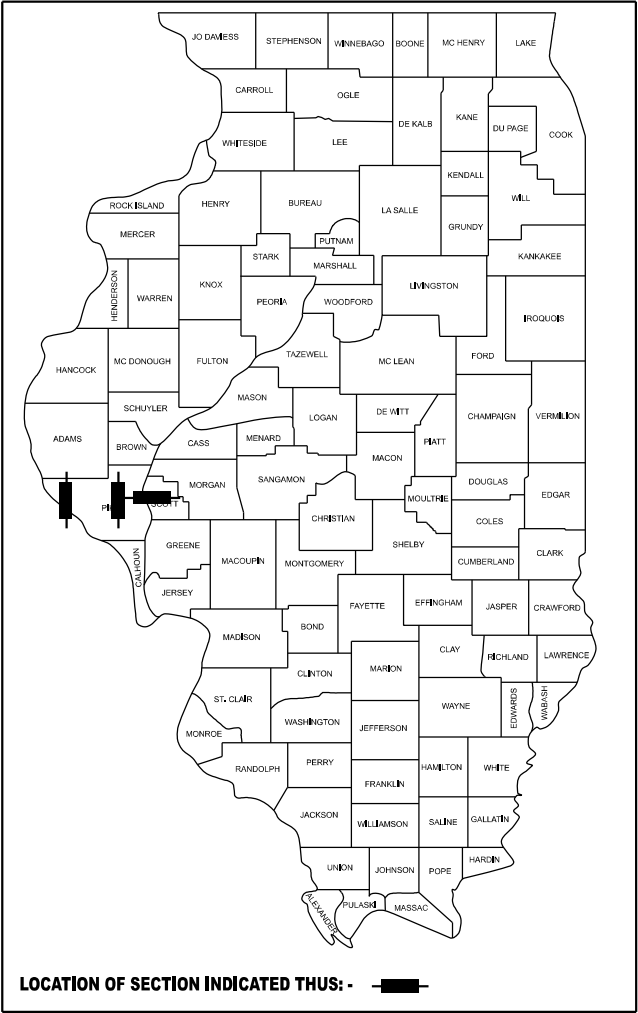


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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	

D-96-510-06

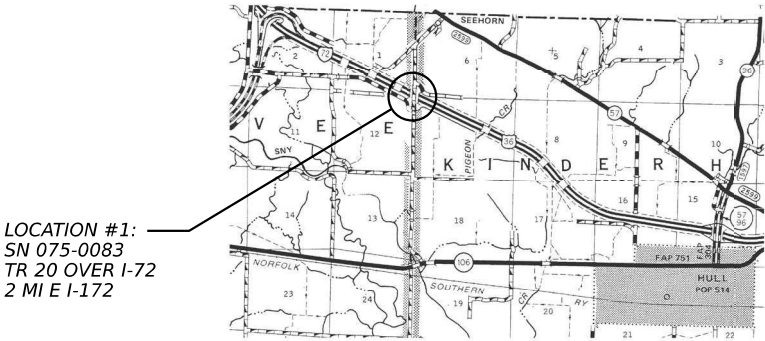


LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

FOR INDEX OF SHEETS, SEE SHEET NO. 2

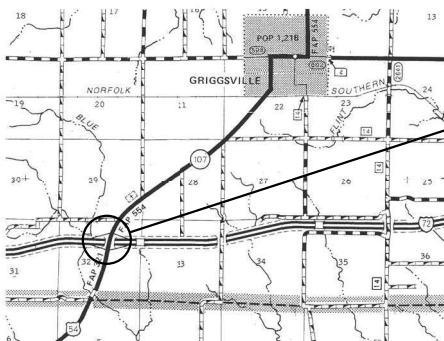
PROPOSED
HIGHWAY PLANS

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



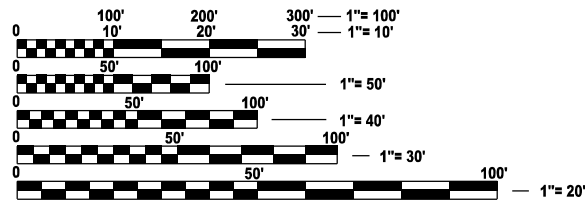
LOCATION #1:
SN 075-0083
TR 20 OVER I-72
2 MI E I-172

PIKE COUNTY



LOCATION #2:
SN 075-0112
IL 107 OVER I-72
AT PITTSFIELD INT.

PIKE COUNTY

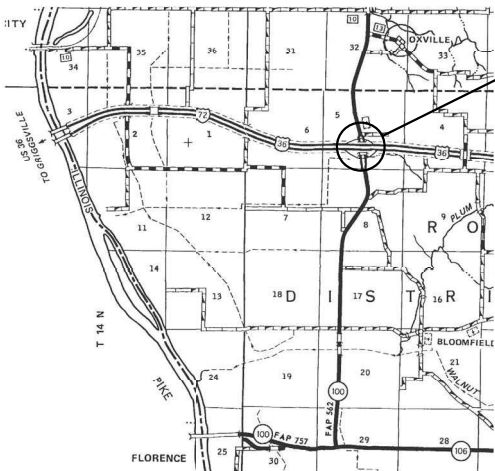


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



LOCATION #3 & #4:
SN 086-0037 & 0038
I-72 OVER IL 100
AT BLUFFS INT.

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
See E. A. Etk
ENGINEER OF DESIGN AND ENVIRONMENT
October 3, 2025
Quarry
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, GENERAL NOTES, & SIGNATURES
- 3-4 SUMMARY OF QUANTITIES
- 5-8 EXISTING BRIDGE PLANS, SN 075-0083
- 9-12 EXISTING BRIDGE PLANS, SN 075-0112
- 13-15 EXISTING BRIDGE PLANS, SN 086-0037 & 0038

HIGHWAY STANDARDS

- 000001-08
- 001006
- 701001-02
- 701006-05
- 701101-05
- 701106-02
- 701400-12
- 701402-12
- 701411-09
- 701901-10
- 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 WITHOLD PAYMENT UNTIL SATISFACTORY CLEANUP IS ACHIEVED.

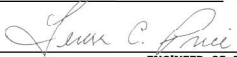
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED

August 14,

20

25



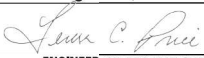
ENGINEER OF OPERATIONS

EXAMINED

August 14,

20

25



ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED

August 13,

20

25



ENGINEER OF PROGRAM DEVELOPMENT

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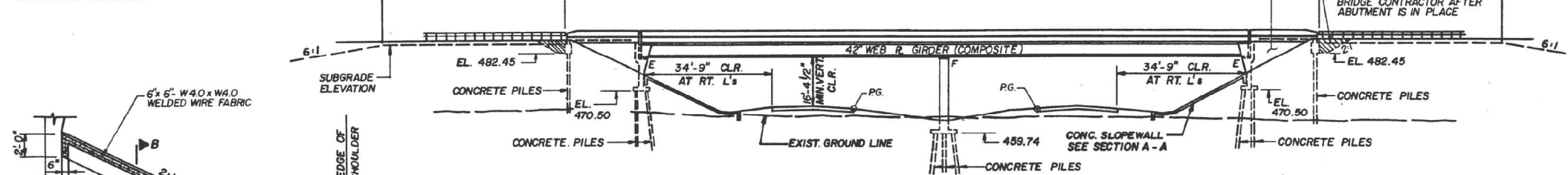
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		DRAWN -	REVISED -				72	(75-1HB,75-5HB-1,86-9HB)BP	PIKE/SCOTT	15	2
		CHECKED -	REVISED -				CONTRACT NO. 72A25				
	PLOT DATE = 5/27/2025	DATE -	REVISED -				ILLINOIS FED. AID PROJECT				
				SCALE:		SHEET 1	OF 1	SHEETS	STA.	TO STA.	

