\OPERATIONS\Bridges\Bridgplans.CAD\72H88 - Sangamon & Scott County paint 2016.p	oBAMWdgn	CHECKED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	*	17	4
Default		DATE -	REVISED -						* SANGAMON & SCOTT		CONTRACT NO. 72H88		
									ILLINOIS FED. AID PROJECT				

Bench Mark: B.M. #75B1
Chiseled D.S.W. Wingwall of
Bridge, 38' Lt. Sta. 124+10
(M.C. B.M. #14) Elev. 545.61

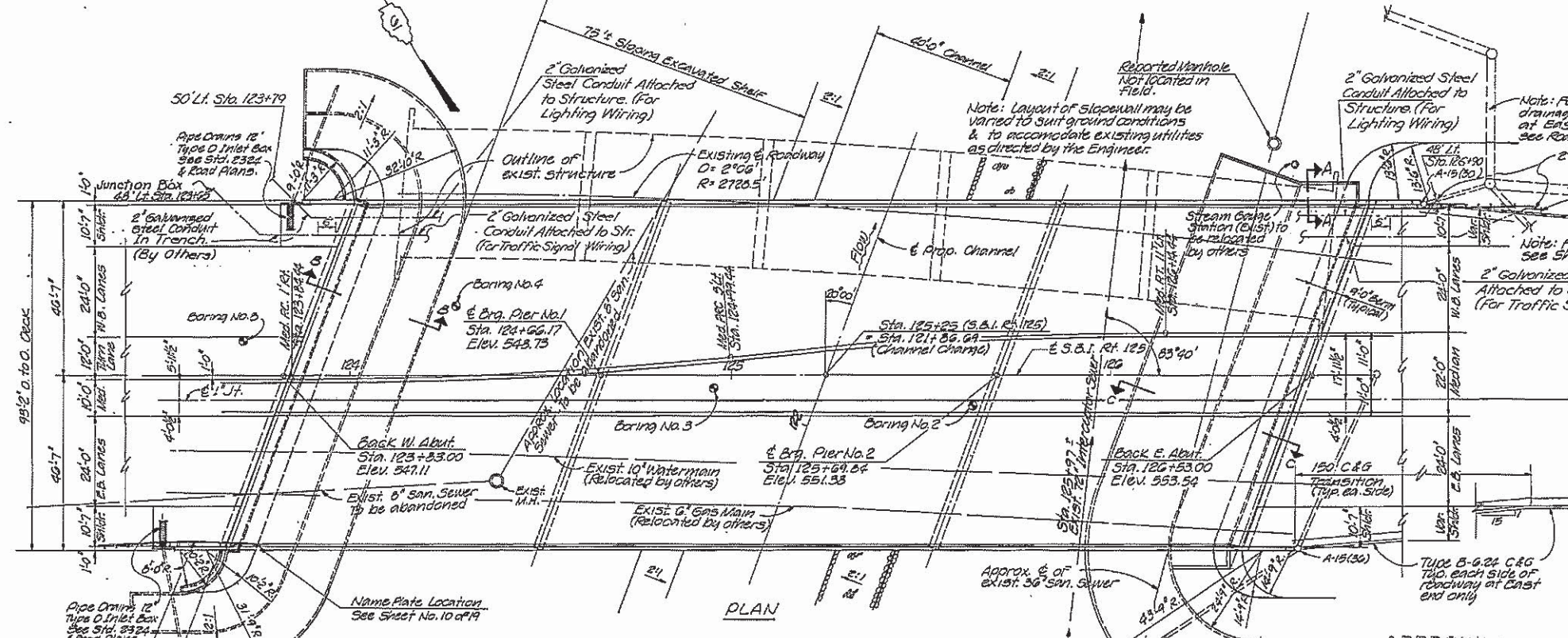
Sheet No. 1
of 19 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CA-67	S-1	SANGAMON	110	47



STA. 125+2500
BUILT 198 BY
STATE OF ILLINOIS
F.A. RT. 67 SEC. 5(B-1)
FA. PROJECT F-67-25
LOADING H5-20
STR. NO. 0

LETTERING FOR
NAMEPLATE
(See Std. 2113)
Structure No. to be supplied by the District.



ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
Removal of Existing Structures	Each		1	1
Rock Excavation for Structures	Cu. Yd.		125	125
CLASS X Concrete	Cu. Yd.	750.8	707.2	1458
Structural Steel	Lump Sum	1		1
Furnishing and Erecting Steel Railing (Special)	Lm. Ft.	266		266
Reinforcement Bars	Pound	66,840	56,920	123,760
Reinforcement Bars (Special)	Pound	120,400		120,400
Steel Piles HPx36	Lm. Ft.		857	857
2x4 Pine Steel HPx36	Each		3	3
Name Plates	Each	1		1
Slope wall 6 Inch	Sq. Yd.		1223	1223
Neoprene Expansion Joint 26"	Lm. Ft.	198		198
Stud Shear Connectors	Each	6046		6046
Protective Coat	Sq. Yd.	2999		2999
Galv. Steel Conduit attached to Structure (2")	Lm. Ft.			554
Floor Drains	Each	66		66
Structure Excavation	Cu. Yds.		1705	1705

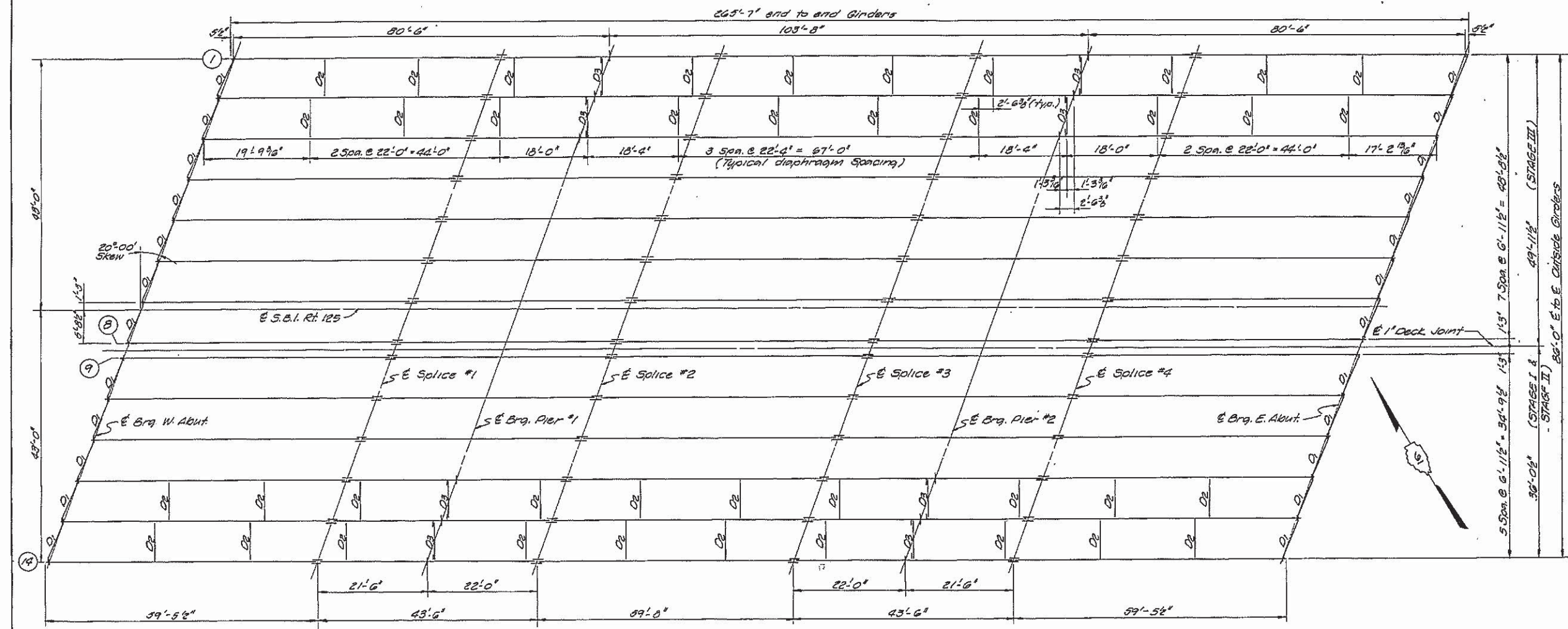
APPROVED
FOR THE DISTRICT ENGINEER
STATE OF ILLINOIS



REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAWN BY DATE JCH 11-77
1	S.B.I. 125 OVER SPRING CREEK F.A. 67 SECTION 5(B-1) PROJ. F-67(25) STA. 125+1800 (S.B.I. 125) SANGAMON CO.	CHECKED BY DATE JCH 5-78
2	HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS	PROJECT NO. 2250-20
3		SHEET NO. 47
4		Rev 10-21-80

Sheet No. 12
of 19 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5A-67	5B-1	SANGAMON	10	58
FED. ROAD DIST. NO.	PROJECT			



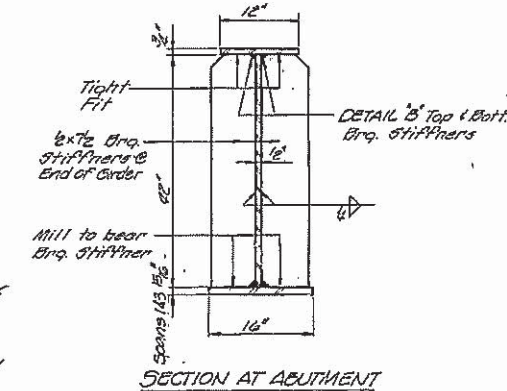
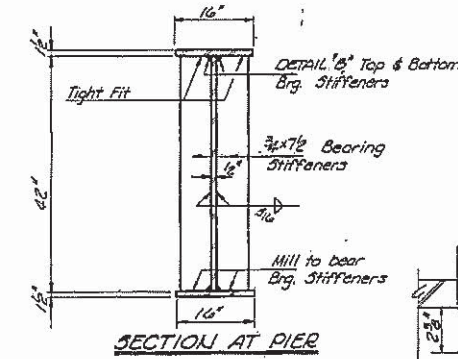
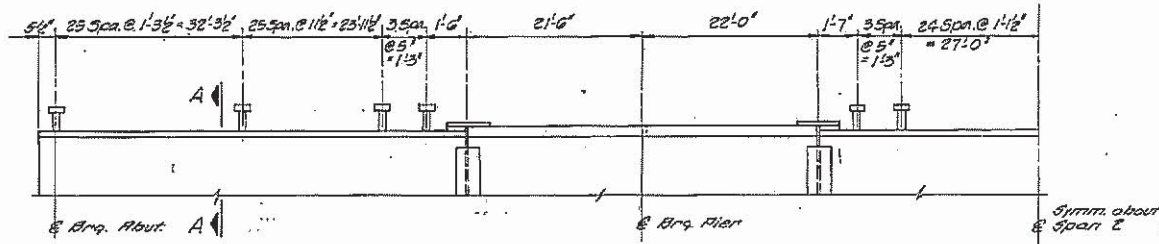
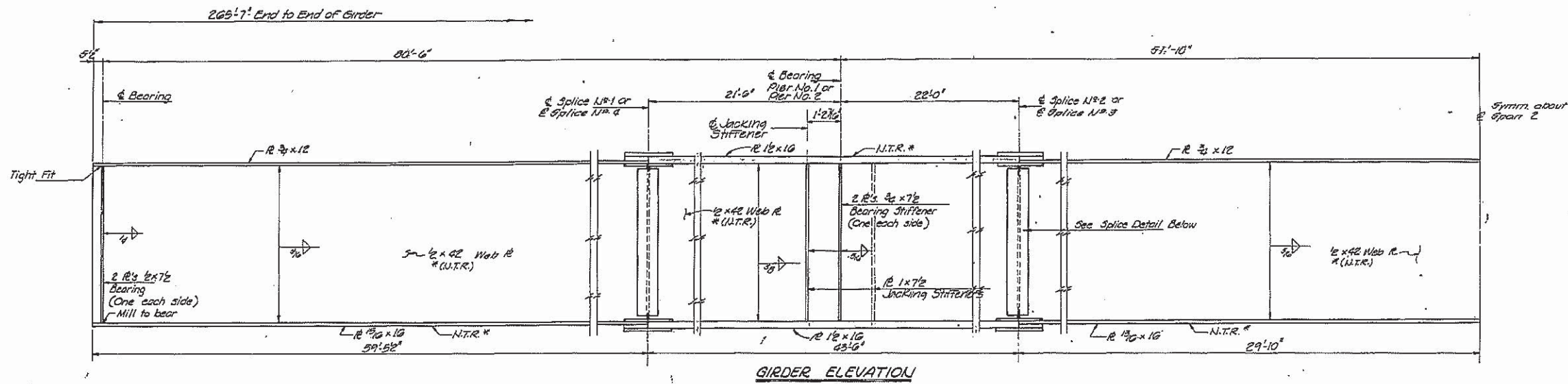
FRAMING PLAN
 All end diaphragms to be W12x40 - D1
 All diaphragms at Piers to be W83x118 - D2
 All other diaphragms to be W16x36 - D2
 See Sheet No. 14 for Top of Web Elevations.

