

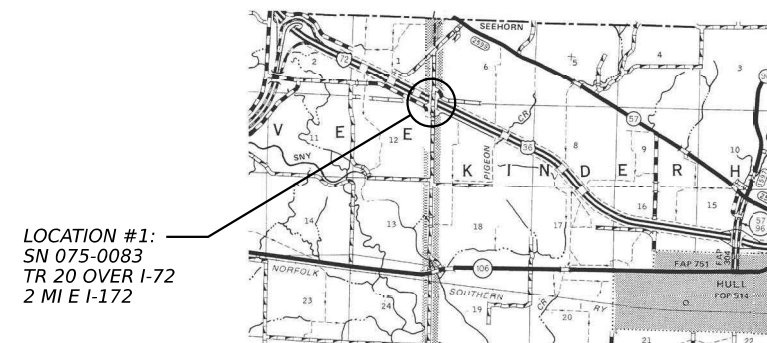
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15	1
		ILLINOIS CONTRACT NO. 72A25		

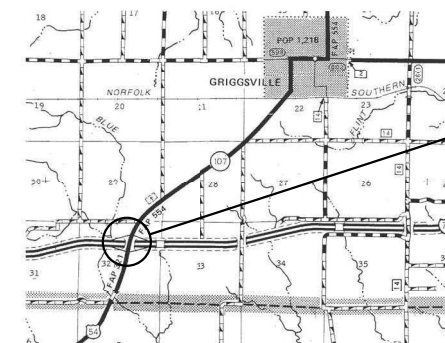
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

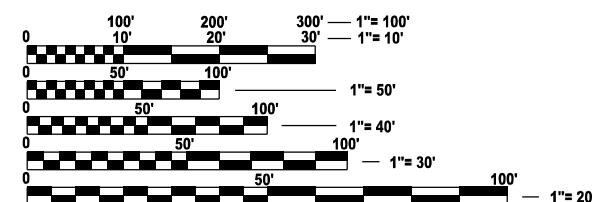
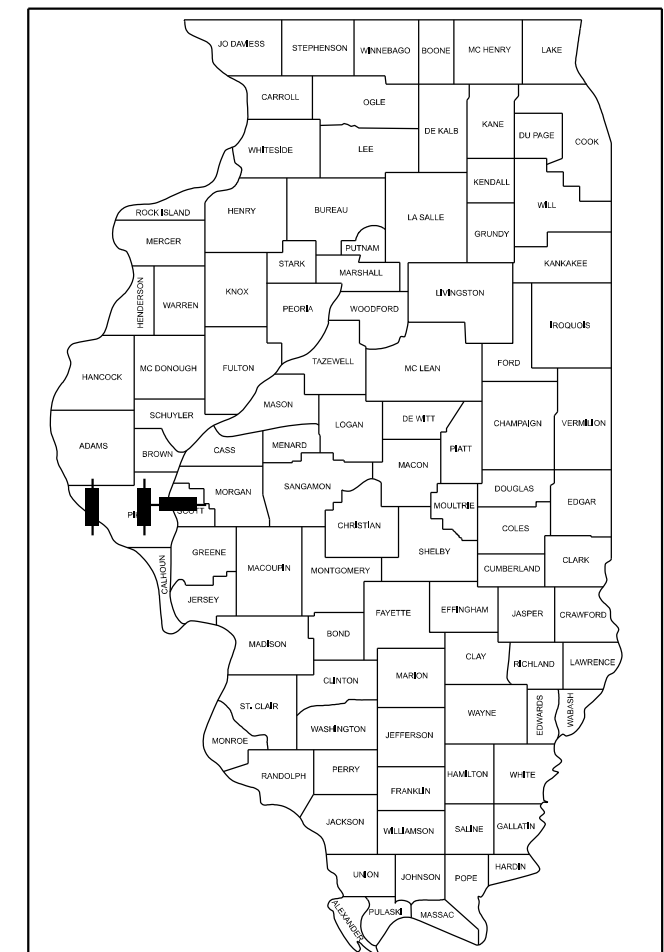
**FAI ROUTE 72 (I-72)
SECTION (75-1HB,75-5HB-1,86-9HB)BP
PROJECT NHPP-XUVA(110)
BRIDGE PAINTING
PIKE & SCOTT COUNTIES
C-96-046-11**



PIKE COUNTY



PIKE COUNTY

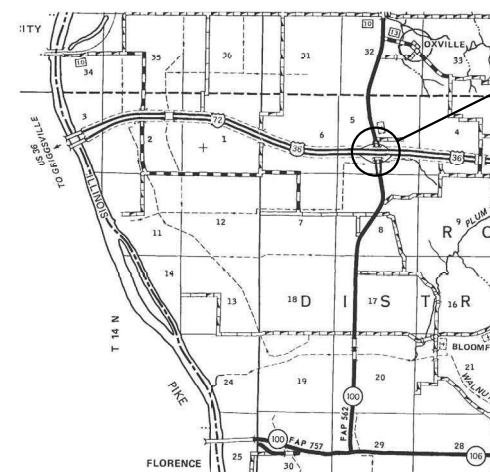


**FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.**

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

PROJECT ENGINEER: BRANDON DUDLEY - (217) 785-9290
PROJECT MANAGER

CONTRACT NO. 72A25



SCOTT COUNTY

GROSS LENGTH = x.xx FT. = x.xxx MILE
NET LENGTH = x.xx FT. = x.xxx MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 14 2025
Teresa C. Price
REGIONAL ENGINEER

October 3 2025

 ENGINEER OF DESIGN AND ENVIRONMENT

October 3 25 5
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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

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- 9-12
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- 001006
- 701001-02
- 701006-05
- 701101-05
- 701106-02
- 701400-12
- 701402-12
- 701411-09
- 701901-11
- 704001-08
- 782006-01

GENERAL NOTES:

1.
- WORK SHALL CONSIST OF BLASTING AND PAINTING STRUCTURAL STEEL AT LOCATIONS DESCRIBED IN THE SPECIAL PROVISIONS. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". 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 COATS SHALL BE AS DESCRIBED IN THE SPECIAL PROVISIONS.
2.
- THE USE OF AIR MONITORS WILL BE REQUIRED AT LOCATIONS AS CALLED OUT IN THE SPECIAL PROVISIONS.
3.
- THE SSPC-QP-1 AND SSPC-QP2 PAINTING CONTRACTOR CERTIFICATIONS WILL BE REQUIRED.
4.
- 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. RUBBER COMPONENTS SHALL NOT BE PAINTED.
5.
- UPON COMPLETION OF PAINTING OPERATIONS, 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.

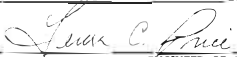
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED

August 14,

20

25



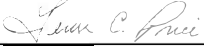
ENGINEER OF OPERATIONS

EXAMINED

August 14,

20

25



ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED

August 13,

20

25



ENGINEER OF PROGRAM DEVELOPMENT

REV - MS

MODEL: index (Sheet)
FILE NAME: c:\pw\work\pvt\td\du\du\m\117407\72A25 plansheet.dgn

	USER NAME	= brandon.dudley	DESIGNED	-	REVISED	-	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, & SIGNATURES	SCALE:	SHEET 1	OF 1	SHEETS	STA.	TO STA.	F.A.I RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			DRAWN	-	REVISED	-									72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15	2
			CHECKED	-	REVISED	-									CONTRACT NO. 72A25				
	PLOT DATE	= 5/27/2025	DATE	-	REVISED	-									ILLINOIS FED. AID PROJECT				

MODEL: SOQ [Sheet]
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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-01379-6003	0-01379-6003	0-01379-6003
				NHPP 90/10	NHPP 90/10	NHPP 90/10
				SN 075-0083	SN 075-0112	SN 086-0037 & 0038
				0047-RURAL	0047-RURAL	0047-RURAL
				PIKE	PIKE	SCOTT
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.5
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	4	2	2	0
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2	0	2	0
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	42	14	14	14
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1200	600	600	0
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1200	600	600	0
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4	2	2	0
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4	2	2	0

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15	5
		CONTRACT NO. 72A25		
		ILLINOIS FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	OF
FA P 408	75-IHB	PIKE	47	26	19 SHEETS
FED. ROAD DIST. NO.					

