78536 01-20-2017 LETTING ITEM 133 ALEXANDER

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	12	1
	ILLINOIS	CONTRACT NO. 78536		

*D9 BRIDGE JOINT REPAIR 2017-1

D-99-038-16

133

INDEX OF SHEETS

1 INDEX OF SHEETS, HIGHWAY STANDARDS
2 GENERAL NOTES, SEQUENCE OF CONSTRUCTION
3 SUMMARY OF QUANTITIES
4 STAGE I TRAFFIC CONTROL LAYOUT
5 STAGE II TRAFFIC CONTROL LAYOUT
6 WIDTH RESTRICTION SIGNING, PAVEMENT MARKING
7 TEMPORARY CONCRETE BARRIER DETAILS
8 GENERAL PLAN & ELEVATION, SILICONE JOINT DETAILS
9 STAGING DETAILS
10 SPANS 4 & 7 JOINT REMOVAL & REPLACEMENT
11 MODULAR JOINT DETAILS
12 BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS

ILLINOIS HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
701101-05	OFF-ROAD, MULTILANE 15' TO 24" FROM PAVEMENT EDGE
701400-09	APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
701401-10	LANE CLOSURE FREEWAY/EXPRESSWAY
701901-06	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

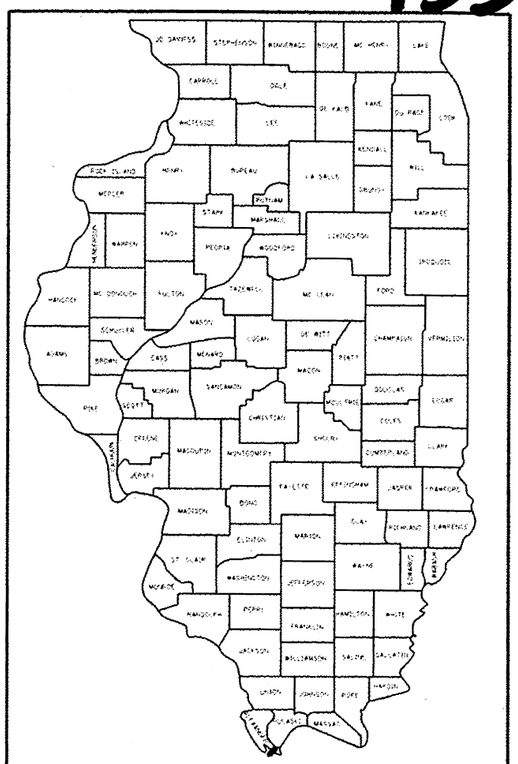
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

PROPOSED
HIGHWAY PLANS

F.A.I. ROUTE 57 (I-57)
SECTION D9 BRIDGE JOINT REPAIR 2017-1
PROJECT ACNHPP-0057(326)
BRIDGE JOINT REPAIR
ALEXANDER COUNTY, IL & MISSISSIPPI COUNTY, MO

C-99-038-16



LOCATION OF SECTION INDICATED THUS: –

BRIDGE DATA

INVENTORY RATING 1.1 (39)
OPERATING RATING 1.755 (63)
NO LOAD POSTING

100%
12-9-2017

I-57 TRAFFIC DATA

2015 ADT 12,200
57% TRUCKS

TOWNSHIP

COUNTY UNIT ROAD DISTRICT

DESIGN DESIGNATION : N/A

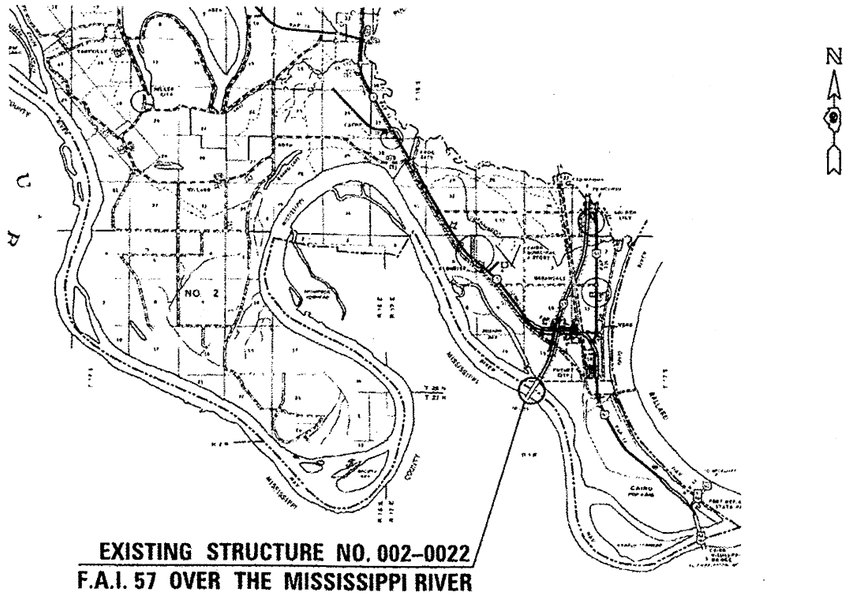
COORDINATE SYSTEM : N/A

POSTED SPEED : 70 MPH

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

PROJECT ENGINEER RITA GAUTNEY
PROJECT MANAGER DAVID PICHE

CONTRACT NO. 78536 002-0022



EXISTING STRUCTURE NO. 002-0022
F.A.I. 57 OVER THE MISSISSIPPI RIVER

BRIDGE LENGTH = 4090.50 FT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

SUBMITTED Oct 18 20 16

Debbie L Keith
REGION FIVE ENGINEER

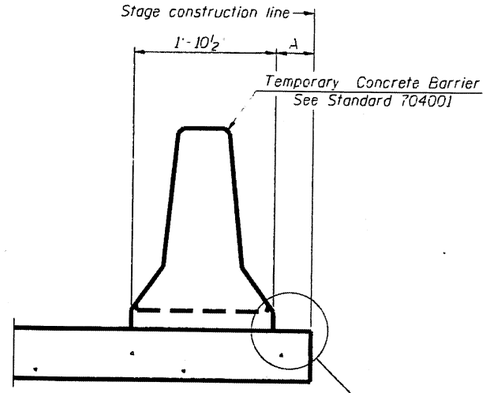
Dec 9 20 16

Maureen M. Addis, P.E. for
ENGINEER OF DESIGN AND ENVIRONMENT

Dec 9 20 2

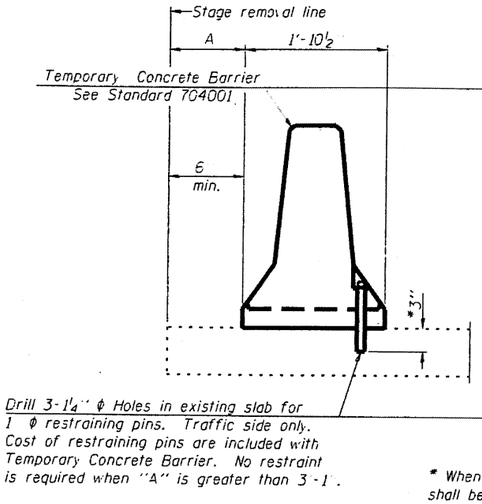
DIRECTOR OF PROGRAM DEVELOPMENT

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS



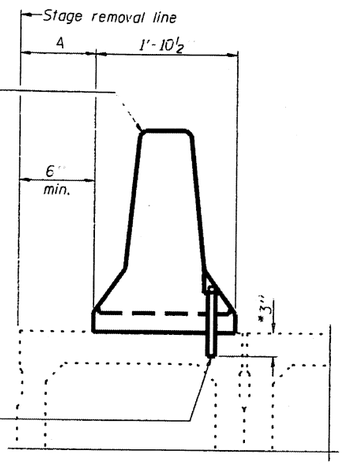
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" ϕ Holes in existing slab for 1 ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

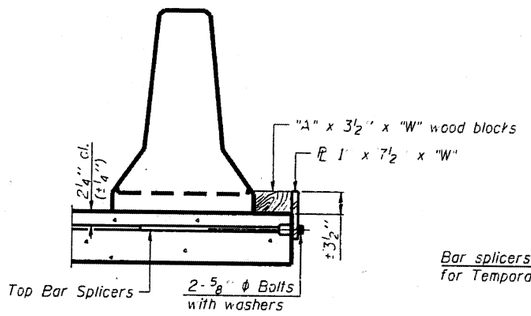
EXISTING SLAB



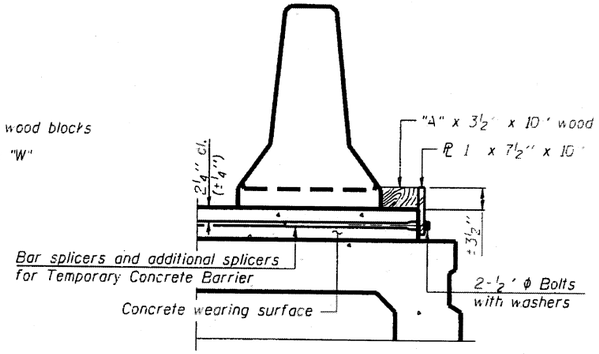
* When hot-mix asphalt wearng surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

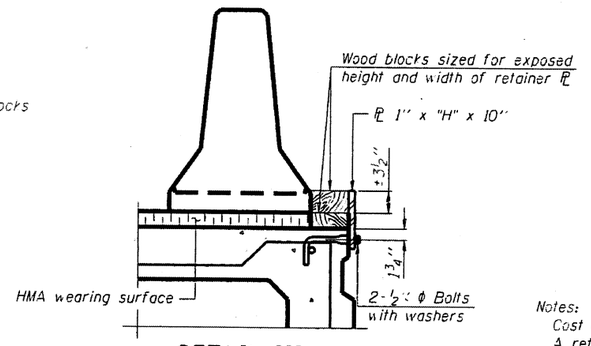
SECTIONS THRU SLAB OR DECK BEAM



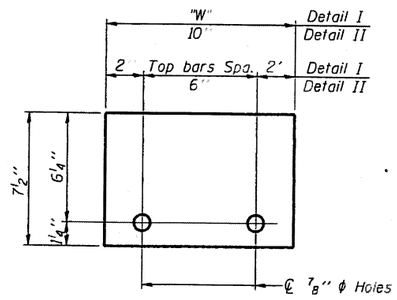
DETAIL I



DETAIL II

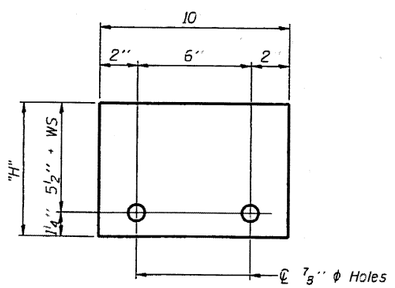


DETAIL III



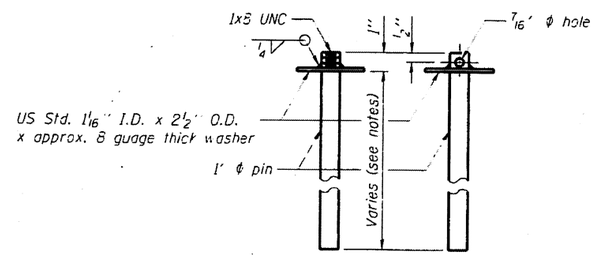
STEEL RETAINER ℄ 1" x 7½" x "W"

(Detail I and II)

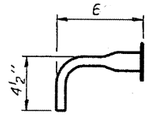


STEEL RETAINER ℄ 1" x "H" x 10"

(Detail III)



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

R-27

07-22-16

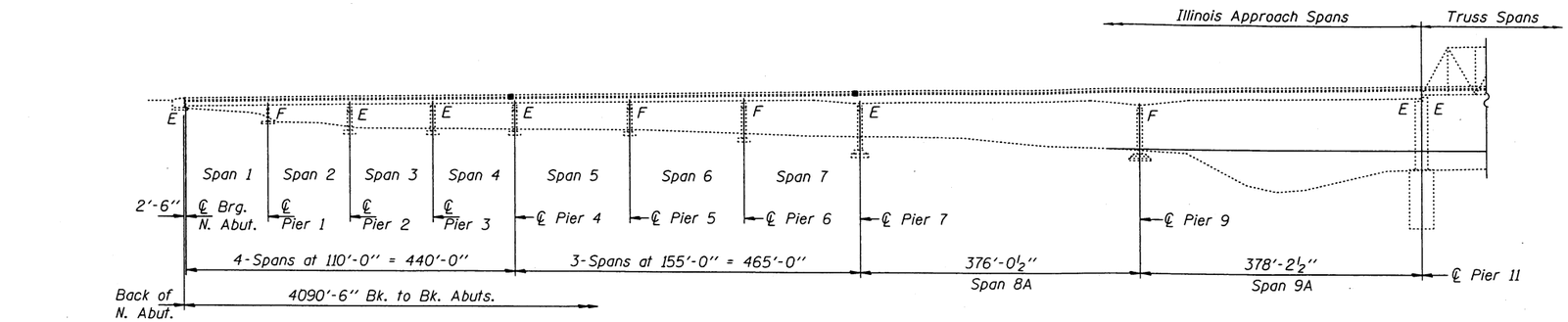
FILE NAME = pw:\\IL684EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 9\Projects\78536 [illegible]te\CADsheets\78536 sht.dgn	USER NAME = gautreyk	DESIGNED -	REVISED -
	PLOT SCALE = 60.0000 ' / in.	CHECKED -	REVISED -
MODELNAME=	PLOT DATE = 10/17/2016	DATE -	REVISED -

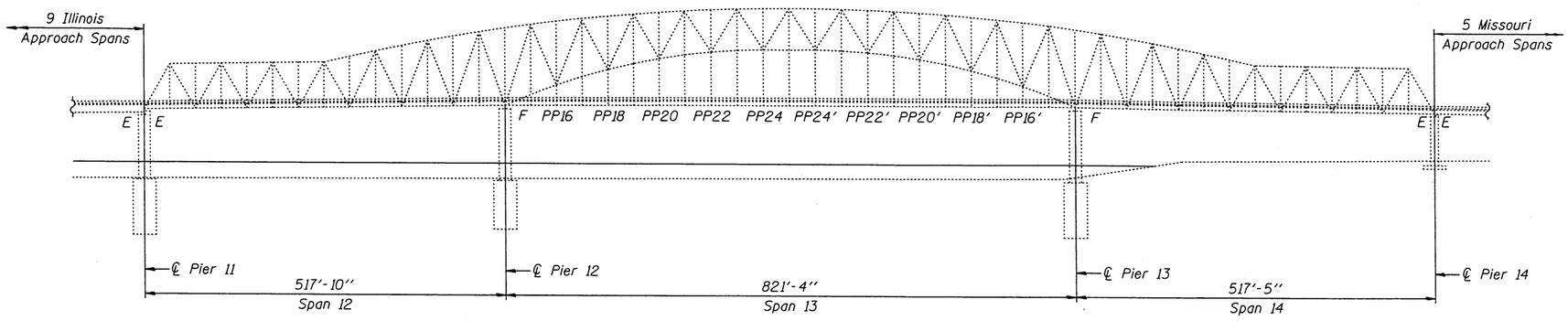
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 002-0022

SCALE: _____ SHEET 7 OF ___ SHEETS STA. _____ TO STA. _____

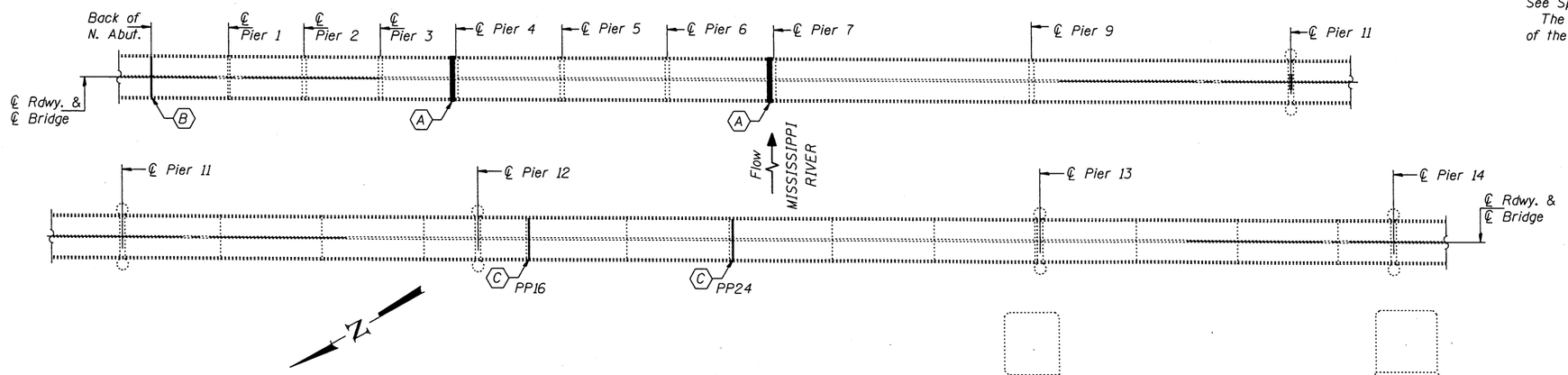
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	-	ALEXANDER	12	7
	D9 BRIDGE JOINT REPAIR 2017-1	CONTRACT NO. 78536		
	ILLINOIS FED. AID PROJECT			





PARTIAL ELEVATION

(Looking East)

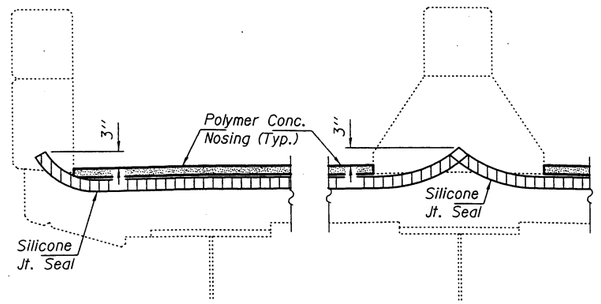


PARTIAL PLAN

Ⓐ - Remove existing Neoprene Expansion Joint and install Modular Expansion Joint.

Ⓑ - Remove & Replace Polymer Concrete Nosing and Silicone Joint Sealer.

Ⓒ - Remove & Replace Silicone Joint Sealer.



NORTH ABUTMENT PARAPET

NORTH ABUTMENT MEDIAN

TYPICAL END OF SEAL TREATMENT

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction 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.

Reinforcement bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

Modular Expansion Joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.

Modular Expansion Joints shall be fabricated and installed according to the manufacturer's recommendations and as approved by the Engineer.

Modular Expansion Joints shall be fabricated to conform to the existing cross slopes of the bridge.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All structural steel used on the modular joints shall be hot-dipped galvanized. See Special Provision "Hot-Dip Galvanizing for Structural Steel".

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY	
Concrete Removal	Cu. Yd.	37.1	1
Concrete Superstructure	Cu. Yd.	35.7	1
Modular Expansion Joint, 9"	Foot	123	
Reinforcement Bars, Epoxy Coated	Pound	7510	
Bar Splicers	Each	92	1
Mechanical Splicers	Each	584	
Polymer Concrete	Cu. Ft.	4.7	
Silicone Joint Sealer, 1¾"	Foot	130	
Silicone Joint Sealer, 2½"	Foot	65	

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD
ILLINOIS
STATE OF ILLINOIS

Expires: November 30, 2018

DESIGNED -	
CHECKED -	
DRAWN -	Kyle M. Steffen
CHECKED -	CCL SMR

PASSED

ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - DECEMBER 8, 2016

REVISED 1 4/4/2017 CCC

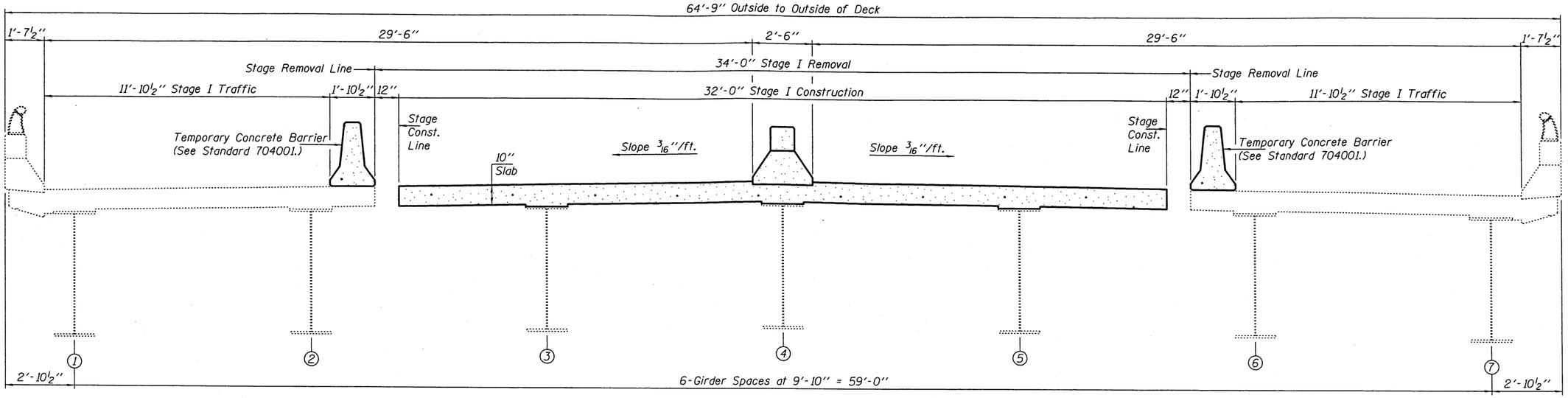
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
F.A.I. ROUTE 57 OVER THE MISSISSIPPI RIVER
SN 002-0022

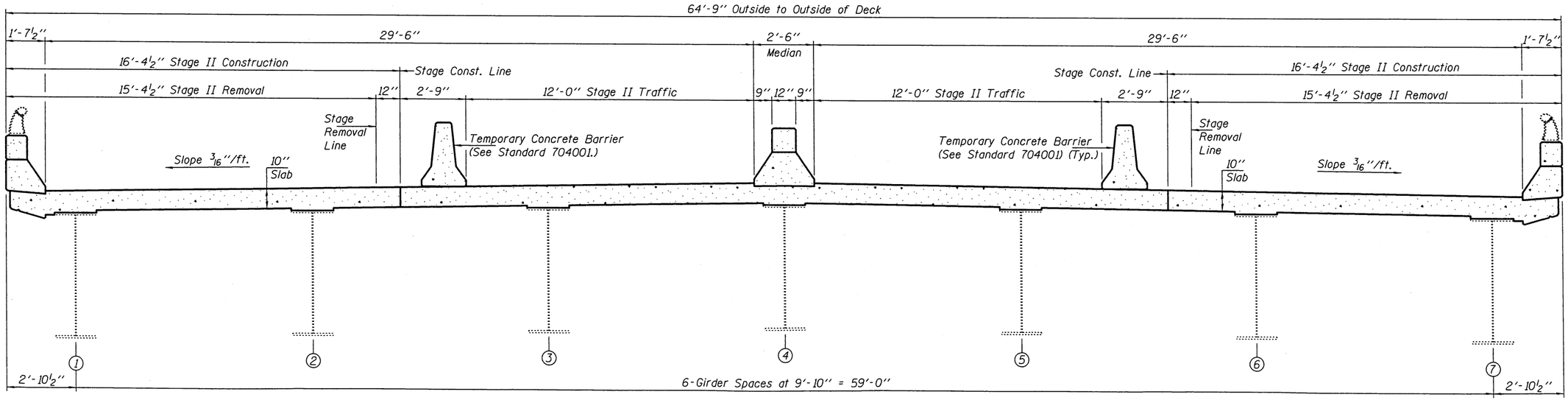
SHEET NO. 1 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE JOINT REPAIR 2017-1	ALEXANDER	12	8
		CONTRACT NO. 78536		
	ILLINOIS FED. AID PROJECT			



STAGE I CONSTRUCTION DETAILS

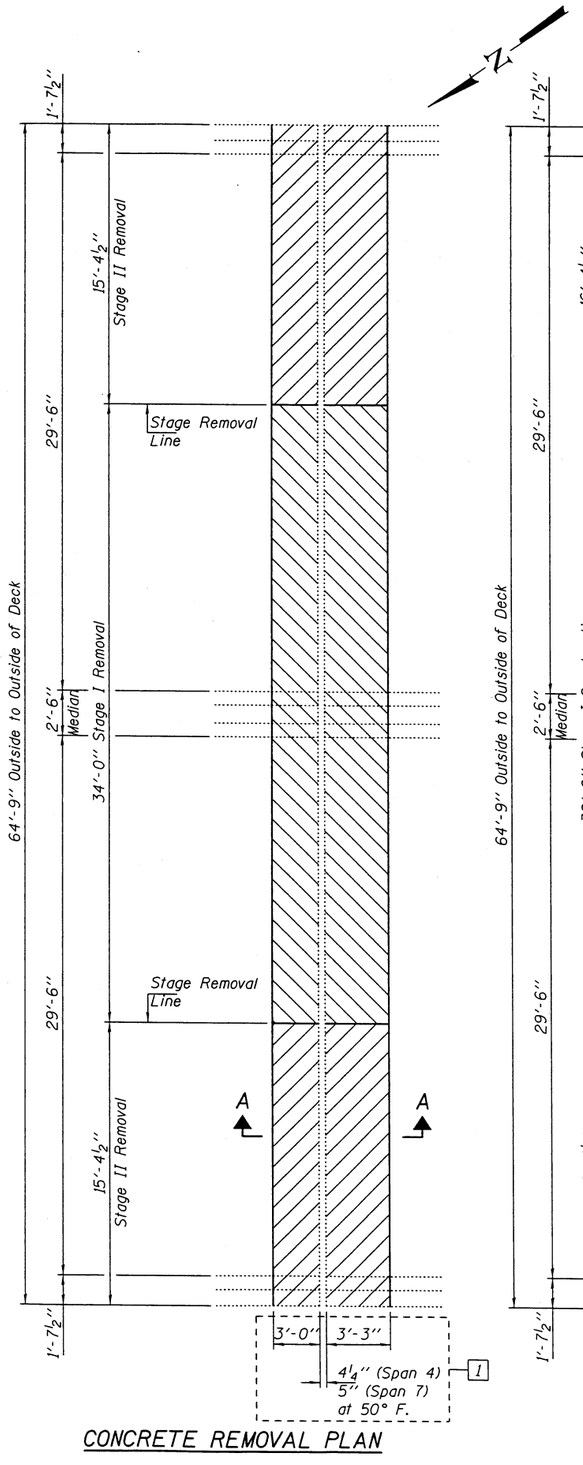
(Looking South)



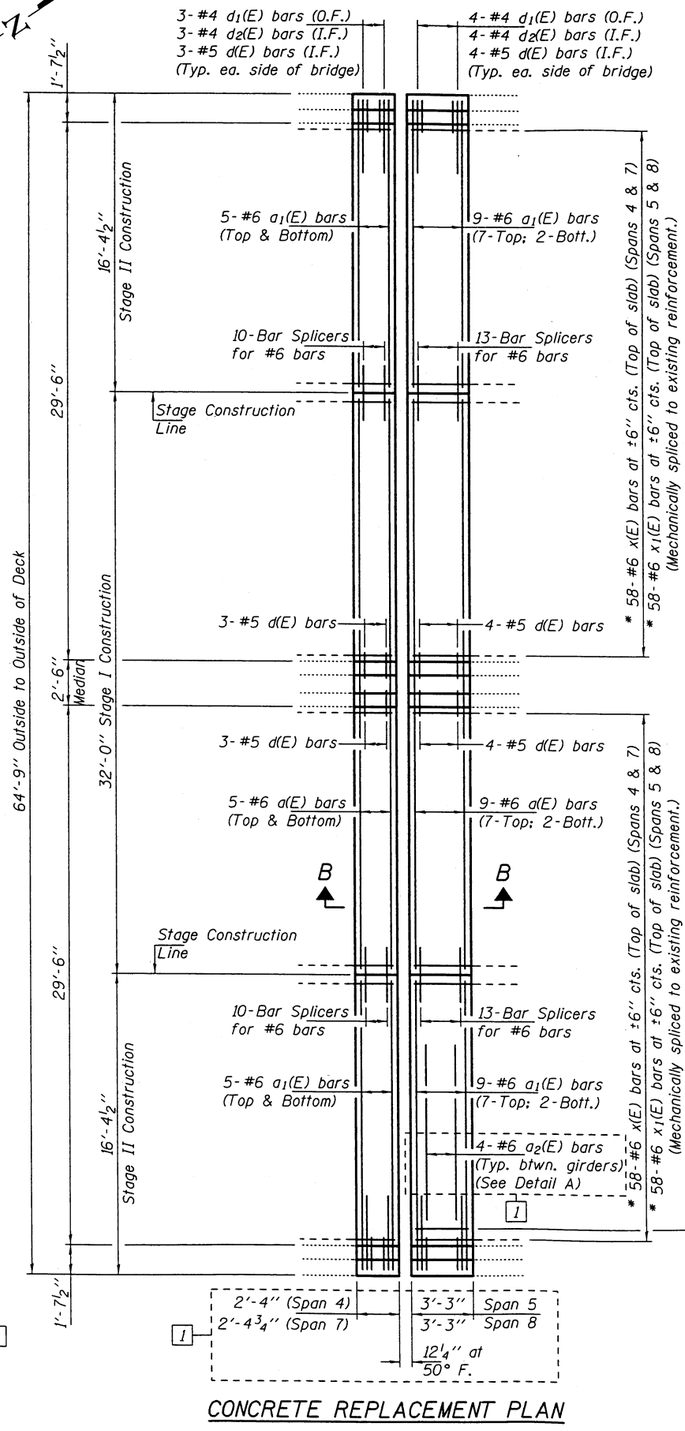
STAGE II CONSTRUCTION DETAILS

(Looking South)

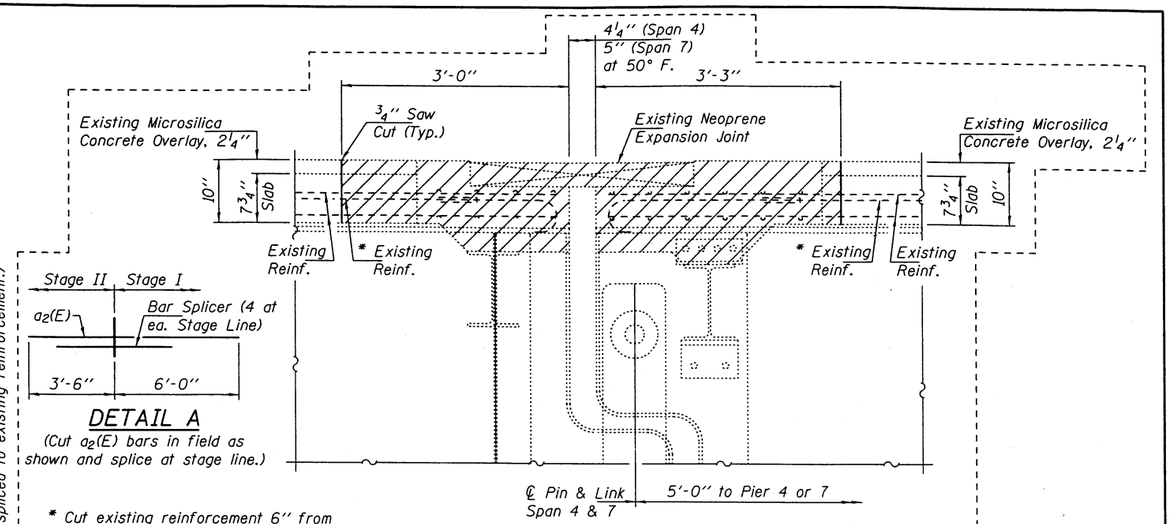
DESIGNED - CCC	PASSED	DATE - DECEMBER 8, 2016	**STATE OF ILLINOIS**	**STAGING DETAILS**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR			**DEPARTMENT OF TRANSPORTATION**	**SN 002-0022**	57	09 BRIDGE JOINT	ALEXANDER	12	9
DRAWN - Kyle M. Steffen	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 2 OF 5 SHEETS		REPAIR 2017-1	CONTRACT NO. 78536		
CHECKED - CCC SMR		REVISED				ILLINOIS FED. AID PROJECT			



CONCRETE REMOVAL PLAN



CONCRETE REPLACEMENT PLAN

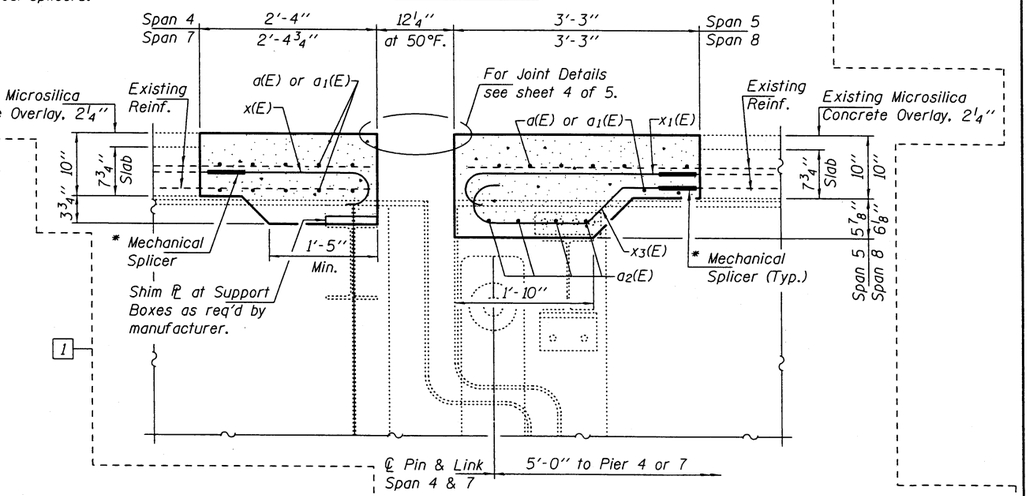


DETAIL A

(Cut $a_2(E)$ bars in field as shown and splice at stage line.)

* Cut existing reinforcement 6" from removal line to facilitate installation of mechanical splicers.

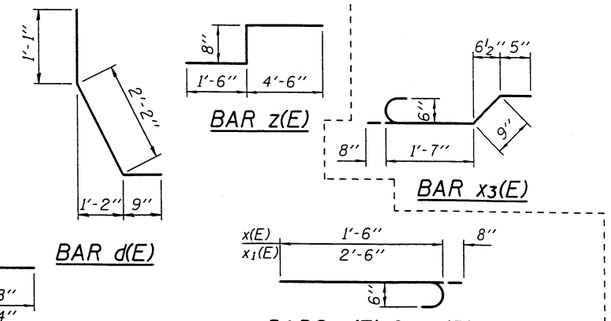
SECTION A-A



SECTION B-B

Modular Expansion Joint not shown for clarity.

Notes:
For median and parapet details see sheet 4 of 5.
Hatched areas indicate concrete removal.
For bars $x_2(E)$ and $z(E)$, see sheet 4 of 5.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	38	#6	31'-8"	—
a1(E)	76	#6	16'-0"	—
a2(E)	48	#6	9'-6"	—
d(E)	56	#5	4'-0"	L
d1(E)	28	#4	4'-1"	L
d2(E)	28	#4	3'-9"	L
x(E)	232	#6	2'-2"	C
x1(E)	232	#6	3'-2"	C
x2(E)	32	#6	2'-0"	—
x3(E)	120	#6	3'-5"	⌐
z(E)	24	#6	6'-8"	⌐
Concrete Removal			Cu. Yd.	37.1
Concrete Superstructure			Cu. Yd.	35.7
Bar Splicers			Each	92
Mechanical Splicers			Each	584
Reinforcement Bars, Epoxy Coated			Pound	7510

DESIGNED -	CCC
CHECKED -	SMR
DRAWN -	Kyle M. Steffen
CHECKED -	CCC SMR

PASSED

ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - DECEMBER 8, 2016

REVISED 1 4/4/2017 CCC

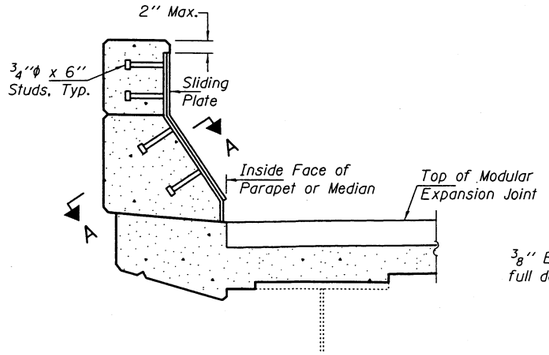
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REMOVAL & REPLACEMENT DETAILS FOR SPANS 4 & 7
SN 002-0022

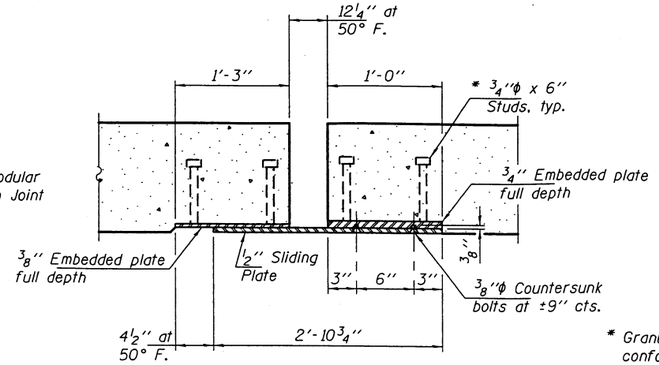
SHEET NO. 3 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE JOINT REPAIR 2017-1	ALEXANDER	12	10
		CONTRACT NO. 78536		
	ILLINOIS FED. AID PROJECT			



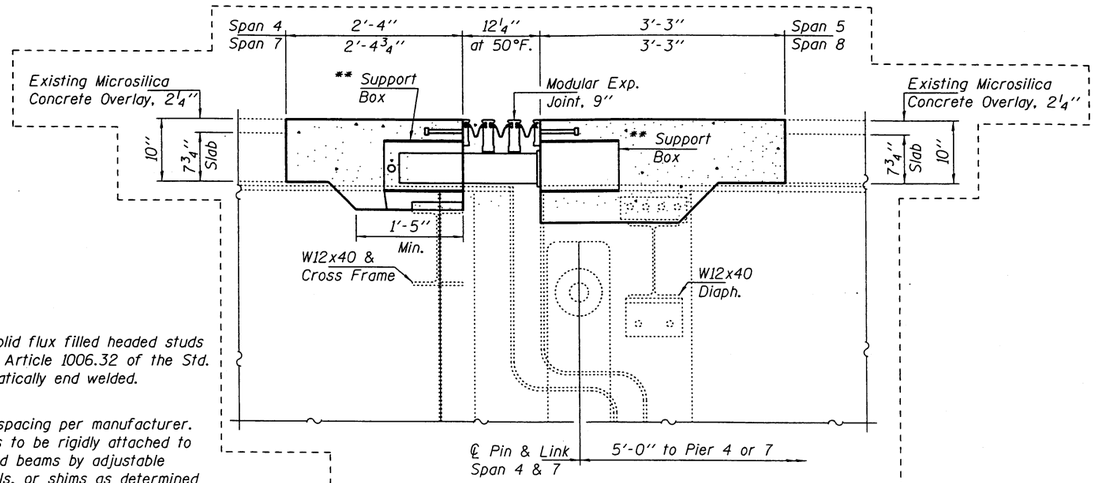
SLIDING PLATE DETAILS FOR PARAPETS & MEDIAN

Cost included with Modular Expansion Joint.



SECTION A-A

Note:
The joint opening, deck, parapet and 1/2" Sliding Plate dimensions are subject to change per joint manufacturer.



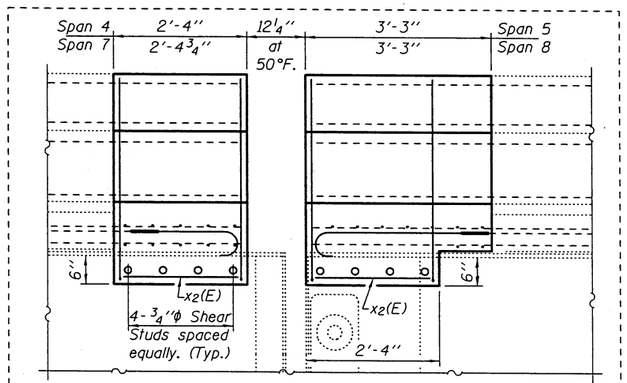
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

** Support Box spacing per manufacturer. Support Boxes to be rigidly attached to diaphragms and beams by adjustable brackets, stools, or shims as determined by manufacturer.
Support Boxes to be spaced so they do not interfere with existing top flange of girders.

SECTION THRU MODULAR EXPANSION JOINT AT SUPPORT BOX

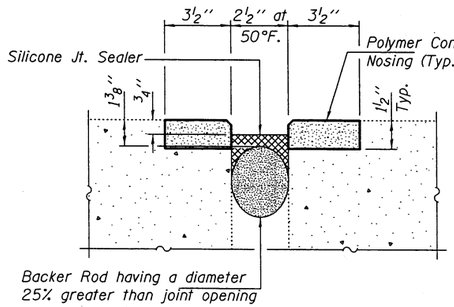
(Reinforcement not shown for clarity.)

1



VIEW C-C

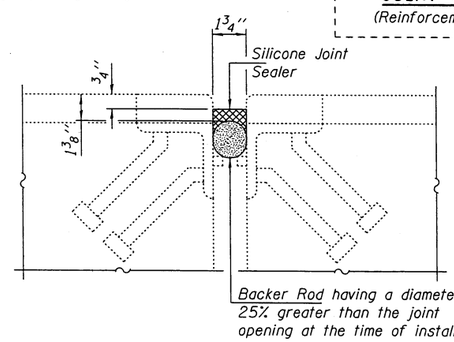
1



Backer Rod having a diameter 25% greater than joint opening at the time of installation.

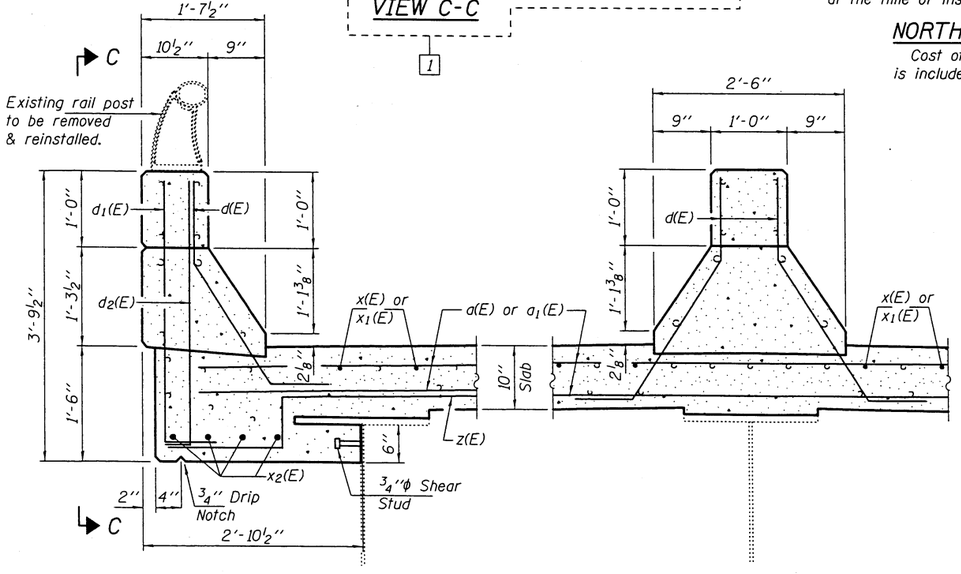
NORTH ABUTMENT JOINT DETAIL

Cost of removal of existing polymer concrete is included with Polymer Concrete.



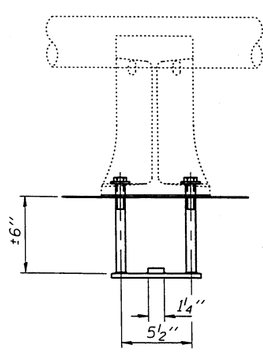
Backer Rod having a diameter 25% greater than the joint opening at the time of installation.

RELIEF JOINT DETAIL AT P.P. 16 & 24

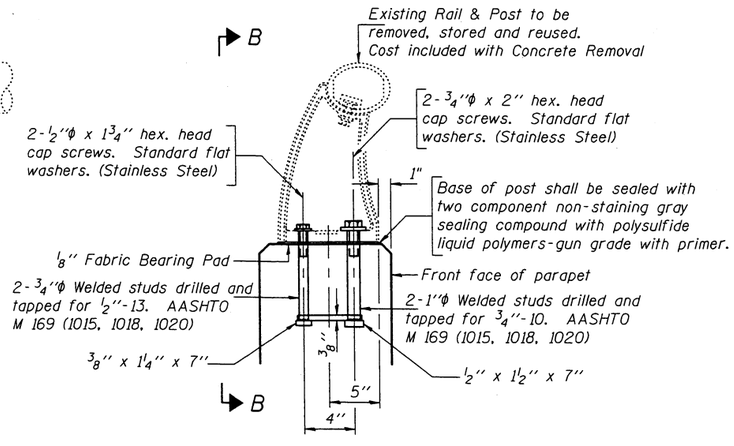


PARAPET DETAILS

MEDIAN DETAILS



VIEW B-B



RAIL POST ANCHOR DEVICE

New Rail Post Anchor Devices will be required at each location where posts are connected to new construction. Cost included with Concrete Removal.

DESIGNED	-	CCC	
CHECKED	-	SMR	
DRAWN	-	Kyle M. Steffen	
CHECKED	-	CCC SMR	

PASSED

ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - DECEMBER 8, 2016

REVISED 1 4/4/2017 CCC

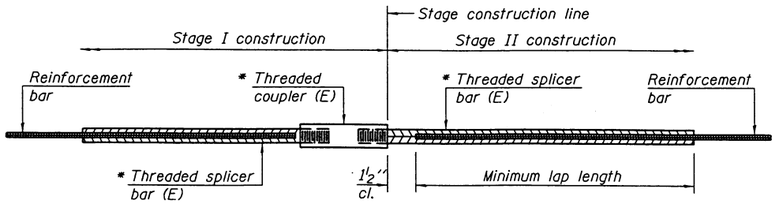
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODULAR JOINT AND REPAIR DETAILS
SN 002-0022

SHEET NO. 4 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE JOINT	ALEXANDER	12	11
	REPAIR 2017-1	CONTRACT NO. 78536		
	ILLINOIS FED. AID PROJECT			



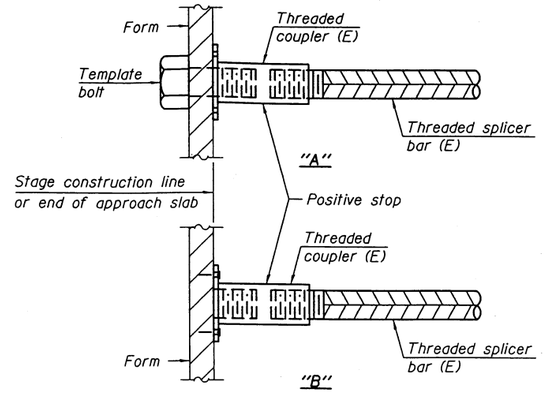
STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1½" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

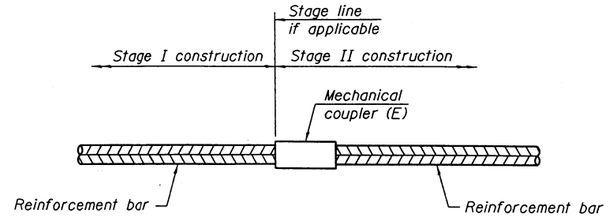
Location	Bar size	No. assemblies required	Minimum lap length
Deck	#6	92	3'-7"

1



INSTALLATION AND SETTING METHODS

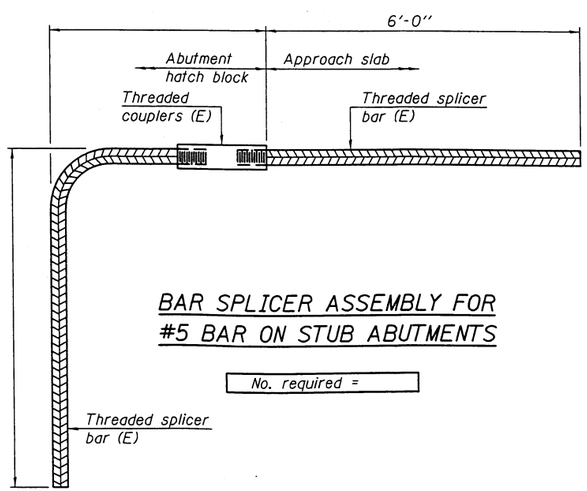
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Deck	#6	584

1



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 6-8-15

DESIGNED - CCC	PASSED	DATE - DECEMBER 8, 2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 002-0022	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR		REVISED 1 4/4/2017 CCC			57	D9 BRIDGE JOINT	ALEXANDER	12	12
DRAWN - Kyle M. Steffen	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 5 OF 5 SHEETS		REPAIR 2017-1	CONTRACT NO. 78536		
CHECKED - CCC SMR						ILLINOIS FED. AID PROJECT			

12160 3-5-10 LETTING ITEM 132 ALEXANDER 132

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 DECK SEAL 2010-1	ALEXANDER	6	1
	ILLINOIS	CONTRACT NO. 78160		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

F.A.I. ROUTE 57 (I–57) NB & SB
SECTION D9 DECK SEAL 2010–1
DECK SEALING AND CRACK SEALING
WITH MINOR JOINT REPAIR

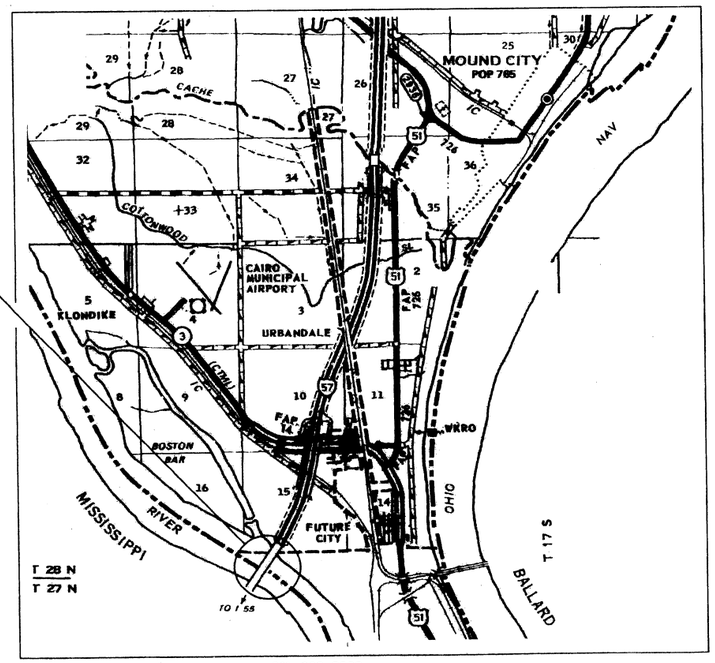
ALEXANDER COUNTY
C–99–015–10

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

99.5%
11/05/2011

TRAFFIC DATA

I–57 TRAFFIC DATA
2007 ADT = 10,200
37% TRUCKS

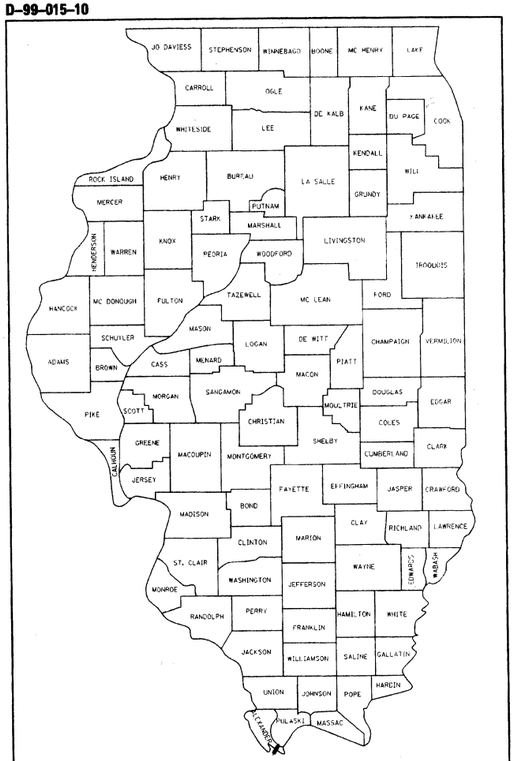


EXISTING STRUCTURE NO. 002–0022
FAI 57 (I–57 NB & SB)

SN 002–0022
NET LENGTH OF PROJECT = 4090'–6"

N

D–99–015–10



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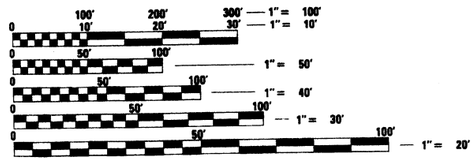

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 8th 20 09
Mary Ann Lamie
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
January 29, 20 10
Scott E. Stitt, P.E.
Acting ENGINEER OF DESIGN AND ENVIRONMENT
January 29, 20 10
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER: DAVID PICHE (618) 351–5227
DESIGNER: BILL PORTER (618) 351–5224

CONTRACT NO. 78160 002-0022

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FILE NAME = s:\pw-work\pwdata\connellim\d0162947\78160-sht-detail.dgn

GENERAL NOTES

1) 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.

2) COMMITMENTS: NONE AS OF DECEMBER 11, 2009.

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS, GENERAL NOTES, STANDARDS
3	SUMMARY OF QUANTITIES
4	STAGING DETAILS
5	GENERAL PLAN AND ELEVATION
6	SILICONE JOINT SEALER REPAIR DETAILS

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
701101-02	OFF-ROAD, MULTILANE 15' TO PAVEMENT EDGE
701400-04	APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
701401-05	LANE CLOSURE FREEWAY/EXPRESSWAY
701426-03	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS $\geq$ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES

Prepared By: Dennis W. Hillebrenner
DISTRICT STUDIES & PLANS ENGINEER

Examined By: James Travis Emery
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By:
DISTRICT OPERATIONS ENGINEER

Examined By:
DISTRICT CONSTRUCTION ENGINEER

Examined By:
DISTRICT MATERIALS ENGINEER

Examined By:
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By:
ASSISTANT REGIONAL ENGINEER

Approved By: Mary C. Lamie
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

Dec 8th 2009
DATE

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	DRAWN -	REVISED -
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PLOT DATE = 12/7/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES AND STANDARDS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART 2010-1	ALEXANDER	6	2
		CONTRACT NO. 78160		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE - F000

CODE NO.	ITEM DESCRIPTION	UNIT	FUNDING 100% STATE TOTAL QUANTITY	100% ILLINOIS	100% MISSOURI
50300300	PROTECTIVE COAT	SQ YD	32,718	16,359	16,359
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	1	0.5	0.5
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	2	1	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1	0.5	0.5
X0301424	SILICONE JOINT SEALER	FOOT	429	214.5	214.5
X0320887	POLYMER CONCRETE	CU FT	0.6	0.3	0.3
X0325747	BRIDGE DECK CONCRETE CRACK SEALER	FOOT	10,000	5,000	5,000

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PLOT SCALE = 50.0000 ' / IN.	DRAWN	REVISED	
PLOT DATE = 12/7/2009	CHECKED	REVISED	
	DATE	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

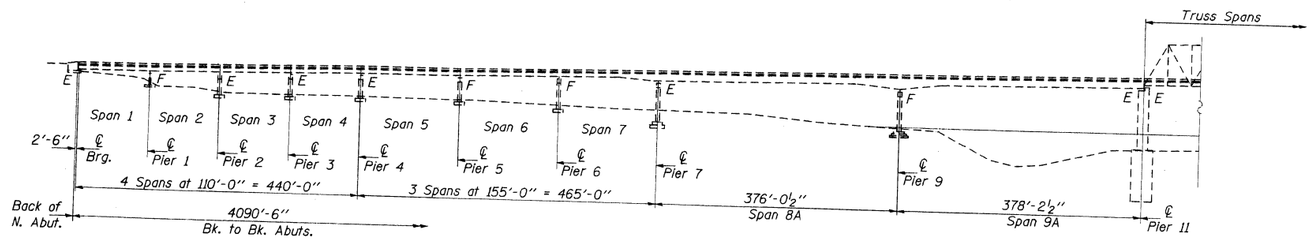
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

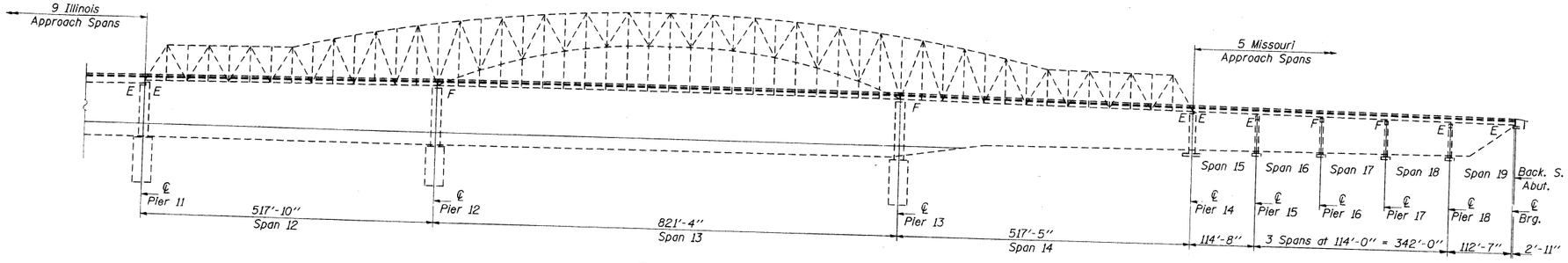
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART 2010-1	ALEXANDER	6	3

CONTRACT NO. 78160

ILLINOIS FED. AID PROJECT

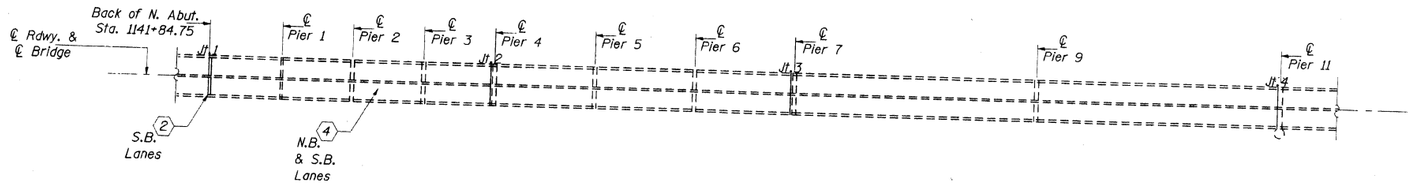
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

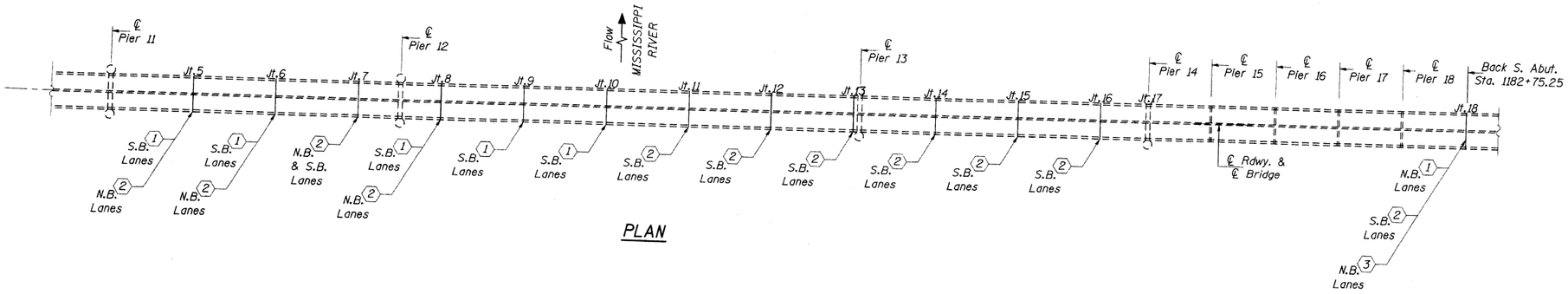




ELEVATION
(Looking East)

Notes:
1. Replace existing Silicone Joint Sealer with new Silicone Joint Sealer.
2. Replace a section of Silicone Joint Sealer which is damaged.
3. Remove and replace damaged portion of polymer concrete, removal included in cost of Polymer Concrete.
4. Apply Bridge Deck Concrete Crack Sealer to cracks in deck surface. Apply Protective Coat to deck surface and inside face of parapets.





PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Polymer Concrete	Cu. Ft.	0.6
Silicone Joint Sealer	Foot	429
Protective Coat	Sq. Yd.	32,718
Bridge Deck Concrete Crack Sealer	Foot	10,000

GENERAL PLAN AND ELEVATION BRIDGE REPAIRS F.A.I. 57 OVER MISSISSIPPI RIVER SEC. D9 DECK SEAL 2010-1 ALEXANDER COUNTY S.N. 002-0022

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PLOT DATE = 12/3/2009

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

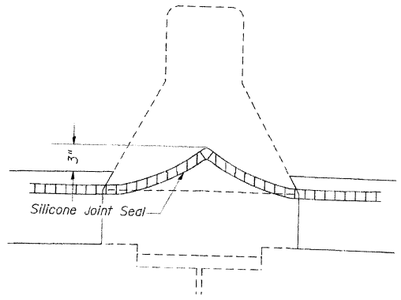
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION

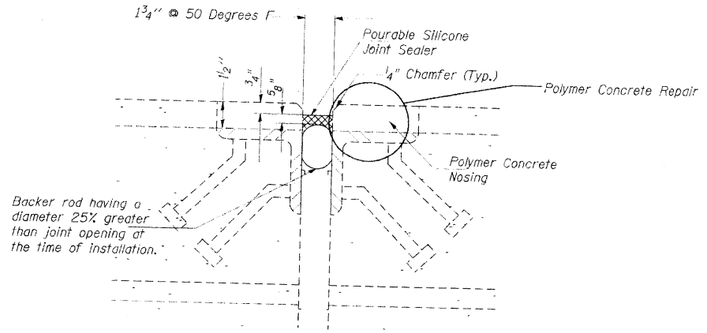
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 DECK SEAL 2010-1	ALEXANDER	6	5
		CONTRACT NO. 78160		
	ILLINOIS FED. AID PROJECT			

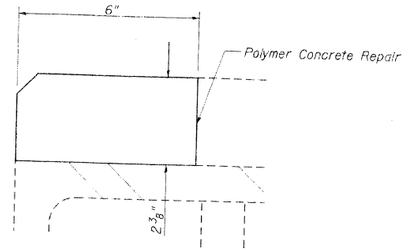
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



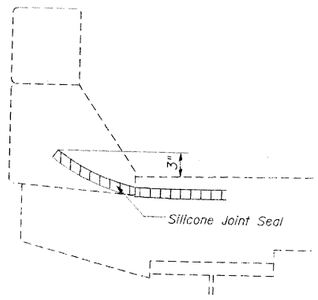
TYPICAL END OF SEAL TREATMENT
AT MEDIAN BARRIER



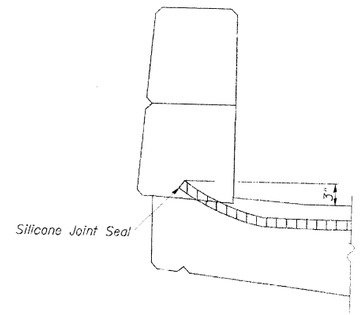
TYPICAL SILICONE JOINT SEALER



TYPICAL POLYMER CONCRETE REPAIR
(Northbound South Abut. Joint)



TYPICAL END OF SEAL TREATMENT
AT TRUSS LOCATIONS



TYPICAL END OF SEAL TREATMENT
AT PARAPET

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	PLOT DATE = 12/9/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SILICONE JOINT SEALER
REPAIR DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 DECK SEAL 2010-1	ALEXANDER	6	6
		CONTRACT NO. 78160		
	ILLINOIS FED. AID PROJECT			

78220

9-17-10 LETTING ITEM 087

ALEXANDER

#87

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE REPAIR 2010-1	ALEXANDER	10	1
	ILLINOIS	CONTRACT NO. 78220		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

100%
10-21-2011

PROPOSED
HIGHWAY PLANS

F.A.I. ROUTE 57 (I-57) NB & SB
SECTION D9 BRIDGE REPAIR 2010-1
STRUCTURAL STEEL AND MISC. REPAIRS
ALEXANDER COUNTY
C-99-079-10

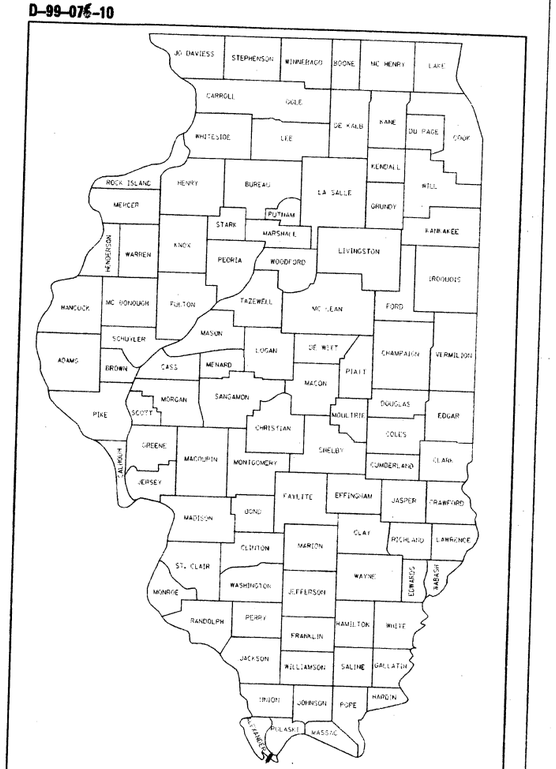
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

TRAFFIC DATA

I-57 TRAFFIC DATA

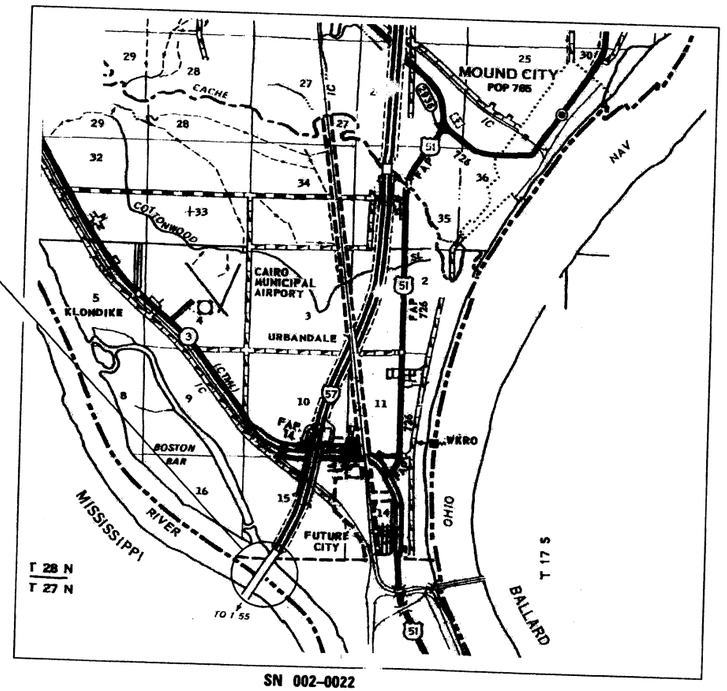
2007 ADT = 10,200
37% TRUCKS

D-99-079-10



LOCATION OF SECTION INDICATED THUS: —

EXISTING STRUCTURE NO. 002-0022
FAI 57 (I-57 NB & SB)



SN 002-0022
NET LENGTH OF PROJECT = 4090'-6"

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

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED June 25 20 10
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
August 13 20 10
Scott E. Stitt, P.E. /BL
acting ENGINEER OF DESIGN AND ENVIRONMENT
August 13 20 10
Christine M. Reed /BL
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER: DAVID PICHE (618) 351-5227
DESIGNER: T. WAYNE HALSTEAD (618) 351-5224

CONTRACT NO. 78220

002-0022

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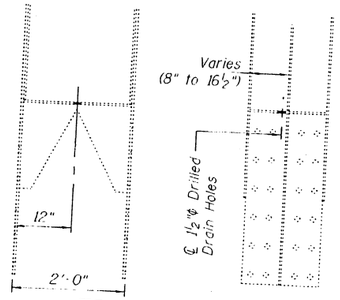
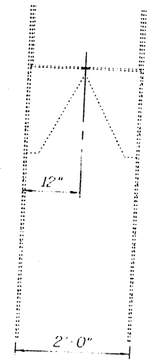
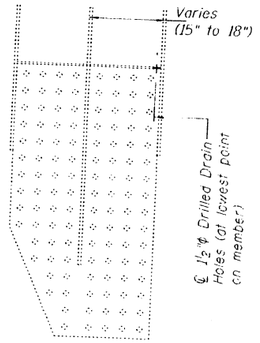


TRUSS VERTICALS
(116 Places Req'd)

TYPICAL DRILLED DRAIN HOLE DETAILS
(184 Locations Req'd)
At all vertical and diagonal members from L7 to L7', except U7 - L8 and U7' - L8'.



TRUSS DIAGONALS
(68 Places Req'd)



GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

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

Plan dimensions and details relative to existing plans are subject to nominal construction 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.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat shall be Interstate Green, Munsell No. 7.5G 4/8 See Special Provision "Cleaning and Painting New Metal Structures".

Cost of drilled drain holes in vertical and diagonal truss members is included with Structural Steel Repair.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

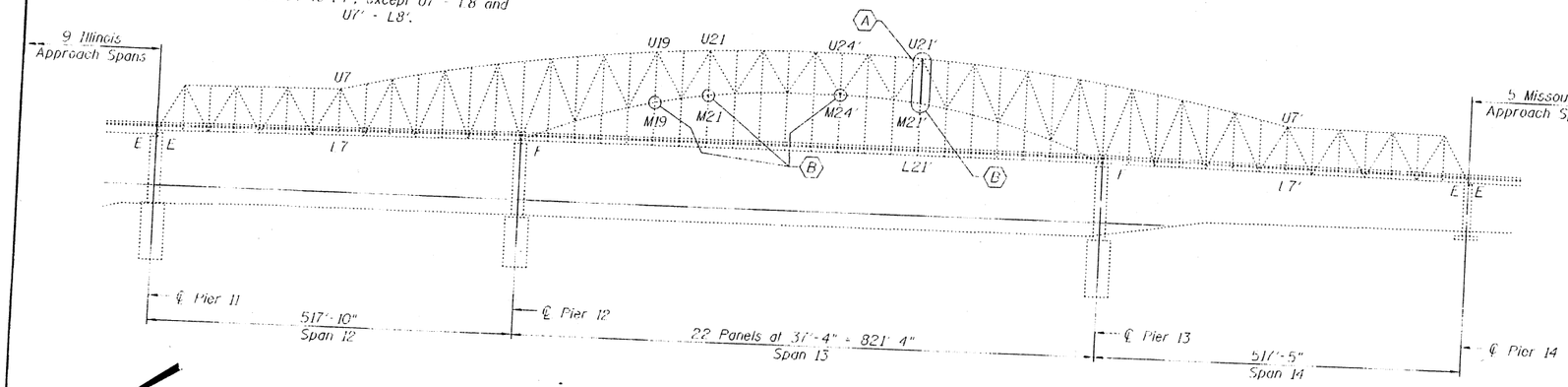
The Contractor shall submit Structural Assessment Report(s) as required for the Contractor's means and methods of construction, and shall include the effect of the temporary removal of member M21' - U21' on the structural adequacy of the bridge. See Special Provisions.

1

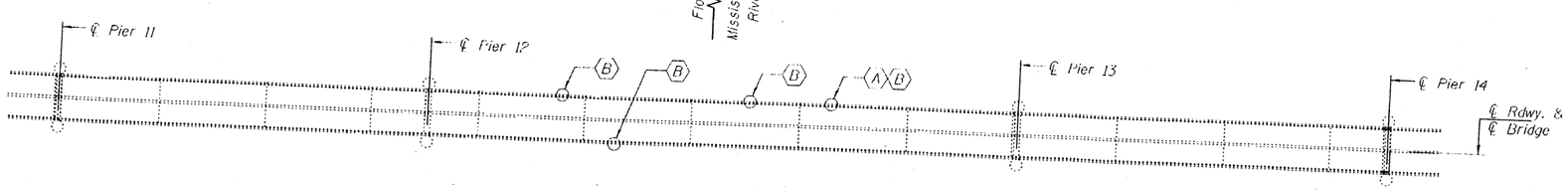
The Contractor shall retain the services of an engineering firm, prequalified in the IDOT consultant selection category of Highway Bridges (Complex), for preparation of the Structural Assessment Report. Contractor's pre-approval shall not be applicable for this project. See Special Provision.

Inventory and Operating Ratings and Live Load Restrictions are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support the Contractors equipment.

CURRENT RATINGS ON FILE FOR EXISTING STRUCTURE
Inventory: HS22.0
Operating: HS35.1
Live Load Restrictions: No



PARTIAL ELEVATION
(Looking East)



PARTIAL DECK PLAN
(A) Replace U21' - M21'
(B) Sway Brace Repair

SEQUENCE OF CONSTRUCTION FOR REMOVAL AND REPLACEMENT OF U21'-M21' MEMBER

1. Install Floor Beam Temporary Support System.
2. Load Cells simultaneously to 55 kips each.
3. Remove existing U21' - M21' member.
4. Install new U21' - M21' member.
5. Unload Cells.

STATE OF ILLINOIS
NAOMI E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2010

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	880
Temporary Support System	L. Sum	1
Furnishing and Erecting Structural Steel	Pound	11,650
Structural Steel Removal	Pound	7,890

DESIGNED	-	
CHECKED	-	
DRAWN	-	
CHECKED	-	

EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - August 11, 2010

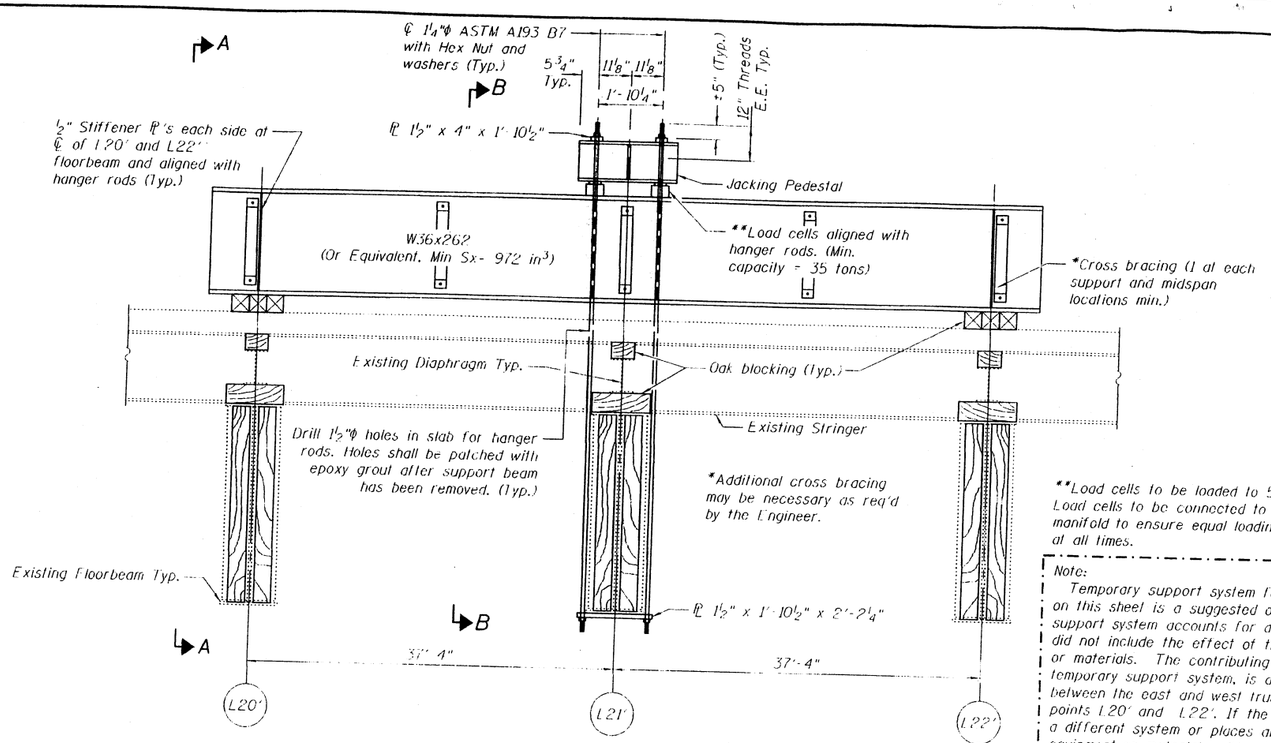
T-99-001-10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
SN 002-0022
SHEET NO. 1 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 Bridge Repair 2010-1	Alexander	10	5
		CONTRACT NO. 78220		
		ILLINOIS FED. AID PROJECT		

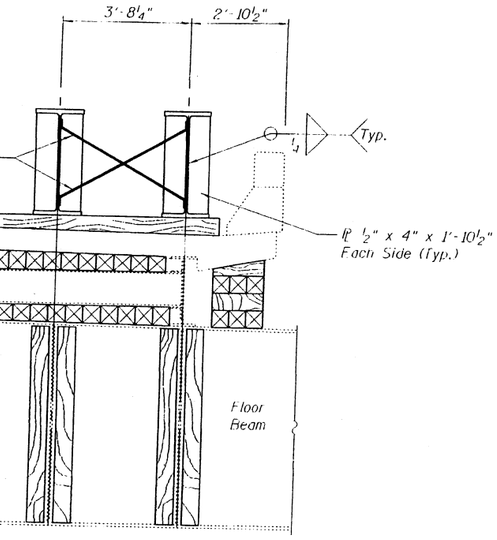
1 Revised Sheet 09/01/10 V.H.V. M.A.C.



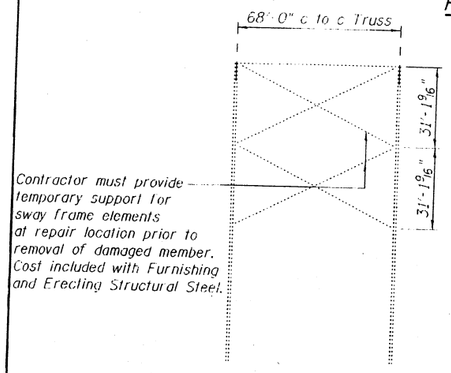
**Load cells to be loaded to 55 kips each. Load cells to be connected to a manifold to ensure equal loading at all times.

Note:
Temporary support system for the floorbeam at L21' shown on this sheet is a suggested one. The design of the temporary support system accounts for dead loads from the bridge and did not include the effect of the contractor's equipment or materials. The contributing area used to design the temporary support system, is defined by the limits between the east and west trusses between panel points L20' and L22'. If the Contractor elects to use a different system or places any construction equipment or materials within the limits contributing to the design of the floorbeam temporary support system, plans shall be submitted to the Bureau of Bridges and Structures for approval prior to commencement of the removal and replacement of the damaged M21'-U21' vertical member.

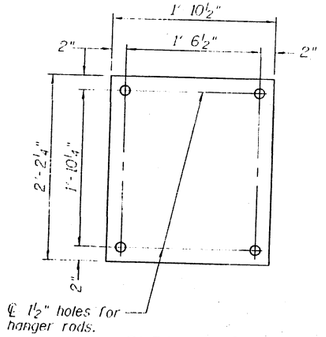
FLOORBEAM TEMPORARY SUPPORT ELEVATION
(Looking West)



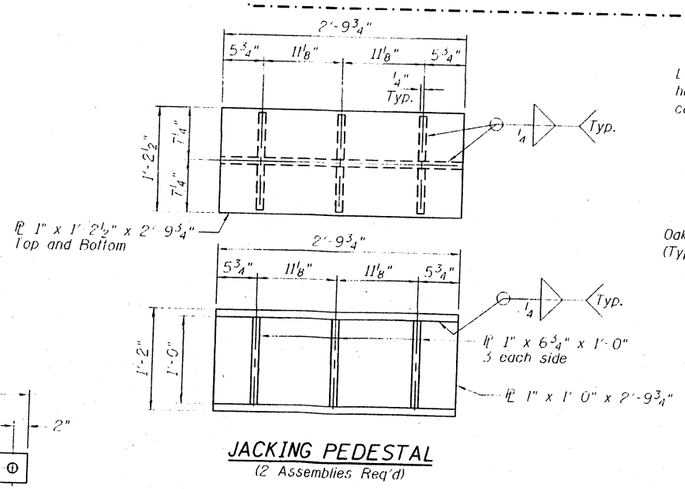
SECTION A-A
(L20' and L22')



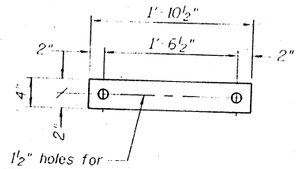
REPAIR LOCATION AT PP21'
(Looking North)



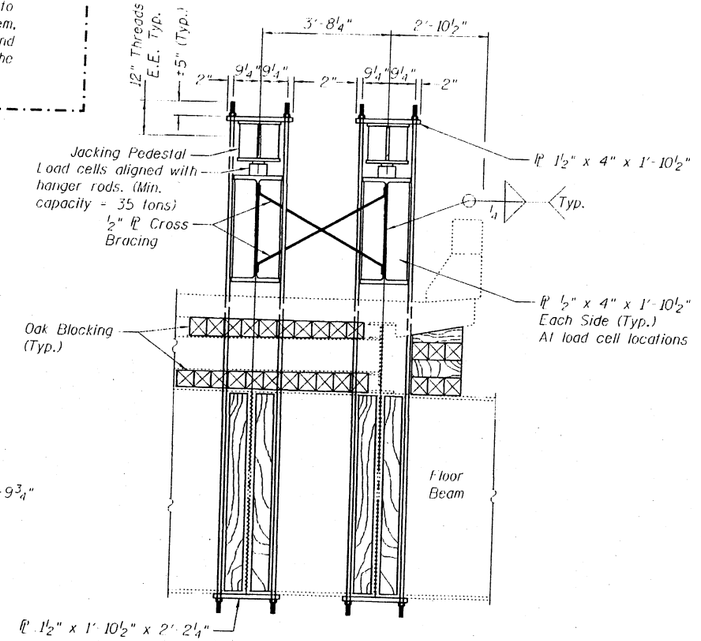
SUPPORT ℄
℄ 1½" x 1'-10½" x 2'-2¼"
(2 Req'd)



JACKING PEDESTAL
(2 Assemblies Req'd)



SUPPORT ℄
℄ 1½" x 4 " x 1'-10½"
(4 Req'd)



SECTION B-B
(L21')

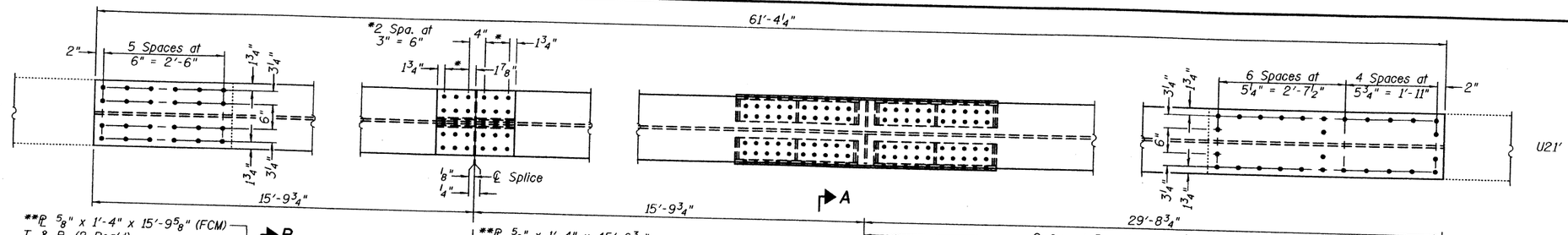
DESIGNED - I.J.L.	EXAMINED		DATE August 11, 2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMP SUPPORT DETAILS		
CHECKED - G.G.E.		A Carl Tharp ENGINEER OF STRUCTURE SERVICES			SN 002-0022		
DRAWN - Drew Christopher	PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES			SHEET NO. 2 OF 6 SHEETS		
CHECKED I.J.L. G.G.E.							

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	09 Bridge Repair 2010-1	Alexander	10	6
		CONTRACT NO. 78220		
	ILLINOIS FED. AID PROJECT			

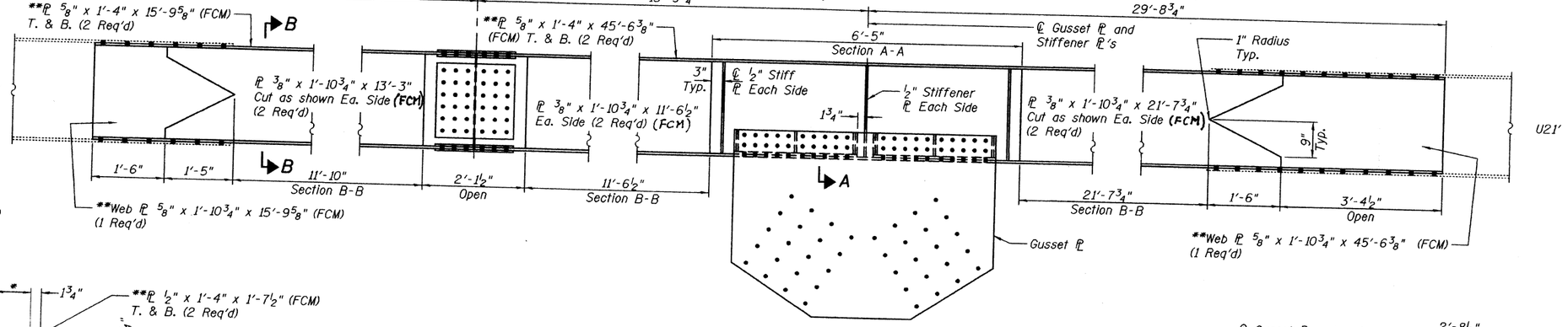
SI T 99-001-10

1 Revised Sheet 09/07/10 V.H.V. M.A.C.

TOP PLAN

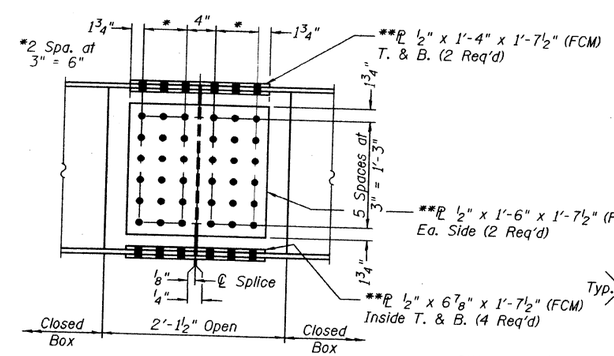


ELEVATION

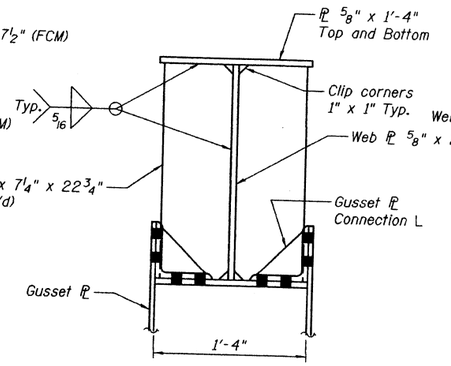


**Structural Steel shall conform to AASHTO M270 Gr. 50.

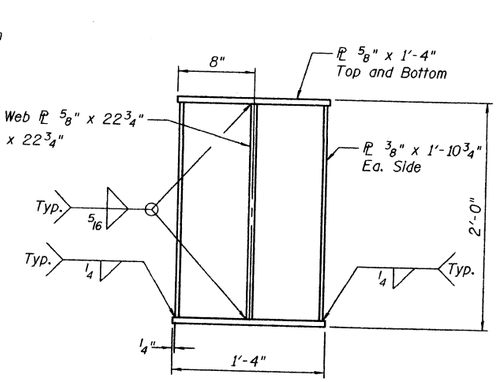
SUPPORT PLAN AND ELEVATION



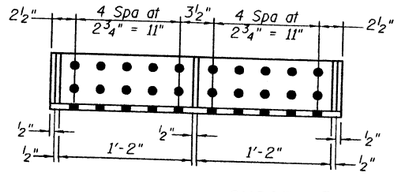
SPLICE DETAIL



SECTION A-A

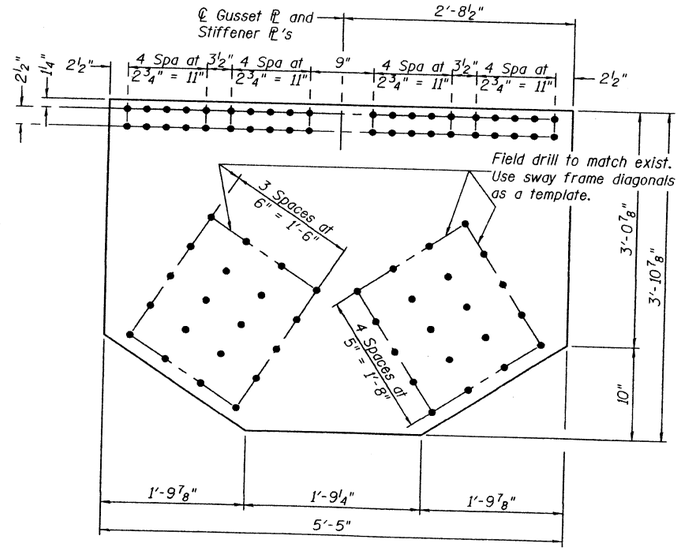


SECTION B-B



GUSSET ℄ CONNECTION L

L 6x6x⅝x 2'-6½"
(4 Req'd)



GUSSET ℄

℄ ½" x 3'-10⅞" x 5'-5"
(2 Req'd)

Note:
The new member U21'-M21' may be installed in one piece. In order for the member to fit properly into position, the Contractor shall carefully measure the clear distance between the inside faces of the gussets at U21'-M21' and adjust fabrication dimensions of U21'-M21' to ensure a tight fit of the member between gussets.
All material designated "FCM" shall conform to Notch Toughness Requirements for Zone 2 (CVN of 25 ft-lbs. at 40°F)

DESIGNED - I.J.L.	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - August 11, 2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - G.G.E.				
DRAWN - Drew Christopher	PASSED	ENGINEER OF BRIDGES AND STRUCTURES		
CHECKED - I.J.L. G.G.E.				

SLT-99-001-10

REPAIR DETAILS
SN 002-0022
SHEET NO. 3 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	69 BRIDGE REPAIR ROAD-I	Alexander	10	7
		CONTRACT NO. 78220		
	ILLINOIS FED. AID PROJECT			

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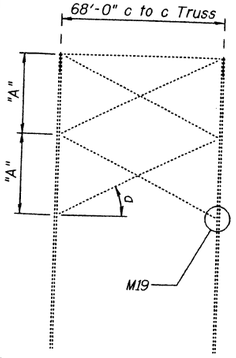
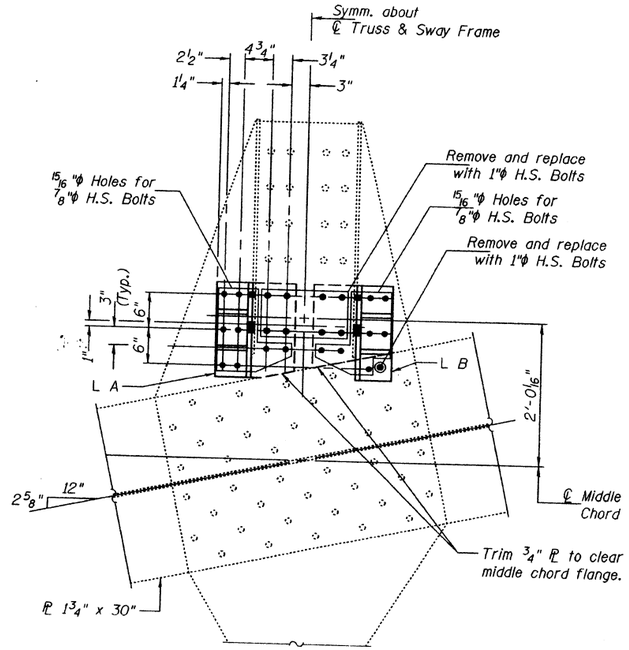


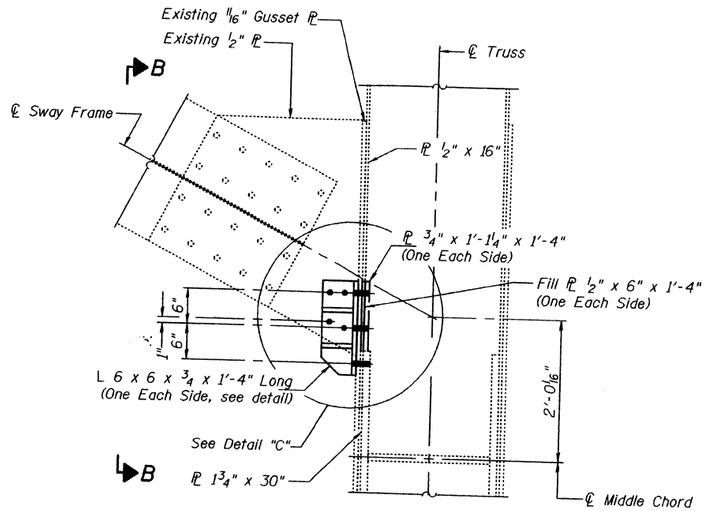
REPAIR LOCATION AT PP19
(Looking North)

DIMENSION "A"
PP19 = 35'-2 5/16"

ANGLE "α"
PP19 = 27.361°



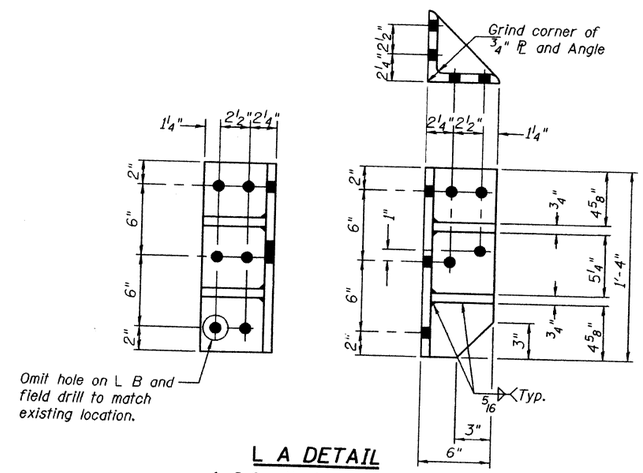
VIEW B-B
(Looking East)



ELEVATION
(Looking North)

SWAY BRACING RETROFIT AT LOCATION M19
(East Truss, 1 location)

DETAIL "C"



L A DETAIL
(L B Opp Hand and as noted)

Notes:
The cost of plates, angles, bolts and all field drilling required for installation of the steel members is included with Structural Steel Repair.
PP = Panel Point

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	230

DESIGNED - I.J.L.	EXAMINED		DATE - August 11, 2010
CHECKED - G.G.E.		ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Drew Christopher	PASSED		
CHECKED - I.J.L. G.G.E.		ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SWAY FRAME DETAILS
SN 002-0022
SHEET NO. 4 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	09 BRIDGE REPAIR 2010-1	Alexander	10	8
		CONTRACT NO. 78220		
	ILLINOIS FED. AID PROJECT			

SLT-99-001-10

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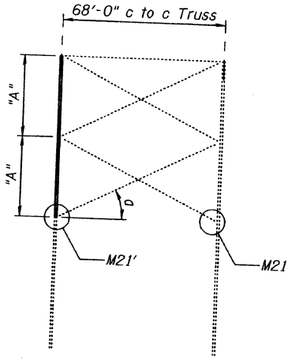
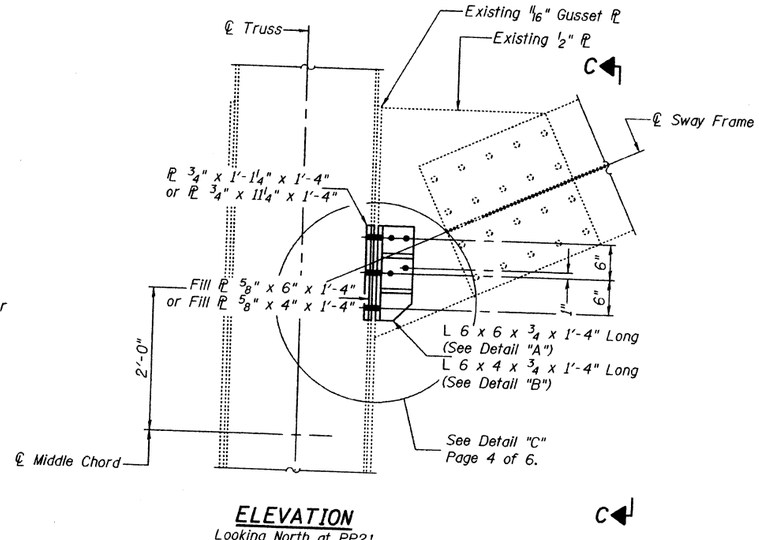


REPAIR LOCATION AT PP21 AND PP21'
(Looking South)

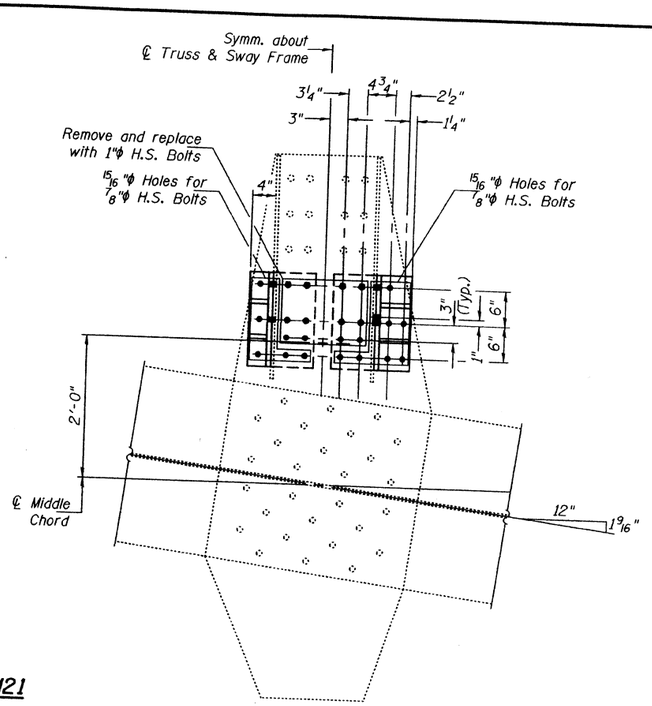
DIMENSION "A"
PP21 = 31'-1 9/16"

ANGLE "θ"
PP21 = 24.595°

Sway bracing work at PP21' is to be done after vertical member U21'-M21' is completed.

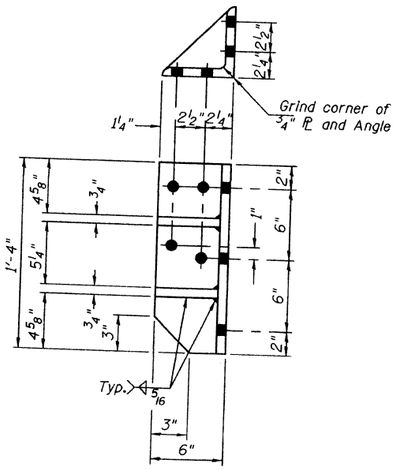


ELEVATION
Looking North at PP21
Looking South at PP21'

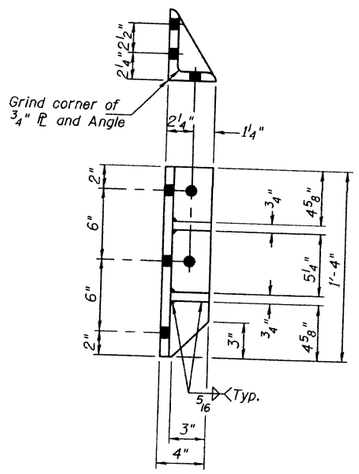


SWAY BRACING RETROFIT AT LOCATION M21
(East Truss, West Truss Similar, 2 locations)

VIEW C-C
Looking West at PP21
Looking East at PP21'



DETAIL "A"
(2 Req'd)



DETAIL "B"
(2 Req'd)

Notes:
The cost of plates, angles, bolts and all field drilling required for installation of the steel members is included with Structural Steel Repair.
PP = Panel Point

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	450

DESIGNED - I.J.L.	EXAMINED		DATE - August 11, 2010
CHECKED - G.G.E.		A Carl Purvis, ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Drew Christopher	PASSED	Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES	
CHECKED - I.J.L. G.G.E.			