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

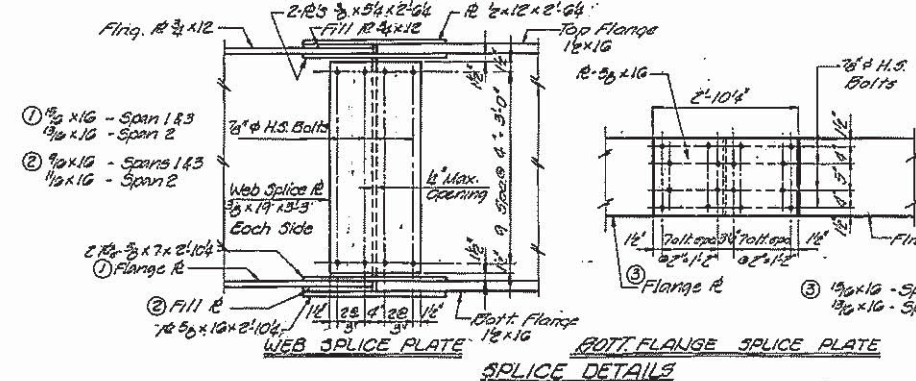
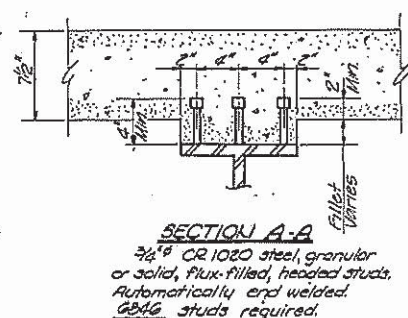
STRUCTURAL STEEL FRAMING
 STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 S.D. 125 OVER SPRING CREEK
 P.A. 67 SECTION 5(B-1) PROJ.
 STA. 123+00 (S.B. 125) SANGAMON CO.
 HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

Sheet 15
of 19 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-67	S.R.-1	SANGAMON	110	59
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



SHEAR CONNECTOR SPACING
(489 stud shear connectors req'd. ea girder)



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

REVISIONS		STRUCTURAL STEEL	
1	DATE	STATE OF ILLINOIS	DESIGNED BY DATE
2	DATE	DEPARTMENT OF TRANSPORTATION	UCL 10-77
3	DATE	S.B. 1.125 - OVER SPRING CREEK	CHECKED BY DATE
4	DATE	F.A. 67 SECTION 5(2-1) PROJ.	RSH 10-77
5	DATE	STA. 125+80.00 (S.B. 1.125) SANGAMON CO.	PRODUCT NO.
6	DATE	HOMER L. CHASTAIN & ASSOCIATES	2250-201
7	DATE	CONSULTING ENGINEERS	SHEET NO.
8	DATE	DECATUR, ILLINOIS	59

MOMENT TABLE - Composite 3 Span
(Composite in Positive Moment Areas only)

INTERIOR GIRDER MOMENT TABLE

	1st Span	Pier	2nd Span
Is (in ⁴)	13,740	25,003	12,985
Ic (in ⁴)	36,315		33,672
Is (in ⁴)	721	1147	655
Is (in ⁴)	1007		919
E (ksi)	0.850	0.850	0.850
M ₁ (K)	319	-854	281
M ₂ (K)	53	92	52
M ₃ (K)	0.320	0.320	0.320
M ₄ (K)	143	-205	105
M ₅ (K)	616	-332	603
M ₆ (K)	150	-127	190
TOTAL (K)	909	-944	950
Δ ₁₋₂ (in)	10.8	9.9	12.4
Δ ₂₋₃ (in)	16.1	19.1	17.6
Δ _{TOTAL} (in)	52.2		43.0

REACTION TABLE

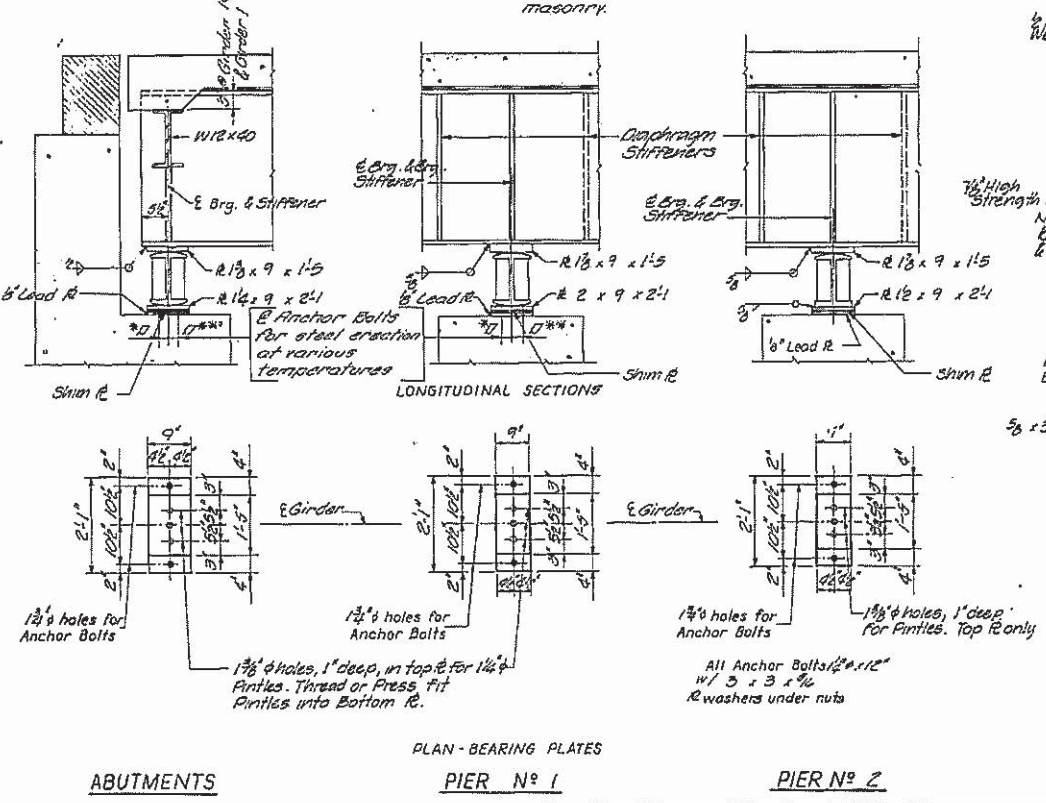
INTERIOR GIRDER REACTION TABLE

	Abut	Pier
R ₁ (K)	33.1	126.7
R ₂ (K)	39.6	60.1
R ₃ (K)	9.1	13.9
R _{TOTAL} (K)	81.8	200.7

VALUES

W. Abut.	0
Pier No. 1	3/8
Pier No. 2	3/8
E. Abut.	3/8

TOP 10 BEVEL DETAILS



TOP OF WEB ELEVATION *

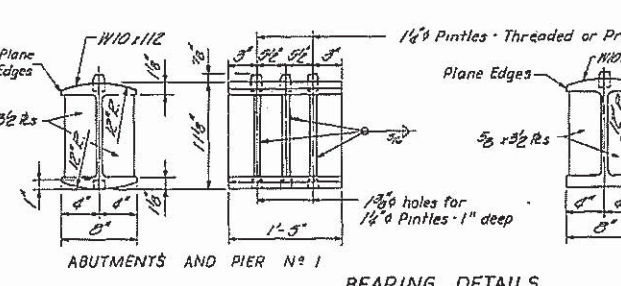
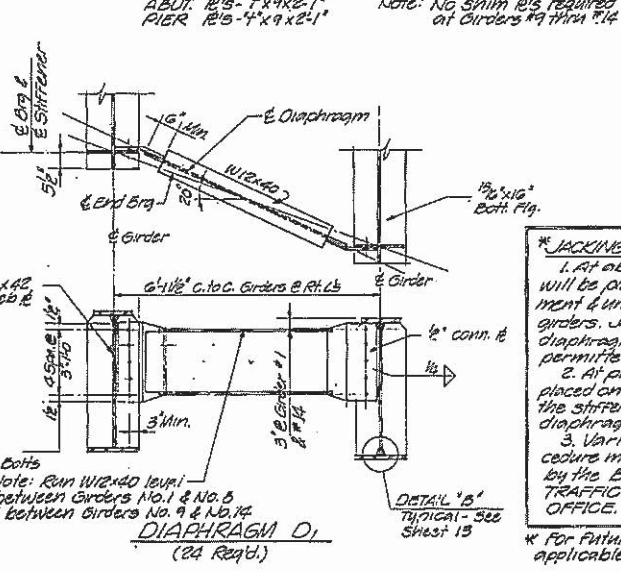
LOCATION	Brn. #1	Brn. #2	Brn. #3	Brn. #4	Brn. #5	Brn. #6	Brn. #7	Brn. #8	Brn. #9	Brn. #10	Brn. #11	Brn. #12	Brn. #13	Brn. #14
E. Brq. W. Abut.	546.007	546.072	546.138	546.203	546.270	546.337	546.405	546.474	546.541	546.609	546.678	546.747	546.816	546.885
E. Girders #1	547.081	547.126	547.167	547.211	547.255	547.299	547.344	547.388	547.432	547.476	547.520	547.564	547.608	547.652
E. Brq. Pier #1	547.606	547.649	547.692	547.735	547.778	547.821	547.864	547.907	547.950	547.993	548.036	548.079	548.122	548.165
E. Girders #2	548.143	548.186	548.229	548.272	548.315	548.358	548.401	548.444	548.487	548.530	548.573	548.616	548.659	548.702
E. Girders #3	549.695	549.738	549.781	549.824	549.867	549.910	549.953	549.996	550.039	550.082	550.125	550.168	550.211	550.254
E. Brq. Pier #2	550.267	550.310	550.353	550.396	550.439	550.482	550.525	550.568	550.611	550.654	550.697	550.740	550.783	550.826
E. Girders #4	550.826	550.869	550.912	550.955	550.998	551.041	551.084	551.127	551.170	551.213	551.256	551.299	551.342	551.385
E. Brq. E. Abut.	552.360	552.403	552.446	552.489	552.532	552.575	552.618	552.661	552.704	552.747	552.790	552.833	552.876	552.919

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	1/8	0	1/8	0	1/8	0	1/8
Pier #2	0	1/8	0	1/8	0	1/8	0	1/8
E. Abut.	0	1/8	0	1/8	0	1/8	0	1/8

NOTES ON SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

- a) D¹ Side of Brq. away from Fixed Brq.
D² 1/8" per 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.



