

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-4HB-2)BP	LOGAN	7	1
		ILLINOIS	CONTRACT NO. 72N06	

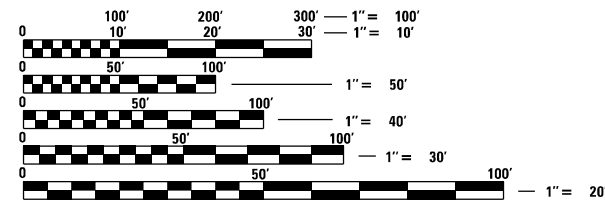
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

FAI ROUTE 55 (I-55)
SECTION (54-4HB-2)BP
PROJECT NHPP-N2R8(831)
BRIDGE PAINTING
LOGAN COUNTY

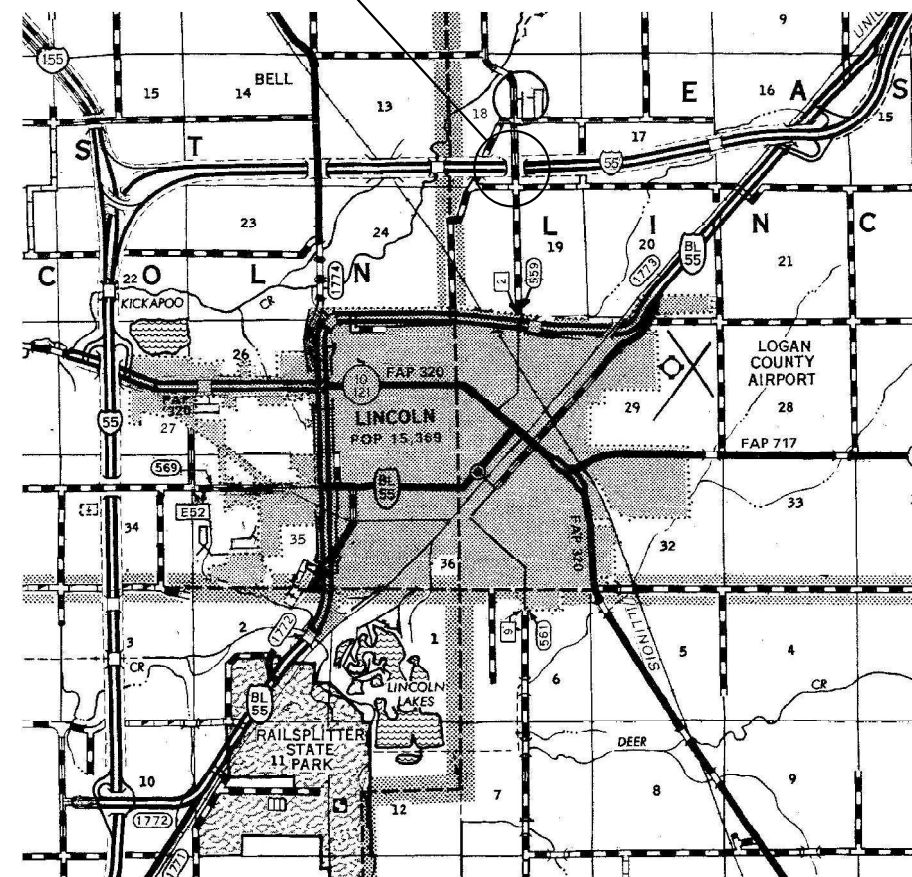
C-96-132-21

PROJECT LOCATION
SN 054-0059
CH 2 OVER I-55
3.1 MI E I-155



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 EXCAVATORS
1-800-892-0123
OR 811

