

03-04-2016 LETTING ITEM 080

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

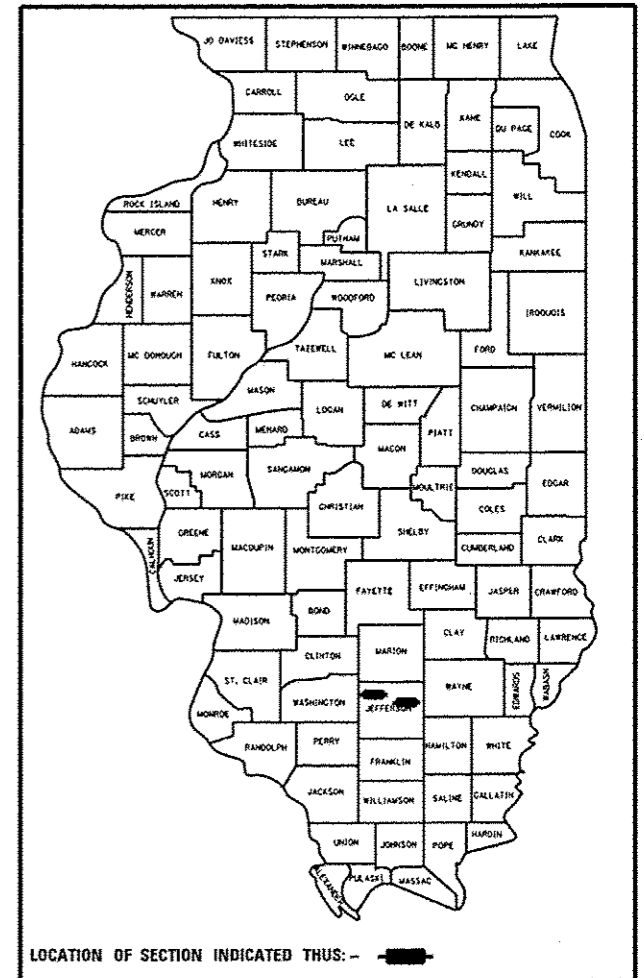
**PROPOSED
HIGHWAY PLANS**

FAI 57 & 64 (I-57 & 64)
SECTION D9 BRIDGE PAINT 2016-2

JEFFERSON COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D9 BRIDGE PAINT 2016-2	VARIOUS	18	1
	(ILLINOIS)	CONTRACT NO. 78512		

D-99-012-16



FOR INDEX OF SHEETS, SEE SHEET NO. 2

BRIDGE NO. 1
SN. 041-0012
I-57 NB 2014 ONE WAY ADT=17400, 37% TRUCKS
TOWNSHIP-SHILOH

BRIDGE NO. 2
SN. 041-0013
I-57 SB 2014 ONE WAY ADT=19300, 38% TRUCKS
TOWNSHIP-SHILOH

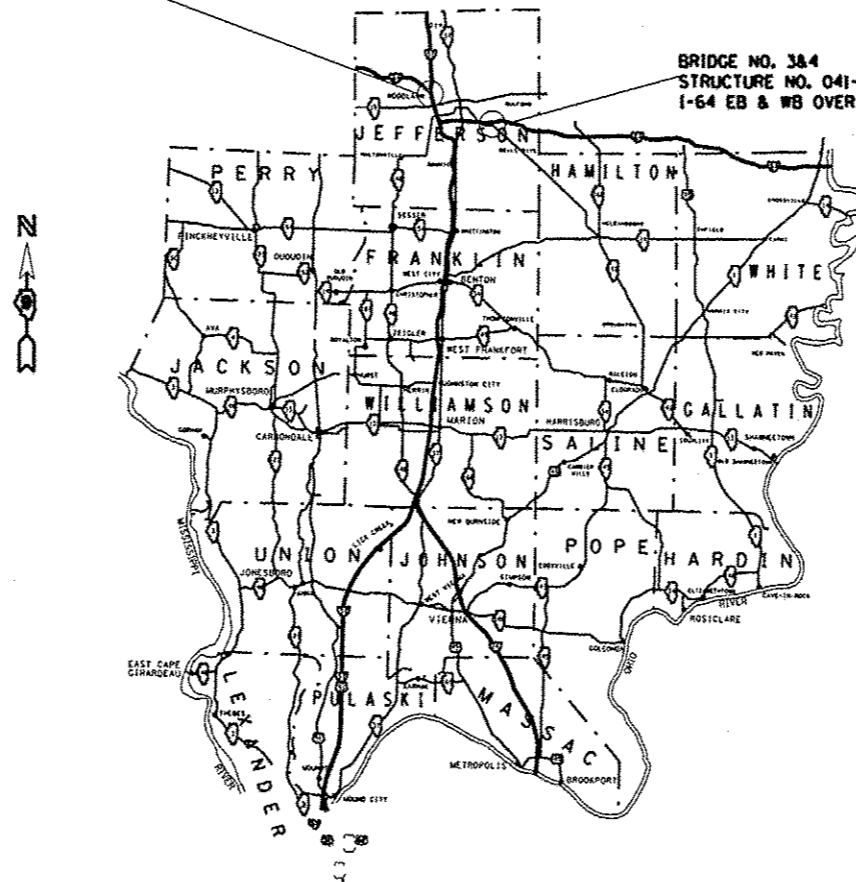
BRIDGE NO. 3
SN. 041-0070
I-64 EB 2014 ONE WAY ADT=5100, 37% TRUCKS
TOWNSHIP-DODDS

BRIDGE NO. 4
SN. 041-0071
I-64 WB 2014 ONE WAY ADT=5600, 40% TRUCKS
TOWNSHIP-DODDS

BRIDGE NO. 1&2
STRUCTURE NO. 041-0012 & 041-0013
I-57 NB & SB OVER EVANSVILLE WESTERN RR

C-99-012-16

BRIDGE NO. 3&4
STRUCTURE NO. 041-0070 & 041-0071
I-64 EB & WB OVER EVANSVILLE WESTERN RR



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

PROJECT ENGINEER: DAVID PICHE (618) 351-5227
DESIGN ENGINEER: AIMAN FAREA

CONTRACT NO. 78512

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 8 2015

Jeffrey Z. Keen
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Jan 29 2016
Maween M. Addis PE
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 29 2016
Omer Osman PE
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES
3	SUMMARY OF QUANTITIES
4-13	SN 041-0012 & SN 041-0013 STRUCTURE INFORMATION
14-18	SN 041-0070 & SN 041-0071 STRUCTURE INFORMATION

STANDARDS

- 701101-04 OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600mm) FROM PAVEMENT EDGE
- 701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
- 701400-08 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701406-09 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
- 701428 TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
- 701901-04 TRAFFIC CONTROL DEVICES

AREAS OF CLEANING & PAINTING

SN/ AREAS OF CLEANING & PAINTING	ALL STEEL WITHIN 5' OF EXP. JOINTS	ALL STRUCTURAL STEEL	2' AT EACH DRAIN LOCATION IN END-SPANS OF FASCIA BEAMS
041-0012	X		X
041-0013	X		X
041-0070		X	
041-0071		X	

GENERAL NOTES

ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED TO CHANNEL TRAFFIC AT COMMERCIAL AND/OR PRIVATE ENTRANCE AS DIRECTED BY THE ENGINEER. ALL TRAFFIC CONTROL DEVICES ARE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION STANDARD USED AT THE SITE, AND WILL NOT BE PAID FOR SEPARATELY.

THE EXISTING STEEL COATINGS CONTAIN LEAD. THE CONTRACTOR SHOULD TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

THE CONTRACTOR IS REQUIRED TO BE SSPC OP1 AND SSPC OP2 CERTIFIED.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

TRAFFIC CONTROL SIGNS SHALL BE PLACED SO THAT THEY DO NOT INTERFERE WITH EXISTING SIGNS OR FLASHING BEACONS. THE DIMENSIONS BETWEEN SIGNS MAY BE MODIFIED SLIGHTLY SO AS TO AVOID CONFLICTS WITH EXISTING SIDE ROADS, COMMERCIAL ENTRANCES, AND PRIVATE ENTRANCES. THE BUREAU OF OPERATIONS SHOULD APPROVE FINAL PLACEMENT OF TRAFFIC CONTROL SIGNING.

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.

FOR STRUCTURES 0471-0012 AND 041-0013, CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES." ALL STRUCTURAL STEEL WITHIN 5 FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF SPECIFIED DECK JOINTS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10. IN ADDITION, THE FASCIA BEAMS FOR 2' IN LENGTH AT EACH DRAIN LOCATION SHALL BE CLEANED PER POWER TOOL CLEANING SSPC-SP15. ALL STEEL THAT HAS BEEN CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1- OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR THE BEAMS SHALL BE INTERSTATE GREEN, MUNSELL NO. 7.5G 4/8.

FOR STRUCTURES 041-0070, AND 041-0071 CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES." ALL STEEL, AS SPECIFIED IN THE PLANS, SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING - SSPC-SP10 AND PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR THE BEAMS SHALL BE INTERSTATE GREEN, MUNSELL NO. 7.5G 4/8.

Prepared By:	<i>[Signature]</i> DISTRICT STUDIES & PLANS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT MATERIALS ENGINEER

SUMMARY OF QUANTITIES

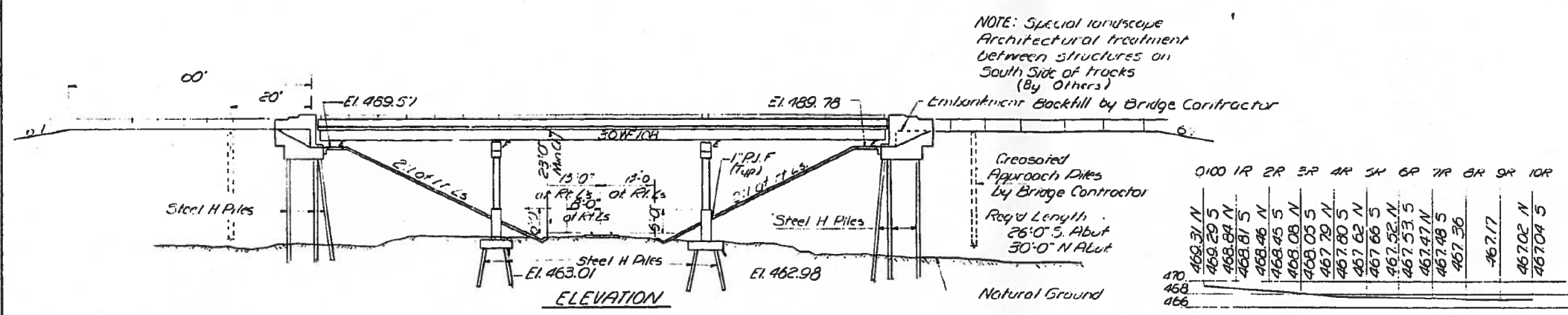
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	0014				
				100% STATE				
				FUNDING:	RURAL	RURAL	RURAL	RURAL
				LOCATION:	FAI 57 OVER RR	FAI 57 OVER RR	FAI 64 OVER RR	FAI 64 OVER RR
ROUTE:	BRIDGE NO. 1 SN 041-0012	BRIDGE NO. 2 SN 041-0013	BRIDGE NO. 3 SN-041-0070	BRIDGE NO. 4 SN-041-0071				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5	1.25	1.25	1.25	1.25	
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25	
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	0.25	0.25	0.25	0.25	
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	5	1.25	1.25	1.25	1.25	
X7010410	SPEED DISPLAY TRAILER	CAL MO	5	1.25	1.25	1.25	1.25	
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1				
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1		1			
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1			1		
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1				1	
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1				
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1		1			
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1			1		
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1				1	
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	0.25	0.25	0.25	0.25	

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

PROJECT NO.	DATE	SHEET NO.	TOTAL SHEETS
F.A.I. 57 41-3VB	JEFFERSON	59	12
F.A. PROJ. I-IG-57-3(26)		CONTRACT NO. 78512	

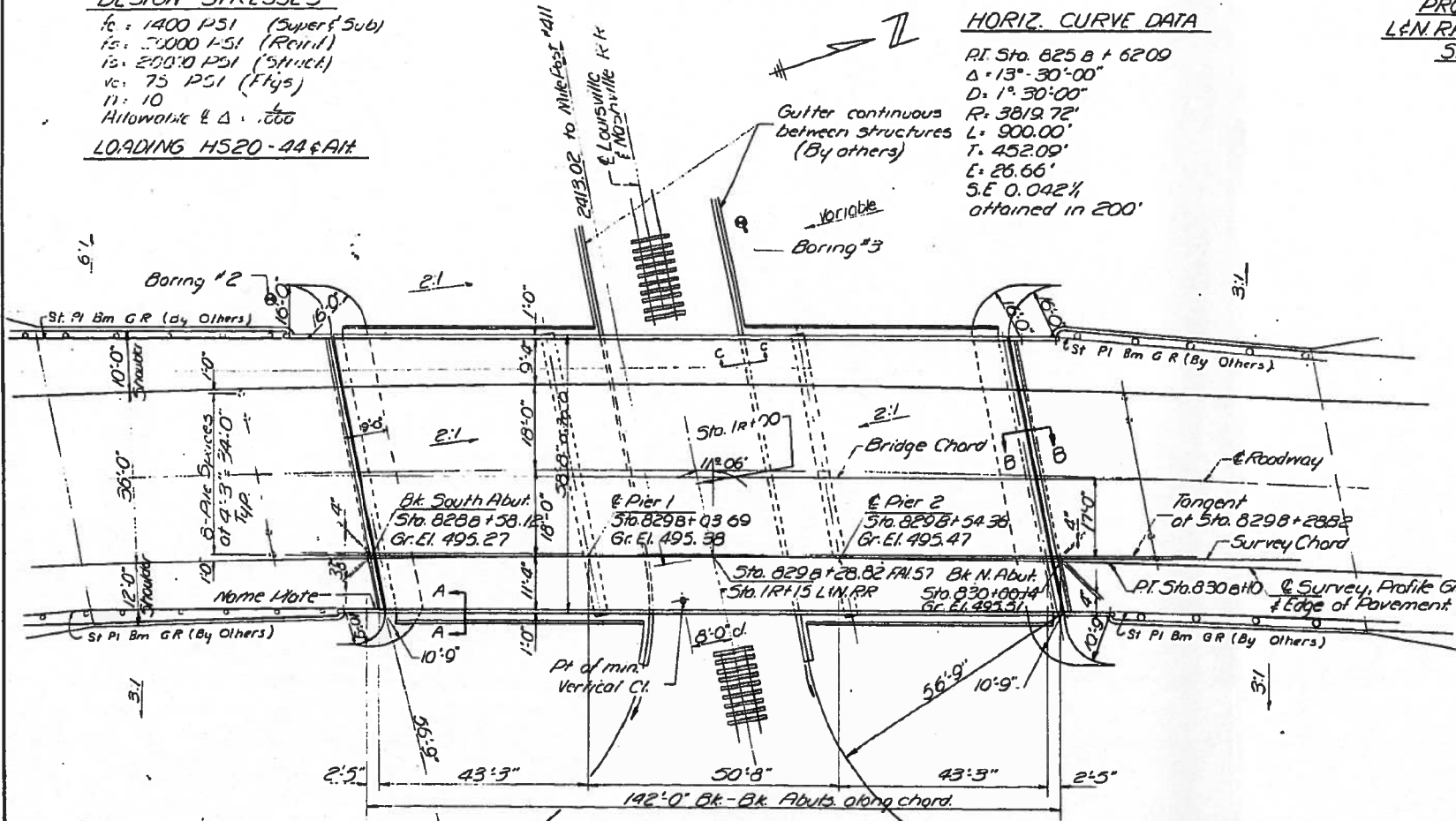
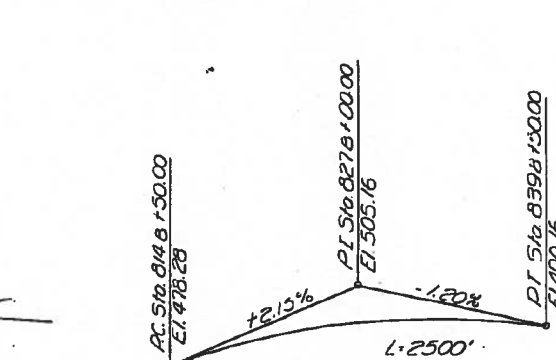
6 Mi. Spx. R.R. to Sta. 829+00
Elev. 470.72



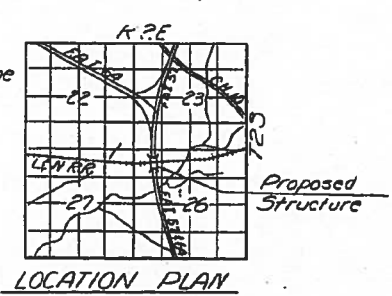
DESIGN STRESSES
 f_c = 1400 PSI (Superf. Sub)
 f_s = 50000 PSI (Reinf.)
 f_s = 20000 PSI (Struct.)
 n = 7.5 PSI (Figs)
 n = 10
 Allowable Δ = .000
LOADING HS20-44 & ALT.

