03-08-2019 LETTING ITEM 188

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	(54-4 54-10) BP-1, (118) BP	LOGAN	16	1
*	FAI 55, 155, FAP 315	ILLINOIS	CONTRACT NO. 72K73	

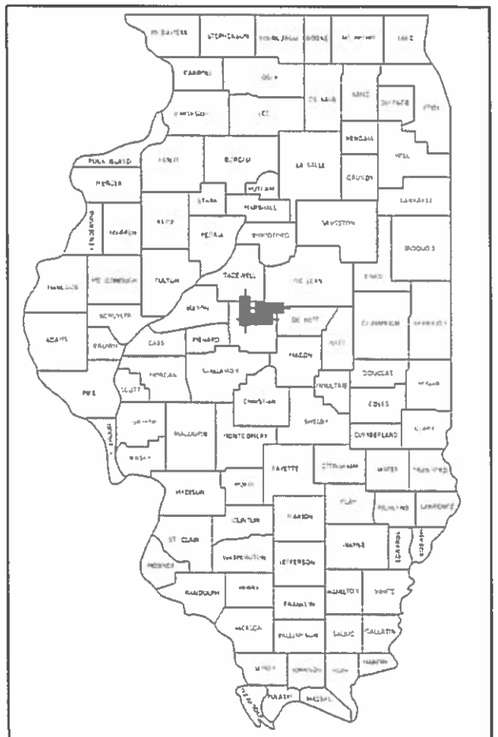
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED
BRIDGE PAINTING

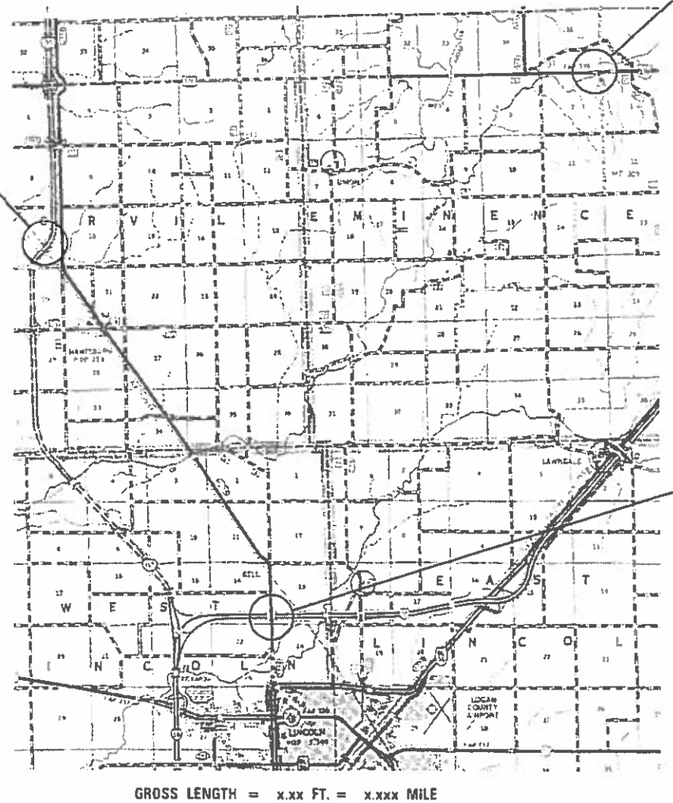
FAI 55, 155, FAP 315 (I–55, I–155, US 136)
SECTION (54–4, 54–10) BP–1, (118) BP
PROJECT NHPP–VE3Q(925)
BRIDGE PAINTING
LOGAN COUNTY

D-96-059-18



LOCATION OF SECTION INDICATED THUS:-

C–96–107–18



0 100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' (SCALE) — 1" = 20'

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

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

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 10 October 2019

[signature]
REGIONAL ENGINEER

Dec 7 2019

[signature]
ENGINEER OF DESIGN AND ENVIRONMENT

Dec 20 2019

[signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

3

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

CONTRACT NO. 72K73

REV. - MS

INDEX OF SHEETS

HIGHWAY STANDARDS

000001-07
001006
701001-02
701006-05
701101-05
701106-02
701201-05
701400-09
701402-12
701406-12
701901-08
704001-08
782006

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 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 NOT BE REQUIRED.

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.

6. 300' OF BARRIER WALL IS ESTIMATED FOR USE IN EACH DIRECTION AT LOCATION #1.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED August 23rd 20 18
ENGINEER OF OPERATIONS

EXAMINED August 22nd 20 18
ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED September 17 20 18
ENGINEER OF PROGRAM DEVELOPMENT

REV. - MS

USER NAME = dudleybm	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in	CHECKED -	REVISED -
PLOT DATE = 10/5/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, STANDARDS, GENERAL NOTES, & SIGNATURES

SCALE | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	2
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
		ILLINOIS FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-01515-6002 NHPP 90/10 BRIDGE-RURAL 0047 LOGAN	0-01515-6003 NHPP 80/20 BRIDGE-RURAL 0047 LOGAN
67100100	MOBILIZATION	L SUM	1	0.75	0.25
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2	2	0
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1	0
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	90	90	0
70400100	TEMPORARY CONCRETE BARRIER	FOOT	600	600	0
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	600	600	0
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2	0
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2	0
X5060603	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1	1	0
X5060604	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1	1	0
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1	0
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	0	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1	0

REV. - MS

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	DRAWN -	REVISED -	
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PLOT DATE = 10/5/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	3
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
	ILLINOIS FED. AID PROJECT			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-01515-6002	0-01515-6003
				NHPP 90/10	NHPP 80/20
				BRIDGE-RURAL	BRIDGE-RURAL
				0047	0047
				LOGAN	LOGAN
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	0	1
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1	1	0
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1	1	0

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DESIGNED -
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CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	4

* FAI 55, 155, FAP 315
CONTRACT NO. 72K73
ILLINOIS FED. AID PROJECT

B.M. #33: 6" Boat Spike in 16" Oak Tree 480' Rt. Sta. 510+30. Elev. 564.792.

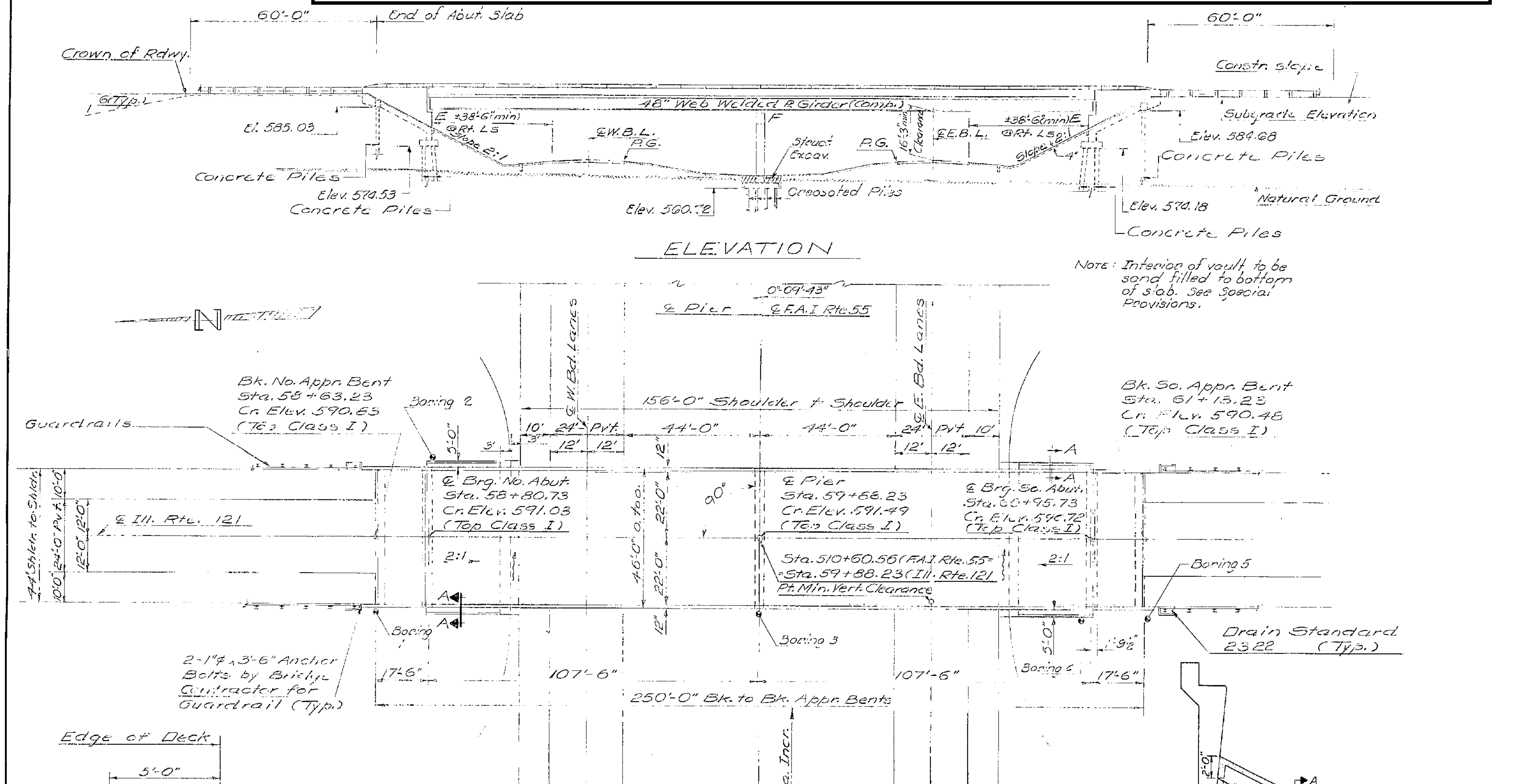
STATE OF ILLINOIS

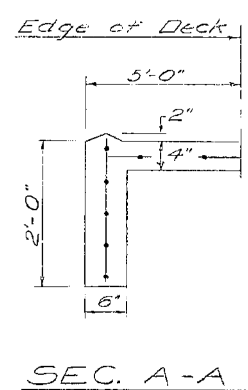
Work shall consist of blasting and painting all structural steel and steel components of bearings.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 55	*	LOGAN	37	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
14 SHEETS

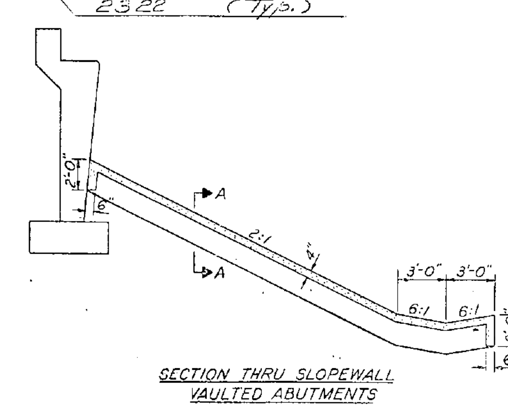
* 54-4 HB-1





STATION 510+60.56
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 55 SEC. 54-4HB-1
F.A. PROJ. I-55-4(91)128
LOADING HS 20-44

NAME PLATE
See Std. 2113



GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Fasteners shall be high strength bolts. Bolts ¾ φ; open holes 13/16 φ, unless otherwise noted.

Calculated weight of Structural Steel. = 344930 Lbs

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

Anchor bolts shall be set before bolting diaphragm over supports.