Sheet No. 14 of 19 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-67	S.B. 1-1	SANGAMON	110	60

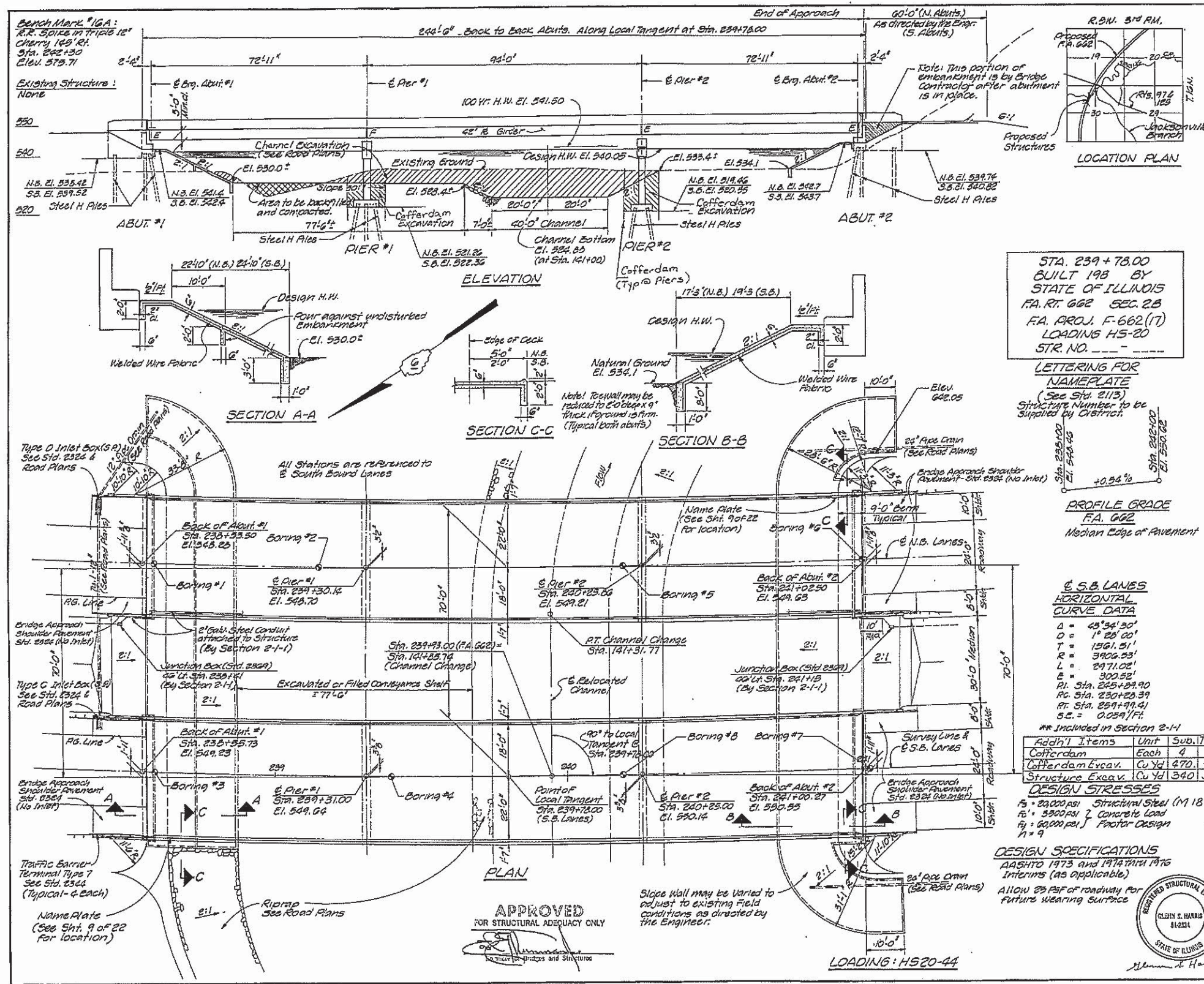
STRUCTURAL STEEL DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

5.B.1.125 OVER SPRING CREEK
SECTION 5(B-1) PROJ.
S14.125+18.00 (S.B. 1.125) SANGAMON CO.

HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
DECATUR, ILLINOIS

DESIGNED BY DATE: J.H. 10-77
CHECKED BY DATE: G.S.H. 10-77
PROJECT NO.: 2250-20
SHEET NO.: 60



Sheet No. 1 of 22 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-662	2B	SANGAMON	71	27

GENERAL NOTES

See Proposal for Boring Data. Fasteners shall be high strength bolts. Bolts 3/4" open holes 1/2", unless otherwise noted. Calculated Weight of Structural Steel = 520,300 pounds. The basic lead zinc 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 HP10x42 in permanent locations, one each at 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 slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail 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. 239 + 78.00
 BUILT 193 BY
 STATE OF ILLINOIS
 F.A. RT. 662 SEC. 2B
 F.A. PROJ. F-662(17)
 LOADING H5-20
 STR. NO. ---

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

PROFILE GRADE
 F.A. 662
 Median Edge of Pavement

DESIGN STRESSES
 S.B. LANES
 HORIZONTAL CURVE DATA
 Δ = 28° 34' 30"
 D = 1° 28' 00"
 T = 1561.51'
 R = 3402.53'
 L = 2971.02'
 E = 300.52'
 P.I. Sta. 235+29.90
 P.C. Sta. 230+23.39
 P.T. Sta. 239+29.41
 S.C. = 0.0391/Ft.

DESIGN SPECIFICATIONS
 AASHTO 1973 and 1974 thru 1976
 Interims (as applicable)
 ALLOW 25% 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	526.75'
Low Water	526.75'
Design Discharge 850	8290 CFS
Created Head	0.75 Ft.
Design Discharge 9100	10,140 CFS
Created Head	0.90 Ft.

* Flood of Record Discharge - 6750 CFS at Gauging Station Cate 1960
 * Gauging Station is located approx. 1900' downstream.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
Protective Coat	Sq. Yd.	2669	—	2669
Class X Concrete	Cu. Yd.	6133	489.0	1102.3
Structural Steel	Lumpsum	1	—	1
Steel Shear Connectors	Each	5724	—	5724
Reinforcement Bars	Pound	—	38,320	38,320
Reinforcement Bars (Ready Mixed)	Pound	163,190	—	163,190
Steel Piles HP10x42	Lin. Ft.	—	3937	3937
7051 Pile Steel HP10x42	Each	—	4	4
Name Plates	Each	2	—	2
Slope Wall 6'	Sq. Yd.	—	1049	1049
Neoprene Expansion Joint 26'	Lin. Ft.	173	—	173
Galvanized Steel Conduit attached to Structure - 2"	Lin. Ft.	251	—	251
Driving Steel Piles	Lin. Ft.	—	3937	3937
Floor Drains	Each	76	—	76

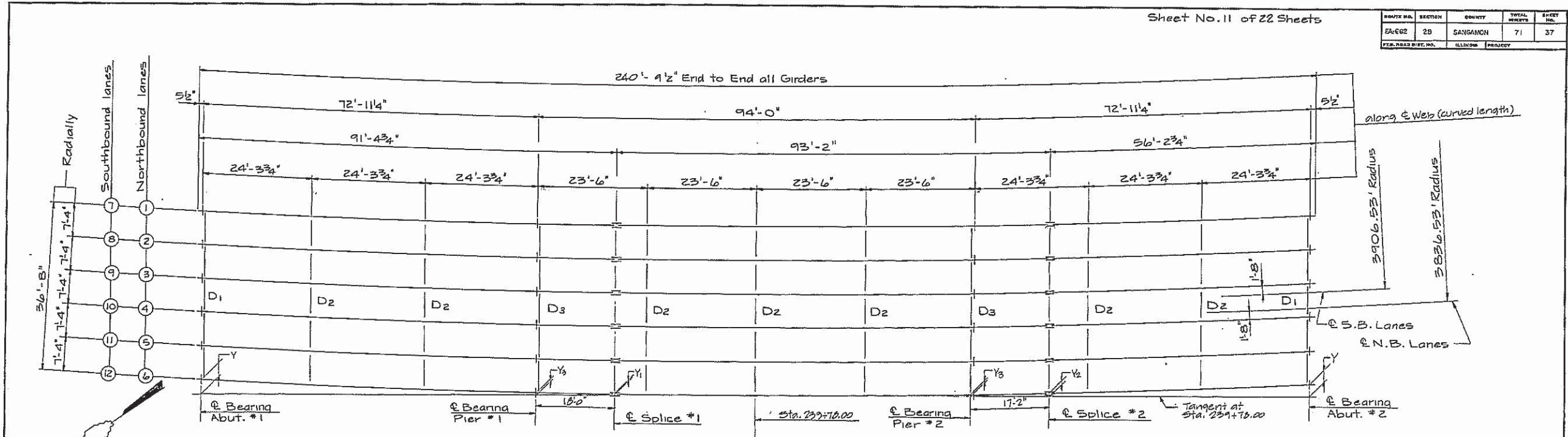
GENERAL PLAN AND ELEVATION

REVISIONS

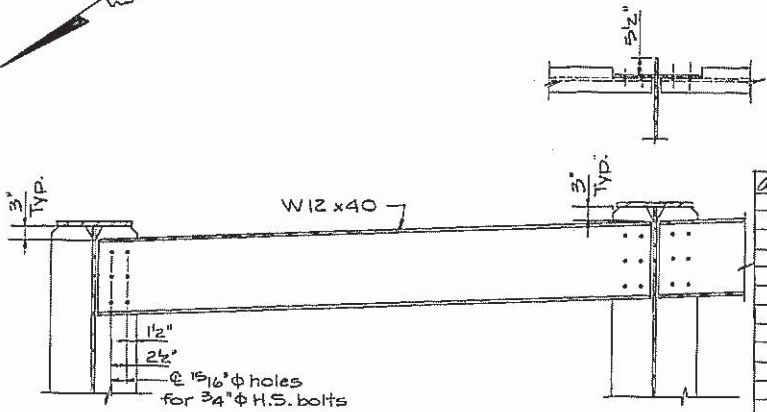
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A. 662 OVER SPRING CREEK
 F.A. 662 SECTION 2B PROJ.
 STA. 239+1800 (F.A. 662) SANGAMON CO.
 HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EA-602	28	SANGAMON	71	37
ILLINOIS PROJECT				