MOMENT TABLE - Symmetrical Composite 2 Span
(Composite in Positive Moment Area Only)

INTERIOR GIRDER	MOMENT	TABLE
$I_s(\text{in}^4)$	14,048	22,963
$I_c(\text{in}^4)$	37680	
$S_s(\text{in}^3)$	743	1,020
$S_{cl}(\text{in}^3)$	1,040	
$\bar{Q}(K/I)$	1,005	
$M\bar{Q}(K)$	585	1,617
$s\bar{Q}(K/I)$	0.380	
$M_s\bar{Q}(K)$	251	
$M_L(K)$	925	673
$M_{imp}(K)$	211	153
$53(M_L + I)(K)$	1,893	1,377
$M_a(K)$	3,549	3,890
$M_u(K)$	3,887	4,185
$f_s(\text{non-comp. k.s.i.})$	9.5	19.0
$f_s(\text{comp. k.s.i.})$	2.9	
$f_s 53(\bar{Q} + I)(k.s.i.)$	21.8	16.2
$f_s(\text{Overload})(k.s.i.)$	34.2	35.2
$f_s(\text{Total})(k.s.i.)$	44.5	45.8
$VR(K)$	65.6	

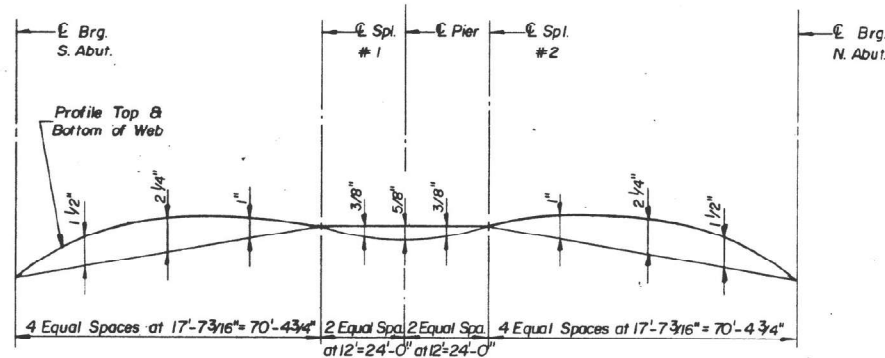
INTERIOR GIRDER	REACTION	TABLE
	ABUT.	PIER
$R_R(K)$	48.3	166.6
$R_L(K)$	49.1	76.5
$Imp.(K)$	11.2	17.5
$R_{Total}(K)$	108.6	260.6

* M_u = Moment Capacity for Braced Non-Compact section.
 **Braced Non-Compact section.
 $M_a(\text{Applied Moment}) = 1.3[M\bar{Q} + M_s\bar{Q} + 53(M_L + I)]$
 I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total and Overload).
 VR is the maximum V + impact shear range in span.
 $f_s(\text{Total})$ is the sum of the stresses due to $1.3[M\bar{Q} + M_s\bar{Q} + 3(M_L + I)]$.
 $f_s(\text{Overload})$ is the sum of the stresses due to $M\bar{Q} + M_s\bar{Q} + 53(M_L + I)$.
 $M\bar{Q}$ - Moment due to deck load on Non-Composite section.
 $M_s\bar{Q}$ - Moment due to deck load on Composite section.
 M_L - Moment due to live load on Non-Composite or Composite section.
 I - Live load impact.

TOP OF WEB ELEVATIONS

LOCATION	€ BRG. S. ABUT.	SPLICE #1	€ PIER	SPLICE #2	€ BRG. N. ABUT.
GIRDER 1	487.64	487.97	487.96	487.94	487.52
GIRDER 2	487.75	488.11	488.11	488.10	487.71
GIRDER 3	487.71	488.10	488.11	488.11	487.75
GIRDER 4	487.52	487.94	487.96	487.97	487.64

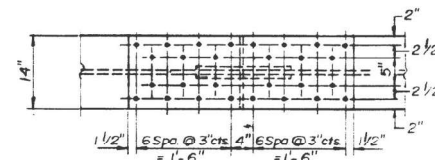
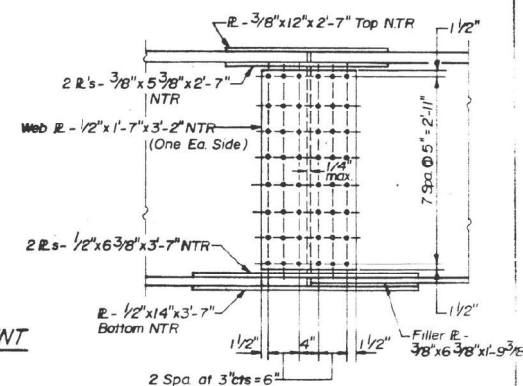
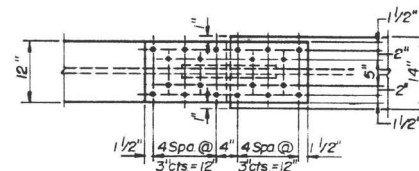
ELEVATIONS ABOVE ARE TOP OF GIRDER WEB BEFORE ANY DEFLECTION.



CAMBER DIAGRAM

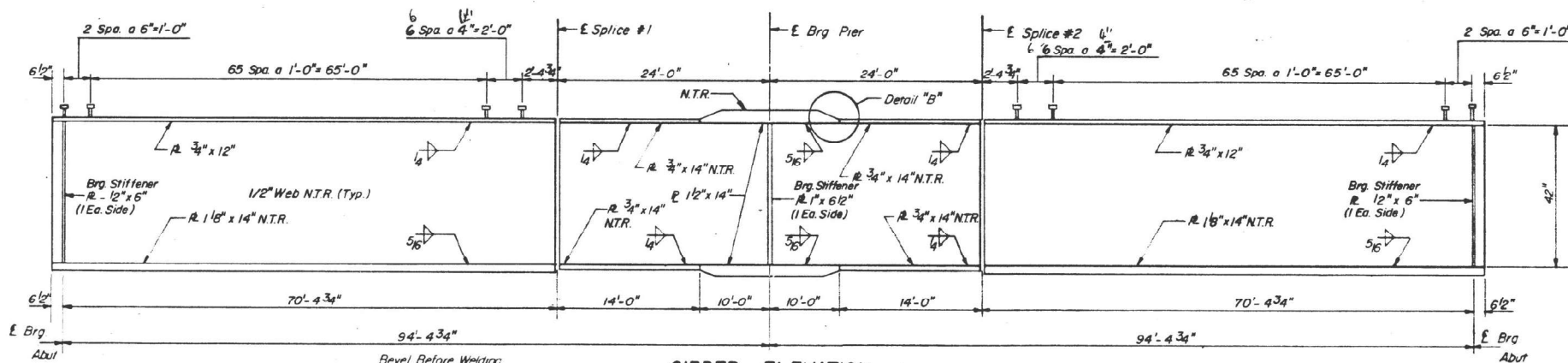
MATERIAL SPECIFICATIONS GIRDER SPLICE MATERIAL

- All Flange Splice Plates shall be AASHTO M223, Grade 50 Steel.
- All Bolts shall be 7/8" High Strength Bolts AASHTO M164 Steel, 15/16" Open Holes.



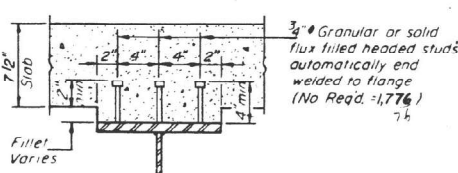
FIELD SPLICE DETAIL
SPLICE NO. 1 & 2

GIRDER DETAILS
 C.H. 24 OVER F.A.P. RTE. 408
 F.A.P. RTE. 408, SEC. 75-IHB
 PIKE COUNTY
 STA. 1121+95.11



GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.
 All Girder Flanges shall be AASHTO M223 (Gr 50) Steel.