HORIZ. CURVE DATA
 P.I. Sta. 825 B + 6200
 $\Delta = 13^\circ 30' 00''$
 D = 1' 30" 00"
 R = 3819.72'
 L = 900.00'
 T = 452.00'
 E = 26.66'
 S.E. 0.042%
 obtained in 200'

PROFILE TOP OF NORTH & SOUTH RAIL
 LEN. RR STA. 829+26.32 & SURVEY F.A.I. 57
 STA. 0L+40 & LEN. R.R.



PROFILE - NORTH BOUND - F.A.I.



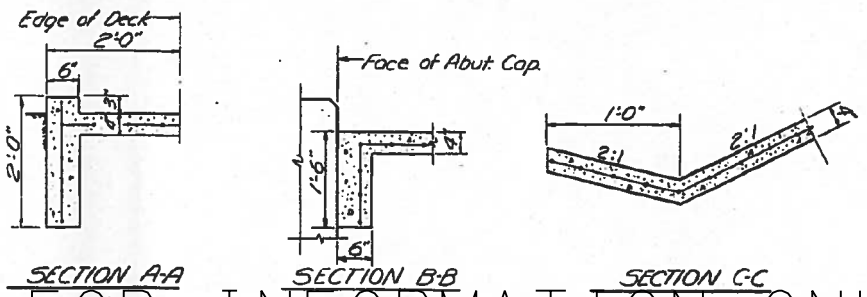
LOCATION PLAN

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class A Excavation for Structures	Cu. Yds		225	225
Structural Steel	Lbs	156,330		156,330
Class X Concrete	Cu. Yds	215.3	334.9	550.2
Aluminum Handrail	Lin. Ft.		278	278
Reinforcement Bars	Lbs.	69,970	29,010	98,980
Cresoted Piles	Lin. Ft.		504	504
Steel Piles 8BP36	Lin. Ft.		1122	1122
Test Piles Steel 8BP36	Lbs.		2	2
Name Plates	Lbs.	1		1
Slopemall (4")	Sq. Yds		860	860
Bridge Seat Sealant	Lbs.		172	172
Protective Coat	Sq. Yds	995		995

* Applied at Abutments only.
 ** Includes use on inside vertical faces, tops and exposed ends of the abutments wings.

NORTH BOUND STRUCTURE
 PROJECT I-IG-57-3(26) 95
 OVER LOUISVILLE & NASHVILLE RR.
 F.A.I. 57 SEC. 41-3VB
 JEFFERSON COUNTY
 STA. 829 B + 28.82



SECTION AA SECTION BB SECTION CC
 FOR INFORMATION ONLY

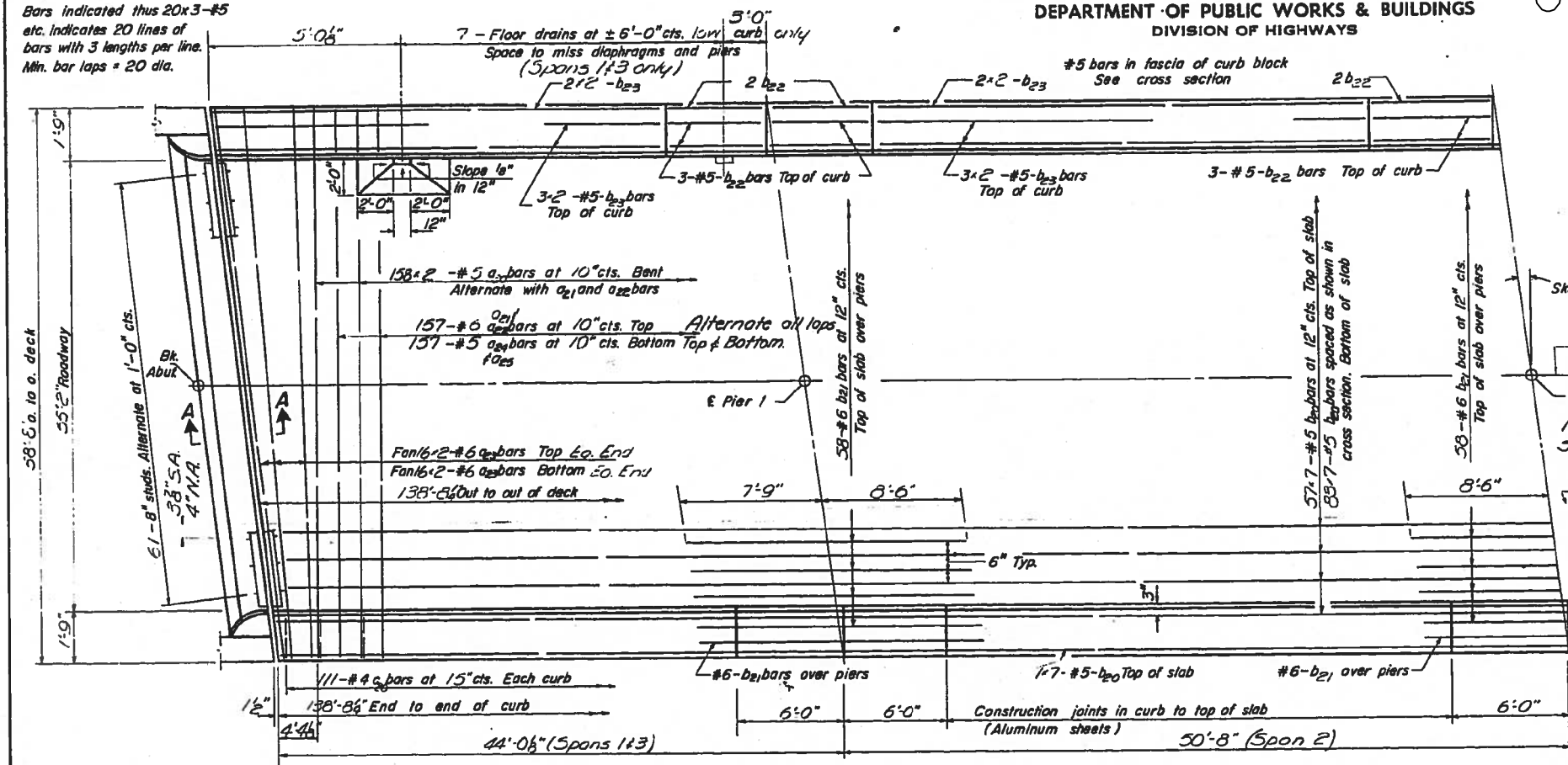
DESIGNED	R. Ferrarido	EXAMINED	Paul C. D.
CHECKED	J. K.	PASSED	
DRAWN	R. Ferrarido	APPROVED	
CHECKED	J. K.		

L&N R.R.
 BUILT 196 BY
 STATE OF ILLINOIS
 F.A.I. 57 SEC. 41-3VB
 F.A. PROJ. I-IG-57-3(26)
 STA. 829 B + 28.82
 LOADING HS20 & ALT.

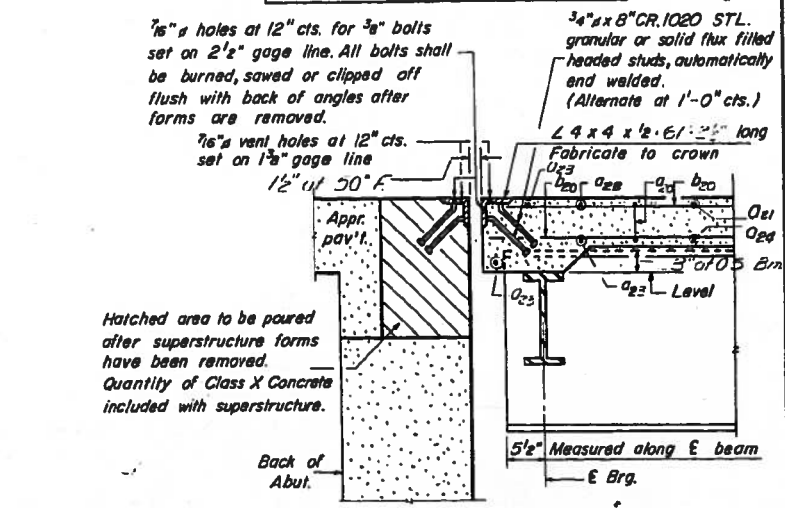
NAME PLATE
 sec. Std. 2113-1

Rev. 1-3-67 K.B.Jr. Added quad rail to No. Approach. Class X Quantity 5342 to 5349 CY & 340.5 to 350.2 CY

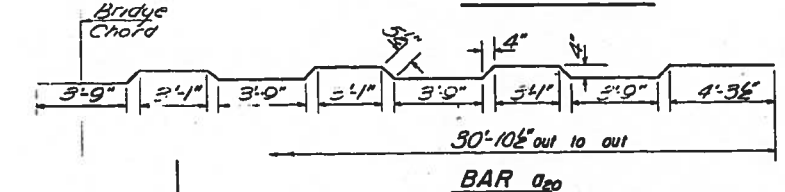
Note:
Bars indicated thus 20x3-#5
etc. indicates 20 lines of
bars with 3 lengths per line.
Min. bar laps = 20 dia.



HALF PLAN

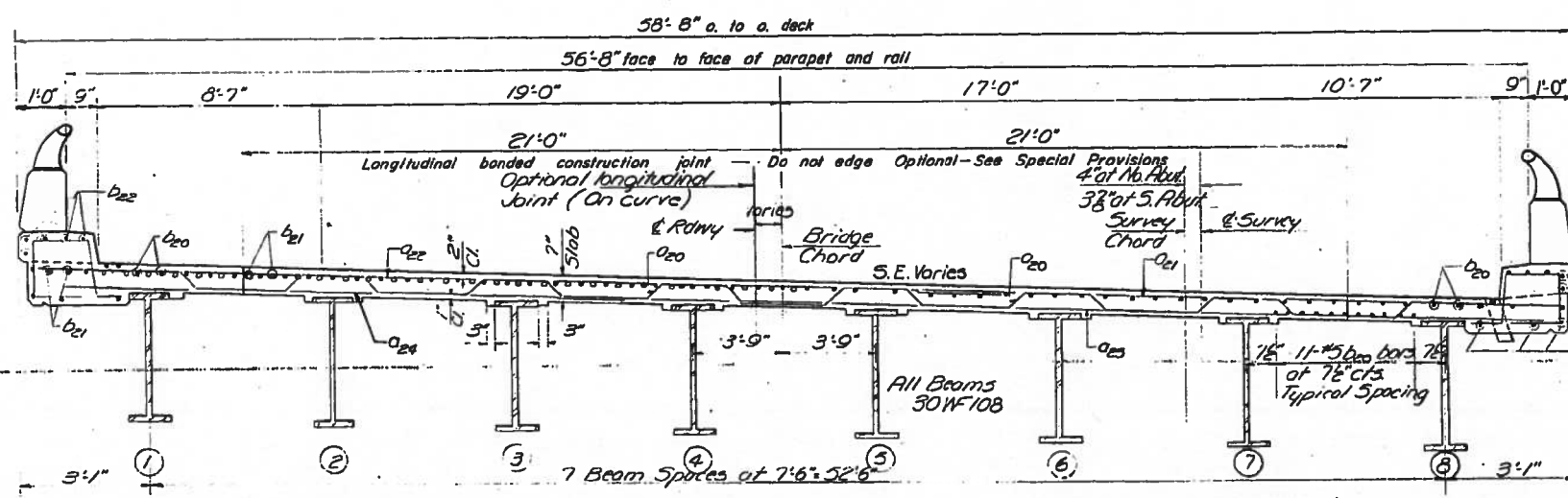
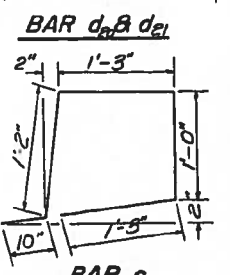


SECTION A-A

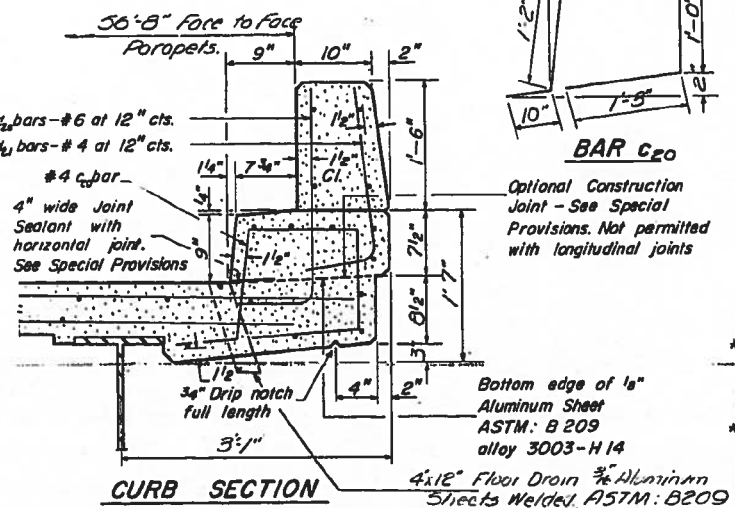


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20	316	#5	31'-9"	—
a21	157	#6	23'-0"	—
a22	157	#6	37'-0"	—
a23	128	#6	29'-0"	—
b20	994	#5	20'-9"	—
b21	120	#6	16'-3"	—
b22	40	#5	5'-9"	—
b23	60	#5	20'-0"	—
c20	151	#5	23'-0"	—
c21	157	#5	31'-0"	—
d20	222	#4	5'-6"	J
d21	278	#6	3'-5"	L
d22	278	#4	2'-8"	L
Reinforcement Bars				Lbs. 68,830
Structural Steel				Lbs. 156,330
Class X Concrete				Cu. Yd. 201.2

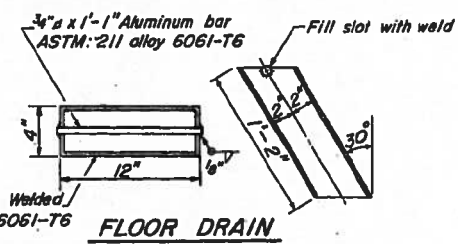


CROSS SECTION
LOOKING NORTH



CURB SECTION

Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete



FLOOR DRAIN

* Weight of bearing assemblies with load plates, and anchor bolts are included as structural steel. Est. Wt. = 8100 Lbs.
The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet 4

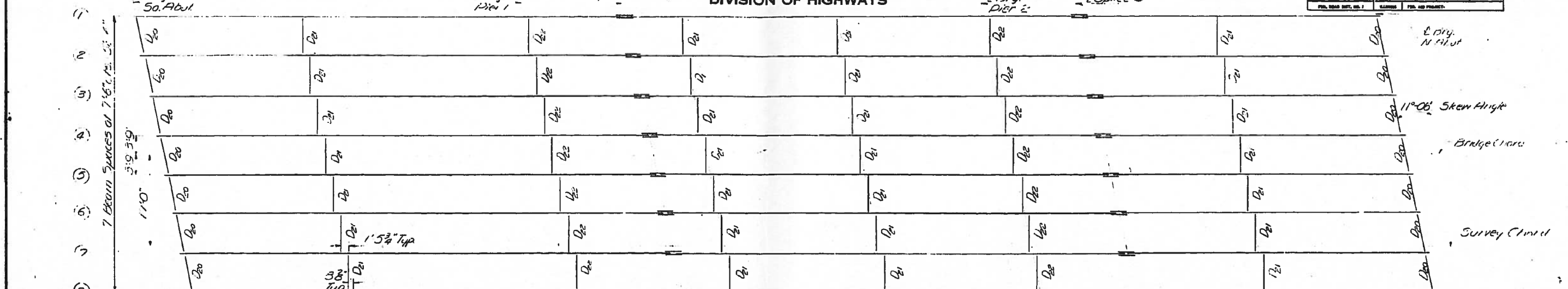
DESIGNED: R. B. ...
CHECKED: I. Kaper
DRAWN: DL Beemer
CHECKED: I. K.
EXAMINED: ...
PASSED: ...
APPROVED: ...
Aug 10 1964

FOR INFORMATION ONLY

SUPERSTRUCTURE
NORTH BOUND STRUCTURE
FAL 57 SEC. 41-318
JEFFERSON COUNTY
STA. 829 B + 28.82

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

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
41-3VB	JEFFERSON	59	10	10



Locate 3" conduit 12" inside of fascia br. web & parallel to br. line. Extend to clear of a point outside of girder. Thread & cap each end. Place of 1/2" lead in structure. Cost is to be incidental to bridge str.

For location of conduit see Sh. 6 & 7 No. 52 Bound Structures

1/4" Lead E.

1" x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.

1/2" x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.

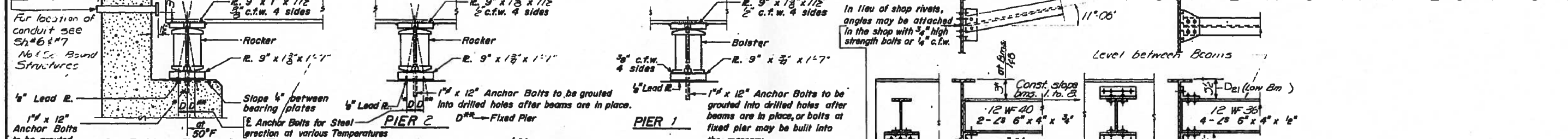
1/2" Holes for 1" x 12" anchor bolts 2 1/2" x 2 1/2" x 3/8" E. washers under nut

1/2" Holes 1" deep in top E. for pintles. Thread or press fit pintles into bottom E.