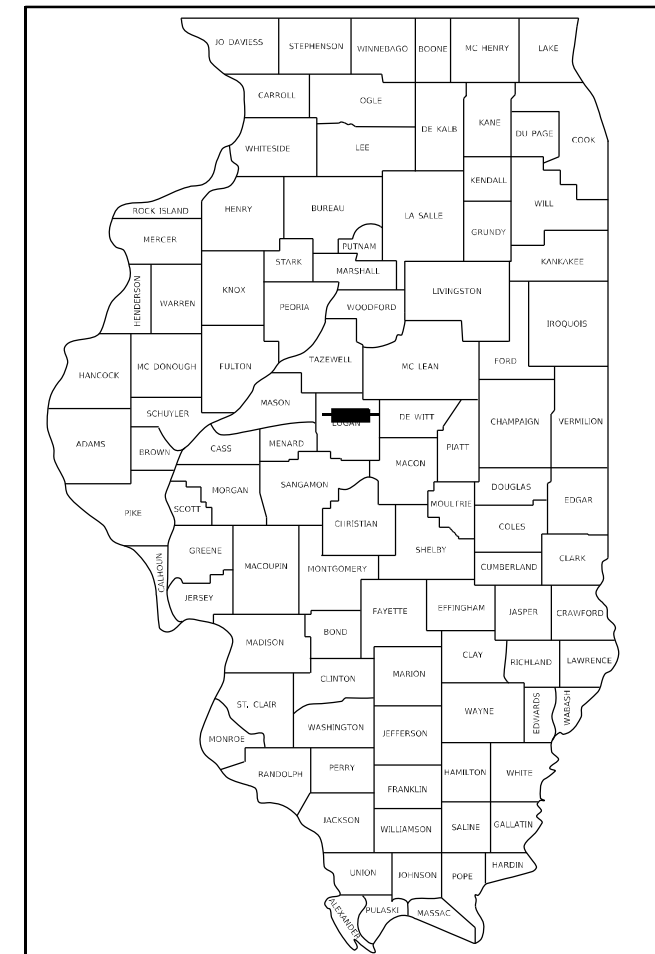


BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY - (217) 785-9290

GROSS LENGTH = XX FT. = XX MILE
NET LENGTH = XX FT. = XX MILE

CONTRACT NO. 72N06

D-96-059-21



LOCATION OF SECTION INDICATED THIS: - [black rectangle]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 5, 2021

John P. Meyer
REGIONAL ENGINEER

December 10, 2021
Stephen M. Smith
ENGINEER OF DESIGN AND ENVIRONMENT

December 10, 2021
Stephen M. Smith
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

HIGHWAY STANDARDS

INDEX OF SHEETS

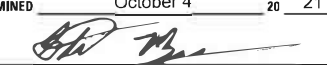
- 1 COVER SHEET
- 2 INDEX, STANDARDS, GENERAL NOTES, & SIGNATURES
- 3 SUMMARY OF QUANTITIES
- 4-7 EXISTING BRIDGE PLANS, SN 054-0059


- 000001-08
- 001006
- 701101-05
- 701106-02
- 701400-11
- 701402-12
- 701901-08
- 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 October 4 20 21

ENGINEER OF OPERATIONS

EXAMINED October 5 20 21

ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED October 5 20 21

ENGINEER OF PROGRAM DEVELOPMENT

REV. - MS

MODEL: Default
FILE NAME: 318 Bridges Bridge Plans_CAD72N06 - 0540059 (print)sheet.dgn

	USER NAME = dudleybrm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STANDARDS, GENERAL NOTES, & SIGNATURES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
		DRAWN -	REVISED -			55	(54-4HB-2)BP	LOGAN	7	2		
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 72N06						
	PLOT DATE = 10/5/2021	DATE -	REVISED -			ILLINOIS FED. AID PROJECT						
						SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.

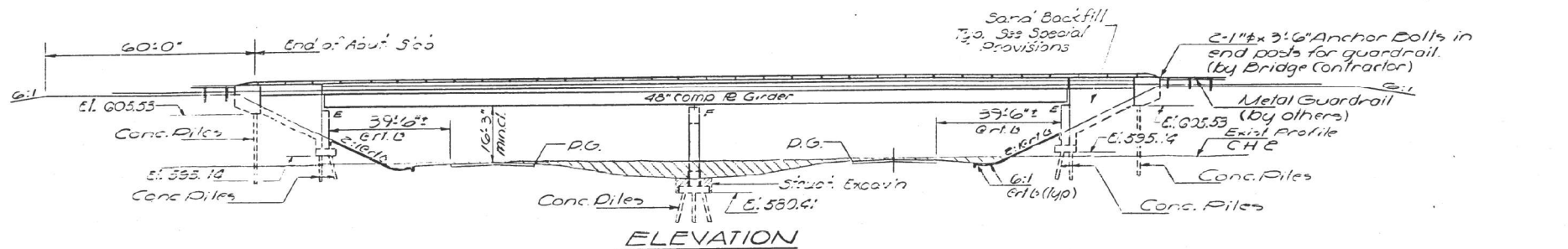
BM #38 6" Dial spike in telephone cable pole
325' L.I. Sta 591+11.1 El. 587.60