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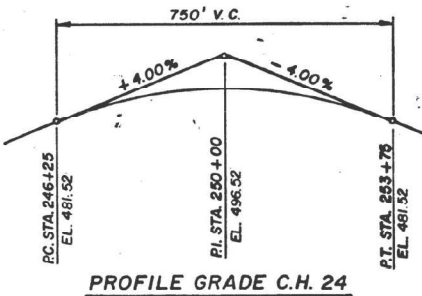
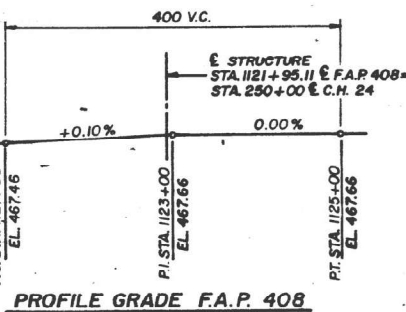
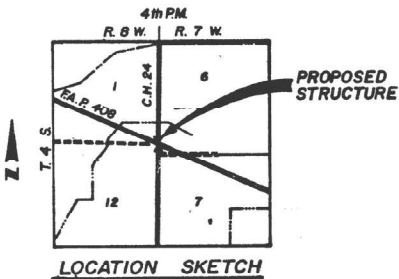
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-01379-6003	0-01379-6003	0-01379-6003
				NHPP 90/10	NHPP 90/10	NHPP 90/10
				SN 075-0083	SN 075-0112	SN 086-0037 & 0038
				0047-RURAL	0047-RURAL	0047-RURAL
				PIKE	PIKE	SCOTT
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.5
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 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

BENCHMARK: B.M. #9 - R.R. SPIKE IN POWER POLE.
18' RT. STA. 247+80
EL. 467.35

EXISTING STRUCTURE:
NO EXISTING STRUCTURE

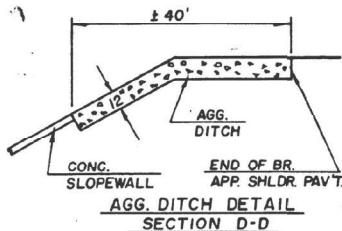


SECTION A-A (THRU SLOPEWALL)



DESIGNED	V.S.N.
CHECKED	K.L.F.
DRAWN	J.S.
CHECKED	K.L.F.

Kenneth L. Figue
REGISTERED STRUCTURAL
ENGINEER OF ILLINOIS
NO. 2992
DATE 3-10-86



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

James J. Rayburn
Engineer of Bridges & Structures

NAME PLATE
(SEE STD. 2113)

STATION 1121+95.11
BUILT BY
STATE OF ILLINOIS
F.A.P. RTE. 408, SEC. 75-1HB
LOADING HS-20
STR. NO. 075-0083

DESIGN STRESSES
STRUCTURAL STEEL
HYBRID GIRDER:
fy = 50,000 PSI. A.A.S.H.T.O. M223, Gr. 50
fy = 36,000 PSI. A.A.S.H.T.O. M163, ST.L.
CAST IN PLACE CONCRETE
f'c = 3,500 PSI.
fy = 60,000 PSI. (REINFORCEMENT)
n = 9
LOADING HS-20-44
ALLOW 25 PSF FOR FUTURE WEARING SURFACE.
WELDED PLATE GIRDER COMPOSITE IN POSITIVE
MOMENT REGION ONLY.

DESIGN SPECIFICATION: 1983 A.A.S.H.T.O. & 1984 INTERIM SPECIFICATIONS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E.A.P. 408	75-1HB	PIKE	47	14

SHEET NO. 1 OF 19 SHEETS

GENERAL NOTES:

- SEE PROPOSAL FOR BORING DATA.
- FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8" Ø, OPEN HOLES 15/16" Ø, UNLESS OTHERWISE NOTED.
- CALCULATED WEIGHT OF STRUCTURAL STEEL M163 = 70,590 LBS. M223(GR. 50) = 72,600 LBS.
- 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 SPLICE PLATE MATERIAL OF THE STEEL GIRDERS.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS AASHTO M-31 OR M-53 GRADE 60.
- SLOPEWALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" x 6" W4.0 x W4.0, WEIGHING 58 LBS. PER 100 SQ. FT.
- THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF ABUTMENTS.
- BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENTS SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF THE TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED.
- CONCRETE PILES AT APPROACH BENTS SHALL BE DRIVEN IN HOLES PRECURRED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 513.09 (c) OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL DRIVE THREE (3) CONCRETE TEST PILES IN PERMANENT LOCATIONS, ONE EACH AT THE ABUTMENTS AND THE PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING REMAINDER OF PILES.

TOTAL BILL OF MATERIAL				
ITEM	UNIT	SUPER	SUB	TOTAL
SAND BACKFILL	CU.YD.		211	211
STRUCTURE EXCAVATION	CU.YD.		390	390
PROTECTIVE COAT	SQ.YD.	950		950
CLASS X CONCRETE	CU.YD.	269.5	224.3	493.8
STRUCTURAL STEEL	L.SUM			
STUD SHEAR CONNECTORS	EACH	1,776		1,776
REINFORCEMENT BARS	POUND	10,260	26,480	36,740
CONCRETE PILES	LIN.FT.		3,298	3,298
TEST PILES CONCRETE	EACH		3	3
NAME PLATES	EACH	1		1
SLOPEWALL 4"	SQ.YD.		271	271
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	8		8
DRAINAGE SCUPPERS	EACH	4		4
NEOPRENE EXPANSION JOINT 2"	LIN.FT.	66		66
REINFORCEMENT BARS (EPOXY COATED)	POUND	54,660		54,660

GENERAL PLAN & ELEVATION

C.H. 24 OVER F.A.P. RTE. 408
F.A.P. RTE. 408, SEC. 75-1HB
PIKE COUNTY
STA. 1121+95.11
STRUCTURE NO. 075-0083

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 075-0083
(FOR INFORMATION ONLY)

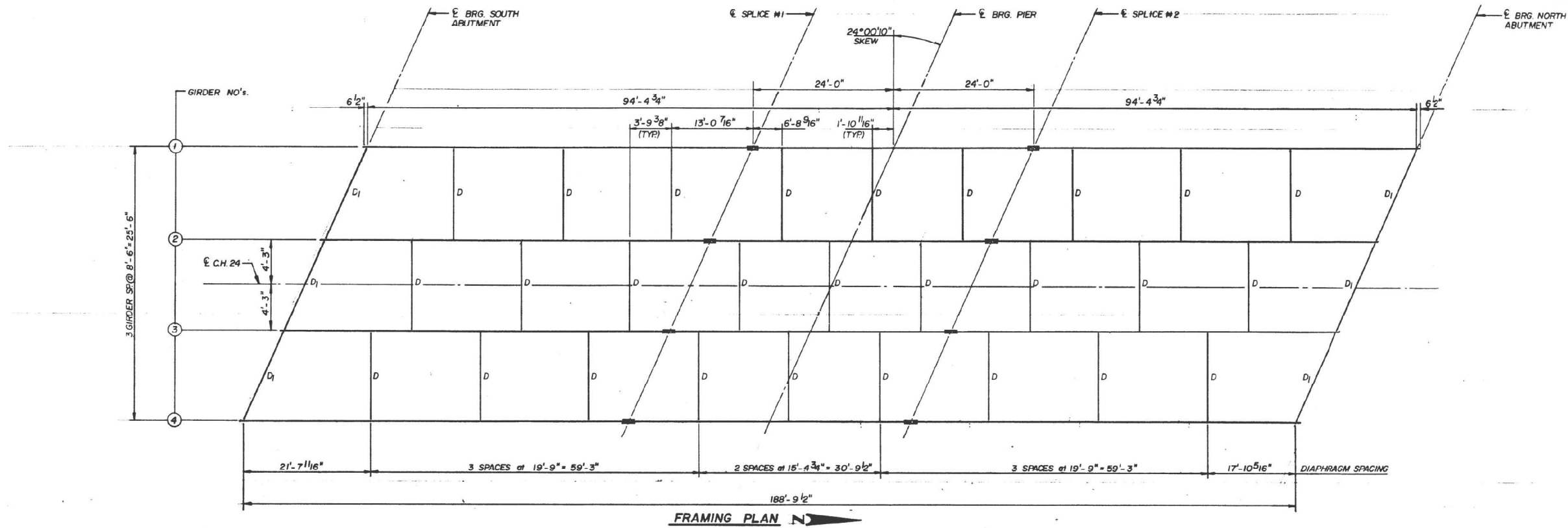
SCALE: SHEET 1 OF 10 SHEETS STA. TO STA.