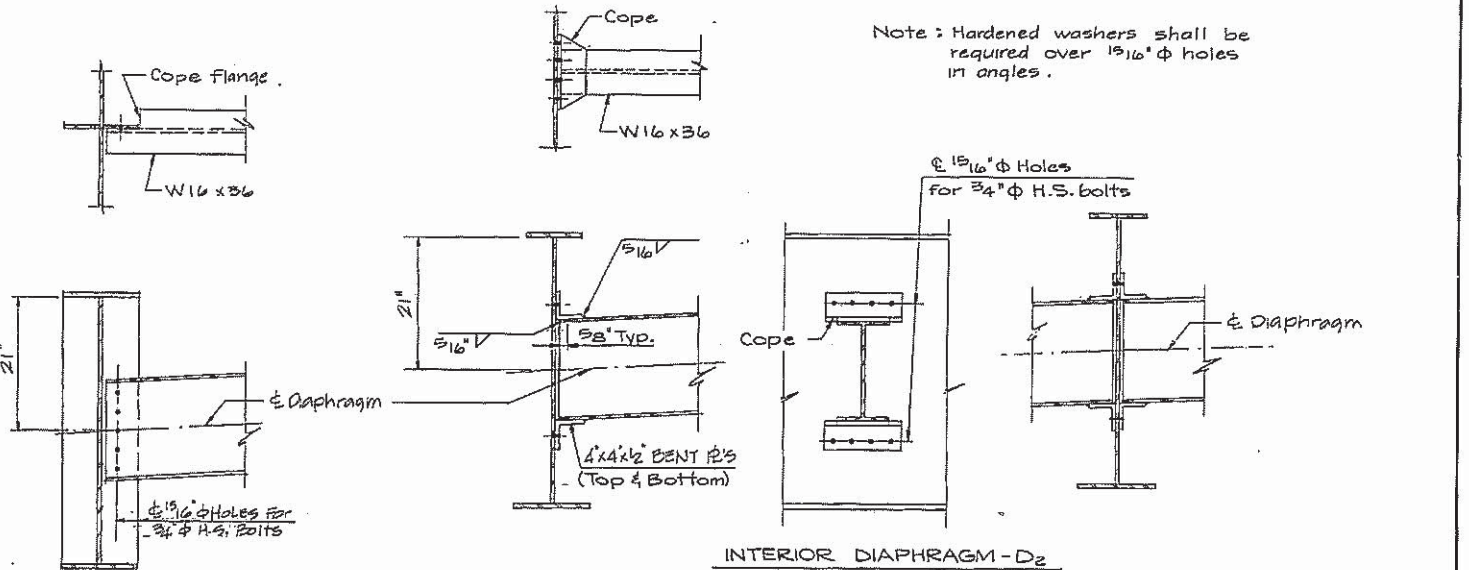


FRAMING PLAN
 All end diaphragms to be W12x40 (D1)
 All interior diaphragms to be W16x36 (D2)
 All Pier diaphragms to be W16x36 (D3)



'Y' OFFSETS

GIRDER NO.	Y	Y1	Y2	Y3
1	1.000	0.110	0.540	0.220
2	1.001	0.110	0.538	0.220
3	1.017	0.110	0.537	0.220
4	1.033	0.110	0.536	0.220
5	1.050	0.109	0.535	0.220
6	1.066	0.109	0.534	0.220
7	1.083	0.108	0.532	0.220
8	1.100	0.108	0.531	0.220
9	1.117	0.108	0.529	0.220
10	1.134	0.107	0.528	0.220
11	1.151	0.107	0.526	0.220
12	1.168	0.107	0.524	0.220



TOP OF WEB ELEVATIONS *

GIRDER NO.	RADIUS	ABUT. 1	PIER 1	SPLICE 1	PIER 2	SPLICE 2	ABUT. 2
1	3816.20'	546.66	547.06	547.16	547.58	547.69	547.90
2	3823.53'	546.94	547.35	547.45	547.86	547.96	548.27
3	3830.86'	547.23	547.63	547.73	548.15	548.25	548.55
4	3838.20'	547.52	547.92	548.02	548.44	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	3890.20'	547.76	548.16	548.26	548.67	548.76	549.06
8	3897.53'	548.05	548.44	548.54	548.95	549.05	549.35
9	3904.86'	548.34	548.73	548.83	549.24	549.33	549.63
10	3912.20'	548.62	549.02	549.11	549.52	549.62	549.92
11	3919.53'	548.91	549.30	549.40	549.81	549.90	550.20
12	3926.86'	549.20	549.59	549.69	550.09	550.19	550.49

* For Fabrication only

FRAMING PLAN AND DIAPHRAGM DETAILS

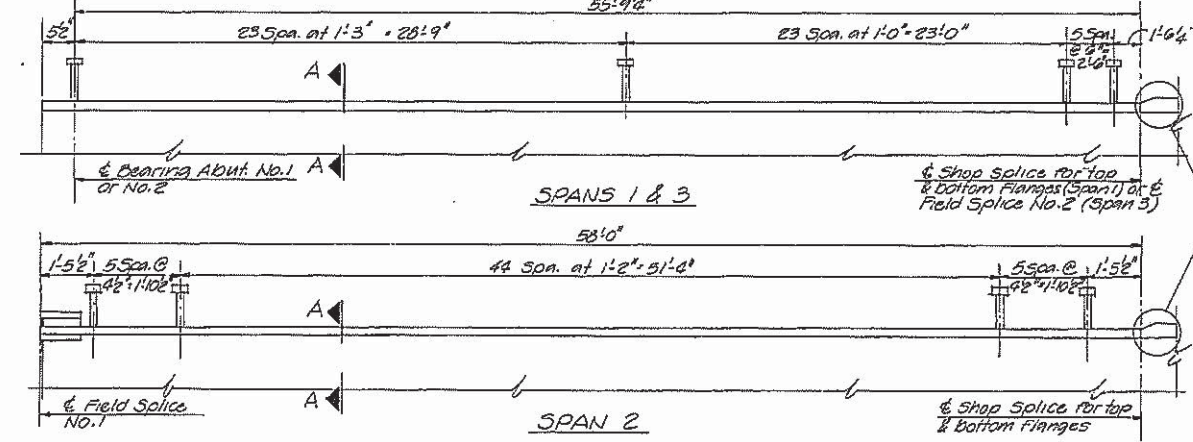
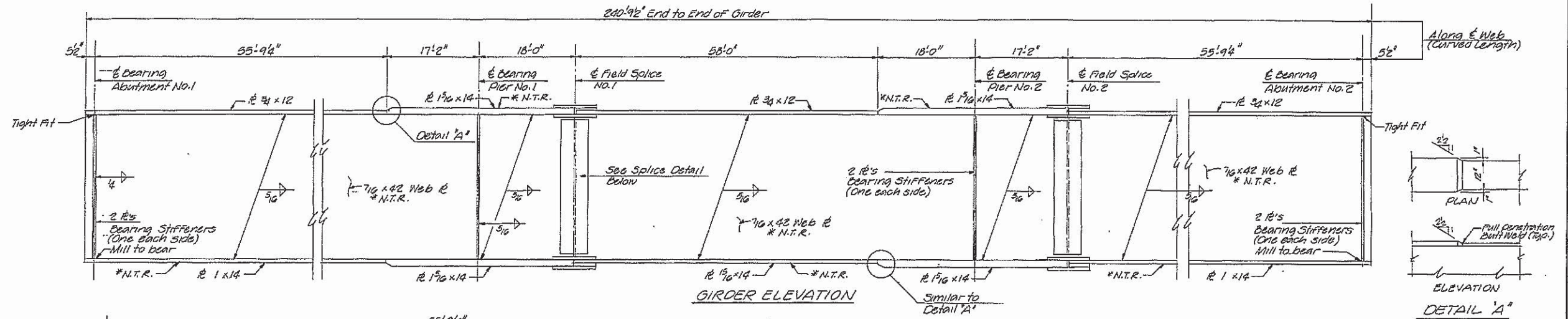
REVISIONS	DATE	BY	REASON
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A. 602 OVER SPRING CREEK
 F.A. 602 SECTION 28 PROJ.
 STA. 237+10.00 (F.A. 602) SANGAMON CO.
 HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

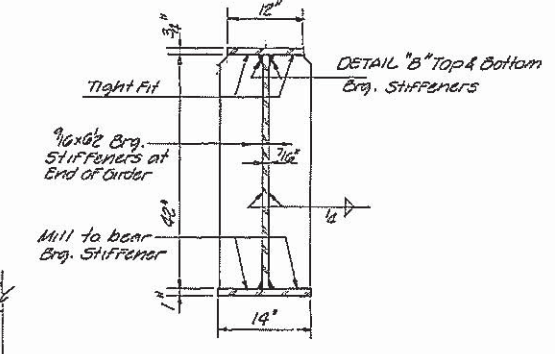
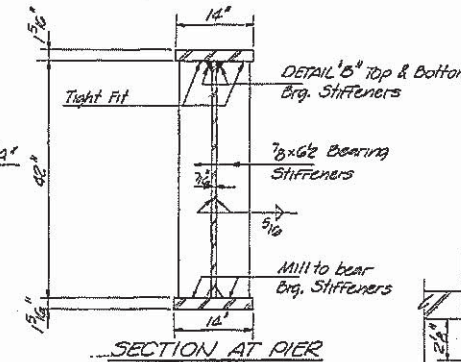
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 CHECKED BY DATE: GSH 4-18
 SHEET NO.: 2250-10
 SHEET NO.: 37

Sheet No. 12
of 22 Sheets

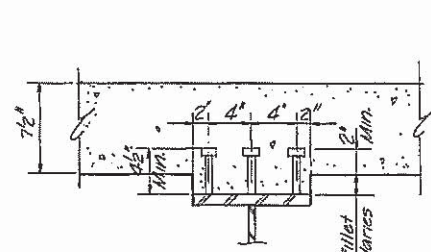
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EA-602	25	SANGAMON	71	38
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



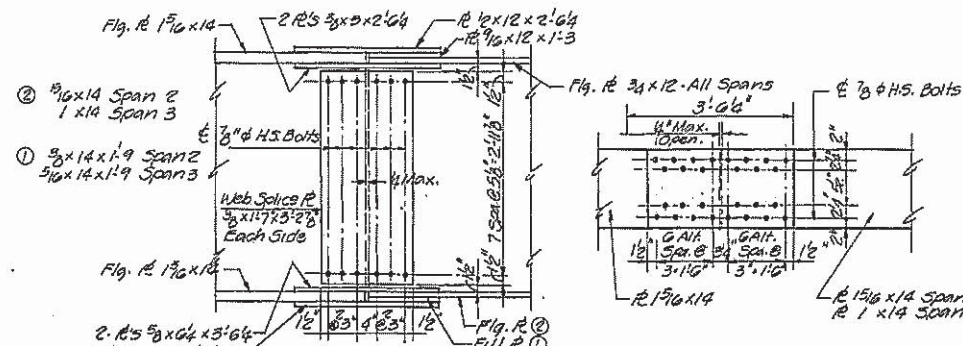
SHEAR CONNECTOR SPACING
(477 stud shear connectors req'd. ea. girder)



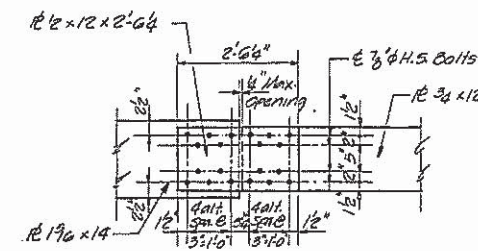
DETAIL 'B'
(Clipping detail)



SECTION A-A
3/4" CR 1020 steel, granular or solid, flux-filled, headed studs, automatically and welded. 5724 studs required.