Slope wall shall be reinforced with welded wire fabric 6"x 6" mesh, weighing 58# per 100 sq. ft.

Concrete piles at 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 Coal Tar Interlayer Protective Coat is applied.

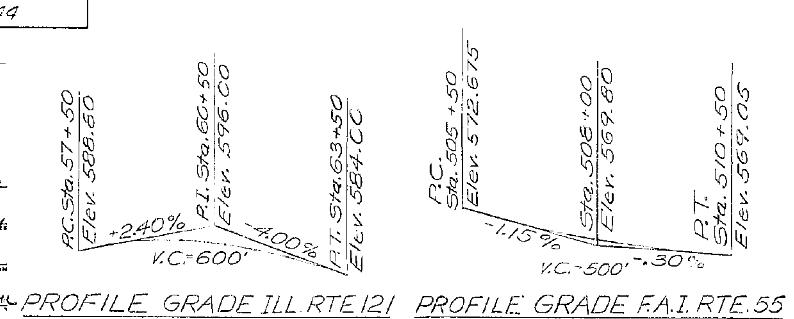
The Contractor shall drive one timber test pile at the pier and one concrete test pile at the South Abutment and one concrete test pile at the North Approach Bent in a permanent location as directed by the Engineer before ordering the remainder of piles.

Field welding of construction accessories to the bottom flanges or for a distance of ¼ of the span each way from pier supports on the top flanges of beams or girders will not be permitted. Field welding in other areas will be permitted only when approved by the Engineer.

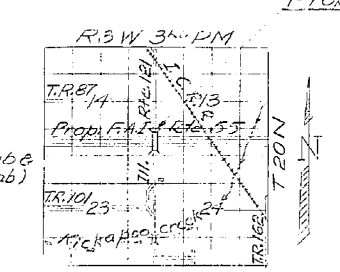
TOTAL BILL OF MATERAL

ITEM	UNIT	SUPER.	SUB.	TOTAL
Bit. Conc. Surf. Cse. Cl. I	Tons	95		95
Structure Excavation	Cu. Yds.			80
Class X Concrete	Cu. Yds.	372.2	247.7	619.9
Stud Shear Connectors	Each	2700		2700
Structural Steel	L. S.	L.S.		L.S.
Aluminum Railing	Lin. Ft.	514		514
Reinforcement Bars	Lbs.	90660	25580	116240
Creosoted Piles over 38'	Lin. Ft.		1833	1833
Test Piles (Timber)	Each		1	1
Concrete Piles	Lin. Ft.		2095	2095
Test Piles (Concrete)	Each		2	2
Name Plates	Each		1	1
Slope Wall 4"	Sq. Yds.			403
Coal Tar Interlayer Protective Coat	Sq. Yds.	1176		1176
Protective Coat	Sq. Yds	197		197
Preformed Joint Sealer	Lin. Ft.	92		92
Sand Backfill	Cu. Yds.		218	218
Metal Shoes	Each		47	47

Proposed structure



DESIGN STRESSES
f'c = 1200 psi (Deck Slab)
f'c = 1400 psi (Curb, Parapet & Subs.)
fs = 20,000 psi (Reinf.) Struct. Slab
fs = 20,000 psi (Struct.)
Vc = 75 psi (Ftg.)
n = 10
Loading HS 20-44
Design Specification - AASHO, 1969, as applicable.
Allow 25#/□' future W.S.



GENERAL PLAN & ELEVATION
PROJECT: I-55-4(91)128
F.A.I. RTE. 55 SECTION 54-4HB-1
ILL. RTE. 121 OVER F.A.I. RTE. 55
LOGAN COUNTY
STA. 510+60.56

DESIGNED	R. Matthews
CHECKED	
DRAWN	V.H.
CHECKED	JH

EXAMINED
PASSED
APPROVED

USER NAME = dudleybm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS, SN 054-0052 (FOR INFORMATION ONLY)
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 1/25/2019	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	5
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
		ILLINOIS FED. AID PROJECT		

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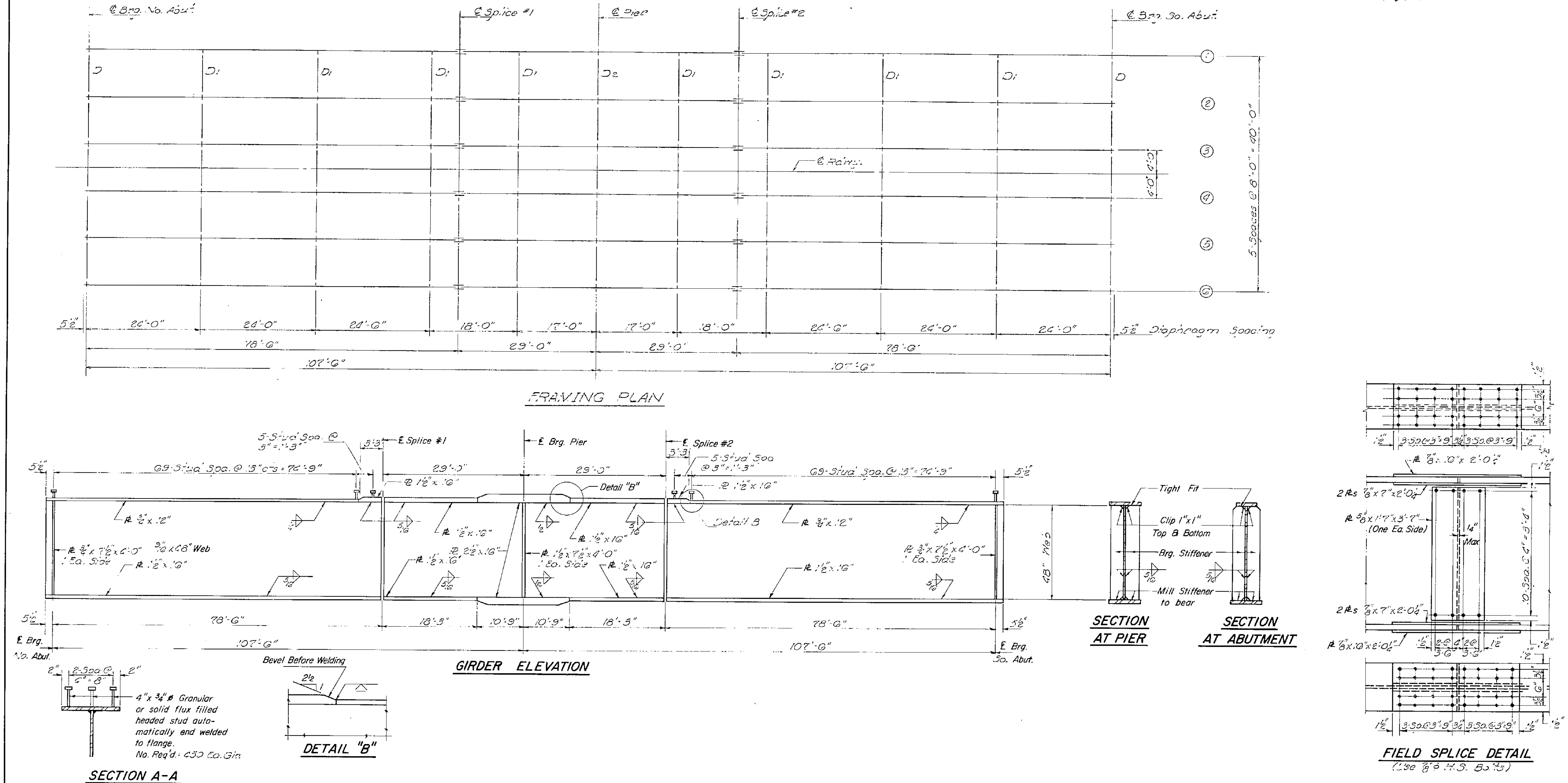
STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 55	*	LOGAN	37	17
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 6
14 SHEETS

* 54-4HB-1



TOP OF WEB ELEVATIONS

Loc. \ Gir.	1 & 6	2 & 5	3 & 4
℄ Brg. No. Abut.	589.78	589.94	590.07
℄ Splice 1	590.14	590.30	590.43
℄ Brg. Pier	590.09	590.26	590.39
℄ Splice 2	590.05	590.22	590.34
℄ Brg. So. Abut.	589.47	589.64	589.76

DESIGNED	
CHECKED	
DRAWN	J. SCHNELLER
CHECKED	JP

G-1 3-29-71

EXAMINED Dec 21 1971
ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED W.E. Baumann
ENGINEER OF DESIGN
APPROVED Richard H. Golterman

STRUCTURAL STEEL
F.A.I. RT. 55 SEC. 54-4HB-1
LOGAN COUNTY
STA 510+60.56

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PLOT DATE = 10/5/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS, SN 054-0052
(FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

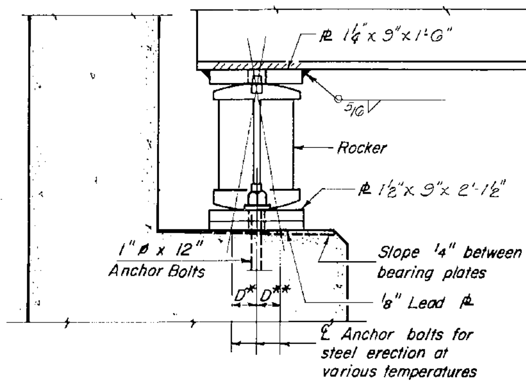
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	6
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS

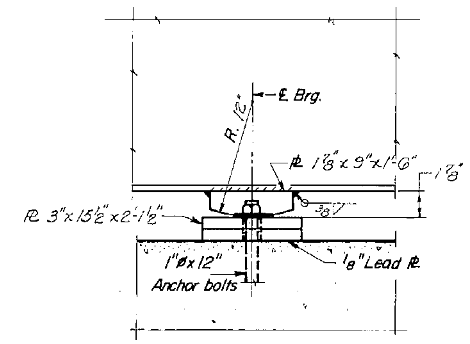
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 55	*	LOGAN	37	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
14 SHEETS

* 54-4HB-1



ELEVATION



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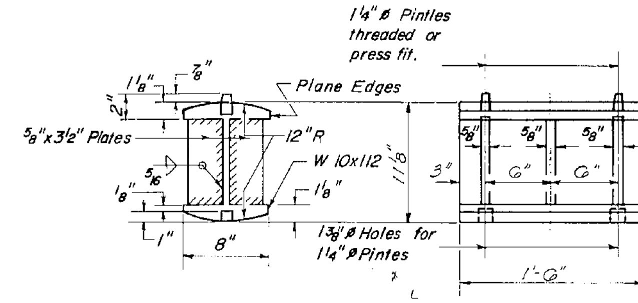
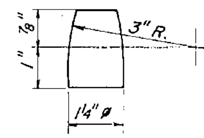
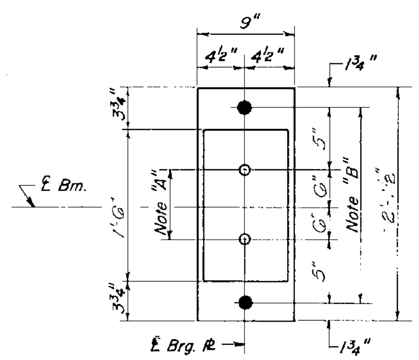


ROCKER



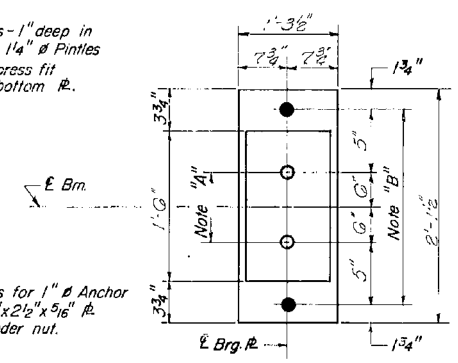
PINTLE



PLAN
AT ABUTMENT

Note "A"
1⅜" ø Holes - 1" deep in top PL for 1¼" ø Pintles
Thread or press fit pintles in bottom PL.

