

FOR INDEX OF SHEETS, SEE SHEET NO. 2.
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4

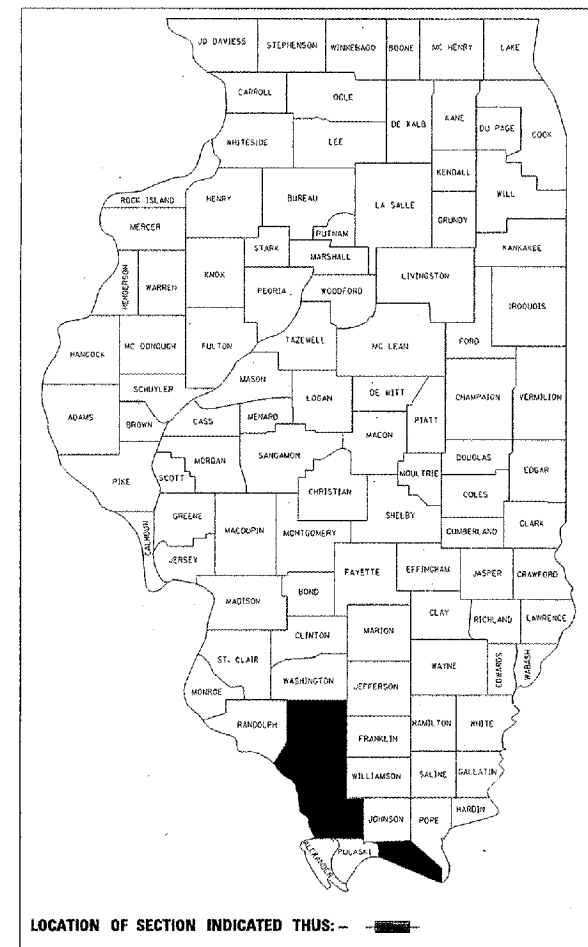
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

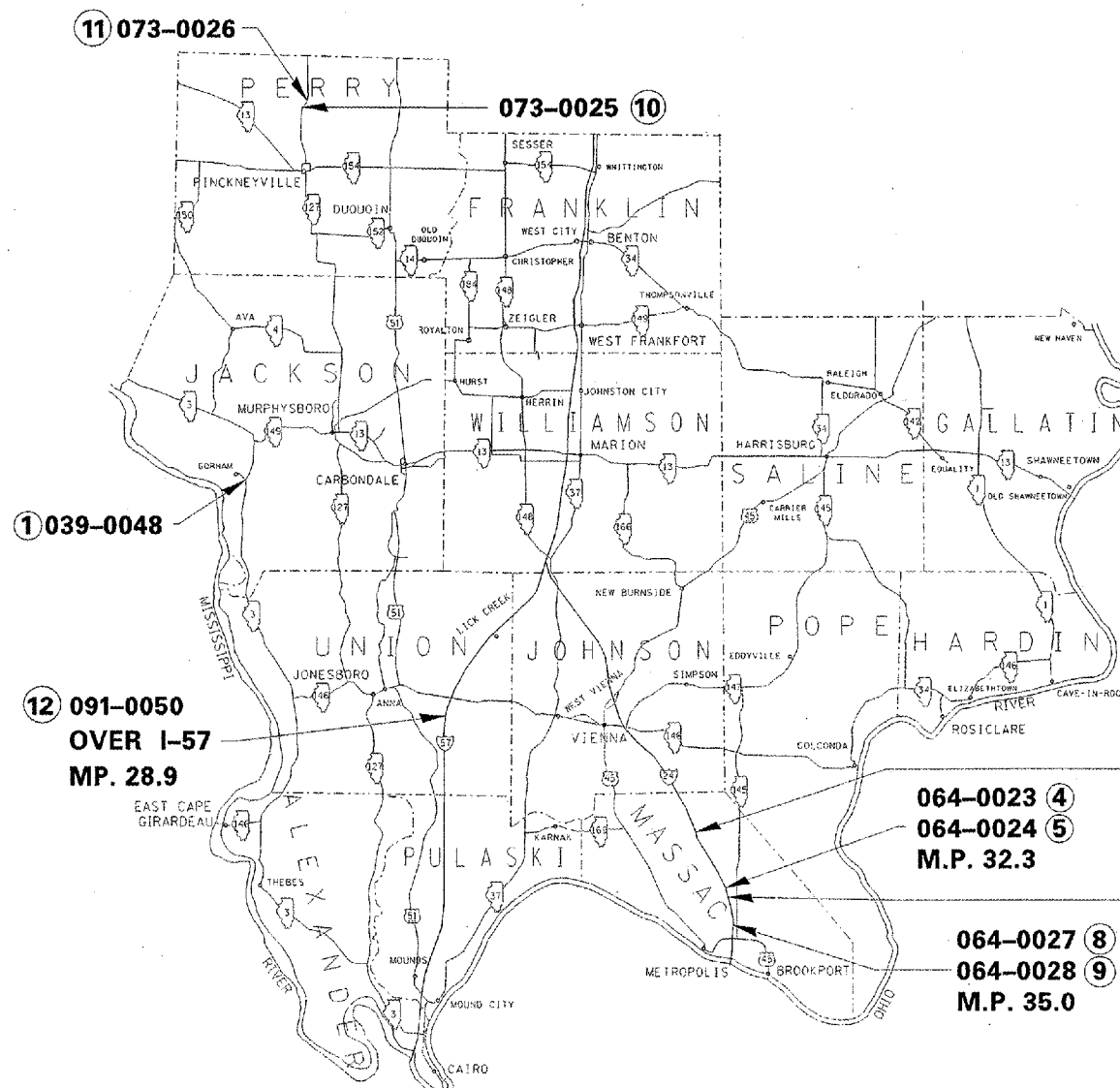
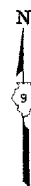
VARIOUS ROUTES
SECTION D-9 BRIDGE PAINTING FY 06-1
VARIOUS COUNTIES
C-99-004-06

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	*	VARIOUS	47	1
FED. ROAD DIST. NO. 7		ILLINOIS		

* D-9 BRIDGE PAINTING FY06-1



PROJECT ENGINEER: LARRY L. PICHE PHONE: (618) 549-2171
SQUAD LEADER: RITA GAUTNEY CENTREX: 782-4554



064-0017 ②
064-0018 ③
M.P. 27.5

064-0025 ⑥
064-0026 ⑦
M.P. 43.7

064-0023 ④
064-0024 ⑤
M.P. 32.3

064-0027 ⑧
064-0028 ⑨
M.P. 35.0

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

CONTRACT NO. 98941

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Aug 30* 20 *05*
Harry C. Gram
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 14 20 *05*
Mike Hertz
ENGINEER OF DESIGN AND ENVIRONMENT

October 14 20 *05*
Eric E. Hamm
DEPUTY DIRECTOR OF HIGHWAYS/CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	*	VARIOUS	48	2
FED. ROAD DIST. NO. 7		ILLINOIS		

* D-9 BRIDGE PAINTING FY06-1

INDEX OF SHEETS

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13	MASSAC COUNTY LOCATION MAP
* 14-20	BRIDGES No. 2 & 3
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38-41	BRIDGE No. 10
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45	UNION COUNTY MAP
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* 15	DELETED

STANDARDS

- 701006-02
- 701101-01
- 701201-02
- 701400-02
- 701406-04
- 702001-05
- B.L.R. 21-6

AGREEMENTS

MASSAC COUNTY
UNION PACIFIC RAILROAD

Approved: Mary Ramo
REGION 5 ENGINEER

DATE Aug 30 2005

Prepared By: J. Smothers
DISTRICT OPERATIONS ENGINEER

Examined By: Danny Clayton
ASSISTANT REGIONAL ENGINEER

Examined By: James Lewis Emery
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: Joe Zdaniewicz
DISTRICT STUDIES & PLANS ENGINEER

Examined By: Joseph Legier
DISTRICT CONSTRUCTION ENGINEER

Examined By: Bruce W. Wells
DISTRICT MATERIALS ENGINEER

Examined By: Danny Clayton
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Rev.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	*	VARIOUS	48	3
FED. ROAD DIST. NO. 7		ILLINOIS		

* D-9 BRIDGE PAINTING FY06-1

GENERAL NOTES

The Contractor shall supply 2 portable changeable message signs at least two weeks prior to any lane closure on Interstate 24 or Interstate 57, as required by Traffic Control and Protection Standard 701400.

Cleaning and painting shall conform to the requirements of special provision "Cleaning And Painting Existing Steel Structures". Near White Metal Blast Cleaning - SSPC - SP10 and Paint System 1 - OZ / E / U shall be used unless otherwise noted.

SSPC - QP1 and SSPC - QP2 Painting Contractor Certifications are not required.

Beam Ends and fascia beams shall be painted on each structure, unless otherwise noted. The term "Beam End" is used in this document to indicate all structural steel within 5 feet (measured along the beam) of either side of a deck joint (or any deck configuration which allows significant amounts of moisture to reach the structural steel). However, on Bridge No. 1 the length of a Beam End is defined as 10 feet instead of 5 feet. Beyond the Beam Ends, exterior surfaces of fascia beams including the bottom of bottom flange, shall be cleaned and painted, unless otherwise noted.

Galvanized bearings and diaphragms at Beam Ends shall be cleaned by Brush Blasting, touched up with OZ Primer, and painted with Epoxy / Urethane according to the requirements of Paint System 1.

The color of the final finish coat for all interior surfaces shall be Gray, Munsell No. 5B 7 /1. The color of the final finish coat for the exterior surfaces of fascia beams, including the exterior surfaces of the fascias' Beam Ends, is shown on sheet 5 of 58.

Bridge No. 1

For Structure 039-0048, railroad liability insurance is required. The Beam Ends on this structure are defined as 10 feet in length. A minimum of 4 air monitors are required. See special provision, "Containment and Disposal of Lead Painting Cleaning Residues."

Bridges No. 6, 7, 8, 9

At the site of twin structures 064-0025 and 064-0026, a minimum of 4 air monitors are required. Similarly, a minimum of 4 air monitors are required at the site of twin structures 064-0027 and 064-0028. See special provision "Containment and Disposal of Lead Paint Cleaning Residues".

Bridges No. 10 and 11

Structures 073-0025 and 073-0026 are constructed of weathering steel. Fascia beams shall not be painted on these structures beyond the Beam Ends. Beam Ends have existing non-lead paint. Containment of cleaning residue is required, and shall conform to special provision "Containment and Disposal of Non-Lead Paint Cleaning Residues."

Bridge No. 12

On Structure 091-0050, both interior and exterior surfaces of the fascia beams shall be painted in addition to Beam Ends. A minimum of 4 air monitors are required at this site. See special provision "Containment and Disposal of Lead Paint Cleaning Residues".

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	*	VARIOUS	58	4
FED. ROAD DIST. NO. 7		ILLINOIS		

* D-9 BRIDGE PAINTING FY06-1

SUMMARY OF QUANTITIES

100% STATE		VARIOUS COUNTIES	
CONSTRUCTION TYPE CODE SFTY-2A		RURAL	
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
50600600	CLEANING & PAINTING STEEL BRIDGE NO. 1	L. SUM	1
50600700	CLEANING & PAINTING STEEL BRIDGE NO. 2	L. SUM	1
50600800	CLEANING & PAINTING STEEL BRIDGE NO. 3	L. SUM	1
50600900	CLEANING & PAINTING STEEL BRIDGE NO. 4	L. SUM	1
50601000	CLEANING & PAINTING STEEL BRIDGE NO. 5	L. SUM	1
50601100	CLEANING & PAINTING STEEL BRIDGE NO. 6	L. SUM	1
50601200	CLEANING & PAINTING STEEL BRIDGE NO. 7	L. SUM	1
50601300	CLEANING & PAINTING STEEL BRIDGE NO. 8	L. SUM	1
50601400	CLEANING & PAINTING STEEL BRIDGE NO. 9	L. SUM	1
50601500	CLEANING & PAINTING STEEL BRIDGE NO. 10	L. SUM	1
50601600	CLEANING & PAINTING STEEL BRIDGE NO. 11	L. SUM	1
50601700	CLEANING & PAINTING STEEL BRIDGE NO. 12	L. SUM	1
50606401	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L. SUM	1
50606402	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L. SUM	1
50606403	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L. SUM	1
50606404	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L. SUM	1
50606405	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L. SUM	1
50606406	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L. SUM	1

100% STATE		VARIOUS COUNTIES	
CONSTRUCTION TYPE CODE SFTY-2A		RURAL	
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
50606407	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L. SUM	1
50606408	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 8	L. SUM	1
50606409	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 9	L. SUM	1
50606412	CONTAINMENT & DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 12	L. SUM	1
50606600	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES	L. SUM	1
67100100	MOBILIZATION	L. SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L. SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STD. CLR-21	L. SUM	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L. SUM	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L. SUM	1

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	*	VARIOUS	48	5

FED. ROAD DIST. NO. 7 ILLINOIS

* D-9 BRIDGE PAINTING FY06-1

PAINT DETAILS

Bridge No.	Structure	Galv. Diaphr.	Galv. Bearings	Exterior Color	Fascia Cleaning Method	Touch-Up *	Air Monitor
1	039-0048			Green	SP10		+
2	064-0017	+	+	Green	SP10	+	
3	064-0018	+	+	Green	SP10	+	
4	064-0023	+	+	Green	SP10		
5	064-0024	+	+	Green	SP10		
6	064-0025			Green	SP10		+
7	064-0026			Green	SP10		+
8	064-0027		+	Green	SP3M	+	+
9	064-0028		+	Green	SP3M	+	+
10	073-0025			Brown			
11	073-0026			Brown			
12	091-0050			Green	SP10		+

*The bottom flange at each existing new bearing located on Pier 2 shall be cleaned on the top, bottom, and side surfaces above the bearing and extending 3" past the bearing. This area shall be cleaned per Modified SP3 and touched up with OZ primer. Epoxy / Urethane paint shall be applied according to the requirements of Paint System 2.

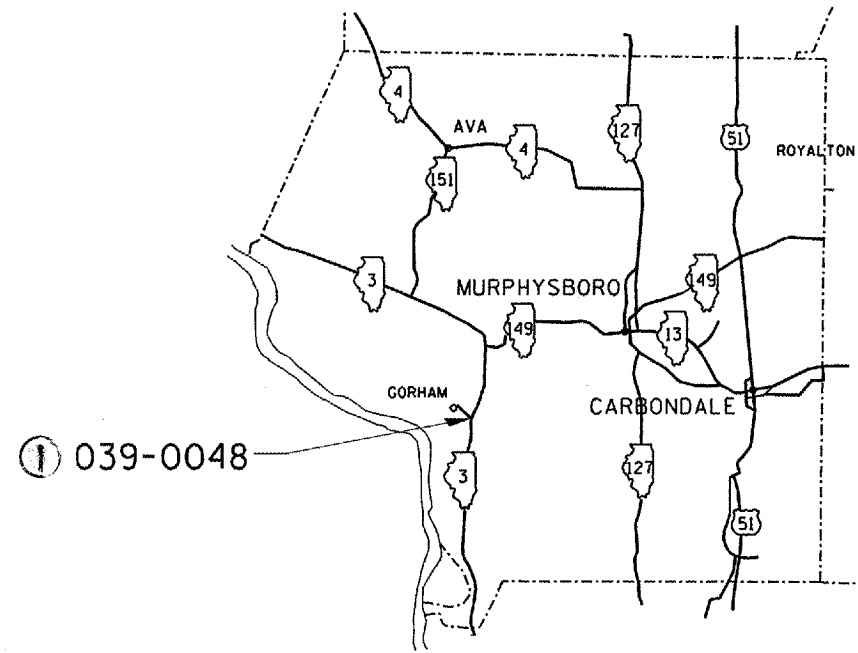
COLORS

Green: Interstate Green, Munsell No. 7.5G 4 / 8

Brown: Brown, Munsell No. 2.5YR 3 / 4

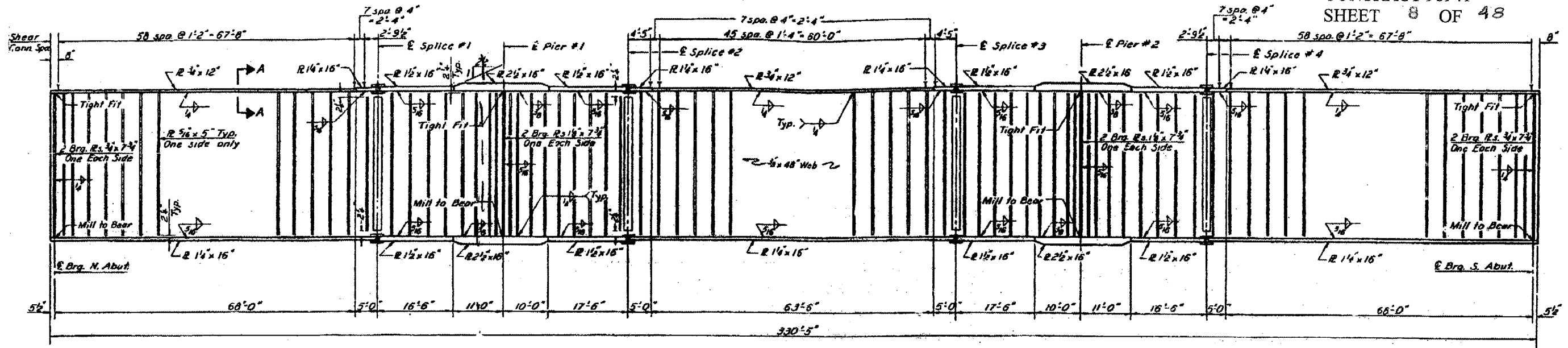
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	•	VARIOUS	48	6
FED. ROAD DIST. NO. 7		ILLINOIS		
• D-9 BRIDGE PAINTING FY06-1				

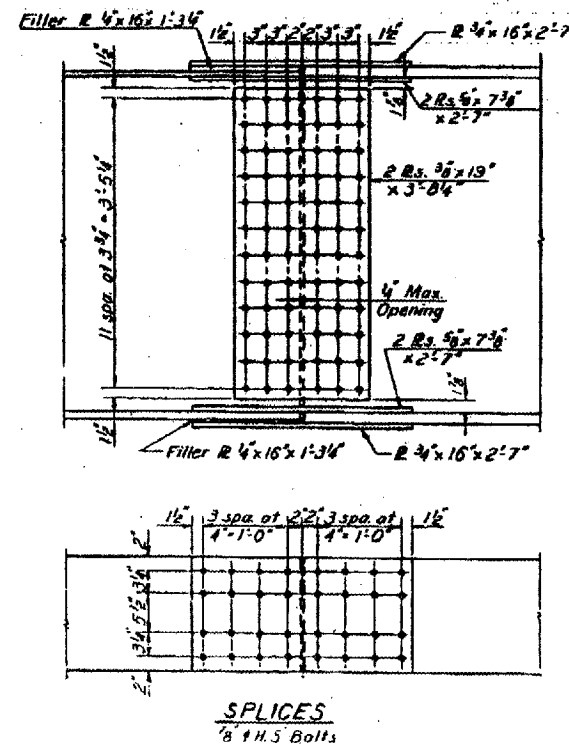
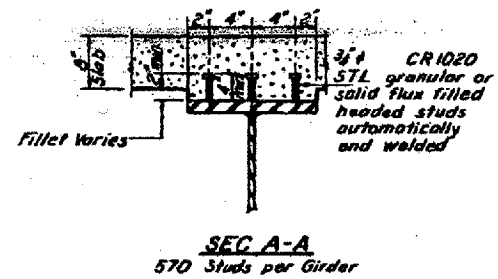


J A C K S O N

① 039-0048	NORTH OF GORHAM ROAD ILL. ROUTE 3 OVER MISSOURI PACIFIC RAILROAD LENGTH: 341.5 FT. WIDTH: 45.9 FT. ADT: 1300 19% TRUCKS
------------	--



ELEVATION



	0.4 Sp. 1 or 0.8 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I_s (in ⁴)	19347	54503	19347
I_c (in ⁴)	52282		52282
S_x (in ³)	995	2057	995
S_y (in ³)	1318		1318
E (ksi)	1028	1484	1046
M_p (k)	591	2225	520
f_s (ksi)	71	13.0	6.3
S_e (in ³)	.447		.447
M_{sR} (k)	308		338
M_p (k)	920	935	944
M_{imp} (k)	204	207	211
TOTAL (k)	1432	1142	1493
$E_s + S_e$ (ksi)	13.1	6.7	13.6
S_y TOTAL (in ³)	20.2	19.7	19.9
VR (k)	64.3		56.6

TOP OF WEB ELEVATION

Gir. Loc.	1	2	3	4	5	6
E. Brg. N. Abut.	393.52	393.76	393.96	394.03	393.96	393.85
E. Splice #1	393.69	393.90	394.07	394.11	394.02	393.87
E. Pier #1	393.76	393.96	394.12	394.15	394.04	393.89
E. Splice #2	393.83	394.01	394.17	394.18	394.07	393.90
E. Splice #3	393.90	394.07	394.18	394.17	394.02	393.84
E. Pier #2	393.89	394.04	394.15	394.12	393.96	393.76
E. Splice #4	393.87	394.02	394.11	394.07	393.90	393.69
E. Brg. S. Abut.	393.85	393.97	394.03	393.96	393.77	393.52

	Abut.	Pier
R_R (k)	52.1	190.4
R_L (k)	46.5	81.4
Imp. (k)	10.30	18.10
R TOTAL (k)	108.9	289.9

I_s and S_x are the moment of inertia and section modulus of the steel section.
 I_c and S_y are the moment of inertia and section modulus of the composite section used in computing I_s .
 VR is the maximum $\frac{1}{4}$ Impact shear in span.

The main load carrying member components subject to the Supplemental webs and spl

BRIDGE NO. 1
 039-0048
 FOR INFORMATION ONLY

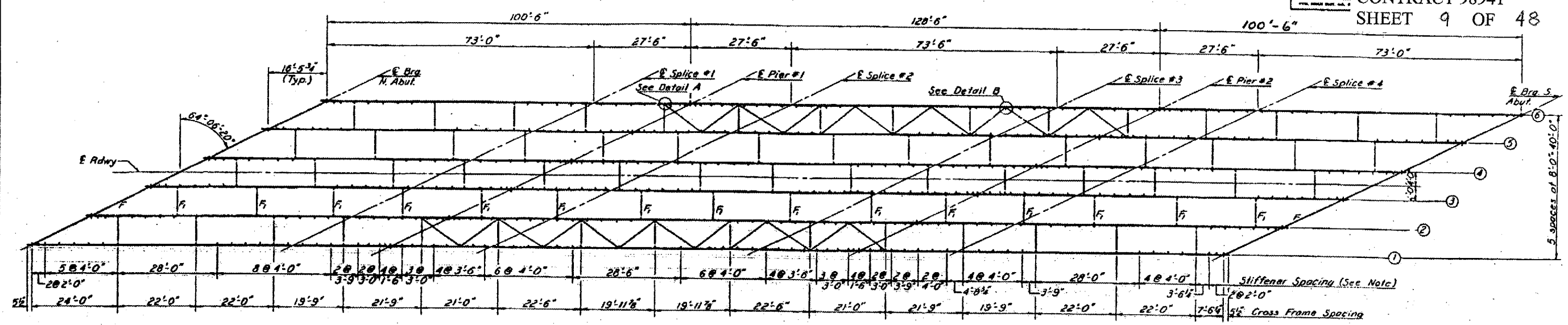
STRUCTURAL STEEL
 F.A. RT100 SEC.130-IVB
 JACKSON COUNTY
 STATION 247+02.81

DESIGNED	Kay M. Baskin	EXAMINED	Jan. 11 1972
CHECKED	James H. Hines	PASSED	
DRAWN	R. P. Summer	APPROVED	
CHECKED	J.P.		

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

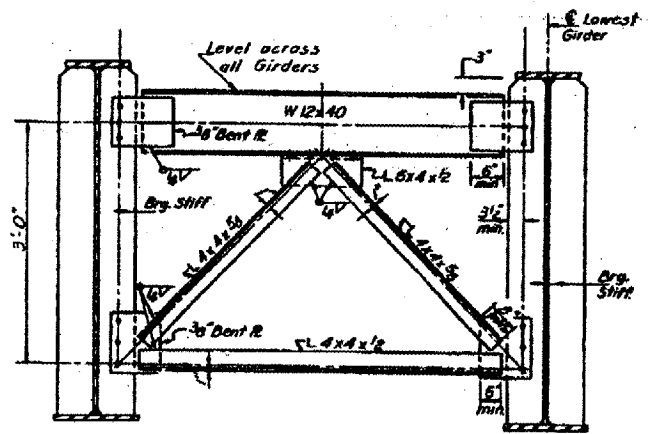
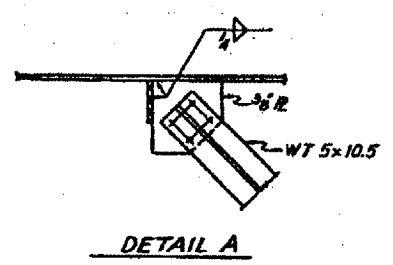
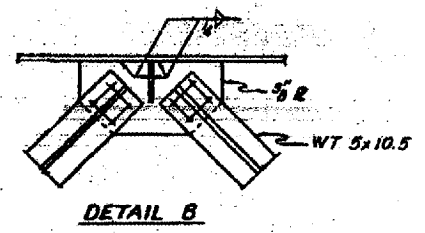
100
 100-31

VARIOUS ROUTES
 VARIOUS COUNTIES
 D-9 BRIDGE PAINTING FY 06-1
 CONTRACT 98941
 SHEET 9 OF 48



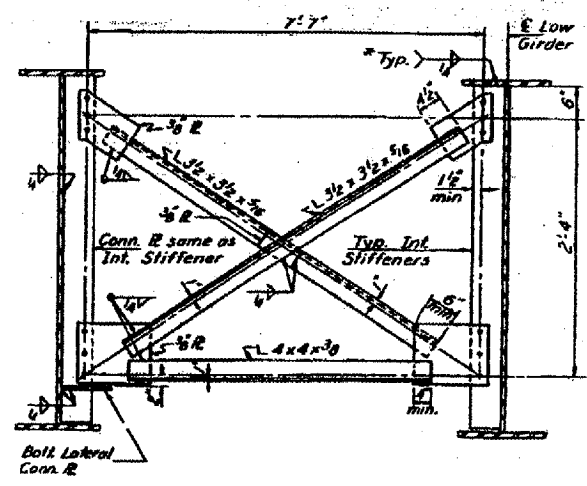
PLAN

Note: Stiffener spacing is for Girders 1,3,4,5.
 Reverse order of dimensions for Girders 2,4,6.



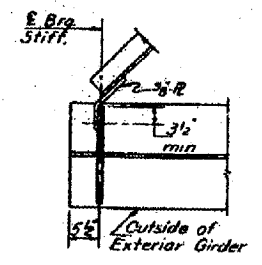
CROSS FRAME F
 (10 Req'd)
 Use 7/8" H.S. Bolts

Note: 1 1/2" holes in gusset Rs for 3/4" bolts
 1 1/4" holes in gusset Rs for 5/8" bolts
 Hardened washers shall be required
 over holes in gusset Rs.



CROSS FRAME F1
 (75 Req'd)

* Omit weld between stiffener & flange on
 first stiffener each side of splice.



CROSS FRAME CONNECTION
 DETAIL AT ABUTMENT

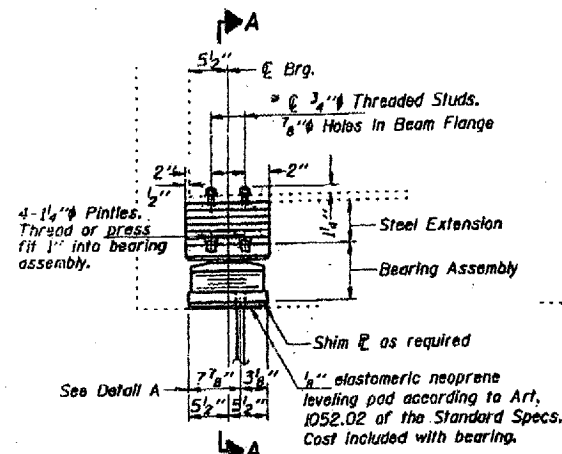
DESIGNED	Jay D. Byrta	EXAMINED	JEN. 11 1972
CHECKED	James P. Sumner	PASSED	
DRAWN	R. P. Sumner	APPROVED	
CHECKED	JP		

BRIDGE NO. 1
 039-0048
 FOR INFORMATION ONLY

STRUCTURAL STEEL
 FA RT.100 SEC.130-1VB
 JACKSON COUNTY
 STATION 247+02.81

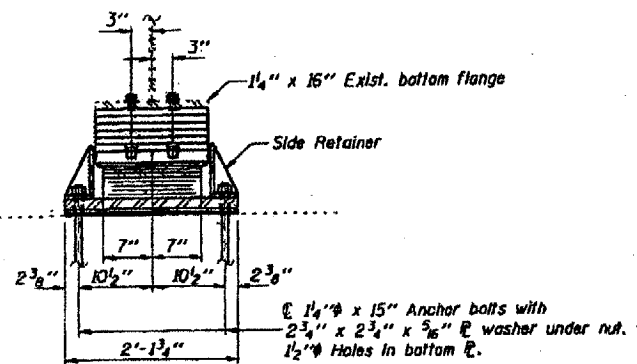
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
CONTRACT 98941
SHEET 10 OF 48

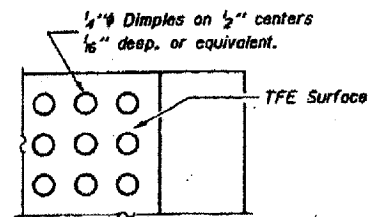


ELEVATION AT N. ABUT.

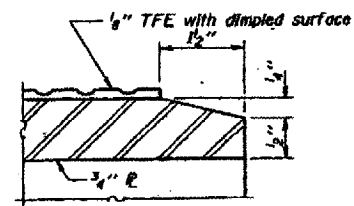
* 3/4" Threaded Studs shall be placed in the field.



SECTION A-A



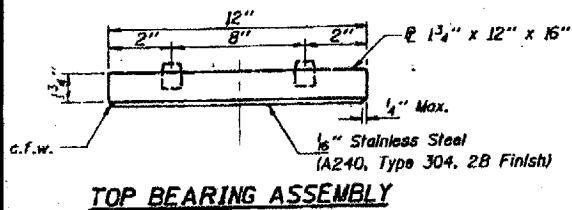
PLAN-TFE SURFACE



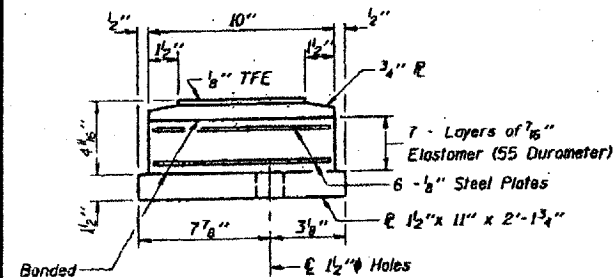
SECTION THRU TFE

Note: The 1/8" TFE sheet shall be banded 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.

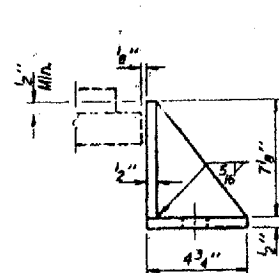
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



TOP BEARING ASSEMBLY

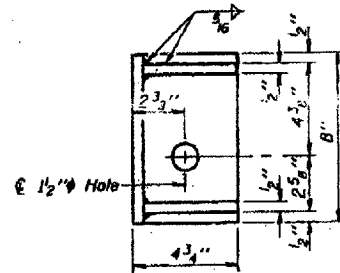


BOTTOM BEARING ASSEMBLY

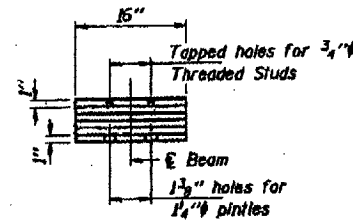


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

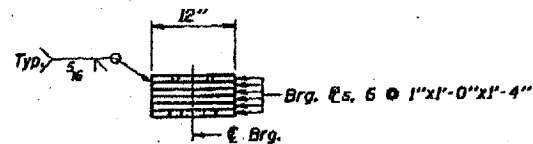


REACTIONS		
RR	(K)	52.1
Rk	(K)	46.5
Rl	(K)	10.3
R Total	(K)	108.9



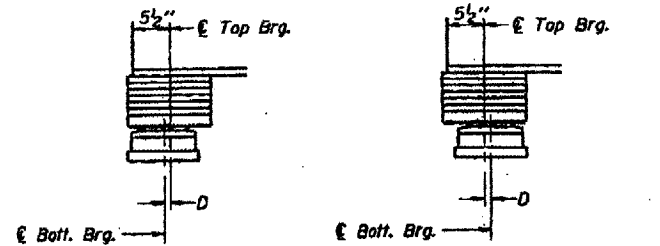
END VIEW STEEL EXTENSION

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



ELEVATION STEEL EXTENSION

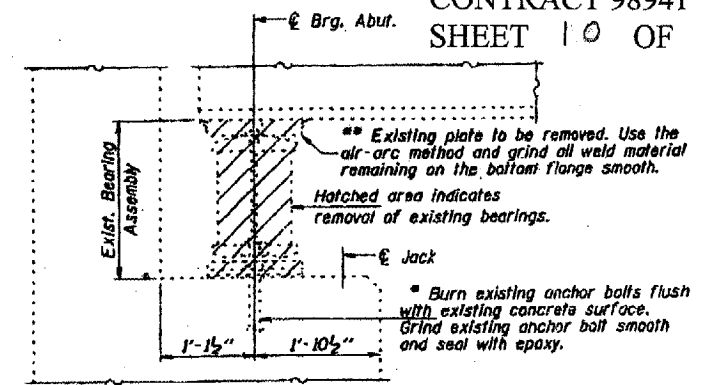
Diaphragm removal & reinstallation may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
New steel extensions, side retainers, shim plates, connection bolts and anchor bolts are included in the cost of "Furnishing and Erecting Structural Steel".
See Sheet 13 of 14 for anchor bolt installation.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. Jack capacity = 60 Tons.
Anchor bolts of exist. beams shall be drilled and grouted in place.



BELOW 50°F. (Move bott. brg. away from fixed brg.)
ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

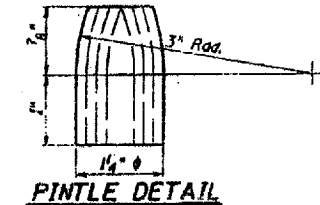
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



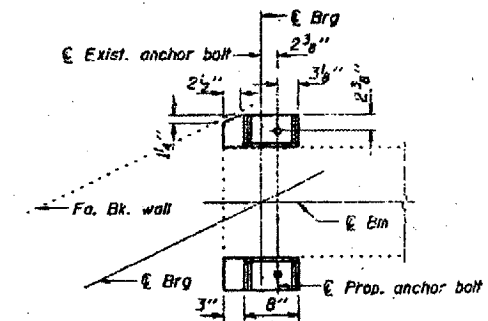
JACK AND REMOVE EXISTING BEARINGS

(Typ. at all abutments)
(Dimensions are at right angles)

** Cost Included in "Jack and Remove Existing Bearing".



PINTLE DETAIL



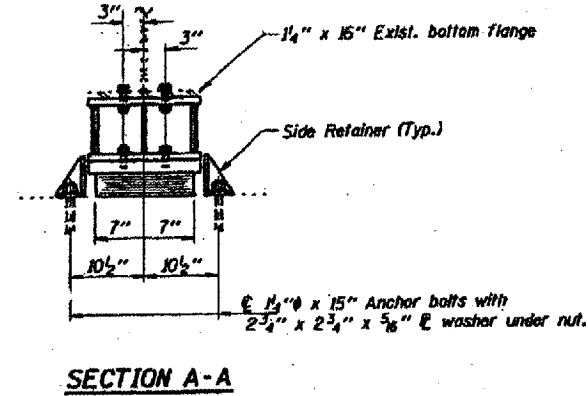
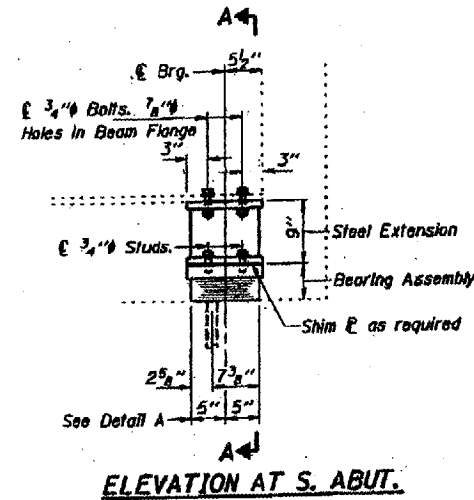
BRIDGE NO. 1
039-0048
FOR INFORMATION ONLY

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6

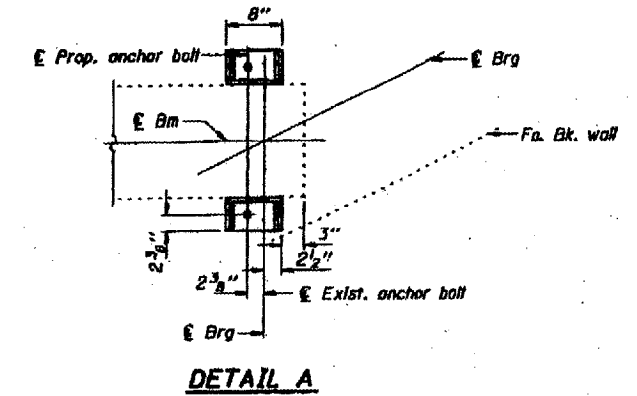
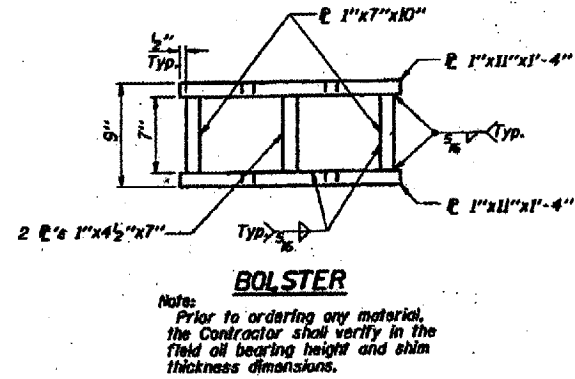
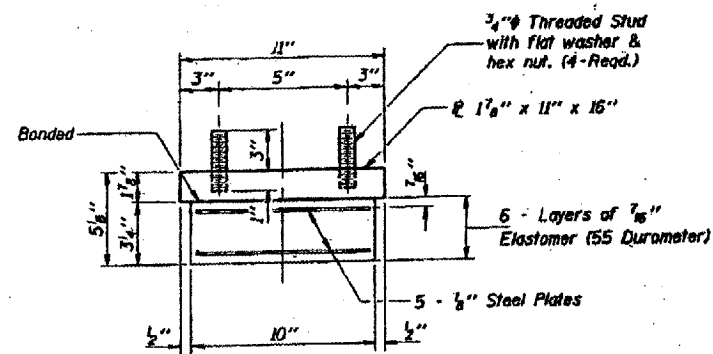
NORTH ABUTMENT BEARING DETAILS
FAP ROUTE 312 OVER MISSOURI PACIFIC RAILROAD
JACKSON COUNTY
STATION 247+02.81
STR. NO. 039-0048

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
CONTRACT 98941
SHEET 11 OF 48

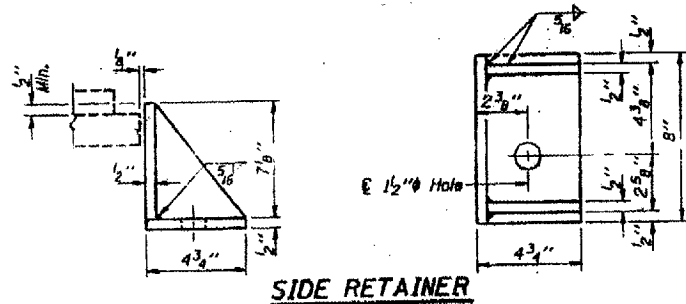
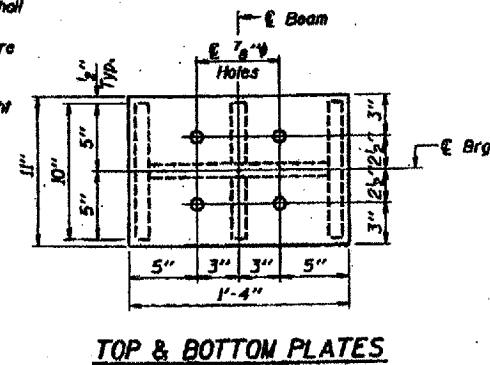


TYPE I ELASTOMERIC EXP. BRG.



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

Diaphragm removal & reinstallation may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural steel".
New steel extensions, side retainers, shim plates, connection bolts and anchor bolts are included in the cost of "Furnishing and Erecting Structural steel".
See Sheet 13 of 14 for anchor bolt installation.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. Jack capacity = 60 Tons.
Anchor bolts of exist. beams shall be drilled and grouted in place.
See sheet 11 of 14 for bearing removal details.



