

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PROPOSED
HIGHWAY PLANS**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

F.A.I. 64

2021 ADT = 31,300 (ACTUAL)
2024 ADT = 32,200 (ESTIMATED)
2044 ADT = 39,300 (ESTIMATED)
SU = 4.2 % MU = 27.5 %
DIR DIST = 50/50

F.A.P. 42

2021 ADT = 4,500 (ACTUAL)
2024 ADT = 4,700 (ESTIMATED)
2044 ADT = 5,900 (ESTIMATED)
SU = 3.1 % MU = 6.7 %
DIR DIST = 50/50

**FAI ROUTE 64 (I-64)
FAP ROUTE 42 (IL 127)
SECTION 82-8P,9BP
PROJECT NHPP-N7ZC(190)
BRIDGE PAINTING
ST. CLAIR COUNTY & WASHINGTON COUNTY**

C-98-076-24

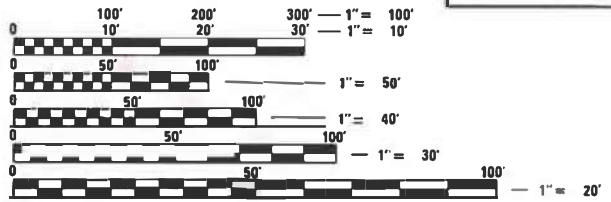
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
"	82-8P, 9BP	"	12	1
F.A.I. 64, F.A.P. 42		ILLINOIS	CONTRACT NO. 76T41	
WASHINGTON, ST. CLAIR				

D-98-008-24



**LOCATION #1
SN 082-0195
WB I-64 OVER
NSRR
LAT: 38.53273252 N
LONG: 89.72693084 W**

**LOCATION #2
SN 095-0065
IL 127 OVER
LOCUST CREEK
LAT: 38.25729381 N
LONG: 89.38026209 W**

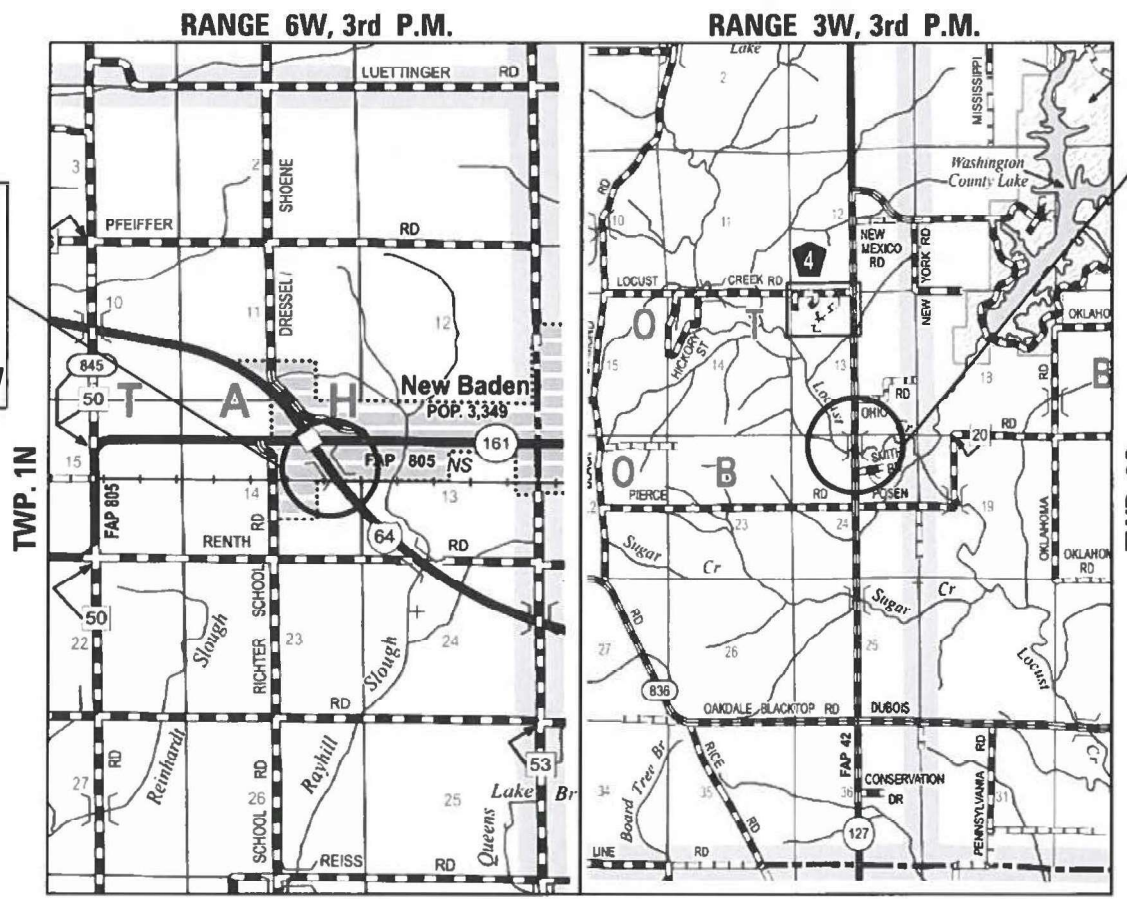


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

**J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811**

**PROJECT ENGINEER: CHERYL KEPLAR
PROJECT MANAGER: TONI MANN**

CONTRACT NO. 76T41



LOCATION MAP

NOT TO SCALE

STRUCTURE LENGTH LOCATION #1 = 171'-9" = 0.033 MILE
STRUCTURE LENGTH LOCATION #2 = 229'-3" = 0.043 MILE

TWP. 1N
TWP. 3S



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Illinois.
Andrew Underwager 01/30/2024
ANDREW E. UNDERWAGER, P.E. DATE
License Number: 062-053211
My license renewal date is November 30, 2025.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED *January 31, 2024*
Bixie H. Brown
REGIONAL ENGINEER

March 22, 2024
Andrew E. Underwager
ENGINEER OF DESIGN AND ENVIRONMENT

March 22, 2024
Steph M. Smith
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, COMMITMENTS, & PERTINENT INFORMATION
- 3 SUMMARY OF QUANTITIES
- 4 STAGE CONSTRUCTION TRAFFIC CONTROL - SN 082-0195
- 5 STAGE CONSTRUCTION TRAFFIC CONTROL - SN 095-0065
- 6-8 EXISTING PLANS - SN. 082-0195
- 9-12 EXISTING PLANS - SN. 095-0065

HIGHWAY STANDARDS

- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 701321-18 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701400-12 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701402-12 LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
- 701411-09 LANE CLOSURE, MULTI-LANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
- 701428-01 TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
- 701901-09 TRAFFIC CONTROL DEVICES
- 704001-08 TEMRRORARY CONCRETE BARRIER
- 782006-01 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

GENERAL NOTES

- 1. UTILITES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREAS:

UTILITIES

- AT&T ILLINOIS
- CHARTER COMMUNICATIONS, INC.
- CLEARWAVE FIBER LLC
- CLINTON COUNTY ELECTRIC COOPERATIVE, INC.
- EVERSTREAM GLC HOLDING COMPANY LLC
- FRONTIER COMMUNICATIONS
- NEW MEMPHIS PUBLIC WATER DISTRICT
- TRI-COUNTY ELECTRIC COOPERATIVE, INC.
- WASHINGTON COUNTY WATER CO.

- 2. NO SURVEY WAS PERFORMED FOR THIS PROJECT AND THE PLANS WERE CREATED USING EXISTING PLANS.

- 3. THE RESIDENT ENGINEER SHALL VERIFY THE EXISTENCE OF HIGHWAY LIGHTING, INTELLIGENT TRANSPORTATION SYSTEMS (I.T.S.) UTILITIES, AND/OR ELECTRICAL CABLES ASSOCIATED WITH TRAFFIC SIGNALS WITHIN THE PROJECT LIMITS. IF ANY OF THESE EXIST WITHIN THE PROJECT LIMITS, AND IF THESE ITEMS REQUIRE LOCATING, THE CONTRACTOR SHALL BE DIRECTED TO DO SO ACCORDING TO SECTION 803 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE PAID FOR ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

- 4. ONE (1) CHANGEABLE MESSAGE SIGN SHALL BE REQUIRED FOR LOCATION #1. TWO (2) CHANGEABLE MESSAGE SIGNS SHALL BE REQUIRED FOR LOCATION #2. CHANGEABLE MESSAGE SIGNS SHALL BE PLACED 2 WEEKS PRIOR TO ANY LANE CLOSURE. THE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

- 5. A MINIMUM OF ONE AIR MONITOR WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT LOCATION 1 (SN 082-0195). SEE SPECIAL PROVISION "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".

- 6. A MINIMUM OF ONE AIR MONITOR WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT LOCATION 2 (SN 095-0065). SEE SPECIAL PROVISION "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".

- 7. THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUBCONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINING GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G. MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THEDISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 681-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

- 8. THE SSPC-QP1 AND SSPC-QP2 CERTIFICATIONS ARE REQUIRED FOR THIS CONTRACT.

- 9. FOR LOCATION 1 (SN 082-0195) CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING (SSPC-SP10). THE DESIGNATED AREAS CLEANED PER NEAR WHITE BLAST CLEANING (SSPC-SP10) SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR ALL STEEL SURFACES SHALL BE GRAY MUNSELL NO. 5B 7/1.