Note "B"
1½" ø Holes for 1" ø Anchor Bolts - 2½" x 2½" x 5/16" PL Washers under nut.



PLAN
AT PIER

NOTES FOR SETTING OF ANCHOR BOLTS
AT EXPANSION BEARINGS

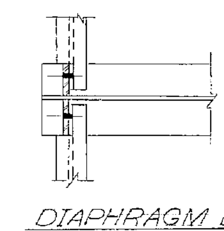
a.) D* (Side of brg. away from fixed brg.)
D* = ⅛" per. each 100' of expansion for every 15° fall below the normal temp. of 50° F.
D** (Side of brg. toward fixed brg.)
D** = ⅛" per each 100' of expansion for every 15° rise above the normal temp. of 50° F.

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.

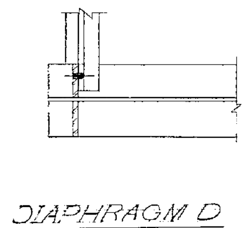
INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp.1	Pier
Is (in.⁴)	22893	56226
Ic (in.⁴)	64548	
Ss (in.³)	1189	2122
Sc (in.³)	1659	
℄ (K/')	1.075	1.725
M℄ ('K)	732	2548
fs℄ (ksi)	7.4	14.4
s℄ (K/')	.487	
Ms℄ ('K)	416	
M LL ('K)	1000	870
M Imp ('K)	215	187
Total ('K)	1631	1057
fs LL (ksi)	11.9	6.0
fs Total (k.s.i)	19.3	20.4
VR (K)	62.6	

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
R℄ (K)	60.2	215.3
R LL (K)	46.9	80.5
Imp. (K)	10.0	17.3
R Total (K)	117.1	313.1

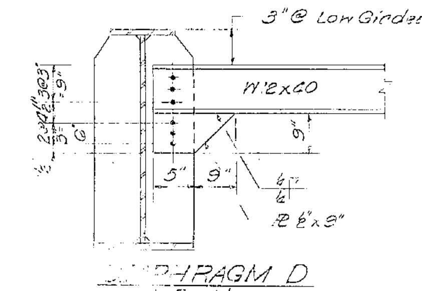
Is and Ss are the moment of inertia and section modulus of the steel section.
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs.
VR is the maximum LL + Impact shear range in span.



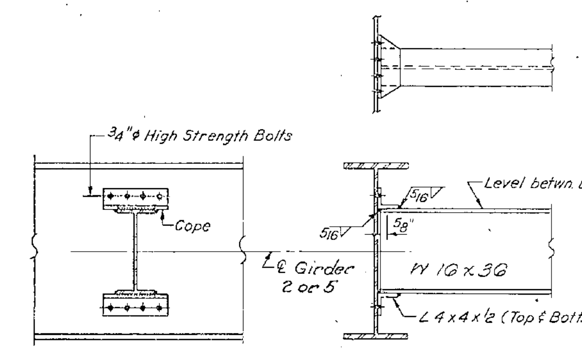
DIAPHRAGM D
(At Interior Girder)



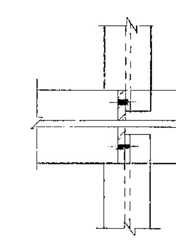
DIAPHRAGM D
(At Exterior Girder)



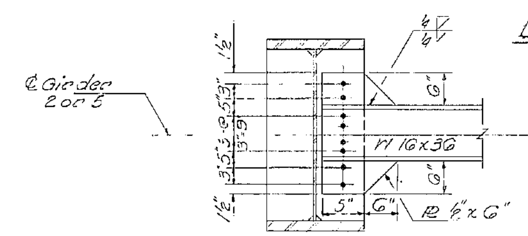
DIAPHRAGM D



DIAPHRAGM D1
60 Req'd



DIAPHRAGM D2
(At Pier)



DIAPHRAGM D2
5 Req'd.

DESIGNED	R. K. Mattur
CHECKED	James Menec
DRAWN	J. SCHNELLER
CHECKED	JP

EXAMINED Dec. 21 1971 Carl E. Diemand — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED W. C. Baumann — ENGINEER OF DESIGN
APPROVED Richard H. Golterman

I-2-G 3-29-71

STRUCTURAL STEEL
F.A.I. RT. 55 SEC. 54-4HB-1
LOGAN COUNTY
STA. 510+60.50

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PLOT DATE = 10/5/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS, SN 054-0052
(FOR INFORMATION ONLY)

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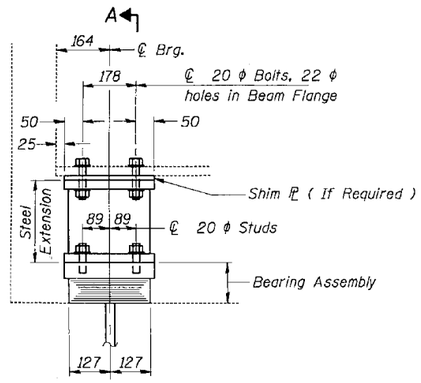
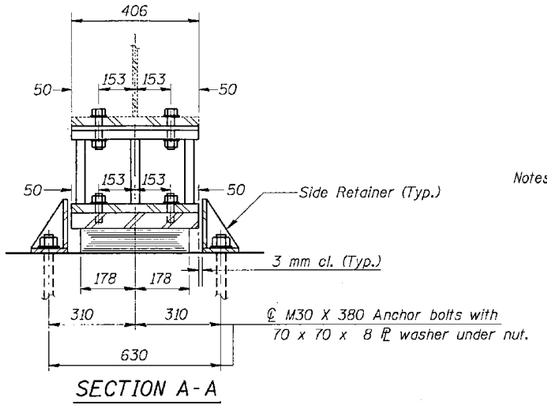
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	7
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
		ILLINOIS	FED. AID PROJECT	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	**	LOGAN	259	217
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

** (54-4)RS-1 & (54-5,6)RS
SN 054-0052 SHEET 6 OF 10



ELEVATION AT SOUTH ABUTMENT
(NORTH ABUT. SIMILAR)



SECTION A-D

GIRDER REACTIONS

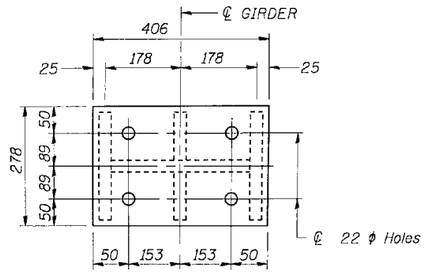
RP	(KN)	270
RA	(KN)	209
Imp.	(KN)	45
R (Total)	(KN)	524

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost is incidental to "Furnishing and Erecting Structural Steel".

New steel extensions, side retainers, connection bolts, and anchor bolts are included in "Furnishing and Erecting Structural Steel". See sheet 7 for Anchor Bolt installation.

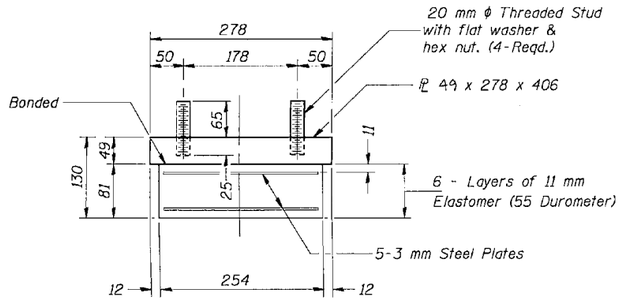
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Minimum jack capacity = 800 kN



PLAN TOP AND BOTTOM PLATE

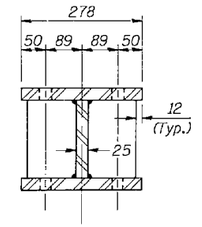
TYPE I ELASTOMERIC EXP. BRG.



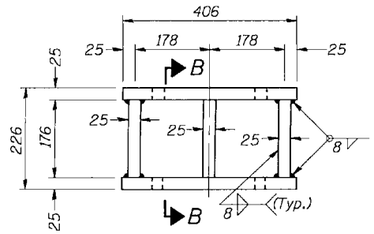
BEARING ASSEMBLY

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

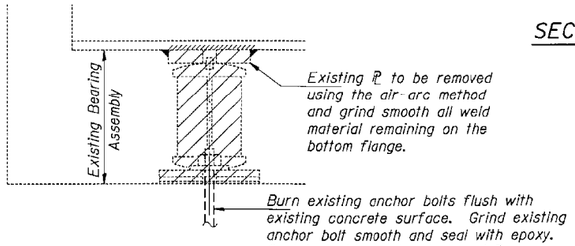
Bearing replacement at the North and South abutments only.



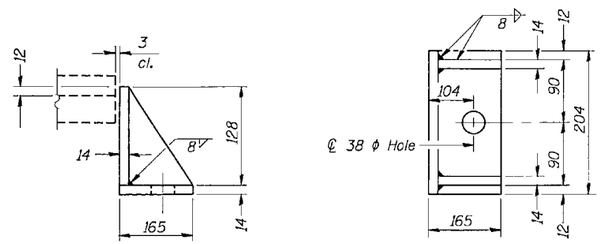
SECTION B-B



STEEL EXTENSION DETAIL



EXISTING BEARING REMOVAL DETAIL



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	12
F & E Structural Steel	Kg	1130
Jack & Remove Existing Bearings	Each	12

NOTE:
UNLESS OTHERWISE SHOWN ALL DIMENSIONS ARE IN MILLIMETERS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS
S.N. 054-0052

DRAWN BY CAD
DATE: DECEMBER 7, 1998 CHECKED BY NAK

PROJECT: W050798 FILE:M050798PLDGN

MODEL: Default
FILE NAME: \\Central\d6\OPERATIONS\Bridges\Bridgeplans_CAD\72K73 - Logan County asbht 2019\plansheet.dgn

USER NAME = dudleybm	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/5/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS, SN 054-0052
(FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	8
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
		ILLINOIS	FED. AID PROJECT	

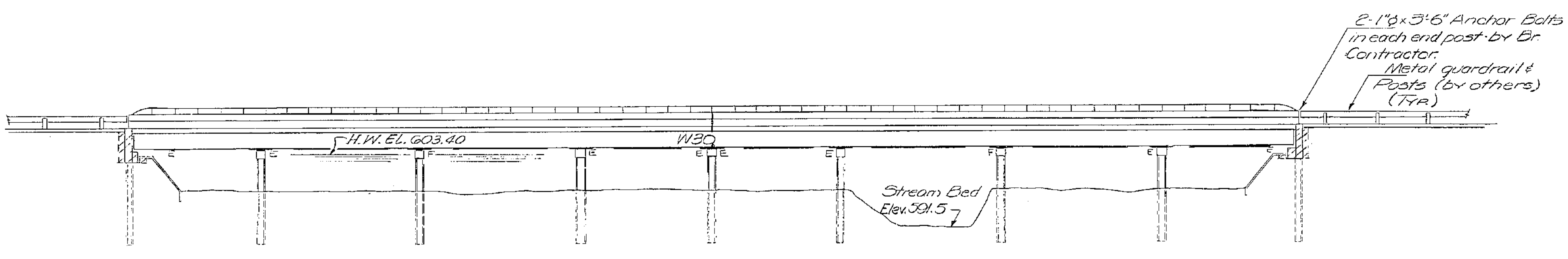
B.M.: "□" cut on S.W. Wingwall Sugar Creek Bridge, Sta. 162 Elev. 606.82
Existing Structure: Built as SBI 119 Sec. 118BC Sta. 166+03 in 1937. Superstructure: RC. Deck with 30WF108 Beams. Substructure: is RC. Abuts on R Conc. piles and Pier Bents on R Conc. piles.
Superstructure to be removed by bridge Contractor - no salvage.
Temporary structure to furnish 600□' waterway opening, HS20 loading - by bridge Contractor.