BOTT. FLANGE SPLICE PLATE
SPLICE DETAILS



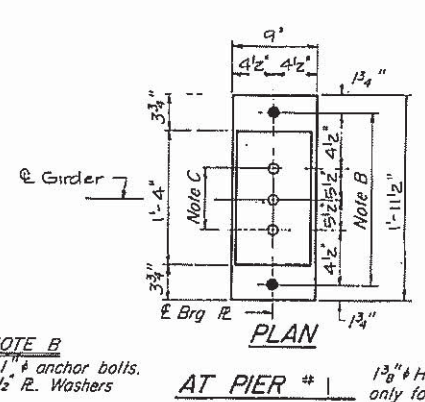
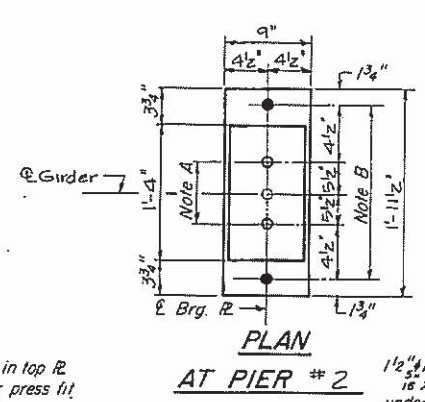
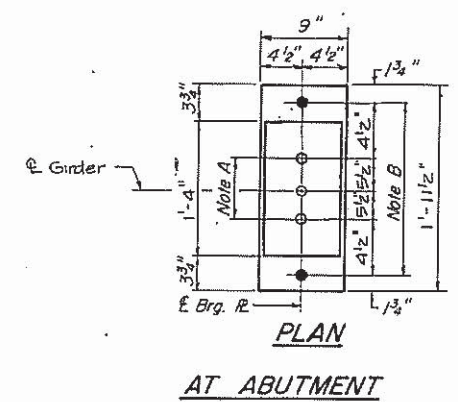
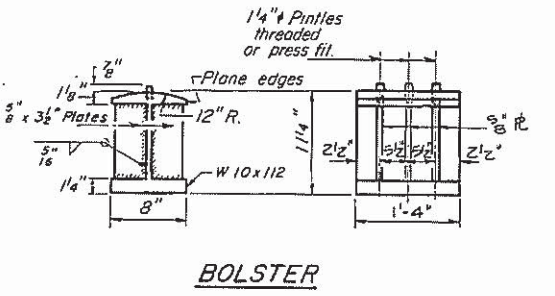
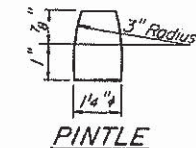
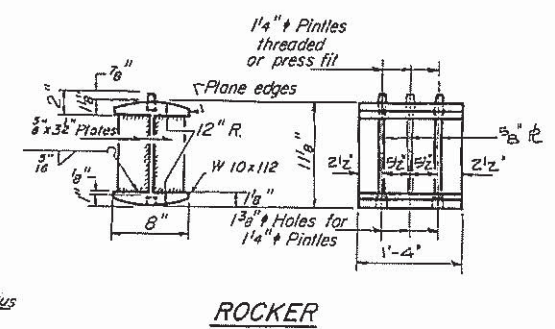
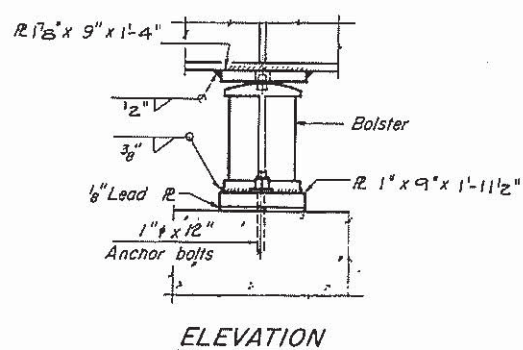
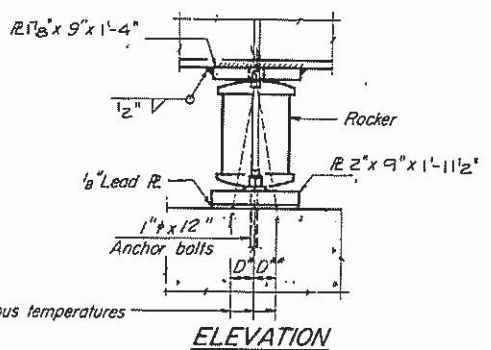
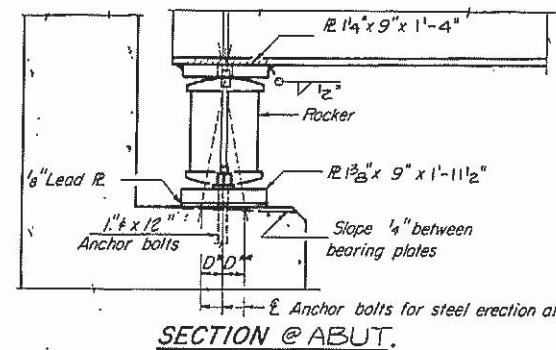
*** Notch Toughness Requirements**

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.

STRUCTURAL STEEL

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION F.A. 602 OVER SPRINGS CREEK SECTION 25 PROJ. STA. 25+780 (F.A. 602) SANGAMON CO.		DRAWN BY DATE JUN 4-78 CHECKED BY DATE GSH 5-78 BOOK NUMBER PROJECT NO. 2250-10 SHEET NO.
REVISIONS NO. DATE DESCRIPTION		PROJECT NO. 2250-10 SHEET NO. 11 CONTRACT NO. 72H88 ILLINOIS FED. AID PROJECT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EA-602	2B	SANGAMON	71	39
FED. ROAD DIST. NO.	STATE	PROJECT		



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

NOTE B
 1 1/2" Holes for 1" anchor bolts. 1 1/2 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" pinholes

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 f_s total.
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s total.
 VR is the maximum $\frac{1}{2}$ l + impact shear range in span used to determine shear connector spacing.

BEARING ASSEMBLY DETAILS

DESIGN DATA

	INTERIOR GIRDER MOMENT TABLE		
	0.4 SPAN 1	PIER	0.5 SPAN 2
I_s (in ⁴)	11,587	19,944	11,962
I_c (in ⁴)	29,937	—	31,215
S_s (in ³)	554	894	584
S_c (in ³)	781	—	820
Q (k/ft.)	.883	.883	.883
M_0 (ft.k)	274	696	271
f_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_{tmp} (ft.k)	139	110	151
TOTAL (ft.k)	835	762	922
f_s -comp. (ksi)	12.83	10.23	13.49
f_s total (ksi)	18.77	19.57	19.07
VR (k)	54.0		

	INTERIOR GIRDER REACTION TABLE		
	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

BEARING DETAILS

REVISIONS NO. DATE DESCRIPTION 1 2 3 4 5 6 7 8 9 10	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION F.A. 602 OVER SPRING CREEK E.A. 602 SECTION 2B FROM STA. 2547+00 (E.A. 602) SANGAMON CO.	DRAWN BY: BSH CHECKED BY: BSH WORK NUMBER: PROJECT NO.: 2280-10 SHEET NO.:
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HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

Reproduced From I.O.O.T. Case Sheet 1-2-B 6-1-70

3/4" x 20 R.R. spits in T.P. Lt. 156' of Sta. 368+57 Elev. 598.76
 Existing Structures: Structure on S.A. Ete. 126 (U.S.G.G) at
 Sta. 372+52.60 Built as Sec. 110X-3VB-VF(2) in 1954 to be
 removed by paving contractor after new structures are
 constructed. Existing I.Bms. 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+33.35
 Built 197 By
 State of Illinois
 F.A.I. Ete. 55 Sec. 84-4-3VB
 F.A. PROJ. I-55-3(62)
 Loading HS20-44 ALT

DATE	BY	REVISION	TOTAL SHEETS	SHEET NO.
11.55	84-4-3 3VB	SANGAMON	261	54

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
 Field connections shall be bolted using high strength bolts. Bolts 3", open holes 1/2", unless otherwise noted.
 Slope wall shall be reinforced with welded wire fabric 6"x 6" 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 1-3. 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 test 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

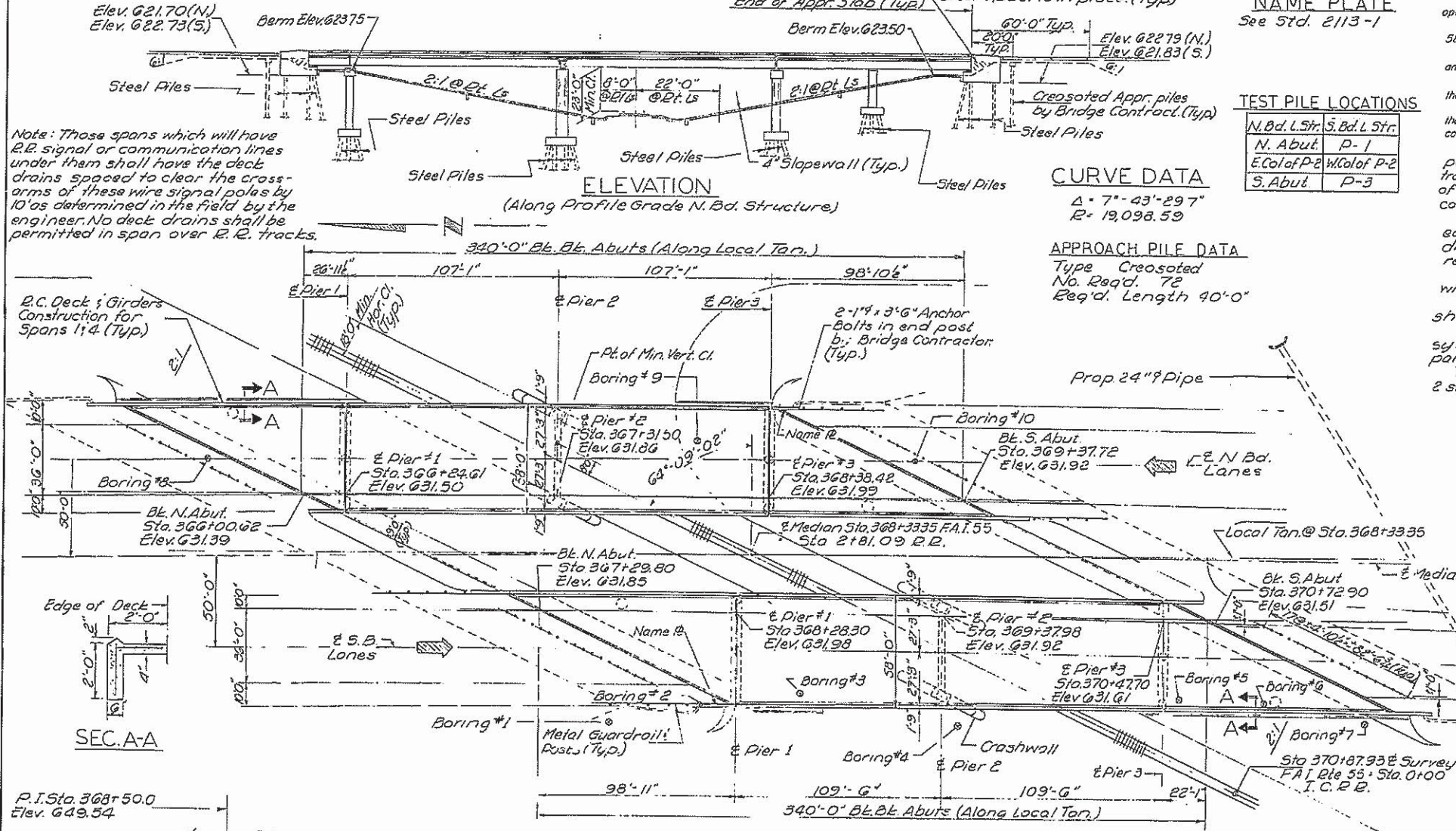
N. Bd. L. Str.	S. Bd. L. Str.
N. Abut.	P-1
E. Col. of P-2	W. Col. of P-2
S. Abut.	P-3

CURVE DATA

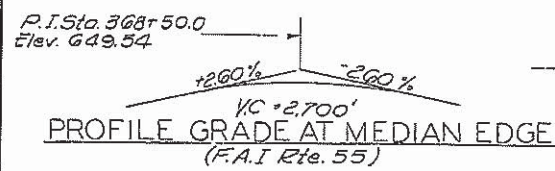
Δ = 7°-43'-29"
 R = 19,098.59

APPROACH PILE DATA

Type Creosoted
 No. Req'd. 72
 Req'd. Length 40'-0"



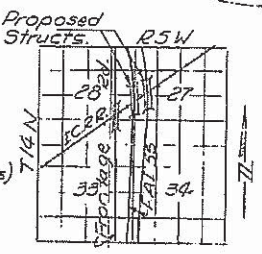
Note: Those spans which will have R.R. signal or communication lines under them shall have the deck drains spaced to clear the cross-arms of these wire signal poles by 10' as determined in the field by the engineer. No deck drains shall be permitted in span over R.R. tracks.