1/2" Holes 1" deep in top E. for pintles. Thread or press fit pintles into bottom E.

1/2" Holes 1" deep in top E. for pintles. Thread or press fit pintles into bottom E.

SECTION AT ABUTMENT



DIAPHRAGM D₂₀ 14' Required

DIAPHRAGM D₂₁, D₂₂ 28' D₂₁, 14' D₂₂ Required

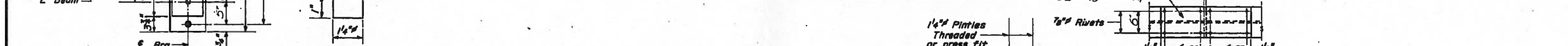
STRESS TABLE

Table of Moments & Reactions - Int. Bm					
Moments			Reactions		
	45p1	Pier 1	35a2	Abut	Pier 1
D.L.	133.6	216.0	56.4	16.2	50.5
L.L.	271.9	212.5	267.2	36.4	45.4
Imp.	83.5	63.2	74.0	10.9	13.6
Total	489.0	491.7	897.6	63.5	109.5

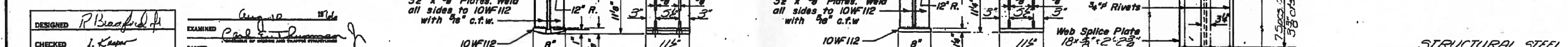
PROPERTIES	
Steel Section	
I _x	446 in ⁴
S _x	299.2 in ³
S _o	299.2 in ³

Location	Em 1	2	3	4	5	6	7	8
50' Abut.	496.51	496.20	495.89	495.57	495.25	494.93	494.61	494.29
Pier 1	496.56	496.25	495.94	495.62	495.31	495.00	494.69	494.37
Splice A	496.57	496.26	495.95	495.63	495.32	495.01	494.70	494.38
Pier 2	496.53	496.22	495.91	495.59	495.28	494.97	494.66	494.34
Splice B	496.52	496.21	495.90	495.58	495.27	494.96	494.65	494.33
No. Abut.	496.24	496.02	495.80	495.58	495.36	495.14	494.92	494.70

DETAIL OF PINTLE



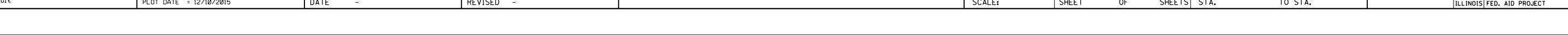
DETAIL OF ROCKER AT ABUT & PIER 2



DETAIL OF BOLSTER AT PIER 1



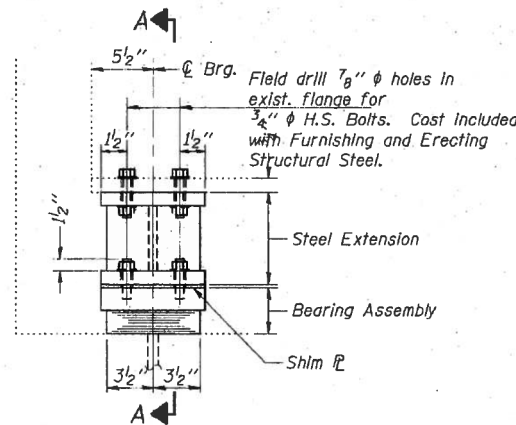
DETAIL OF SPLICE



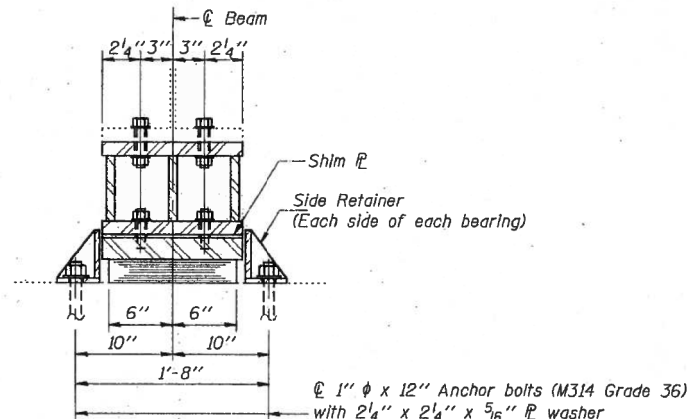
DESIGNED: R. Bradford
CHECKED: I. K.
DRAWN: W. A. Seubert Jr.
APPROVED: [Signature]

I-2 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

STRUCTURAL STEEL
NORTH BOUND STRUCTURE
F.A. 57 SEC. 41-3VB
JEFFERSON COUNTY
STA. 8298+28.82



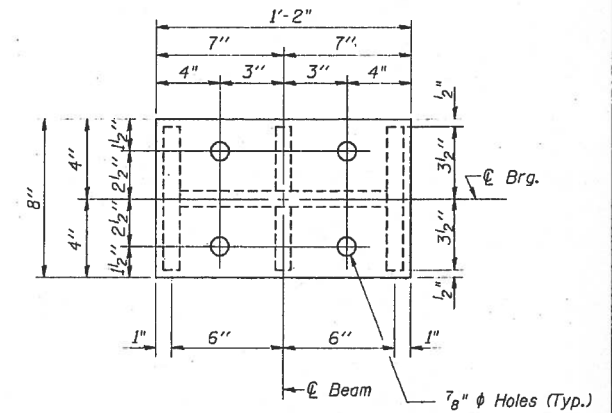
ELEVATION AT SOUTH ABUT.



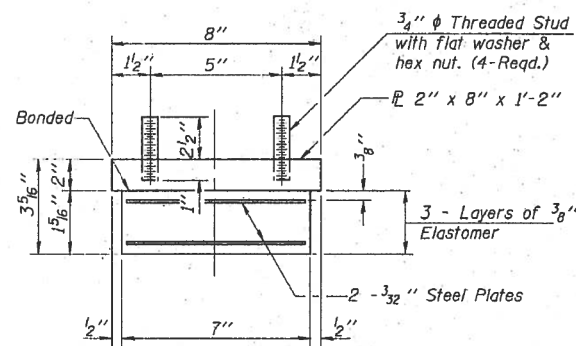
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
The minimum jack capacity required is 35 Tons.
Existing diaphragm removal and installation may be required to facilitate drilling holes, cost to be included with "Jack and Remove Existing Bearings".
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Two 1/2 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
New steel extensions, connection bolts, Fill \bar{r} 's and Shim \bar{r} 's are included in "Furnishing and Erecting Structural Steel".



PLAN-TOP & BOTTOM PLATE



BEARING ASSEMBLY

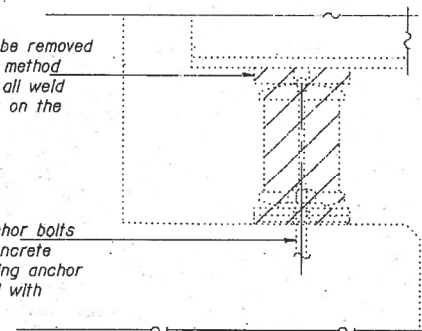
Note: Shim plates shall not be placed under Bearing Assembly.

GIRDER REACTIONS

RP	(K)	18.3
R _L	(K)	36.4
Imp.	(K)	10.8
R (Total)	(K)	65.5

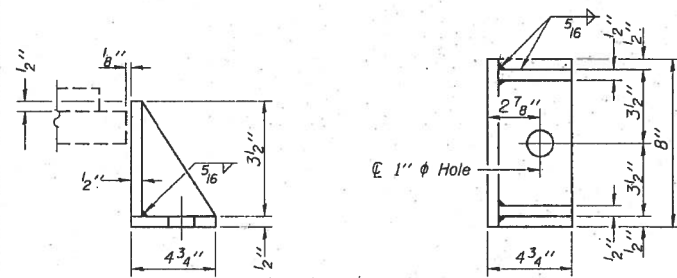
Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

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



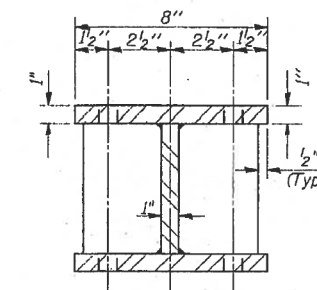
EXISTING BEARING REMOVAL DETAIL

Cost is included with Jack and Remove Existing Bearings

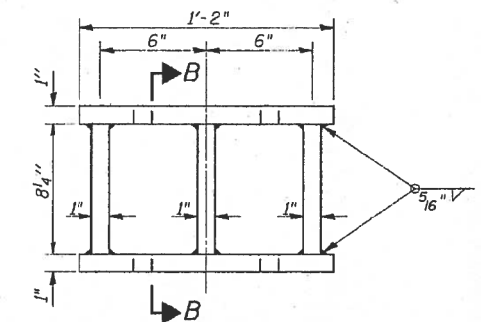


SIDE RETAINER

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



SECTION B-B



STEEL EXTENSION DETAIL

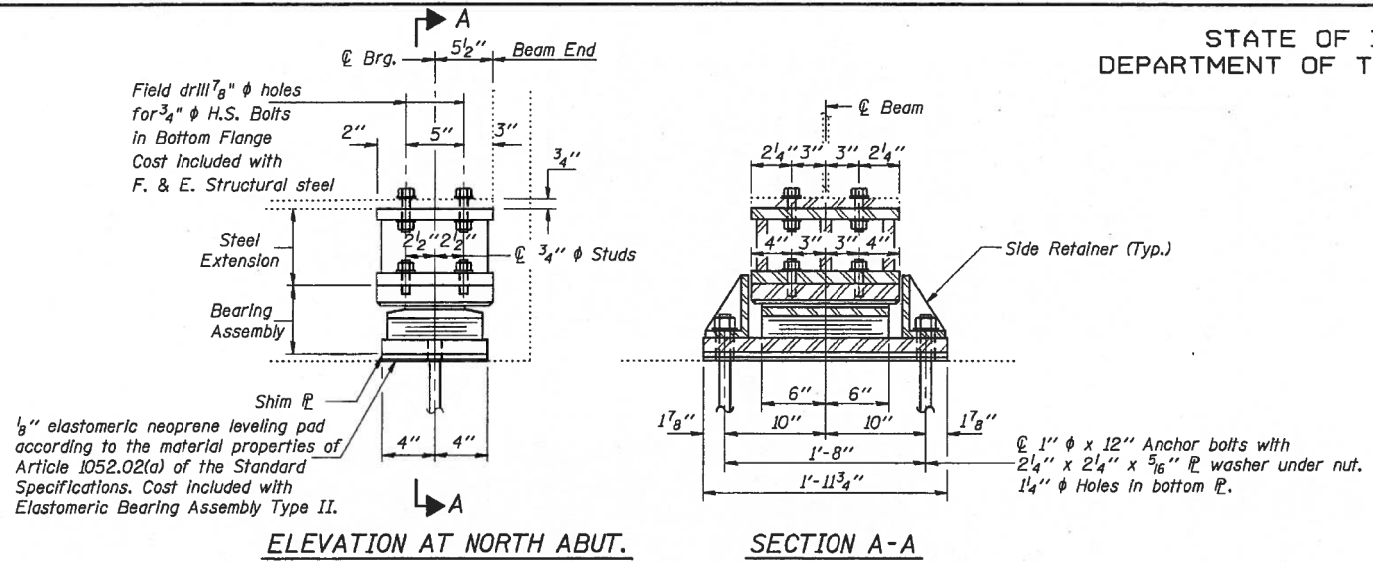
FOR INFORMATION ONLY

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	8
Anchor Bolts, 1"	Each	16
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	1190

SOUTH ABUTMENT
BEARING DETAILS
STRUCTURE NO. 041-0012 (N.B)

FILE NAME =	USER NAME =	DESIGNED - TWH	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOUTH ABUTMENT BEARING DETAILS	F.A.I. RTE. 57	SECTION (41-2-1,41-3,41-3-1R-1)	COUNTY JEFFERSON	TOTAL SHEETS 422	SHEET NO. 150
		CHECKED - MAS	REVISIONS -		SHEET NO. 2 OF 11 SHEETS				CONTRACT NO. 78172	
		DRAWN - TWH	REVISIONS -						ILLINOIS FED. AID PROJECT	
		CHECKED - MAS	REVISIONS -							



Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The $1/8$ " PTFE 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.

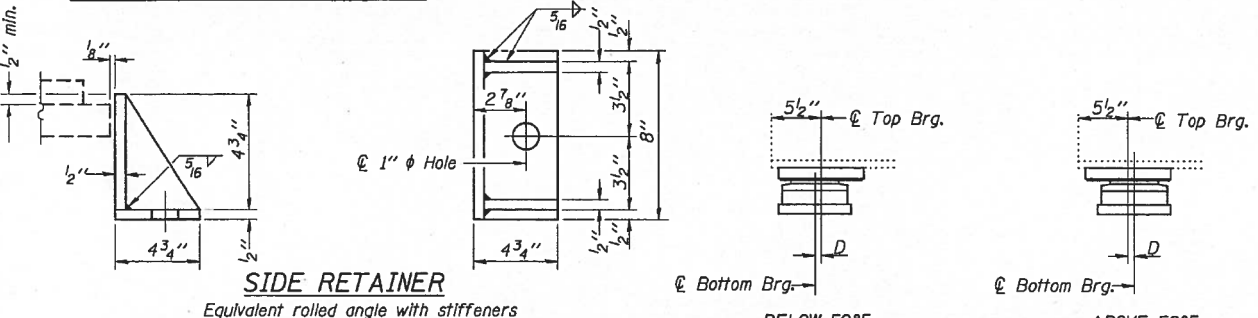
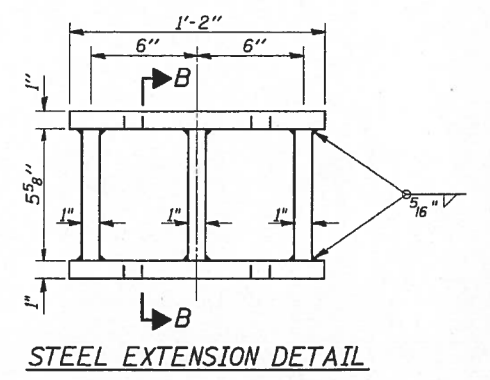
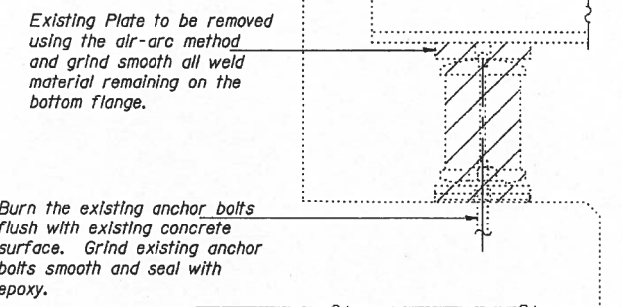
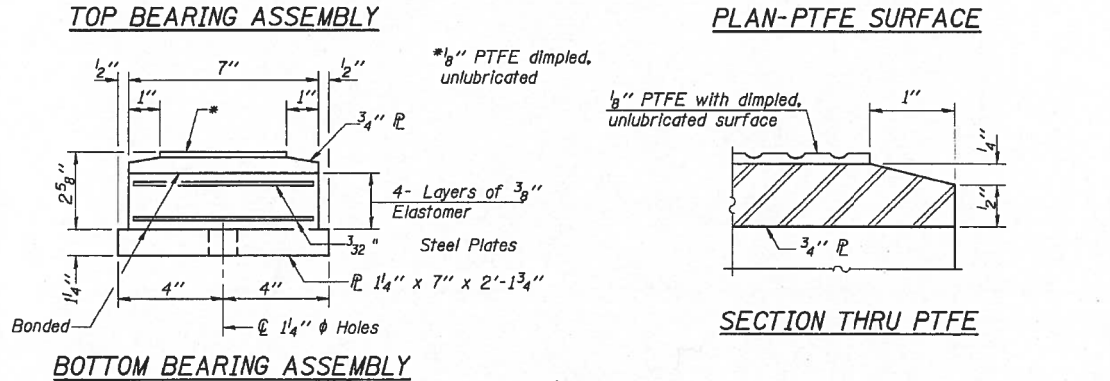
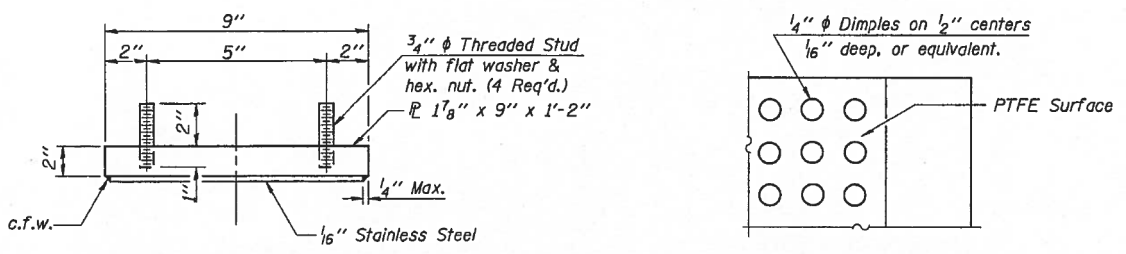
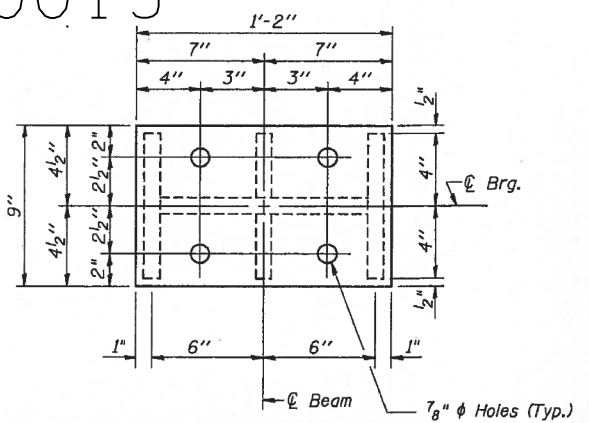
Bonding of $1/8$ " PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer. The minimum Jack capacity required is 35 Tons.