STATE OF ILLINOIS

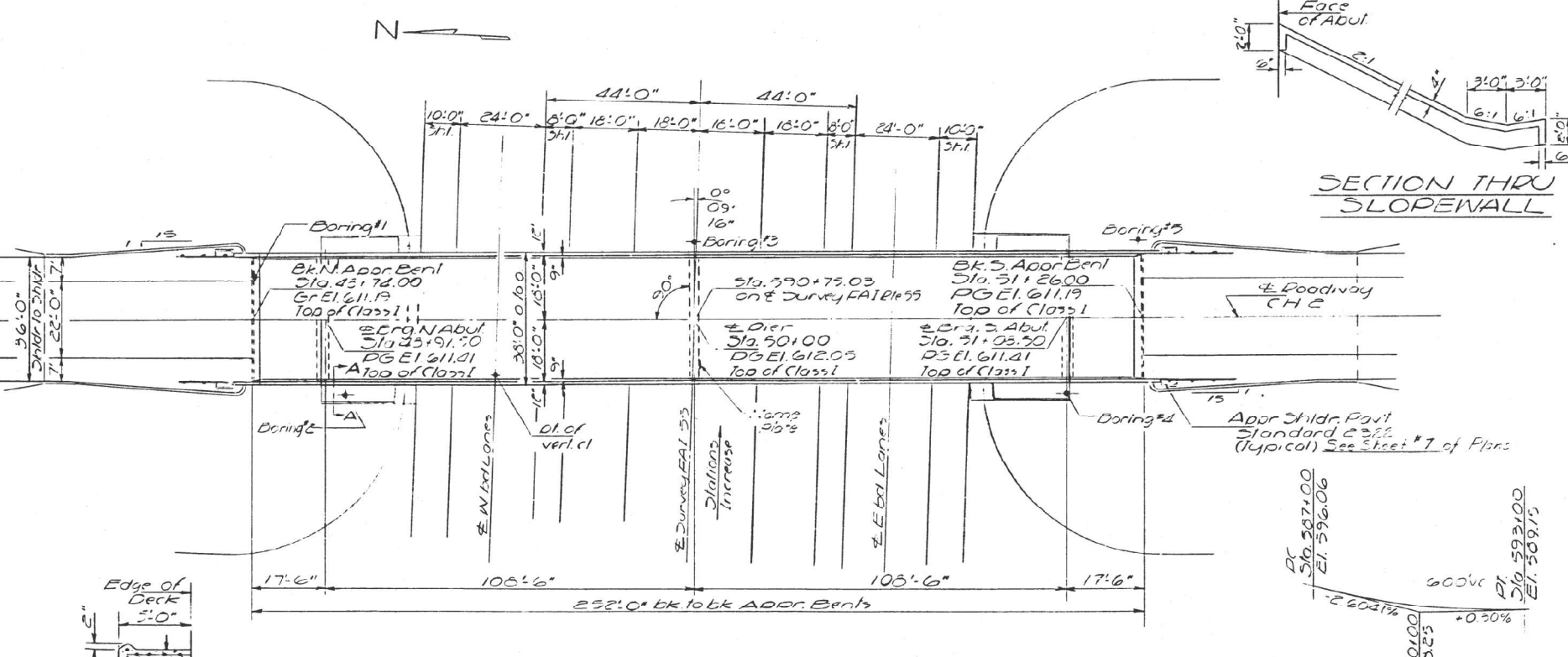
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. /
55	54-4HB-2	LOGAN	32	8	12 SHEETS
FED. ROAD DIST. NO. 7			SALMON		FED. AID PROJECT
					3

GENERAL NOTES

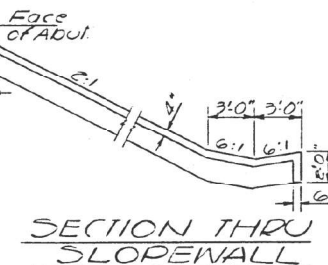
- All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
- Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ ; open holes $\frac{1}{8}$ " ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = 289 040 Lbs.
- The Basic Lead Silica Chromate paint system shall be used for shop and field painting of structural steel.
- Anchor bolts shall be set before bolting diaphragms over supports.
- Slope wall shall be reinforced with welded wire fabric 6" x 5" mesh, weighing 53# per 100 sq.ft.
- Concrete piles of abutments shall be driven in holes precored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.
- 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 Cool Tar Interlayer Protective Coat is applied.
- 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.
- The Contractor shall drive Pileus Concrete test piles in a permanent location, one at North Abutment and one at South Abutment and one at the Pier as directed by the Engineer before ordering the remainder of piles.



ELEVATION



PLAN



SECTION THRU SLOPE WALL

TOTAL BILL OF MATERIAL

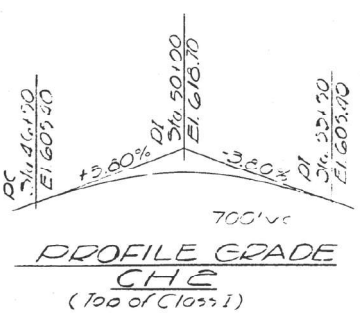
ITEM	UNIT	54-4HB-2	54-4	TOTAL
Structural Excavation	Cu Yds	77	77	77
3" Conc Slab over CH2	Sq Yds	78	78	78
Class X Concrete	Cu Yds	33.7	93.2	51.3
Structural Steel	Lbs	289,040	289,040	289,040
Steel Splice Connectors	Each	2227	2227	2227
Aluminum Purlins	Lbs	513	513	513
Reinforcement Bars	Lbs	176,870	2,350	93,670
Concrete Piles	Lin Ft	3,350	3,350	3,350
Test Piles (Concrete)	Each	3	3	3
Narrow Plates	Each	1	1	1
3/8" x 4" Sq Yds	Sq Yds	412	412	412
Protective Coat	Sq Yds	180	180	180
Preformed Joint Slabs	Lin Ft	78	78	78
Sand Backfill	Cu Yds	90	90	90
Cool Tar Interlayer Prot. Coat	Sq Yds	362	362	362

SECTION AA

DESIGNED	J. Schaeffer	EXAMINED	J. Schaeffer
CHECKED	J. Schaeffer	PASSED	W. G. Baumann
DRAWN	J. Schaeffer	APPROVED	Richard H. Moller
CHECKED	J. Schaeffer		

STATION 590+75.03
BUILT 1975 BY
STATE OF ILLINOIS
F.A.I. RTE. 55 SEC. 54-4B-2
PROJECT 155-4(94)
LOADING H520

NAME PLATES
See 3'd. 21.3

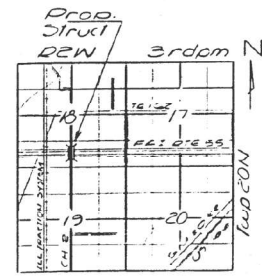


PROFILE GRADE CHE
(Top of Class 1)