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

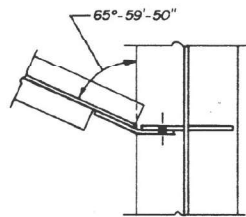
CONTRACT NO. 72A25
ILLINOIS FED. AID PROJECT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 408	75-1HB	PIKE	47	25

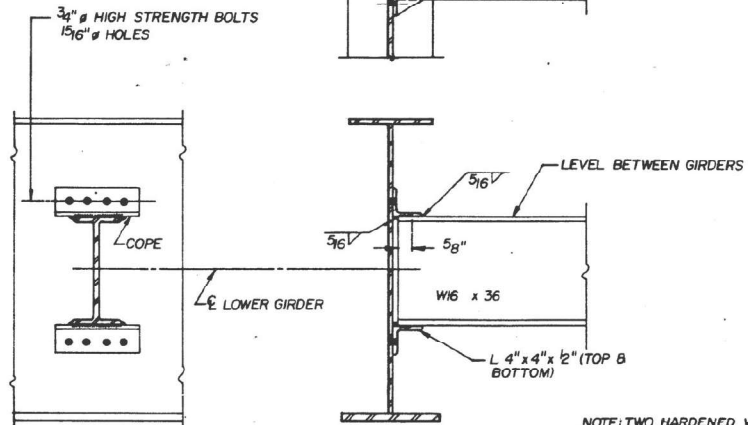
SHEET NO. 12 OF 19 SHEETS



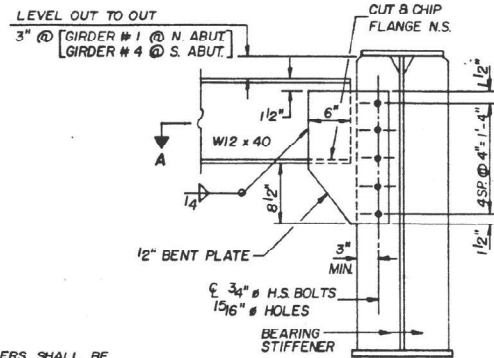
FRAMING PLAN N



SECTION A-A



DIAPHRAGM D
(27 REQ'D.)



DIAPHRAGM D1
(6 REQ'D.)

NOTE: TWO HARDENED WASHERS SHALL BE REQUIRED OVER ALL 15/16" HOLES IN DIAPHRAGMS.

FRAMING PLAN & FRAMING DETAILS
C.H. 24 OVER F.A.P. RTE. 408
F.A.P. RTE. 408, SEC. 75-1HB
PIKE COUNTY
STA. 1121+95.11

DESIGNED	V.S.N.
CHECKED	K.L.F.
DRAWN	J.S.
CHECKED	K.L.F.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: SHEET 2 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB, 75-5HB-1, 86-9HB)BP	PIKE/SCOTT	15	6
CONTRACT NO. 72A25				

ILLINOIS FED. AID PROJECT

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

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

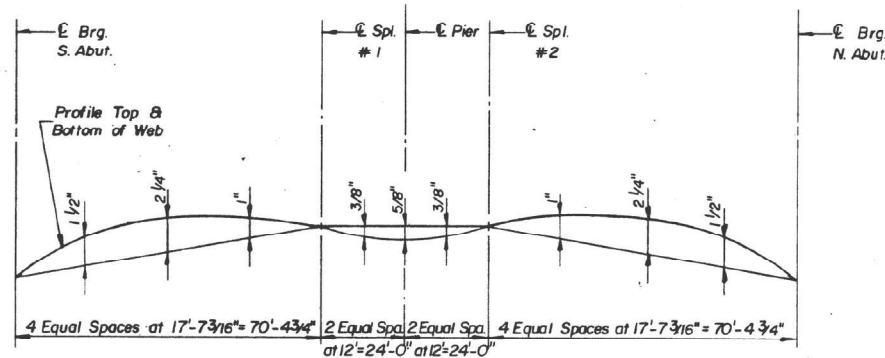
INTERIOR GIRDER	REACTION	TABLE
	ABUT.	PIER
$R \bar{Q} (K)$	48.3	166.6
$R \bar{L} (K)$	49.1	76.5
$Imp. (K)$	11.2	17.5
$R Total (K)$	108.6	260.6

* M_u = Moment Capacity for Braced Non-Compact section.
 **Braced Non-Compact section.
 M_a (Applied Moment) = $1.3 [M \bar{Q} + M s \bar{Q} + 53(M \bar{L} + I)]$
 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_{cl} are the moment of inertia and section modulus of the composite section used in computing f_s (Total and Overload).
 VR is the maximum $\bar{L}$ + impact shear range in span.
 f_s (Total) is the sum of the stresses due to $1.3 [M \bar{Q} + M s \bar{Q} + 3(M \bar{L} + I)]$.
 f_s (Overload) is the sum of the stresses due to $M \bar{Q} + M s \bar{Q} + 53(M \bar{L} + I)$.
 $M \bar{Q}$ - Moment due to deck load on Non-Composite section.
 $M s \bar{Q}$ - Moment due to deck load on Composite section.
 $M \bar{L}$ - 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

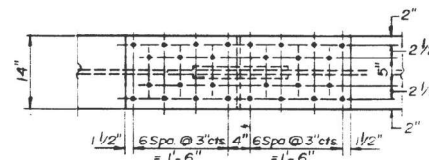
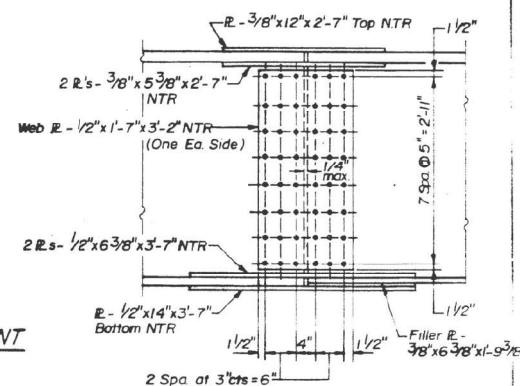
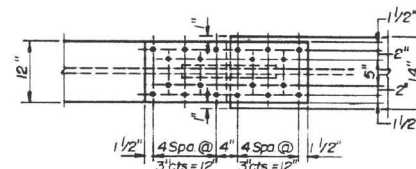
ELEVATIONS ABOVE ARE TOP OF GIRDER WEB BEFORE ANY DEFLECTION.