Existing diaphragm removal and reinstallation may be required to facilitate drilling holes, cost to be included with "Jack and Remove Existing Bearings".

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

Two $1/8$ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

New steel extensions, connection bolts, Fill ϕ 's and Shim ϕ 's are included in "Furnishing and Erecting Structural Steel".



FOR INFORMATION ONLY

GIRDER REACTIONS

R ϕ	(K)	18.3
R ξ	(K)	36.4
Imp.	(K)	10.8
R (Total)	(K)	65.5

BILL OF MATERIAL

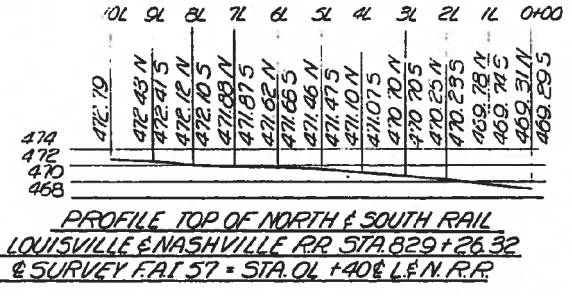
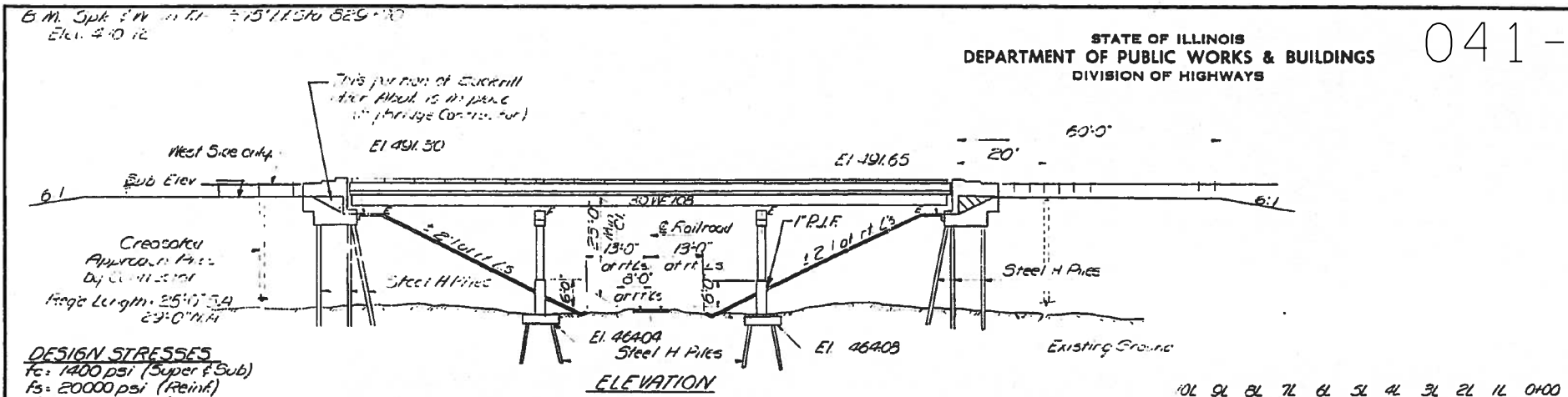
Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	8
Anchor Bolts, 1"	Each	16
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	1090

NORTH ABUTMENT BEARING DETAILS
STRUCTURE NO. 041-0012 (N.B)

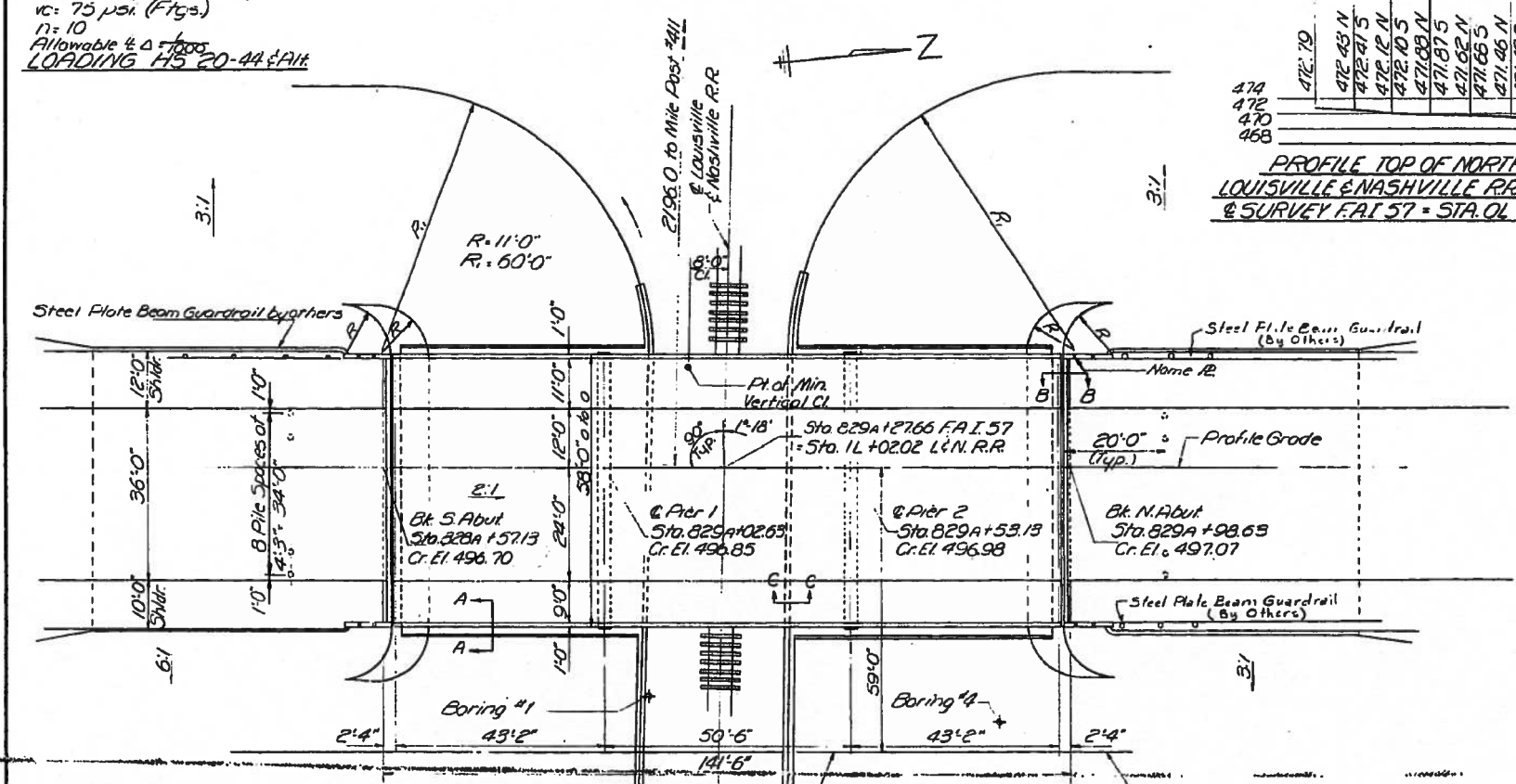
FILE NAME *	USER NAME =	DESIGNED - TWH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NORTH ABUTMENT BEARING DETAILS	F.A.I. RTE. 57	SECTION (41-2-1,41-3,41-3-1R-1)	COUNTY JEFFERSON	TOTAL SHEETS 422	SHEET NO. 151
	PLLOT SCALE =	DRAWN - TWH	REVISED -		SHEET NO. 8 OF 11 SHEETS				CONTRACT NO. 78172	
	PLLOT DATE =	CHECKED - MAS	REVISED -						ILLINOIS FED. AID PROJECT	

GENERAL NOTES

Course aggregate to be used in parapet nonrails and wing walls must be free of chert, flint, limestone, lignite, and soft sandstone.
The concrete floor slab shall be finished in accordance with Article 519 of the Standard Specifications.
Slopewall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 55# per 100 Sq. Ft.
All reinforcement bars shall be lapped 20 diameters unless otherwise shown.
All Structural Steel shall conform to ASTM Specifications Designation A-58.
Rivets 2 1/2", Open Holes 1 3/8" unless otherwise noted.
Anchor bolts shall be set before riveting diaphragms over supports.
The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.
Expansion guards are included in the quantity of Structural Steel. Estimated weight 3050 Lbs.
Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.
The contractor shall drive two steel test piles in permanent locations as directed by the Engineer (one at No. Abut. & one at Pier 1). These piles shall be driven before ordering the remainder of the piles.
Excavations for portions of structures in the embankments shall not be classified.
Permanent forms will not be permitted in forming the concrete deck.
FIELD WEAVING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DECREASE OF 1/2 OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WEAVING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

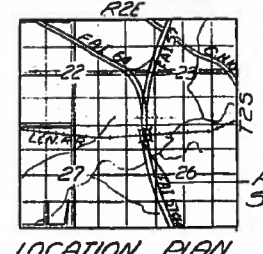
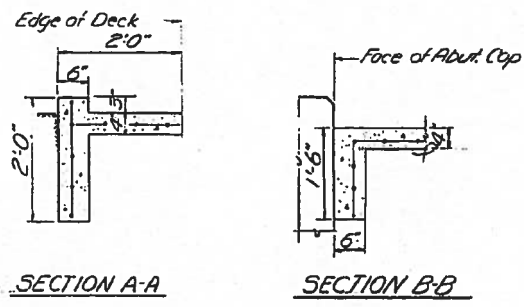


L&N R.R.
 BUILT 196 BY
 STATE OF ILLINOIS
 F.A.I. RT. 57 SEC. 41-3VB
 F.A. PROJ. 1-16-57326
 STA. 829A+27.66
 LOADING HS 20 & ALT.



Note: Special landscape architectural treatment between structures on South Side of tracks. (By Others) Ditches shall be parallel to track.
 Gutter continuous between structures (By others)

DESIGNED R. Bradford
 CHECKED I. Keper
 DRAWN R. Ferrando
 CHECKED I. K.
 EXAMINED Paul E. T...
 PASSED
 APPROVED



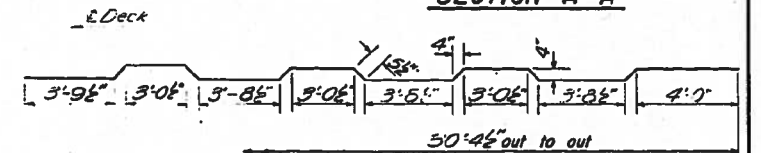
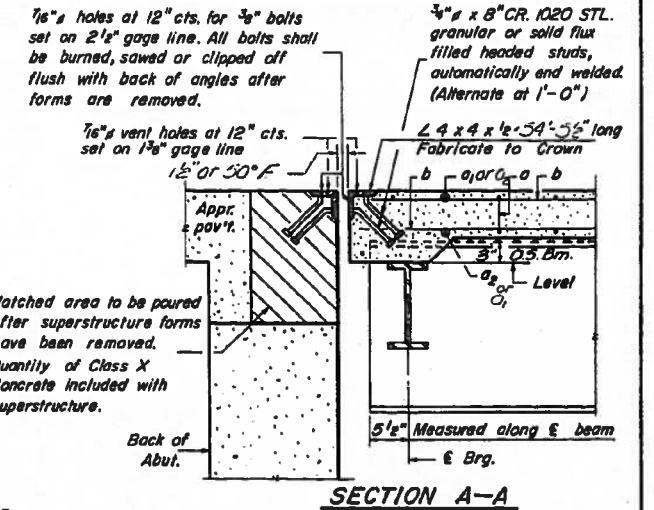
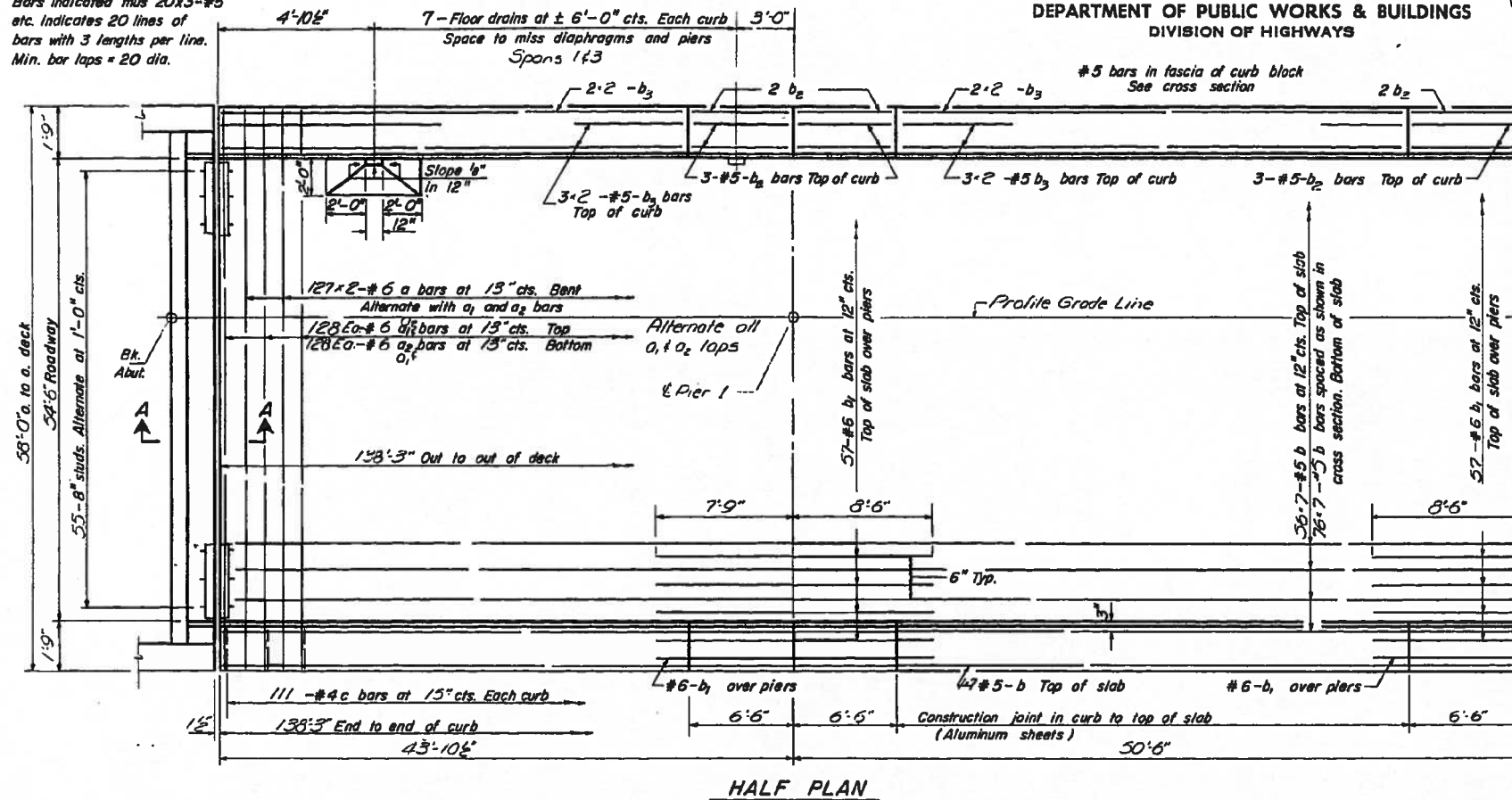
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class A Excavation for Structures	Cu. Yds.		150	150
Structural Steel	Lbs.	153660		153660
Class X Concrete	Cu. Yds.	210.7	301.9	512.6
Aluminum Handrail	Lin. Ft.	277		277
Reinforcement Bars	Lbs.	63,050	28,260	91,310
Crested Piles	Lin. Ft.		486	486
Steel Piles B&P26	Lin. Ft.		1223	1223
Test Piles Steel B&P36	EO		2	2
Name Holes	EO	1		1
Slope Wall (4")	Sq. Yds.		940	940
Bridge Seat Sealant	L.S.			112
Protective Coat	Sq. Yds.	980		980

* Applied at Abutments only.
 ** Includes use on inside vertical faces, tops and exposed ends of the Abutment wings.