PROFILE GRADE FAI RTE 55
(Median edge)

DESIGN STRESSES

$f_c = 1200$ psi - Deck Slab
 $f_c = 1400$ psi - Turb. Parapet, Sub Slab
 $f_s = 20,000$ psi - Reinf.
 $f_s = 20,000$ psi - Strut
 $v_c = 75$ psi - Flg.
 $n = 10$
Allow 25% for future w/s
Design Specifications
1925 AA510 as applicable
LOADING H520-44



LOCATION SKETCH

GENERAL PLAN & ELEVATION
PROJ. I-55-4()129
CH2 OVER FAI RTE 55
SECTION 54-4HB-2
LOGAN COUNTY
STATION 590+75.03

MODEL Path: ... FILE NAME: ...

USER NAME	= dudleybm
PLOT SCALE	= 100,0000' / in.
PLOT DATE	= 10/5/2021

DESIGNED	-	REVISED	-
DRAWN	-	REVISED	-
CHECKED	-	REVISED	-
DATE	-	REVISED	-

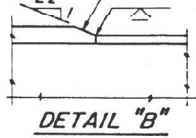
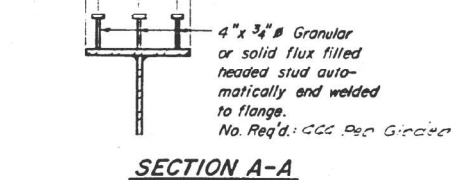
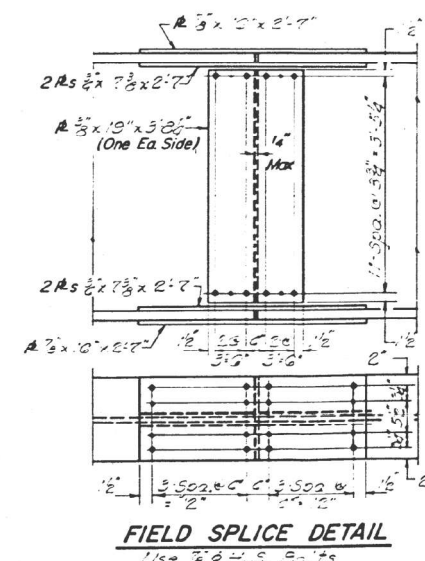
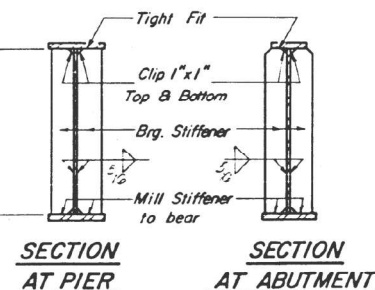
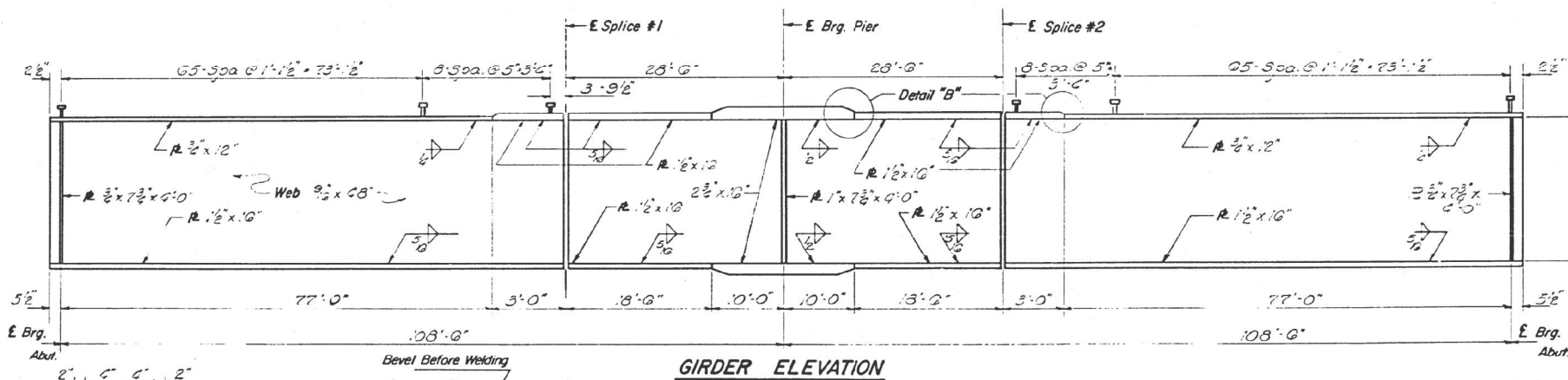
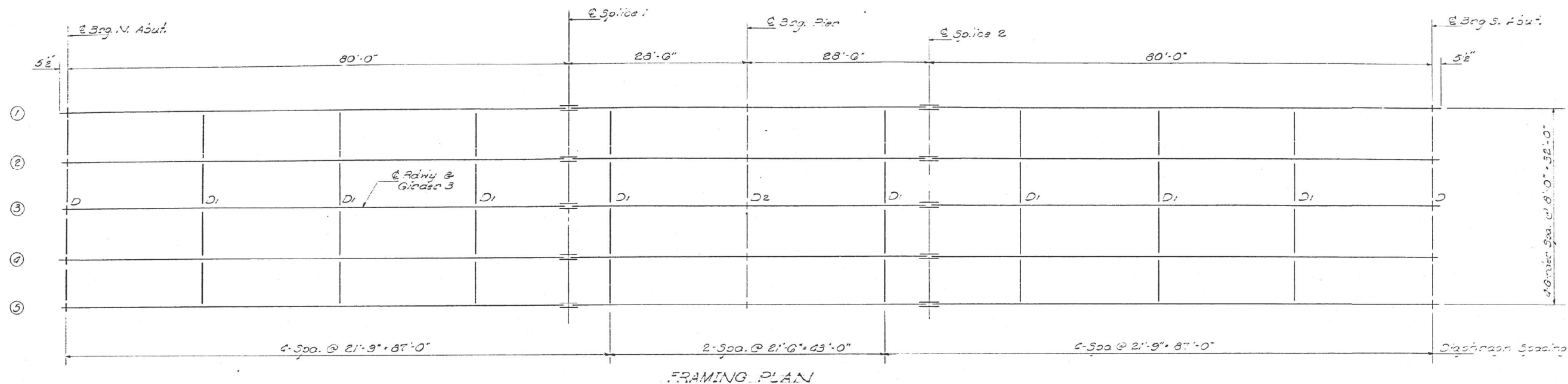
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 054-0059 EXISTING PLANS
(FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-4HB-2)BP	LOGAN	7	4
ILLINOIS			FED. AID PROJECT	
			CONTRACT NO. 72N06	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	54-4B-2	LOGAN	32	13
SHEET NO. 6				
12 SHEETS				