CAMBER DIAGRAM

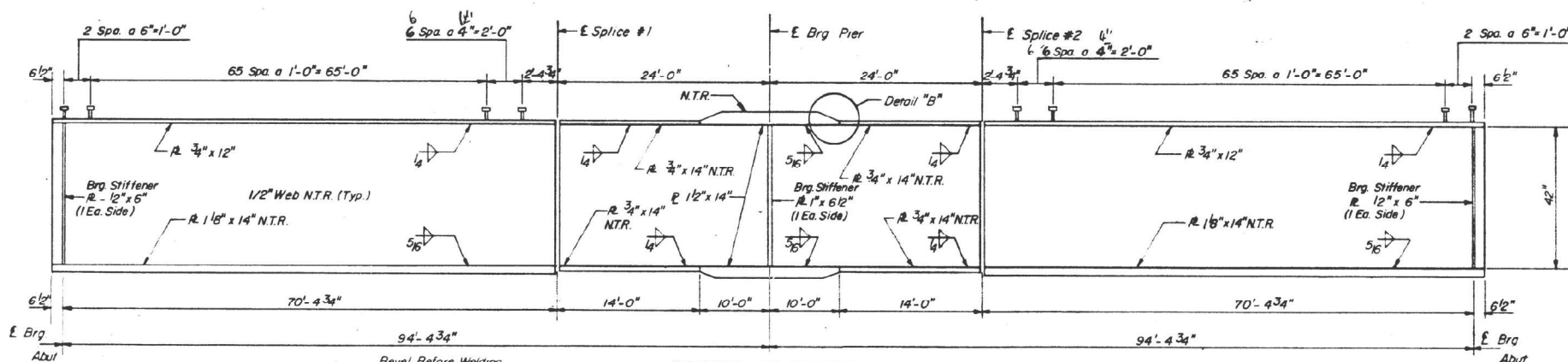
MATERIAL SPECIFICATIONS GIRDER SPLICE MATERIAL

- 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.



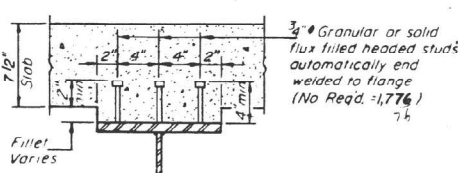
FIELD SPLICE DETAIL
SPLICE NO. 1 & 2

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	JS
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 cross-section of the assembly with the following dimensions and components:

- Overall width: $6 \frac{1}{2}"$
- Distance from centerline to the edge of the bearing housing: $1"$
- Distance from centerline to the center of the bolt holes: $2"$
- Distance from centerline to the center of the shim: $2"$
- Distance from centerline to the edge of the shim: $1 \frac{1}{4}"$
- Distance from centerline to the edge of the bearing housing: $5"$
- Distance from centerline to the edge of the bearing housing: $5"$
- Components:
 - $7/8" \phi$ Holes in Bolt Flange
 - Shim @ $1 \frac{1}{4}" \times 11" \times 16"$
 - Bearing Assembly

Side Retainer (at inside face of exterior girders only)

10 1/4"

6" 1" x 12" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" R washer under nut

PINTLE

Note Shim plates shall not be placed under Bearing Assembly.

DESIGNED	VSN
CHECKED	KLF
DRAWN	JDS
CHECKED	KLF

TABLE OF SHIM PLATE LOCATION AND THICKNESS "t"

BEARING DETAILS
C.H. 24 OVER F.A.P. RTE. 408
F.A.P. RTE. 408, SEC. 75-1HB
PIKE COUNTY
STA. 1121+95.11

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.

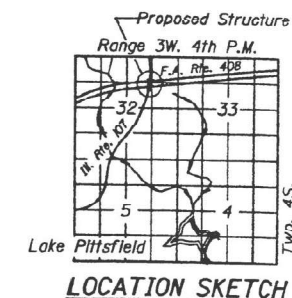
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi

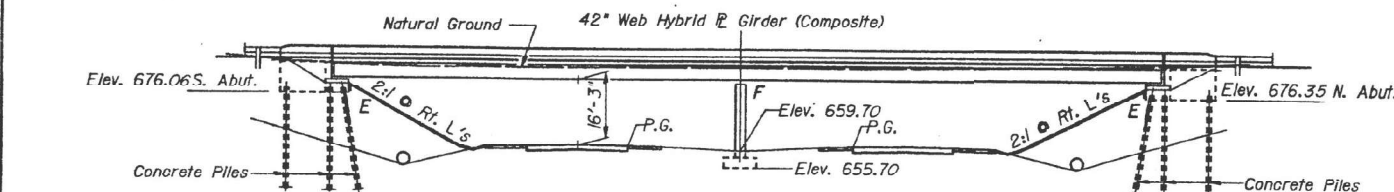
$f_y = 60,000$ psi (Reinf.)