GENERAL PLAN & ELEVATION OF SOUTH BOUND STRUCTURE
 PROJECT I-16-57-3 (26)95
 OVER LOUISVILLE & NASHVILLE R.R.
 F.A.I. RT. 57 SEC. 41-3VB
 JEFFERSON COUNTY
 STA. 829A+27.66

Note:
Bars indicated thus 20x3-#5
etc. indicates 20 lines of
bars with 3 lengths per line.
Min. bar laps = 20 dia.



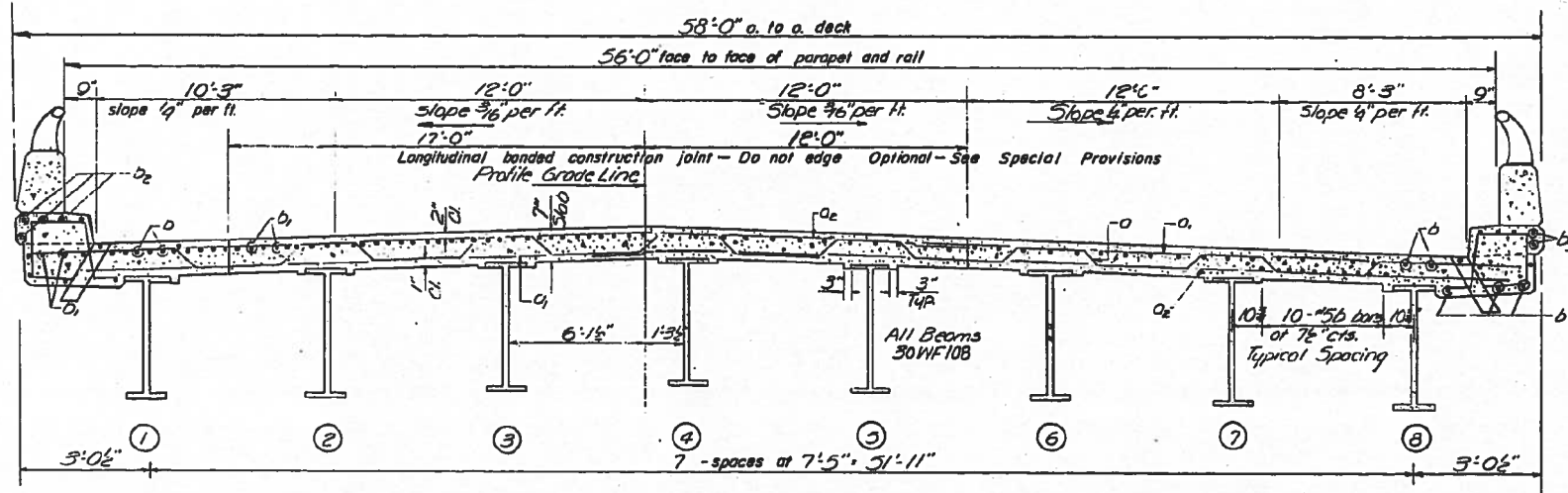
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	252	#6	37'-3"	~
a ₁	256	#6	28'-3"	~
a ₂	256	#6	32'-9"	~
b	938	#5	20'-0"	~
b ₁	118	#6	16'-3"	~
b ₂	40	#3	6'-3"	~
b ₃	60	#5	19'-6"	~
c	EEE	#4	5'-3"	J
d	278	#6	3'-4"	~
d ₁	278	#4	2'-7"	~

Reinforcement Bars Lbs. 61,980
Structural Steel Lbs. 133,660
Class X Concrete Cu.Yd. 106.6

* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel.
Est. Wt = 8090 Lbs.

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet 4



DESIGNED R. Brodhead
CHECKED I. Kasper
DRAWN D. L. Beamer
CHECKED I. K.

EXAMINED Aug 10 1966
PASSED
APPROVED

FOR INFORMATION ONLY

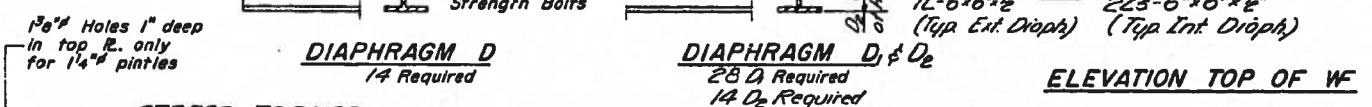
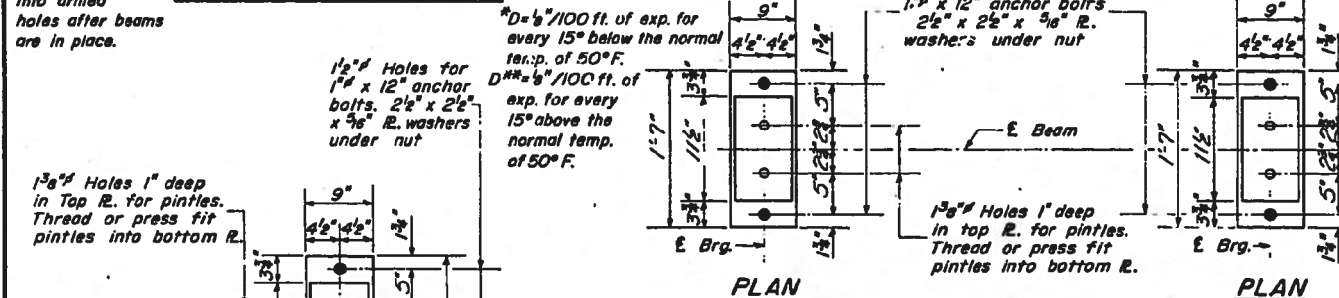
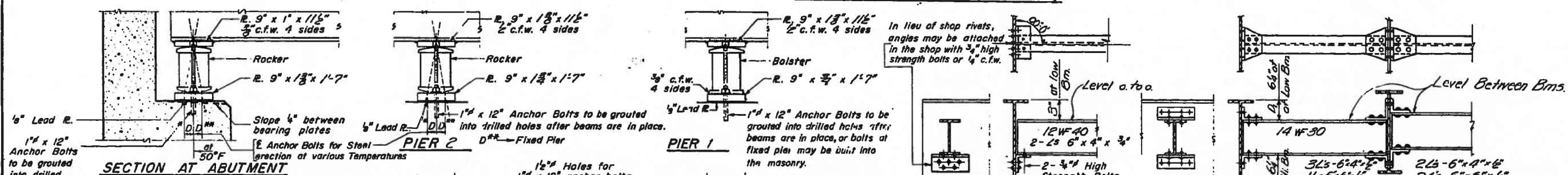
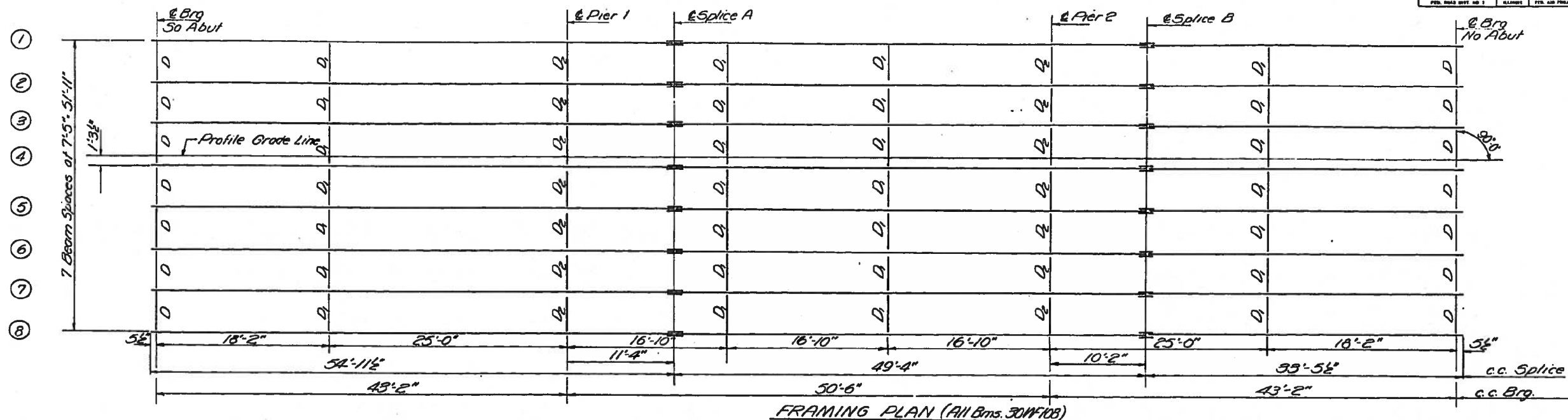
SUPERSTRUCTURE
SOUTH BOUND STRUCTURE
FBI. 57. SEC. 41-3VB
JEFFERSON COUNTY
STA. 829A+27.66

FOR INFORMATION ONLY

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

041-0012/0013

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1 A.E. ST	41-3VB	JEFFERSON	59	24
SHEET NO. 3		SHEETS 10		



STRESS TABLES

Table of Moments & Reactions - Interior Bms

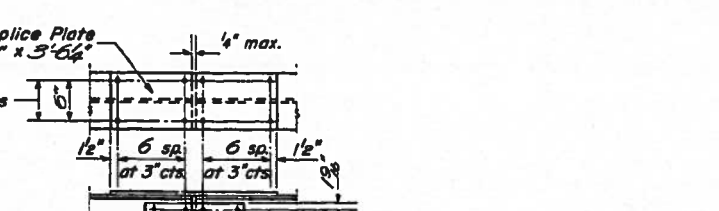
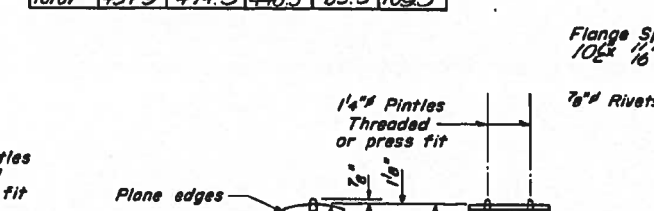
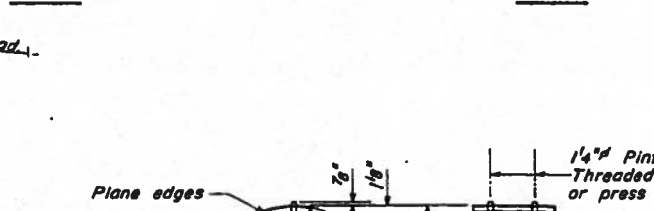
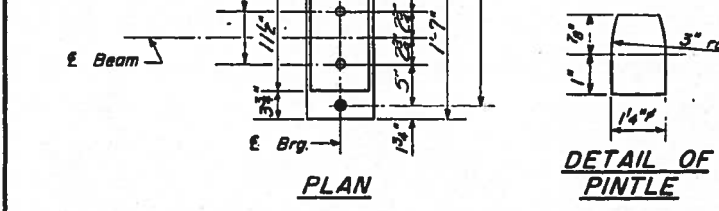
	Moments		Reactions	
	45p1	55p2	Abut	Pier 1
D.L.	139.6	216.6	96.4	162
L.L.	271.9	212.5	267.2	36.4
Ima	69.5	65.2	74.9	10.9
Total	494.9	494.3	448.5	63.5

PROPERTIES

Steel Section	Weight
15. 4461 in ²	
5/16. 2992 lb	
3/16. 2992 lb	

ELEVATION TOP OF WF

Location	Beam	1	2	3	4	5	6	7	8
South Abut		495.76	495.91	496.05	496.11	495.99	495.85	495.70	495.55
Pier 1		495.86	496.01	496.13	496.21	496.09	495.95	495.80	495.65
Splice A		495.89	496.04	496.16	496.24	496.12	495.98	495.83	495.68
Pier 2		495.98	496.13	496.25	496.33	496.21	496.07	495.92	495.77
Splice B		496.01	496.16	496.28	496.36	496.24	496.10	495.95	495.80
North Abut		496.11	496.26	496.38	496.46	496.34	496.20	496.05	495.90



DESIGNED: R. P. Bradford
 CHECKED: J. Kasper
 DRAWN: W. A. Sauseman Jr.
 EXAMINED: Carl E. Johnson
 PASSED: [Signature]
 APPROVED: [Signature]

I-2 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

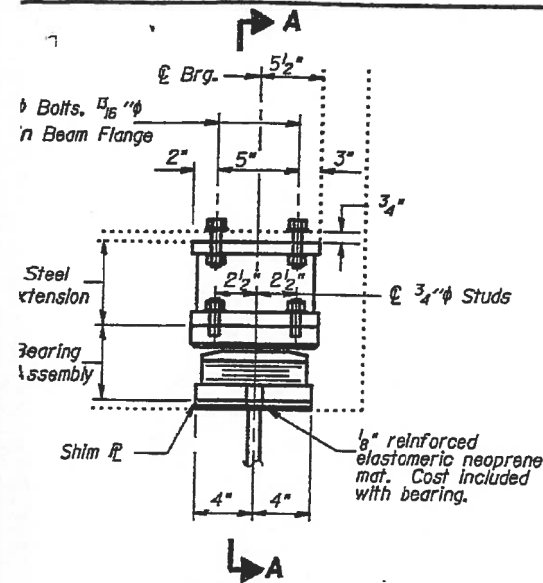
STRUCTURAL STEEL
 SOUTH BOUND STRUCTURE
 F.A. 57 SEC. 41-3VB
 JEFFERSON COUNTY
 STA. 829 A + 27.65

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

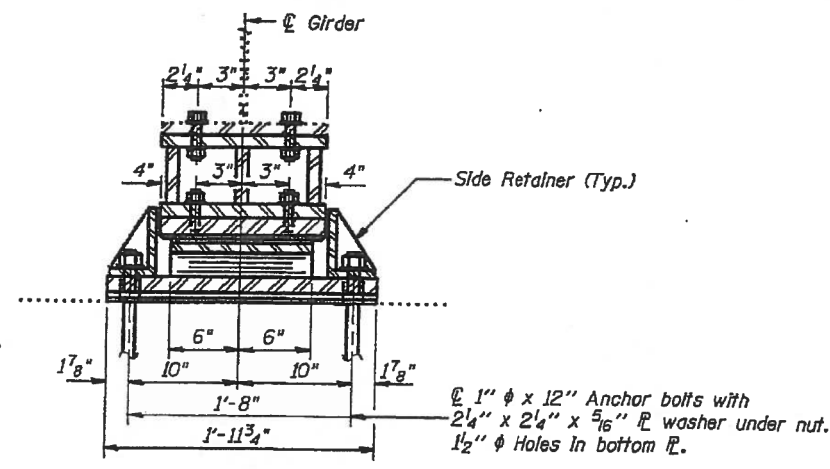
GIRDER REACTIONS

RP	(K)	18.3
R _L	(K)	36.4
Imp.	(K)	10.8
R (Total)	(K)	65.5

NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	41-316-CL-1	JEFFERSON	11	5

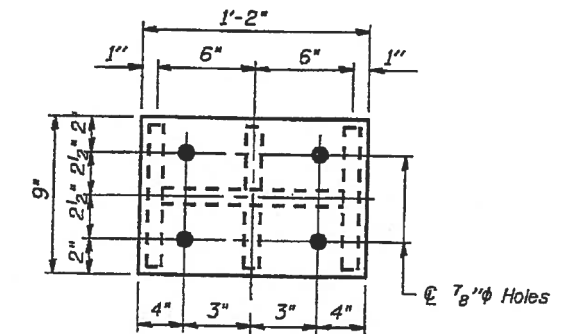


ELEVATION AT N. ABUTMENT



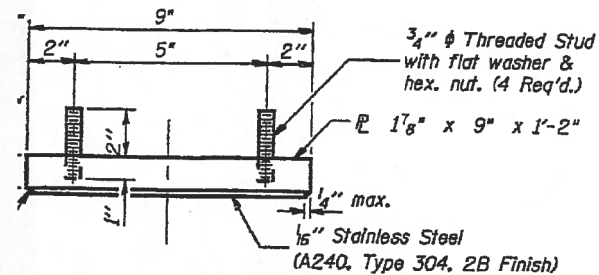
SECTION A-A

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, and anchor bolts 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.
Min. jack capacity = 35 tons.

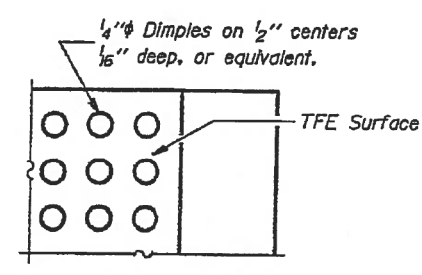


PLAN TOP AND BOTTOM PLATE

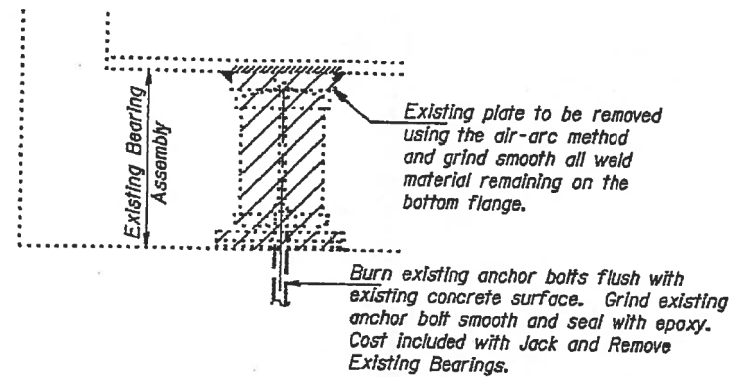
TYPE II TFE ELASTOMERIC EXP. BRG.