TOP OF WEB ELEVATION

Loc.	Gir 1	Gir 105	Gir 200	Gir 3
E. Brg. Abut's	610.26	610.39	610.51	
E. Splices 1 & 2	610.71	610.33	610.99	
E. Brg. Pier	610.71	610.80	610.99	

DESIGNED	<i>[Signature]</i>	EXAMINED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>	PASSED	<i>[Signature]</i>
DRAWN	J. SCHNELLER	APPROVED	<i>[Signature]</i>
CHECKED	J.P.		

DATE: Jan 6 1972

FRAMING PLAN
 F.A.I. RT. 55 SEC. 54-4B-2
 LOGAN COUNTY
 STA. 590+75.03

MODEL: D:\p\... FILE NAME: S:\address\Bridges\plans_CAD\72N06 - 0540059.dwg

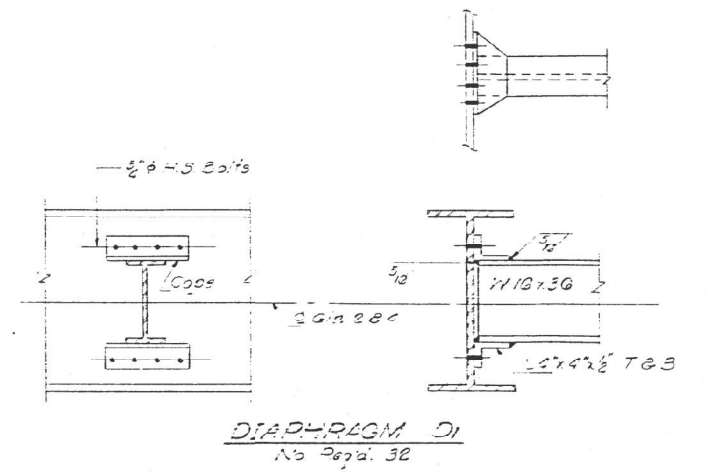
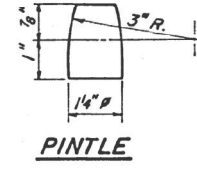
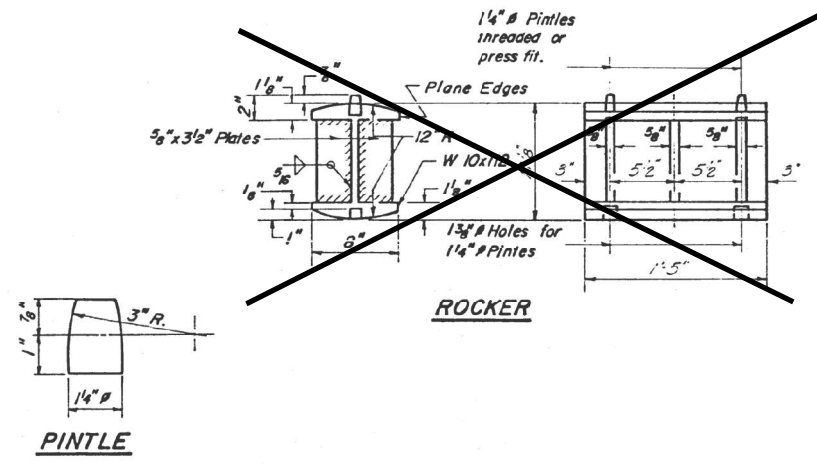
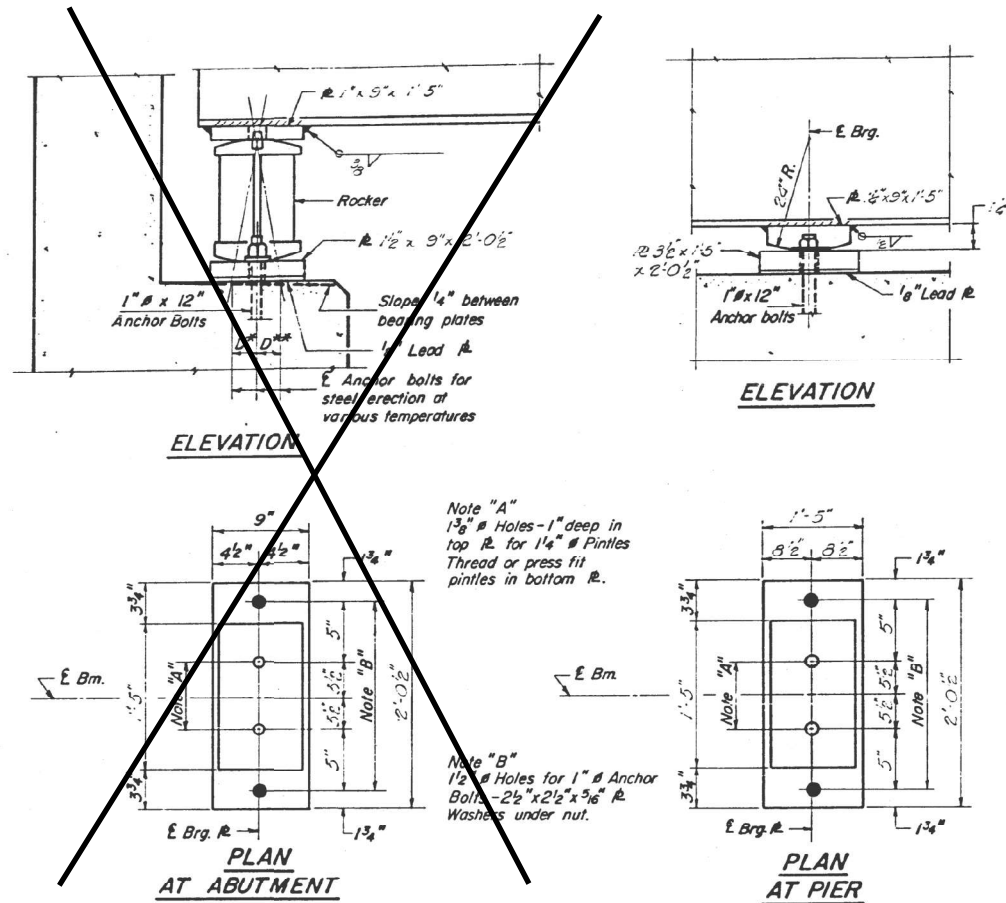