DETAIL "B"

SECTION A-A

DESIGNED	VSN
CHECKED	KLF
DRAWN	JDS
CHECKED	KLF

G-1 4-1-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS, SN 075-0083
(FOR INFORMATION ONLY)

SCALE: SHEET 3 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-IHB, 75-SHB-1, 86-9HB)BP	PIKE/SCOTT	15	7
CONTRACT NO. 72A25				

ILLINOIS FED. AID PROJECT

Technical drawing of a bearing assembly. The drawing shows a shaft with a bearing and a shim. The dimensions are as follows:

- Bearing width: $6 \frac{1}{2}"$
- Shim width: $2"$
- Shim thickness: $\frac{7}{8}"$
- Shaft diameter: $5"$
- Shim size: $11" \times 16"$

Labels include:

- Bolt Flange
- Shim
- Bearing Assembly

Diagram illustrating the connection of a side girder to a main girder. The side girder is shown with dimensions: 2" (flange width), 5" (web width), 5" (web width), and 2" (flange width). The main girder is shown with dimensions: 7" (flange width) and 7" (web width). The side girder is connected to the main girder using a side retainer (at inside face of exterior girders only) and 6 1" # x 12" anchor bolts with 2' x 2' x 5/8" R washer under nut.

$1/8"$ Holes - 1" deep in top $\bar{F}$
 for $1/4"$ pinholes Thread on
 press fit in bottom $\bar{F}$

4 $3\frac{1}{2}"$ $3\frac{1}{2}"$ 4

$24\frac{1}{2}"$ $9\frac{1}{2}"$ $9\frac{1}{2}"$

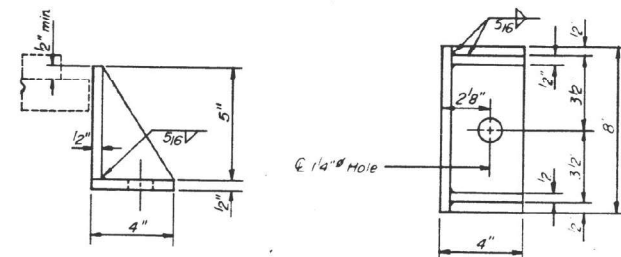
$2\frac{1}{2}"$ $2\frac{1}{2}"$

$* \frac{1}{2}" \times 18"$ Anchor bolts w/ "n"
 $3" \times 3" \times \frac{5}{16}"$ R washer under "n"
 $2"$ Holes in bottom "R"

PINTLE

*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry.

All bearing plates are AASHTO M 223 Grade 50 Steel.



DESIGNED	VSN
CHECKED	KLF
DRAWN	JDS
CHECKED	KLF

POINT	GRADER	NO. 1	NO. 2	NO. 3	NO. 4	
	R	THICKNESS	R	THICKNESS	R	THICKNESS
SOUTH ABUT.		0	0	1/4"	0	
NORTH ABUT.		0	1/4"	0	0	
PIER		0	0	0	0	

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15	8
CONTRACT NO. 72A25				
ILLINOIS		FED. AID PROJECT		

Bench Mark: #17, Top of brass plug stamped FE-8, 538' Rt. Sta. 233+97.00 (F.A. 408) Elev. 684.81

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	FILE	SHEET NO. 1
75-5	HB-1	PIKE	147	50	16 SHEETS
408					
FED. ROAD DIST. NO. 7					
ILLINOIS FED. AID PROJECT					

GENERAL NOTES

See Proposal for Boring Data.
Fasteners shall be high strength bolts. Bolts 7/8" ϕ , open holes 1 1/8" ϕ , unless otherwise noted.
Calculated weight of AASHTO M223, Grade 50 Structural Steel = 202,920.
Calculated weight of AASHTO M163, Structural Steel = 164,940.
The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel except where otherwise 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.
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.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x 4.0, weighing 58 lbs. per 100 sq. ft.
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
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" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed.

The contractor shall drive one concrete test pile in a permanent location at the South Abutment as directed by the Engineer before ordering the remainder of piles.

STATION 234+67.07
BUILT 198 BY
STATE OF ILLINOIS
F.A. RTE. 408 SEC. 75-5HB-1
LOADING HS20
STR. NO. 075-0112

NAME PLATE

See Std. 2113

GENERAL NOTES CONTINUED

All high strength bolt connections shall conform to the requirements of the latest issue of the Specifications for structural joints using ASTM A325 (M164) or A490(M253) bolts for slip-critical connections. The method of bolt tightening shall be achieved by the use of direct tension indicators meeting the requirements of ASTM F959. A hardened round steel washer shall be used between the direct tension indicator and the turned element.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.	329	329	
Concrete Piles	Lin. Ft.	1257	1257	
Test Piles Concrete	Each	1	1	
Reinforcement Bars	Pound	40,330	40,330	
Reinforcement Bars (Epoxy Coated)	Pound	117,460	40	117,500
Class X Concrete Superstructures	Cu. Yd.	407.7		407.7
Class X Concrete	Cu. Yd.	265.7		265.7
Structural Steel	L. S.	1		1
Stud Shear Connectors	Each	4064		4064
Elastomeric Bearing Assembly, Type I	Each	16		16
Drainage Scuppers	Each	4		4
Floor Drains	Each	1		1
Preformed Joint Seal 4"	Lin. Ft.	142		142
Slope Wall 4"	Sq. Yd.	753		753
Protective Coat	Sq. Yd.	191		191
Name Plates	Each	1		1

DESIGN SPECIFICATIONS

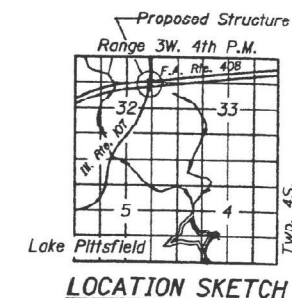
AASHTO (1983), 1984 and 1985 Interims
LOADING HS 20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

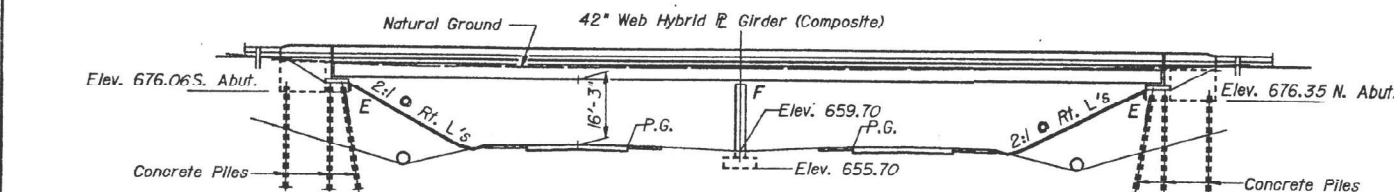
FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)
Hybrid $f_y = 50,000$ psi (M223) Flange
Girder $f_y = 36,000$ psi (M163) Web