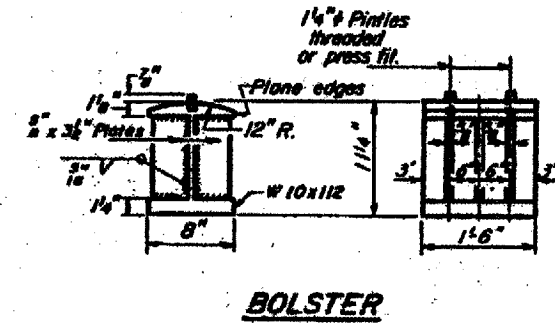
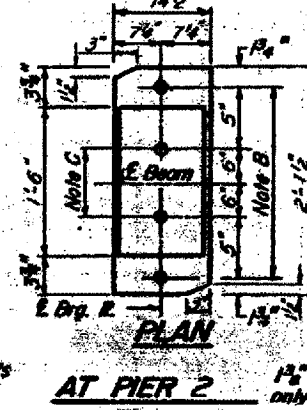
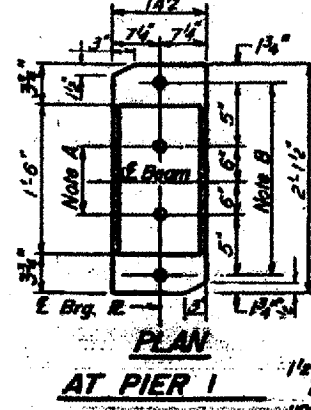
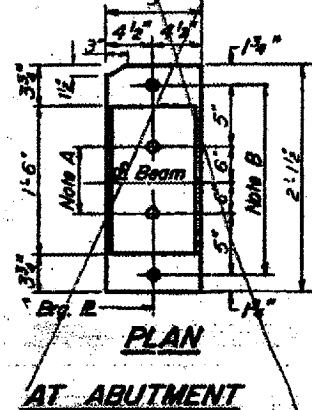
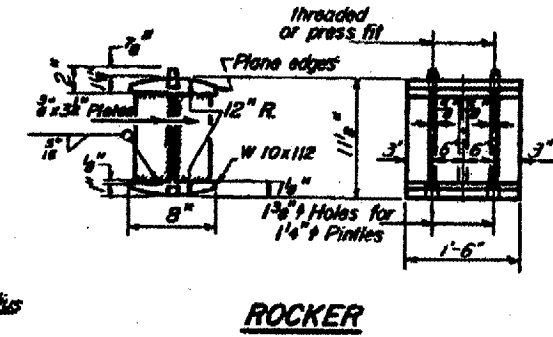
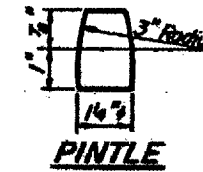
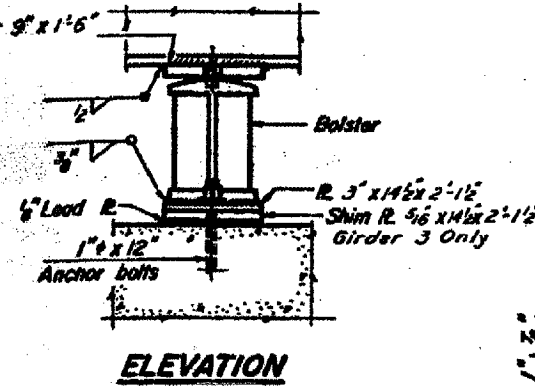
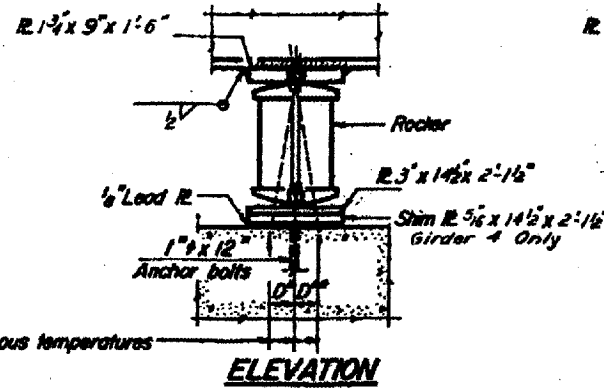
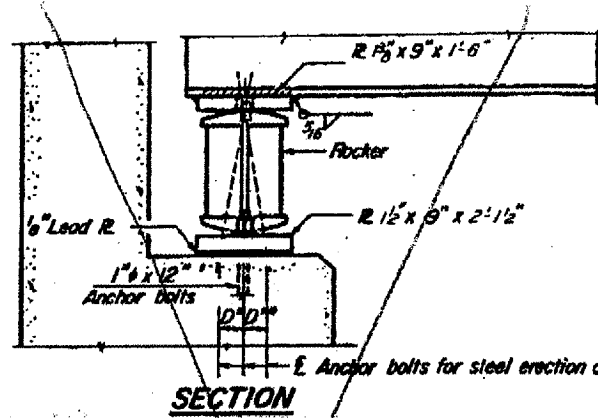
SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
Weight Included with Structural Steel.

REACTIONS	
RP	(K) 52.1
RE	(K) 46.5
R1	(K) 10.3
R Total	(K) 108.9

BILL OF MATERIAL

BRIDGE NO. 1
039-0048
FOR INFORMATION ONLY

SOUTH ABUTMENT BEARING DETAILS
FAP ROUTE 312 OVER MISSOURI PACIFIC RAILROAD
JACKSON COUNTY
STATION 247+02.81
STR. NO. 039-0048



NOTE A
 1 1/2" Holes - 1" deep in top R.
 for pintles. Thread or press fit
 pintles into bottom R.

NOTE B
 1 1/2" Holes for 1 1/4" anchor bolts
 1 1/2" x 2 1/2" x 2 1/2" R. Washers
 under nut.

NOTE C
 1 1/2" Holes 1" deep in top R.
 only for 1 1/4" pintles.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D* (Side of brg. away from fixed brg.)
 $D^* = 1/8"$ per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
 D** (Side of brg. toward fixed brg.)
 $D^{**} = 1/8"$ per each 100' of expansion for every 15° rise above the normal temp. of 50°F.
- b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

Bearing 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 3/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other pins.

BRIDGE NO. †
 039-0048
 FOR INFORMATION ONLY

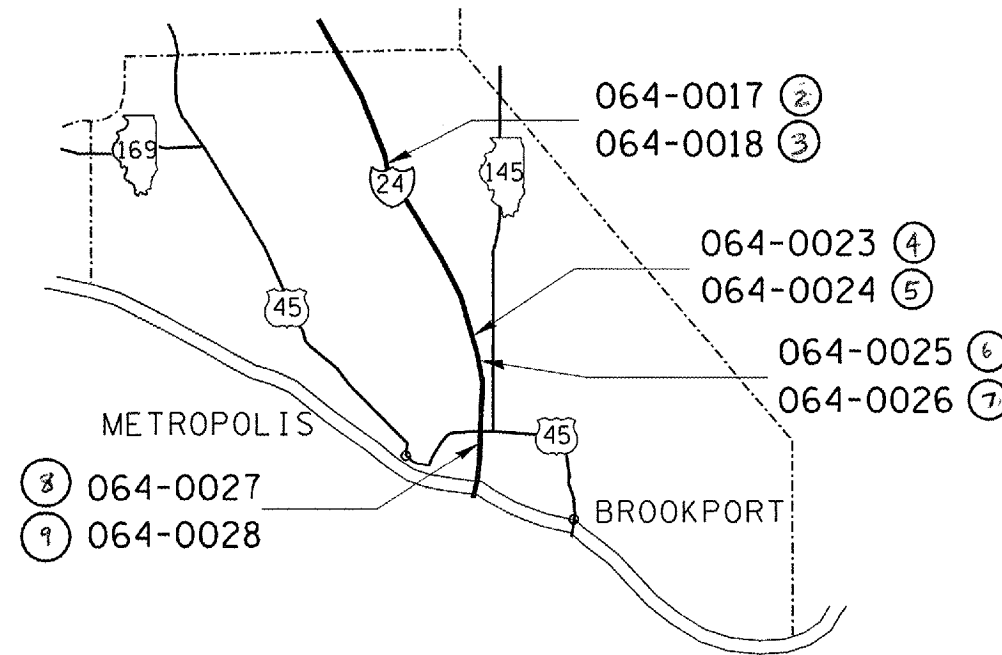
DESIGNED <i>May 4 1972</i>	EXAMINED <i>11 1972</i>
CHECKED <i>James P. ...</i>	PASSED
R. P. Summer	APPROVED
DRAWN P.G. Barnett	
CHECKED JP	

BEARING DETAILS
 F.A. RT. 100 SEC. 130-IVB
 JACKSON COUNTY
 STATION 247+02.81

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	.	VARIOUS	48	13
FED. ROAD DIST. NO. 7		ILLINOIS		

D-9 BRIDGE PAINTING FY06-1



M A S S A C

<p>② 064-0017 ③ 064-0018</p>	<p>4 MILES SOUTH OF JOHNSON COUNTY LINE INTERSTATE 24 OVER BEAR CREEK - MILEPOST 27.5 LENGTH: 150.8 FT. WIDTH: 41.7 FT. ADT: 8400 36% TRUCKS</p>
<p>④ 064-0023 ⑤ 064-0024</p>	<p>5 MILES NORTH OF U.S. ROUTE 45 INTERSTATE 24 OVER MASSAC CREEK - MILEPOST 32.3 LENGTH: 156.8 FT. WIDTH: 41.7 FT. ADT: 8400 36% TRUCKS</p>

<p>⑥ 064-0025 ⑦ 064-0026</p>	<p>4 MILES NORTH OF U.S. ROUTE 45 INTERSTATE 24 OVER TR 86 - MILEPOST 33.2 LENGTH: 118.5 FT. WIDTH: 43.7 FT. ADT: 8400 36% TRUCKS</p>
<p>⑧ 064-0027 ⑨ 064-0028</p>	<p>2 MILES NORTH OF U.S. ROUTE 45 INTERSTATE 24 OVER FAS 962 (COUNTRY CLUB ROAD) MILEPOST 35 LENGTH: 130.5 FT. WIDTH: 43.7 FT. ADT: 8400 36% TRUCKS</p>

B.M. #30 - R.R. Spike in SE Root
28' Cypress - 250' RT Sta.
253+26 Elev. 340.12

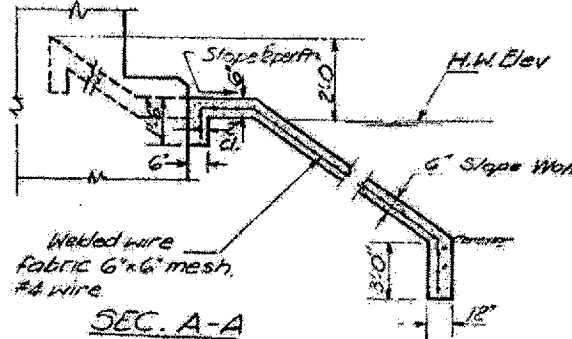
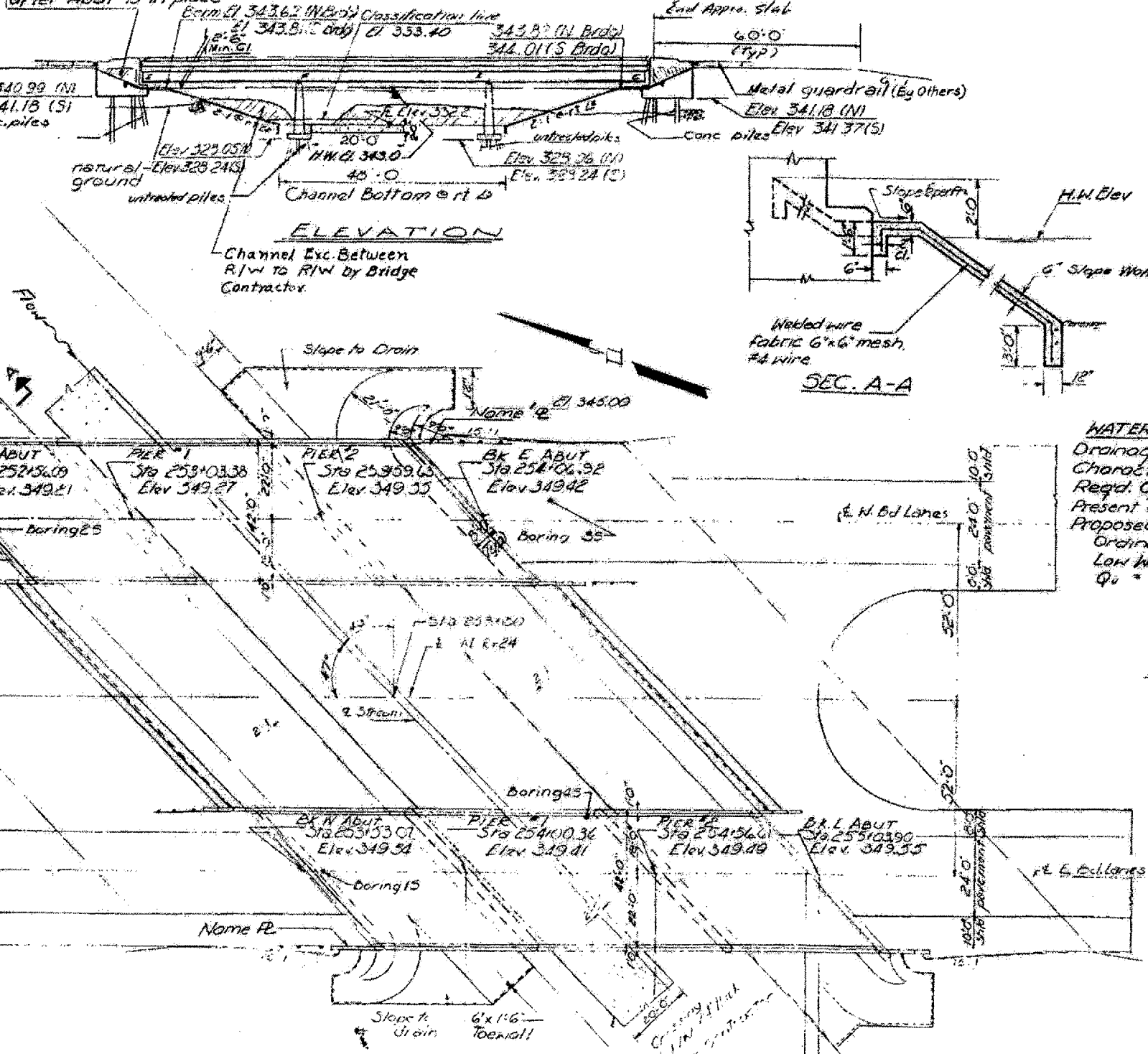
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 14 OF 48
CONTRACT 98941

This portion of Embankment
backfill by Bridge Contractor
after Abut 15 in place.

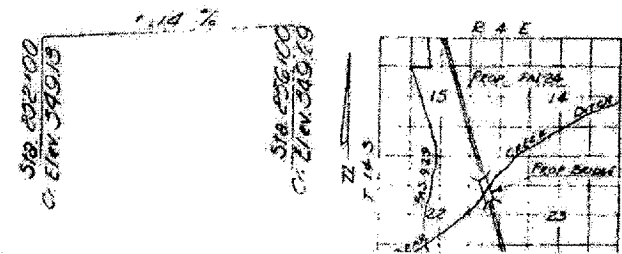
STATION 253+80
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 24 SEC. 64-1B-1
F.A. PROJ. 1-24-1141
LOADING HS20/AL1

NAME PLATE
See Std 2113-1



WATERWAY INFORMATION
Drainage Area - 11,372 acres
Character - rolling, wooded
Regd. Opening (50yr Fl) 700 sq. ft
Present Opening - none
Proposed Opening - 700 sq. ft
Ordinary Flow - Elev. 332.7
Low Water Flow - Elev. 332.4
Q₁₀ = 3560 cfs

F.A.I. RT. 24 PROFILE



TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class B Excav for Cr	Cu Yds		470	470
Structural Steel	LS	1		1
Bridge Seat Sealant	L.S.		2.5	2.5
Class A Concrete	Cu Yds	278.6	514.0	582.6
Class X Concrete	Cu Yds			582.6
Aluminum Reinfg	Lbs	586		586
Reinforcement Bars	Lbs	11,111	30,580	41,691
Unstaked Piles (concrete)	Linear Ft		4641	4641
Concrete Piles	Linear Ft		2850	2850
Test Piles (Timber)	Linear Ft		2	2
Test Piles (Concrete)	Linear Ft		2	2
Protective Oil	Gal	1200		1200
Paint	Gal		2	2
Shop & Mill	Linear Ft		2000	2000

DESIGN STRESSES
F_c = 12,000 psi (Deck Slab)
F_c = 12,000 psi (Cure, Parapet, Sub)
F_s = 20,000 psi (Reinfg)
F_s = 20,000 psi (Struct)
W_c = 75 psi (Figs)
n = 10
E_{mod} = 30,000,000 psi (Composite)
LOADING HS20/AL1

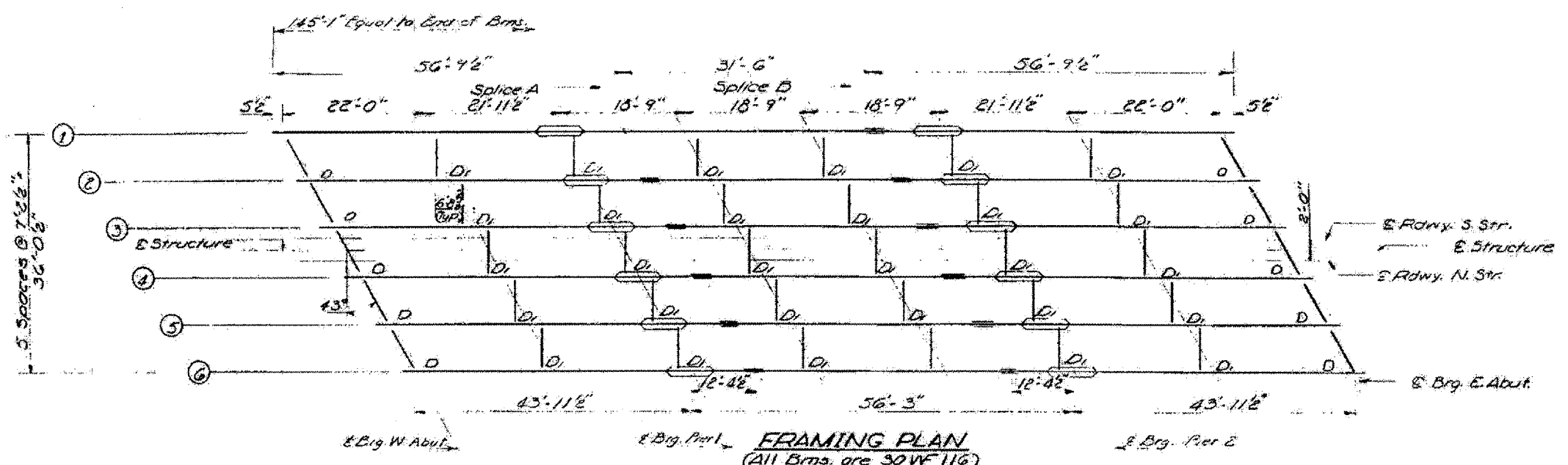
DESIGNED: [Signature]
CHECKED: L. M. Chou
DRAW: [Signature]
CHOC: [Signature]
EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]
SEPT 24 1968

BRIDGES NO. 2 AND NO. 3
STRUCTURES
064-0017
064-0018
FOR INFORMATION ONLY

GENERAL PLAN
& ELEVATION
F.A.I. RT. 24 OVER
BEAR CREEK DITCH
F.A.I. RT. 24 SEC. 64-1B-1
NASSAU COUNTY
STA 253+80

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

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 16 OF 48
ELEV. NO. CONTRACT 98941



Beam No.	E. Brg. W. Abut.	Pier 1	Splice A	Splice B	Pier 2	E. Abut.
1	347.12	348.13	348.20	348.24	348.56	348.32
2	348.28	348.34	348.36	348.40	348.42	348.43
3	348.41	348.47	348.49	348.53	348.55	348.61
4	348.46	348.54	348.56	348.60	348.62	348.68
5	348.38	348.42	348.46	348.52	348.52	348.58
6	348.25	348.31	348.33	348.37	348.39	348.45

SOUTH STRUCTURE

Beam No.	E. Brg. W. Abut.	Pier 1	Splice A	Splice B	Pier 2	E. Brg. E. Abut.
1	348.30	348.41	348.43	348.47	348.49	348.55
2	348.43	348.55	348.57	348.61	348.63	348.69
3	348.61	348.67	348.69	348.73	348.75	348.81
4	348.52	348.62	348.64	348.69	348.70	348.76
5	348.45	348.51	348.53	348.57	348.59	348.65
6	348.31	348.37	348.39	348.43	348.45	348.51

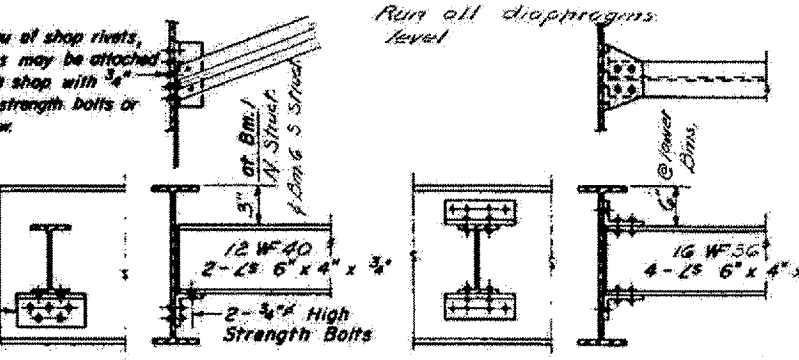
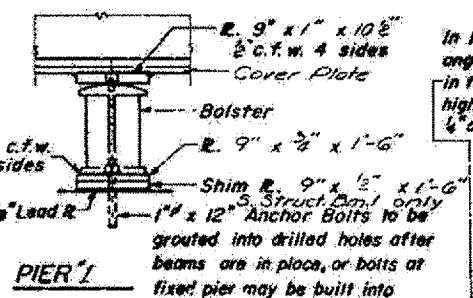
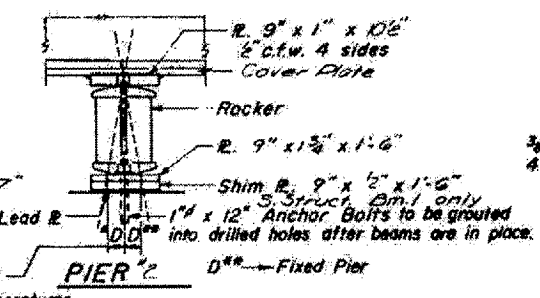
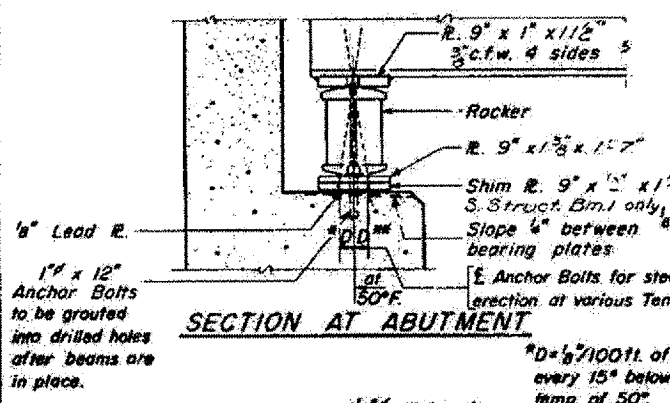
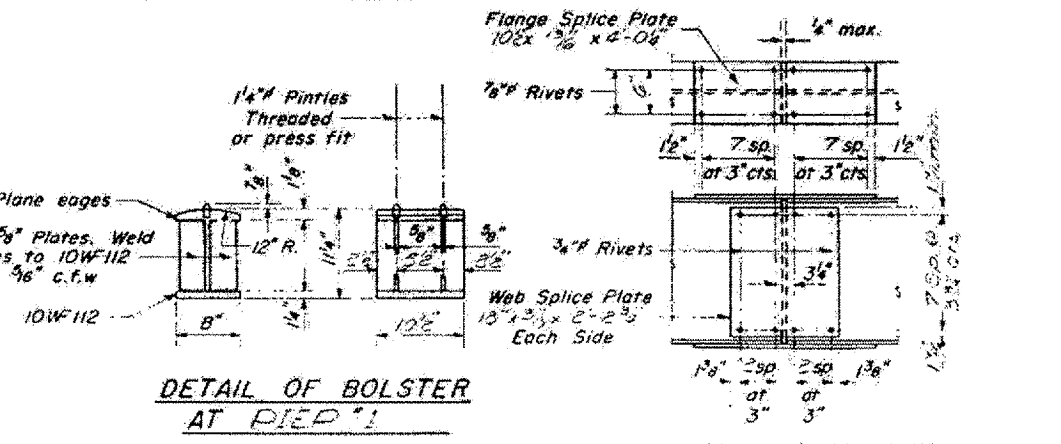
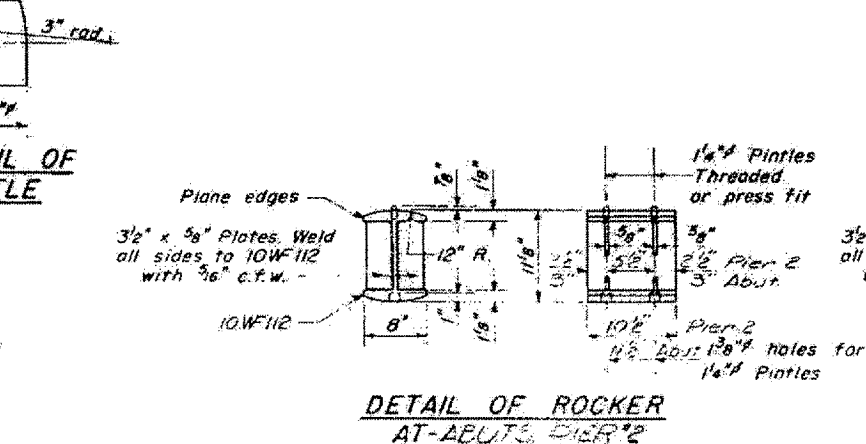
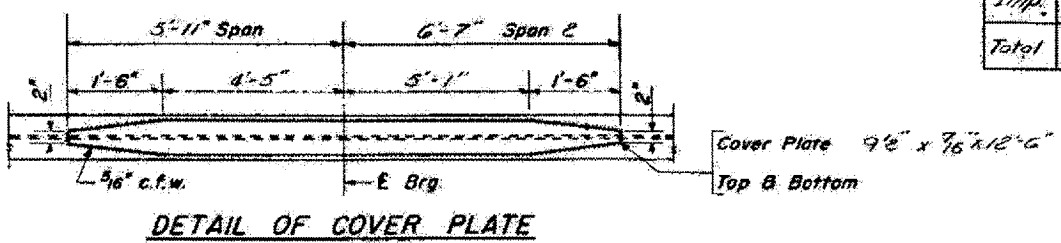
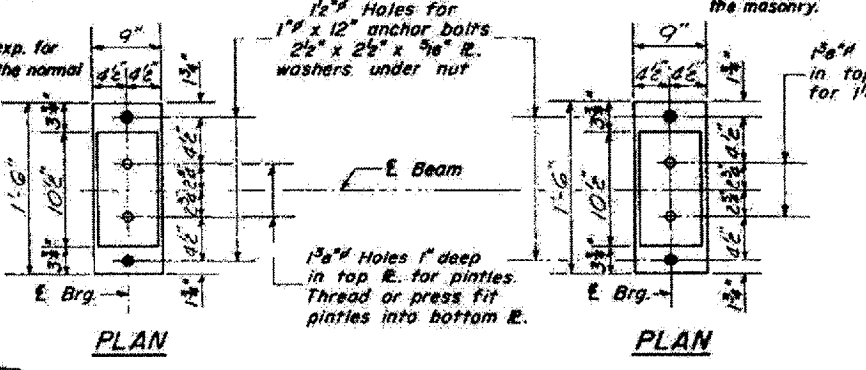
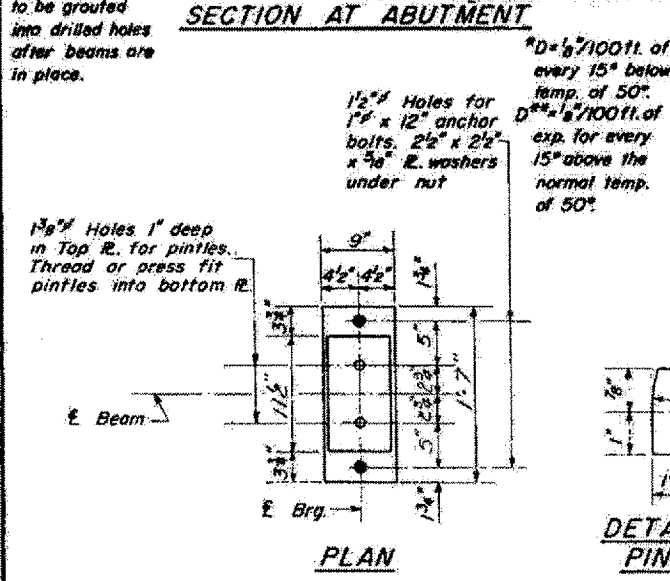


TABLE OF MOMENTS & REACTION (INTERIOR BMS. ONLY)

	Moment (Kip-ft unit)		Reactions (Kip)	
	0+L1 @ Pier	0.5L2 @ Abut.	@ Abut.	@ Pier
Q	146.5	317.0	149.1	15.6 66.1
R	274.5	241.0	264.0	34.7 44.0
Imp.	79.5	69.8	70.0	
Total	500.5	627.8	511.1	53.5 110.1

Note: Weight of the structural steel on Snt. # 2

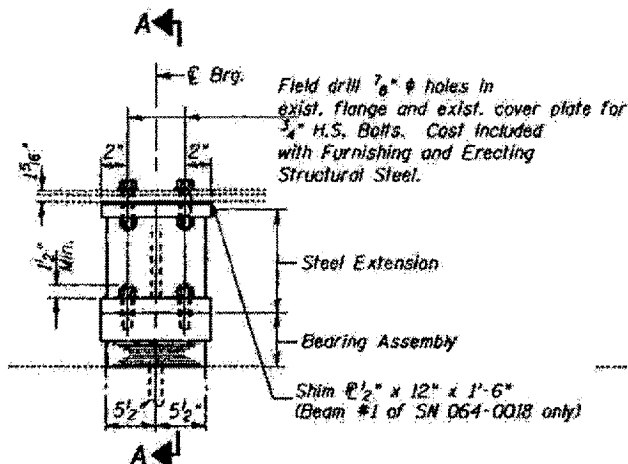


DESIGNED: [Signature]
CHECKED: P.G. Barnett, D. Burrows, W.A. Sausaman Jr.
DRAWN: W.A. Sausaman Jr.
EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

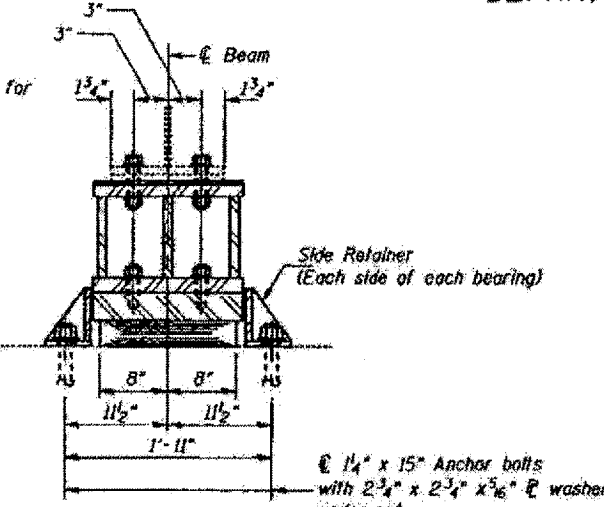
BRIDGES NO. 2 AND NO. 3
STRUCTURES 064-0017
064-0018
FOR INFORMATION ONLY
STRUCTURAL STEEL
I.A.I. RT. 24 SEC. 64-1B-1
MASSAC COUNTY
STA 255-50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 17 OF 48
CONTRACT 98941

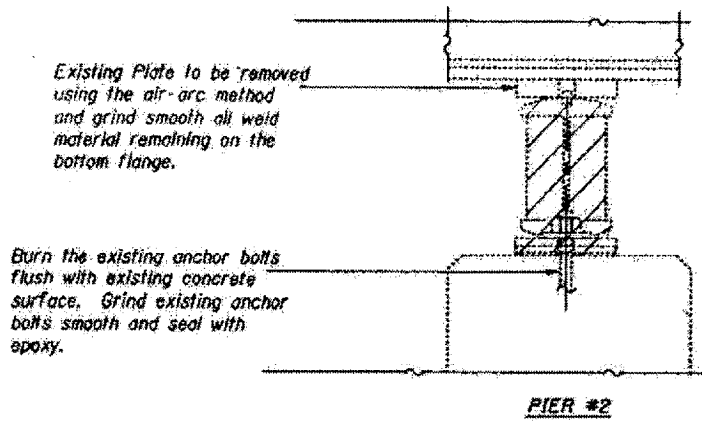


ELEVATION AT PIER #2



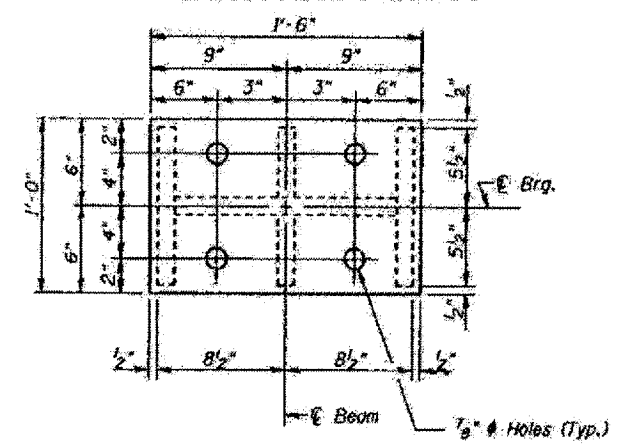
SECTION A-A

Notes: See sheet 151 for Anchor Bolt installation.

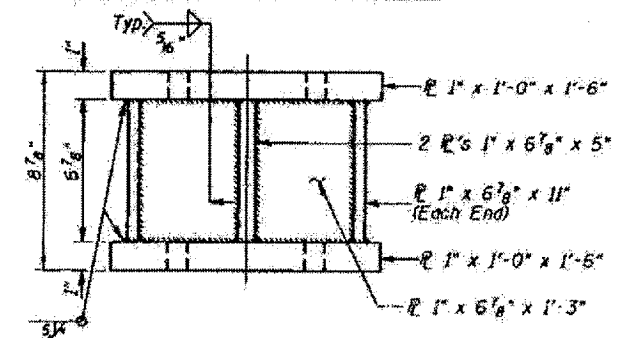


EXISTING BEARING REMOVAL DETAILS

Cost is included with Jack and Remove Existing Bearings

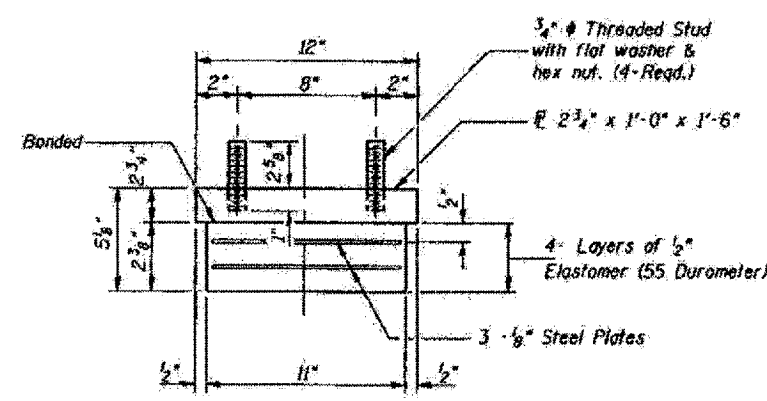


PLAN-TOP & BOTTOM PLATE



STEEL EXTENSION AT PIER #2

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

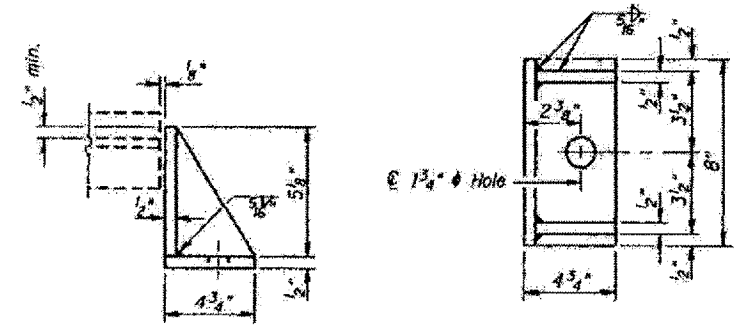
Note: Shim plates shall not be placed under Bearing Assembly.

GIRDER REACTIONS

RP	(K)	75.52
R ₁	(K)	44.58
Imp.	(K)	13.37
R (Total)	(K)	133.47

Notes:

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. The minimum jock capacity required is 75 Tons. New steel extensions, side retainers, connection bolts, any shim and anchor bolts are included in "Furnishing and Erecting Structural Steel". Hatched areas indicate Jack and Remove Existing Bearings. Existing diaphragm removal and new diaphragm erection shall be coordinated with drilling holes in bottom flange for bearing attachment, if necessary, to provide clearance for the drill.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Furnishing and Erecting Structural Steel.

DESIGNED:	CMW
CHECKED:	TWH
DRAWN:	CMW
CHECKED:	TWH

BILL OF MATERIAL

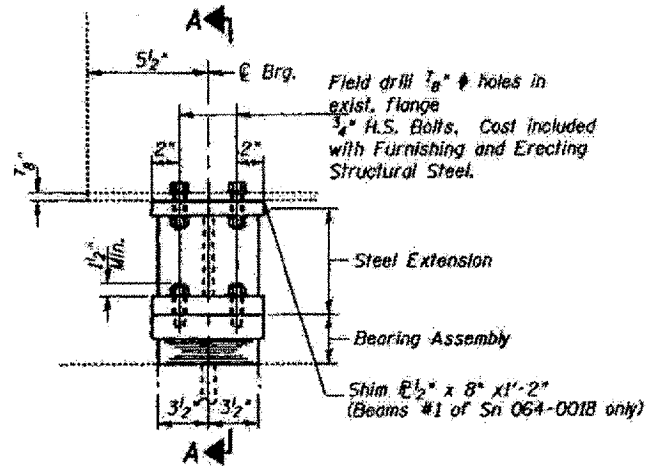
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12
Jack and Remove Existing Bearings	Each	12

BRIDGES NO. 2 AND NO. 3
STRUCTURES 064-0017 064-0018
FOR INFORMATION ONLY

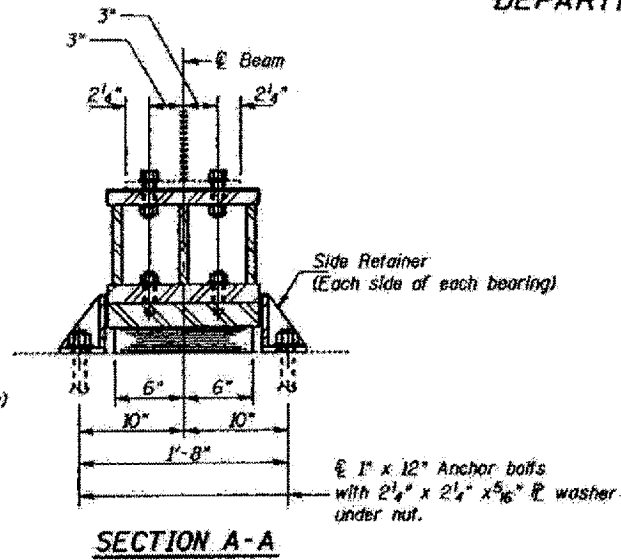
PIER #2
TYPE I ELASTOMERIC BEARING
MASSAC COUNTY
S.N. 064-0017 (M.B.)
S.N. 064-0018 (E.B.)
84L22-L3-13R5-1 BSMRT FY2002-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 18 OF 40
CONTRACT 98941



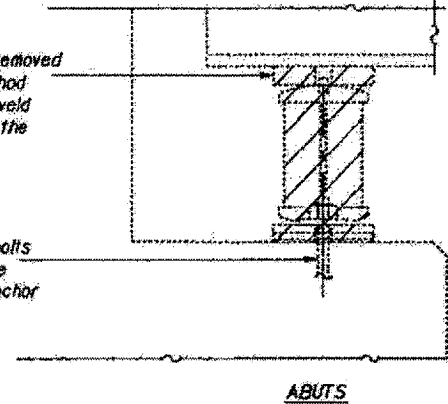
ELEVATION AT W. ABUT.



SECTION A-A

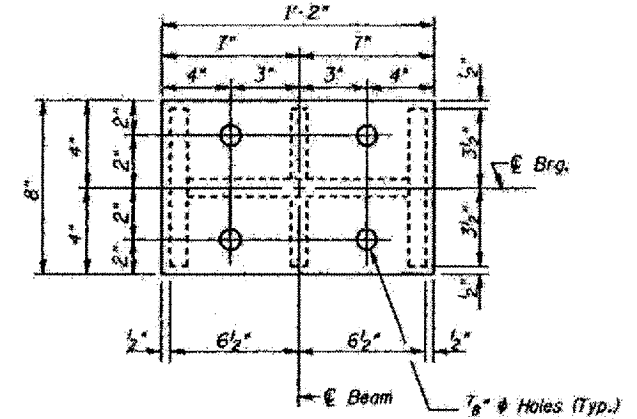
Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

Burn the existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy.



EXISTING BEARING REMOVAL DETAILS

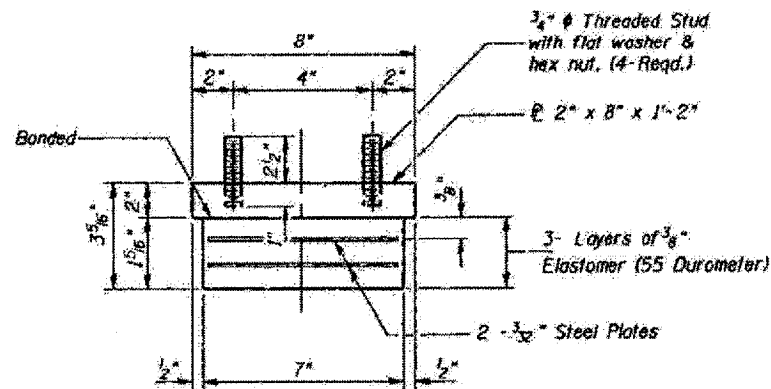
Cost is included with Jack and Remove Existing Bearings



PLAN-TOP & BOTTOM PLATE

TYPE I ELASTOMERIC EXP. BRG.

Notes: See sheet 151 for Anchor Bolt Installation.