PLAN

DESIGN STRESSES

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



LOCATION PLAN

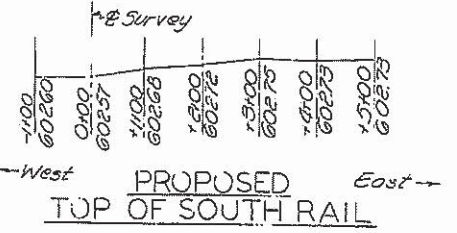
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Cl. A Excav. for Structures	Cu. Yds.			130
Protective Coat	Sq. Yds.	5915		5915
Class X Concrete	Cu. Yds.	17371	10913	28284
Structural Steel	Lump Sum	L.S.		1
Stud Shear Connectors	Each	6240		6240
Aluminum Railing	Lin. Ft.	1,323		1,323
Reinforcement Bars	Lbs.	443960	112900	556860
Creosoted Piles (738')	Lin. Ft.			2800
Steel Piles (12 @ P53)	Lin. Ft.		6398	6398
Steel Piles (10 @ P42)	Lin. Ft.		5288	5288
Test Piles Steel (12 @ P53)	Each		2	2
Test Piles Steel (10 @ P42)	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 = 1,062,160 Lbs.
 * Including Excavation for Slope wall.

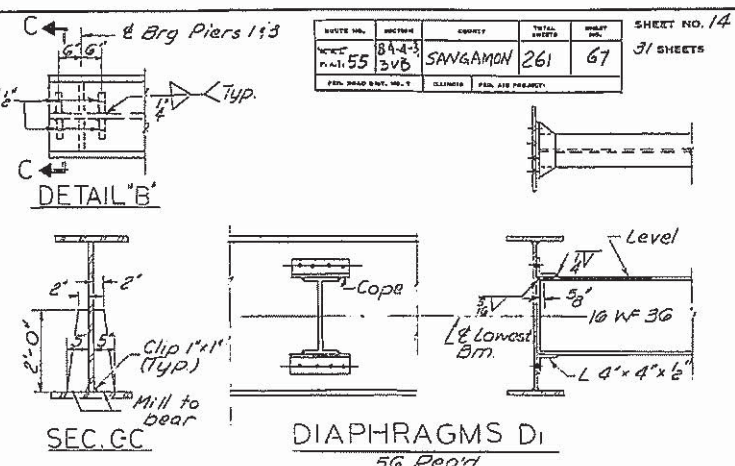
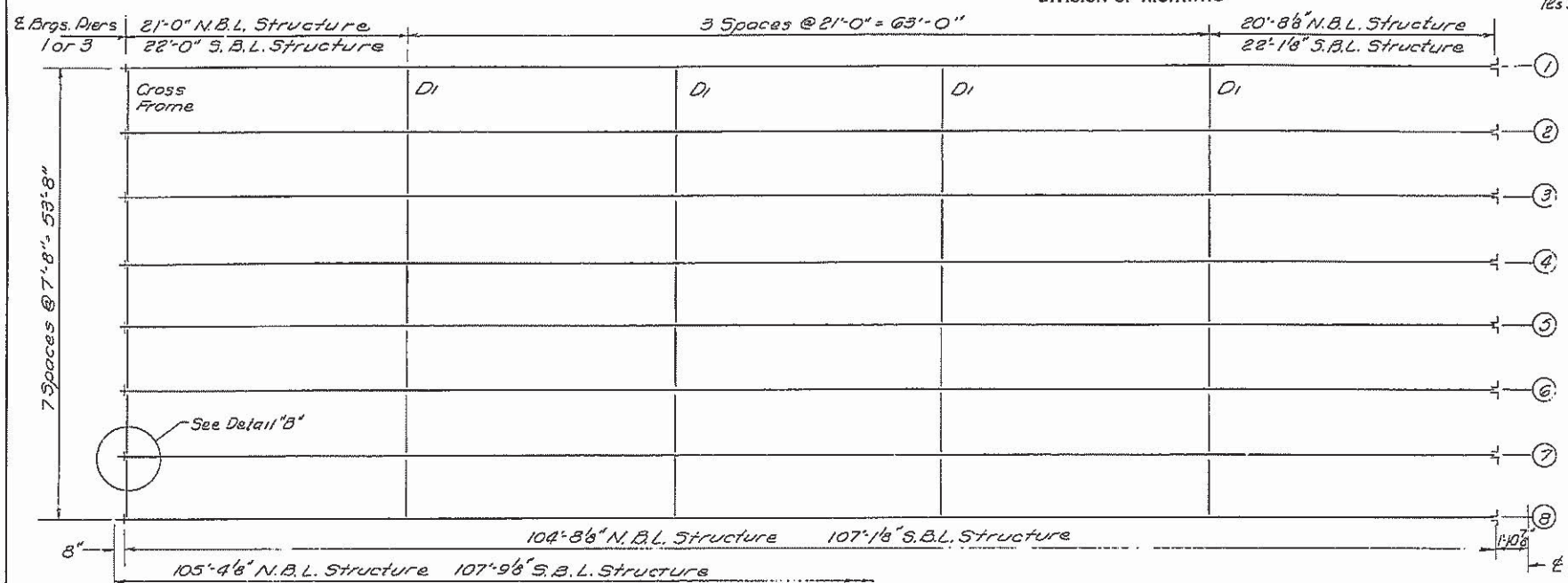
PROJ. I-55-3(62)84
 GENERAL PLAN & ELEVATION
 F.A.I. RTE. 55 - N. E. R. ICHING GLEN ARM
 SANGAMON COUNTY
 STA. 368+33.35

DESIGNED	W. H. H.	EXAMINED	DEC. 12 1963
CHECKED	H. S.	PASSED	
DRAWN	F. Mercado	APPROVED	
CHECKED	H. S.		



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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	84-4-3VB	SANGAMON	261	67
31 SHEETS				



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}	5,453.4 in ³
S _{Ac}	2,396.5 in ³

D.L.	Steel Section	
	Max. Moment	1520'K
S.D.L.	Composite Section	
	Max. Moment	430'K
L.L.	1,152'K	
Imp.	254'K	
Total	1,836'K	
Shear with Impact		
Supp.	4 Point	Point
+L.L.	559k	406 23.3k
-L.L.	0	101 23.3k
Total	559k	507 50.6k