STATE OF ILLINOIS

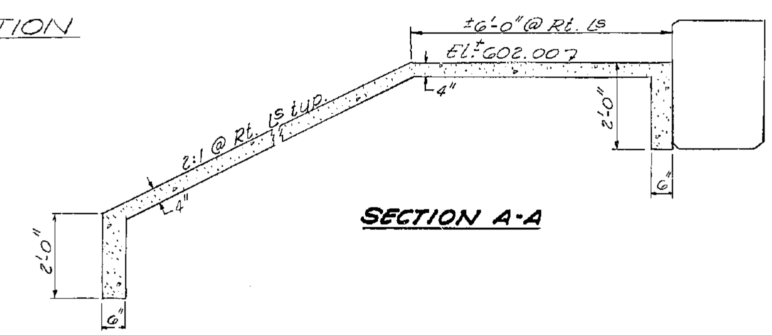
Work shall consist of blasting and painting the outside and bottom of both fascia beams. Also included shall be the entire bottom flange and 6" up the web on beam 6 in span 5 only.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 119	118BR	LOGAN	45	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
15 SHEETS



ELEVATION

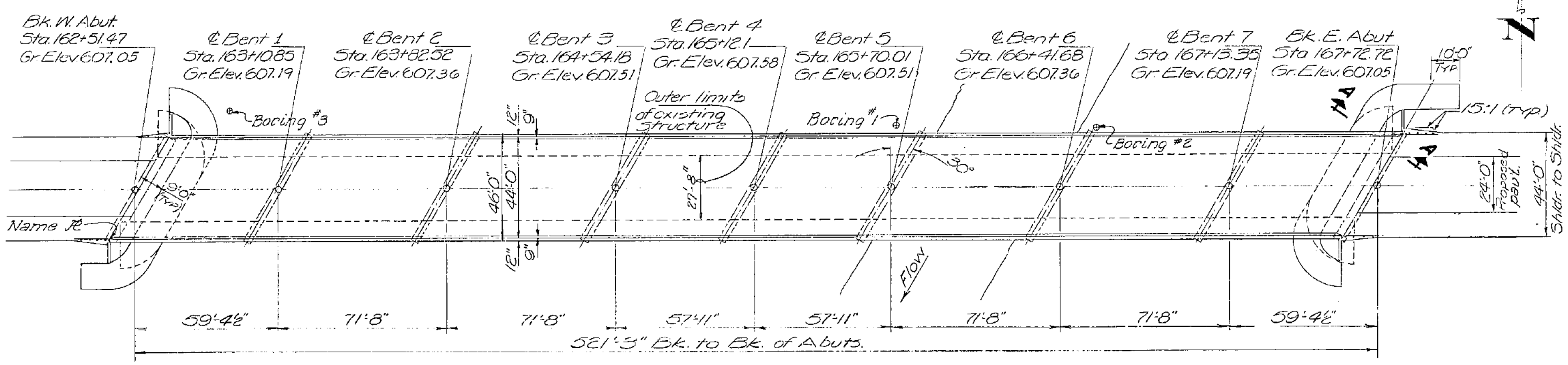


SECTION A-A

STATION 166 + 03
RE-BUILT 19 . BY
STATE OF ILLINOIS
F.A. RT. 119 SEC. 118BR

LOADING HS20

NAME PLATE
See Std. 2113-1



PLAN

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Fasteners shall be high strength bolts. Bolts ⅞"φ; open holes 15/16"φ, unless otherwise noted.

Calculated weight of structural steel = 581,300 lbs.

The basic lead silico chromate paint system shall be used for shop & field painting of structural steel.

Field welding of construction accessories will not be permitted to the bottom flange of beams 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" x 6" mesh, weighing 58 lbs. per 100 sq. ft.

Layout of slope wall may be varied in the field to suit ground conditions as directed by the Engineer.

The Contractor shall drive 2 concrete test piles. One each in permanent locations at pier bent 2 and East abutment, as directed by the Engineer before ordering the remainder of piles.

It shall be the responsibility of the Contractor to verify all dimensions & conditions existing in the field prior to construction & ordering of materials.

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.

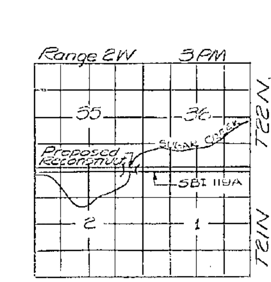
Expansion bolts shall consist of self-drilling expansion anchors & ¾"φ x 12" hooked bolts.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB.	SUPER.	TOTAL
Removal of Existing Superstructure	Each			1
Concrete Removal	Cu. yds.			12.6
Expansion Bolts (¾"φ)	Each	126		126
Structure Excavation	Cu. yds.	135		135
Protective Coat	Sq. yds.		2,830	2,830
Class X Concrete	Cu. yds.	68.4	670.6	739.0
Structural Steel	Lump Sum		1	1
Stud Shear Connectors	Each		7,728	7,728
Aluminum Railing	Lin. ft.		1,034	1,034
Reinforcement Bars	Lbs.	6,780	177,770	184,550
Concrete Piles	Lin. ft.	927		927
Test Piles (Concrete)	Each	2		2
Name Plate	Each			1
Slopewall (4")	Sq. yds.	374		374
Temporary Bridge Complete	Each			1
Neoprene Expansion Joint (2")	Lin. ft.		104	104
Neoprene Expansion Joint (4")	Lin. ft.		53	53

DESIGN STRESSES
fc = 1200 psi (Super) Deck Slab
fc = 1400 psi Sup. Curb & Parapet
fs = 20000 psi (Reinf.)
fs = 20000 psi (Structural)
vc = 75 psi (Ftgs)
n = 10
Design Specifications 1969 AASHO (as applicable)

WATERWAY INFORMATION
Drainage Area: 76700 Acres
Character: Rolling wooded & cultivated
Present Opening: 2650 Sq. Ft.
Req'd Opening: 2650 Sq. Ft.
Proposed Opening: 2650 Sq. Ft.
Q(50) 7400 CFS.



LOCATION PLAN

GENERAL PLAN and ELEVATION
F.A. 119 over SUGAR CREEK
F.A. RTE. 119 SEC. 118BR
LOGAN COUNTY
STA. 166+03

DESIGNED
CHECKED
DRAWN Ferrando
CHECKED

August 5, 1971
EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

LOADING HS20-44

Rev. 9-30-70

USER NAME = dudleybm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS, SN 054-0027 (FOR INFORMATION ONLY)
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 1/25/2019	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	9
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
	ILLINOIS	FED. AID PROJECT		

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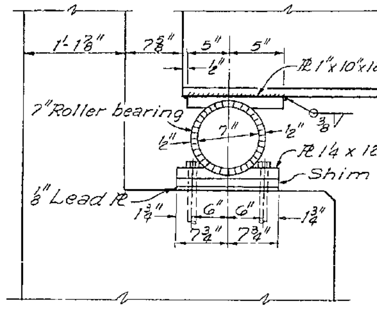
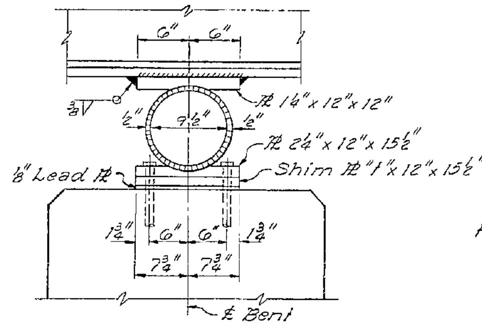
STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 119	118BR	LOGAN	45	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

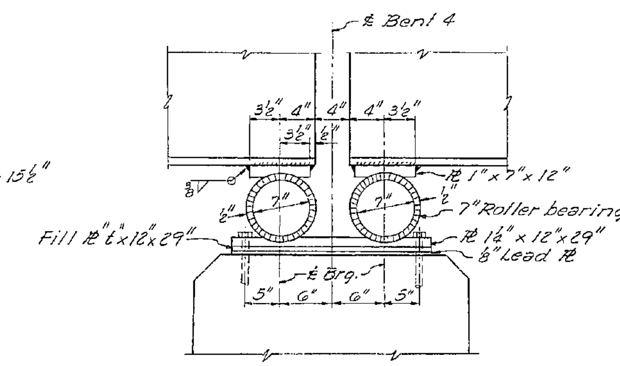
SHEET NO. 9
15 SHEETS



SECTION
Dimensions along ℄ beam
No. req'd. 14



SECTION
Dimensions along ℄ beam
No. req'd. 8 (new) & 20 (salvaged) = 28 total

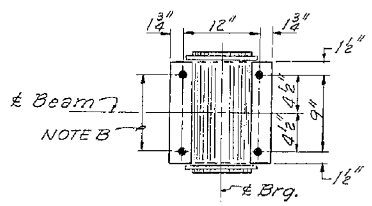


SECTION
Dimensions along ℄ beam
No. req'd 7

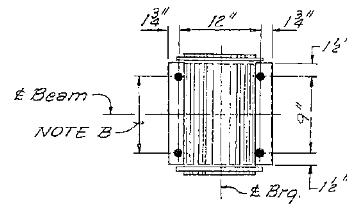
ROLLER BEARING DATA

		W.ABUT.	BENT 1	BENT 2	BENT 3	BENT 4	BENT 5	BENT 6	BENT 7	E.ABUT.	TOTAL
9½" Roller Bearings	New		2		2		2		2		8
	Salvage		5		5		5		5		20
7" Roller Bearings		7				14				7	28

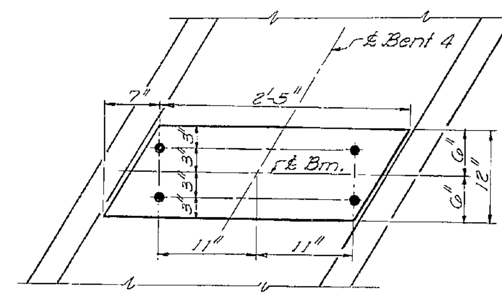
Use all new top & bottom bearing plates.
Sandblast & repaint the salvaged roller bearings.
Salvage, cleaning, painting & resetting existing rollers shall be incidental to structural steel.