SLT-99-001-10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SWAY FRAME DETAILS
SN 002-0022
SHEET NO. 5 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D7 BRIDGE REPAIR 2010-1	Alexander	10	9
		CONTRACT NO. 78220		
	ILLINOIS FED. AID PROJECT			

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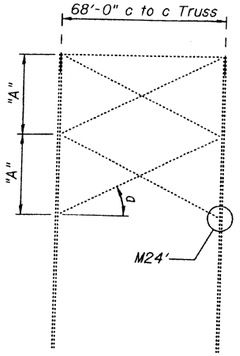


REPAIR LOCATION AT PP24'

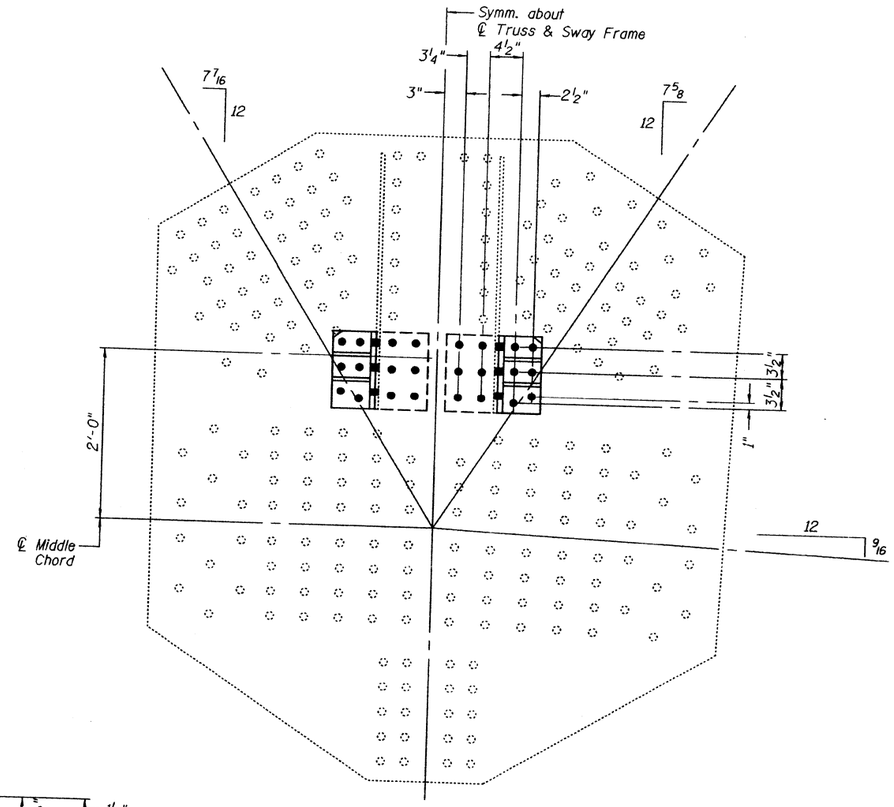
(Looking North)

DIMENSION "A"

PP24 = 28'-9"

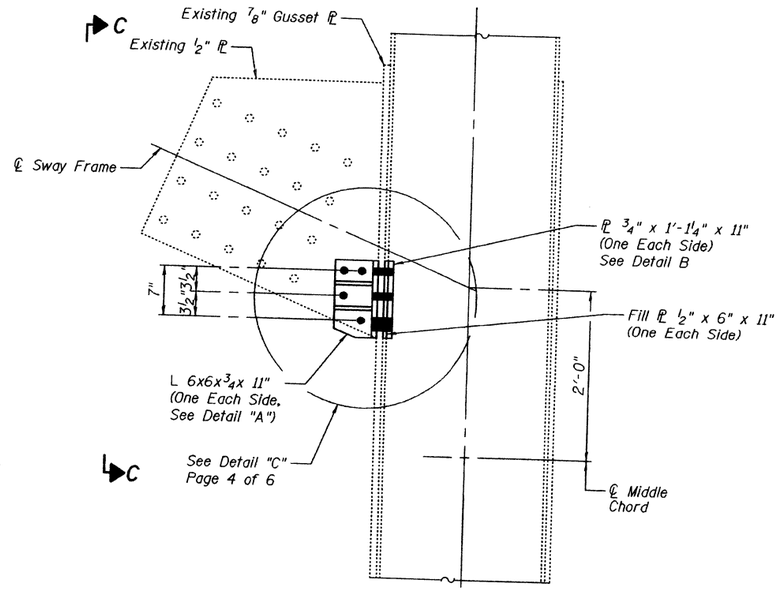
ANGLE "α"

PP24 = 22.874°



VIEW C-C

Looking East

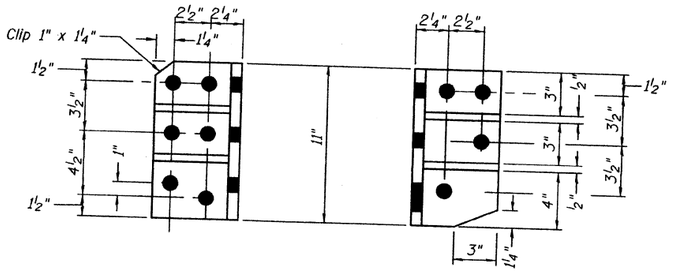


ELEVATION

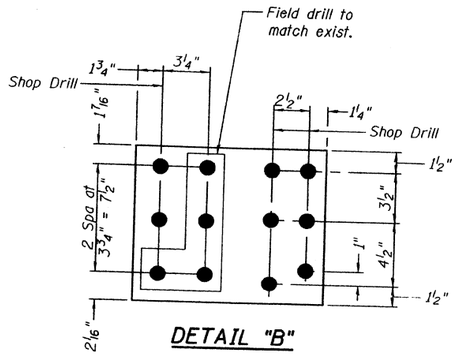
Looking North

SWAY BRACING RETROFIT AT LOCATION M24'

(East Truss, 1 location)



DETAIL "A"



DETAIL "B"

Notes:

The cost of plates, angles, bolts and all field drilling required for installation of the steel members is included with Structural Steel Repair.

PP = Panel Point

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	200

DESIGNED - I.J.L.	EXAMINED	DATE - August 11, 2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - G.G.E.	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Drew Christopher	PASSED		
CHECKED - I.J.L. G.G.E.	ENGINEER OF BRIDGES AND STRUCTURES		

SLT-99-001-10

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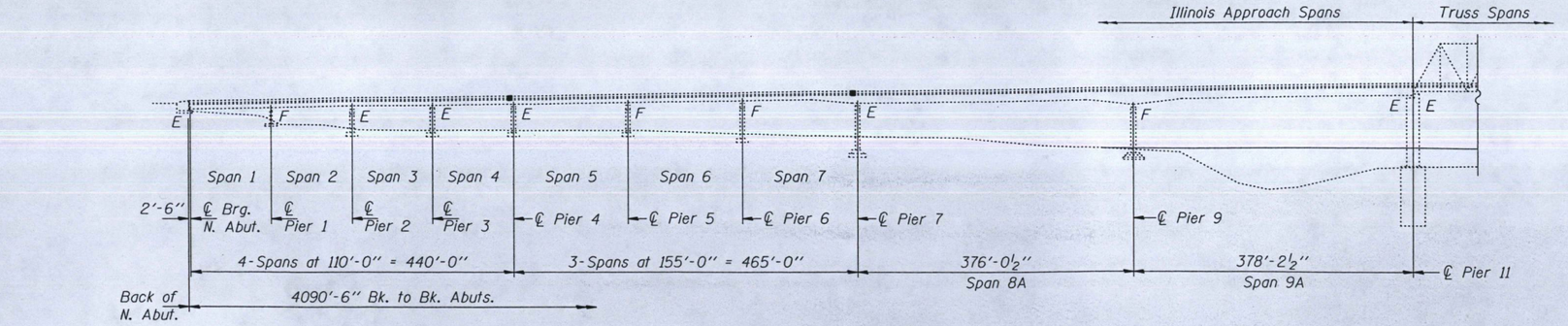
SWAY FRAME DETAILS

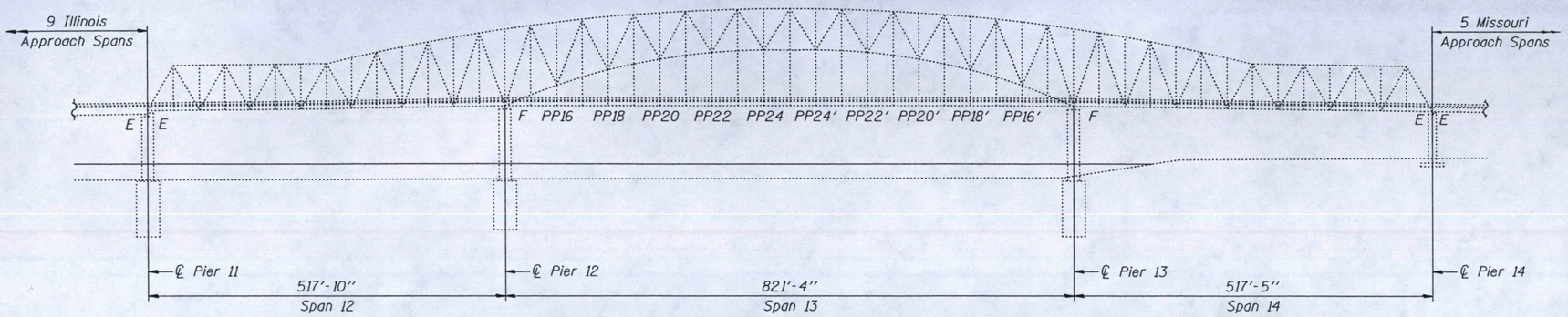
SN 002-0022

SHEET NO. 6 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	69 BRIDGE REPAIR 2010-1	Alexander	10	10
		CONTRACT NO. 78220		
	ILLINOIS FED. AID PROJECT			

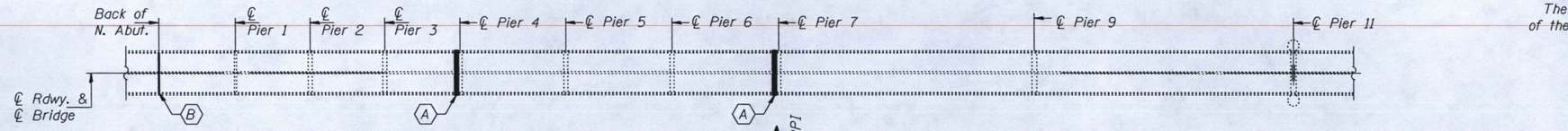
UNIT COPY

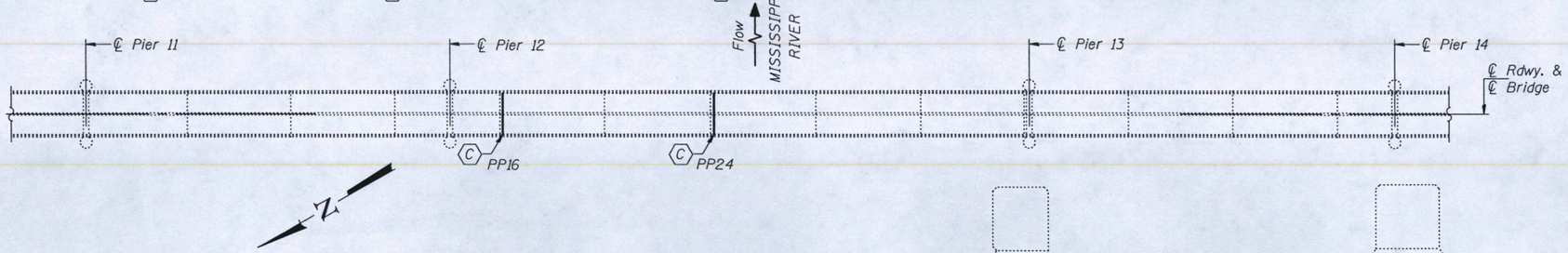




PARTIAL ELEVATION

(Looking East)



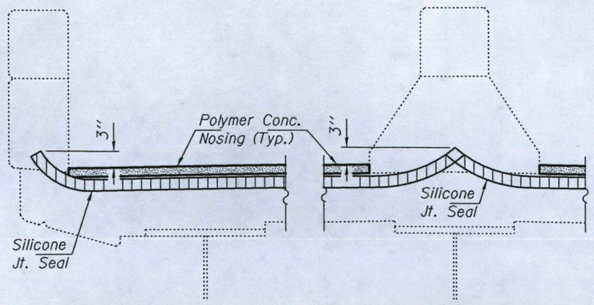


PARTIAL PLAN

Ⓐ - Remove existing Neoprene Expansion Joint and install Modular Expansion Joint.

Ⓑ - Remove & Replace Polymer Concrete Nosing and Silicone Joint Sealer.

Ⓒ - Remove & Replace Silicone Joint Sealer.



TYPICAL END OF SEAL TREATMENT

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction 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.

Reinforcement bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

Modular Expansion Joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.

Modular Expansion Joints shall be fabricated and installed according to the manufacturer's recommendations and as approved by the Engineer.

Modular Expansion Joints shall be fabricated to conform to the existing cross slopes of the bridge.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All structural steel used on the modular joints shall be hot-dipped galvanized. See Special Provision "Hot-Dip Galvanizing for Structural Steel".

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	36
Concrete Superstructure	Cu. Yd.	34.6
Modular Expansion Joint, 9"	Foot	123
Reinforcement Bars, Epoxy Coated	Pound	7160
Bar Splicers	Each	96
Mechanical Splicers	Each	464
Polymer Concrete	Cu. Ft.	4.7
Silicone Joint Sealer, 1¾"	Foot	130
Silicone Joint Sealer, 2½"	Foot	65

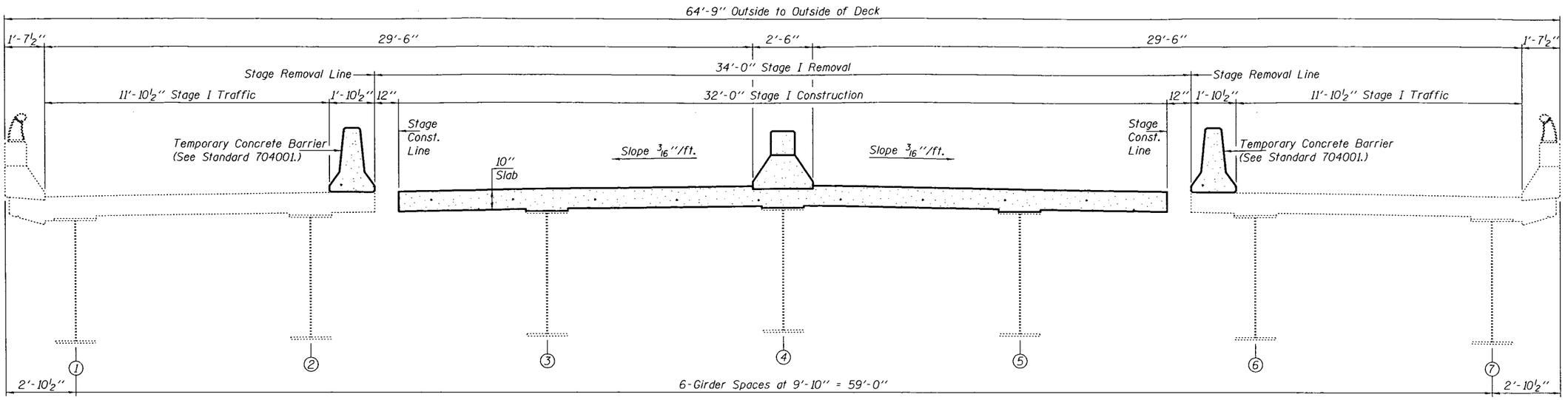
LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

Expires: November 30, 2018

DESIGNED -		DATE - DECEMBER 8, 2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED -			
DRAWN -	Kyle M. Steffen	PASSED	
CHECKED -	OCC SMR	ACTING ENGINEER OF BRIDGES AND STRUCTURES	
		REVISED	
		REVISED	

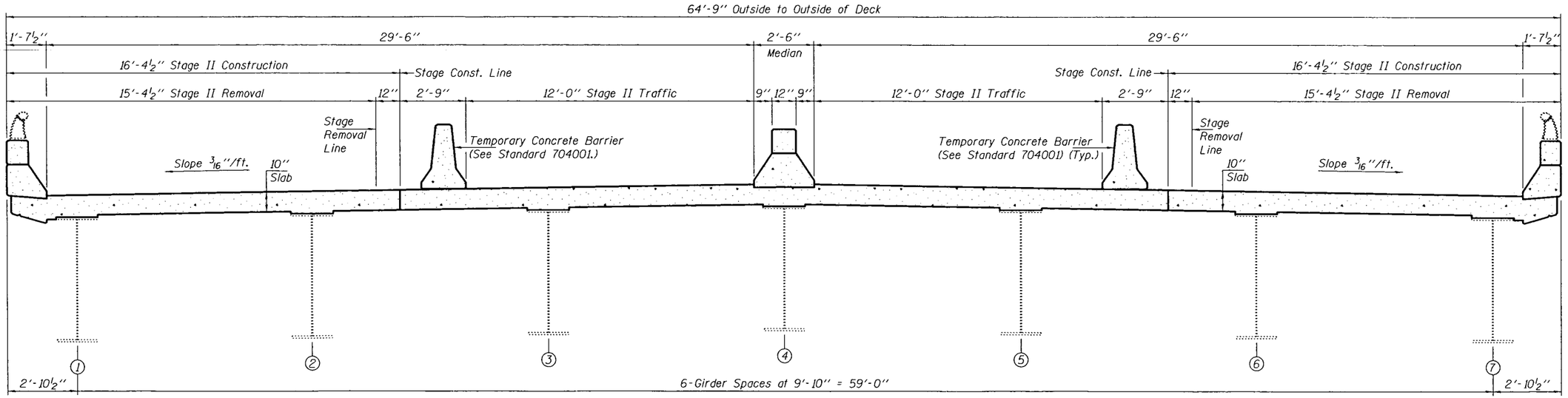
GENERAL PLAN & ELEVATION
F.A.I. ROUTE 57 OVER THE MISSISSIPPI RIVER
SN 002-0022
SHEET NO. 1 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE JOINT	ALEXANDER	12	8
	REPAIR 2017-1	CONTRACT NO. 78536		
	ILLINOIS FED. AID PROJECT			



STAGE I CONSTRUCTION DETAILS

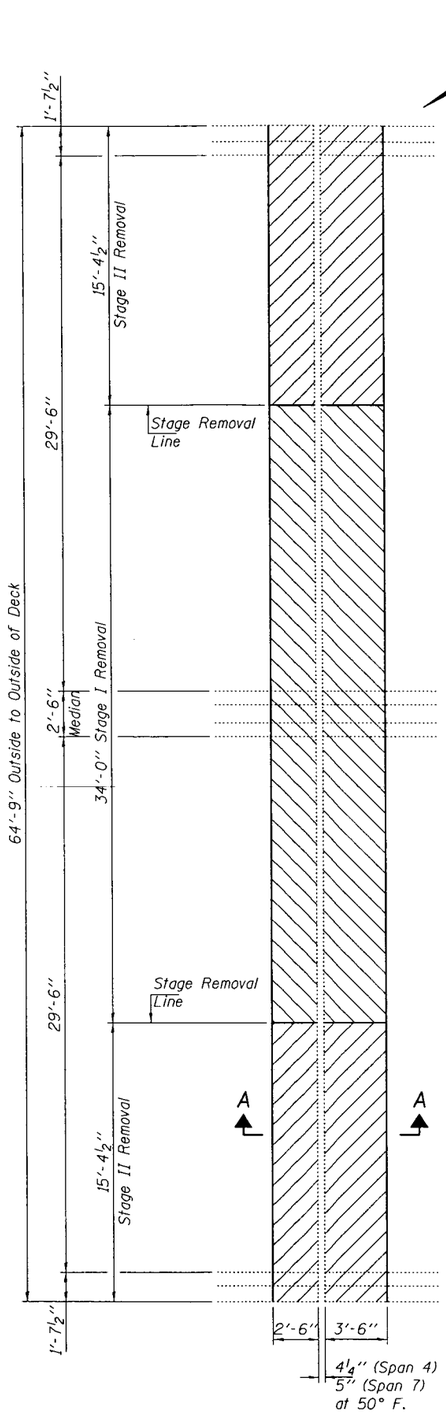
(Looking South)



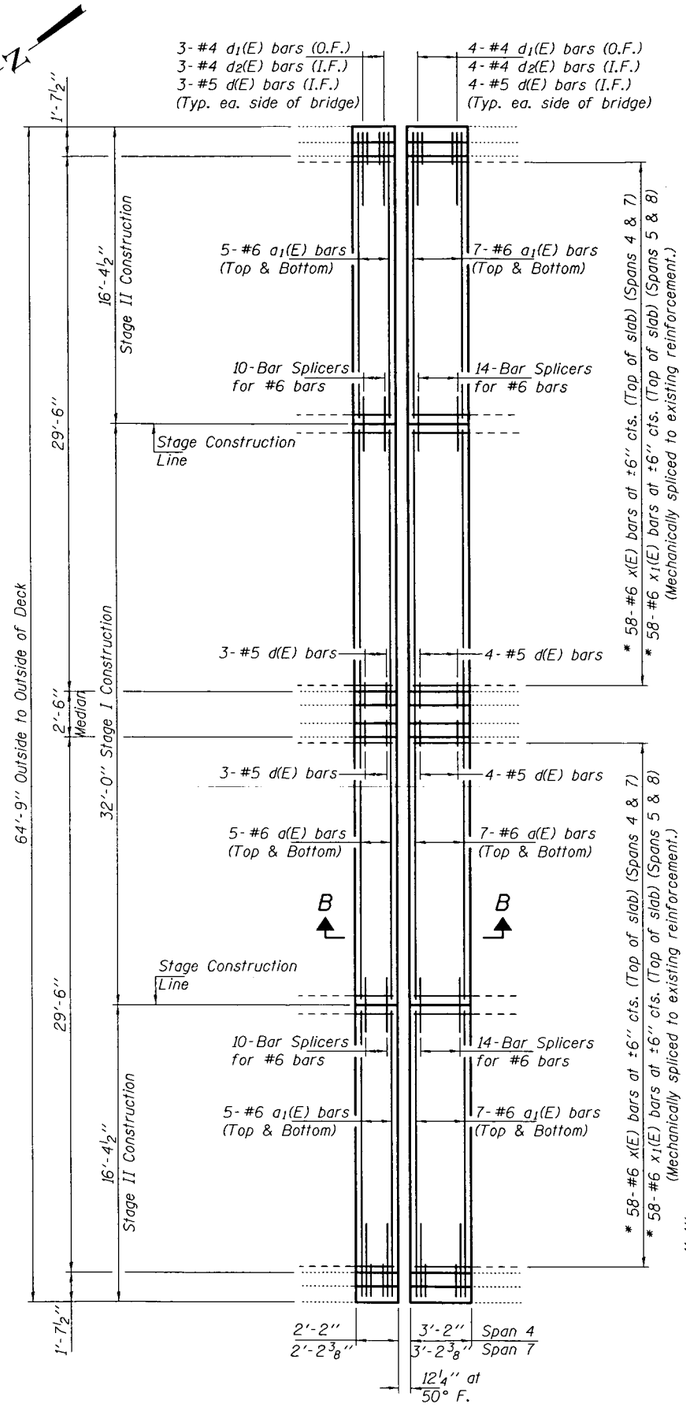
STAGE II CONSTRUCTION DETAILS

(Looking South)

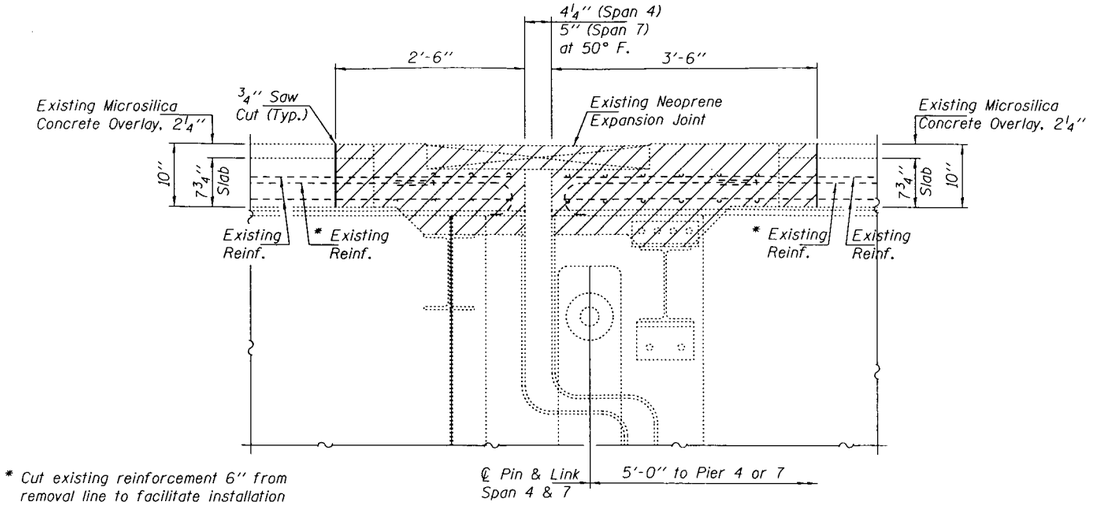
DESIGNED - CCC		DATE - DECEMBER 8, 2016	**STATE OF ILLINOIS**	**STAGING DETAILS**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR			**DEPARTMENT OF TRANSPORTATION**	**SN 002-0022**	57	D9 BRIDGE JOINT	ALEXANDER	12	9
DRAWN - Kyle M. Steffen	PASSED	REVISED				REPAIR 2017-1	CONTRACT NO. 78536		
CHECKED - CCC SMR	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 2 OF 5 SHEETS		ILLINOIS	FED. AID PROJECT		



CONCRETE REMOVAL PLAN

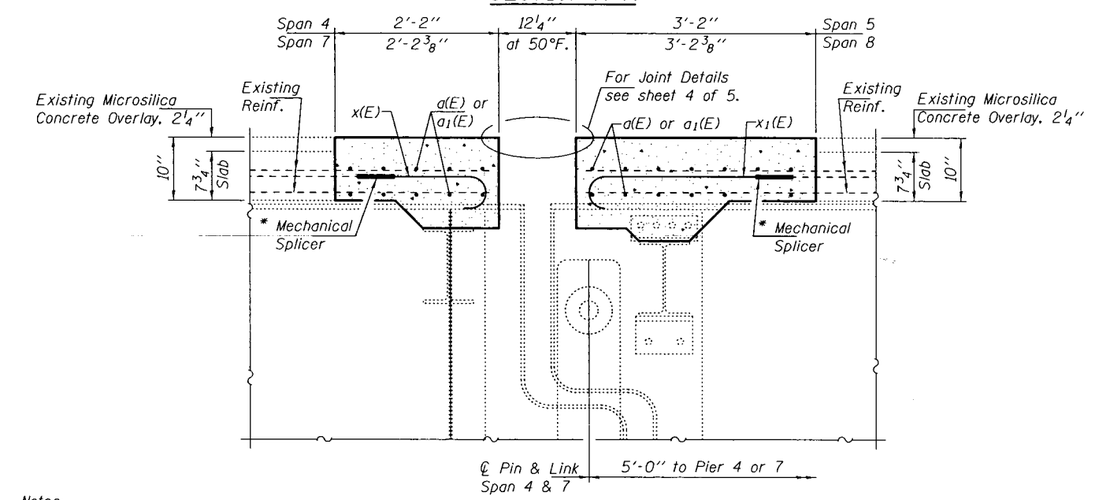


CONCRETE REPLACEMENT PLAN



* Cut existing reinforcement 6" from removal line to facilitate installation of mechanical splicers.

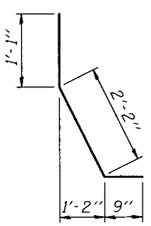
SECTION A-A



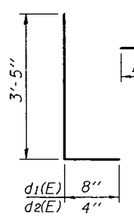
Notes:
For median and parapet details see sheet 4 of 5.
Hatched areas indicate concrete removal.
For bars x2(E) and z(E), see sheet 4 of 5.

SECTION B-B

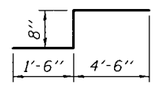
Modular Expansion Joint not shown for clarity.



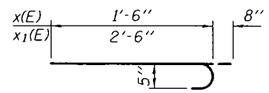
BAR d(E)



BARS d1(E) & d2(E)



BAR z(E)



BARS x(E) & x1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	48	#6	31'-8"	—
a1(E)	96	#6	16'-0"	—
d(E)	56	#5	4'-0"	L
d1(E)	28	#4	4'-1"	L
d2(E)	28	#4	3'-9"	L
x(E)	232	#6	2'-2"	C
x1(E)	232	#6	3'-2"	C
x2(E)	32	#6	1'-10"	—
z(E)	24	#6	6'-8"	Z
Concrete Removal			Cu. Yd.	36
Concrete Superstructure			Cu. Yd.	34.6
Bar Splicers			Each	96
Mechanical Splicers			Each	464
Reinforcement Bars, Epoxy Coated			Pound	7160

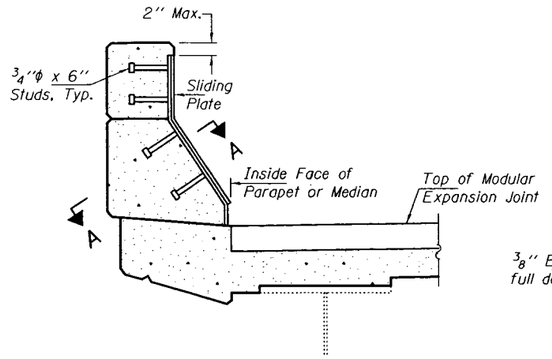
DESIGNED - CCC
CHECKED - SMR
DRAWN - Kyle M. Steffen
CHECKED - CCC SMR

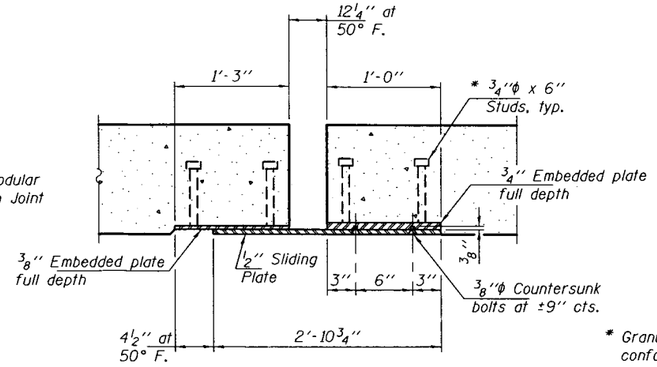
DATE - DECEMBER 8, 2016
PASSED — ACTING ENGINEER OF BRIDGES AND STRUCTURES
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REMOVAL & REPLACEMENT DETAILS FOR SPANS 4 & 7
SN 002-0022
SHEET NO. 3 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE JOINT	ALEXANDER	12	10
	REPAIR 2017-1	CONTRACT NO. 78536		
	ILLINOIS FED. AID PROJECT			





SLIDING PLATE DETAILS FOR PARAPETS & MEDIAN

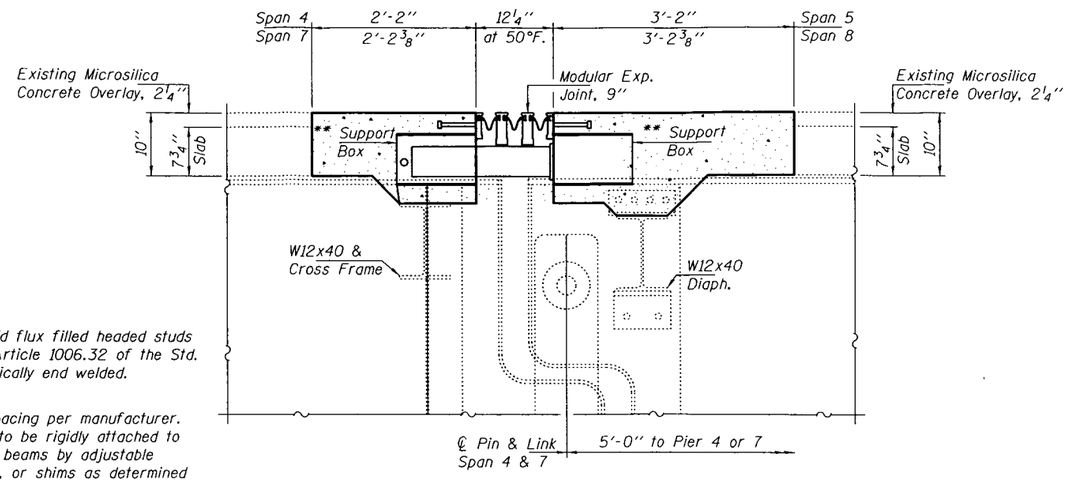
Cost included with Modular Expansion Joint.

SECTION A-A

Note:
The joint opening, deck, parapet and $\frac{1}{2}$" Sliding Plate dimensions are subject to change per joint manufacturer.

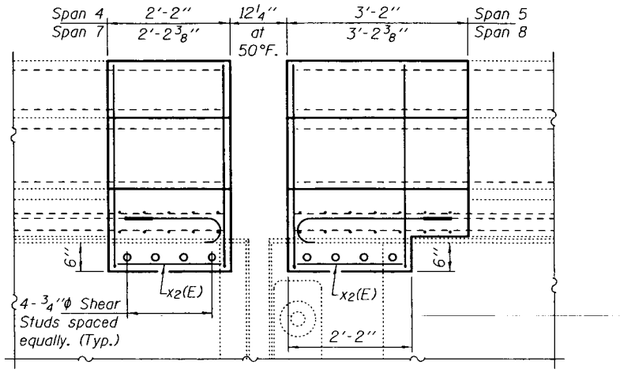
* *Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.*

** *Support Box spacing per manufacturer. Support Boxes to be rigidly attached to diaphragms and beams by adjustable brackets, stools, or shims as determined by manufacturer. Support Boxes to be spaced so they do not interfere with existing top flange of girders.*

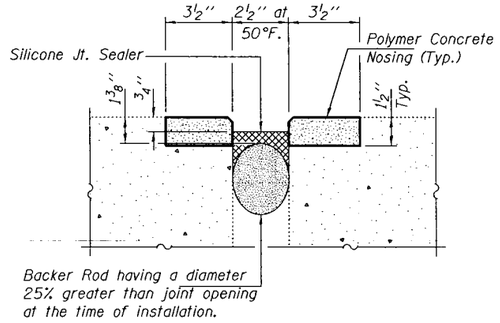


SECTION THRU MODULAR EXPANSION JOINT AT SUPPORT BOX

(Reinforcement not shown for clarity.)

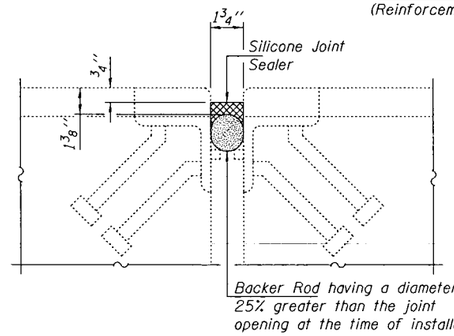


VIEW C-C

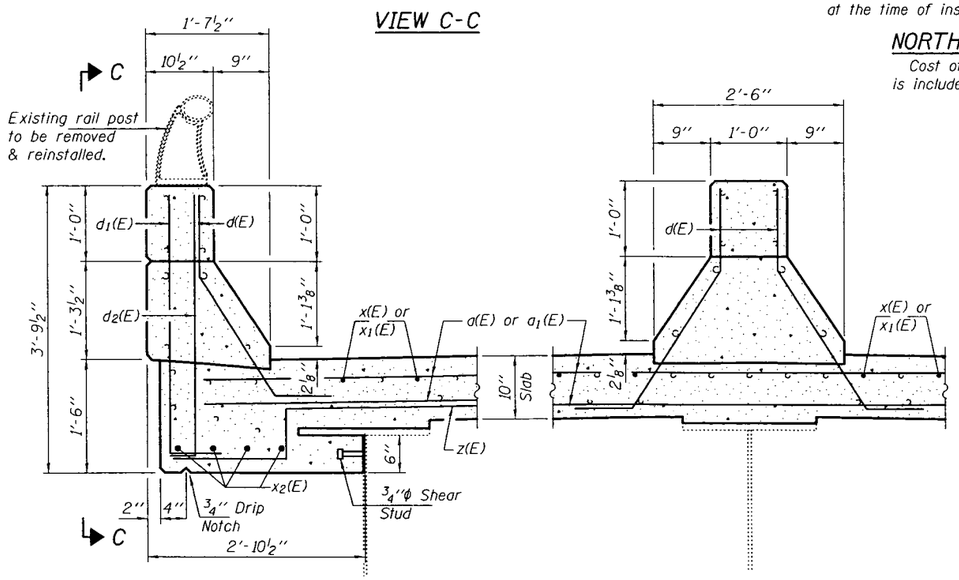


NORTH ABUTMENT JOINT DETAIL

Cost of removal of existing polymer concrete is included with Polymer Concrete.

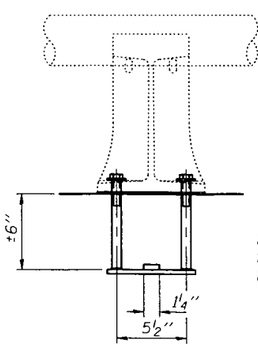


RELIEF JOINT DETAIL AT P.P. 16 & 24

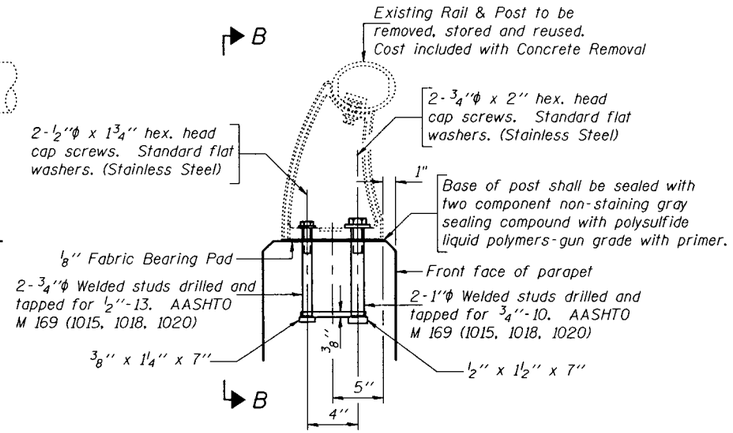


PARAPET DETAILS

MEDIAN DETAILS



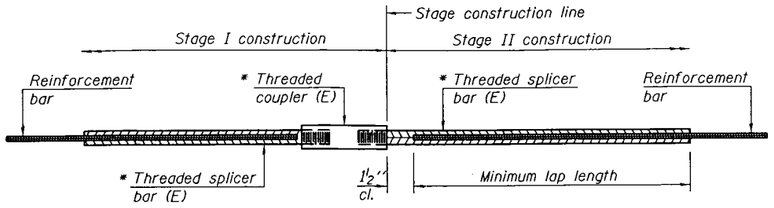
VIEW B-B



RAIL POST ANCHOR DEVICE

New Rail Post Anchor Devices will be required at each location where posts are connected to new construction. Cost included with Concrete Removal.

DESIGNED - CCC		DATE - DECEMBER 8, 2016	**STATE OF ILLINOIS**	**MODULAR JOINT AND REPAIR DETAILS**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR			**DEPARTMENT OF TRANSPORTATION**	**SN 002-0022**	57	D9 BRIDGE JOINT	ALEXANDER	12	11
~~DRAWN - Kyle M. Steffen~~	PASSED	A Carl Trupp		SHEET NO. 4 OF 5 SHEETS		REPAIR 2017-1	CONTRACT NO. 78536		
CHECKED - CCC SMR		ACTING ENGINEER OF BRIDGES AND STRUCTURES				ILLINOIS FED. AID PROJECT			
	REVISED								
	REVISED								

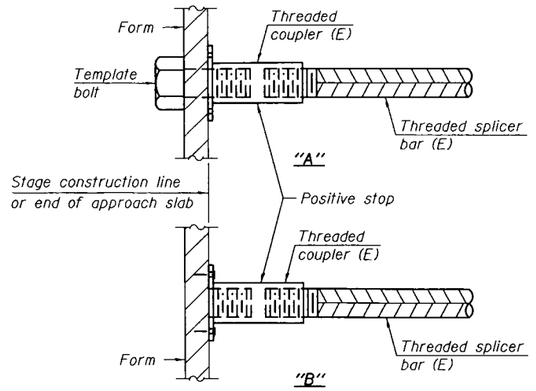


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1½" + thread length

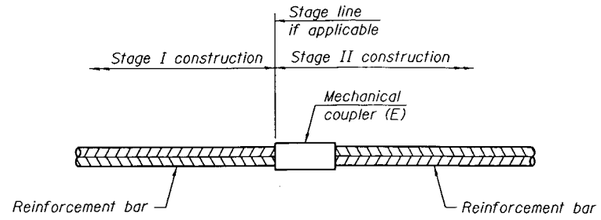
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#6	96	3'-7"



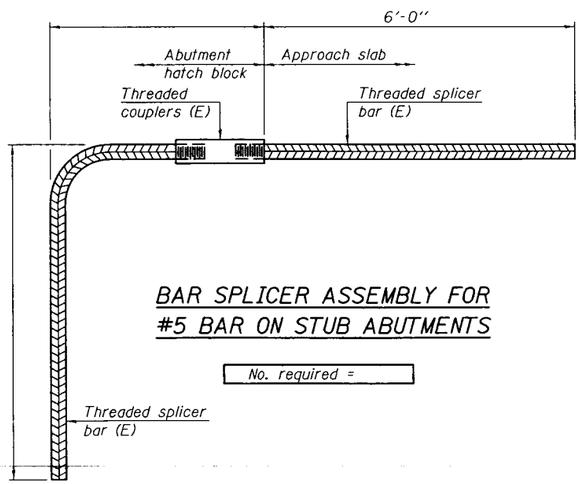
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Deck	#6	464



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 6-8-15

DESIGNED - CCC		DATE - DECEMBER 8, 2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 002-0022	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR					57	DS BRIDGE JOINT	ALEXANDER	12	12
DRAWN - Kyle M. Steffen	PASSED	REVISED				REPAIR 2017-1	CONTRACT NO. 78536		
CHECKED - CCC SMR	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 5 OF 5 SHEETS		ILLINOIS FED. AID PROJECT			

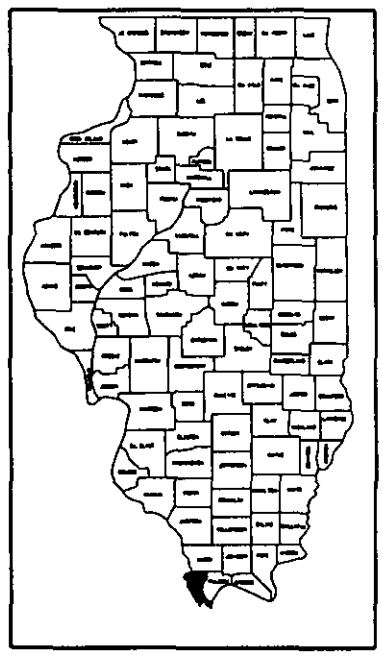
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-57	*	ALEXANDER	5	1
FED. ROAD DIST. NO. 7	ILLINOIS	DAY LABOR		

*STRUCTURAL STEEL AND JOINT REPAIR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS DISTRICT 9

BRIDGE REPAIRS
ALEXANDER COUNTY



Improvement Location
002–0022
Structural Steel Repair

PREPARED BY: _____
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: _____
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: _____
DISTRICT PROJECT IMPLEMENTATION ENGINEER

APPROVED: March 11, 2009
_____
DISTRICT ENGINEER

FOR INDEX OF SHEETS, SEE SHEET NO. 2.
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3.

JULIE 1–800–892–0123

DAY LABOR PROJECT NO.

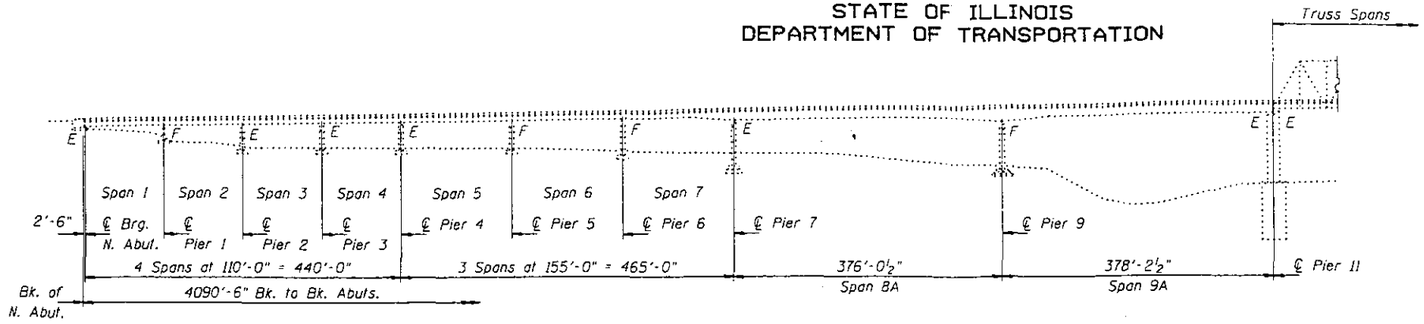
PROJECT ENGINEER: LARRY PICHE PHONE: (618) 549–2171
SQUAD LEADER: RITA GAUTNEY CENTREX: 782–4554

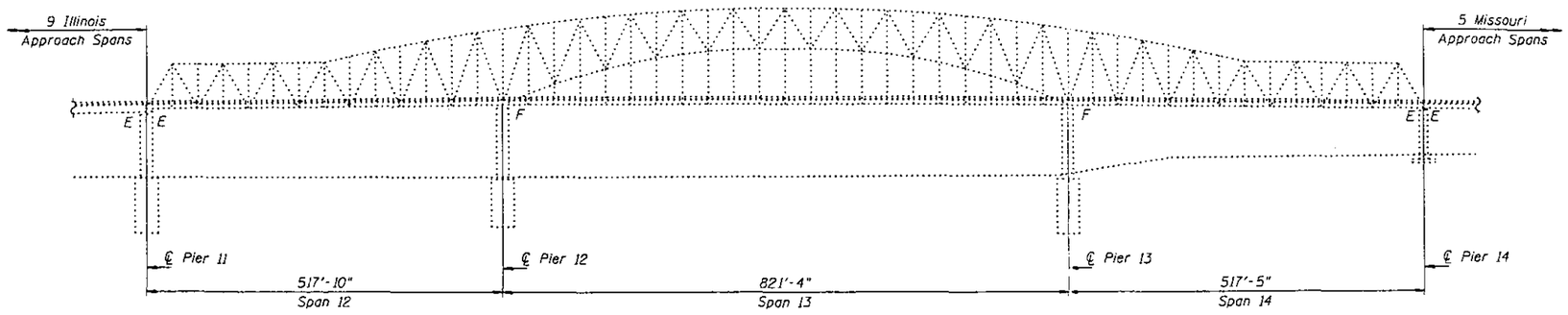
09-00029

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

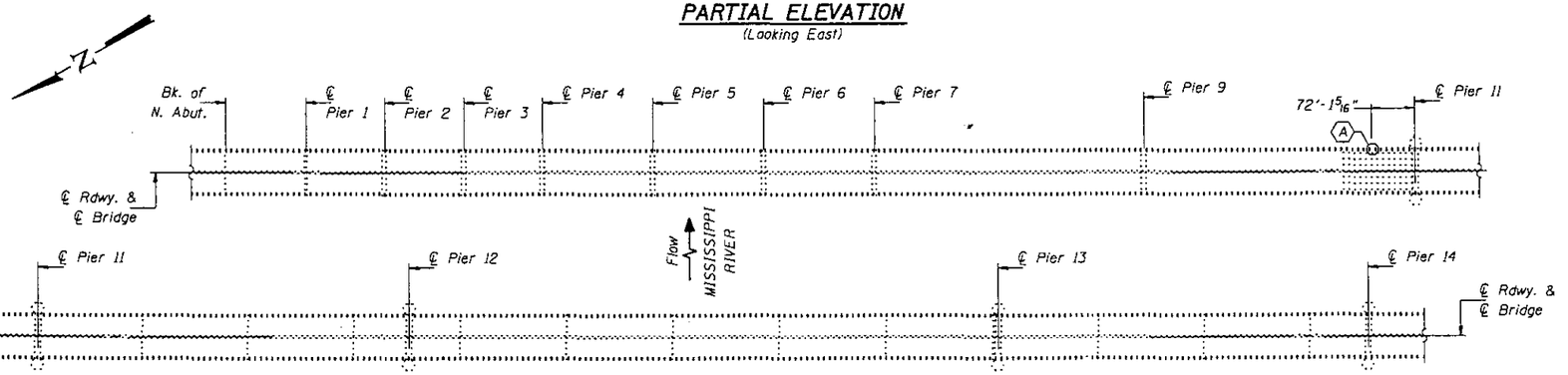
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ALEXANDER		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
1SHEETS



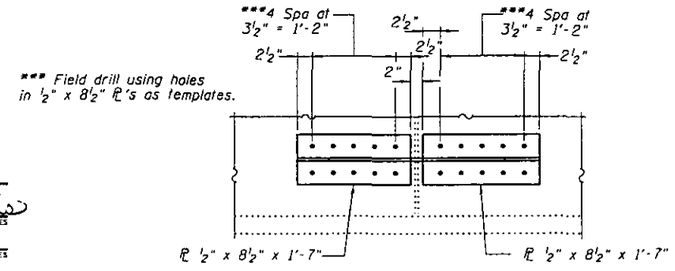


PARTIAL ELEVATION
(Looking East)

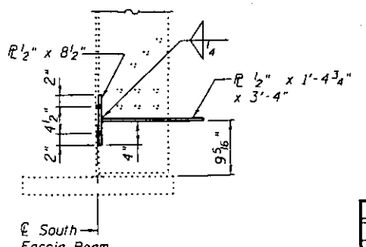


PARTIAL DECK PLAN

Ⓐ Structurl Steel Repair See Details This Sheet.



ELEVATION



SECTION A-A

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

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

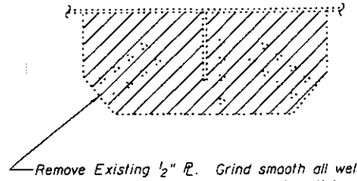
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction 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.

Cost of removal and/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Structural Steel Repair.

The inorganic zinc rich primer/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision "Cleaning and Painting New Metal Structures".

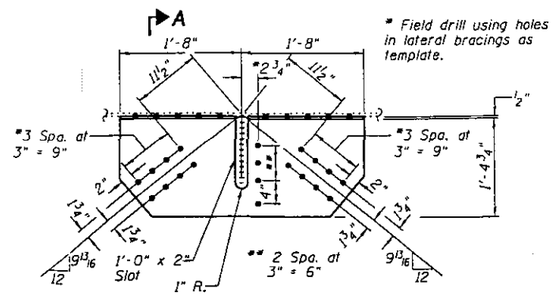
The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".



Remove Existing ½" ℄. Grind smooth all weld material remaining on the web, and verticle stiffener. Inspect ground surfaces for cracks using dye penetrant or magnetic particle testing. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Cost included with Structural Steel Repair.

REMOVAL OF EXISTING CONNECTION PLATE



PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	180

PLAN, ELEVATION AND REPAIR DETAILS F.A.I. 57 OVER MISSISSIPPI RIVER ALEXANDER COUNTY SN.002-0022

DESIGNED	Marian Holloway
CHECKED	Victor K. Velez
DRAWN	
CHECKED	ATH VKV

EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

...\projects\mac00034\0020022.dgn 11/18/2003 11:45:29 AM

#98636 #97 03-08-02 F.A. RTE. 57 Alexander County Sect. (02-1B-1)I-5 I & R Copy #97

97

99%
8-16-2003

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1)I-5	ALEXANDER	39	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED

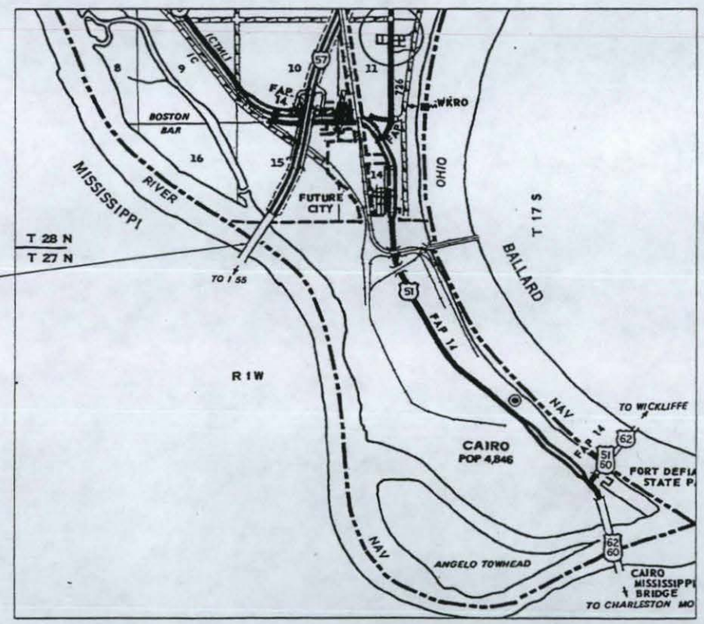
F.A.I. 57 (I-57)
SECTION (02-1B-1) I-5

ALEXANDER COUNTY, IL & MISSISSIPPI COUNTY, MO
C-99-085-01

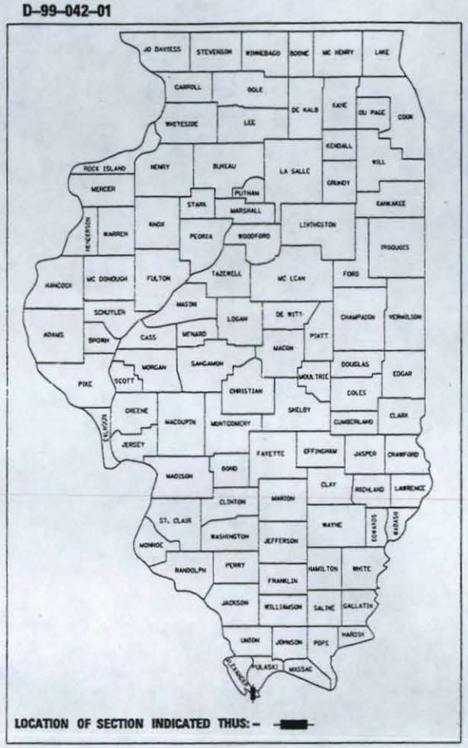
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

I-57 TRAFFIC DATA

2000 ADT 10,300
WYATT TOWNSHIP



PROPOSED IMPROVEMENT SN 002-0022



N
9

0 50' 100' — 1"= 50' PLAN, PROFILE, CROSS SECTION
0 50' 100' — 1"= 40' PLAN
0 50' 100' — 1"= 30' PLAN
0 50' 100' — 1"= 20' PLAN

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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
www.julie1call.com

THE PROPOSED IMPROVEMENT IS ON S.N. 002-0022 WHICH CARRIES INTERSTATE 57 OVER THE MISSISSIPPI RIVER IN ALEXANDER COUNTY. THE PROPOSED IMPROVEMENT CONSISTS OF THE REMOVAL OF THE EXISTING BITUMINOUS WEARING SURFACE AND WATERPROOFING, DECK SLAB REPAIRS, SCARIFICATION OF THE BRIDGE DECK AND PLACEMENT OF A MICROSILICA CONCRETE OVERLAY. OTHER IMPROVEMENTS CONSIST OF JOINT RECONSTRUCTION, STRUCTURAL STEEL REPAIRS, REMOVAL AND REPLACEMENT OF ONE BEARING AND PIER CAP SEAT SEALING.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 10, 20 02
Gale Batsheimer
DISTRICT ENGINEER
February 1, 20 02
Michael Hine
ENGINEER OF DESIGN AND ENVIRONMENT
February 1, 20 02
James R. Easter
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

9-173

CONTRACT NO. 98636 002-0022

NET LENGTH OF PROJECT = 4090'-6"

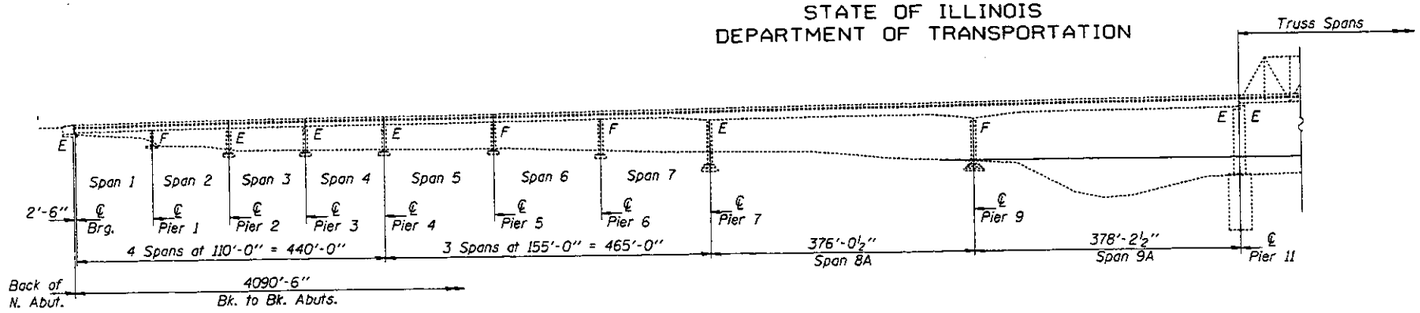
PROJECT LEADER: DAVID PICHE
DESIGN LEADER: WAYNE HALSTEAD
PHONE NO. (618) 549-2171
CENTREX NO. 782-4554

SECTION: (02-1B-1) I-5 COUNTY: ALEXANDER ROUTE: F.A.I. 57

Rev.

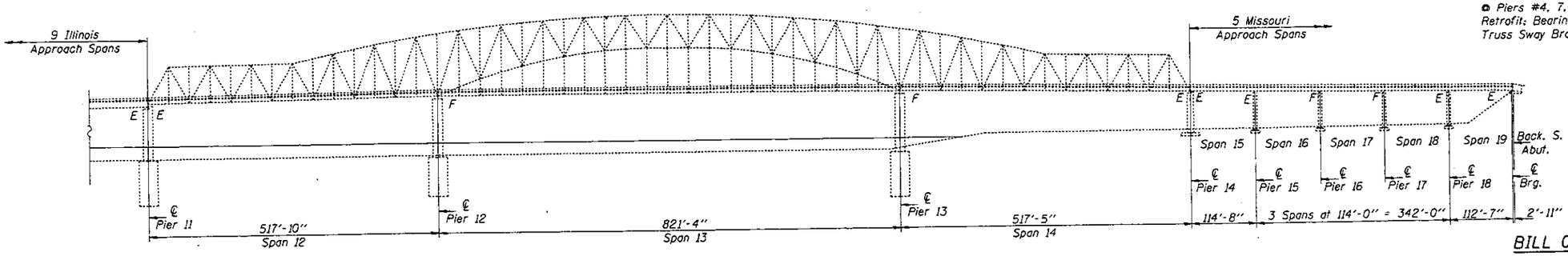
F. A. I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1) I-5	JACKSON	39	14
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Notes:
1. Replace existing PJS with new Silicone Joint Sealer. Remove existing 1" steel ℄ and install polymer concrete
2. Replace existing PJS with new Silicone Joint Sealer. Remove a 2'-6" deck section and 1'-0" hatchblock and install the joint using polymer concrete nosings
3. Replace a ±6' section of Silicone Joint Sealer which is missing
4. Remove the existing 1½" bituminous overlay. Scarify ¾" of the existing deck and install a 2¼" Microsilica Concrete Overlay

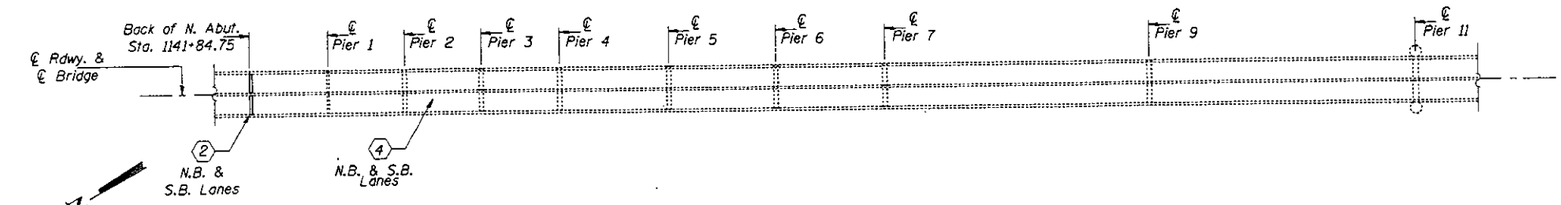
For additional repairs (Joint Repair @ Piers #4, 7, 11, & 14; Girder Retrofit; Bearing Replacement; Truss Sway Brace Retrofit). See Sheet #21 of 39.

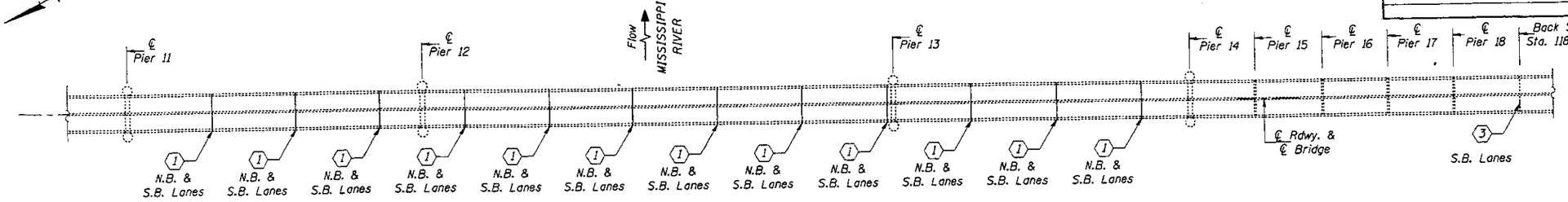


ELEVATION
(Looking East)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Polymer Concrete	Cu. Ft.	63.4
Silicone Joint Sealer	Foot	838
Reinforcement Bars, Epoxy Coated	Pound	1450
Concrete Superstructure	Cu. Yd.	9.9
Concrete Removal	Cu. Yd.	8.9
Bridge Deck Scarification (3/4")	Sq. Yd.	26606
Bridge Deck Grooving	Sq. Yd.	25704
Bridge Deck Microsilica Concrete Overlay (2¼")	Sq. Yd.	26606
Protective Coat	Sq. Yd.	26606
Bridge Seat Sealer	Sq. Ft.	2073
Bituminous Concrete Removal (Deck)	Sq. Yd.	26606





PLAN

DESIGN STRESSES

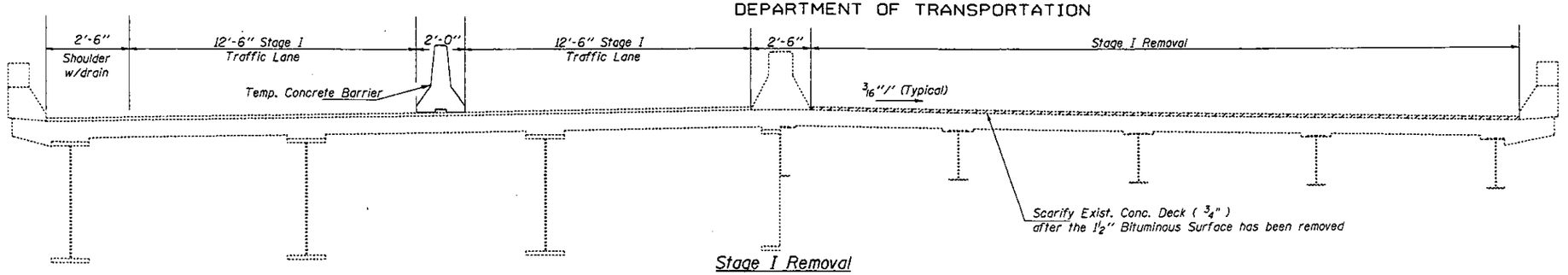
FIELD UNITS
New Construction
f'_c = 3500 psi
f_y = 60,000 psi (reinforcement)

DESIGNED	T. Wayne Halstead
CHECKED	MAS
DRAWN	T. Wayne Halstead
CHECKED	TWH MAS

GENERAL PLAN
BRIDGE REPAIRS
F.A.I. 57 OVER MISSISSIPPI RIVER
SEC. 02-1B-1
ALEXANDER COUNTY
S.N. 002-0022

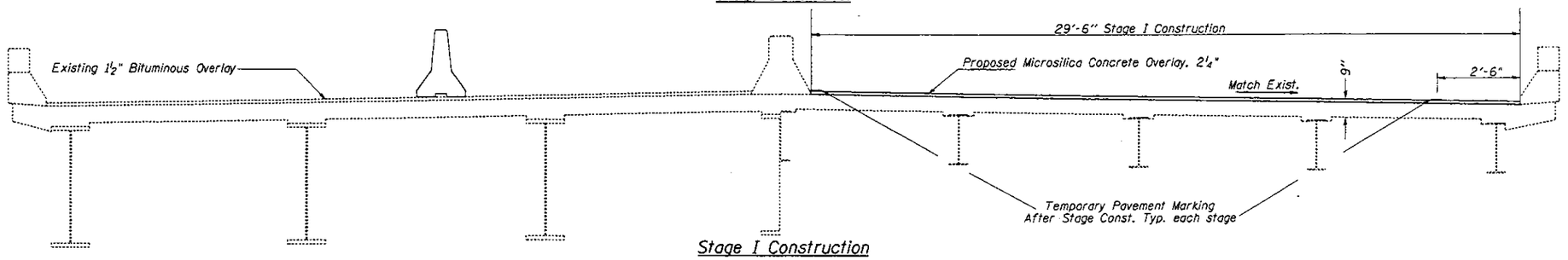
F. A. I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	(02-1B-1) I-5	JACKSON	39	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

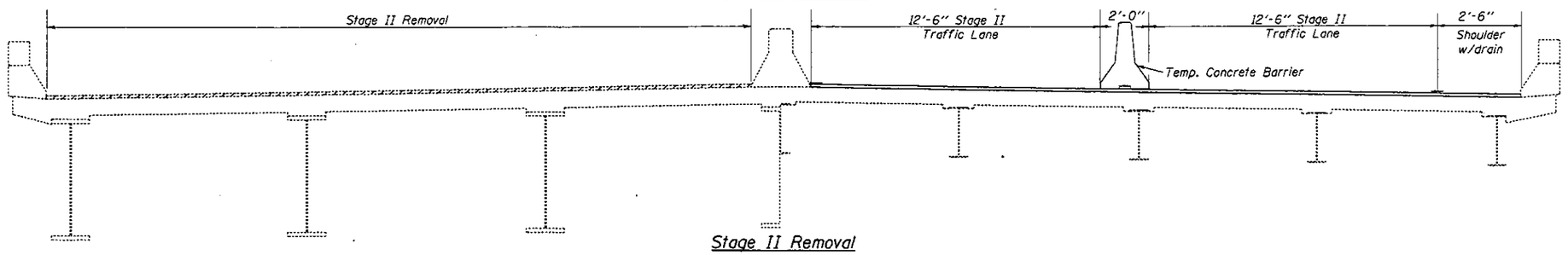


Bituminous Concrete Removal (Deck)

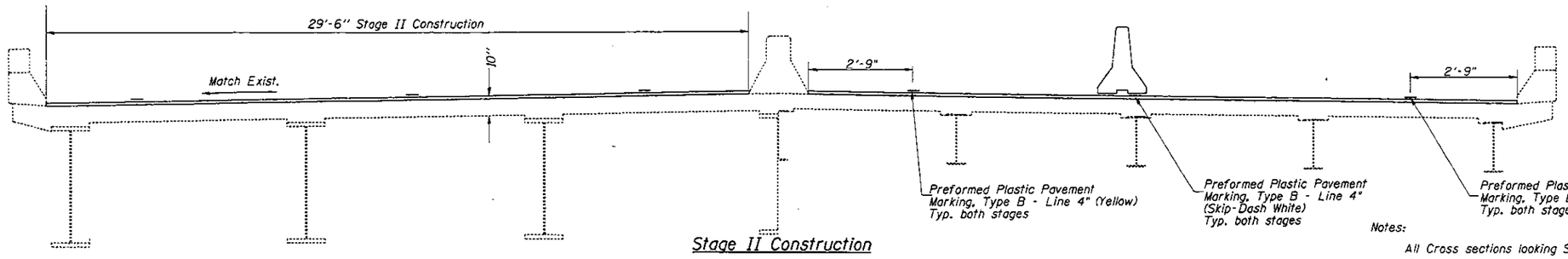
Stage I Removal



Stage I Construction



Stage II Removal



Stage II Construction

Notes:
All Cross sections looking South
Final locations of permanent pavement markings shall be as directed by the Engineer

Spans 1 to 9A & 15 to 19

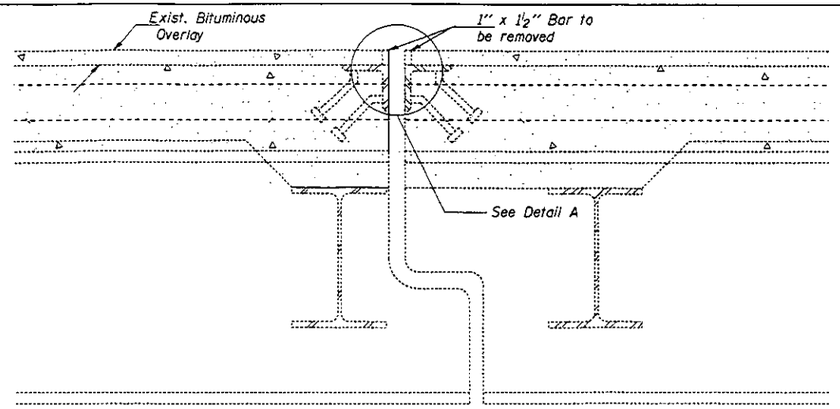
Spans 12, 13 & 14

DESIGNED	T. Wayne Halstead
CHECKED	MAS
DRAWN	T. Wayne Halstead
CHECKED	TWH MAS

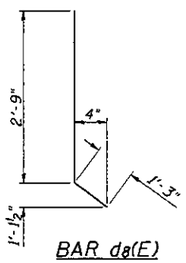
STAGE CONSTRUCTION DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

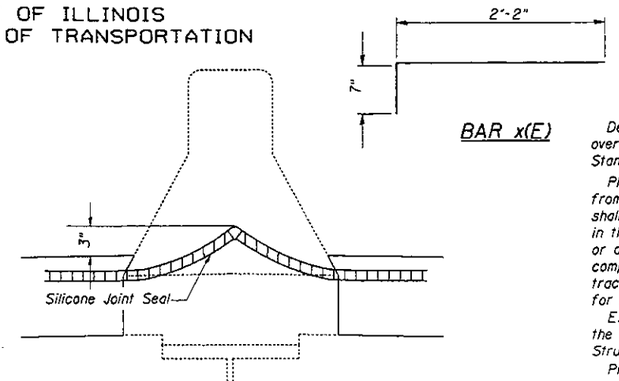
P. A. & SEC. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1) I-5	JACKSON	39	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING SECTION AT PREFORMED JT. SEALER
12 Locations in Spans 12, 13, & 14

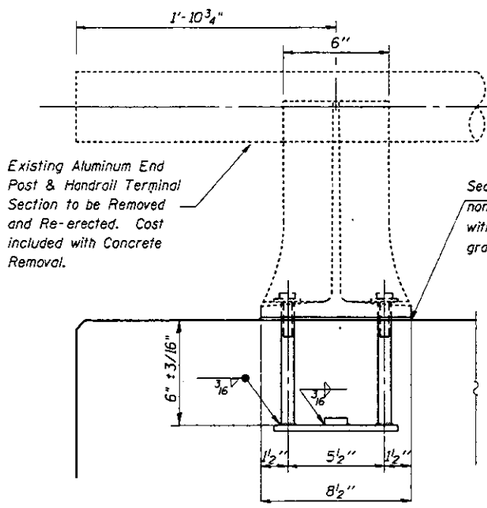


BAR d_8(E)

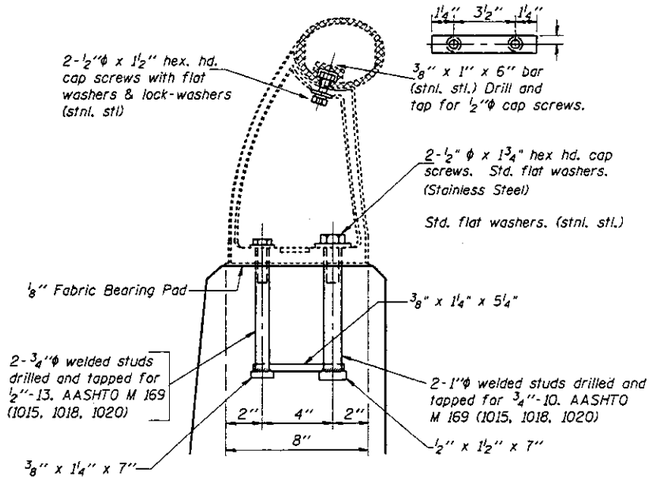


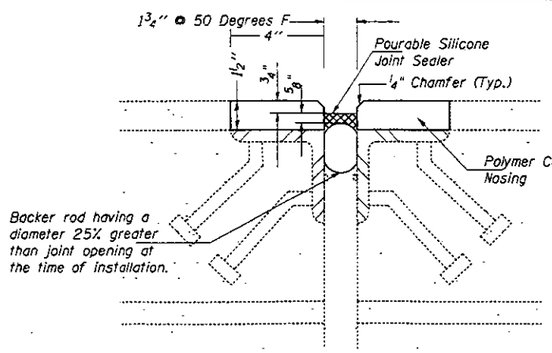
BAR x(E)

TYPICAL END OF SEAL TREATMENT AT NORTH ABUT. MEDIAN BARRIER

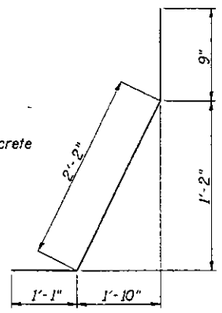


RAIL POST DETAILS

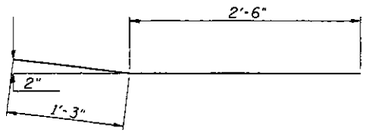




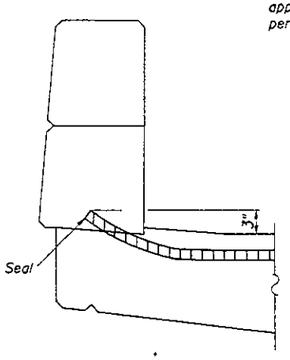
SILICONE JOINT SEALER, DETAIL A
Only the PJS and 1½" bars shall be removed, cost included with Silicone Joint Sealer



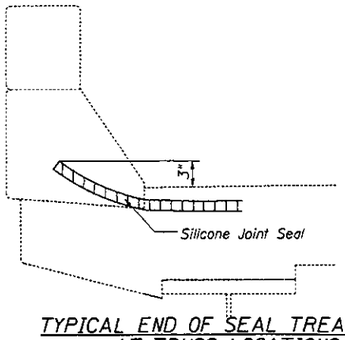
BAR d_1(E)



BAR a_5(E)



TYPICAL END OF SEAL TREATMENT AT NORTH ABUT. PARAPET



TYPICAL END OF SEAL TREATMENT AT TRUSS LOCATIONS

GENERAL NOTES

Deck Slab Repair, if required, shall be determined by the engineer once the overlay is removed and shall be paid for according to Article 109.04 of the Standard Specifications.

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 Structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".

Prior to pouring the new portion of the concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

Bridge Seat Sealer shall be applied to seat areas of Pier 4, Pier 7, Pier 11, and Pier 14.

The existing deck drains within the areas adjacent to the outside parapets shall remain undisturbed. Drains consist of 20⅜" x 23¾" scuppers on the girder spans, Sta. 1141+84.75 to Sta. 1158+46.50 and Sta. 1177+03.08 to Sta. 1182+75.25 (Spans 1-9A and 15-19) and 4" diameter deck drains on the truss spans, Sta. 1158+46.50 to Sta. 1177+03.08 (Spans 12-14).

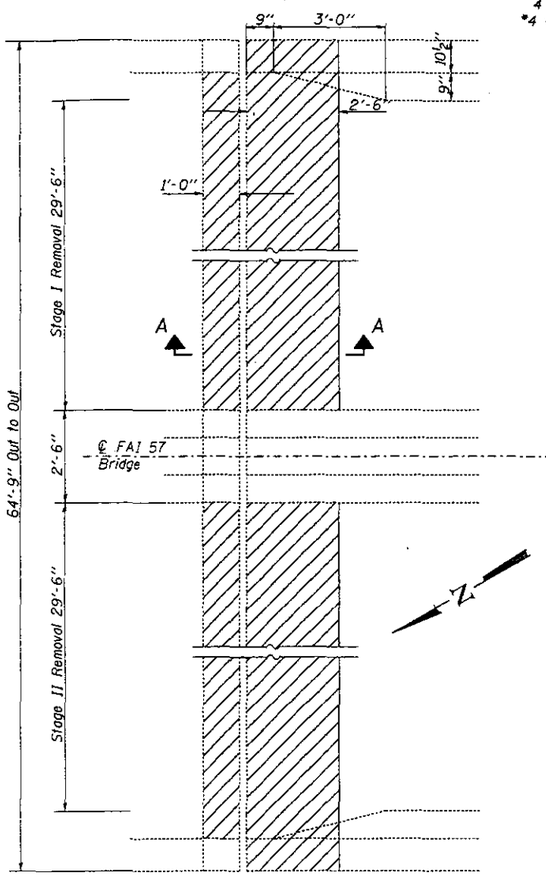
Protective coat shall be applied to the bridge deck microsilica concrete overlay and Bridge Approach Pavement if needed in accordance with article 503.19 of the Standard Specifications. The Seasonal exception shall not apply. The rate of application for each coat on saw cut grooved areas shall be 25 square yards per gallon of mixture.

DESIGNED	T. Wayne Halstead
CHECKED	MAS
DRAWN	T. Wayne Halstead
CHECKED	TWH MAS

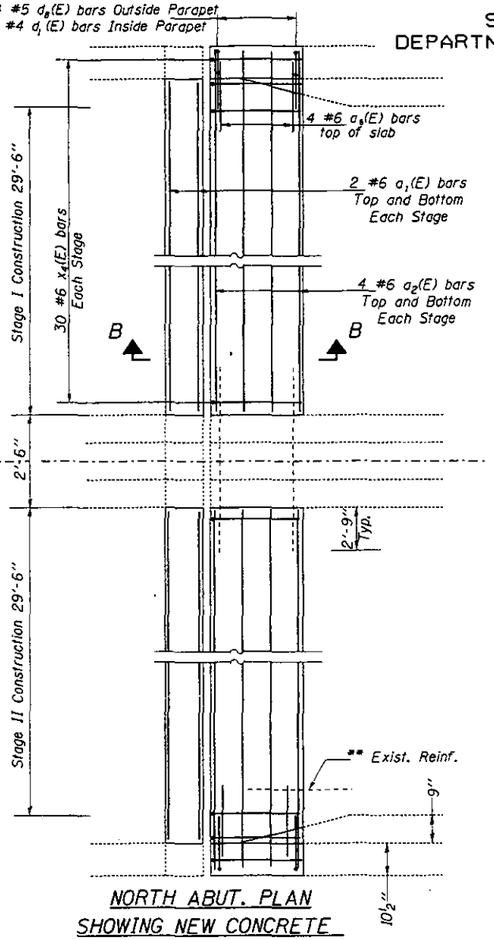
GENERAL NOTES, SEAL END TREATMENT, AND TRUSS JOINT DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

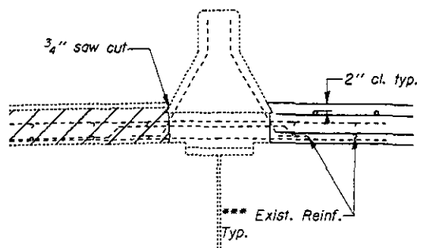
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1) I-5	JACKSON	39	17
STA.	TO STA.			
FED. PROJ. DIST. NO.	ILLINOIS	FED. AID PROJECT		



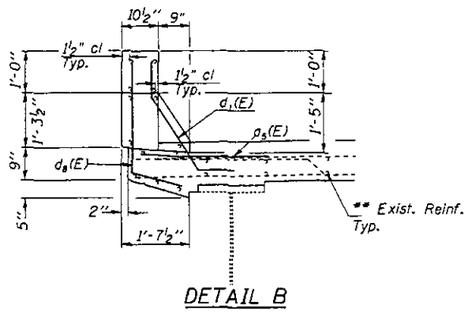
NORTH ABUT. PLAN
SHOWING CONCRETE REMOVAL



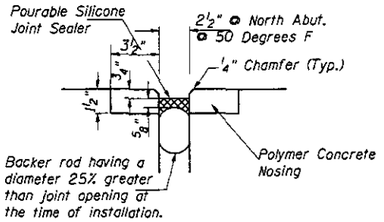
NORTH ABUT. PLAN
SHOWING NEW CONCRETE



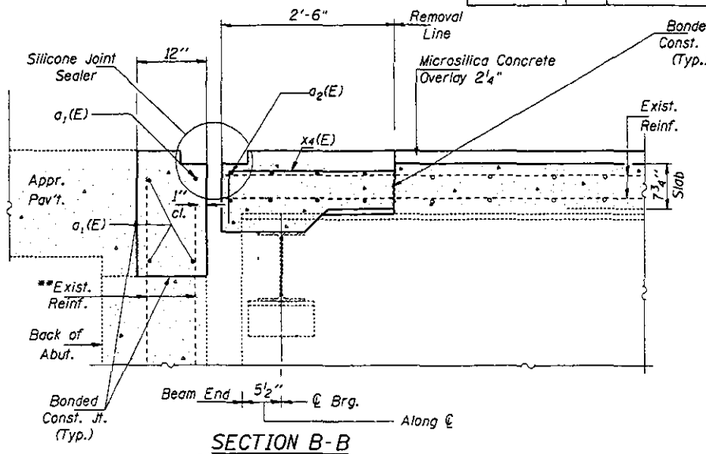
DETAIL A



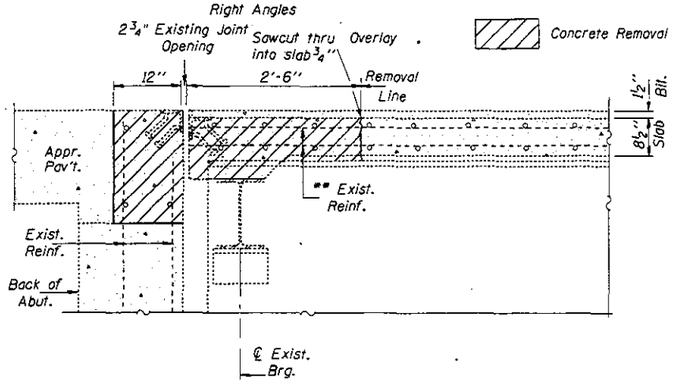
DETAIL B



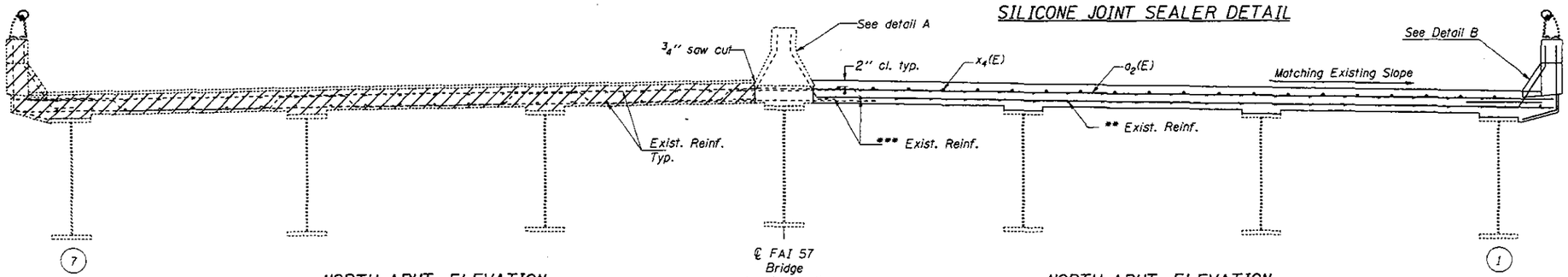
SILICONE JOINT SEALER DETAIL



SECTION B-B
Dimensions measured ⊥ Right Angles



SECTION A-A



NORTH ABUT. ELEVATION
SHOWING CONCRETE REMOVAL

NORTH ABUT. ELEVATION
SHOWING NEW CONCRETE

Notes:
* Cut or Bend to fit in the field
** Extend Existing Reinforcement into new Construction
Work this sheet with sheet #15
*** Extend Existing Reinforcement into new Construction at least 2'-9" min.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_1(E)	8	#6	29'-11"	
a_2(E)	16	#6	30'-9"	
a_3(E)	8	#6	3'-9"	
d_1(E)	8	#5	4'-0"	
d_3(E)	8	#4	4'-0"	
x_4(E)	60	#6	2'-9"	
Concrete Superstructure			Cu. Yd.	9.9
Concrete Removal			Cu. Yd.	8.9
Reinforcement Bars, Epoxy Coated			Pound	1450

Reinforcement bars designated (E) shall be epoxy coated.

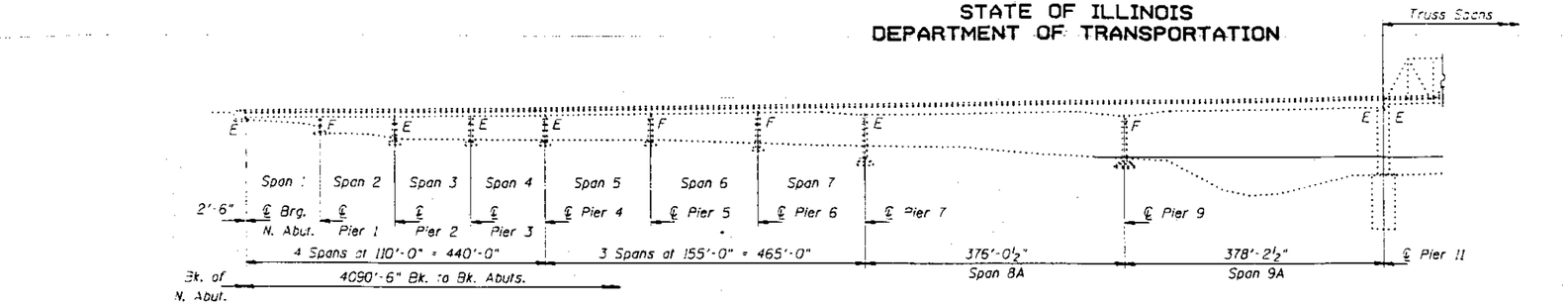
NORTH ABUTMENT JOINT
RECONSTRUCTION DETAILS
ALEXANDER COUNTY
SN 002-0022

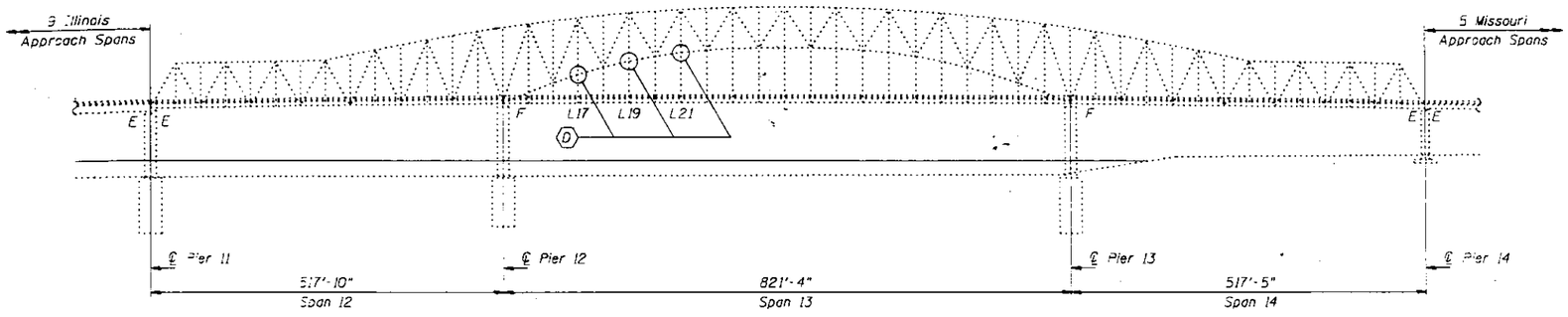
DESIGNED	T. Wayne Halstead
CHECKED	MAS
DRAWN	T. Wayne Halstead
CHECKED	TWH MAS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

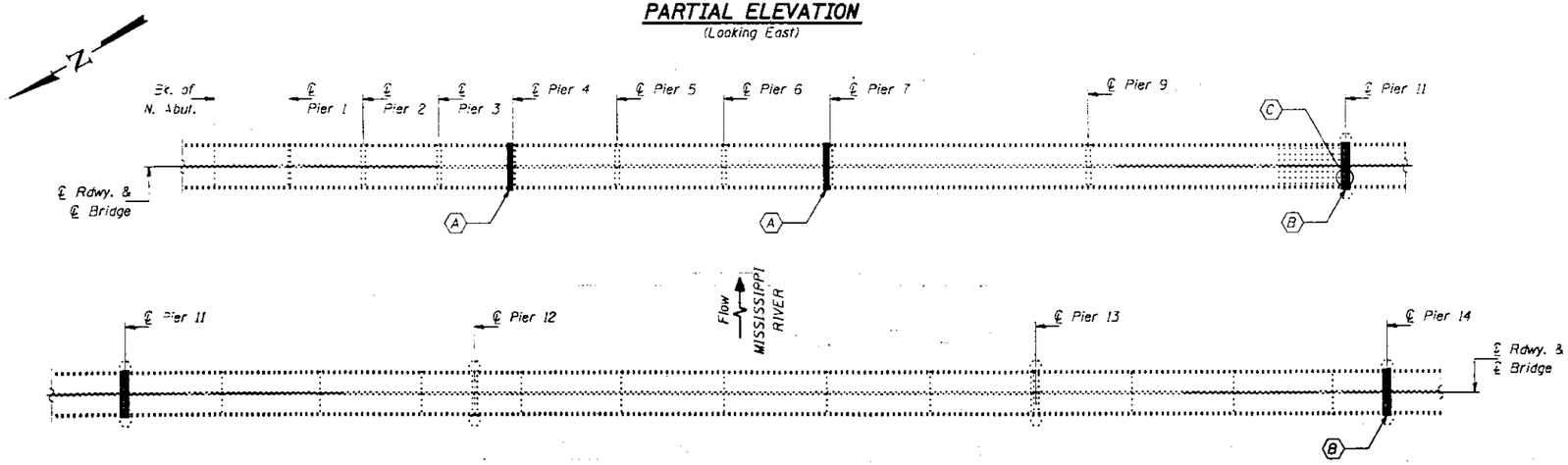
		ALEXANDER		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
14 SHEETS





PARTIAL ELEVATION
(Looking East)



PARTIAL DECK PLAN

(A) Remove existing Modular Joint and replace with new Neoprene Expansion Joint. North & South Bound Lanes.
(B) Remove existing Finger Plate Joint and replace with new Finger Plate Joint. Replace existing transverse members and install new transverse members for support of the new finger plate stools. North & South Bound Lanes. [1]
(C) Repair 5" crack in Girder G6 & replace Bearing at Girder 6. Span 9A.
(D) Sway Frame Repair Locations.

DESIGNED	V.H.V. P.S.J. A.T.H.
CHECKED	V.H.V. A.T.H. P.S.J. D. DH
DRAWN	John F. Schneller Jr.
CHECKED	V.H.V. A.T.H. P.S.J.

FEBRUARY 4, 2002
EXAMINED John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL NOTES

All new structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Calculated weight of AASHTO M-270, Grade 36 Structural Steel = 37,170 Lbs.
Calculated weight of AASHTO M-270, Grade 50 Structural Steel = 84,310 Lbs. [1]

Fasteners shall be high strength bolts. Bolts ¾"ø, open holes ¹³⁄₁₆"ø, unless otherwise noted.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

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.

Finger Plate Expansion Joints shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.

The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.

Joint openings shall be adjusted according to Article 503.10(c) of the the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

Prior to pouring the new concrete deck, all loose rust, loose mill scale and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

The inorganic zinc rich primer/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".

The SSPC-QP1 Painting Contractor Certification will not be required for this bridge.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	52.1
Concrete Superstructures	Cu. Yd.	54.0 [1]
Reinforcement Bars, Epoxy Coated	Pound	14,880
Mechanical Splice	Each	1,232
Furnishing and Erecting Structural Steel	L.S.	1
Structural Steel Repair	Pound	800
Neoprene Expansion Joint (9")	Foot	130
Fabric Reinforced Elastomeric Trough	Foot	127
Drainage System	L.S.	1
Protective Coat	Sq. Yd.	90
Jack and Remove Existing Bearing	Each	1
Structural Steel Removal [1]	Pound	9860

PLAN & ELEVATION
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

[1] Revised 04/25/02, DC PSJ

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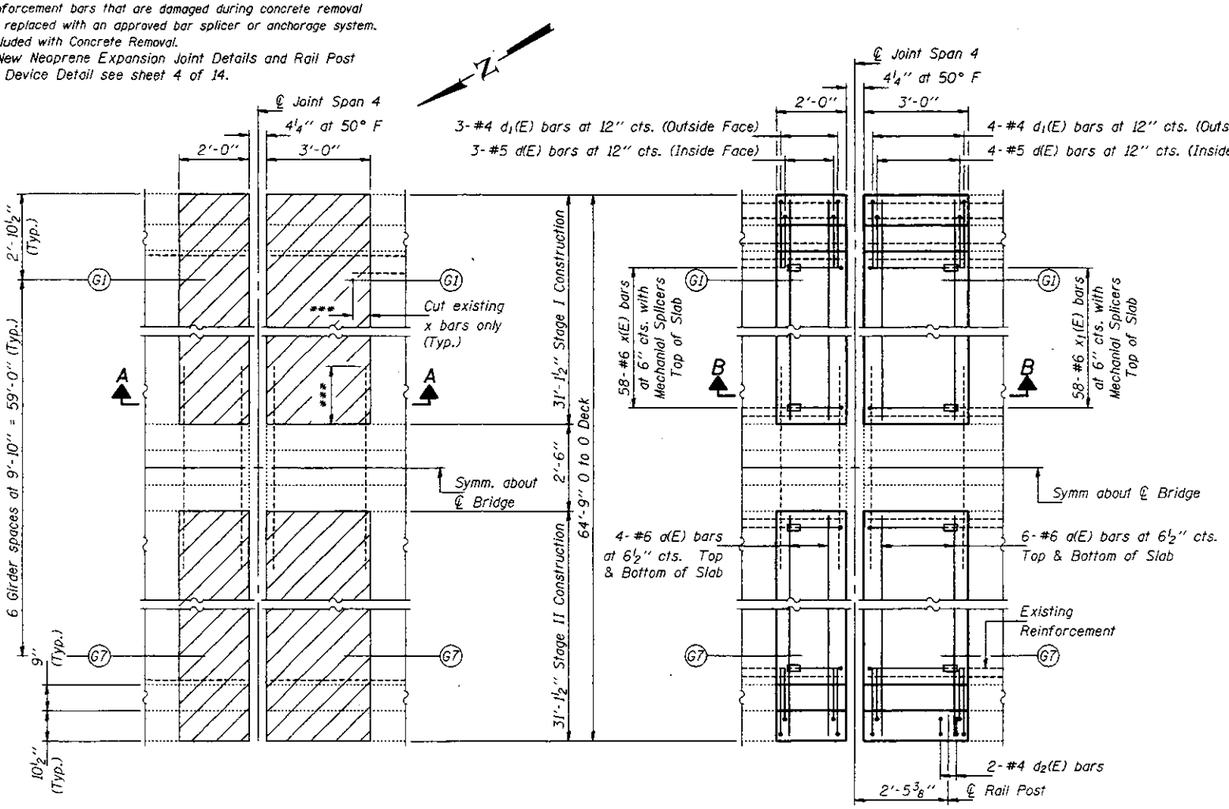
Notes:
Hatched areas indicates "Concrete Removal".
Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
For New Neoprene Expansion Joint Details and Rail Post Anchor Device Detail see sheet 4 of 14.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

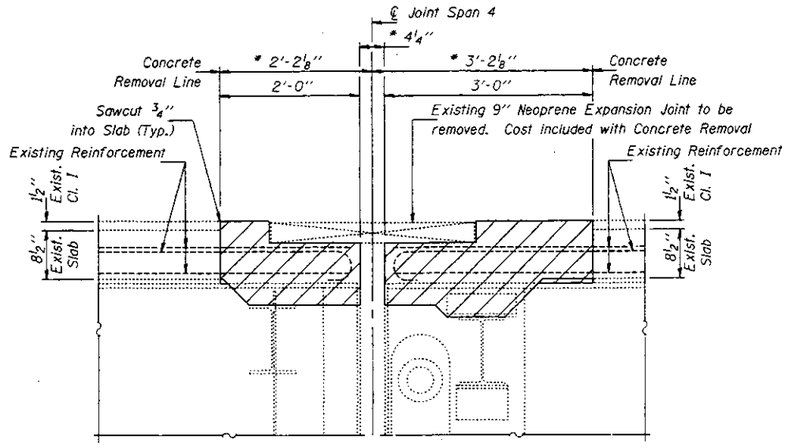
FAI ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	39	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 2
14 SHEETS
* (02-1B-1) I-5

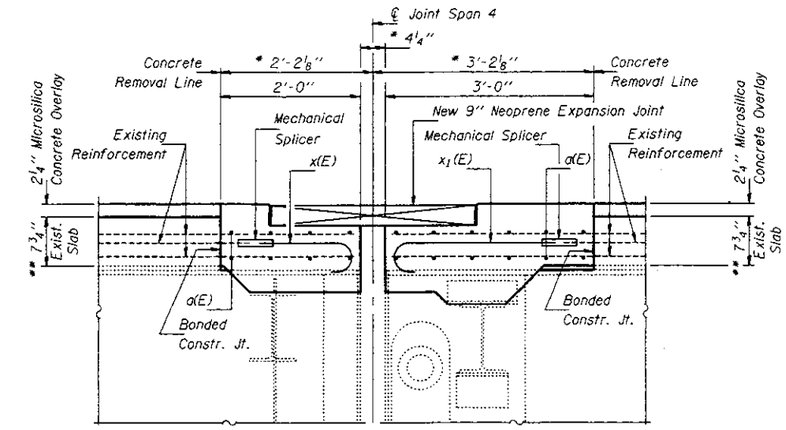


PARTIAL PLAN SHOWING CONCRETE REMOVAL
*** 6" Longitudinal
2'-1" Tranverse

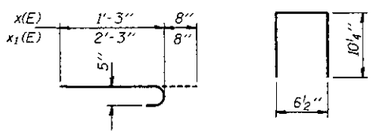
PARTIAL PLAN SHOWING CONCRETE REPLACEMENT



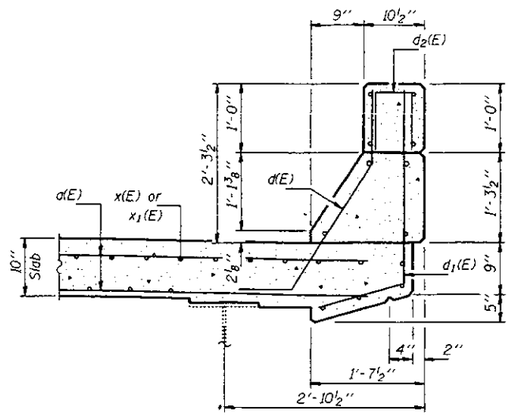
SECTION A-A
* At 50° F



SECTION B-B
* At 50° F
** After ¾" scarification



BARS x(E) & x1(E) BAR d2(E)

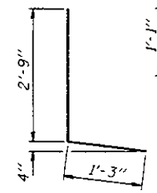


SECTION THRU CURB

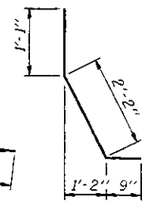
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	40	#6	29'-10"	
d(E)	14	#5	4'-0"	
d1(E)	14	#4	4'-0"	
d2(E)	2	#4	2'-3"	
x(E)	116	#6	1'-11"	
x1(E)	116	#6	2'-11"	
Reinforcement Bars, Epoxy Coated			Pound	2,730
Concrete Superstructure			Cu. Yds.	10.2
Concrete Removal			Cu. Yds.	10.2
Mechanical Splice			Each	232

Reinforcement bars designated (E) shall be epoxy coated.



BAR d1(E)



BAR d(E)

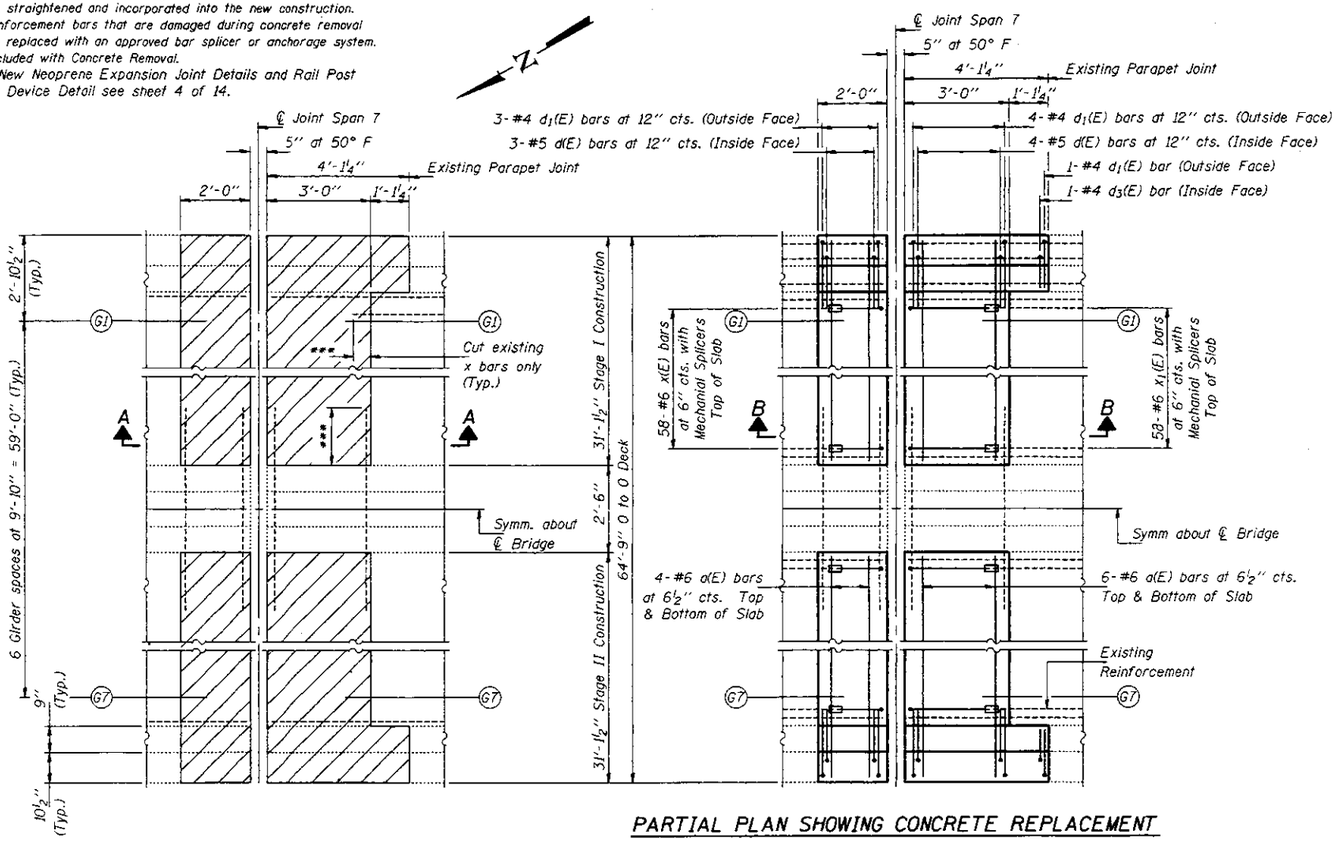
DESIGNED	A.T.H.
CHECKED	P.S.J.
DRAWN	John F. Schneller Jr. DH
CHECKED	A.T.H. P.S.J.