- 10. FOR LOCATION 2 (SN 095-0065) THE DESIGNATED ZONE FOR CLEANING AND PAINTING IS 5 FOOT FROM THE ENDS OF BEAMS FOR ALL BEAMS AND THE FULL LENGTH OF THE FASCIAS AND BOTTOM FLANGES OF THE EXTERIOR BEAMS. CLEANING AND PAINTING OF THE EXISTING STEEL BEAMS SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". THE DESIGNATED ZONE SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING (SSPC-SP10). THE DESIGNATED ZONE CLEANED PER NEAR WHITE BLAST CLEANING (SSPC-SP10) SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR ALL STEEL SURFACES SHALL BE GREEN MUNSELL NO. 7.5G 4/8.

- 11. FOR LOCATION 2 (SN 095-0065) CLEANING AND PAINTING OF THE EXISTING STEEL BEARINGS AND END DIAPHRAGMS SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL BEARINGS AND DIAPHRAGMS SURFACES SHALL BE CLEANED PER SOLVENT CLEANING (SSPC-SP1). THE DESIGNATED AREAS CLEANED PER SOLVENT CLEANING (SSPC-SP1) SHALL RECEIVE ONE FULL COAT OF EPOXY INTERMEDIATE COAT AND ONE FULL COAT OF ALIPHATIC URETHANE FINISH COAT. THE COLOR OF THE FINAL FINISH COAT FOR ALL STEEL SURFACES SHALL BE GREEN MUNSELL NO. 7.5G 4/8.

COMMITMENTS

NONE


PERTINENT INFORMATION

THE PRIMARY NORFOLK SOUTHERN RAILROAD POINT OF CONTACT FOR WORK ON STRUCTURE SN 082-0195 IS:

BRIAN TAYLOR
ENGINEER PUBLIC IMPROVEMENTS
NORFOLK SOUTHERN CORPORATION
650 WEST PEACHTREE STREET, NW
BOX 45
ATLANTA, GA 30308
(470) 463-7534 OFFICE
GEORGE.TAYLOR@NSCORP.COM

REV. - MS

HRC PROJECT NO.: 200712.08
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	CHECKED - AEU	REVISED -	*			82-8P, 9BP	**	12	2	
PLOT SCALE =	DRAWN - WJH	REVISED -	* F.A.I. 64, F.A.P. 42	SHEET NO. OF SHEETS		ILLINOIS		CONTRACT NO. 76T41		
PLOT DATE = 1/26/2024	CHECKED - AEU	REVISED -	** WASHINGTON, ST. CLAIR							FED. AID PROJECT

CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				90% FED 10% STATE	80% FED 20% STATE
				BRIDGE	
				0047 SN 082-0195	0047 SN 095-0065
		RURAL			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	2	2
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1		1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1	1	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1		1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6		6
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	42	14	28
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	0.5	0.5
70400100	TEMPORARY CONCRETE BARRIER	FOOT	776	351	425
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	3	1	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
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1	
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1		1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1	

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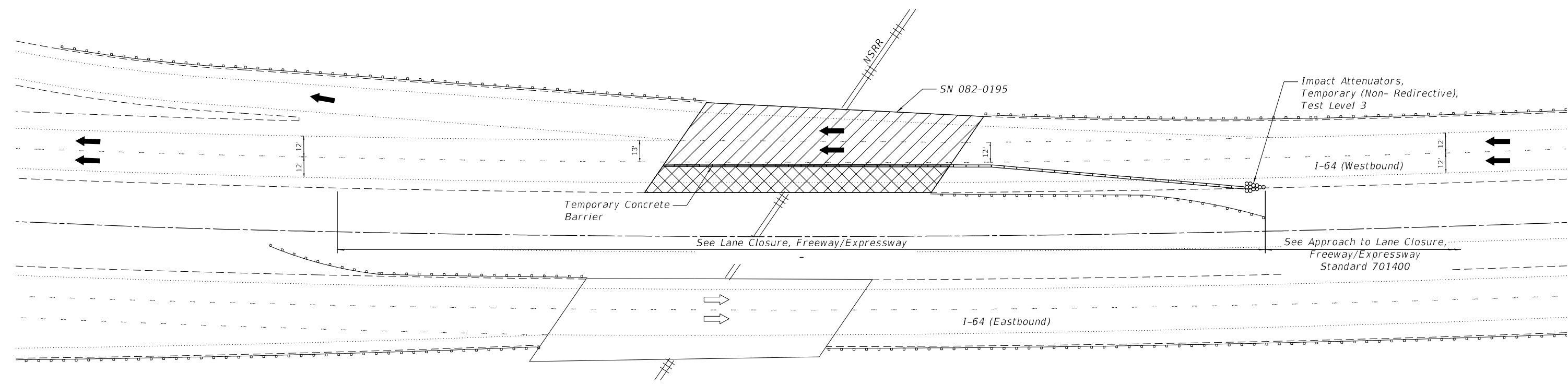
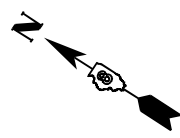
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SHEET NO. OF SHEETS

*F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-8P, 9BP	**	12	3
* F.A.I. 64, F.A.P. 42		CONTRACT NO. 76T41		
** WASHINGTON, ST. CLAIR		ILLINOIS	FED. AID PROJECT	

REV. - MS



MAINTENANCE OF TRAFFIC

LEGEND

- Work Area Under Bridge
- Work Under Bridge and Contractor Staging Area

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

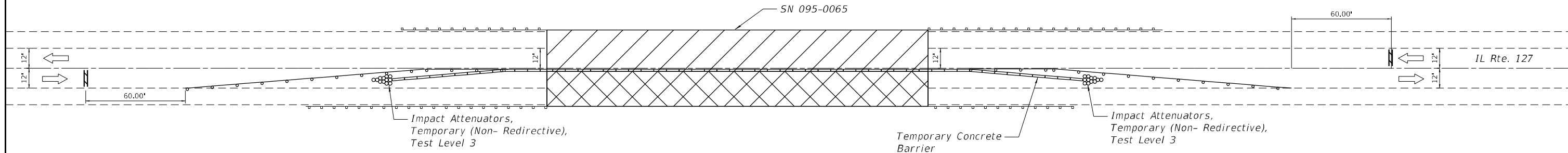
STAGE CONSTRUCTION TRAFFIC CONTROL - LOCATION #1
STRUCTURE NO. 082-0195

SHEET NO. 1 OF 4 SHEETS

*F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-SP, 9BP	**	12	4
* F.A.I. 64, F.A.P. 42		ILLINOIS	CONTRACT NO. 76T41	
** WASHINGTON, ST. CLAIR			FED. AID PROJECT	



See Lane Closure, 2L, 2W, Bridge Repair With Barrier



MAINTENANCE OF TRAFFIC

LEGEND

- Work Area Under Bridge
- Work Under Bridge and Contractor Staging Area

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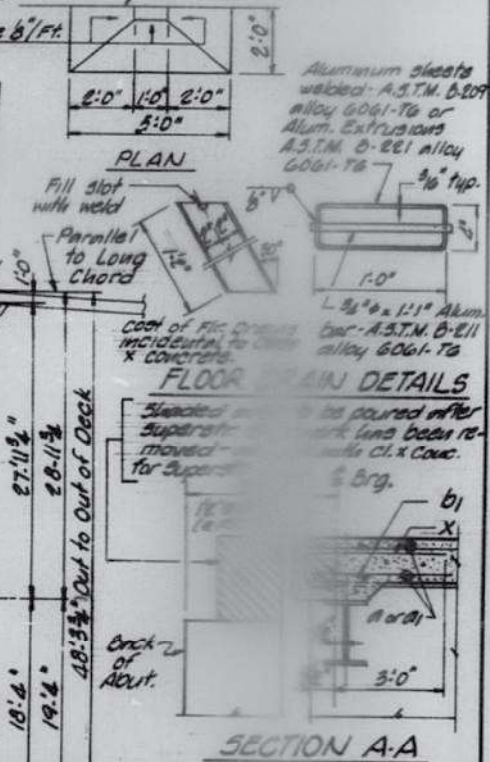
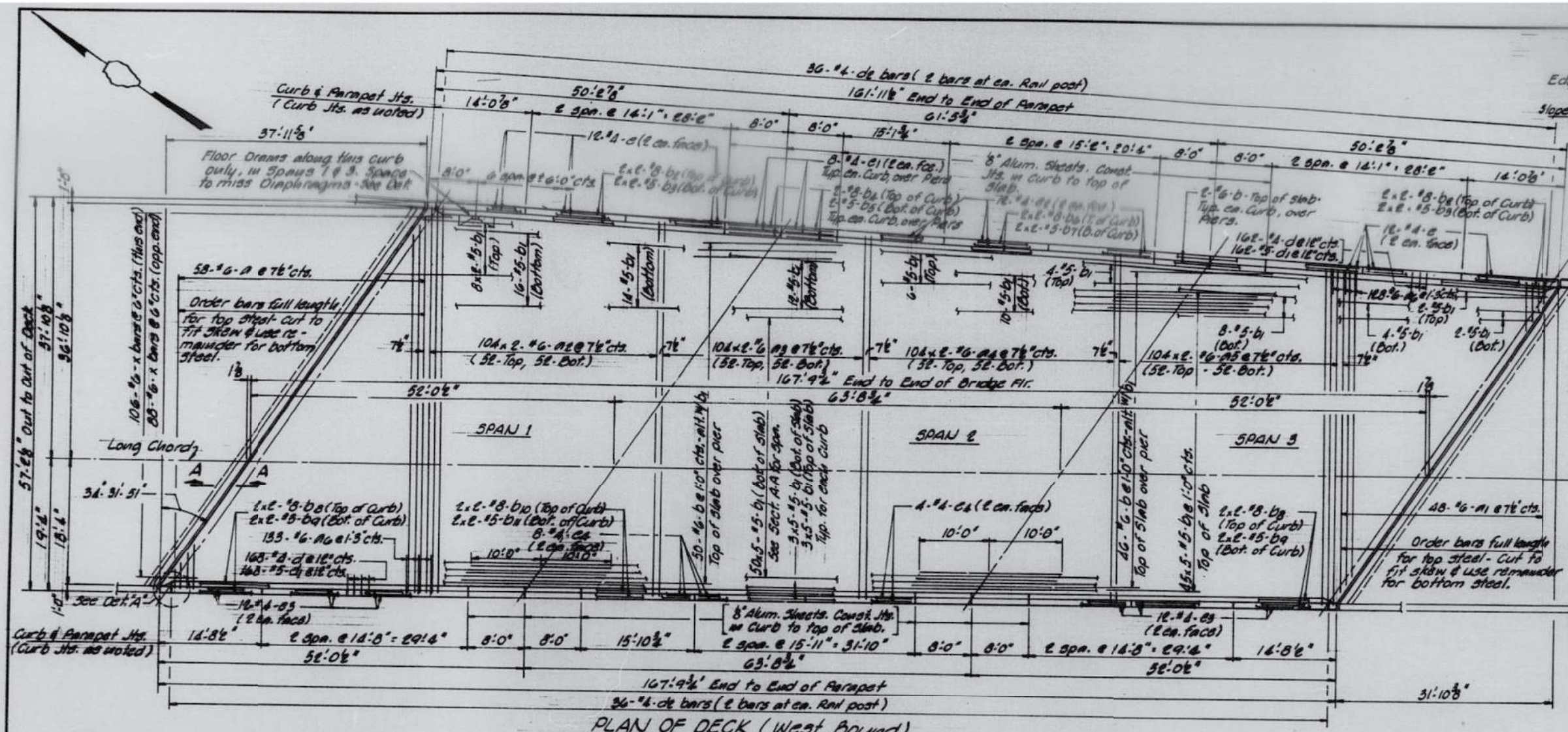
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION TRAFFIC CONTROL - LOCATION #2
STRUCTURE NO. 095-0065