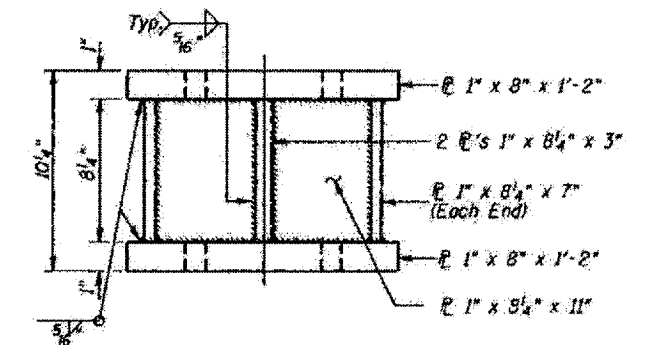


BEARING ASSEMBLY

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

GIRDER REACTIONS

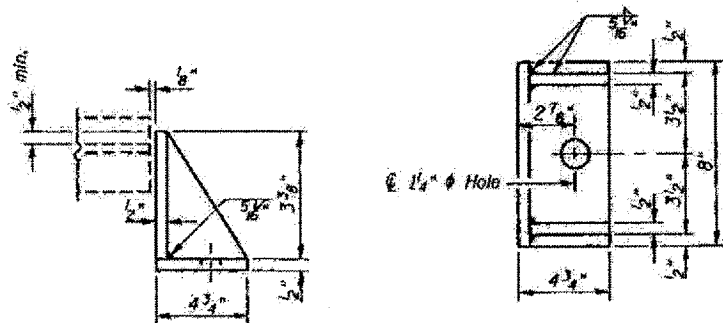
RP	(K)	21.81
RL	(K)	35.36
Imp.	(K)	10.61
R (Total)	(K)	67.78



STEEL EXTENSION AT WEST ABUT.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12
Jack and Remove Existing Bearings	Each	12



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Furnishing and Erecting Structural Steel.

Notes:

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. The minimum jack capacity required is 35 Tons.

New steel extensions, side retainers, connection bolts, any shim and anchor bolts are included in "Furnishing and Erecting Structural Steel".

Hatched areas indicate Jack and Remove Existing Bearings.

Existing diaphragm removal and new diaphragm erection shall be coordinated with drilling holes in bottom flange for bearing attachment, if necessary, to provide clearance for the drill.

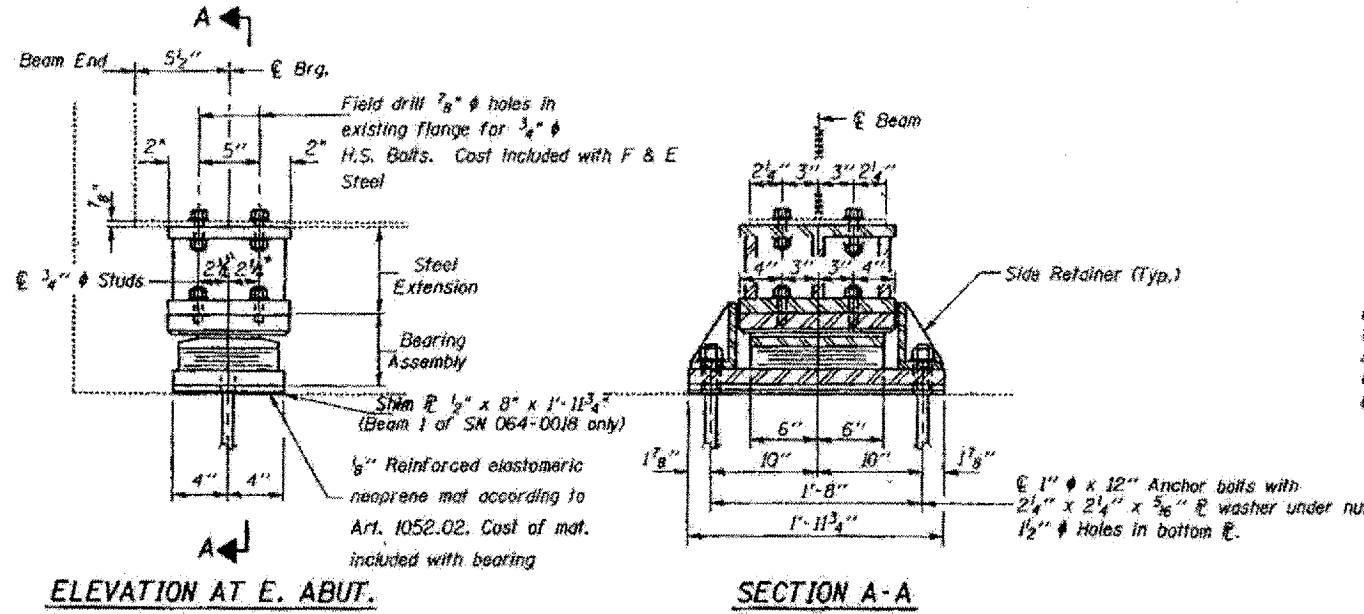
DESIGNED:	CMW
CHECKED:	TWH
DRAWN:	CMW
CHECKED:	TWH

BRIDGES NO. 2 AND NO. 3
STRUCTURES 064-0017 064-0018
FOR INFORMATION ONLY

WEST ABUTMENT
TYPE I ELASTOMERIC BEARING
MASSAC COUNTY
S.N. 064-0017 (W.B.)
S.N. 064-0018 (E.B.)

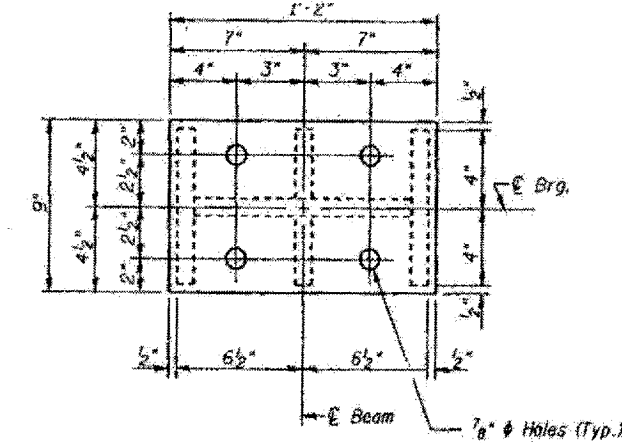
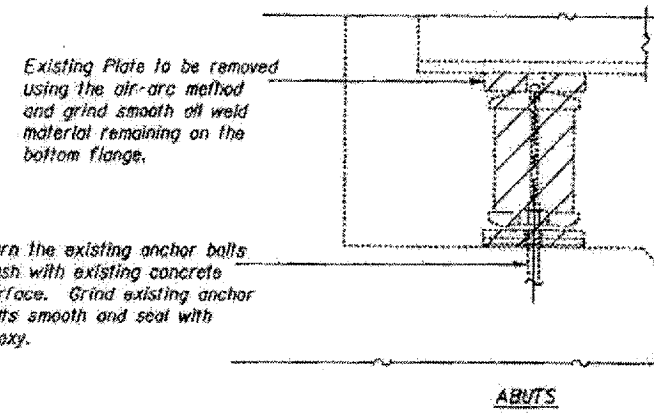
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 19 OF 48
CONTRACT 98941

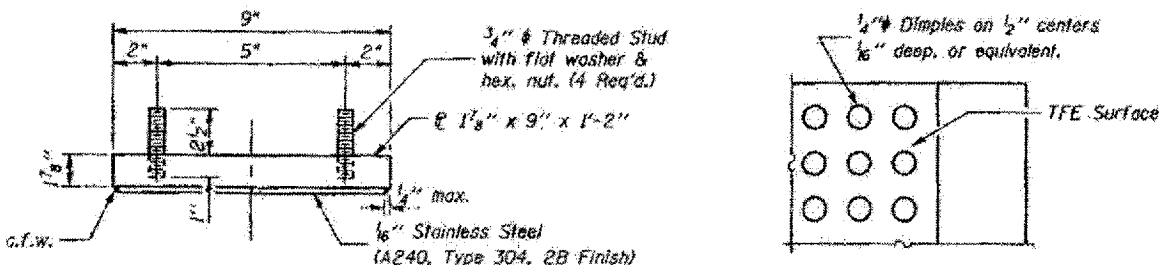


TYPE II TFE ELASTOMERIC EXP. BRG.

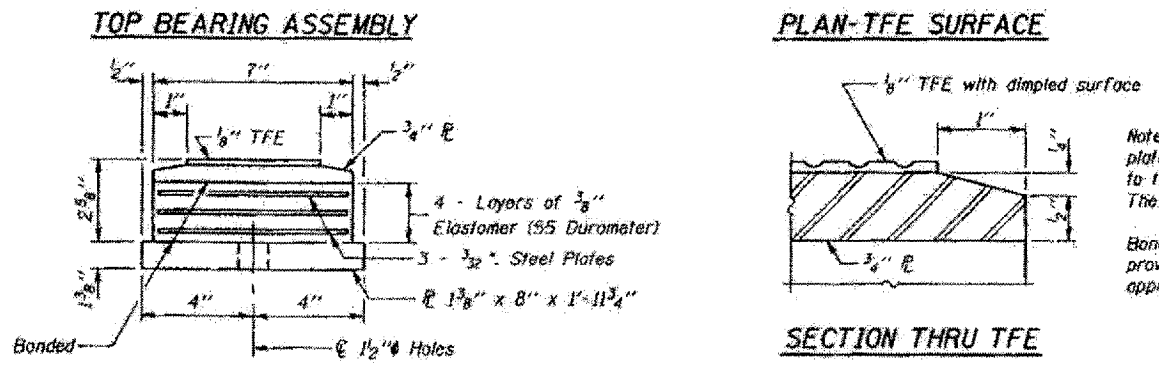
Notes: See sheet 151 for Anchor Bolt Installation.



PLAN-TOP & BOTTOM PLATE



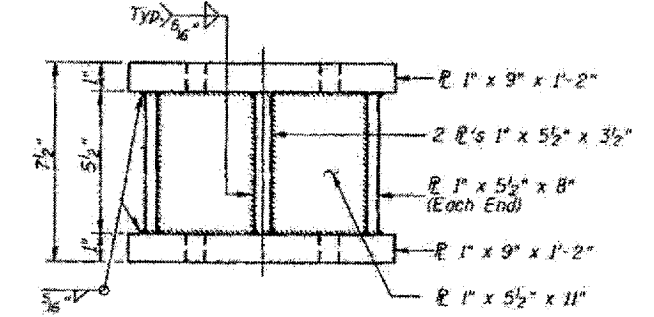
Notes:
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. The minimum jack capacity required is 35 Tons.
New steel extensions, side retainers, connection bolts, any shim and anchor bolts are included in "Furnishing and Erecting Structural Steel".
Hatched areas indicate Jack and Remove Existing Bearings. Existing diaphragm removal and new diaphragm erection shall be coordinated with drilling holes in bottom flange for bearing attachment, if necessary, to provide clearance for the drill.



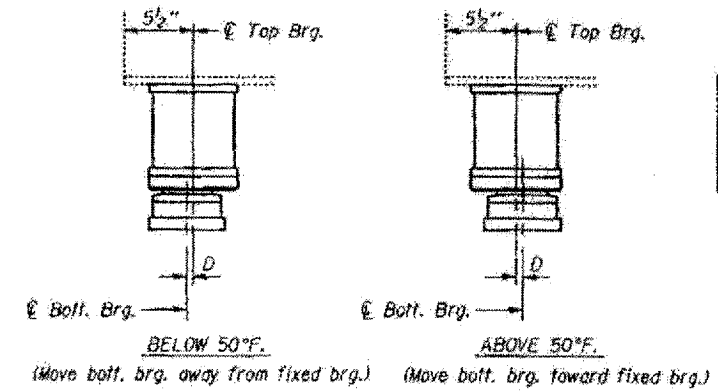
GIRDER REACTIONS

RP	(K)	21.81
RL	(K)	35.36
Imp.	(K)	10.61
R (Total)	(K)	67.78

Note: The 1/8" 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 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



STEEL EXTENSION AT EAST ABUT.



SETTING ANCHOR BOLTS AT EXP. BRG.
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

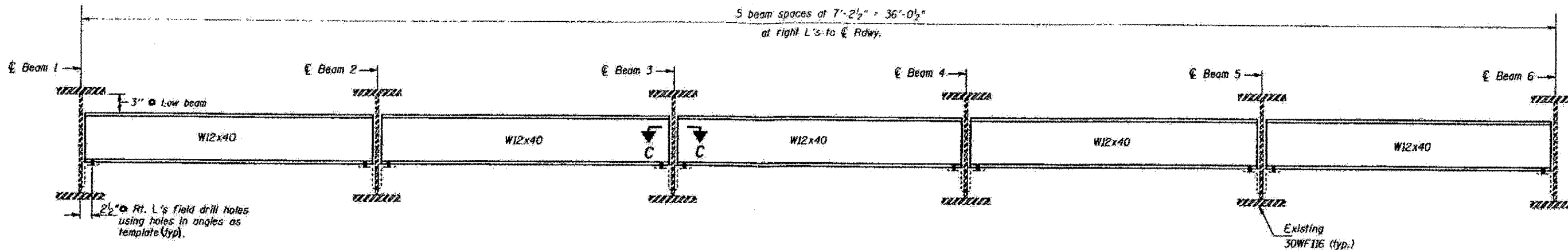
Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Jack and Remove Existing Bearings	Each	12

**BRIDGES NO. 2 AND NO. 3
STRUCTURES 064-0017 064-0018
FOR INFORMATION ONLY**

**EAST ABUTMENT
TYPE II ELASTOMERIC BEARING
MASSAC COUNTY
S.N. 064-0017 (W.B.)
S.N. 064-0018 (E.B.)**

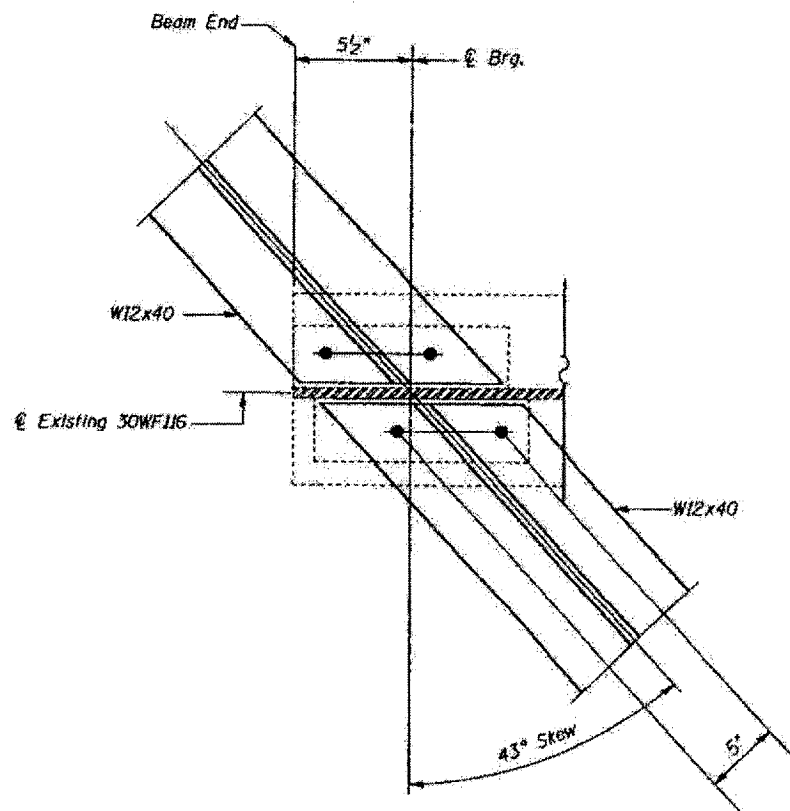
DESIGNED:	CMW
CHECKED:	TWH
DRAWN:	CMW
CHECKED:	TWH

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

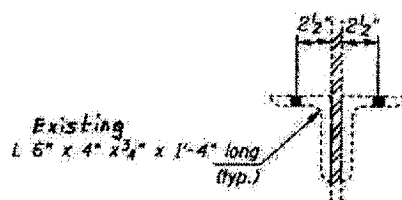


DIAPHRAGM REPLACEMENT AT ABUTMENTS

Required: 20 - W12 x 40 x 9'-9 3/8" long



SECTION C-C



CLIP ANGLES

DESIGNED:	CMW
CHECKED:	TWH
DRAWN:	CMW
CHECKED:	TWH

Notes: 5/16" ϕ Holes for new 3/4" H.S. Bolts shall be used for all diaphragm connections. Two hardened washers shall be required at diaphragm connections. Existing clip angles are welded to the webs and are to be reused.

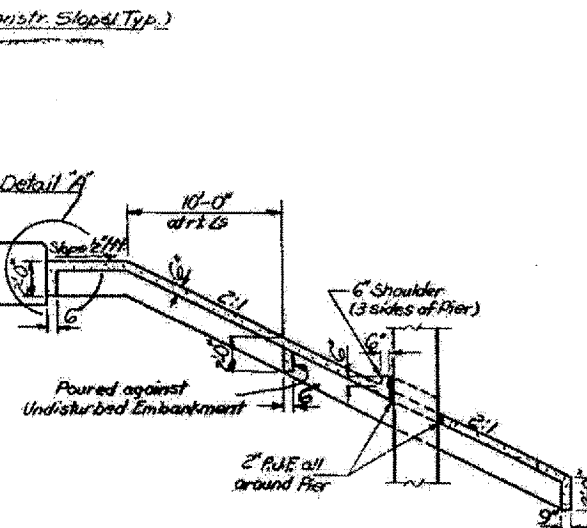
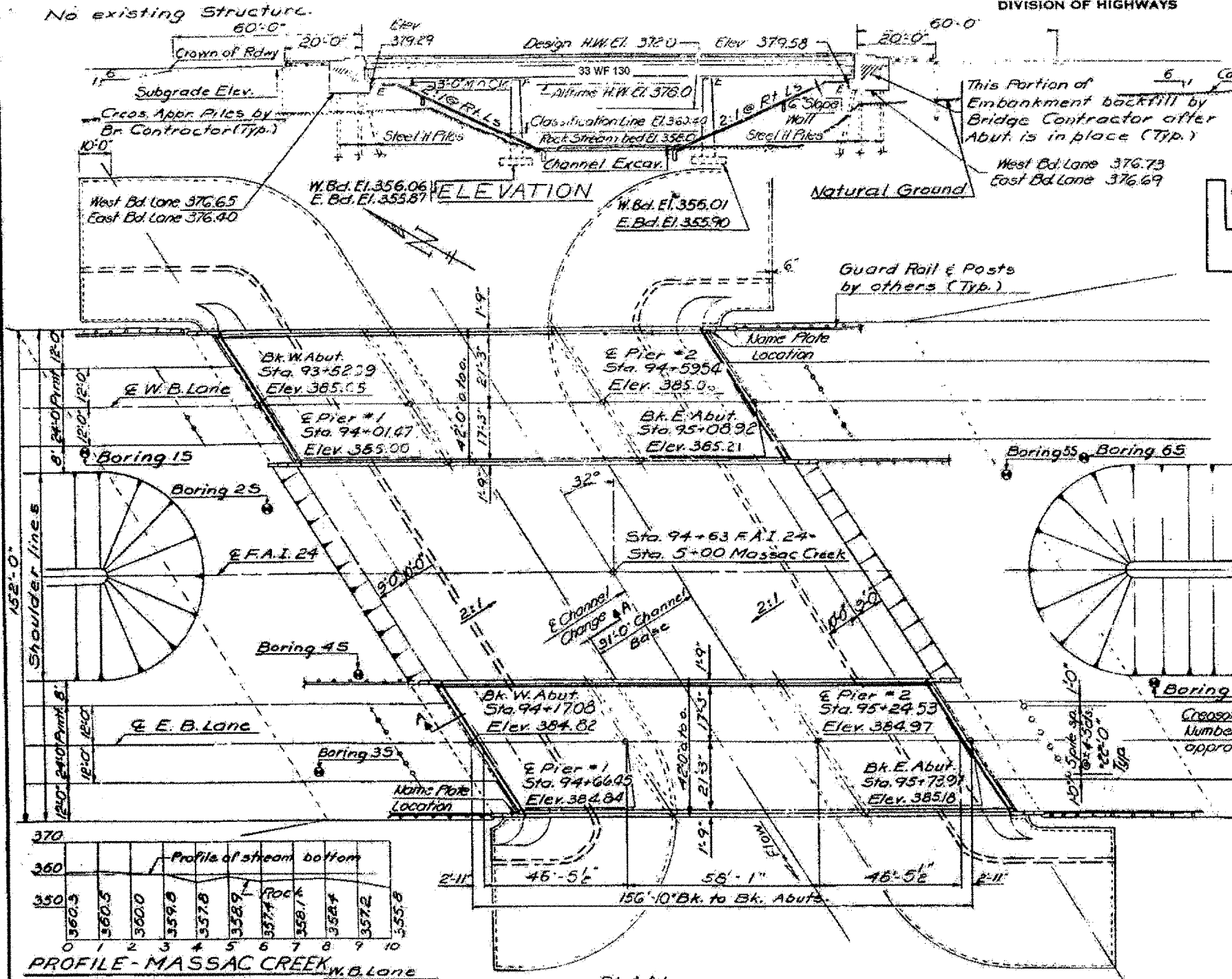
BRIDGES NO. 2 AND NO. 3
STRUCTURES 064-0017 064-0018
FOR INFORMATION ONLY

DIAPHRAGM REPLACEMENT
6412.2-13-13HS-1-BSMART-FY2008-2

B.M. #7 - Elev. 385.55 Boat Spike in 15" Catalpa
222' Lt. of Sta. 96+08.

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

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 21 OF 48
CONTRACT 98941



SECTION A-A

DETAIL A

GENERAL NOTES

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

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ "⁺; open holes $\frac{13}{16}$ "⁺, unless otherwise noted.

Calculated weight of Structural Steel = 297,040

Diaphragm connections may be adapted to shop welding subject to approval by the Engineer.

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# per 100 sq. ft.

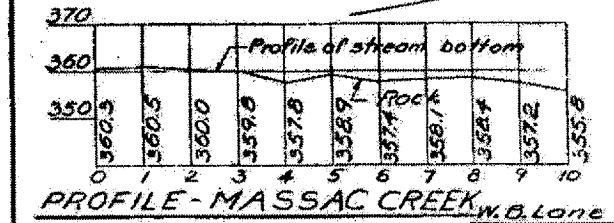
Layout of slope walls may be varied in the field to suit ground conditions as directed by the Engineer.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

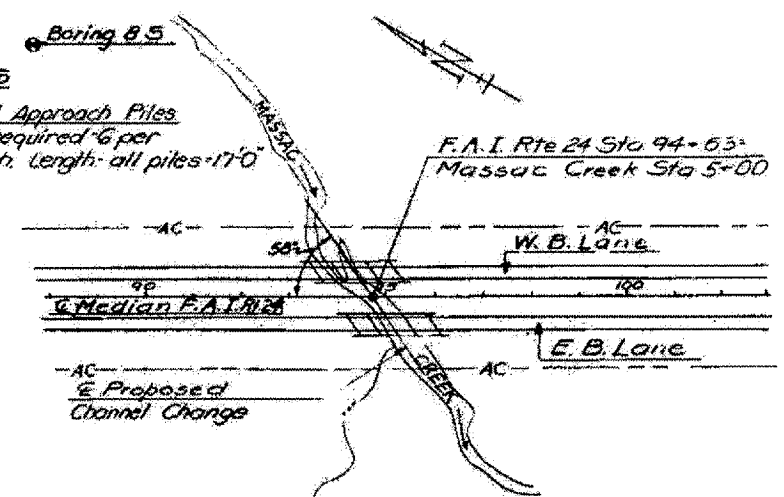
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

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

The contractor shall drive one B5P36 test pile in a permanent location at the West Abutment-West Bound lane and one in a permanent location at the East Abutment-East Bound lane as directed by the engineer, before ordering the remainder of the piles.



PLAN



CHANNEL CHANGE SKETCH

CHANNEL SECTION

STATION 94+63.00
BUILT 19 BY
STATE OF ILLINOIS
F.A.I.R.T. 24 SEC. 64-2B-1
F.A. PROJ. I-24-100
LOADING HS 20 FT.

PROPOSED PROFILE F.A.I.R.T. 24

DESIGNED	<i>[Signature]</i>	EXAMINED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>	PASSED	<i>[Signature]</i>
DRAWN	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>		

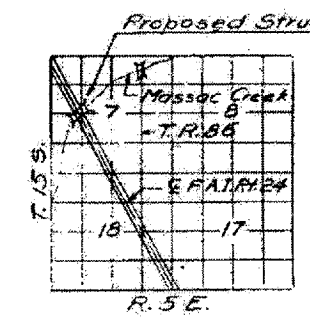
WATERWAY INFORMATION

Drainage Area 13,330 acres.
Character: hilly, wooded, cultivated
Required Opening (50 years freq) 780 Sq. Ft.
Proposed Opening 785 Sq. Ft.
Q = 4550 cfs
Ordinary Water Elev. 360.10
Low Water Elev. 359.40

DESIGN STRESSES

f_c = 1200 p.s.i. Deck
 f_c = 1400 p.s.i. Sub. Curv. Par.
 f_c = 75 p.s.i. Ftgs.
 f_s = 20,000 p.s.i. Reinf.
 f_s = 20,000 p.s.i. Struct. (A-30)
 n = 10
& Deflection = $\frac{1}{800}$

Loading: HS 20-44 & Alt.



LOCATION SKET

BRIDGES NO. 4 AND NO. 5
STRUCTURES 064-0023 064-0024
FOR INFORMATION ONLY

GENERAL PLAN & ELEVATION
PROJECT: I-24-100/31

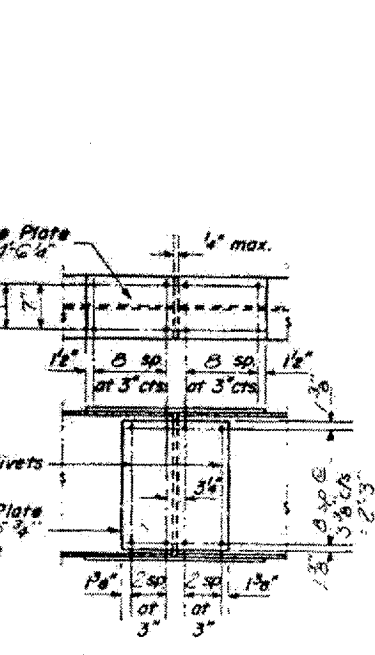
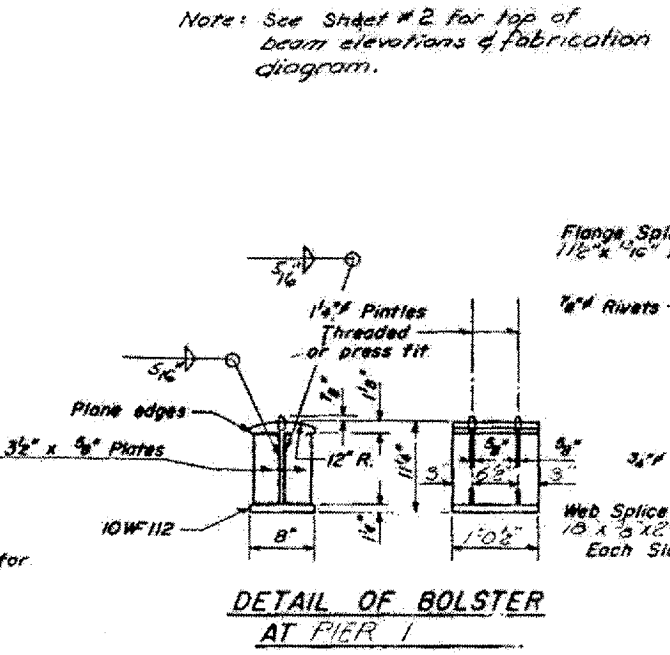
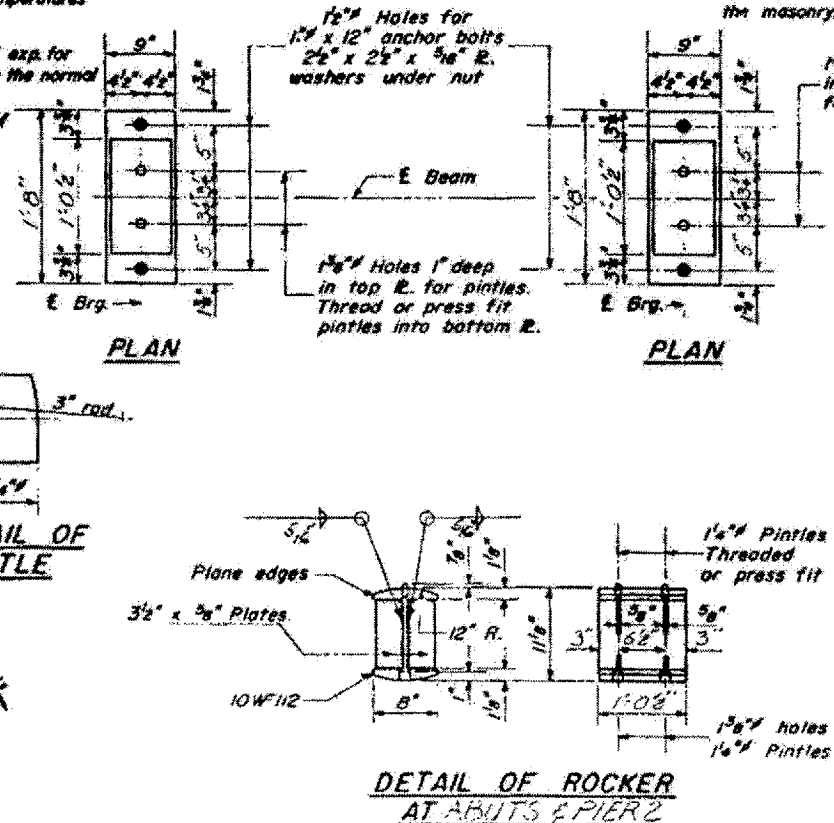
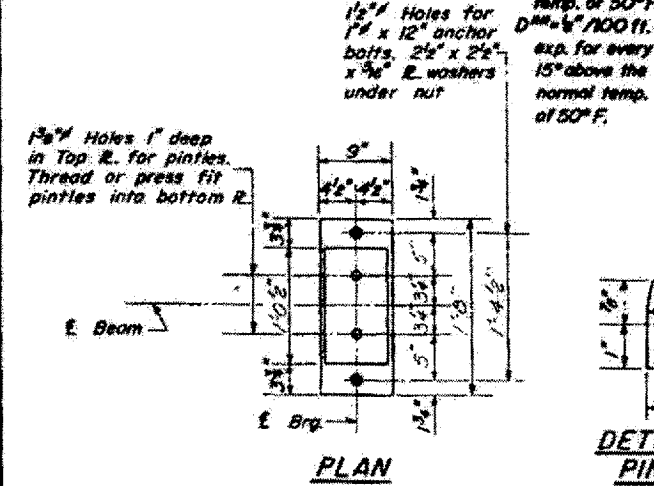
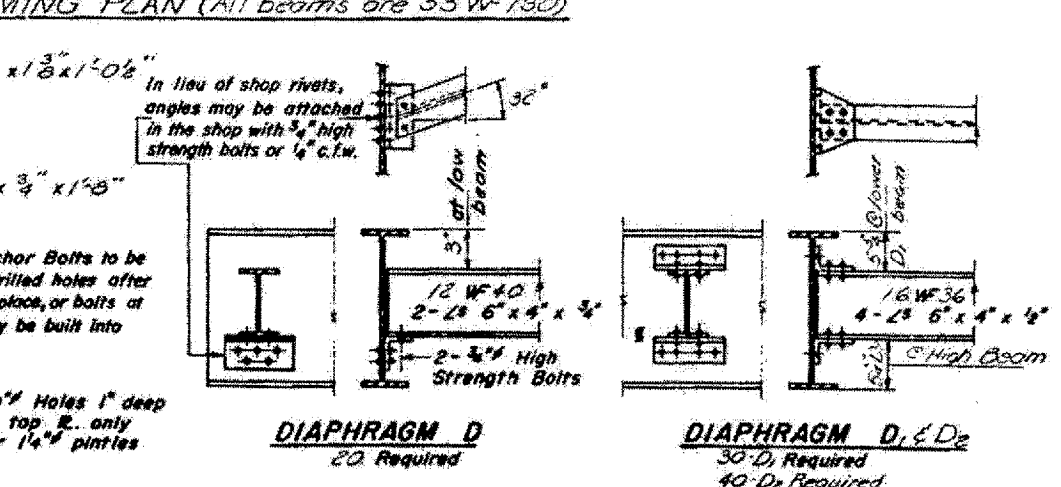
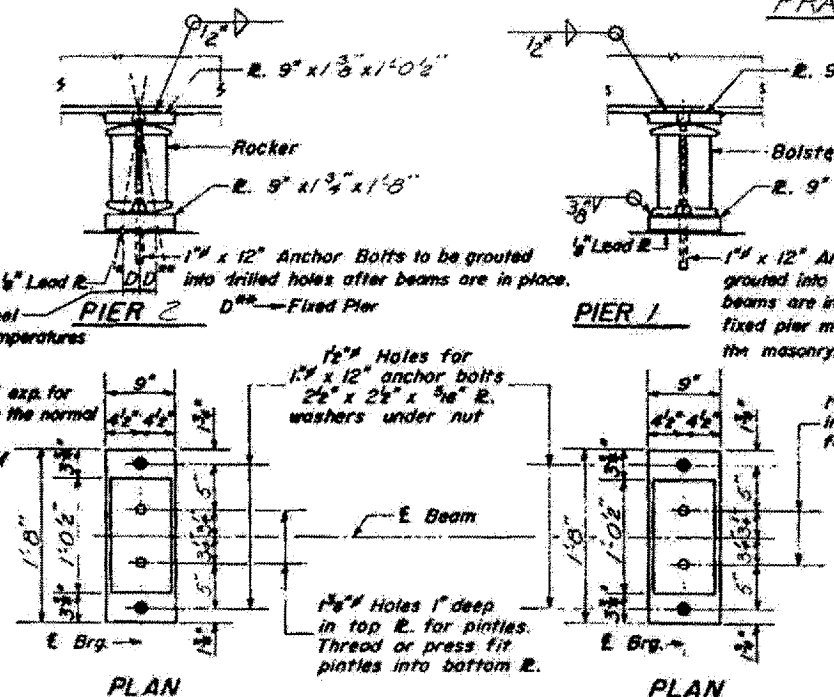
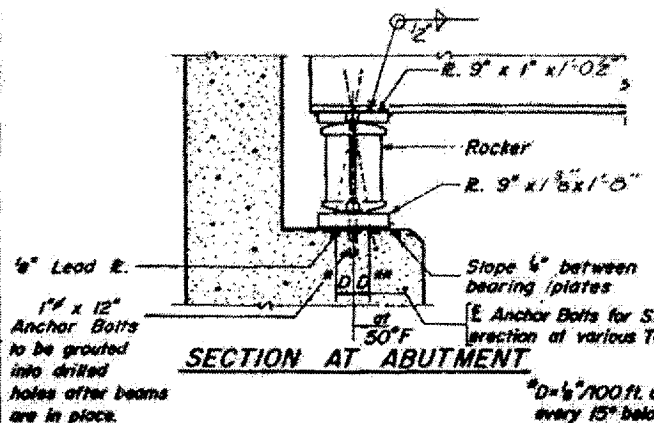
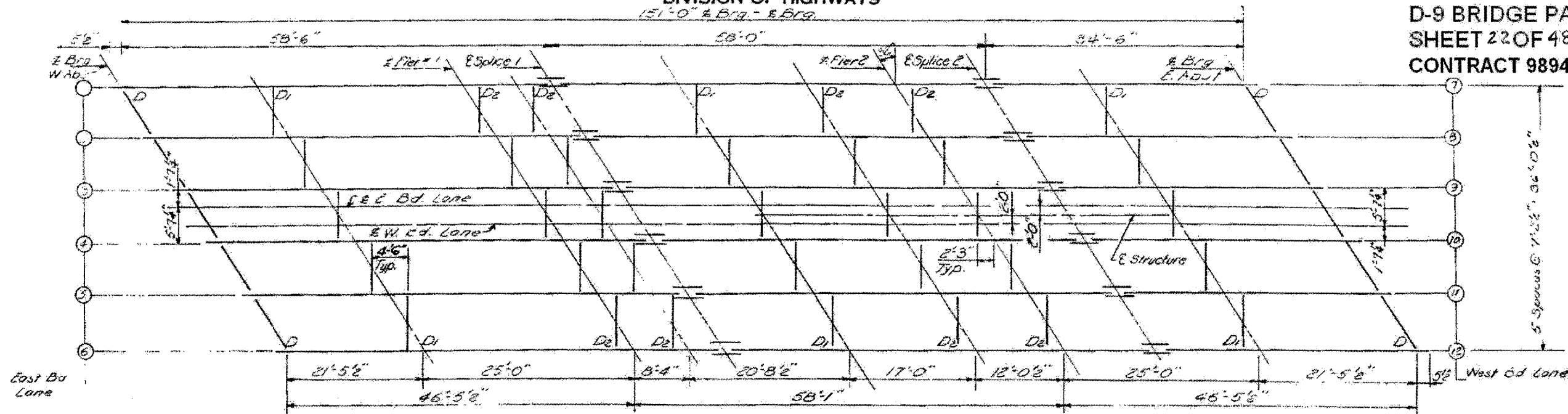
F.A.I.R.T. 24 OVER MASSAC CREEK
F.A.I.R.T. 24 SECTION 64-2B-1

MASSAC COUNTY
STA. 94 + 6.300

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

151'-0" E. Brg. - E. Brg.

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 22 OF 48
CONTRACT 98941



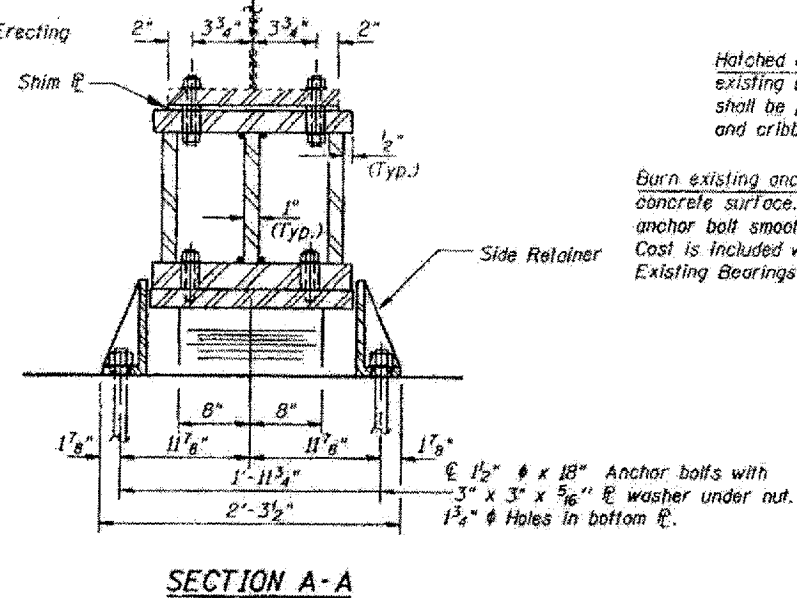
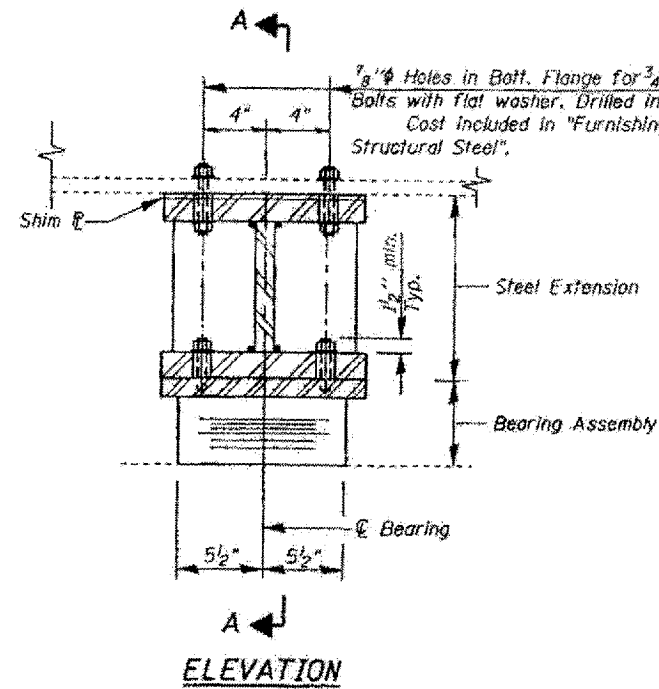
DESIGNED *Clayton J. Pickett*
CHECKED *James W. Bennett*
DRAWN *D. Derringer*
APPROVED *W. A. Soussan Jr.*

EXAMINED *W. A. Soussan Jr.*
PASSED *W. A. Soussan Jr.*
APPROVED *W. A. Soussan Jr.*

DATE: Dec 8 1960

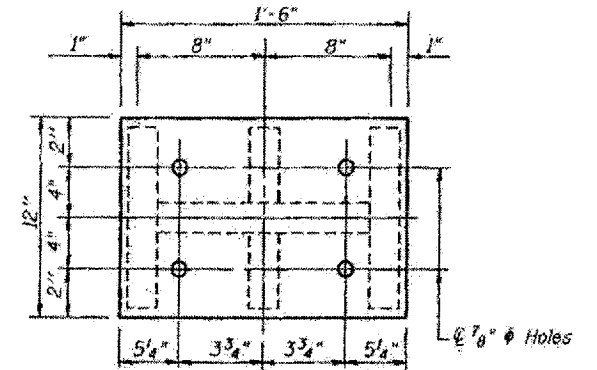
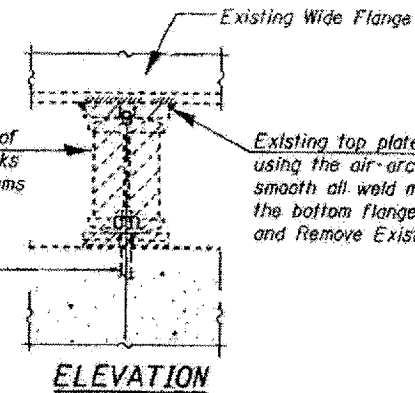
BRIDGES NO. 4 AND NO. 5
STRUCTURES 064-0023 064-0024
FOR INFORMATION ONLY

STRUCTURAL STEEL
FA. RT. 24 SEC. 64-2B-1
MASSAC COUNTY
STA 94+63.00

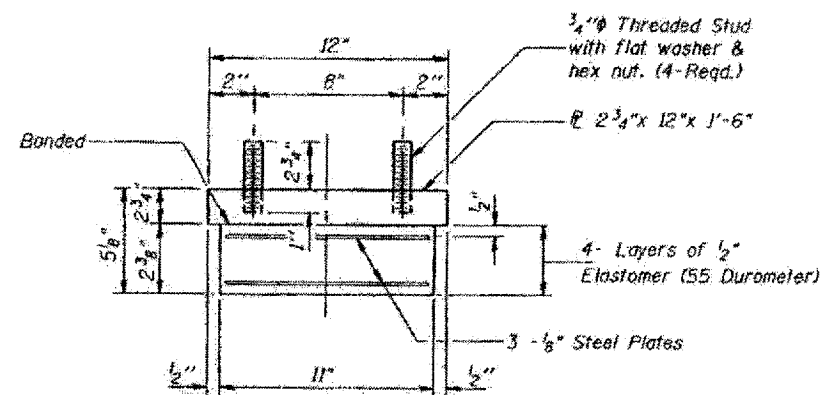


Hatched areas indicate removal of existing bearing and plates. Jacks shall be placed under exist. beams and cribbing shall be provided.