USER NAME = dudleybm	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 10/5/2021	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SN 054-0059 EXISTING PLANS (FOR INFORMATION ONLY)	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-4B-2)BP	LOGAN	7	5
CONTRACT NO. 72N06				
ILLINOIS FED. AID PROJECT				

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	54-4B-2	LOGAN	32	14
SHEET NO. 7				
12 SHEETS				



INTERIOR GIRDER MOMENT TABLE

	0.4 Sp. 1	Pier
I_s (in ⁴)	22,893	61,897
I_c (in ⁴)	62,568	
S_s (in ³)	1,189	23,4
S_c (in ³)	1,659	
R (K)	1,078	1,578
M_R (K)	761	2,043
$f_s R$ (ksi)	7.5	3.7
$s R$ (K)	1,500	
$M_s R$ (K)	432	
M_I (K)	1,004	892
M_{Imp} (K)	220	91
Total (K)	1,656	1,085
$f_s k$ (ksi)	12.1	3.6
f_s Total (ksi)	19.6	19.3
VR (K)	62.6	

INTERIOR GIRDER REACTION TABLE

	Abut.	Pier
R_R (K)	61.3	219.9
R_L (K)	62.9	81.2
$Imp.$ (K)	10.0	17.6
R Total (K)	118.2	318.5