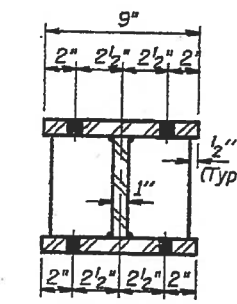
TOP BEARING ASSEMBLY



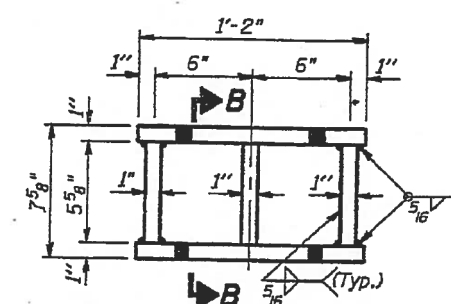
PLAN-TFE SURFACE



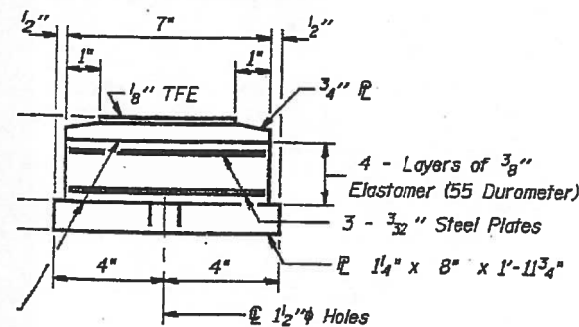
EXISTING BEARING REMOVAL DETAIL



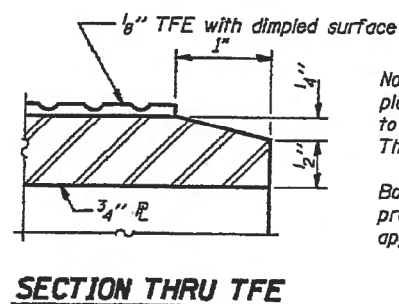
SECTION B-B



STEEL EXTENSION DETAIL



BOTTOM BEARING ASSEMBLY



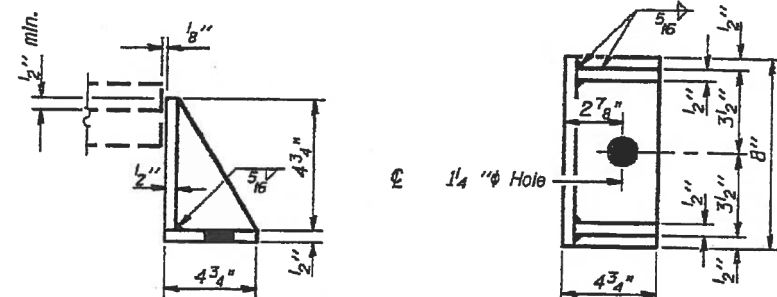
SECTION THRU TFE

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

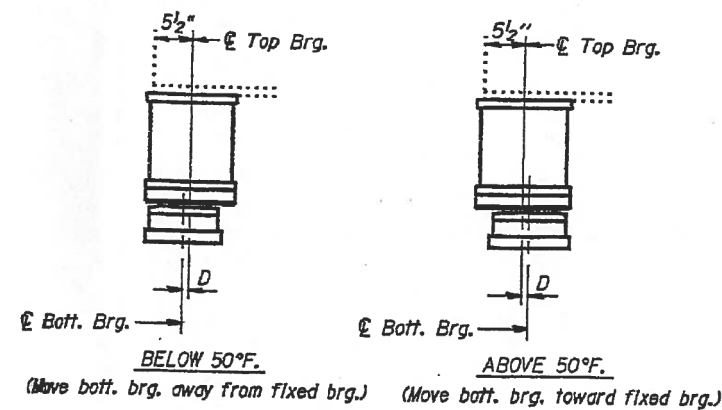
FOR INFORMATION ONLY

CHANGED	ENGINEER OF STRUCTURAL SERVICES
PASSED	ENGINEER OF BRIDGES AND STRUCTURES



SIDE RETAINER

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



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8 inch per each 100 feet of expansion for every 15 degrees temp.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	8
Jack and Remove Existing Bearings	Each	8

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ELASTOMERIC BEARING DETAILS
SN 041-0013 (SB)
NORTH ABUTMENT

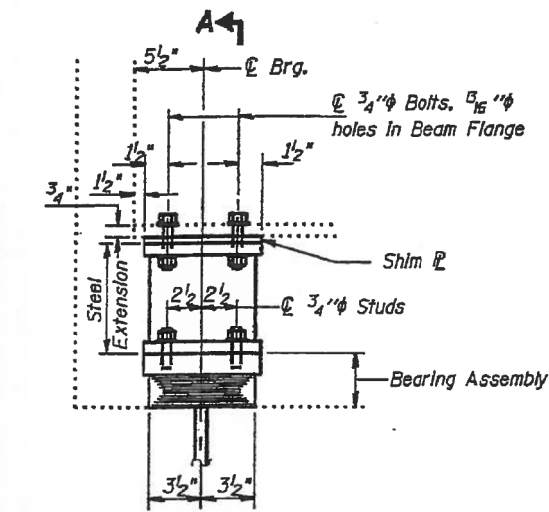
041-0012/0013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

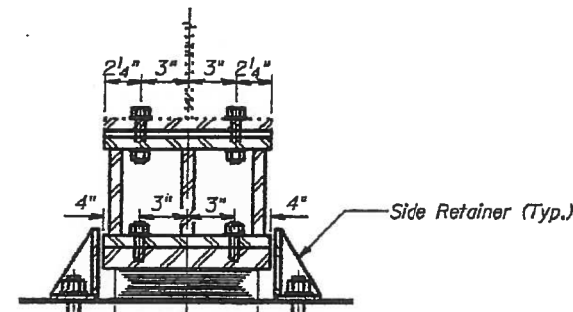
GIRDER REACTIONS

R _P	(K)	18.3
R _L	(K)	36.4
Imp.	(K)	10.8
R (Total)	(K)	65.5

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41-310-01-1	JEFFERSON	11	6

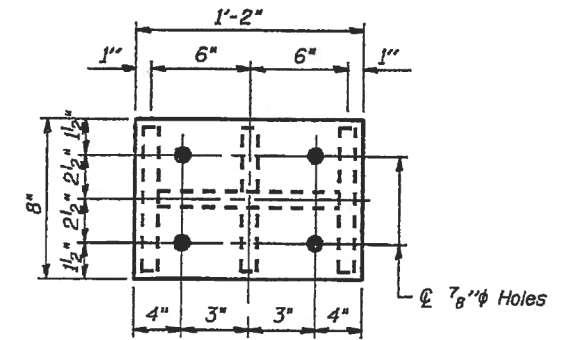


ELEVATION AT S. ABUTMENT



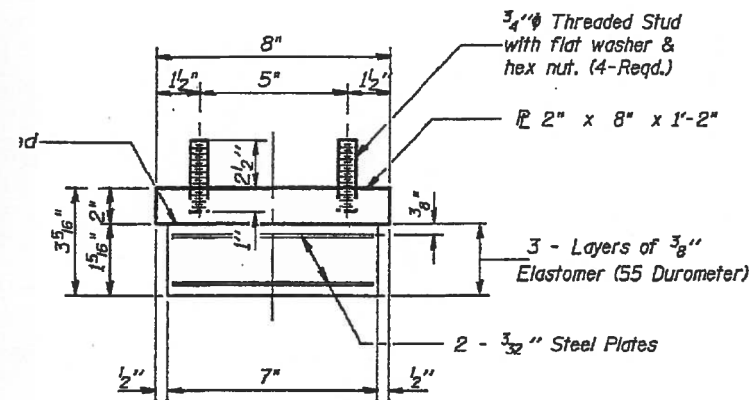
SECTION A-A

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cast shall be included in the cost of Furnishing and Erecting Structural Steel.
New steel extensions, side retainers, connection bolts, and anchor bolts are included in Furnishing and Erecting Structural Steel. See sheet 6 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 - 35 tons.



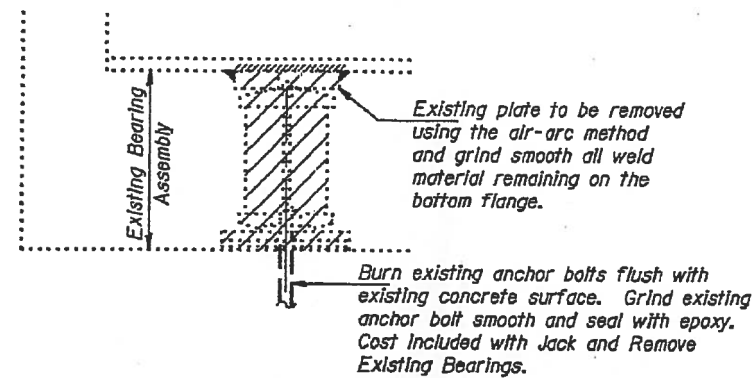
PLAN TOP AND BOTTOM PLATE

TYPE I ELASTOMERIC EXP. BRG.

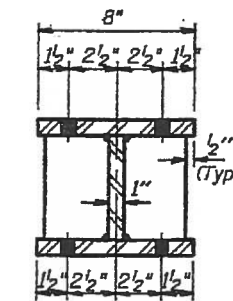


BEARING ASSEMBLY

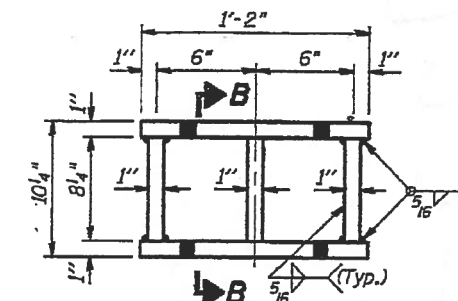
Note: Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL DETAIL



SECTION B-B



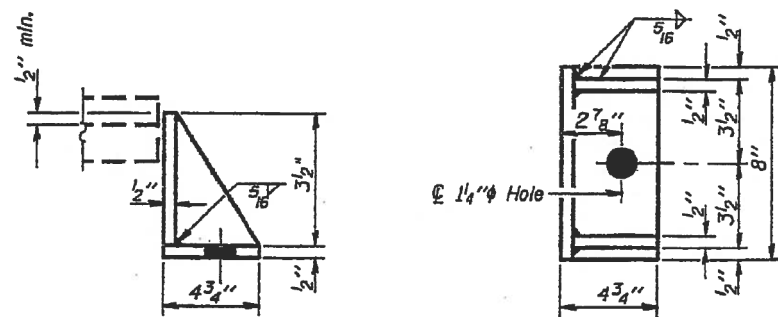
STEEL EXTENSION DETAIL

FOR INFORMATION, ONLY

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	8
Jack and Remove Existing Bearings	Each	8

EXAMINED	19
PASSED	



SIDE RETAINER

Equivalent rolled angle with stiffeners

REVISIONS	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ELASTOMERIC BEARING DETAILS
SN 041-0013 (SB)
SOUTH ABUTMENT

FAI	SECTION	COUNTY	POST MILE	SHEET NO.
64		JEFFERSON	22	12
*41-8-1, 41-9IRS				

041-0070/0071

FOR INFORMATION ONLY

GENERAL NOTES

ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH INORGANIC ZINC-RICH PRIMER AS PER AASHTO M300, TYPE 1.

ALL STRUCTURAL STEEL SHALL BE AASHTO M 270 GRADE 345.

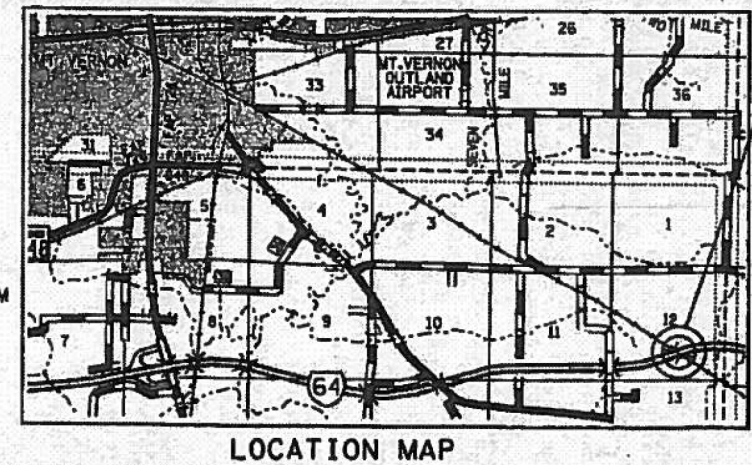
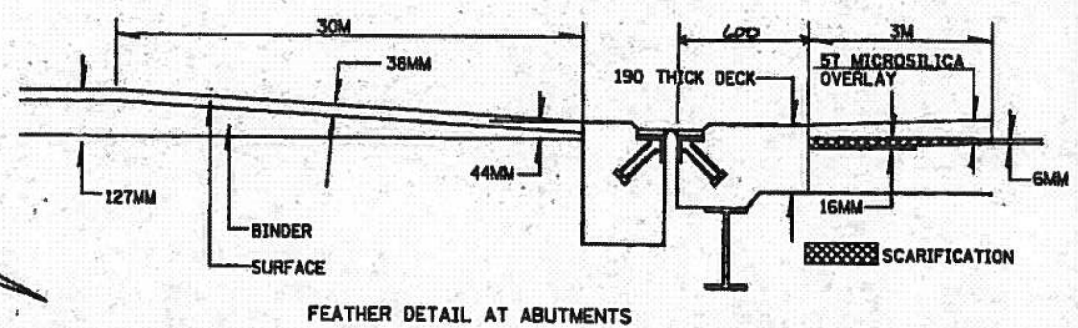
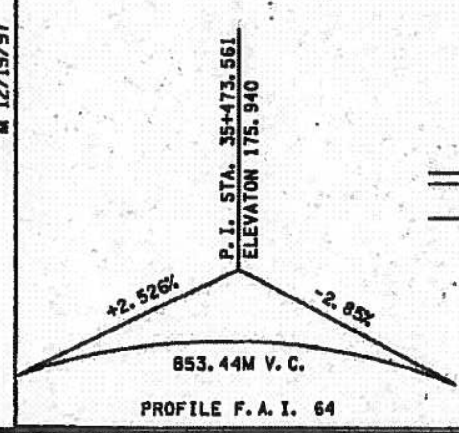
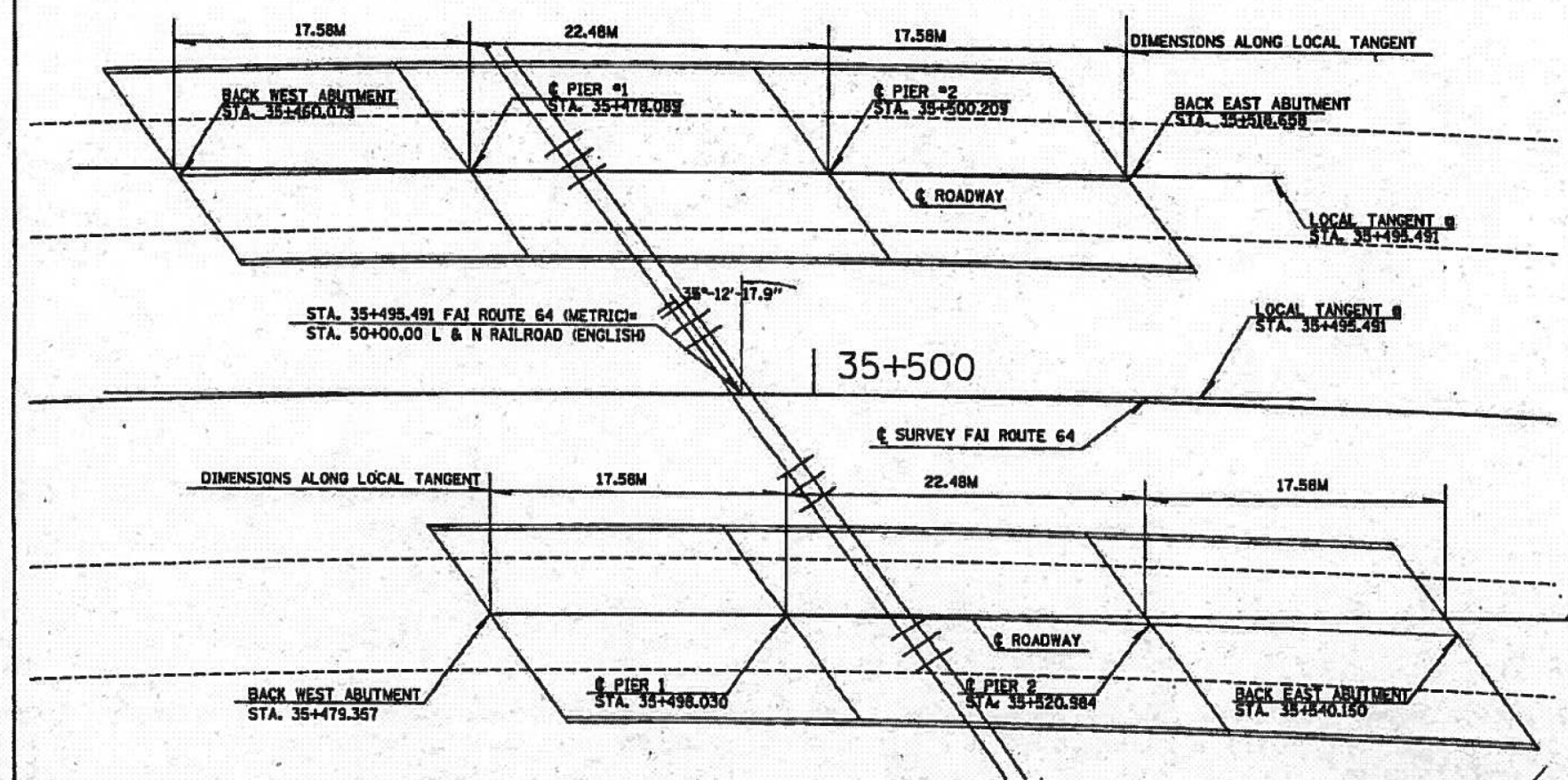
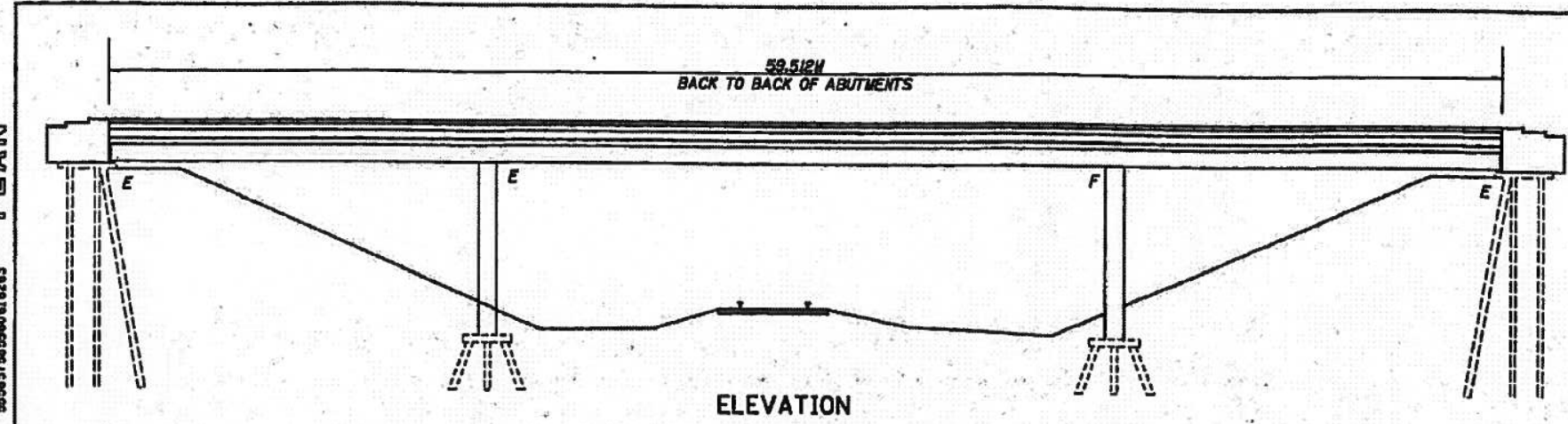
REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31M, M-42M, OR M-53M; GRADE 400.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