PLAN AT ABUTMENTS



PLAN AT BENTS 1, 3, 5 & 7



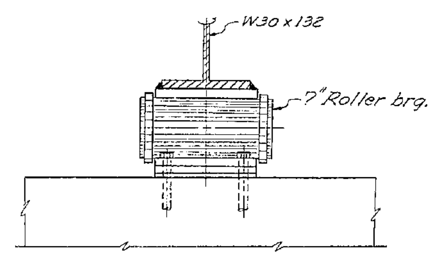
PLAN AT BENT 4

NOTE A
1⅜"⌀ Holes-1" deep in top ℞ for pintles. Thread or press fit pintles into bottom ℞.

NOTE B
1½"⌀ Holes for 1"⌀ anchor bolts. 2½" x 2½" x ⅜" ℞ washers under nut

SHIM PLATES

	B_1	B_2	B_3	B_4	B_5	B_6	B_7
W. Abut.	0	0	0	1¼"	0	0	0
Bent 1	0	⅞"	2	3⅛"	1½"	0	0
Bent 2	0	¾"	1⅞"	2⅞"	1½"	0	0
Bent 3	0	1¾"	2¾"	4"	2½"	1"	0
Bent 4	0	0	1¼"	2⅝"	1¼"	0	0
Bent 5	0	1½"	2⅝	4⅛"	2⅝"	1½"	0
Bent 6	0	⅛"	1½"	2¾"	1¾"	¾"	0
Bent 7	0	¼"	1½"	2¾"	1½"	0	0
E. Abut.	0	0	0	1¼"	0	0	0



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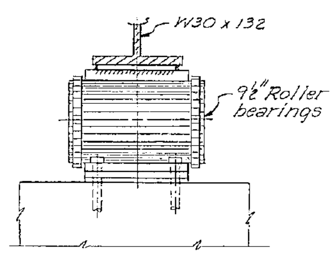
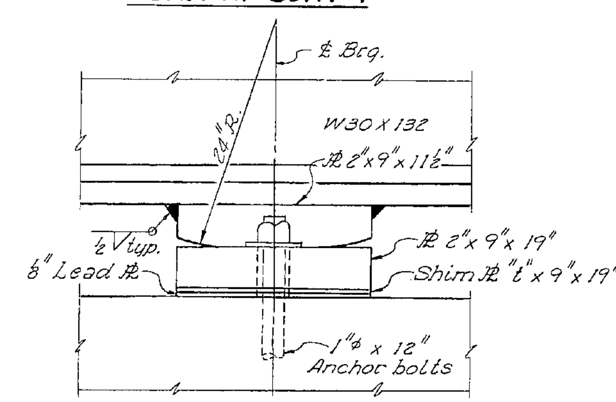
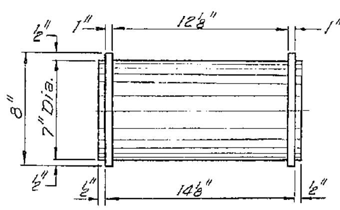


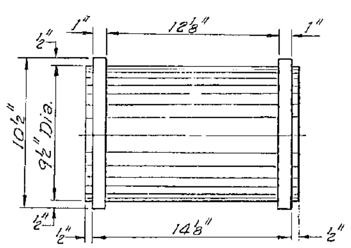
ELEVATION



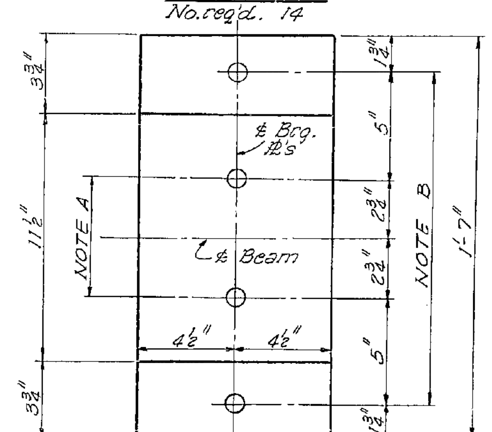
ELEVATION
No. req'd. 14



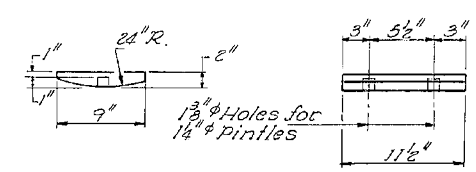
7" ROLLER BEARING



9½" ROLLER BEARING



PLAN AT BENTS 2 & 6



ROCKER AT BENT 2 & 6
No. req'd. 14

DESIGNED	Charles O. Buc
CHECKED	Robert Jenveja
DRAWN	J. Mullenix
CHECKED	Robert Jenveja

AUG. 5 1971
EXAMINED
PASSED W. E. Baumann
APPROVED Richard H. Golterman

BEARINGS
F.A. RT. 119 SEC. 118 BR
LOGAN COUNTY
STATION 166+03

MODEL: Default
FILE NAME: \\Central\d6\OPERATIONS\Bridges\Bridgeplans CADD\72K73 - Logan County paint 2019\plansheet.dgn

USER NAME = dudleybm	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/5/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS, SN 054-0027
(FOR INFORMATION ONLY)

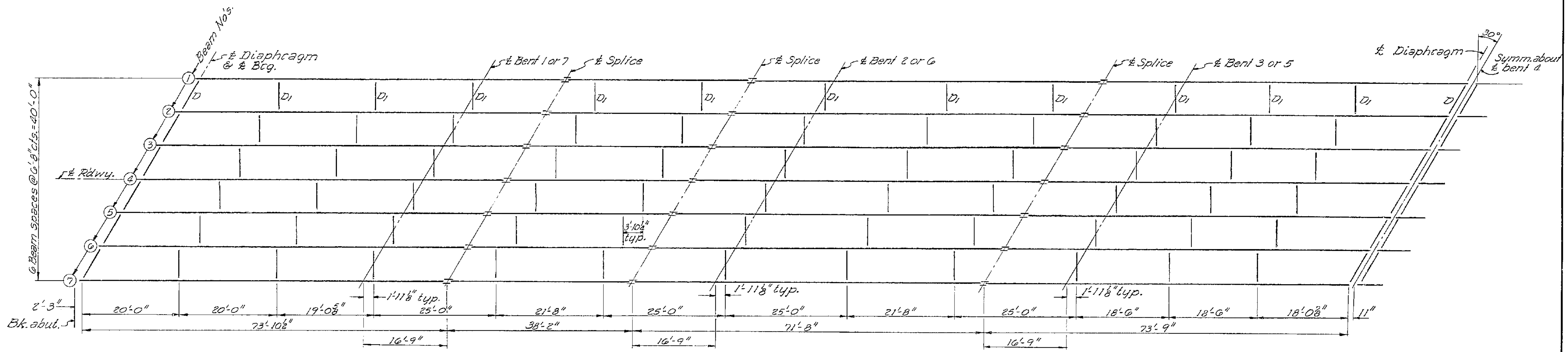
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	10
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 119	118BR	LOGAN	45	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10
15 SHEETS



FRAMING PLAN

*TOP OF BEAM ELEVATIONS

	B_1	B_2	B_3	B_4	B_5	B_6	B_7
W. Abut.	606.10	606.23	606.33	606.43	606.31	606.19	606.05
Bent 1	606.18	606.31	606.42	606.52	606.40	606.28	606.13
.23 Span 2	606.21	606.34	606.44	606.54	606.42	606.30	606.15
.77 Span 2	606.32	606.45	606.55	606.64	606.53	606.41	606.26
Bent 2	606.36	606.49	606.59	606.68	606.57	606.45	606.30
.77 Span 3	606.47	606.60	606.70	606.80	606.69	606.57	606.42
Bent 3	606.50	606.63	606.73	606.84	606.72	606.61	606.46
Bent 4	606.58	606.73	606.84	606.95	606.84	606.73	606.58
Bent 5	606.46	606.61	606.72	606.84	606.73	606.63	606.50
.23 Span 6	606.42	606.57	606.69	606.80	606.70	606.60	606.47
Bent 6	606.30	606.45	606.57	606.68	606.59	606.49	606.36
.23 Span 7	606.26	606.41	606.53	606.64	606.55	606.45	606.32
.77 Span 7	606.15	606.30	606.42	606.54	606.44	606.34	606.21
Bent 7	606.13	606.28	606.40	606.52	606.42	606.31	606.18
E. Abut.	606.05	606.19	606.31	606.43	606.33	606.23	606.10

* For fabrication only

**EXISTING BENT SEAT ELEVATIONS

	B_2	B_3	B_4	B_5	B_6
W. Abut.		603.02	603.01	603.00	
Bent 1	602.58	602.59	602.60	602.61	602.62
Bent 2	603.52	603.52	603.53	603.53	603.54
Bent 3	602.83	602.84	602.85	602.86	602.87
Bent 4	603.43	603.43	603.43	603.43	603.43
Bent 5	602.83	602.84	602.84	602.85	602.85
Bent 6	603.55	603.54	603.54	603.53	603.52
Bent 7	602.60	602.62	602.63	602.64	602.65
E. Abut.		603.00	603.01	603.02	

** These elevations are to be verified by the contractor in the field before ordering the shim plates on sheet #7. Should the actual elevations vary from those shown above, the difference shall be adjusted in the thickness of the shims.
No additional compensation for shim adjustments.

DESIGNED	Charles P. Guend
CHECKED	Ashok Jenvoja
DRAWN	J. Mullenix
CHECKED	Ashok Jenvoja

Aug. 5 1971
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED W. E. Baumann
ENGINEER OF DESIGN
APPROVED Richard H. Golterman

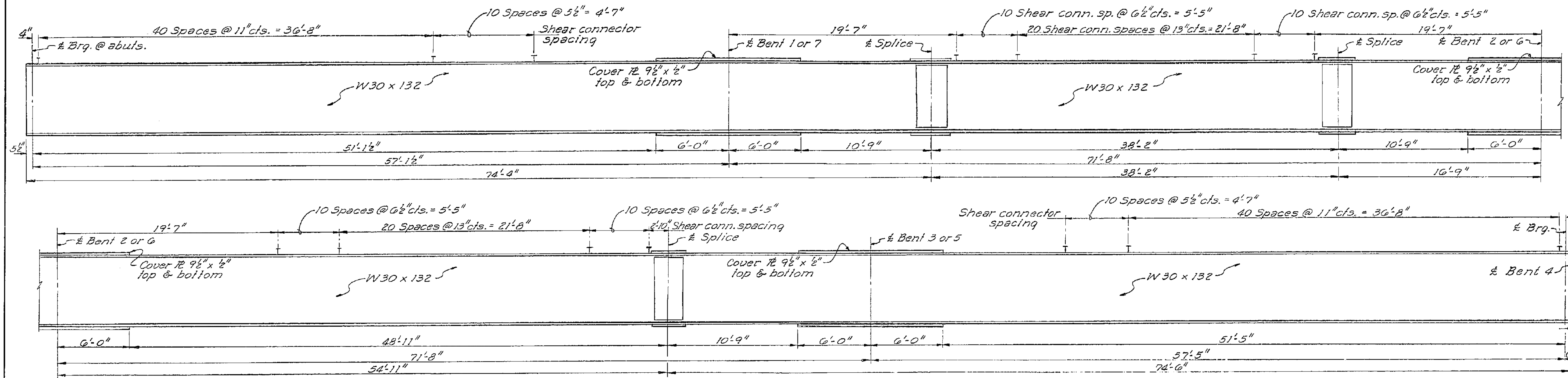
STRUCTURAL STEEL FRAMING PLAN
F.A. RT. 119 SEC. 118BR
LOGAN COUNTY
STATION 166+03