Hybrid $f_y = 50,000$ psi (M223) Flange
Girder $f_y = 36,000$ psi (M183) Web

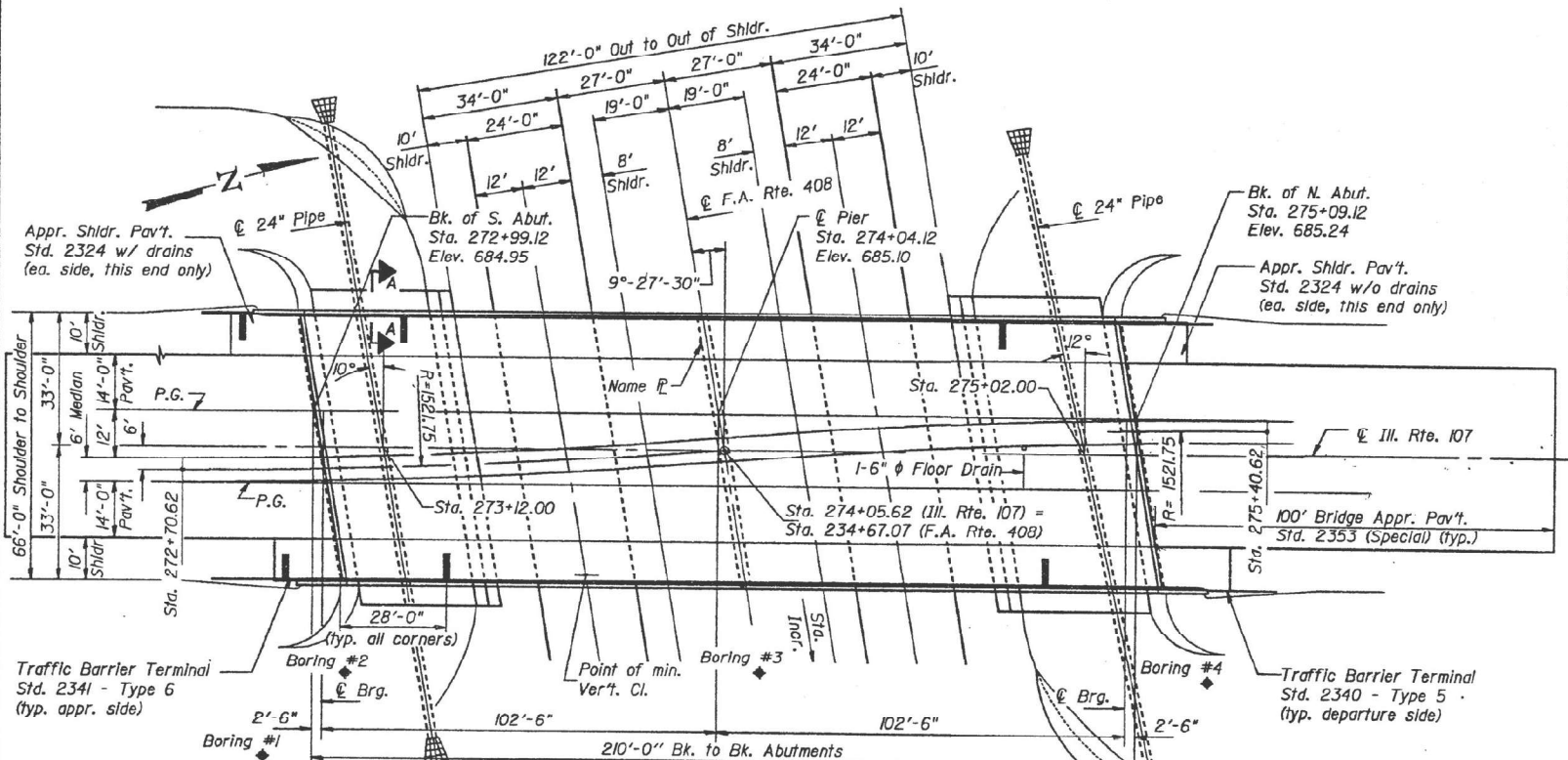


LOCATION SKETCH

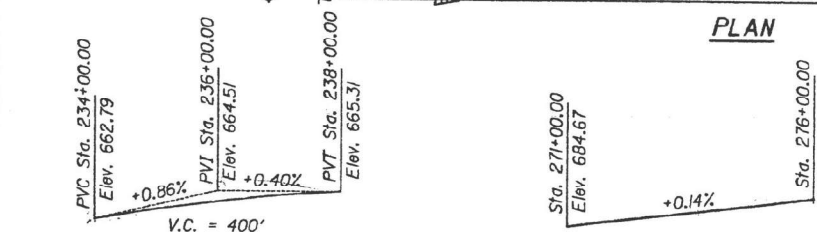
GENERAL PLAN
ILL. ROUTE 107 OVER F.A. ROUTE 408
F.A. ROUTE 408 SECTION 75-5HB-1
PIKE COUNTY
STATION 234+67.07 (F.A. RTE. 408)
STATION 274+05.62 (ILL. RTE. 107)
STRUCTURE NUMBER 075-0112



ELEVATION



PLAN



PROFILE GRADE

F.A. Route 408

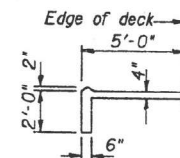
(median edge of Roadway)

PROFILE GRADE

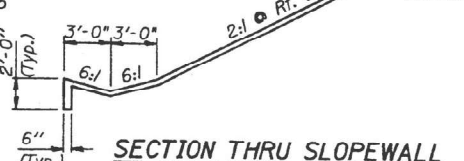
Ill. Route 107

(median edge of Roadway)

SECTION A-A



SECTION THRU SLOPEWALL



DESIGNED	James J. Reichen	EXAMINED	James J. Reichen
CHECKED	James J. Reichen	PASSED	James J. Reichen
DRAWN	R. S. S. S.	APPROVED	James J. Reichen
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)

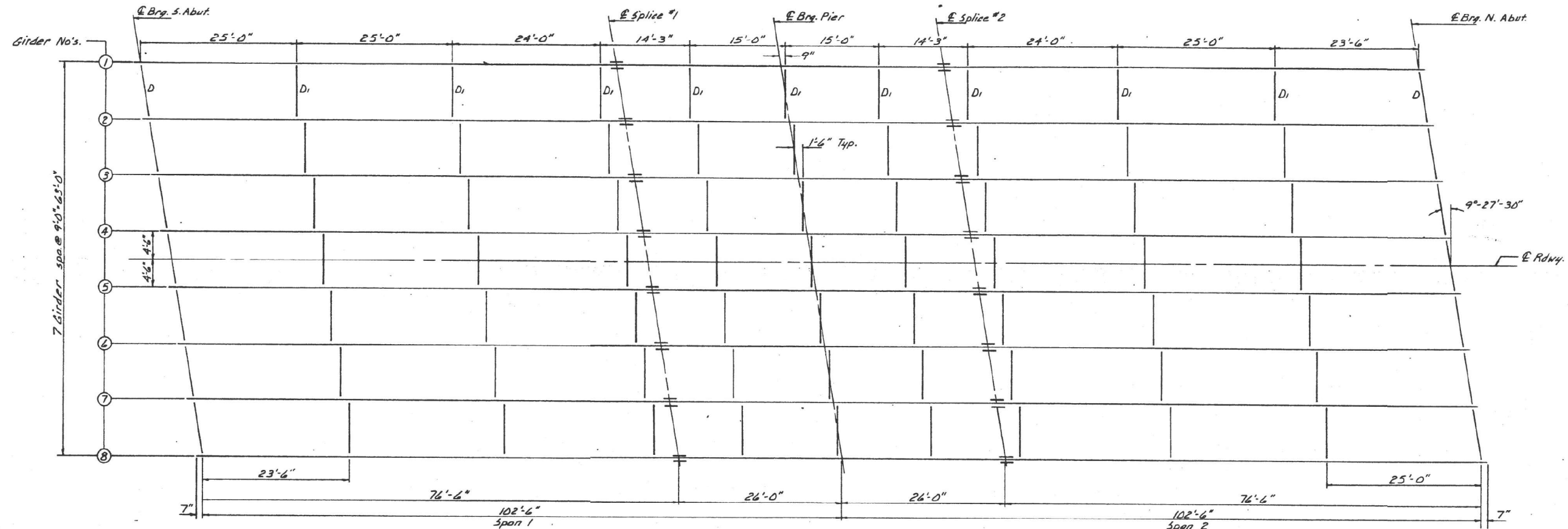
SCALE: SHEET 5 OF 10 SHEETS STA. TO STA.

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

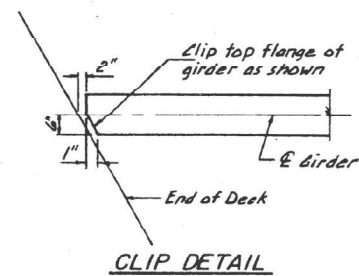
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGNED BY	CHECKED BY	DATE	TOTAL SHEETS	SHEET NO.
			58	16 SHEETS

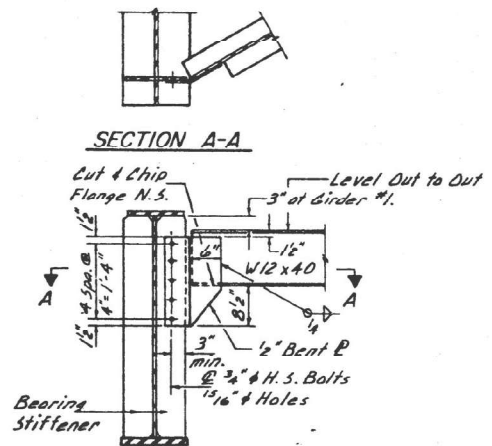
SHEET NO. 9
16 SHEETS



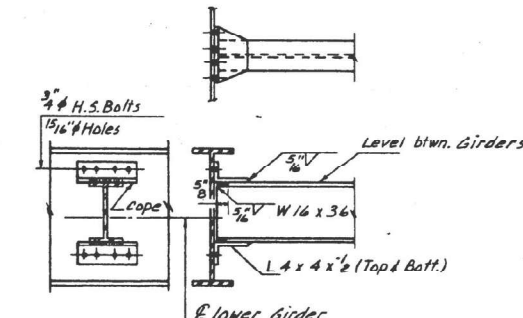
FRAMING PLAN



CLIP DETAIL



DIAPHRAGM D
14 Required



DIAPHRAGM D1
63 Required

Note: Hardened washers shall be required over 15/16" holes in angles. (2 washers per bolt.)