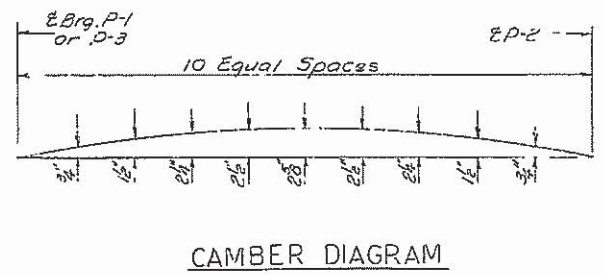
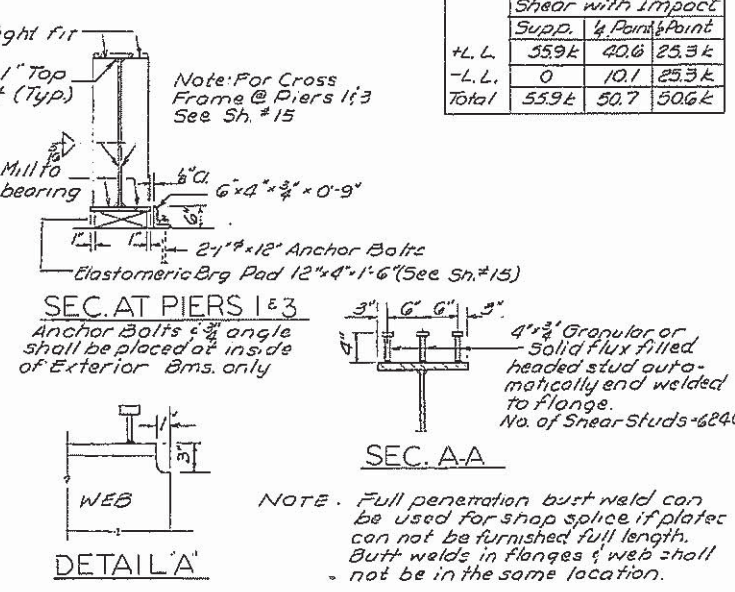
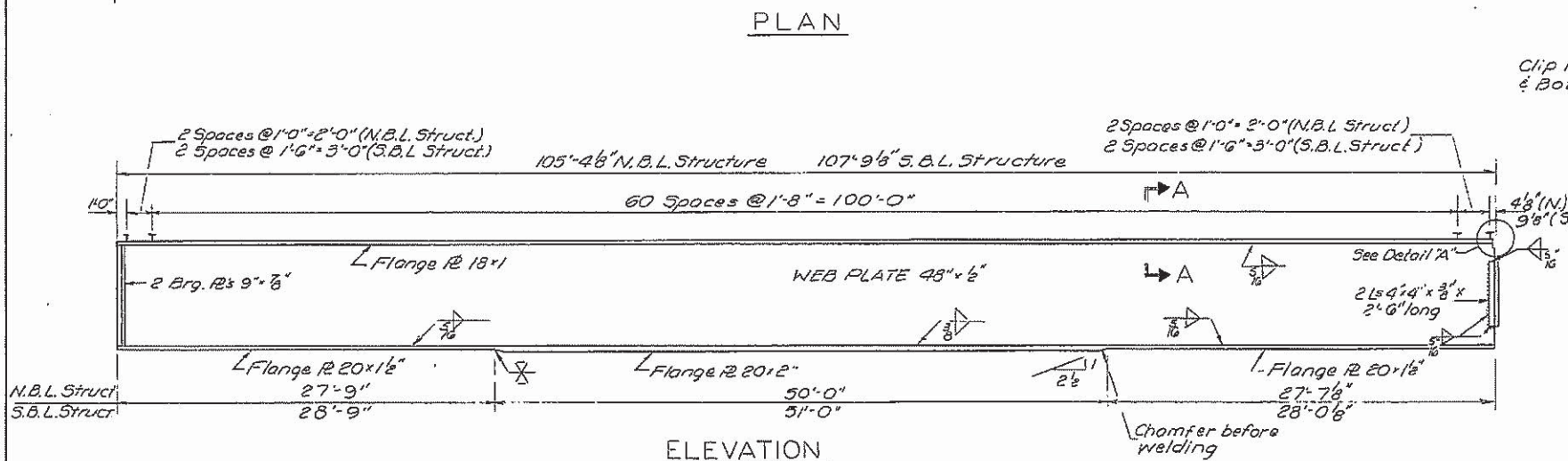
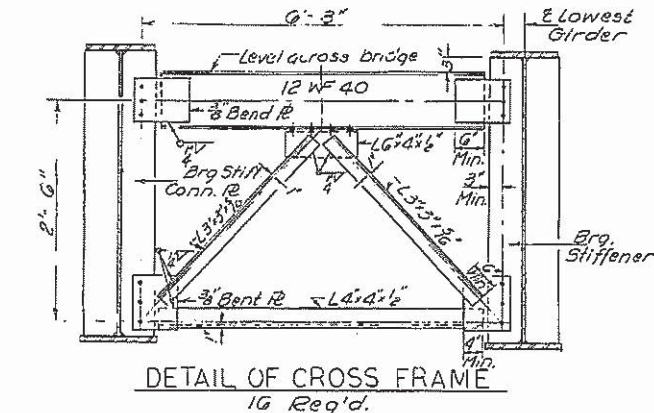
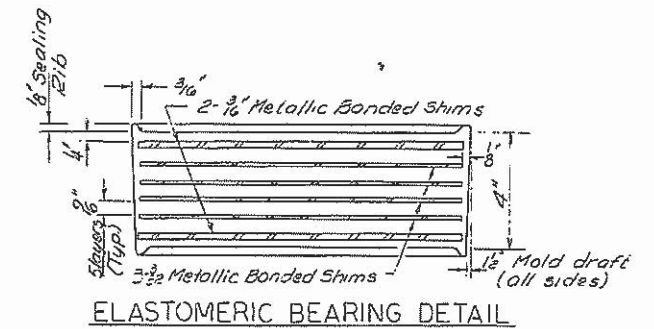
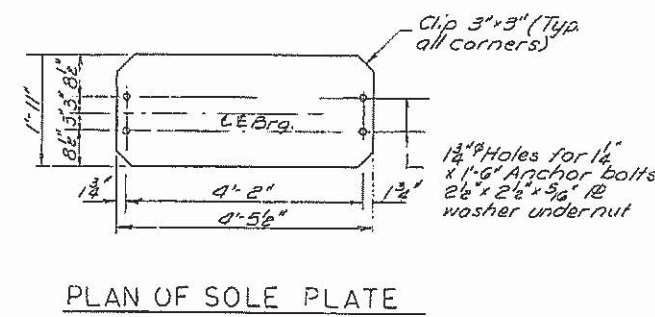
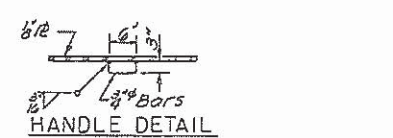
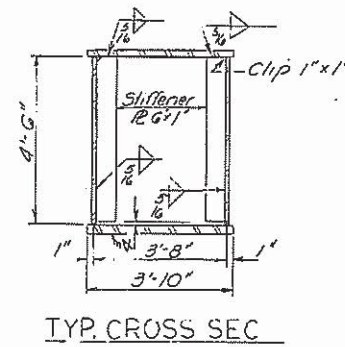
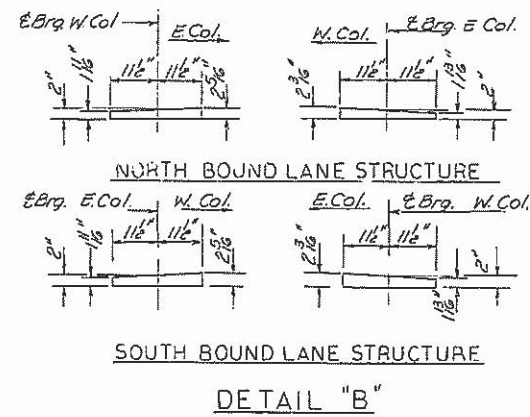
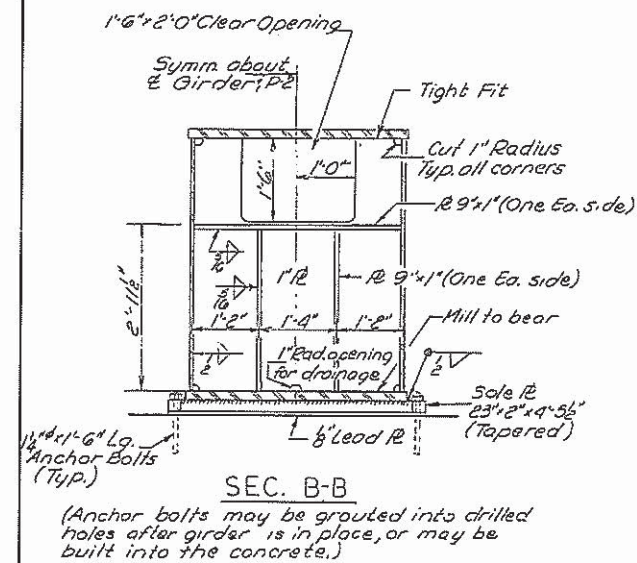
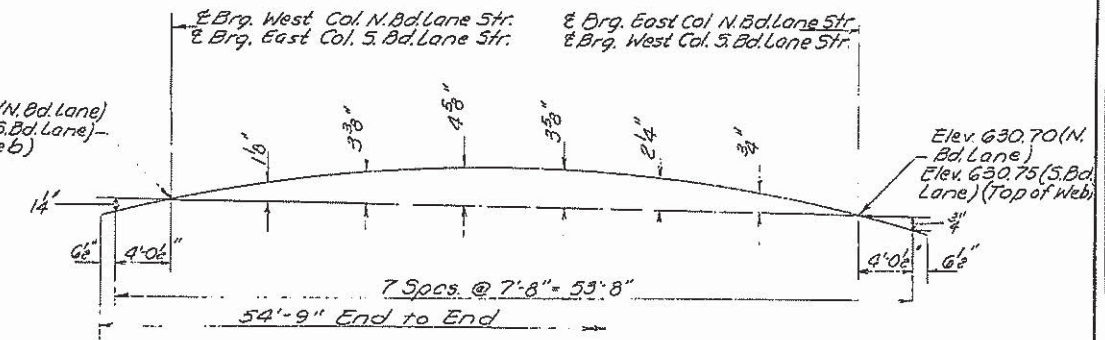
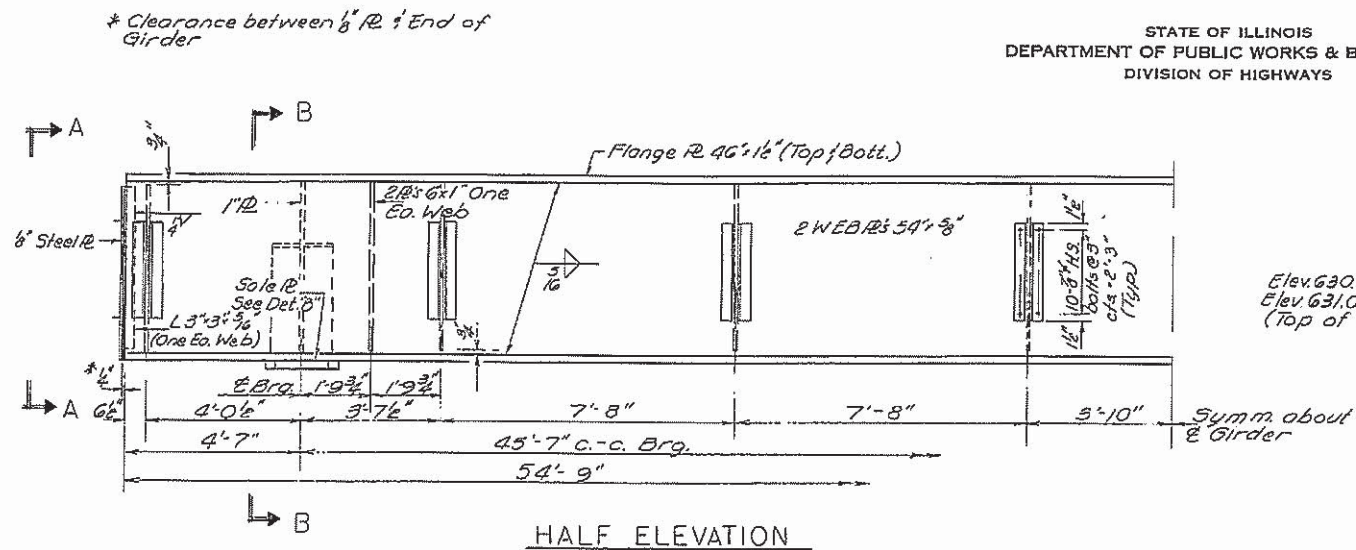


TABLE OF ELEVATIONS (TOP OF WEB)

	0m	1m	2m	3m	4m	5m	6m	7m	8m
E Brg P-1	630.25	630.47	630.63	630.78	630.86	630.86	630.74	630.56	
E P-2	630.88	630.84	631.00	631.15	631.27	631.20	631.08	630.92	
E Brg P-3	630.82	630.98	631.14	631.28	631.40	631.33	631.21	630.98	
E Brg P-1	631.07	631.23	631.35	631.35	631.26	631.11	630.93	630.79	
E P-2	630.99	631.15	631.28	631.32	631.20	631.05	630.89	630.73	
E Brg P-3	630.67	630.83	630.96	631.03	630.91	630.76	630.60	630.36	

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

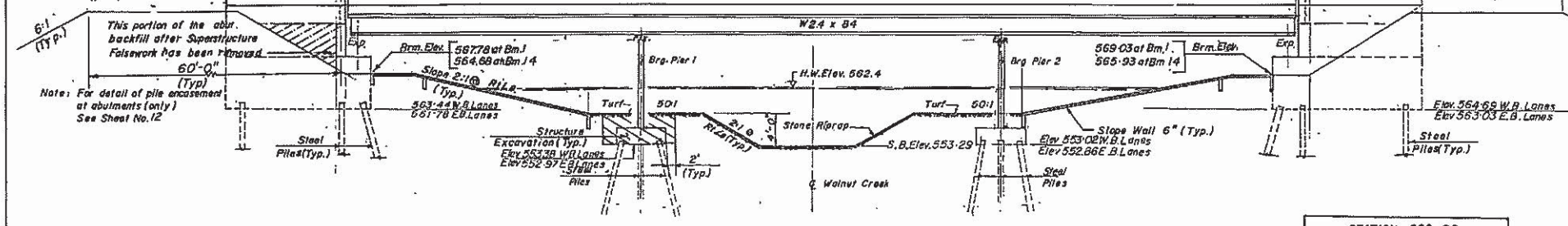
DESIGNED	M.A. H. d. s.	EXAMINED	Dec. 12 1952
CHECKED	Harold C. Smith	PASSED	
DRAWN	F. Mercado	APPROVED	
CHECKED	H.S.		