FEBRUARY 4. 2002
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

EXPANSION JOINT DETAILS - SPAN 4
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

Notes:
Hatched areas indicates "Concrete Removal".
Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
For New Neoprene Expansion Joint Details and Rail Post Anchor Device Detail see sheet 4 of 14.

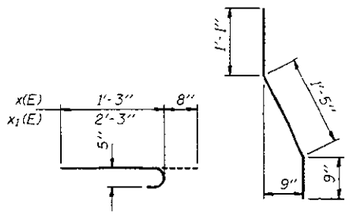
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



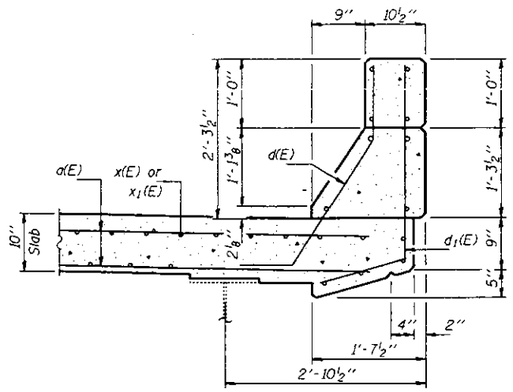
PARTIAL PLAN SHOWING CONCRETE REMOVAL

PARTIAL PLAN SHOWING CONCRETE REPLACEMENT

*** 6" Longitudinal
2'-1" Tranverse



BARS x(E) & x1(E) BAR d3(E)



SECTION THRU CURB

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	40	#6	29'-10"	
d(E)	14	#5	4'-0"	
d1(E)	16	#4	4'-0"	
d3(E)	2	#4	3'-3"	
x(E)	116	#6	1'-11"	
x1(E)	116	#6	2'-11"	
Reinforcement Bars. Epoxy Coated			Pound	2,740
Concrete Superstructure			Cu. Yds.	10.2
Concrete Removal			Cu. Yds.	10.2
Mechanical Splice			Each	232

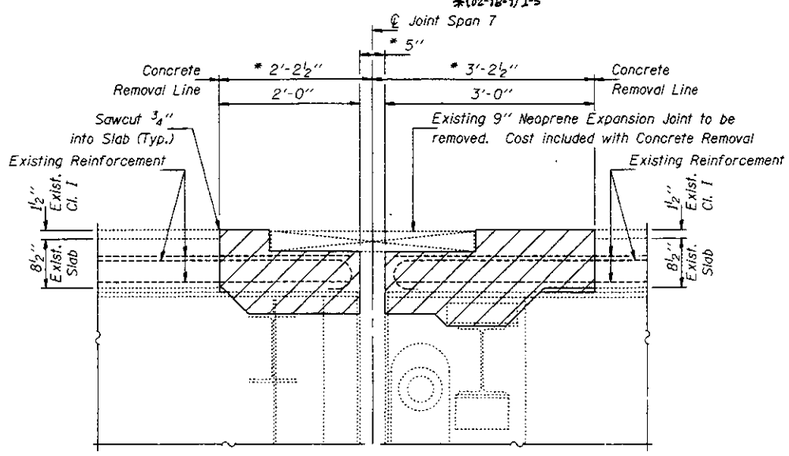
Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	A.T.H.
CHECKED	P.S.J.
DRAWN	John F. Schneller Jr.
CHECKED	A.T.H. P.S.J.

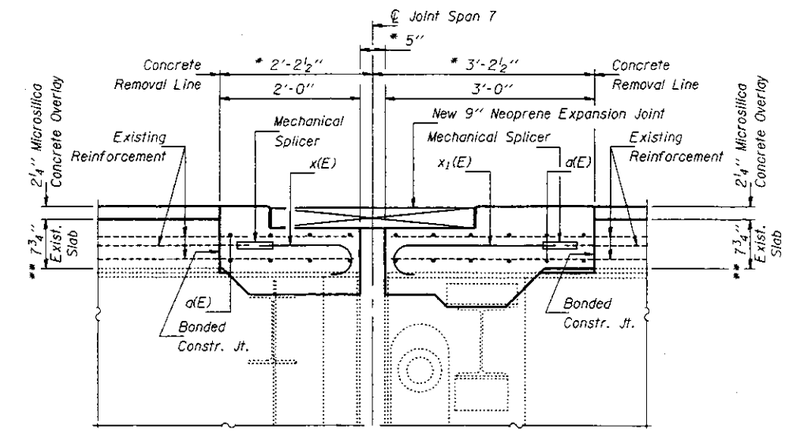
FEBRUARY 4, 2002
EXAMINED John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	39	22
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

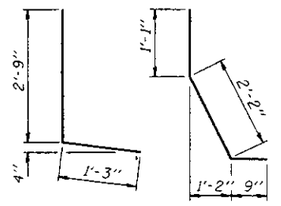
SHEET NO. 3
14 SHEETS
*(02-1B-1) I-5



SECTION A-A
* At 50° F



SECTION B-B
* At 50° F
** After ¾" scarification



BAR d1(E) BAR d(E)

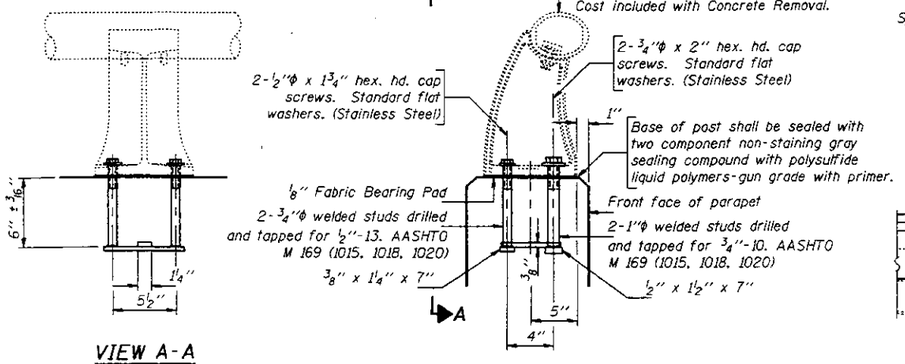
EXPANSION JOINT DETAILS - SPAN 7
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	39	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 4
14 SHEETS

*(02-18-1)I-5

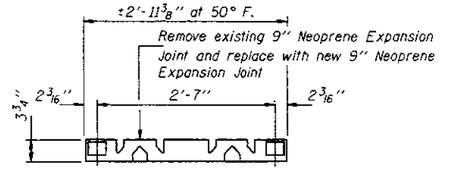


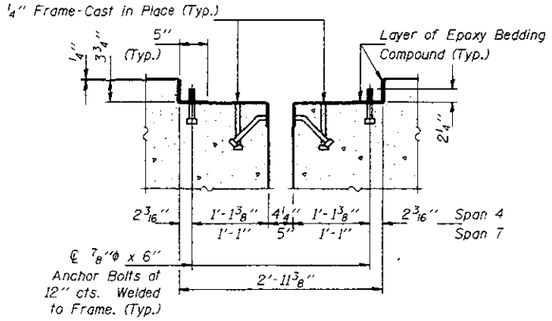
VIEW A-A

SECTION THRU PARAPET

RAIL POST ANCHOR DEVICE DETAIL

New Rail Post Anchor Devices will be required at each location where posts are connected to new construction. Cost included with Concrete Removal.

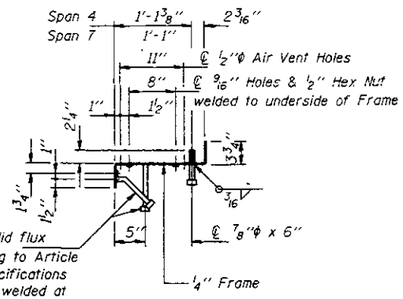




SECTION THRU NEOPRENE EXPANSION JOINT (9") (TRANSFLEX MODEL 900)

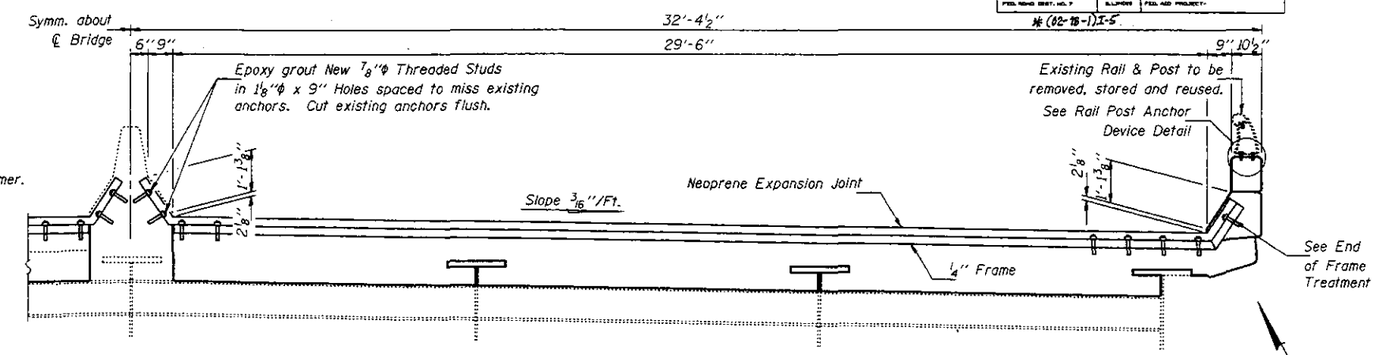
TABLE OF JOINT OPENINGS

Temp. (°F.)	Span 4	Span 7
130	3/4"	1"
110	1 5/8"	2"
90	2 1/2"	3"
70	3 3/8"	4"
50	4 1/4"	5"
30	5 1/8"	6"
10	6"	7"
-10	6 7/8"	8"
-30	7 3/4"	9"

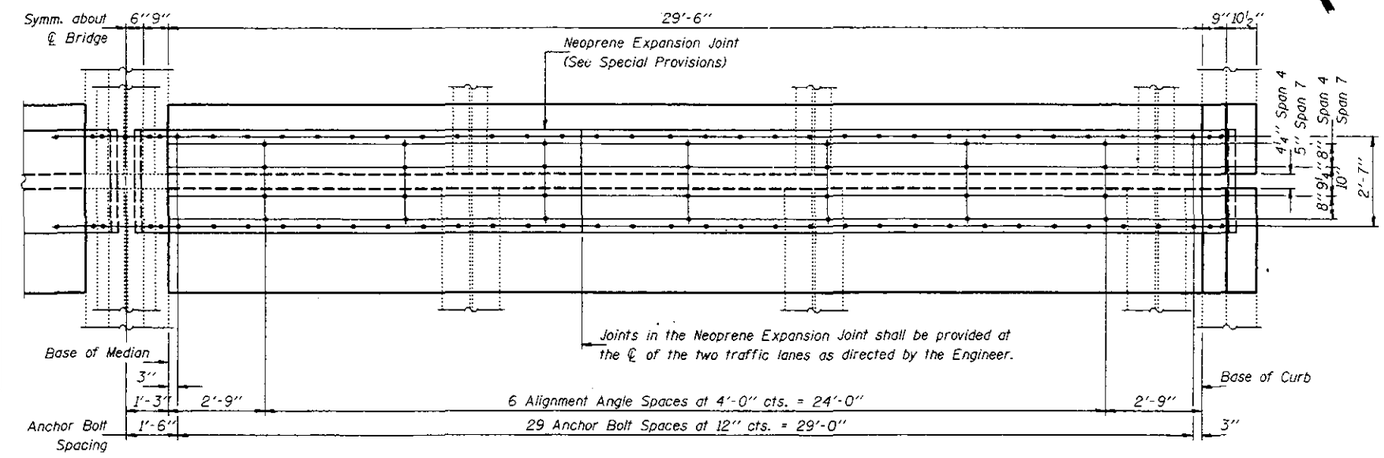


FRAME DETAIL

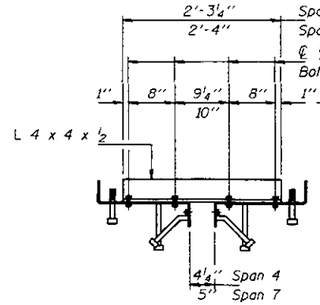
Cost of Frame is included with Neoprene Expansion Joint (9")



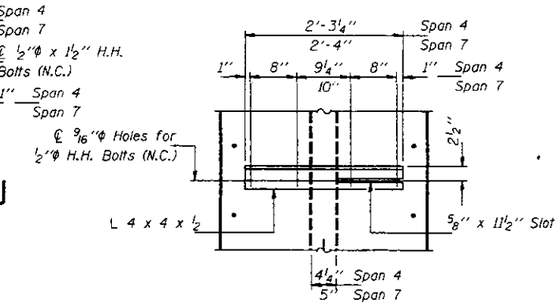
ELEVATION



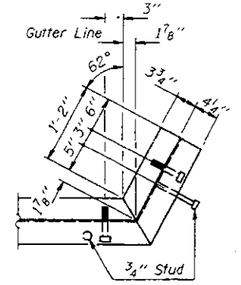
PLAN NEOPRENE EXPANSION JOINT - SPANS 4 & 7



CROSS SECTION



PLAN



END FRAME TREATMENT

ALIGNMENT ANGLE DETAIL

Note: Alignment System shall be in place prior to deck pour and until the concrete has cured.

DESIGNED	A.T.H.
CHECKED	P.S.J.
DRAWN	John F. Schneller Jr. DH
CHECKED	A.T.H. P.S.J.

FEBRUARY 4, 2002

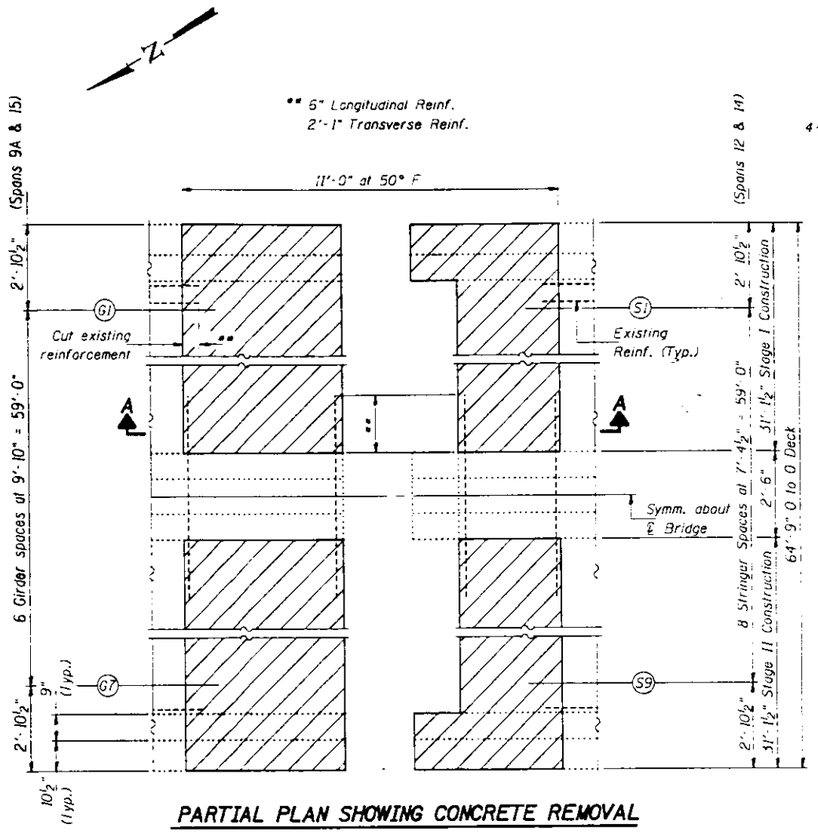
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

EXPANSION JOINT DETAILS - SPANS 4 & 7
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

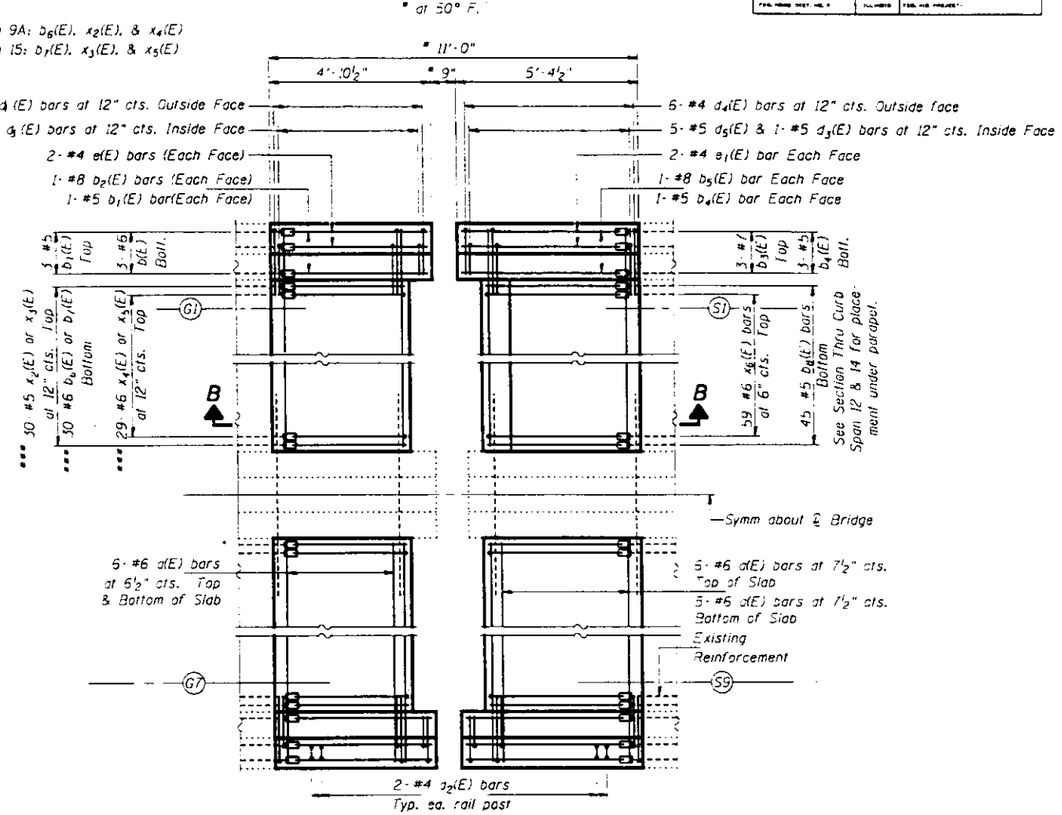
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

		ALEXANDER			SHEET NO. 5
					14 SHEETS



PARTIAL PLAN SHOWING CONCRETE REMOVAL

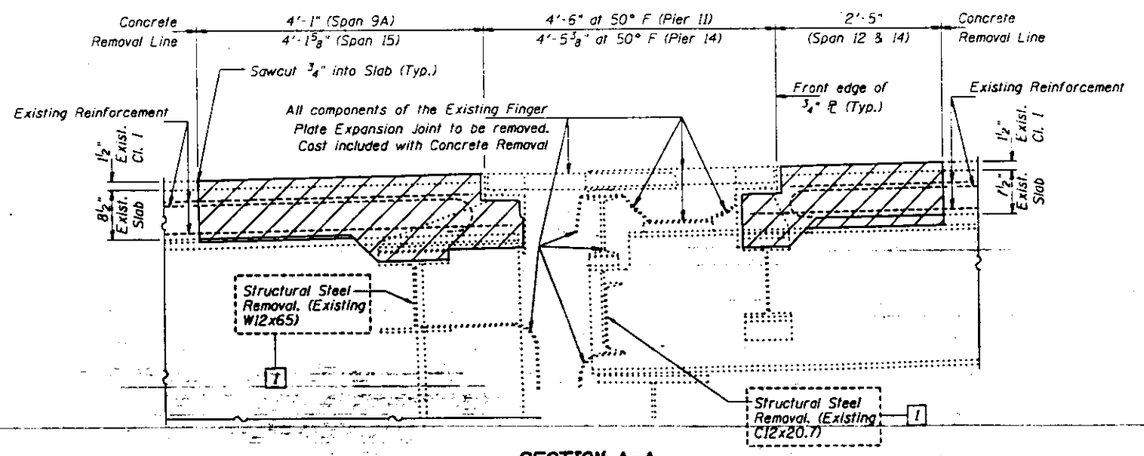
(Pier 11 Shown, Pier 14 Similar)



PARTIAL PLAN SHOWING CONCRETE REPLACEMENT

(Pier 11 Shown, Pier 14 Similar)

Notes:
Hatched areas indicates "Concrete Removal".
Existing reinforcement to which new bars are to be lapped or mechanically spliced shall be cleaned, straightened, and incorporated into the new construction. Any such reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
For Section B-B, Section Thru Parapets, Bar Details and Bill of Material see sheet 6 of 14.
For Rail Post Anchor Device Detail, see Sheet 4 of 14.



SECTION A-A

Notes: New transverse d(E) bars shall be lapped with existing bars. All new longitudinal (b,e, & x) bars shall be joined to existing reinforcement with Mechanical Splicers, except for the $x_4(E)$ & $x_5(E)$ bars. Alternate $x_4(E)$ & $x_5(E)$ bars with $x_2(E)$ & $x_3(E)$ bars, respectively.

DESIGNED	P.S.J.
CHECKED	A.T.H. DH
DRAWN	John F. Schneller Jr.
CHECKED	A.T.H. P.S.J.

FEBRUARY 4, 2002

ENGINEER OF STRUCTURAL SERVICES

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

EXPANSION JOINT DETAILS - PIER 11 & 14
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

1 Revised 04/25/02, DC PSJ

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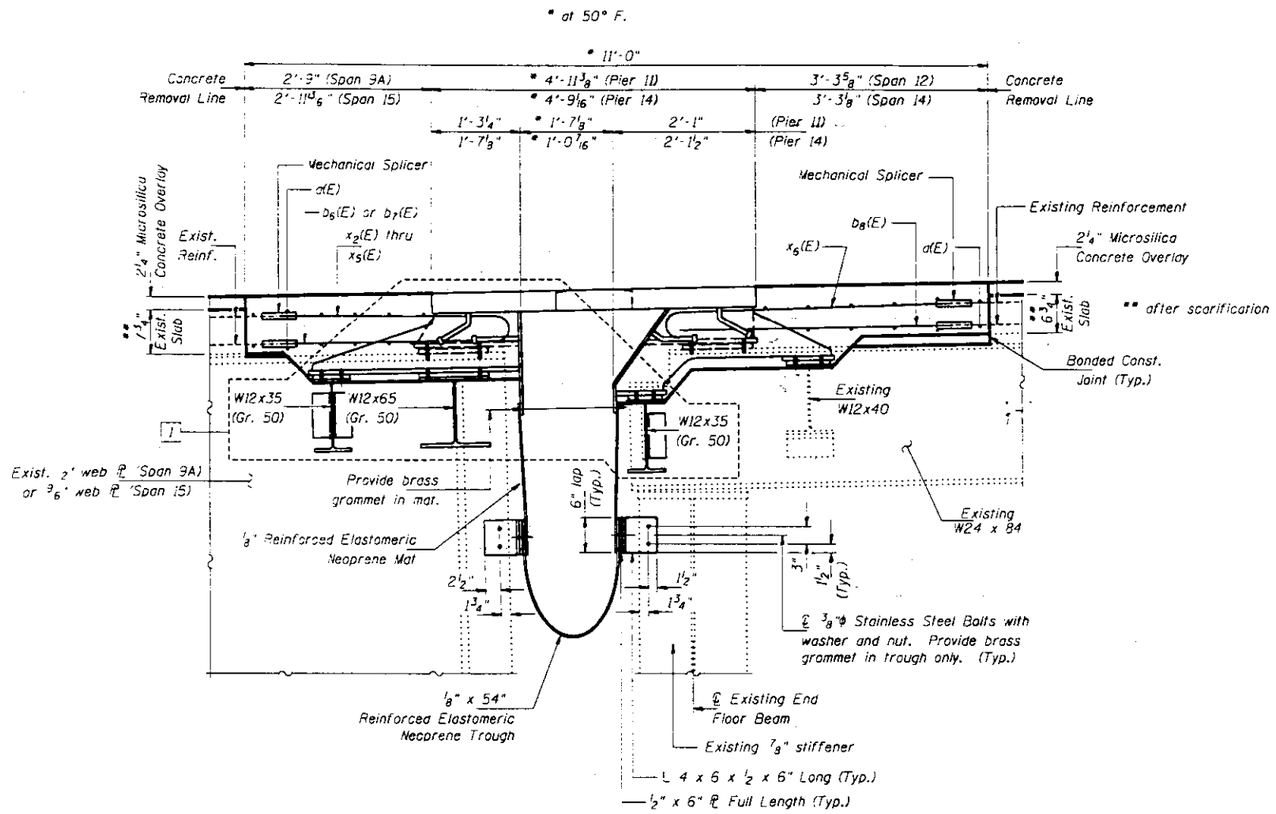
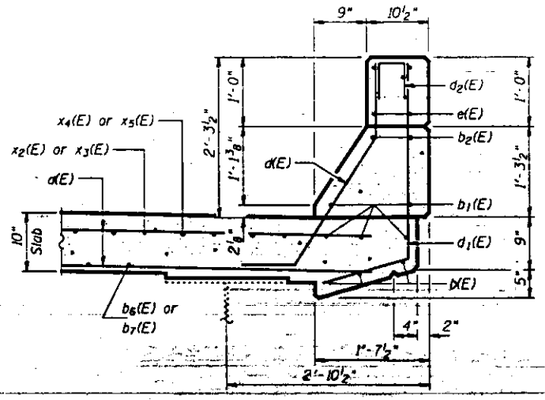
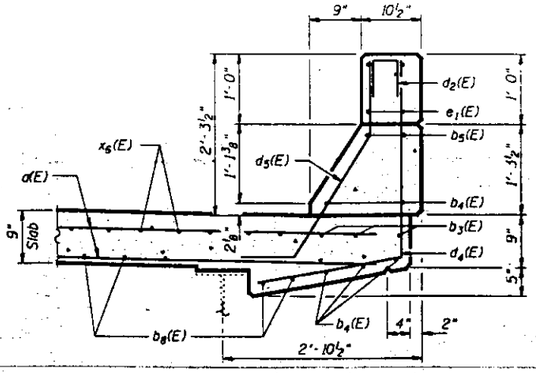
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



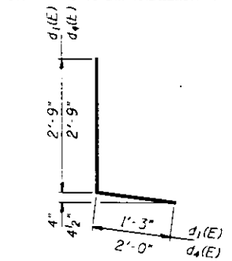
SECTION B-B
Pier 11 shown; Pier 14 similar



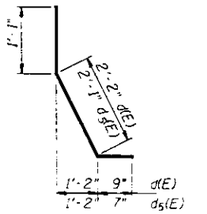
SECTION THRU CURB - SPAN 9A & 15



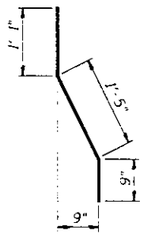
SECTION THRU CURB - SPAN 12 & 14



BARS d1(E) & d4(E)



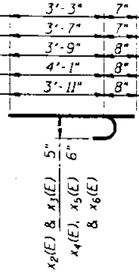
BARS d(E) & d5(E)



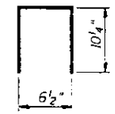
BAR d3(E)

ROUTE NO.	SECTION	COUNTY	SHEET NO. 5
		ALEXANDER	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	

x2(E)	3'-3"	7"	Span 9A
x3(E)	3'-7"	7"	Span 15
x4(E)	3'-9"	8"	Span 9A
x5(E)	4'-1"	8"	Span 15
x6(E)	3'-11"	8"	Spans 12 & 14



BARS x2(E) THRU x6(E)



BAR d8(E)

PIERS 11 & 14
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	92	#6	29'-10"	
b(E)	12	#6	4'-2"	
b1(E)	20	#5	4'-2"	
b2(E)	8	#8	4'-2"	
b3(E)	12	#7	4'-8"	
b4(E)	20	#5	4'-8"	
b5(E)	8	#8	4'-8"	
b6(E)	50	#6	3'-3"	
b7(E)	50	#6	3'-9"	
b8(E)	180	#5	4'-0"	
d(E)	16	#5	4'-0"	L
d1(E)	20	#4	4'-0"	L
d2(E)	16	#4	2'-3"	⊓
d3(E)	8	#5	3'-3"	\
d4(E)	24	#4	4'-9"	L
d5(E)	20	#5	3'-9"	L
e(E)	16	#4	4'-2"	
e1(E)	16	#4	4'-8"	
x2(E)	60	#5	3-10"	⊃
x3(E)	60	#5	4'-2"	⊃
x4(E)	58	#6	4'-5"	⊃
x5(E)	58	#6	4'-9"	⊃
x6(E)	236	#6	4'-7"	⊃
Reinforcement Bars, Epoxy Coated		Pound	9410	
Concrete Superstructure		Cu. Yds.	33.6 [1]	
Concrete Removal		Cu. Yds.	31.7	
Mechanical Splice		Each	768	

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	John P. Schneller Jr.
CHECKED	A.T.H. P.S.J.

FEBRUARY 4, 2002
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

EXPANSION JOINT DETAILS - PIER 11 & 14
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

[1] Revised 04/25/02. DC PSJ

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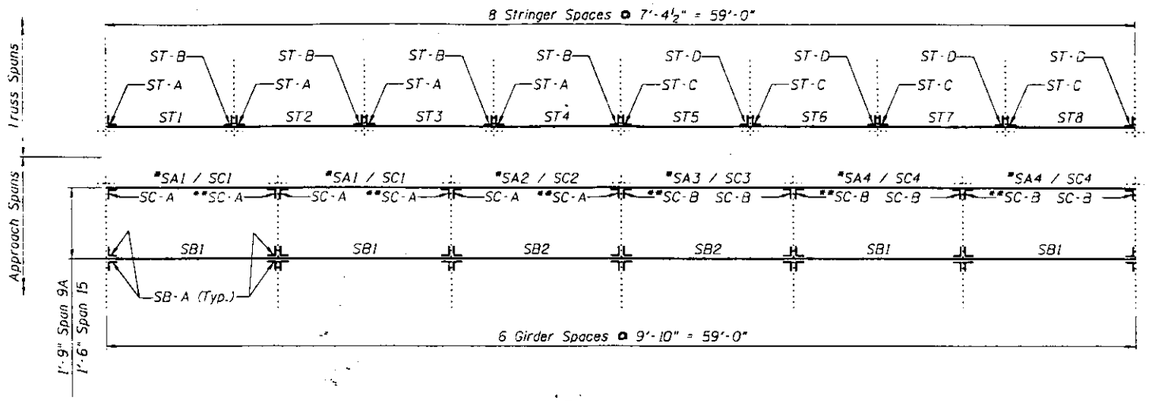
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

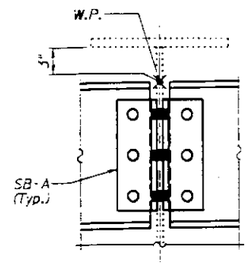
		ALEXANDER		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6A
14 SHEETS

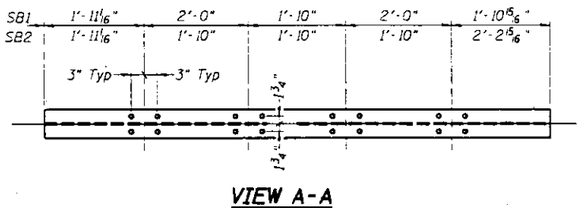


PARTIAL FRAMING PLAN AT PIERS 11 AND 14

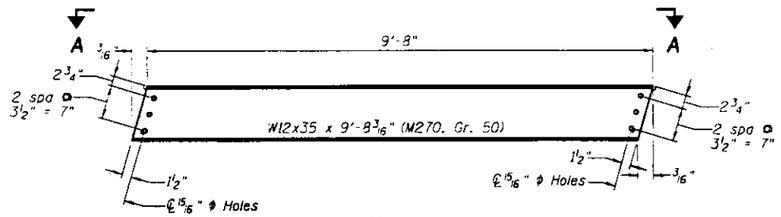
* SA# at Span 9A (no clip angles req'd). SC# at Span 15
** Inverted top for bottom from detail shown on Sheet 6B of 14.



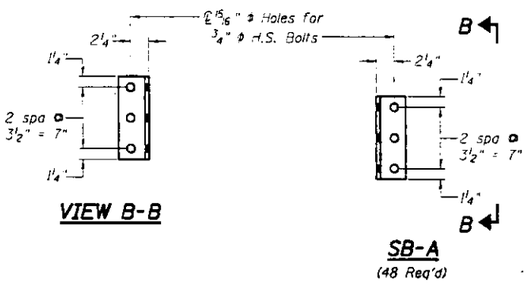
DETAIL A



VIEW A-A

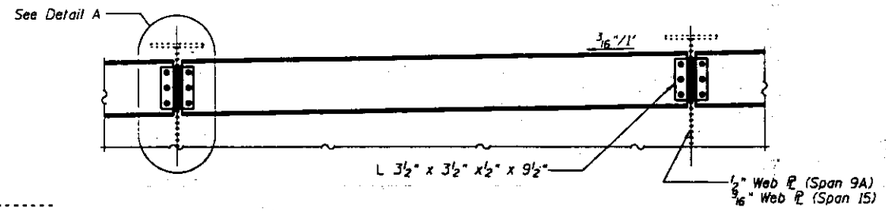


SB1 AND SB2
(SB1 8 Req'd. SB2 4 Req'd)



VIEW B-B

SB-A
(48 Req'd)



BACK STOOL SUPPORT - SPANS 9A AND 15

Work this sheet with Sheets 6B and 6C.

Cost of required field drilling is included with Furnishing and Erecting Structural Steel.

Hardened washers will be required at all oversized hole locations.

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	A.T.H. P.S.J.

EXAMINED John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

STOOL SUPPORT DETAILS
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

1 Added Sheet 04/25/02. DC PSJ

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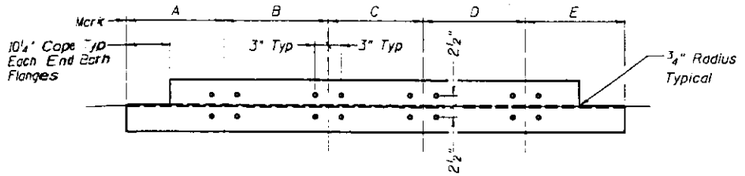
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ALEXANDER		
FED. ROAD DIST. NO.		STATE	FED. AID PROJECT	

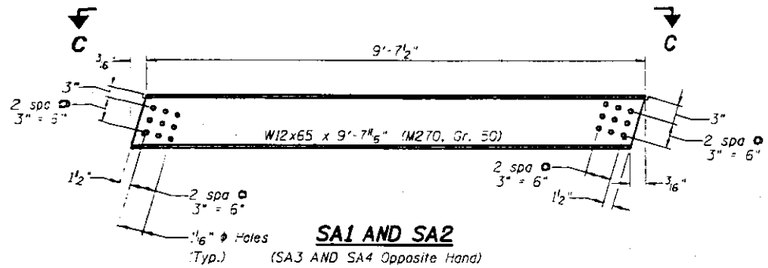
SHEET NO. 6B
14 SHEETS

FRONT STOOL SUPPORT SPAN 9A

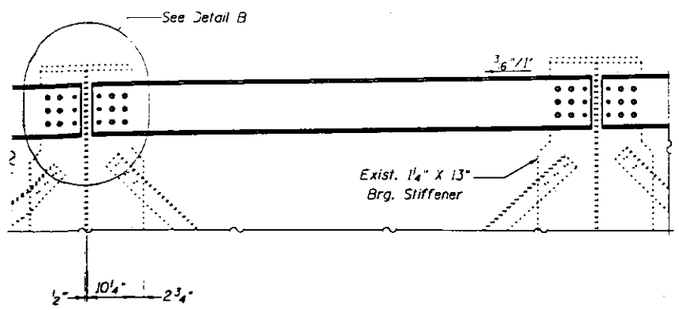
Mark	A	B	C	D	E	No. Req'd
SA1	1'-10 3/16"	2'-0"	1'-10"	2'-0"	1'-10 11/16"	2
SA2	1'-10 3/16"	1'-10"	1'-10"	1'-10"	2'-2 11/16"	1
SA3	2'-2 3/16"	1'-10"	1'-10"	1'-10"	1'-10 3/16"	1
SA4	1'-10 5/16"	2'-0"	1'-10"	2'-0"	1'-10 13/16"	2



VIEW C-C
(No opposite hand required)

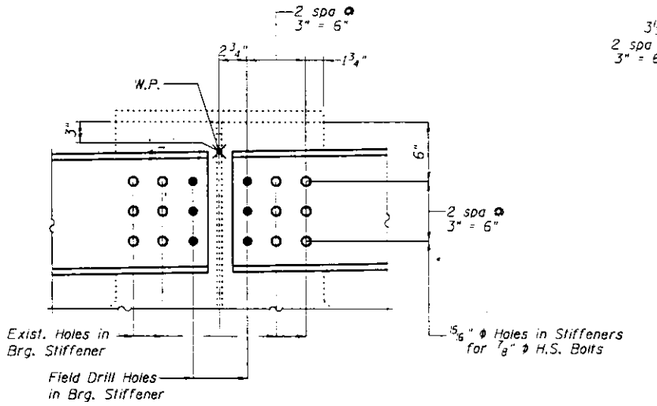


SA1 AND SA2
(SA3 AND SA4 Opposite Hand)

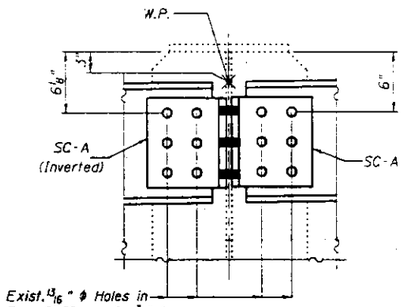


FRONT STOOL SUPPORT SPAN 15

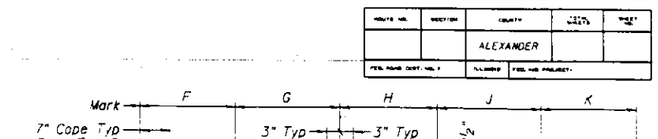
Mark	F	G	H	J	K	No. Req'd
SC1	1'-10 9/32"	2'-0"	1'-10"	2'-0"	1'-10 5/32"	2
SC2	1'-10 1/4"	1'-10"	1'-10"	1'-10"	2'-2 3/16"	1
SC3	2'-2 3/16"	1'-10"	1'-10"	1'-10"	1'-10 1/4"	1
SC4	1'-10 5/32"	2'-0"	1'-10"	2'-0"	1'-10 9/32"	2



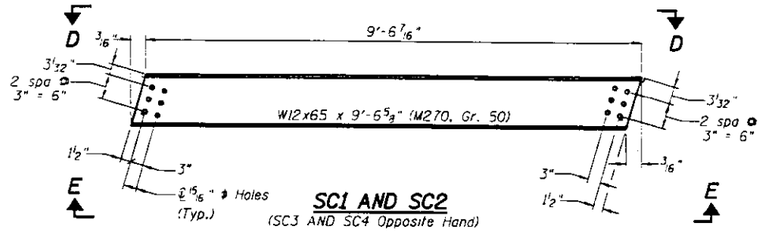
DETAIL B



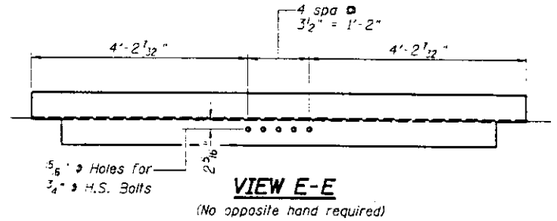
DETAIL C



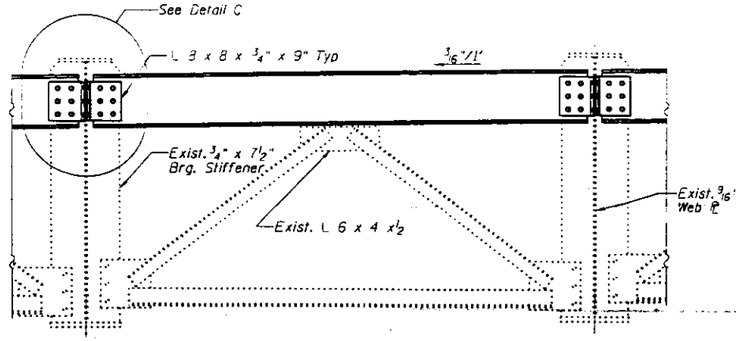
VIEW D-D
(No opposite hand required)



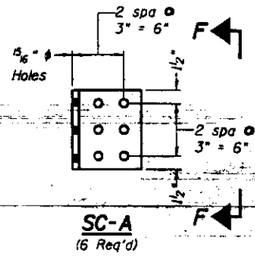
SC1 AND SC2
(SC3 AND SC4 Opposite Hand)



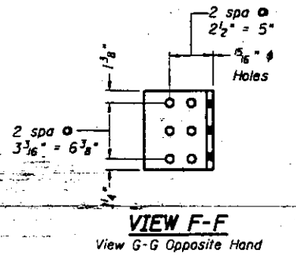
VIEW E-E
(No opposite hand required)



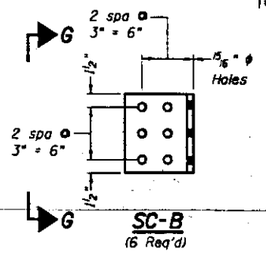
FRONT STOOL SUPPORT - SPAN 9A



SC-A
(6 Req'd)



VIEW F-F
View G-G Opposite Hand



SC-B
(6 Req'd)

FRONT STOOL SUPPORT - SPAN 15

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	A.T.H. P.S.J.

EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

STOOL SUPPORT DETAILS
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

1 Added Sheet 04/25/02, DC PSJ

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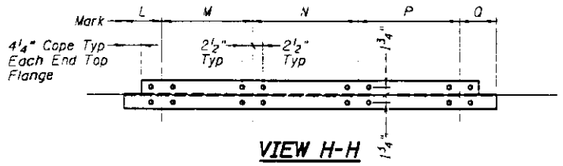
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

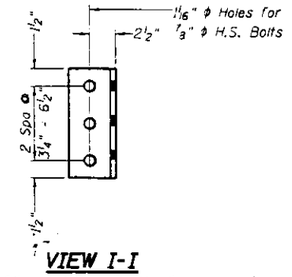
		ALEXANDER			SHEET NO. 50
					14 SHEETS

FRONT STOOL SUPPORT

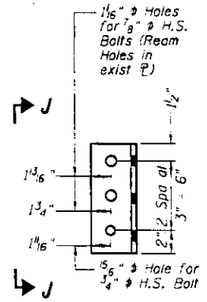
Mark	L	M	N	P	Q
ST1	1'-1"	1'-6 1/4"	1'-11 1/4"	1'-6 1/4"	1'-1 3/4"
ST2	9"	1'-9 1/4"	2'-0"	1'-11 1/2"	8 3/4"
ST3	1'-1"	1'-6 1/4"	1'-11 1/4"	1'-11 1/4"	8 3/4"
ST4	1'-7 1/4"	1'-7 1/2"	1'-7 1/2"	1'-7 3/4"	8 1/2"
ST5	8 1/2"	1'-7 3/4"	1'-7 1/2"	1'-7 1/2"	1'-7 1/4"
ST6	8 3/4"	1'-11 1/4"	1'-11 1/4"	1'-6 1/4"	1'-1"
ST7	8 3/4"	1'-11 1/2"	2'-0"	1'-9 1/4"	9"
ST8	1'-1 3/4"	1'-6 1/4"	1'-11 1/4"	1'-6 1/4"	1'-1"



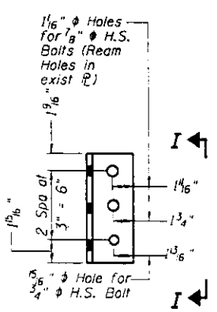
VIEW H-H



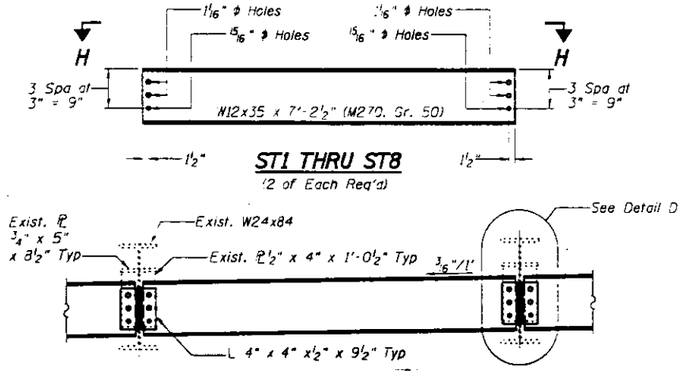
VIEW I-I
(View J-J Opposite Hand)



ST-A
(8 Req'd)



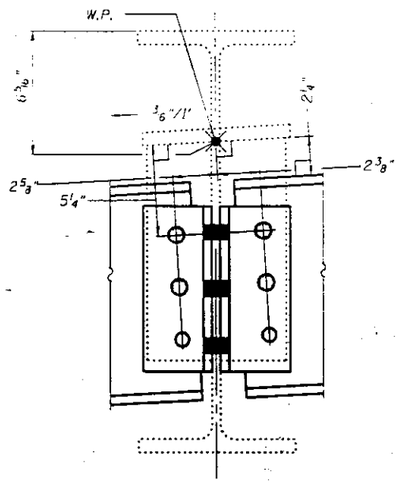
ST-B
(8 Req'd)



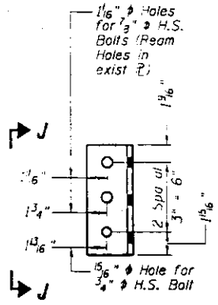
ST1 THRU ST8
(2 of Each Req'd)

ST5 thru ST8 Shown ST1 thru ST4 Opposite Hand)

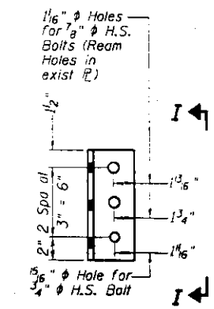
FRONT STOOL SUPPORT - SPANS 12 AND 14



DETAIL D



ST-C
(8 Req'd)



ST-D
(8 Req'd)

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	P.S.J. A.T.H.

EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

STOOL SUPPORT DETAILS
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

1 Added Sheet 04/25/02. DC PSJ

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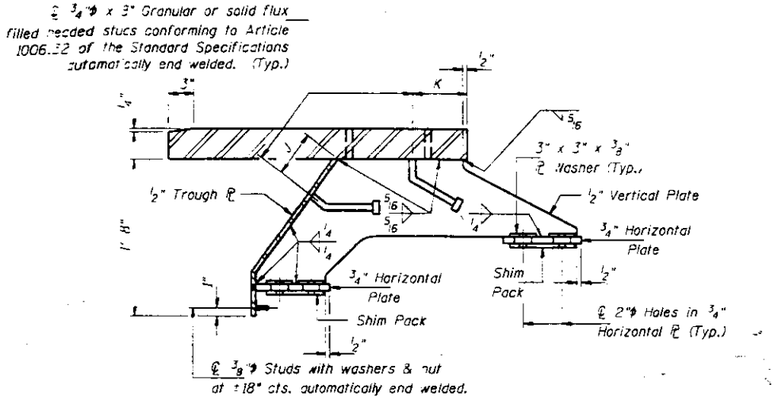
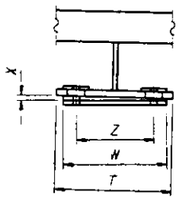
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ALEXANDER		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

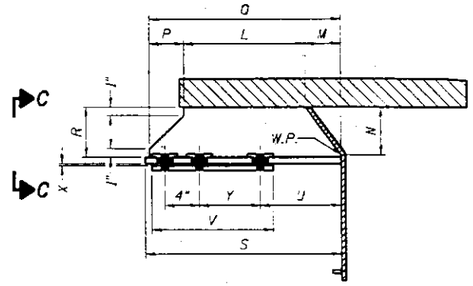
SHEET NO. 7
14 SHEETS



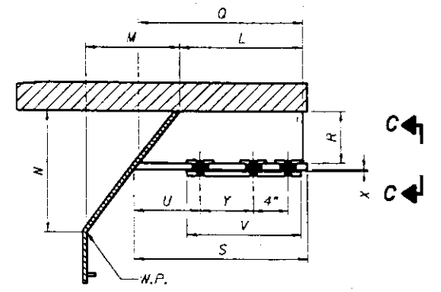
TYPICAL WELDS, ATTACHMENTS & MISC. DIMENSIONS DETAIL



SECTION C-C



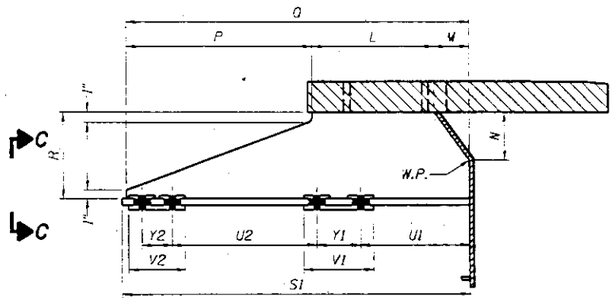
GIRDER STOOLS "B" AND "F"



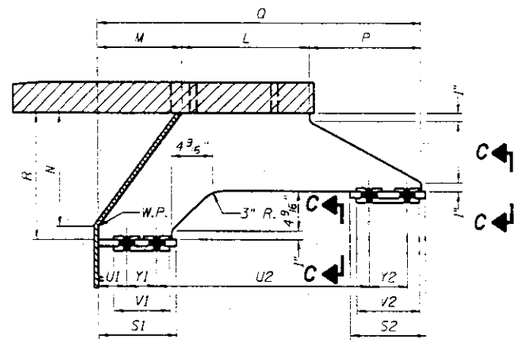
STRINGER STOOLS "D" AND "H"

FINGER PLATE, TROUGH PLATE & STOOL PLATE DIMENSIONS

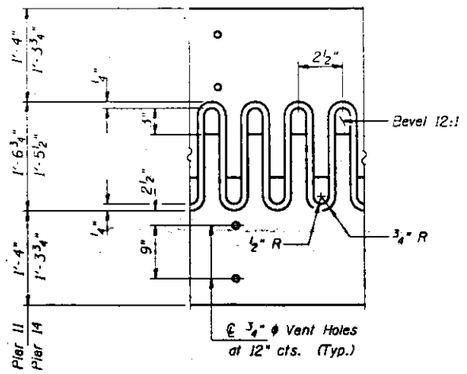
Dim.	Description	Pier 11				Pier 14			
J	Trough ℄ Stud Location	5 1/4"				5"			
K	Finger ℄ Stud Location	6 1/4"				6"			
L	Vertical ℄ Misc.	1'-2 1/4"				1'-2"			
	Location	**Approach Side**		**Truss Side**		**Approach Side**		**Truss Side**	
W	Trough / Vertical ℄ Misc.	------		9 3/4"		4 1/8"		10 1/2"	
N	Trough / Vertical ℄ Misc.	------		1'-1"		5 1/2"		1'-2"	
	Stool I.D.	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
	Number Required Per Joint	12	3	16	1	12	3	16	1
P	Vertical ℄ Misc.	1'-9 1/2"	4"	1'-1 1/8"	------	1'-0 3/4"	------	1'-0 5/8"	------
Q	Length of 1/2" Vertical ℄	2'-11 3/4"	1'-6 1/4"	3'-1 1/8"	1'-6 3/16"	2'-6 7/8"	1'-6 1/8"	3'-1 1/8"	1'-6 1/2"
R	Height of 1/2" Vertical ℄	3 7/8"	5 1/2"	1'-2 1/2"	5 3/4"	9 3/4"	5 3/4"	1'-2 3/4"	6"
	Plate I.D.	**#1**	**#2**	**#1**	**#2**	**#1**	**#2**	**#1**	**#2**
S	Length of 3/4" Horizontal ℄	3'-0 1/4"	------	1'-6 3/4"	3"	9"	1'-7 5/8"	2'-7 3/8"	------	1'-6 5/8"	9"	9"	1'-7 9/16"
T	Width of 3/4" Horizontal ℄	10 1/2"	------	1'-1 1/2"	9 1/2"	9 1/2"	9 1/2"	10 1/2"	------	1'-1 1/2"	9 1/2"	9 1/2"	9 1/2"
U	Horizontal ℄ Misc.	8 3/4"	1'-4 3/4"	5 1/2"	3 1/4"	2'-0 1/8"	7 3/16"	5 3/8"	1'-1 3/4"	5 3/8"	3 1/4"	2'-0 1/8"	7 3/16"
V	Length of All Shim ℄'s	8"	6 1/2"	1'-2"	6 1/2"	7 1/2"	1'-1"	8"	6 1/2"	1'-2"	6 1/2"	7 1/2"	1'-1"
W	Width of All Shim ℄'s	9"	9"	12"	8"	8"	8"	9"	9"	12"	8"	8"	8"
X	Tapered Shim Thickness	------	------	1/8" - 5/16"	------	1/8" - 1/4"		------	------	1/8" - 5/16"	------	------	1/8" - 1/4"
Y	Longitudinal Gage	5"	3 1/2"	7"	3 1/2"	4 1/2"	6"	5"	3 1/2"	7"	3 1/2"	4 1/2"	6"
Z	Transverse Gage	6"	6"	6"	5"	5"	5"	5"	6"	6"	5"	5"	5"



INTERMEDIATE STOOLS "A" AND "E"



INTERMEDIATE STOOLS "C" AND "G"



FLAME CUTTING DIAGRAM

Cut from
℄ 3 1/2" x 50 3/4" x 29'-5 1/2" (Pier 11)
℄ 3 1/4" x 49" x 29'-5 1/2" (Pier 14)
AASHTO M 270, Grade 50.
(2 of Each Required)

Notes: Two Joints (North Bound & South Bound) are required at each pier
Re-entrant cuts shall have a 3/4" radius, unless otherwise noted.
Adjusting shims of like size may be shared among stool locations.

Stools B, D, F & H
Girder / Stringer flanges, shims and plate washers shall have 15/16" ϕ holes for 7/8" ϕ H.S. Bolts.
Each stool shall be provided with a transversely tapered shim plate as indicated above.
Longitudinally tapered shims, as may be required by the Engineer to create a smooth joint, shall be provided and paid for as Furnishing and Erecting Structural Steel.
Each stool shall be provided with a Shim Pack for vertical adjustment consisting of 2 plates of 1/4" thickness and 1 plate each of 1/2", 1/8" and 1/16" thickness.

Stools A, C, E & G
Each stool shall be provided with a Shim Pack for vertical adjustment and/or for adjustment of the longitudinal slope to create a smooth joint.
Each shim pack shall consist of 1 plate each of 1/2", 1/4", 1/8" and 1/16" thickness for each of the 2 sets (#1 & #2) of shim plate plan dimensions shown above.

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	John F. Schaeller Jr. DH
CHECKED	A.T.H. P.S.J.

FEBRUARY 4, 2002
EXAMINED John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

EXPANSION JOINT DETAILS - PIER 11 & 14
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

1 Revised Sheet 04/25/02, DC PSJ

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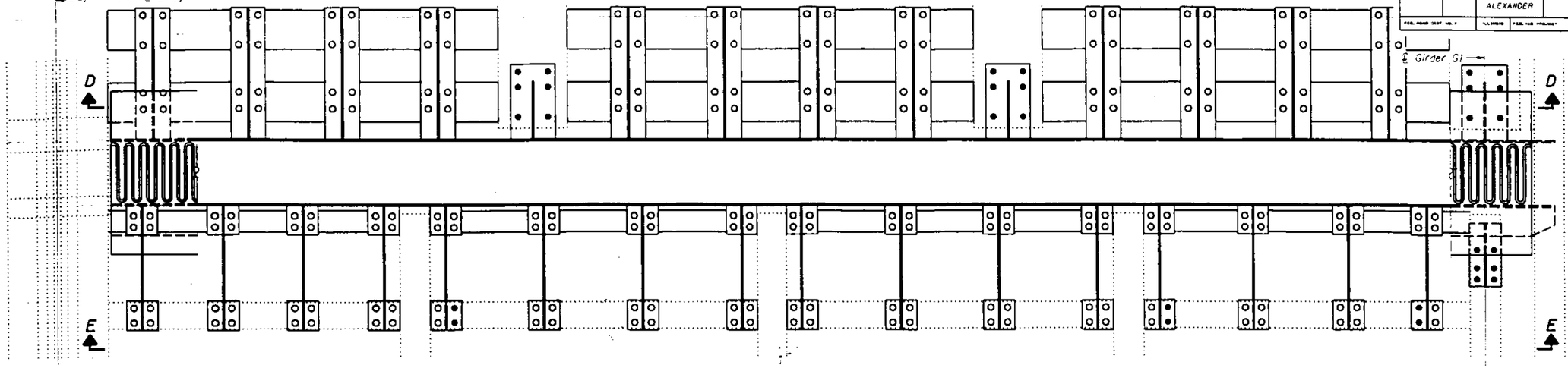
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

		ALEXANDER		

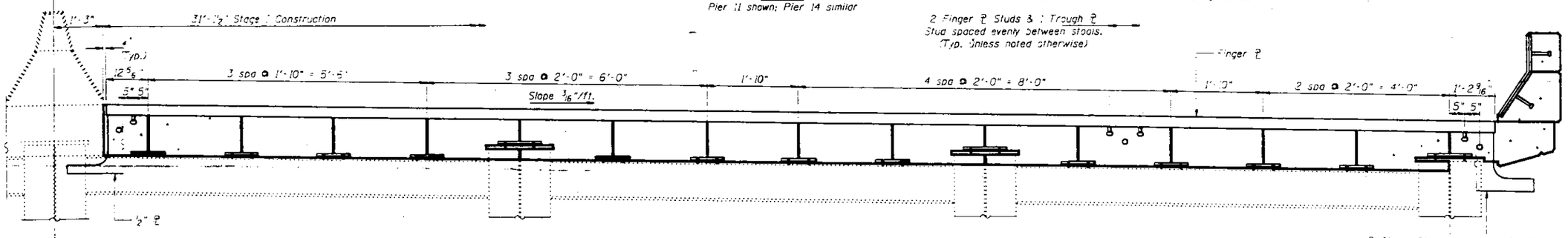
SHEET NO. 3
14 SHEETS



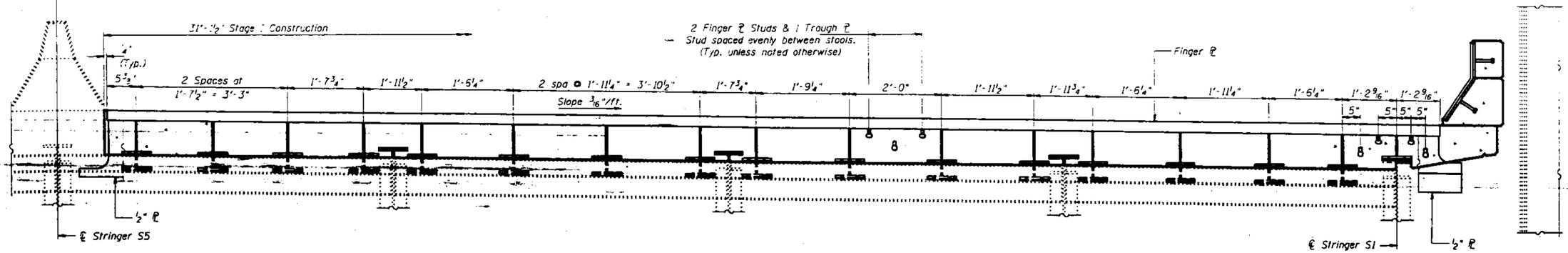
PLAN

Pier 11 shown; Pier 14 similar

○ Indicates use of holes in new or existing member.
● Indicates field drilled holes in existing member.



SECTION D-D



SECTION E-E

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	John F. Schneller Jr.
CHECKED	A.T.H. P.S.J.

FEBRUARY 4, 2002
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

Notes:
For Parapet Plate Assembly see sheet 10 of 14.

EXPANSION JOINT DETAILS - PIER 11 & 14
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

1 Revised Sheet 04/25/02, DC PSJ

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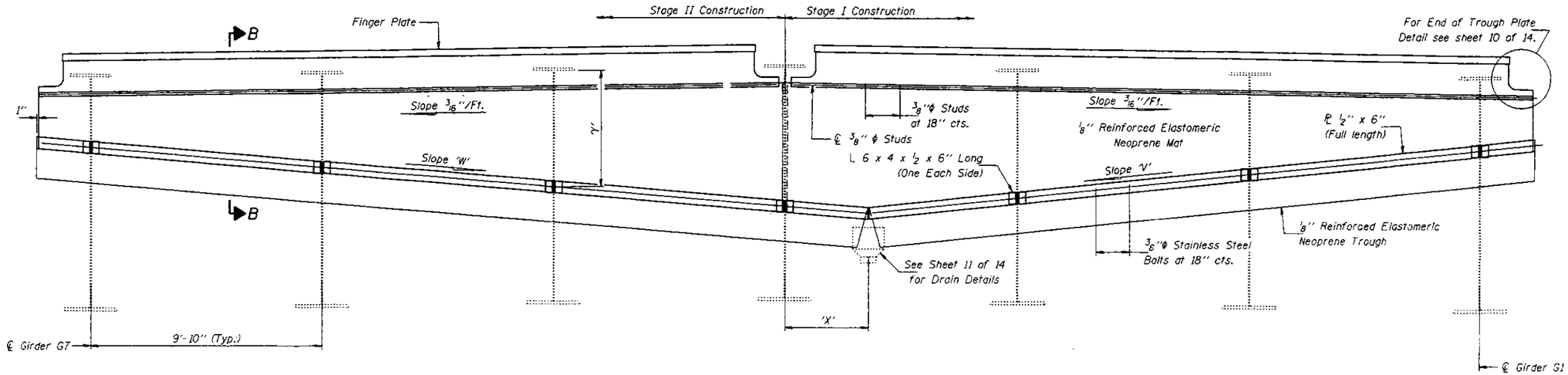
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

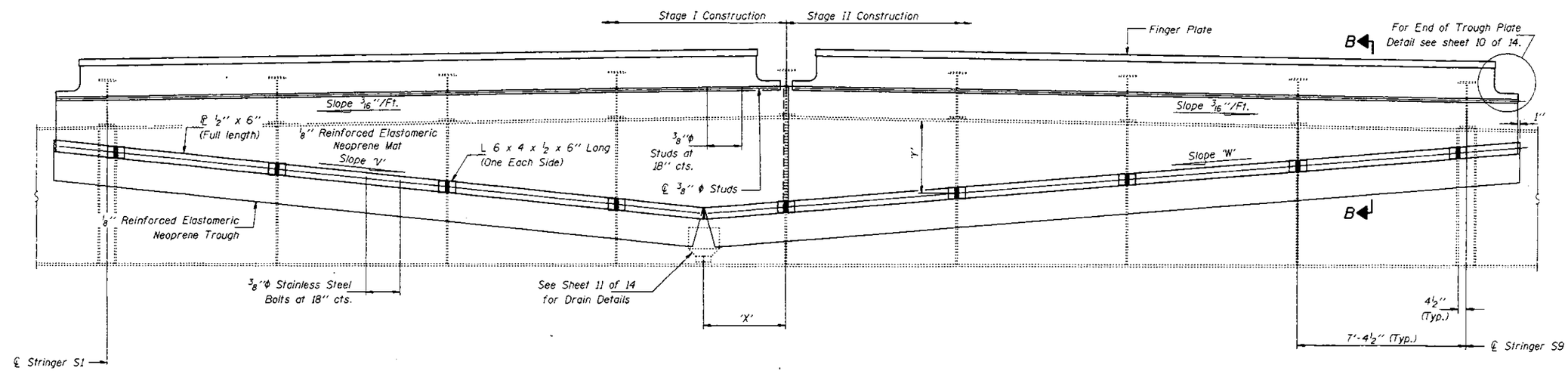
FAI ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	39	28
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

* (02-18-1) I-5

SHEET NO. 9
14 SHEETS



ELEVATION - APPROACH SPAN
(Looking North)



ELEVATION - TRUSS SPAN
(Looking South)

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	John F. Schaeller Jr. DH
CHECKED	P.S.J. A.T.H.

FEBRUARY 4, 2002

EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

Notes:
Showing Pier 11: Pier 14 similar.
For Section B-B see sheet 6 of 14.
For slopes 'V' & 'W' and dimensions 'X' & 'Y', see Sheet 10 of 14.
Dimension 'Y' is measured from the underside of the top flange of the girders (Approach Spans) or Floor Beam (Truss Spans) to the center of the connection for the 1/2" x 6" PL.

TROUGH DETAILS - PIER 11 & 14
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

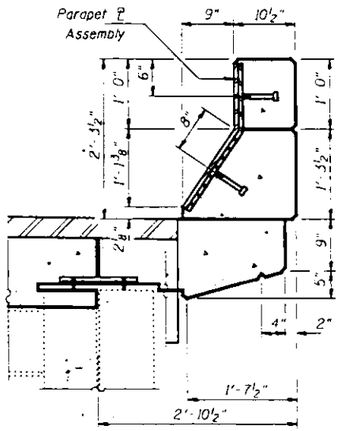
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

		ALEXANDER		

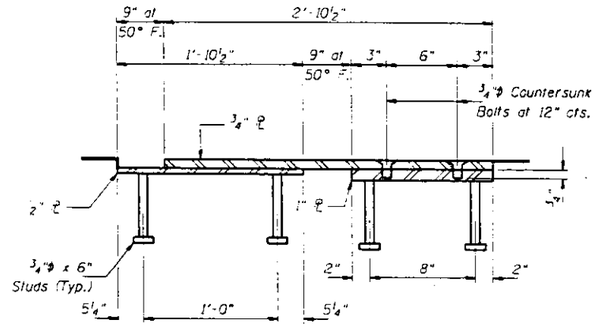
SHEET NO. 10
14 SHEETS

TROUGH DIMENSIONS

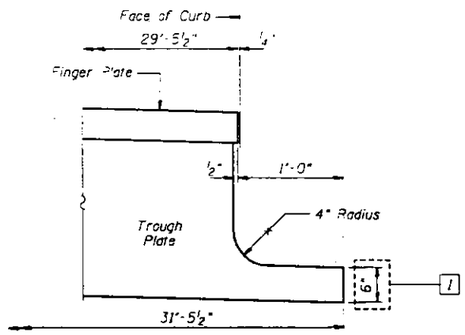
SLOPE/ DIMENSION		Pier 11	Pier 14
'y'		$1\frac{1}{4}$"/ft.	$\frac{7}{8}$"/ft.
'W'		1"/ft.	$\frac{5}{8}$"/ft.
'x'		3'-6 $\frac{3}{4}$"	4'-10 $\frac{1}{2}$"
'Y' Approach Span	G1	3'-0 $\frac{1}{2}$"	2'-6 $\frac{3}{16}$"
	G2	4'-2 $\frac{5}{8}$"	3'-4 $\frac{5}{8}$"
	G3	5'-4 $\frac{13}{16}$"	4'-3 $\frac{1}{16}$"
	G4	5'-10 $\frac{15}{16}$"	4'-6 $\frac{1}{4}$"
	G5	4'-11 $\frac{1}{4}$"	3'-10 $\frac{1}{4}$"
	G6	3'-11 $\frac{5}{8}$"	3'-2 $\frac{1}{4}$"
	G7	2'-11 $\frac{15}{16}$"	2'-5 $\frac{1}{4}$"
'Y' Truss Span	S1	1'-0 $\frac{1}{4}$"	5 $\frac{3}{4}$"
	S2	1'-10 $\frac{5}{16}$"	1'-1 $\frac{3}{16}$"
	S3	2'-8 $\frac{15}{16}$"	1'-9"
	S4	3'-7 $\frac{1}{2}$"	2'-4 $\frac{7}{8}$"
	S5	3'-10 $\frac{3}{8}$"	2'-5 $\frac{7}{16}$"
	S6	3'-1 $\frac{3}{4}$"	1'-11 $\frac{7}{16}$"
	S7	2'-4 $\frac{5}{8}$"	1'-5 $\frac{7}{16}$"
	S8	1'-7 $\frac{7}{8}$"	11 $\frac{7}{16}$"
	S9	11 $\frac{9}{16}$"	5 $\frac{3}{4}$"



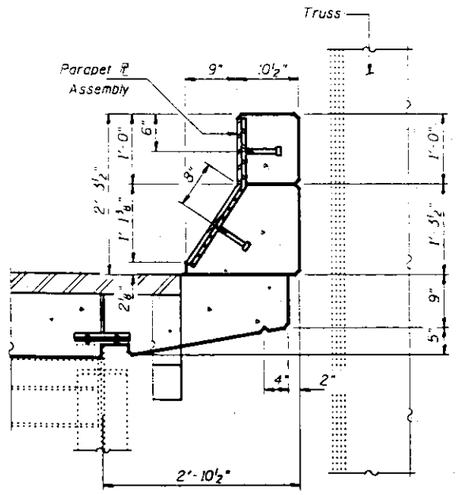
SECTION THRU CURB - SPANS 9A & 15



PARAPET PLATE ASSEMBLY DETAIL



TYPICAL END OF TROUGH PLATE DETAIL



SECTION THRU CURB - SPANS 12 & 14

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	John P. Schaller Jr.
CHECKED	A.T.H. P.S.J.

FEBRUARY 4, 2002
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

EXPANSION JOINT DETAILS - PIER 11 & 14
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

1 Revised 04/25/02. DC PSJ

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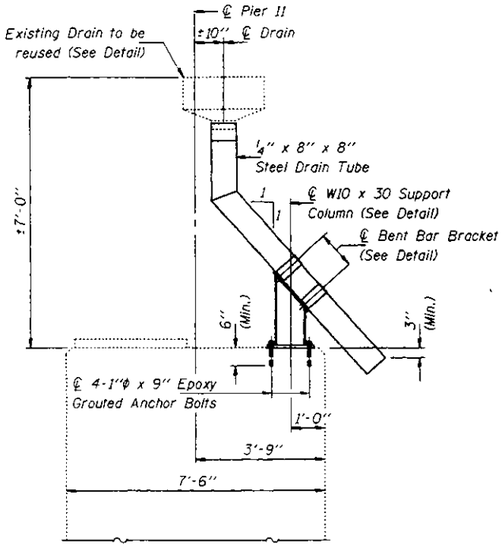
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

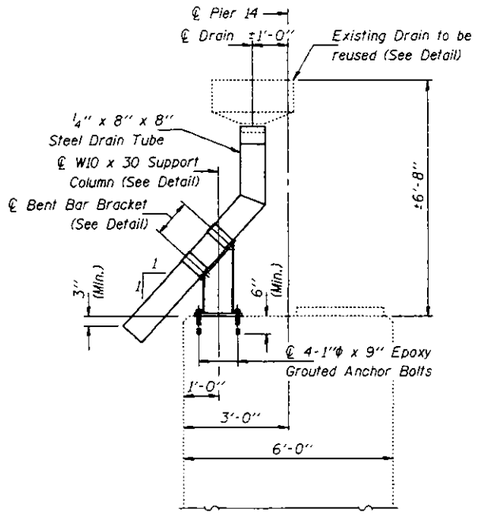
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	39	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
14 SHEETS

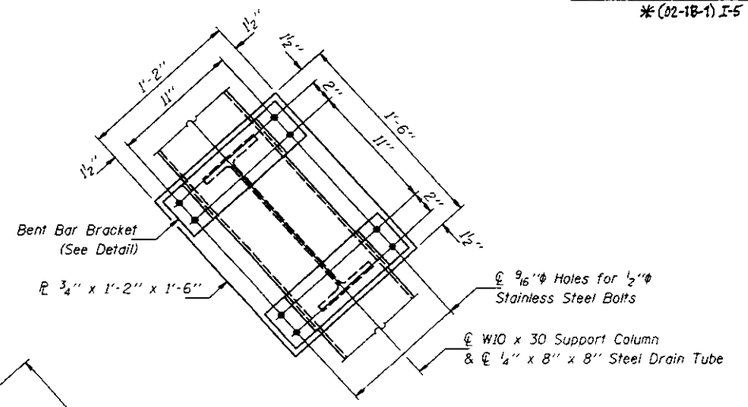
*(02-18-1) I-5



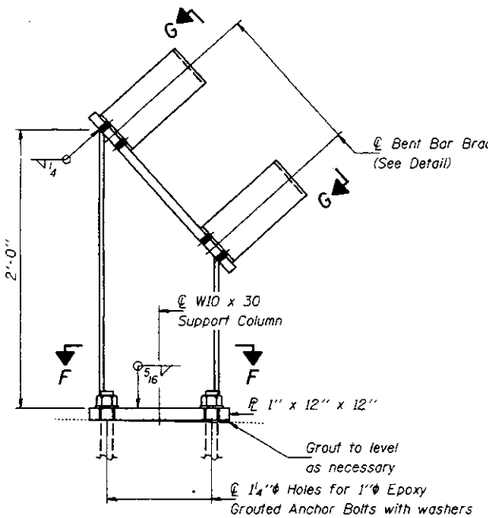
ELEVATION - PIER 11



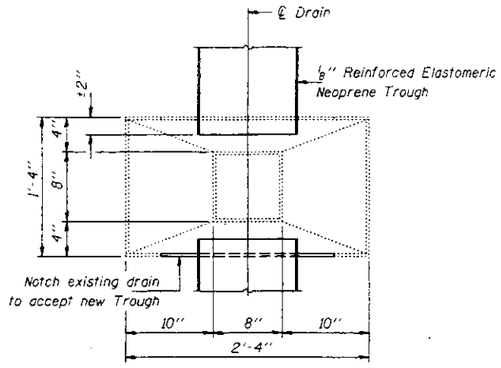
ELEVATION - PIER 14



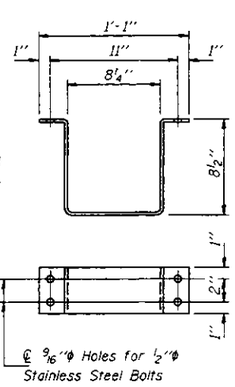
VIEW G-G



SUPPORT COLUMN
(No. Req'd. = 2)

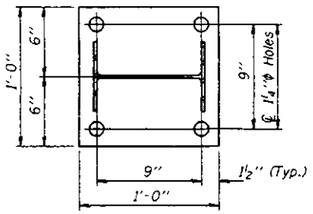


TOP VIEW

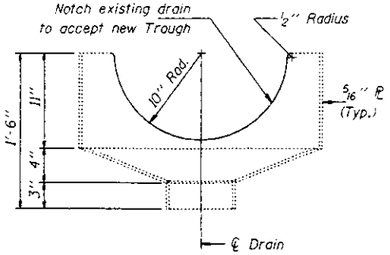


BENT BAR BRACKET DETAIL
℄ ¼" x 4" x 2'-5"
(No. Req'd. = 4)

Note: Place ⅛" thick Neoprene around Drain Tube at Bracket locations.



SECTION F-F



DRAIN ELEVATION

Notes:
The ¼" x 8" x 8" Structural Steel Tubing shall conform to the requirements of ASTM designation A-500, Grade B, Structural Steel Tubing.
Steel tubing shall be galvanized in accordance with AASHTO M111 and ASTM A-385. Cost included with Drain System.
Existing ¼" x 8" x 8" Steel Drain Tubes may be re-used for new Drainage System, as directed by the Engineer.

DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	John F. Schueller Jr. DH
CHECKED	P.S.J. A.T.H.

FEBRUARY 4, 2002
EXAMINED John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

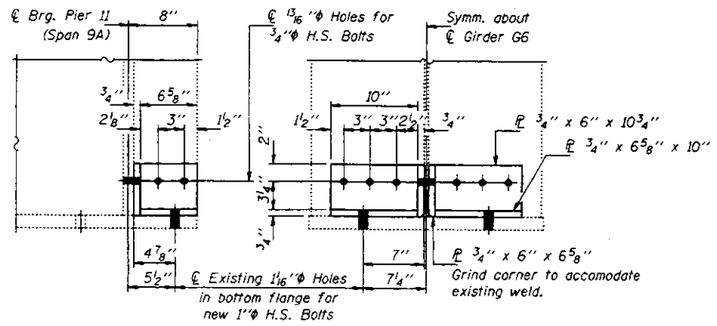
DRAIN SYSTEM - PIER 11 & 14
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

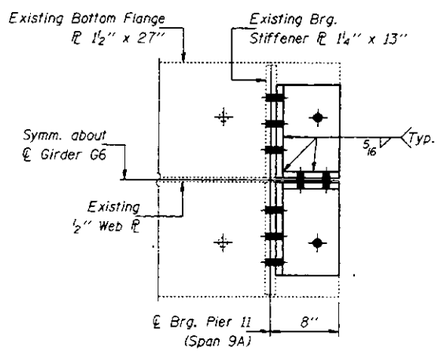
FAI ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	39	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 12
14 SHEETS

*(02-18-1) I-5



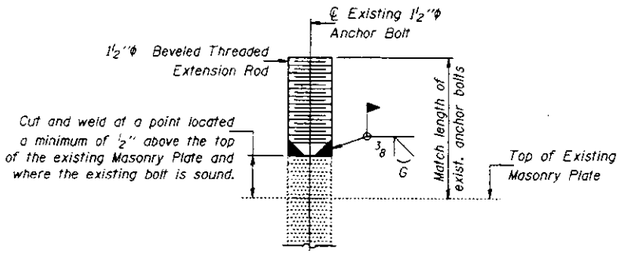
ELEVATION **END VIEW**



PLAN

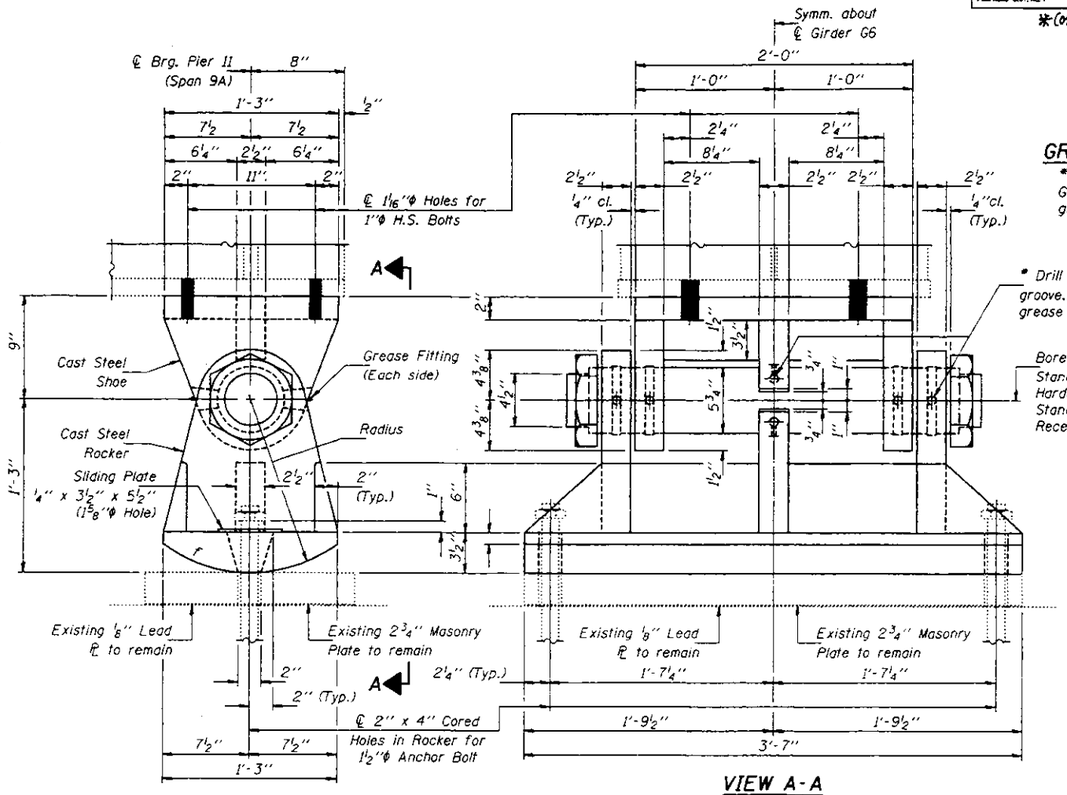
GIRDER G6 CRACK REPAIR

Notes:
The cost of all field drilling required for installation of the steel members is included with Furnishing and Erecting Structural Steel.
Estimated weight of Structural Steel for this repair = 80 Lbs.

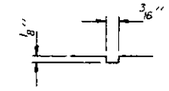


ANCHOR BOLT REPAIR DETAIL

The cost of furnishing and installation of required Anchor Bolt Extensions included with Furnishing and Erecting Structural Steel.



ELEVATION **VIEW A-A**

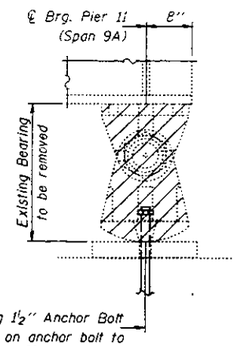


GREASE GROOVE ON SADDLE

** Note:*
Grease bearing assembly with molybdenum grease before installation.

** Drill 1/4"ϕ Holes to grease groove. Drill and tap for grease fitting. (Typ.)*

Bore 5 3/4" + 1/32" for Standard Steel Case Hardened Pin (See Standard Specifications) Recessed Hex. Nut



℄ Existing 1 1/2" Anchor Bolt
Existing nut on anchor bolt to be removed. If nut can not be removed cut anchor bolt, see Anchor Bolt Repair Detail.

EXISTING BEARING REMOVAL DETAIL

REACTION TABLE		
D	(k)	276.3
L	(k)	115.9
Imp.	(k)	11.6
Total	(k)	403.8

Minimum Jack Capacity = 255 Tons.

Notes:
Cast Steel shall conform to A.S.T.M. A486-64, Class 70, normalized.
Forged Steel shall conform to A.S.T.M. A235-64, Class F.
All other material shall conform to A.S.T.M. A36 except as otherwise noted.
Structural Steel weldments of equal section and strength may be substituted for the castings subject to approval of Engineer.
Fillet or partial penetration weld shall be used for weldments. Minimum weld size shall be 1/4 the thickness of plate being welded, except maximum size of weld need not exceed 3/4".
The estimated weight of Structural Steel for the bearing replacement = 1090 Lbs.
Cost included with Furnishing & Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing heights and shim thickness dimensions.

DESIGNED	V.H.V.
CHECKED	P.S.J.
DRAWN	John F. Schneller Jr. DH
CHECKED	V.H.V. P.S.J.

FEBRUARY 4, 2002

EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES

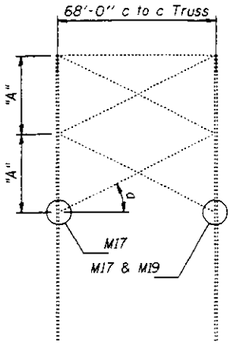
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

GIRDER CRACK REPAIR & BEARING REPLACEMENT GIRDER 6 - SPAN 9A F.A.I. 57 OVER MISSISSIPPI RIVER ALEXANDER COUNTY S.N. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	37	32
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	14 SHEETS

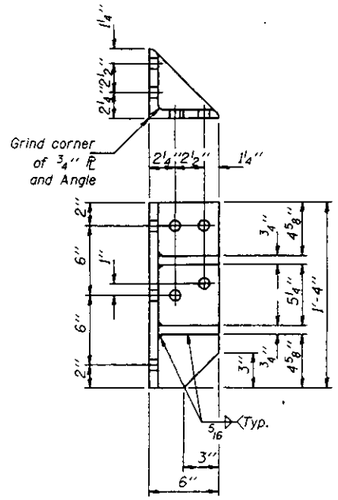
* (02-1B-1) I-5



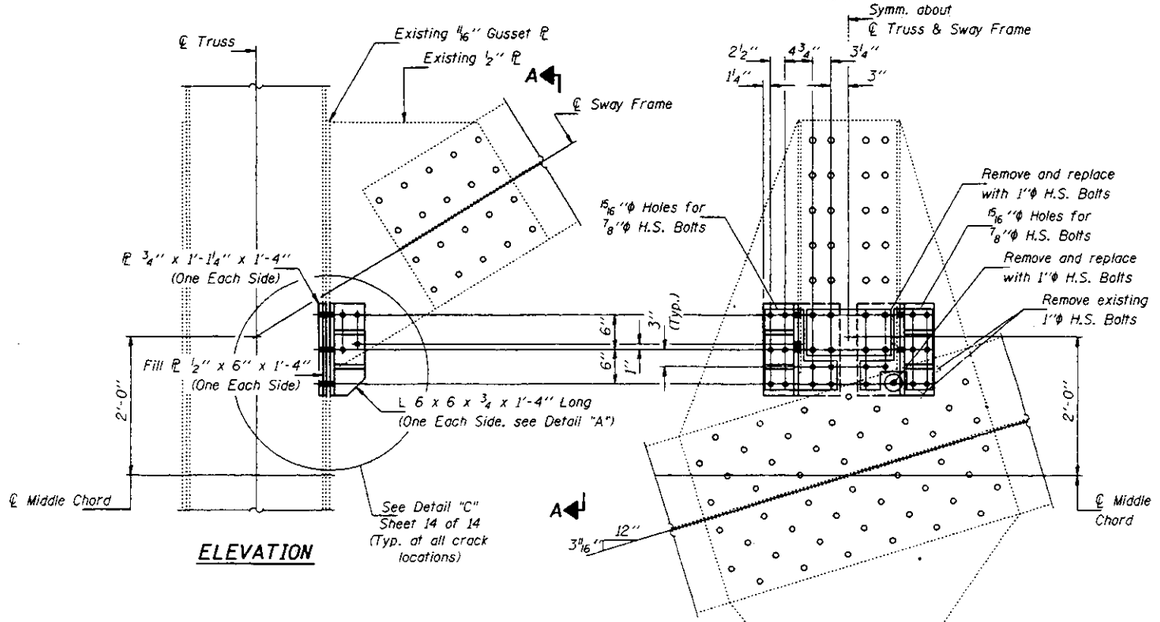
DIMENSION "A"
PP17 = 41'-6 5/16"
PP19 = 35'-2 5/16"

ANGLE "a"
PP17 = 31.406°
PP19 = 27.361°

REPAIR LOCATION AT PP17 & PP19
(Looking South)



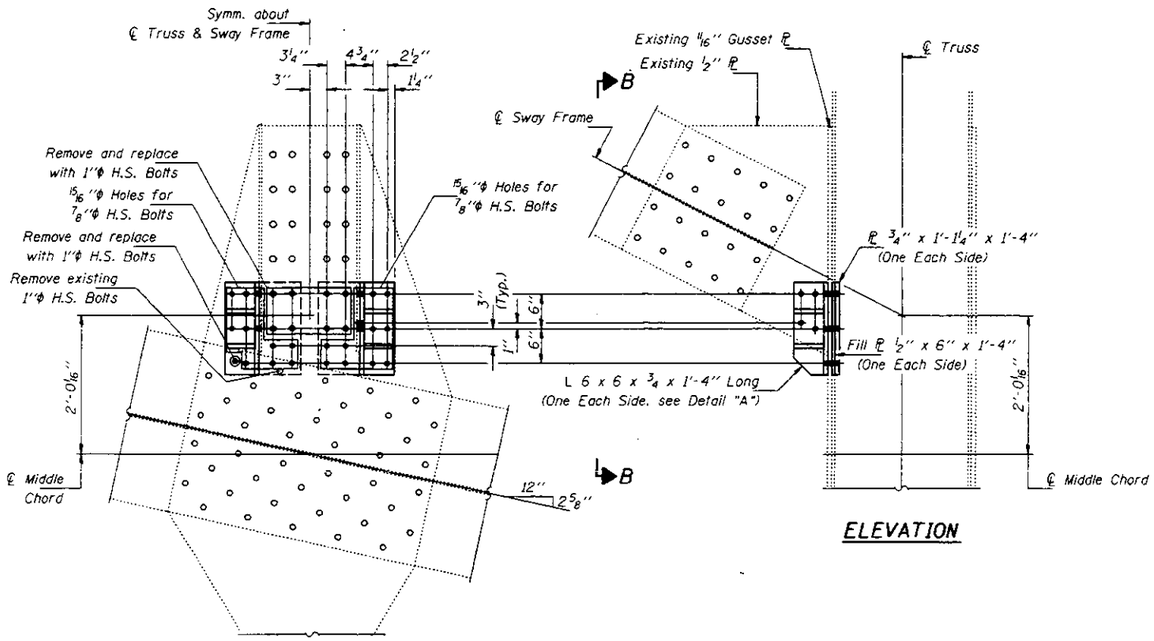
DETAIL "A"



ELEVATION

VIEW A-A

SWAY BRACING RETROFIT AT LOCATION M17
(East Truss shown, West Truss similar, 2 locations)



ELEVATION

VIEW B-B

SWAY BRACING RETROFIT AT LOCATION M19
(West Truss, 1 location)

Notes:
The cost of plates, angles, bolts and all field drilling required for installation of the steel members is included with Structural Steel Repair.
PP = Panel Point

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	600

DESIGNED	V.H.V.
CHECKED	P.S.J.
DRAWN	John F. Schneller Jr. DH
CHECKED	V.H.V. P.S.J.

FEBRUARY 4, 2002
EXAMINED John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

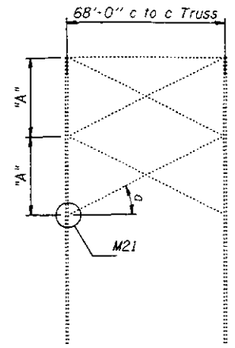
SWAY FRAME REPAIRS - M17 & M19
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	ALEXANDER	39	32A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 14
14 SHEETS

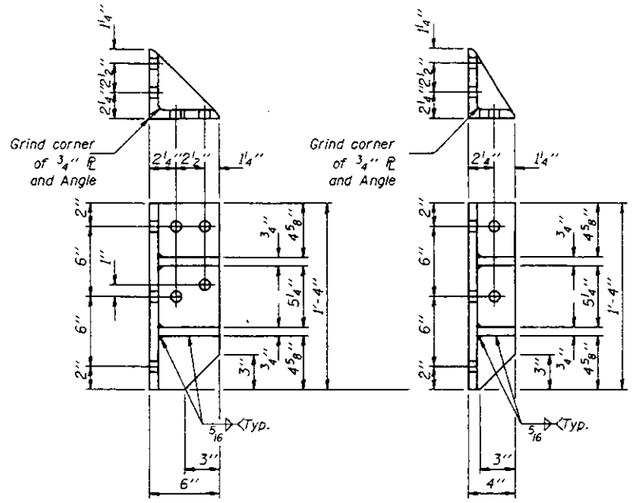
*(02-18-1) I-5



REPAIR LOCATION AT
PP21
(Looking South)

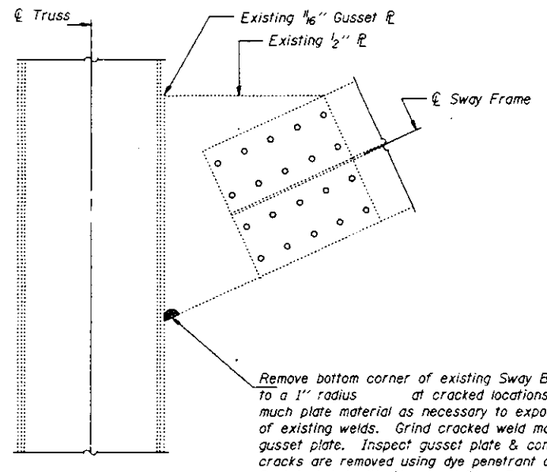
DIMENSION "A"
PP21 = 31'-1 9/16"

ANGLE "a"
PP21 = 24.595°



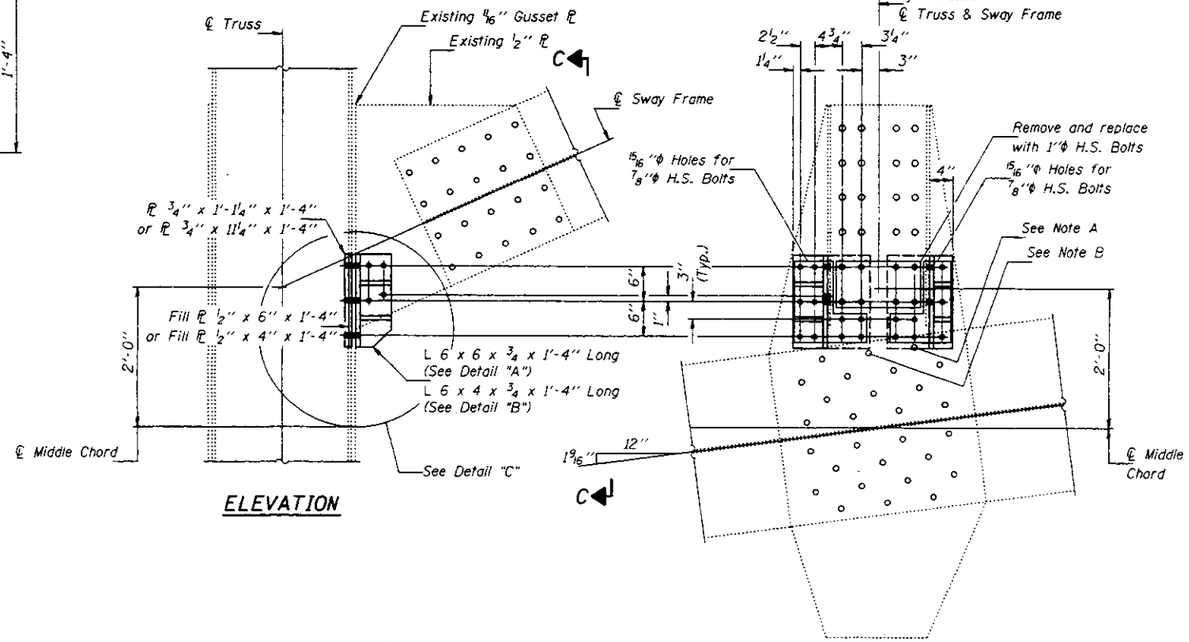
DETAIL "A"

DETAIL "B"



Remove bottom corner of existing Sway Brace Connection ℄ to a 1" radius at cracked locations. Only remove as much plate material as necessary to expose cracked portion of existing welds. Grind cracked weld material smooth against gusset plate. Inspect gusset plate & connection plate to ensure cracks are removed using dye penetrant or magnetic particle testing. Cost included with Structural Steel Repairs. Any cracks found in the gusset plate or connection plate shall be identified and reported to the Bureau of Bridges and Structures for further disposition. This work is to be done prior to any installation of repair angles and plates.

DETAIL "C"



ELEVATION

VIEW C-C

SWAY BRACING RETROFIT AT LOCATION M21
(East Truss, 1 location)

Notes:
The cost of plates, angles, bolts and all field drilling required for installation of the steel members is included with Structural Steel Repair.
PP = Panel Point

Note A:
Notch ¾" plate to clear existing 1"ϕ bolt if necessary.
Note B:
Clip ¾" plate to clear existing 1" bolt if necessary.

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	200

DESIGNED	V.H.V.
CHECKED	P.S.J.
DRAWN	John F. Schaeller Jr. D-H
CHECKED	V.H.V. P.S.J.

FEBRUARY 4, 2002

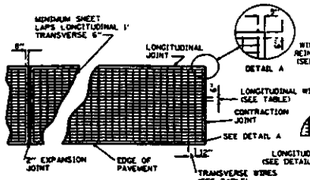
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

SWAY FRAME REPAIRS - M21
F.A.I. 57 OVER MISSISSIPPI RIVER
ALEXANDER COUNTY
S.N. 002-0022

DPS_PCES1 n:\bridges\active\002027.dgn 2/19/2002 11:46:19 AM

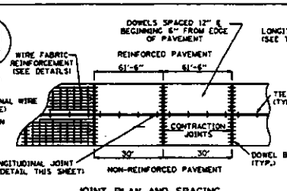
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
726	(02-1B-1) 1-5	ALEXANDER	39	33
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



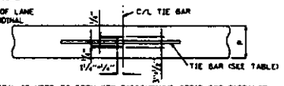
LENGTH OF SHEETS IS 16'-0". SHEETS MAY BE INCREASED TO 21' LENGTHS PROVIDED PROOF IS SUPPLIED BY THE CONTRACTOR THAT ANTICIPATED PAVING PROGRESS AND ROADWAY CURVATURE WILL PERMIT PLACEMENT

SHEETS SHALL BE FULL WIDTH OF PAVEMENT LANE. IF WIDTH OF LANE EXCEEDS 13 FEET, THE CONTRACTOR SHALL MAKE ONE LONGITUDINAL SPLICE, USING THE MOST ECONOMICAL WIDTH OF FABRIC.

PLAN WIRE FABRIC REINFORCEMENT



JOINT PLAN AND SPACING FOR CONTRACTION JOINTS

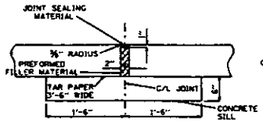


IF METAL IS USED TO FORM KEY DISCONTINUE STRIP FOR DISTANCE OF APPROXIMATELY 3" EACH SIDE OF TRANSVERSE JOINT.

TYPE (K) REQUIRES TIE BAR.

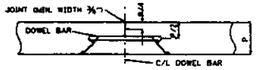
TYPE (M) CONSTRUCTED WITHOUT TIE BARS.

TONGUE AND GROOVE JOINTS (K) AND (M)



SILL SHALL EXTEND 18" BEYOND EACH EDGE OF THE PAVEMENT, AND SHALL BE CONSTRUCTED OF CONCRETE REGARDLESS OF ADJACENT BASE MATERIAL.

EXPANSION JOINTS (E)

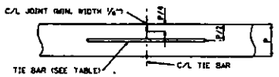


DOWELS REQUIRED. FOR PERMISSIBLE TYPES OF DOWEL SUPPORTING UNITS, SEE OTHER DRAWINGS.

(1) DOWEL BARS ARE REQUIRED FOR ALL PAVEMENTS HAVING THE SAME THICKNESS AS THE TRAVELED WAY.

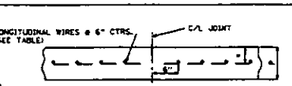
TRANSVERSE CONTRACTION JOINTS FOR CONCRETE PAVEMENT OR BASE WIDENING SHALL MATCH EXISTING JOINTS.

TRANSVERSE CONTRACTION JOINT (C1)

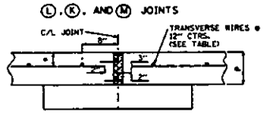


TIE BARS REQUIRED.

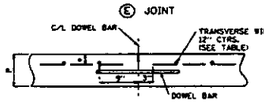
LONGITUDINAL JOINT (L)



(L), (K), AND (M) JOINTS



(E) JOINT

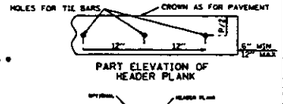


(C1) JOINT

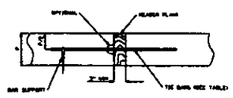
REINFORCING DETAILS

*3" + ½" FOR PAVEMENT THICKNESS OF 10" OR LESS.
4" + ½" FOR PAVEMENT THICKNESS GREATER THAN 10".

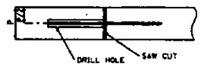
PCCP THICKNESS (IN)	SLAB REINFORCEMENT		DOWELS		TIE BARS	
	STEEL WIRE FABRIC SIZE	NO. 3 REBAR GRID	SIZE	SPACING	SIZE	SPACING
10" OR LESS	6x12 - W6.3xW4	6" x 12"	1¼" x 18"	12" CTR. - CTR.	#5 x 30"	30" CTR. - CTR.
GREATER THAN 10"	6x12 - W8xW4	6" x 12"	1½" x 18"	12" CTR. - CTR.	#6 x 40"	30" CTR. - CTR.



PART ELEVATION OF HEADER PLANK



HEADER SECTION



SAWED SECTION

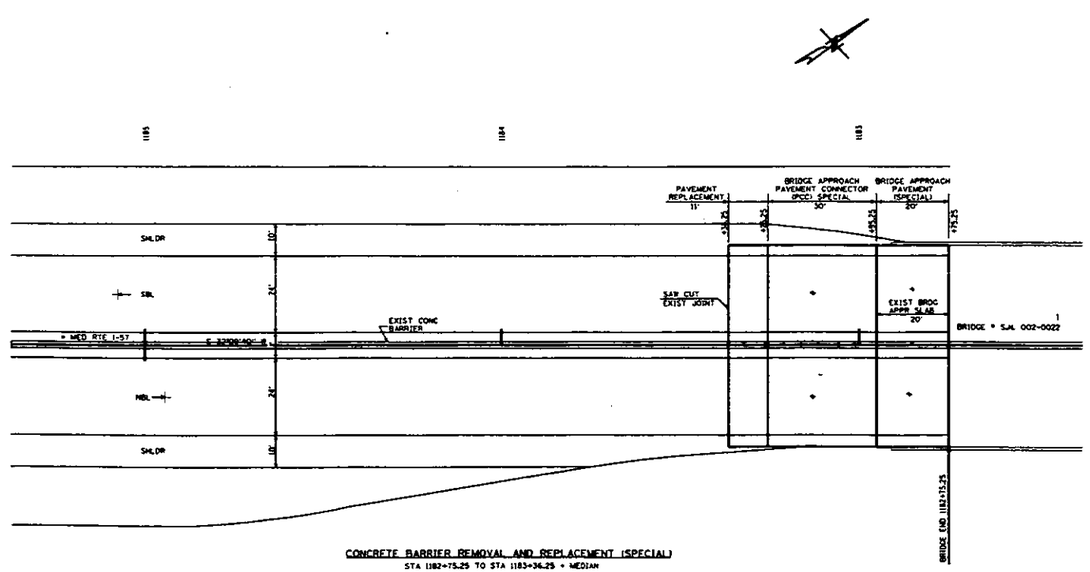
THE HEADER BOARD SHALL BE SUFFICIENTLY RIGID TO PREVENT DISTORTION FROM THE TYPICAL SECTION AND MAINTAIN A STRAIGHT LINE FROM PAVEMENT EDGE TO PAVEMENT EDGE. STRAIGHT OR BENT TIE BARS MAY BE USED WITH THE TIMBER HEADER JOINT. IF BENT BARS ARE USED, THE OPTIONAL KEYWAY MUST BE USED.