FRAMING PLAN
FA. RTE. 408 SEC. 75-5HB-1
PIKE COUNTY
STA. 234+67.07

DESIGNED <i>Sam J. Mayhew</i>	EXAMINED <i>April 7, 1989</i>
CHECKED <i>Harold Richeson</i>	PASSED <i>James J. Kuhlmann</i>
DRAWN <i>R. Sammer</i>	APPROVED
CHECKED <i>DLG</i>	

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 075-0112
(FOR INFORMATION ONLY)

SCALE: SHEET 6 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB, 75-5HB-1, 86-9HB)BP	PIKE/SCOTT	15	10
CONTRACT NO. 72A25				
ILLINOIS FED. AID PROJECT				

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

Structural drawing of a bridge deck showing cross-sections and reinforcement details. The drawing includes dimensions for various components, reinforcement bar specifications, and a central detail 'B' showing a splice and a bridge pier.

Dimensions and Spacing:

- Top dimensions: 7", 61 Spa. @ 8" = 40'-8", 57 Spa. @ 6 1/2" = 30'-10 1/2", 8 Spa. @ 3" = 2'-0", 28'-11 1/2", 28'-11 1/2", 8 Spa. @ 3" = 2'-0", 57 Spa. @ 6 1/2" = 30'-10 1/2", 61 Spa. @ 8" = 40'-8", 7"
- Bottom dimensions: 7", 76'-6", 19'-0", 7'-0", 7'-0", 19'-0", 76'-6", 7"
- Overall width: 102'-6"

Reinforcement Details:

- Top reinforcement: #2 1" x 12"
- Bottom reinforcement: #2 5/8" x 6 1/4"
- Web reinforcement: 1/2" x 42" Web # (Typ.)
- Diagonal reinforcement: #3 3/8" x 14"
- Central detail 'B' shows a splice and a bridge pier with reinforcement: #2 1 1/8" x 6 1/4", #3 3/8" x 14", #2 1" x 12", #2 5/8" x 6 1/4"

Labels and Notes:

- Splice #1
- Br. Pier
- Splice #2
- See Detail "B"
- 102'-6"
- Br. Abut.
- N. Abut.

7 1/2"
5/8"

2 1/2" min.

3"

6"

3"

1 1/2" min.

Fillet
Varies

$\frac{3}{16}$ " Granular or solid
flux filled headed studs
automatically end
welded to flange.
(No. Req'd.=4064)

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

April 7, 1987

EXAMINED *Errol J. Kasper*
ENGINEER OF BRIDGE DESIGN

PASSED *James L. Rabinow*
ENGINEER OF BRIDGE & STRUCTURES

APPROVES _____
DIRECTOR OF HIGHWAYS

Before Welding

Technical drawing of a vertical stiffener assembly. The drawing shows a cross-section of a vertical stiffener (Brg. Stiffener) with a mill stiffener (Mill Stiffener) to bear on the bottom. The stiffener is connected to a horizontal plate (Clp 1" Horizontal x 2 1/2" Vertical Top & Bottom) via a tight fit. The stiffener is also connected to a filler plate (Filler) on the right. Dimensions include 5/16 inch for the stiffener thickness, 1/4 inch for the filler thickness, and 5/16 inch for the stiffener width. A note "See Detail 'c'" points to the bottom connection.

Diagram of a vertical pressure vessel showing internal components and dimensions. The vessel is labeled with various parts: "Tight Fit" at the top, "Horizontal 'Vertical' Bottom" for the base, "Stiffener" for the main body, "Stiffener bear" for the base support, and "Rail 'C'" for the bottom rail. Dimensions are indicated: $5/16$ for the top flange thickness, $1/4$ for the stiffener thickness, and $5/16$ for the base thickness. A "Fill" line is shown at the top, and a "2" is indicated at the bottom right.

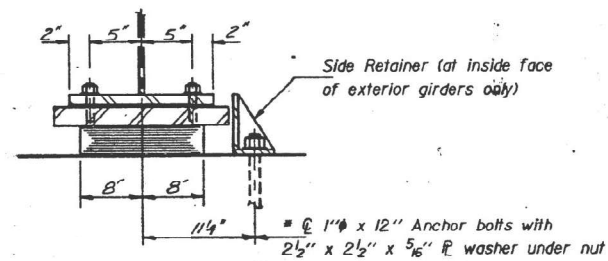
[illegible]

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total and Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total and Overload).
YR is the maximum $\frac{L}{4}$ + impact shear range in span.
fs (Total) is the sum of the stresses due to $1.3[MDL + MsDL + \frac{5}{8}(M-L + I)]$.
fs (Overload) is the sum of the stresses due to $M \frac{L}{4} + Ms \frac{L}{4} + \frac{5}{8}(M \frac{L}{4} + I)$.
M_D - Moment due to dead loads on noncomposite section.
M_S - Moment due to dead loads on composite section.
M_L - Moment due to live load on non-composite or composite section.
I - Live load impact.

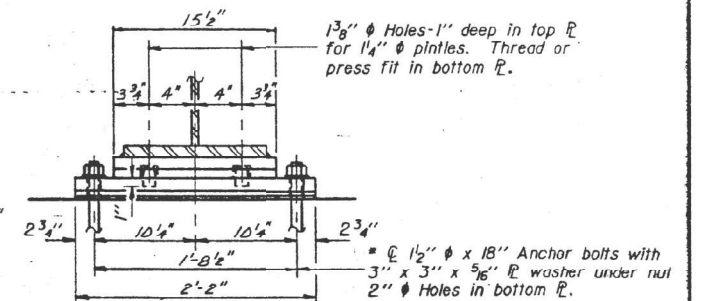
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. 24.				60
F. A.				
FED. ROAD DIST. NO. 7		ELLIPSE	FED. AID PROJECT	

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"
- Internal vertical dimension: 3 1/2"
- Internal horizontal dimension: 1"
- 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: 8"
- Top flange thickness: 1/2" min.
- Top flange width: 2"
- Top flange hole diameter: 2 1/8"
- Top flange hole position: 1/2" from the left edge.
- Top flange hole position: 1/2" from the right edge.
- Top flange hole position: 1/2" from the bottom edge.
- Top flange hole position: 1/2" from the top edge.
- Top flange hole position: 1/2" from the left edge.
- Top flange hole position: 1/2" from the right edge.
- Top flange hole position: 1/2" from the bottom edge.
- Top flange hole position: 1/2" from the top edge.

Top View (Right):

- Overall width: 4"
- Overall height: 8"
- Top flange thickness: 1/2" min.
- Top flange width: 2"
- Top flange hole diameter: 2 1/8"
- Top flange hole position: 1/2" from the left edge.
- Top flange hole position: 1/2" from the right edge.
- Top flange hole position: 1/2" from the bottom edge.
- Top flange hole position: 1/2" from the top edge.
- Top flange hole position: 1/2" from the left edge.
- Top flange hole position: 1/2" from the right edge.
- Top flange hole position: 1/2" from the bottom edge.
- Top flange hole position: 1/2" from the top edge.

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

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

April 7, 1987

EXAMINED *Dwight J. Kaspar*
ENGINEER OF BRIDGE DESIGN

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

APPROVED _____
CHIEF-CLERK OF RECORDS

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.