USER NAME = dudleybm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS, SN 054-0027 (FOR INFORMATION ONLY)
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 10/5/2018	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	11
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
		ILLINOIS	FED. AID PROJECT	

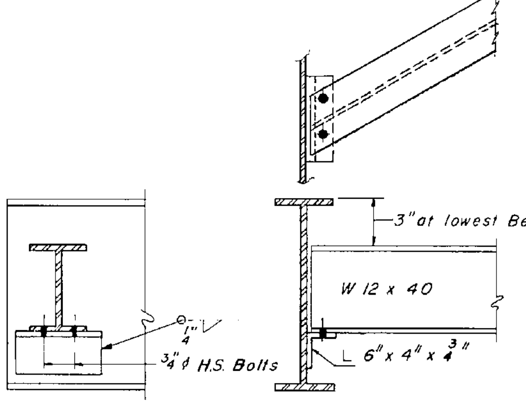
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. [illegible]	118BR	LOGAN	43	39
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11
15 SHEETS



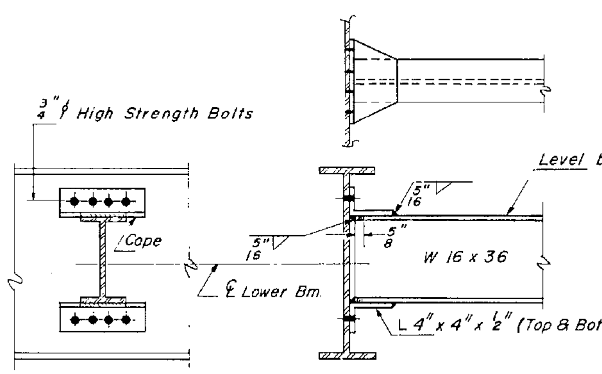
BEAM ELEVATIONS

Note: Clip top flanges of beams at bent 4 to clear joint in slab.



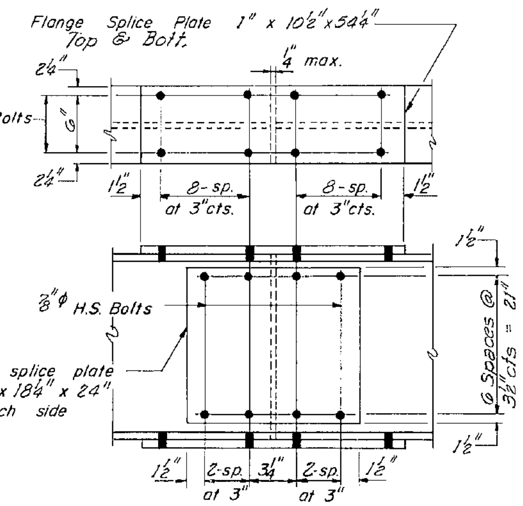
DIAPHRAGM D

24 Required



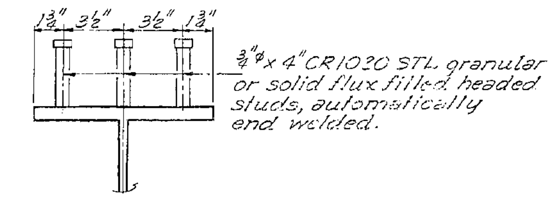
DIAPHRAGM D1

132 Required



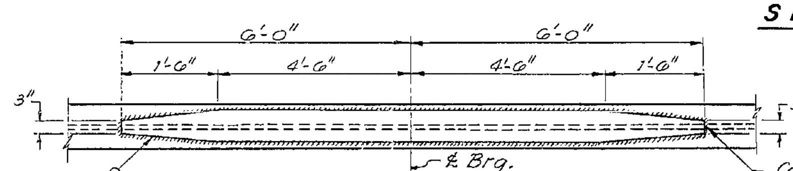
SPLICE

42 Req'd.



SHEAR CONNECTOR

1,104 Req'd. per beam



COVER PLATE

At bents 1, 2, 3, 5, 6, 7

DESIGNED	[illegible]
CHECKED	Ashok Jenveja
DRAWN	J. Schneller
CHECKED	Ashok Jenveja

Aug. 5 1971
EXAMINED [illegible]
PASSED W. E. Baumann
APPROVED Richard A. Holtermann

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

STRUCTURAL STEEL
F.A. RT. 119 SEC. 118 BR
LOGAN COUNTY
STATION 166+03

MODEL: Default
FILE NAME: \\CentralIdot\OPERATIONS\Bridges\Bridgeplans CAD\72K73 - Logan County paint 2019\plansheet.dgn

USER NAME = dudleybm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS, SN 054-0027 (FOR INFORMATION ONLY)
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 10/5/2018	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	12
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
	ILLINOIS	FED. AID PROJECT		

Bench Mark: B.M. #203 - Chisled "+" on R.R. tie bolt N.E. corner of R.R. trestle over So. Prairie Creek (on East stringer R.R. tie Elev. 573.58)

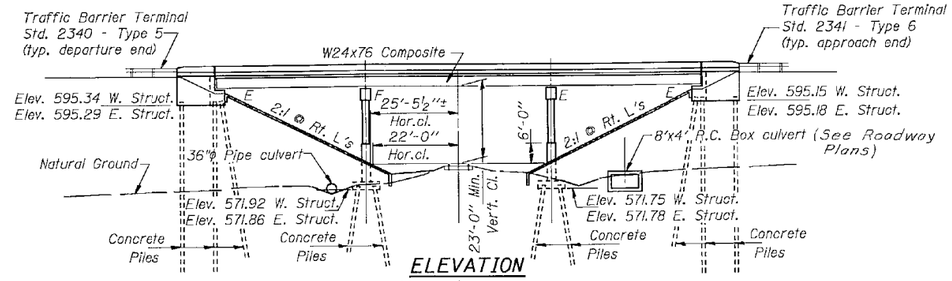
No Existing Structure.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

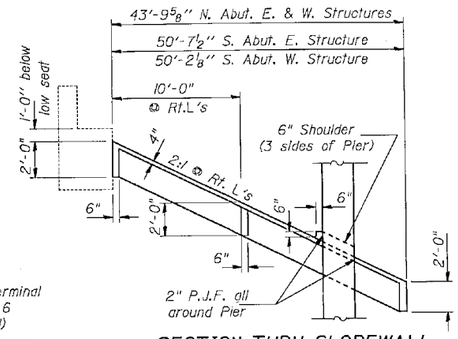
Work shall consist of blasting and painting all beam ends, end diaphragms, and steel components of bearings at both abutments on both bridges.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 406	54 - 10VB	LOGAN	34	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

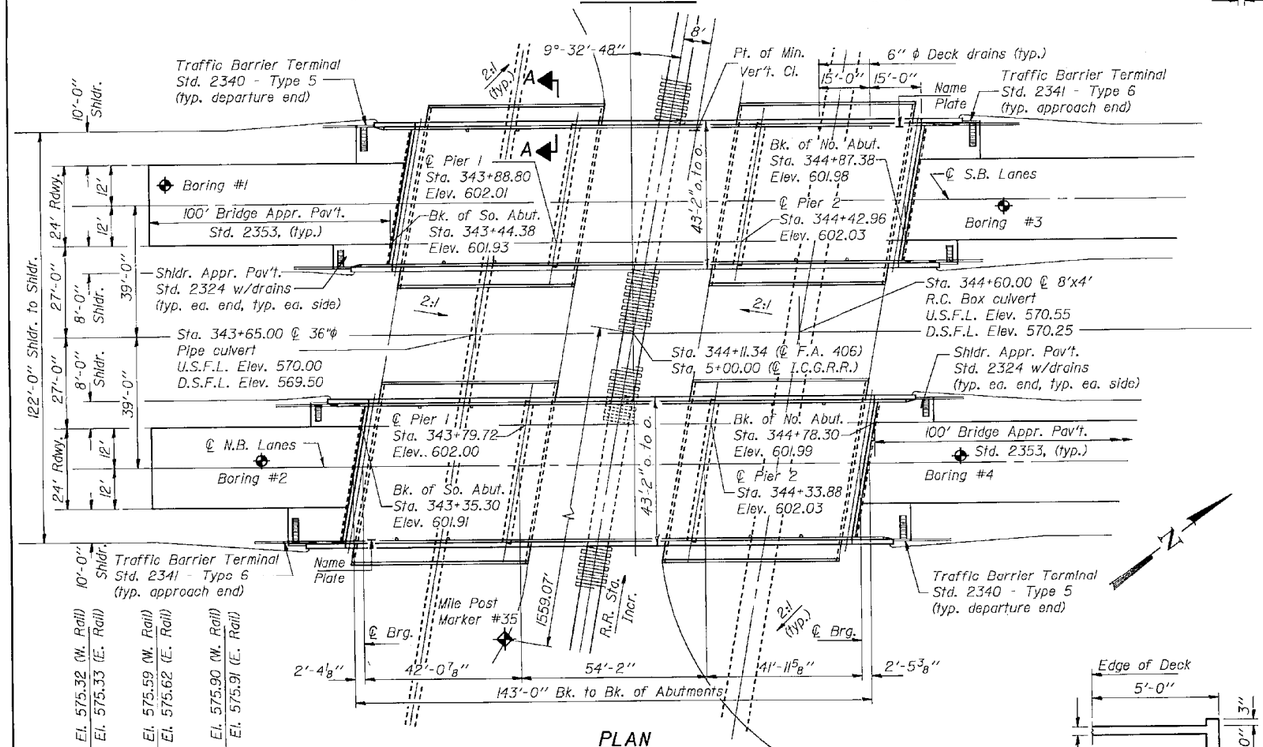
SHEET NO. 1
18 SHEETS



ELEVATION



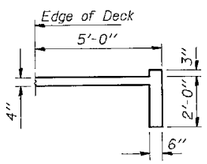
SECTION THRU SLOPEWALL



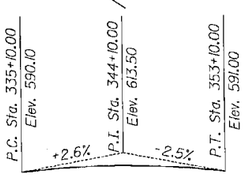
PLAN

	Sta. 4+00	Sta. 5+00	Sta. 6+00
El. 575.32 (W. Rail)			
El. 575.33 (E. Rail)			
El. 575.59 (W. Rail)			
El. 575.62 (E. Rail)			
El. 575.90 (W. Rail)			
El. 575.91 (E. Rail)			

PROFILE GRADE
(Top of Rail)
I.C.G.R.R.



SECTION A-A



V.C. = 1800'

PROFILE GRADE
F.A. Route 406
(Along Median edge of Pavement)

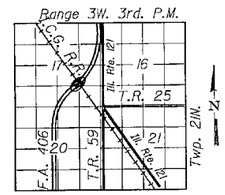
DESIGN SPECIFICATIONS
AASHTO (1983), 1984 and 1985 Interims.
LOADING HS 20-44
Allow 25#/sq. ft. for future wearing surface.
DESIGN STRESSES
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (Struct. Stl.) (M223, Gr.50)
fy = 36,000 psi (Struct. Stl.) (M183)

STATION 344+11.34
BUILT 198 BY
STATE OF ILLINOIS
F.A. RT. 406 SEC. 54-10VB
F.A. PROJ. EBF-406-1(43)
LOADING HS20
STR. NO. 054-0076

NAME PLATE
WEST STRUCTURE
See Std. 2113

STATION 344+11.34
BUILT 198 BY
STATE OF ILLINOIS
F.A. RT. 406 SEC. 54-10VB
F.A. PROJ. EBF-406-1(43)
LOADING HS20
STR. NO. 054-0077

NAME PLATE
EAST STRUCTURE
See Std. 2113



LOCATION SKETCH

GENERAL NOTES

See Proposal for Boring Data.