EXISTING BRIDGE DECK IS 190MM (7.5") THICK.

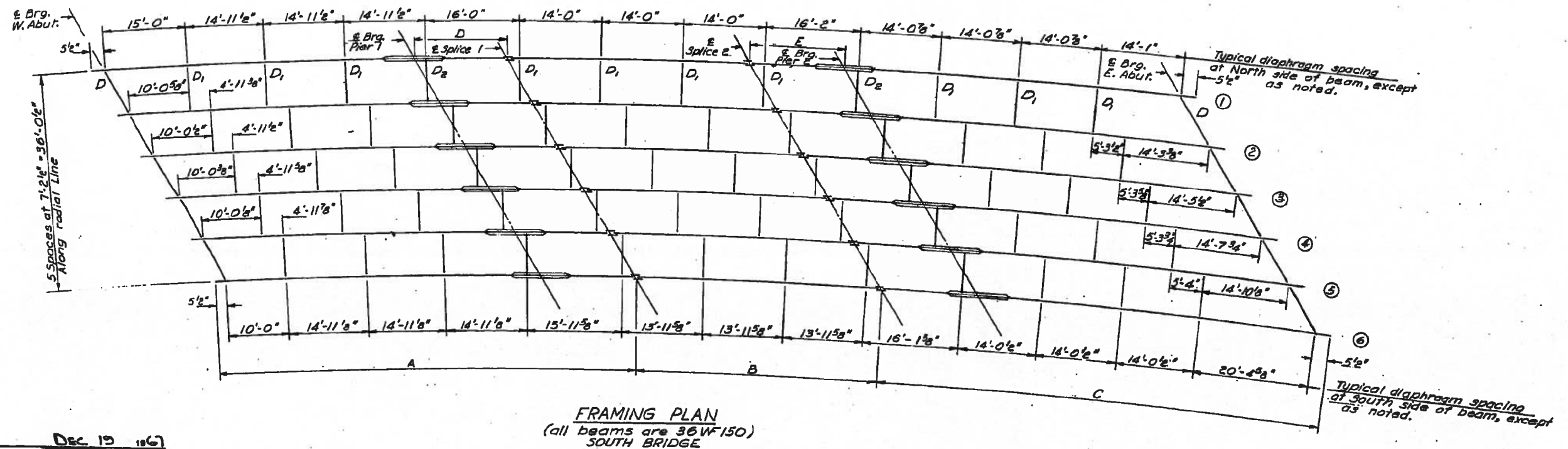
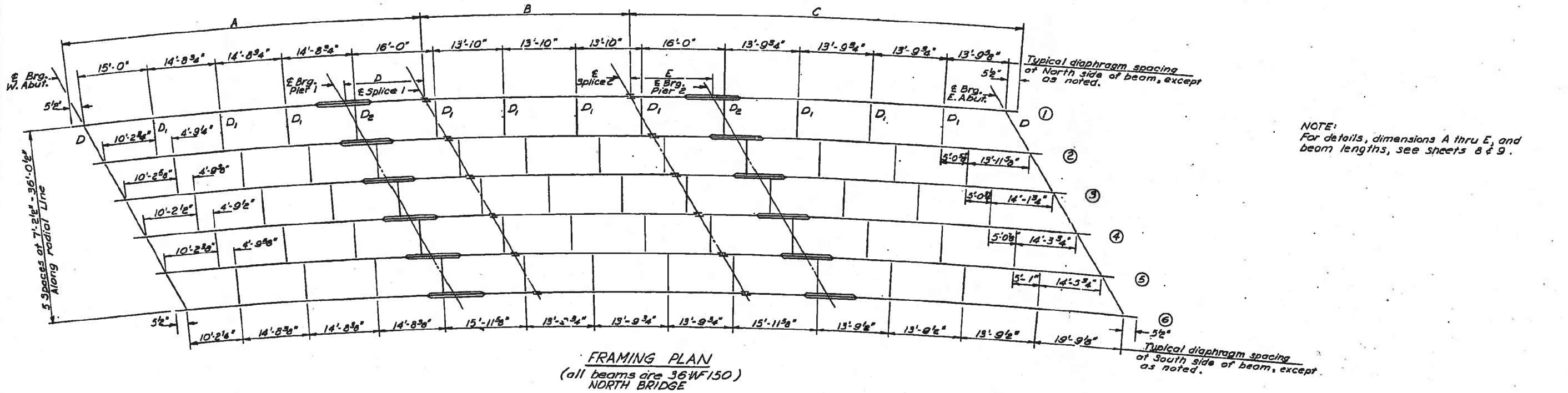
ALL DIMENSIONS ARE IN MILLIMETERS (MM) UNLESS OTHERWISE NOTED.

ITEM	UNIT	TOTAL
TC-PROT 701401 SPL	L. SHM	1
PAVEMENT MARKING REMOVAL	SQ M	169
F & E STRUCTURAL STEEL	KG	3470
BITUMINOUS CONC REMOVAL (DECK)	SQ M	1342
DECK SLAB REPAIR (PARTIAL DEPTH)	SQ M	81
DECK SLAB REPAIR (FULL DEPTH-TYPE 2)	SQ M	4
BRIDGE DECK SCARIFICATION	SQ M	1342
BRIDGE DECK MICROSILICA CONC OVERLAY	SQ M	1342
BRIDGE DECK GROOVING	SQ M	1272
BIT SURFACE REMOVAL VARIABLE DEPTH	SQ M	439
TEMPORARY RAMP	SQ M	59
RELIEF JOINT 100	METER	44
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	24
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	12
TACK & REMOVE EXISTING BEARINGS	EACH	36



GENERAL PLAN & ELEVATION
 FAI ROUTE 64 OVER L&N RR
 SECTION 41-9VBR-1
 JEFFERSON COUNTY
 STATION 35+495.491
 SN 041-0070 & 041-0071

M 12/19/97
 19 20 21 22 23 24 25 26 27
 28 29 30 31 32 33 34 35 36
 37 38 39 40 41 42 43 44 45
 46 47 48 49 50 51 52 53 54
 55 56 57 58 59 60 61 62 63



DESIGNED J.R. Hoyer
CHECKED Gene McCornick
DRAWN J.R. Hoyer
CHECKED Gene McCornick

EXAMINED
PASSED
APPROVED
ENGR. OF BRIDGE
ENGR. OF HIGHWAY

FOR INFORMATION ONLY

STRUCTURAL STEEL
NORTH & SOUTH BRIDGES
E.A.1. RT. 64 SEC. 41-9VB-1
JEFFERSON COUNTY
STATION 2967+71.95

041-0070/0071

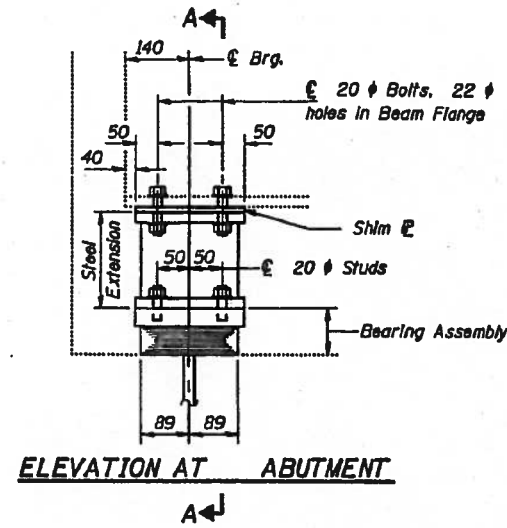
FAI No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64		JEFFERSON	22	16
<small>FED. AID PROJ. NO. 7 BILLING FED. AID PROJECT NO.</small>				

(41-8-1, 41-9)RS

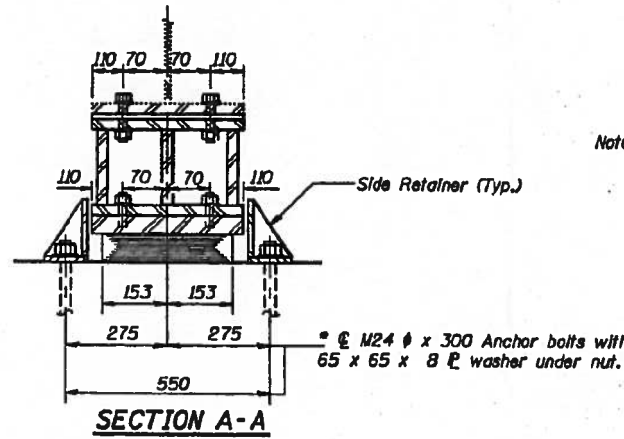
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER REACTIONS

R ₁	(kN)	111
R ₂	(kN)	124
Imp.	(kN)	33
R (Total)	(kN)	268

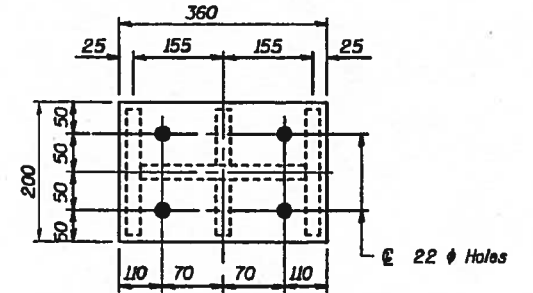


ELEVATION AT ABUTMENT



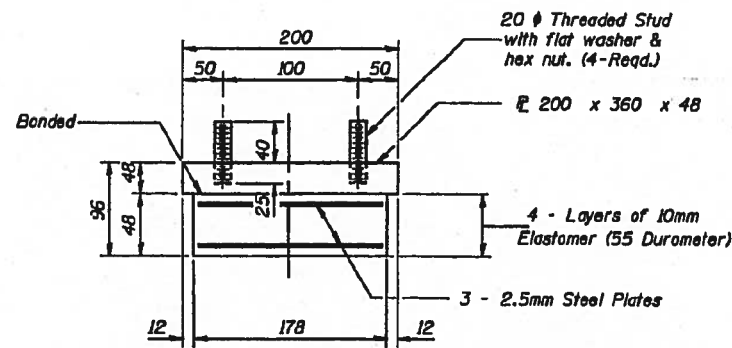
SECTION A-A

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, AND ANCHOR BOLTS ARE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL". SEE SHEET 19 FOR ANCHOR BOLT INSTALLATION. PRIOR TO ORDERING ANY MATERIAL, THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT AND SHIM THICKNESS DIMENSIONS. ALL DIMENSIONS ARE IN MILLIMETERS (MM) EXCEPT AS NOTED. MIN. JACK CAPACITY SHALL BE 267 kN (30 TONS)



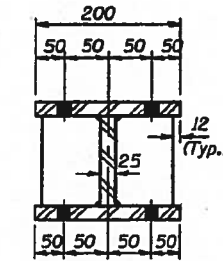
PLAN TOP AND BOTTOM PLATE

TYPE I ELASTOMERIC EXP. BRG.