SHEET NO. 1 OF 3 SHEETS

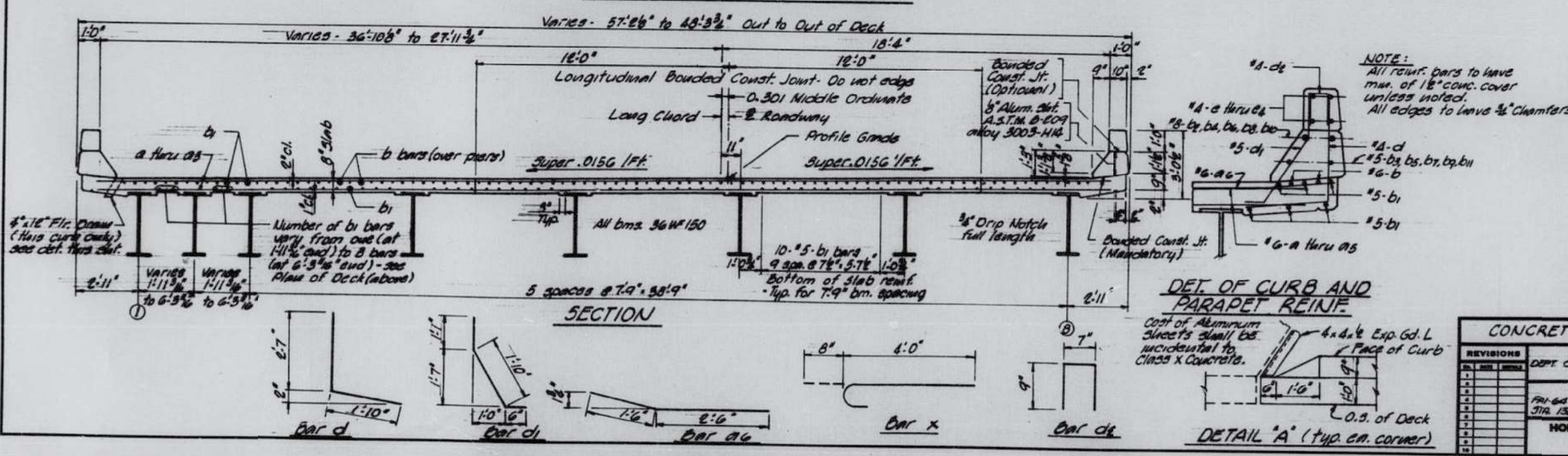
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*	82-SP, 9BP	**	12	5
* F.A.I. 64, F.A.P. 42	ILLINOIS	CONTRACT NO. 76T41		
** WASHINGTON, ST. CLAIR	FED. AID PROJECT			

Sheet No. 6	of 23 Sheets	DATE: 08-29-19	PROJECT: ST. CLAIR	SHEET NO. 19
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BILL OF MATERIAL

Bar	No.	Size	Length	Weight
a	50	#2	24.0'	10.0
b	104	#2	20.0'	41.6
c	167	#2	31.10'	110.0
d	36	#4	24.0'	10.0
e	50	#2	27.0'	11.0
f	104	#2	26.1'	44.0
g	167	#2	25.0'	57.0
h	26	#4	2.0'	1.0
i	104	#4	20.0'	38.6
l	167	#4	22.0'	51.8
m	16	#4	7.9'	7.9
n	16	#4	22.8'	23.8
o	4	#4	23.4'	10.0
p	4	#4	23.0'	10.0
q	4	#4	23.0'	10.0
r	4	#4	23.9'	10.0
s	4	#4	23.3'	10.0
t	194	#6	4.8'	10.0
Class X Concrete				281.7
Reinforcement Bars				126
Structural Steel				1.3



DETAIL OF CURB AND PARAPET REINF.

Cost of Aluminum Sheat's shall be incidental to Class X Concrete.

DETAIL 'A' (Typ. ea. corner)

Dimensions: 4'-0" x 4'-0" x 1'-0" x 1'-0"

CONCRETE DECK - W.B. STRUCTURE

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

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

FRI-64 OVER SOUTHERN R.V. SEC 82-94B PROJECT ST. CLAIR CO. ILLINOIS

HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS

1848-5

FOR INFORMATIONAL USE ONLY

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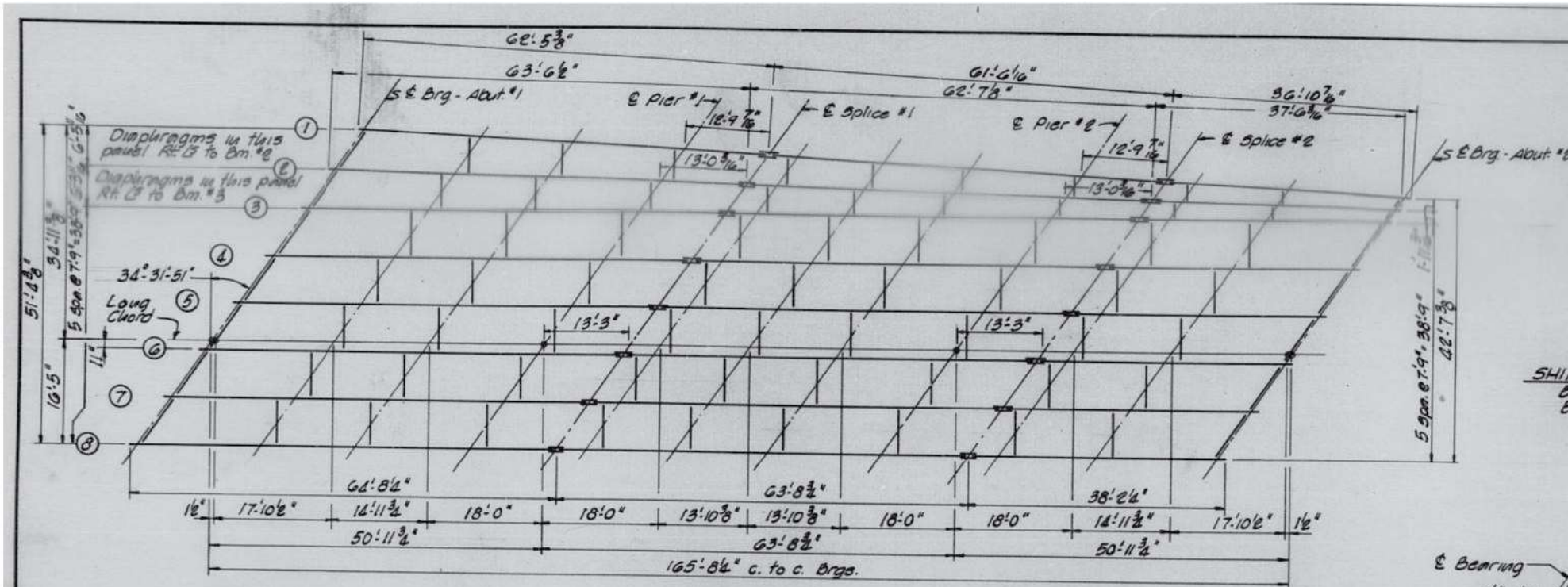