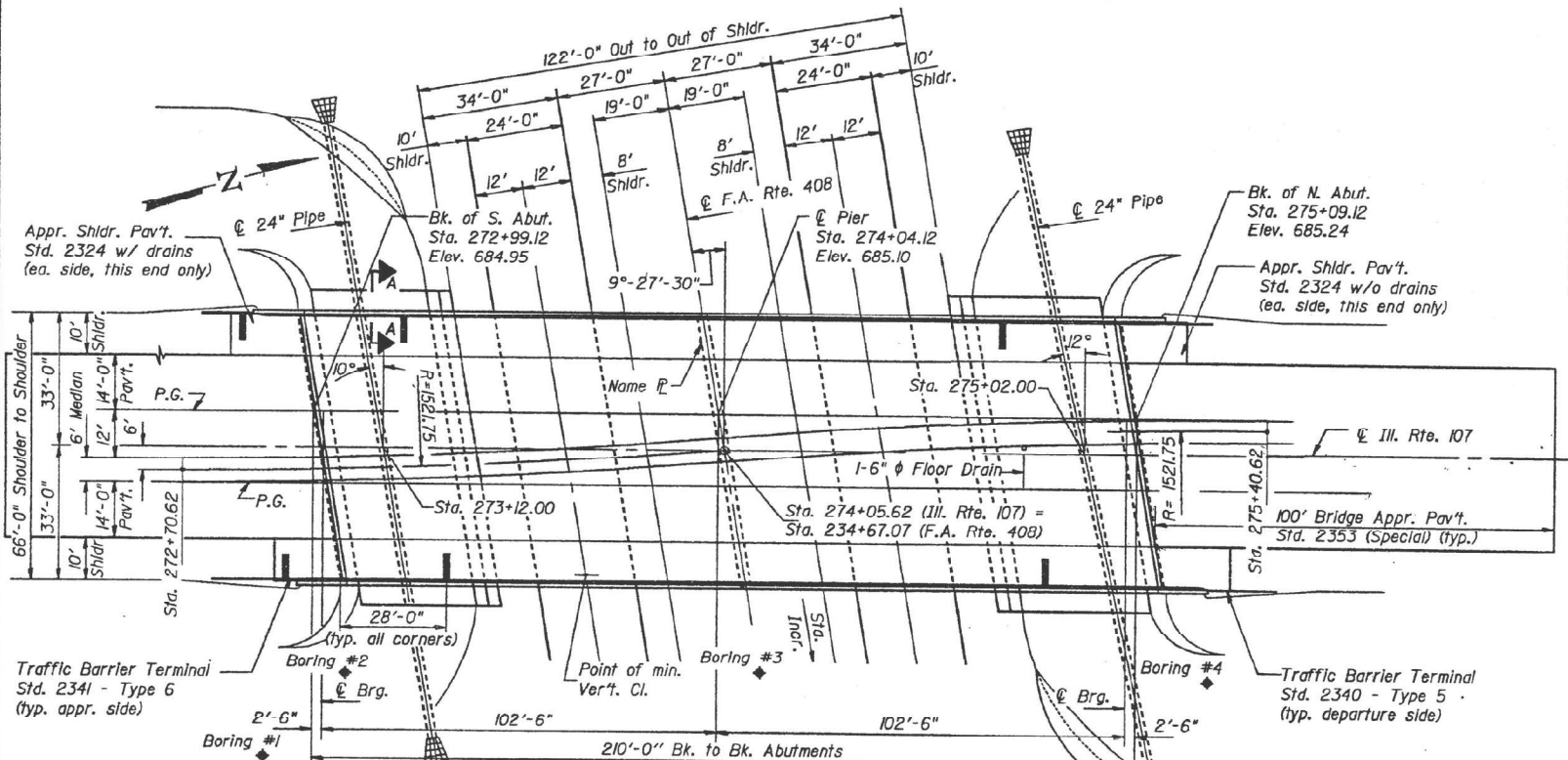


LOCATION SKETCH

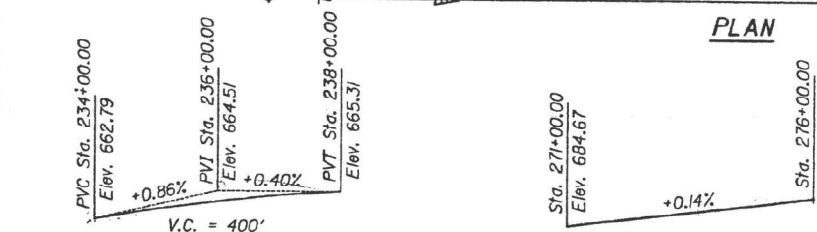
GENERAL PLAN
ILL. ROUTE 107 OVER F.A. ROUTE 408
F.A. ROUTE 408 SECTION 75-5HB-1
PIKE COUNTY
STATION 234+67.07 (F.A. RTE. 408)
STATION 274+05.62 (ILL. RTE. 107)
STRUCTURE NUMBER 075-0112



ELEVATION



PLAN



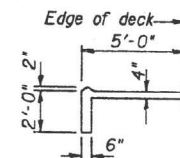
PROFILE GRADE

F.A. Route 408
(median edge of Roadway)

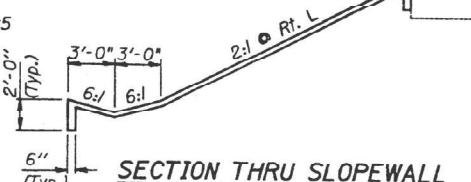
PROFILE GRADE

ILL. Route 107
(median edge of Roadway)

SECTION A-A



SECTION THRU SLOPEWALL



DESIGNED	Brandon Dudley	EXAMINED	James J. Kasper
CHECKED	Tyler J. Reichen	PASSED	James J. Kasper
DRAWN	R. S. S. S.	APPROVED	James J. Kasper
CHECKED	DLG KLR		

As Revised 4-24-87 R.E.A.

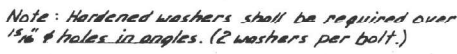
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS, SN 075-0112
(FOR INFORMATION ONLY)

SCALE: SHEET 5 OF 10 SHEETS STA. TO STA.

USER NAME	DESIGNED	REVISION	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
brandon.dudley	-	-	72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15
					CONTRACT NO. 72A25	9
					ILLINOIS	FED. AID PROJECT

DATE OF	DESCRIPTION	SUBJECT	TOTAL SHEETS	SHEET NO
19 11 64				58
THE SECRETARY OF THE DEFENSE DEPARTMENT			SHEET NO 58 16 SHEETS	



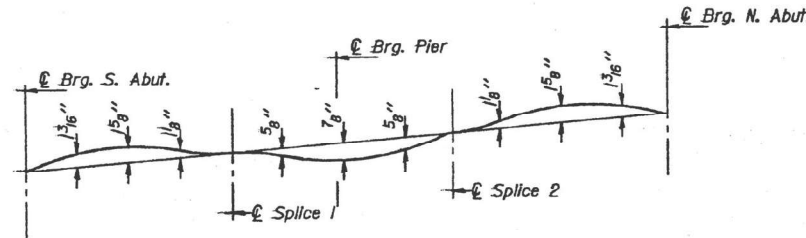
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	PROJECT	DATE	SHEET NO.
72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15	11
FILE NAME: c:\p\work\bridge\duley\cml11740772a25 plansheet.dgn				

TOP OF WEB ELEVATION

Location	Girder #1	Girder #2	Girder #3	Girder #4	Girder #5	Girder #6	Girder #7	Girder #8
Brq. S. Abut.	683.66	683.84	683.98	684.13	684.13	683.99	683.85	683.67
Splice #1	683.84	684.02	684.17	684.31	684.31	684.17	684.03	683.85
Brq. Pier	683.80	683.99	684.13	684.27	684.27	684.13	684.00	683.81
Splice #2	683.91	684.10	684.24	684.38	684.38	684.24	684.11	683.92
Brq. N. Abut.	683.94	684.13	684.27	684.41	684.42	684.28	684.14	683.96

For Fabrication only. Elevations at splices have been adjusted for camber.