Fasteners shall be high strength bolts. Bolts ⅞"ϕ, open holes ¹⁵⁄₁₆"ϕ, unless otherwise noted.

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. Except tightening methods using either the load indicating washers or the calibrated wrench are not allowed.

Calculated weight of M-183 Structural Steel = 41,790 Lbs.

Calculated weight of M-223 Structural Steel = 132,050 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 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 wide flange beams and all splice plate material.

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 ⅛ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two ⅛" 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.

Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.

The contractor shall drive four concrete test piles in permanent locations one each at S. Abut. W. Structure, Pier 2 W. Structure, Pier 1 E. Structure and N. Abut. E. Structure as directed by the Engineer before ordering the remainder of piles.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.		610	610
Floor Drains	Each	16		16
Protective Coat	Sq. Yd.	1,520		1,520
Class X Concrete	Cu. Yd.		396.9	396.9
Structural Steel	L. Sum			1
Stud Shear Connectors	Each	5,208		5,208
Reinforcement Bars	Lbs.		56,970	56,970
Reinforcement Bars (Epoxy Coated)	Lbs.	90,620		90,620
Concrete Piles	Lin. Ft.		5,008	5,008
Test Pile Concrete	Each		4	4
Name Plates	Each	2		2
Slope Wall 4 Inch	Sq. Yd.			1,316
Preformed Joint Seal 2½"	Lin. Ft.	87		87
Preformed Joint Seal 4"	Lin. Ft.	87		87
Elastomeric Bearing Assembly, Type I	Each	24		24
Elastomeric Bearing Assembly, Type II	Each	12		12
Class X Concrete Superstructure	Cu. Yd.	359.8		359.8

GENERAL PLAN
F.A. RTE. 406 OVER ILL. CENT. GULF R.R.
F.A. RTE. 406 SECTION 54-10VB
LOGAN COUNTY
STATION 344+11.34 (F.A. RTE. 406)
STRUCTURE NUMBER 054-0076 (S.B.)
STRUCTURE NUMBER 054-0077 (N.B.)

DESIGNED	Mary H. Bloxdorf
CHECKED	Paul S. Johnson
DRAWN	P.W. Sweet
CHECKED	MHB

January 16 1987
EXAMINED Craig D. Koppa — ENGINEER OF BRIDGE DESIGN
PASSED James T. Lauburn — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

Rev 3-27-87

MODEL: Default
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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/25/2019	DATE -	REVISED -

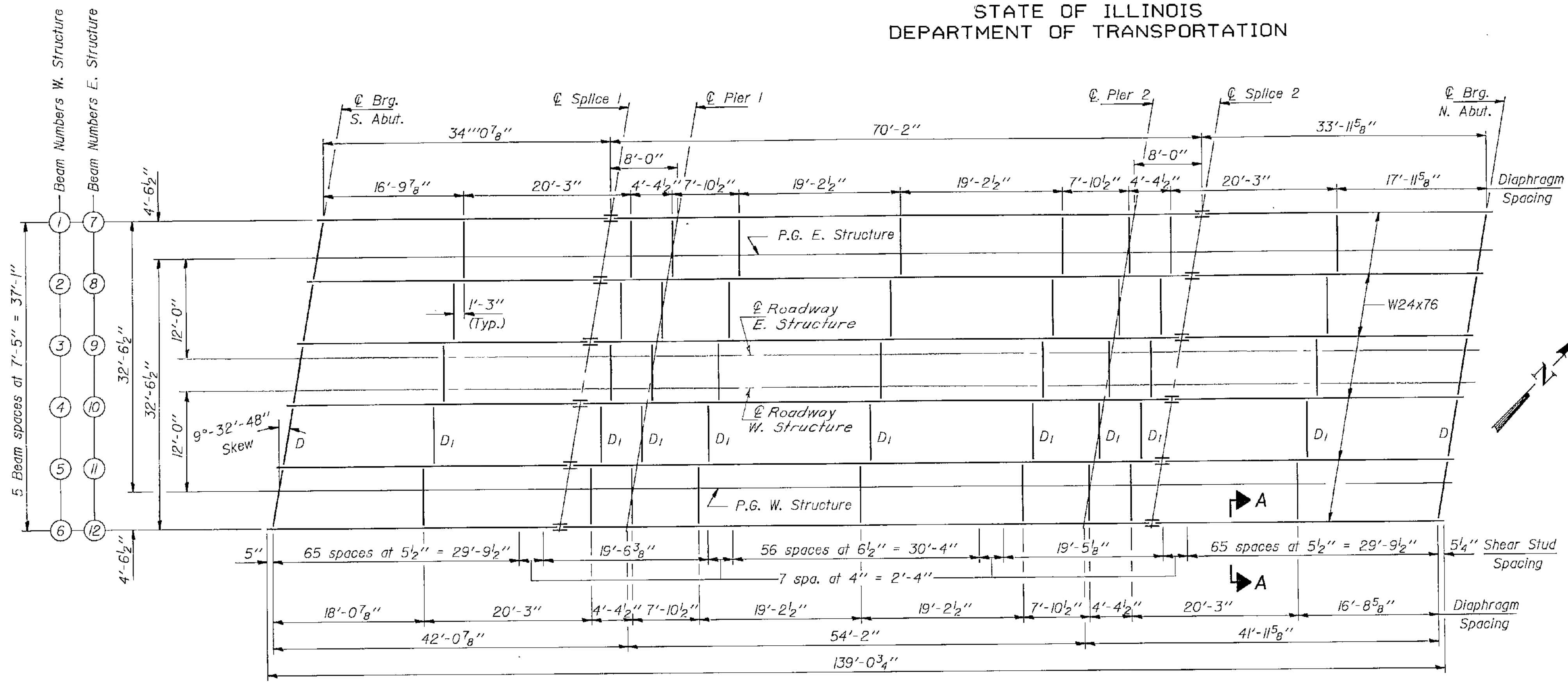
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS, SN 054-0076 & 0077
(FOR INFORMATION ONLY)

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

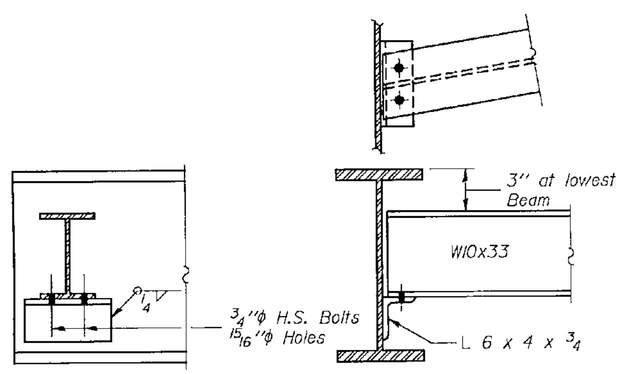
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	13
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

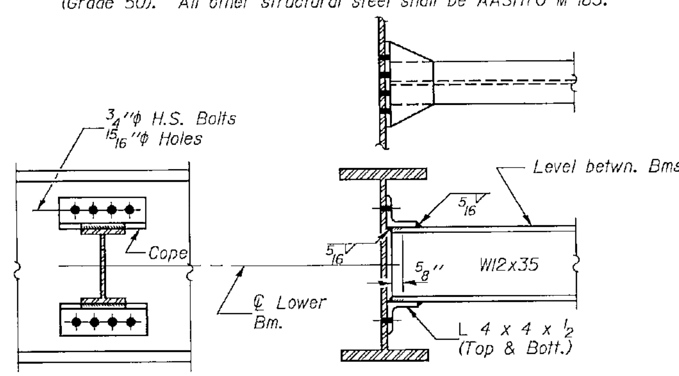
All Beams and Splice Plate material shall conform to the Supplemental Requirements for Notch Toughness Zone 2, and shall be AASHTO M 223 (Grade 50). All other structural steel shall be AASHTO M 183.



DIAPHRAGM D

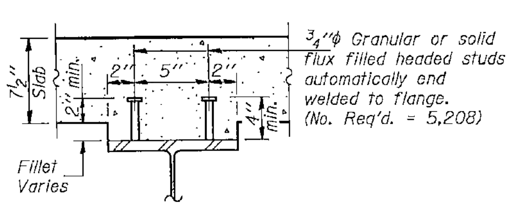
20 Required

Note: Two hardened washers shall be required over all 15/16"φ holes.

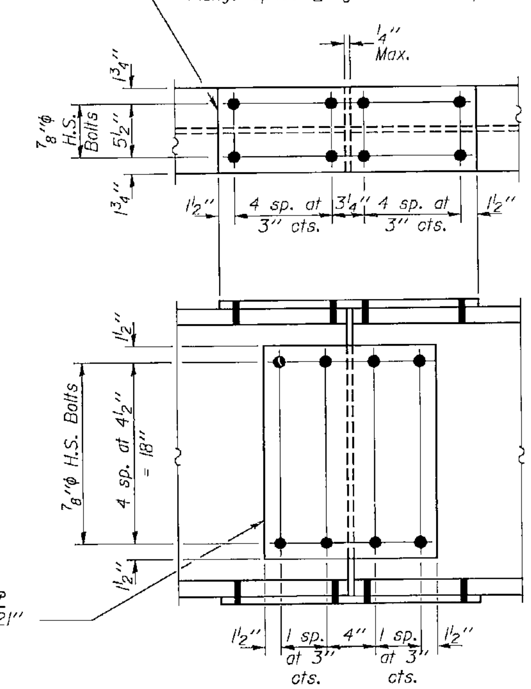


DIAPHRAGM D1

90 Required



SECTION A-A



SPLICE

Top of Beam Elevations	℄ Brg. S. Abut.	℄ Splice 1	℄ Brg. Pier 1	℄ Brg. Pier 2	℄ Splice 2	℄ Brg. N. Abut.
Beam 1	601.10	601.07	601.07	601.08	601.08	601.13
Beam 2	601.26	601.22	601.22	601.23	601.24	601.28
Beam 3	601.37	601.34	601.34	601.36	601.36	601.41
Beam 4	601.43	601.40	601.40	601.42	601.42	601.47
Beam 5	601.32	601.28	601.29	601.30	601.31	601.36
Beam 6	601.17	601.14	601.15	601.17	601.17	601.22
Beam 7	601.16	601.13	601.14	601.17	601.17	601.23
Beam 8	601.29	601.27	601.27	601.31	601.31	601.38
Beam 9	601.40	601.38	601.39	601.42	601.43	601.49
Beam 10	601.34	601.32	601.32	601.36	601.37	601.43
Beam 11	601.21	601.20	601.20	601.24	601.24	601.31
Beam 12	601.06	601.04	601.04	601.08	601.09	601.16

(For Fabrication Only)

INTERIOR BEAM MOMENT TABLE		0.4 Sp. #1 or 0.6 Sp. #3	Piers	0.5 Sp. #2
Is	(in4)	2,100	2,100	2,100
Ic	(in4)	6,694		6,694
Ss	(in3)	176	176	176
Sc	(in3)	279		279
Z	(in3)		200	
DL	(K/ft.)	.796	1.118	.796
MDL	('K)	93	245	104
sDL	(K/ft.)	.322		.322
MsDL	('K)	46		62
MLL	('K)	286	152	335
M (Imp)	('K)	85	44	93
5/3(MLL+I)	('K)	618	327	714
Ma	('K)	984	743	1,143
Mu	('K)	1,668	833	1,668
fsDL non-comp	(k.s.i.)	6.4	16.7	7.1
fsDL (comp)	(k.s.i.)	2.0		2.7
fs5/3(LL+I)	(k.s.i.)	26.6	22.3	30.7
fs (Overload)	(k.s.i.)	35.0	39.0	40.5
VR	(K)	52.1		45.1

INTERIOR BEAM REACTION TABLE		Abuts.	Piers
RDL	(K)	17.6	59.6
RLL	(K)	36.6	44.6
Imp.	(K)	11.0	12.9
R (Total)	(K)	65.2	117.1

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic and Sc are the moment of inertia and section modulus of the composite section section used in computing fs (Total & Overload).