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	CHECKED - AEU	REVISED -
PLOT SCALE =	DRAWN - WJH	REVISED -
PLOT DATE = 1/12/2024	CHECKED - AEU	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
 STRUCTURE NO. 082-0195
 SHEET NO. 2 OF 3 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	82-9P, 9BP	**	12	7
F.A.I. 64, F.A.P. 42		ILLINOIS	CONTRACT NO. 76741	
WASHINGTON, ST. CLAIR		FED. AID PROJECT		



TOP OF BEAM ELEVATIONS

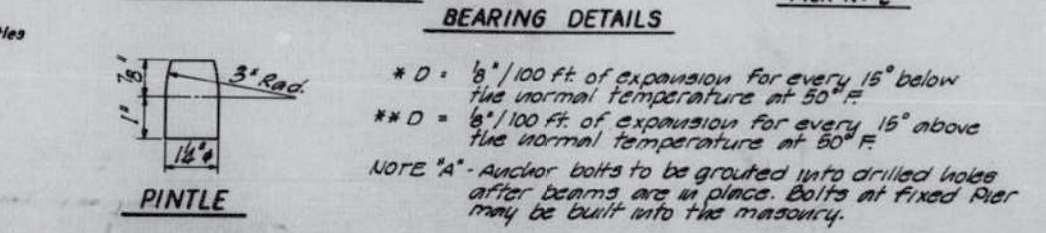
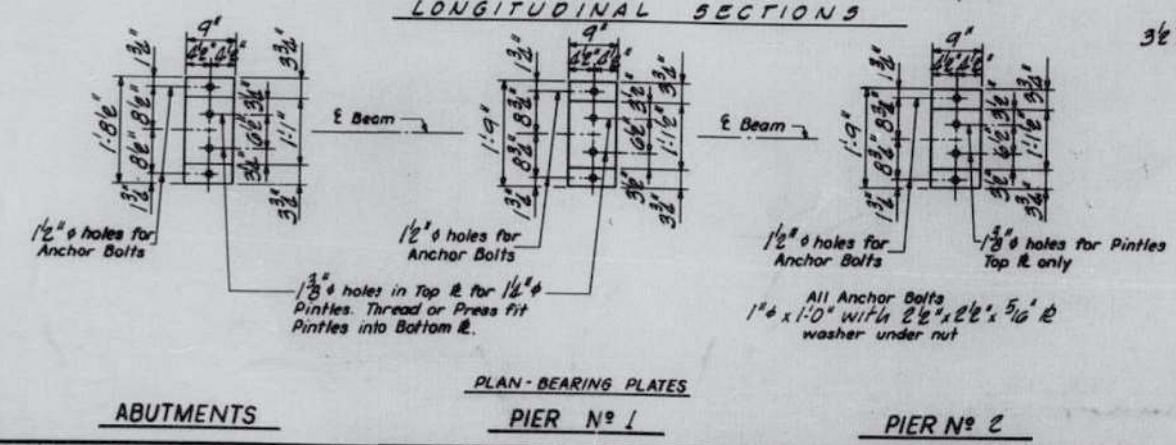
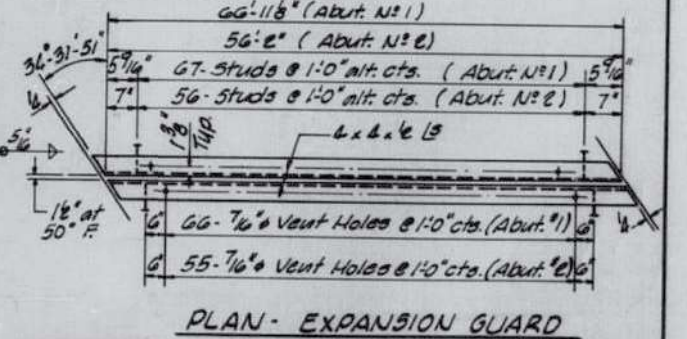
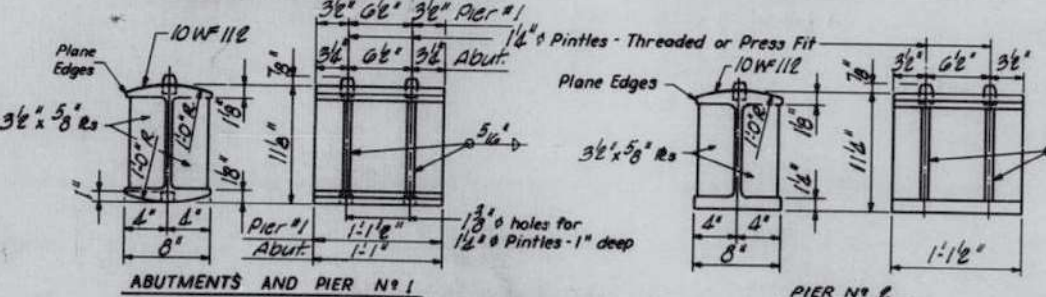
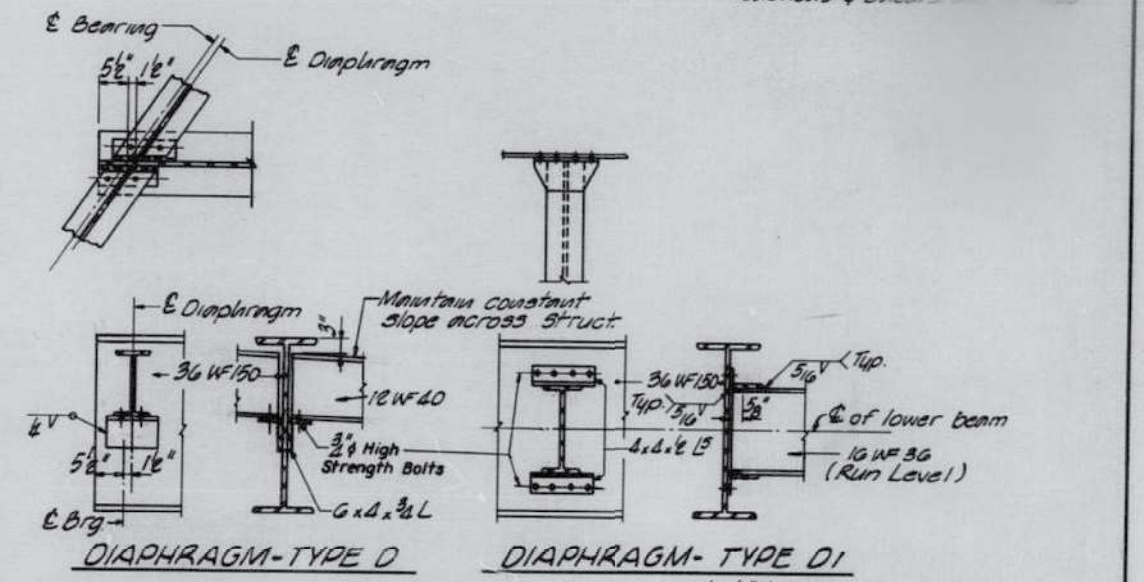
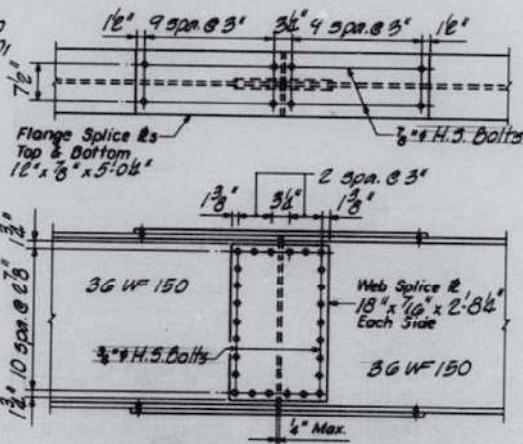
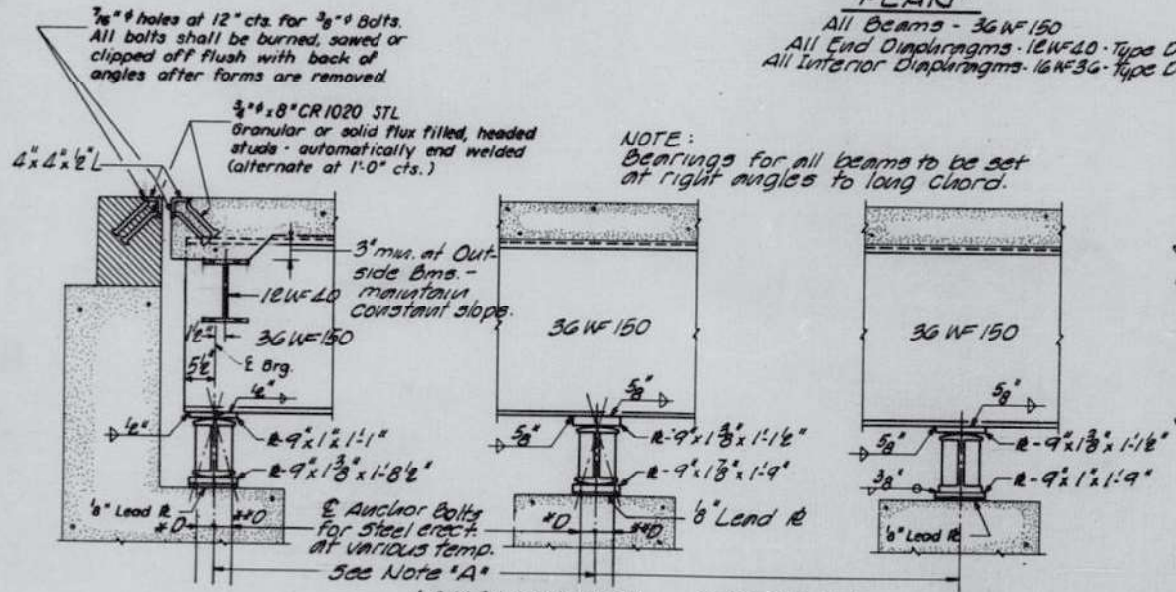
Location	Beams							
	1	2	3	4	5	6	7	8
E. Brg. Abut. N°1	291.69	291.82	291.95	292.11	292.27	292.43	292.58	292.74
E. Brg. Pier N°1	291.33	291.43	291.53	291.70	291.85	292.01	292.16	292.32
E. Splice N°1	291.23	291.33	291.43	291.59	291.72	291.90	292.05	292.21
E. Brg. Pier N°2	290.87	290.94	291.01	291.17	291.33	291.49	291.65	291.79
E. Splice N°2	290.78	290.82	290.90	291.06	291.22	291.38	291.55	291.69
E. Brg. Abut. N°2	290.31	290.55	290.59	290.76	290.91	291.07	291.22	291.38