Burn existing anchor bolts flush with concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost is included with "Jack and Remove Existing Bearings".



TYPE I ELASTOMERIC BEARING PIER 2



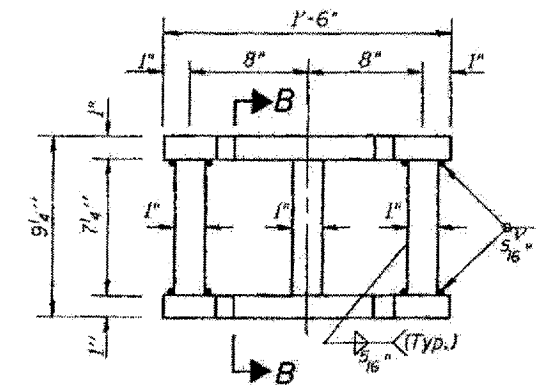
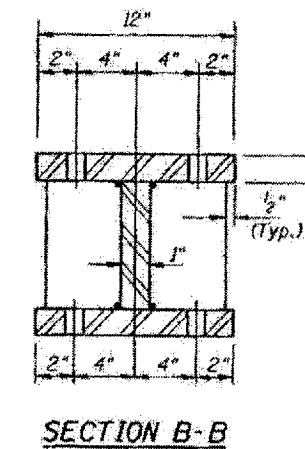
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly

***INTERIOR BEAM REACTION TABLE**

	SERVICE LOADS
R ϕ (K)	85.8
R ϕ (K)	44.7
Imp (K)	12.6
R Total (K)	143.1

* Min. Jack capacity at each Beam shall be 85 Tons.



BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12

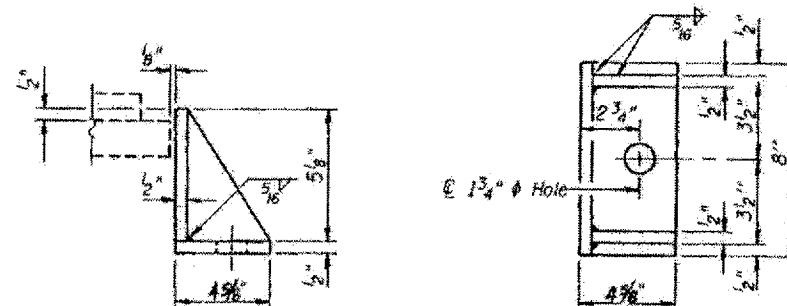
Notes:

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

For anchor bolt installation details see sheet # 8 of 11.

New steel extensions, side retainers, connection bolts, anchor bolts, and shim plates are included in "Furnishing and Erecting Structural Steel".

Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

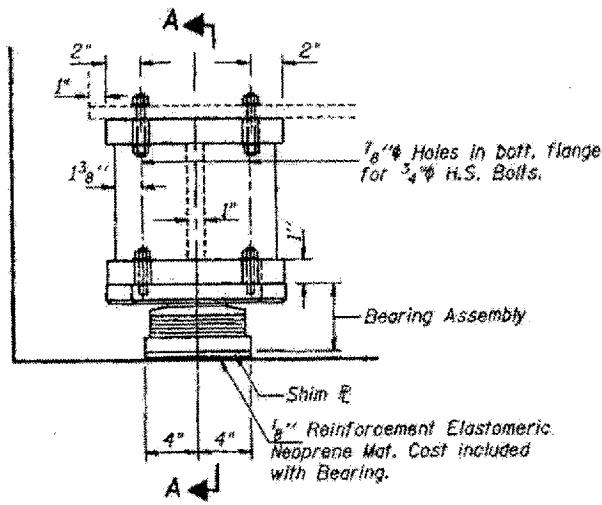
DESIGNED	J.C.P.
CHECKED	
DRAWN	T.F.
CHECKED	



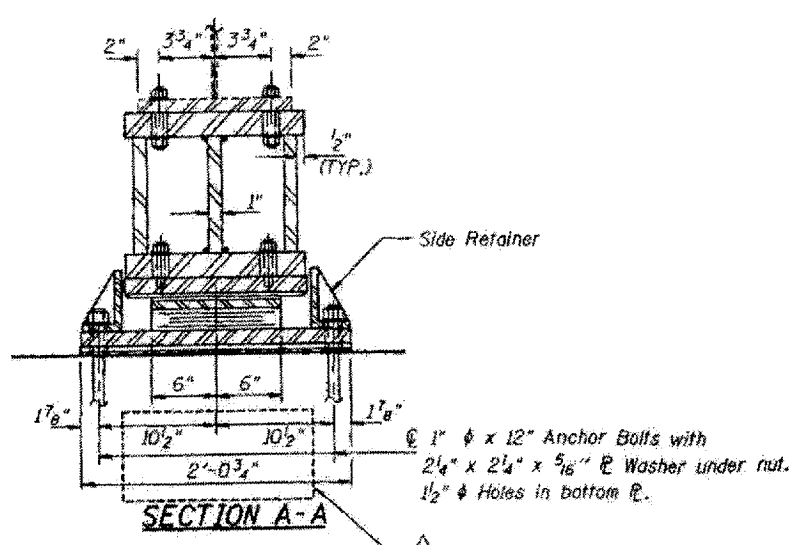
BRIDGES NO. 4 AND NO. 5
STRUCTURES 064-0023 064-0024
FOR INFORMATION ONLY

ELASTOMERIC BEARING TYPE I, PIER 2

64(1),2,2-1,3-1,3)RS-1, BSMRT FY2002-2

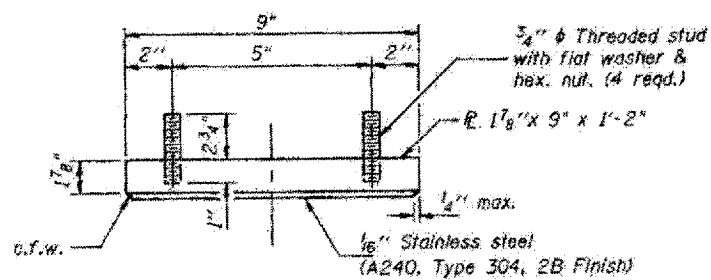


ELEVATION AT ABUT.

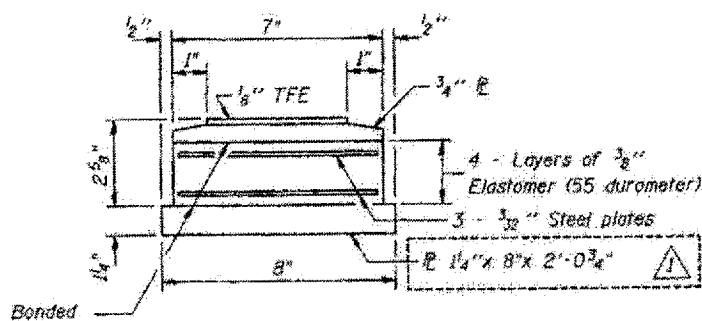


SECTION A-A

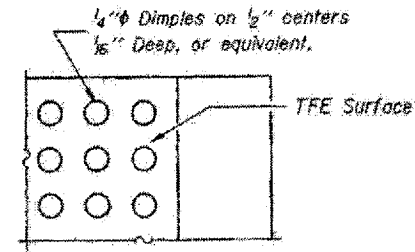
TYPE II ELASTOMERIC EXP. BRG.



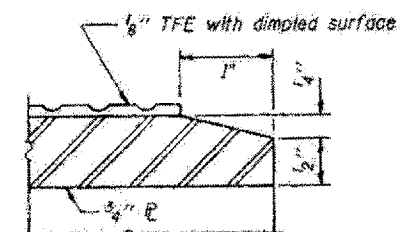
TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY



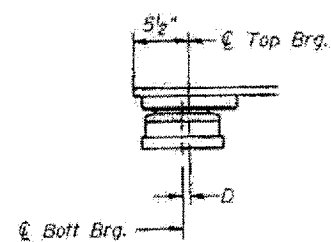
PLAN-TFE SURFACE



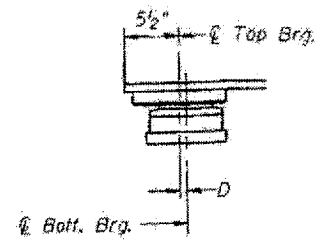
SECTION THRU TFE

NOTE: The 1/8" 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 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



Below 50°F.
(Move bott. brg. away from fixed brg.)



Above 50°F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. Change from the normal temp. of 50°F.

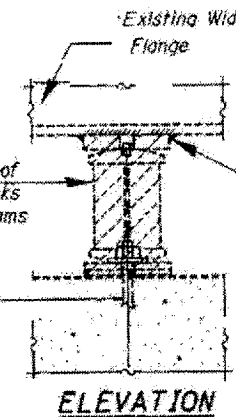
*INTERIOR BEAM REACTION TABLE

	SERVICE LOADS
R _Q (K)	13.8
R _{1/2} (K)	34.8
Imp (K)	10.4
R Total (K)	59.0

* Min. Jack capacity at each Beam shall be 30 Tons.

Hatched areas indicate removal of existing bearing and plates. Jacks shall be placed under exist. beams and cribbing shall be provided.

Burn existing anchor bolts flush with concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost is included with "Jack and Remove Existing Bearings".



ELEVATION

Existing top plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange, cost included in "Jack and Remove Existing Bearings".

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	12

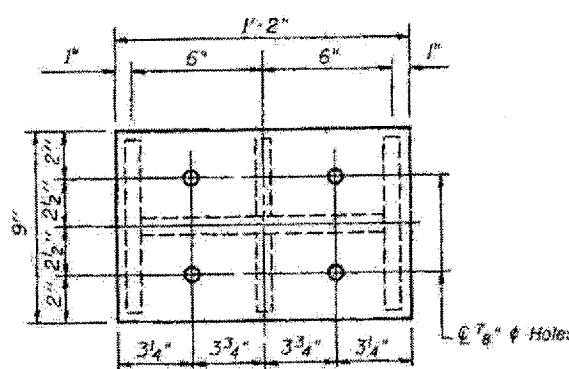
Notes:

Prior to ordering any material, the contractor shall verify in the field all bearing height dimensions.

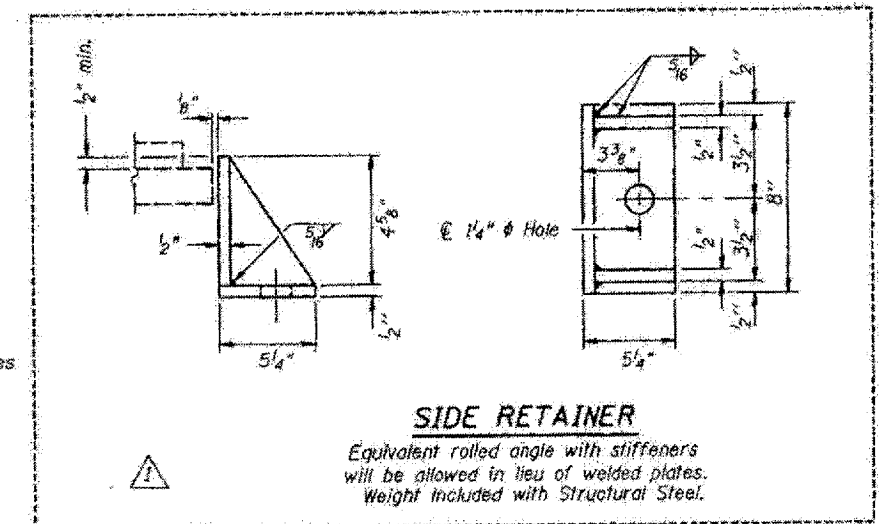
For anchor bolt installation details see sheet # 8 of 12.

New steel extensions, side retainers, connection bolts, anchor bolts, and shim plates are included in "Furnishing and Erecting Structural Steel".

Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of Furnishing and Erecting Structural Steel.

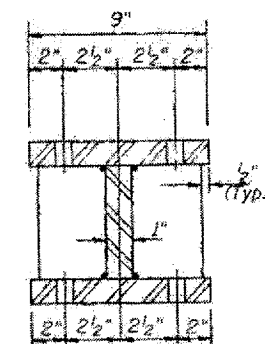


PLAN TOP AND BOTTOM PLATE

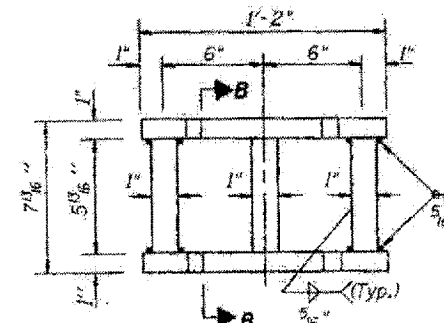


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



SECTION B-B



STEEL EXTENSION DETAIL

DESIGNED	J.C.P.
CHECKED	
DRAWN	T. F.
CHECKED	

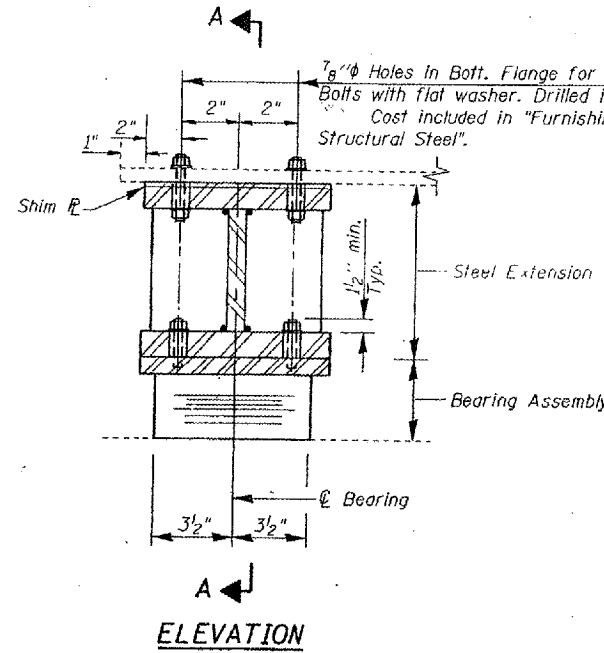
BRIDGES NO. 4 AND NO. 5
STRUCTURES 064-0023 064-0024
FOR INFORMATION ONLY



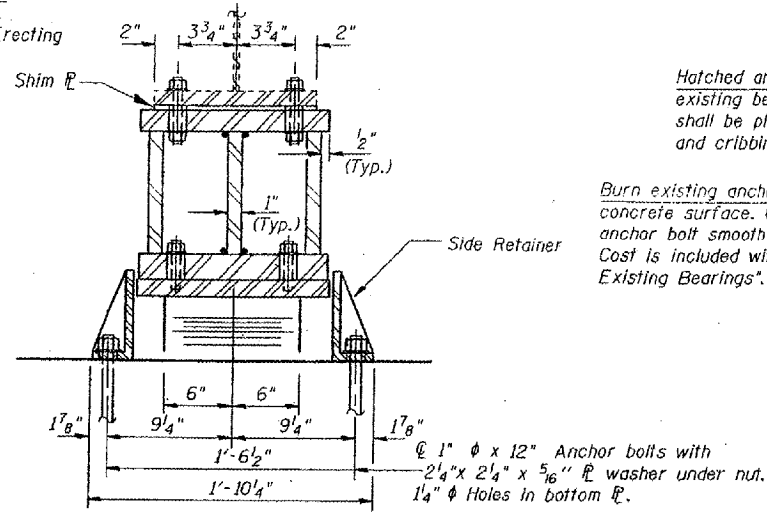
ELASTOMERIC BEARING TYPE II, EAST ABUTMENT

9/10/2001 AKK

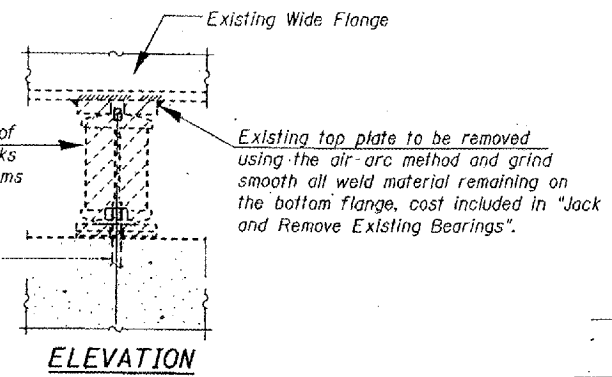
D-9 BSMART
FY2001



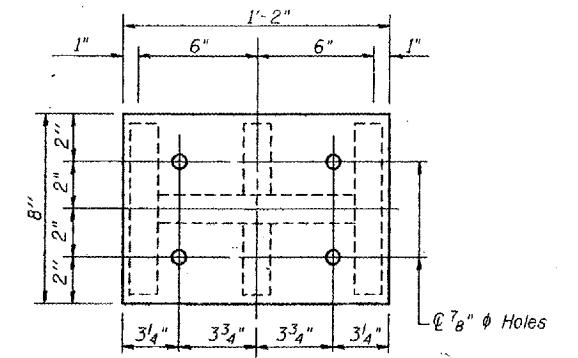
ELEVATION



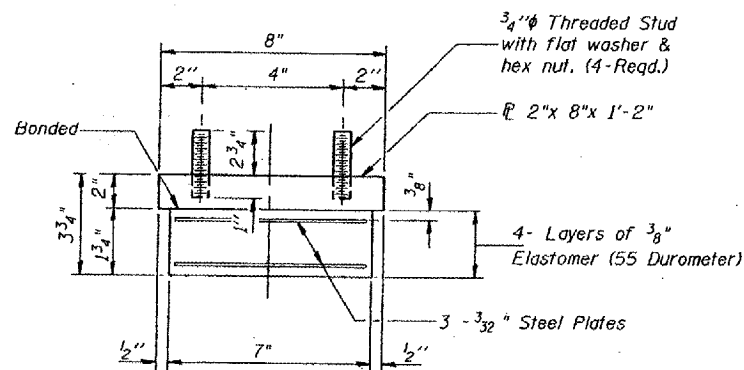
SECTION A-A



ELEVATION



TYPE I ELASTOMERIC BEARING WEST ABUTMENT



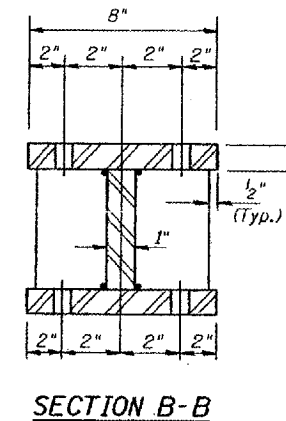
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly

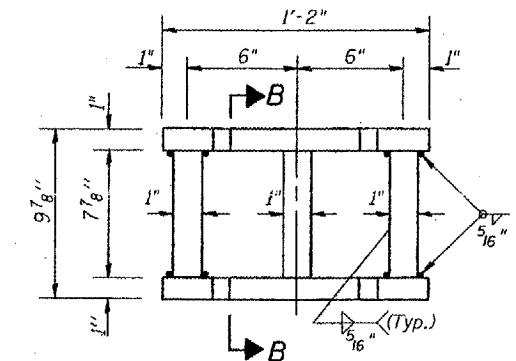
*INTERIOR BEAM REACTION TABLE

	SERVICE LOADS
R @ (K)	25.4
R $\frac{1}{2}$ (K)	35.9
Imp (K)	10.5
R Total (K)	71.8

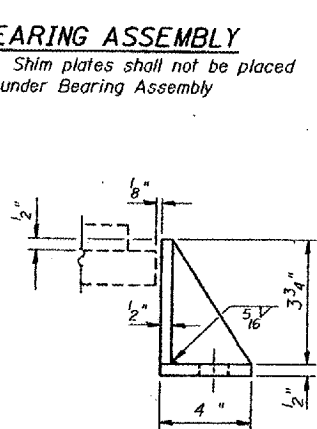
* Min. Jack capacity at each Beam shall be 37 Tons.



SECTION B-B



STEEL EXTENSION AT WEST ABUT.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

- Notes:
 Prior to ordering any material, the contractor shall verify in the field all bearing height dimensions and shim thickness dimensions.
 For anchor bolt installation details see sheet # 8 of 11.
 New steel extensions, side retainers, connection bolts, anchor bolts, and shim plates are included in 'Furnishing and Erecting Structural Steel'.

DESIGNED	J.C.P.
CHECKED	
DRAWN	T.F.
CHECKED	

**BRIDGES NO. 4 AND NO. 5
STRUCTURES 064-0023 064-0024
FOR INFORMATION ONLY**

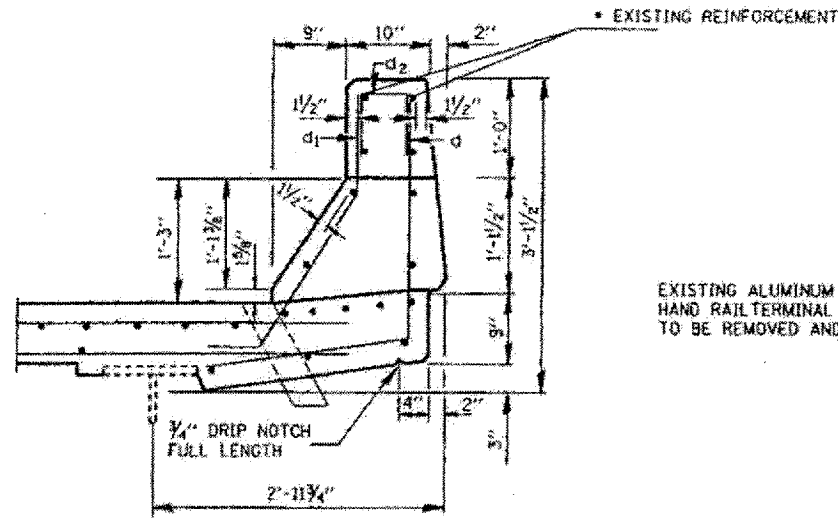
BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12



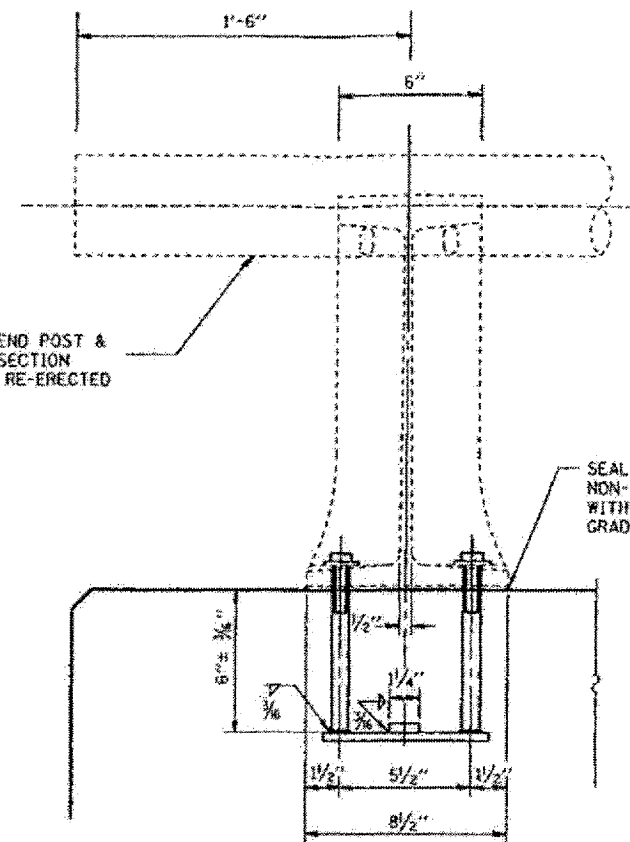
ELASTOMERIC BEARING TYPE I, WEST ABUTMENT

NOTE: d_1 and d_2 (E) BARS SPACED AT 12" CTRS.

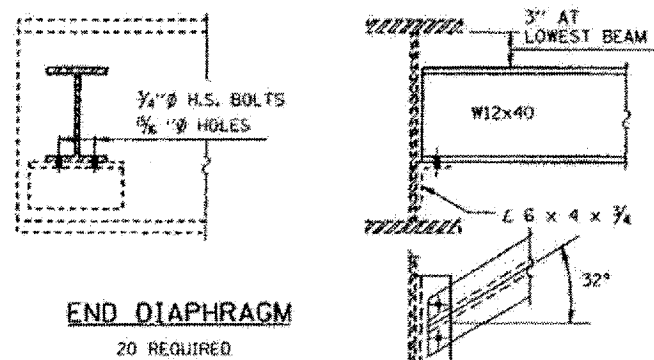


SECTION THRU PARAPET

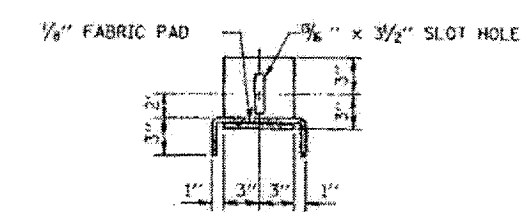
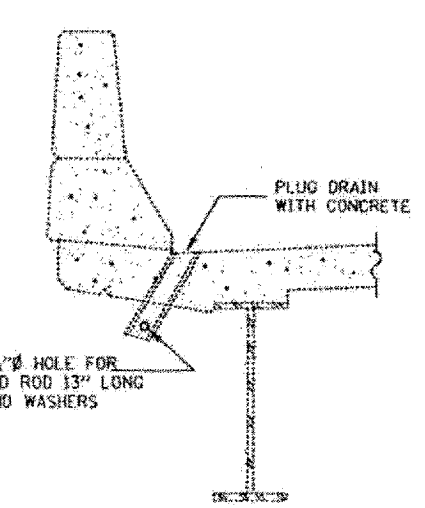
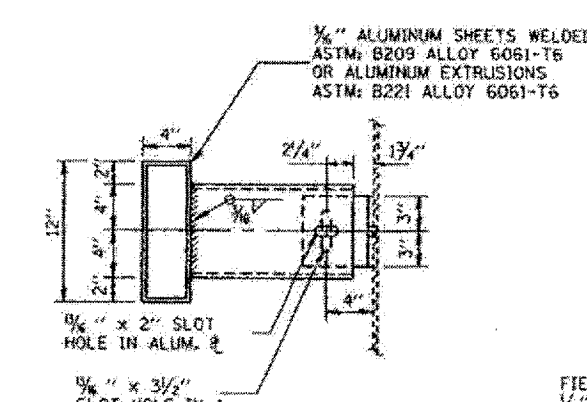
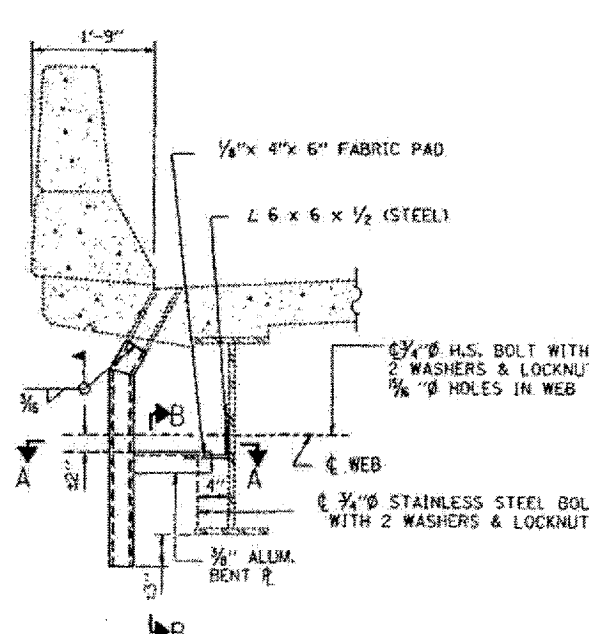
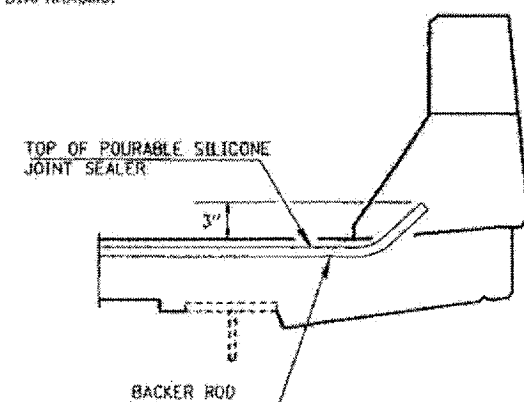
EXISTING REINFORCEMENT EXTENDING INTO REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION. COST INCLUDED IN CONCRETE REMOVAL.



RAIL POST DETAILS



NOTE: TWO HARDENED WASHERS SHALL BE REQUIRED OVER ALL OVERSIZE HOLES FOR DIAPHRAGMS.



DESIGNED	J.C.P.
CHECKED	
DRAWN	T. F.
CHECKED	



BM: #11 Elev. 335.72 Boal Spike
in roof of 26" Oak #12' L.I. of
Station 14104.

This portion of embankment
backfill by Bridge Contractor
after abutment is in place

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

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 27 OF 48
CONTRACT 98941

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
Field connections shall be bolted using high strength bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{1}{8}$ " unless otherwise noted.
The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.
Field welding of construction accessories will not be permitted to the bottom flange of beams 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 pouring end blocks over supports. Slope wall shall be reinforced with welded wire fabric $\frac{1}{2}$ " x 6" mesh, weighing 58# per 100 sq. ft.

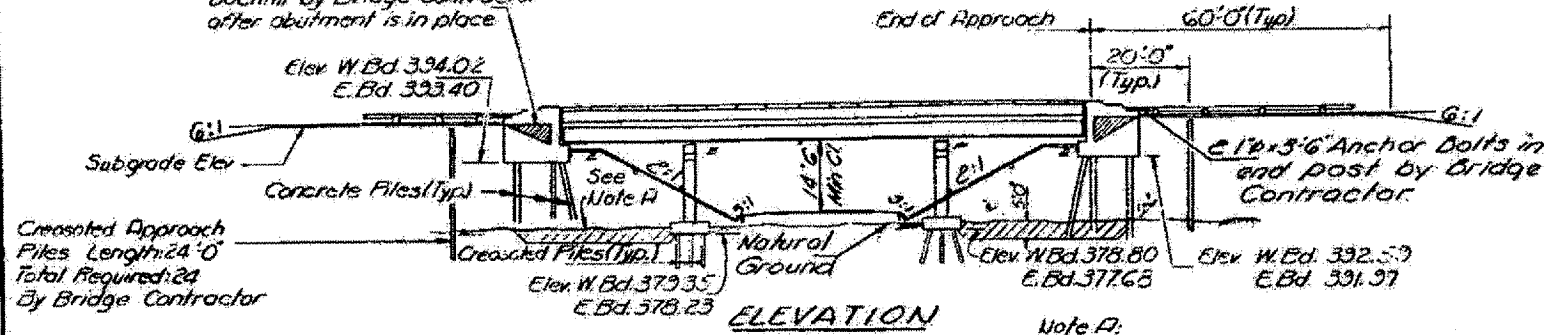
Concrete piles of abutments shall be driven in holes prepared through the embankment in accordance with Article 513.09(d) of the Standard Specifications. The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
The contractor shall drive two Concrete Test Piles in a permanent location. One of the East Abut-West Bound Lanes; one of the West Abut-East Bound Lanes and two Timber Test Piles, one in the vicinity of Pier 1 of East Bound Lanes, one in the vicinity of Pier 2 of West Bound Lanes as directed by the Engineer before ordering the remainder of piles.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

TOTAL BILL OF MATERIAL

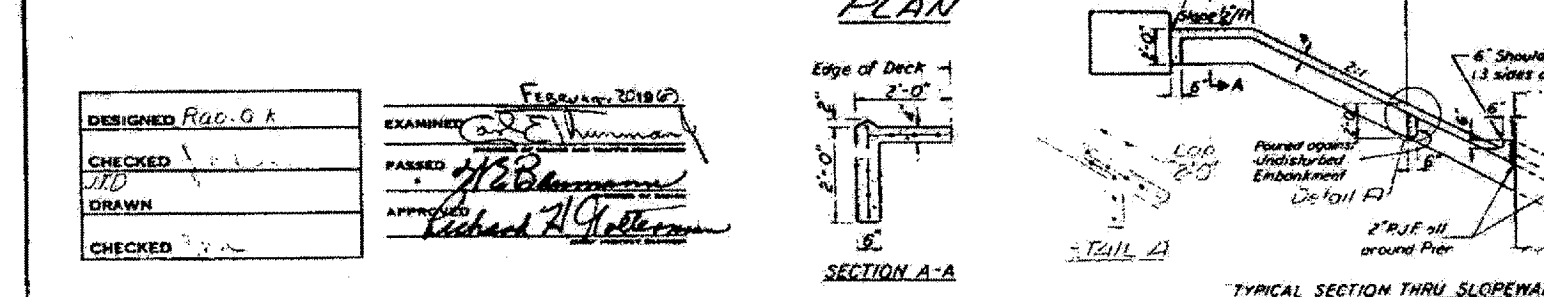
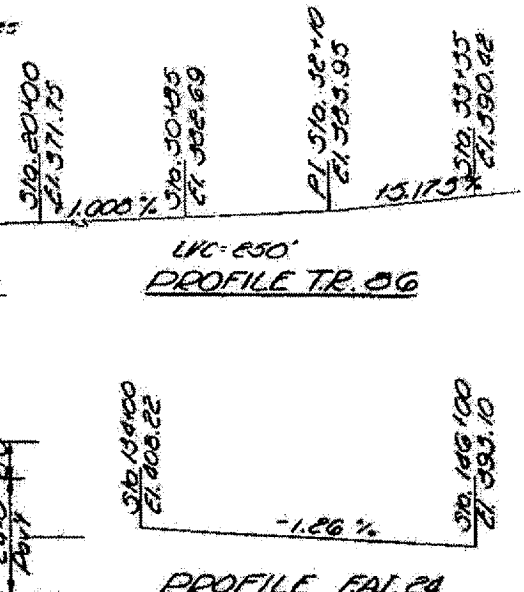
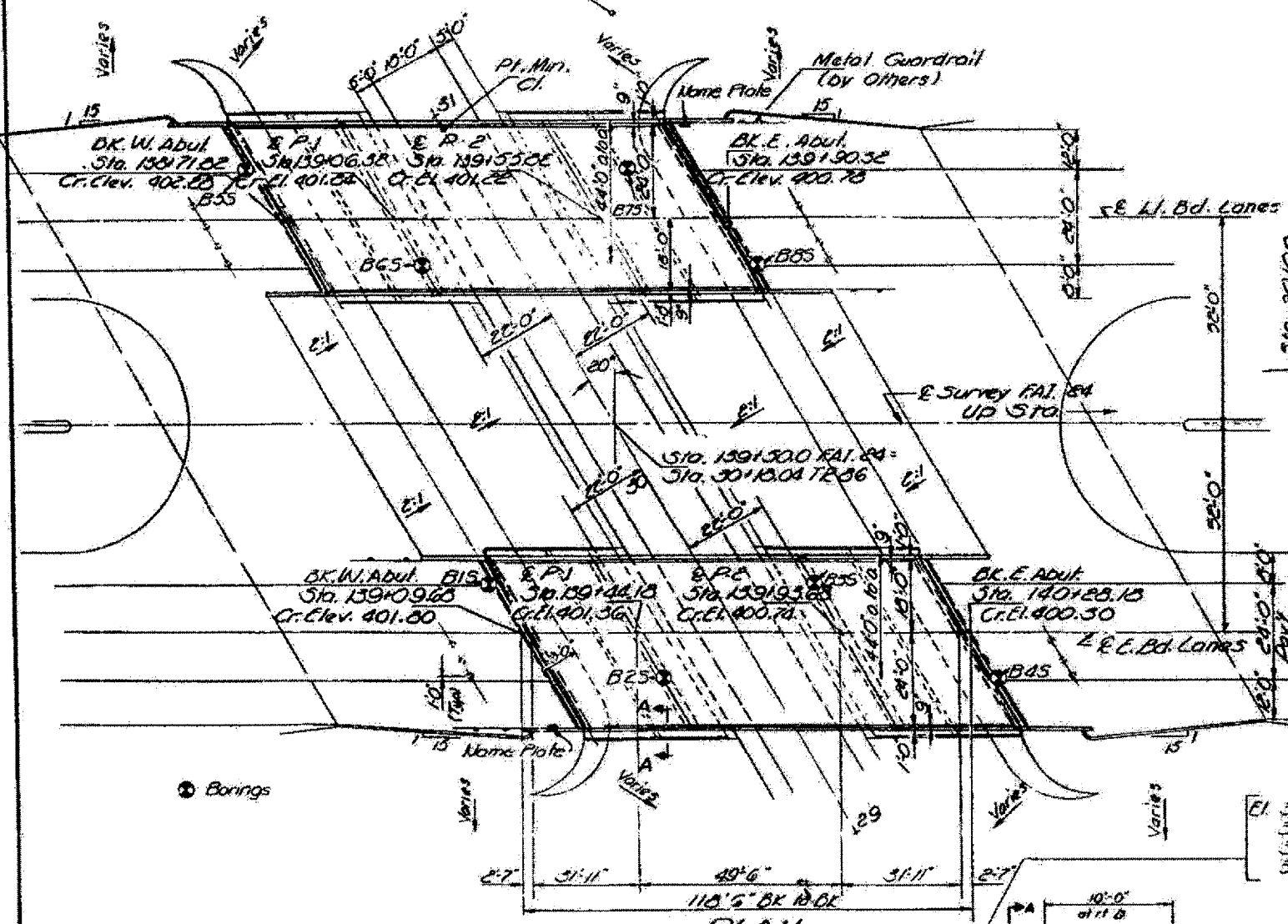
Item	Units	Super	Sub.	Total
Class A Excavation for Structures	Cu. Yds.			70
Class X Concrete	Cu. Yds.	318.4	418.1	736.5
Structural Steel	Lt. Sum			1
Reinforcement Bars	Lbs.	73,610	42,600	122,210
Concrete Piles	Lin. Ft.		1565	1565
Crested Piles (20.1 in. 38 H.L.I)	Lin. Ft.		3067	3067
Aluminum Railing	Lin. Ft.	460		460
Preformed Joint Sealer	Lin. Ft.	189		189
Test Piles (Concrete)	Each		2	2
Test Piles (Timber)	Each		2	2
Slope Wall (4)	Sq. Yds.			1150
Protective Coat	Sq. Yds.			1280
Name Plates	Each			2
Earth Excavation	Cu. Yds.			2750

* CALCULATED WEIGHT OF STRUCTURAL STEEL = 190,340 LBS.



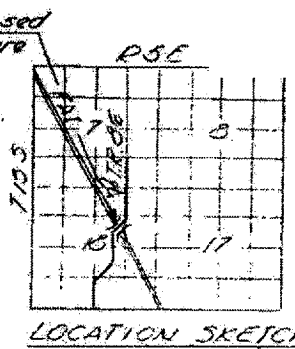
STATION 139+50
BUILT BY
STATE OF ILLINOIS
FD.1 RT24 SEC. 6A-2HB2
FD. PROJ. I-24-1(55)
LOADING HS 20+44' ALT.

NAME PLATE
(See Std. 2113-1)



EI. 396.99 W. Abut. W. Bd. Lanes
396.36 W. Abut. E. Bd. Lanes
395.56 E. Abut. W. Bd. Lanes
394.93 E. Abut. E. Bd. Lanes

DESIGN STRESSES
fc = 4000 psi Deck Slab
fc = 1400 psi Curb, Parapet, Sub.
fs = 20,000 psi Reinf.
fs = 20,000 psi Struct.
vc = 75 psi Ftgs.
n = 10
Allowable & Deflection 4/1000
LOADING
HS 20-44' ALT.