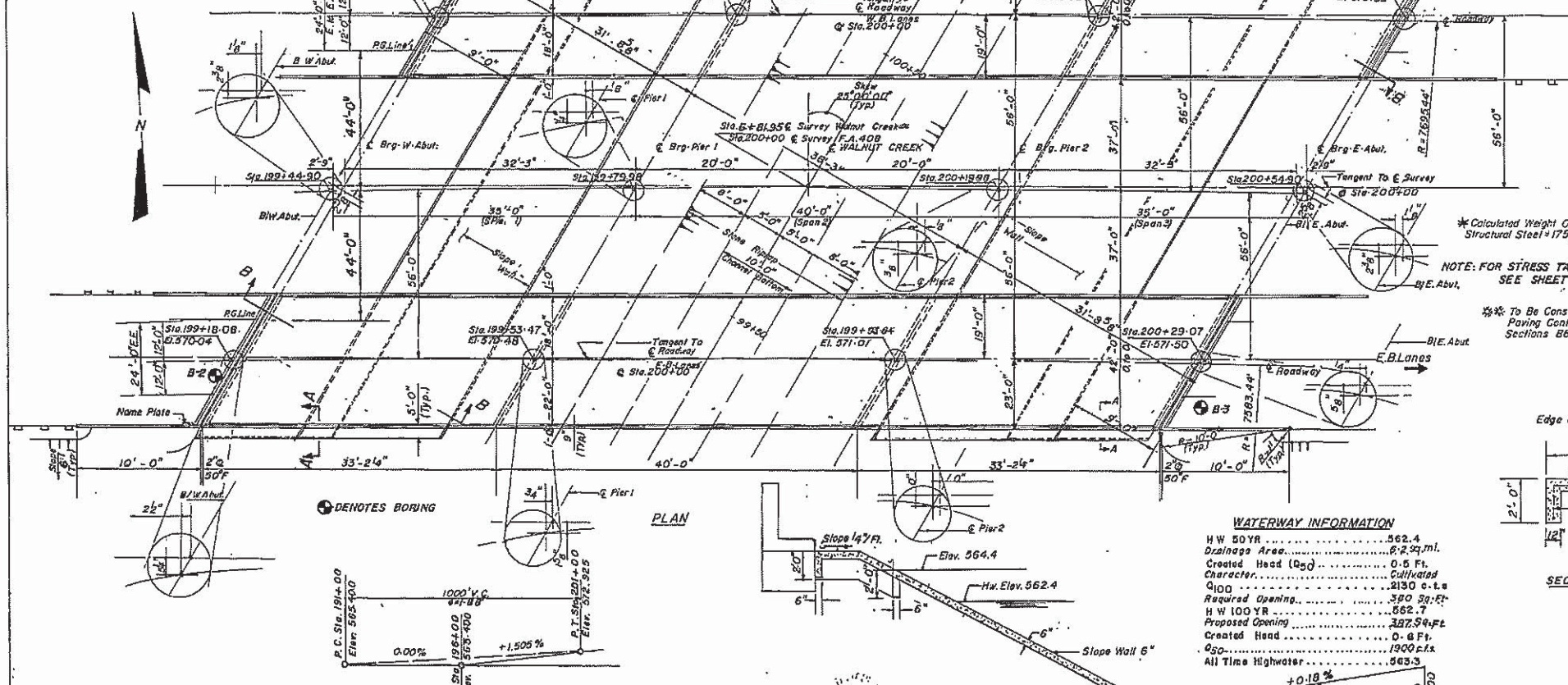
SUPPORTING GIRDER
FAI RTE. 55 SEC. 84-4-3 VB
SANGAMON COUNTY
STA. 368+33.35

DESIGNED	W.A. HERR	DATE	7/1/55
CHECKED	H.S.	EXAMINED	D.S. 17
DRAWN	F. MERCADO	PASSED	
CHECKED	H.S.	APPROVED	

B.M. 460-R.R. Spike in 20' Stump
20' E. On Local Tangent.
Sta. 200+00
Elev. 560.268

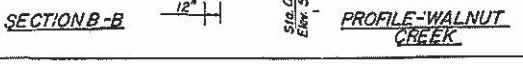


Survey
F.A.R.T. 408
CURVE DATA
P.L. Sta. 198+22.01
A = 8°47'37.6"
D = 0°45'
T = 587.406'
R = 7639.44'
L = 1172.504'
E = 22.55'
P.C. Sta. 193+34.51
P.T. Sta. 205+07.11
Super Elev. 0.033'/ft.



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

PACE ASSOCIATES, INC.
PREPARED BY: Sam C. Sit
Rep. Structural Engineer of Illinois
PLANNERS ENGINEERS ARCHITECTS
33 EAST WACKER DRIVE CHICAGO ILLINOIS 60601



408 86-108 SCOTT 37 12
P-96-026-72

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-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" X 6" MESH, WEIGHING 50# PER 100 SQ. FT.
LAYOUT OF SLOPE WALLS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE HIGHEST EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.
THE CONTRACTOR SHALL DRIVE TWO TEST PILES ONE EACH AT PIERS 1, EAST BOUND LANES, AND PIER 2, WEST BOUND LANES IN REINFORCEMENT LOCATION AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REBARWORK OF THE PILES.
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 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 200 BENCH TOUGHNESS AND THE WEBS, SPLICE PLATES, AND THE FLANGES OF THE WIDE FLANGE BEAMS.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCT.	SUB STRUCT.	TOTAL
Structure Excavation	Cu.Yds		180	180
Biluminous 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.Sun			L.S.
Aluminum Rolling	Lin.Ft.	498		498
Steel Piles (HP 10X 42)	Lin.Ft.		4110	4110
Reinforcement Bars	Lbs.	62270	30970	93240
Water Proofing Membrane System	Sq.Yds	912		912
Prefomed Joint Sealer (2 1/2")	Lin.Ft.	93		93
Test Pile Steel (HP 10X 42)	Each		2	2
Name Plates	Each		2	2
Slope Wall 6 Inch	Sq.Yds.		725	725
Protective Coat	Sq.Yds		212	212

NOTES:
DESIGN LOADING
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 Fastenings
Allowable Live Load Deflection = L/1000 (Non-Composite)
DESIGN SPECIFICATIONS:
AASHTO, 1973 As Applicable

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

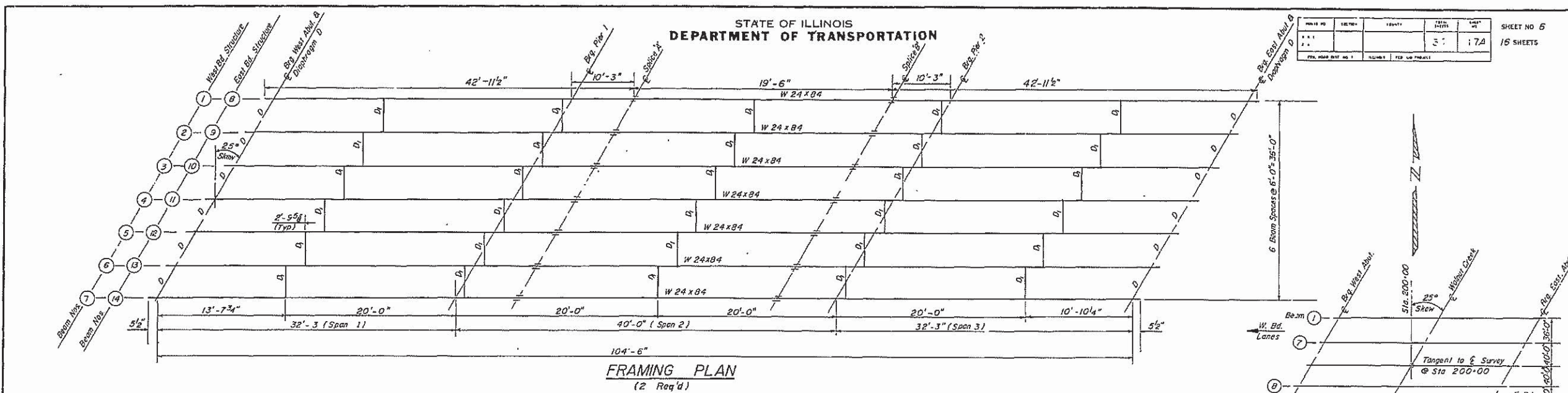
GENERAL PLAN & ELEVATION
ILLINOIS DEPARTMENT OF TRANSPORTATION
Project: EBRF-408-1(B)
F.A. ROUTE 408 SEC 86-108
F.A. 408 OVER WALNUT CREEK

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

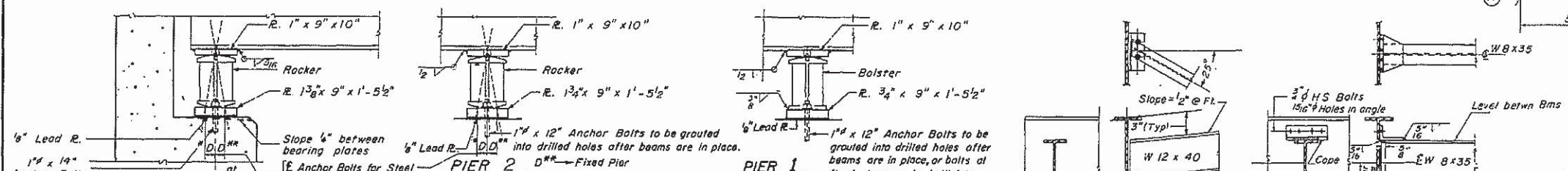
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NO. 10	NO. 11	NO. 12	NO. 13	NO. 14	NO. 15
1	2	3	4	5	6

SHEET NO 5
15 SHEETS



KEY PLAN

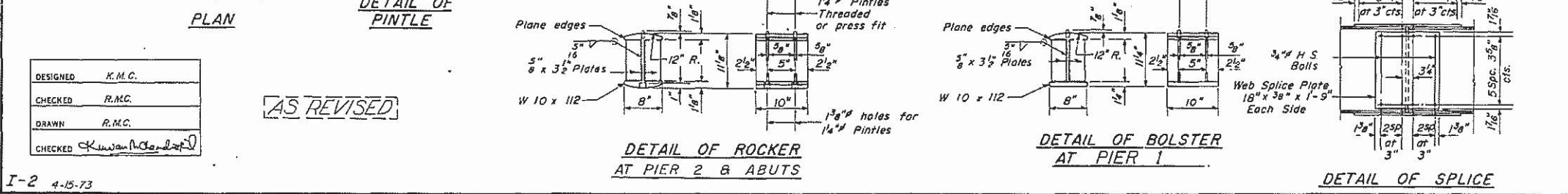
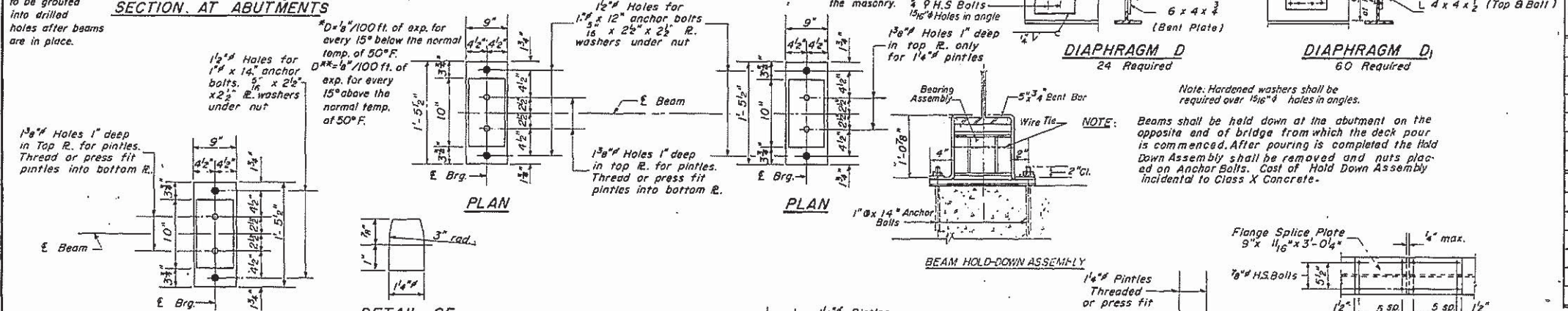


SECTION AT ABUTMENTS

*ELEVATIONS - TOP OF BEAMS

Beam No.	LOCATION					
	€ Brg. € Brg.	€ Splice € Splice	€ Brg € Brg.	€ Brg. € Brg.	€ Brg. € Brg.	
1	571.53	571.92	572.04	572.20	572.39	573.00
2	571.29	571.68	571.50	571.95	572.15	572.76
3	571.05	571.44	571.56	571.72	571.91	572.52
4	570.81	571.20	571.32	571.48	571.67	572.28
5	570.57	570.96	571.08	571.24	571.43	572.04
6	570.33	570.72	570.84	571.00	571.19	571.80
7	570.09	570.48	570.60	570.76	570.95	571.56
8	569.87	570.26	570.38	570.54	570.73	571.34
9	569.63	570.02	570.14	570.30	570.49	571.10
10	569.39	569.78	569.90	570.06	570.25	570.86
11	569.15	569.54	569.66	569.82	570.01	570.62
12	568.91	569.30	569.42	569.58	569.77	570.38
13	568.67	569.06	569.18	569.34	569.53	570.14
14	568.43	568.82	568.94	569.10	569.29	569.90

* For Fabrication Only



DESIGNED	K.M.C.
CHECKED	R.M.C.
DRAWN	R.M.C.
CHECKED	K.M.C.

AS REVISED

I-2 4-15-73