SHIM PLATES AT ABUT. #2 ONLY
 Beam N°5 - 2 9" x 1/2" x 18"
 Beam N°3 - 2 9" x 1/2" x 18"

TABLE OF MOMENTS & REACTIONS

D.L.	MOMENTS				REACTIONS
	Abut. #1	Pier #1	Pier #2	Abut. #2	
208	386	202		74.8	
366	302	378		29.0	
104	83	100		13.5	
678	771	680		117.3	

Moments are in Ft.-Kips
 Reactions & Shears are in Kips



FRAMING PLAN - WEST BOUND STRUCT.

REVISIONS	DATE	BY	CHKD.
1	12/10/22		

STATE OF ILLINOIS
 DEPT. OF PUBLIC WORKS AND BLDG.
 DIVISION OF HIGHWAYS
 F.A.I. 64 OVER SOUTHERN RY.
 FAI 64 SEC. 82-9P PROJ.
 STA. 18A1+51.92 (FAI 64) ST. CLAIR COUNTY
 HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

PROJECT NO. 1448-5
 SHEET NO. 8

FOR INFORMATIONAL USE ONLY

HRG PROJECT NO.: 201713.08
 HRG PROJ. CONT. NO.:
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USER NAME = rauttejada	DESIGNED - RAT	REVISED -
PLOT SCALE =	CHECKED - AEU	REVISED -
PLOT DATE = 1/12/2024	DRAWN - WJH	REVISED -
	CHECKED - AEU	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
 STRUCTURE NO. 082-0195
 SHEET NO. 3 OF 3 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	82-9P, 9BP	**	12	8
F.A.I. 64, F.A.P. 42	ILLINOIS	CONTRACT NO. 76741		
** WASHINGTON, ST. CLAIR		FED. AID PROJECT		

B.M. No. 22 A. Chisled "o" N.E. Wingwall
Locust Crk. Bridge Sta. 653+71-15 Rt. Elev. 459.72

B.M. No. 5 R.R. Spike in 23" Sycamore Tree
Sta. 660+96 - 35 Rt. Elev. 456.20

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 42	98B	Washington	47	20

GENERAL NOTES

- Reinforcement Bars shall conform to the requirements of AASHTO, M-53, Gr. 60 or M-31, Gr. 60.
- See Special Provisions for Boring Data.
- Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " open holes $1\frac{1}{8}$ " ϕ , unless otherwise noted.
- Calculated weight of Structural Steel 285,570 lbs.
- The basic lead silico chromate paint system shall be used for shop and field painting of Structural Steel.
- 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 6×6 mesh, weighing 58# per 100 sq. ft.
- Layout of slope walls may be varied in the field to suit ground conditions as directed by the Engineer.
- The Contractor shall drive two (2) Steel HP 8X36 test piles in a permanent location, one at the South abutment and one at Pier #2 as directed by the Engineer before ordering the remainder of 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 Handrail Concrete.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plates, shall be provided for each bearing in addition to all other plates or shims.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Match Toughness Zone 2. These components are the tension flanges, webs, cover plates and all splice plate material of the steel girders or wide flange beams.
- The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

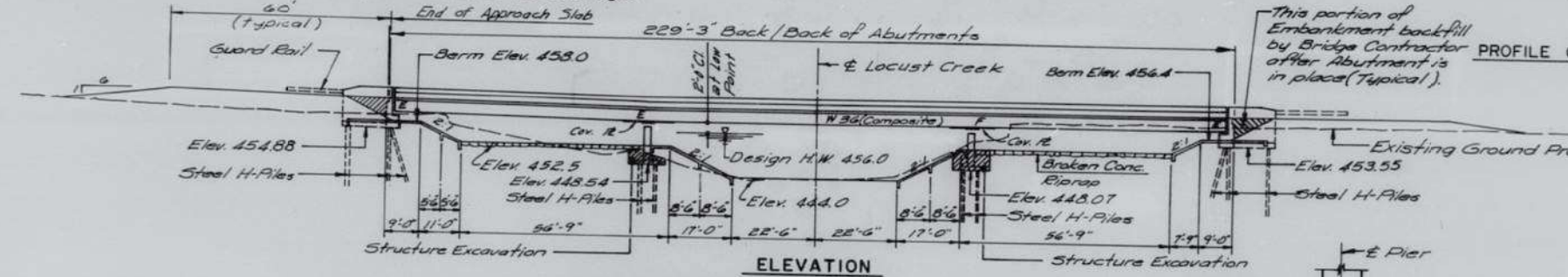
The high voltage power lines extending over the bridge near Pier 2 requires that 30 ft of clearance be maintained between the pile driver and the low wires for safety. It is anticipated that at least two full strength pile splices will be required for each furnished length of pile affected by the restricted clearance. Cost of splicing the piles at Pier 2 is included in the cost of driving.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Removal of Existing Structure	Ea	-	-	1
Structure Excavation	Cu Yds	-	-	435
Structural Steel	Lbs	1	-	1
Class X Concrete	Cu Yds	315.7	189.4	505.1
Reinforcement Bars	Lbs	46,110	16,510	62,620
Reinforcement Bars (Epoxy Coated)	Lbs	47,000	-	47,000
Stud Shear Connectors	Ea	4680	-	4680
Steel Piles HP 10X42	L.F	-	2690	2690
Test Piles (Steel HP 10X42)	Ea	-	2	2
Slope Wall (6")	Sq Yds	-	-	615
Broken Concrete Riprap	Sq Yds	-	-	635
Name Plates	Ea	-	-	1
Temporary Bridge Complete	Ea	-	-	1
Neoprene Expansion Joint (2")	L.F	44	-	44
Preformed Joint Sealer (2 1/2")	L.F	44	-	44

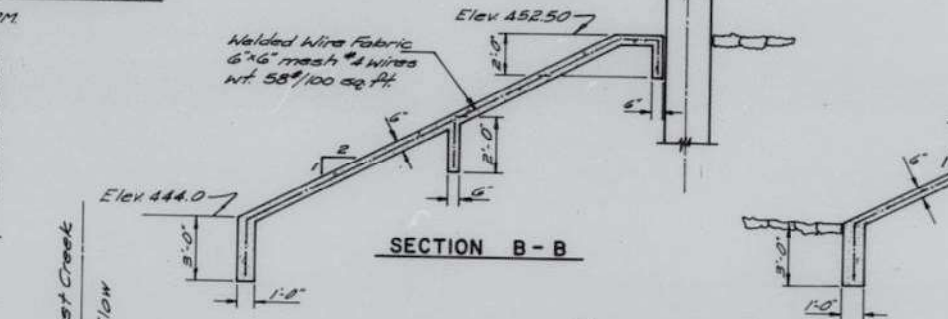
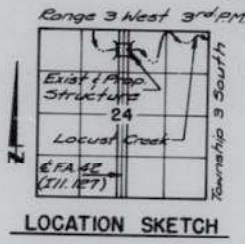
PROJECT BR-F-42(44)
GENERAL PLAN AND ELEVATION
FA. RT. 42 OVER LOCUST CREEK
FA. RT. 42, SEC. 98B
WASHINGTON COUNTY
STATION 653+18.38

Existing Structure:
No. 095-0027 built as S.A. Rte. 9, Sec. 8B, C1D in 1936 @ Sta. 552+95, 3 spans conf. I-Brn. Superstructure and Substructure will be removed by Contractor before construction of new Bridge. Temporary Bridge to be built on runaround of existing structure. No Salvage.