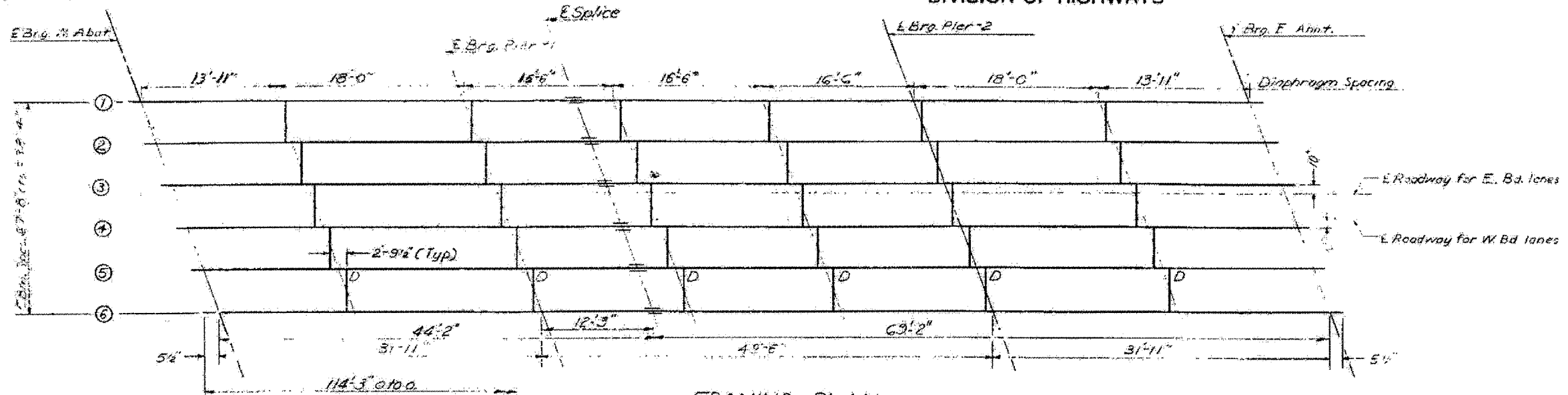


BRIDGES NO. 6 AND NO. 7
STRUCTURES 064-0025 064-0026
FOR INFORMATION ONLY
FD. PROJ. I-24-1(55)22
GENERAL PLAN & ELEVATION
FAI RT24 OVER TR. RT. 06
FAI RT24 SEC. 6A-2HB2
MASSAC COUNTY
STATION 139+50

DESIGNED Rac-G k
CHECKED JTD
DRAWN
CHECKED
EXAMINED
PASSED
APPROVED

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

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 28 OF 48
CONTRACT 98941

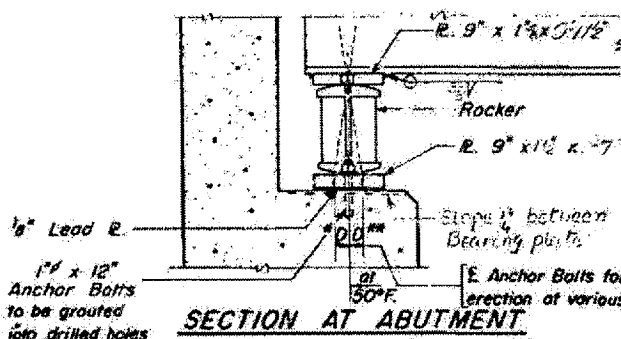


FRAMING PLAN
(All Beams 30WF108)

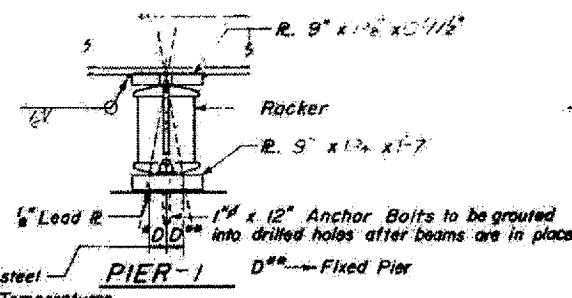
Beam Location	1	2	3	4	5	6
E. Brg. W. Abut.	400.87	400.97	401.06	400.93	400.76	400.57
E. Brg. Pier 1	400.47	400.57	400.66	400.53	400.36	400.17
E. Splice	400.32	400.42	400.51	400.38	400.21	400.02
E. Brg. Pier 2	399.84	399.94	400.03	399.90	399.73	399.54
E. Brg. E. Abut.	399.44	399.54	399.63	399.50	399.33	399.14

WEST ENDING BEAMS

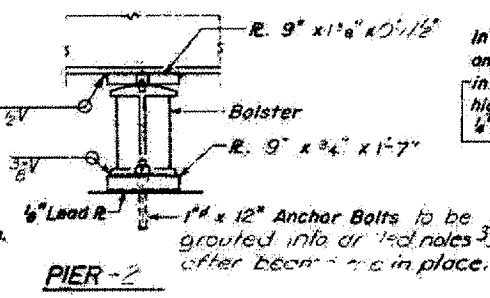
Beam Location	1	2	3	4	5	6
E. Brg. W. Abut.	401.25	401.37	401.47	401.53	401.57	401.13
E. Brg. Pier 1	400.85	400.97	401.07	401.13	400.97	400.70
E. Splice	400.70	400.82	400.92	400.98	400.82	400.64
E. Brg. Pier 2	400.22	400.34	400.44	400.50	400.34	400.16
E. Brg. E. Abut.	399.82	399.94	400.04	400.10	399.94	399.71



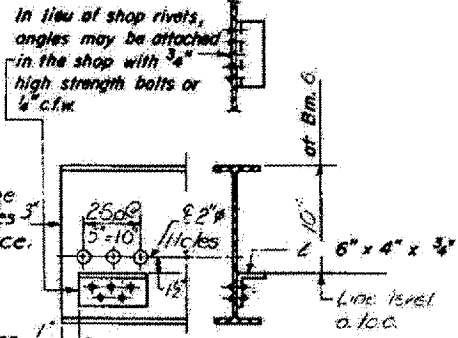
SECTION AT ABUTMENT



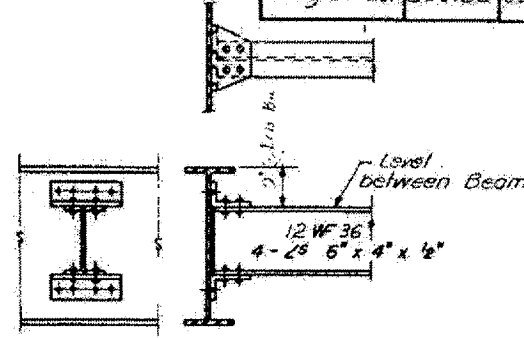
PIER-1
Fixed Pier



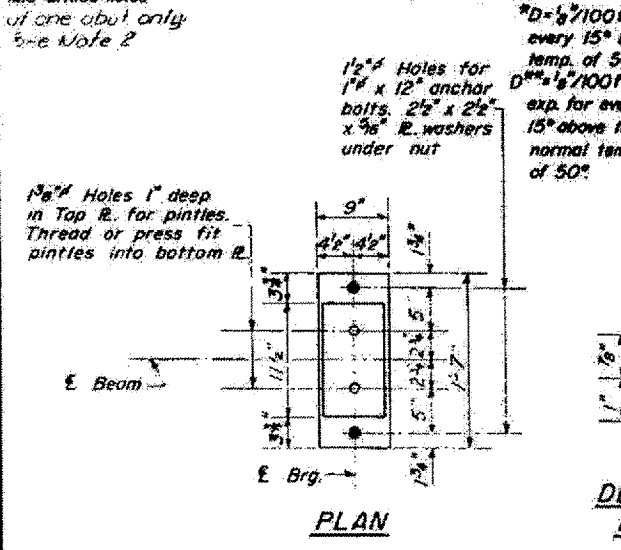
PIER-2
Bolster



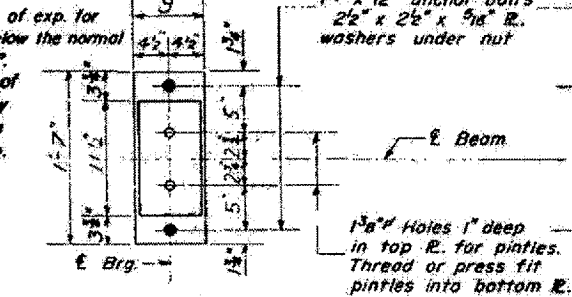
END OF BEAM DETAILS



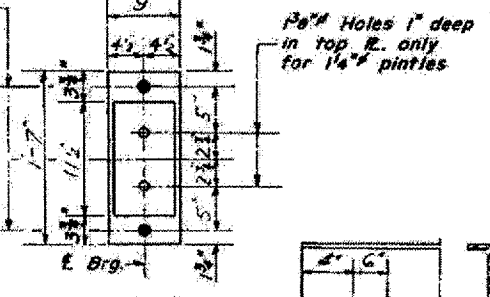
DIAPHRAGM D
60" Required



PLAN



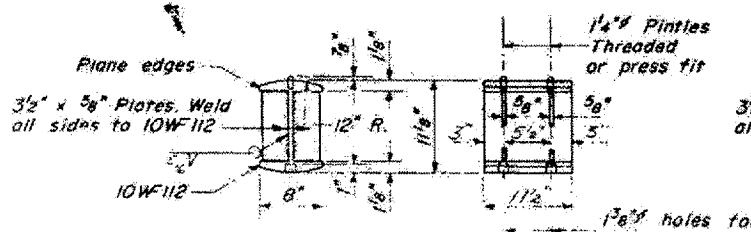
PLAN



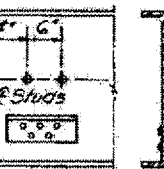
PLAN



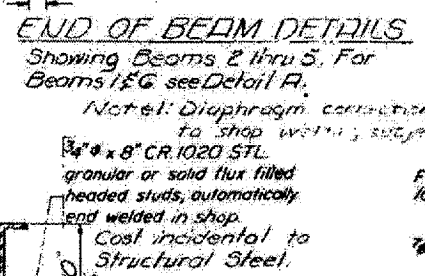
DETAIL OF PINTLE



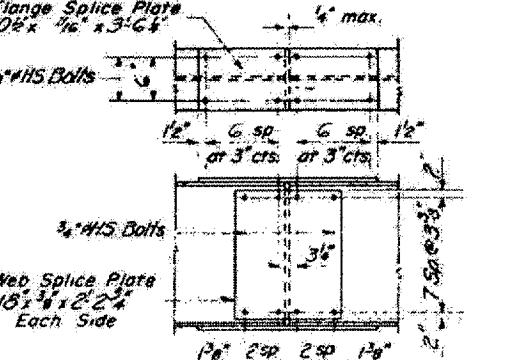
DETAIL OF ROCKER
AT PIER-1 & ABUTMENTS



DETAIL A



DETAIL OF BOLSTER
AT PIER-2



DETAIL OF SPLICE

TABLE OF STRESSES

Moments and Reactions - Interior Beams

	Moments (ft. kips)		Reactions (kips)	
	4 Span	Pier 1	5 Span	Pier 1
D.L.	65.37	223.51	154.57	126.09
L.L.	196.64	182.73	247.88	33.61
IMP	58.29	54.83	74.36	10.08
Total	320.30	461.07	476.81	56.38

Note: 2
For Detail of Beam Hold Down Assembly See Sheet # 6

DESIGNED: P.G. G.A.
CHECKED: P.G. Barnett
DRAWN: W.A. Sausaman Jr.
CHECKED:

EXAMINED: Richard J. Holterman
PASSED: H.G. Blummann
APPROVED: Richard J. Holterman

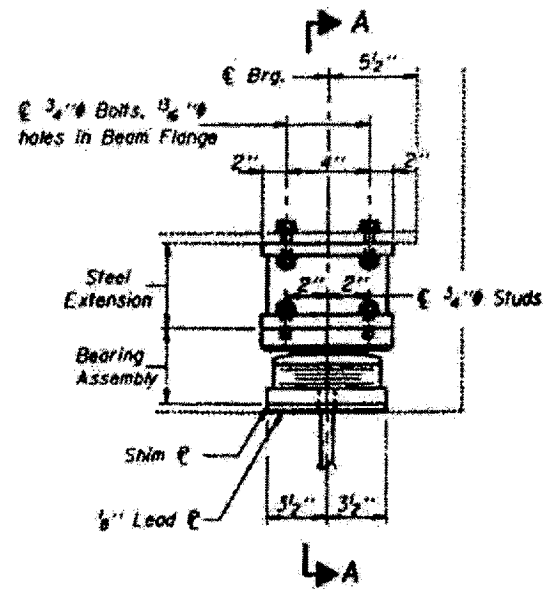
BRIDGES NO. 6 AND NO. 7
STRUCTURES 064-0025 064-0026
FOR INFORMATION ONLY
F.A.I. RT.
STAT. 139-50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

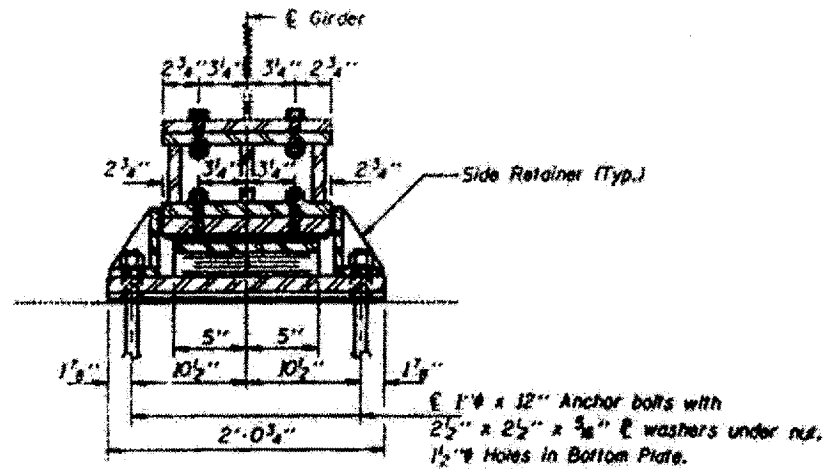
GIRDER REACTIONS

RR	(K)	17.3
R1	(K)	13.6
Imp.	(K)	10.1
R 0' 10"	(K)	56.5

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 29 OF 48
CONTRACT 98941

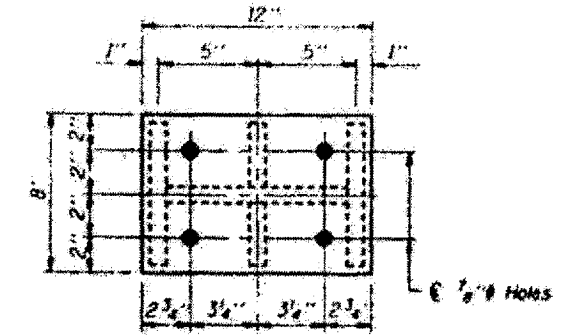


ELEVATION AT EAST & WEST ABUTMENT



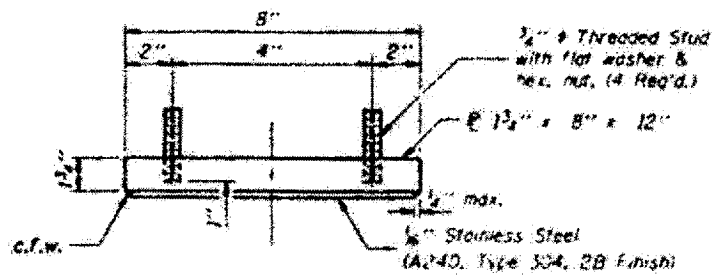
SECTION A-A

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
New steel extensions, side retainers, connection bolts, anchor bolts and lead plates are included in "Furnishing and Erecting Structural Steel".
See sheet 6 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 = 25 tons.

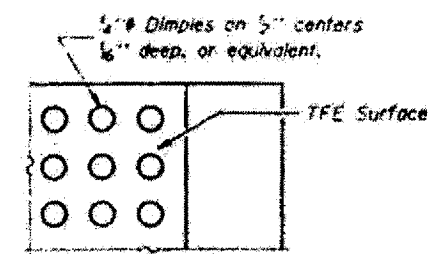


PLAN TOP AND BOTTOM PLATE

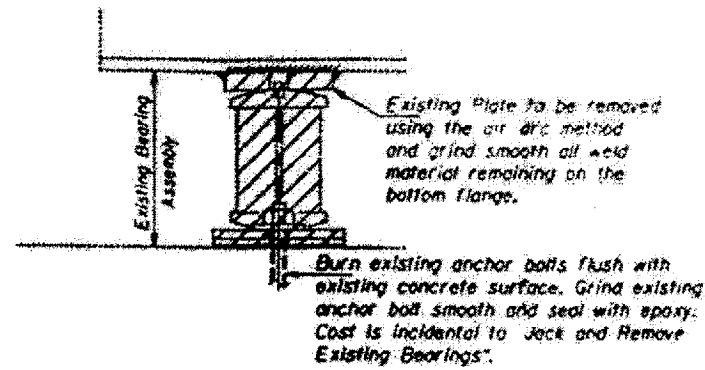
TYPE II TFE ELASTOMERIC EXP. BRG.



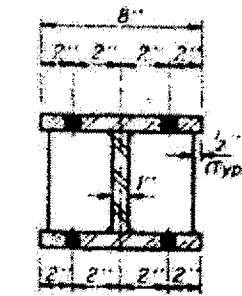
TOP BEARING ASSEMBLY



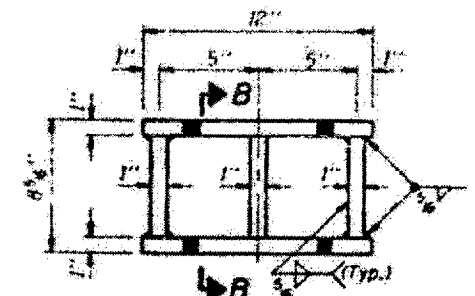
PLAN-TFE SURFACE



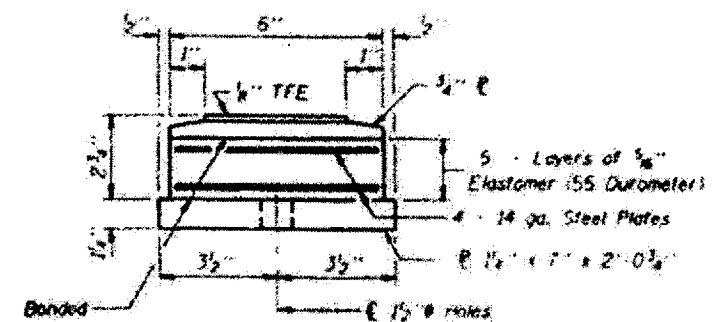
EXISTING BEARING REMOVAL DETAIL



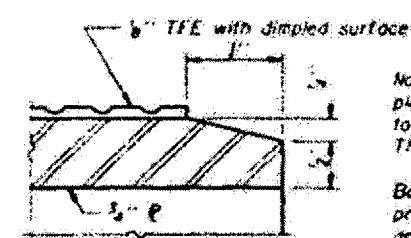
SECTION B-B



STEEL EXTENSION DETAIL



BOTTOM BEARING ASSEMBLY



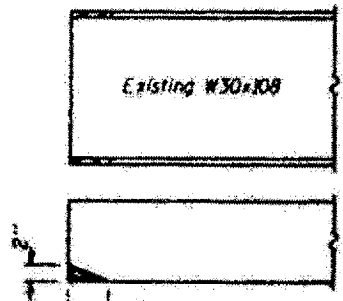
SECTION THRU TFE

Notes: The 1/8" 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 MM-A-154, Type I. The bond agent shall be applied on the full area of the contact surfaces.

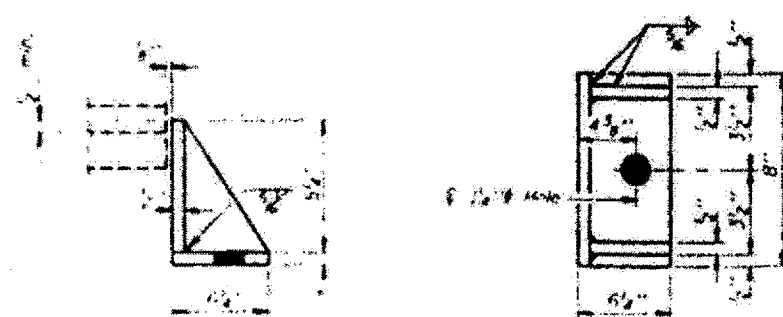
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

BILL OF MATERIAL

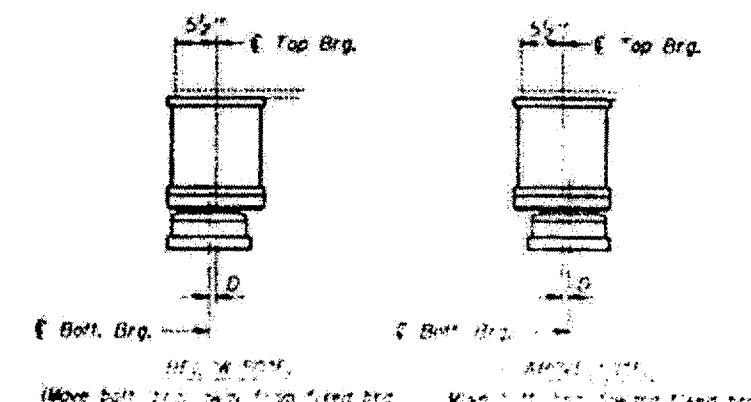
Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Jack and Remove Existing Bearings	Each	12



FLANGE CLIP DETAIL



SIDE RETAINER



SETTING ANCHOR BOLTS AT EXP. BRG.

DESIGNED	M.J.
CHECKED	
DRAWN	M.J.
CHECKED	

APRIL 2, 1998
 EXAMINED
 T.Y.L.
 PERMITTED

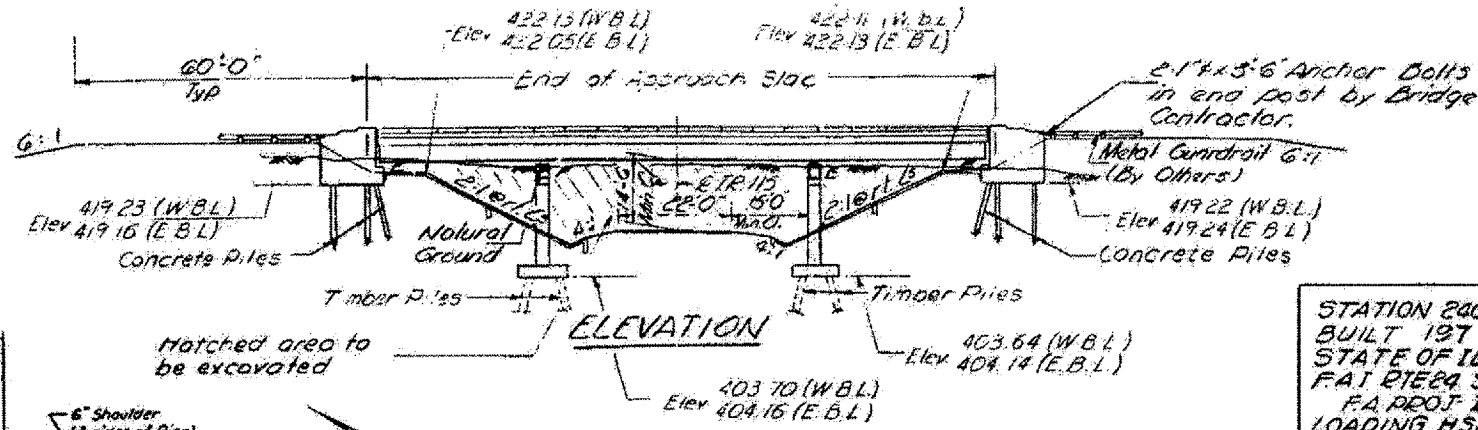
BRIDGES NO. 6 AND NO. 7
STRUCTURES 064-0025 064-0026
FOR INFORMATION ONLY

BEARING REPLACEMENT
EAST AND WEST ABUTMENTS
F.A.I. 24 SEC. 64-2HB-2
MASSAC COUNTY
STA. 139+50
S.N. 064-0025

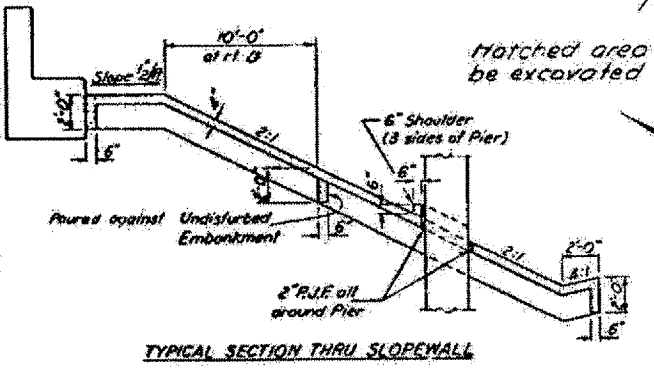
B.M. 18-Elev. 484.46 Boat Sailing
Sassafos 225' R.I. of Sta 244+20

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

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
SHEET 30 OF 48
CONTRACT 98941



STATION 240+78.40
BUILT 197 BY
STATE OF ILLINOIS
F.A.I. PROJ. SEC. 64-34B
F.A. PROJ. I-24-1(48)
LOADING H.S.20 & ALT
NAME PLATE
See STD 2113



GENERAL NOTES

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

Field connections shall be bolted using high strength bolts. Bolts $\frac{3}{4}$ " open holes $\frac{1}{2}$ " unless otherwise noted.

Diaphragm connections may be adapted to shop welding subject to approval by the Engineer.

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor on 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 cross frames over supports. Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58# per 100 sq. ft.

Class A Excavation for structures includes excavation for slope wall. The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

The contractor shall drive two concrete test piles in permanent locations, one at East Abutment of East Bound structure and one at West Abutment of the West Bound structure; he shall also drive one timber pile in the vicinity of Pier #1 of the East Bound structure and one timber pile in the vicinity of Pier #2 of the West Bound structure.

This Basic Lead Silico Chromate Paint system shall be used for shop and field painting of Structural steel.

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 Normal Concrete.

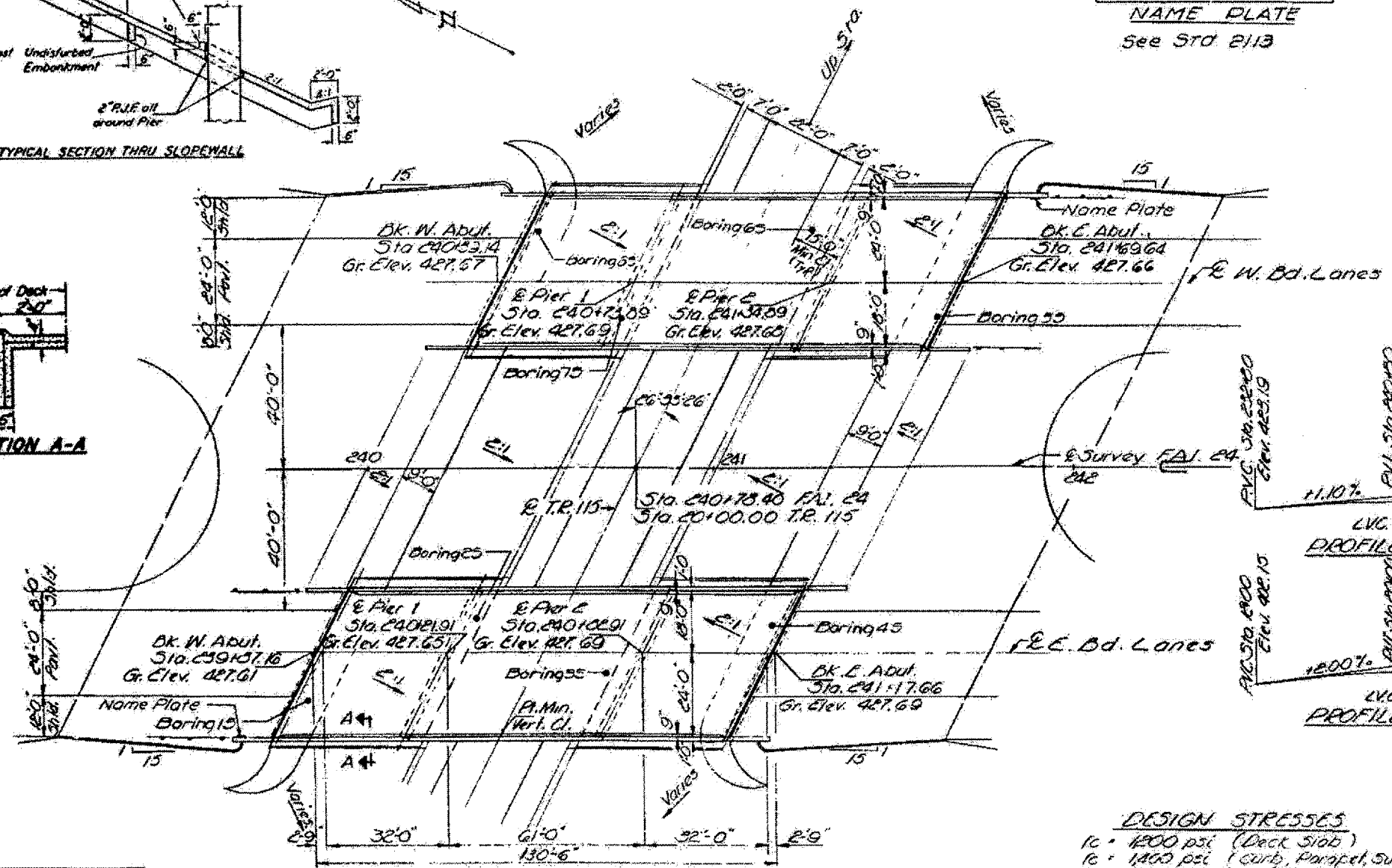
Calculated weight of Structural Steel = 219,460 lbs.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class A Excavation for Structs.	Cu Yds.		845	845
Protective Coat	Sq Yds	1327	43	1370
Class X Concrete	Cu Yds	348.5	416.0	764.5
Furnishing & Erecting Structural Steel	L. Sum.	1		1
Stud Shear Connectors	Ea.	1548		1548
Aluminum Railing	Lin. Ft.	508		508
Reinforcement Bars	Lbs.	92530	48080	140610
Cresoted Piles (to 20')	Lin. Ft.		1320	1320
Concrete Piles	Lin. Ft.		1890	1890
Test Piles (Timber)	Each		2	2
Test Piles (Concrete)	Each		2	2
Name Plates	Each		2	2
Slope Walls (4')	Sq. Yds.		1030	1030
Cresoted Piles (20.1' to 38')	Lin. Ft.		616	616
Preformed Joint Sealer	Lin. Ft.		179	179

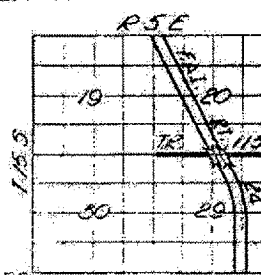
BRIDGES NO. 8 AND NO. 9
STRUCTURES 064-0027 064-0028
FOR INFORMATION ONLY

F.A. PROJ. I-24-1(48)34
GENERAL PLAN / ELEVATION
F.A.I. PROJ. SEC. 64-34B
MASSAC COUNTY
STATION 240+78.40



DESIGN STRESSES

$f_c = 1800$ psi (Deck Slab)
 $f_c = 1800$ psi (Curb, Parapet, Sub)
 $f_s = 20000$ psi (Reinf.)
 $f_s = 20000$ psi (Struct)
 $V_c = 15$ psi (Fins)
 $n = 10$



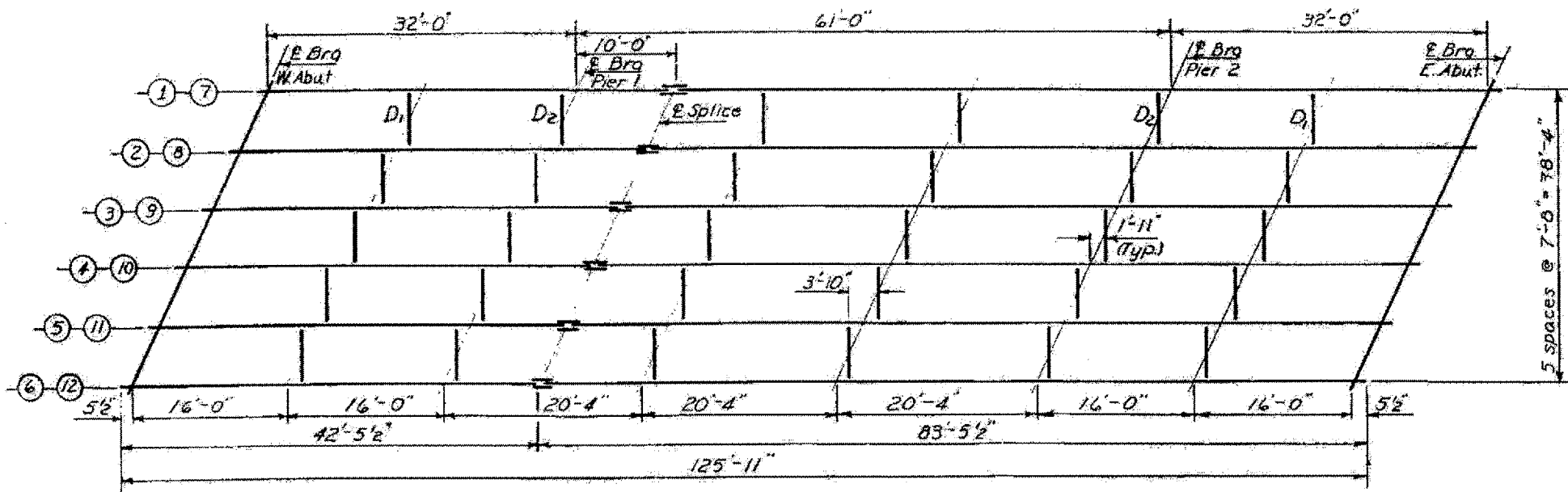
Allowable Excavation 4' 1100 Comp.
4' 1100 Non-Comp.
LOADINGS H.S. 20 & ALT.

DESIGNED James Hamilton
CHECKED A. Kernally
DRAWN F. Mercos
CHECKED OK

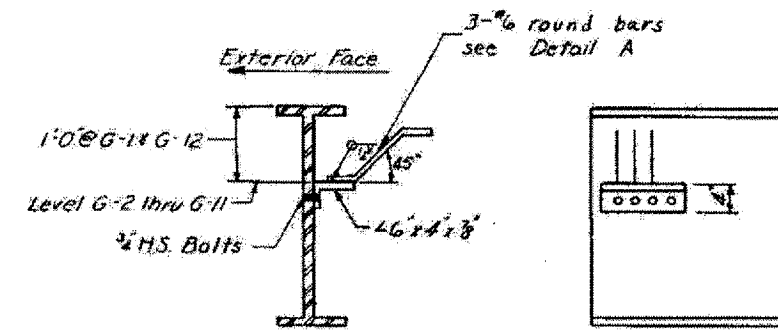
EXAMINED [Signature]
PASSED [Signature]
APPROVED [Signature]

FEBRUARY 14 1969

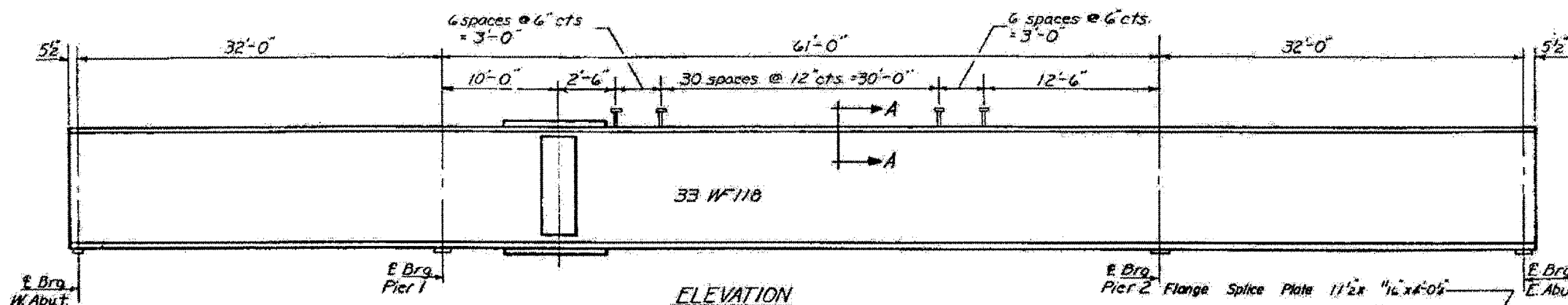
PLAN



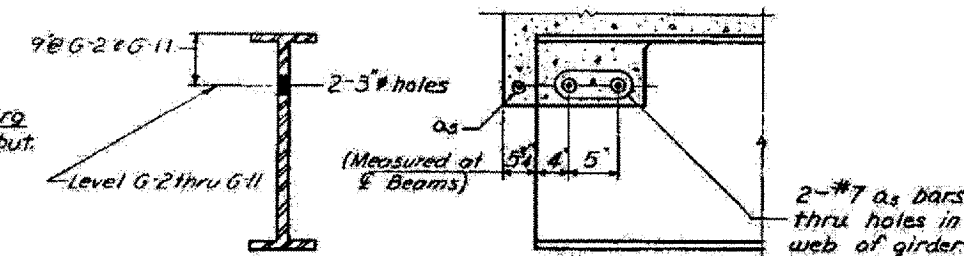
PLAN



EXTERIOR GIRDER
AT ABUTMENTS

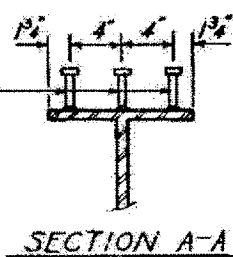


ELEVATION

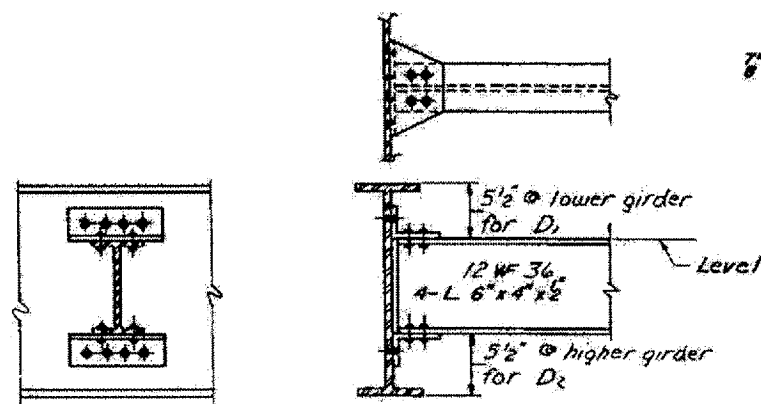


INTERIOR GIRDER
AT ABUTMENTS

3/4" x 4" CR 1020 STL.
Granular or Solid
flux filled headed
studs automatically
end welded.
No. Req'd = 1548

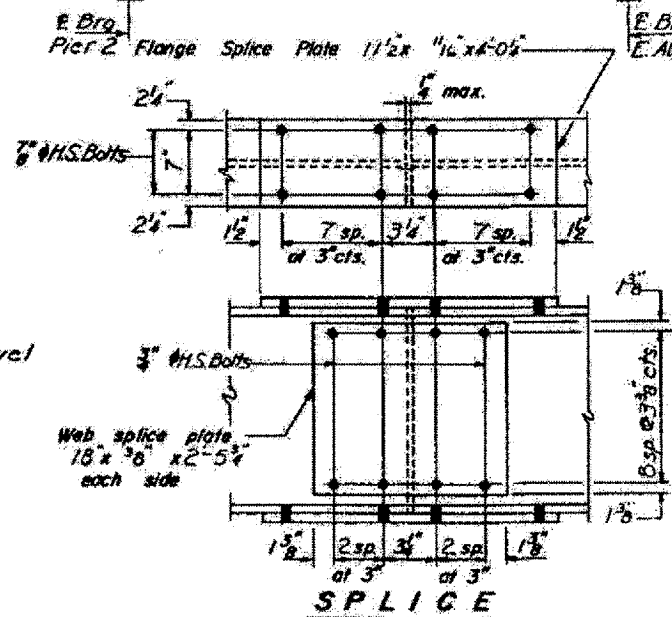


SECTION A-A

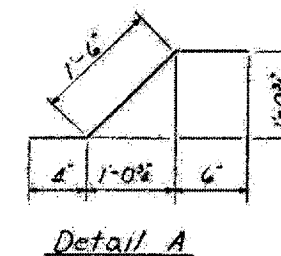


DIAPHRAGM D1 & D2

40 D1 Required
20 D2 Required



SPLICE



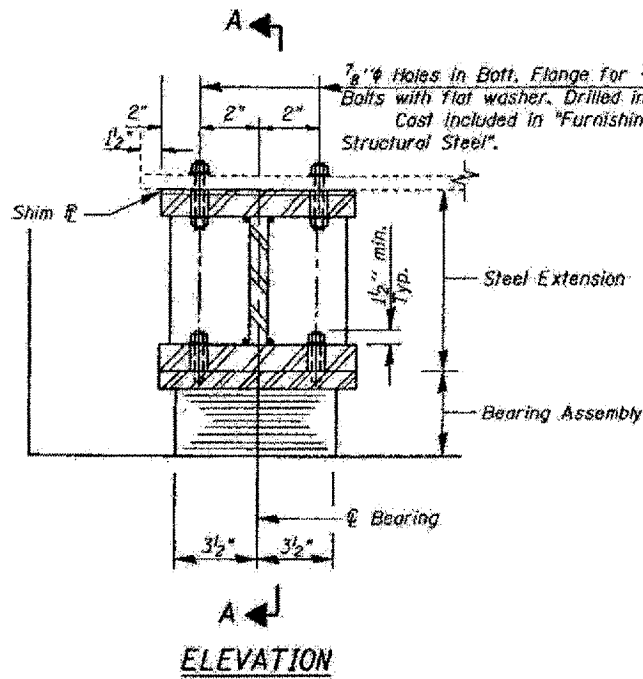
Detail A

DESIGNED	James Hamilton
CHECKED	Cheremali
DRAWN	WILKINS
CHECKED	A A

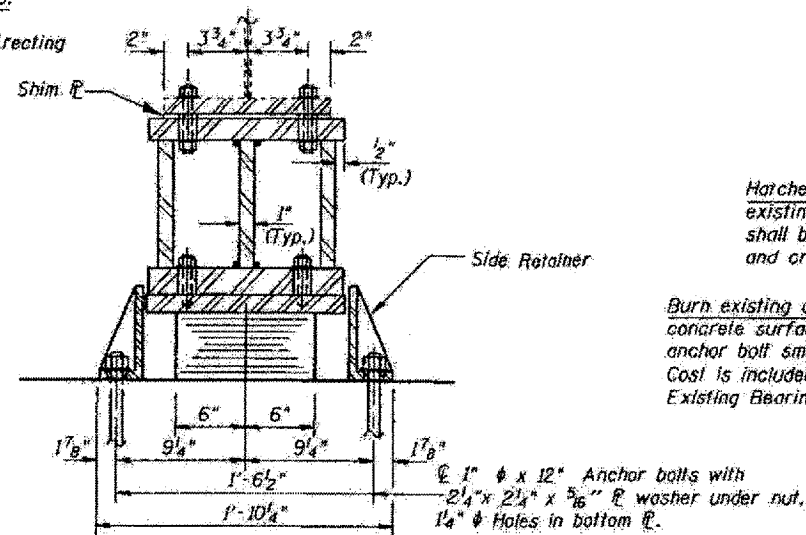
FEB. 14 1969
EXAMINED
PASSED
APPROVED

BRIDGES NO. 8 AND NO. 9
STRUCTURES 064-0027 064-0028
FOR INFORMATION ONLY

FAI RT 24 SEC. 64-3HB
MASSAC COUNTY
STA. 240+78.10



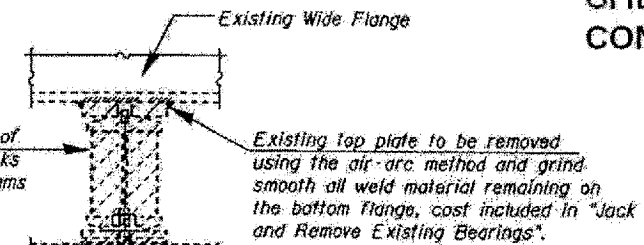
ELEVATION



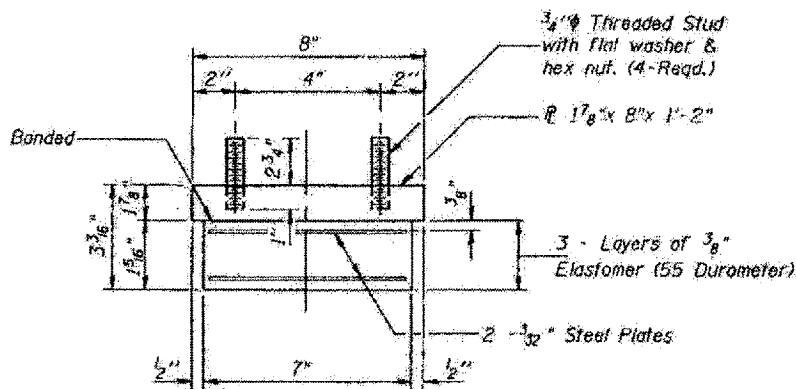
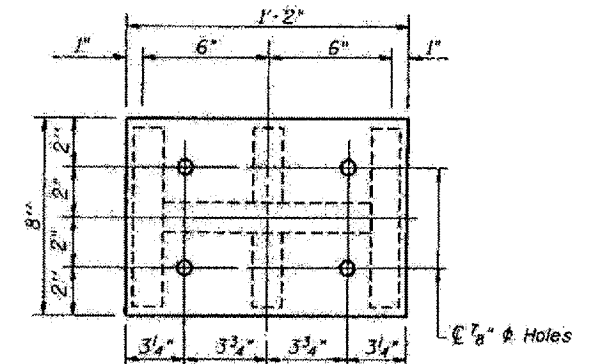
SECTION A-A

TYPE I ELASTOMERIC BEARING WEST ABUT.