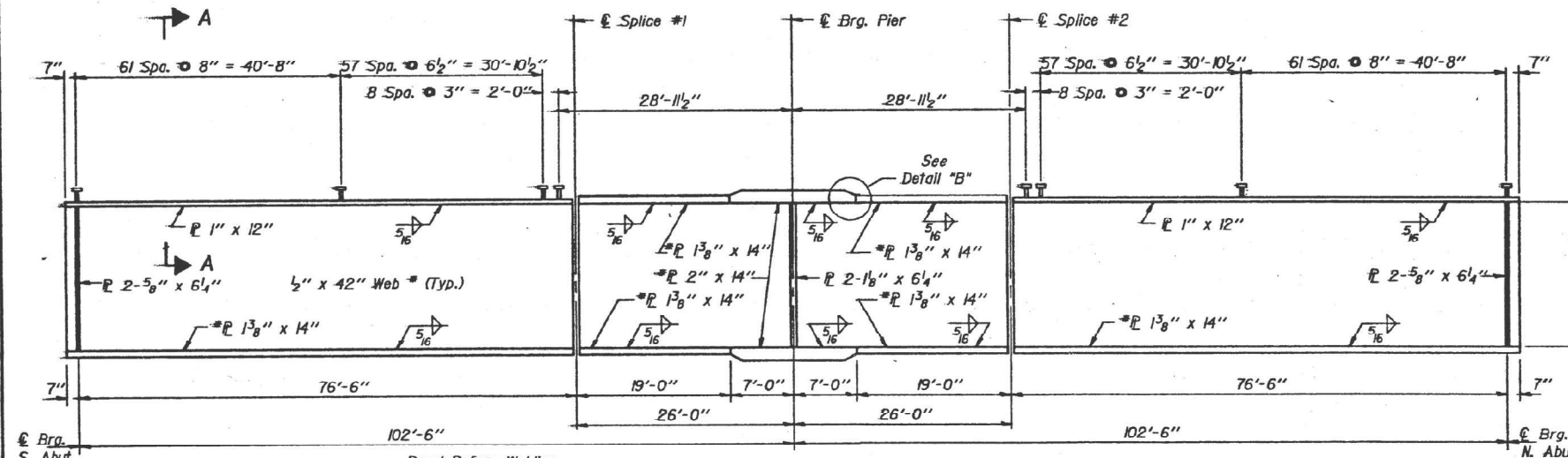


CAMBER DIAGRAM

INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp. 1	Pier
Is (in ⁴)	17205	30210
Ic (in ⁴)	44516	
Ss (in ³)	890	1314
Sc (in ³)	1210	
Q (k/ft)	1.080	1.482
M _D (k)	728	2031
s _D (k/ft)	0.402	
M _s (k)	328	
M _L (k)	1079	827
M _{Imp.} (k)	237	182
M _D + I (k)	2193	1682
M _a (k)	4224	4827
M _u (k)	4546	5407
fs _D non-comp. (k.s.i.)	9.8	18.5
fs _D comp. (k.s.i.)	3.3	
fs _D (L + I) (k.s.i.)	21.7	15.4
fs _D (Overload) (k.s.i.)	34.8	33.9
fs _D (Total) (k.s.i.)	45.2	44.1
VR (k)	69.7	

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
R _D (K)	56.1	191.5
R _L (K)	52.5	86.3
Imp. (K)	11.5	19.0
R _{Total} (K)	120.1	296.8

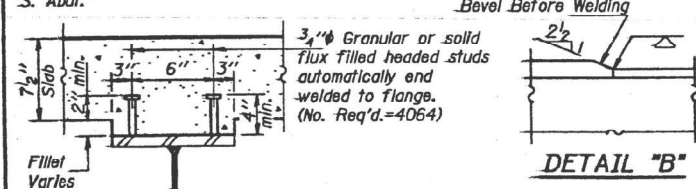
** Mu = Moment capacity for Braced noncompact hybrid section computed according to AASHTO 10.5.3.1 & 10.5.3.2.
Ma (Applied Moment) = 1.3 [M_D + M_s + $\frac{1}{3}$ (M_L + I)]



GIRDER ELEVATION

* Denotes plates to which notch toughness requirements are applicable.

Notes: All flanges and flange splice plate material shall be AASHTO M-223, Grade 50.
All other structural steel shall be AASHTO M-183.



SECTION A-A

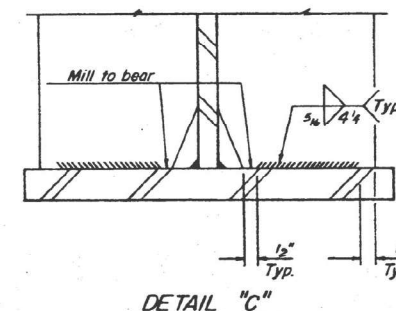
DESIGNED	Samuel A. Richter
CHECKED	Kevin L. Richter
DRAWN	R.S. Richter
CHECKED	DLG

EXAMINED	David J. Kasper
PASSED	James J. Richter
APPROVED	James J. Richter

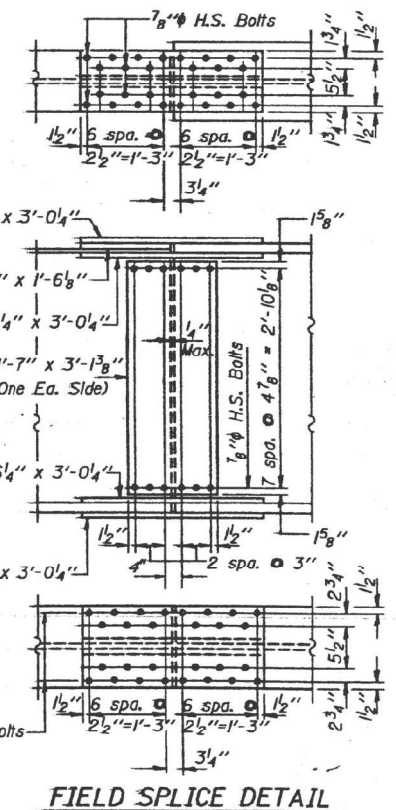
G-1 4-1-79

SECTION AT PIER

SECTION AT ABUTMENT



DETAIL "C"



FIELD SPLICE DETAIL

STRUCTURAL STEEL
F.A. RTE. 408 SEC. 75-5HB-1
PIKE COUNTY
STA. 234+67.07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS, SN 075-0112
(FOR INFORMATION ONLY)

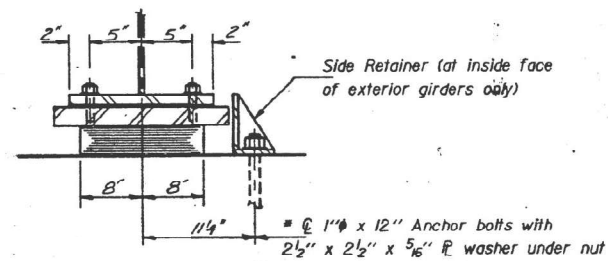
SCALE: SHEET 7 OF 10 SHEETS STA. TO STA.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15	11
CONTRACT NO. 72A25				

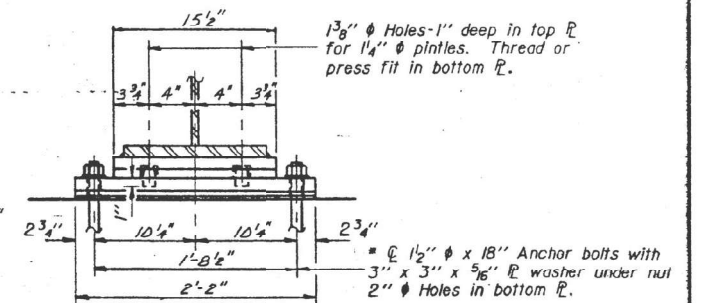
ILLINOIS FED. AID PROJECT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. 24.				60
FED. ROAD DIST. NO. 7		ELLIPSE	FED. AID PROJECT	

SHEET NO. //
16 SHEETS



SECTION A-A



SECTION B-B

FIXED BEARING

Technical drawing of a shear specimen with the following dimensions and components:

- Top width: 12"
- Top section widths: 2", 5", 2"
- Vertical dimensions on the left: 5 3/4", 3 5/8", 1"
- Vertical dimension on the right: 5"
- Bottom width: 11"
- Bottom section widths: 4", 11", 4"
- Components:
 - 3/4" Threaded Stud with flat washer & hex nut. (4-Reqd.)
 - 2 1/8" x 12" x 18"
 - 6 Layers of 1/2" Elastomer (55 Durometer)
 - 5 1/8" Steel Plates
 - Bonded

PINTLE

[illegible]

Technical drawing of a mechanical part showing front and top views with dimensions.