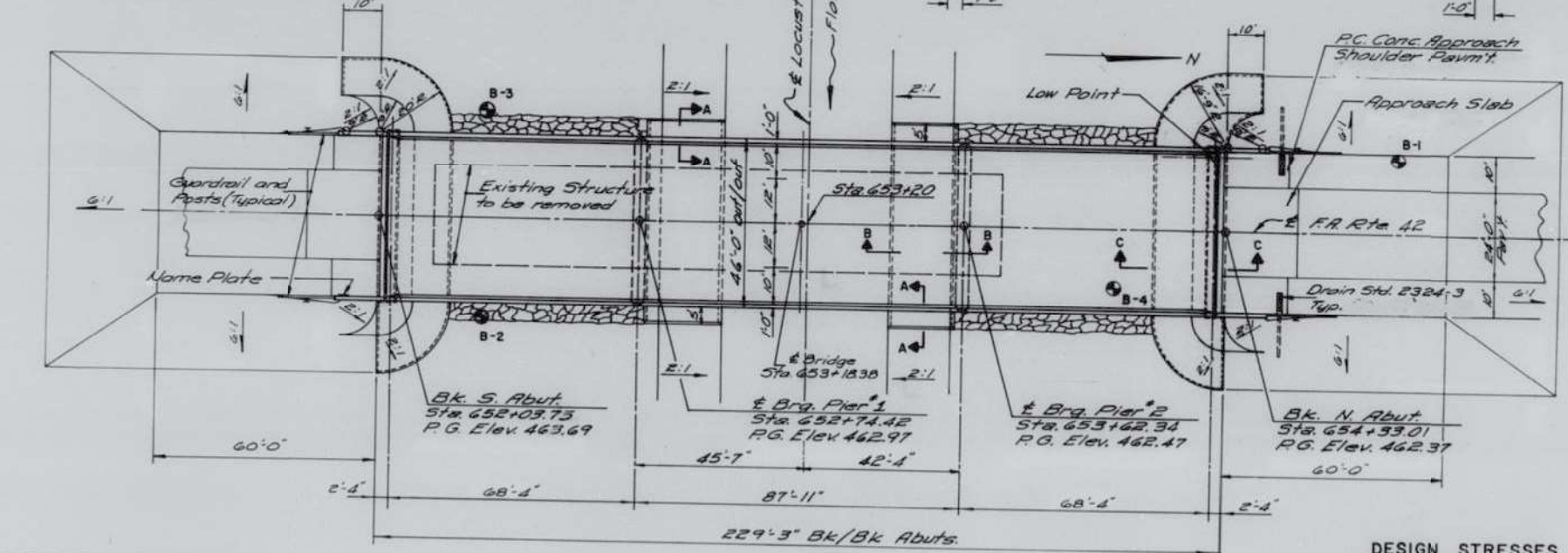
HYDRAULIC DATA

Drainage Area	23.7 Sq Miles
Design Discharge (50 yr.)	5350 cfs
Exist. Opening Below 50 yr. H.W.L.	987 Sq Ft
Reg'd. Opening Below 50 yr. H.W.L.	1215 Sq Ft
Proposed Opening	1215 Sq Ft
Created Head, Design Flood	0.9 Ft
100 yr. Discharge	6450 cfs
Created Head for 100 yr. Flood	1.0 Ft
H.W. Elev. (50)	= 456.0'
H.W. Elev. (100)	= 456.4'



STRUCTURE NO. 095-
STATION 653+20.00
LOCUST CREEK
BUILT 197-
FA. RT. 42 SEC. 98B
FA. PROJ. BR-F-42(44)
LOADING HS 20

NAME PLATE
(See Std. 2113)

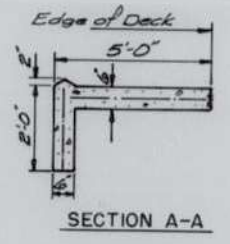


DESIGN STRESSES

$f_c = 1400$ psi.
 $f_s = 20,000$ psi. (Struct. Steel.)
 $**f_s = 24,000$ psi. (Reinf.)

LOADING HS 20-44

Allow 25 #/D' for Future W.S.
Design Specifications: 1973 AASHTO, 1974, 1975 and 1976 Interim Specifications.
** Epoxy Coated Reinforcement Bars shall be used in the top layer of the slab.



DESIGNED	KLF
CHECKED	PRN
DRAWN	RAW
CHECKED	KLF

Kenneth L. Figge
REGISTERED STRUCTURAL
ENGINEER IN ILLINOIS
No. 2992

FOR INFORMATIONAL USE ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 095-0065

SHEET NO. 1 OF 4 SHEETS

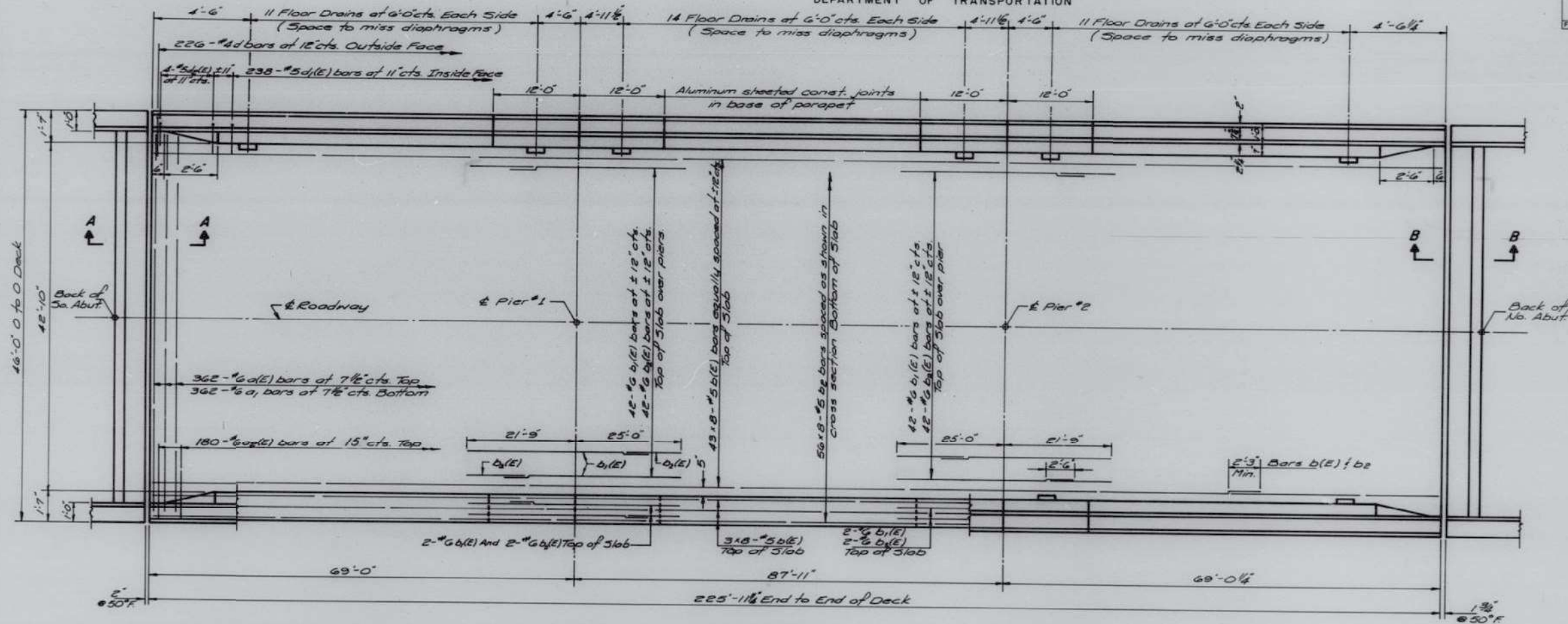
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA. RT. 42	82-8P, 98B	Washington	12	9

CONTRACT NO. 76741
FED. AID PROJECT

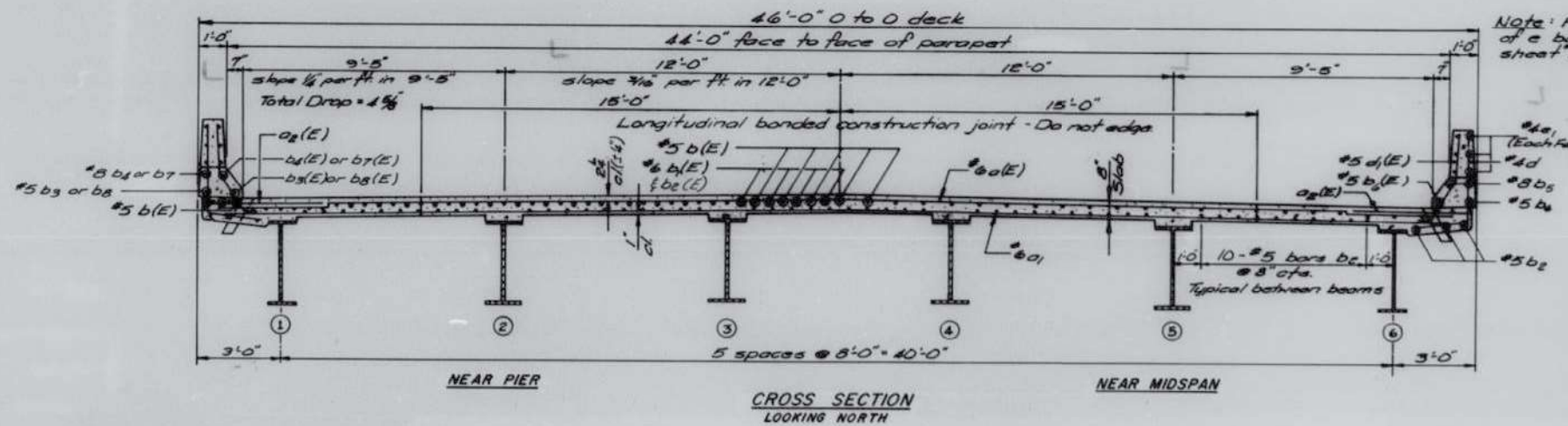
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HRGreen.com
Multi-Professional Design Firm
#184-001322

USER NAME	DESIGNED	REVISION
rauttejada	RAT	-
	AEU	-
	WJH	-
	AEU	-



PLAN



Note: For placement of c bars see sheet 5.