THE CONSTRUCTION JOINT MAY BE SAWED FULL DEPTH. HOLES FOR TIE BARS SHALL BE DRILLED AFTER THE CONCRETE HAS SUFFICIENT SET TO PREVENT DAMAGE. TIE BARS SHALL BE GROUTED INTO THE HOLES.

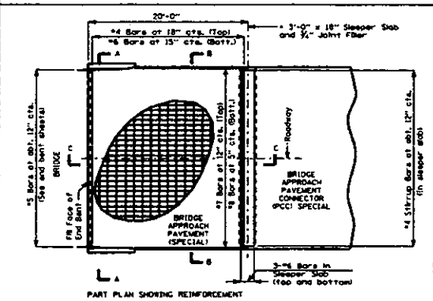
CONSTRUCTION JOINT (C)

GENERAL NOTES:
THE FINAL POSITION OF ALL DOWELS AND TIE BARS SHALL BE PERPENDICULAR WIRE SIZES SHOWN FOR STEEL WIRE FABRIC REINFORCEMENT ARE MINIMUM SIZES.

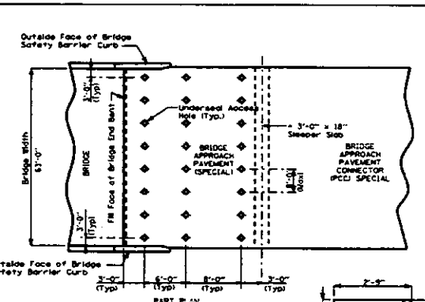
BRIDGE APPROACH PAVEMENT CONNECTOR (SPECIAL) DETAILS SHEET 1 OF 1



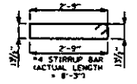
CONCRETE BARRIER REMOVAL AND REPLACEMENT (SPECIAL)
STA 1182+75.25 TO STA 1183+36.25 = MEDIAN



PART PLAN SHOWING REINFORCEMENT



PART PLAN
(SHOWING TYPICAL UNDERSEAL ACCESS HOLE LOCATIONS)



GENERAL NOTES:

The reinforcing steel in the bridge approach pavement (special) and the sleeper slab shall be epoxy coated Grade 60 with Fy = 60,000 psi.

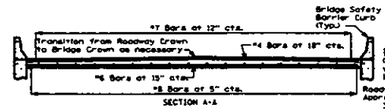
Minimum clearance to reinforcing steel shall be 1-1/2", unless otherwise shown.

The reinforcing steel in the bridge approach pavement (special) and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by lap splicing the #4 & #6 bars 18" and 26" respectively.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures. Stirrup and Tie Dimensions.

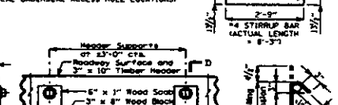
When a lap splice is required for the use of a mechanical bar splice, the minimum lap length shall be 40" for transverse bridge approach pavement (special) bar splices.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.



SECTION A-A

Note: With the approval of the Engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



SECTION D-D

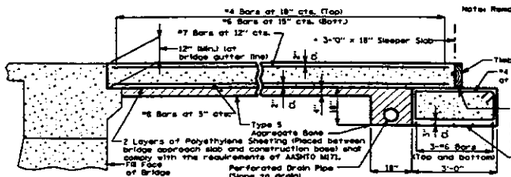
PART ELEVATION

Note: Remove timber header when concrete pavement is placed.

DETAILS OF TIMBER HEADER

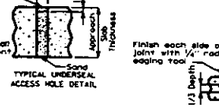
TYPICAL 135° STIRRUP HOOK DIMENSIONS BENDING DIAGRAM

Note: Nominal lengths are based on out to out dimensions shown in bending diagram and are listed for fabricators use nearest inch.

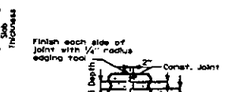


SECTION C-C

Note: This drawing is not to scale. Follow dimensions.



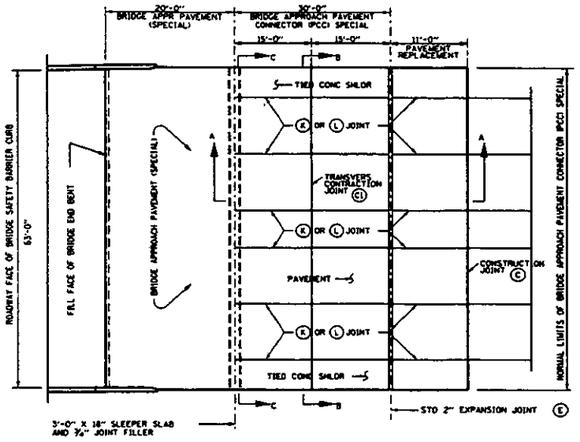
TYPICAL UNDERSEAL ACCESS HOLE DETAIL



CONST. JOINT DETAIL (IF REQUIRED)

BRIDGE APPROACH PAVEMENT (SPECIAL) SHEET 1 OF 1

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
726	(02-18-1) I-5	ALEXANDER	39	34
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PART PLAN
(SQUARE)

REINFORCEMENT TABLE		
PCCP THICKNESS (D)	STEEL WIRE FABRIC SIZE	RE-BAR
10" OR LESS	6x12 - W6.3xW4	NO. 3, 6"x12"
GREATER THAN 10"	6x12 - W8xW4	NO. 3, 6"x12"

GENERAL NOTES:

THE CONTRACTOR SHALL DETERMINE THE PAVING WIDTH. (K) JOINTS SHALL BE USED BETWEEN ADJOINING SECTIONS OF PAVEMENT. (L) JOINTS SHALL BE USED WITHIN THE PAVING WIDTH.

ALL BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL SHALL BE REINFORCED AS SHOWN IN TABLE.

LENGTH OF SHEETS IS 16'-0". SHEET LENGTHS MAY BE INCREASED PROVIDED PAVING PROGRESS OR ROADWAY CURVATURE PERMITS PLACEMENT.

SHEETS SHALL BE FULL WIDTH OF PAVEMENT LANE. IF WIDTH OF LANE EXCEEDS 13 FEET, THE CONTRACTOR SHALL MAKE ONE LONGITUDINAL SPLICE, USING THE MOST ECONOMICAL WIDTH OF FABRIC.

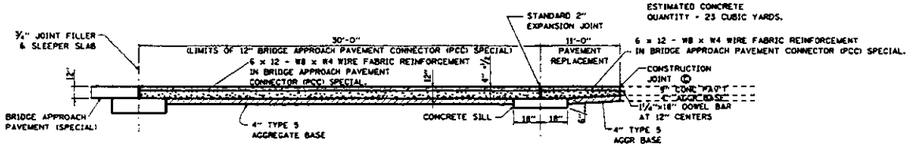
MAXIMUM SHEET OVERLAP AT SPLICE SHALL BE 1' LONGITUDINAL AND 6" TRANSVERSE.

FOR BRIDGE APPROACH PAVEMENT (SPECIAL), SLEEPER SLAB, AND JOINT FILLER DETAILS, SEE SHEET 1 OF 1, BRIDGE APPROACH PAVEMENT (SPECIAL).

FOR SECTION A-A, B-B AND C-C, SEE SHEET 2 OF 2, BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL.

COST OF FURNISHING AND PLACEMENT OF 4" TYPE 5 AGGREGATE BASE AND ¾" JOINT FILLER IS INCLUDED IN CONTRACT UNIT BID PRICE FOR BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL.

BRIDGE APPROACH
PAVEMENT CONNECTOR PCC (SPECIAL)
SHEET 1 OF 2

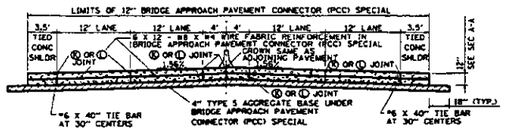


ESTIMATED CONCRETE QUANTITY - 23 CUBIC YARDS.

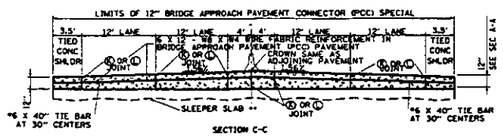
SECTION A-A

GENERAL NOTES: FOR LOCATION OF SECTION A-A, B-B, C-C, SEE SPECIAL SHEET 1 OF 2, BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL.

STANDARD WIRE FABRIC REINFORCING SHALL BE USED IN PAVEMENT REPLACEMENT.



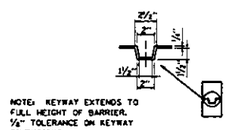
SECTION B-B



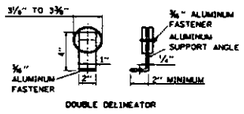
SECTION C-C

**TOP OF SLEEPER SLAB MAY BE FLAT OR CROWNED, SEE SPECIAL SHEET 1 OF 1, BRIDGE APPROACH PAVEMENT (SPECIAL).

BRIDGE APPROACH
PAVEMENT CONNECTOR PCC (SPECIAL)
SHEET 2 OF 2

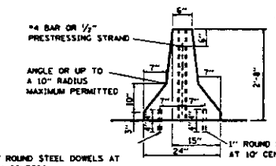


NOTE: KEYWAY EXTENDS TO FULL HEIGHT OF BARRIER. ½" TOLERANCE ON KEYWAY DIMENSIONS.



DOUBLE DELINEATOR

DELINEATORS TO BE MOUNTED ON TRAFFIC BARRIERS SHALL BE YELLOW WHERE THE BARRIER IS ON THE LEFT IN THE DIRECTION OF TRAFFIC, SHALL BE WHITE WHERE THE BARRIER IS ON THE RIGHT IN THE DIRECTION OF TRAFFIC; AND SHALL BE DOUBLE YELLOW WHERE THE BARRIER IS IN THE MEDIAN WITH TRAFFIC IN EACH DIRECTION.

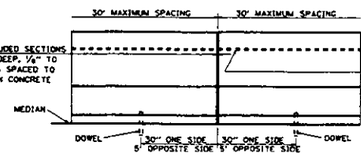


1" ROUND STEEL DOWELS AT 10" CENTERS.

TYPE A - TWO TRAFFIC FACES
TYPE B - ONE TRAFFIC FACE

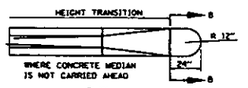
TYPICAL SECTION

THE CAST-IN-PLACE AND EXTRUDED SECTIONS SHALL BE PROVIDED WITH 2" DEEP, ½" TO ½" WIDE CONTRACTION JOINTS SPACED TO MATCH CONTRACTION JOINTS IN CONCRETE MEDIAN OR 30' MAXIMUM.



ELEVATION
CAST-IN-PLACE OR EXTRUDED SECTION

THE *4 BAR OR ½" PRESTRESSING STRAND SHALL BE CONTINUOUS THROUGH CONTRACTION JOINTS.



WHERE CONCRETE MEDIAN IS NOT CARRIED AHEAD

PLAN

GENERAL NOTES:

PRECAST UNITS WILL NOT BE PERMITTED.

PERMANENT INSTALLATIONS REQUIRE THE BARRIER TO BE DOWELED, EXCEPT WHEN THE PLANS SPECIFY A MINIMUM 1¾" OF BITUMINOUS MATERIAL TO BE PLACED ABUTTING BOTH BARRIER FACES.

PERMANENT INSTALLATIONS AT BRIDGES OR BRIDGE APPROACH PAVEMENT (SPECIAL) REQUIRE THE SECTION TO BE CABLED.

DELINEATOR:

ALL MATERIAL FOR SUPPORTING DELINEATORS SHALL BE ALUMINUM EXCEPT ANCHOR DEVICES.

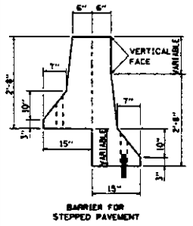
ANCHOR DEVICES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AND SHALL BE EXPANSIVE BOLTS OR ADHESIVE SELF-GROUTING BOLTS. IF GALVANIZED STEEL BOLTS ARE USED, A NON-CONDUCTIVE WASHER SHALL BE USED BETWEEN THE ALUMINUM ALLOY SUPPORT ANGLE AND THE HEAD OF THE BOLT.

DELINEATOR SPACING:

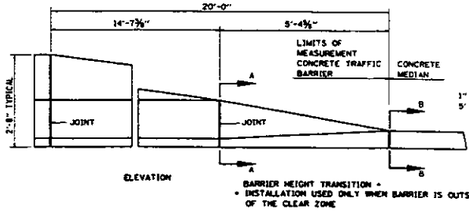
0+ TO 2+45' CURVE - 100' SPACING; 3+ TO 6+ CURVE - 60' SPACING

NO DIRECT PAYMENT IS MADE FOR DELINEATORS.

EXPANSIVE JOINTS SHALL BE PROVIDED IN THE BARRIER TO CONFORM WITH EXPANSION JOINTS IN PAVEMENT.

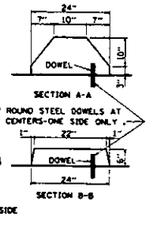


BARRIER FOR STEPPED PAVEMENT



ELEVATION

BARRIER HEIGHT TRANSITION *
* INSTALLATION USED ONLY WHEN BARRIER IS OUTSIDE OF THE CLEAR ZONE



CONCRETE BARRIER REMOVAL AND REPLACEMENT (SPECIAL)
SHEET 1 OF 1

#98623 #40 11-5-99 FAI 57 Alexander Co. IL/Mississippi Co. Mo SEC. (02-1B-1)I-4 I&R #40

40

99.9%
9-10-2000

S.N. 002-0022

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1)I-4	ALEXANDER	9	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY

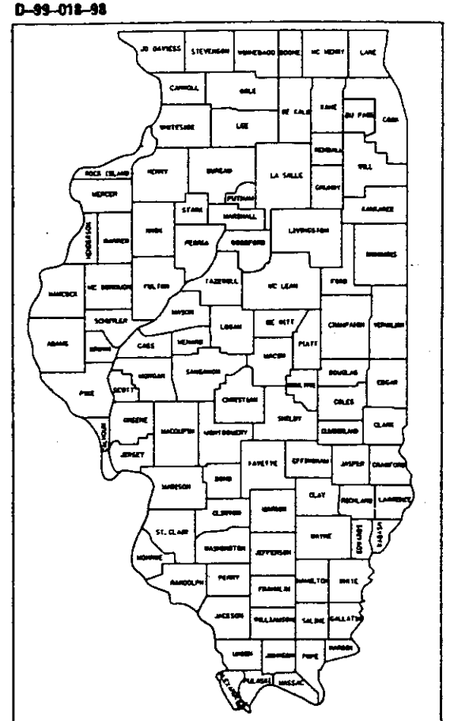
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 2

TRAFFIC DATA

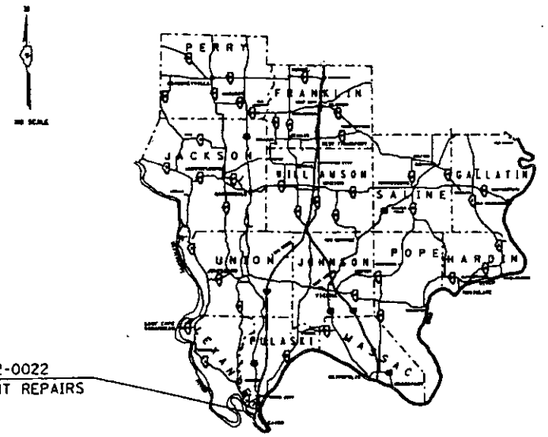
STR. NO.	ADT.	M.U.%
002-0022	9,300	37

FAI ROUTE 57 (I-57)
SECTION: (02-1B-1)I-4
NAVIGATION LIGHT REPAIRS
ALEXANDER CO., IL. & MISSISSIPPI CO., MO.
C-99-013-00

D-99-013-98



LOCATION OF SECTION INDICATED THUS: - ▬▬



STRUCTURE NO. 002-0022
NAVIGATIONAL LIGHT REPAIRS

GROSS LENGTH OF PROJECT = WITHIN EXISTING LIGHTING SYSTEM

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Aug 26 19 99
Robert Ritchmyer
DISTRICT ENGINEER

October 1 19 99
Bill Hunley
ENGINEER OF DESIGN AND ENVIRONMENT

October 1 19 99
James C. Sluder
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

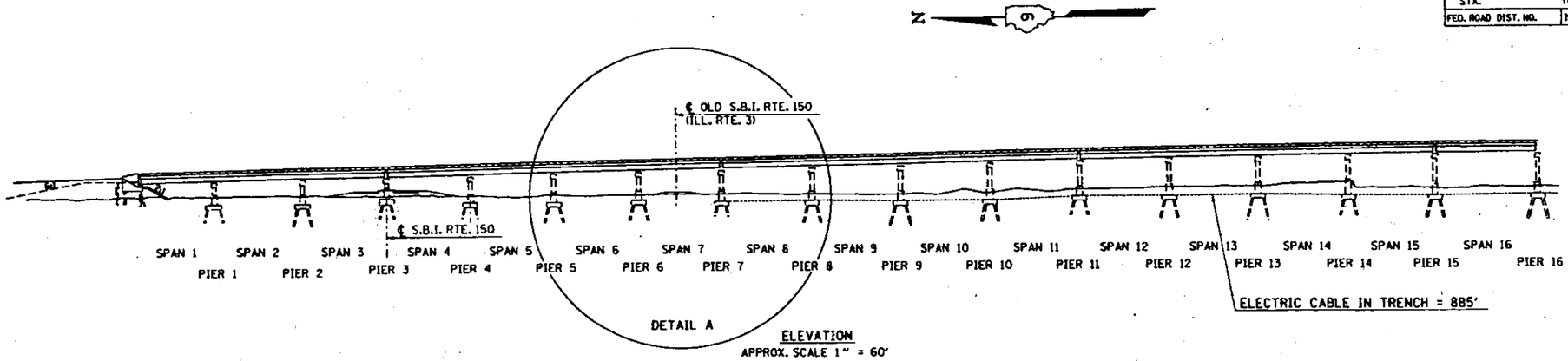
CONTRACT NO. 98623
002-0022

9-163

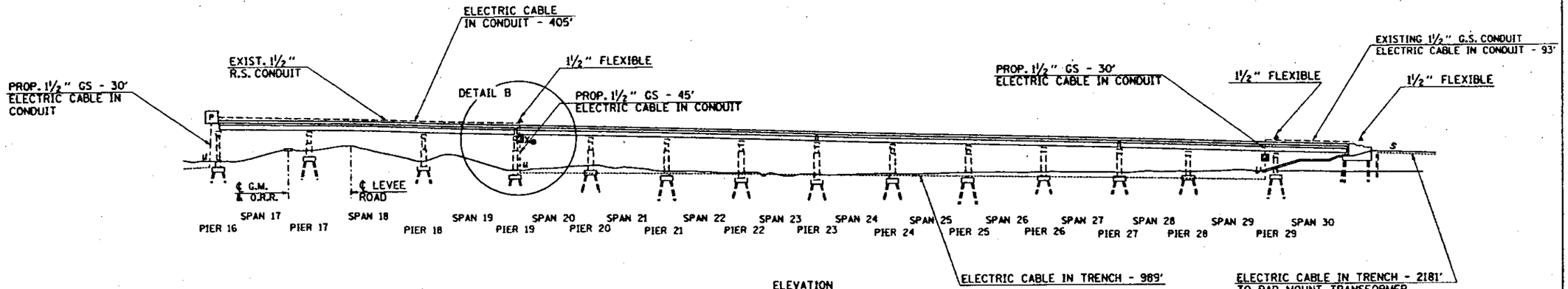
PROJECT ENGINEER: DOUG KEIRN (618)351-5313

COUNTY: ALEXANDER SECTION: (02-1B-1)I-4 ROUTE: I-57

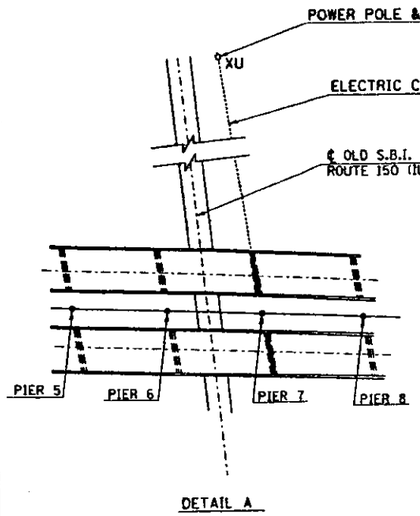
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	102-1B-1) 1-4	ALEXANDER	9	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



ELEVATION
APPROX. SCALE 1" = 60'



ELEVATION
APPROX. SCALE 1" = 60'



DETAIL A

THE FOLLOWING ITEMS TO BE INCLUDED IN THE COST OF ELECTRIC CABLE IN CONDUIT, 15KV (EPR-TYPE) 1/C NO. 2, ALUMINUM:

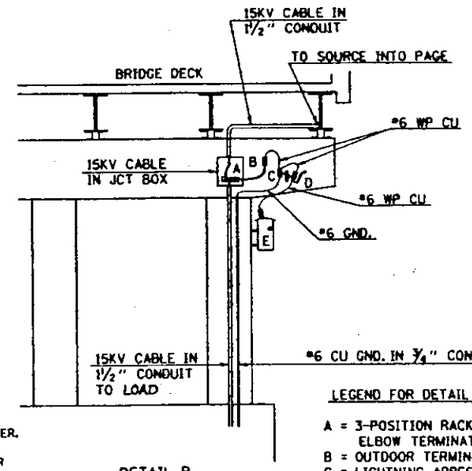
1.) 15KV OUTDOOR CABLE TERMINATION (QUANTITY - 1) A 15KV OUTDOOR CABLE TERMINATION COLD SHRINK UNIT SPECIFICALLY DESIGNED FOR RISER POLE APPLICATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

2.) 15 KV ELBOW TERMINATOR (QUANTITY - 4) A 15KV LOADBREAK ELBOW TERMINATOR SPECIFICALLY SIZED FOR THE NO. 2 ALUMINUM EPR CABLE. A 3-POSITION RACK IS REQUIRED FOR THE ENCLOSURE OF PIER 19 (S.N. 002-0024 - SEE DETAIL B) AND ALSO INCLUDES THE PARKING STANDS, STANDOFF INSULATORS, AND GROUNDED BUSHINGS NECESSARY FOR SAFE OPERATION. A TEE-SPLICE MAY BE USED IN LIEU OF THE 3-POSITION RACK AT PIER 19 WITH THE ENGINEER'S APPROVAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

3.) 15KV CABLE SPLICE - A 15KV PREMOLDED CABLE SPLICE SPECIFICALLY SIZED FOR NO. 2 ALUMINUM EPR CABLE. DESIGNED FOR JACKETED CABLE. ELECTRICALLY TESTED TO MEET OR EXCEED THE CABLE WITHSTAND RATINGS, AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

NO SPLICES WILL BE PERMITTED EXCEPT THOSE NOTED ON THE PLANS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

4.) METAL CONDUIT GUARD - A METAL "U" GUARD WITH BACKING PLATE TO COVER AND PROTECT CONDUIT RISER AT GROUND PENETRATION POINT. GUARD WILL ATTACH TO POLE WITH LAG BOLTS OR EXTENSION ANCHORS.



DETAIL B

LEGEND FOR DETAIL B

A = 3-POSITION RACK WITH ELBOW TERMINATORS
B = OUTDOOR TERMINATOR
C = LIGHTNING ARRESTOR
D = CUTOUT
E = 10KVA TRANSFORMER

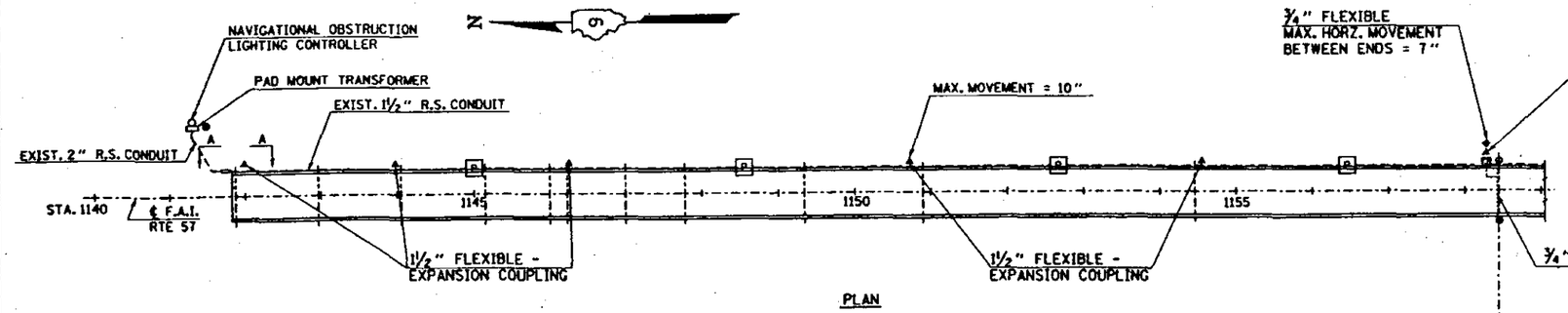
LEGEND

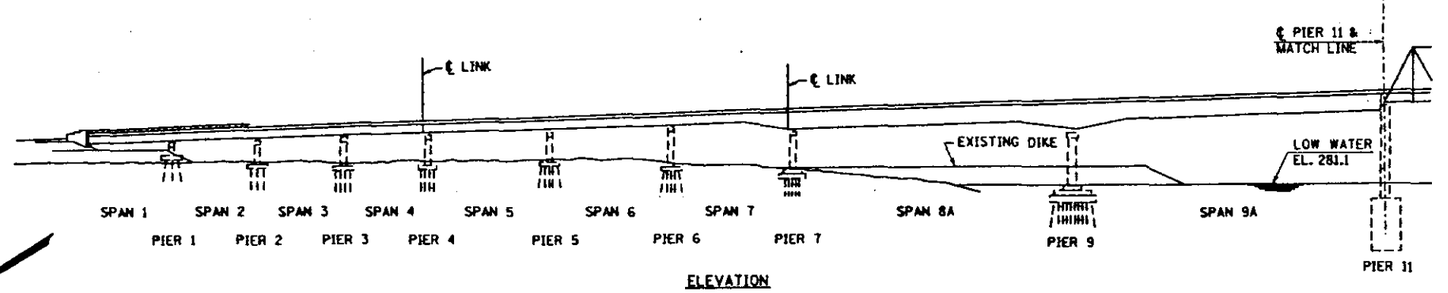
- ELECTRIC CABLE IN TRENCH, SERVICE, 15 KV (EPR) 1/C #2 ALUM (LENGTH)
- CONDUIT ATTACHED TO STRUCTURE, 1½" DIA., GALVANIZED STEEL (SIZE, TYPE, LENGTH)
- ● 15KV ELBOW TERMINATOR (5)
- ▲ CONDUIT, FLEXIBLE, METALLIC, WEATHERPROOF, 1½" (SIZE, TYPE)
- X 15KV OUTDOOR CABLE TERMINATION
- U METAL CONDUIT GUARD
- S 15KV CABLE SPLICE
- ◘ JUNCTION BOX - STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" x 12" x 8"
- [P] PULL BOX, STAINLESS STEEL ATTACHED TO STRUCTURE, 12" x 10" x 6"

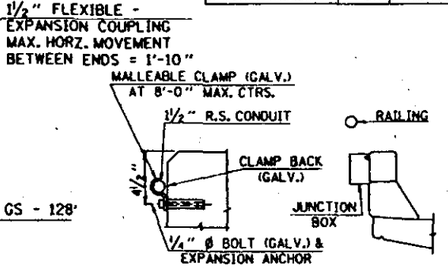
Rev.

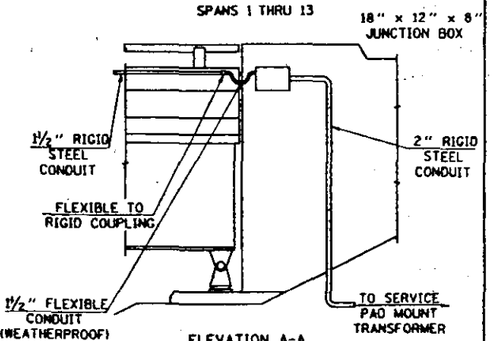
LIGHTING PLAN (S.N. 002-0024)

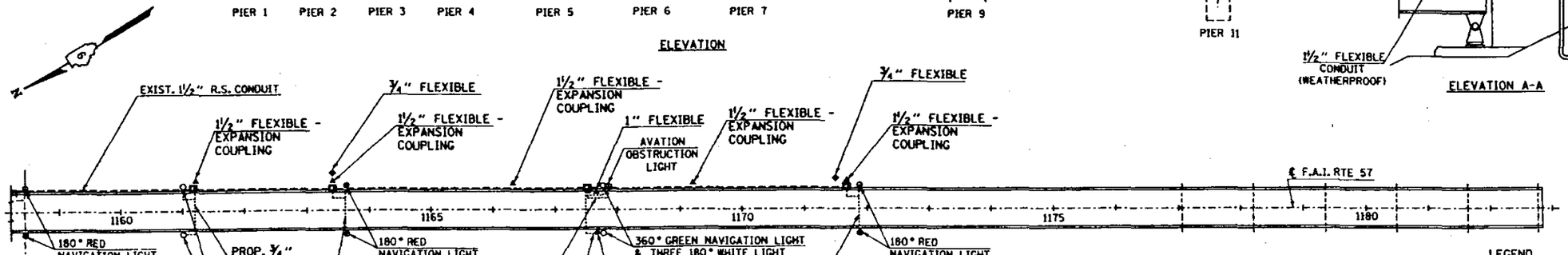
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1) I-4	ALEXANDER	9	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

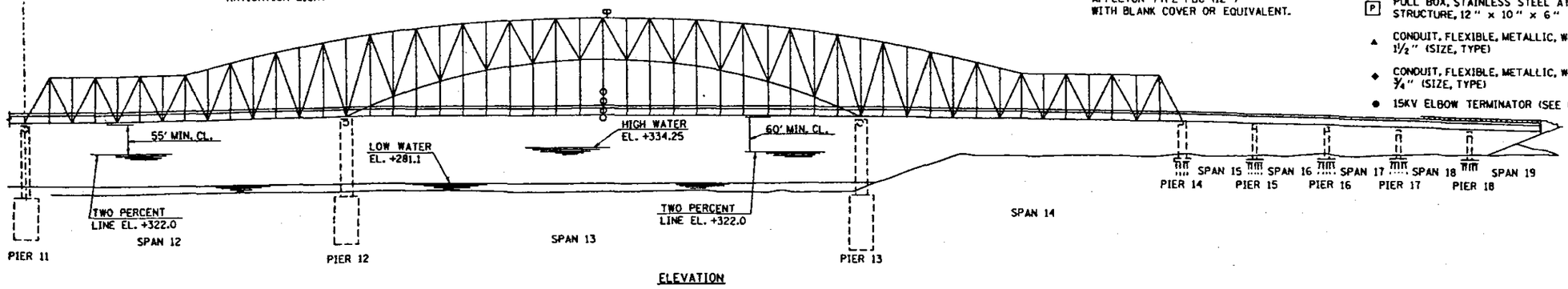












NOTES:

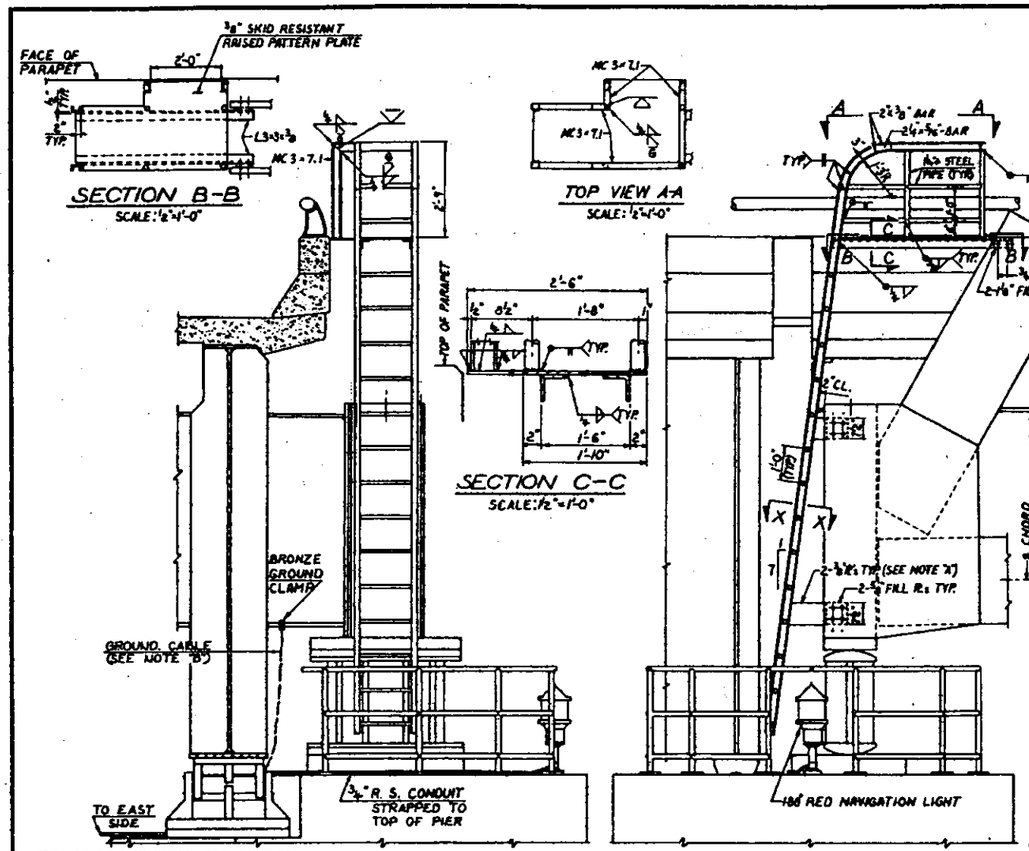
ALL JUNCTION BOXES SHALL BE 18" x 12" x 8".

ALL PULL BOXES SHALL BE APPLETON TYPE PBC (12") WITH BLANK COVER OR EQUIVALENT.

LEGEND

- CONDUIT ATTACHED TO STRUCTURE, ¾" DIA., GALVANIZED STEEL (SIZE, TYPE, LENGTH)
- JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" x 12" x 8"
- [P] PULL BOX, STAINLESS STEEL ATTACHED TO STRUCTURE, 12" x 10" x 6"
- ▲ CONDUIT, FLEXIBLE, METALLIC, WEATHERPROOF, 1½" (SIZE, TYPE)
- ◆ CONDUIT, FLEXIBLE, METALLIC, WEATHERPROOF, ¾" (SIZE, TYPE)
- ● 15KV ELBOW TERMINATOR (SEE PAGE 8)

LIGHTING PLAN (S.N. 002-0022)



FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	**	9	7
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* (02-1B-1)I-4

**ALEXANDER COUNTY

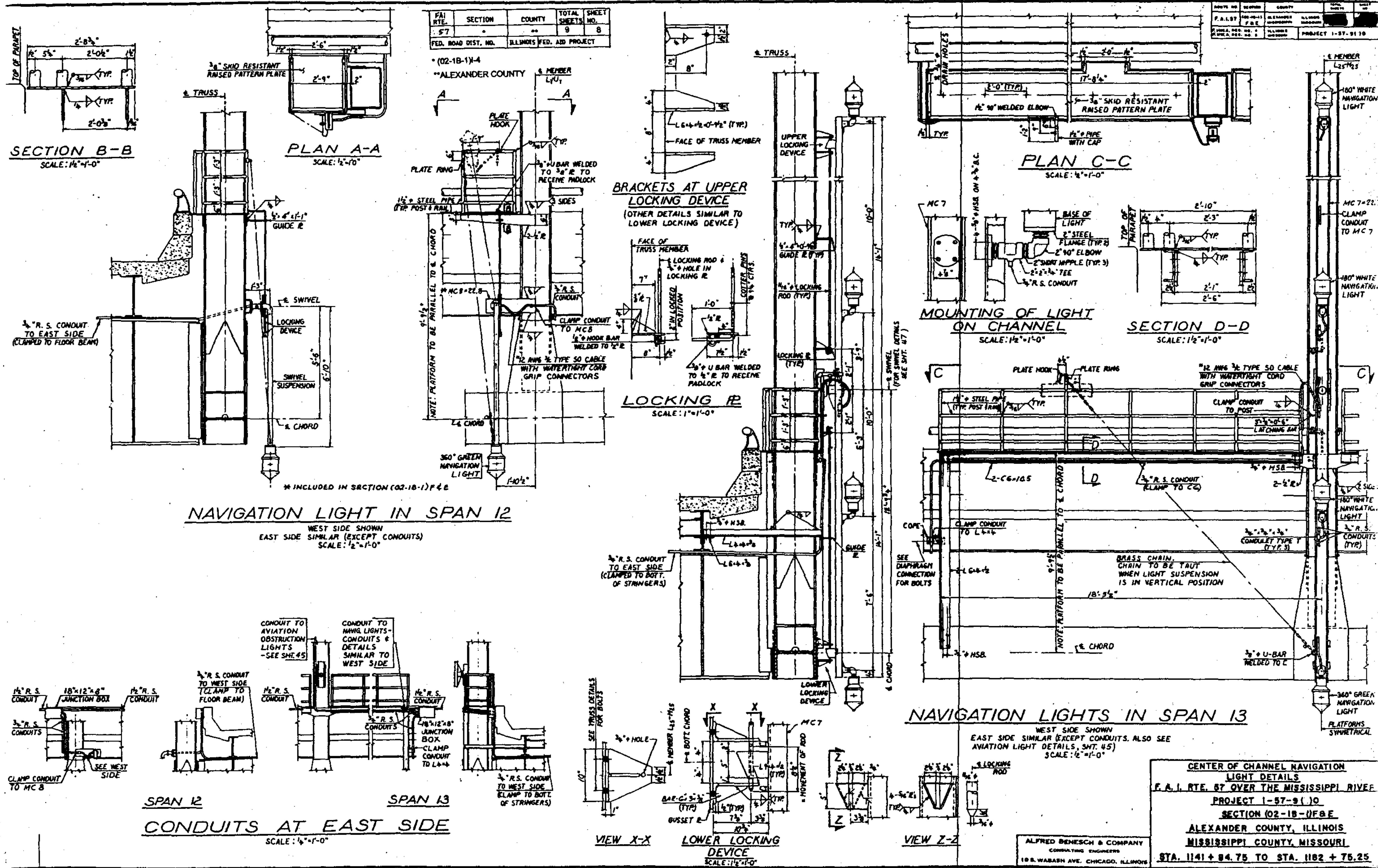
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

PIER LIGHT, LADDER & RAILING DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	**	9	8
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

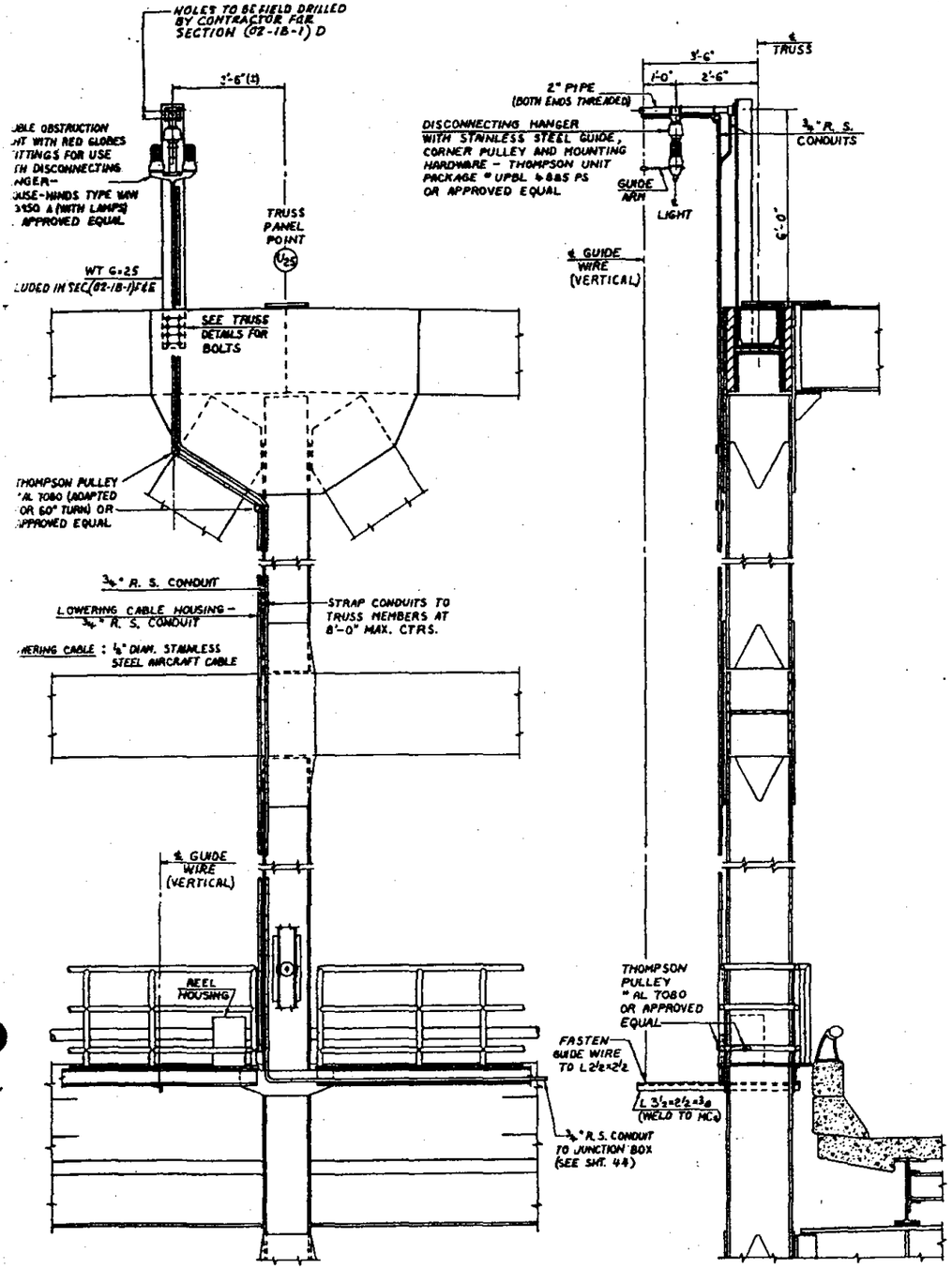
* (02-1B-1)I-4

**ALEXANDER COUNTY



ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

CENTER OF CHANNEL NAVIGATION LIGHT DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25



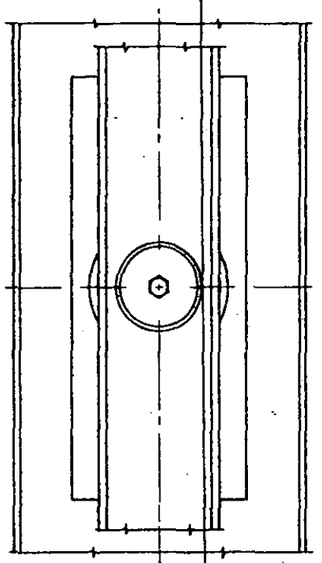
AVIATION OBSTRUCTION LIGHTING DETAILS

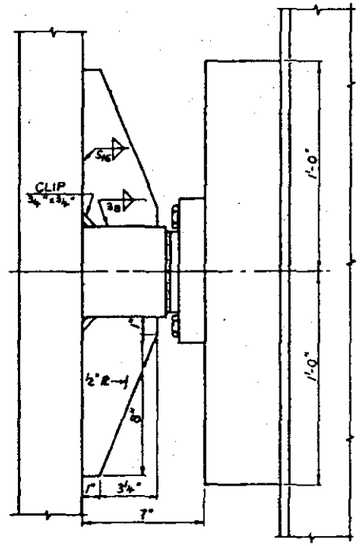
ON EAST SIDE OF BRIDGE
SCALE: ½"=1'-0"

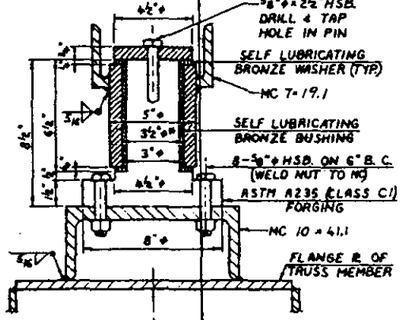
FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	**	9	9
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (02-1B-1)I-4

**ALEXANDER COUNTY







CLEARANCES AND SURFACE FINISHES SHALL BE AS REQUIRED FOR PROPER OPERATION OF THE SELF LUBRICATING BUSHING AND WASHERS

* INTERFERENCE FIT BETWEEN BUSHING & HOUSING

SWIVEL FOR NAVIGATION LIGHT SUSPENSION IN SPAN 13

SCALE: 3"=1'-0"

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 F&E	ALEXANDER ILLINOIS		
F.A.S. Rte.			PROJECT I-57-9(10)	

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
100 S. WABASH AVE. CHICAGO, ILLINOIS

AVIATION OBSTRUCTION LIGHT DETAILS
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

#98624 #46 11-5-99 FAI 57, FAI 24, FAS 944 Alexander-Massac, IL Sec. FY99 Clearance Guage Painting J&R
Mississippi, MO / McCracken, KY

46 100% 6-5-2000

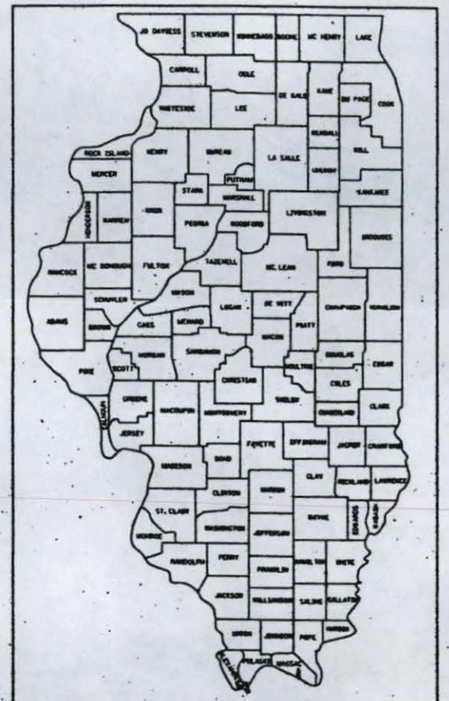
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	**	11	1
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* FY 99 CLEARANCE GAUGE PAINTING
** ALEXANDER & MASSAC

D-99-018-98



LOCATION OF SECTION INDICATED THUS:- ▬▬

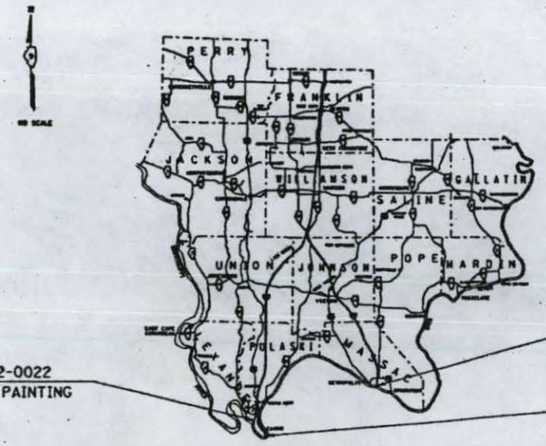
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 2

TRAFFIC DATA

STR. NO.	ADT.	M.U.T.
002-0022	9,300	37
002-0005	4,300	15
064-0035	26,300	17

FAI ROUTES 57 & 24, FAS 944 (I-57, I-24, US 60/62)
SECTION: FY 99 CLEARANCE GAUGE PAINTING

ALEXANDER & MASSAC CO. (IL.), McCRACKEN CO. (KY.), & MISSISSIPPI CO. (MO.)
C-99-014-00



STRUCTURE NO. 002-0022
CLEARANCE GAUGE PAINTING
BRIDGE NO. 1

STRUCTURE NO. 064-0035
CLEARANCE GAUGE PAINTING
BRIDGE NO. 3

STRUCTURE NO. 002-0005
CLEARANCE GAUGE PAINTING
BRIDGE NO. 2

GROSS LENGTH OF PROJECT = WITHIN BRIDGE PIERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Aug 24, 19 99
Tab Buttemeyer
DISTRICT ENGINEER

October 1, 19 99
Bill Jeudy
ENGINEER OF DESIGN AND ENVIRONMENT

October 1, 19 99
James C. Sly
DIRECTOR, DIVISION OF HIGHWAYS

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

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

PROJECT ENGINEER: DOUG KERN (618) 351-5313

CONTRACT NO. 98624

002-0022

9-163

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	**	11	2
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* FY 99 CLEARANCE GAUGE PAINTING
** ALEXANDER & MASSAC

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	50% ILLINOIS / 50% MISSOURI / FAI - 57 / ALEXANDER / BRIDGE / CONSTR. TYPE CODE / S.N.	50% ILLINOIS / 50% MISSOURI / US 60 & 62 / ALEXANDER / BRIDGE / CONSTR. TYPE CODE / S.N.	50% KENTUCKY / I - 24 / MASSAC / BRIDGE / CONSTR. TYPE CODE / S.N.
				SFTY-2A 002-0022	SFTY-2A 002-0005	SFTY-2A 002-0035
X0322731	CLEANING AND PAINTING CLEARANCE GAUGE MARKINGS - BRIDGE NO. 1	L. SUM	1	1		
X0322732	CLEANING AND PAINTING CLEARANCE GAUGE MARKING - BRIDGE NO. 2	L. SUM	1		1	
X0322733	CLEANING AND PAINTING CLEARANCE GAUGE MARKING - BRIDGE NO. 3	L. SUM	1			1
67100100	MOBILIZATION	L. SUM	1	0.34	0.33	0.33
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L. SUM	1		1	
70100800	TRAFFIC CONTROL AND PROTECTION STANDARD 701401	L. SUM	1	0.50		0.50

GENERAL NOTES

ENGLISH UNITS OF MEASURE SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

THE U.S. COAST GUARD SHALL BE ADVISED OF ANY OPERATIONS THAT MAY CAUSE A HINDRANCE TO NAVIGATION AT THE FOLLOWING ADDRESS & PHONE NUMBER:

ROGER WIEBUSH
BRIDGE ADMINISTRATOR
WESTERN RIVERS OPERATION
U.S. COAST GUARD
1222 SPRUCE STREET
ST. LOUIS, MO 63103-2398
(314) 539-3900 EXT. 378

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, SUMMARY OF QUANTITIES, GENERAL NOTES, STANDARDS
3	CLEARANCE GAUGE PLAN & ELEVATION (STRUCTURE NO. 002-0005)
4	CLEARANCE GAUGE DETAILS (STRUCTURE NO. 002-0005)
5	RIVER HYDROGRAPH (STRUCTURE NO. 002-0005 & STRUCTURE NO. 002-0022)
6	RIVER HYDROGRAPH (STRUCTURE NO. 002-0005 & STRUCTURE NO 002-0022)
7	CLEARANCE GAUGE PLAN & ELEVATION (STRUCTURE NO. 002-0022)
8	CLEARANCE GAUGE DETAILS (STRUCTURE NO. 002-0022)
9	CLEARANCE GAUGE PLAN & ELEVATION (STRUCTURE NO. 064-0035)
10	CLEARANCE GAUGE DETAILS (STRUCTURE NO. 064-0035)
11	RIVER HYDROGRAPH (STRUCTURE NO. 064-0035)

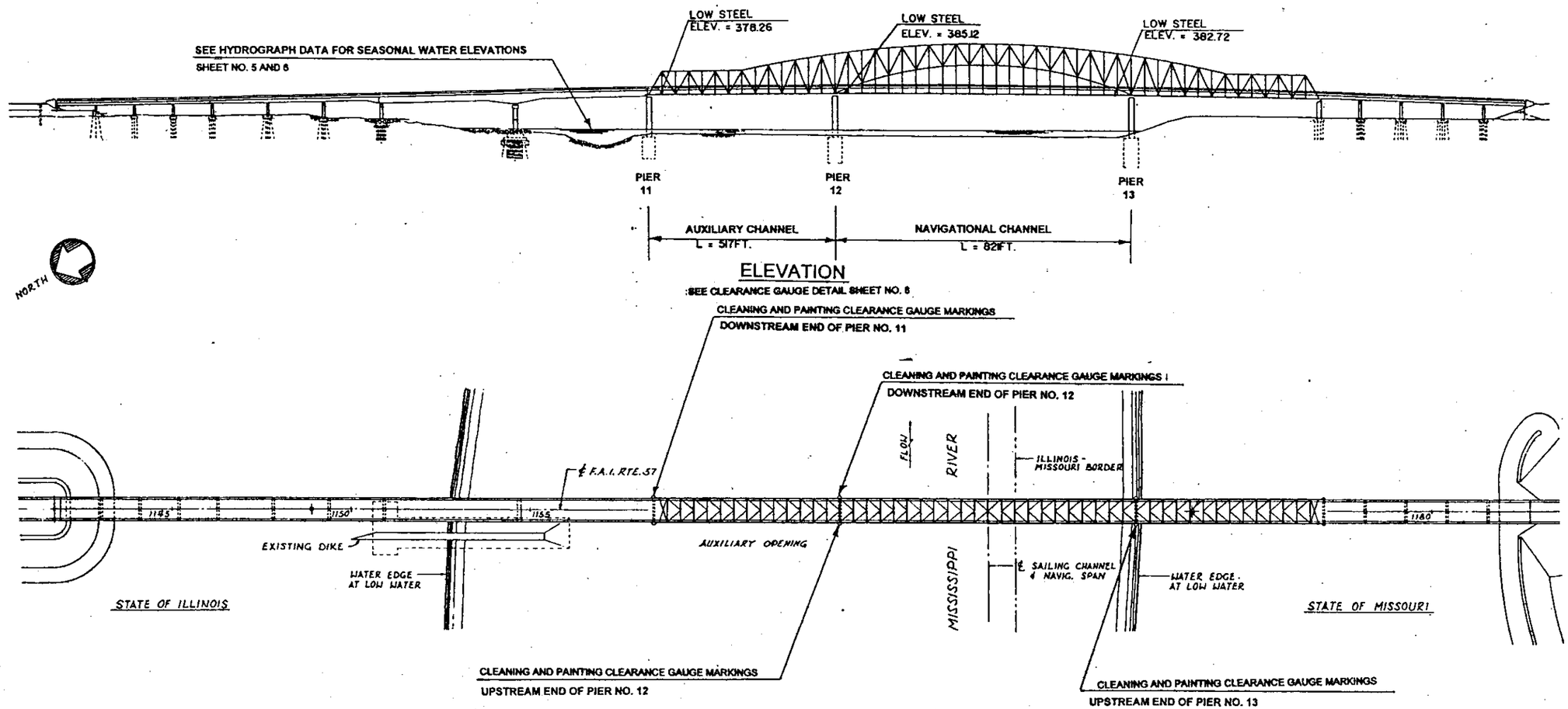
STANDARDS

000001-02
701101
701106
701201
701301
701401
702001

Prepared By: DISTRICT BRIDGES & ADS ENGINEER
Examined By: DISTRICT LAND ACQUISITION ENGINEER
Examined By: DISTRICT PROJECT DEVELOPMENT ENGINEER
Examined By: DISTRICT OPERATIONS ENGINEER
Examined By: DISTRICT CONSTRUCTION ENGINEER
Examined By: DISTRICT MATERIALS ENGINEER
Examined By: DISTRICT PROJECT IMPLEMENTATION ENGINEER
Approved By: DISTRICT ENGINEER
Aug 26 1999 DATE

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	**	11	7
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* FY99 CLEARANCE GAUGE PAINTING
** ALEXANDER AND MASSAC



CLEARANCE GAUGE PLAN & ELEVATION (STR. NO. 002-0022)

#98458 #61X 7-10-98 F.A.I. RTE 57 (I-57) ALEXANDER-(IL) MISSISSIPPI (MO) CO:S SEC. (02-1B-1)I-3 I&R COPY #61X

61X

100%
4-14-1999

S.N. 002-0022

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1)I-3	ALEXANDER IL. MISSISSIPPI MO.	16	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY

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

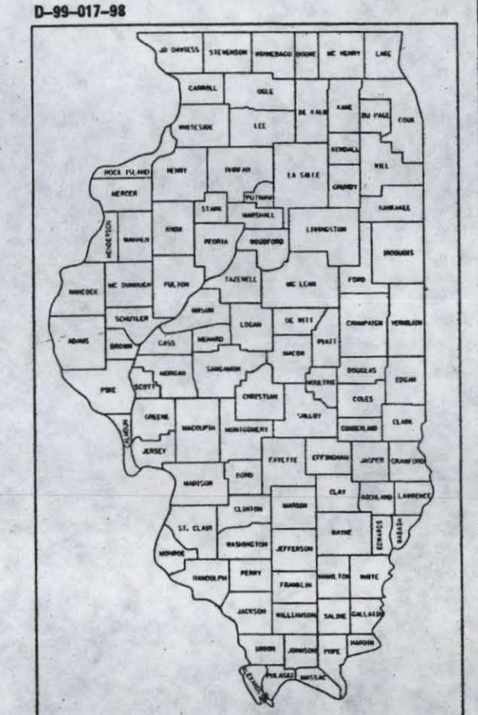
TRAFFIC DATA

STR. NO.	ADT.	M.U.%
002-0022	9,300	37

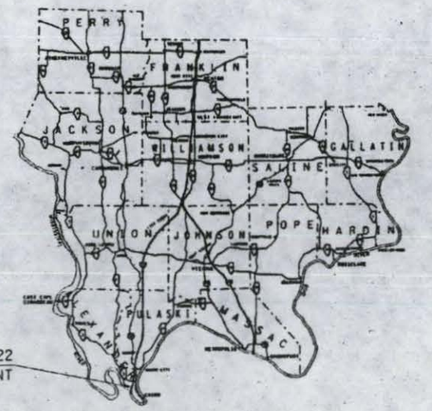
F.A.I. 57 (I-57)
SECTION: (02-1B-1)I-3
PIN AND LINK PLATE REPLACEMENT

ALEXANDER COUNTY, IL.
& MISSISSIPPI COUNTY, MO.
C-99-031-98

D-99-017-98



LOCATION OF SECTION INDICATED THUS: - ■■■ -



NO SCALE

STRUCTURE NO. 002-0022
PIN AND LINK PLATE REPLACEMENT

TOTAL LENGTH OF SECTION = 0.000 M 0.000 KM
NET LENGTH OF PROJECT = 0.000 M 0.000 KM

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

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

CONTRACT NO. 98458
002-0022

PROJECT ENGINEER: DAVID PICHE (618)351-5313

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 3 19 98
Kirk Brandt Jr.
DISTRICT ENGINEER

May 8 19 98
Bill Lemley
ENGINEER OF DESIGN AND ENVIRONMENT

May 8 19 98
DIRECTOR, DIVISION OF HIGHWAYS

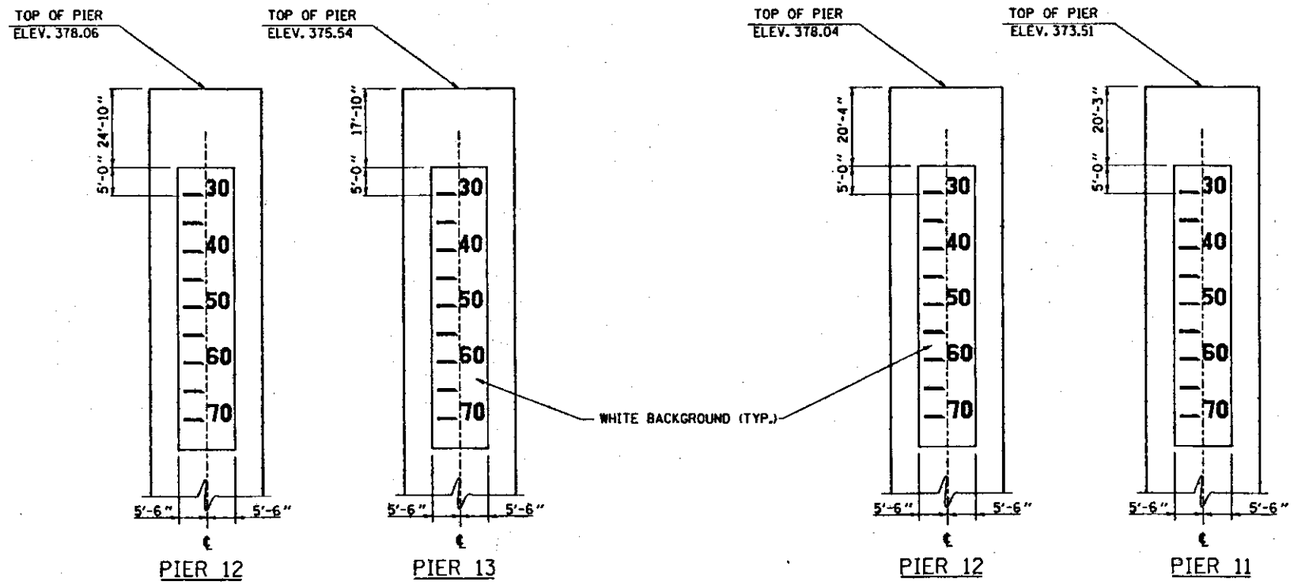
PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

9-158

COUNTY: ALEXANDER SECTION: (02-1B-1)I-3 ROUTE: F.A.I. 57

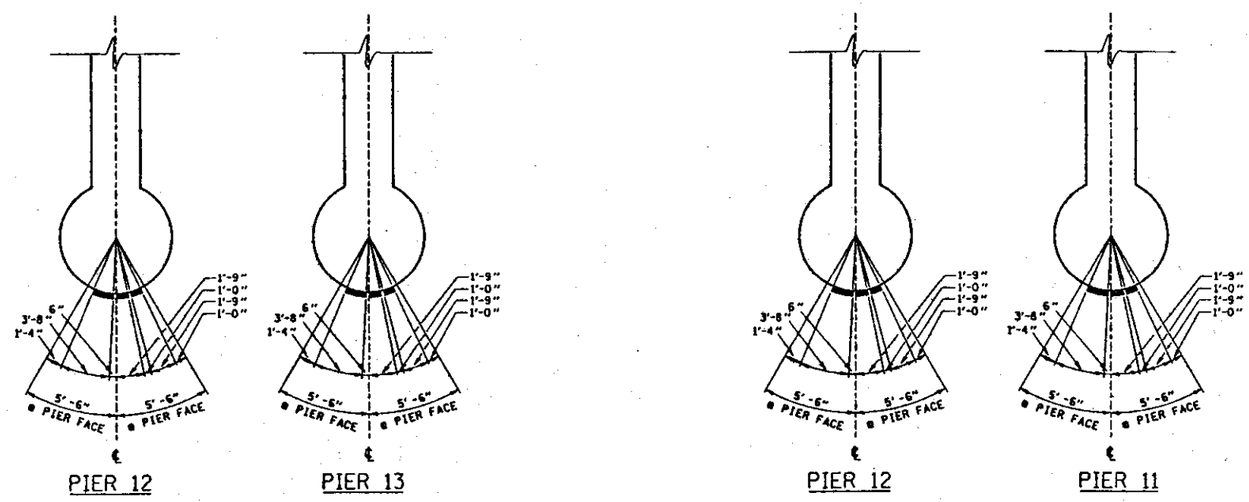
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	**	11	8
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* FY 99 CLEARANCE GAUGE PAINTING
** ALEXANDER & MASSAC

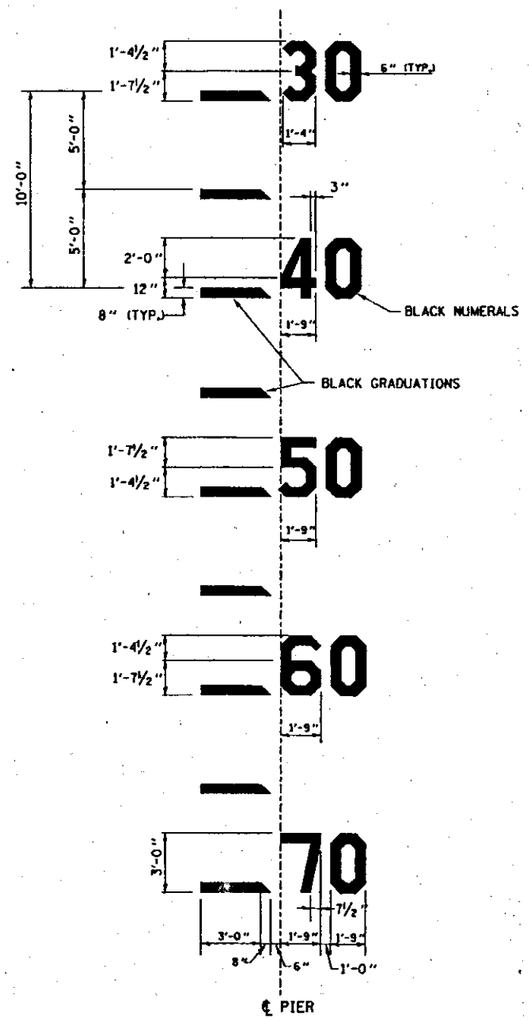


UPSTREAM ELEVATION

DOWNSTREAM ELEVATION



DETAIL OF CLEARANCE GAUGES



DETAIL OF GRADUATIONS & NUMBERS

TOP OF PIER 11 ELEVATION TAKEN FROM EXISTING PLANS AND USED AS DATUM. FOR REFERENCE USE ONLY.

CLEARANCE GAUGE DETAILS (STRUCTURE NO. 002-0022)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	102-1B-1I1-3	ALEXANDER (IL.) MISSISSIPPI (MO.)	16	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	50% ILLINOIS / 50% MISSOURI
				FAI 57
				RURAL
		COUNTY; STATE		ALEXANDER CO. (IL.) : MISSISSIPPI CO. (MO.)
		FUNDING		
		WORK TYPE		BRIDGE
		CONSTR. TYPE CODE		SFTY - 2A
				S.N.
				002-0022
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L. SUM	1	1.0
Z0040330	PIN AND LINK PLATE REPLACEMENT	EACH	122	122.0
Z0073400	TEMPORARY SUPPORT SYSTEM	EACH	122	122.0

GENERAL NOTES

ENGLISH UNITS OF MEASURE SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

EXISTING STATE-OWNED AND MAINTAINED UTILITY LINES MAY INTERFERE WITH THE PIN AND LINK PLATE REPLACEMENT. SHOULD THE UTILITY LINES CONFLICT WITH CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TEMPORARILY LOOSEN THE BRACKET ATTACHING THE LINES TO THE STRUCTURES TO ALLOW THE LINK PLATE TO SLIDE BEHIND THE UTILITY LINE. WHEN THE PLATE HAS BEEN INSTALLED, THE CLIPS HOLDING THE UTILITY LINE TO THE STRUCTURE SHALL BE TIGHTENED TO THE SATISFACTION OF THE ENGINEER.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, SUMMARY OF QUANTITIES, GENERAL NOTES, STANDARDS
3	LOCATION PLAN
4-16	PIN AND LINK PLATE REPLACEMENT DETAILS - STRUCTURE NO. 002-0022

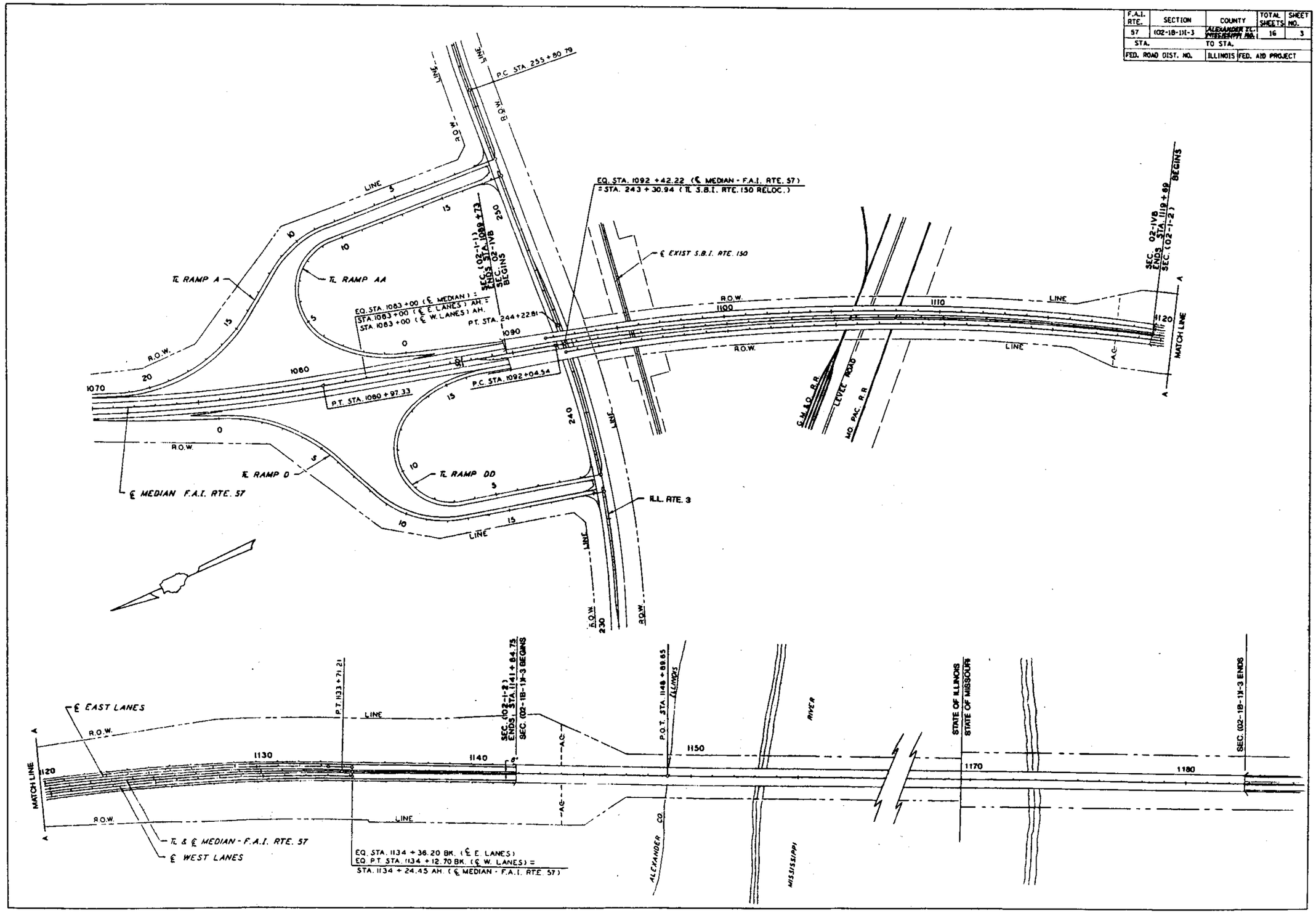
STANDARDS

000001-01
701101
701106
701301
701401
702001

Prepared By: [signature] DISTRICT BRIDGES & STRUCTURES ENGINEER
Examined By: [signature] DISTRICT LAND ACQUISITION ENGINEER
Examined By: [signature] DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By: [signature] DISTRICT OPERATIONS ENGINEER
Examined By: Bob Zielke DISTRICT CONSTRUCTION ENGINEER
Examined By: [signature] DISTRICT MATERIALS ENGINEER
Examined By: Bob Zielke DISTRICT TRAFFIC IMPLEMENTATION ENGINEER
Approved By: [signature] DISTRICT ENGINEER
Mar 5 1998 DATE

Rev.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1)(-3	ALEXANDER CO. MISSISSIPPI CO.	16	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

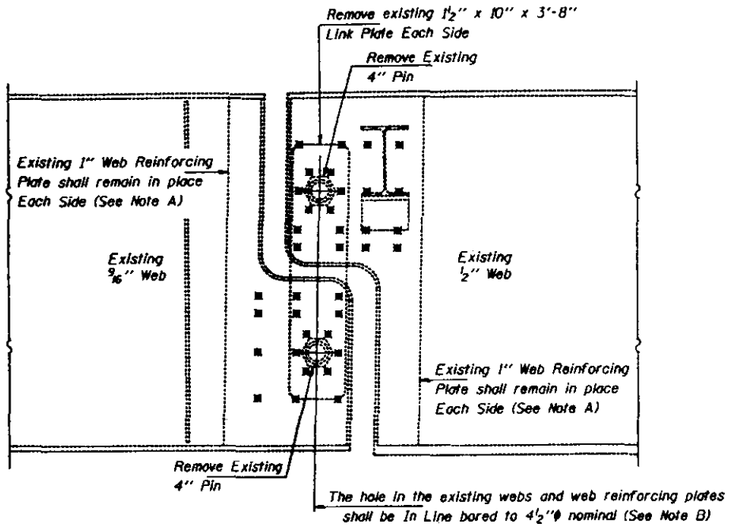


LOCATION PLAN

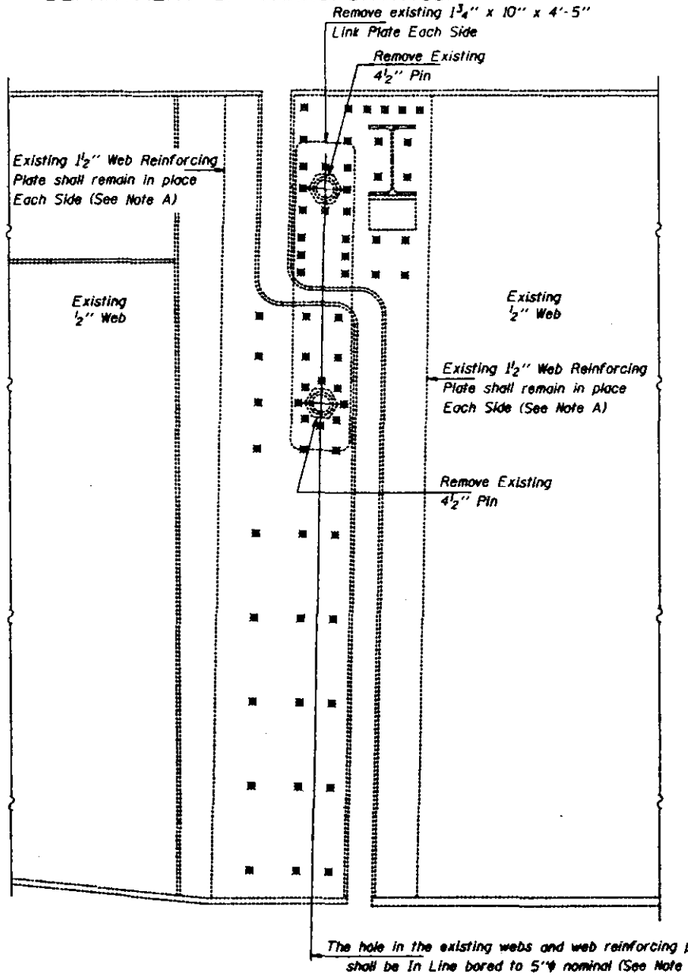
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI Route No.	Section	County	Total Sheets	Sheet No.
57	(02-1B-1) Σ-3	ALEXANDER IL. MISSISSIPPI RIV.	16	4

13 SHEETS

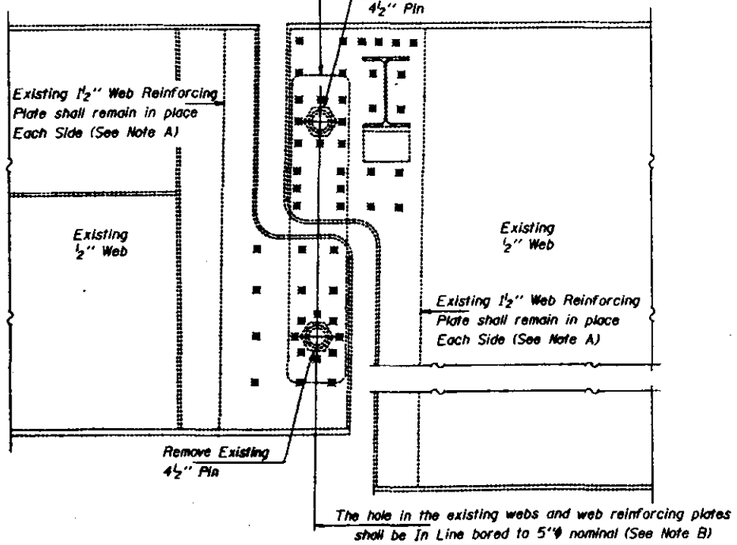


ELEVATION AT EXISTING PIN ASSEMBLY SPAN 4



ELEVATION AT EXISTING PIN ASSEMBLY SPAN 7 GIRDERS 1 AND 7

Any Pins that can be easily removed without damage to the pin shall be salvaged and the Bridge Engineer shall be contacted for disposition. Cost of salvage is included in "Pin and Link Plate Replacement".



ELEVATION AT EXISTING PIN ASSEMBLY SPAN 7 GIRDERS 2 THRU 6

GENERAL NOTES

All new structural steel shall conform to AASHTO Classification M-270 Gr. 36. unless otherwise noted.

The Contractor shall provide support and/or shoring systems for the beam in the area of existing pin and link plate replacement. See Special Provision "Temporary Support System."

The inorganic zinc rich primer/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green. Munsell No. 7.5G 4/8. See Special Provisions "Cleaning and Painting New Metal Structures". Cost shall be included in the cost of "Pin and Link Plate Replacement".

Existing Structural steel shall be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures". Cost shall be included in the cost of "Pin and Link Plate Replacement."

All existing steel surfaces behind link plates shall be cleaned and primed before installation of new link plates. Cost shall be included in the cost of "Pin and Link Plate Replacement."

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, except the pin diameters, 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.

The Pins and Link Plates shall conform to the minimum Charpy V-Notch Toughness of 25 ft.-lbs. at 40° F.

The pins, link plates, bushings, nuts, Set Bolts, Neoprene Pad and silicone sealant are the items included in "Pin and Link Plate Replacement".

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

Notes: For notes A thru G see sheet 2 of 13.
⊠ Indicates existing Plug Welds (See Note G)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Temporary Support System	Each	122
Pin and Link Plate Replacement	Each	122

DESIGNED	Victor H. Velez
CHECKED	Curtis M Ivory
DRAWN	Paul Summer
CHECKED	VHV CMI

FEBRUARY 19, 19 98

EXAMINED Todd E Hahn
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

MAXIMUM REACTIONS AT PIN SPAN 4

RP	(K)	60.5
RL	(K)	60.8
Imp.	(K)	13.0
R (Total)	(K)	134.3

MAXIMUM REACTIONS AT PIN SPAN 7

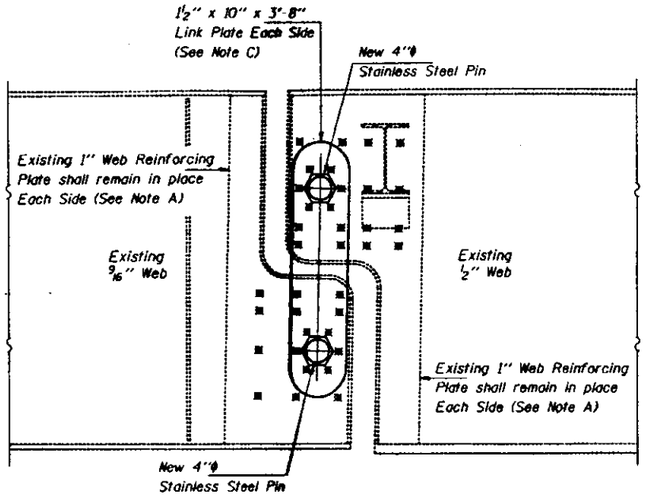
RP	(K)	101.5
RL	(K)	61.7
Imp.	(K)	13.3
R (Total)	(K)	176.5

PIN AND LINK PLATE REPLACEMENT
SPANS 4 AND 7
F.A.I. ROUTE 57 SEC. 02-1B-1
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

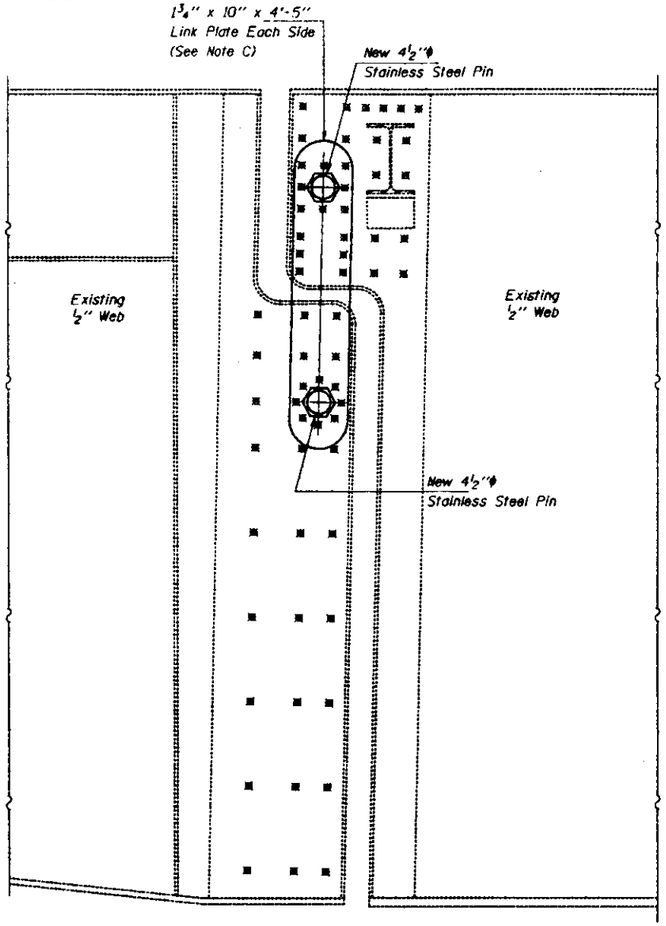
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1) I-3	ALEXANDER IL., MISSISSIPPI MO.	16	5
PROJ. FEDERAL ENGR. NO.	ILLINOIS	FED. AID PROJECT		

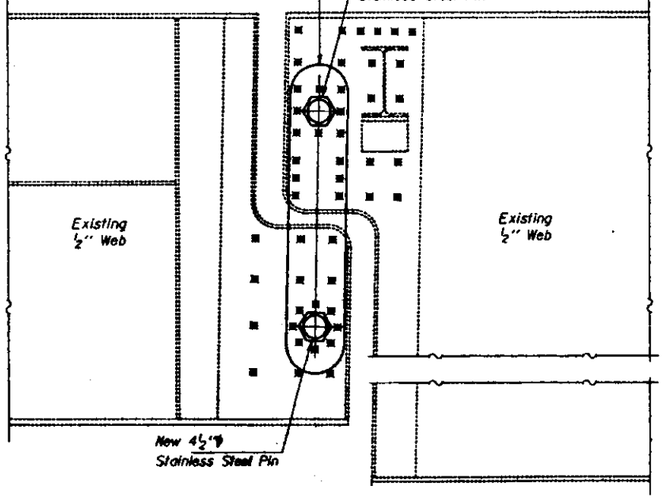
SHEET NO. 2
13 SHEETS



ELEVATION AT NEW PIN ASSEMBLY SPAN 4



ELEVATION AT NEW PIN ASSEMBLY SPAN 7 GIRDERS 1 AND 7



ELEVATION AT NEW PIN ASSEMBLY SPAN 7 GIRDERS 2 THRU 6

Note A:
Existing welds shall be inspected for cracks using liquid dye penetrant or magnetic particle testing. Any cracks that are found shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Clean and paint before installing new link plates.

Note B:
Bore diameter for bushing in link plate, existing webs and web reinforcement plates shall correspond to bushing manufacturer's allowable tolerances for proper functioning. Hole diameter may be adjusted to allow use of stock bushings.

Note C:
Inside face of new link plates shall receive first field coat in shop. The primer shall pass the M.E.K. Rub Test before the first field coat is applied.

Note D:
Actual bushing thickness per manufacturer's specifications. ¼" is approximate. Bushings shall be a self lubricating filament wound epoxy matrix backed Duralon Bearing, metal backed Fiber Glide Bearing or equivalent. No primer or grease shall be allowed on bushings. Bushings shall be suitable for dynamic loads of 20,000 psi.

Note E:
Tighten inside nuts to bring all bushings into firm contact, then back off ¼ turn and tighten outer nuts and set bolts.

Note F:
Apply ⅜" bead to face of the web reinforcing plates approximately ½" from bushing immediately before installing new link plates. Place sealant around nuts after installation. Sealant shall be suitable for prolonged exterior exposure without losing flexibility or adhesion to painted steel surfaces. Proposed products shall be subject to Department's acceptance based on documented testing or other evidence.

Note G:
Welds shall be inspected for cracks using liquid dye penetrant or magnetic particle testing. Any cracks that are found that cannot be removed by grinding approximately ¼" shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Clean and paint before installing new link plates.

DESIGNED	VHV
CHECKED	CME
DRAWN	Paul Summer
CHECKED	VHV CME

FEBRUARY 19, 1998

EXAMINED Todd E. Hanson
ENGINEER OF STRUCTURAL SERVICES

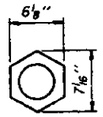
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

Notes: For Pin and Link Plate Details see sheet 3 of 13.

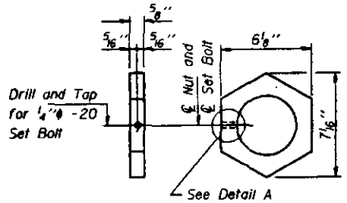
PIN AND LINK PLATE REPLACEMENT
SPANS 4 AND 7
F.A.I. ROUTE 57 SEC. 02-1B-1
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

FAI					SHEET NO. 3
57	(02-1B-1 I-3	ALEXANDER IL, MISSISSIPPI MO.	16	6	13 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INTERIOR NUT DETAIL
(28 Required)



EXTERIOR NUT DETAIL
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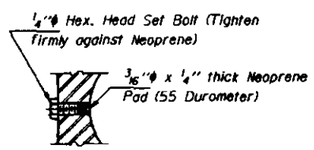
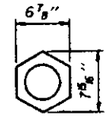


DETAIL A
Set Bolts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.



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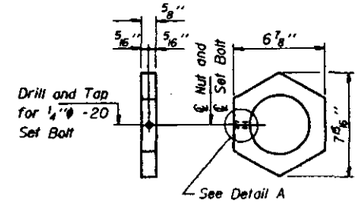

EXTERIOR NUT DETAIL
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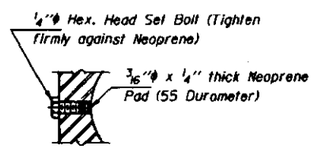
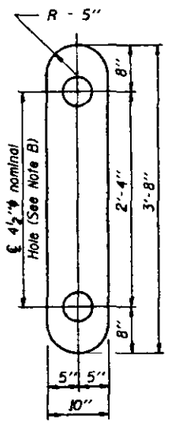


DETAIL A
Set Bolts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.



LINK PLATE
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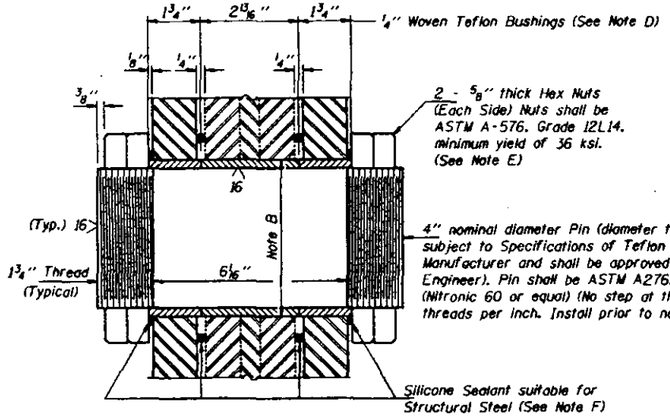
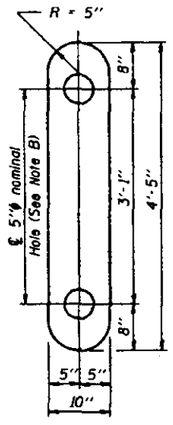
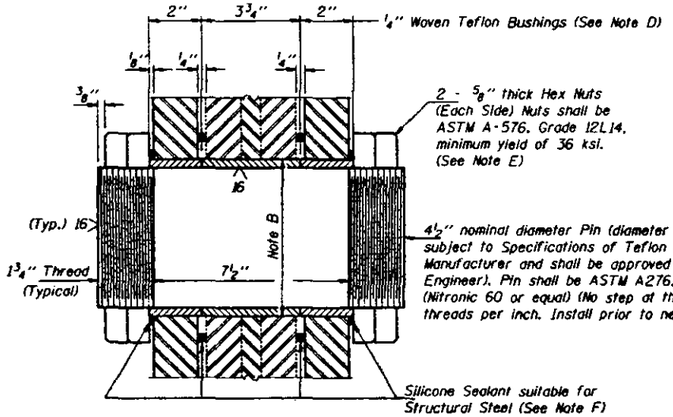


SECTION THRU PIN
(14 Required)

PIN ASSEMBLY SPAN 4



LINK PLATE
(14 Required)



SECTION THRU PIN
(14 Required)

PIN ASSEMBLY SPAN 7

Notes: For notes A thru G see sheet 2 of 13.

DESIGNED	VHV
CHECKED	CME
DRAWN	Paul Summar
CHECKED	VHV CME

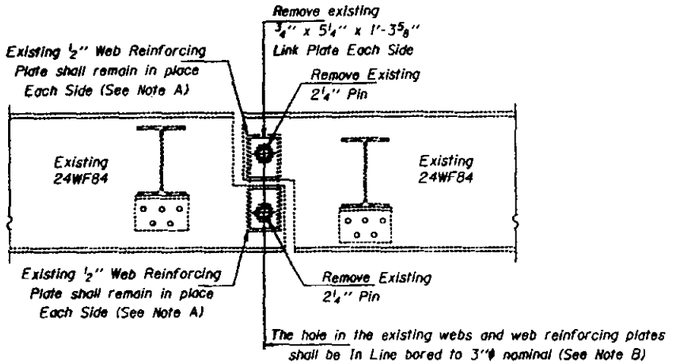
FEBRUARY 19, 1998
EXAMINED _____ ENGINEER OF STRUCTURAL SERVICES
PASSED _____ ENGINEER OF BRIDGES AND STRUCTURES

PIN AND LINK PLATE REPLACEMENT
SPANS 4 AND 7
F.A.I. ROUTE 57 SEC. 02-1B-1
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

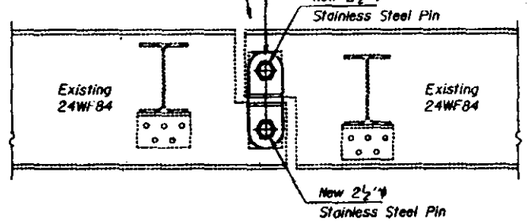
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	02-1B-1 I-3	ALEXANDER CO. MISSISSIPPI RIV.	16	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 4
13 SHEETS

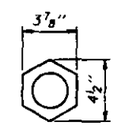


ELEVATION AT EXISTING PIN ASSEMBLY
SPANS 12, 13 AND 14

Any Pins that can be easily removed without damage to the pin shall be salvaged and the Bridge Engineer shall be contacted for disposition. Cost of salvage is included in "Pin and Link Plate Replacement".



ELEVATION AT NEW PIN ASSEMBLY
SPANS 12, 13 AND 14



INTERIOR NUT DETAIL
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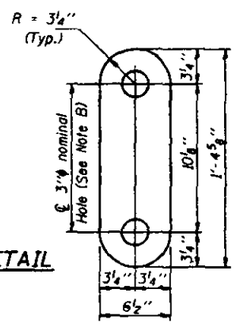

LINK PLATE DETAIL
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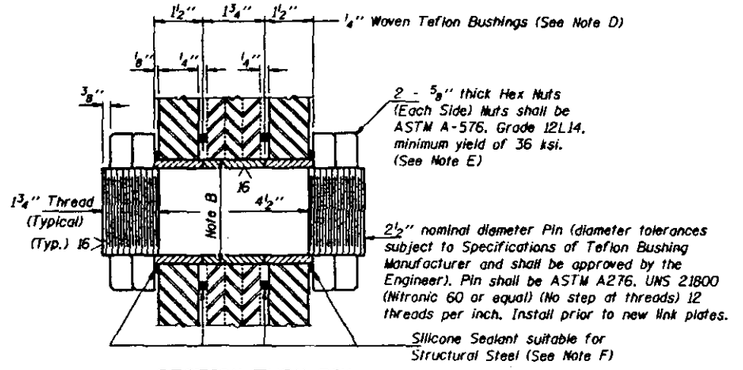
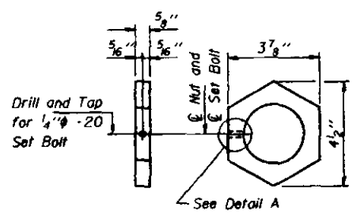
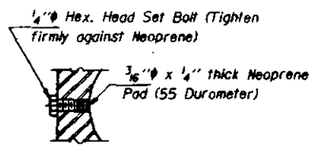


SECTION THRU PIN
(216 Required)



EXTERIOR NUT DETAIL
(432 Required)



DETAIL A

Set Bolts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Notes: For notes A thru F see sheet 2 of 13.

DESIGNED	VHV
CHECKED	CME
DRAWN	Paul Summer
CHECKED	VHV CME

FEBRUARY 19, 1998

EXAMINED _____ ENGINEER OF STRUCTURAL SERVICES

PASSED _____ ENGINEER OF BRIDGES AND STRUCTURES

MAXIMUM REACTIONS AT PIN

R_R	(K)	12.9
R_L	(K)	36.9
Imp.	(K)	11.0
R (Total)	(K)	60.8

PIN AND LINK PLATE REPLACEMENT
SPANS 12, 13 AND 14
F.A.I. ROUTE 57 SEC. 02-1B-1
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

98343 10-4-96 #32 Alexander Co. FAI 57 I&R Copy Sec. (02-1B-1) I-1 #32

32

99.0%
8-23-97

S.N. 002-0022

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

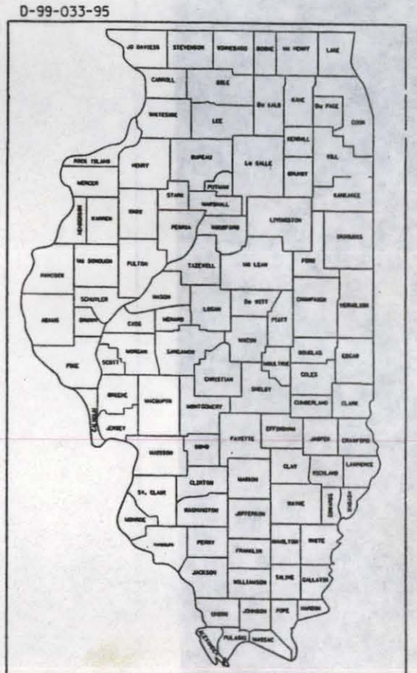
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

F.A.I. ROUTE 57
SECTION (02-1B-1)I-1
ALEXANDER COUNTY (IL.)
MISSISSIPPI COUNTY (MO.)
C-99-065-95

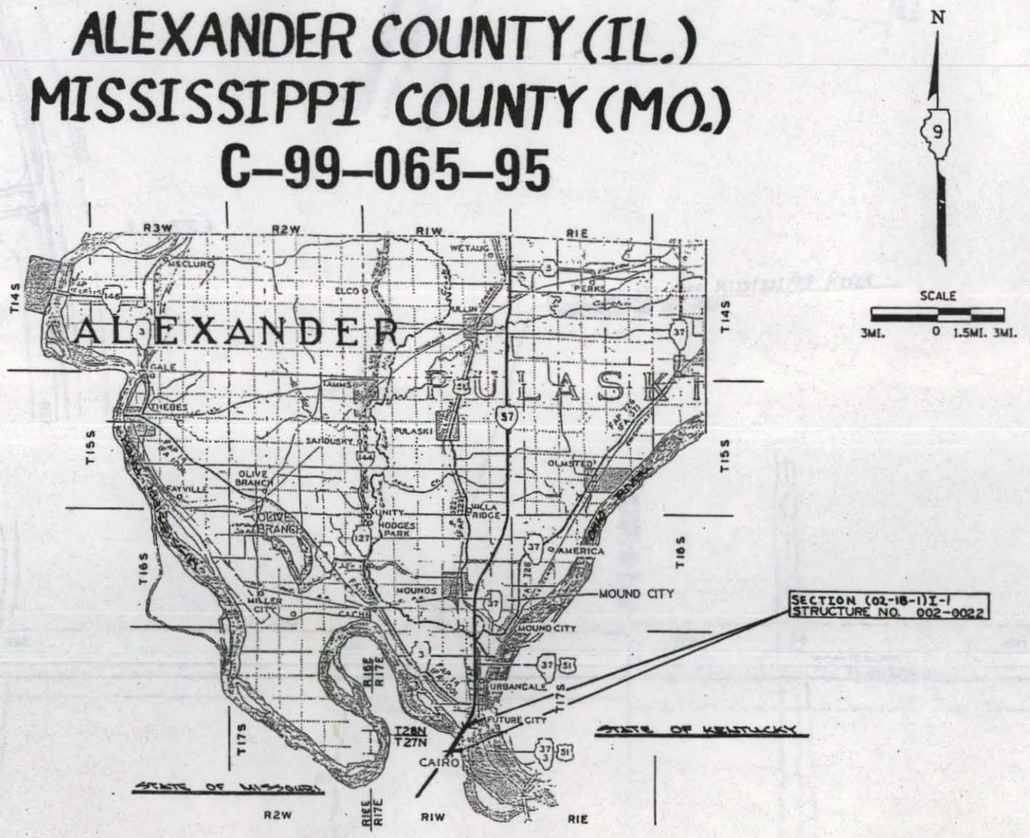
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1)I-1	ALEXANDER IL. LINCOLN TRAIL DIST. NO.	7	1
F.A.P. RTE.		ILLINOIS PROJECT		

D-99-033-95



LOCATION OF SECTION INDICATED THUS:-■-

SCALE IN FEET
PLAN
200' 0 100' 200'



1995 TRAFFIC DATA:
F.A.I. ROUTE 57
ADT = 8,000 TRUCKS 38%

TOWNSHIP:
CAIRO

JULIE 1-800-892-0123

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Aug 5 19 96
DISTRICT ENGINEER

EXAMINED 19
ENGINEER OF PLANS AND CONTRACTS

PASSED 09-06 19 96
ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED 09-06 19 96
DIRECTOR, DIVISION OF HIGHWAYS

CONTRACT NO. 98343

002-0022

9-154

MATCH LINE STA. 200+00

PROJECT ENGINEER: RAD SHAFER (618) 849-2171
SQUAD LEADER: HEATHER ZEGHALIS CENTRUS 782-4894

ALEXANDER IL.
COUNTY: MISSISSIPPI MO. SECTION: (02-1B-1)I-1 ROUTE: F.A.I. 57

98343 #229 7-12-96

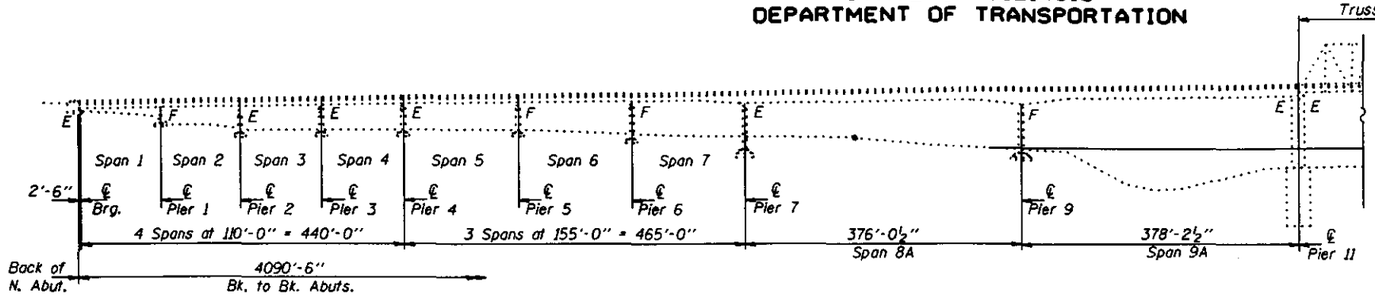
ALEXANDER I&R copy 02-1B-1

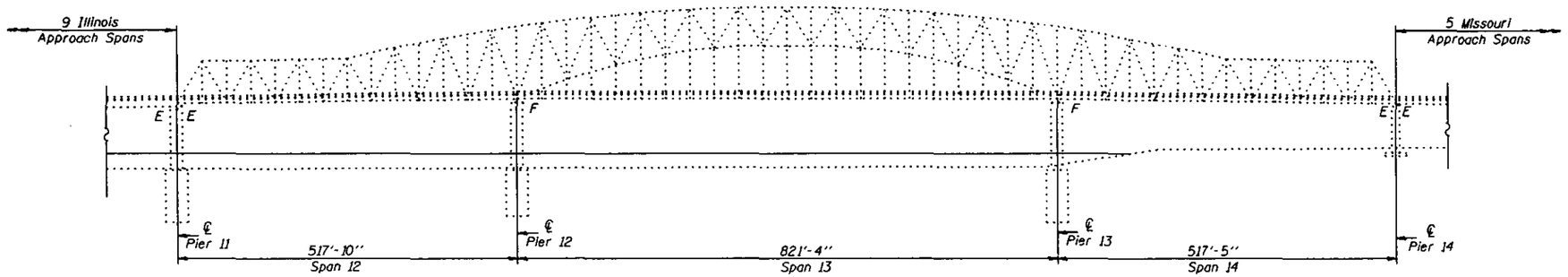
~~#32~~ ~~#229~~

2200-200 NS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

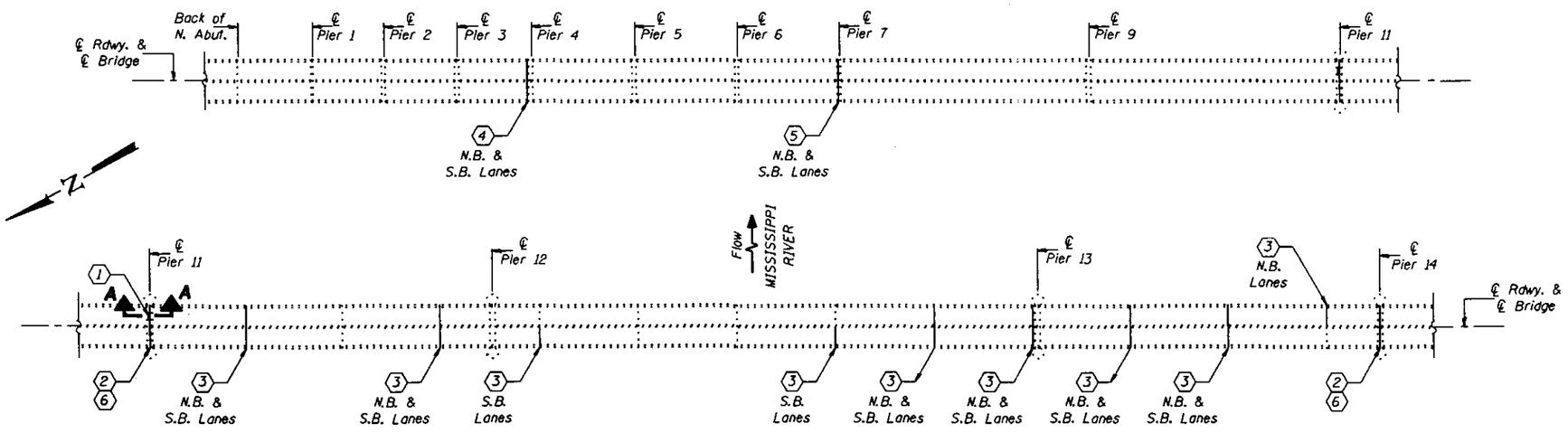
ROUTE NO.	SECTION	COUNTY	JOB NO.	SHEET NO.
F.A.I. 57	02-1B-1	ALEXANDER		1
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		4 SHEETS





PARTIAL ELEVATION

(Looking East)



PARTIAL DECK PLAN

GENERAL NOTES

1 All new structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled $\frac{1}{16}$"ϕ and reamed in the field to $\frac{13}{16}$"ϕ for $\frac{3}{4}$"ϕ high strength bolts (except as noted on the plans) after new structural steel sections are properly fitted into position.