Hatched areas indicate removal of existing bearing and plates. Jacks shall be placed under exist. beams and cribbing shall be provided.



ELEVATION



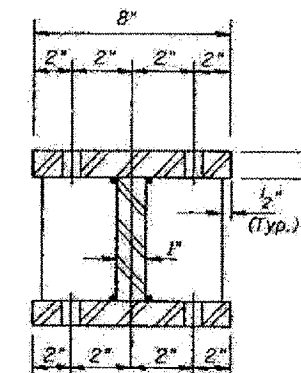
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly

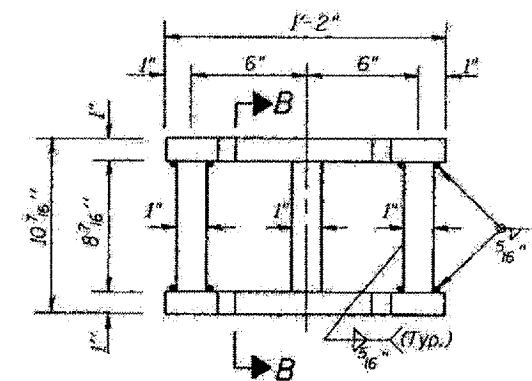
*INTERIOR BEAM REACTION TABLE

	SERVICE LOADS
R D (K)	13.8
R L (K)	34.8
Imp (K)	10.4
R Total (K)	59.0

* Min. Jack capacity at each beam shall be 30 Tons.



SECTION B-B



STEEL EXTENSION AT WEST ABUT.

BILL OF MATERIAL

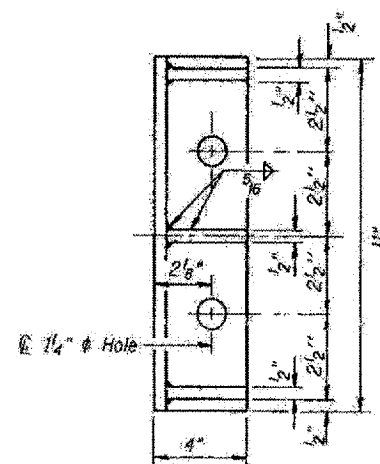
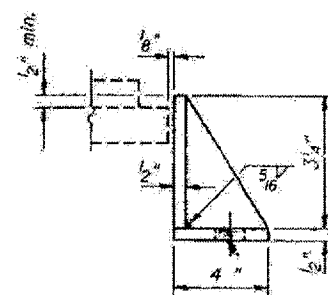
ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12

Notes:

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

For anchor bolt installation details see sheet # 8 of 12.

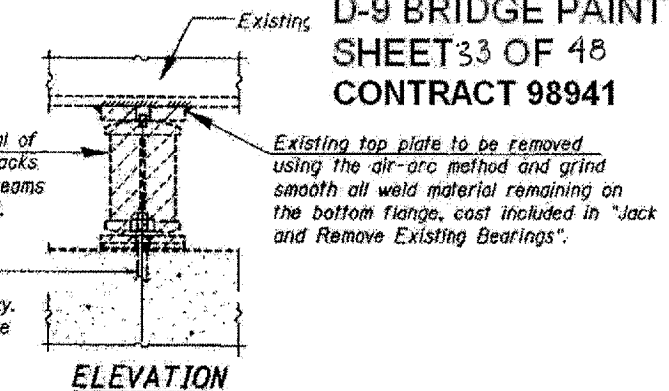
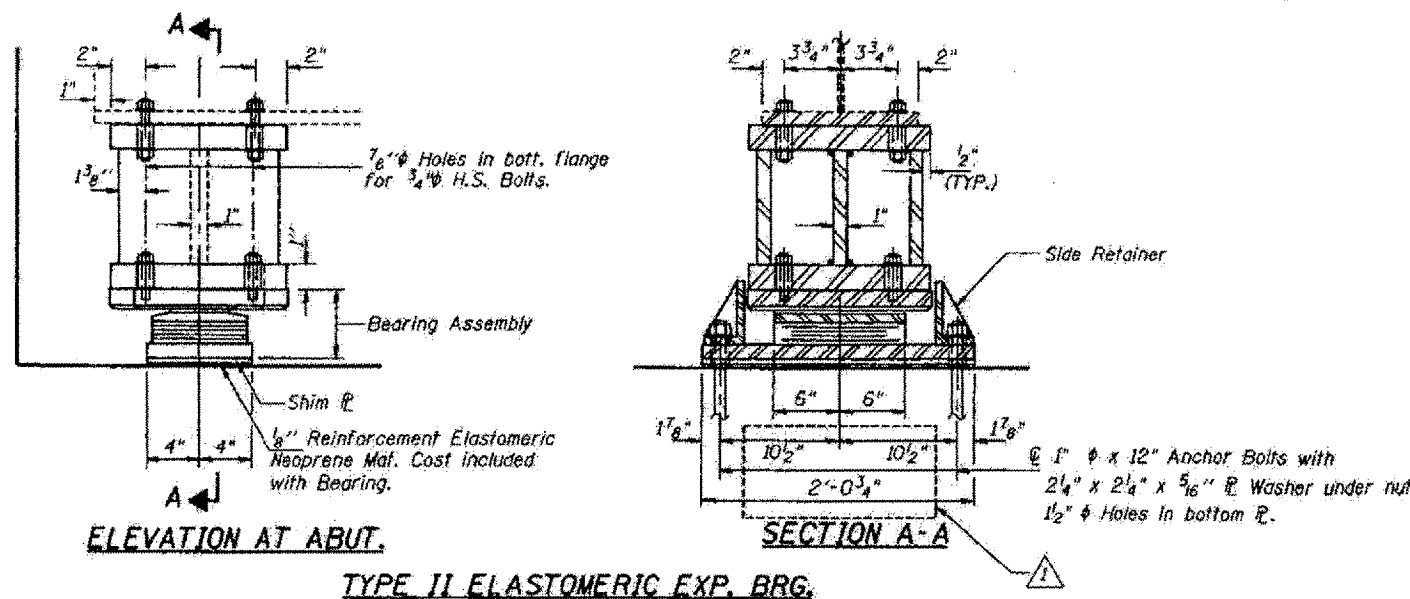
New steel extensions, side retainers, connection bolts, anchor bolts, and shim plates are included in, "Furnishing and Erecting Structural Steel".



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

DESIGNED	J.C.P.
CHECKED	
DRAWN	T.F.
CHECKED	

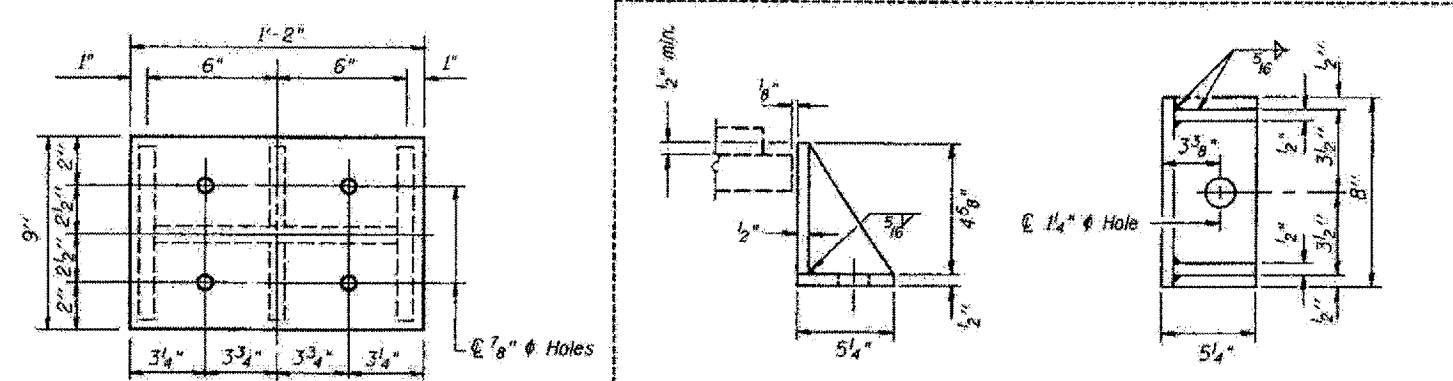
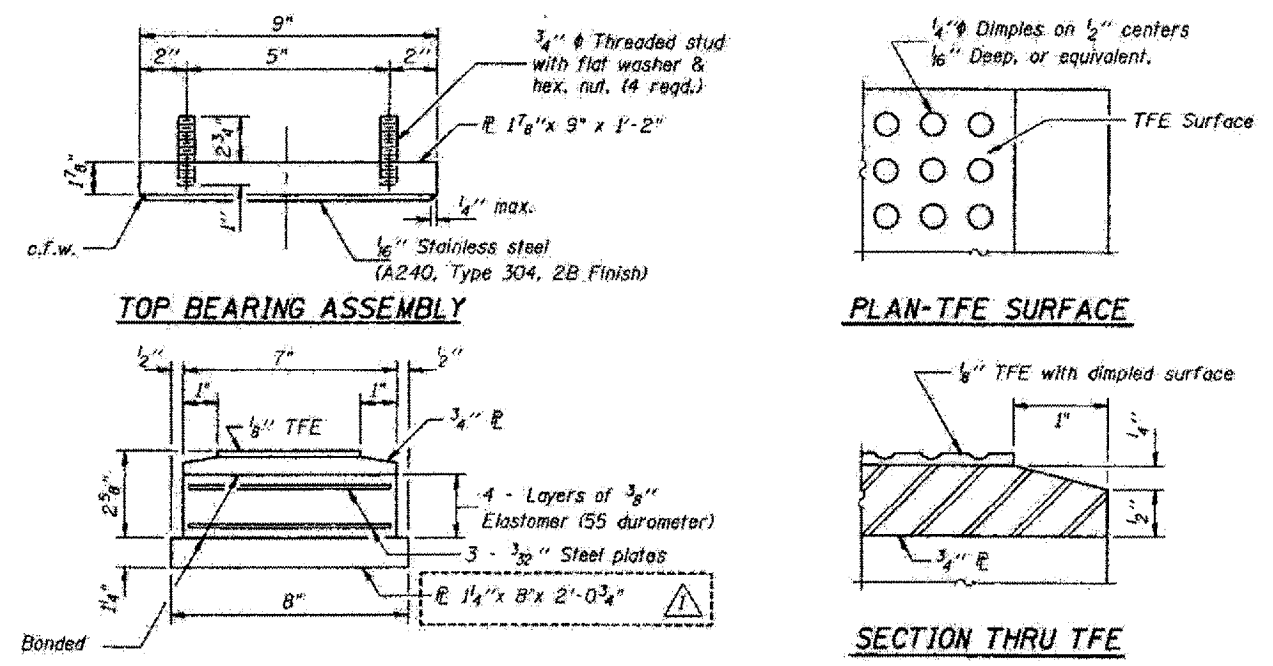


***INTERIOR BEAM REACTION TABLE**

	SERVICE LOADS
R ₁ (K)	13.8
R ₂ (K)	34.8
Imp (K)	10.4
R ₁ Total (K)	59.0

* Min. Jack capacity at each Beam shall be 30 Tons.

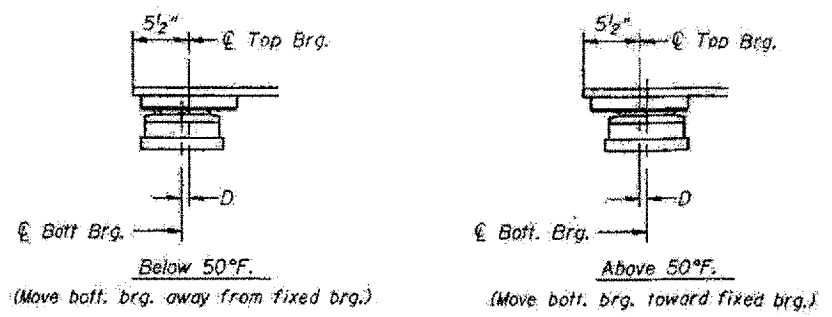
Notes:
Prior to ordering any material, the contractor shall verify in the field all bearing height dimensions.
For anchor bolt installation details see sheet # 8 of 12.
New steel extensions, side retainers, connection bolts, anchor bolts, and shim plates are included in "Furnishing and Erecting Structural Steel".
Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of Furnishing and Erecting Structural Steel.



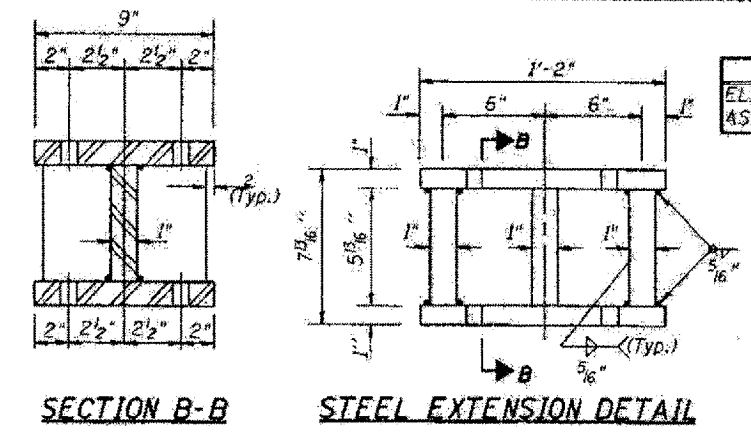
BOTTOM BEARING ASSEMBLY

NOTE: The 1/8" 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 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



PLAN TOP AND BOTTOM PLATE



BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	12

BRIDGES NO. 8 AND NO. 9
STRUCTURES 064-0027 064-0028
FOR INFORMATION ONLY

ELASTOMERIC BEARING TYPE II.

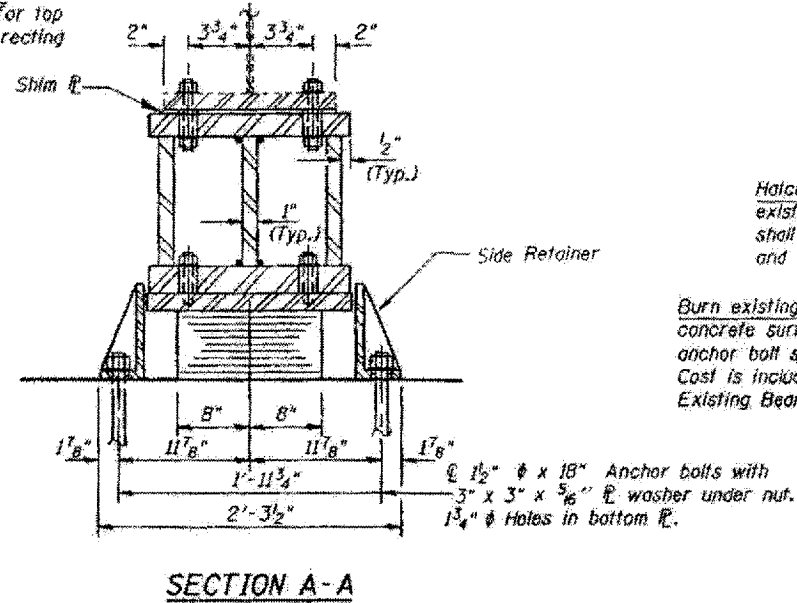
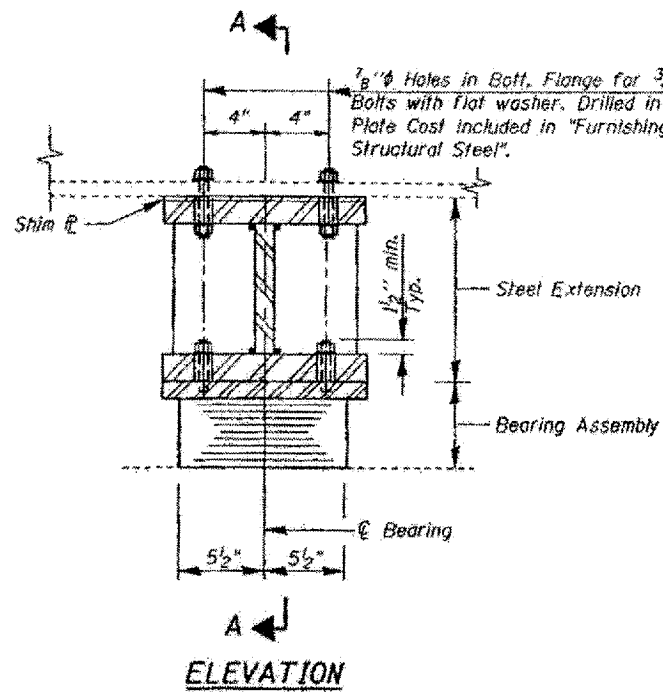
EAST ABUTMENT

DESIGNED	J.C.P.
CHECKED	
DRAWN	T. F.
CHECKED	



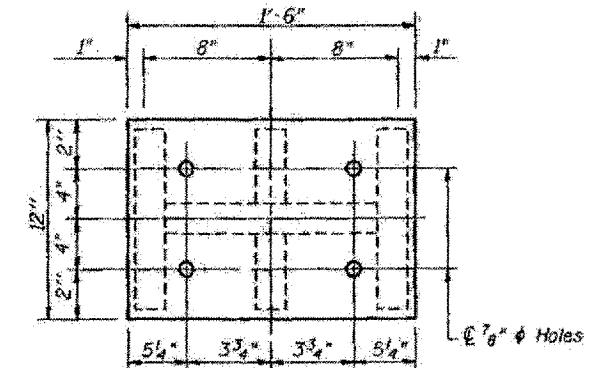
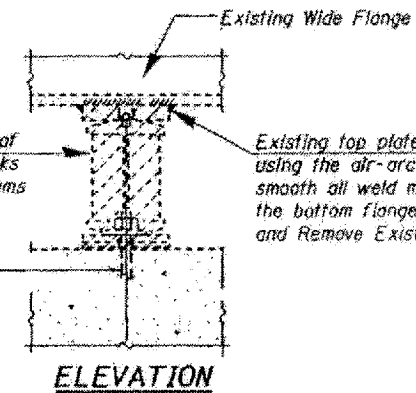
9/10/2001 AKK

D-9 BSMART
FY2001

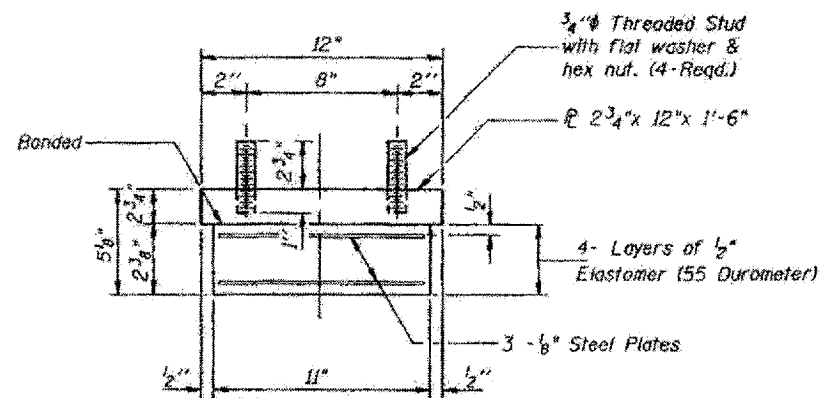


Halched areas indicate removal of existing bearing and plates. Jacks shall be placed under exist. beams and cribbing shall be provided.

Burn existing anchor bolts flush with concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost is included with "Jack and Remove Existing Bearings".



TYPE I ELASTOMERIC BEARING PIER 2



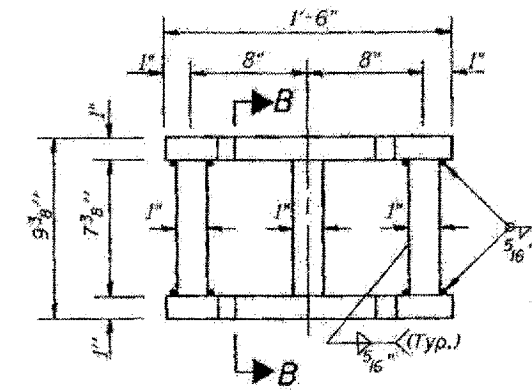
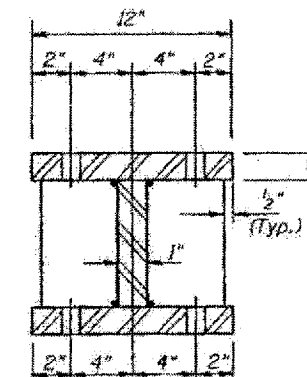
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly

* BEAM REACTION TABLE

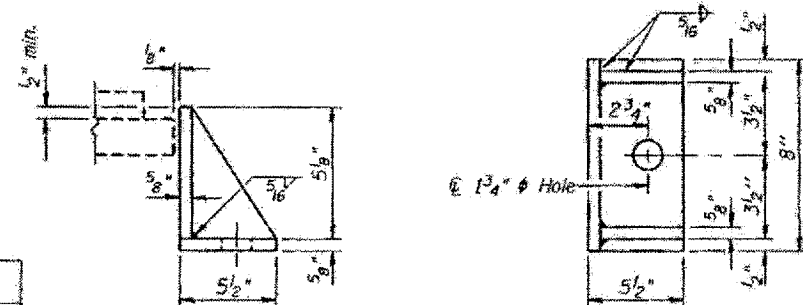
	SERVICE LOADS
R \bar{D} (K)	83.1
R \bar{L} (K)	47.4
Imp (K)	13.8
R Total (K)	144.3

* Min. Jack capacity of each Beam shall be 85 Tons.



BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

Notes:

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

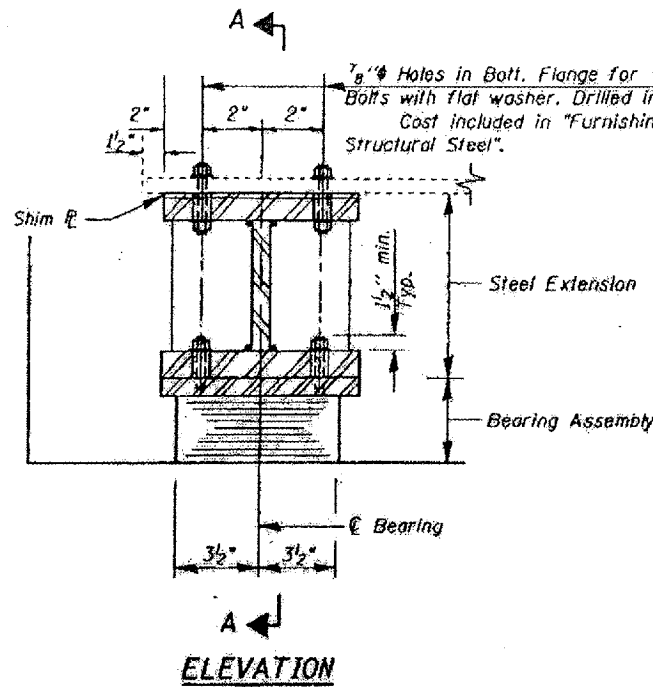
For anchor bolt installation details see sheet # 8 of 12.

New steel extensions, side retainers, connection bolts, anchor bolts, and shim plates are included in "Furnishing and Erecting Structural Steel".

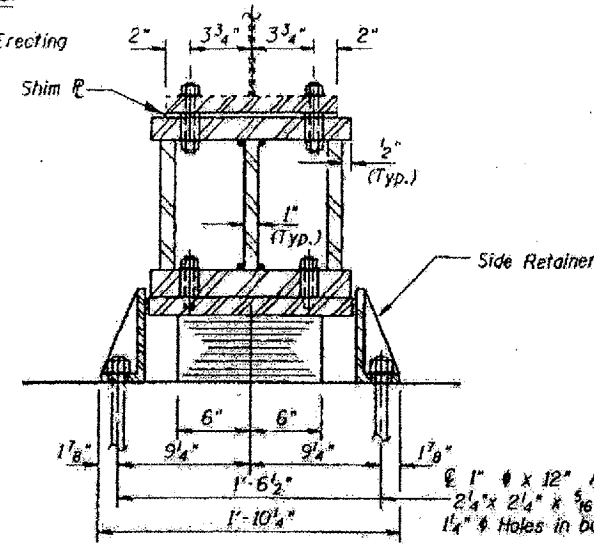
Diaphragm removed and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".

DESIGNED	J.C.P.
CHECKED	
DRAWN	T.F.
CHECKED	





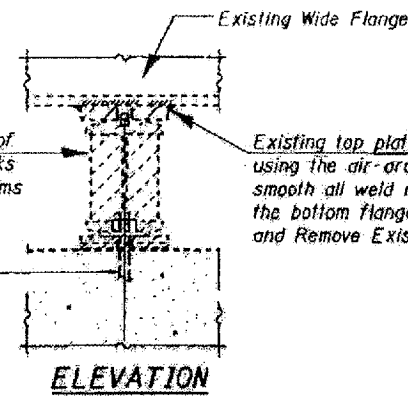
ELEVATION



SECTION A-A

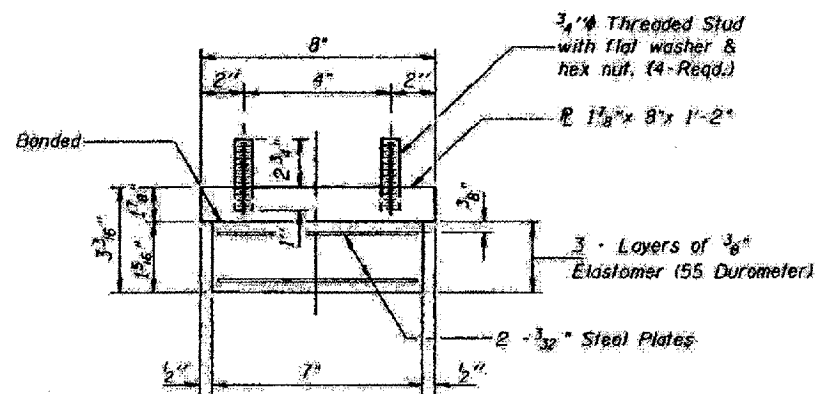
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ELEVATION

TYPE I ELASTOMERIC BEARING WEST ABUT.



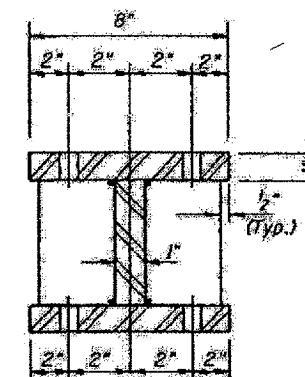
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly

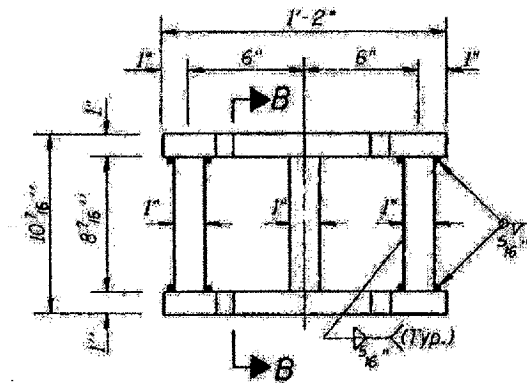
*INTERIOR BEAM REACTION TABLE

	SERVICE LOADS
R D (K)	13.8
R L (K)	34.8
Imp (K)	10.4
R Total (K)	59.0

*Min. Jack capacity at each Beam shall be 30 Tons.



SECTION B-B



STEEL EXTENSION AT WEST ABUT.

BILL OF MATERIAL

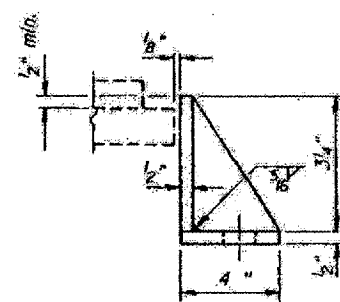
ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12

Notes:

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

For anchor bolt installation details see sheet # 8 of 12.

New steel extensions, side retainers, connection bolts, anchor bolts, and shim plates are included in "Furnishing and Erecting Structural Steel".



SIDE RETAINER

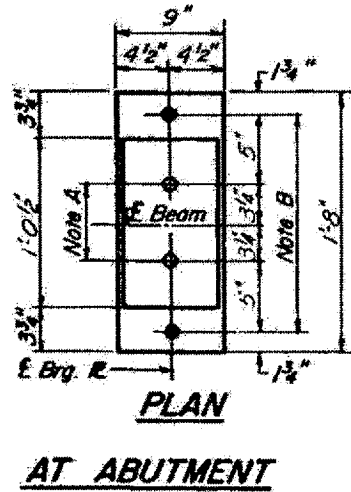
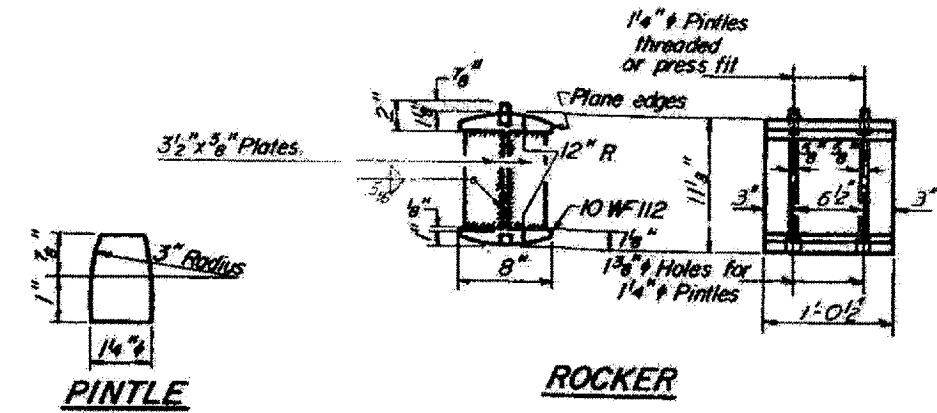
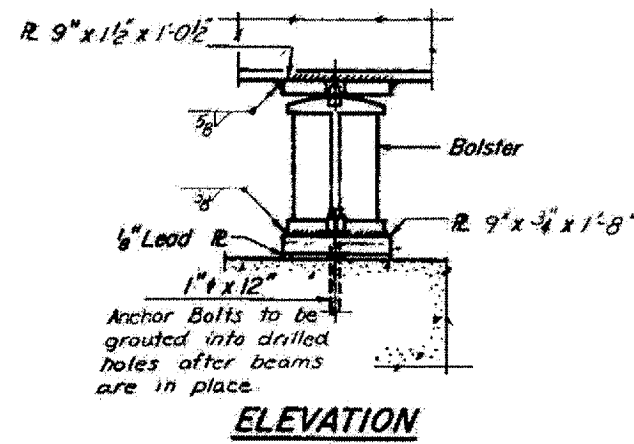
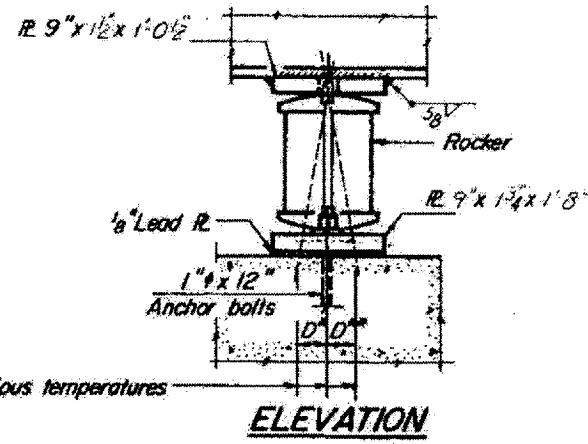
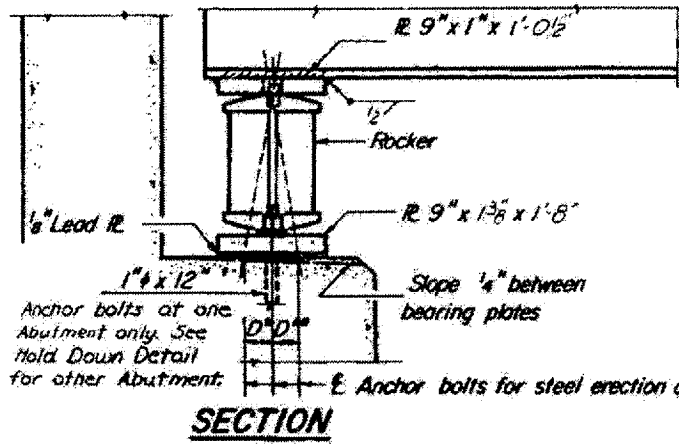
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

DESIGNED	J.C.P.
CHECKED	
DRAWN	T.F.
CHECKED	

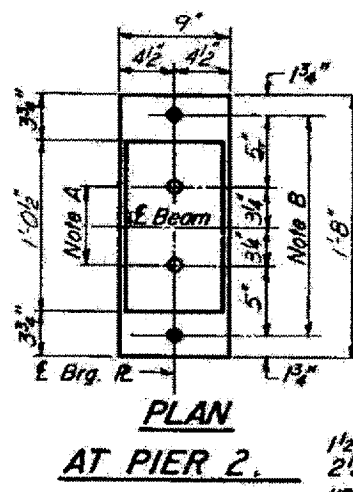


ELASTOMERIC BEARING TYPE I, WEST ABUTMENT

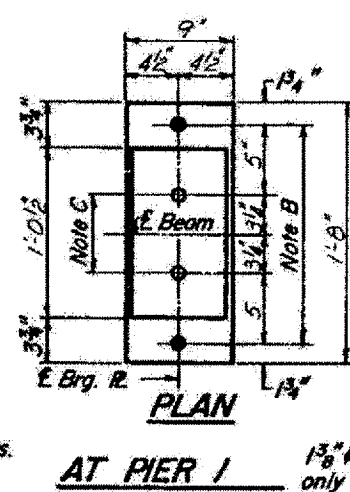
SN 064-0027 & SN 064-0028 ELASTOMERIC BEARING TYPE I, PEDESTAL, WEST ABUTMENT
640.2.2-1.3-1.31RS-1. BSMART FY2002-2



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

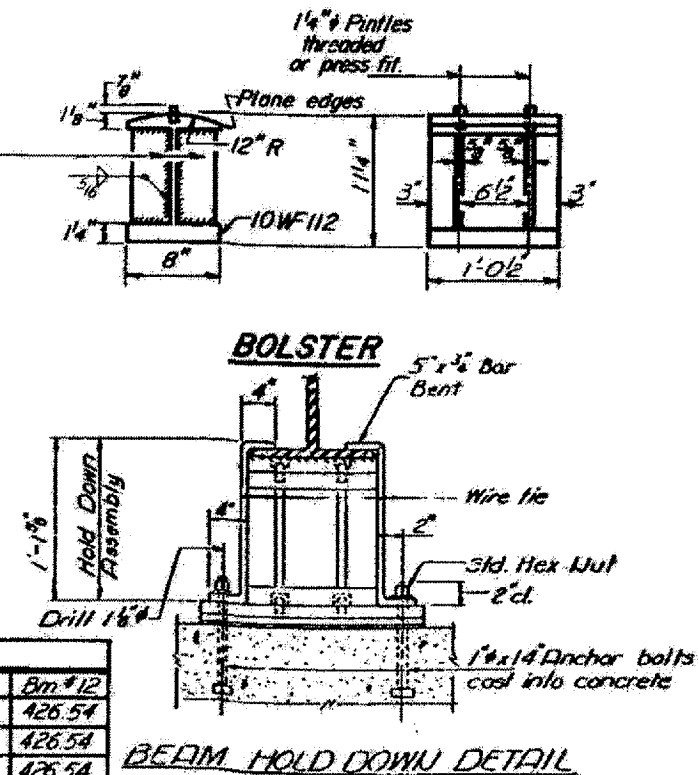


NOTE B
1/2" Holes for 1" anchor bolts.
2 1/2" x 2 1/2" x 3/16" R. Washers
under nut.



NOTE C
1 3/8" Holes 1" deep in top R.
only for 1 1/4" pintles.

BEARING ASSEMBLY DETAILS



NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

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

- b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place, except as noted.

TOP OF BEAM ELEVATIONS

	West Bound Bridge						East Bound Bridge					
	Bm #1	Bm #2	Bm #3	Bm #4	Bm #5	Bm #6	Bm #7	Bm #8	Bm #9	Bm #10	Bm #11	Bm #12
Q Brg. W. Abut.	426.61	426.77	426.90	426.99	426.87	426.73	426.68	426.82	426.94	426.84	426.70	426.54
Q Brg. Pier 1	426.58	426.74	426.87	426.96	426.84	426.70	426.68	426.82	426.94	426.84	426.70	426.54
Q Splice	426.57	426.73	426.86	426.95	426.83	426.69	426.68	426.82	426.94	426.84	426.70	426.54
Q Brg. Pier 2	426.59	426.75	426.88	426.97	426.85	426.71	426.73	426.87	426.99	426.89	426.75	426.59
Q Brg. E. Abut.	426.60	426.76	426.89	426.98	426.86	426.72	426.76	426.90	427.02	426.92	426.78	426.62

TABLE OF MOMENTS AND REACTIONS-INTERIOR BEAMS

	Moments (ft-kip)			Reactions (kips)	
	3 Span 1 or 3	Pier 1 or 2	5 Span 2	Abut	Pier
Initial Dead Load	+26.6	-244.5	+188.0	7.2	50.8
Comp. Dead Load	+14.4	-65.5	+81.9	3.0	16.8
Live Load	+176.8	-186.8	+400.5	33.8	46.8
Impact	+53.0	-50.4	+108.1	9.7	12.7
Total	+270.8	-547.2	+778.5	53.7	127.1

BEAM PROPERTIES

	Steel Section	Composite Section
	Pier	0.5 Span 2
I	5887 in ⁴	15,538 in ⁴
S _f	358 in ³	5,012 in ³
S _b	358 in ³	522 in ³

Note:
Beams shall be held down at the Abutment on the opposite end of Bridge from which the deck pour is commenced after pouring is completed the Hold Down Assembly shall be removed and Nuts placed on Anchor Bolts.
Cost of Hold Down Assembly, incidental to Class X Concrete.

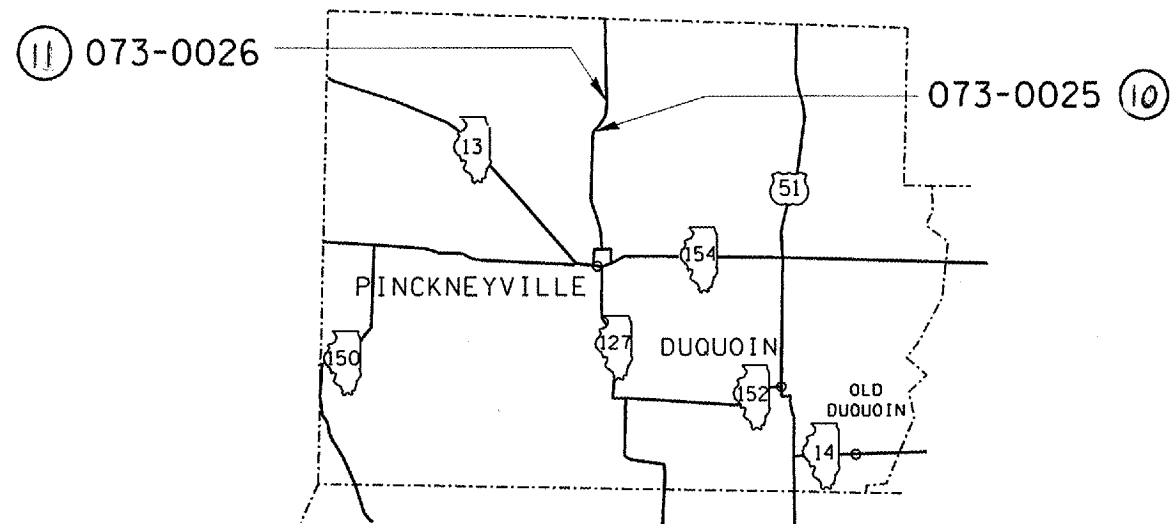
DESIGNED James Hamilton
CHECKED A. K.
R.P.S.
DRAWN P.G. Barnett
CHECKED A.K.