NOTES:
See sheet #5 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20 x 3-5 etc. indicates 20 lines of bars with 3 lengths per line.
For placement of longitudinal curb and parapet reinforcement See Sheet #5.

**SUPERSTRUCTURE
DECK PLAN & CROSS SECTION
F.A. RT. 42, SEC. 9 BR
WASHINGTON COUNTY
STATION 653 + 18.38**

DESIGNED	K.L.F.
CHECKED	PRN
DRAWN	K.A.W.
CHECKED	K.L.F.

FOR INFORMATIONAL USE ONLY

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PLOT SCALE	=
PLOT DATE	= 1/12/2024

DESIGNED	- RAT	REVISED	-
CHECKED	- AEU	REVISED	-
DRAWN	- WJH	REVISED	-
CHECKED	- AEU	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

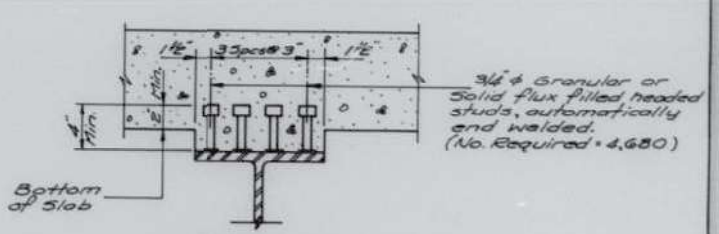
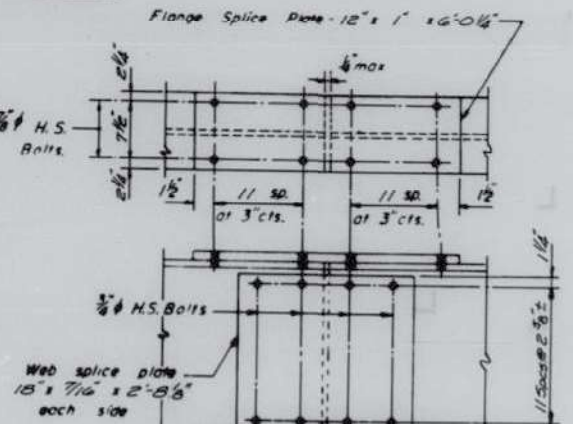
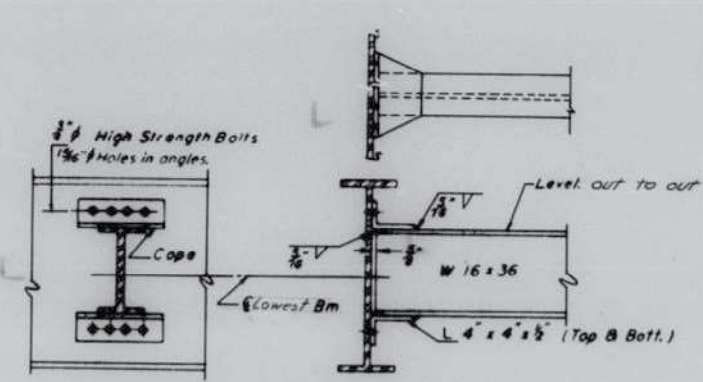
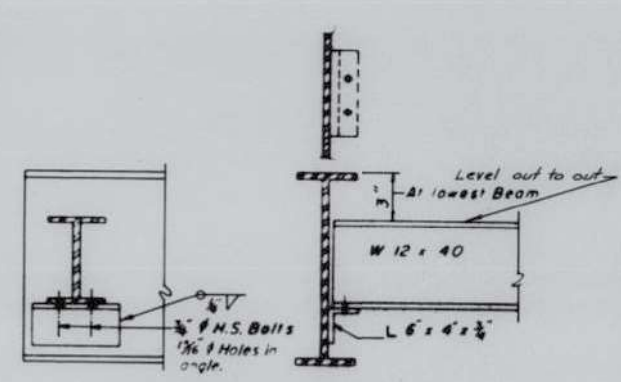
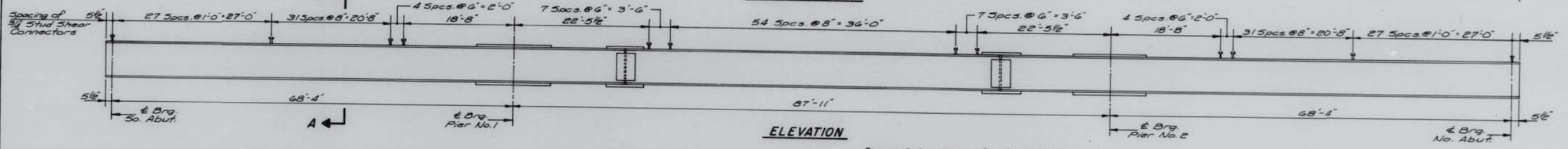
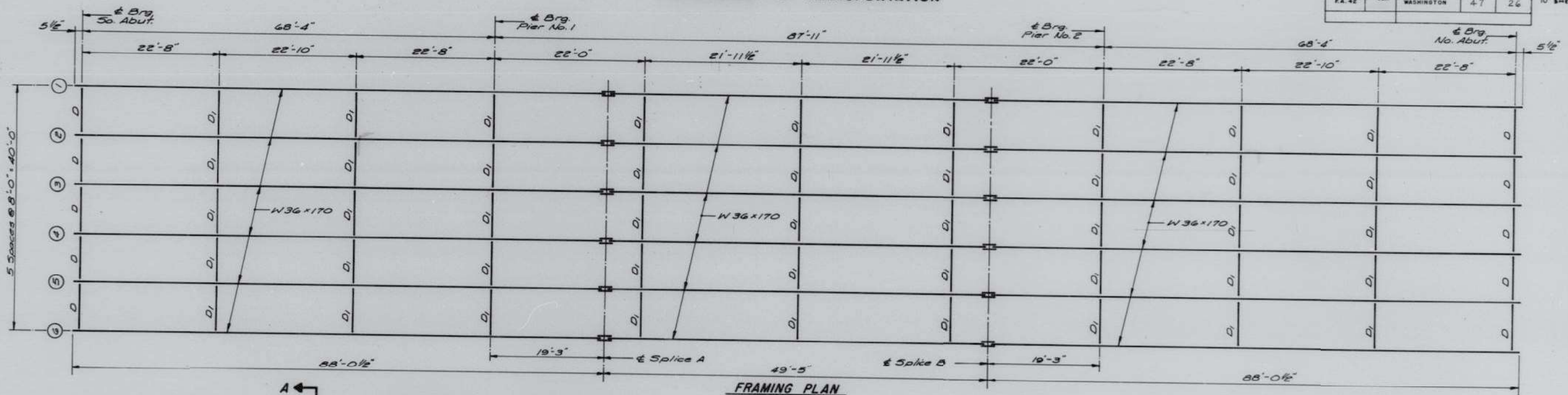
EXISTING PLANS
STRUCTURE NO. 095-0065

SHEET NO. 2 OF 4 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-8P, 9BP	**	12	10
* F.A.I. 64, F.A.P. 42		CONTRACT NO. 76741		
** WASHINGTON, ST. CLAIR		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
EA. 42	98P	WASHINGTON	47	26	10 SHEETS



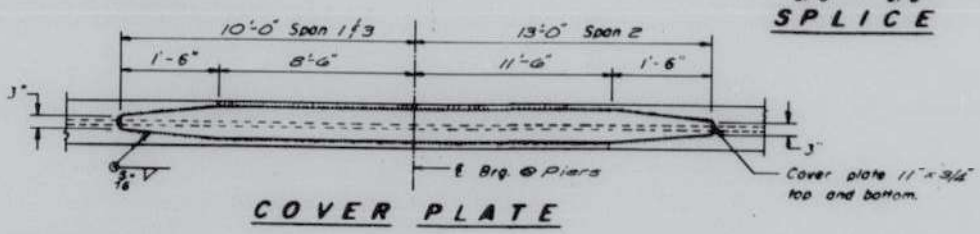
ELEVATION TOP OF WF BEAM
(FOR FABRICATION ONLY)

Location	Beam No. 116	Beam No. 215	Beam No. 314
± Brg. So. Abutment	462.557	462.753	462.848
± Brg. Pier No. 1	461.848	462.014	462.199
± Splice A	461.648	461.814	461.933
± Splice B	461.371	461.537	461.662
± Brg. Pier No. 2	461.348	461.514	461.639
± Brg. No. Abutment	461.266	461.432	461.557

NOTE: Elevations tabulated above are to top of beam flange at all locations.

DESIGNED	K.L.F.
CHECKED	PRN
DRAWN	RAW
CHECKED	K.L.F.