The inorganic zinc rich primer/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provisions "Cleaning and Painting Metal Structures".

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 Structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".

Traffic control shall be determined by the District.

Notes:
(1) Replace center broken section of existing Finger ℄ on Approach side of expansion joint, N.B. Lanes. (For Section A-A, see Sheet 2)
(2) Install new catch drains and elastomeric mat, full length, under existing Finger Joints.
(3) Remove existing 2½" PJS and replace with new 2½" PJS. (Removal shall be incidental to Preformed Joint Seal 2½".)
(4) Remove existing Finger ℄ expansion device and replace with new 9" Waboflex Model SR9 neoprene expansion joint. Removal shall be incidental to Neoprene Expansion Joint (9").
(5) Remove existing 9" neoprene joint and replace with new 9" Waboflex Model SR9. (Removal shall be incidental to Neoprene Expansion Joint (9").
(6) Remove existing Finger ℄ sections on each side of expansion joint, N.B. & S.B. Lanes, as necessary for height adjustment and re-install existing Finger ℄ sections.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	3,900
Traffic Control	L.S.	1
Reinf. Neoprene Expansion Jt. Treatment	Foot	127
Preformed Joint Seal 2½"	Foot	490
Neoprene Expansion Joint (9")	Foot	130
Drain System	L.S.	1
Finger Plate Adjustment	L.S.	1

DESIGNED	KPS
CHECKED	NJS
DRAWN	D.Herbert
CHECKED	NJS KPS

AUGUST 21 1996

EXAMINED
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

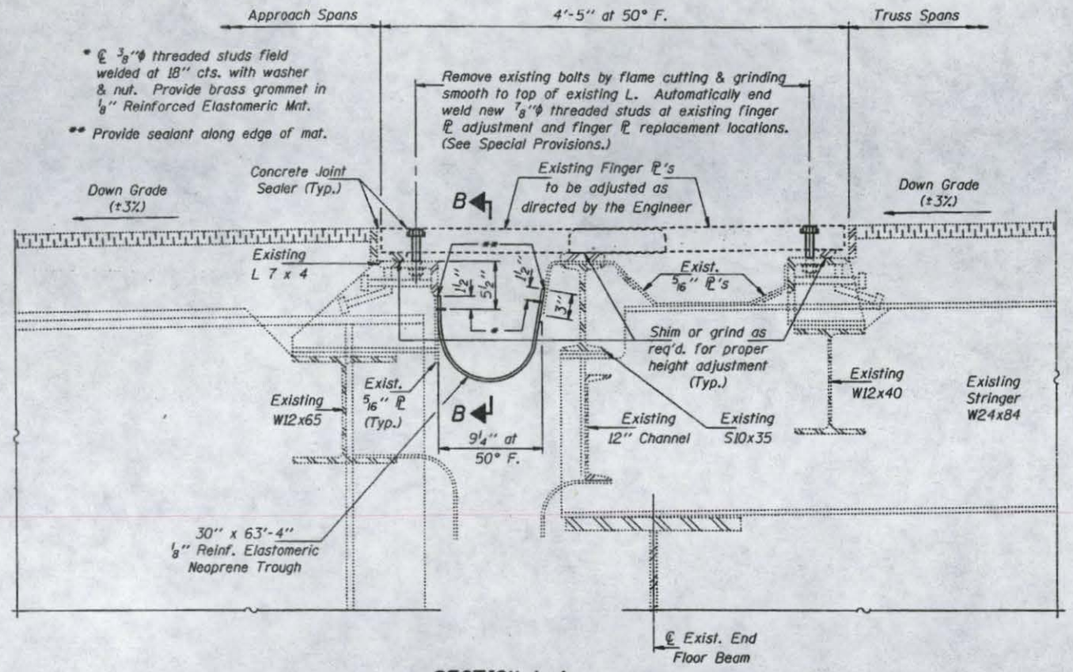
BRIDGE REPAIRS
F.A.I. 57 OVER MISSISSIPPI RIVER
SEC. 02-1B-1
ALEXANDER COUNTY
S.N. 002-0022

1 Revised 10/28/96 V.V.

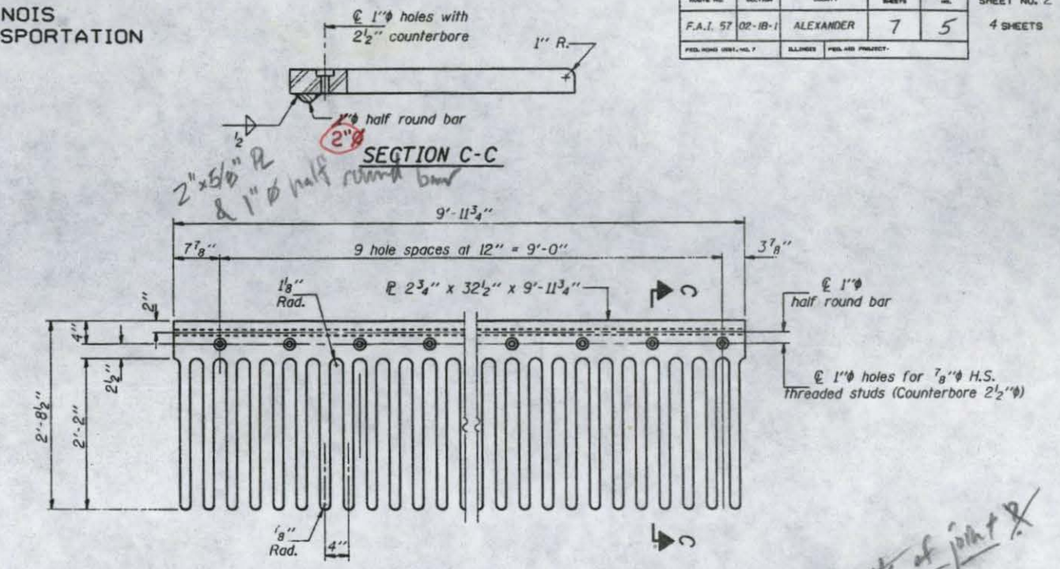
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	02-1B-1	ALEXANDER	7	5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
4 SHEETS

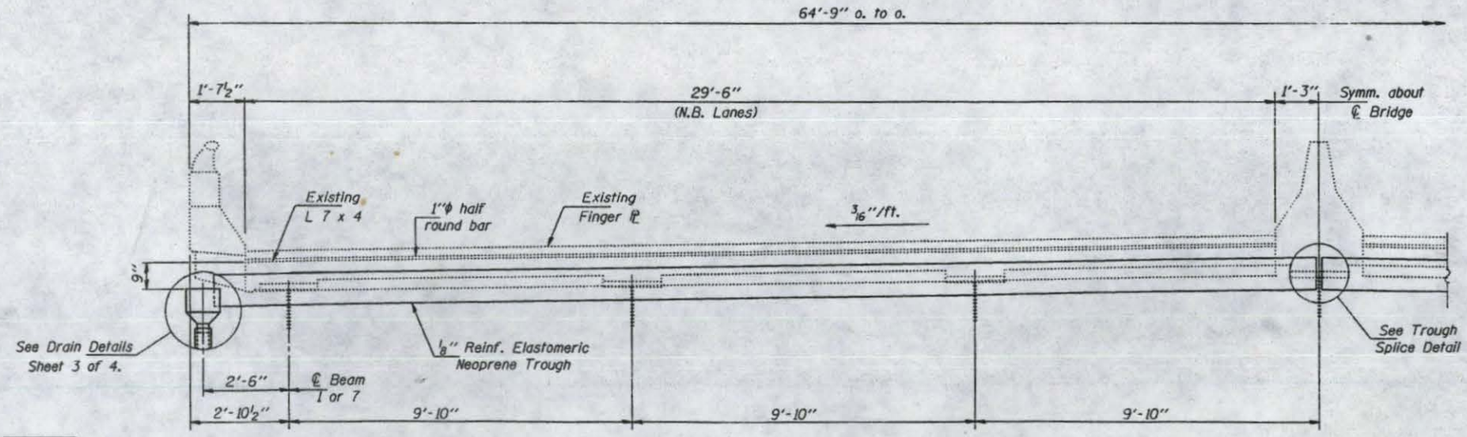


SECTION A-A
Pier 11 shown; Pier 14 similar

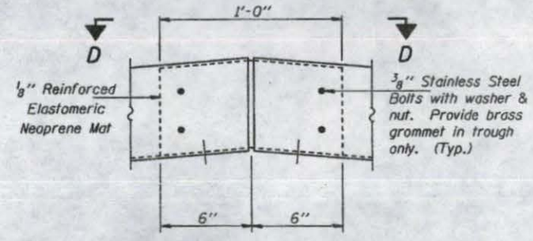


FINGERPLATE REPLACEMENT DETAIL
Req'd.: One (1) at Pier 11, center section of N.B. Lane
Note: Field measure to verify dimensions before fabricating.

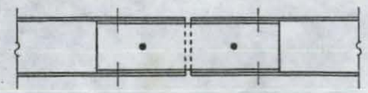
N. side of joint ℄



SECTION B-B



TROUGH SPLICE DETAIL



VIEW D-D

DESIGNED	KPS
CHECKED	NJS
DRAWN	D-Herbert
CHECKED	NJS KPS

AUGUST 21 1996
EXAMINED Todd E. Adams
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

BRIDGE REPAIRS
F.A.I. 57 OVER MISSISSIPPI RIVER
SEC. 02-1B-1
ALEXANDER COUNTY
S.N. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	02-1B-1	ALEXANDER	7	5A
FED. HIGH. DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2A
4 SHEETS

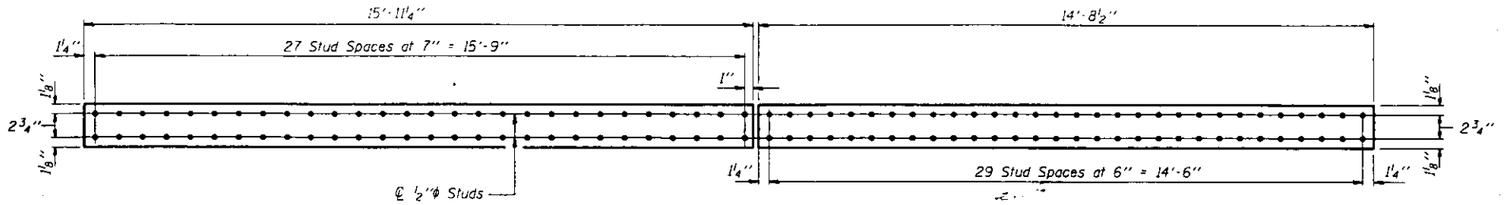
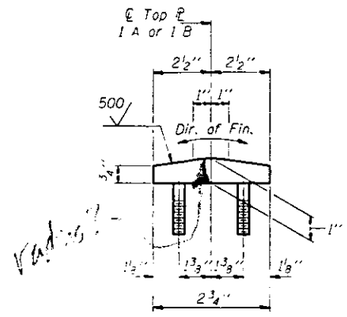


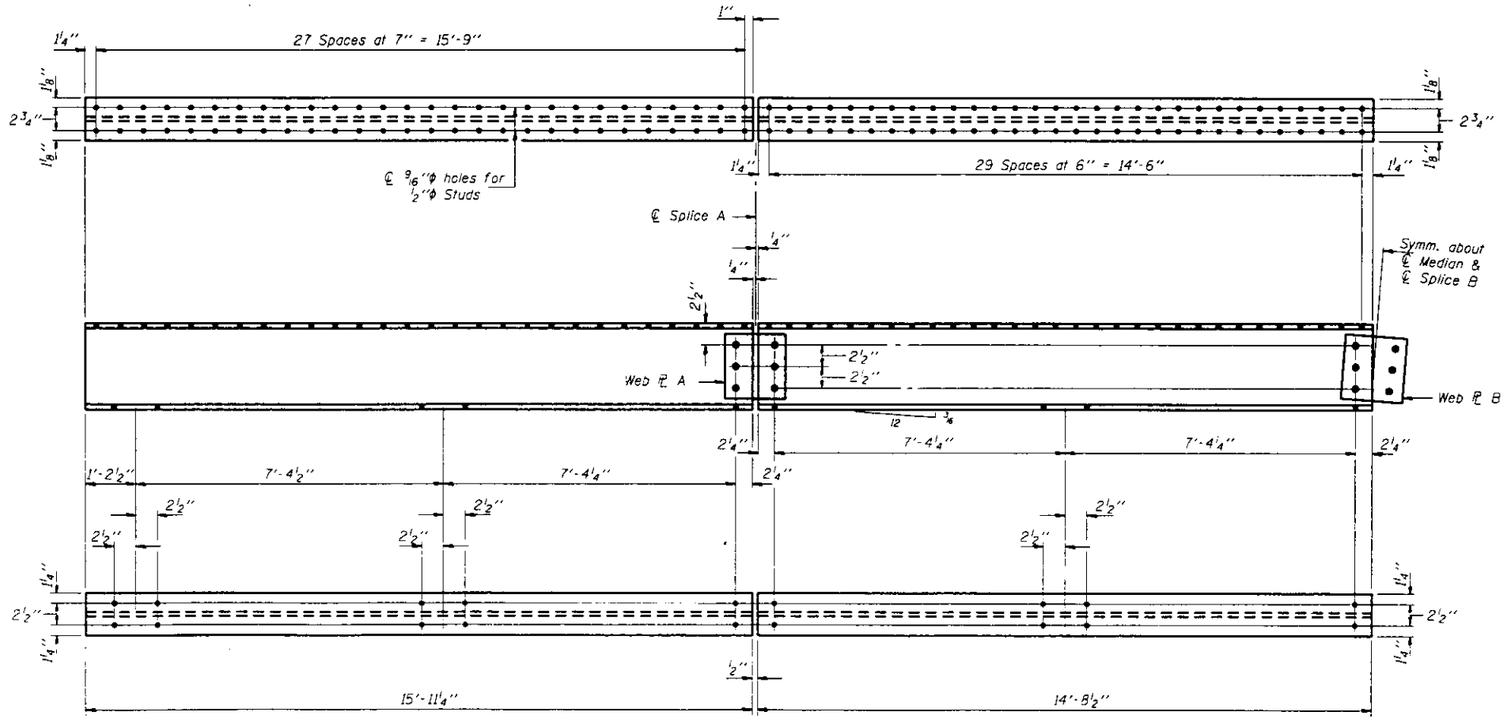
PLATE 1 A
No. Req'd.: 2

PLATE 1 B
No. Req'd.: 2

BOTTOM VIEW - TOP PLATES

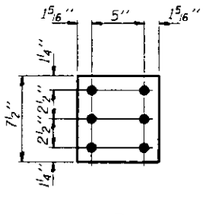


END VIEW TOP PLATE

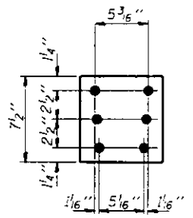


BEAM 1 A
Req'd.: 2-S10x35 x 15'-11¼"

BEAM 1 B
Req'd.: 2-S10x35 x 14'-8½"



WEB ℄ A
℄ ⅜" X 7½" X 7 5/8"
No. Required: 4



WEB ℄ B
℄ ⅜" X 7½" X 7 5/8"
No. Required: 2

DESIGNED	C.M.E.
CHECKED	V.H.V.
DRAWN	D.Herbert
CHECKED	R.P.S. C.M.E.

APRIL 22 1997
EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

Stage III?
(Stage I completed before this construction change)

Stage II?

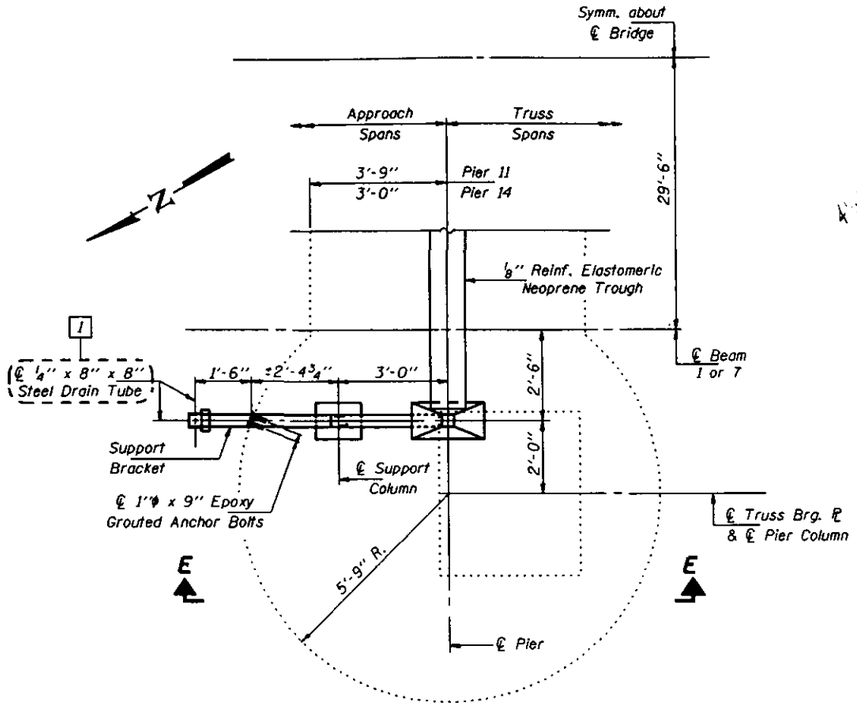
Dir. II
Dr. Stage I

BRIDGE REPAIRS
F.A.I. 57 OVER MISSISSIPPI RIVER
SEC. 02-1B-1
ALEXANDER COUNTY
S.N. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

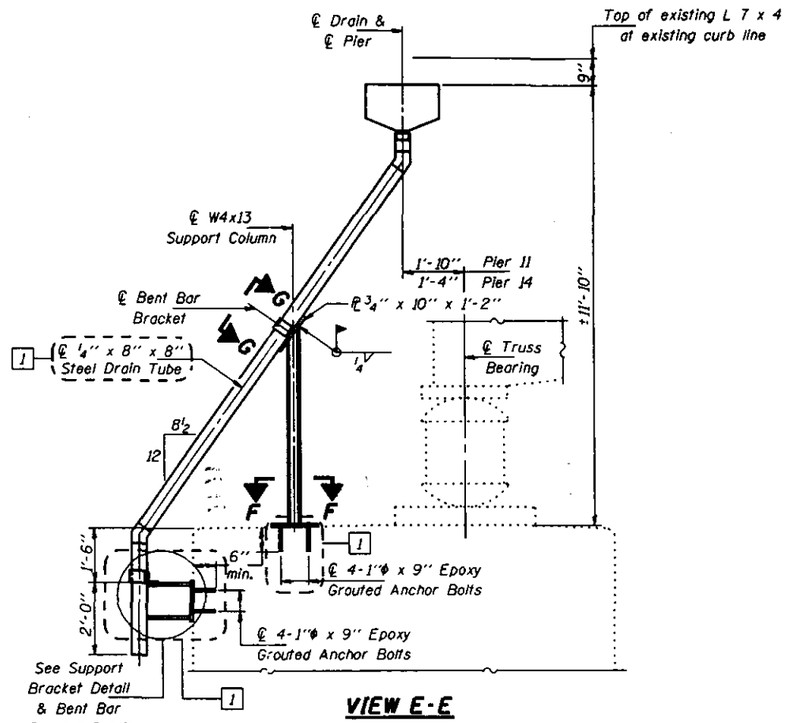
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	02-18-1	ALEXANDER		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
4 SHEETS

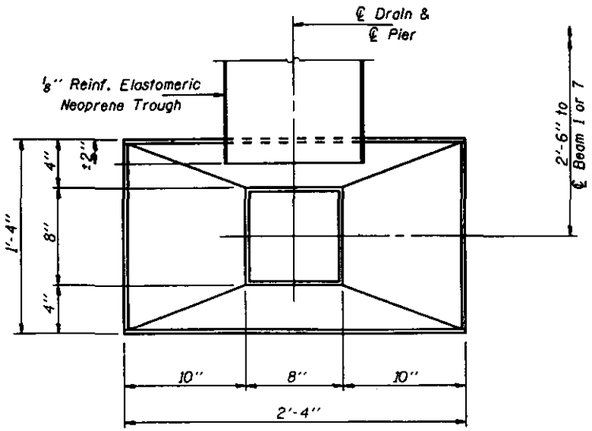


PARTIAL PLAN - PIER 11

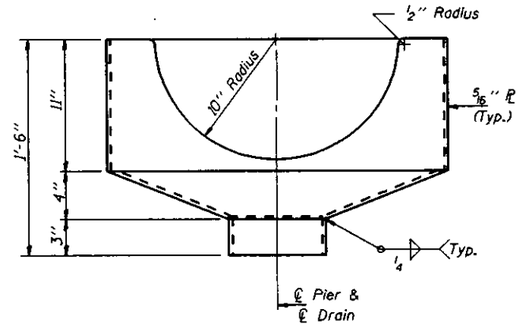
(Pier 14 similar by rotation of 180°)



VIEW E-E



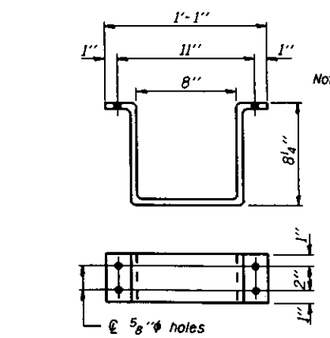
TOP VIEW



DRAIN ELEVATION

(Looking out from ℄ Bridge)

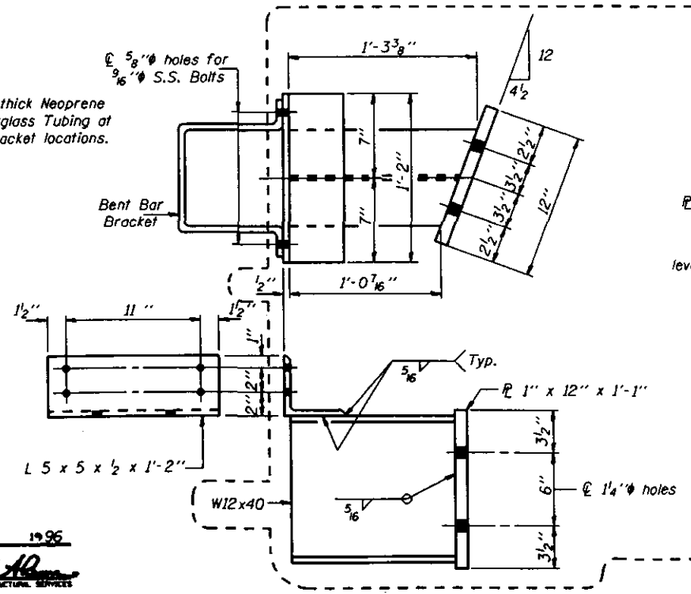
Total No. Req'd.: 4



BENT BAR BRACKET DETAIL

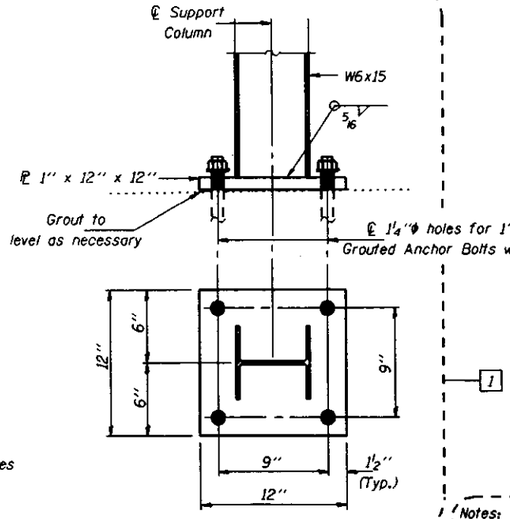
PL 1/4 x 4 x 2'-4 1/2"
Total No. Req'd.: 8

Note: Place 1/8" thick Neoprene around Fiberglass Tubing at Bent Bar Bracket locations.



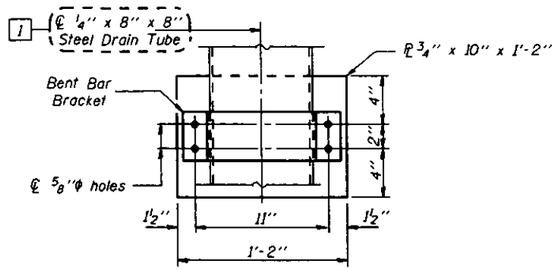
SUPPORT BRACKET

Total No. Req'd.: 4



SECTION F-F

Total No. Req'd.: 4



VIEW G-G

DESIGNED	DAH KPS
CHECKED	NJS
DRAWN	D-Herbert
CHECKED	NJS KPS

AUGUST 21 1996
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

Notes: The 1/4" x 8" x 8" Structural Steel Tubing shall conform to the requirements of ASTM designation A-500, Grade B, Structural Steel Tubing.
Steel tubing shall be galvanized in accordance with AASHTO M111 and ASTM A-385.
Cost included with Drain System.

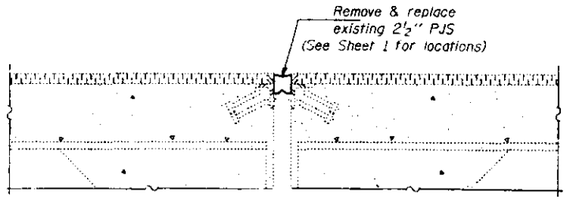
1

DRAIN DETAILS
F.A.I. 57 OVER MISSISSIPPI RIVER
SEC. 02-18-1
ALEXANDER COUNTY
S.N. 002-0022

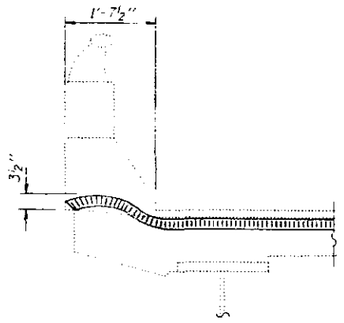
1 Revised 10/28/96 V.V.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

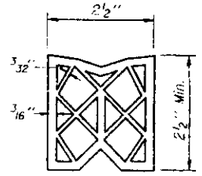
					SHEET NO. 4
F.A.I. 57	02-1B 1	ALEXANDER	7	7	4 SHEETS



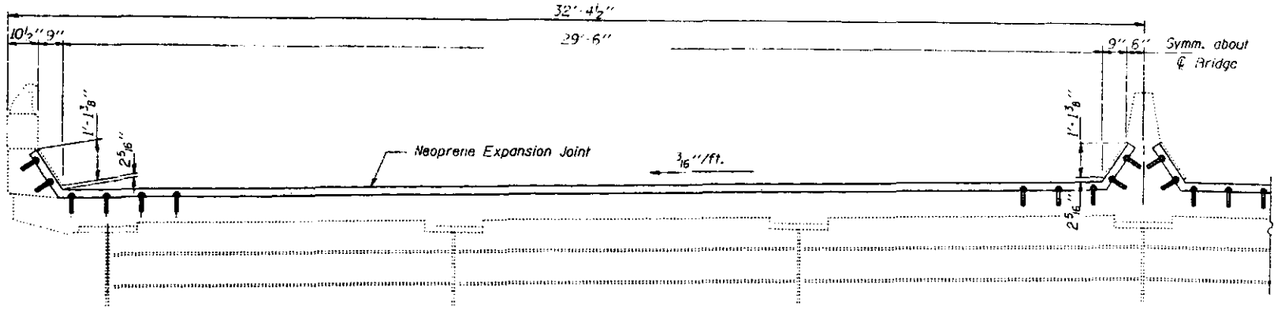
SECTION THRU PJS JOINTS



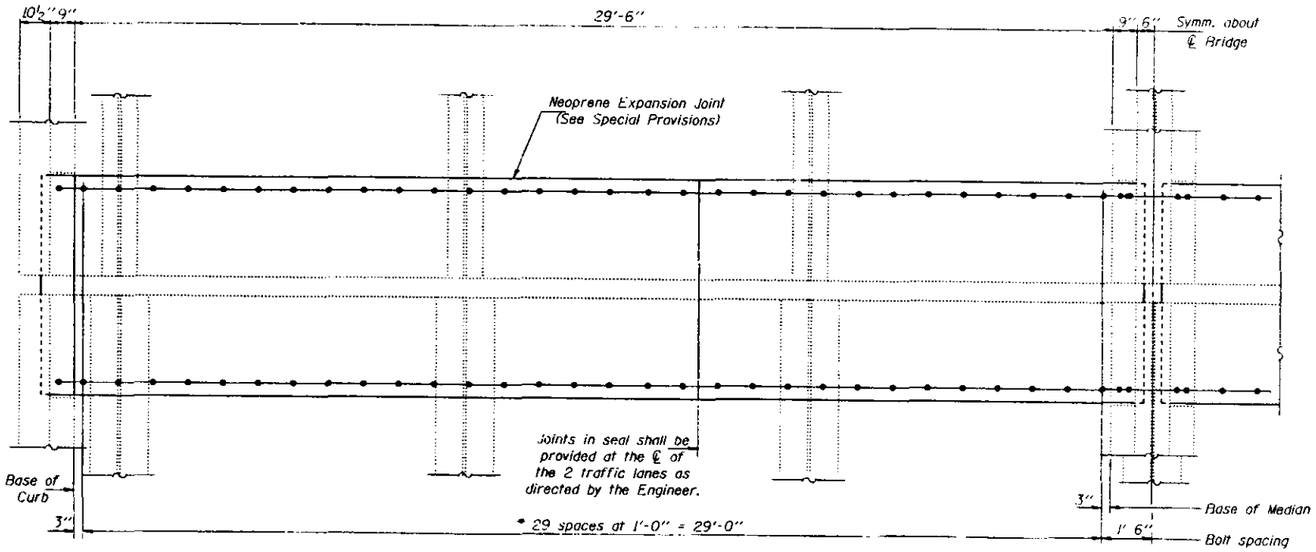
END OF SEAL TREATMENT



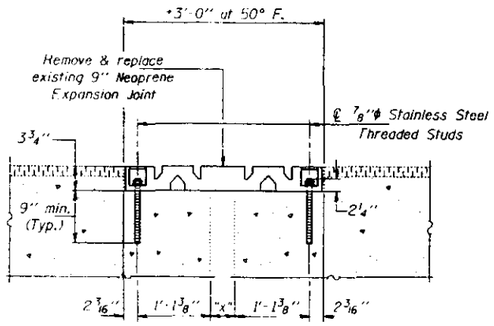
2½"PREFORMED JOINT SEAL



ELEVATION



PLAN
EXPANSION GUARD - SPANS 4 & 6
(Piers 4 & 7)



Temp. (°F.)	Dim. "x"
130	¾"
110	1⅝"
90	2½"
70	3⅜"
50	4¼"
30	5⅛"
10	6"
-10	6⅞"
-30	7¾"

SECTION THRU NEOPRENE EXP. JT. (9")

* Remove existing ⅞"ϕ studs by flame cutting and grind flush with top of concrete. Epoxy grout new ⅞"ϕ Stainless Steel threaded studs in 1⅛"ϕ x 9" (min.) drilled holes.

DESIGNED	KPS
CHECKED	NJS
DRAWN	DHerbert
CHECKED	NJS KPS

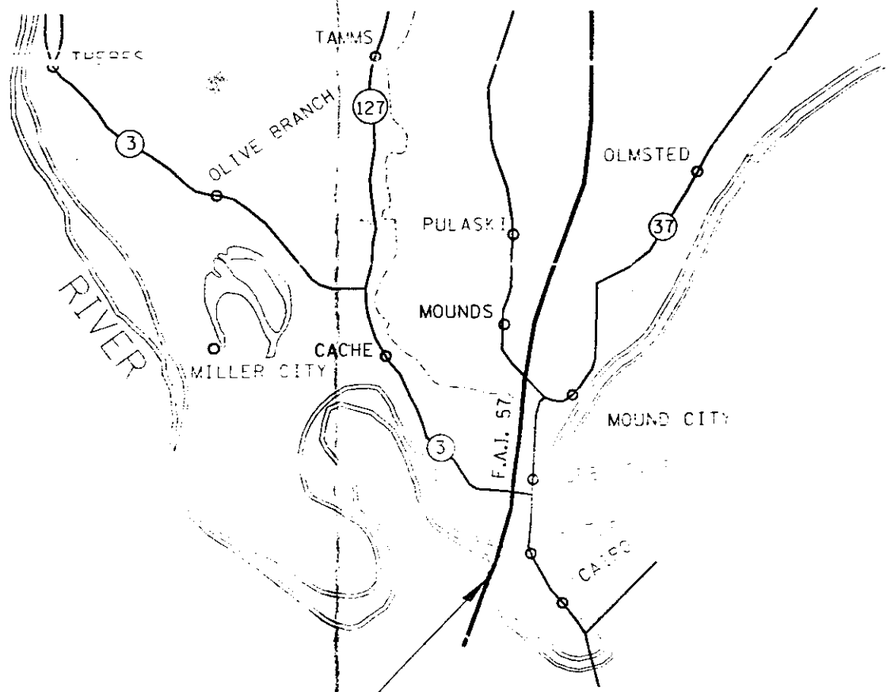
AUGUST 21 1996
EXAMINED Todd E. Adams
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

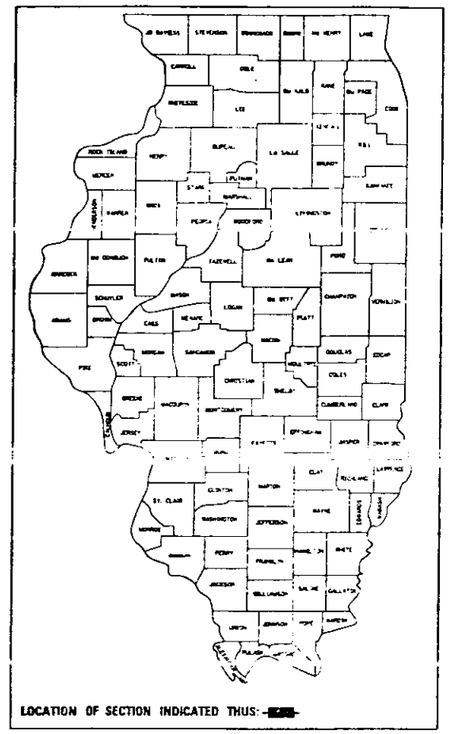
BRIDGE REPAIRS
F.A.I. 57 OVER MISSISSIPPI RIVER
SEC. 02-1B-1
ALEXANDER COUNTY
S.N. 002-0022

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	(02-1B-1)NDL-931	ALEXANDER	6	1
		ILLINOIS PROJECT BRIDGE REPAIR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
PROJECT NO. 94G902

ROUTE: I-57
COUNTY: ALEXANDER
STRUCTURE NO.: 002-0022
FLOOR BEAM REPAIR





N

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PREPARED BY: Bill Stout
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: [illegible]
DISTRICT PROJECT DEVELOPMENT ENGINEER

EXAMINED BY: [illegible]
DISTRICT PROJECT IMPLEMENTATION ENGINEER

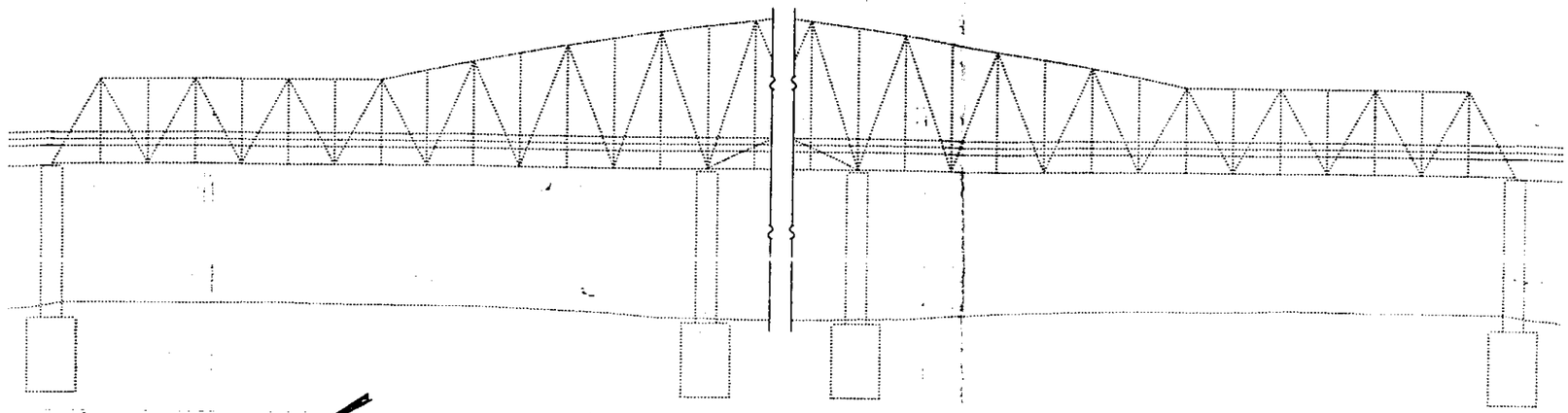
APPROVED: April 16, 1993
[illegible]
DISTRICT ENGINEER

JULIE 1-800-892-0123

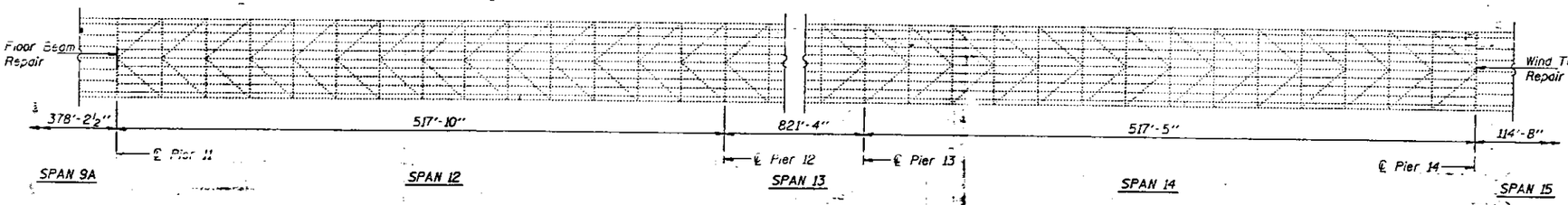
Reel DL3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO. 1
F.A.I. 57	(02-1B-1) (DL-93)		6	2	5 SHEETS



PARTIAL ELEVATION



PARTIAL PLAN

Repair End Floor Beam at Pier 11.
Remove and replace stainless steel plate at wind tongue at Pier 14. See detail sheet 2

GENERAL NOTES

All new structural steel shall conform to AASHTO Classification M-270 Gr. 36.

All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled $\frac{1}{16}$"ϕ and reamed in the field to $\frac{13}{16}$"ϕ for $\frac{3}{4}$"ϕ high strength bolts (except as noted on the plans) after new structural steel sections are properly fitted into position.

The Contractor shall grind all cracked welds parallel to the direction of the existing weld and not perpendicular to the weld.

Traffic control shall be determined by the District.

Plan dimensions and details relating to existing structure have been taken from existing plans and are subject to field verification. It shall be the Contractor's responsibility to verify all dimensions in the field and make necessary adjustments before fabrication or ordering of materials. Such verification shall be considered as compensation for a change in the work and the Contractor will be paid for the quantities shown on the plans for the work.

Oil and all loose paint shall be removed from the concrete deck in the area of repair.

Removal of all damaged members necessary to complete the work as detailed on the plans and as specified in the Standard Specifications shall be considered incidental to the contract.

The three coat lead and chromate free paint system shall be used for shop and field painting of the new steel. The color of the finish coat shall match the existing steel.

Structural steel shall only be placed and painted as required by the Special Provision "Cleaning and Painting New Metal Structures".

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	5820
Traffic Control	L.S.	1
Temporary Shoring and Cribbing	L.S.	1

DESIGNED	Kenneth P. Stuttle
CHECKED	CHM
DRAWN	Paul Summer
CHECKED	KPS CHM

March 8 1993

EXAMINED Fred E. Hansen
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

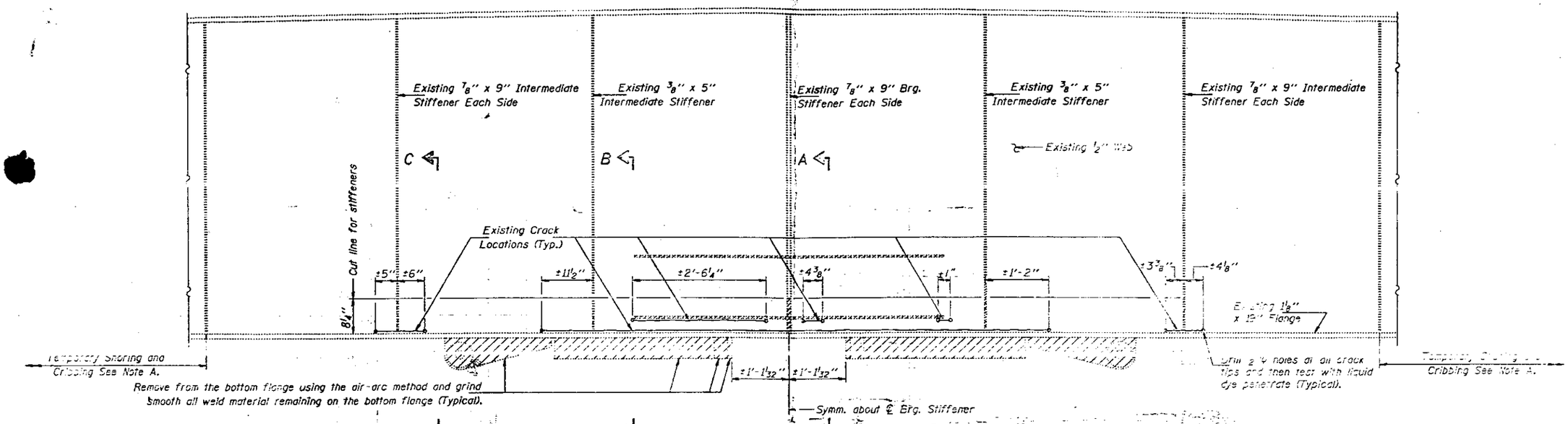
APPROVED
DIRECTOR OF HIGHWAYS

FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-93)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

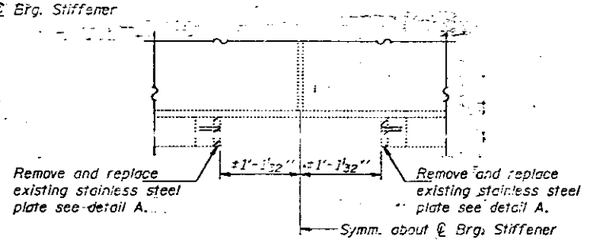
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B) (DL-93)	ALEXANDER	6	3
PROJECT NO.	ILLINOIS	FED. AID PROJECT		

SHEET 1 OF 6 SHEETS



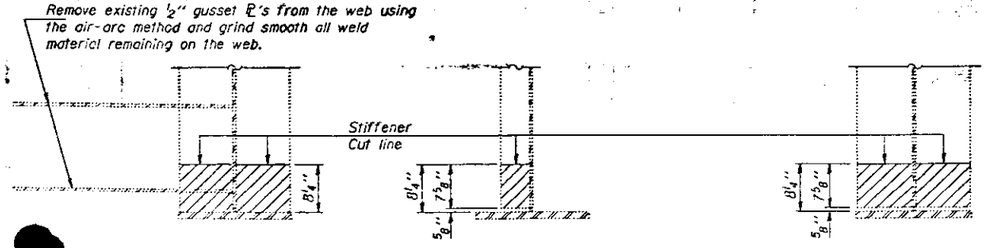
PARTIAL ELEVATION NORTH END FLOOR BEAM AT PIER 11

Hatched areas indicate removal.

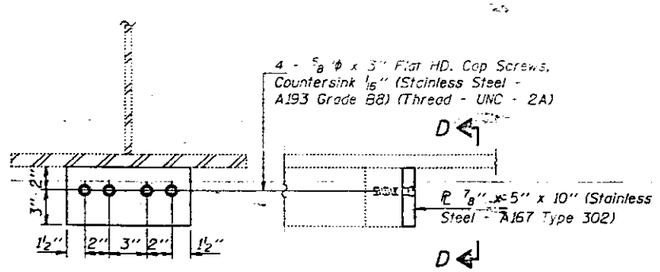


PARTIAL ELEVATION SOUTH END FLOOR BEAM AT PIER 14

Note A: At Pier 11. Temporary Shoring and Cribbing shall be placed between the existing floorbeam and the top of the pier during repair operations and traffic shall be restricted to lanes which are not directly over the area of the floorbeam being repaired.



SECTION A-A SECTION B-B SECTION C-C



SECTION D-D DETAIL A

Note: Cost of 5/8"ϕ x 3" Flat HD Cap Screws (Stainless Steel - A193 Grade B8) shall be incidental to Furnishing and Erecting Structural Steel.

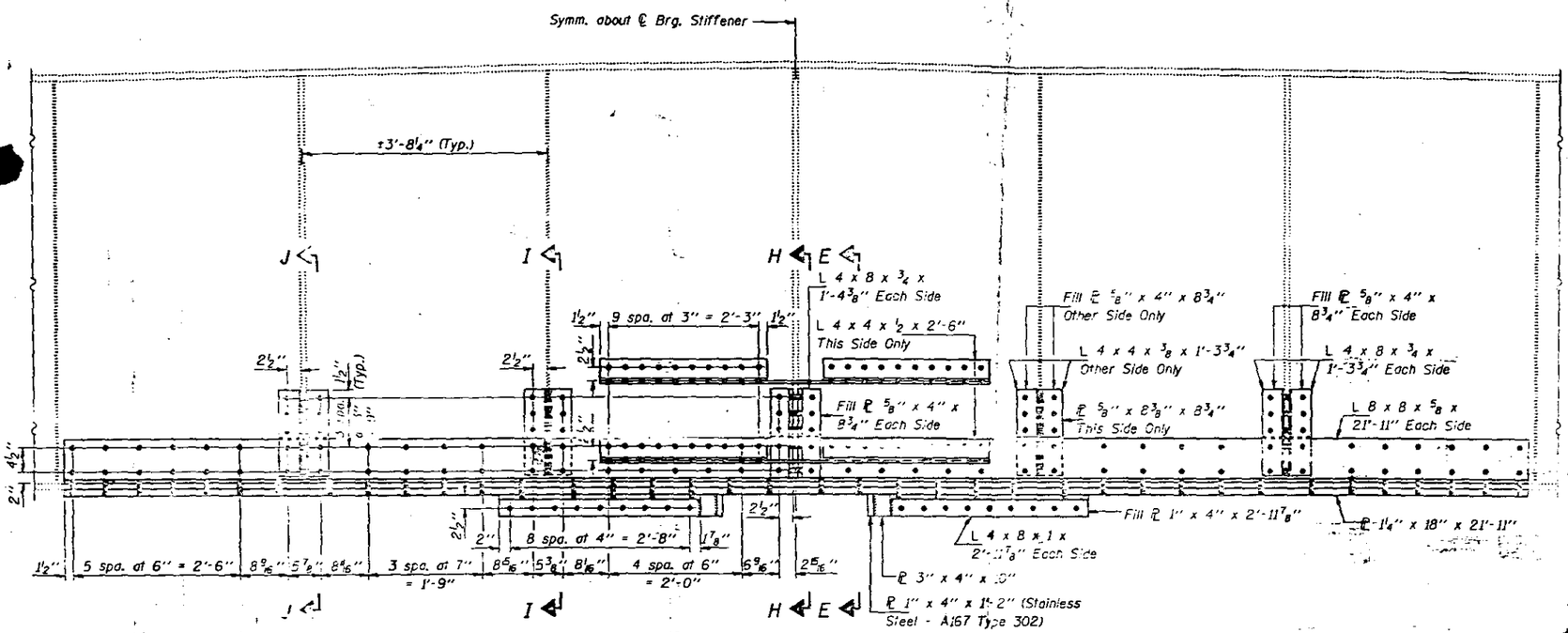
DESIGNED	Kenneth P. Stutt
CHECKED	CHM
DRAWN	Paul Summer
CHECKED	KPS CHM

March 8 1993
EXAMINED Todd E. Adams
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

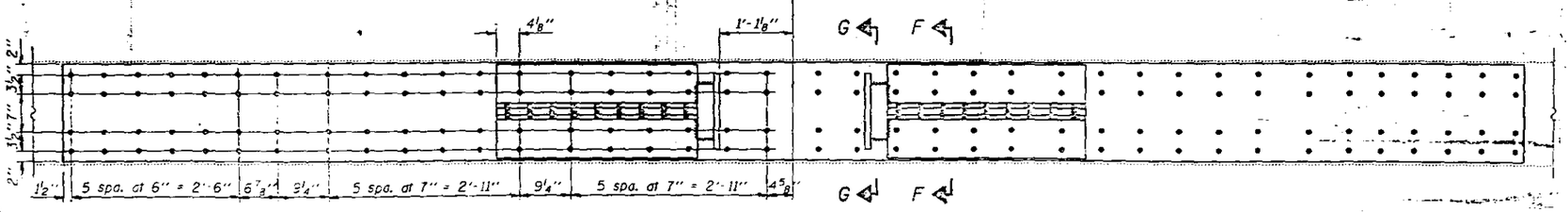
FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-93)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO. 3
F.A.I. 57	(02-1B-1) (DL-93)		6	4	5 SHEETS
		ILLINOIS	FED. AID PROJECT		



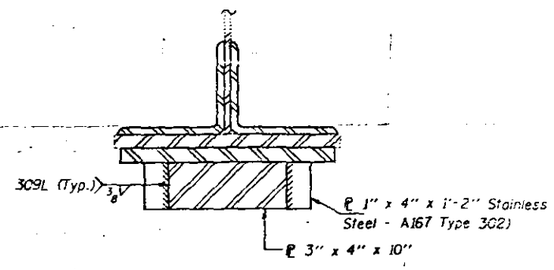
PARTIAL ELEVATION
(Looking North)



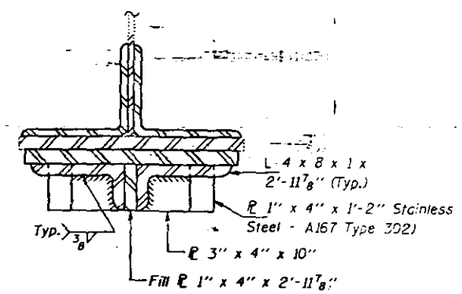
BOTTOM PLAN

SECTION E-E

For details of Gusset Plates see Sheet 5. Drill holes in floor beam to match existing Gusset Plate location.



SECTION G-G



SECTION F-F

DESIGNED	Kenneth P. Stutts
CHECKED	CHM
DRAWN	Paul Summer
CHECKED	KPS CHM

March 8 19 93

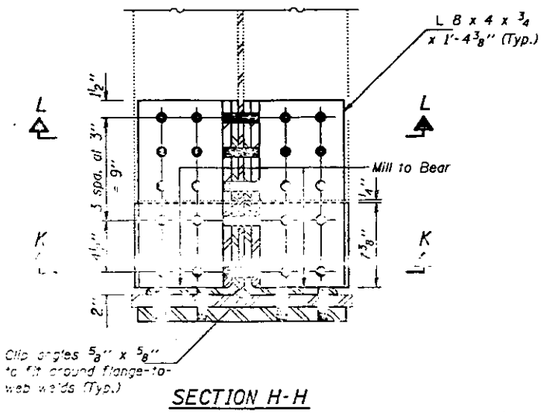
EXAMINED Jodi E. Adams
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

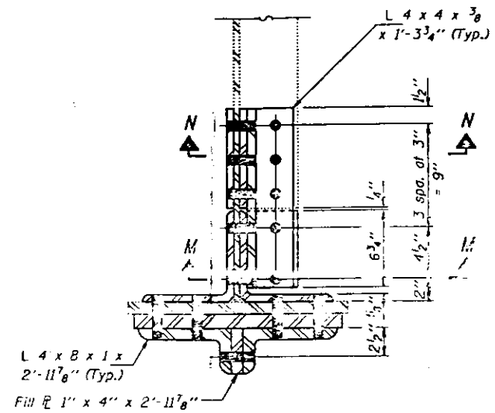
APPROVED
DIRECTOR OF HIGHWAYS

FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-93)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

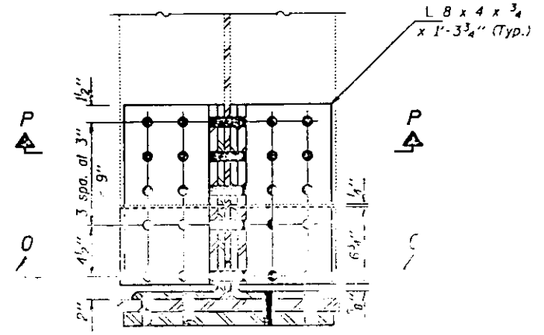
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



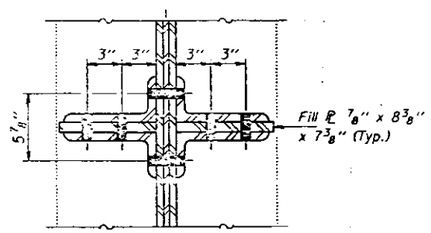
SECTION H-H



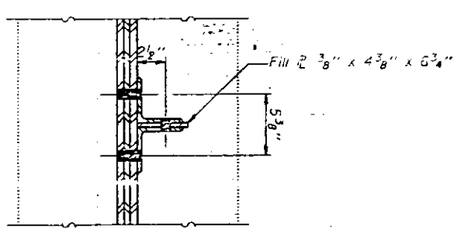
SECTION I-I



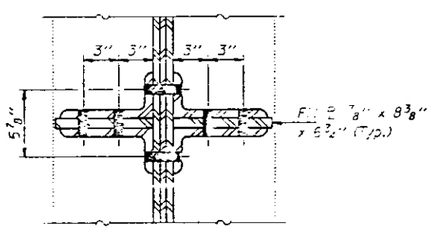
SECTION J-J



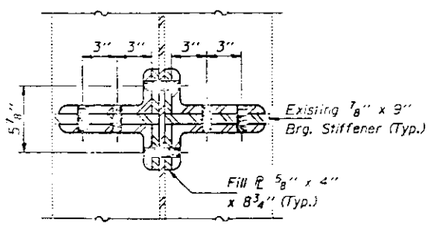
SECTION K-K



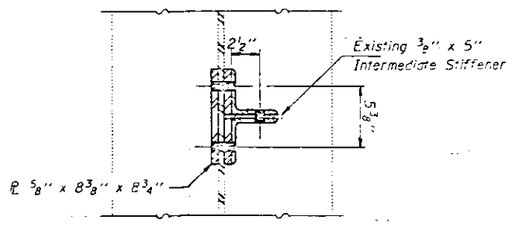
SECTION M-M



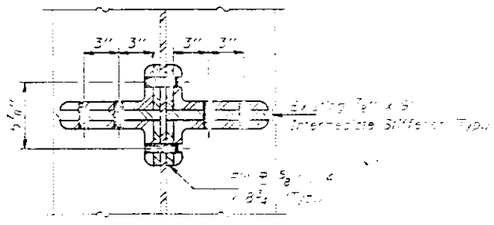
SECTION O-O



SECTION L-L



SECTION N-N



SECTION P-P

DESIGNED	Kenneth P. Smith
CHECKED	CHM
DRAWN	Paul Sumner
CHECKED	KPS CHM

March 8 1993

EXAMINED Todd E. Adams
ENGINEER OF STRUCTURAL SERVICES

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

APPROVED

DIRECTOR OF HIGHWAYS

FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-35)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	9	ALEXANDER	5	1
F.H.W.A. REG. NO.	ILLINOIS	PROJECT		

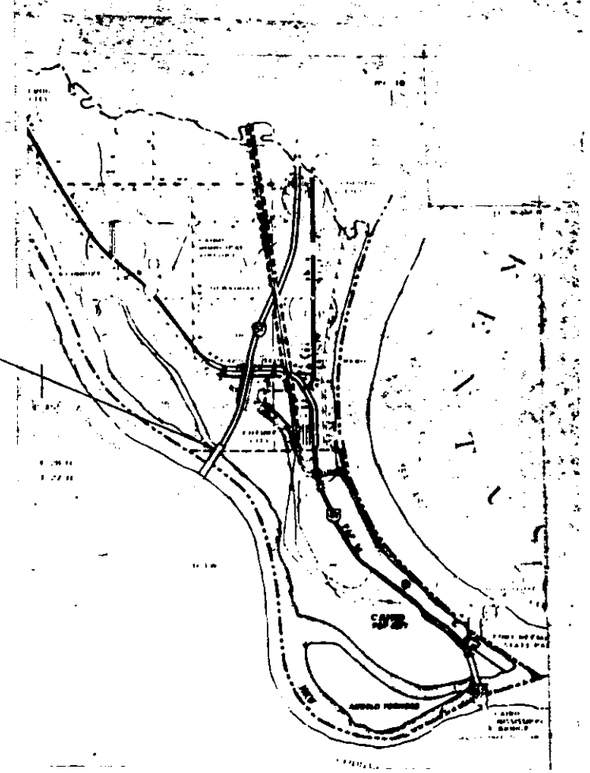
02-1B-1-DL-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

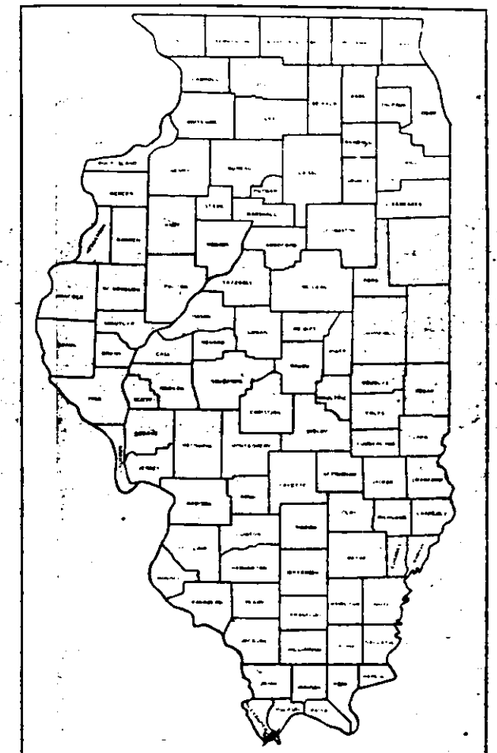
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A.I. ROUTE 57
SECTION 02-1B-1-DL-1
ALEXANDER COUNTY

SLT-99-001-85



LOCATION OF PROPOSED
IMPROVEMENT F.A.I. 57
OVER MISSISSIPPI RIVER
STR. NO. 002-0022



LOCATION OF SECTION INDICATED THUS: —

SUMMARY OF QUANTITIES

ITEM	UNIT	QUANTITY
ERECTING STRUCTURAL STEEL	POUND	8020
REMOVAL OF EXISTING STEEL	L.SUM	1
TEMPORARY SUPPORT SYSTEM	L.SUM	1
TRAFFIC CONTROL	L.SUM	1

INDEX OF SHEETS — SHEET NO. —
SUMMARY OF QUANTITIES — SHEET NO. —

SHEET
1 COVER SHEET
2-5 STRUCTURE PLANS

STANDARDS: 2298-7
2299-10
2300-3
2307-6
2315-6
2316-8

PREPARED BY: _____ ENGINEER

[redacted]: _____ DISTRICT PLANNING ENGINEER

EXAMINED BY: _____ DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: _____ DISTRICT MAINTENANCE ENGINEER

EXAMINED BY: _____ DISTRICT TRAFFIC ENGINEER

EXAMINED BY: _____ DISTRICT MATERIALS ENGINEER

EXAMINED BY: _____

APPROVED BY: _____ 19
DATE

_____
DISTRICT ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED _____ 19__
DISTRICT ENGINEER

EXAMINED _____ 19__
ENGINEER OF PLANS AND CONTRACTS

PASSED _____ 19__
ENGINEER OF BRIDGES

APPROVED _____ 19__
DIRECTOR DIVISION OF HIGHWAYS

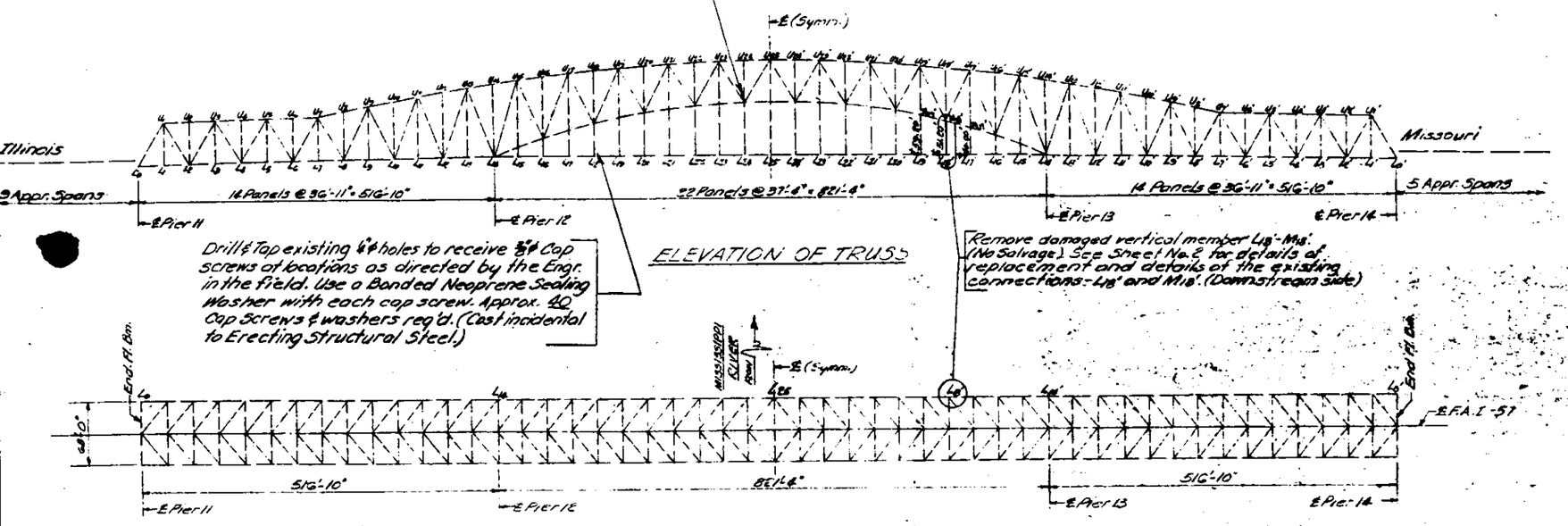
COUNTY SECTION ROUTE

Reel DL 5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO 2
5 SHEETS

Seal the top horizontal plate of Member L28-M28 of the West Truss to prevent water infiltration. Use elastic caulking as directed by the Engr. in the field at this location. (Cost incidental to Erecting Structural Steel.)

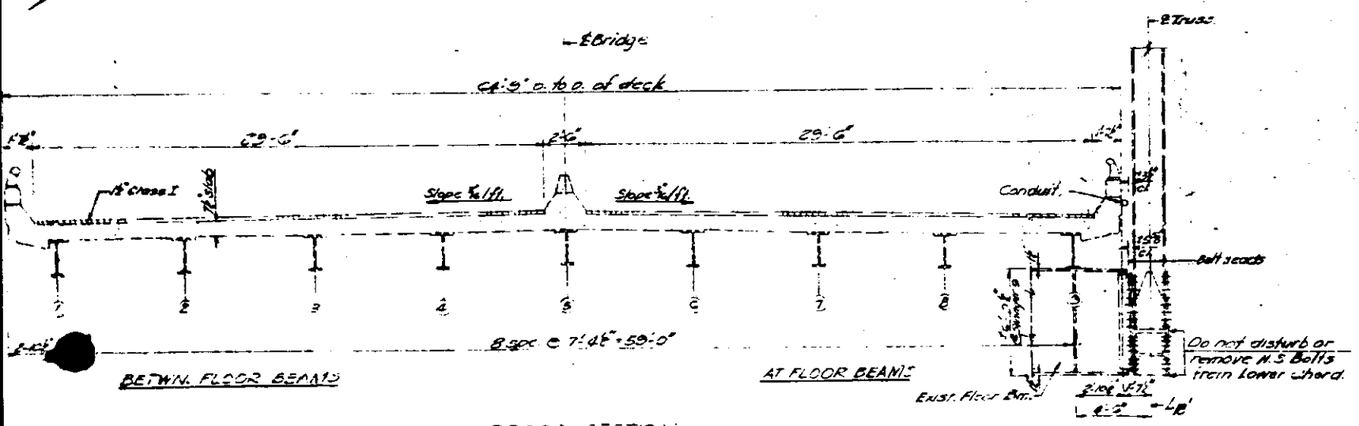


ELEVATION OF TRUSS

Drill & Tap existing 1" ϕ holes to receive ⅝" ϕ Cap screws at locations as directed by the Engr. in the field. Use a Bonded Neoprene Sealing Washer with each cap screw. Approx. 40 Cap Screws & washers req'd. (Cost incidental to Erecting Structural Steel.)

Remove damaged vertical member L18'-M18' (No Salvage) See Sheet No. 2 for details of replacement and details of the existing connections L18' and M18'. (Downstream side)

PLAN ~ FLOOR BEAMS & LOWER LATERALS



BETWN. FLOOR BEAMS AT FLOOR BEAMS

CROSS SECTION

GENERAL NOTES

All new structural steel shall conform to AASHTO Classification M-183. (L18'-M18').
Fasteners shall be high strength bolts.

Holes shall be subpunched or subdrilled and reamed in the field as noted on the plans.

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 or fabrication. 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.

The new member L18'-M18' shall be installed in one piece. In order for the member to fit properly into position, the contractor shall carefully measure the clear distances between the inside faces of the gussets of L18' & M18' and adjust the fabrication dimension of L18'-M18' to ensure a tight fit of the member between gussets.

The basic lead silica chromate paint system shall be used for shop and field painting of new structural steel Areas not to be painted as per Standard Specifications adopted October 1, 1983. All areas of paint damage in the repair area shall be cleaned and spot painted with the basic lead silica chromate paint and two coats of Interstate Green.

Temporary support system for floor beam and lower chord at L18'-U18' shown on Sht. 3 of the plans is a suggested system. If the Contractor elects to use a different system, plans shall be submitted to the Bureau of Bridges for approval before commencement of the removal and replacement of the damaged vertical member.

Traffic Control will be required during these repairs. No traffic or construction equipment in the traveled lane next to the truss for two panels each side of the vertical member L18'-M18'. One lane of traffic will be permitted next to the repair area (North bound) and two lanes (South bound) will be permitted.

TOTAL BILL OF MATERIAL

	Item	Unit	Total
	~~Furnishing Structural Steel~~	~~Lbs.~~	~~6020~~
	Erecting Structural Steel	Lbs.	6020
**	Removal of Existing Steel (L18'-M18')	L.S.	L.S.
	Temporary Support System	L.S.	L.S.
	Traffic Control	L.S.	L.S.

** Est. Wt. = 6,020 Lbs. (L18'-M18')

DESIGNED	ENR
CHECKED	APW
DRAWN	ENR
CHECKED	APW

Dec. 17, 1984
EXAMINED O.J. Rohrer
PASSED
APPROVED

L18'-M18' STRESSES - Kips

Dead Load ~ Steel = 51 k
" ~ Conc. = 166 k
Total Dead Load = 217 k
Live Load + Impact = 149 k
Total D + I + Q = 366 k

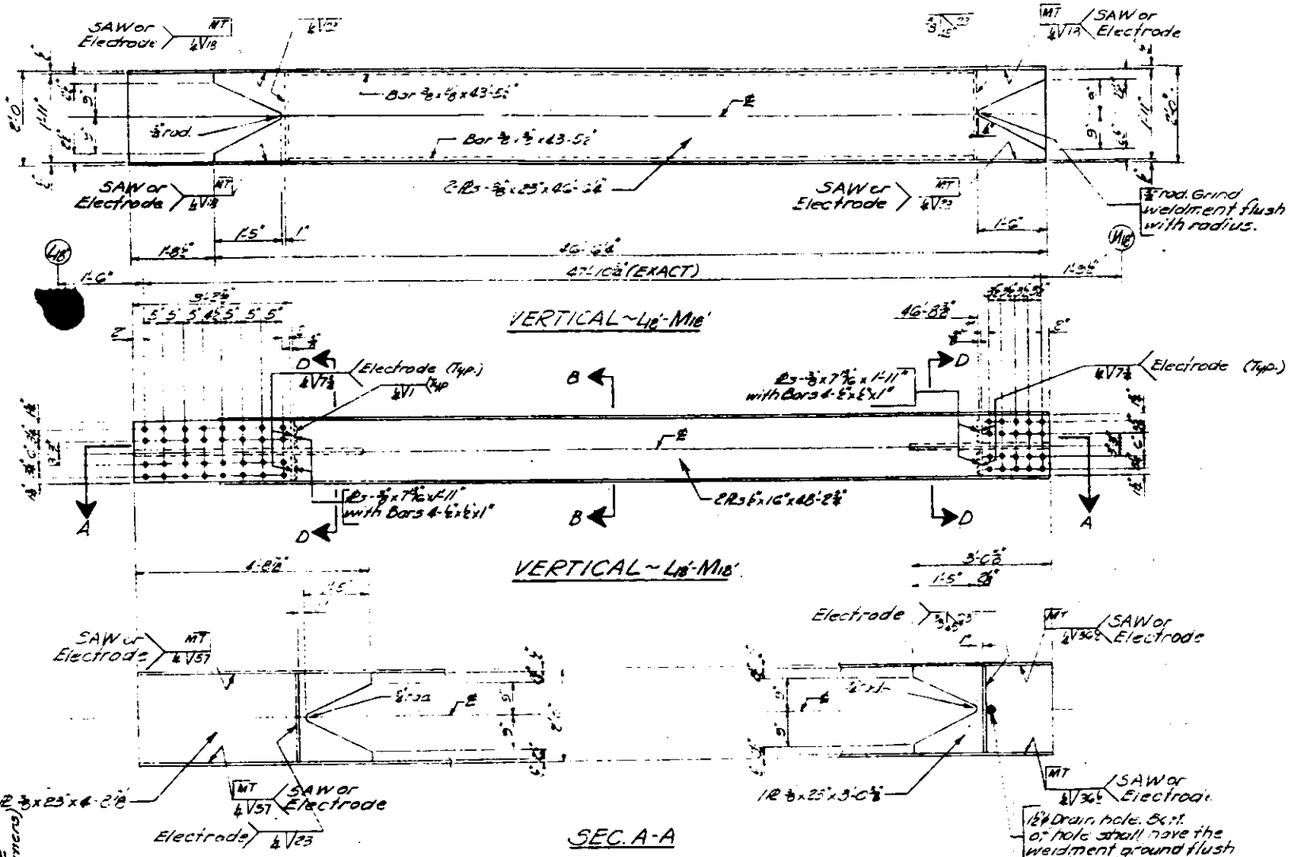
DESIGN LOADING
HS 20 & Alternate

WELDING
AWS-1969 (10th ed.)

L18'-M18' MEMBER-REPLACEMENT
FAI-57 OVER MISSISSIPPI RIVER
FAI RT 57 SEC. 02-1B-1-J-DL-1
ALEXANDER COUNTY
Bridge No. 002-0022

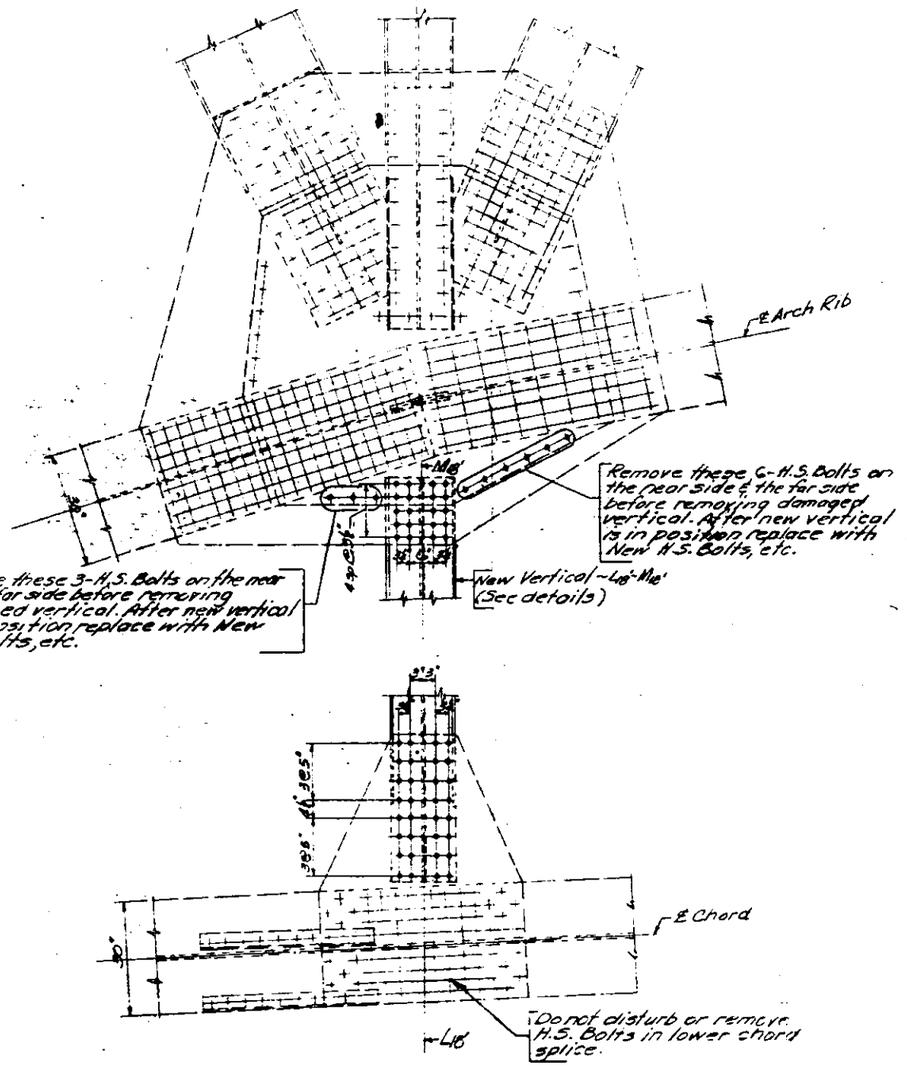
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO 3
5 SHEETS

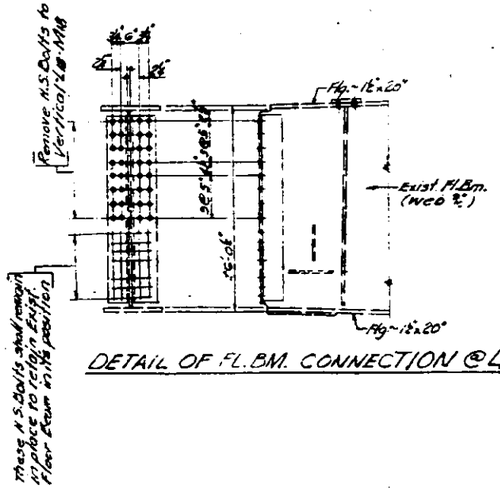


NOTES

1. All connection holes in vertical L16'-M16' shall be subpunched or subdrilled 1 1/16" ϕ and reamed in the field to the same dia. as existing holes in gussets (1 1/16" ϕ). Use New 1" ϕ A.S. Bolts in connection.
2. Electrodes maybe E 7028 or E 7018.
3. Grinder must be square at connections.
4. Dimensions & Details of L16'-M16' are from original contract fabrication plans.



DETAIL OF EXISTING L16' & M16' CONNECTIONS
(Looking Upstream)



DETAIL OF FL. BM. CONNECTION @ L16'

BILL OF MATERIAL

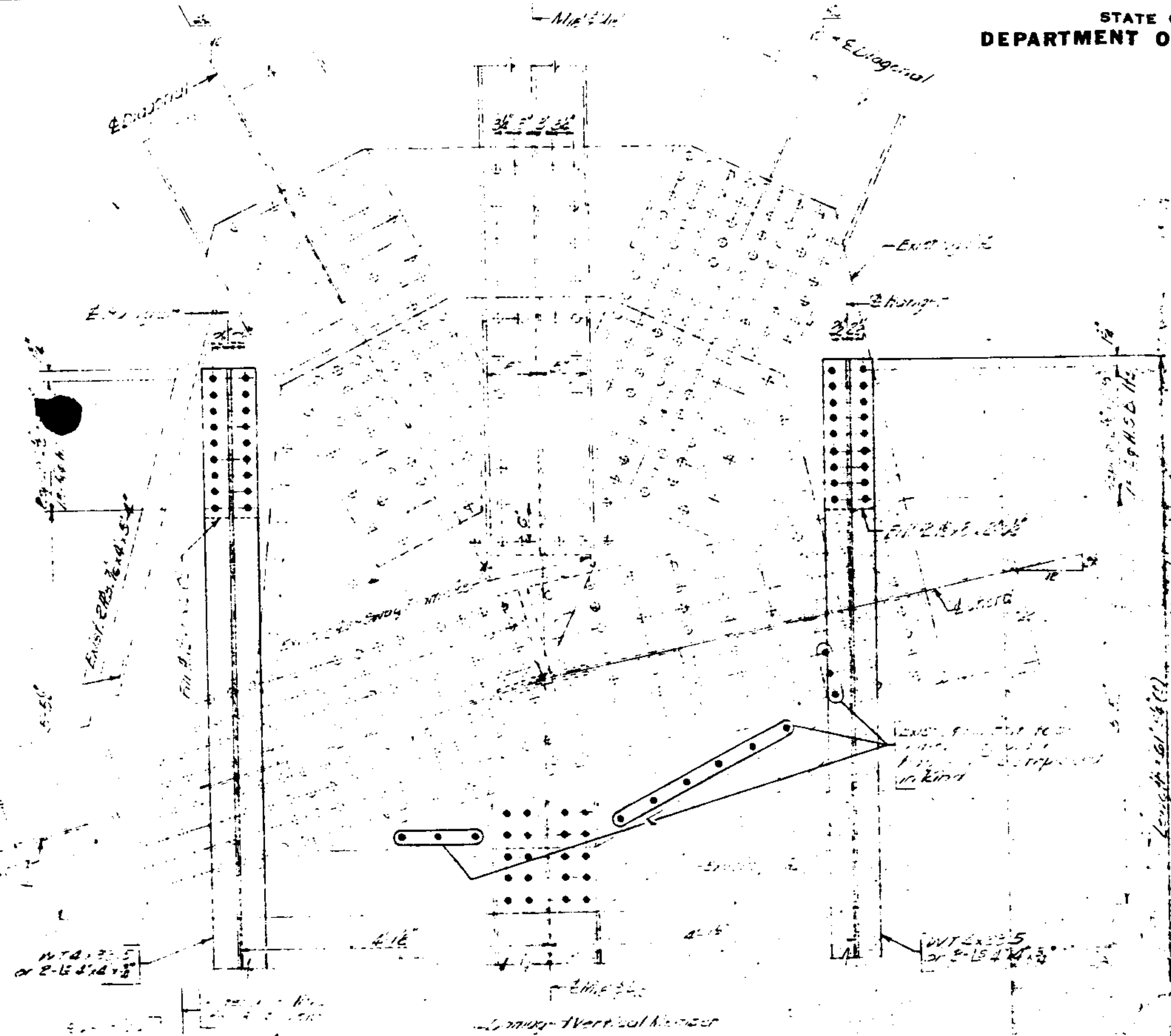
Item	Unit	Total
~~Furnishing Structural Steel~~	~~lbs.~~	~~6080~~
Erecting Structural Steel	Lbs.	6,080

DESIGNED	ENR
CHECKED	A.P.N
DRAWN	ENR
CHECKED	A.P.N

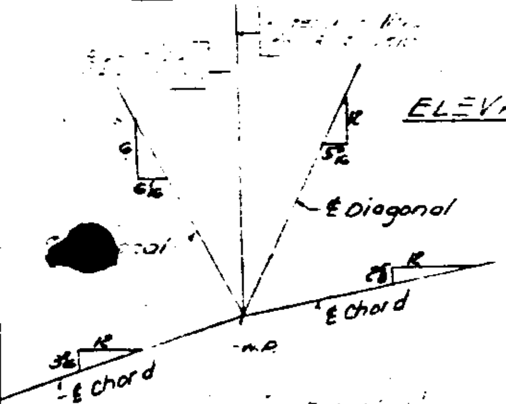
Dec 17 1984
EXAMINED O.J. Rohrer
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

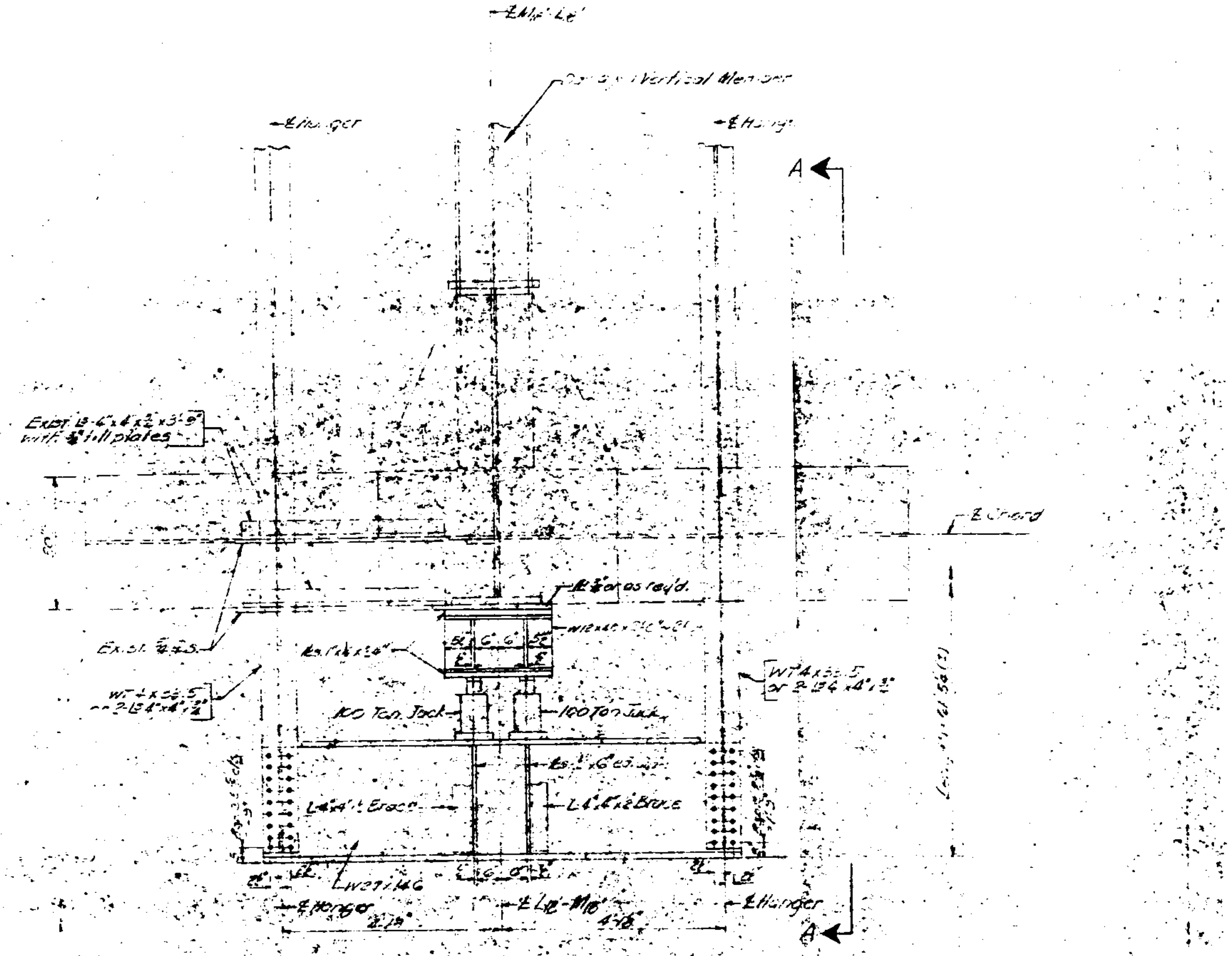
L16'-M16' MEMBER & DETAILS
F.A.I.-57 OVER MISSISSIPPI RIVER
F.A.I RT. 57 SEC. 02-1B-1-I-OL-1
ALEXANDER COUNTY

Bridge No. 002-0002



ELEVATION ~ TOP PORTION OF SUPPORT SYSTEM





ELEVATION ~ BOTTOM PORTION OF SUPPORT SYSTEM

BILL OF MATERIAL

Item	Unit	Total
* Temporary Support System	L.S.	L.S.

* Est. Wt. of Structural Steel = 6910 Lbs.

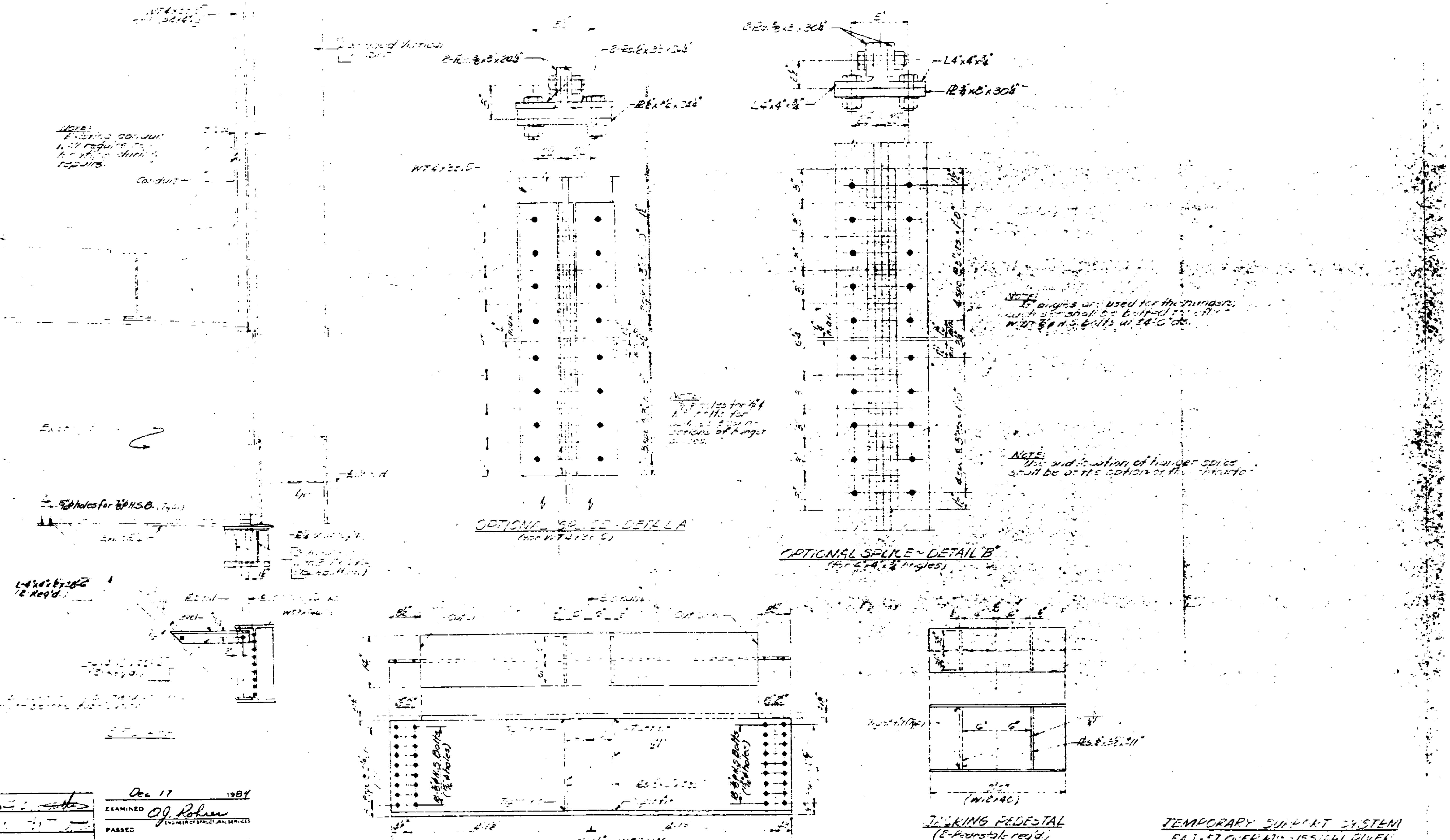
DESIGNED
CHECKED
DRAWN ENR
CHECKED

Dec 17 1984
EXAMINED O.J. Rohren
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

TEMPORARY SUPPORT SYSTEM
F.A.I.-57 OVER MISSISSIPPI RIVER
F.A.I. RT. 57 SEC. 02-1B-1-2-DL-1
ALEXANDER COUNTY
Bridge No. 002-0002

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 5
5 SHEETS



DESIGNED
CHECKED
DRAWN
CHECKED

Dec 17 1984
EXAMINED O.J. Rohrer
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

TEMPORARY SUPPORT SYSTEM
FA.I.-57 OVER MISSISSIPPI RIVER
FA.I. RT. 57 SEC. -DL-1
ALEXANDER COUNTY
Bridge No. 002-0022

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.57	102-1B-1 P	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	40	1
F. HW A. REG. NO. 4 F. HW A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(6)0	

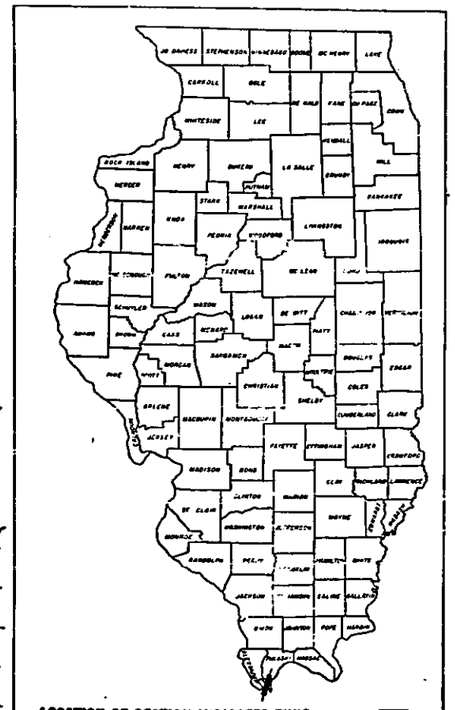
P-99-012-64

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

MISSOURI
STATE HIGHWAY COMMISSION

PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY
BRIDGE OVER MISSISSIPPI RIVER
WEST OF CAIRO, ILLINOIS
ALEXANDER COUNTY, ILLINOIS - MISSISSIPPI COUNTY, MISSOURI
F.A.I. ROUTE 57 PROJECT I-57-9(6)0
SUPERSTRUCTURE SECTION (02-1B-1) P

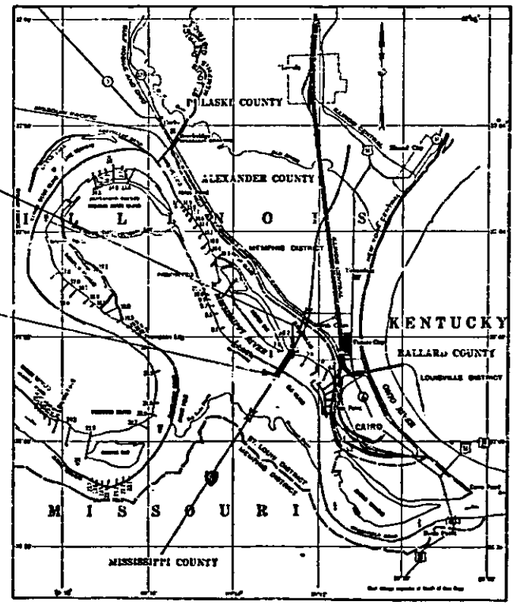
C-99-110-71



INDEX OF SHEETS, SHEET NO. 2
SUMMARY OF QUANTITES, SHEET NO. 2

PROPOSED IMPROVEMENT BEGINS
PROJECT I-57-9(6)0
SECTION (02-1B-1)P
STA. 1141+85.25

PROPOSED IMPROVEMENT ENDS
PROJECT I-57-9(6)0
SECTION (02-1B-1)P
STA. 1182+74.75



LAYOUT

SECTION (02-1B-1) P INCLUDES FURNISHING ALL MATERIALS AND FIELD PAINTING ALL STRUCTURAL STEEL FOR (A) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 9 SPANS (4 @ 110 FT, 3 @ 155 FT AND 2 @ 376 FT), (B) A THREE SPAN CONTINUOUS THROUGH TRUSS STRUCTURE OVER THE MAIN AND AUXILIARY NAVIGATION CHANNELS (518 FT, 821 FT AND 518 FT) (C) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 5 SPANS OF 114 FT CARRYING F.A.I. ROUTE 57 OVER THE MISSISSIPPI RIVER AT CAIRO, ILLINOIS.

NET LENGTH OF PROJECT
4089.50 LIN. FT. = 0.7745 MILES

PREPARED BY: ALFRED BENESCH & COMPANY, CONSULTING ENGINEERS, 10 SO. WABASH AVENUE, CHICAGO, ILLINOIS

EXAMINED BY — DIST. DESIGN ENGINEER — Harry D. Ley
EXAMINED BY — DIST. CONST. ENGINEER — Arnold Lenzini
EXAMINED BY — DIST. MAINT. ENGINEER — Carl K. Bellstedt
EXAMINED BY — DIST. TRAFFIC ENGINEER — A. E. Zellers
EXAMINED BY — DIST. M'TLS. ENGINEER — F. M. Conrad
EXAMINED BY — DIST. R.O.W. ENGINEER — T. Yantiss

A-2000

MISSOURI STATE HIGHWAY COMMISSION
SUBMITTED Nov. 6, 19 [illegible]
APPROVED Nov. 8, 19 [illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED Dec. 17, 19 [illegible]
DISTRICT ENGINEER [illegible]
EXAMINED [illegible]
ENGINEER OF PLANS AND CONTRACT [illegible]
APPROVED [illegible]
ENGINEER OF MEANS [illegible]
APPROVED [illegible]
DIRECTOR OF HIGHWAYS

EXAMINED BY
Carl E. Thurmon Jr.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR — DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR — DATE

CONTRACT NUMBER 32375

ALEXANDER COUNTY ILLINOIS SECTION 102-1B-1)P F.A.I. ROUTE 57
MISSISSIPPI COUNTY MISSOURI

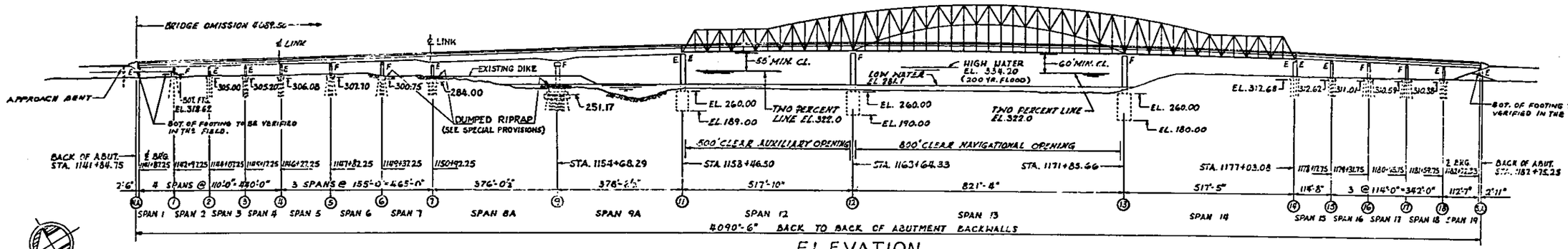
REEL 9-97

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I 57	102-1841 P	ALEXANDER ILLINOIS DIVISION	40	2
F.H.W.A. REG. NO. 4		ILLINOIS		
F.H.W.A. REG. NO. 5		MISSOURI	PROJECT I-57-9(6)0	

BENCH MARKS

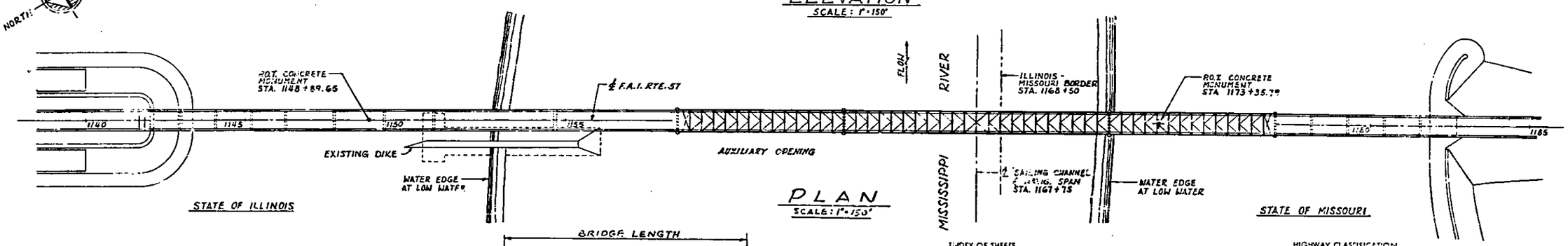
CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1148+89.65 TL ℄ ℄ MEDIAN EL. 317.12

CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1173+35.79 TL ℄ ℄ MEDIAN EL. 319.31

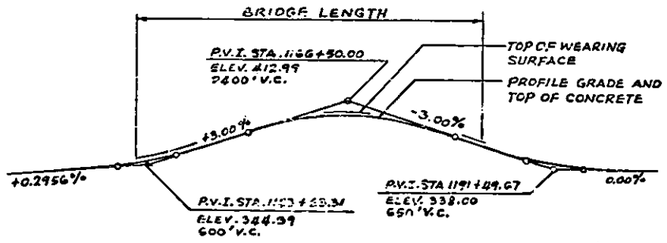


ELEVATION
SCALE: 1"=150'

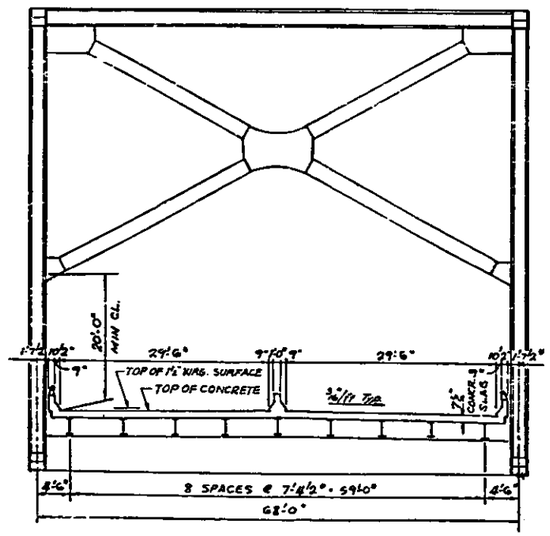
NORTH



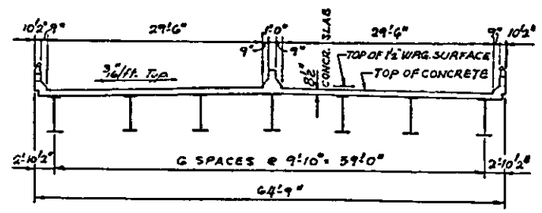
PLAN
SCALE: 1"=150'



PROFILE GRADE - F.A.I. RTE. 57
(4'0" LT. AND RT. OF ℄ MEDIAN)



TYPICAL SECTION THRU TRUSS SPANS



TYPICAL SECTION THRU GIRDER SPANS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL PLAN AND ELEVATION
3	FRAMING PLAN - SPANS 1, 2, 3 & 4
4	FRAMING PLAN - SPANS 1, 2, 3 & 4
5	FRAMING PLAN - SPANS 5, 6 & 7
6	FRAMING PLAN - SPANS 5, 6 & 7
7	FRAMING PLAN - SPANS 8A, 9A
8	FRAMING PLAN - SPANS 15 TO 19
9	GIRDER CROSSFRAMES AND LINK DETAILS
10	GIRDER CROSSFRAMES AND BRACING DETAILS
11, 12, 13	STEEL DETAILS - SPANS 8A & 9A
14	FIELD SPLICE AND DETAILS - SPANS 1 TO 9A & 15 TO 19
15	BEARING DETAILS - SPANS 1 TO 9A & 15 TO 19
16, 17	EXPANSION GUARD - PIERS 11 & 14
18	TRUSS LAYOUT & BLOCKING ORDINATES
19	FRAMING PLAN - SPANS 12, 13 & 14
20	FLOOR STEEL DETAILS - SPANS 12, 13 & 14
21	FLOOR BEAMS - SPANS 12, 13 & 14
22	TRUSS DETAILS - L_0 TO L_3 & U_1 TO U_3
23	TRUSS DETAILS - L_4 TO L_7 & U_4 TO U_7
24	TRUSS DETAILS - L_8 TO L_{10} & U_8 TO U_{10}
25	TRUSS DETAILS - L_{11} TO L_{13} & U_{11} TO U_{13}
26	TRUSS DETAILS - L_{14}, M_{15}, M_{16} & U_{14} TO U_{16}
27	TRUSS DETAILS - M_{17} TO M_{19} & U_{17} TO U_{19}
28	TRUSS DETAILS - M_{20} TO M_{22} & U_{20} TO U_{22}
29	TRUSS DETAILS - M_{23} TO M_{25} & U_{23} TO U_{25}
30	TRUSS DETAILS - L_{15} TO L_{25}
31	TRUSS DETAILS - MISCELLANEOUS
32	SWAY FRAMES - SPANS 12, 13 & 14
33	PORTALS - SPANS 12, 13 & 14
34	TRUSS BEARINGS AT PIERS 12 & 13
35	TRUSS BEARINGS AT PIERS 13 & 14
36	NAVIGATION & AVIATION OBSTRUCTION LIGHTS
37	PIER LIGHT, LADDER & RAILING DETAILS
38	CENTER OF CHANNEL NAVIGATION LIGHT DETAILS
39	AVIATION OBSTRUCTION LIGHT DETAILS
40	DRAINAGE DETAILS

HIGHWAY CLASSIFICATION

F.A.I. ROUTE 57, DHV: 1920, M.P.H.: 70, DESIGNATION: B-I (1987)

GENERAL NOTES

STRUCTURAL STEEL SHALL BE FIELD PAINTED IN ACCORDANCE WITH SEC. 507 OF THE STD. SPECS.

THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED

Estimated weight of Structural Steel to be painted = 22,243,460#

SUMMARY OF QUANTITIES
SECTION (02-18-1)P

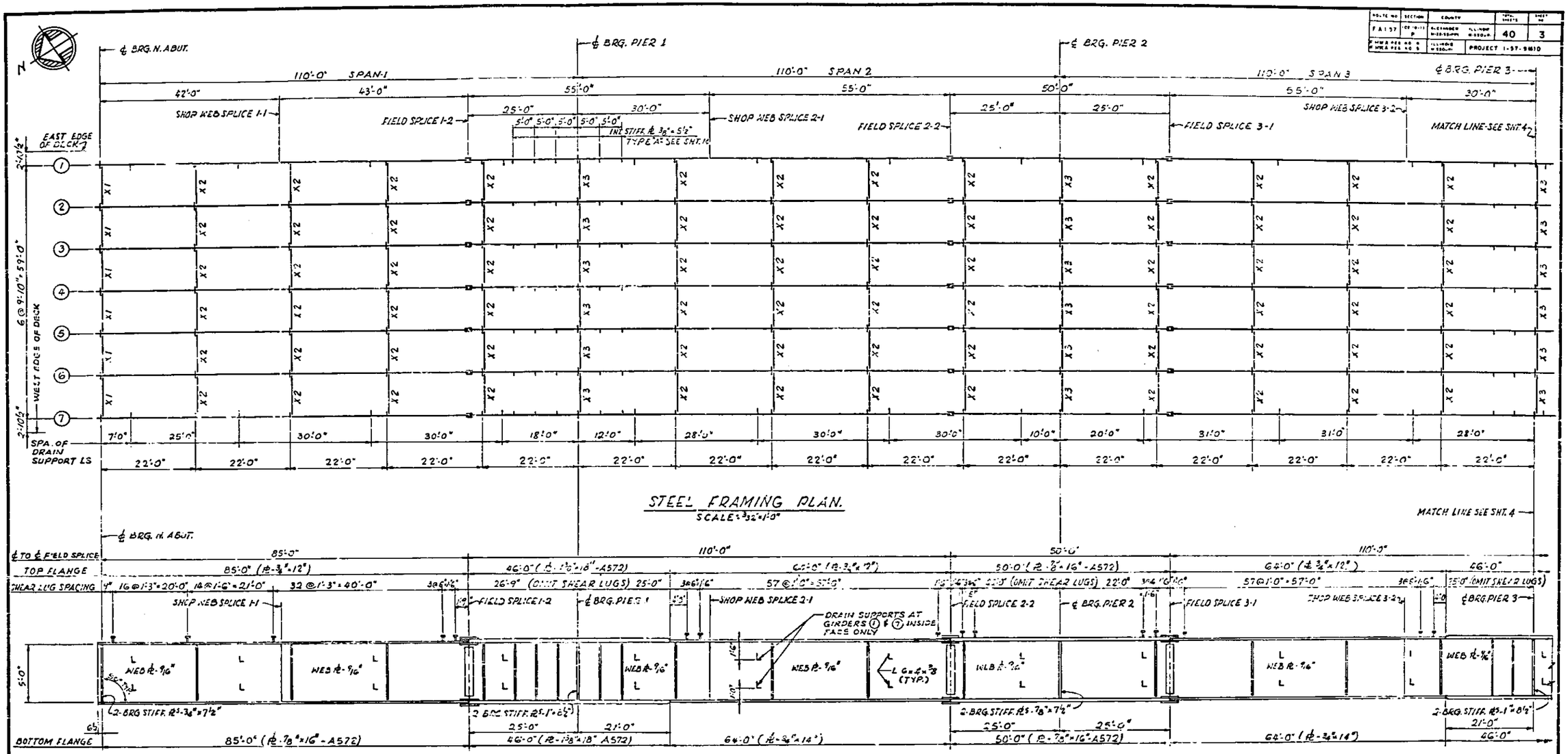
QUANTITY	UNIT	ITEM	CODE NO.
1	L. SUM	PAINTING STRUCTURAL STEEL	X50904

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

GENERAL PLAN AND ELEVATION
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(6)0
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

Rev. 3-1-76 Rev. 10-27-76

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-1B-1)P	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	40	3
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(B)10	



STEEL FRAMING PLAN.

SCALE: 3/32" = 1'-0"

ELEVATION

NO SCALE
GIRDER 1 SHOWN

S.W.S. = SHOP WEB SPLICE
F.S. = FIELD SPLICE

GIRDER ELEVATIONS-FOR FABRICATION ONLY

GIRDER \ LOCATION	℄ BRG. N. ABUT.	S.W.S. 1-1	F.S. 1-2	PIER 1	S.W.S. 2-1	F.S. 2-2	PIER 2	F.S. 3-1	S.W.S. 3-2	PIER 3	F.S. 4-1	S.W.S. 4-2	℄ LINK-SPANS
1	343.076	343.597	343.890	344.197	344.565	345.534	345.996	346.457	347.518	348.258	348.858	350.125	350.877
2	343.180	343.751	344.044	344.350	344.719	345.688	346.150	346.611	347.672	348.411	349.012	350.279	351.031
3	343.334	343.904	344.198	344.504	344.872	345.841	346.304	346.764	347.826	348.565	349.165	350.432	351.184
4	343.487	344.058	344.351	344.656	345.026	345.995	346.457	346.918	347.979	348.718	349.319	350.586	351.338
5	343.334	343.904	344.198	344.504	344.872	345.841	346.304	346.764	347.826	348.565	349.165	350.432	351.184
6	343.180	343.751	344.044	344.350	344.719	345.688	346.150	346.611	347.672	348.411	349.012	350.279	351.031
7	343.026	343.597	343.890	344.197	344.565	345.534	345.996	346.457	347.518	348.258	348.858	350.125	350.877

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE.

FILLET WELD TABLE

FLANGE PL THICKNESS	WELD SIZE
OVER ½" TO ¾"	¼
OVER ¾" TO 1½"	5/16

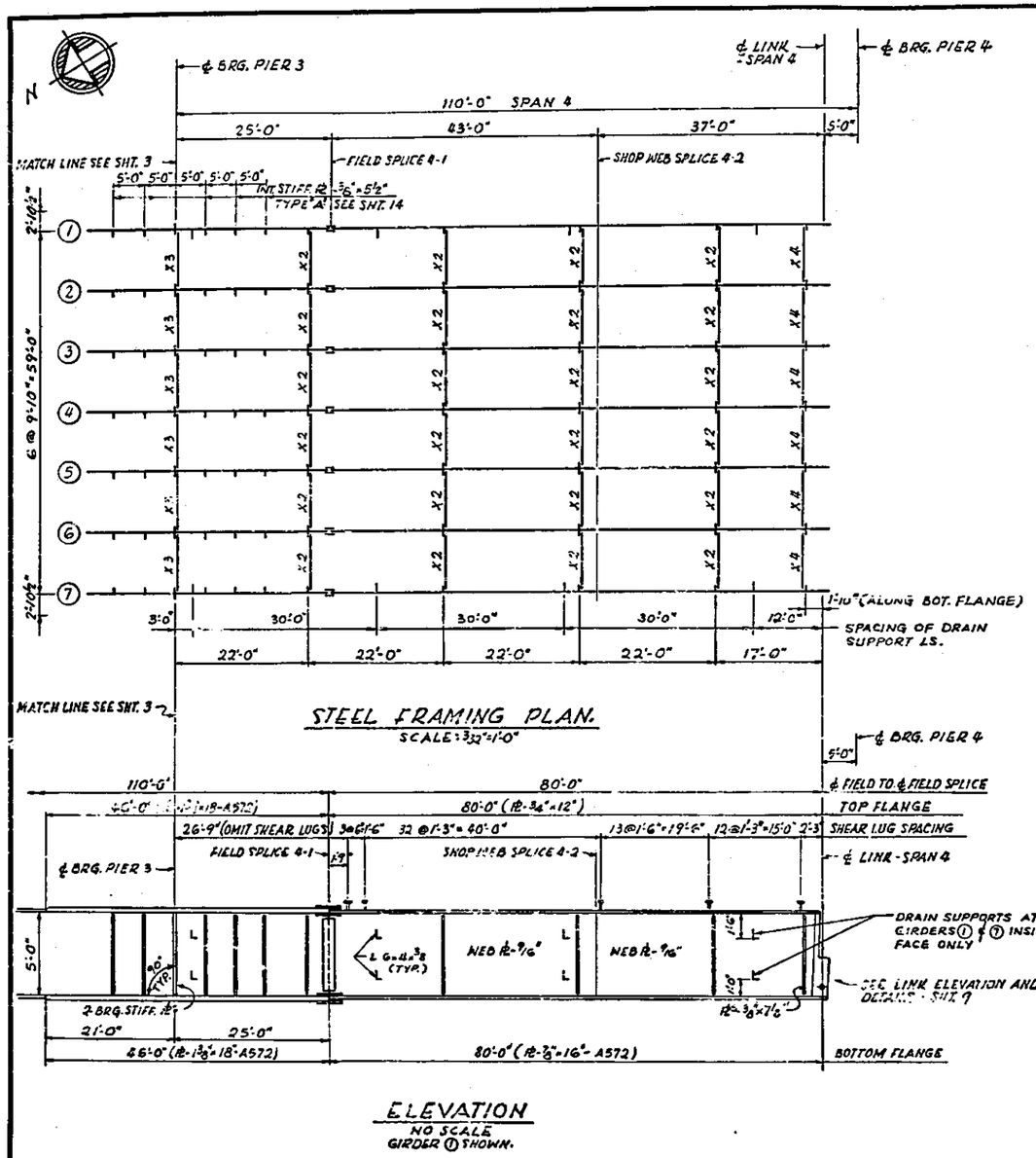
NOTES:

MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (02-1B-1)D.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

FRAMING PLAN - S[illegible] 84
F.A.I. RTE. 57 OVER T[illegible] PPI RIVER
PROJECT I-[illegible]-9(B)10
SECTION (02-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) P	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI		40	4
F.H.W.A.REG. NO. 5 / F.H.W.A.REG. NO. 6		ILLINOIS / MISSOURI	PROJECT I-57-9(6)0		

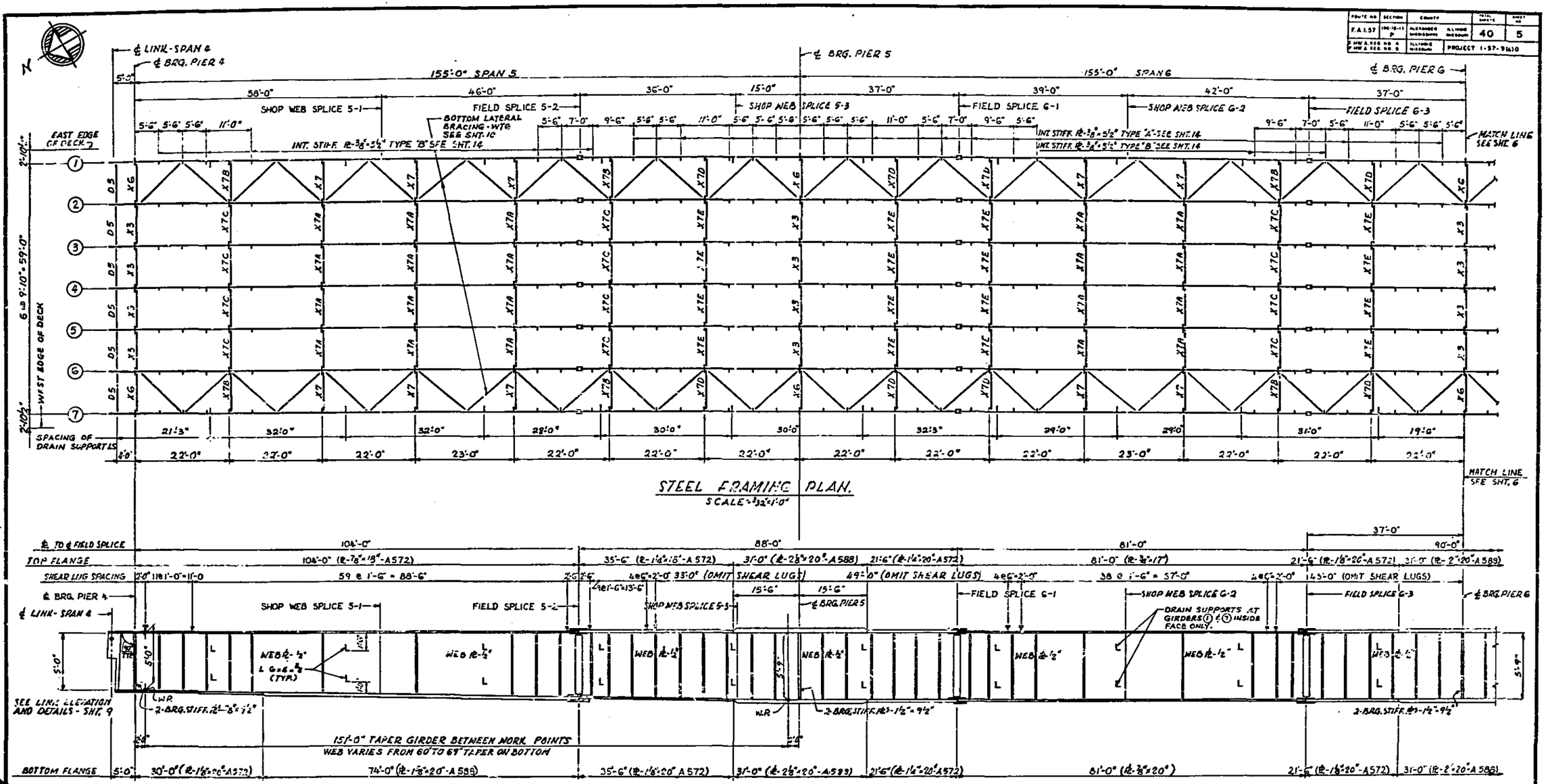


ELEVATION
NO SCALE
GIRDER 1 SHOWN.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 E. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 4
F. A. I. RTE. 57 OVER THE MISS I RIVER
PROJECT I-57-9(6)0
SECTION (02-18-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-1 P	ALEXANDER (ILLINOIS)	MISSISSIPPI (MISSOURI)	40	5
F.A.I. & SEC. NO. 4 F.A.I. & SEC. NO. 5		ILLINOIS (MISSOURI)	PROJECT I-57-9(610)		



STEEL FRAMING PLAN.
SCALE: 1/32" = 1'-0"

ELEVATION
NO SCALE
GIRDER ① SHOWN

FILLET WELD TABLE

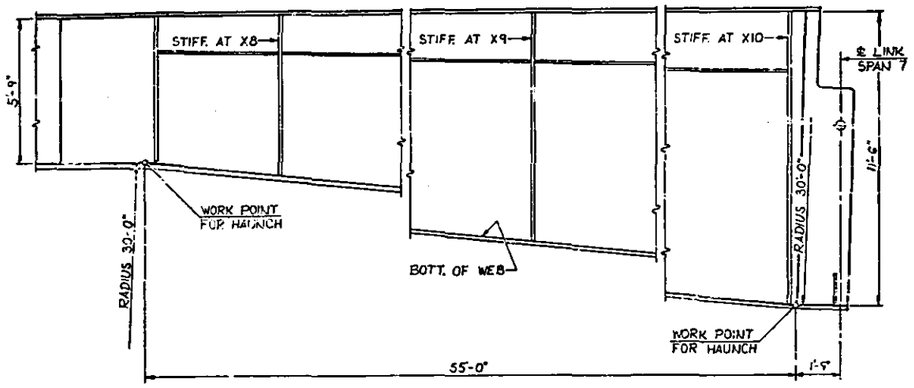
FLANGE PL THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16
OVER 1 1/2 TO 2 1/4"	3/8

NOTES:
MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (02-18-1) D.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

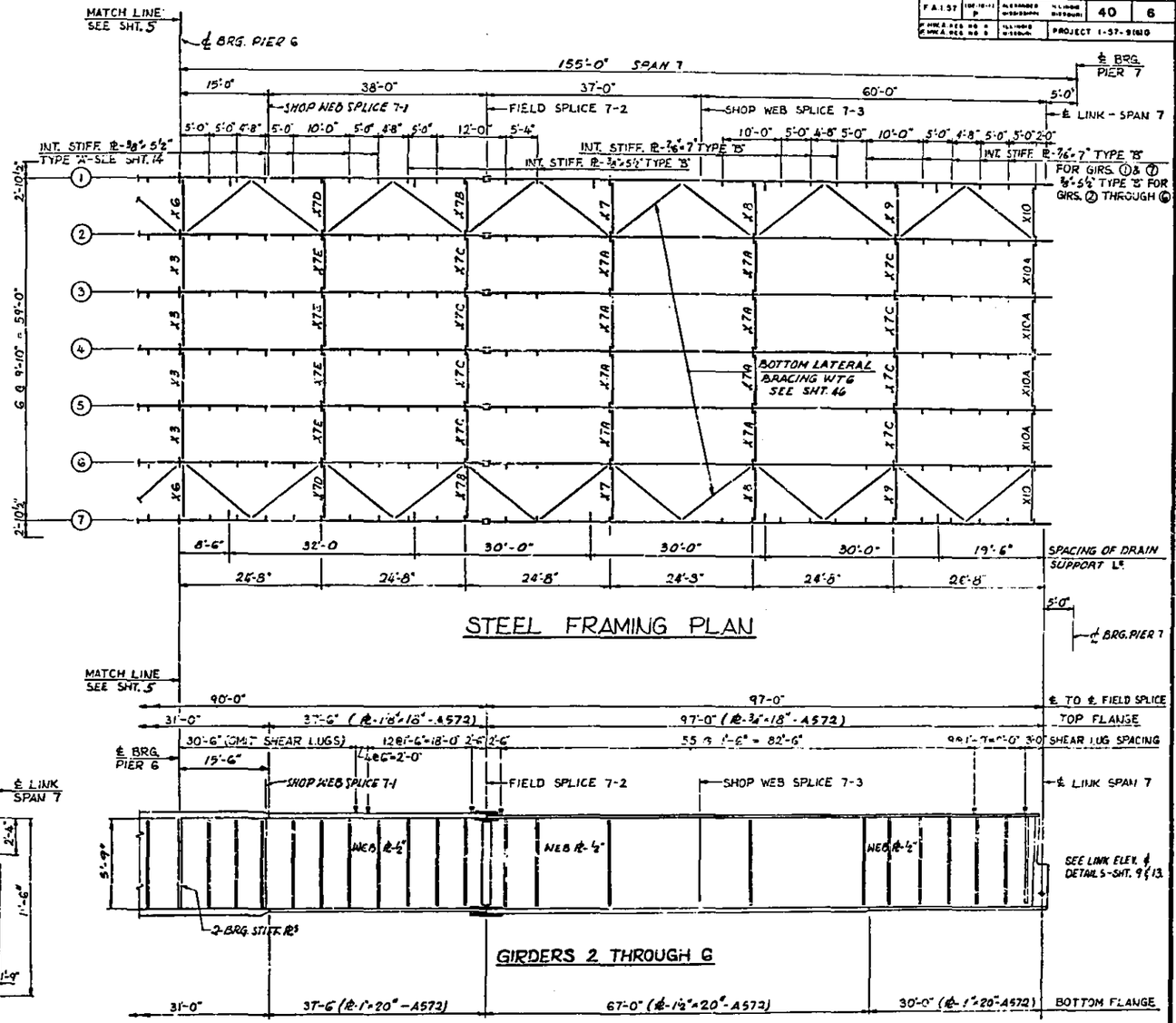
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 5, 6 AND 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVE
PROJECT I-57-9(610)
SECTION 102-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

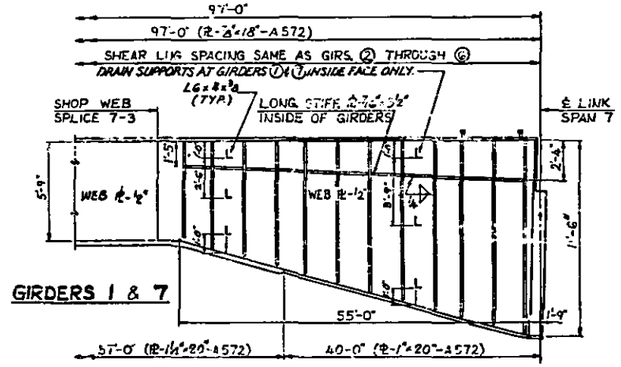
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(102-1B-1) P	ALEXANDER & MISSISSIPPI	40	6
			PROJECT I-57-9(6)0	



DETAIL OF HAUNCH
FOR GIRDERS 1 & 7 ONLY



STEEL FRAMING PLAN



GIRDER 1 & 7

ELEVATION
GIRDERS 2 THROUGH 6

GIRDER ELEVATIONS-FOR FABRICATION ONLY

S.W.S. = SHOP WEB SPLICE
F.S. = FIELD SPLICE

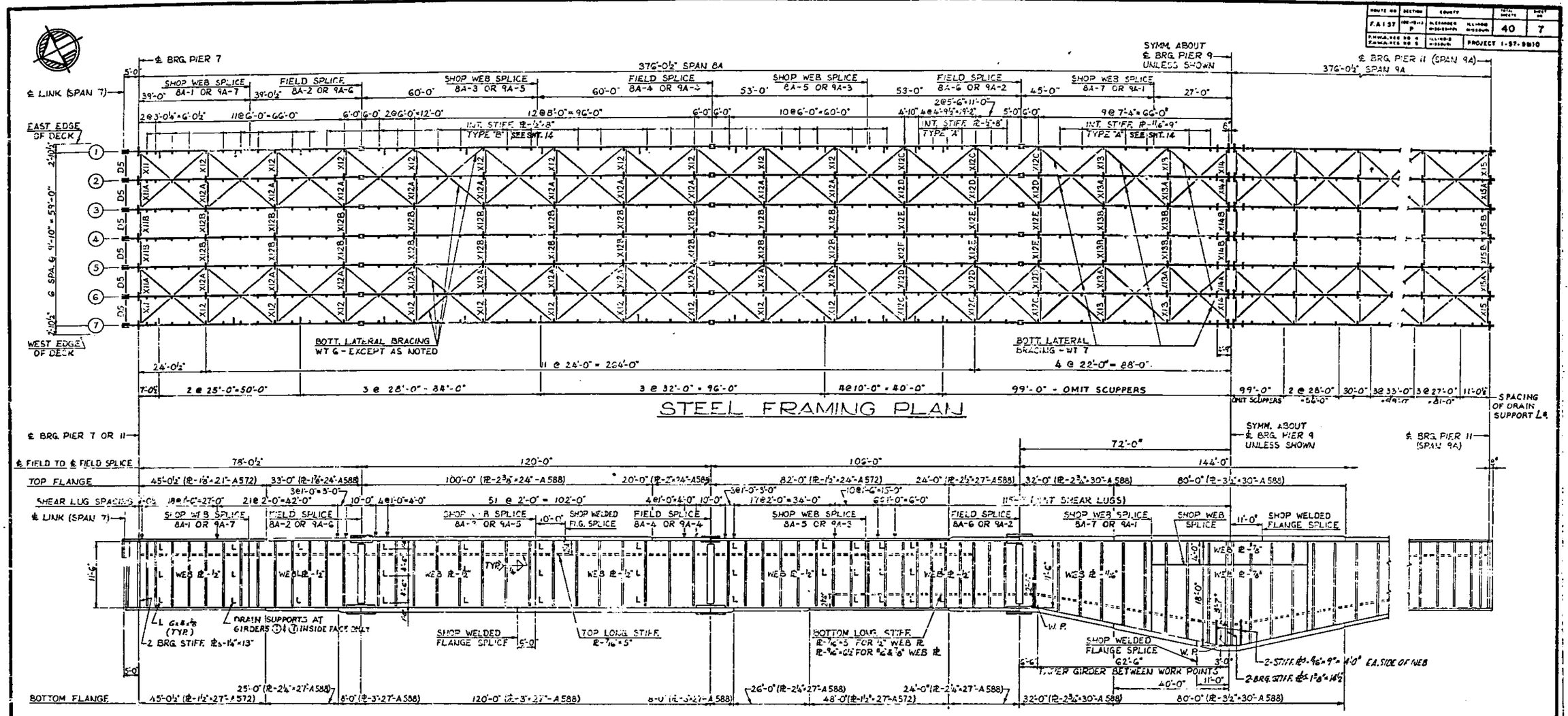
GIRDER \ LOCATION	℄ LINK-SPAN 6	PIER 6	S.W.S. 5-1	F.S. 5-2	S.W.S. 5-3	PIER 5	F.S. 6-1	S.W.S. 6-2	F.S. 6-3	PIER 6	S.W.S. 7-1	F.S. 7-2	S.W.S. 7-3	℄ LINK SPAN 7
1	350.877	351.062	353.177	354.391	355.193	355.612	356.646	357.975	359.089	360.267	360.745	362.125	363.328	364.761
2	351.031	351.216	353.331	354.544	355.347	355.766	356.800	358.129	359.242	360.421	360.899	362.279	363.482	364.914
3	351.184	351.370	353.485	354.698	355.500	355.919	356.953	358.283	359.396	360.575	361.052	362.433	363.636	365.068
4	351.338	351.523	353.638	354.852	355.654	356.073	357.107	358.436	359.550	360.728	361.206	362.586	363.789	365.222
5	351.184	351.370	353.485	354.698	355.500	355.919	356.953	358.283	359.396	360.575	361.052	362.433	363.636	365.068
6	351.031	351.216	353.331	354.544	355.347	355.766	356.800	358.129	359.242	360.421	360.899	362.279	363.482	364.914
7	350.877	351.062	353.177	354.391	355.193	355.612	356.646	357.975	359.089	360.267	360.745	362.125	363.328	364.761

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 5,6
F.A.I. RTE. 57 OVER THE MISSIS ER
PROJECT I-57-9(6)0
SECTION (102-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	(02-1B-1)D	ALEXANDER (ILLINOIS)	MISSISSIPPI (MISSOURI)	40	7
FORMERLY NO 0 FORMERLY NO 0		ILLINOIS (MISSOURI)		PROJECT I-57-9(6)C	



GIRDER ELEVATIONS — FOR FABRICATION ONLY

LOCATION / GIRDER	℄ LINK SPAN 7	PIER 7	S.W.S. 8A-1	F.S. 8A-2	S.W.S. 8A-3	F.S. 8A-4	S.W.S. 8A-5	F.S. 8A-6	S.W.S. 8A-7	PIER 9	S.W.S. 9A-1	F.S. 9A-2	S.W.S. 9A-3	F.S. 9A-4	S.W.S. 9A-5	F.S. 9A-6	S.W.S. 9A-7	℄ BRG. PIER 11 SPAN 9A
1	364.761	364.964	366.552	367.840	369.939	371.596	372.965	373.981	375.245	376.050	376.854	378.215	380.231	381.908	383.424	384.497	385.203	385.620
2	364.914	365.118	366.706	368.067	370.181	371.832	373.171	374.150	375.398	376.203	377.008	378.384	380.437	382.062	383.671	384.718	385.398	385.773
3	365.068	365.272	366.860	368.221	370.336	371.987	373.325	374.304	375.553	376.357	377.162	378.539	380.591	382.216	383.825	384.872	385.553	385.928
4	365.222	365.425	367.013	368.371	370.488	372.140	373.478	374.458	375.706	376.511	377.315	378.692	380.744	382.369	383.978	385.025	385.706	386.081
5	365.068	365.272	366.860	368.221	370.336	371.987	373.325	374.304	375.553	376.357	377.162	378.539	380.591	382.216	383.825	384.872	385.553	385.928
6	364.914	365.118	366.706	368.067	370.181	371.832	373.171	374.150	375.398	376.203	377.008	378.384	380.437	382.062	383.671	384.718	385.398	385.773
7	364.761	364.964	366.552	367.840	369.939	371.596	372.965	373.981	375.245	376.050	376.854	378.215	380.231	381.908	383.424	384.497	385.203	385.620

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE

F. S. = FIELD SPLICE
S. W. S. = SHOP WEB SPLICE

FILLET WELD TABLE

FLANGE PL THICKNESS	WELD SIZE
OVER ¾" TO 1½"	5/16"
OVER 1½" TO 2¼"	¾"
OVER 2¼" TO 6"	½"

NOTES:

ALL MATERIAL ASTM A36 - *EXCEPT AS NOTED.*

ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.

SHEAR LUGS ARE TO BE FURNISHED & INSTALLED UNDER SECTION (02-1B-1)D.

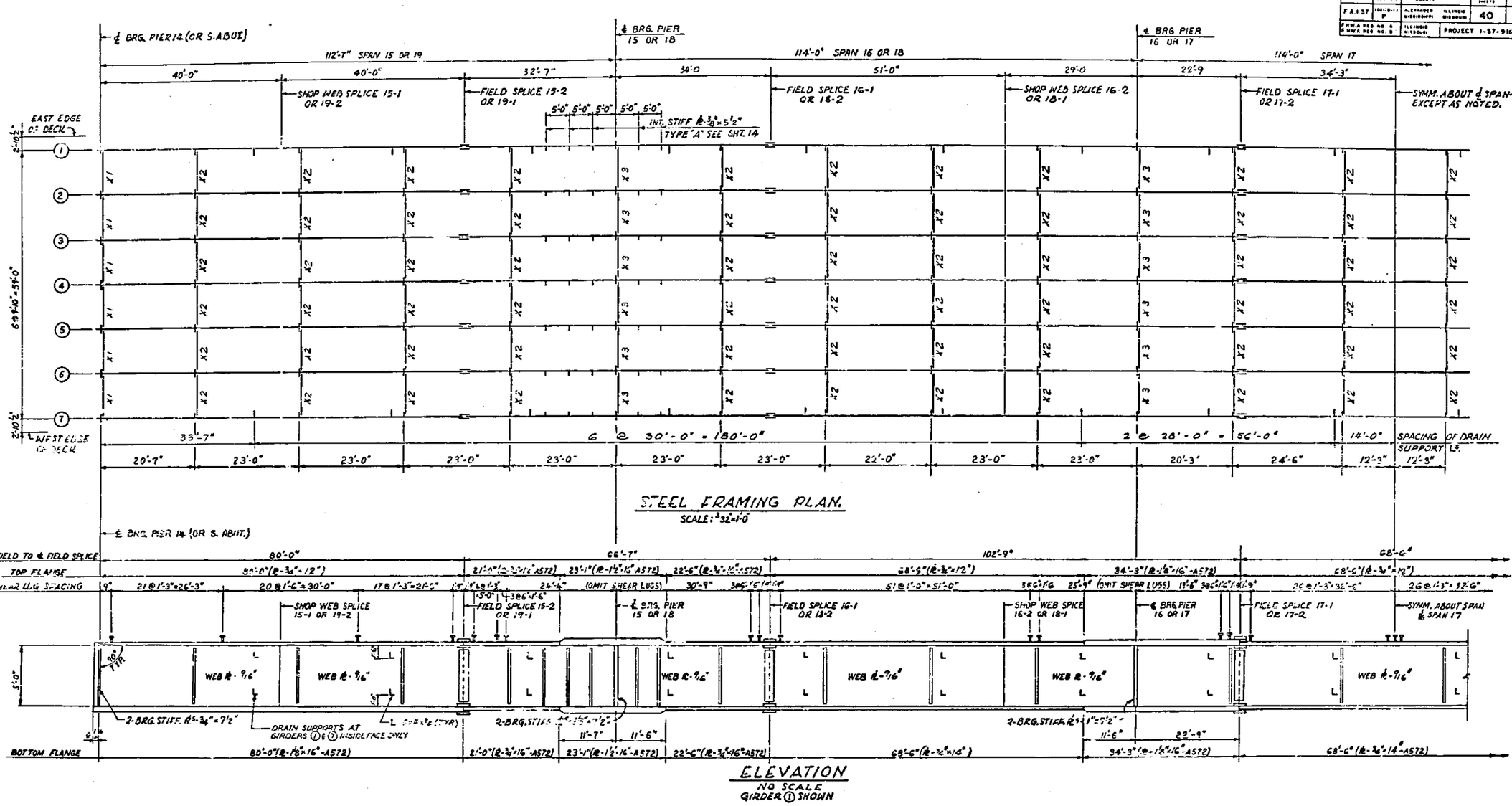
LONGITUDINAL STIFFENERS TO BE ON SIDE OF WEB OPPOSITE TRANSVERSE STIFFENERS ON GIRDERS ① TO ⑦.

SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN — SPANS 8
F. A. I. RTE. 57 OVER THE MISS[illegible] RIVER
PROJECT I-57-9(6)C
SECTION (02-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 P	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		40	8
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9(16)0		



GIRDER ELEVATIONS-FOR FABRICATION ONLY

S.W.S. = SHOP WEB SPLICE
F.S. = FIELD SPLICE

GIRDER \ LOCATION	℄ BRG. PIER 14	S.W.S. 15-1	F.S. 15-2	PIER 15	F.S. 19-1	S.W.S. 19-2	PIER 16	F.S. 17-1	F.S. 17-2	PIER 17	S.W.S. 18-1	F.S. 18-2	PIER 18	F.S. 19-1	S.W.S. 19-2	℄ BRG. S.ABUT.
1	379.882	378.993	377.697	376.692	375.644	374.160	373.316	372.654	370.599	369.896	369.000	367.410	366.445	365.521	364.516	363.130
2	380.036	379.147	377.851	376.846	375.798	374.314	373.470	372.807	370.752	370.050	369.154	367.564	366.599	365.674	364.669	363.283
3	380.190	379.301	378.004	376.999	375.951	374.467	373.623	372.961	370.906	370.203	369.307	367.717	366.752	365.828	364.823	363.437
4	380.343	379.454	378.158	377.153	376.105	374.621	373.777	373.115	371.060	370.357	369.461	367.871	366.906	365.982	364.977	363.591
5	380.190	379.301	378.004	376.999	375.951	374.467	373.623	372.961	370.906	370.203	369.307	367.717	366.752	365.828	364.823	363.437
6	380.036	379.147	377.851	376.846	375.798	374.314	373.470	372.807	370.752	370.050	369.154	367.564	366.599	365.674	364.669	363.283
7	379.882	378.993	377.697	376.692	375.644	374.160	373.316	372.654	370.599	369.896	369.000	367.410	366.445	365.521	364.516	363.130

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE.

FILLET WELD TABLE

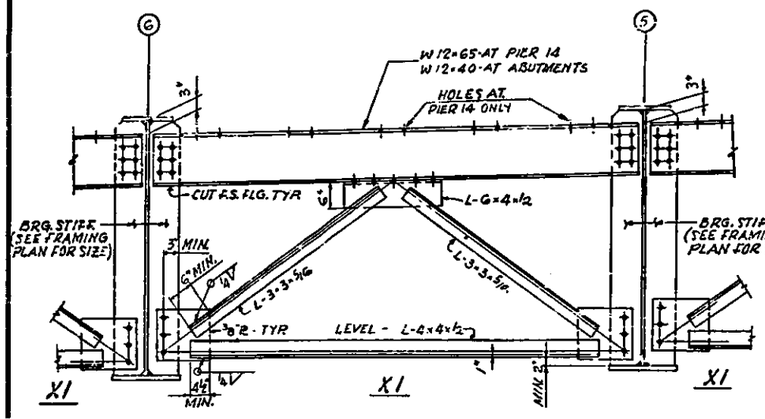
FLANGE ℄ THICKNESS	WELD SIZE
OVER ½" TO ¾"	¼
OVER ¾" TO 1½"	5/16

NOTES:
MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (02-1B-1) P.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

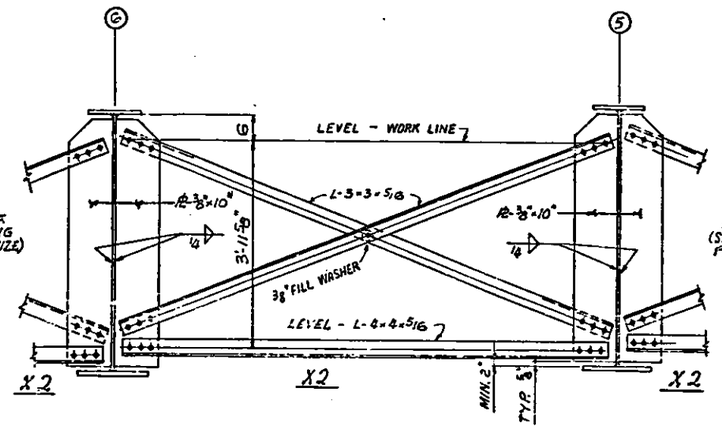
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 E. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SP[illegible]2.19
F. A. I. RTE. 57 OVER THE [illegible]PPI RIVER
PROJECT I-57-[illegible]
SECTION (02-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

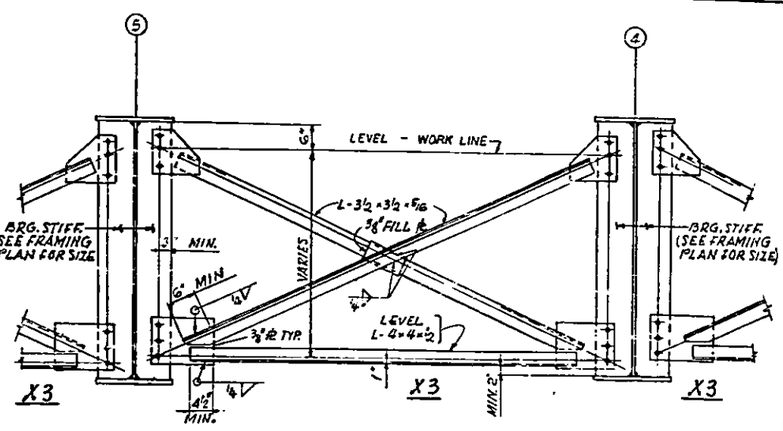
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 57	(02-18-1) P	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	40	8
F.H.W.A. REG. NO. 4 / F.H.W.A. REG. NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9(6)10	



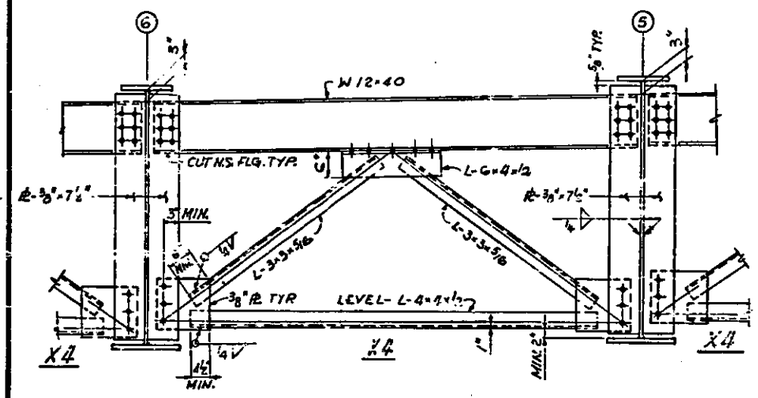
CROSSFRAME-X1 (AT ABUTMENT & PIER)
SCALE: 3/8" = 1'-0"



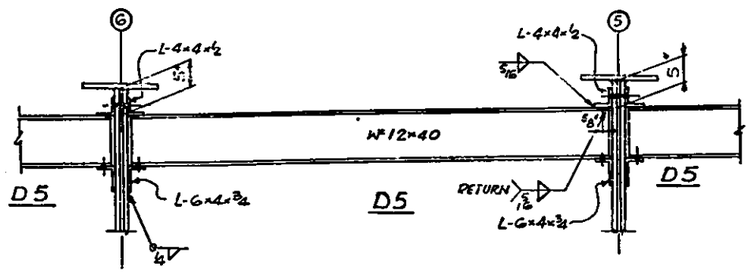
INTERMEDIATE CROSSFRAME - X2
SCALE: 3/8" = 1'-0"



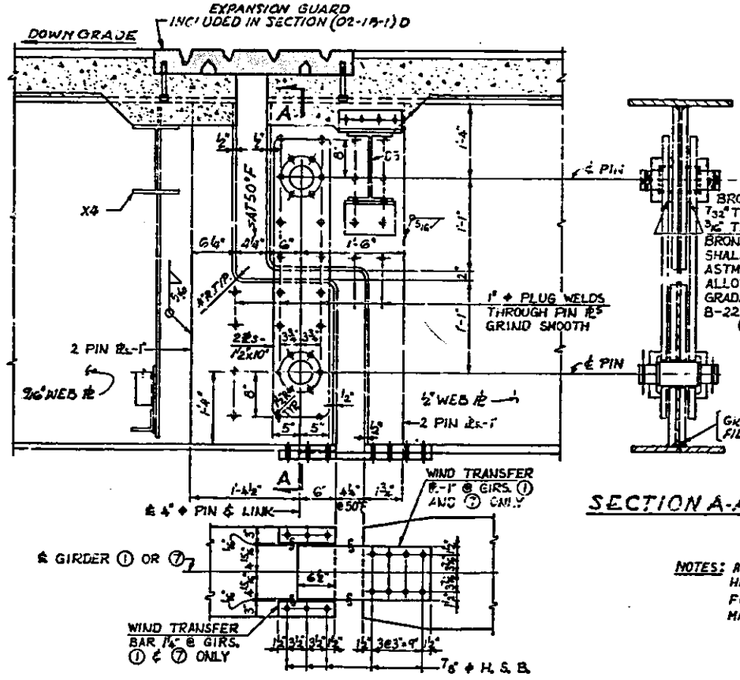
CROSSFRAME-X3 (AT PIER)
SCALE: 3/4" = 1'-0"



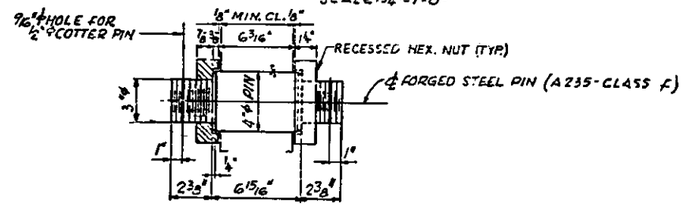
CROSSFRAME-X4 (AT LINK)
SCALE: 3/4" = 1'-0"



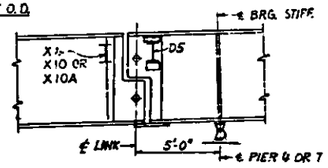
DIAPHRAGM-D5 (AT LINK)
SCALE: 3/4" = 1'-0"



LINK DETAILS - SPAN 4



PIN DETAIL
NUTS SHALL BE SNUGGED UP FINGER TIGHT AGAINST SHOULDERS OF PIN. TOTAL NO. OF PINS REQUIRED = 14



LINK SETTING ELEVATION
LINK IN SPAN 4 SHOWN. LINK IN SPAN 7 SIMILAR

SECTION A-A

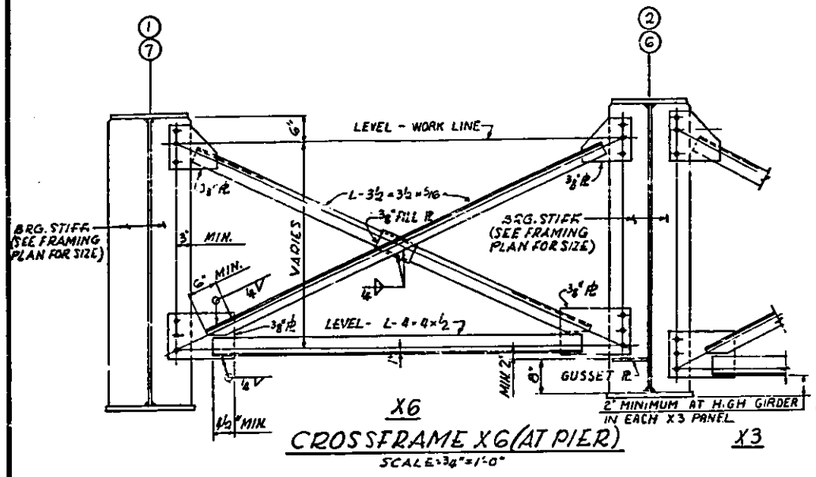
BRONZE Ø WASHER, 7/32" THICK UPPER PIN, 3/16" THICK LOWER PIN, T.O.D. BRONZE MATERIAL SHALL CONFORM TO ASTM SPEC. B-100 ALLOY 1, B-169 GRADE D SOFT OR B-22 ALLOY B. (TYP.)

NOTE: LINK SHALL BE TRULY VERTICAL AT 50°F. CROSSFRAMES & DIAPHRAGMS SHALL BE AT RIGHT ANGLES TO GIRDER FLANGE.

NOTES: ALL FASTENERS SHALL BE ¾"ϕ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED. FOR DETAIL OF STIFFENERS SEE SHT. 14. MATERIAL - A36 - EXCEPT AS NOTED.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

GIRDER CROSSFRAMES AND DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(6)0
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.78 TO STA. 1182 + 75.25

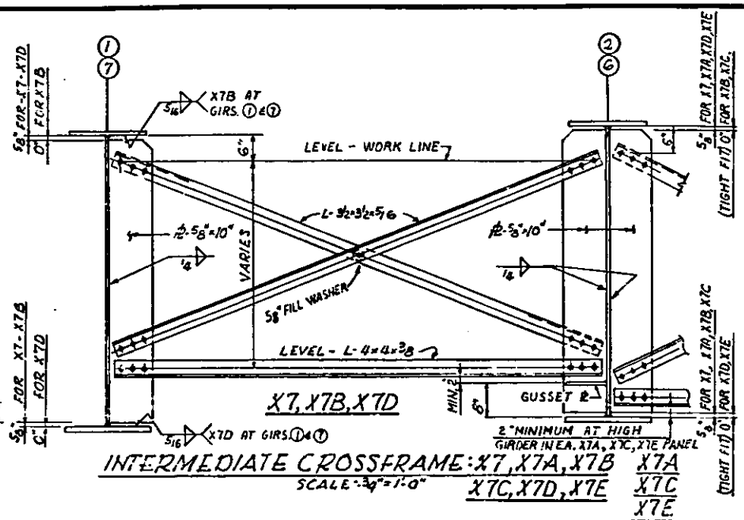


X6

CROSSFRAME X6 (AT PIER)

SCALE: 3/8" = 1'-0"

X3

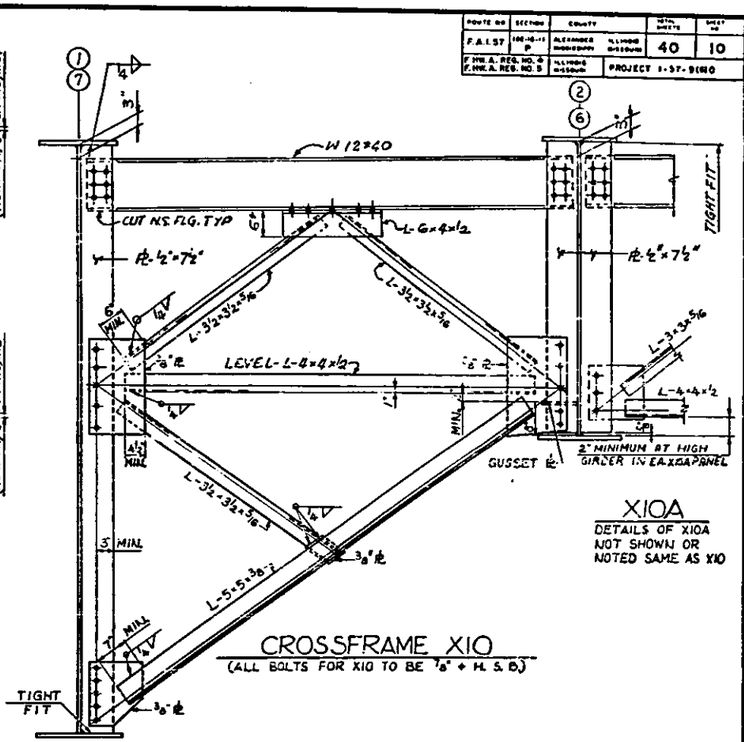


X7, X7B, X7D

INTERMEDIATE CROSSFRAME: X7, X7A, X7B, X7C, X7D, X7E

SCALE: 3/8" = 1'-0"

X7A X7C X7E

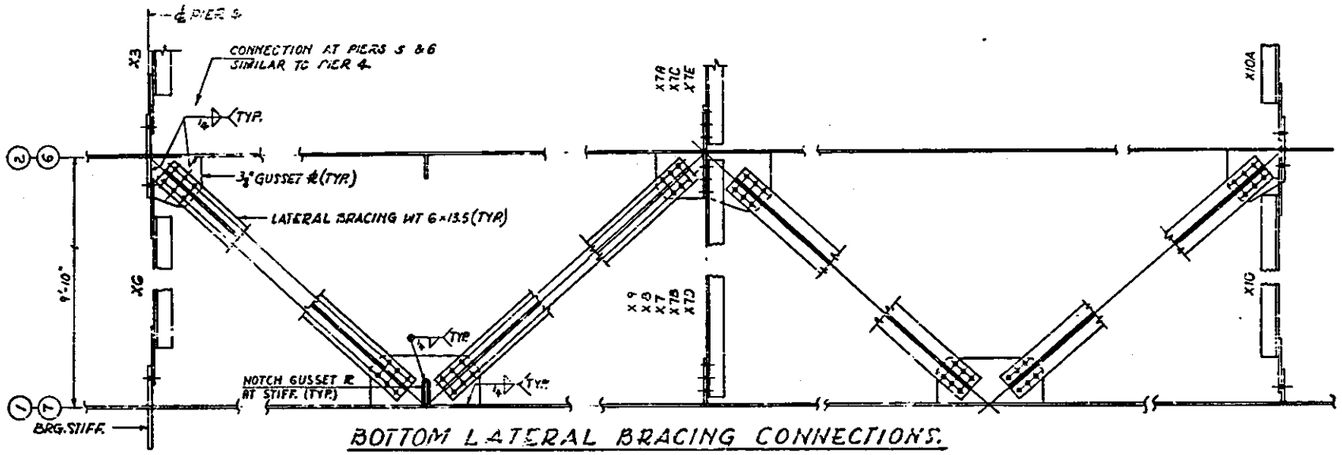


X10A

DETAILS OF X10A NOT SHOWN OR NOTED SAME AS X10

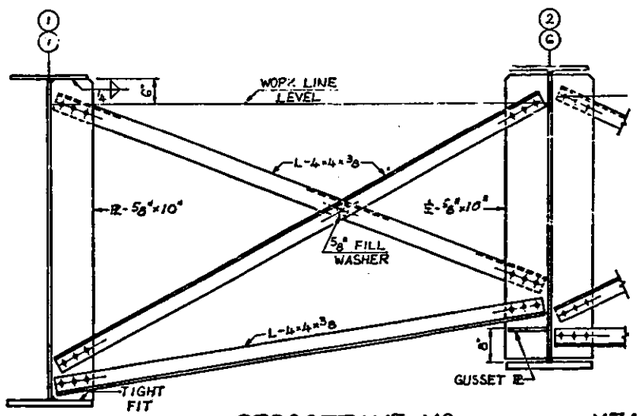
CROSSFRAME X10

(ALL BOLTS FOR X10 TO BE 7/8" ϕ H. S. B.)



BOTTOM LATERAL BRACING CONNECTIONS.

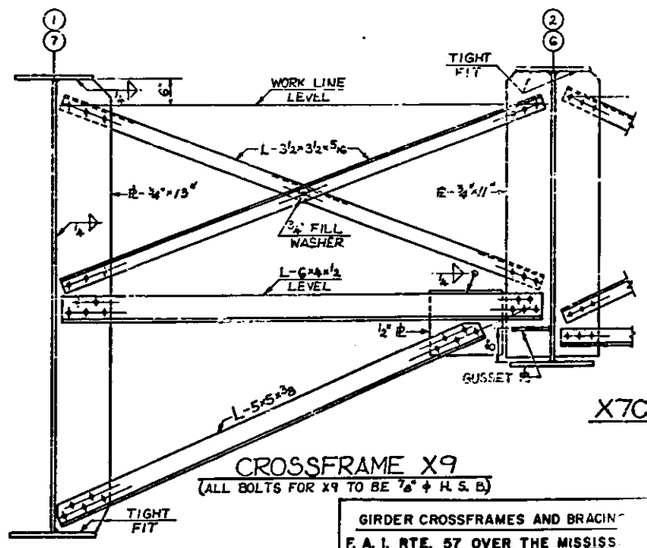
SPANS 5, 6 & 7



CROSSFRAME X8

(ALL BOLTS FOR X8 TO BE 7/8" ϕ H. S. B.)

X7A



X7C

CROSSFRAME X9

(ALL BOLTS FOR X9 TO BE 7/8" ϕ H. S. B.)

NOTES:

ALL MATERIAL ASTM A 36 UNLESS NOTED.

ALL FASTENERS SHALL BE 3/4" ϕ ASTM A 325 HIGH STRENGTH BOLTS UNLESS NOTED.

FOR DETAIL OF STIFFENERS, SEE SHT. 14

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 P	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	40	10
F.HW.A. REG. NO. 5 / F.HW.A. REG. NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9(6)10	

GIRDER CROSSFRAMES AND BRACIN[illegible]S

F.A.I. RTE. 57 OVER THE MISSISS[illegible]VER

PROJECT I-57-9(6)0

SECTION (02-1B-1)P

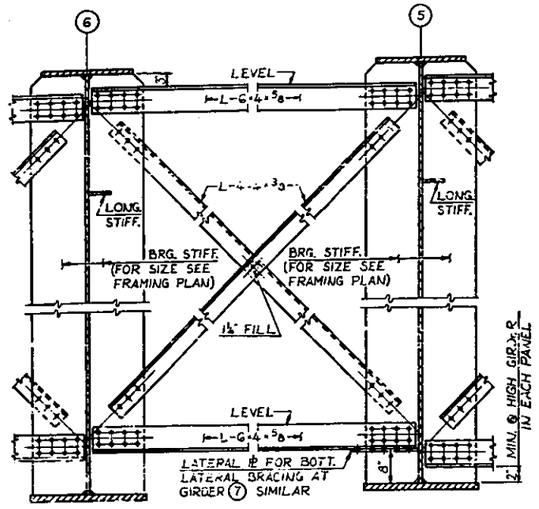
ALEXANDER COUNTY, ILLINOIS

MISSISSIPPI COUNTY, MISSOURI

STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

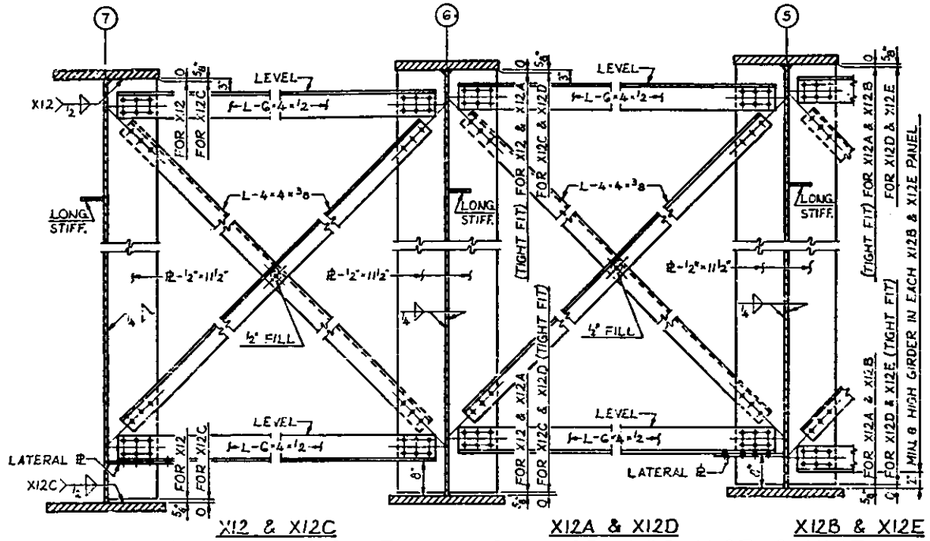
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-18-1 P	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	40	11
F.H.W.A. REG. NO. 6 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9(6)0	



X11 X11A X11B

CROSSFRAME X11, X11A & X11B

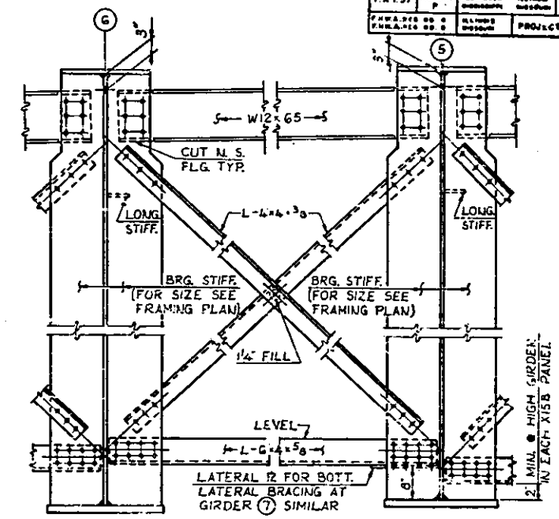
DETAILS OF X11 & X11B NOT SHOWN OR NOTED, SIMILAR TO X11A



X12 & X12C X12A & X12D X12B & X12E

INTERMEDIATE CROSSFRAME X12, X12A, X12B, X12C, X12D & X12E

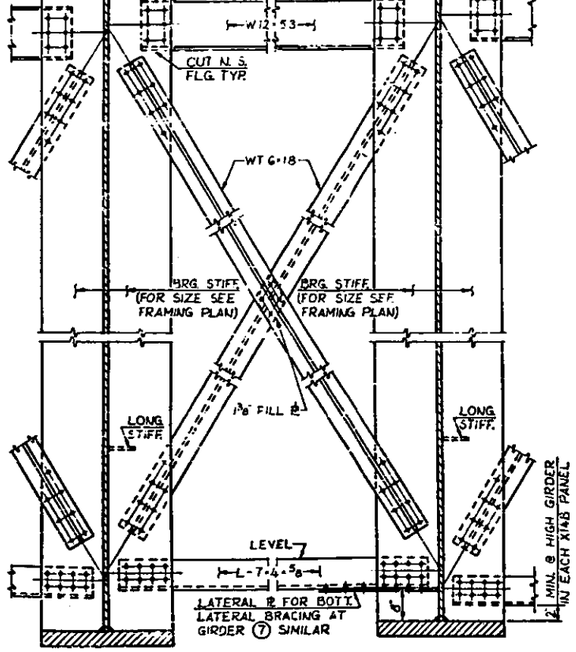
DETAILS OF X12B & X12E NOT SHOWN OR NOTED, SIMILAR TO X12A & X12D



X15 X15A X15B

CROSSFRAME X15, X15A & X15B

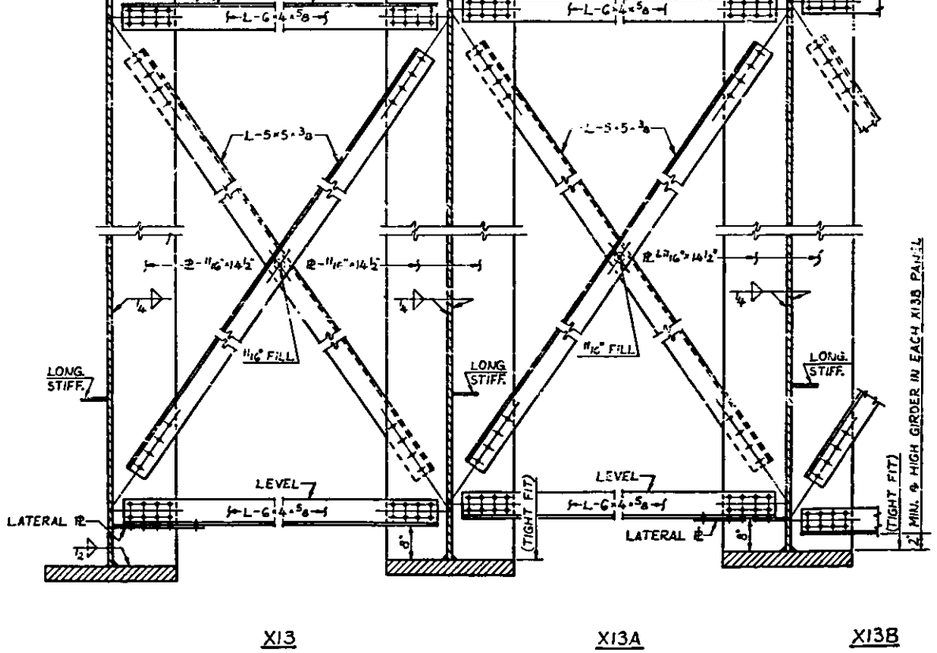
DETAILS OF X15 & X15B NOT SHOWN OR NOTED, SIMILAR TO X15A



X14 X14A X14B

CROSSFRAME X14, X14A & X14B

DETAILS OF X14 & X14B NOT SHOWN OR NOTED, SIMILAR TO X14A



X13 X13A X13B

INTERMEDIATE CROSSFRAME X13, X13A & X13B

DETAILS OF X13B NOT SHOWN OR NOTED, SIMILAR TO X13A

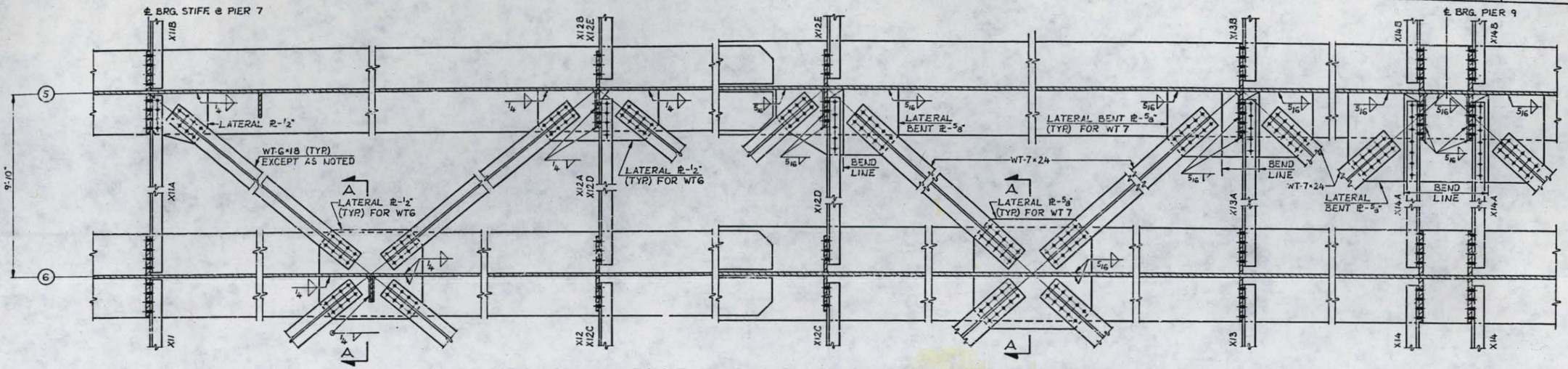
NOTES:

ALL MATERIAL ASTM A36 UNLESS NOTED.

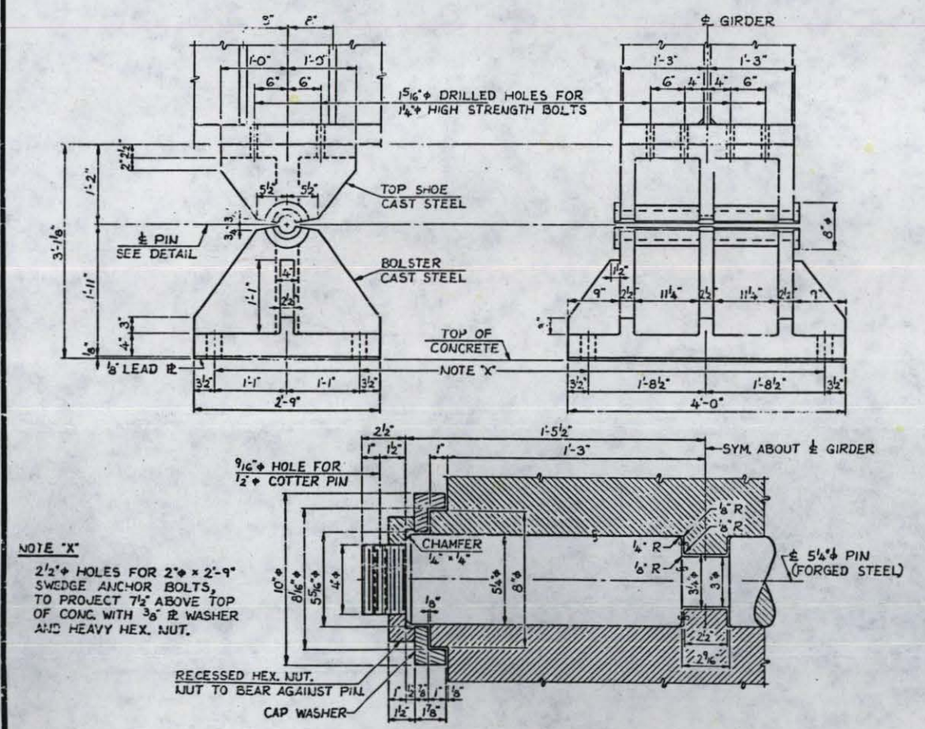
ALL FASTENERS SHALL BE ⅞"ϕ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.

STEEL DETAILS - SPANS 8A A
F.A.I. RTE. 57 OVER THE MISSIS VER
PROJECT I-57-9(6)0
SECTION (02-18-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-1B-1 P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	12
F.A.I.-RTE NO 4 F.A.I.-RTE NO 9		ILLINOIS MISSOURI		PROJECT 1-57-9(6)0	



BOTTOM LATERAL BRACING CONNECTIONS

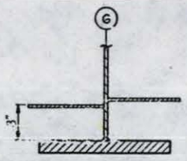


NOTE "X"

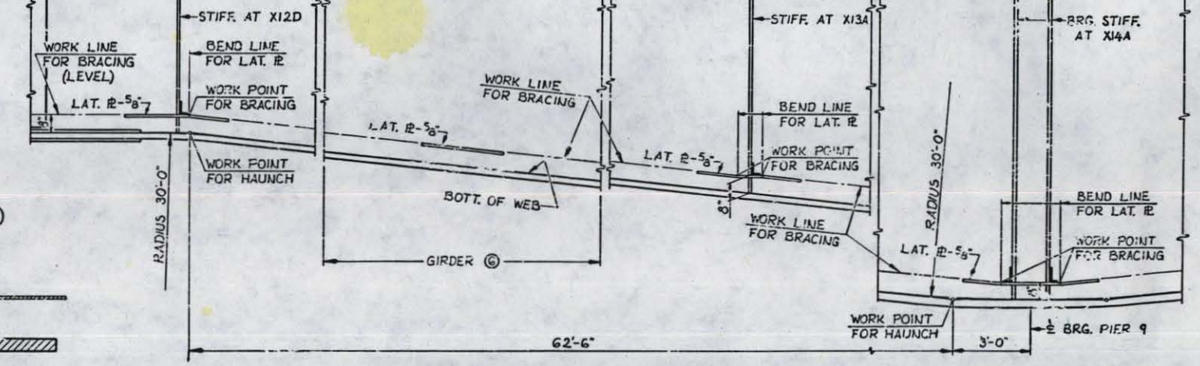
2½"ϕ HOLES FOR 2"ϕ × 2'-9" SWEDGE ANCHOR BOLTS, TO PROJECT 7½" ABOVE TOP OF CONC. WITH ⅜" L2 WASHER AND HEAVY HEX. NUT.

PIN DETAIL

FIXED BEARING AT PIER 9



SECTION A-A



DETAIL OF HAUNCH

GIRDER (5) SHOWN EXCEPT AS NOTED

NOTES:

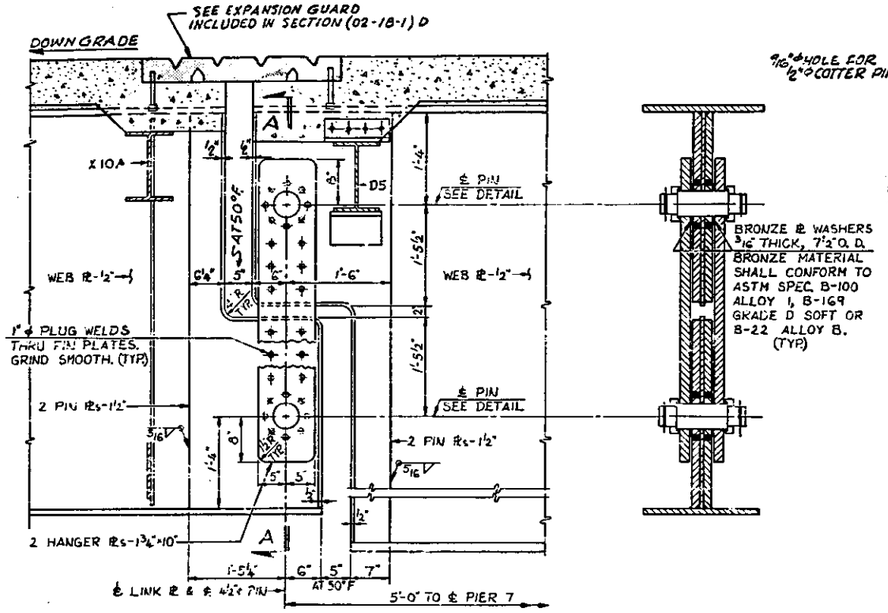
ALL MATERIAL ASTM A36 UNLESS NOTED.

ALL FASTENERS SHALL BE ⅞"ϕ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.

FOR BEARING NOTES SEE SHT. 15.

STEEL DETAILS - SPANS 8A [illegible] 8A
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9(6)0
SECTION (02-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	13
F.A.M.ALEX NO 4 F.A.M.ALEX NO 8		ILLINOIS MISSOURI		PROJECT I-57-9(6)0	

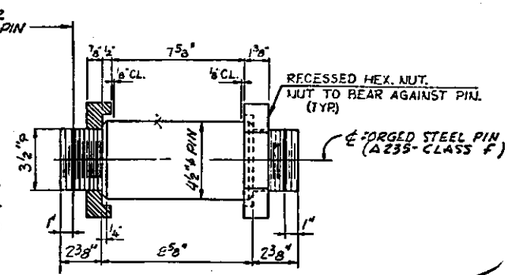


LINK DETAILS — SPAN 7

GIRDER 2 TO 6 SHOWN
GIRDERS 1 & 7 SIMILAR EXCEPT FOR WIND BRACING

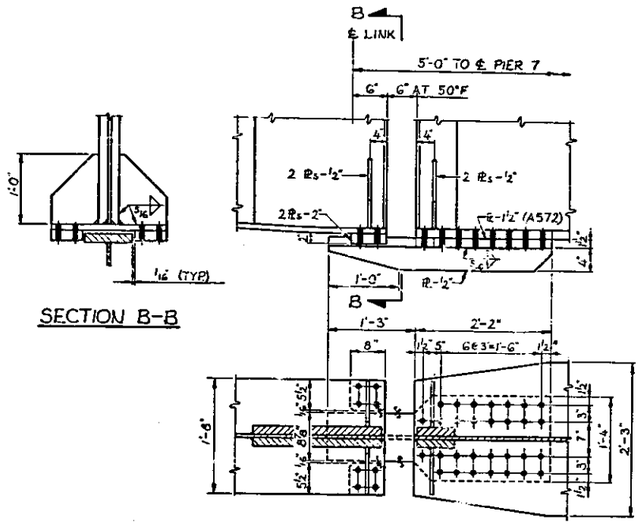
SECTION A-A

BRONZE ℄ WASHERS 3/16" THICK, 7"-2" O. D. BRONZE MATERIAL SHALL CONFORM TO ASTM SPEC. B-100 ALLOY 1, B-169 GRADE D SOFT OR B-22 ALLOY B. (TYP)



PIN DETAIL

13,375
1,125



SECTION B-B

WIND BRACING AT LINK-SPAN 7

GIRDER 1 & 7

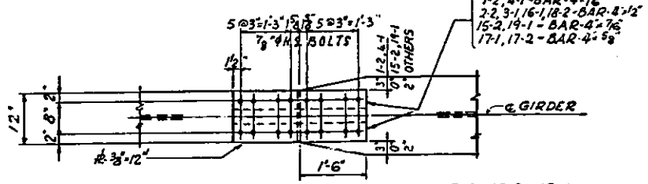
NOTES:

ALL MATERIAL ASTM A36 UNLESS NOTED.

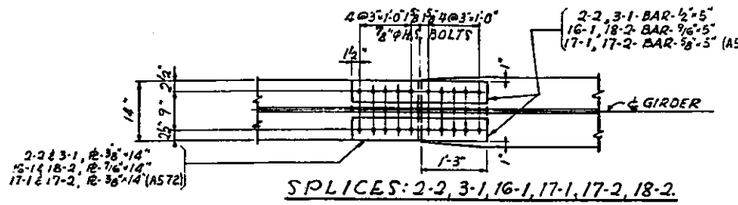
ALL FASTENERS SHALL BE 7/8" ø ASTM A 325 HIGH STRENGTH BOLTS UNLESS NOTED.

STEEL DETAILS - SPANS E [illegible] 9A
F. A. I. RTE. 57 OVER THE MISS[illegible]I RIVER
PROJECT I-57-9(6)0
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

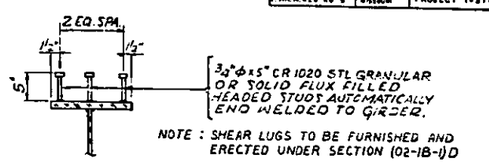
ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 I P	ALEXANDER ILLINOIS	MISSISSIPPI MISSOURI	40	14
F.H.W.A. REG. NO. 5		ILLINOIS		PROJECT I-57-9(6)0	
F.H.W.A. REG. NO. 6		ILLINOIS			



SPLICES: 1-2, 2-2, 3-1, 4-1, 15-2, 16-1, 17-1, 17-2, 18-2, 19-1.

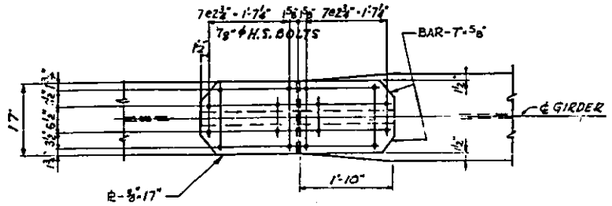


SPLICES: 2-2, 3-1, 16-1, 17-1, 17-2, 18-2.

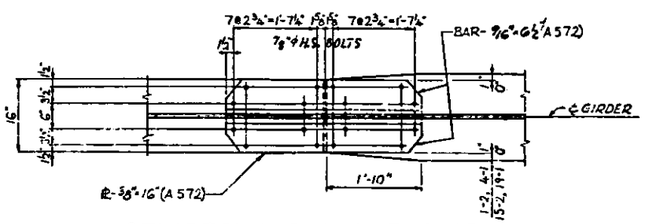


NOTE : SHEAR LUGS TO BE FURNISHED AND ERECTED UNDER SECTION (02-1B-1)D

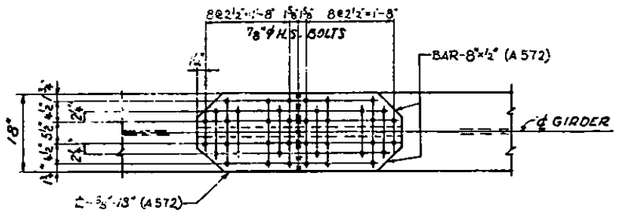
SHEAR LUG DETAIL



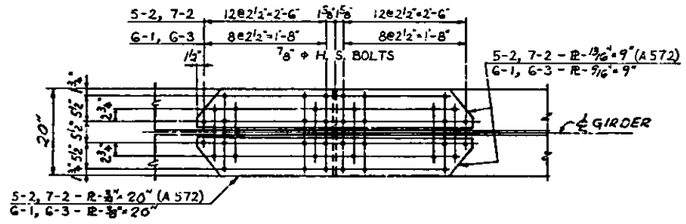
SPLICES: G-1, G-3



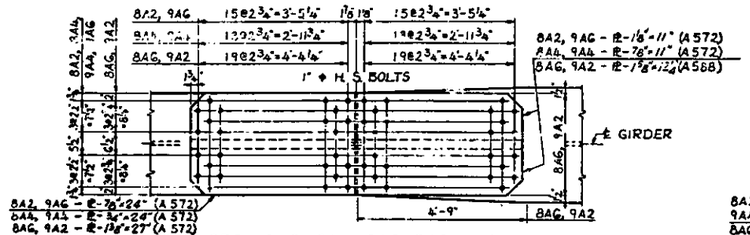
SPLICES: 1-2, 4-1, 15-2, 19-1



SPLICES: 5-2, 7-2

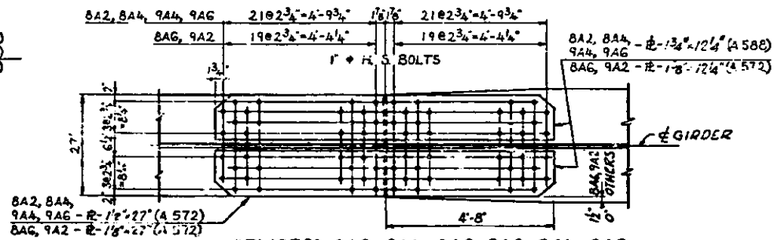


SPLICES: 5-2, G-1, G-3, 7-2



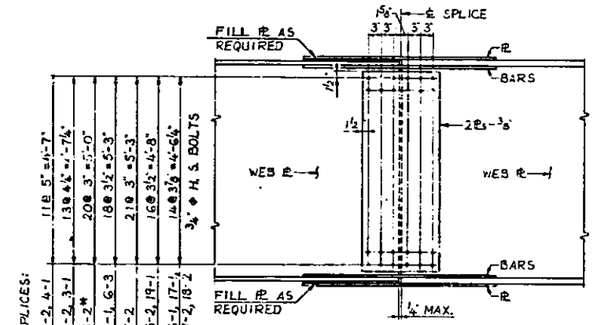
SPLICES: 8A2, 8A4, 8AG, 9A2, 9A4, 9AG

FIELD SPLICES -- TOP FLANGE



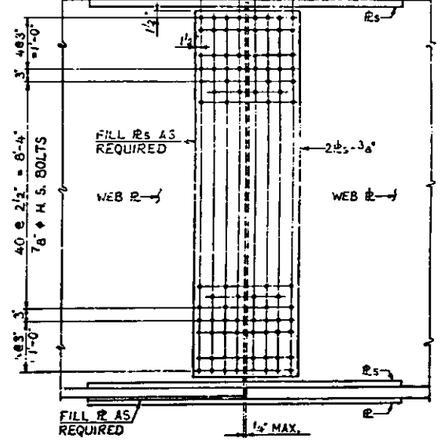
SPLICES: 8A2, 8A4, 8AG, 9A2, 9A4, 9AG

FIELD SPLICES - BOTTOM FLANGE.



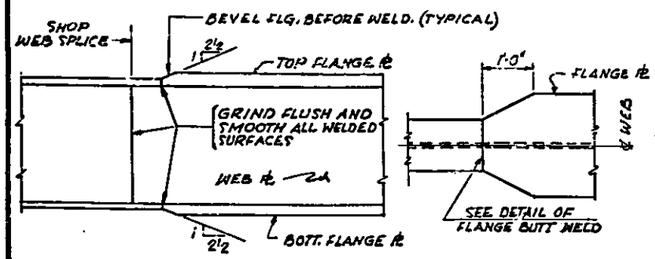
* BOTTOM FLANGE SLOPES

SPANS: 1-7 & 15-19



SPANS: 8A & 9A

WEB SPLICES

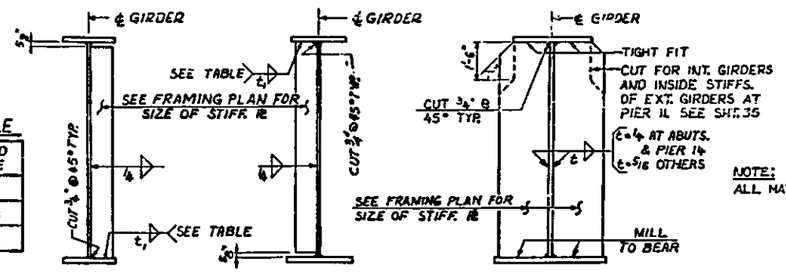


BUTT WELD DETAILS

FLANGE TRANSITION DETAIL

FILLET WELD (t,) TABLE

FLANGE PL THICKNESS	WELD SIZE
OVER ½" TO ¾"	¼
OVER ¾" TO 1½"	5/16
OVER 1½" TO 2¼"	⅜

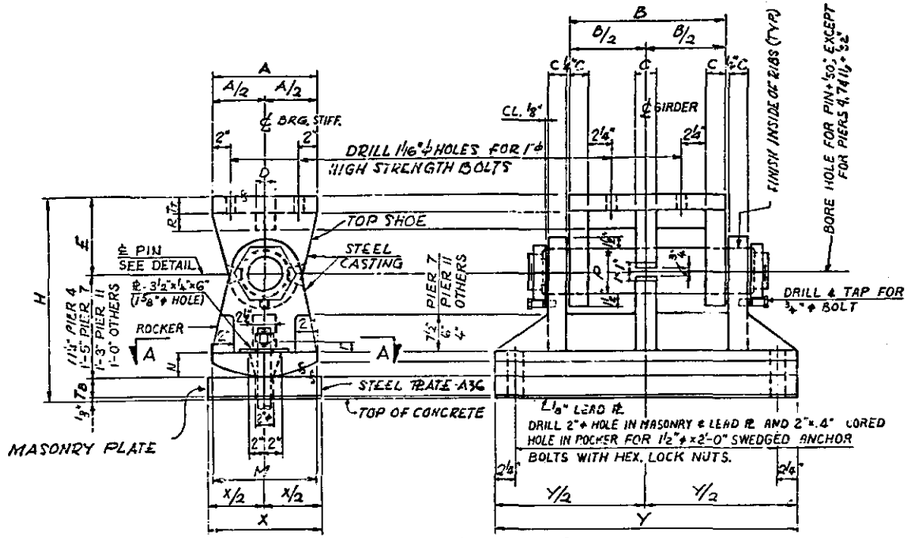


NOTE:
ALL MATERIAL ASTM A 36 UNLESS NOTED.

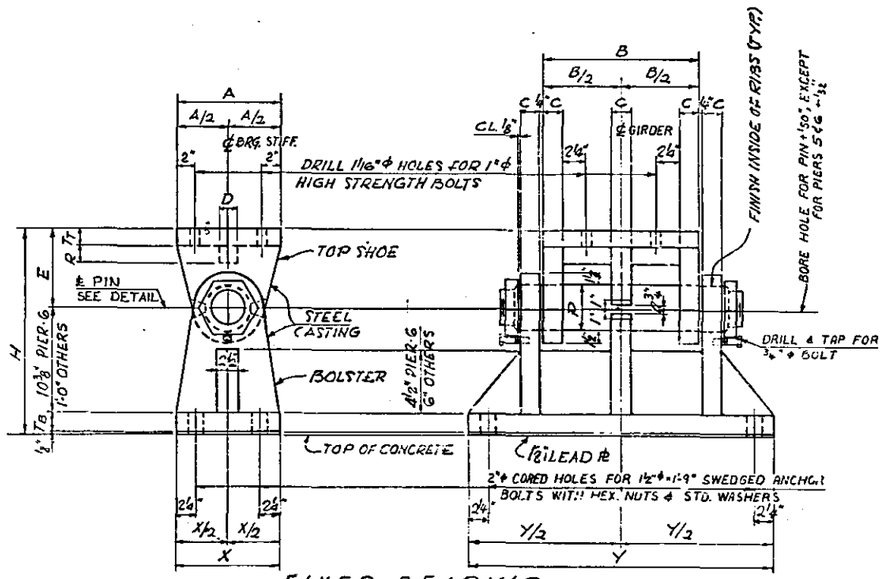
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 E. WABASH AVE. CHICAGO, ILLINOIS

FIELD SPLICES & DETAILS - SPANS 1 TO 5 & 19
F.A.I. RTE. 57 OVER THE MISSISSI[illegible]ER
PROJECT I-57-9(6)0
SECTION (02-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 76.25

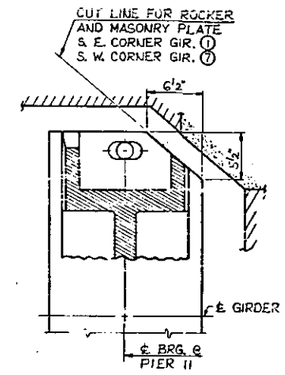
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 P	ALEXANDER MISSOURI	ILLINOIS MISSOURI	40	15
FHWA REG. NO. 4 FHWA REG. NO. 3		ILLINOIS MISSOURI		PROJECT I-57-9(6)0	



EXPANSION BEARING



FIXED BEARING

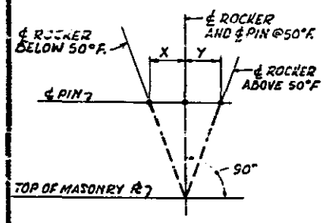


SECTION A-A

FOR GIRDERS ① & ⑦ @ PIER 11 ONLY

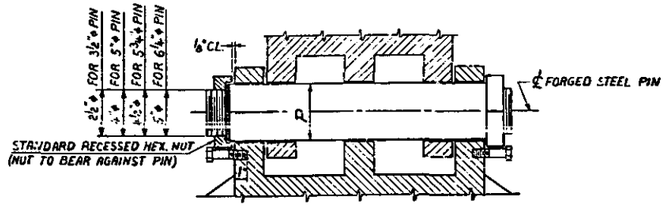
LOCATION	TOP SHOE A	B	Tt	C	D	E	R	PIN ϕ P	ROCKER M	N	MASONRY PLATE X	Y	TB	H
NORTH ABUTMENT	1'-0"	1'-4"	1 1/2"	1 1/2"	1 1/2"	9"	2"	3 1/2"	1'-0"	2 1/2"	1'-0"	2'-7"	1/2"	1'-10 5/8"
PIER 2	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-0"	2 1/2"	1'-0"	2'-9"	2"	1'-11 1/8"
PIER 3	1'-0"	1'-6"	2"	2 1/4"	2"	9"	2"	5"	1'-0"	2 3/4"	1'-1"	2'-11"	2 1/4"	1'-11 3/8"
PIER 4	1'-3"	1'-8"	2"	2 1/2"	2"	9"	2 1/2"	5 3/4"	1'-0"	2 3/4"	1'-3"	3'-2"	2 1/4"	1'-10 5/8"
PIER 7	1'-3"	2'-3"	2 1/2"	3 1/4"	3 1/4"	10 1/2"	4 1/4"	6 1/4"	1'-3"	3 1/2"	1'-10"	4'-0"	3 1/2"	2'-7 1/8"
PIER 11-SPAN 9A	1'-3"	2'-0"	2"	2 1/2"	2 1/2"	9"	3 1/2"	5 3/4"	1'-3"	3 1/2"	1'-6"	3'-7"	2 3/4"	2'-2 7/8"
PIER 14-SPAN 15	1'-0"	1'-4"	1 1/2"	1 1/2"	1 1/2"	9"	2"	3 1/2"	1'-0"	2 1/2"	1'-0"	2'-7"	1/2"	1'-10 5/8"
PIER 15	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-0"	2 1/2"	1'-1"	2'-9"	2 1/4"	1'-11 3/8"
PIER 18	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-0"	2 1/2"	1'-1"	2'-9"	2 1/4"	1'-11 3/8"
SOUTH ABUTMENT	1'-0"	1'-4"	1 1/2"	1 1/2"	1 1/2"	9"	2"	3 1/2"	1'-0"	2 1/2"	1'-0"	2'-7"	1/2"	1'-10 5/8"

LOCATION	TOP SHOE A	B	Tt	C	D	E	R	PIN ϕ P	BOLSTER X	Y	TB	H
PIER 1	1'-0"	1'-6"	2"	2 1/4"	2"	9"	2"	5"	1'-2"	2'-11"	2 1/2"	1'-11 5/8"
PIER 5	1'-3"	1'-8"	2"	2 1/2"	2"	9"	2 1/2"	5 3/4"	1'-3"	3'-2"	2 3/4"	1'-11 7/8"
PIER 6	1'-3"	1'-8"	2"	2 1/2"	2"	?"	2 1/2"	5 3/4"	1'-3"	3'-2"	2 3/4"	1'-10 1/4"
PIER 16	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-2"	2'-9"	2 1/2"	1'-11 5/8"
PIER 17	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-2"	2'-9"	2 1/2"	1'-11 5/8"



LOCATION	X -10°F	10°	30°F	X or Y 50°F	Y 70°F	90°F	110°F
N. ABUT.	1/2"	3/8"	3/16"	0"	3/16"	3/8"	1/2"
PIER 2	1/2"	3/8"	3/16"	0"	3/16"	3/8"	1/2"
PIER 3	1"	3/4"	3/8"	0"	3/8"	11/16"	1"
PIER 4	1 1/8"	3/4"	3/8"	0"	5/8"	3/4"	1 1/8"
PIER 7	1 3/4"	1 5/16"	9/16"	0"	9/16"	1 1/16"	1 3/4"
PIER 11-SPAN 9A	1 3/4"	1 5/16"	9/16"	0"	9/16"	1 3/16"	1 3/4"
PIER 14-SPAN 15	1 5/16"	7/8"	7/16"	0"	7/16"	7/8"	1 5/16"
PIER 15	1 3/16"	9/16"	1/8"	0"	1/8"	9/16"	1 3/16"
PIER 18	1 3/16"	9/16"	1/8"	0"	1/8"	9/16"	1 3/16"
S. ABUT.	1 5/16"	7/8"	7/16"	0"	7/16"	7/8"	1 5/16"

CORRECTION FOR TEMPERATURE-ROCKER SETTING



PIN DETAIL

NOTES:

FOR DETAILS OF FIXED BEARING AT PIER 9 SEE SHT 12

CAST STEEL SHALL CONFORM TO A. S. T. M. A-486-65, CLASS 70, NORMALIZED.

FORGED STEEL SHALL CONFORM TO A. S. T. M. A 235-65, CLASS F.

ALL OTHER MATERIAL SHALL CONFORM TO A. S. T. M. A36 EXCEPT AS OTHERWISE NOTED.

STRUCTURAL STEEL WELDMENTS OF EQUAL SECTION AND STRENGTH MAY BE SUBSTITUTED FOR THE CASTINGS SUBJECT TO APPROVAL OF ENGINEER.

CASTINGS, BEARING PLATES, LEAD PLATES, ANCHOR BOLTS AND MISCELLANEOUS ITEMS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH SECTION 507 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. PLAN WEIGHT OF BEARINGS IS 184,785 POUNDS WHICH INCLUDES 131,540 POUNDS OF CAST STEEL.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

BEARING DETAILS - SPANS 1 TO 9A & 9
F. A. I. RTE. 57 OVER THE MISSISS ER
PROJECT I-57-9(6)0
SECTION (02-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-1B-1 P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	16
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(6)0	

29'-6"

10½" 9" 1'-0" 1'-3½" STUDS AT 6" MAX. CTRS. 3-STUDS BETW. STOOLS (TYP.)

3/16"/FT SLOPE

L 7×4 W12 (TYP.) BT PL (SEE SECT. F-F FOR FIELD WELD) ℄ GIRDER (TYP)

9" 6" 1'-0" 1'-3½" TYP. 6" W12 CUT BRG. STIFF. AS SHOWN AT PIER 11 SEE SHT. 14.

P P ½"± W12 ¾"ϕ H.S. BOLTS AT 7" MAX. CTRS. BT. PL. ½"

SECTION P-P

ELEVATION K-K

SYMMETRICAL ABOUT ℄ BRIDGE

SPANS 9A & 15

1'-3" 1'-4" 4 SPA. AT 1'-9½" = 7'-2" 1'-4" 1'-4" 4 SPA. AT 1'-9½" = 7'-2" 1'-4" 1'-4" 4 SPA. AT 1'-8½" = 6'-10" 1'-8"

¼" F ¾" BAR W12 (TYP.) L 1" BAR S 1" BAR DOWN GRADE C L W12 (TYP.) ¾" BAR

A A B B K K H H

STUDS AT 6" MAX. CTRS. 3-STUDS BETW. STOOLS (TYP.)

3 SPA. AT 1'-11⅛" = 5'-9¾" 7⅜" 7⅜" 7⅜" 3 SPA. AT 1'-11⅛" = 5'-9¾" 9⅜" 9⅜" 3 SPA. AT 1'-11⅛" = 5'-9¾" 9⅜" 9⅜" 3 SPA. AT 1'-7½" = 4'-10½" 1'-8⅝"

SPANS 12 & 14

F

HALF PLAN AT PIER 11 & 14

(DRAIN PLATES NOT SHOWN)

SCALE: ¾" = 1'-0"

10½" 9" 1'-0" 1'-5" 1'-0" AT PIER 11 1'-0" AT PIER 14 1'-0⅜" 1'-0⅜" 1'-0" AT PIER 11 1'-0" AT PIER 14 9" 6" C

¾" 3/16"/FT. SLOPE BAR T. TROUGH S10 (CONT.) 2-¾"ϕ H.S. S-10

END ℄ (TYP.) DOWNSPOUT TOP FLANGE OF END FLOOR BEAM D3 (TYP.) SEE SHT. 9

¾"ϕ H.S. BOLTS AT 7" MAX. CTRS. ℄ STRINGER (TYP.) BT ℄ (SEE SECT. F-F FOR FIELD WELD.)

NOTE - END FLOOR BM. NOT SHOWN - SEE SHT. 21.

ELEVATION H-H

EXPANSION GUARD - PIERS 11

F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER

PROJECT I-57-9(6)0

SECTION (02-1B-1)P

ALEXANDER COUNTY, ILLINOIS

MISSISSIPPI COUNTY, MISSOURI

STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

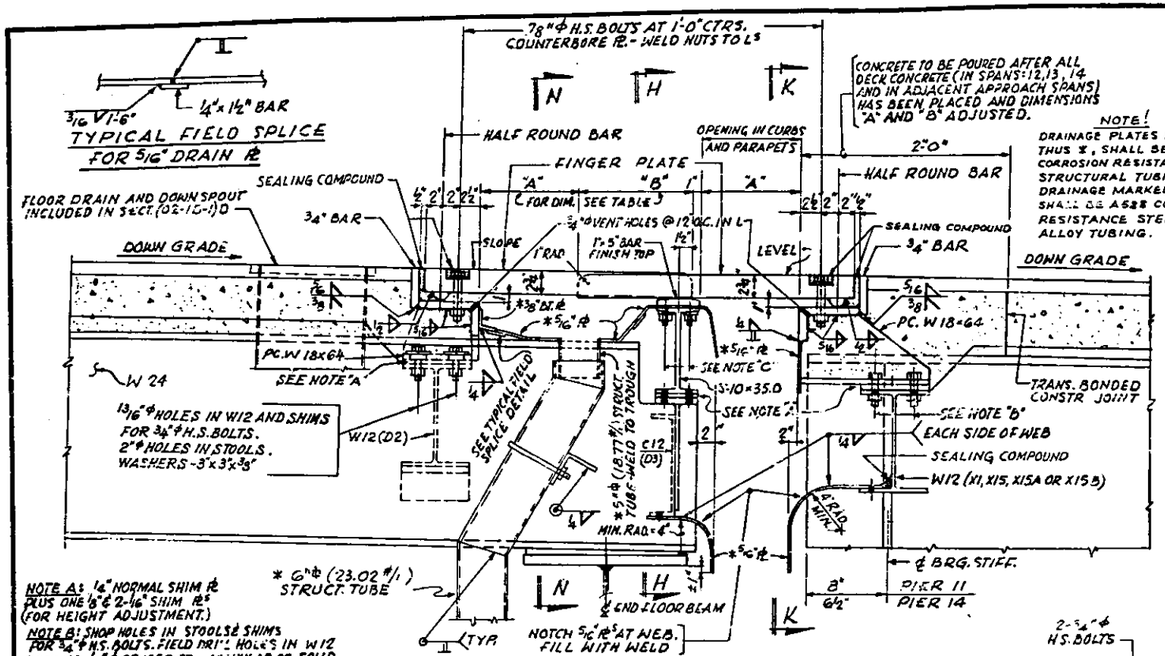
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 P	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	40	17
F.A.M. 3, SEC. NO. 4 F.A.M. 4, SEC. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(6)10	

TYPICAL FIELD SPLICE FOR 5/16" DRAIN ℄

SECTION F-F

SPANS: 12 OR 14 — SPANS: 7, A OR 15

SCALE: 1/2" = 1'-0"



NOTE A: 1/4" NORMAL SHIM ℞ PLUS ONE 1/8" & 2-1/16" SHIM ℞'S (FOR HEIGHT ADJUSTMENT.)

NOTE B: SHOP HOLES IN STOOLS & SHIMS FOR 3/4" ϕ H.S. BOLTS. FIELD DRILL HOLES IN W12

NOTE C: 1/2" ϕ CR 1020 STL. CIRCULAR OR SOLID FLUX FILLED-THREADED STUDS AUTO. END WELDED AT 7 1/2" ALT. CTRS. 11/16" ϕ HOLE IN FLG. OF S10. BEVELED WASHERS AND SELF-LOCK NUTS.

NOTE D: 3/4" ϕ x 8" CR 1020 STL. GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED.

FLAME CUT PLATE

SCALE: 1" = 1'-0"

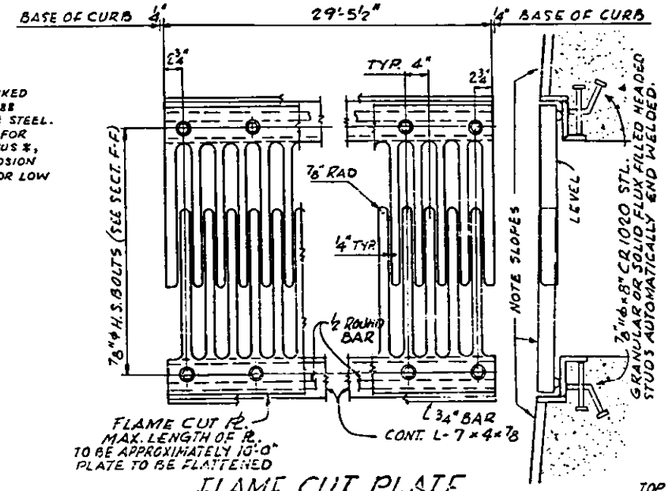
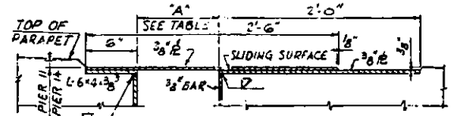


TABLE OF "A" AND "B" DIMENSIONS

TEMP (°F)*	BEFORE DECK CONCRETE IN SPANS 12, 13 & 14 IS POURED				AFTER DECK CONCRETE IN SPANS 12, 13 & 14 IS POURED			
	PIER 11		PIER 14		PIER 11		PIER 14	
	A	B	A	B	A	B	A	B
130	6 5/16	18 11/16	6 7/16	18 9/16	3 13/16	21 3/16	3 15/16	21 1/16
110	8 1/4	16 3/8	8 5/16	16 1/16	5 3/8	19 1/4	5 5/16	19 3/16
90	10 3/16	14 13/16	10 3/16	14 3/16	7 11/16	17 5/16	7 11/16	17 5/16
70	12 1/16	12 5/16	12 1/8	12 1/8	9 11/16	15 1/16	9 5/8	15 3/8
50	14 "	"	14 "	"	11 1/2"	13 1/2	11 1/2"	13 3/8"
30	15 15/16	9 1/16	15 7/8	9 1/8	13 1/16	11 7/16	13 1/8	11 7/8
10	17 7/16	7 3/16	17 7/16	7 3/16	15 1/16	9 1/16	15 1/16	9 1/16
-10	19 3/4	5 1/4	19 1/16	5 5/16	17 1/4	7 3/4	17 1/16	7 3/16
-30	21 1/16	3 5/16	21 3/16	3 1/16	19 1/16	5 13/16	19 1/16	5 5/16

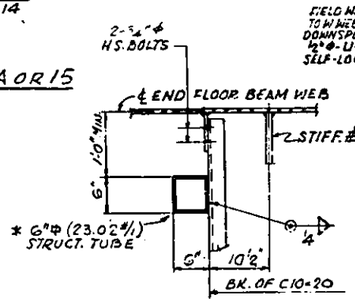
* TEMPERATURE AT TIME OF ADJUSTMENT OF EXPANSION GUARD

SECTION C-C



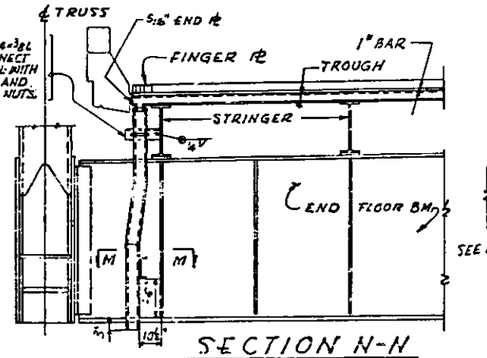
SECTION M-M

SCALE: 1" = 1'-0"

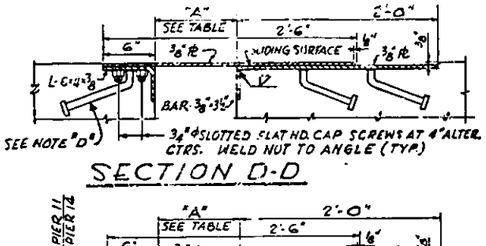


SECTION N-N

SCALE: 3/8" = 1'-0"

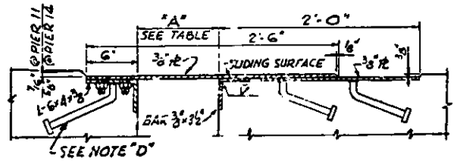


SECTION D-D



SECTION E-E

SCALE: 1 1/2" = 1'-0"

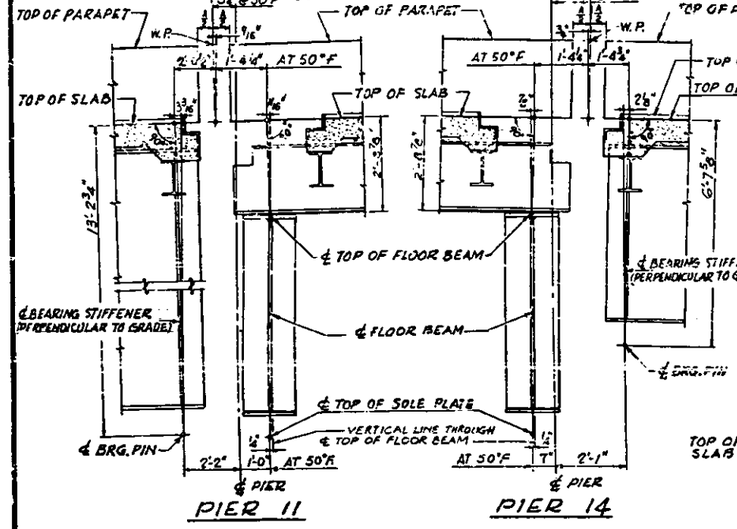


NOTE

EXPANSION GUARD MATERIAL IN CURBS & PARAPETS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1)D. ALL OTHER MATERIAL SHOWN ON THIS SHEET IS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) F & E EXCEPT AS NOTED.