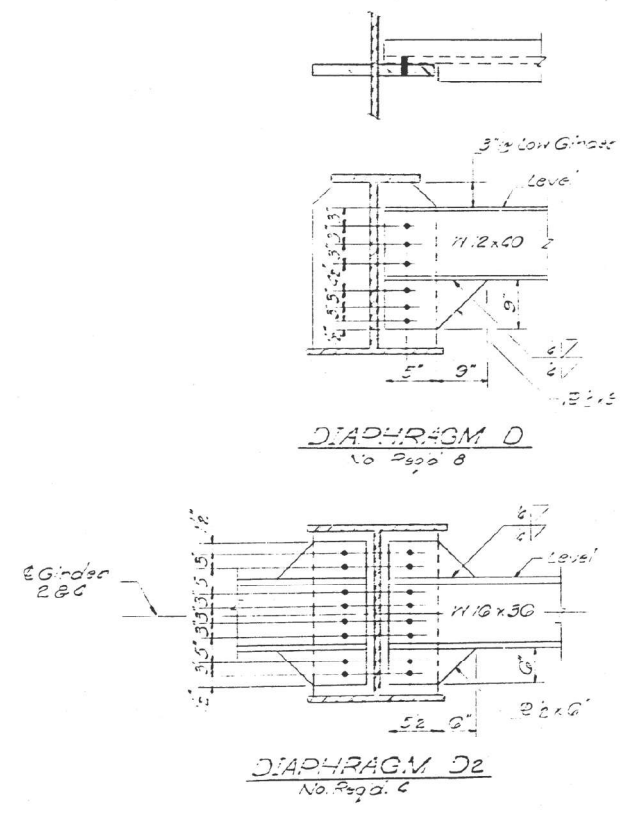
I_s and S_s are the moment of inertia and section modulus of the steel section.
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s .
 VR is the maximum $k +$ Impact shear range in span.

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

a.) D^* (Side of brg. away from fixed brg.)
 $D^* = \frac{1}{8}$ " per each 100' of expansion for every 15° fall below the normal temp. of 50°F.

D^{**} (Side of brg. toward fixed brg.)
 $D^{**} = \frac{1}{8}$ " per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

b.) After beams have been erected and dimensions D^* & D^{**} determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.



DESIGNED: [Signature]
 CHECKED: [Signature]
 DRAWN: J. SCHNELLER
 CHECKED: [Signature]

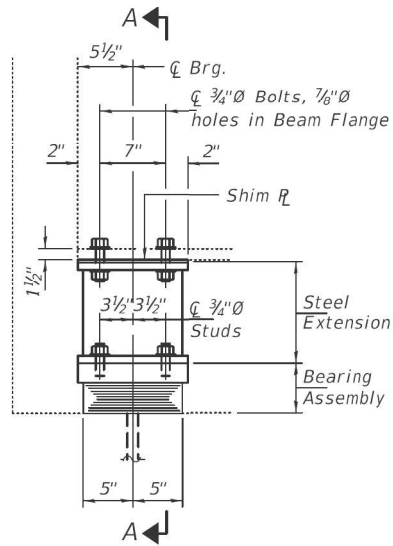
EXAMINED: [Signature]
 PASSED: [Signature]
 APPROVED: [Signature]

JAN 6 1972

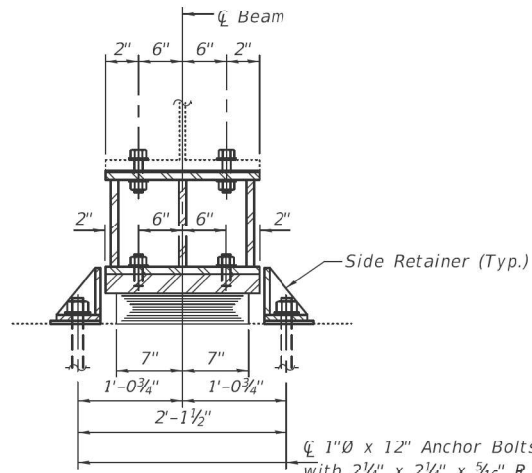
I-2-G 3-29-71

BEARING DETAILS
 F.A.I. RT. 55 SEC. 54-4B-2
 LOGAN COUNTY
 STA. 590+75.03

MODEL Path: ... FILE Name: ...



ELEVATION AT ABUTMENT

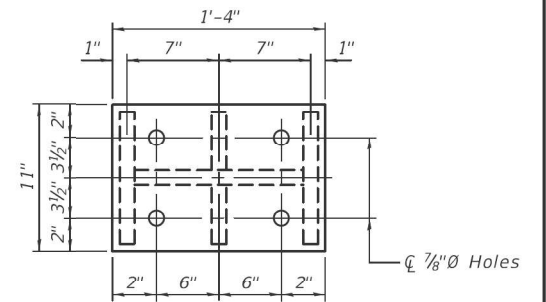


SECTION A-A

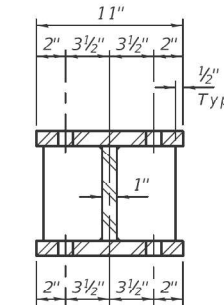
BEAM REACTIONS

R _p	(K)	61.3
R _t	(K)	46.9
Imp.	(K)	10.0
R (Total)	(K)	118.2

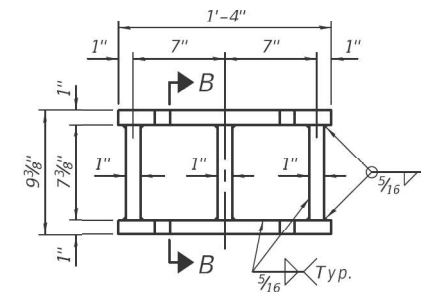
Notes:
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).
 Min. jack capacity - 70 Tons.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