I-2-CD 4 15 73



COVER PLATE

STRUCTURAL STEEL
FRAMING PLAN & DETAILS
F.A. RT. 42, SEC. 9 BR
WASHINGTON COUNTY
STATION 653 + 18.38

FOR INFORMATIONAL USE ONLY

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

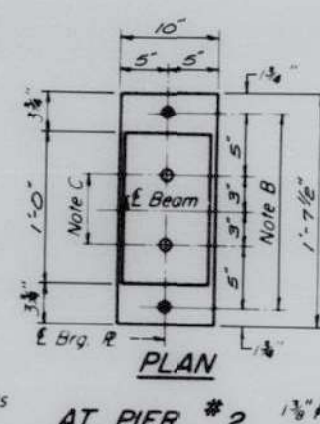
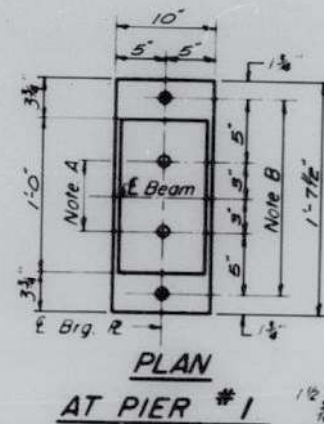
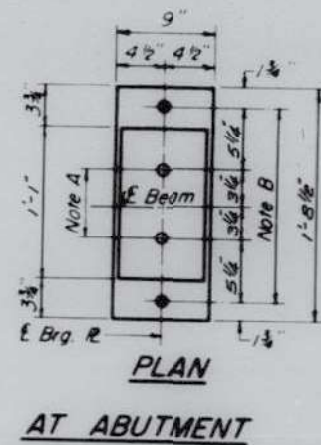
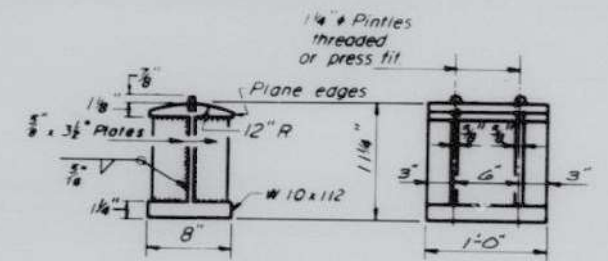
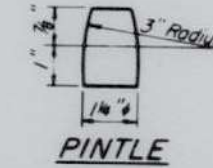
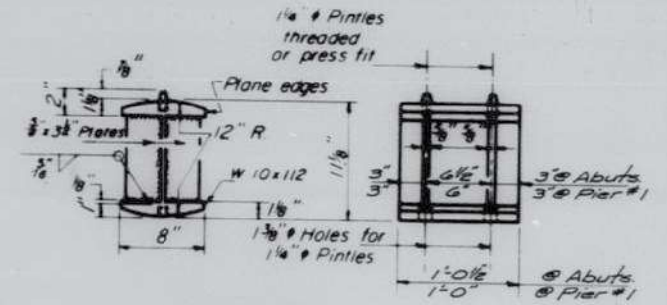
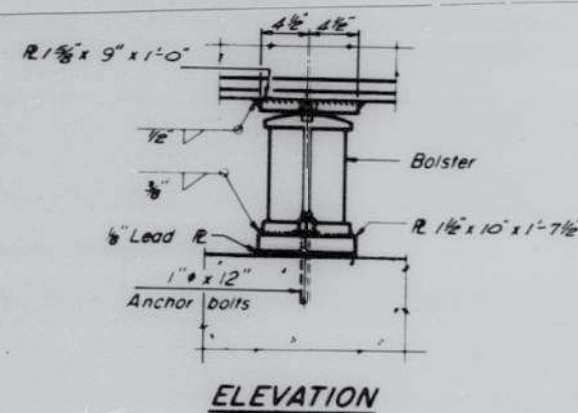
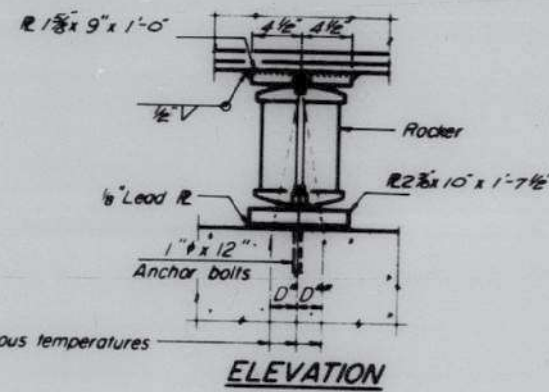
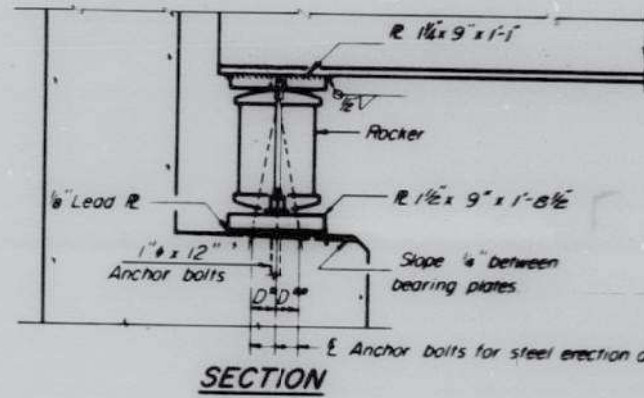
EXISTING PLANS
STRUCTURE NO. 095-0065

SHEET NO. 3 OF 4 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	82-8P, 98P	**	12	11
F.A.I. 64, F.A.P. 42		ILLINOIS	CONTRACT NO. 76741	
WASHINGTON, ST. CLAIR		FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. B
F.A. 42	9BR	WASHINGTON	47	27	10 SHEETS



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

NOTE B
1 3/8" Holes for 1" anchor bolts 1/2" x 2 1/2" x 2 1/2" R Washers under nut.

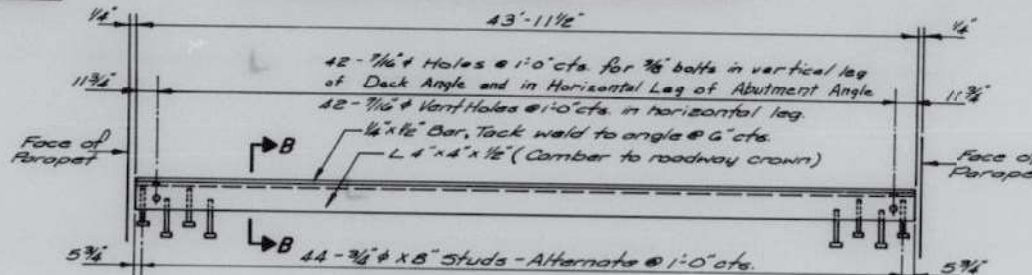
NOTE C
1 3/8" Holes 1" deep in top R only for 1 3/8" pintles.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP BRGS.

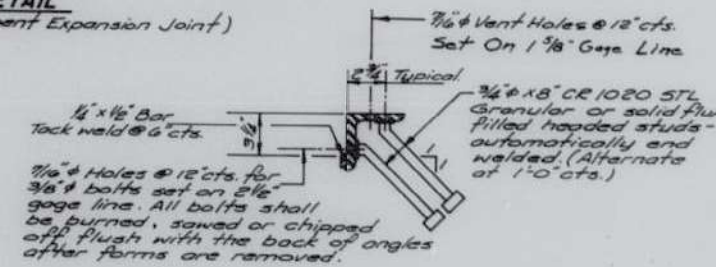
- A) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp of 50°F.
D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp of 50°F.

- 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.

BEARING ASSEMBLY DETAILS



EXPANSION GUARD DETAIL
(2 Required at North Abutment Expansion Joint)



SECTION B-B

	0.45p ₁ l ₃	Pier #1 to #2	0.5span 2
I ₃ (in. ⁴)	10,500	16,120	10,500
I _c (in. ⁴)	25,787	—	25,787
S _s (in. ³)	580	856	580
S _{ca} (in. ³)	826.5	—	826.5
Q (K/1)	1.00	1.00	1.00
M _{enc} (1-K)	297.2	690.5	306.4
P _{sp} (K/1)	6.15	9.68	6.34
S ₀ (K/1)	3.15	3.15	3.15
M ₀ (1-K)	107.2	173.2	131.2
M ₀ (1-K)	591.2	433.1	665.8
M _{omp} (1-K)	153.7	106.1	153.1
Total (1-K)	852.1	712.4	950.1
P _{sp} + S ₀ (K/1)	12.37	9.99	12.79
P _{total} (K/1)	18.52	19.67	20.13
V _R (K)	61.2	—	52.7

	Abut.	Pier
R _{enc} (K)	25.33	90.86
R _{comp} (K)	8.98	29.22
R ₀ (K)	48.73	64.90
R _{omp} (K)	12.67	15.90
Total (K)	95.71	200.88

**STRUCTURAL STEEL
BEARINGS & MISCELLANEOUS DETAILS**
F.A. RT. 42, SEC. 9 BR
WASHINGTON COUNTY
STATION 653 + 18.38

DESIGNED	K.L.F.
CHECKED	P.R.M.
DRAWN	E.A.W.
CHECKED	K.L.F.

I-2-B 9 65, 8-1-70

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Illinois Professional Design Firm
#184-001322

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DRAWN - WJH
CHECKED - AEU
PLOT SCALE =
PLOT DATE = 1/12/2024

DESIGNED - RAT
CHECKED - AEU
DRAWN - WJH
CHECKED - AEU
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 095-0065

SHEET NO. 4 OF 4 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 42	82-9P, 9BP	WASHINGTON	47	27
F.A. 1. 64, F.A.P. 42	ILLINOIS	CONTRACT NO. 76741	12	12
WASHINGTON, ST. CLAIR	FED. AID PROJECT			