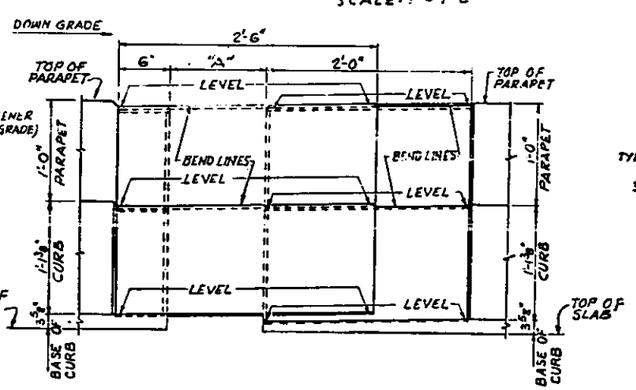
WORK LINES

SCALE: 1/2" = 1'-0"



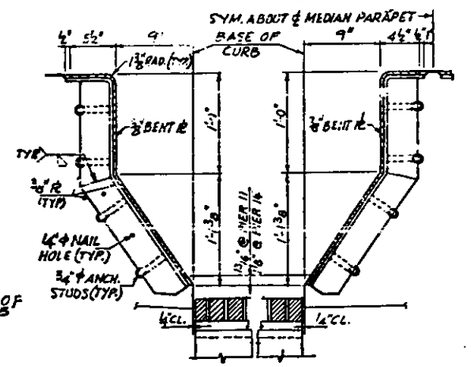
ELEVATION OF CURB AND PARAPET

SCALE: 1 1/2" = 1'-0"



SECTION A-A SECTION B-B

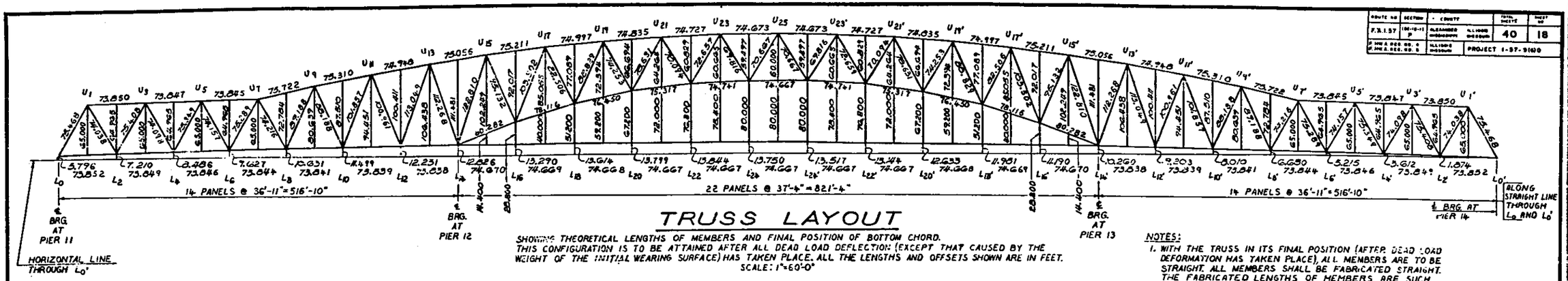
SCALE: 1 1/2" = 1'-0"



EXPANSION GUARD - PIER 11 & PIER 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-5
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) P	ALEXANDER ILLINOIS / MISSOURI	40	18
F.A.I. RTE. NO. 0 / F.A.S. RTE. NO. 0		ILLINOIS / MISSOURI	PROJECT I-57-9(610)	

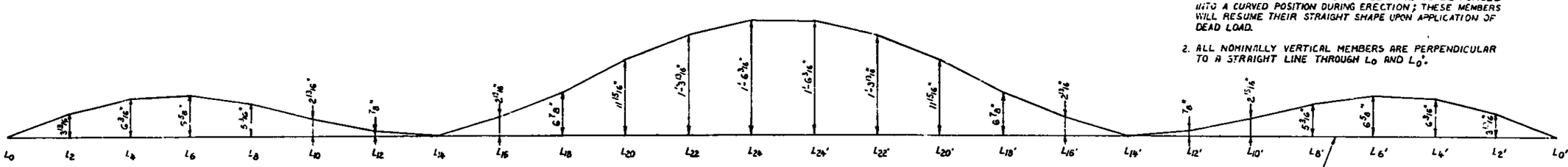


TRUSS LAYOUT

SHOWING THEORETICAL LENGTHS OF MEMBERS AND FINAL POSITION OF BOTTOM CHORD. THIS CONFIGURATION IS TO BE ATTAINED AFTER ALL DEAD LOAD DEFLECTION (EXCEPT THAT CAUSED BY THE WEIGHT OF THE INITIAL WEARING SURFACE) HAS TAKEN PLACE. ALL THE LENGTHS AND OFFSETS SHOWN ARE IN FEET.
SCALE: 1"=60'-0"

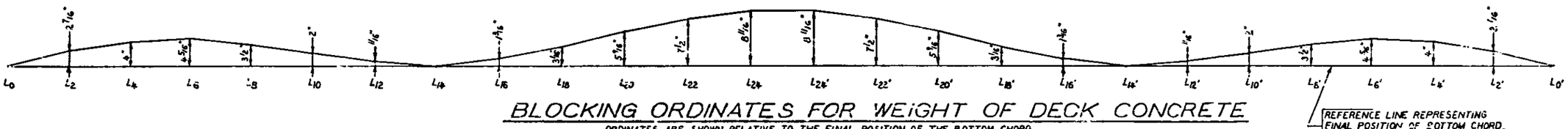
NOTES:

1. WITH THE TRUSS IN ITS FINAL POSITION (AFTER DEAD LOAD DEFORMATION HAS TAKEN PLACE), ALL MEMBERS ARE TO BE STRAIGHT. ALL MEMBERS SHALL BE FABRICATED STRAIGHT. THE FABRICATED LENGTHS OF MEMBERS ARE SUCH THAT SOME CHORD MEMBERS WILL HAVE TO BE FORCED INTO A CURVED POSITION DURING ERECTION; THESE MEMBERS WILL RESUME THEIR STRAIGHT SHAPE UPON APPLICATION OF DEAD LOAD.
2. ALL NOMINALLY VERTICAL MEMBERS ARE PERPENDICULAR TO A STRAIGHT LINE THROUGH L0 AND L0'.



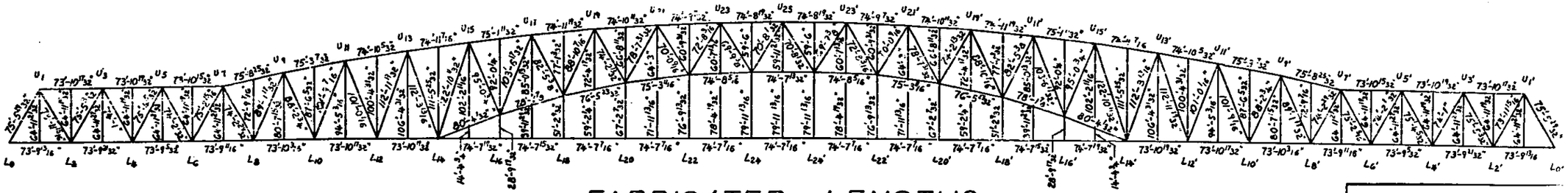
BLOCKING ORDINATES FOR TOTAL DEAD LOAD *

ORDINATES ARE SHOWN RELATIVE TO THE FINAL POSITION OF THE BOTTOM CHORD
* EXCLUDING WEIGHT OF INITIAL WEARING SURFACE



BLOCKING ORDINATES FOR WEIGHT OF DECK CONCRETE

ORDINATES ARE SHOWN RELATIVE TO THE FINAL POSITION OF THE BOTTOM CHORD



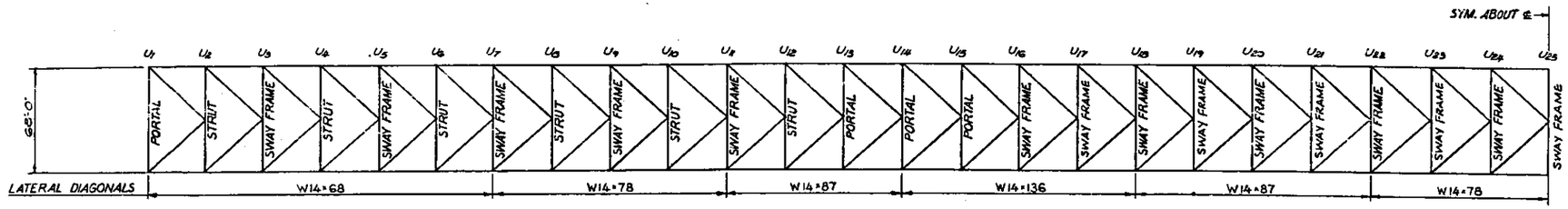
FABRICATED LENGTHS

THE LENGTHS SHOWN ARE THE THEORETICAL LENGTHS OF MEMBERS CORRECTED FOR DEFORMATION DUE TO DEAD LOAD.
SCALE: 1"=60'-0"

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

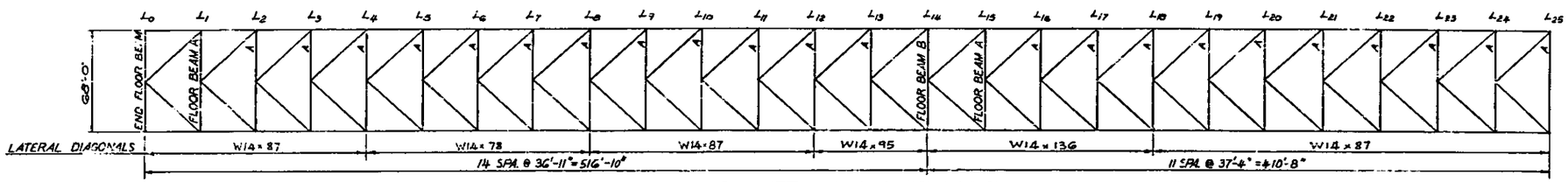
TRUSS LAYOUT & BLOCKING OF S
F.A.I. RTE. 57 OVER THE MISSISSI RIVER
PROJECT I-57-9(610)
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. ST	102-18-1 P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	19
P.HW.2 REG. NO. 6 P.HW.2 REG. NO. 8		ILLINOIS MISSOURI		PROJECT I-57-9(6)0	



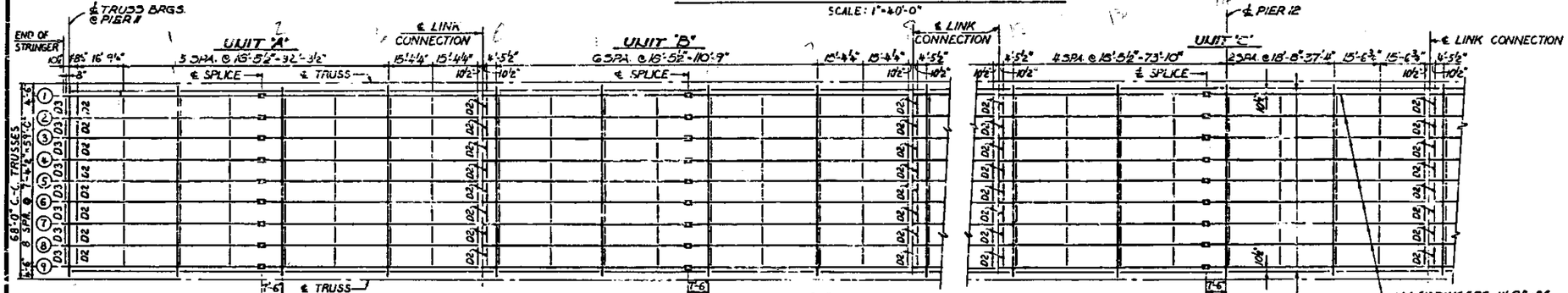
PLAN - TOP LATERAL SYSTEM

SCALE: 1"=40'-0"



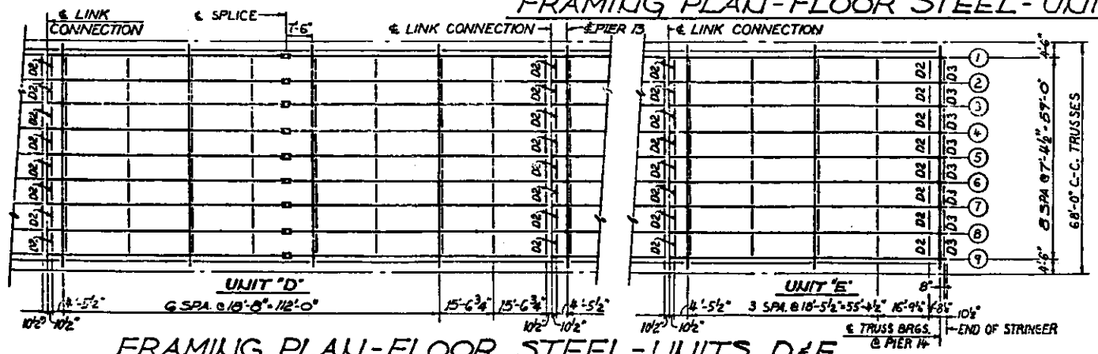
PLAN - BOTTOM LATERALS

SCALE: 1"=40'-0"



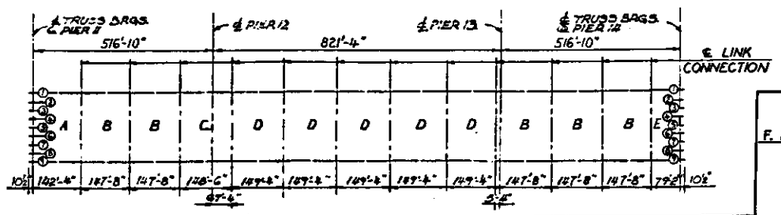
FRAMING PLAN - FLOOR STEEL - UNITS A, B & C

SCALE: 1"=20'-0"



FRAMING PLAN - FLOOR STEEL - UNITS D & E

SCALE: 1"=20'-0"



KEY PLAN

NOTES:

ALL DIAPHRAGMS ARE D1 UNLESS NOTED.

ALL MATERIAL ASTM A36 UNLESS NOTED.

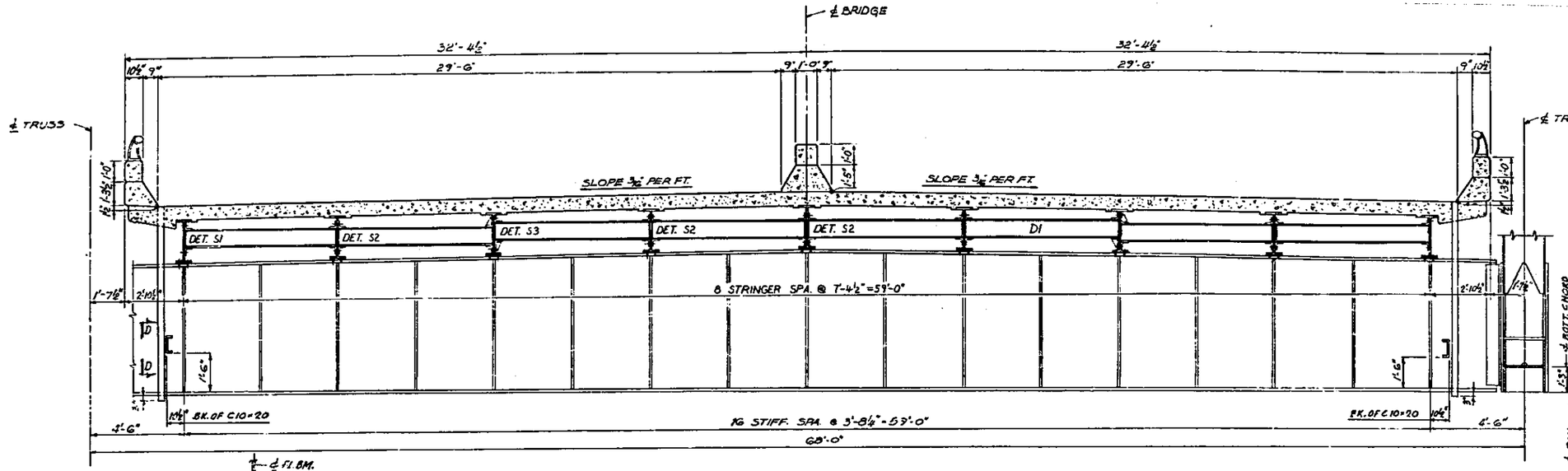
ALL DIMENSIONS PERPENDICULAR TO TRUSS ARE HORIZONTAL.

ALL DIMENSIONS PARALLEL TO TRUSS ARE ALONG A STRAIGHT LINE THROUGH L_0 AND L_0' (SEE TRUSS LAYOUT, SHT. 18)

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

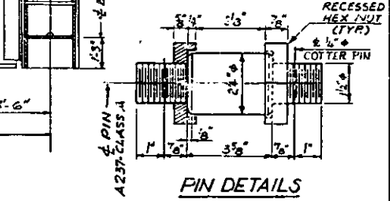
FRAMING PLAN - SPANS 1 :4
F. A. I. RTE. 57 OVER THE MISS :I RIVER
PROJECT I-57-9(6)0
SECTION 102-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-10-1 P	ALEXANDER CO. ILLINOIS	ILLINOIS MISSOURI	40	20
F. AID A. PROJ. NO. 6	ILLINOIS				
F. AID A. PROJ. NO. 9	MISSOURI			PROJECT I-57-9(6)0	

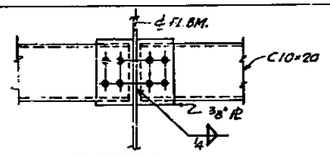


TYPICAL CROSS - SECTION

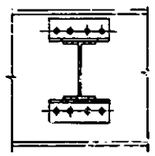
SCALE: 3/8" = 1'-0"



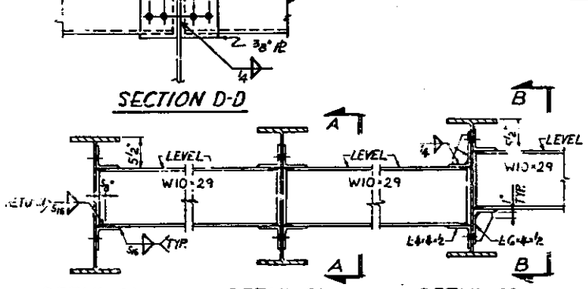
PIN DETAILS



SECTION D-D



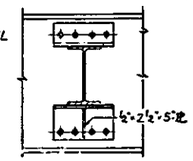
SECTION A-A



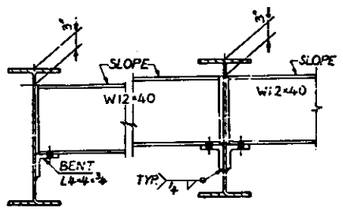
DETAIL S1 DETAIL S2 DETAIL S3

DIAPHRAGM D1 DETAILS

SCALE: 1"=1'-0"

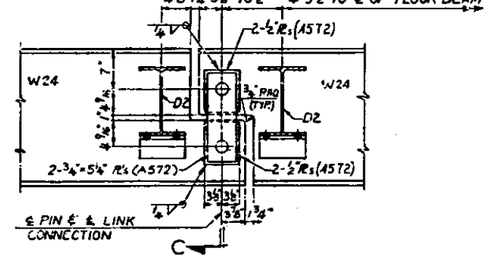


SECTION B-B



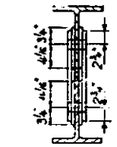
DIAPHRAGM D2 DETAILS

SCALE: 1"=1'-0"

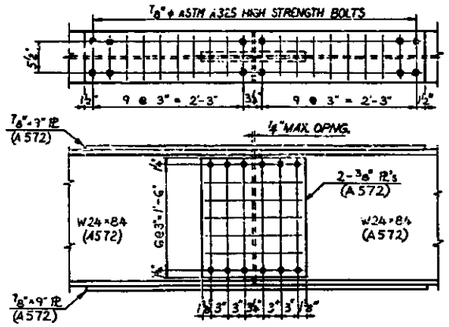


LINK CONNECTION

SCALE: 1"=1'-0"

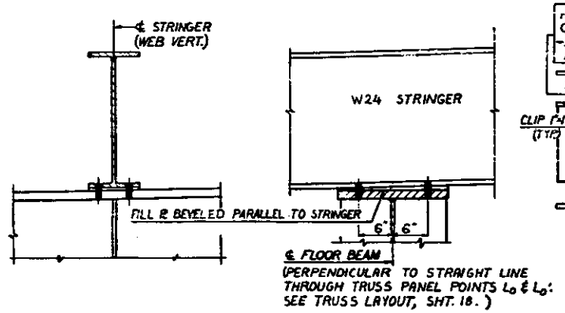


SECTION C-C



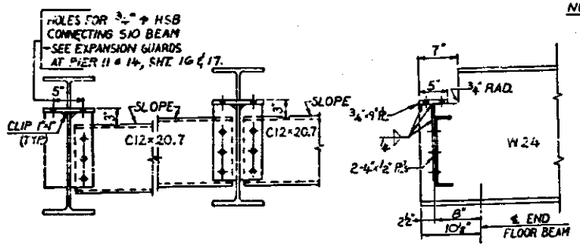
TYPICAL STRINGER SPLICE

SCALE: 1"=1'-0"



CONNECTION OF STRINGER TO FLOOR BEAM

SCALE: 1"=1'-0"



DIAPHRAGM D3 DETAILS

SCALE: 1"=1'-0"

NOTES:
ALL MATERIAL ASTM A36 UNLESS NOTED
ALL FASTENERS SHALL BE 7/8" ø ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.
FOR FLOOR BEAMS, SEE SHT. 21

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FLOOR STEEL DETAILS - SPANS 12,
F. A. I. RTE. 57 OVER THE MISSISSIPPI R.
PROJECT I-57-9(6)0
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	102-1B-1) P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	22
F.HW.A. REG. NO. 4 F.HW.A. REG. NO. 3		ILLINOIS MISSOURI		PROJECT I-57-9(6)0	

GENERAL NOTES ON TRUSS DETAILS

ALL MATERIAL SHALL BE ASTM A36 UNLESS NOTED.

ALL SHOP FASTENERS (DENOTED THUS: ⊕) AND FIELD FASTENERS (DENOTED THUS: +) SHALL BE 1" ϕ ASTM A325 HIGH STRENGTH BOLTS. SHOP & FIELD CONNECTIONS MAY BE INTERCHANGED.

FOR DETAILS OF WEB TO FLANGE FILLET WELDS IN TRUSS MEMBERS AND DETAILS AT CHANGE OF SECTION IN TRUSS MEMBERS (WHERE SECTIONS "WITHIN GUSSETS" AND "OUTSIDE GUSSETS" ARE DIFFERENT) SEE MISCELLANEOUS TRUSS DETAILS, SHT. 31

FOR DETAILS OF GUSSET PLATE STIFFENERS, GUSSET PLATE DIAPHRAGMS, AND CHORD DIAPHRAGMS SEE MISCELLANEOUS TRUSS DETAILS, SHT. 31

FOR TOP LATERAL CONNECTIONS ALONG ℄ OF BRIDGE SEE MISCELLANEOUS TRUSS DETAILS, SHT. 31

FOR BOTTOM LATERAL CONNECTIONS ALONG ℄ OF BRIDGE SEE FLOOR BEAMS, SHT. 21

FOR DETAILS OF FLOOR BEAM CONNECTIONS SEE SHT. 21

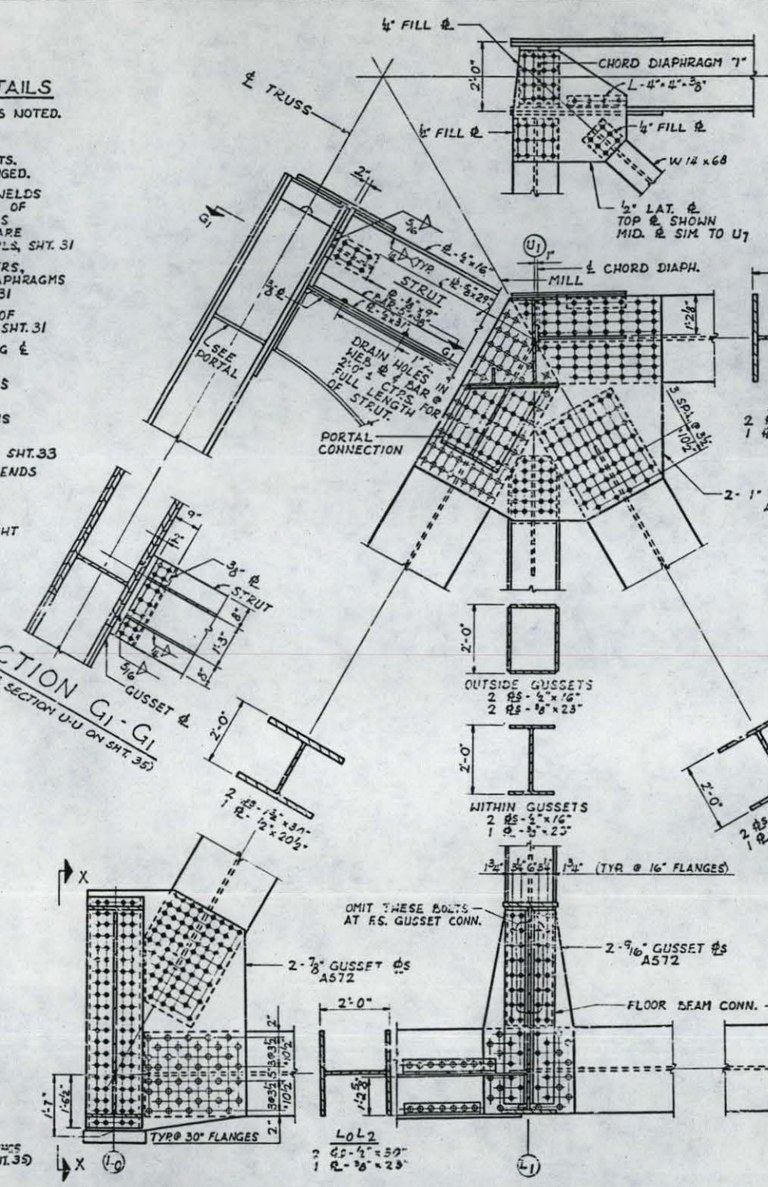
FOR DETAILS OF SWAY FRAME CONNECTIONS SEE SHT. 32.

FOR DETAILS OF PORTAL CONNECTIONS SEE SHT. 33

FOR DETAILS OF WEB PLATE CUT-OFF AT ENDS OF DIAGONAL TRUSS MEMBERS, SEE SHT. 31

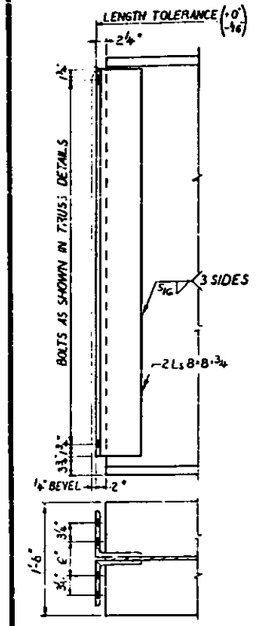
ALL NOMINALLY VERTICAL TRUSS MEMBERS AND THE NOMINALLY VERTICAL ℄ OF ALL FLOOR BEAMS ARE TO BE PERPENDICULAR TO A STRAIGHT LINE THROUGH PANEL POINTS L_0 AND L_0'.

THE WIDTH OF TRUSS MEMBERS, OUT-TO-OUT OF FLANGES, SHALL BE AS FOLLOWS:
CHORDS : 2'-0" (+1/16", -0)
DIAGONALS: 2'-0" (+0, -1/16")
VERTICALS: 2'-0" (+0, -1/16")

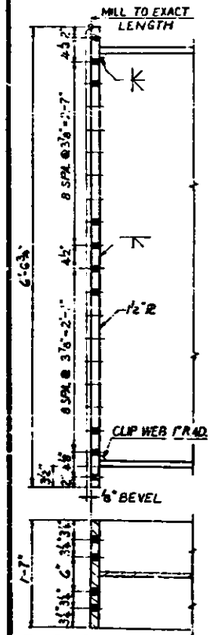


TRUSS DETAILS - L_0 TO L_3 & U_0 TO U_3
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(6)0
SECTION (02-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

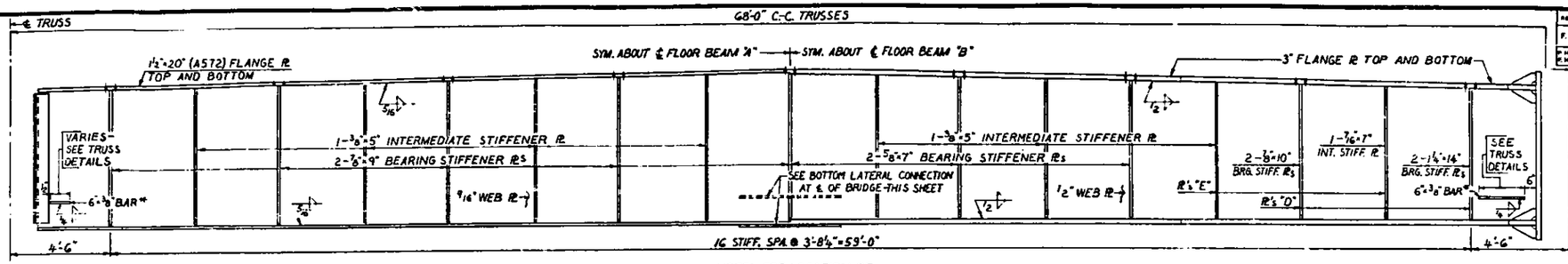
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	102-1B-1 P	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	40	21
F.H.W.S. REG. NO. 5 / F.A.S. REG. NO. 5		ALL IOWA WISCONSIN	PROJECT I-57-9(6)0	



FLOOR BEAM "A" CONNECTION
(LATERAL R's NOT SHOWN)
SCALE: 1"=1'-0"



END FLOOR BEAM CONNECTION
SCALE: 1"=1'-0"

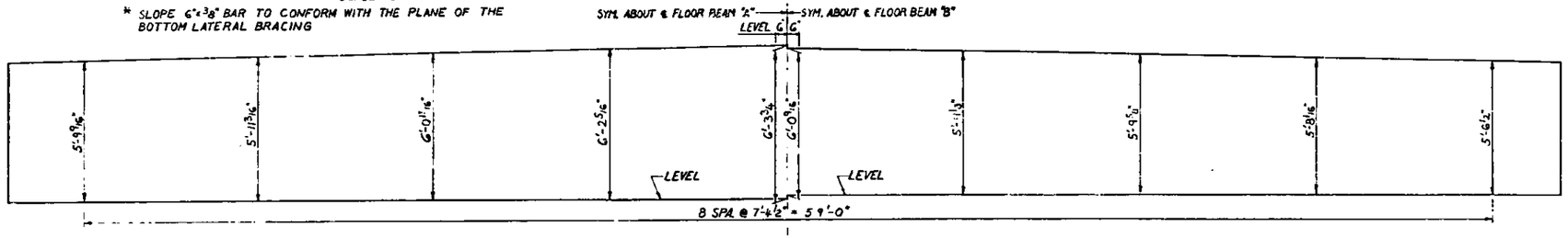


HALF ELEVATION INTERMEDIATE FLOOR BEAM "A"
SCALE: ⅜"=1'-0"

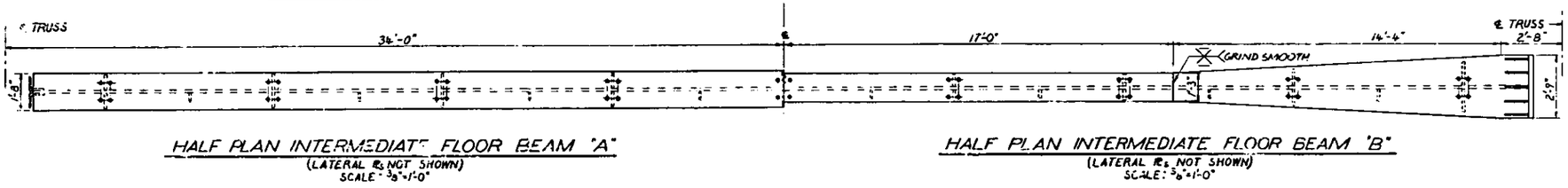
* SLOPE 6"x⅜" BAR TO CONFORM WITH THE PLANE OF THE BOTTOM LATERAL BRACING

NOTE: FOR LOCATION OF FLOOR BEAMS "A" & "B" SEE FRAMING PLAN, SHT. 19.

HALF ELEVATION INTERMEDIATE FLOOR BEAM "B"
SCALE: ⅜"=1'-0"

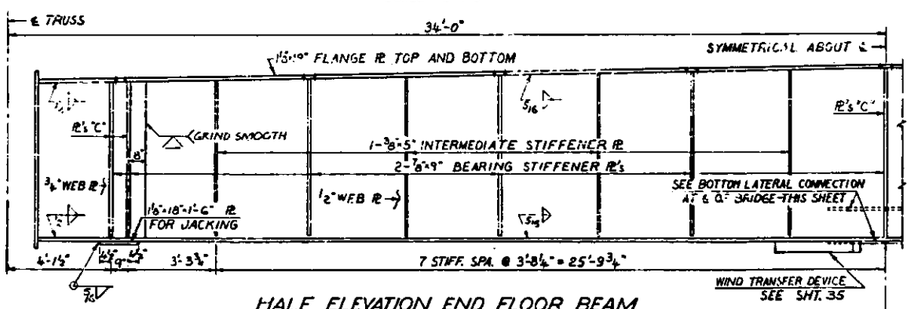


WEB PLATE OFFSETS CAMBERED FOR CROWN & TOTAL DEAD LOAD DEFLECTIONS OF FLOOR BEAMS "A" & "B"

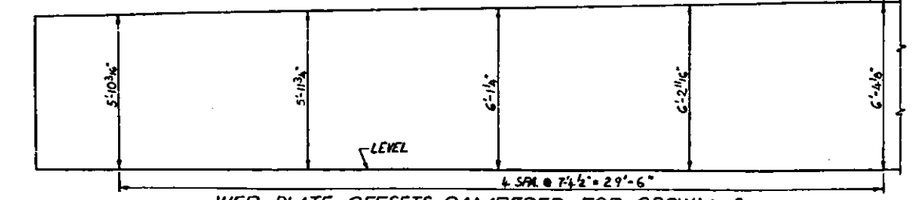


HALF PLAN INTERMEDIATE FLOOR BEAM "A"
(LATERAL R's NOT SHOWN)
SCALE: ⅜"=1'-0"

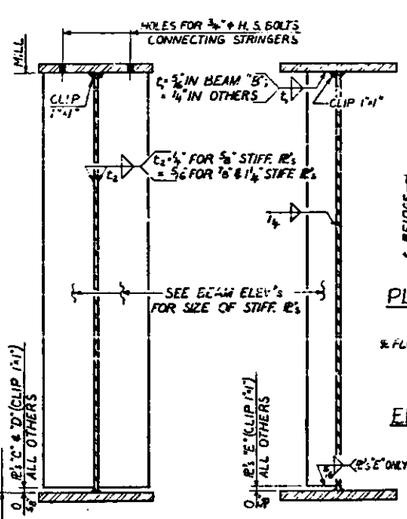
HALF PLAN INTERMEDIATE FLOOR BEAM "B"
(LATERAL R's NOT SHOWN)
SCALE: ⅜"=1'-0"



HALF ELEVATION END FLOOR BEAM
SCALE: ⅜"=1'-0"

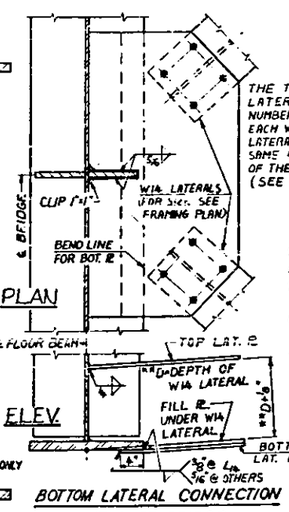


WEB PLATE OFFSETS CAMBERED FOR CROWN & TOTAL DEAD LOAD DEFLECTION OF END FLOOR BEAM



BEARING STIFFENER
SCALE: 1"=1'-0"

INTERMEDIATE STIFFENER
SCALE: 1"=1'-0"



BOTTOM LATERAL CONNECTION AT ℄ OF BRIDGE
SCALE: 1"=1'-0"

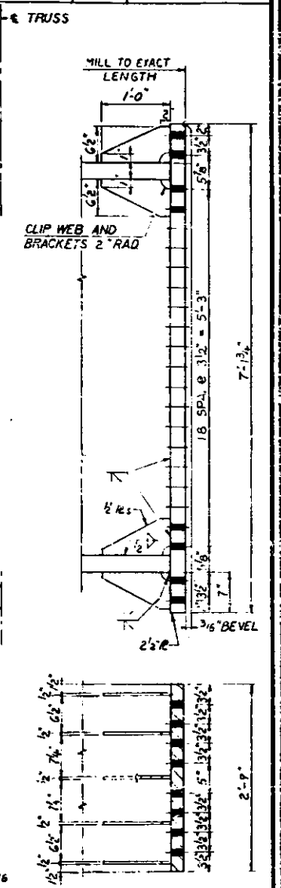
NOTES:

ALL MATERIAL ASTM A36 UNLESS NOTED.

TOTAL DEAD LOAD DEFLECTION DOES NOT INCLUDE DEFLECTION DUE TO FUTURE WEARING SURFACE.

FOR CONNECTION OF STRINGERS TO FLOOR BEAMS SEE FLOOR STEEL DETAILS, SHT. 20.

ALL FASTENERS SHALL BE 1" ϕ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.

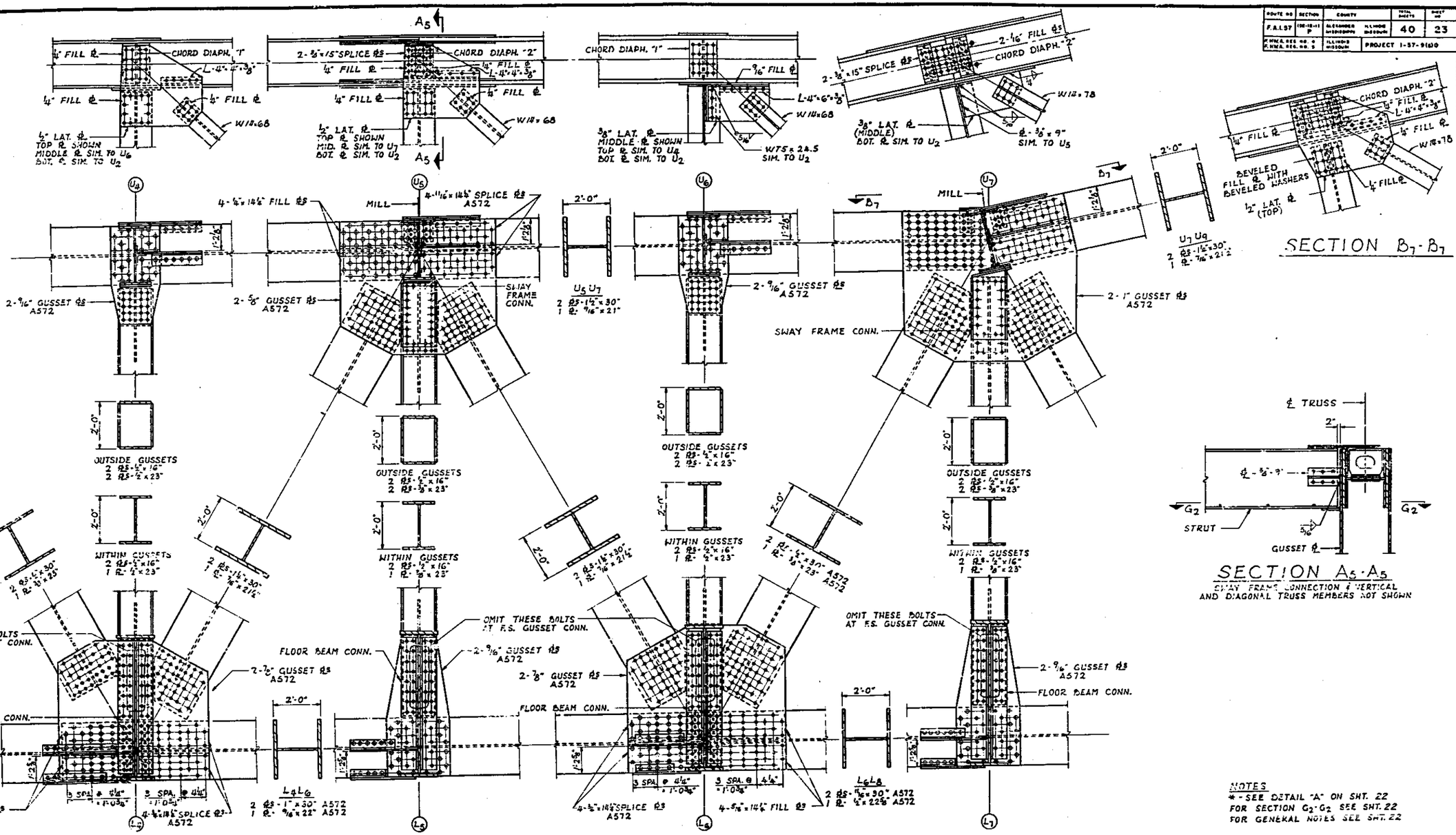


FLOOR BEAM "B" CONNECTION
(LATERAL R's NOT SHOWN)
SCALE: 1"=1'-0"

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FLOOR BEAMS - SPANS 12, 13
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(6)0
SECTION (02-1B-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-1B-11 P	ALEXANDER	ILLINOIS	40	23
		MISSISSIPPI	MISSOURI		
F.H.W.A. REG. NO. 4		ILLINOIS			
F.H.W.A. REG. NO. 5		MISSOURI		PROJECT I-57-9(6)0	



NOTES
* - SEE DETAIL "A" ON SHT. 22
FOR SECTION G2-G2 SEE SHT. 22
FOR GENERAL NOTES SEE SHT. 22

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - L4 TO L6 U4 TO U7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(6)0
SECTION (02-1B-0 P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(102-18-1) P	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		40	24
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9(6)0		

CHORD DIAPH. "1"
1/4" FILL ℄
1/4" FILL ℄
1/2" LAT. ℄ TOP ℄ SHOWN MID ℄ SIM. TO U0 BOT. ℄ SIM. TO U2
L-4"×4"×5/8"
1/4" FILL ℄
W18×78
U8
2'-0"
OUTSIDE GUSSETS
2 PS - 1/2" × 16"
2 PS - 1/2" × 28"
2'-0"
WITHIN GUSSETS
2 PS - 5/16" × 16"
1 PL - 1/2" × 23"
2'-0"
2 PS - 1/2" × 30"
1 PL - 1/2" × 21"
OMIT THESE BOLTS AT F.S. GUSSET CONN.
2 - 3/4" GUSSET ℄s A572
2 - 5/8" GUSSET ℄s A572
FLOOR BEAM CONN.
2'-0"
L8 L10
2 PS - 15/16" × 30"
1 PL - 7/16" × 21 1/8"
12 SPA. @ 3 1/2" = 42"
L8
2 - 9/16" GUSSET ℄s A572
12'-2"

CHORD DIAPH. "2"
BEVELED FILL ℄
1/4" FILL ℄
2 - 3/8" × 15" SPLICE ℄s
1/4" FILL ℄
L-4"×4"×5/8"
W18×78
1/2" LAT. ℄ TOP ℄ SHOWN MID ℄ SIM. TO U1 BOT. ℄ SIM. TO U3
STRUT
2 PS - 1/2" × 16 1/2"
1 PL - 5/8" × 29"
U9
2'-0"
U9 U11
2 PS - 11/16" × 30" A572
1 PL - 7/16" × 22 5/8" A572
SWAY FRAME CONN.
2 - 5/8" GUSSET ℄s A572
2 - 3/4" GUSSET ℄s A572
12'-2"
2'-0"
OUTSIDE GUSSETS
2 PS - 1/2" × 16"
2 PS - 1/2" × 23"
2'-0"
WITHIN GUSSETS
2 PS - 1/2" × 16"
1 PL - 1/2" × 23"
OMIT THESE BOLTS AT F.S. GUSSET CONN.
FLOOR BEAM CONN.
2 - 5/16" GUSSET ℄s A572
2'-0"
L8 L10
2 PS - 15/16" × 30" A572
1 PL - 7/16" × 21 1/8" A572
L9

CHORD DIAPH. "1"
9/16" FILL ℄
L-4"×6"×3/8"
W18×78
WT5×24.5
3/8" LAT. ℄ MIDDLE ℄ SHOWN TOP ℄ SIM. TO U8 BOT. ℄ SIM. TO U2
U10
2'-0"
2 - 9/16" GUSSET ℄s A572
12'-2"
2'-0"
OUTSIDE GUSSETS
2 PS - 1/2" × 16"
2 PS - 1/2" × 23"
2'-0"
WITHIN GUSSETS
2 PS - 1/2" × 16"
1 PL - 1/2" × 23"
OUTSIDE GUSSETS
2 PS - 1/2" × 30" A572
2 PS - 3/8" × 23" A572
2'-0"
WITHIN GUSSETS
2 PS - 1/2" × 30" A572
1 PL - 7/16" × 22 5/8" A572
OMIT THESE BOLTS AT F.S. GUSSET CONN.
FLOOR BEAM CONN.
2 - 1" GUSSET ℄s A572
2 - 3/4" GUSSET ℄s A572
2'-0"
L10 L12
2 PS - 15/16" × 30" A572
1 PL - 5/8" × 21 1/8" A572
L10

2'-0"
2 - 3/8" × 15" SPLICE ℄s
CHORD DIAPH. "4"
CUT L-4"×6"×3/8"
3/8" LAT. ℄ TOP ℄ SHOWN BOT. ℄ SIM. TO L6
3/8" BAR
W18×68

9/16" FILL ℄
CHORD DIAPH. "3"
L-4"×6"×1/2"
1/2" LAT. ℄ TOP ℄ SHOWN BOT. ℄ SIM. TO L11
3/8" BAR
W18×87

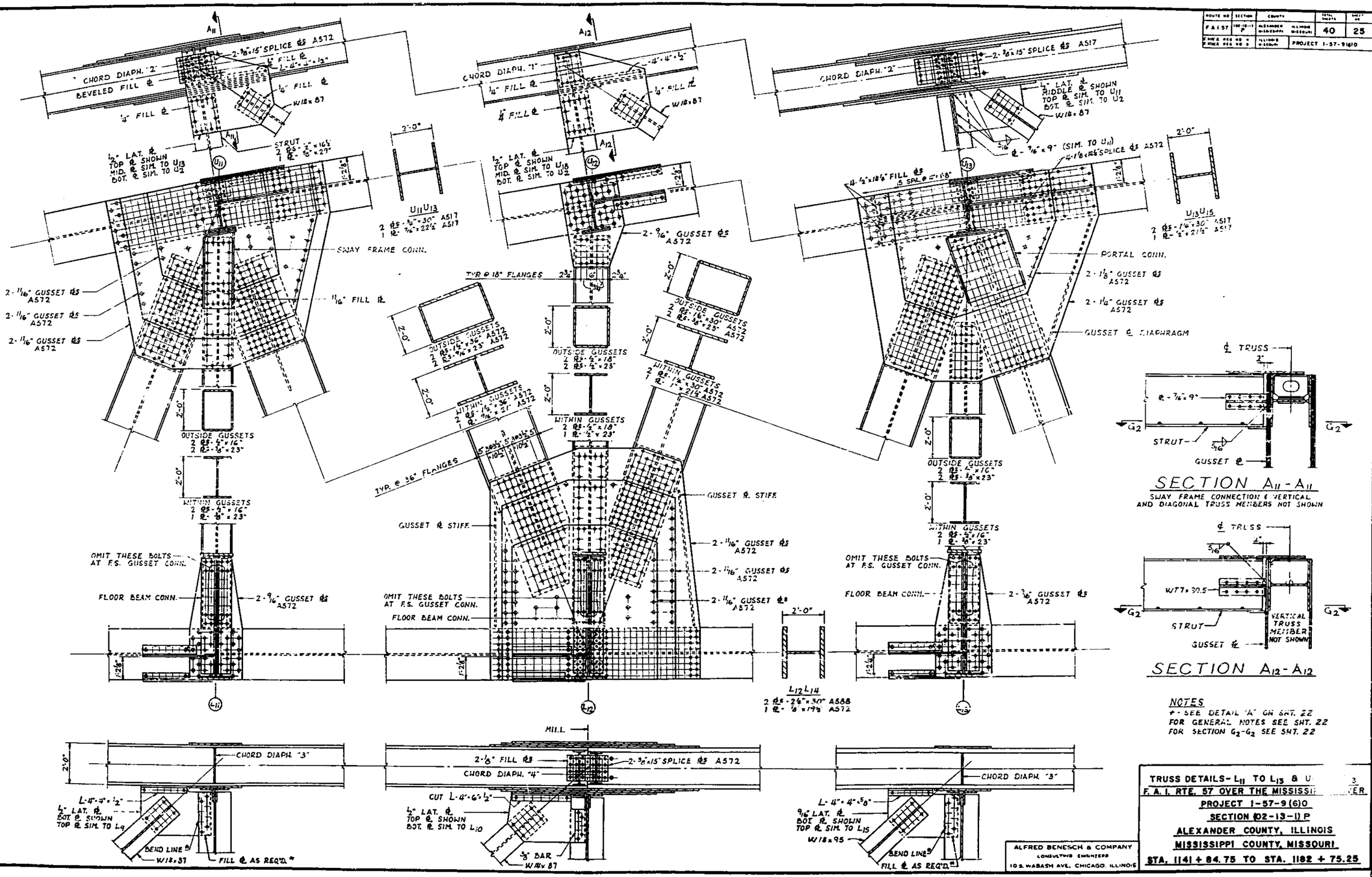
MILL
2 - 3/32" FILL ℄s
CHORD DIAPH. "4"
2 - 3/8" × 15" SPLICE ℄s
L-4"×4"×1/2"
1/2" LAT. ℄ BOT. ℄ SHOWN TOP ℄ SIM. TO L12
BEND LINE
W18×87
FILL ℄ AS REQ'D.

NOTES
* - SEE DETAIL "A" ON SHT. 22
FOR GENERAL NOTES SEE SHT. 22

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
100 E. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - L_8 TO L_{10} & U_8 TO U
F. A. I. RTE. 57 OVER THE MISSISSIPPI RI
PROJECT I-57-9(6)0
SECTION 102-18-1 P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F A I 57	102-13-1 P	ALEXANDER (ILLINOIS) MISSISSIPPI (MISSOURI)	40	25
F.M.E.A. RTE NO 0		ILLINOIS	PROJECT I-57-9(610)	
F.M.E.A. RTE NO 0		MISSOURI		



NOTES

* - SEE DETAIL 'A' ON SHT. 22

FOR GENERAL NOTES SEE SHT. 22

FOR SECTION G_2-G_2 SEE SHT. 22

TRUSS DETAILS - L_{11} TO L_{13} & U — 3

F. A. I. RTE. 57 OVER THE MISSISSI... ...ER

PROJECT I-57-9(610)

SECTION (02-13-1) P

ALEXANDER COUNTY, ILLINOIS

MISSISSIPPI COUNTY, MISSOURI

STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1) P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	26
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				PROJECT I-57-9(6)10	

SECTION B_{14}-B_{14}

SECTION C_{16}-C_{16}

SECTION H_{14}-H_{14}

SECTION D_{16}-D_{16}

NOTES
FOR SECTIONS A_{14} A_{16} & A_{15}-A_{15} SEE SHT. 27
FOR SECTIONS E_{14}-E_{14} & F_{14}-F_{14} SEE SHT. 30
FOR GENERAL NOTES SEE SHT. 22

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - L_{14}, M_{15}, M_{16} TO U_{16}
F. A. I. RTE. 57 OVER THE MISS RIVER
PROJECT I-57-9(6)10
SECTION (02-1B-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	27
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(6)0	

2-⅝"x15" SPLICE PLS
CHORD DIAPH. "2"
W14x136
PL-½"x9" SIM. TO U16
L3½"x3½" LAT. PL. MID. PL SHOWN, TOP PL SIM. TO U15, BOT. PL SIM. TO U2
U17
2'-0"
1'-2½"
U17 U19
2 PLS-11/16"x30"
1 PL-9/16"x22⅝"
SWAY FRAME CONN.
2-1" GUSSET PLS A572
2-1⅛" GUSSET PLS A572
OUTSIDE GUSSETS
2 PLS-½"x16"
2 PLS-⅜"x23"
WITHIN GUSSETS
2 PLS-½"x16"
1 PL-⅜"x23"
SWAY FRAME CONN.
2-11/16" GUSSET PLS A572
M17
OUTSIDE GUSSETS
2 PLS-½"x16"
2 PLS-⅜"x23"
WITHIN GUSSETS
2 PLS-½"x16"
1 PL-⅜"x23"

CHORD DIAPH. "1"
9/16" FILL PL
L-4"x6"x½"
W14x87
5/16
W77x30.5 SIM. TO U12
½" LAT. PL MID. PL SHOWN TOP PL SIM. TO U17 BOT. PL SIM. TO U2
U18
1'-2½"
SWAY FRAME CONN.
2-9/16" GUSSET PLS A572
OUTSIDE GUSSETS
2 PLS-½"x16"
2 PLS-⅜"x23"
WITHIN GUSSETS
2 PLS-½"x16"
1 PL-⅜"x23"
M18
OUTSIDE GUSSETS
2 PLS-½"x30" A572
2 PLS-⅜"x23" A572
WITHIN GUSSETS
2 PLS-½"x30" A572
1 PL-⅜"x22" A572
OUTSIDE GUSSETS
2 PLS-½"x30" A588 A572
2 PLS-⅜"x23" A572
WITHIN GUSSETS
2 PLS-½"x30" A588 A572
1 PL-⅜"x20½" A572
GUSSET PL STIFF.
2-1" GUSSET PLS A572
2-1" GUSSET PLS A572
SWAY FRAME CONN.
D18
D18
HILL
OUTSIDE GUSSETS
2 PLS-½"x16"
2 PLS-⅜"x23"
WITHIN GUSSETS
2 PLS-½"x16"
1 PL-⅜"x23"

2-⅛" FILL PLS
BEVELED FILL PL
CHORD DIAPH. "2"
2-⅝"x15" SPLICE PLS
¼" FILL PL
1-11"x4½"x½"
½" FILL PL
½" LAT. PL TOP PL SHOWN MID. PL SIM. TO U21 BOT. PL SIM. TO U2
¼" FILL PL
W14x87
U19
2'-0"
1'-2½"
U19 U21
2 PLS-1½"x30"
1 PL-11/16"x21½"
SWAY FRAME CONN.
2-⅜" GUSSET PLS A572
2-1" GUSSET PLS A572
OUTSIDE GUSSETS
2 PLS-½"x16"
2 PLS-⅜"x23"
WITHIN GUSSETS
2 PLS-½"x16"
1 PL-⅜"x23"
SWAY FRAME CONN.
2-11/16" GUSSET PLS A572
M19
OUTSIDE GUSSETS
2 PLS-½"x16"
2 PLS-⅜"x23"
WITHIN GUSSETS
2 PLS-½"x16"
1 PL-⅜"x23"

M18 M20
2 PLS-⅜"x30"
1 PL-½"x22½"

2-⅝"x15" SPLICE PLS
2-11/16" FILL PLS

SECTION D18-D18

℄ TRUSS
2"
W77x30.5
G2
G2
STRUT
5/16
GUSSET PL

SECTION A14-A14
PORTAL CONNECTION & VERTICAL TRUSS MEMBER NOT SHOWN

℄ TRUSS
2"
PL-4'-7"
G2
G2
STRUT
5/16
GUSSET PL

SECTION A15-A15
PORTAL CONNECTION & DIAGONAL TRUSS MEMBERS NOT SHOWN

NOTES
FOR SECTION G2-G2 SEE SHT. 22
FOR GENERAL NOTES SEE SHT. 22

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS — M_{17} TO M_{19} TO U_{19}
F.A.I. RTE. 57 OVER THE MISS. RIVER
PROJECT I-57-9(6)0
SECTION (02-18-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-1 P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	28
P.W.A. REG. NO. 4 P.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(610)	

SECTION B_{20}-B_{20}

SECTION D_{20}-D_{20}

SECTION D_{22}-D_{22}

U_{21} U_{23}
2 PLS- 2"x30" A588
1 PL- ⅞"x20" A572

M_{20} M_{22}
2 PLS- 1¼"x30"
1 PL- 7/16"x2½"

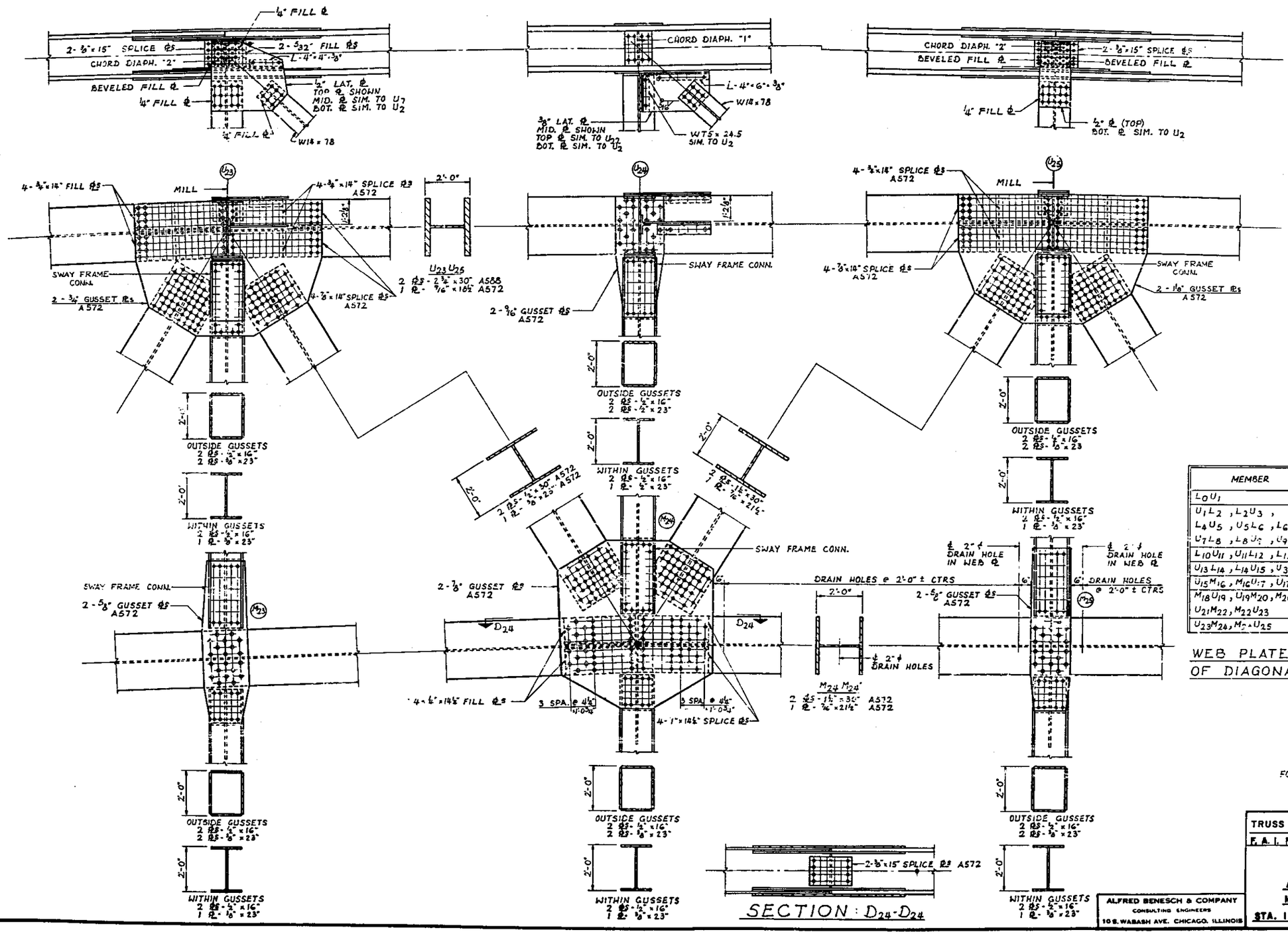
M_{22} M_{24}
2 PLS- 1"x30" A572
1 PL- 7/16"x22" A572

FOR GENERAL NOTES SEE SHT. 22

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - M_{20} TO U_{20} TO U_{22}
F. A. I. RTE. 57 OVER THE M[illegible]SSIPPI RIVER
PROJECT I-57-9(610)
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) P	ALEXANDER (ILLINOIS)	ILLINOIS (MISSOURI)	40	29
ILLINOIS REG. NO. 0 MISSOURI REG. NO. 0		ILLINOIS MISSOURI		PROJECT I-57-2(610)	



MEMBER	"Y" AT LOWER END	"Y" AT UPPER END
L_0U_1	1'-3"	0'-0"
U_1L_2 , L_2U_3 , L_4U_5 , U_5L_6 , L_6U_7 U_7L_8 , L_8U_9 , U_9L_{10}	1'-3"	1'-3"
$L_{10}U_{11}$, $U_{11}L_{12}$, $L_{12}U_{13}$	1'-6"	1'-6"
$U_{13}L_{14}$, $L_{14}U_{15}$, U_3L_4	0'-0"	0'-0"
$U_{15}M_{16}$, $M_{16}U_{17}$, $U_{17}M_{18}$	1'-6"	1'-6"
$M_{18}U_{19}$, $U_{19}M_{20}$, $M_{20}U_{21}$ $U_{21}M_{22}$, $M_{22}U_{23}$	1'-3"	1'-3"
$U_{23}M_{24}$, $M_{24}U_{25}$	1'-0"	1'-0"

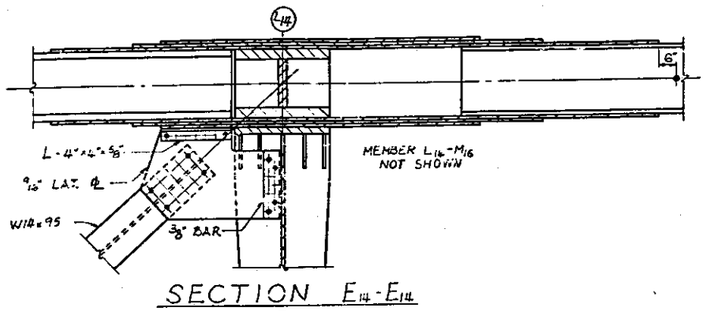
WEB PLATE CUT-OFF AT ENDS OF DIAGONAL TRUSS MEMBERS

FOR GENERAL NOTES SEE SHT. 22

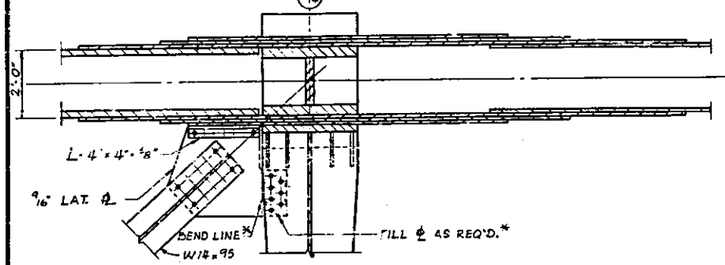
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS – M_{23} TO M_{25} & U_{23} TO U_{25}
F. A. I. RTE. 57 OVER THE MISSISSIPPI
PROJECT I-57-2(610)
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

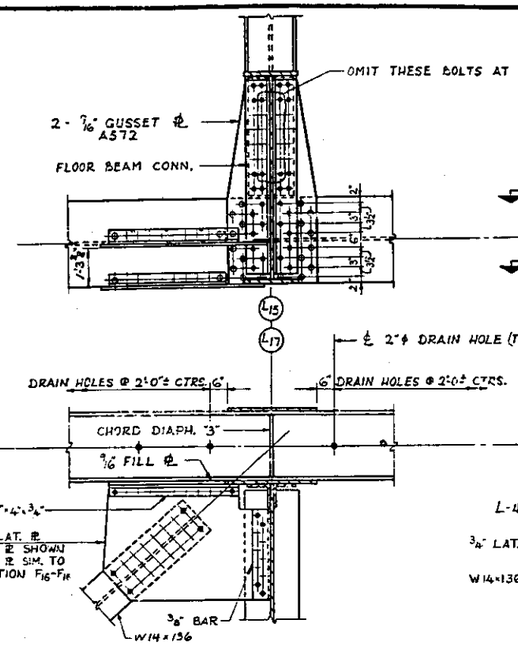
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) P	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	40	30
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 6		ILLINOIS MISSOURI	PROJECT I-57-5(610)	

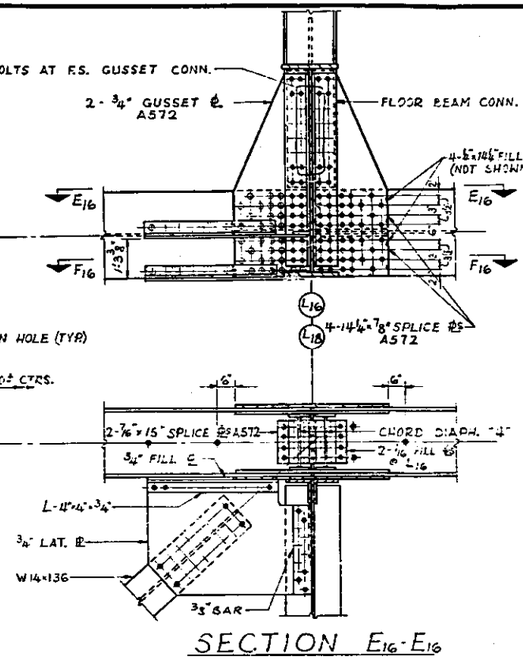


SECTION E_{14}-E_{14}

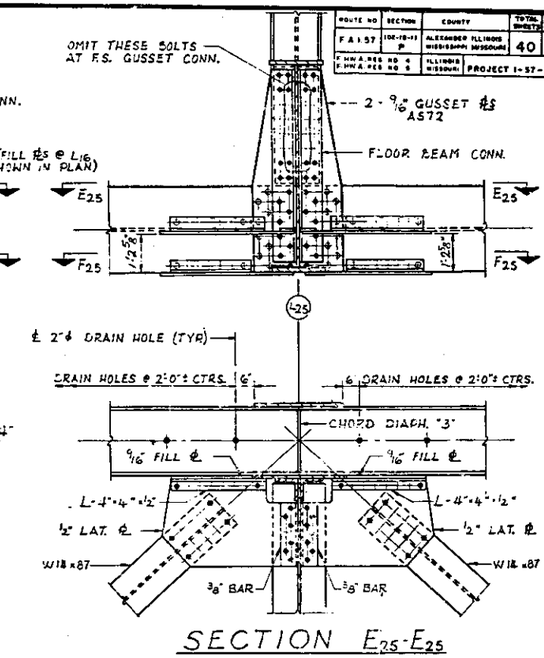


SECTION F_{14}-F_{14}

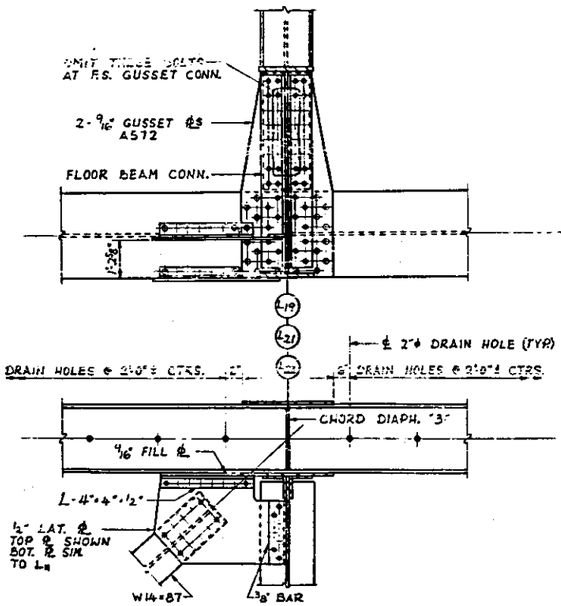


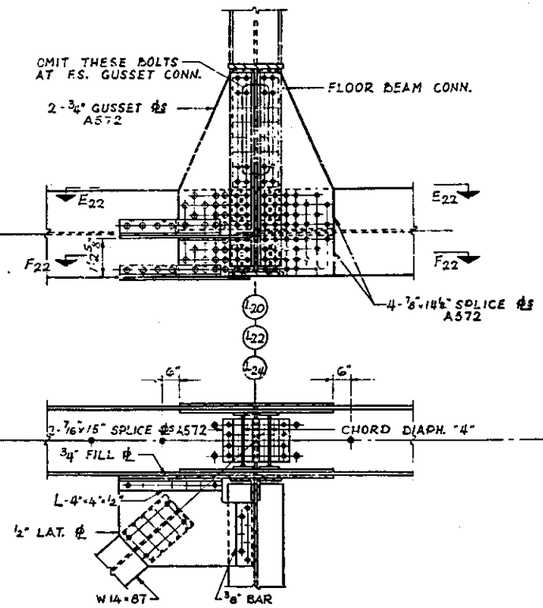


SECTION E_{16}-E_{16}

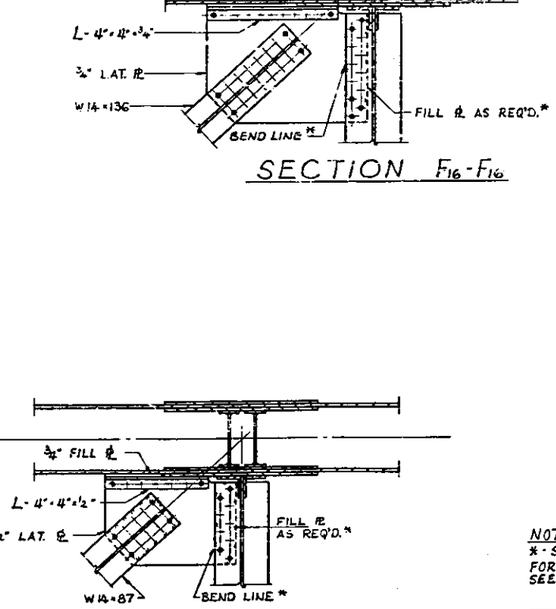


SECTION E_{25}-E_{25}

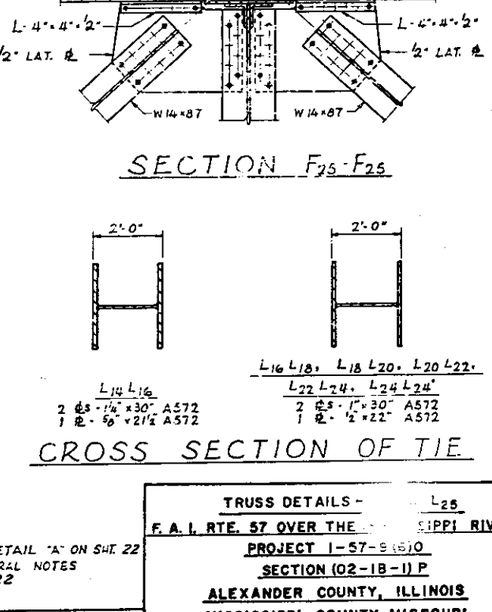




SECTION E_{22}-E_{22}



SECTION F_{16}-F_{16}



SECTION F_{25}-F_{25}

L_{14} L_{16}
2 ℄S - 1⅛" x 30" A572
1 ℄ - 5/8" x 21½ A572

L_{16} L_{18}, L_{18} L_{20}, L_{20} L_{22}, L_{22} L_{24}, L_{24} L_{24}'
2 ℄S - 1" x 30" A572
1 ℄ - ½" x 22" A572

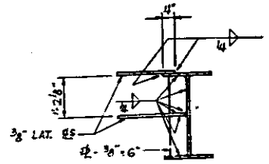
CROSS SECTION OF TIE

NOTES
*- SEE DETAIL "A" ON SHT. 22
FOR GENERAL NOTES SEE SHT. 22

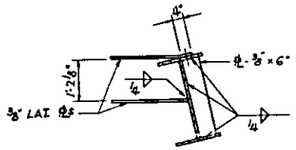
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - L_{25}
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-5(610)
SECTION (02-18-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

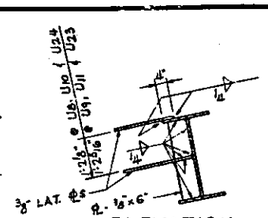
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) P	ALEXANDER (ILLINOIS) MISSISSIPPI (MISSOURI)	40	31
ILLINOIS HWA. REG. NO. 4 / MISSOURI HWA. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(6)0	



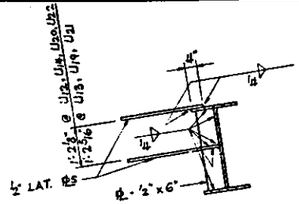
ELEVATION



ELEVATION



ELEVATION



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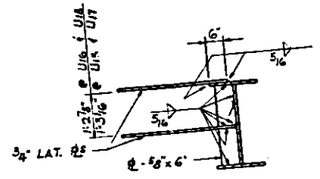
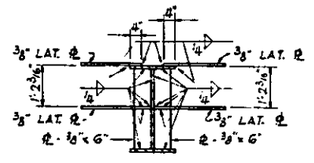
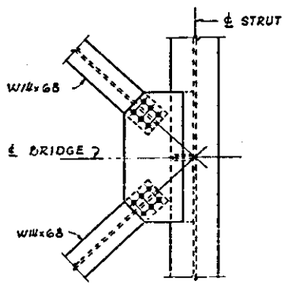


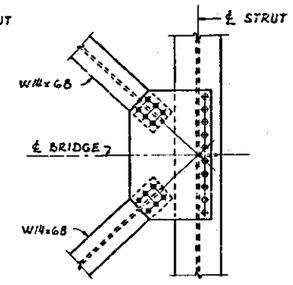
ELEVATION



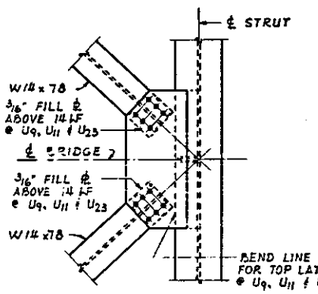
ELEVATION



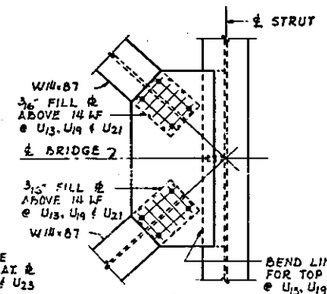
PLAN
U2 THRU U6



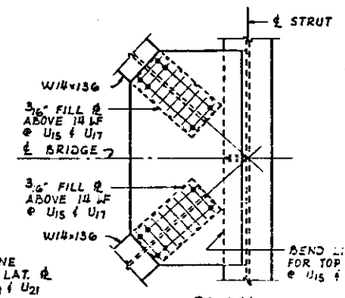
PLAN
U7



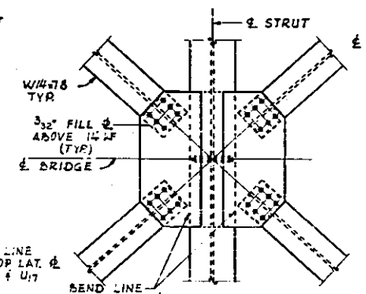
PLAN
U8 THRU U11, U23 & U24



PLAN
U12 THRU U14 & U19 THRU U22

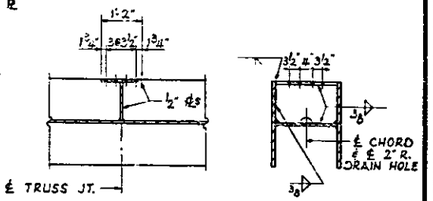


PLAN
U15 THRU U18

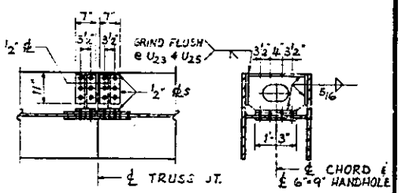


PLAN
U25

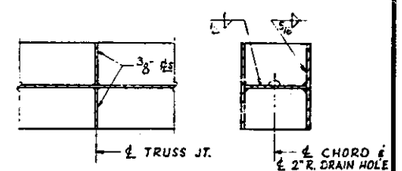
TOP LATERAL CONNECTIONS ALONG ℄ BRIDGE



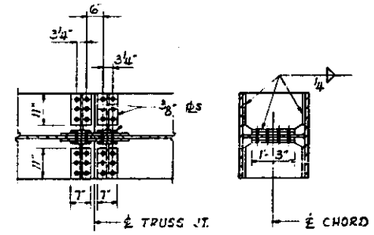
CHORD DIAPHRAGM "1"



CHORD DIAPHRAGM "2"

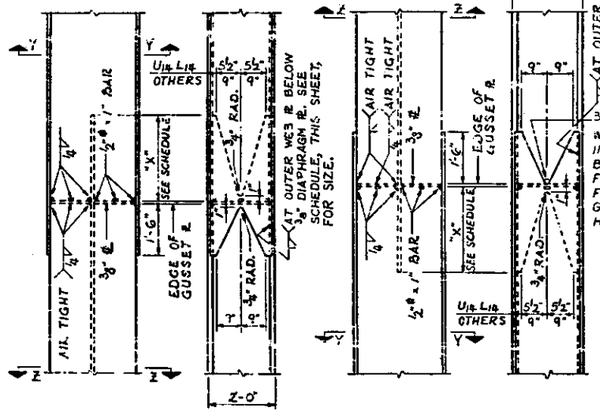


CHORD DIAPHRAGM "3"



CHORD DIAPHRAGM "4"

SECTION Y-Y
OUTSIDE GUSSETS



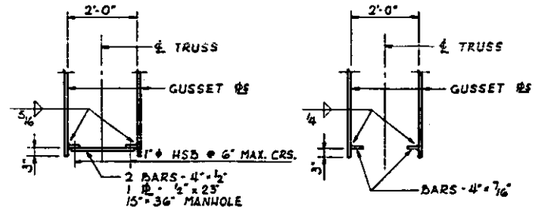
SECTION Z-Z
WITHIN GUSSETS

LOWER END — UPPER END

DETAILS AT CHANGE OF SECTION

SCHEDULE OF "X" DIMENSIONS

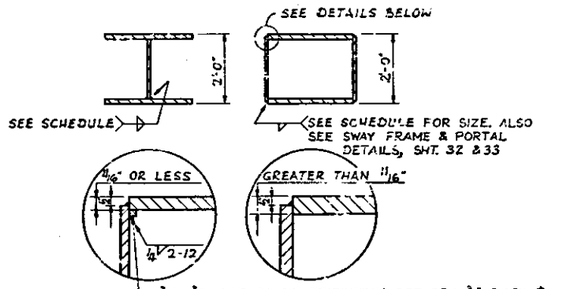
MEMBER		"X"
DIAGONALS	L8 U9	3'-0"
	U9 L10	2'-0"
	L10 U11	3'-0"
	U11 L12	2'-0"
	L12 U13	3'-0"
	U13 L14	3'-0"
	L14 U15	3'-0"
	U15 M16	3'-0"
	M16 U17	2'-0"
	U17 M18	3'-0"
	M18 U19	2'-0"
	U19 L19	3'-0"
VERTICALS	ALL OTHERS	1'-6"



GUSSET ℄ DIAPHRAGM

GUSSET ℄ STIFFENER

FOR LOCATIONS SEE ELEVATION OF TRUSS



FILLET WELD SIZES FOR TRUSS MEMBERS*

MATERIAL THICKNESS OF THICKER PART JOINED (IN.)	SIZE OF FILLET WELD (IN.)
TO 3/4" INCL.	1/4
OVER 3/4 TO 1 1/2	5/16
OVER 1 1/2 TO 2 1/4	3/8
OVER 2 1/4	1/2

* - UNLESS OTHERWISE NOTED

WELD DETAILS

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - MISCELLANEOUS

F. A. I. RTE. 57 OVER THE MISSISSIPPI — CR

PROJECT I-57-9(6)0

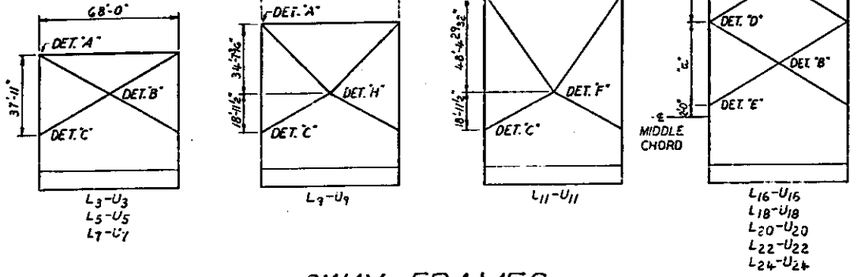
SECTION (02-18-1) P

ALEXANDER COUNTY, ILLINOIS

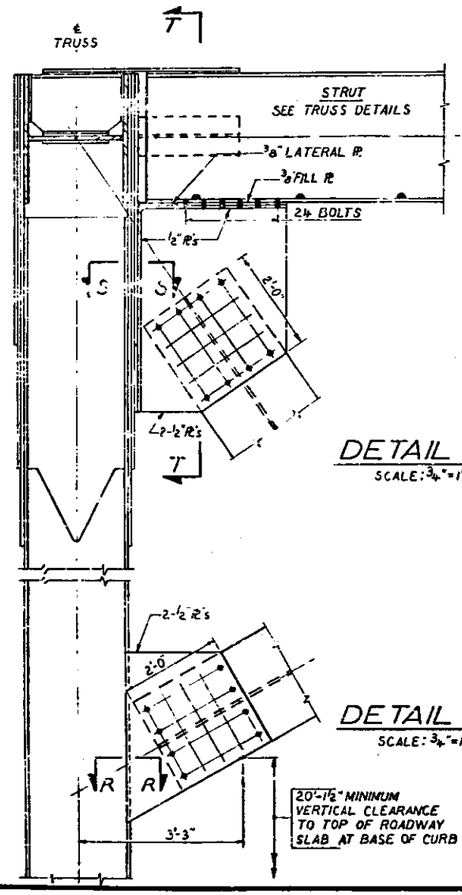
MISSISSIPPI COUNTY, MISSOURI

STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 P	ALEXANDER	ILLINOIS	40	32
		MISSISSIPPI	MISSOURI		
F.H.W.A. REG. NO. 5		ILLINOIS		PROJECT 1-57-9(10)	
F.H.W.A. REG. NO. 7		MISSOURI			

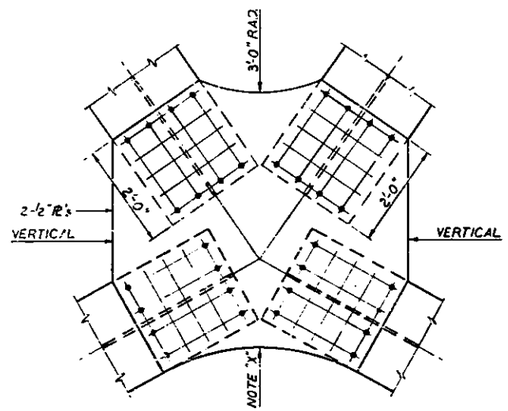


SWAY FRAMES

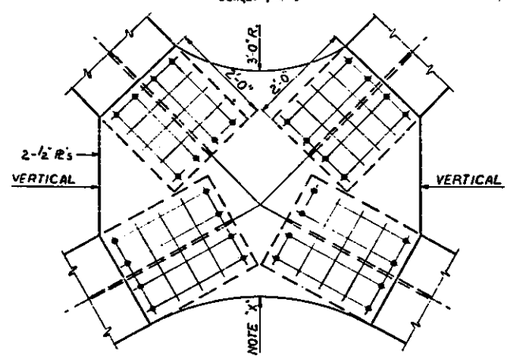


DETAIL "G"
SCALE: 3/4"=1'-0"

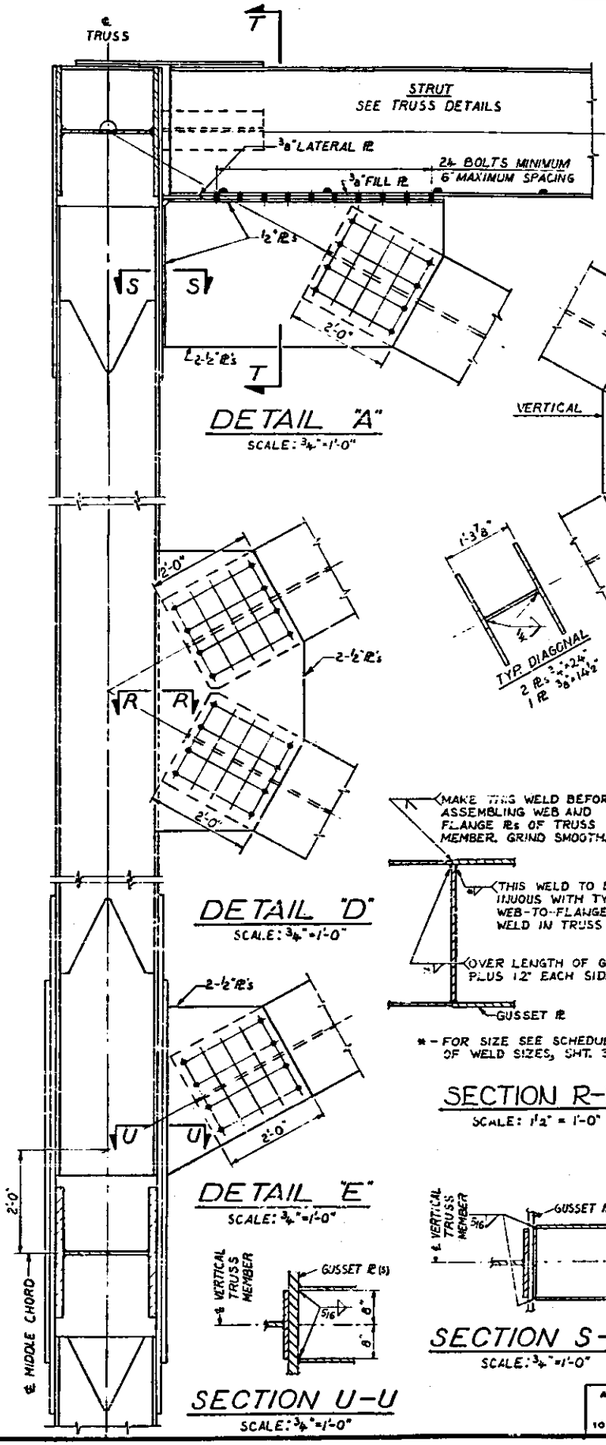
DETAIL "C"
SCALE: 3/4"=1'-0"



DETAIL "F"
SCALE: 3/4"=1'-0"



DETAIL "H"
SCALE: 3/4"=1'-0"



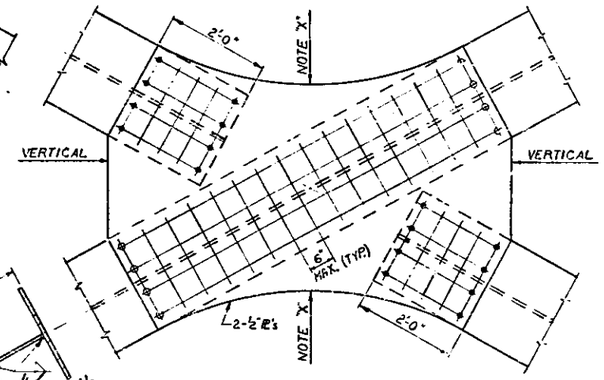
DETAIL "A"
SCALE: 3/4"=1'-0"

DETAIL "D"
SCALE: 3/4"=1'-0"

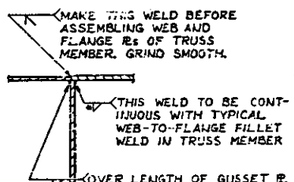
DETAIL "E"
SCALE: 3/4"=1'-0"

SECTION U-U
SCALE: 3/4"=1'-0"

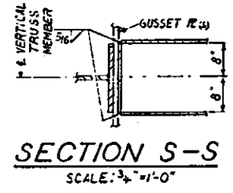
NOTE "X"
CURVE TANGENTIAL TO MEMBERS. RADIUS AS REQUIRED.



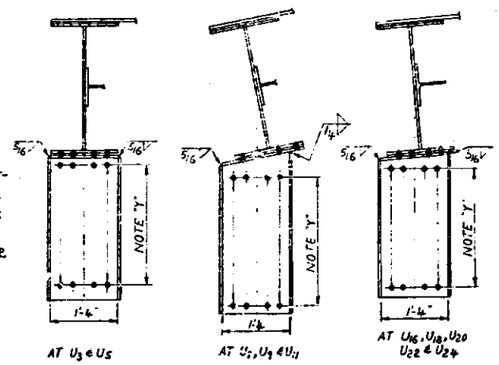
DETAIL "B"
SCALE: 3/4"=1'-0"



SECTION R-R
SCALE: 1 1/2" = 1'-0"



SECTION S-S
SCALE: 3/4"=1'-0"



SECTION T-T
SCALE: 3/4"=1'-0"

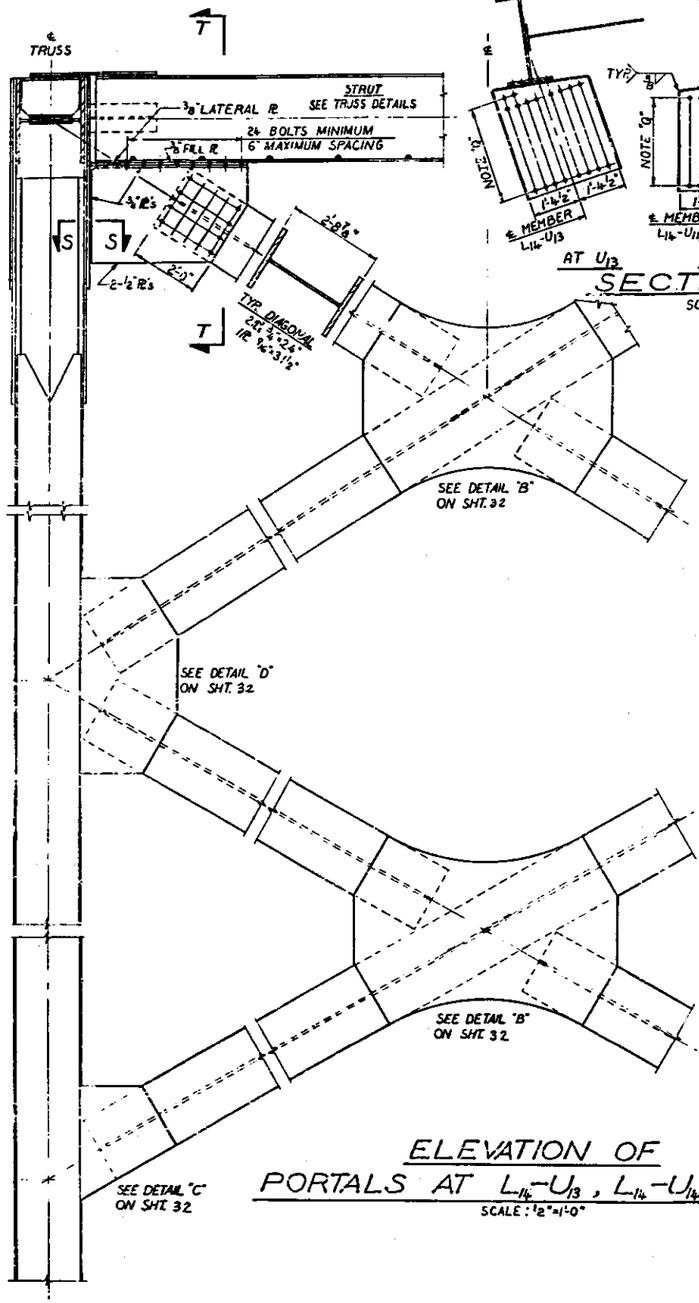
NOTE "Y": SEE TRUSS DETAILS FOR BOLTS

NOTES:
ALL MATERIAL ASTM A36.
ALL SHOP FASTENERS (DENOTED THUS: ⊕) AND FIELD FASTENERS (DENOTED THUS: ⊗) SHALL BE 1" ϕ ASTM A325 HIGH STRENGTH BOLTS.
SEE TRUSS DETAILS FOR CONNECTION OF STRUT TO TRUSS.

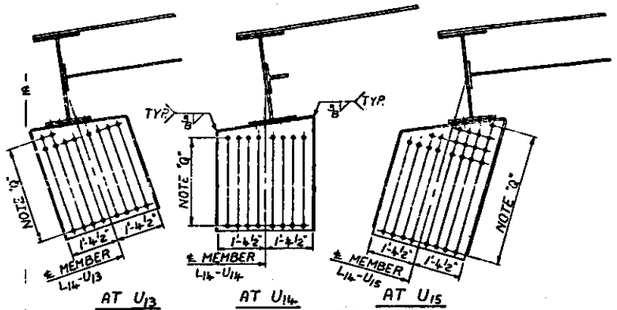
SWAY FRAMES - SPANS [illegible] 8 14
F. A. I. RTE. 57 OVER THE [illegible]SSIPPI RIVER
PROJECT 1-57-9(10)
SECTION (02-1B-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEER
105 WABASH AVE, CHICAGO ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-1B-1) P	ALEXANDER	ILLINOIS	40	33
		MISSISSIPPI	MISSOURI		
F. HWA. REG. NO. 4		ILLINOIS		PROJECT I-57-9(6)0	
F. HWA. REG. NO. 5		MISSOURI			

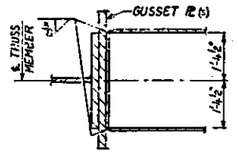


ELEVATION OF
PORTALS AT L_{14}-U_{13}, L_{14}-U_{14} & L_{14}-U_{15}
SCALE: 1/2"=1'-0"

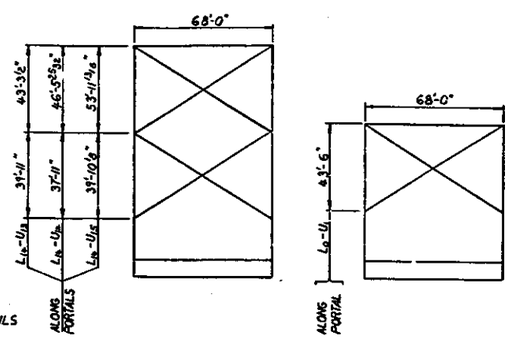


SECTION T-T
SCALE: 1/2"=1'-0"

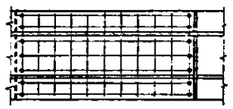
NOTE "Q": SEE TRUSS DETAILS FOR BOLTS



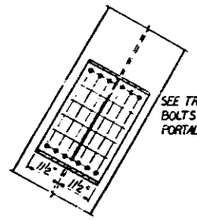
SECTION S-S
SCALE: 1/2"=1'-0"



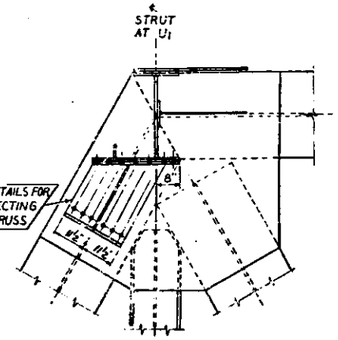
DIMENSIONS OF PORTALS



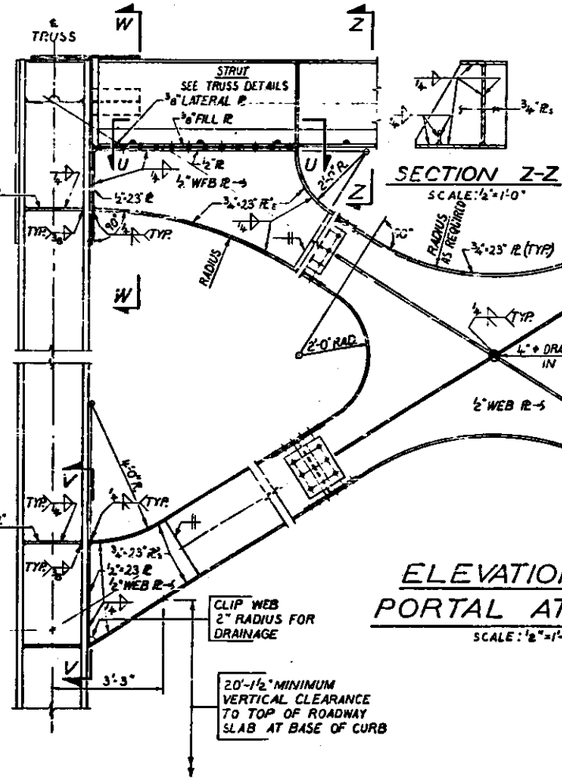
SECTION U-U
SCALE: 1/2"=1'-0"



SECTION V-V
SCALE: 1/2"=1'-0"

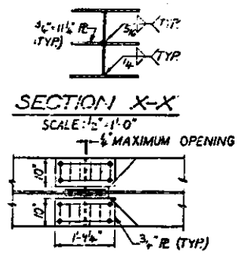


SECTION W-W
SCALE: 1/2"=1'-0"



SECTION Z-Z
SCALE: 1/2"=1'-0"

ELEVATION OF
PORTAL AT L_0-U_1
SCALE: 1/2"=1'-0"



SECTION X-X
SCALE: 1/2"=1'-0"

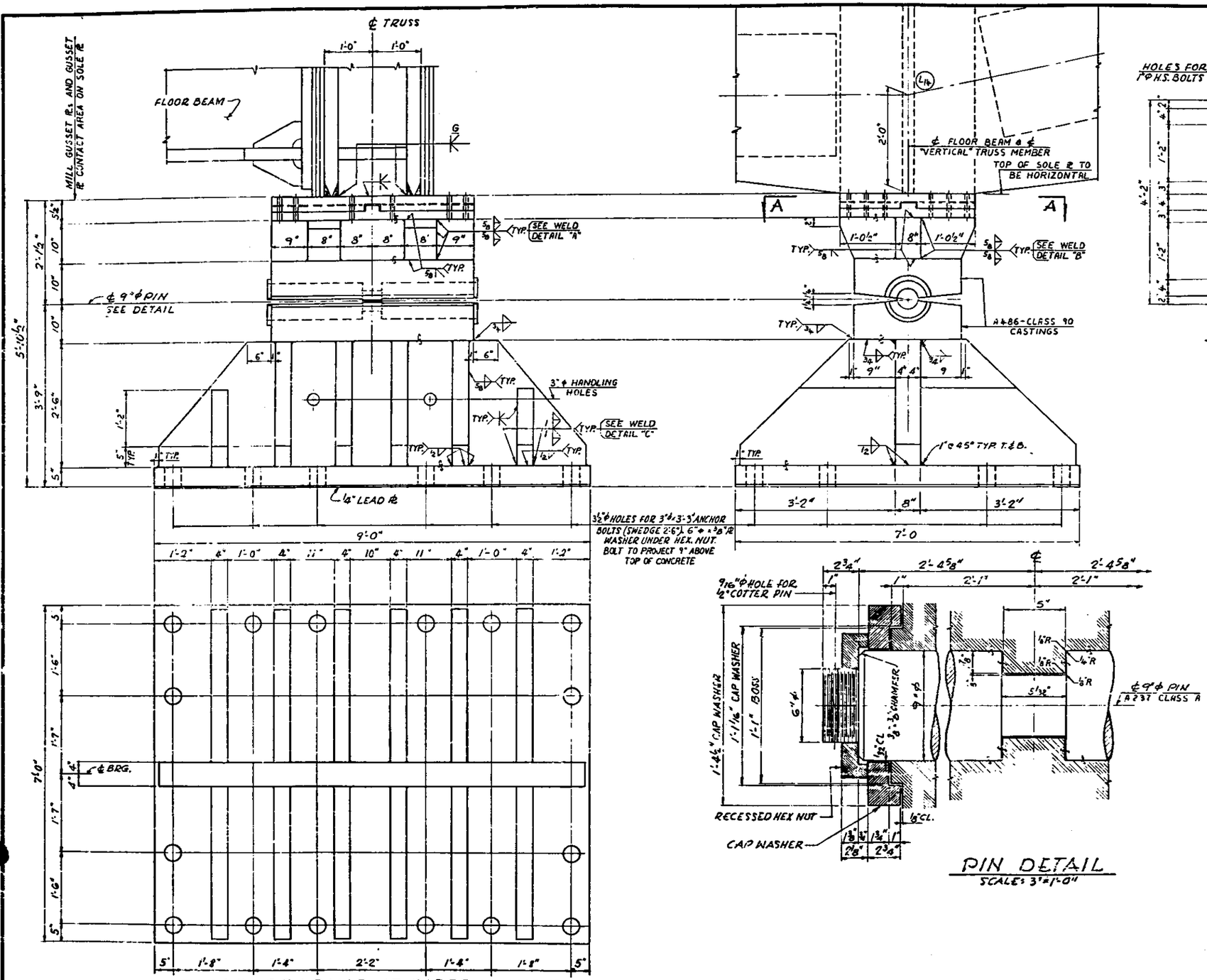
SECTION Y-Y
SCALE: 1/2"=1'-0"

FOR NOTES SEE SWAY FRAMES, SHT. 32

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

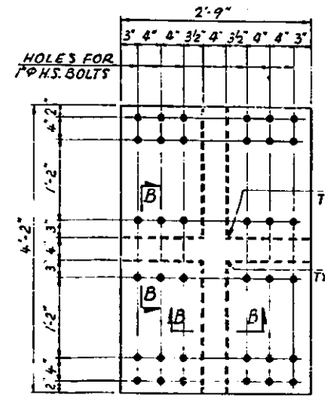
PORTALS - SPANS 12, 1[illegible]
F. A. I. RTE. 57 OVER THE MISS[illegible]PPI RIVER
PROJECT 1-57-9(6)0
SECTION (02-1B-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-1B-1 P	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI		40	34
P.HRA.REG.NO. 0 / P.HRA.REG.NO. 0		ILLINOIS / MISSOURI	PROJECT I-57-9(6)0		

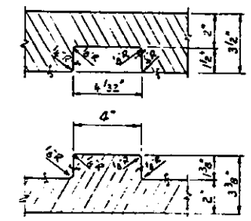


FIXED BEARING AT PIERS 12 AND 13.
SCALE: 1"=1'-0"

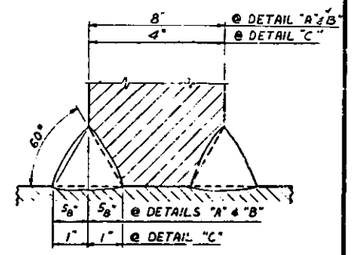
PIN DETAIL
SCALE: 3"=1'-0"



SECTION A-A
SCALE: 1"=1'-0"



SECTION B-B
SHOWING PLATES SEPARATED
SCALE: 3"=1'-0"



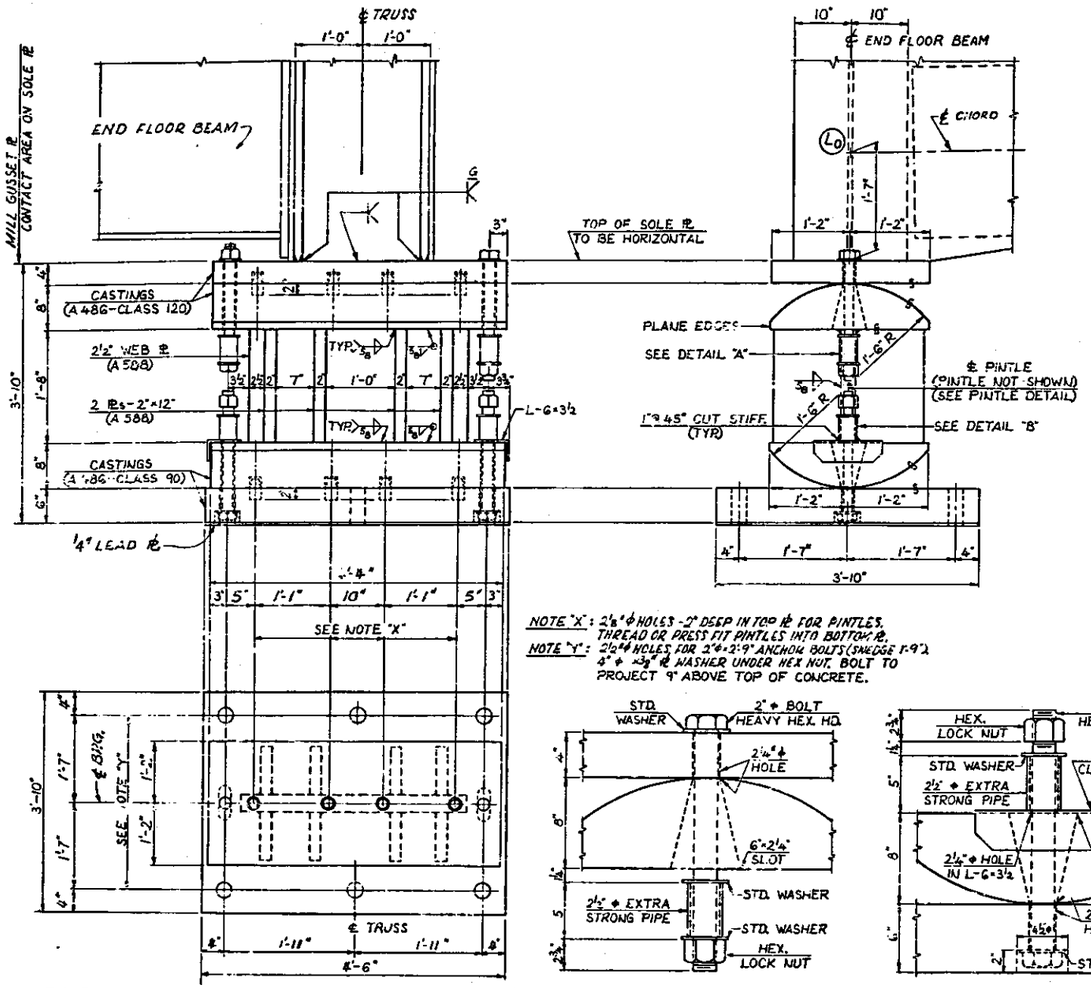
WELD DETAILS "A" "B" & "C"

NOTES:
- ALL MATERIAL ASTM A36 UNLESS NOTED.
- ALL WELDS SHALL BE BY THE SUBMENGED ARC PROCESS.
- FINISHES PER USASI, B46.1, PART I.
- ASTM A486 (CLASS 90) CASTINGS OF EQUAL STRENGTH AND SECTION MAY BE SUBSTITUTED FOR THE WELDMENTS COMPRISING THE BOLSTER AND TOP SHOE.
- PLATES OF EQUAL STRENGTH AND SECTION MAY BE SUBSTITUTED FOR CASTINGS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

TRUSS BEARINGS AT PIERS 12 & 13
F.A.I. RTE. 57 OVER THE MISSISSIPPI
PROJECT I-57-9(6)0
SECTION (02-1B-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F A I 57	(02-18-1) P	ALEXANDER ILLINOIS MISSOURI	40	35
F HWA PROJ NO 4 F HWA PROJ NO 5		ILLINOIS MISSOURI	PROJECT I-57-9(610)	



NOTE "X": 2⅛"ϕ HOLES - 2" DEEP IN TOP PL FOR PINTLES. THREAD OR PRESS FIT PINTLES INTO BOTTOM PL.