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[MDL + MsDL + 5/3(MLL + I)].

Mu is the Full Plastic Moment Capacity for Compact, Braced section.

fs (Overload) is the sum of the stresses due to MDL + MsDL + 5/3(MLL + I).

DESIGNED Mary H. Bloxdorf	EXAMINED Oraj J. Kaspar	Jan 16 1987
CHECKED Paul S. Johnson	ENGINEER OF BRIDGE DESIGN	
DRAWN Paul Summer	PASSED James T. Rayburn	
CHECKED MHB	ENGINEER OF BRIDGES AND STRUCTURES	
	APPROVED	DIRECTOR OF HIGHWAYS

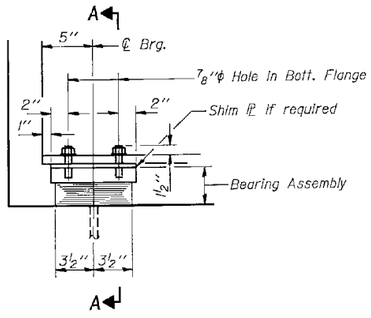
I-2-D 8-30-80

STRUCTURAL STEEL
F.A. RT. 406 SEC. 54-10VB
LOGAN COUNTY
STA. 344+11.34

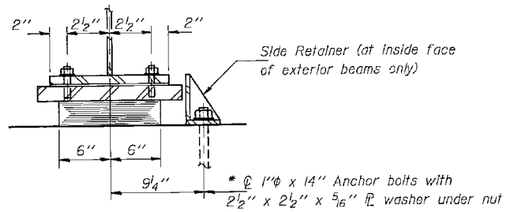
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. F.A. 406	54-10VB	LOGAN	34	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
18 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

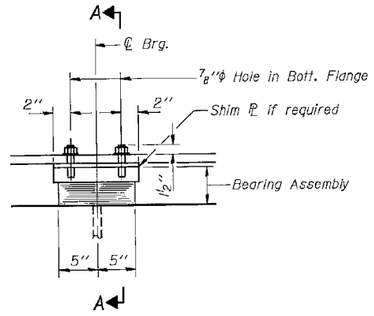


ELEVATION AT S. ABUT.

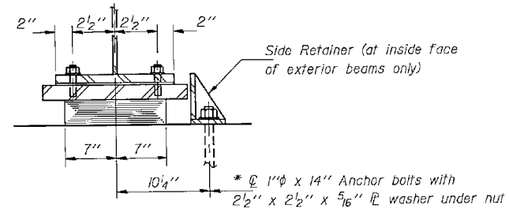


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

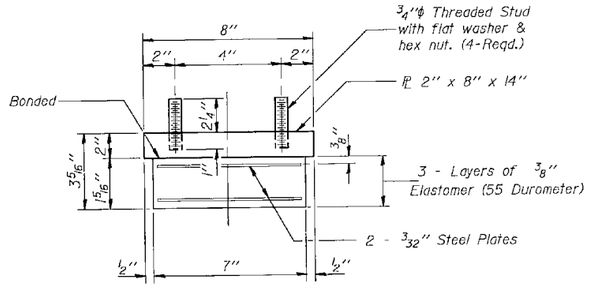


ELEVATION AT PIER 2



SECTION A-A

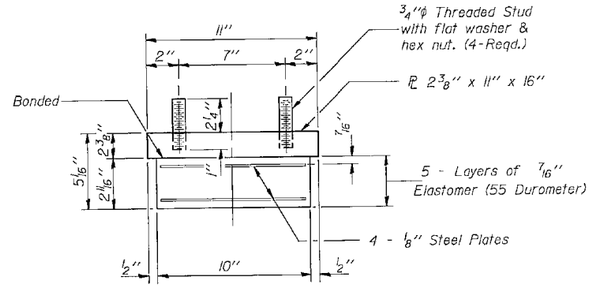
TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

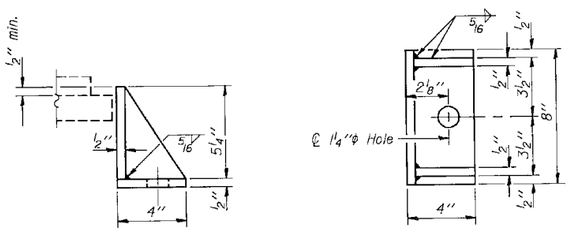
Note: Shim plates shall not be placed under Bearing Assembly.

* See sheet 11 of 18 for Anchor Bolt installation.



BEARING ASSEMBLY

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



SIDE RETAINER

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

DESIGNED	Mary H. Bloxdorf	
CHECKED	Paul S. Johnson	
DRAWN	Paul Summer	
CHECKED	MHB	

Jan 16 1987

EXAMINED Engineer of Bridge Design

PASSED Engineer of Bridges and Structures

APPROVED Director of Highways

I-2-EI 12-1-83

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	24

BEARING DETAILS
F.A. RT. 406 SEC. 54-10VB
LOGAN COUNTY
STA. 344+11.34

MODEL: Default
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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/5/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS, SN 054-0076 & 0077
(FOR INFORMATION ONLY)

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

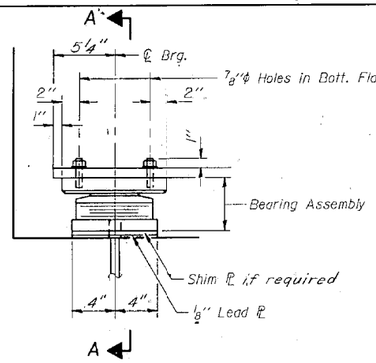
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	15
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
	ILLINOIS	FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RTE. 406	54-10VB	LOGAN	34	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

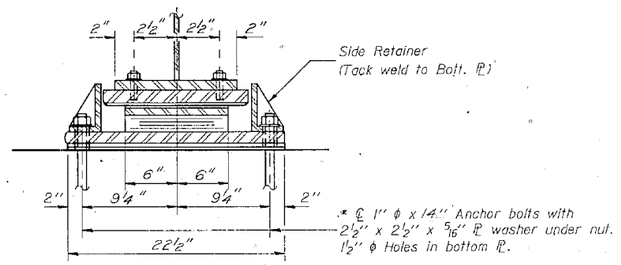
SHEET NO. 10
18 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

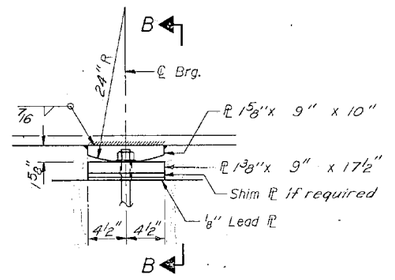
TYPE II TFE ELASTOMERIC EXP. BRG.



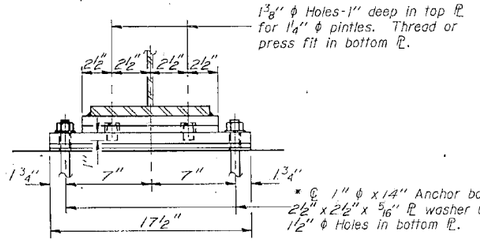
ELEVATION AT N. ABUT.



SECTION A-A



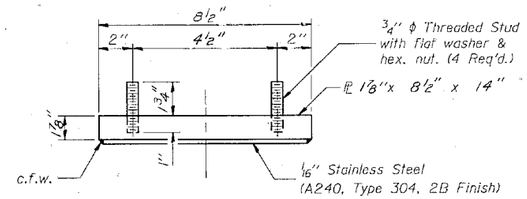
ELEVATION AT PIER 1



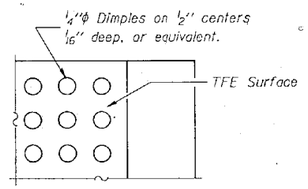
SECTION B-B

FIXED BEARING

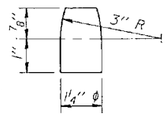
* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet 11 of 18 for Anchor Bolt installation.



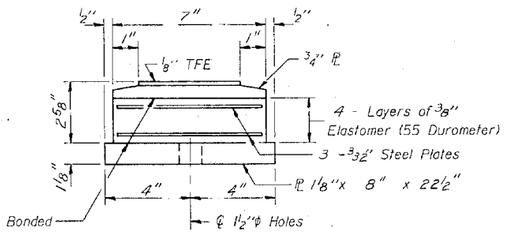
TOP BEARING ASSEMBLY



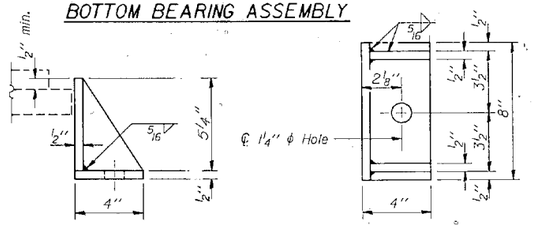
PLAN-TFE SURFACE



PINTLE



BOTTOM BEARING ASSEMBLY



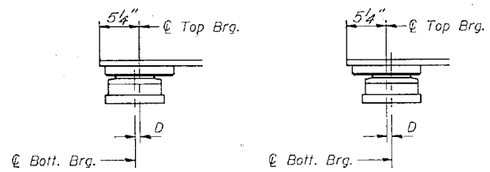
SIDE RETAINER

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

SECTION THRU TFE

Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12

BEARING DETAILS
F.A. RT. 406 SEC. 54-10VB
LOGAN COUNTY
STA. 344+11.34

DESIGNED Mary H. Blaxdorf	Jan 16 1987	
CHECKED Paul S. Johnson	EXAMINED Iraj D. Kaspar, ENGINEER OF BRIDGE DESIGN	
DRAWN Paul Summer	PASSED James T. Rayburn, ENGINEER OF BRIDGES AND STRUCTURES	
CHECKED MHB	APPROVED DIRECTOR OF HIGHWAYS	

I-2-E2 12-1-83

USER NAME = dudleybm	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/5/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS, SN 054-0076 & 0077
(FOR INFORMATION ONLY)

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(54-4,54-10) BP-1, (118) BP	LOGAN	16	16
* FAI 55, 155, FAP 315		CONTRACT NO. 72K73		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: \\Contra06\OPERATIONS\Bridges\Bridgeplans_CAD\72K73 - Logan County paint 2019\dansheet.dgn