Front View (Left):

- Overall width: 4"
- Overall height: 5 1/2"
- Top flange thickness: 1/2" min.
- Top flange width: 2"
- Top flange has a central hole with a diameter of 1/2" min.
- Top flange has a chamfer with a slope of 5/16"
- Bottom flange thickness: 1/2"
- Bottom flange has a central hole with a diameter of 1/2"

Top View (Right):

- Overall width: 4"
- Overall depth: 8"
- Top flange width: 2 1/2"
- Top flange depth: 5"
- Top flange has a central hole with a diameter of 1/2"
- Top flange has a chamfer with a slope of 5/16"
- Bottom flange width: 2 1/2"
- Bottom flange depth: 5"
- Bottom flange has a central hole with a diameter of 1/2"
- Bottom flange has a chamfer with a slope of 5/16"

*Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.*

DESIGNED	David J. Greig
CHECKED	Kevin L. Rechen
DRAWN	R. Sommer
CHECKED	DLG

April 7, 1987

EXAMINED *Dr. J. Kaspar*
ENGINEER OF BRIDGE DESIGN

PASSED *James T. Karpburn*
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED

THINKING OF MODERNITY

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	16

BEARING DETAILS
FA. RTE. 108 SEC. 75-5HB-1
PIKE COUNTY
STA. 234+67.07

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15	12
CONTRACT NO. 72A25				
		ILLINOIS	FED. AID PROJECT	

Bench Mark B Chisled on curved wall 5' west of west headwall of culvert at Sta. 565+97 El. 456.30

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. /
86-9HB	Scott	249	76	15	SHEETS

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts 2" x 4" open holes 1/4" x 1/4" unless otherwise noted.
Calculated weight of structural Steel M103=157,430lb, M223=195,300lb.
Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

See Proposal for Boring Data.

The basic lead silico chromate point system shall be used for shop and field painting of Structural Steel.

Slope wall shall be reinforced with welded wire fabric, 6" x 6" W4.0 x W4.0, weighing 50 lbs. per 100 sq. ft.

Anchor bolts shall be set before bolting cross frames over supports.

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 bottom flanges and the web of the steel girders.

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.

Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

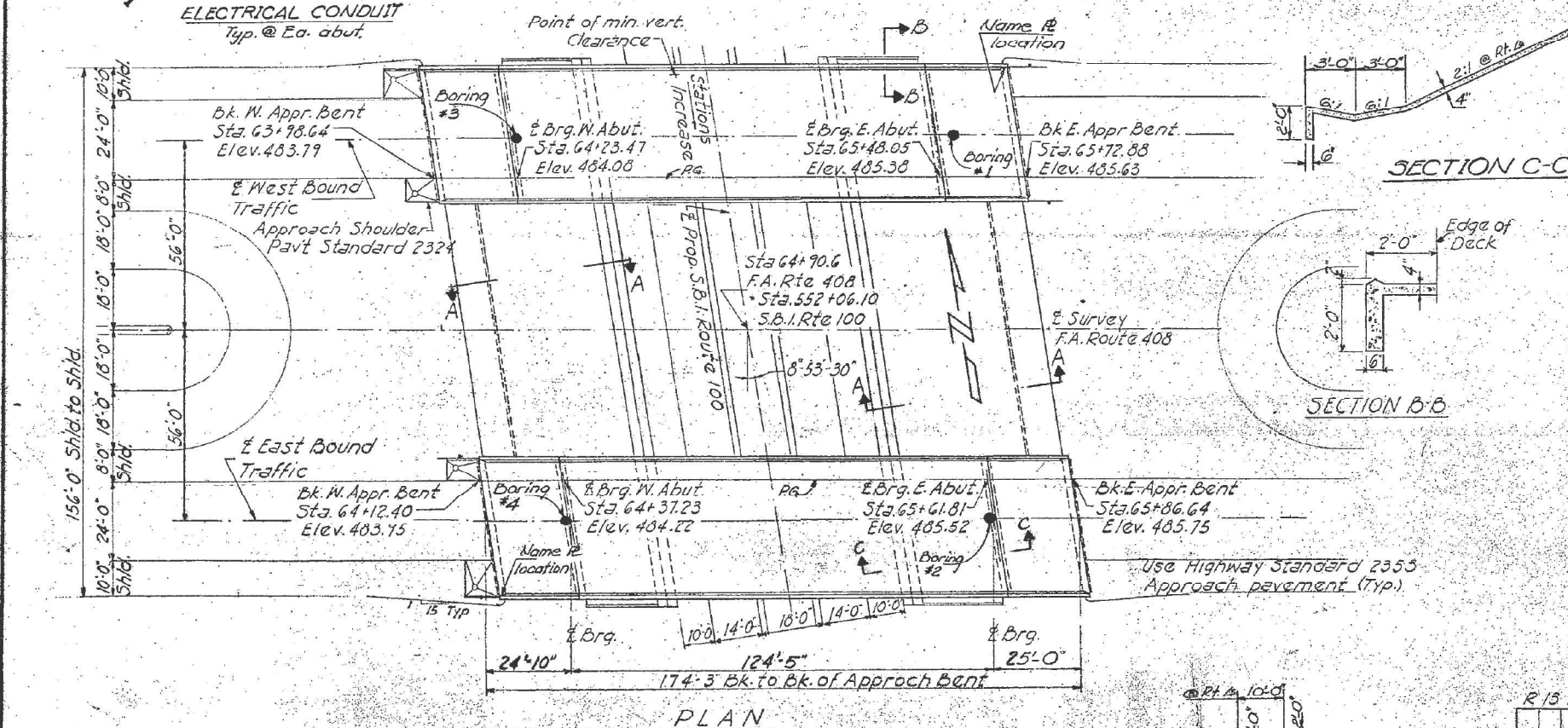
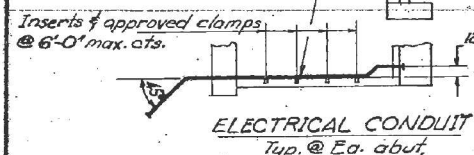
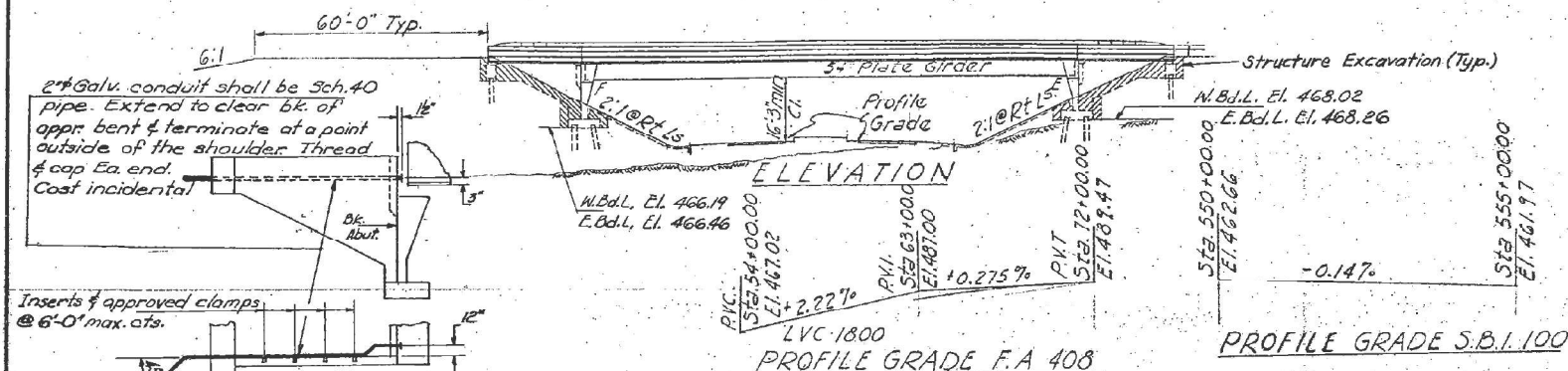
The Contractor shall drive two (2) steel (8HP36) test piles in a permanent location, one at West abut. W. Bd. Lanes and one at East abut. E. Bd. Lanes as directed by the Engineer before ordering the remainder of piles.