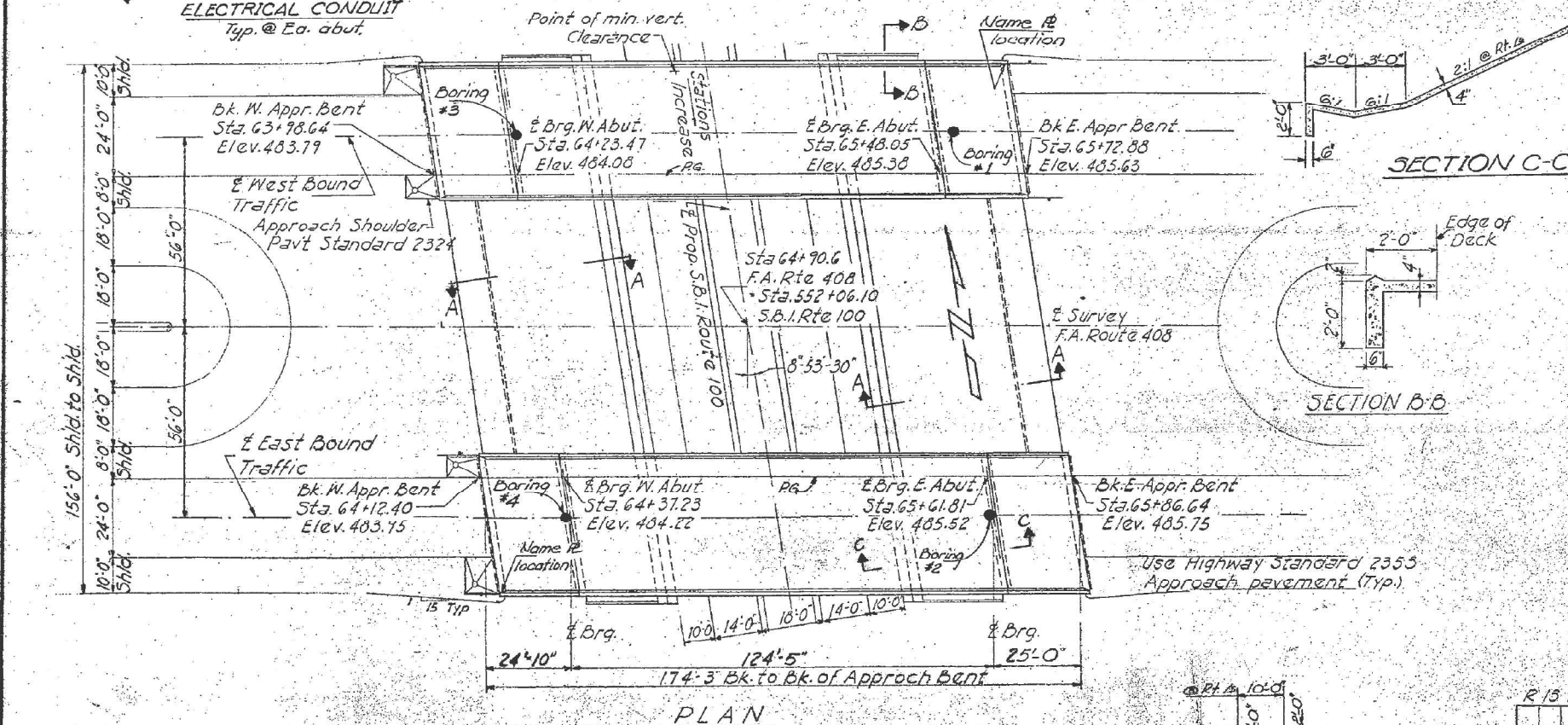
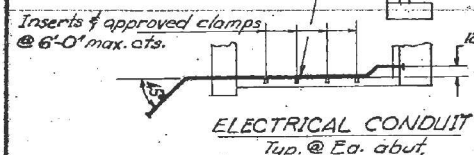
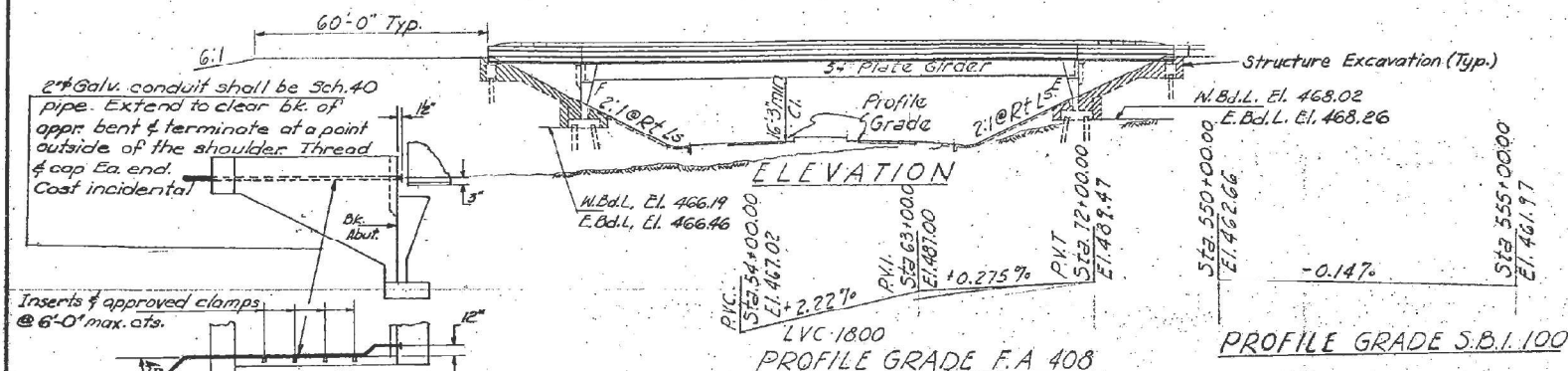
The Contractor shall drive two (2) steel (8HP36) test piles in a permanent location, one at West abut. W. Bd. Lanes and one at East abut. E. Bd. Lanes as directed by the Engineer before ordering the remainder of piles.

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

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
Sand 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. Huns
DRAWN A. Berrozo
CHECKED C. S. W.