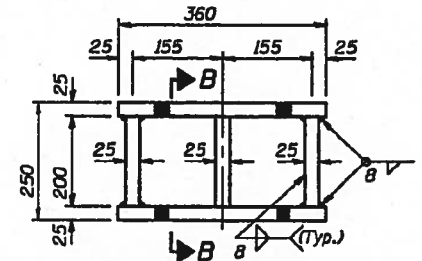


BEARING ASSEMBLY

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



SECTION B-B

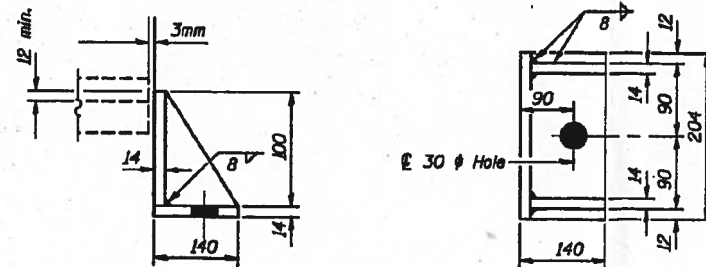


STEEL EXTENSION DETAIL

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12
JACK & REM EX BEARING	EACH	12
FURNISH & ERECT STRUCTURAL STEEL	KG	910

ELASTOMERIC BEARING TYPE 1
EAST ABUTMENT
FAI ROUTE 64
SECTION (41-8-1, 41-9)RS
JEFFERSON COUNTY
STRUCTURE NUMBER
041-0070 & 041-0071



SIDE RETAINER

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

FOR INFORMATION ONLY

DESIGNED		19
CHECKED	EXAMINED	
DRAWN	PASSED	ENGINEER OF STRUCTURAL SERVICES
CHECKED		ENGINEER OF BRIDGES AND STRUCTURES

TYI 11-10-97

M 12/19/97
94360d\01396pa.dgn
MMO REV: 09-29-97
EA

M 12/19/97

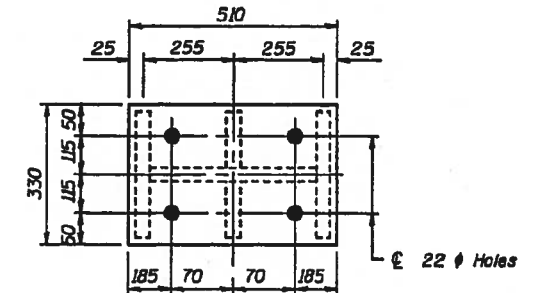
FAI No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64		JEFFERSON	22	17
ILLINOIS FEDERAL AID PROJECT NO. (41-8-1, 41-9)RS				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

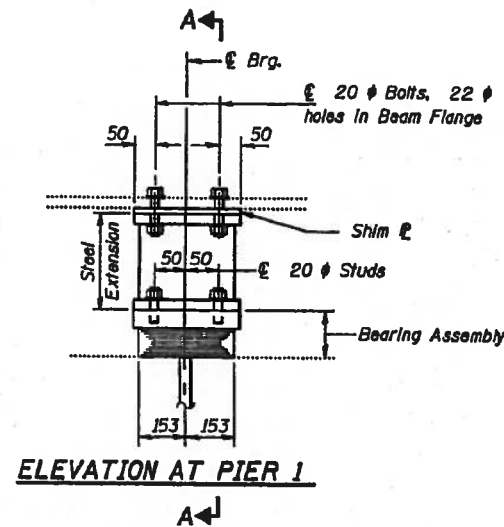
GIRDER REACTIONS

<i>R_R</i> (kN)	393
<i>R_L</i> (kN)	222
<i>Imp.</i> (kN)	67
<i>R (Total)</i> (kN)	682

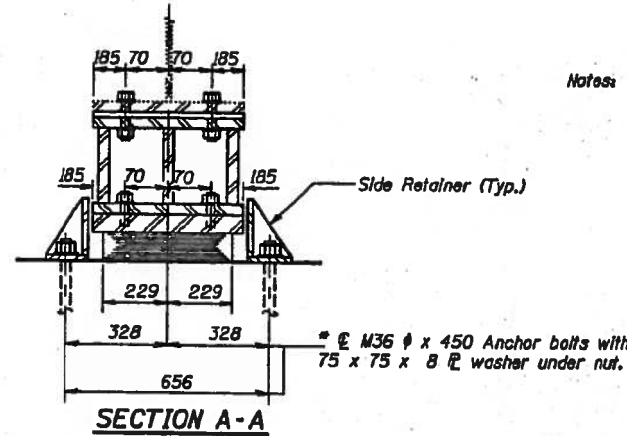
Notes: DIAPHRAGM REMOVAL AND REPLACEMENT MAY BE REQUIRED TO FACILITATE DRILLING HOLES. COST SHALL BE INCLUDED IN THE COST OF "FURNISHING AND ERECTING STRUCTURAL STEEL". NEW STEEL EXTENSIONS, SIDE RETAINERS, CONNECTION BOLTS, AND ANCHOR BOLTS ARE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL". SEE SHEET 19 FOR ANCHOR BOLT INSTALLATION. PRIOR TO ORDERING ANY MATERIAL, THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT AND SHIM THICKNESS DIMENSIONS. ALL DIMENSIONS ARE IN MILLIMETERS (MM) EXCEPT AS NOTED. MIN. JACK CAPACITY SHALL BE 801 kN (90 TONS)



PLAN TOP AND BOTTOM PLATE

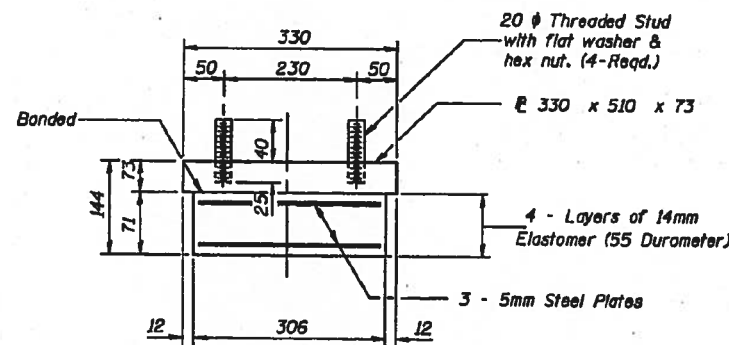


ELEVATION AT PIER 1



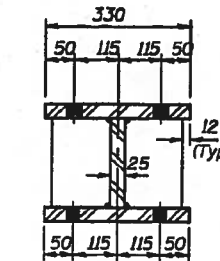
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

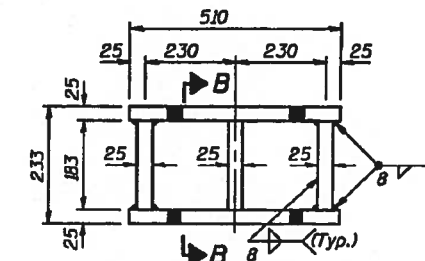


BEARING ASSEMBLY

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



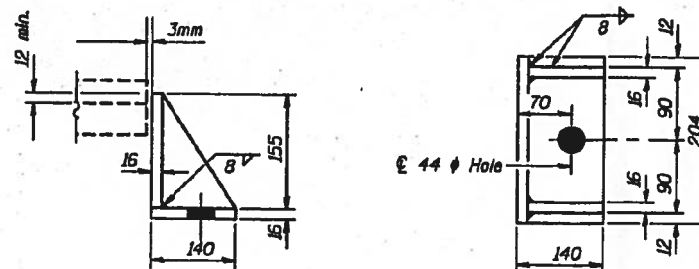
SECTION B-B



STEEL EXTENSION DETAIL

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12
JACK & REM EX BEARING	EACH	12
FURNISH & ERECT STRUCTURAL STEEL	KG	1690



SIDE RETAINER

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

DESIGNED	19
CHECKED	ENGINEER OF STRUCTURAL SERVICES
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES
TYI	11-10-97

FOR INFORMATION ONLY

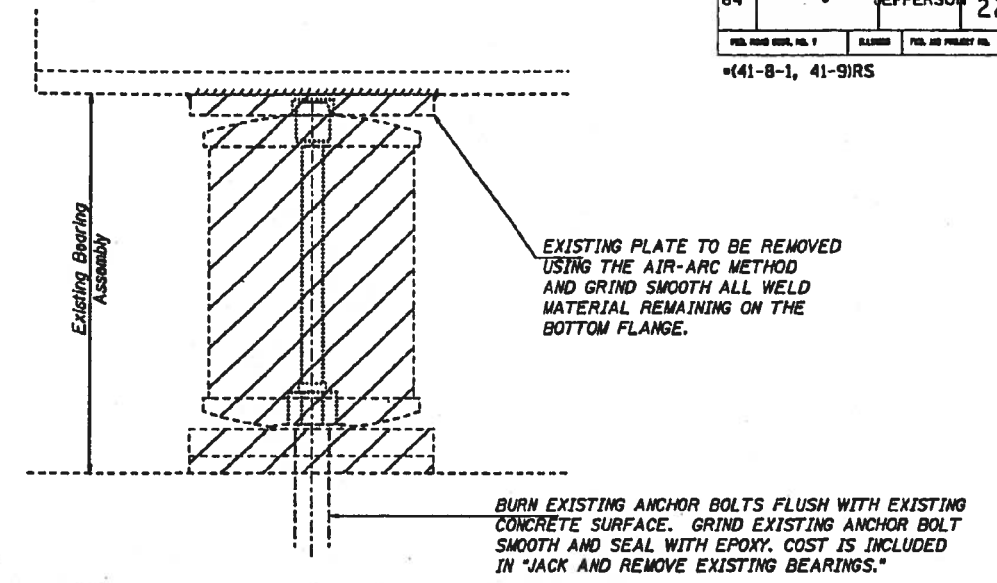
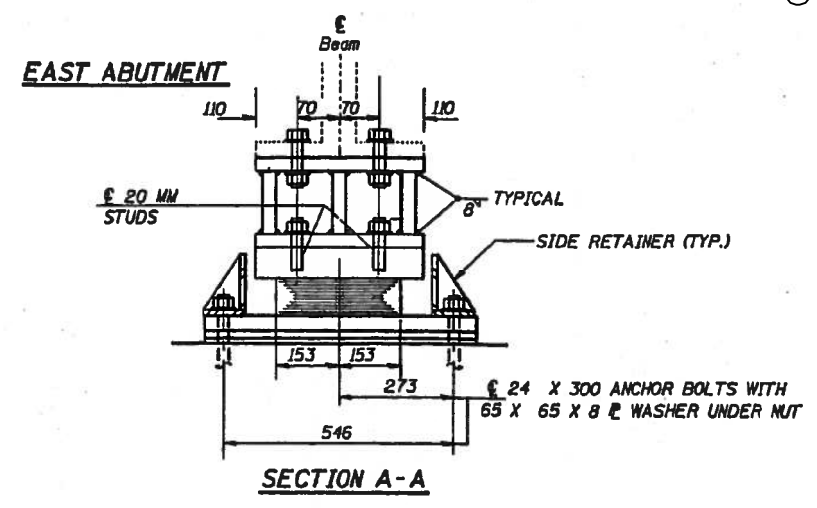
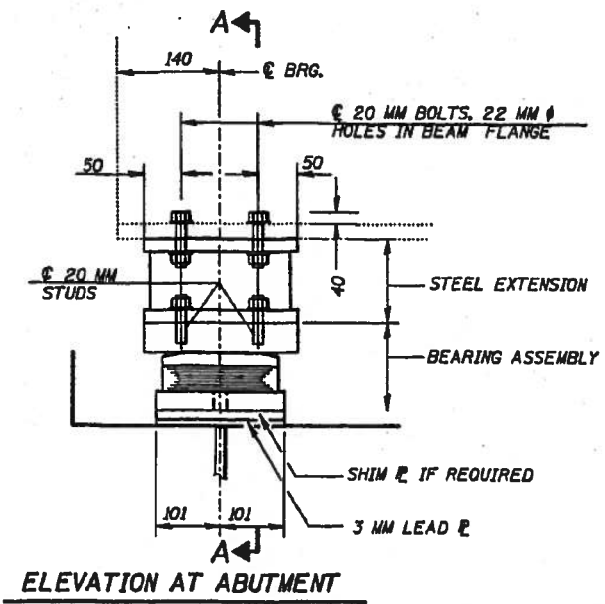
ELASTOMERIC BEARING TYPE I
PIER 1
FAI ROUTE 64
SECTION (41-8-1, 41-9)RS
JEFFERSON COUNTY
STRUCTURE NUMBER
041-0070 & 041-0071

ELASTOMERIC BEARING TYPE 1 DETAILS

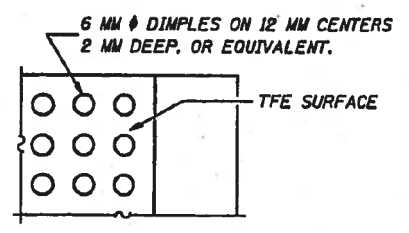
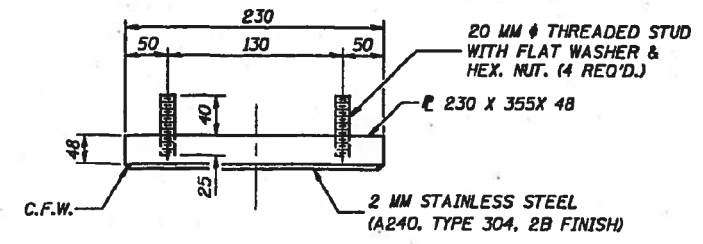
041-0070/0071

FAI	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64		JEFFERSON	22	18
<small>FED. HIGHWAY DIST. NO. 1</small> <small>BASED ON</small> <small>FED. AID PROJECT NO.</small> (41-8-1, 41-9)RS				

M 12/19/97
 \943604\0396pa.dgn
 MMO REV: 09-29-97
EAI
 1 10 11 12 13 14 15 16 17 18
 19 20 21 22 23 24 25 26 27
 28 29 30 31 32 33 34 35
 36 37 38 39 40 41 42 43 44
 45 46 47 48 49 50 51 52 53 54
 55 56 57 58 59 60 61 62 63



TYPE II TFE ELASTOMERIC EXP. BRG.



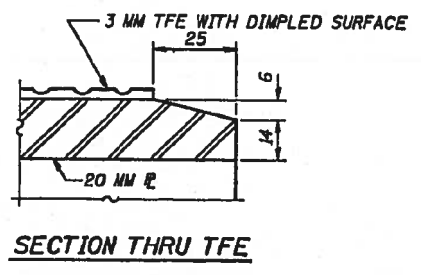
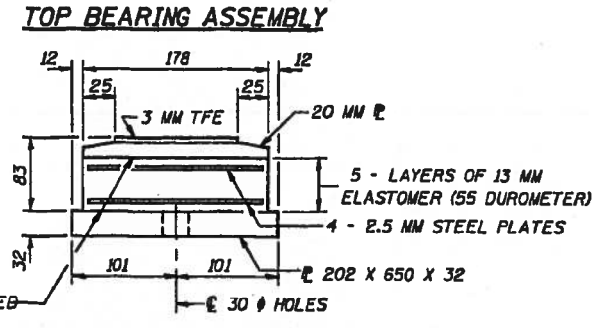
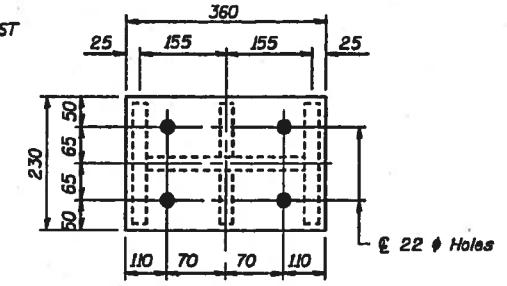
Notes: DIAPHRAGM REMOVAL AND REPLACEMENT MAY BE REQUIRED TO FACILITATE DRILLING HOLES. COST SHALL BE INCLUDED IN THE COST OF "FURNISHING AND ERECTING STRUCTURAL STEEL".

NEW STEEL EXTENSIONS, SIDE RETAINERS, CONNECTION BOLTS, ANCHOR BOLTS AND LEAD PLATES ARE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL".

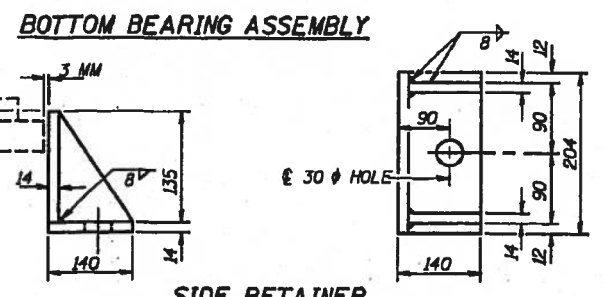
ALL DIMENSIONS ARE IN MILLIMETERS (MM) EXCEPT AS NOTED.

PRIOR TO ORDERING ANY MATERIAL, THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT, STEEL EXTENSION AND SHIM PLATE DIMENSIONS.

MIN. JACK CAPACITY 267 kN - (30 TONS)

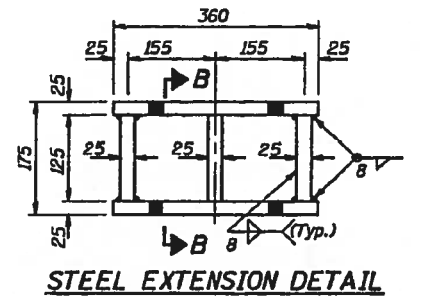
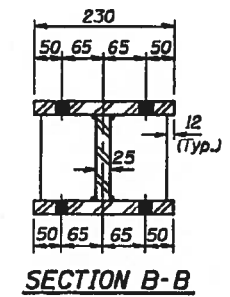


PLAN TOP AND BOTTOM PLATE



NOTE: THE 3 MM 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 3 MM TFE SHEET DURING VULCANIZING PROCESS WILL BE PERMITTED PROVIDED THE PROCESS AND METHOD OF ADJUSTING ASSEMBLY HEIGHT IS APPROVED BY THE ENGINEER.

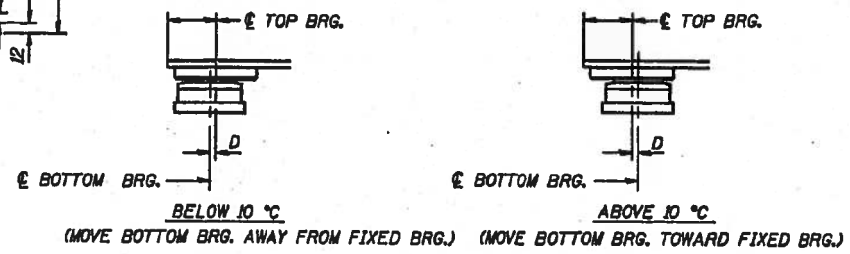


GIRDER REACTIONS

R Q	kN	111
R L	kN	124
IMPACT	kN	33
R (TOTAL)	kN	268

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	12
JACK & REM EX BEARING	EACH	12
FURNISH & ERECT STRUCTURAL STEEL	KG	870



SETTING ANCHOR BOLTS AT EXP. BRG.
 D= 1 MM PER EACH 10 MM OF EXPANSION FOR EVERY 8 °C TEMP. CHANGE FROM THE NORMAL TEMP. OF 10 °C.

FOR INFORMATION ONLY

ELASTOMERIC BEARING TYPE 2 WEST ABUTMENT FAI ROUTE 64 SECTION (41-8-1, 41-9)RS JEFFERSON COUNTY STRUCTURE NUMBER 041-0070 & 041-0071

ELASTOMERIC BEARING, TYPE 2 DETAILS