Field welding of construction accessories will not be permitted to the bottom flanges of girders. Field welding in other areas will be permitted only when approved by the Engineer.

STATION 64+90.60
BUILT 198 BY
STATE OF ILLINOIS
F.A. RTE. 408 SEC. 86-9HB
PROJ. EBF-408-1(49)
LOADING HS 20
*STR. NO. _____

NAME PLATE

See Std. 2113
* Structure Number to be supplied by District.



SECTION B-B

SECTION A-A

LOCATION SKETCH

TOTAL BILL OF MATERIAL

Item	Super	Sub	Total
Diluminous Concrete Surface Course Class I	Tons	03	03
Protective Coat	Sq. Yds.	244	244
Class X Concrete	Cu. Yds.	512.2	397.3
Structural Steel	Lump Sum	L.S.	L.S.
Stud Shear Connectors	Ea.	2628	2628
Aluminum Rolling	Lin. Ft.	684	684
Reinforcement Bars	Pounds	111,190	43,780
Steel Piles (8HP36)	Lin. Ft.	2646	2646
Test Pile Steel (8HP36)	Ea.	2	2
Slope Wall (4')	Sq. Yds.	1792	1792
Waterproofing Membrane System	Sq. Yds.	1480	1480
Band Backfill	Cu. Yds.	555	555
Preformed Joint Sealer (4")	Lin. Ft.	78	78
Name Plates	Ea.	2	2
Elastomeric Expansion Bearing, Type I	Ea.	12	12
Structure Excavation	Cu. Yd.	176	176
Preformed Joint Sealer (2 1/2")	Lin. Ft.	78	78

DESIGNED Robert K. Kline
CHECKED Amy L. Harris
DRAWN A. Berrozo
CHECKED C. S. W.

EXAMINED
PASSED
APPROVED

DESIGN STRESSES

$f_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_s = 20,000$ psi (Struct. Steel M 103)
 $f_s = 27,000$ psi (Struct. Steel M 223 Grade 50)

Allow 25% for future W.S.

Design Specifications
1971 AASHTO, 1978 #1979 Interims

LOADING HS 20-44

PROJECT EBF-408-1(49)
GENERAL PLAN AND ELEVATION
F.A. ROUTE 408 OVER S.B.I. ROUTE 100
F.A. ROUTE 408 SECTION 86-9HB
SCOTT COUNTY
STATION 64+90.60 F.A. 408
STATION 552+06.10 S.B.I. 100

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS, SN 086-0037 & 0038
(FOR INFORMATION ONLY)

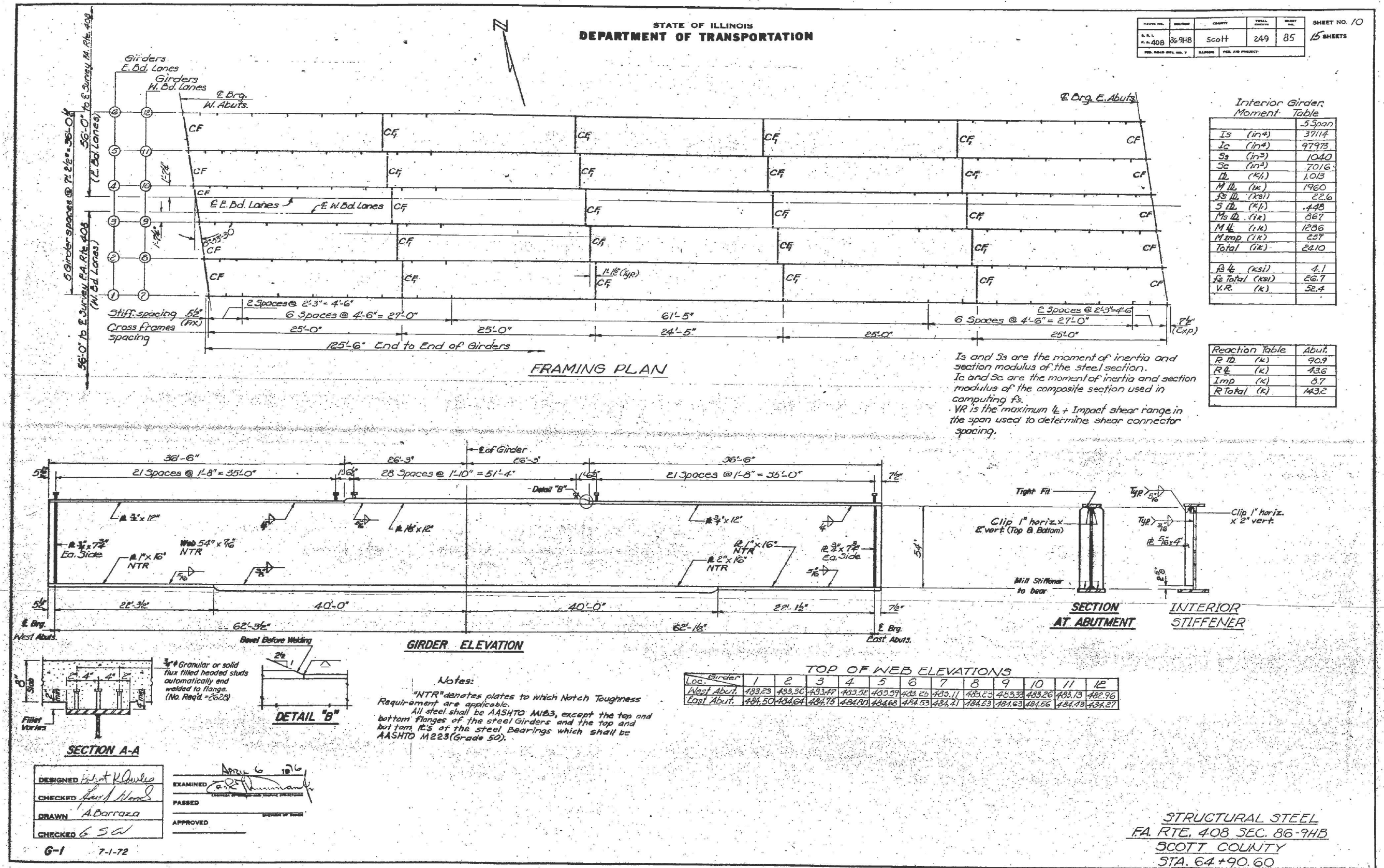
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB, 75-5HB-1, 86-9HB)BP	PIKE/SCOTT	15	13

CONTRACT NO. 72A25

SCALE: SHEET 9 OF 10 SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT

MODEL: bridge-9 (Sheet)
FILE NAME: c:\pwworking\brandon.dudley\cadd\117407172\25 plansheet.dgn



USER NAME = brandon.dudley	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/27/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

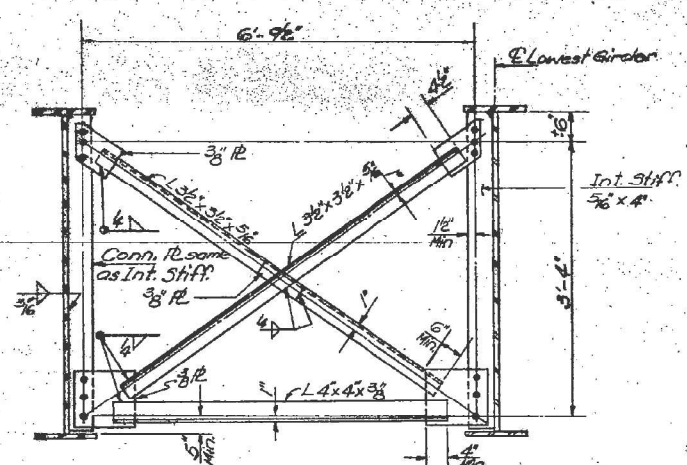
EXISTING PLANS, SN 086-0037 & 0038
(FOR INFORMATION ONLY)

SCALE: SHEET 10 OF 10 SHEETS STA. TO STA.