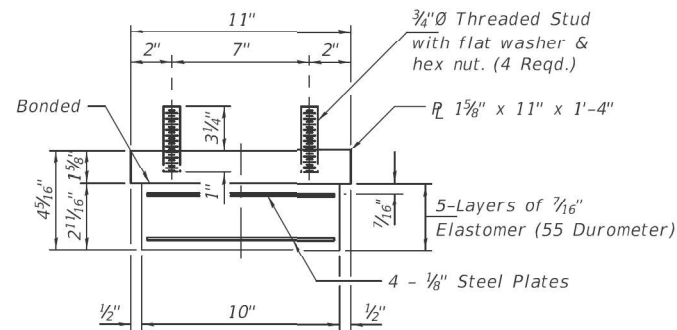
PLAN TOP AND BOTTOM PLATE



SECTION B-B

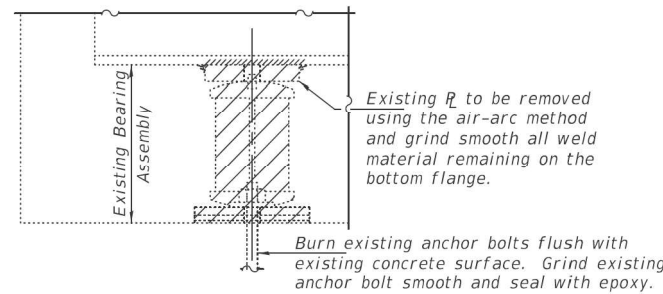


STEEL EXTENSION DETAIL



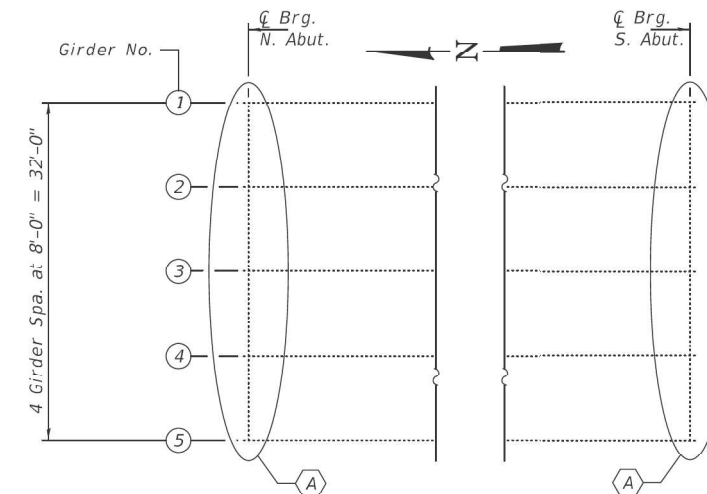
BEARING ASSEMBLY

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



EXISTING BEARING REMOVAL DETAIL

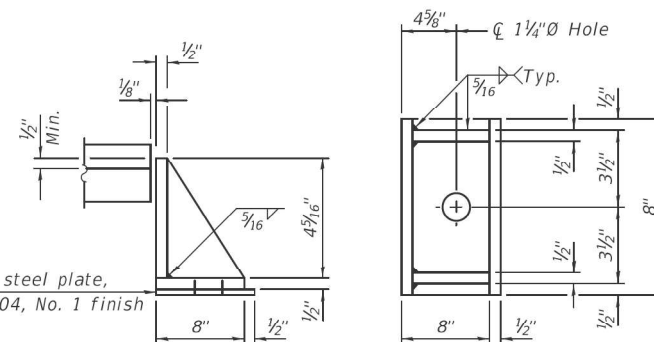
Cost included with Jack and Remove Existing Bearings



PARTIAL FRAMING PLAN

(A) - Bearing Replacement

NEW ABUTMENT BEARING ASSEMBLIES ARE GALVANIZED



SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	10
Jack and Remove Existing Bearings	Each	10
Furnishing and Erecting Structural Steel	Pound	2004
Anchor Bolts, 1"Ø	Each	20

TYI/REPS 5-17-2018

DESIGNED - CCC	EXAMINED - <i>Timothy A. Bucht</i>	DATE - JUNE 25, 2020	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING DETAILS - ABUTMENTS SN 054-0059	F.A.I. RTE. 55	SECTION (54-4) BRR-1, BJR-2	COUNTY LOGAN	TOTAL SHEETS 6	SHEET NO. 6
CHECKED - JSB	PASSED - <i>David J. Burdell</i>	REVISED -			CONTRACT NO. 72M11				
DRAWN - <i>daburdell</i>	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET NO. 1 OF 1 SHEETS						
CHECKED - CCC JSB		REVISED -	ILLINOIS FED. AID PROJECT						

MODEL Path: \\s:\projects\Bridges\054-0059\054-0059.dwg

USER NAME = dudleybm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 054-0059 EXISTING PLANS (FOR INFORMATION ONLY)	F.A.I. RTE. 55	SECTION (54-4HB-2)BP	COUNTY LOGAN	TOTAL SHEETS 7	SHEET NO. 7
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 72N06				
PLOT DATE = 10/5/2021	DATE -	REVISED -	SCALE: SHEET OF SHEETS STA. TO STA.						
ILLINOIS FED. AID PROJECT									