EXAMINED
PASSED
FEB. 14 1965

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	.	VARIOUS	48	17
FED. ROAD DIST. NO. 7		ILLINOIS		

D-9 BRIDGE PAINTING FY06-1



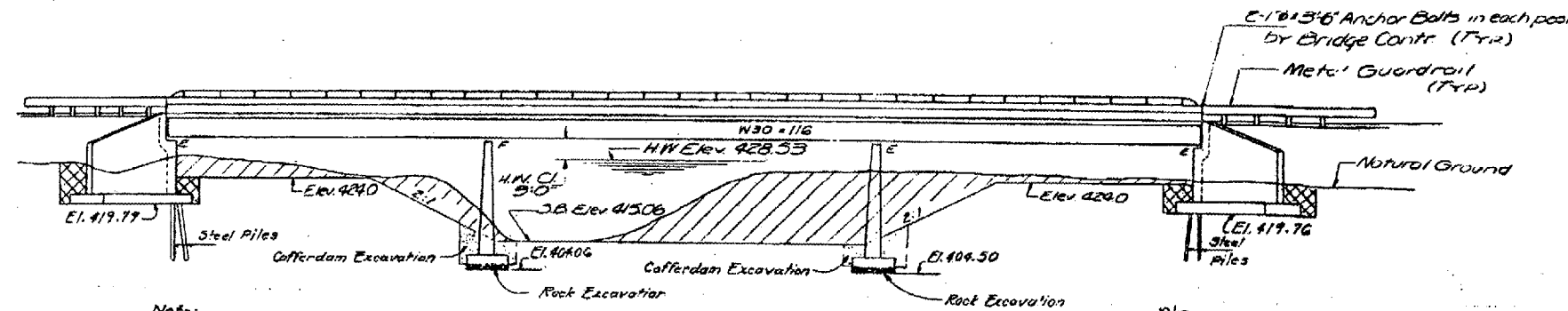
P E R R Y

<p>⑩ 073-0025</p>	<p>4.3 MILES SOUTH OF WASHINGTON COUNTY LINE ILL. ROUTE 127 OVER SWANWICK CREEK LENGTH: 147.2 FT. WIDTH: 45.8 FT. ADT: 3600 24% TRUCKS</p>
<p>⑪ 073-0026</p>	<p>4.1 MILES SOUTH OF WASHINGTON COUNTY LINE ILL. ROUTE 127 OVER SWANWICK CREEK OVERFLOW LENGTH: 238.2 FT. WIDTH: 45.8 FT. ADT: 3600 24% TRUCKS</p>

B.M. RR Spike in R.D. 31st Sta. 276+96 Elev 425.29
 Existing Structure: Built by FA 128, Sec. 8000 Sta. 272+35.30
 in 1926. Superstr. is R.C. On Steel Bms. Substr. is Pile
 Bent. Contractor shall remove existing structure after
 completion of new structure.

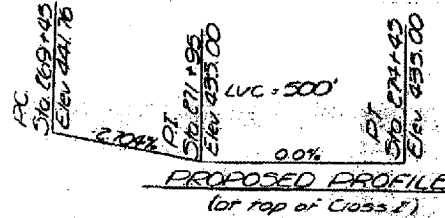
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

VARIOUS ROUTES
 VARIOUS COUNTIES
 D-9 BRIDGE PAINTING FY 06-1
 CONTRACT 98941
 SHEET 38 OF 48

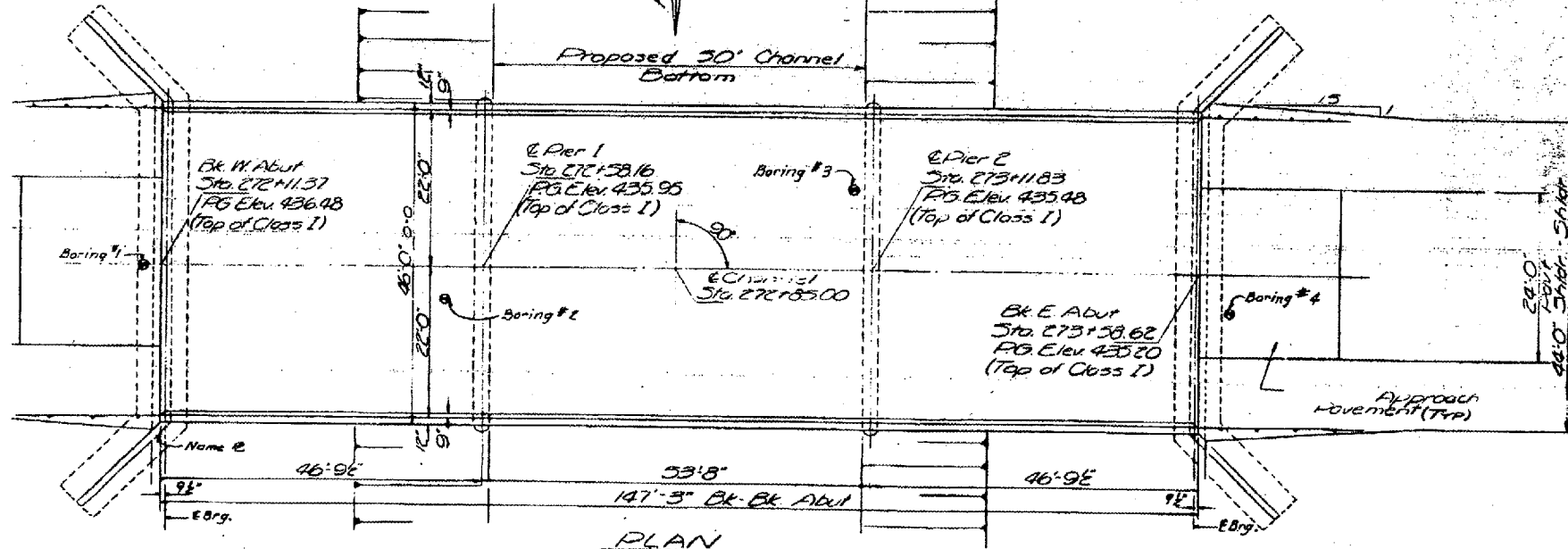


Note:
 Hatched areas indicate
 Channel Excavation.
 Cross hatched areas indicate
 Structure Excavation.

ELEVATION



PROPOSED PROFILE
 (for top of Class I)



PLAN

STATION 272+85.00
 BUILT 19 BY
 STATE OF ILLINOIS
 FA. RT. 128 SEC. 8-1-B
 PROJ. NO. 231(33)
 LOADING HS 20
 NAME PLATE
 (See STC. 2113)

DESIGN STRESSES

f_c: 1200 psi Deck 5'0" f_c: 1000 psi Abutments
 f_c: 1400 psi Curb, Parapet & Piers
 f_s: 20000 psi Rein.
 f_s: 27000 psi Structural
 v_c: 75 psi Ftgs n=10
 Allow 25%/50 FT for Ft W3.
 Design Specifications 1969
 AASHTO (as applicable)

LOADING HS20-44

WATERWAY INFORMATION

Drainage Area: 53.0 Sq miles
 Present Opening: 5345 Sq Ft
 Proposed Opening: 2247 Sq Ft
 Proposed Opening: 1183 Sq Ft
 (Main Structure)
 Q_{max} 11,000 cfs
 Created Head 0.77'

TOTAL BILL OF MATERIAL

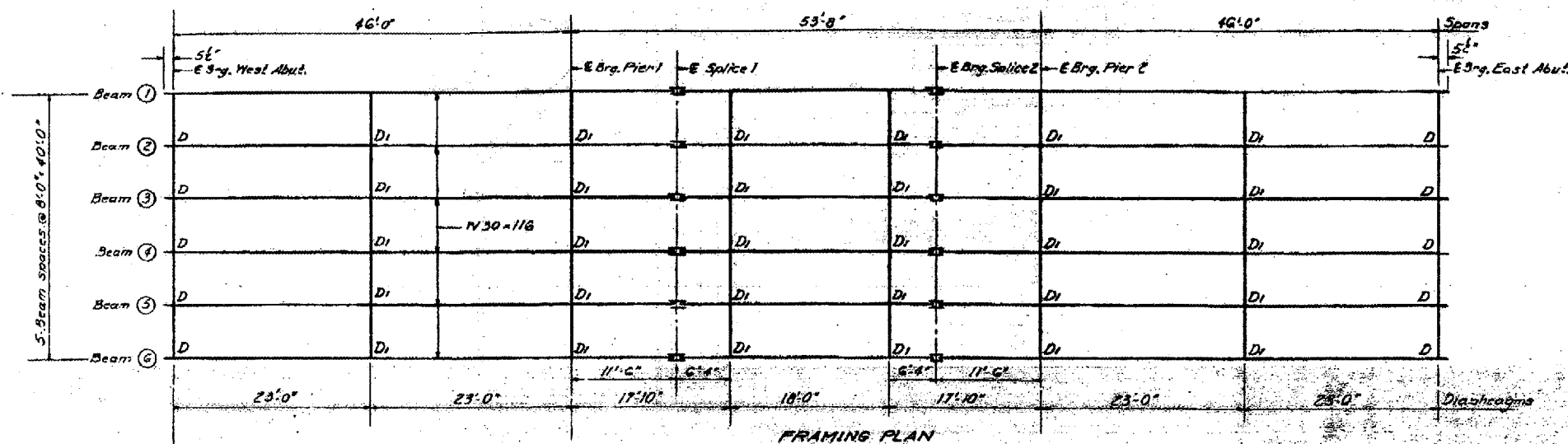
Item	Unit	Super	Sub	Total
Bituminous Conc. Surface Crse Class I	Tons	57		57
Structure Excavation	Cu. Yds.		307	307
Class A Concrete	Cu. Yds.		243.7	243.7
Waterproofing Membrane System	Sq. Yds.	704		704
Class X Concrete	Cu. Yds.	210.5	174.9	385.4
Reinforcement Bars	Lbs.	52,570	35,040	87,610
Structural Steel	L. S.	L. S.		0.96
Aluminum Railings	Lin. Ft.	290		290
Protective Coal	Sq. Yds.	111		111
Steel Piles HP10x42	Lin. Ft.		1524	1524
Test Piles (Steel)	Each		1	1
Rock Excavation for Structure	Cu. Yds.		11	11
Preformed Joint Sealer (2 1/2")	Lin. Ft.	92		92
Name Plates				1
Removal of Existing				
Cofferdam Excavation				
Cofferdams				

BRIDGE NO. 10
 073-0025
 FOR INFORMATION ONLY

FA RT. 128 SEC. 8-1-B
 PERRY COUNTY
 STA. 272+85.00

DESIGNED	R. W. Miller
CHECKED	James P. Pavee
DRAWN	E. J. Anderson
CHECKED	J. P.

EXAMINED	October 12, 1973
PASSED	W. G. Bannerman
APPROVED	Henry R. Hanley

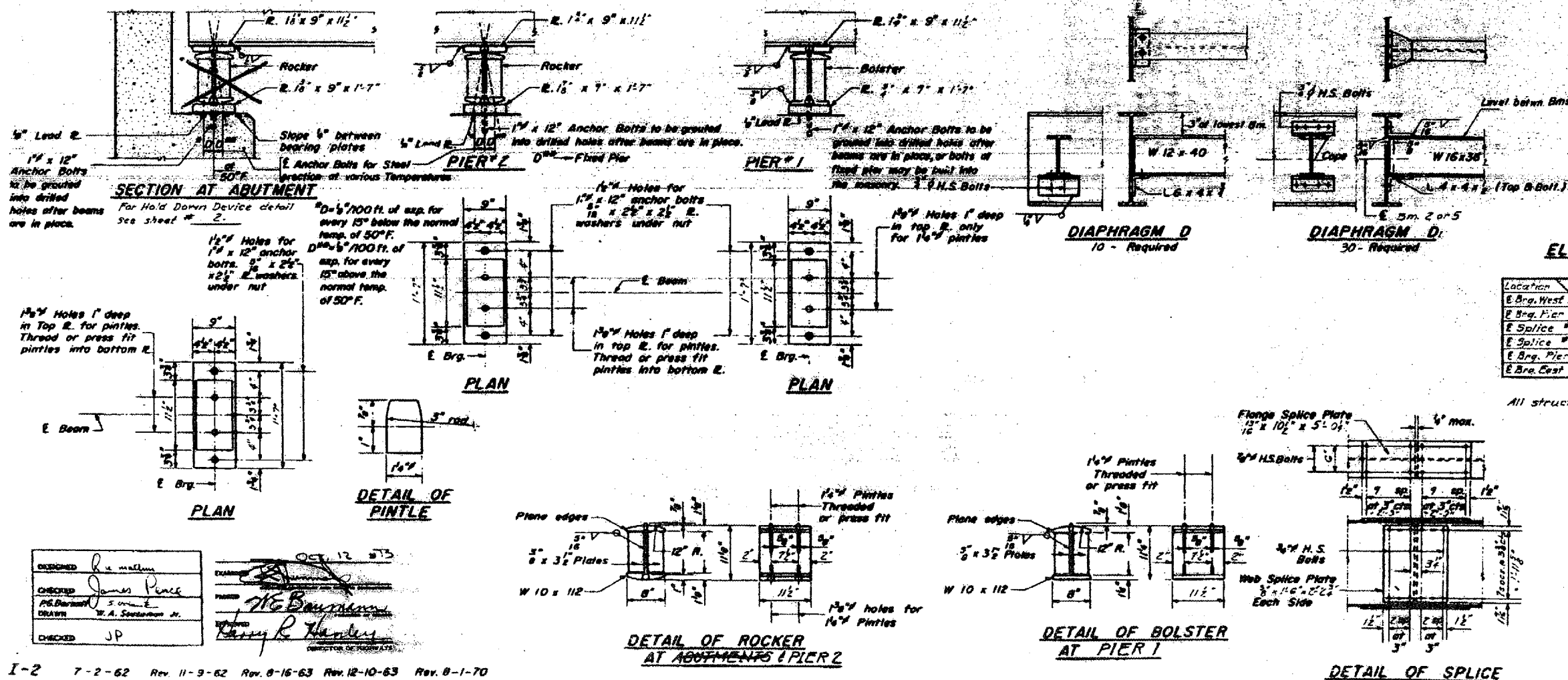


INTERIOR BEAM MOMENT TABLE

	0.5 Sp. 1-3	Pier 1 or 2	0.5 Sp. 2
I (in ⁴)	4930	4930	4930
Q (ft ²)	1.354	1.354	1.354
M ₀ (ft-k)	217	342	146
M ₁ (ft-k)	390	253	311
Imp. (ft-k)	96	72	67
M _{TOTAL} (ft-k)	645	627	574
R ₀ (ft-k)	23.5	24.3	19.7

INTERIOR BEAM REACTION TABLE

	Abut.	Pier
R ₀ (ft-k)	23.0	71.0
R ₁ (ft-k)	39.7	67.3
Imp. (ft-k)	11.5	13.8
R _{TOTAL} (ft-k)	74.2	134.1



ELEVATION TOP OF FLANGE

Location	Sm. No.	Beam 10-G	Beam 20-S	Beam 30-F
E. Brg. West Abut.		435.277	435.445	435.570
E. Brg. Pier #1		434.775	434.879	435.004
E. Splice #1		434.571	434.737	434.861
E. Splice #2		434.300	434.467	434.591
E. Brg. Pier #2		434.244	434.410	434.535
E. Brg. East Abut.		434.019	434.185	434.310

All structural steel shall be AASHTO M222.

BRIDGE NO. 10
073-0025
FOR INFORMATION ONLY

STRUCTURAL STEEL
P.A. RT. 128 SEC. 8-1-B
PERRY COUNTY
STA. 272+85-00

DESIGNED *h. a. muller*
CHECKED *James Pence*
P.E. DRAWN *W. A. Sauerbrey Jr.*
CHECKED *JP*

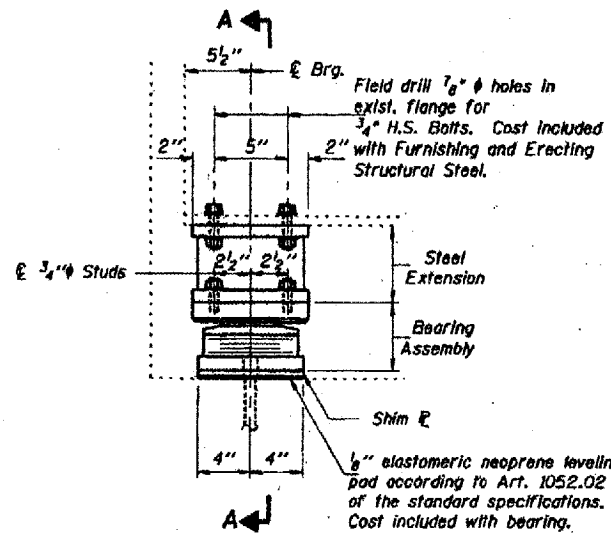
DATE *OCT 12 1973*
DRAWN *W. A. Sauerbrey Jr.*
CHECKED *Harry R. Hantley*

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

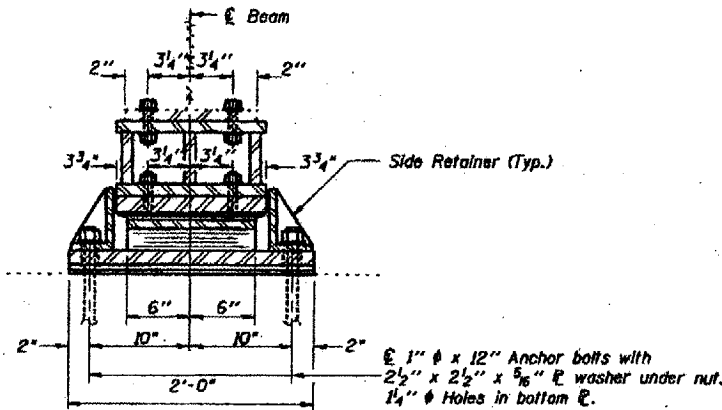
GIRDER REACTIONS

RP	(K)	23.0
Rt	(K)	39.7
Imp.	(K)	11.5
R (Total)	(K)	74.2

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
CONTRACT 98941
SHEET 40 OF 48

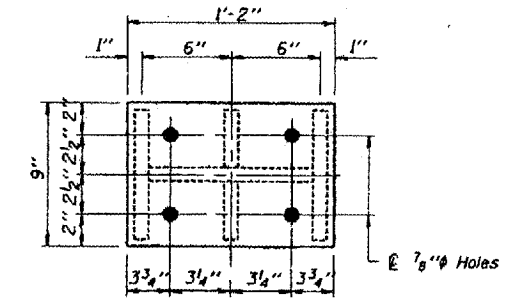


ELEVATION AT EAST ABUTMENT



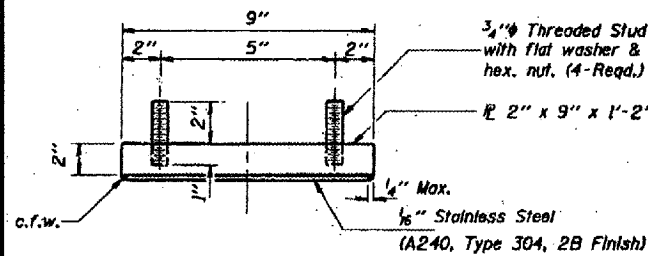
SECTION A-A

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included with Furnishing and Erecting Structural Steel.
New steel extensions, side retainers, shim ϵ 's, connection bolts, and anchor bolts are included with Furnishing and Erecting Structural Steel.
See Sheet 12 of 12 for Anchor Bolt Installation.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. Jack capacity = 40 Tons.

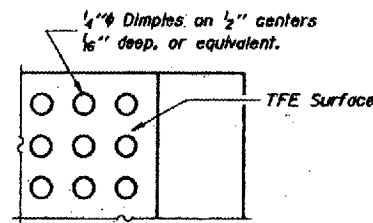


PLAN TOP AND BOTTOM PLATE

TYPE II TFE ELASTOMERIC EXP. BRG.



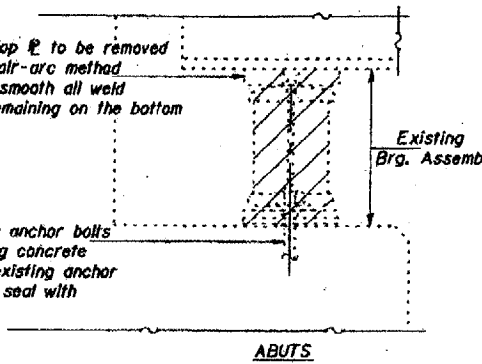
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE

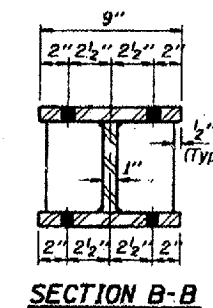
* Existing Top ϵ to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

* Burn the existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy.

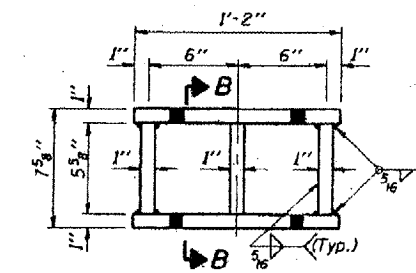


EXISTING BEARING REMOVAL DETAIL

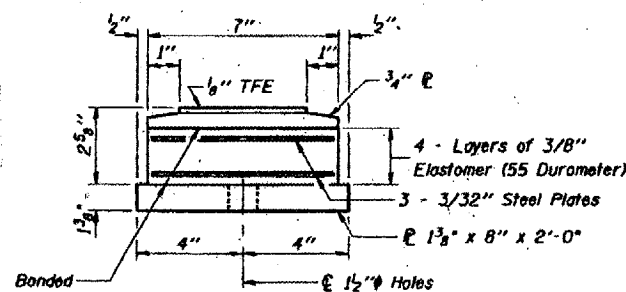
* Cost is included with Jack and Remove Existing Bearings



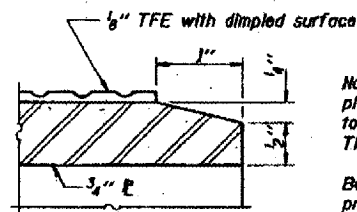
SECTION B-B



STEEL EXTENSION DETAIL



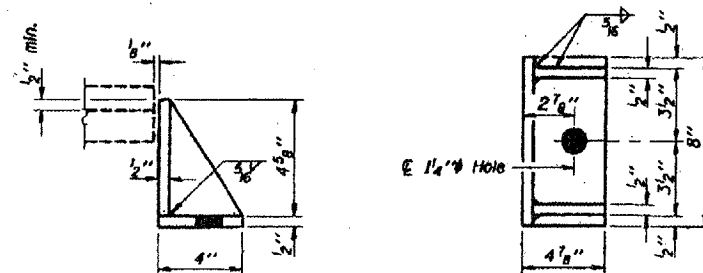
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

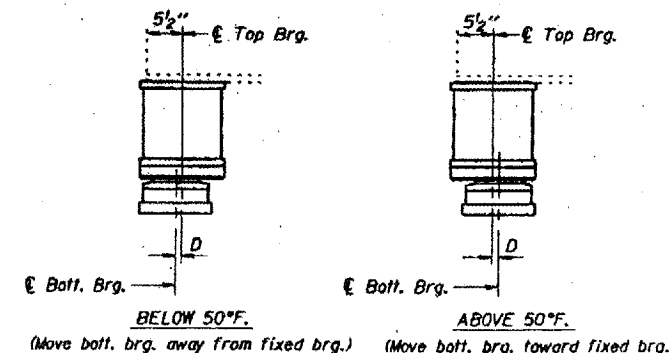
Note: The $\frac{1}{8}$ " TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of $\frac{1}{8}$ " TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SIDE RETAINER

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



SETTING ANCHOR BOLTS AT EXP. BRG.

D = $\frac{1}{8}$ " 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	6

BRIDGE NO. 10
073-0025
FOR INFORMATION ONLY

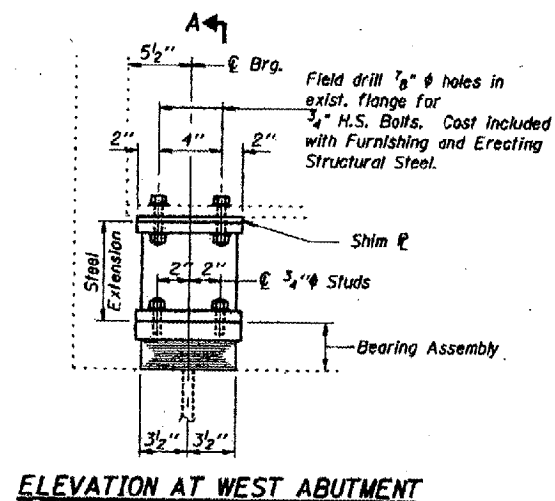
TYPE II BEARING REPLACEMENT
EAST ABUTMENT
PERRY COUNTY
S.N. 073-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

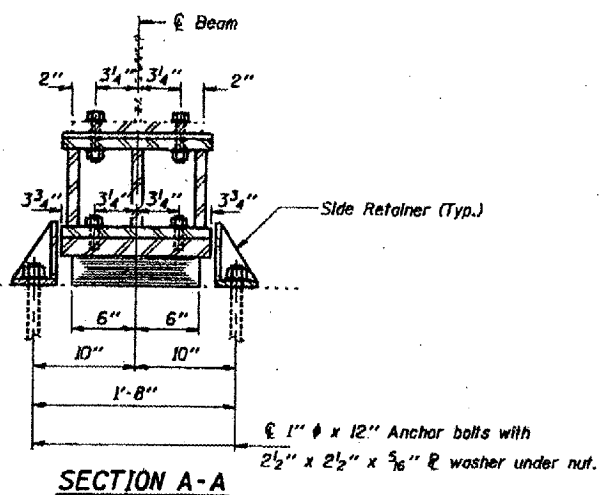
GIRDER REACTIONS

R ₁	(K)	23.0
R ₂	(K)	39.7
Imp.	(K)	11.5
R (Total)	(K)	74.2

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
CONTRACT 98941
SHEET 41 OF 48

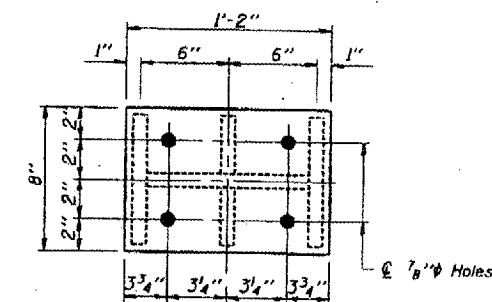


ELEVATION AT WEST ABUTMENT



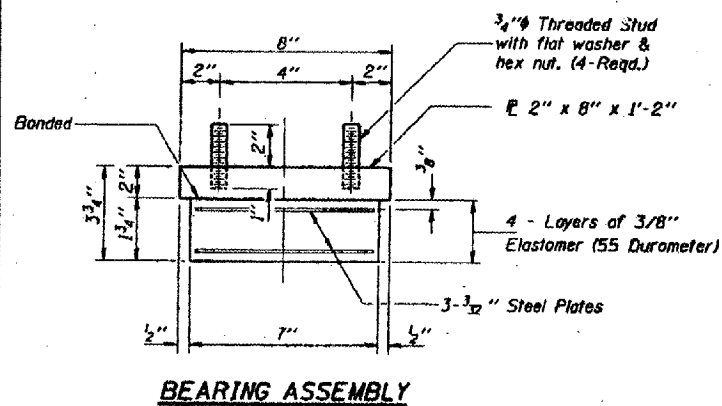
SECTION A-A

Notes: Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost shall be included with Furnishing and Erecting Structural Steel.
New steel extensions, side retainers, shim P's, connection bolts, and anchor bolts are included with Furnishing and Erecting Structural Steel.
See Sheet 12 of 12 for Anchor Bolt Installation.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. Jack capacity = 40 Tons.



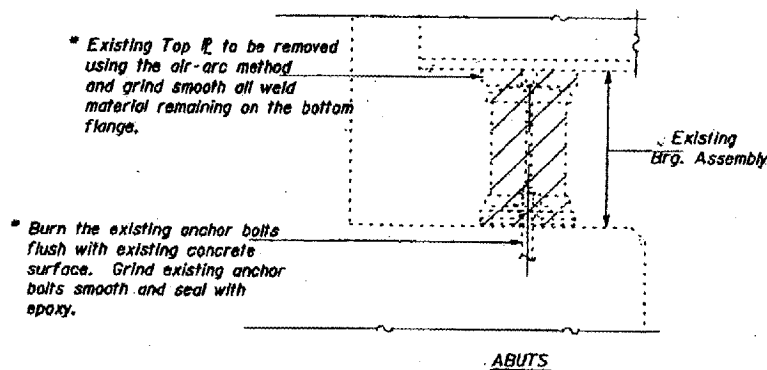
PLAN TOP AND BOTTOM PLATE

TYPE I ELASTOMERIC EXP. BRG.



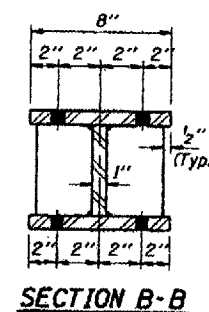
BEARING ASSEMBLY

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

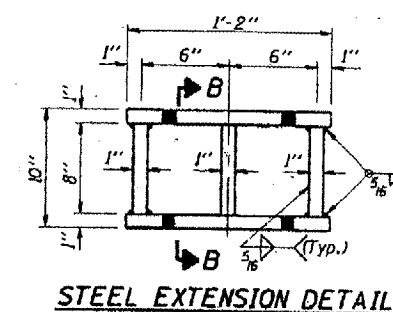


EXISTING BEARING REMOVAL DETAIL

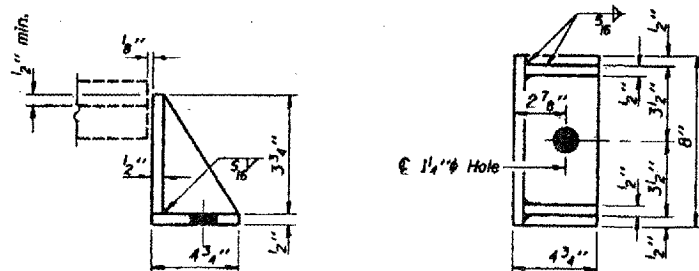
* Cost is Included with Jack and Remove Existing Bearings



SECTION B-B



STEEL EXTENSION DETAIL



SIDE RETAINER

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

BRIDGE NO. 10
073-0025
FOR INFORMATION ONLY

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6

TYPE I BEARING REPLACEMENT
WEST ABUTMENT
PERRY COUNTY
S.N. 073-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
CONTRACT 98941
SHEET 42 OF 48

B.M. R.R. Spike in P.R. 49' Rt. Sta. 290+91 Elev. +32.40
Existing structures built as F.A. Rte. 126, Sec. 8 BCD, Sta. 281+00 &
Sta. 287+00 in 1936. Superstructure 24' W with
6 1/2" Conc. slab, Pile Bent Substructure. The Existing
26'-0" Wide x 213'-0" Long bridges to be removed
by Contractor after new bridge is open to
traffic
No Salvage

All reinforcement & Fasteners shall be otherwise noted.
Calculated weight of structural steel = 233,120 lbs.
All Structural Steel shall be AASHTO M 222 unpainted except as 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.

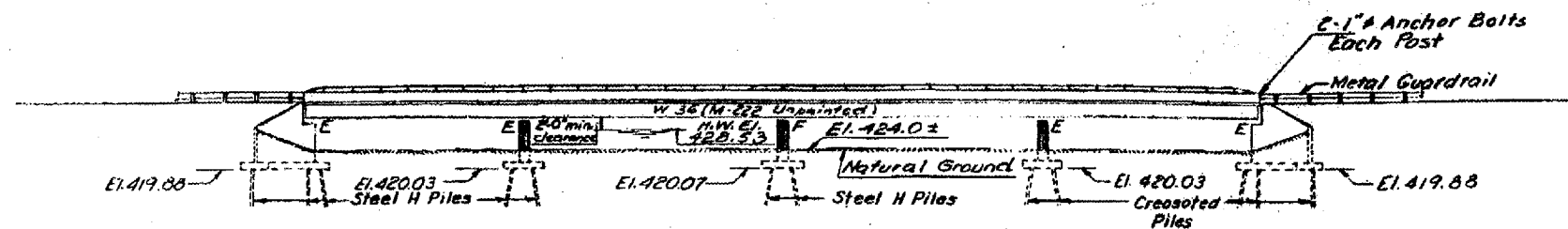
Anchor bolts shall be set before bolting diaphragms over supports. The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the wide flange beams.

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.

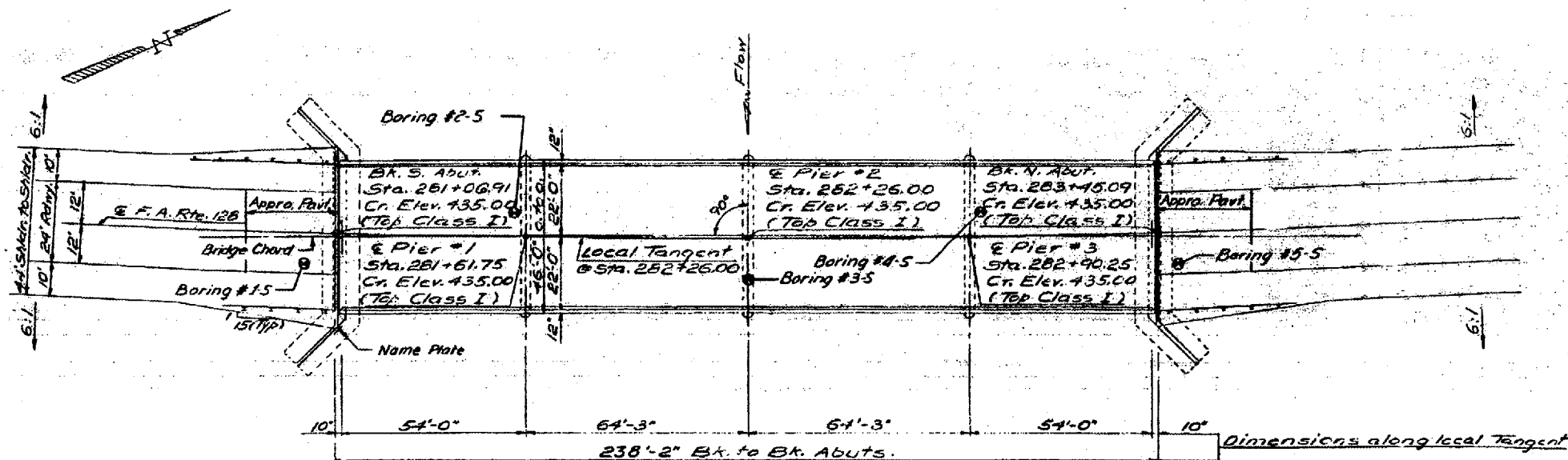
Protective coat shall not be applied to surfaces which Waterproofing Membrane System is applied.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ± 1/8". Adjustment 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.

The Contractor shall drive one timber test pile in a permanent location at Pier #3 and one steel test pile (HP 12x53) in a permanent location at Pier #2 as directed by the Engineer before ordering the remainder of piles.



ELEVATION



PLAN

CURVE DATA

A = 10° - 32' - 13"
D = 0° - 35'
R = 7822.13'
L = 1806.33'
T = 905.72'
E = 41.67'
S.E. = 0.0211/ft.
App. Sta. 278+05 to Sta. 280+05

STATION 282+26
BUILT 197 BY
STATE OF ILLINOIS
F.A. RT. 126 SEC. 8-1B-1
F.A. PROJ. F-237 (33)
LOADING HS20

See Standard 2113
NAME PLATE

WATERWAY INFORMATION

Drainage Area 53.0 Sq. mi.
Required Opening 1064 Sq. Ft.*
Proposed Opening 1064 Sq. Ft.*

Design H.W. El. 428.53
Q(20) = 5500 cfs
Crested Height = 0.71'

* Includes 6' x 6' Box Culvert

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yds.		604	604
Class A Concrete	Cu. Yds.	337.2	197.4	534.6
Reinforcement Bars	Lbs.	79,930	20,120	100,050
Aluminum Rolling	Lin. Ft.	472		472
Bituminous Concrete Surface Course, C.I.	Yds.	93		93
Waterproofing Membrane System*	Sq. Yds.	1123		1123
Preformed Joint Sealer (1/2")	Lin. Ft.	92		92
Structural Steel	L.S.	LS		0.64
Name Plates	Each		1	1
Protective Coat	Sq. Yds.	175		175
Class A Concrete	Cu. Yds.		135.3	135.3
Crossed Piles (Over 38')	Lin. Ft.		2173	2173
Test Piles (Timber)	Each		1	1
Steel Piles (HP 12 x 53)	Lin. Ft.		3740	3740
Test Piles Steel (HP 12 x 53)	Each		1	1
Removal of Existing Structures	Each			2

* See Special Provisions

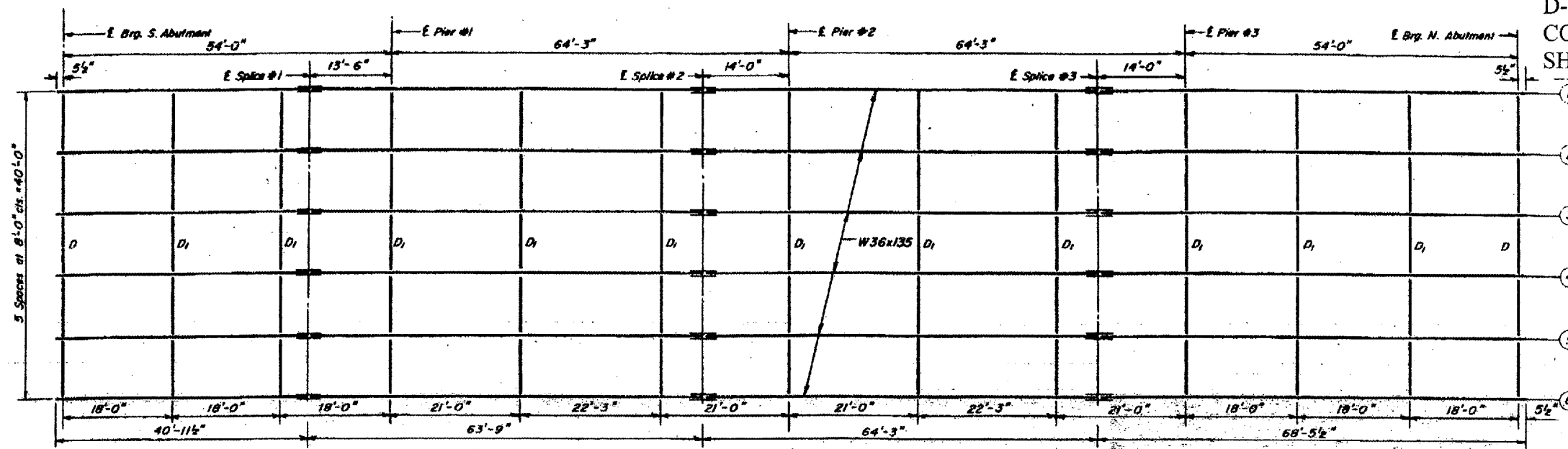
BRIDGE NO. 11
073-0026
FOR INFORMATION ONLY

GENERAL PLAN & ELEVATION
PROJECT: F-237(33)
F.A. RTE 126 OVER SWANWICK CREEK
OVERFLOW
F.A. RTE 128 SECTION 8-1B-1
PERRY COUNTY
STA. 282+26.00

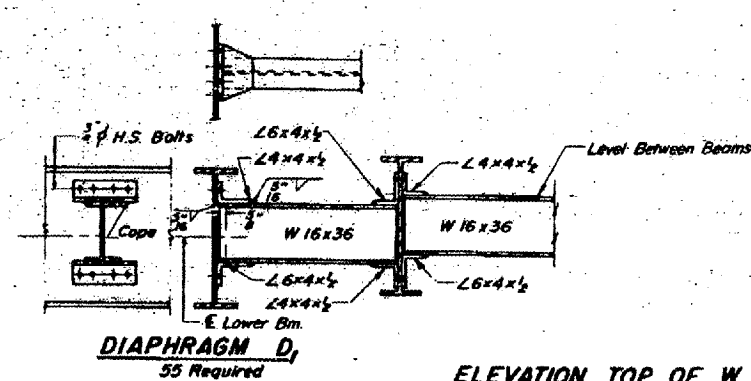
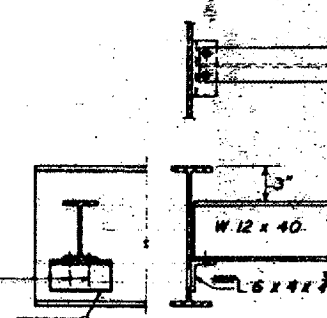
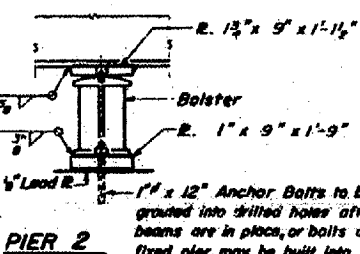
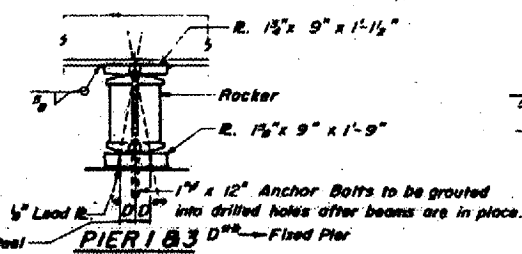
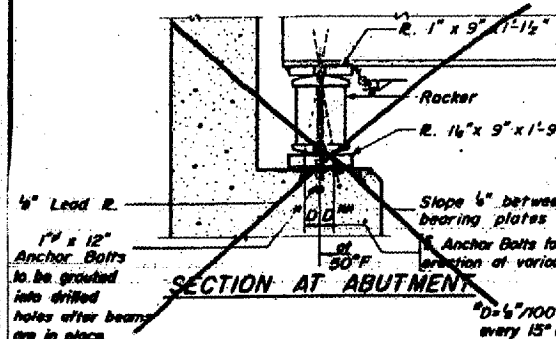
DESIGNED	Fordy Chu	DATE	October 15 1973
CHECKED	Sal Fatoni	APPROVED	H. W. El. 428.53
DRAWN	P. Bonetti	APPROVED	Q(20) = 5500 cfs
CHECKED	SF TCC	APPROVED	Crested Height = 0.71'

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
CONTRACT 98941
SHEET 43 OF 48



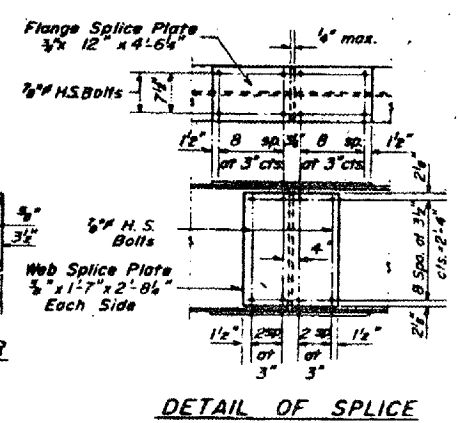
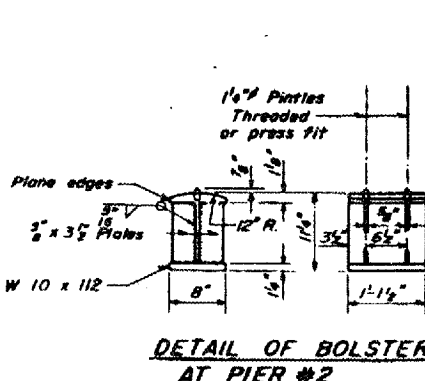
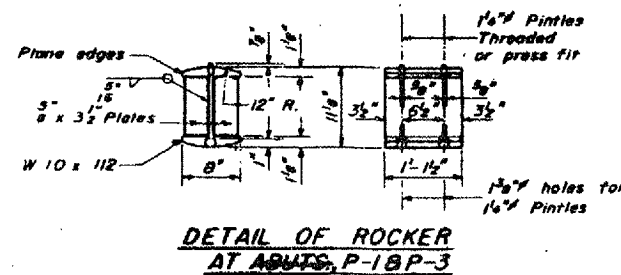
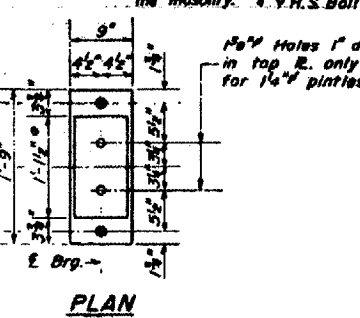
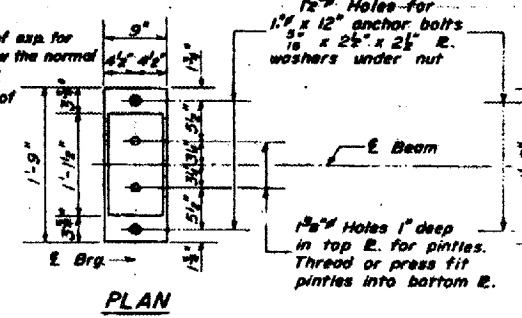
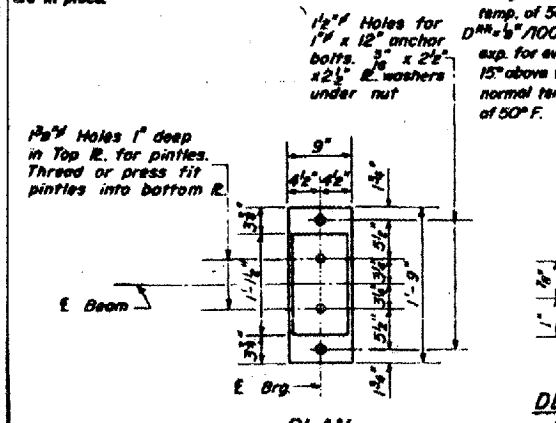
PLAN



ELEVATION TOP OF W

Beam #	1	2	3	4	5	6
Elevation	433.71	433.87	434.03	434.19	434.35	434.51

All at Control Points.