FAJ RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB, 75-5HB-1, 86-9HB)BP	PIKE/SCOTT	15	14
CONTRACT NO. 72A25				
ILLINOIS FED. AID PROJECT				

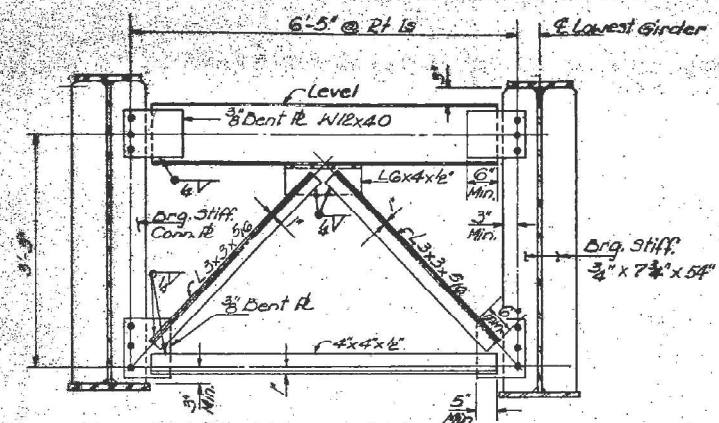
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
86-9HB	Scott	249	86	15

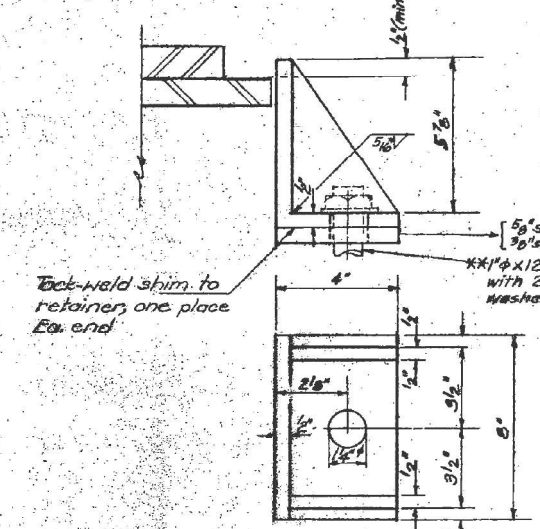


TYP. CF. CROSS FRAME
40 Reg'd.

Note: 1/4" holes in gusset Rs for 3/4" bolts. Hardened washers shall be used over holes in gusset Rs.

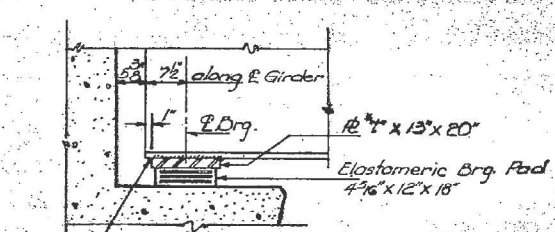


TYP. CF. CROSS FRAME
20 Reg'd.



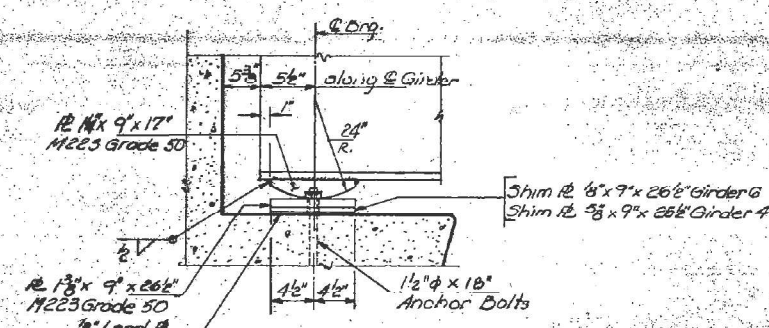
SIDE RETAINER DETAILS
(Req'd. 2 Ea. Brg. assembly)

**Note: After girders have been erected, holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry.

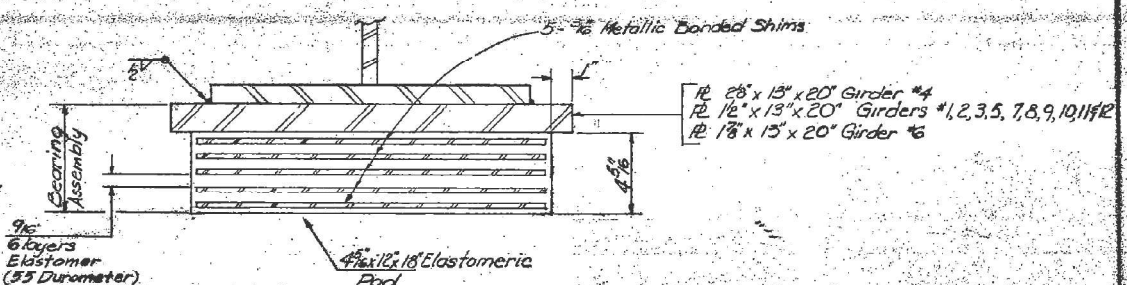


EXP. BRG. DETAIL AT EAST ABUTS.
* See Elastomeric Brg. Assembly Detail

Note: 'A' 1/4" holes - 1" deep in top R. for 1/4" pintles. Thread or press fit pintles in bott. R.
Note: 'B' 2" holes for 1/2" anchor bolts. 3" x 3" x 5/8" R. Washer under nut.

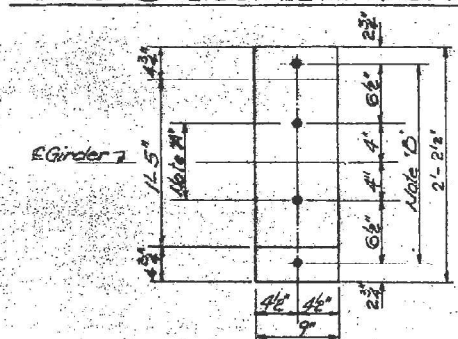


FIXED BRG. DETAIL AT WEST ABUTS.

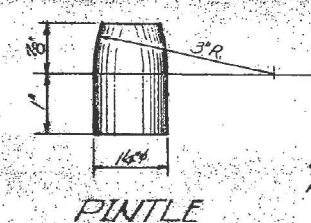


TYPE I
ELASTOMERIC BRG. ASSEMBLY
(Cost incidental)

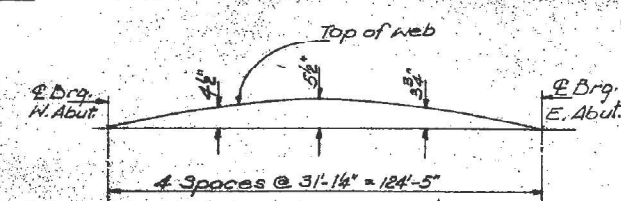
Note: Shim plates shall not be placed under Bearing Assembly.



PLAN
BRG. AT W. ABUTS.



PINTLE



CAMBER DIAGRAM

DESIGNED	Robert D. Dudley	EXAMINED	April 6, 1970
CHECKED	Raymond Woods	PASSED	
DRAWN	A. Barroza	APPROVED	
CHECKED	Raymond Woods		

STRUCTURAL STEEL DETAILS
E.A. RTE. 408 SEC. 86-9HB
SCOTT COUNTY
STA. 64+90.60

MODEL: bridge-10 (Sheet)
FILE NAME: C:\pwwork\dwg\bridge\bridge-10.dwg
PLOT DATE: 5/27/2025

USER NAME = brandon.dudley	DESIGNED -	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS, SN 086-0037 & 0038 (FOR INFORMATION ONLY)	SCALE: SHEET 1 OF 11 SHEETS STA. TO STA.	F.A.I. RTE. 72	SECTION (75-1HB, 75-5HB-1, 86-9HB)BP	COUNTY PIKE/SCOTT	TOTAL SHEETS 15	SHEET NO. 15
	DRAWN -	REVISD -								
	CHECKED -	REVISD -								
PLOT DATE = 5/27/2025	DATE -	REVISD -								