EXAMINED
PASSED
APPROVED

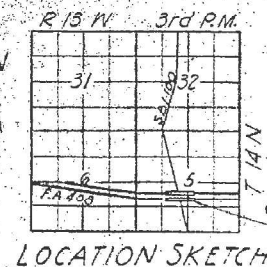
DESIGN STRESSES

$f_c = 3,500$ 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

SECTION A-A



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

REVISED 7-17-80 EAH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

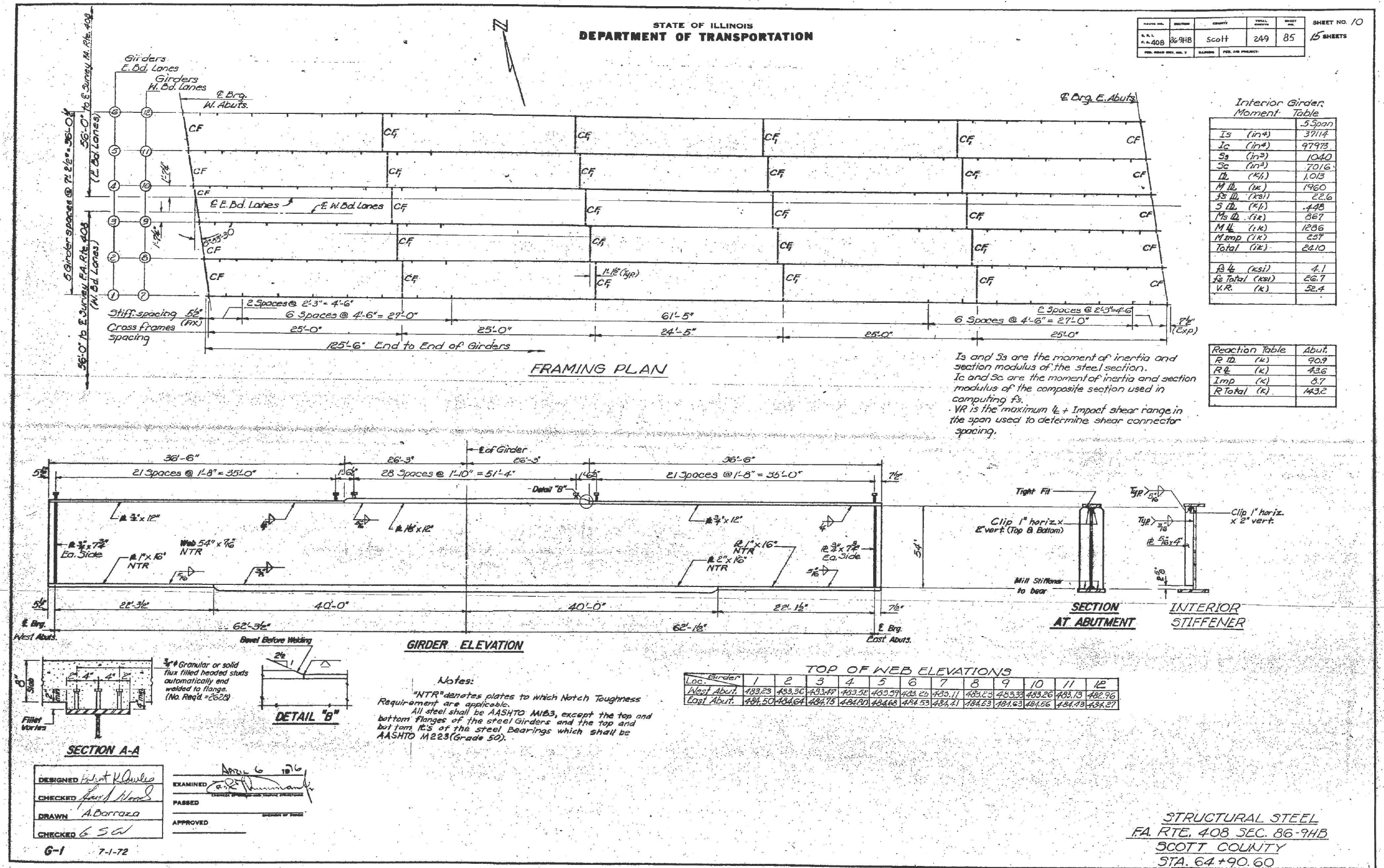
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB, 75-5HB-1, 86-9HB)BP	PIKE/SCOTT	15	13

CONTRACT NO. 72A25

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

ILLINOIS FED. AID PROJECT

MODEL: bridge-9 (Sheet)
FILE NAME: c:\p\work\bridge\duddy\cml11740717225 plansheet.dgn



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

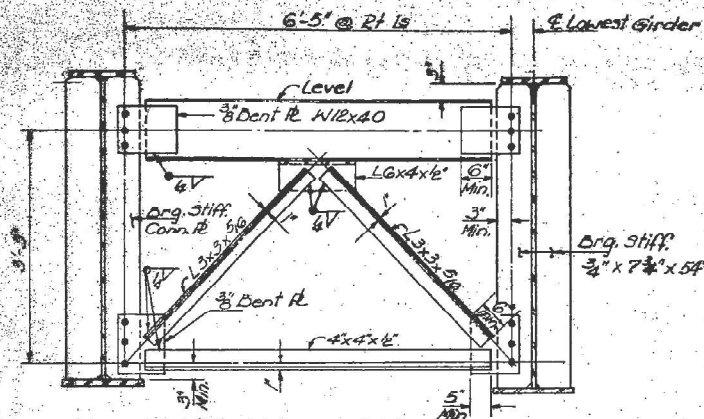
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

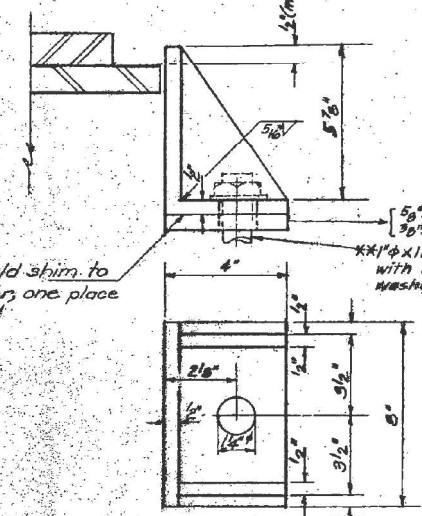
FAJ RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(75-1HB, 75-5HB-1, 86-9HB)BP	PIKE/SCOTT	15	14
CONTRACT NO. 72A25				
ILLINOIS FED. AID PROJECT				

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
R. & L. P. A. 408	86-9HB	Scott	249	86	15 SHEETS
FED. ROAD DIST. NO. 7		KLAVON	FED. AID PROJECT		

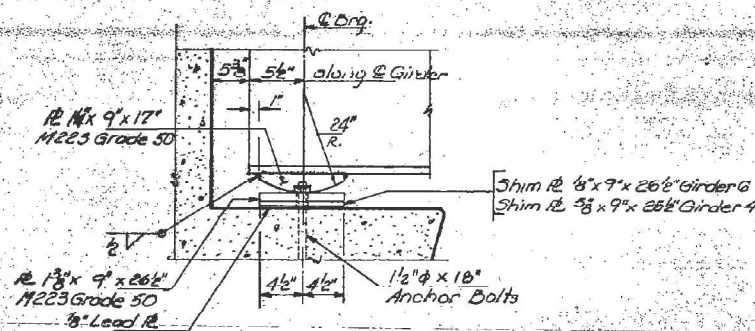


TYP CF CROSS FRAME
20 Reg'd.

Tack-weld shim to
retainer, one place
Ea. end

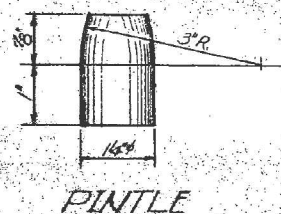


****Note:** After girders have been erected, holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry.



FIXED BRG. DETAIL AT WEST ABUTS.

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



Top of web

4' 6"

5' 6"

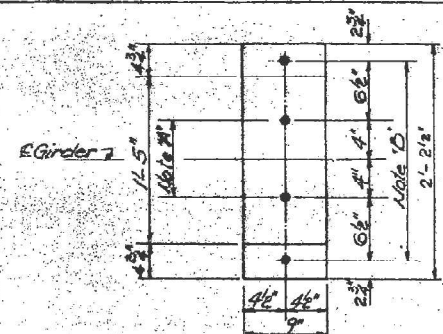
4' 6"

W. Abut.

E. Abut.

4 spaces @ $31'-1\frac{1}{4}" = 124'-5"$

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



DESIGNED	<i>Robert D. Lewis</i>	APRIL 6 1976
CHECKED	<i>James A. Ward</i>	EXAMINED <i>CA [Signature]</i>
DRAWN	<i>A. Dorrozo</i>	PASSED
CHECKED	<i>James A. Ward</i>	APPROVED