DESIGNED: *[Signature]*
CHECKED: *[Signature]*
DRAWN: *[Signature]*
DATE: OCT. 15 1973

BRIDGE NO. 41
073-0026
FOR INFORMATION ONLY

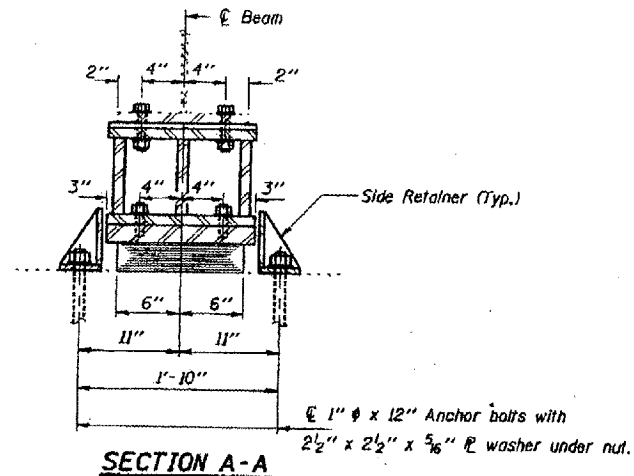
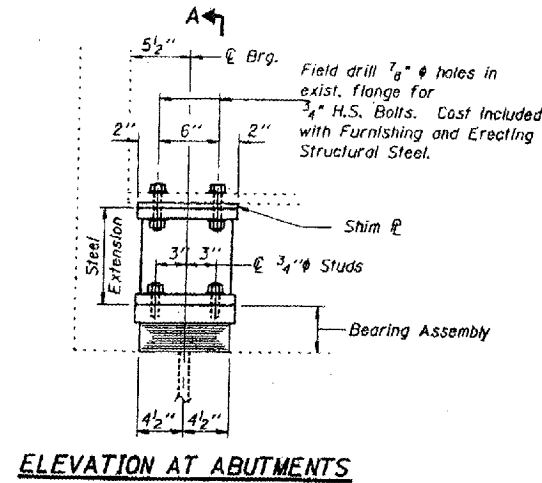
STRUCTURAL STEEL
F.A. RT. 128 SEC. 8-1B-1
PERRY COUNTY
STA. 282+26

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

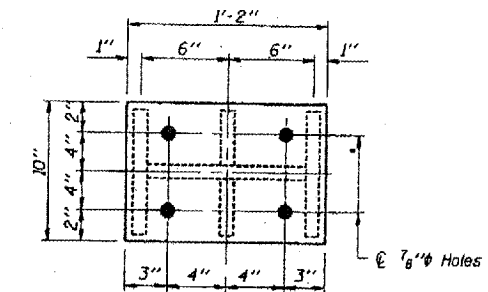
GIRDER REACTIONS

R _l	(K)	30.7
R _t	(K)	41.4
Imp.	(K)	12.5
R (Total)	(K)	84.6

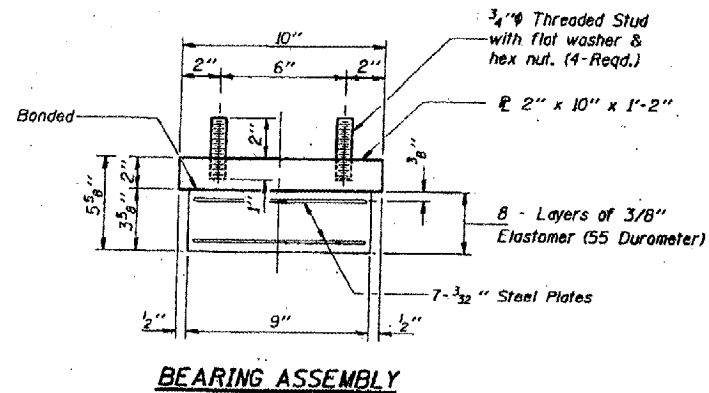
VARIOUS ROUTES
VARIOUS COUNTIES
D-9 BRIDGE PAINTING FY 06-1
CONTRACT 98941
SHEET 44 OF 48



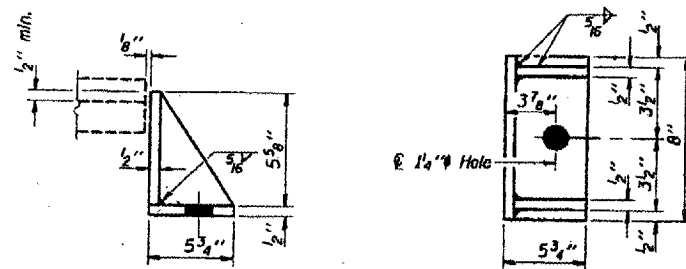
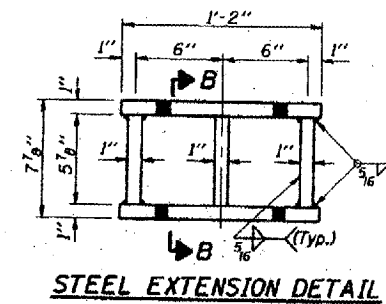
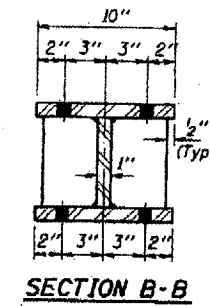
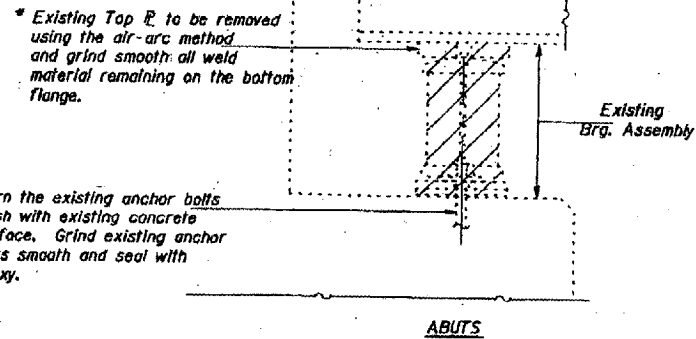
Notes: Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost shall be included with Furnishing and Erecting Structural Steel.
New steel extensions, side retainers, shim ϕ 's, connection bolts, and anchor bolts are included with Furnishing and Erecting Structural Steel.
See Sheet 12 of 12 for Anchor Bolt installation.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. Jack capacity = 50 Tons.



TYPE I ELASTOMERIC EXP. BRG.



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



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

BRIDGE NO. 11
073-0026
FOR INFORMATION ONLY

BILL OF MATERIAL

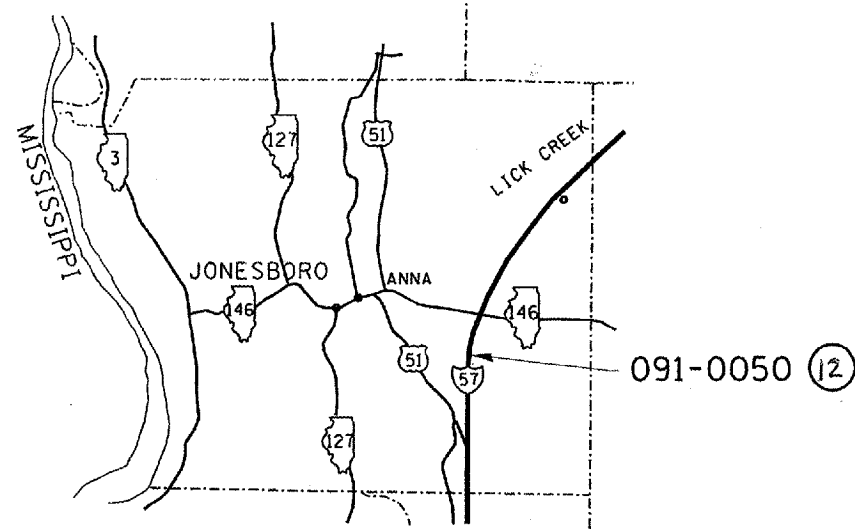
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12

TYPE I BEARING REPLACEMENT
ABUTMENTS
PERRY COUNTY
S.N. 073-0026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	-	VARIOUS	48	45

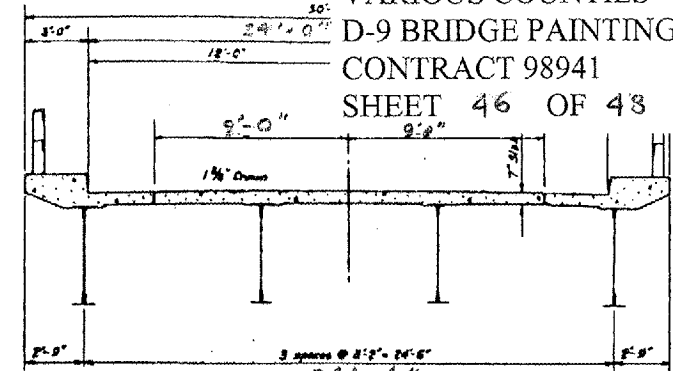
FED. ROAD DIST. NO. 7	ILLINOIS
D-9 BRIDGE PAINTING FY06-1	



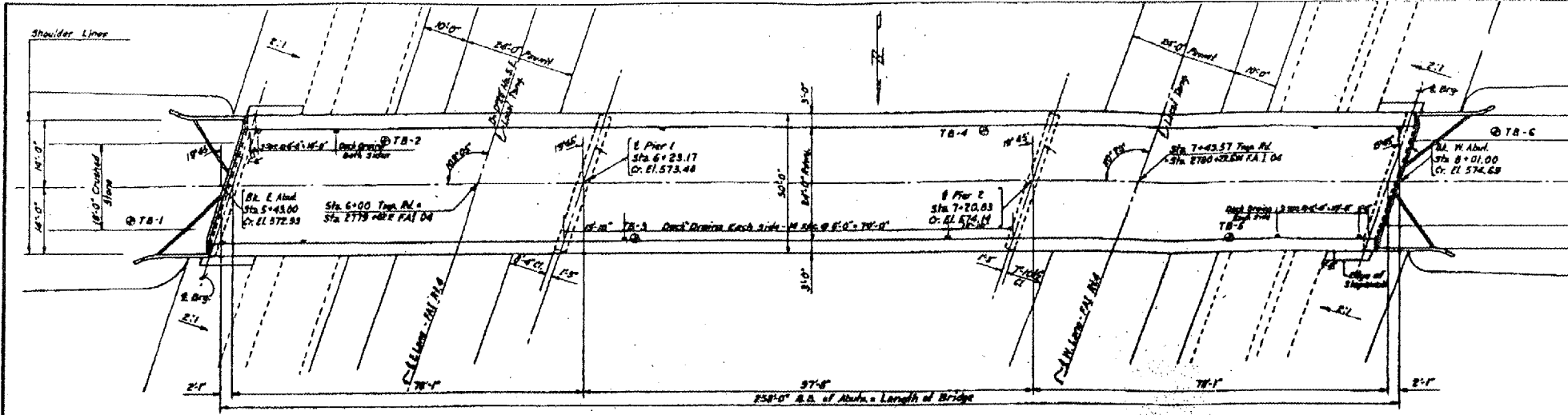
U N I O N

⑫ 091-0050

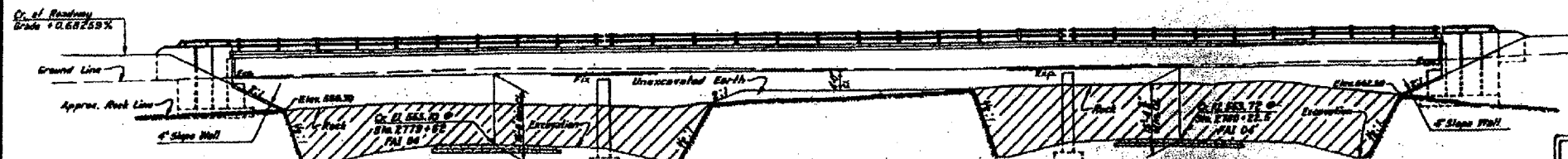
1.1 MILE SOUTH OF ILL. ROUTE 146
TR 193 (FRIENDSHIP ROAD) OVER INTERSTATE 57 - I 57 M.P. 28.9
LENGTH: 258.0 FT. WIDTH: 30.1 FT.
ADT: 100 5% TRUCKS



DECK CROSS SECTION
SCALE: 1/4" = 1'-0"



PLAN
SCALE: 1" = 15'



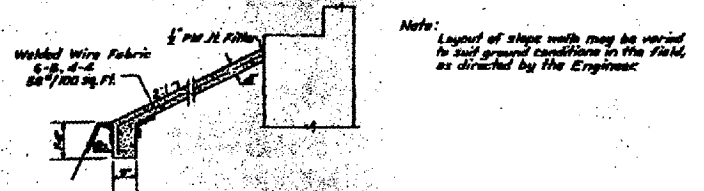
ELEVATION
SCALE: 1" = 15'

NAME PLATE
STATION 2779+62
BUILT 195 BY
STATE OF ILLINOIS
FAI RT. 4 SEC. 91-3NB-2
FA PROJ. 1-04-1 (35)
LOADING H15-S12

GENERAL NOTES

Class X Concrete shall be used throughout.
The concrete floor slab shall be finished in accordance with Article 51.10(e) of the Standard Specifications and shall be poured in one continuous operation between joints.
All rebar, bearing plates, lead plates, stirrups and anchor bolts shall be furnished and set in accordance with Article 51.10 of the Standard Specifications, and are included for payment on Structural Steel. The cost of handrail post anchors shall be included in the payment for handrail post anchors. The Contract Price per linear foot of handrail shall include the furnishing, installing and painting of the handrail. The number of linear feet of handrail is measured along the top longitudinal railing member.
Metal handrail on concrete end post shall be included in linear feet of metal handrail.
All structural steel and metal handrail shall receive one shop coat of red lead and two field coats of aluminum paint in accordance with Article 52.1 to 52.5 inclusive of the Standard Specifications.
All work shall be furnished and applied by the Contractor.
All structural steel shall be inspected by Illinois Division of Highways before painting.
The filling shall be done according to Article 52.8 of the Standard Specifications. Bearing Data are shown on the plans only as a guide to bidders in estimating soil conditions which may be encountered in the field.
Design stresses:
F_y = 18,000 p.s.i. for structural steel.
F_y = 20,000 p.s.i. for intermediate grade reinforcing steel.
F_y = 1,000 p.s.i. for superstructure.
E = 29,000 p.s.i. in manufacture with earth pressure.
Shrink in castings = 75 p.s.i. maximum.
T₁₀ 10.
Design Specifications AASHTO H15-S12 84

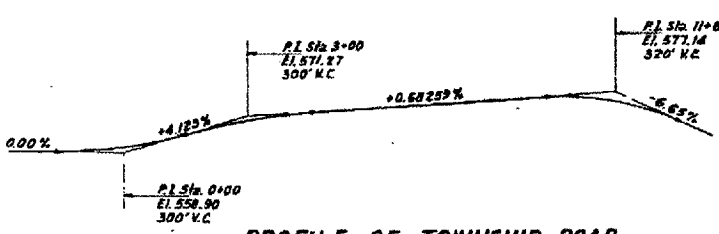
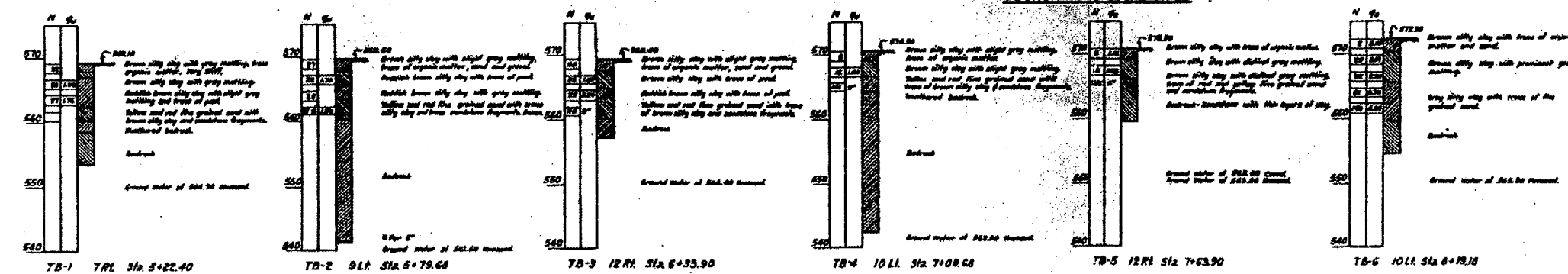
NOTES:
N indicates the number of blows required to drive a 1 1/2" I.D., 2" O.D. split spoon sampler 12" by means of a 140# weight falling 30".
Cu indicates the unconfined compressive strength of the soil in tons/sq. ft.
See Plan on this sheet for location of borings.



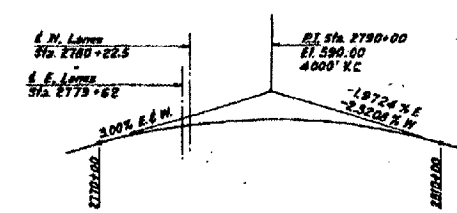
SECTION THRU SLOPE WALL

TOTAL BILL OF MATERIAL

ITEM	SUPERSTR.	SUBSTR.	TOTAL
Class X Concrete	Cu. Yds. 209.3	197.4	406.7
Reinforcement Bars	Lbs. 34,454	22,506	56,960
Structural Steel	Lbs. 234,600		234,600
Metal Handrail	Lin. Ft. 552.88		552.88
Name Plates	Each 1		1
Class A Excavation for structures	Cu. Yds. 232		232
Rock Excavation for Structures	Cu. Yds. 70		70
Slope Well	Sq. Yds. 6.8		6.8



PROFILE OF TOWNSHIP ROAD

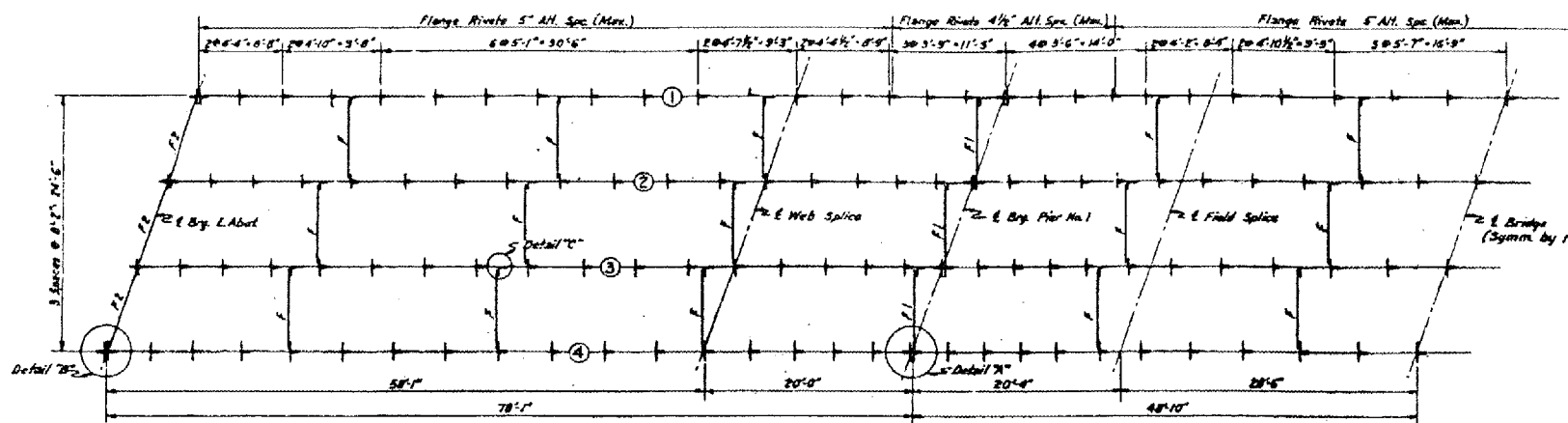


PROFILE OF FAI RT. 04

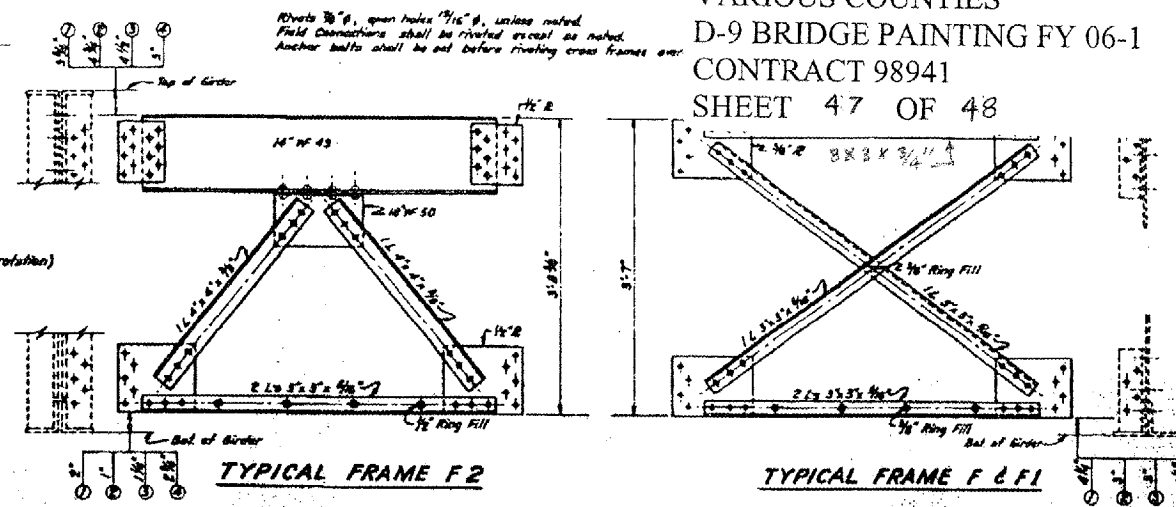
BRIDGE NO. 12
091-0050
FOR INFORMATION ONLY

GIRDER DETAILS-PUBLIC ROAD- 91-3NB-2

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS & BUILDINGS DIVISION OF HIGHWAYS	DESIGNED BY DATE P.M. 3-99
1	FAI-4 SECTION 91-3NB-2 PROJECT 1-04-1(35)	CHECKED BY DATE R.L. 4-99
2	STATION 2779+62 & 2780+22.5W	DRAWN BY DATE
3	UNION COUNTY	CHECKED BY DATE
4	HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR ILLINOIS	DESIGN NO.



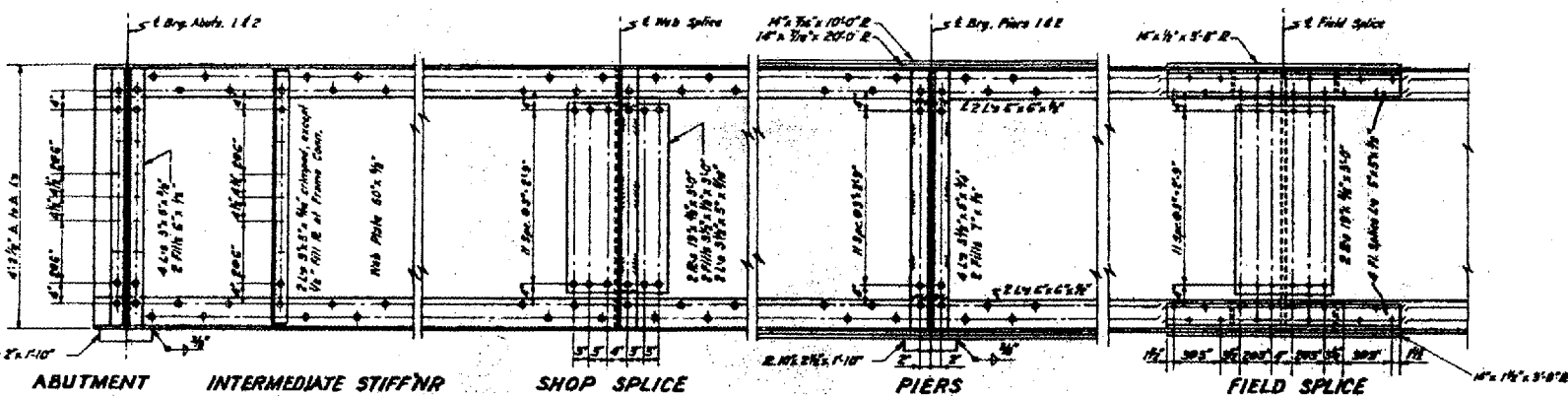
STRUCTURAL STEEL FRAMING HALF PLAN



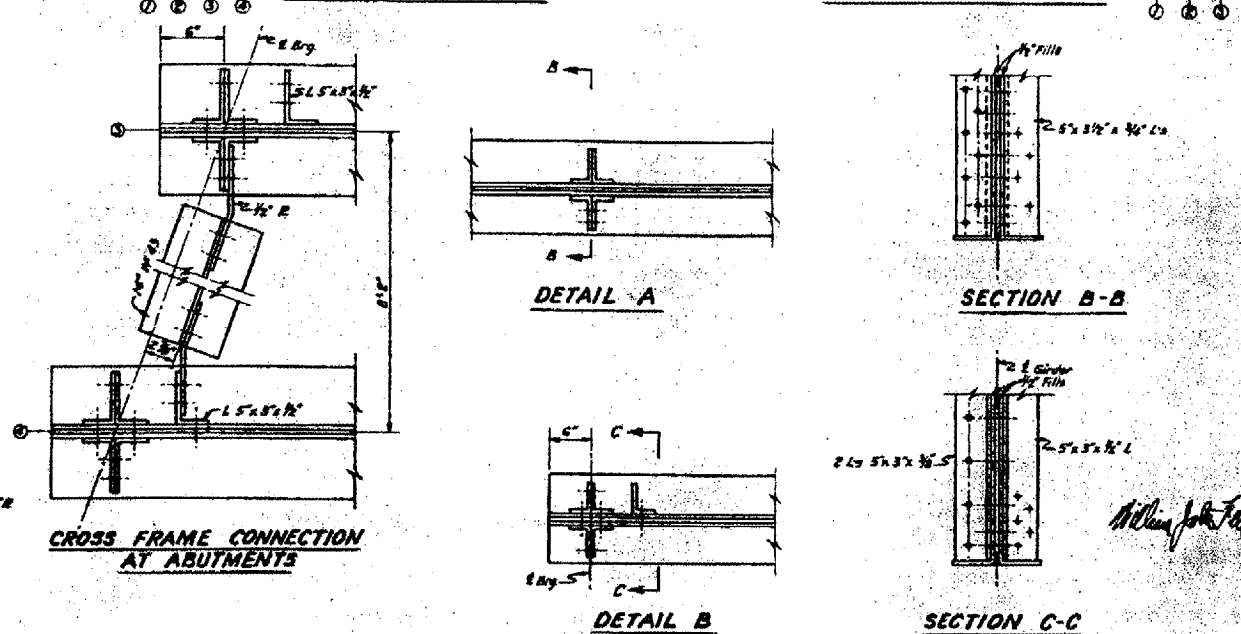
TYPICAL FRAME F2

TYPICAL FRAME F & F1

Rivets 3/4" φ, open holes 1/16" φ, unless noted.
 Field Connections shall be riveted except as noted.
 Anchor bolts shall be set before riveting cross frames on.



TYPICAL GIRDER DETAILS



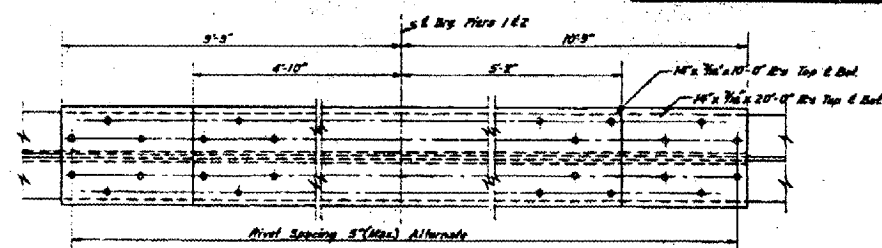
CROSS FRAME CONNECTION AT ABUTMENTS

DETAIL A

SECTION B-B

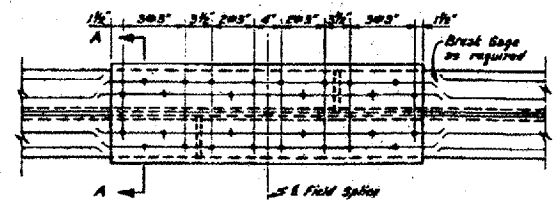
DETAIL B

SECTION C-C

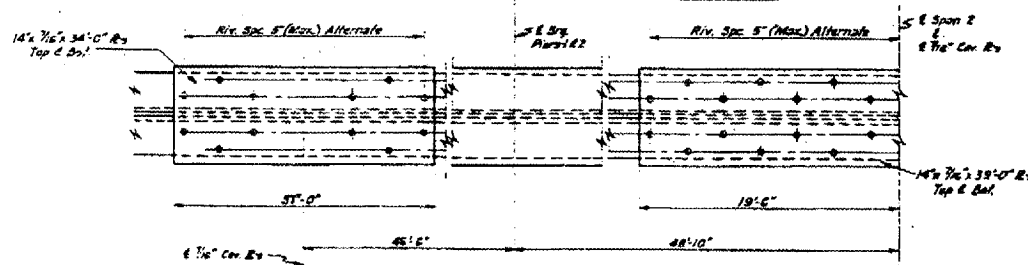


SPANS 1 & 3

SPAN 2



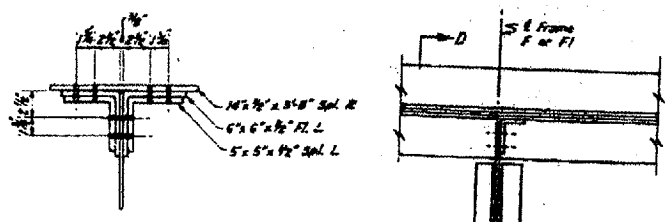
FIELD SPLICE FOR FLANGE



SPANS 1 & 3

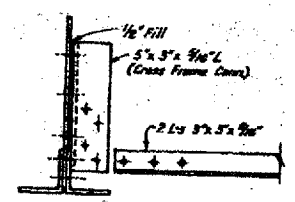
SPAN 2

COVER PLATES



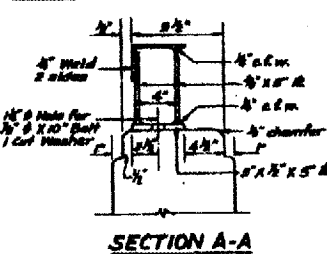
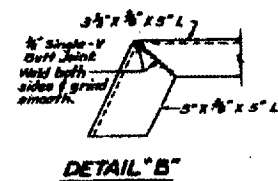
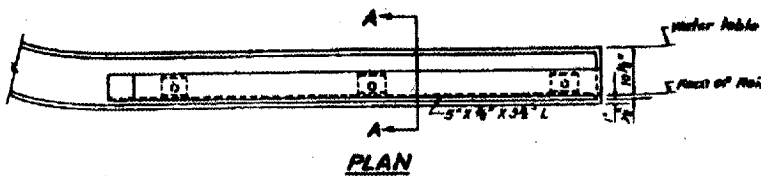
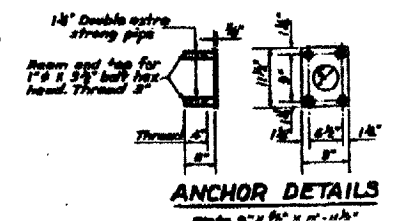
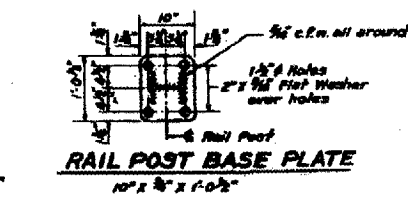
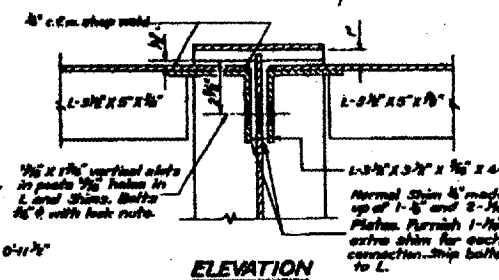
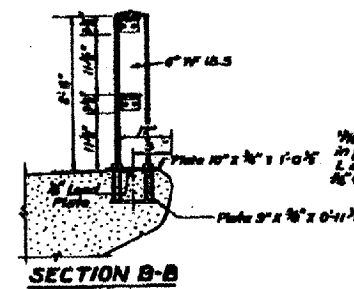
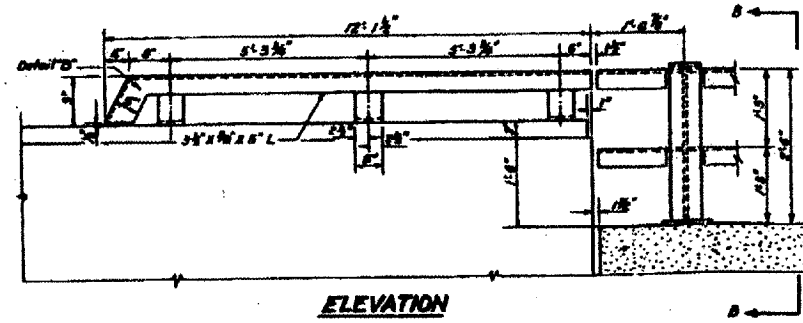
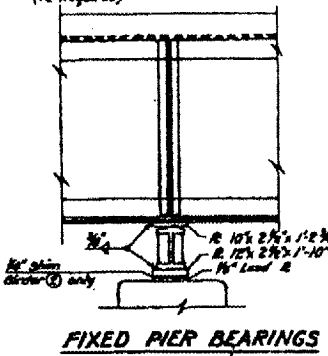
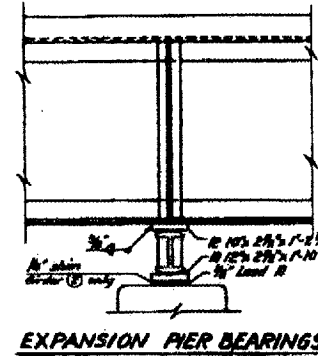
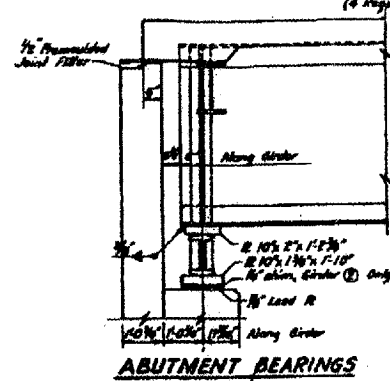
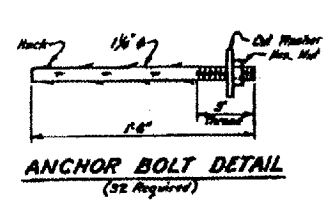
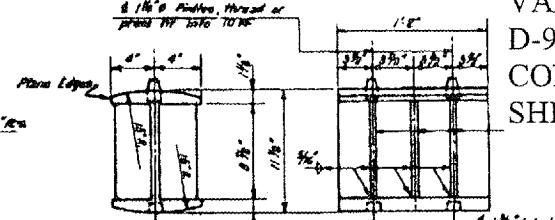
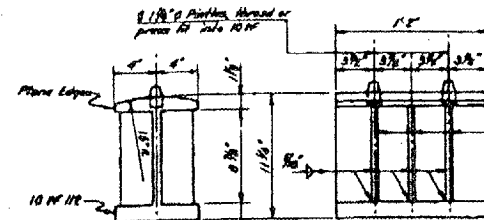
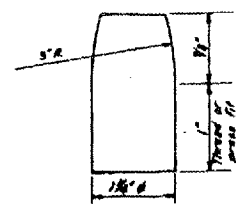
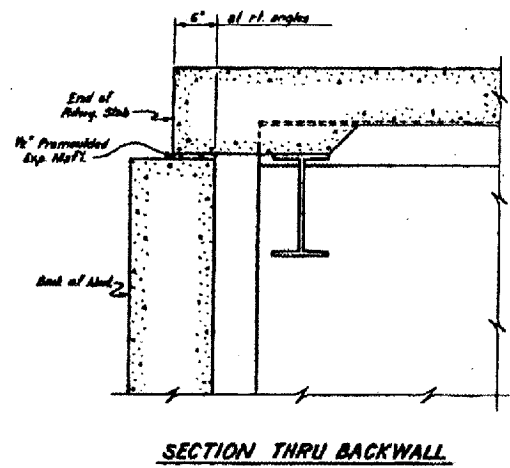
SECTION A-A

DETAIL C

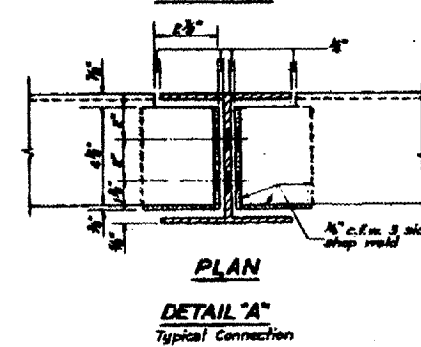
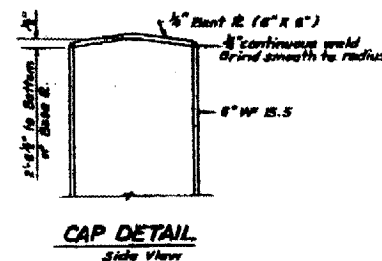


BRIDGE NO. 12
 091-0050
 FOR INFORMATION ONLY

William John Fell



END POST DETAILS



BRIDGE NO. 12
 091-0050
 FOR INFORMATION ONLY

BEARINGS, HANDRAIL & MISC. DETAILS-PUBLIC ROAD-91-3HB-2			
REVISION	DATE	BY	CHKD
1			
2			
3			
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6			
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9			
10			

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS & BUILDINGS DIVISION OF HIGHWAYS	PROJECT 1-04-11351
FBI-4 SECTION 91-3HB-2	STATION 2779+42.2 & 2780+22.0 W
UNION	COUNTY
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS BEGUN ILLINOIS	