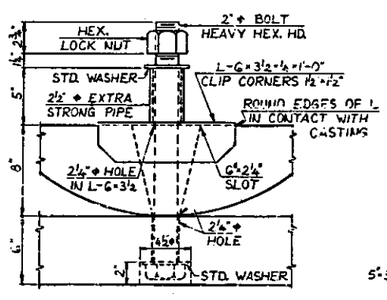
NOTE "Y": 2½"ϕ HOLES FOR 2"ϕ×2'-9" ANCHOR BOLTS (SMEDGE 1-9-2) 4"ϕ×¼" PL WASHER UNDER HEX NUT. BOLT TO PROJECT 9" ABOVE TOP OF CONCRETE.

EXPANSION BEARINGS AT PIERS 11 & 14

SCALE: 1"=1'-0"

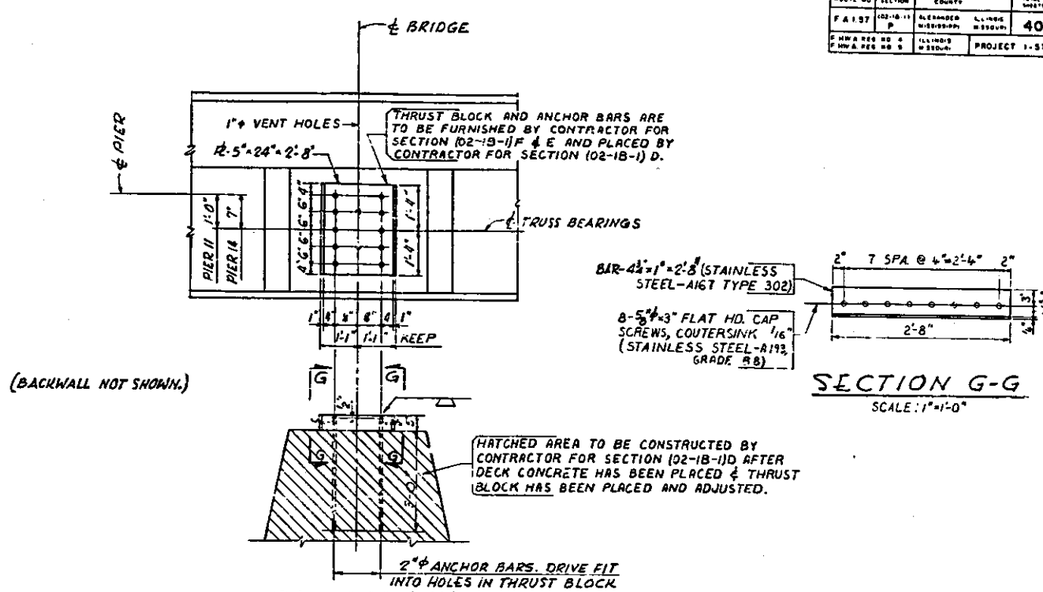
DETAIL "A"

(ON FLOOR BEAM SIDE INSTALL WITH NUT ON TOP)
SCALE: 2"=1'-0"



DETAIL "B"

SCALE: 2"=1'-0"

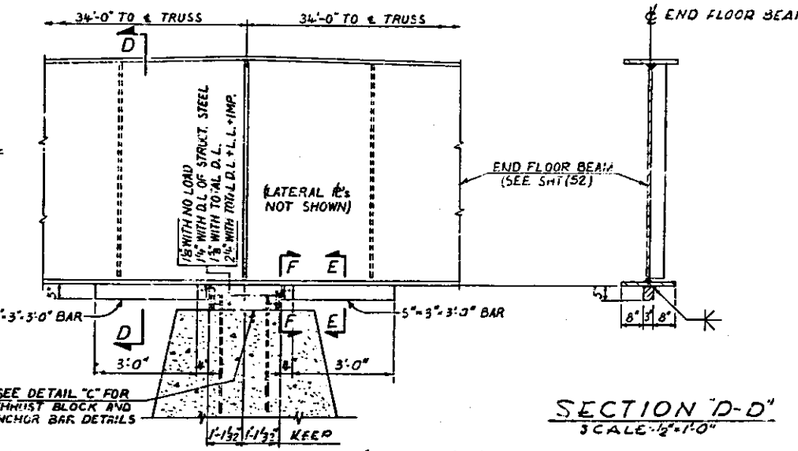


DETAIL "C"

SCALE: ½"=1'-0"

SECTION G-G

SCALE: 1"=1'-0"

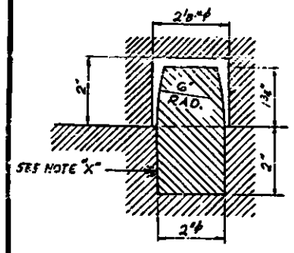


WIND TRANSFER DEVICE (PIERS 11 & 14)

SCALE: ½"=1'-0"

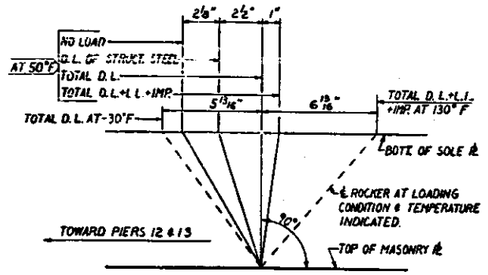
SECTION D-D

SCALE: ½"=1'-0"

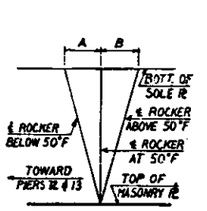


PINTLE

HALF SIZE

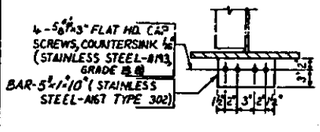


ROCKER SETTING DIMENSIONS



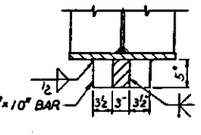
TEMP. (°F)	A	B
130	—	5 13/16"
110	—	4 3/16"
90	—	2 5/8"
70	—	1 1/16"
50	0	0
30	1 1/16"	—
10	2 1/8"	—
-10	4 3/16"	—
-30	5 13/16"	—

CORRECTION FOR TEMPERATURE



SECTION F-F

SCALE: 1"=1'-0"



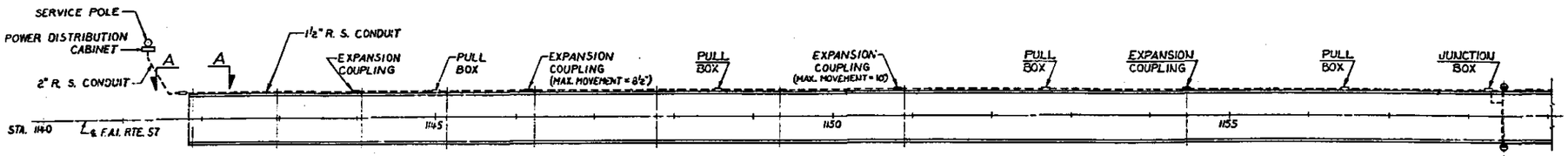
SECTION E-E

SCALE: 1"=1'-0"

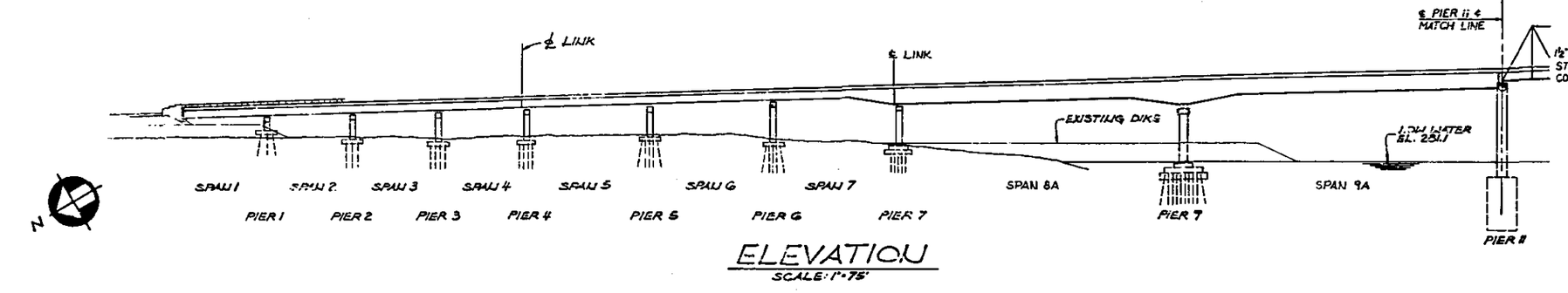
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS BEARINGS AT PIER 14
F. A. I. RTE. 57 OVER THE MISS RIVER
PROJECT I-57-9(610)
SECTION (02-18-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

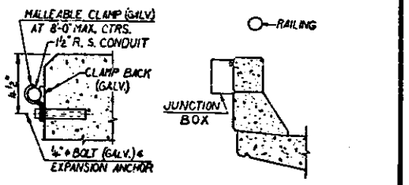
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	36
F.H.W.A. REG NO. 4 F.H.W.A. REG NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(6)10	



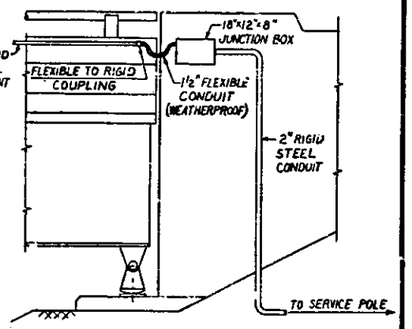
PLAN
SCALE: 1"=75'



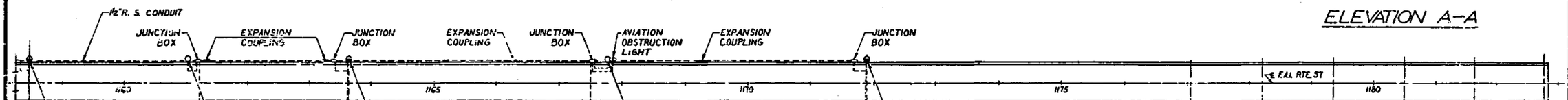
ELEVATION
SCALE: 1"=75'



TYPICAL SECTION THROUGH EAST PARAPET
SPANS 1 THRU 13



ELEVATION A-A



PLAN
SCALE: 1"=75'

NOTES:

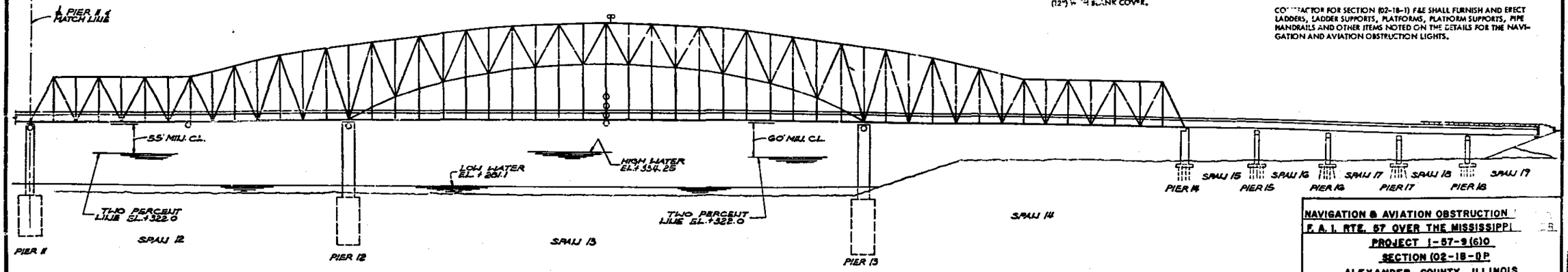
ALL JUNCTION BOXES SHALL BE 18" X 12" X 8".

ALL PULL BOXES SHALL BE APPLETON TYPE PBC (12") WITH BLANK COVER.

NOTE FOR DIVISION OF WORK:

CONTRACTOR FOR SECTION (02-18-1) D SHALL FURNISH AND INSTALL THE NAVIGATION LIGHTING SYSTEM AND THE AVIATION OBSTRUCTION LIGHT SYSTEM BOTH COMPLETE. SEE SPECIAL PROVISIONS.

CONTRACTOR FOR SECTION (02-18-1) F&E SHALL FURNISH AND ERECT LADDERS, LADDER SUPPORTS, PLATFORMS, PLATFORM SUPPORTS, PIPE HANDRAILS AND OTHER ITEMS NOTED ON THE DETAILS FOR THE NAVIGATION AND AVIATION OBSTRUCTION LIGHTS.

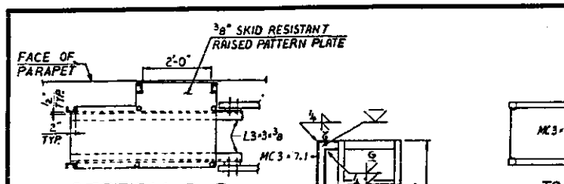


ELEVATION
SCALE: 1"=75'

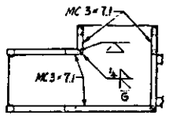
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

NAVIGATION & AVIATION OBSTRUCTION
F. A. I. RTE. 57 OVER THE MISSISSIPPI
PROJECT I-57-9(6)10
SECTION (02-18-0)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-18-1 P	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	40	37
F.H.W.A. REG. NO. 5 / F.H.W.S. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(610)	

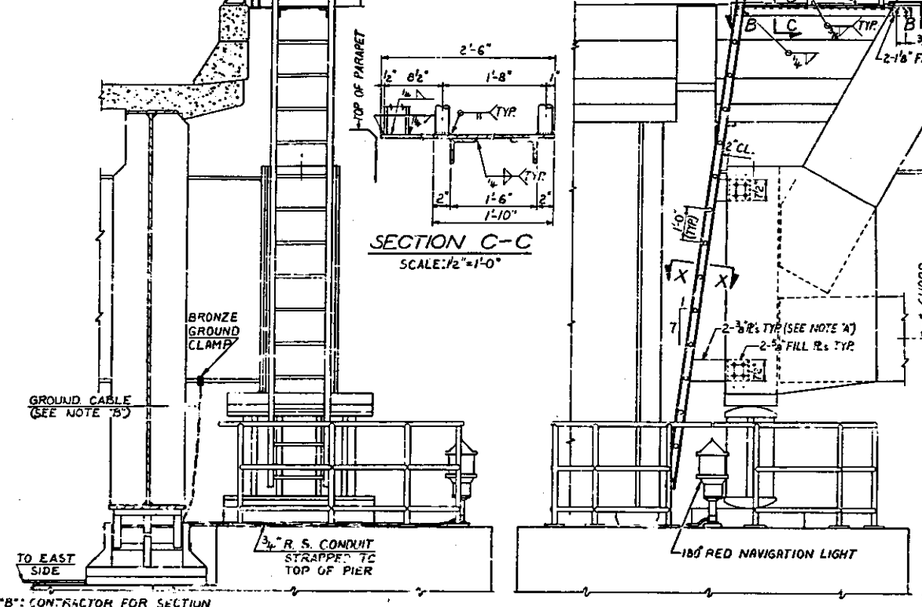


SECTION B-B
SCALE: 1/2"=1'-0"



TOP VIEW A-A
SCALE: 1/2"=1'-0"

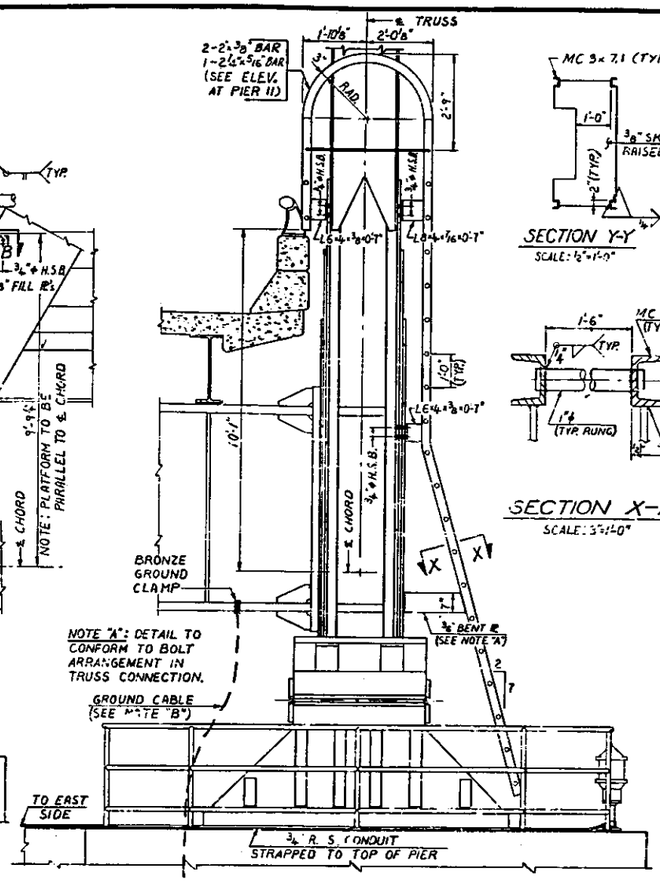
SECTION C-C
SCALE: 1/2"=1'-0"

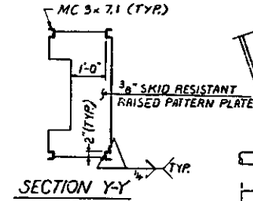


NOTE "B": CONTRACTOR FOR SECTION (02-18-1)B WILL FURNISH & INSTALL GROUND CABLES AT PIERS 11, 12, 13 & 14

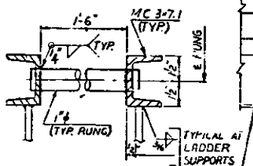
CONTRACTOR FOR SECTION (02-18-1) D SHALL CONNECT GROUND CABLES TO FLOOR BEAMS.

ELEVATIONS AT PIER 11

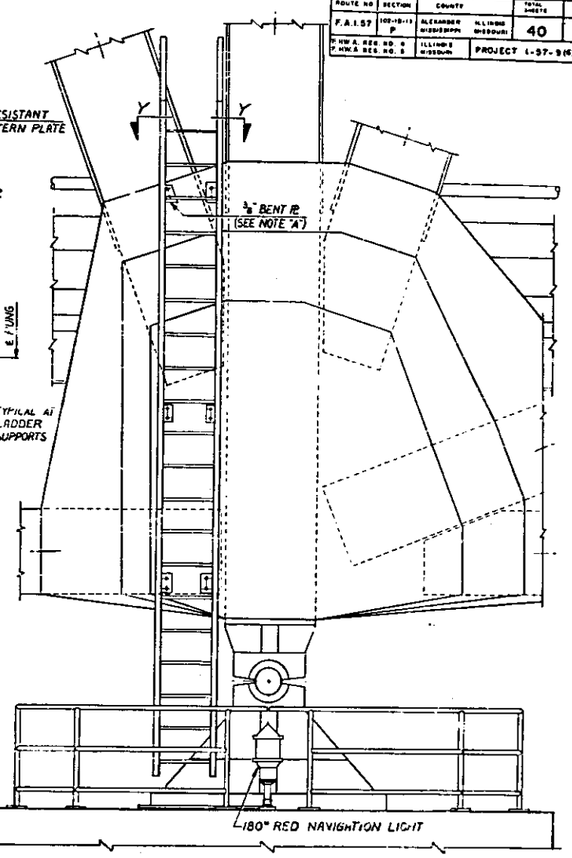




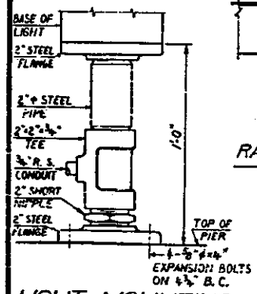
SECTION Y-Y
SCALE: 1/2"=1'-0"



SECTION X-X
SCALE: 3"=1'-0"

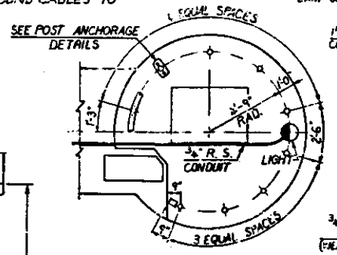


ELEVATIONS AT PIER 12

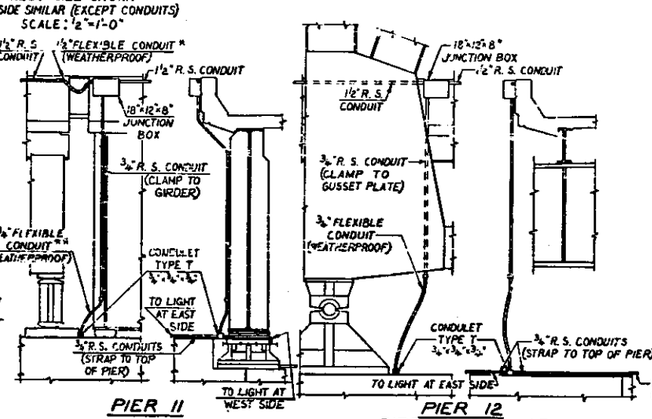


LIGHT MOUNTING
SCALE: 3"=1'-0"

WEST SIDE SHOWN
EAST SIDE SIMILAR (EXCEPT CONDUITS)
SCALE: 1/2"=1'-0"



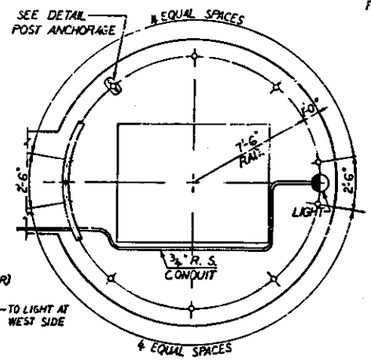
RAILING PLAN AT PIER 11
SCALE: 1/4"=1'-0"



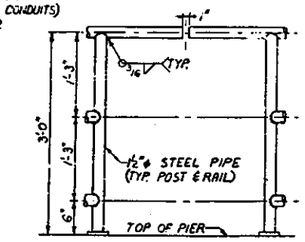
CONDUITS AT EAST SIDE
SCALE: 1/4"=1'-0"

* MAX. HORIZONTAL MOVEMENT BETWEEN ENDS = 1'-10"
** MAX. HORIZONTAL MOVEMENT BETWEEN ENDS = 7"

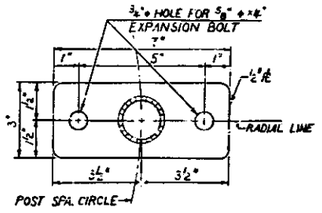
WEST SIDE SHOWN
EAST SIDE SIMILAR (EXCEPT CONDUITS)
PIER 13 SIMILAR
SCALE: 1/4"=1'-0"



RAILING PLAN AT PIERS 12 & 13
SCALE: 1/4"=1'-0"



DETAILS AT END OF RAIL
SCALE: 1"=1'-0"



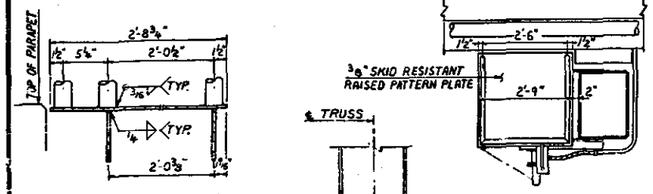
POST ANCHORAGE DETAILS
SCALE: 4 1/2"=1'-0"

NOTE:
AT PIER 14 PROVIDE LADDERS & RAILINGS SIMILAR TO THOSE AT PIER 11

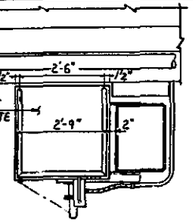
PIER LIGHT, LADDER & RAILING
F. A. I. RTE. 57 OVER THE MISSISSIPPI R
PROJECT I-57-9(610)
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

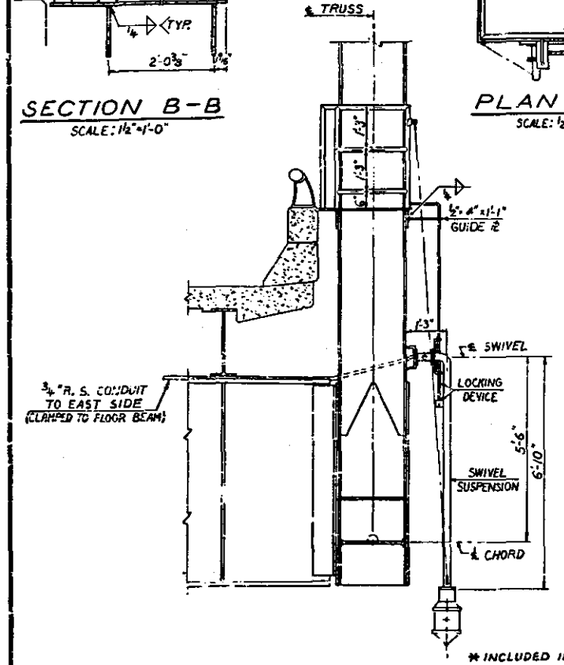
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) P	ALEXANDER ILLINOIS MISSOURI	40	38
F.H.W.A. REG NO 5 F.H.W.S. REG NO 5		ILLINOIS MISSOURI	PROJECT I-57-9(10)0	

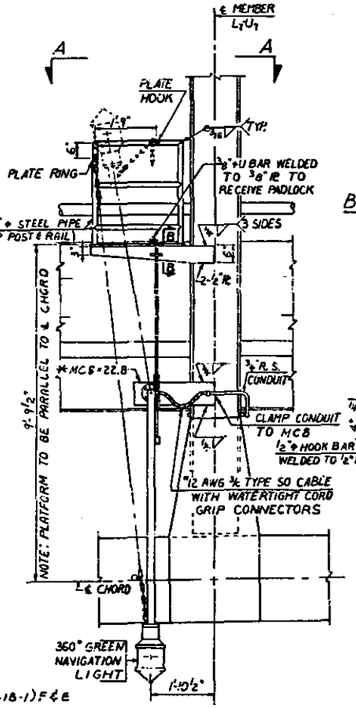


SECTION B-B
SCALE: 1½"=1'-0"



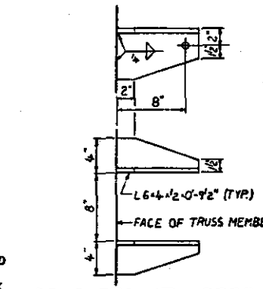
PLAN A-A
SCALE: ½"=1'0"





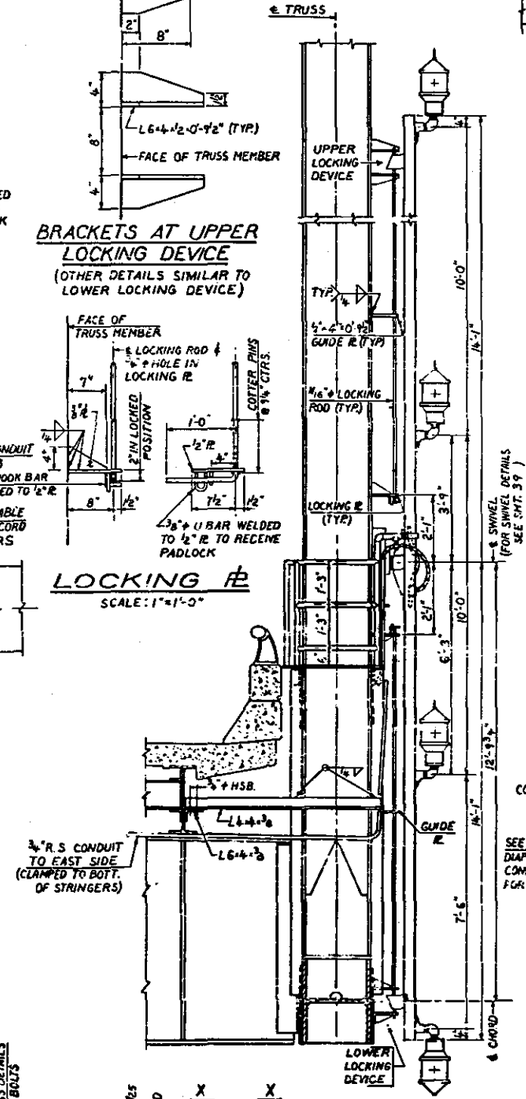
* INCLUDED IN SECTION (02-18-1) F & E

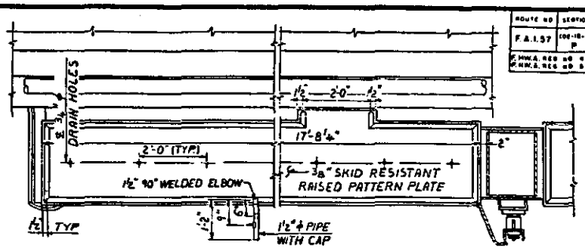
NAVIGATION LIGHT IN SPAN 12
WEST SIDE SHOWN
EAST SIDE SIMILAR (EXCEPT CONDUITS)
SCALE: ½"=1'-0"



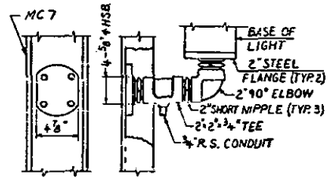
BRACKETS AT UPPER LOCKING DEVICE
(OTHER DETAILS SIMILAR TO LOWER LOCKING DEVICE)

LOCKING PL
SCALE: 1"=1'-0"

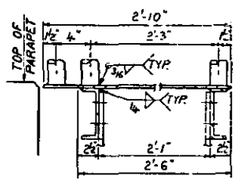




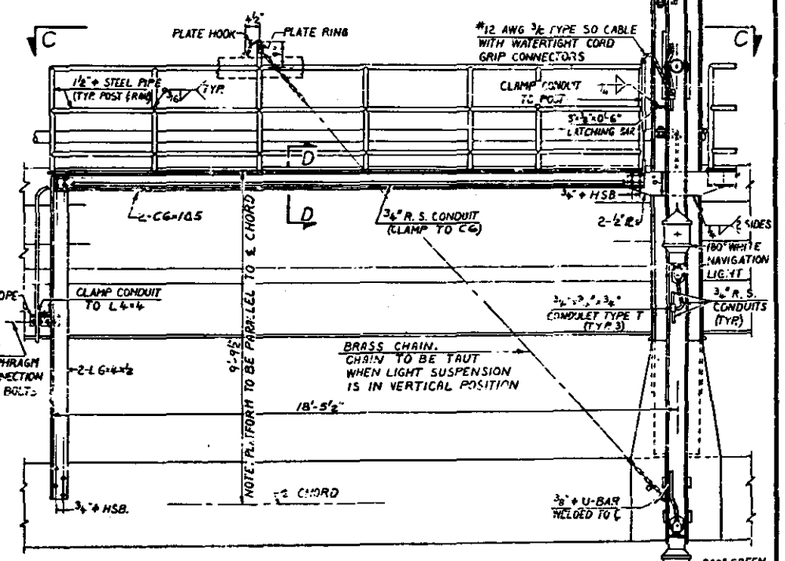
PLAN C-C
SCALE: ½"=1'-0"



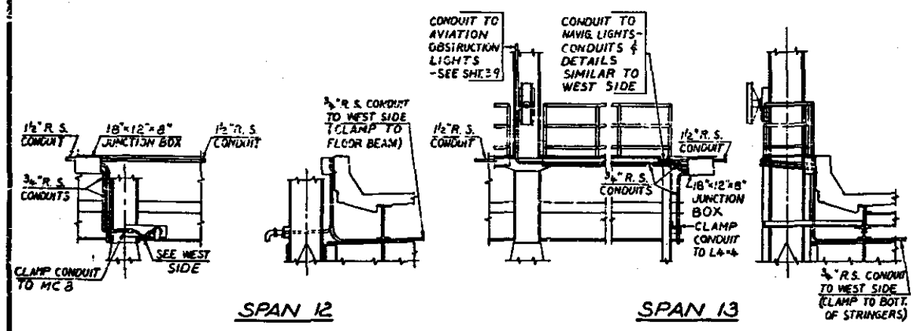
MOUNTING OF LIGHT ON CHANNEL
SCALE: 1½"=1'-0"



SECTION D-D
SCALE: 1½"=1'-0"

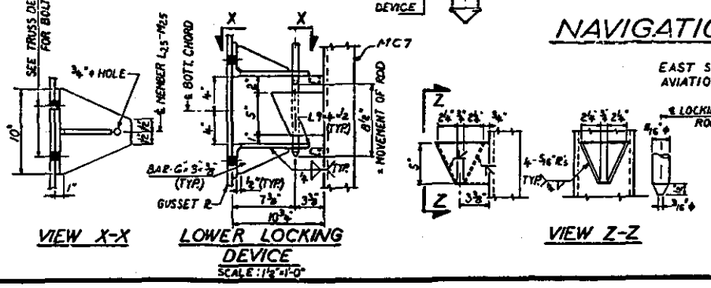


NAVIGATION LIGHTS IN SPAN 13
WEST SIDE SHOWN
EAST SIDE SIMILAR (EXCEPT CONDUITS. ALSO SEE AVIATION LIGHT DETAILS, SHT. 39)
SCALE: ½"=1'-0"



SPAN 12 SPAN 13

CONDUITS AT EAST SIDE
SCALE: ¼"=1'-0"



VIEW X-X LOWER LOCKING DEVICE
SCALE: 1½"=1'-0"

VIEW Z-Z

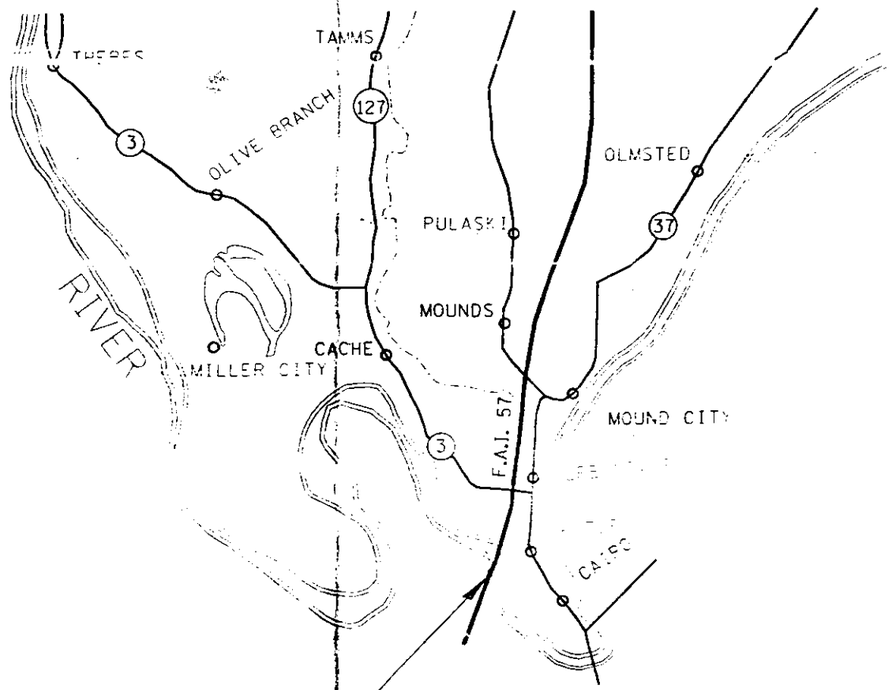
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

CENTER OF CHANNEL NAVIG[illegible] LIGHT DETAILS
F. A. I. RTE. 57 OVER THE MISSIS[illegible]IVER
PROJECT I-57-9(6)0
SECTION (02-18-1)P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

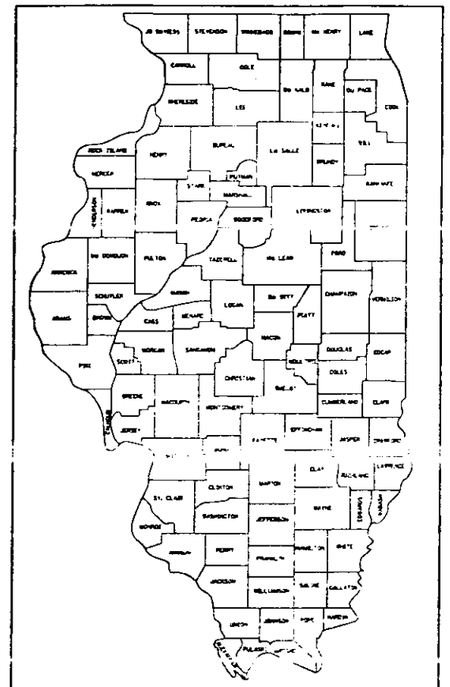
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	(02-1B-1HDL-93)	ALEXANDER	6	1
FAP/A SEC.		ILLINOIS	PROJECT BRIDGE REPAIR	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
PROJECT NO. 94G902

ROUTE: I-57
COUNTY: ALEXANDER
STRUCTURE NO.: 002-0022
FLOOR BEAM REPAIR



IMPROVEMENT LOCATION I-57 AT MISSISSIPPI RIVER
STATION 1168+50



LOCATION OF SECTION INDICATED THUS: ■

N

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PREPARED BY: Bill Stout
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: Tom Bridges
DISTRICT PROJECT DEVELOPMENT ENGINEER

EXAMINED BY: [illegible]
DISTRICT PROJECT IMPLEMENTATION ENGINEER

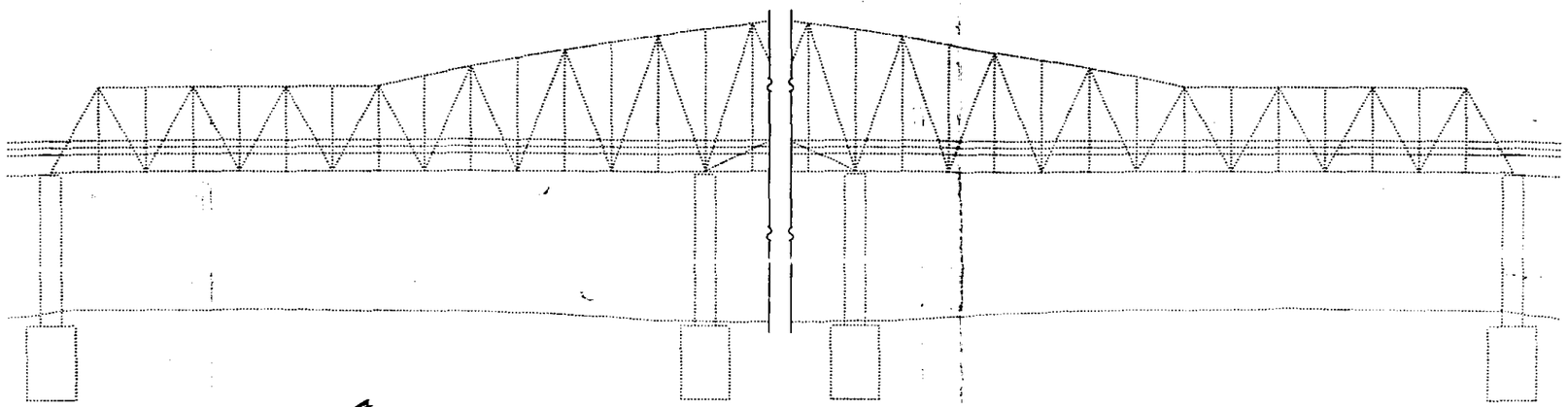
APPROVED: April 16 1993
Earl L. Gustafson
DISTRICT ENGINEER

JULIE 1-800-892-0123

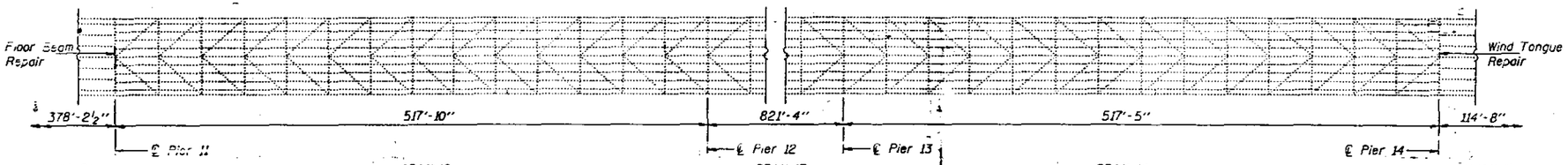
Reel DL3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO. 1
F.A.I. 57	(02-1B-1) DL-93	ALEXANDER	6	2	SHEETS



PARTIAL ELEVATION



PARTIAL PLAN

Repair End Floor Beam at Pier 11.
Remove and replace stainless steel plate at wind tongue at Pier 14. See detail sheet 2

GENERAL NOTES

All new structural steel shall conform to AASHTO Classification M-270 Gr. 36.

All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled $\frac{5}{16}$"ϕ and reamed in the field to $\frac{13}{16}$"ϕ for $\frac{3}{4}$"ϕ high strength bolts (except as noted on the plans) after new structural steel sections are properly fitted into position.

The Contractor shall grind all cracked welds parallel to the direction of the existing weld and not perpendicular to the weld.

Traffic control shall be determined by the District.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to [illegible] shall be the Contractor's responsibility [illegible] in the field and make necessary [illegible] or ordering of materials. Such work [illegible] compensation for a change in the [illegible] tractor will be paid for [illegible] for the work.

Oil and all loose paint shall be removed from the concrete [illegible] area of repair.

Removal of all damaged members necessary to complete the work as detailed on the plans and as specified in the Standard Specifications shall be considered incidental to the contract.

The three coat lead and chromate free [illegible] shop and field painting of the new structural steel. The [illegible] coat shall match the existing steel.

Structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting [illegible] Structures".

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	5920
Traffic Control	L.S.	1
Temporary Shoring and Cribbing	L.S.	1

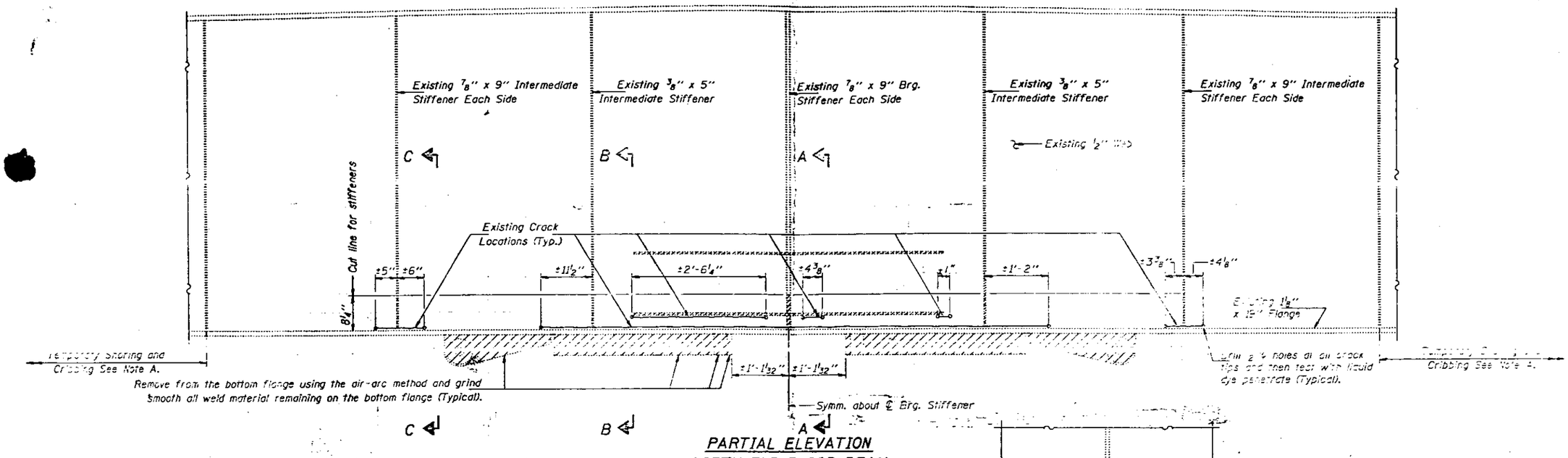
DESIGNED	Kenneth P. Stiatte
CHECKED	CHM
DRAWN	Paul Summer
CHECKED	KPS CHM

March 8 1993
EXAMINED Jared E. Hoskins
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-93)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

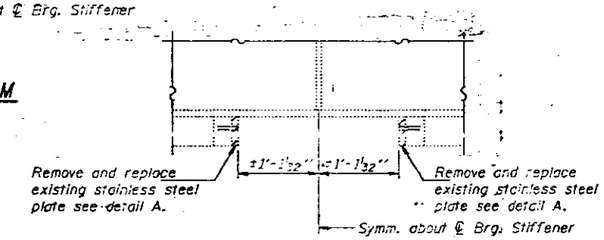
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1) (DL-93)	ALEXANDER	6	3
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

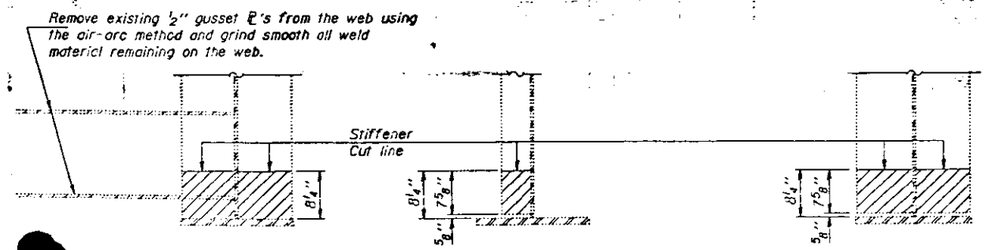


PARTIAL ELEVATION
NORTH END FLOOR BEAM
AT PIER 11

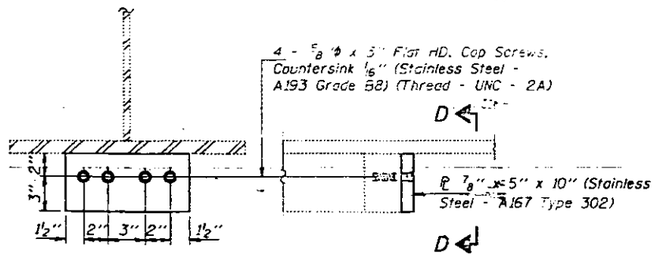
Hatched areas indicate removal.



PARTIAL ELEVATION
SOUTH END FLOOR BEAM
AT PIER 14



SECTION A-A SECTION B-B SECTION C-C



SECTION D-D DETAIL A

Note: Cost of 5/8"ϕ x 3" Flat HD Cap Screws (Stainless Steel - A193 Grade B8) shall be incidental to Furnishing and Erecting Structural Steel.

Note A: At Pier 11, Temporary Shoring and Cribbing shall be placed between the existing floorbeam and the top of the pier during repair operations and traffic shall be restricted to lanes which are not directly over the area of the floorbeam being repaired.

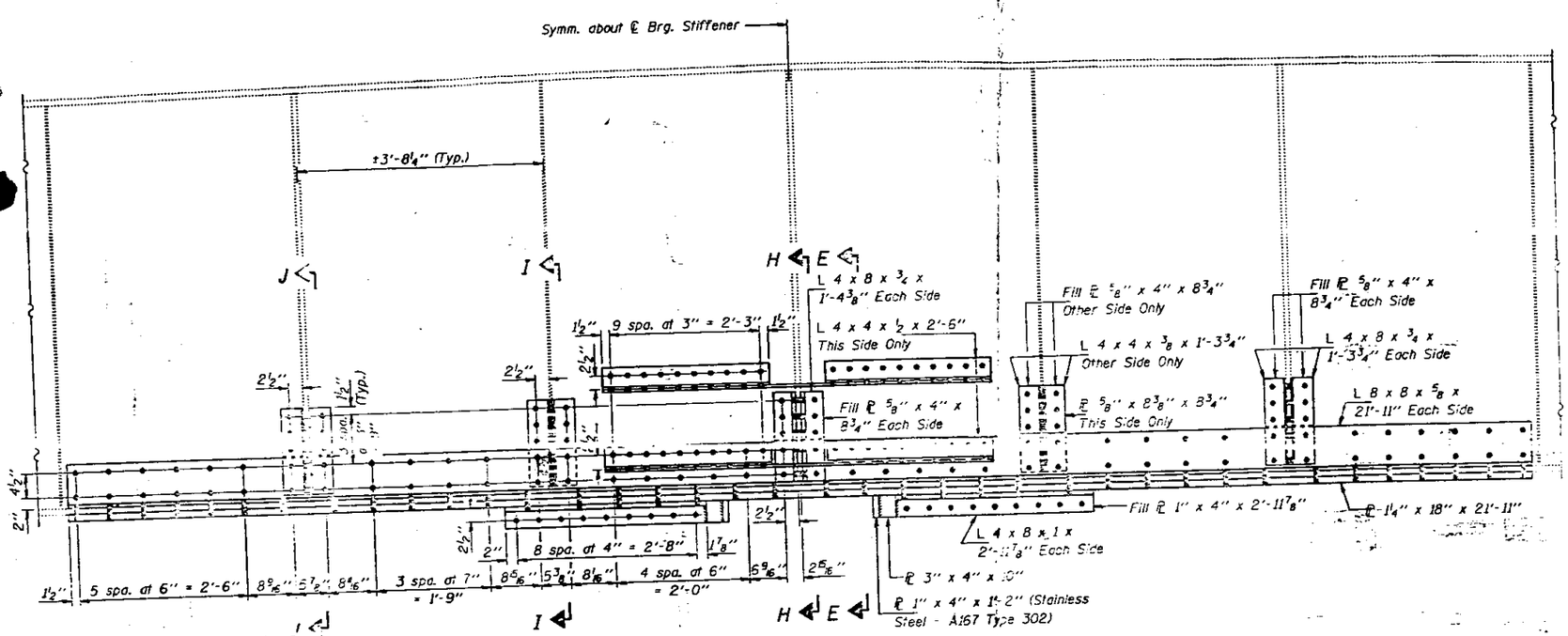
DESIGNED	Kenneth P. Stutt
CHECKED	CHM
DRAWN	Paul Summer
CHECKED	KPS CHM

March 8 1993
EXAMINED Todd E. Adams
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

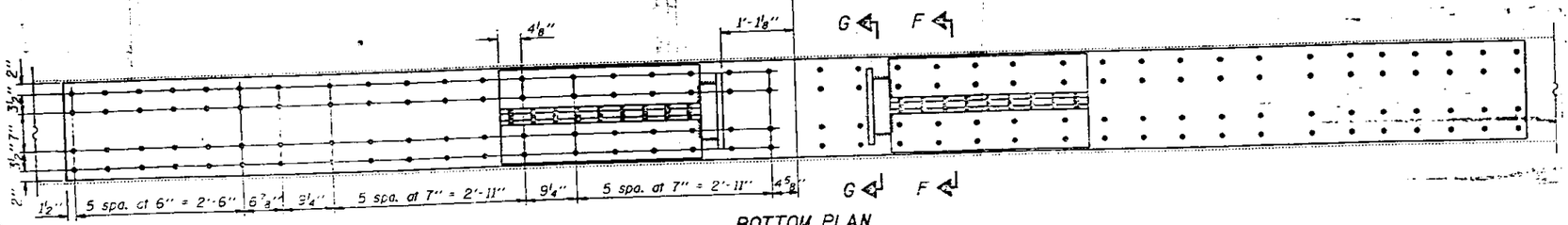
FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-93)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

					SHEET NO. 3
F.A.I. RT. 57	(02-1B-1) DL-93	ALEXANDER	6	4	5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

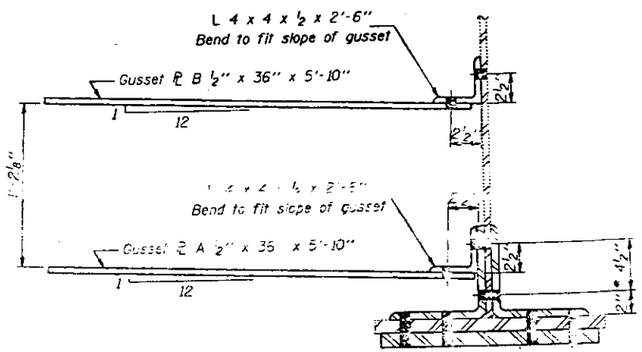
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PARTIAL ELEVATION
(Looking North)

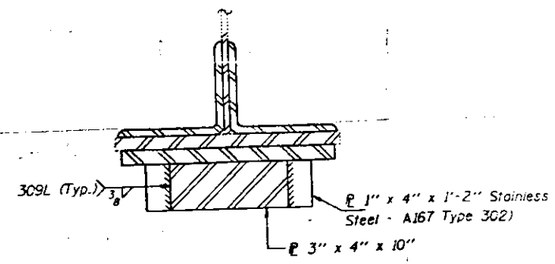


BOTTOM PLAN

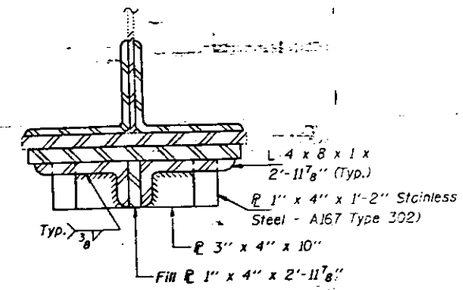


SECTION E-E

For details of gusset plates see Sheet 5.
Drill holes in floor beam to match existing gusset plate location.



SECTION G-G



SECTION F-F

DESIGNED	Kenneth P. Stutto
CHECKED	CHM
DRAWN	Paul Summer
CHECKED	KPS CHM

March 8 1993

EXAMINED Joseph E. Adams
ENGINEER OF STRUCTURAL DESIGN

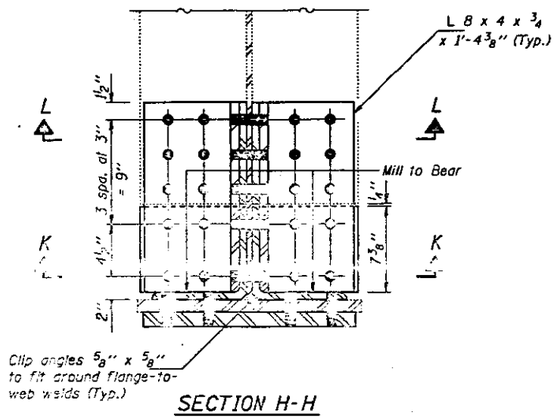
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

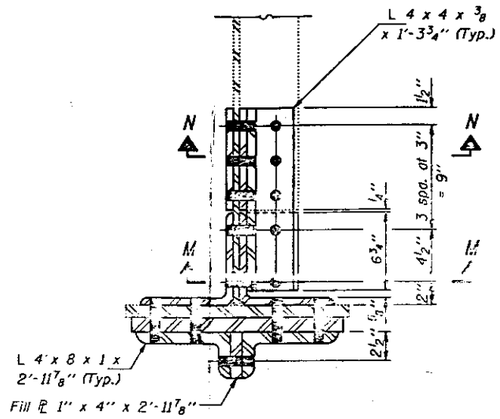
FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-93)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

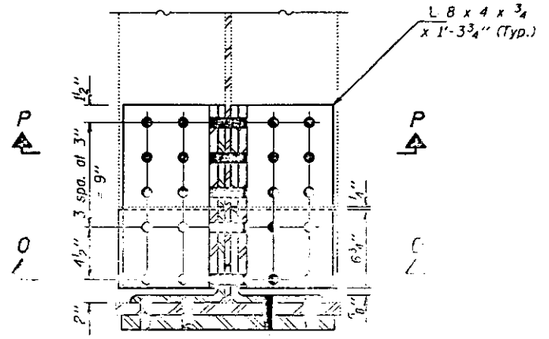
F.A.I. 57	DL-93		6	5
		ILLINOIS	FED. AID PROJECT:	



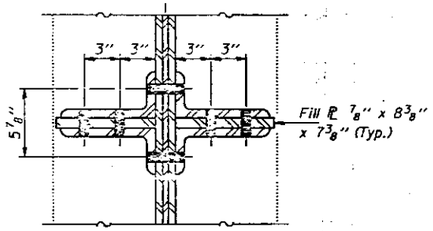
SECTION H-H



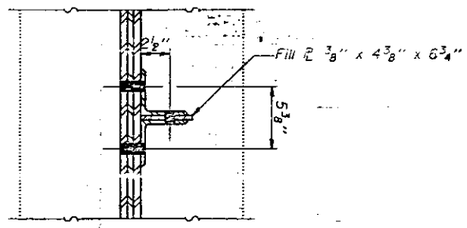
SECTION I-I



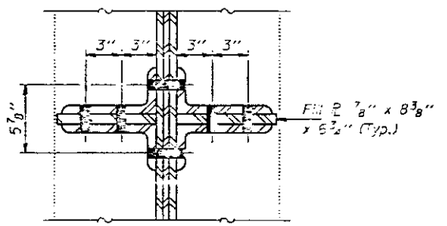
SECTION J-J



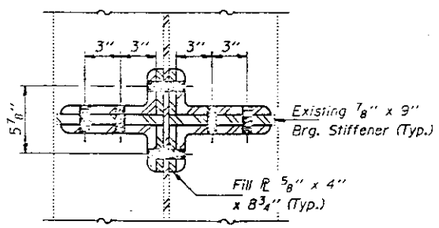
SECTION K-K



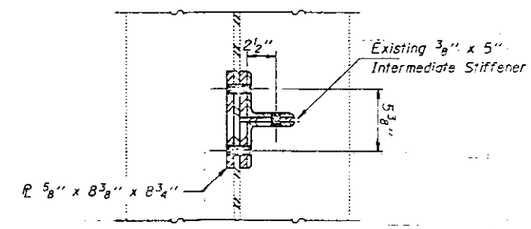
SECTION M-M



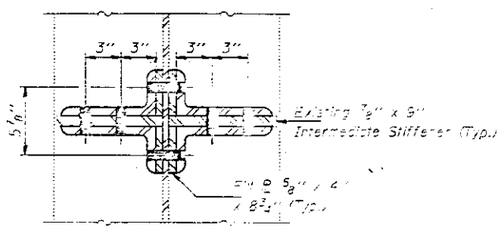
SECTION O-O



SECTION L-L



SECTION N-N



SECTION P-P

DESIGNED	Kenneth P. Jeffers
CHECKED	CHM
DRAWN	Paul Sumner
CHECKED	KPS CHM

March 8 1993

EXAMINED Todd E. Adams
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

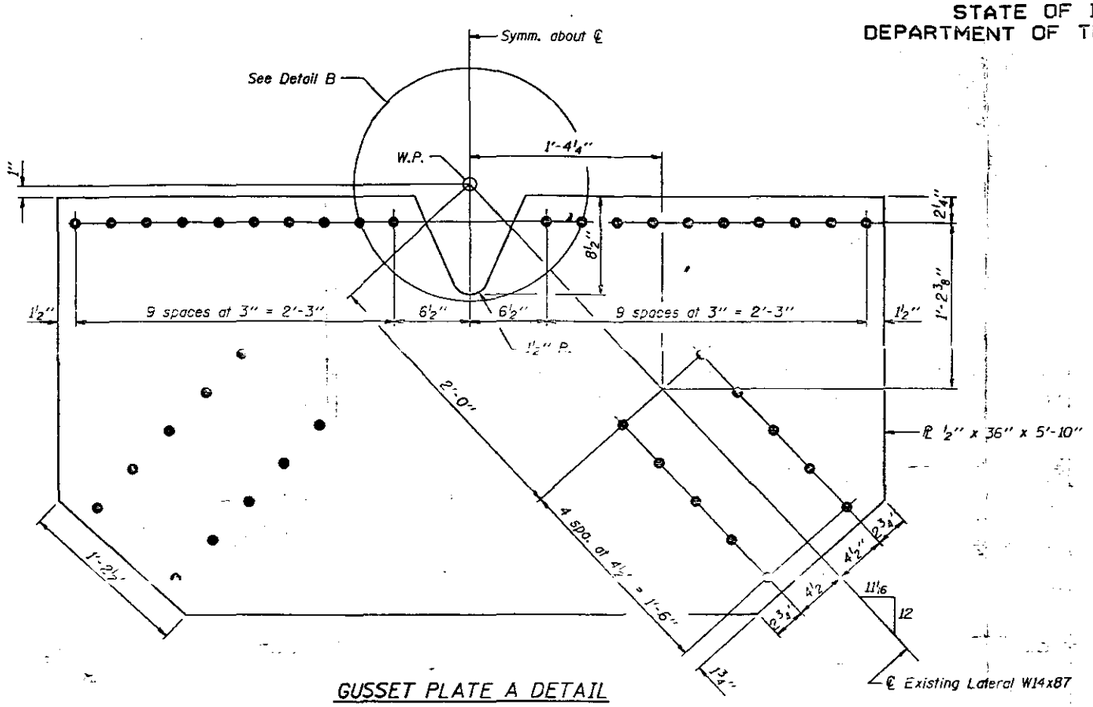
APPROVED
DIRECTOR OF HIGHWAYS

FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-93)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

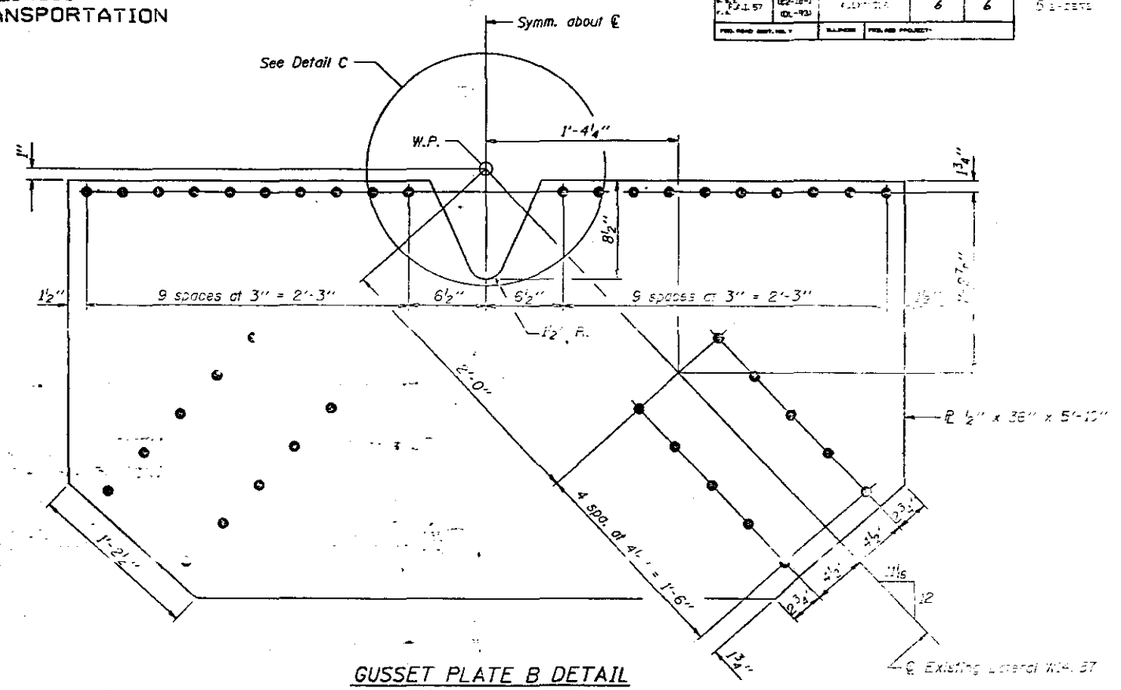
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
F.A.I. 57	(02-1B-1) (DL-93)	ALEXANDER	6	6
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

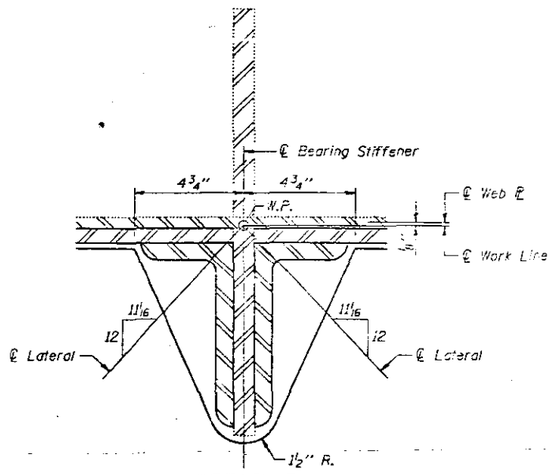
SHEET NO. 5
5 SHEETS



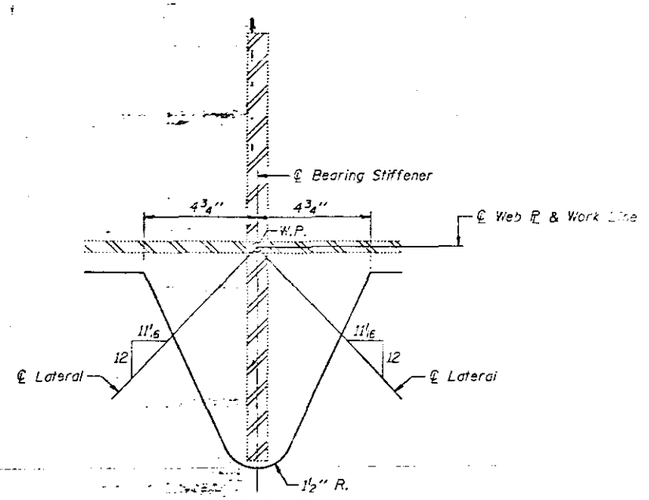
GUSSET PLATE A DETAIL



GUSSET PLATE B DETAIL



DETAIL B



DETAIL C

DESIGNED	Kenneth P. Stutts
CHECKED	CHM
DRAWN	Paul Summer
CHECKED	KPS CHM

March 8 1993

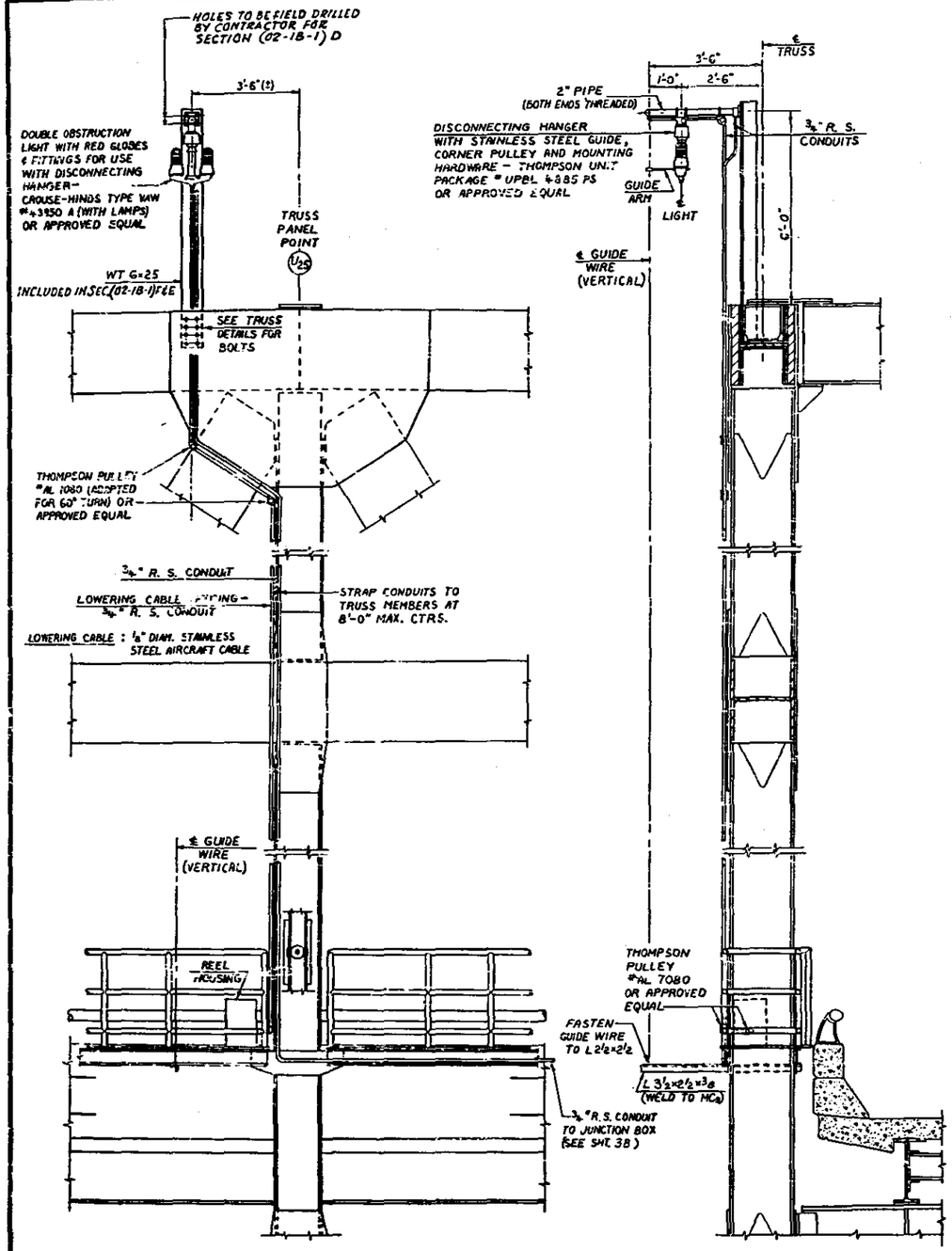
EXAMINED Todd E. Adam
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

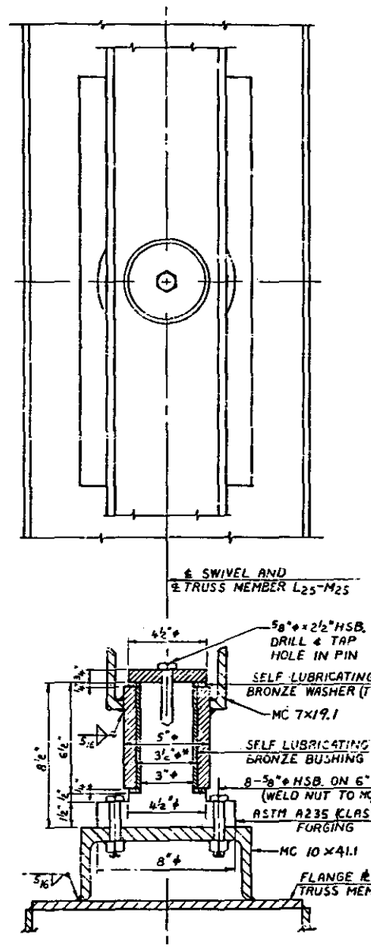
FLOOR BEAM REPAIRS
F.A.I. RT. 57 SEC. (02-1B-1) (DL-93)
ALEXANDER COUNTY
STA. 1168+50
STR. No. 002-0022

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	186-1(2-1)P	ALEXANDER MISSOURI	ILLINOIS MISSOURI	40	39
F. HWA. REG NO 4 F. HWA. REG NO 5		ILLINOIS MISSOURI		PROJECT I-57-9(6)0	



AVIATION OBSTRUCTION LIGHTING DETAILS

ON EAST SIDE OF BRIDGE
SCALE: ½"=1'-0"

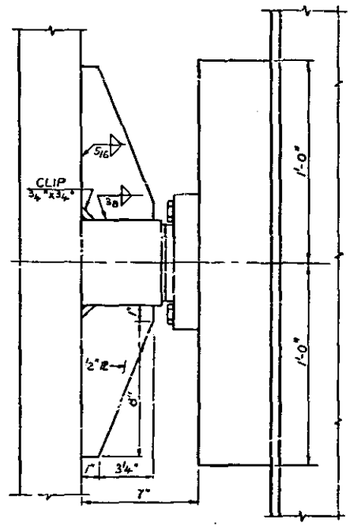


CLEARANCES AND SURFACE FINISHES SHALL BE AS REQUIRED FOR PROPER OPERATION OF THE SELF LUBRICATING BUSHING AND WASHERS

*INTERFERENCE FIT BETWEEN BUSHING & HOUSING

SWIVEL FOR NAVIGATION LIGHT SUSPENSION IN SPAN 13

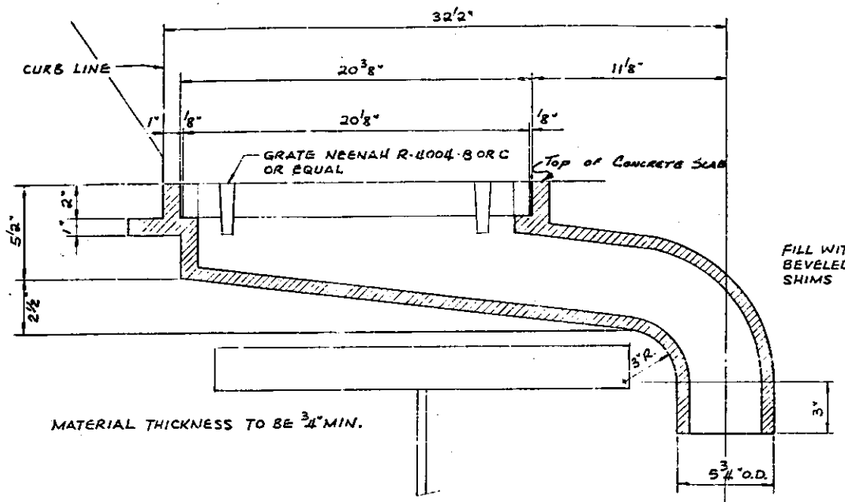
SCALE: 3"=1'-0"

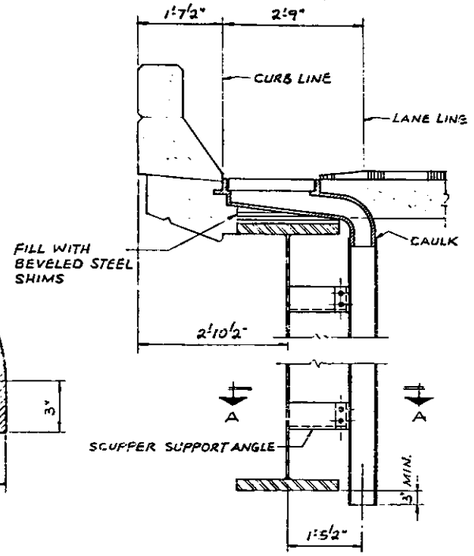


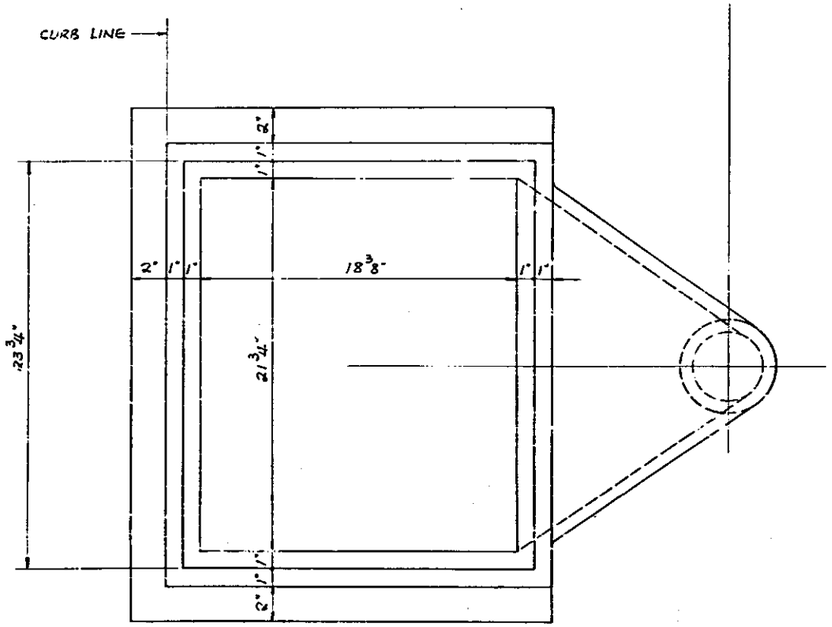
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
100 E. WABASH AVE. CHICAGO, ILLINOIS

AVIATION OBSTRUCTION LIGHTING DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(6)0
SECTION (02-18-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

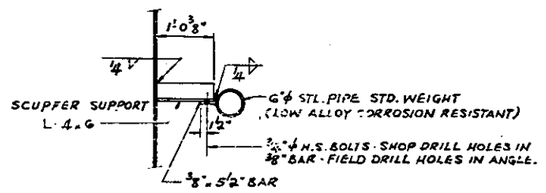
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) P	ALEXANDER (ILLINOIS) / MISSOURI (MISSOURI)	ILLINOIS DIVISION	40	40
F.H.W.A.PROJ. NO.		ILLINOIS DIVISION	PROJECT I-57-9(6)6		
F.H.W.A.PROJ. NO.					







DETAILS OF SCUPPER



SECTION A-A

DETAIL AT GIRDER SPANS
SPANS 1 TO 9A & 15 TO 19

NOTES:

FOR LOCATION OF SCUPPERS SEE FRAMING PLAN.

SCUPPER SUPPORT ANGLES ARE TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) F & B.

ALL OTHER MATERIAL SHOWN ON THIS SHEET IS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) D.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

DRAINAGE DETAILS
F. A. I. RTE. 57 OVER THE MIS[illegible] RIVER
PROJECT I-57-9(6)6
SECTION (02-18-1) P
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1) F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	81	
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9(4)0	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI
STATE HIGHWAY COMMISSION

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY BRIDGE OVER MISSISSIPPI RIVER

WEST OF CAIRO, ILLINOIS

ALEXANDER COUNTY, ILLINOIS - MISSISSIPPI COUNTY, MISSOURI

F.A.I. ROUTE 57 PROJECT I-57-9(4)0

SUPERSTRUCTURE SECTION (02-1B-1) F&E

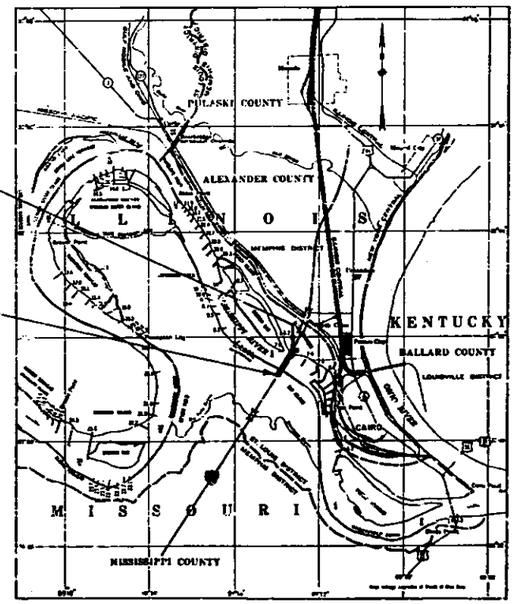
ILLINOIS JOB No. P-99-012-64 C-99-105-71

MISSOURI A-2000

INDEX OF SHEETS, SHEET NO. 2
SUMMARY OF QUANTITES, SHEET NO. 2

PROPOSED IMPROVEMENT BEGINS
PROJECT I-57-9(4)0
SECTION (02-1B-1) F & E
STA. 1141+85.25

PROPOSED IMPROVEMENT ENDS
PROJECT I-57-9(4)0
SECTION (02-1B-1) F & E
STA. 1182+74.75



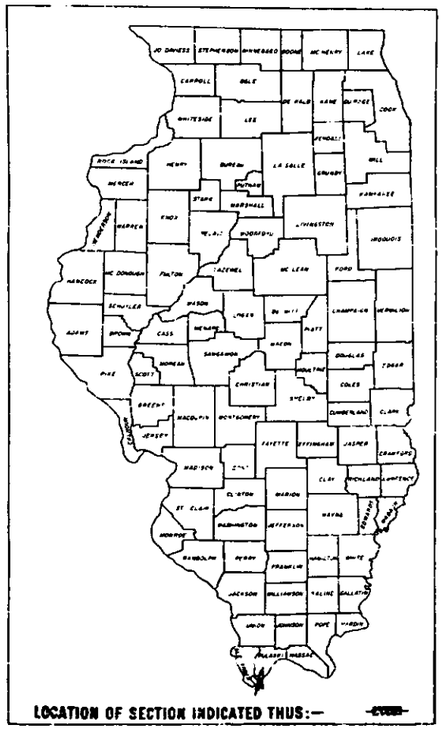
LAYOUT

SECTION (02-1B-1) F&E INCLUDES FURNISHING, FABRICATING, TRANSPORTING, ERECTING ALL STRUCTURAL STEEL AND PIPE RAILING FOR (A) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 9 SPANS (4 @ 110 FT, 3 @ 155 FT AND 2 @ 376 FT), (B) A THREE SPAN CONTINUOUS THROUGH TRUSS STRUCTURE OVER THE MAIN AND AUXILIARY NAVIGATION CHANNELS (513 FT, 821 FT AND 513 FT) (C) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 5 SPANS OF 114 FT CARRYING F.A.I. ROUTE 57 OVER THE MISSISSIPPI RIVER AT CAIRO, ILLINOIS.

NET LENGTH OF PROJECT
4089.50 LIN. FT. = 0.7745 MILES

PREPARED BY ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 SO. WABASH AVENUE
CHICAGO, ILLINOIS

EXAMINED BY _____ DIST. DESIGN ENGINEER
EXAMINED BY _____ DIST. CONST. ENGINEER
EXAMINED BY _____ DIST. MAINT. ENGINEER
EXAMINED BY _____ DIST. TRAFFIC ENGINEER
EXAMINED BY _____ DIST. M. TLS. ENGINEER
EXAMINED BY _____ DIST. R/W ENGINEER



LOCATION OF SECTION INDICATED THUS:—

APPROVED
FOR SECRETARIAL ACTIVITIES
DIRECTOR OF DEPARTMENT OF TRANSPORTATION

MISSOURI
STATE HIGHWAY COMMISSION
Submitted May 24 '73
Approved May 29 '73

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
Submitted May 4 '73
Approved June 4 '73
Approved June 6 '73
Approved June 8 '73
ACTING CHIEF TRANSPORTATION ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ENGINEER DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ENGINEER DATE

CONTRACT NUMBER 29570

ALEXANDER COUNTY ILLINOIS SECTION (02-1B-1) F&E F.A.I. ROUTE 57
MISSISSIPPI COUNTY MISSOURI

REEL 9-86
Rev 5-12-76

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) F&E	ALEXANDER MISSOURI	81	2
F.H.W.A. REG. NO.		ILLINOIS MISSOURI	PROJECT I-57-9 (4)0	

SUMMARY OF QUANTITIES
SECTION (02-18-1) F&E

QUANTITY	UNIT	ITEM	CODE NO.
1	L. SUM	FURNISHING & ERECTING STRUCTURAL STEEL	507030
294	LIN.FT.	PIPE HANDRAIL	635001
1	EACH	ENGINEER'S FIELD OFFICE, TYPE A	646001
1,000	HOUR	TRAINEES	XZ1900

TABULATION OF CALCULATED PLAN WEIGHT OF STRUCTURAL STEEL

GIRDER SPANS 1 TO 9A AND 15 TO 19

A36 -	4,087,010	LBS.
A572 -	1,238,140	LBS.
A588 -	2,123,050	LBS.
A486 (CLASS 70) -	131,840	LBS.

TRUSS SPANS 12, 13 AND 14

A36 -	6,873,580	LBS.
A572 -	5,473,050	LBS.
A509 -	1,821,760	LBS.
A517 -	437,160	LBS.
A406 (CLASS 90 & 120) -	57,870	LBS.

TOTAL CALCULATED PLAN WEIGHT OF STRUCTURAL STEEL - 22,243,460 LBS.

GENERAL NOTES

ALL STEEL SHALL BE STRUCTURAL CARBON STEEL, A.S.T.M. A36, UNLESS OTHERWISE NOTED ON DRAWINGS OR IN THE SPECIAL PROVISIONS.

ALL STEEL DESIGNATED ON THE PLANS AS CONFORMING TO A.S.T.M. SPECIFICATION A572 SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 POUNDS PER SQUARE INCH.

ALL FIELD CONNECTIONS AND ALL SHOP CONNECTIONS UTILIZING MECHANICAL FASTENERS SHALL BE MADE WITH HIGH STRENGTH BOLTS, A.S.T.M. A325, EXCEPT AS OTHERWISE NOTED. ALL HIGH STRENGTH BOLTS SHALL BE INSTALLED IN HOLES OF A DIAMETER OF 1/16" LARGER THAN THE NOMINAL BOLT SIZE. ALL JOINTS UTILIZING HIGH STRENGTH BOLTS TO CONNECT MAIN MEMBERS SHALL BE FRICTION-TYPE.

IN THE APPLICATION OF THE STANDARD SPECIFICATION AND SPECIAL PROVISIONS AND THE SUPPLEMENTARY REQUIREMENTS STATED HEREIN, THE FOLLOWING STRUCTURAL PARTS SHALL BE CLASSIFIED AS MAIN MEMBERS: GIRDERS; STRINGERS; FLOORBEAMS; TRUSS MEMBERS (CHORDS, DIAGONALS AND VERTICALS); STRUTS BETWEEN THE TRUSSES; AND THE COMPONENTS OF SWAY FRAMES, PORTALS, CROSSFRAMES AND THE LATERAL BRACING SYSTEM.

STRUCTURAL STEEL WELDMENTS OF EQUAL SECTION AND STRENGTH MAY BE SUBSTITUTED FOR CASTINGS AT THE OPTION OF THE CONTRACTOR, SUBJECT TO APPROVAL BY THE ENGINEER PRIOR TO FABRICATION. NO ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR THIS SUBSTITUTION.

ROADWAY EXPANSION GUARDS SHALL BE ASSEMBLED IN THE PROPER POSITION WITH THE ENDS IN PLACE AND SHALL BE LEFT ASSEMBLED FOR SHOP INSPECTION. THE EXPANSION GUARDS ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. THE ROADWAY EXPANSION PLATES SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04 (1) OF THE STANDARD SPECIFICATIONS.

STRUCTURAL STEEL SHALL BE SHOP PAINTED UNDER SECTION (02-18-1) F & E AND FIELD PAINTED UNDER SECTION (02-18-1) F. ALL PAINT IS TO BE FURNISHED AND APPLIED BY THE CONTRACTOR FOR THE RESPECTIVE SECTIONS. THE STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT AND TWO FIELD COATS EXCEPT AS OTHERWISE SPECIFIED. THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING.

THE EXPOSED SURFACES OF THE EXPANSION GUARDS SHALL BE GIVEN TWO SHOP COATS OF PAINT AND THE CONTACT SURFACES ONE SHOP COAT OF PAINT. ANCHOR STUDS SHALL NOT BE PAINTED. THE TOP OF GIRDERS AND STRINGERS SHALL NOT BE PAINTED EXCEPT THAT OVER SUPPORTS AND LINKS SUCH SURFACES SHALL BE PAINTED WITH 2 SHOP COATS FOR A DISTANCE OF 5 FEET EACH WAY FROM THE CENTERLINE OF THE SUPPORT OR LINK. CONTACT SURFACES WITHIN FRICTION TYPE BOLTED JOINTS SHALL BE FREE OF PAINT OR LACQUER.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF GIRDERS AND STRINGERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE CENTER OF SUPPORTS OVER WHICH THE GIRDER OR STRINGER IS CONTINUOUS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING CROSSFRAMES OVER SUPPORT.

SHOP INSPECTION OF THE STRUCTURAL STEEL SHALL BE BY ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING.

FOR NOTES ON BEARINGS, SEE BEARING DETAILS SHEETS.

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 THIMMING 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.

INDEX OF SHEETS

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2	INDEX OF SHEETS, QUANTITIES AND GENERAL NOTES
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6	FRAMING PLAN - SPANS 5, 6 & 7
7	FRAMING PLAN - SPANS 5, 6 & 7
8	FRAMING PLAN - SPANS 8A & 9A
9	FRAMING PLAN - SPANS 15 TO 19
10	GIRDER CROSSFRAMES AND LINK DETAILS
11	GIRDER CROSSFRAMES AND BRACING DETAILS
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15	FIELD SPLICES AND DETAILS - SPANS 1 TO 9A AND 15 TO 19
16	BEARING DETAILS - SPANS 1 TO 9A AND 15 TO 19
17, 18	EXPANSION GUARD - PIERS 11 AND 14
19	BLOCKING DIAGRAMS - SPANS 1 TO 9A AND 15 TO 19
20	DESIGN DATA AND STRESS TABLE - SPANS 1 TO 9A AND 15 TO 19
21	TRUSS LAYOUT AND BLOCKING ORDINATES
22, 23	STRESS TABLE FOR TRUSS MEMBERS
24	FRAMING PLAN - SPANS 12, 13 & 14
25	STRINGER ELEVATIONS & DESIGN DATA - SPANS 12, 13 & 14
26	FLOOR STEEL DETAILS - SPANS 12, 13 & 14
27	FLOOR BEAMS - SPANS 12, 13 & 14
28	TRUSS DETAILS - L_0 TO L_3 & U_1 TO U_3
29	TRUSS DETAILS - L_4 TO L_7 & U_4 TO U_7
30	TRUSS DETAILS - L_8 TO L_{10} & U_8 TO U_{10}
31	TRUSS DETAILS - L_{11} TO L_{13} & U_{11} TO U_{13}
32	TRUSS DETAILS - L_{14} TO M_{15}, M_{16} & U_{14} TO U_{16}
33	TRUSS DETAILS - M_{17} TO M_{19} & U_{17} TO U_{19}
34	TRUSS DETAILS - M_{20} TO M_{22} & U_{20} TO U_{22}
35	TRUSS DETAILS - M_{23} TO M_{25} & U_{23} TO U_{25}
36	TRUSS DETAILS - L_{13} TO L_{25}
37	TRUSS DETAILS - MISCELLANEOUS
38	SWAY FRAMES - SPANS 12, 13 & 14
39	PORTALS - SPANS 12, 13 & 14
40	TRUSS BEARINGS AT PIERS 12 & 13
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* 42	NAVIGATION & AVIATION OBSTRUCTION LIGHTS
43	PIER LIGHT, LADDER & RAILING-DETAILS
44	CENTER OF CHANNEL NAVIGATION LIGHT DETAILS
45	AVIATION OBSTRUCTION LIGHT DETAILS
* 46, 47	TOP OF SLAB ELEVATIONS - SPANS 1, 2, 3 & 4
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* 50, 51	TOP OF SLAB ELEVATIONS - SPANS 8A & 9A
* 52-58	TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
* 59, 60	TOP OF SLAB ELEVATIONS - SPANS 15 TO 19
* 61	DECK CROSS SECTION AND DETAILS - SPANS 1 TO 9A AND 15 TO 19
* 62	DECK CROSS SECTION AND DETAILS - SPANS 12, 13 & 14
* 63	DECK WORK POINTS - SPANS 1 TO 9A AND 15 TO 19
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* 65	NORTH ABUTMENT
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* 79	PLAN & PROFILE - ILLINOIS BANK
* 80	PLAN & PROFILE - MISSOURI BANK
81	DRAINAGE DETAILS

* THESE SHEETS ARE INCLUDED FOR REFERENCE ONLY — NOT PART OF SECTION (02-18-1) F & E

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

INDEX OF SHEETS, QUANTITIES & GENERAL NOTES
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(4)0
SECTION 02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.RTE 57	7BR	ALEXANDER MISSISSIPPI	81	24
F.A.I. RTE. 55 & F.A.I. RTE. 57		ALEXANDER MISSISSIPPI	PROJECT I-57-3	0

SUMMARY OF QUANTITIES
SECTION (02-18-1) F&E

QUANTITY	UNIT	ITEM	CODE NO.
1	L. SUM	FURNISHING & ERECTING STRUCTURAL STEEL	509030
294	LIN.FT.	PIPE HANDRAIL	631001
1	EACH	ENGINEER'S FIELD OFFICE, TYPE A	666001
1,000	HOUR	TRAINEES	X21905

TABULATION OF CALCULATED PLAN WEIGHT OF STRUCTURAL STEEL

GIRDER SPANS 1 TO 9A AND 15 TO 19

A36 -	4,087,060 LBS.
A572 -	1,238,140 LBS.
A588 -	2,125,080 LBS.
A486 (CLASS 70) -	131,040 LBS.

TRUSS SPANS 12, 13 AND 14

A36 -	6,873,980 LBS.
A572 -	5,475,980 LBS.
A588 -	1,821,760 LBS.
A517 -	437,160 LBS.
A486 (CLASS 90 & 120) -	57,670 LBS.

TOTAL CALCULATED PLAN WEIGHT OF STRUCTURAL STEEL - 22,845,460 LBS.

GENERAL NOTES

ALL STEEL SHALL BE STRUCTURAL CARBON STEEL, A.S.T.M. A36, UNLESS OTHERWISE NOTED ON DRAWINGS OR IN THE SPECIAL PROVISIONS.

ALL STEEL DESIGNATED ON THE PLANS AS CONFORMING TO A.S.T.M. SPECIFICATION A572 SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 POUNDS PER SQUARE INCH.

ALL FIELD CONNECTIONS AND ALL SHOP CONNECTIONS UTILIZING MECHANICAL FASTENERS SHALL BE MADE WITH HIGH STRENGTH BOLTS, A.S.T.M. A325, EXCEPT AS OTHERWISE NOTED. ALL HIGH STRENGTH BOLTS SHALL BE INSTALLED IN HOLES OF A DIAMETER OF 1/16" LARGER THAN THE NOMINAL BOLT SIZE. ALL JOINTS UTILIZING HIGH STRENGTH BOLTS TO CONNECT MAIN MEMBERS SHALL BE FRICTION-TYPE.

IN THE APPLICATION OF THE STANDARD SPECIFICATION AND SPECIAL PROVISIONS AND THE SUPPLEMENTARY REQUIREMENTS STATED HEREIN, THE FOLLOWING STRUCTURAL PARTS SHALL BE CLASSIFIED AS MAIN MEMBERS: GIRDERS; STRINGERS; FLOORBEAMS; TRUSS MEMBERS (CHORDS, DIAGONALS AND VERTICALS); STRUTS BETWEEN THE TRUSSES; AND THE COMPONENTS OF SWAY FRAMES, PORTALS, CROSSFRAMES AND THE LATERAL BRACING SYSTEM.

STRUCTURAL STEEL WELDMENTS OF EQUAL SECTION AND STRENGTH MAY BE SUBSTITUTED FOR CASTINGS AT THE OPTION OF THE CONTRACTOR, SUBJECT TO APPROVAL BY THE ENGINEER PRIOR TO FABRICATION. NO ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR THIS SUBSTITUTION.

ROADWAY EXPANSION GUARDS SHALL BE ASSEMBLED IN THE PROPER POSITION WITH THE ENDS IN PLACE AND SHALL BE LEFT ASSEMBLED FOR SHOP INSPECTION. THE EXPANSION GUARDS ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. THE ROADWAY EXPANSION PLATES SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 509.06 (3) OF THE STANDARD SPECIFICATIONS.

STRUCTURAL STEEL SHALL BE SHOP PAINTED UNDER SECTION (08-18-1) F & E AND FIELD PAINTED UNDER SECTION (08-18-1) P. ALL PAINT IS TO BE FURNISHED AND APPLIED BY THE CONTRACTOR FOR THE RESPECTIVE SECTIONS. THE STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT AND TWO FIELD COATS (EXCEPT AS OTHERWISE SPECIFIED). THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING.

THE EXPOSED SURFACES OF THE EXPANSION GUARDS SHALL BE GIVEN TWO SHOP COATS OF PAINT AND THE CONTACT SURFACES ONE SHOP COAT OF PAINT. ANCHOR STUDS SHALL NOT BE PAINTED. THE TOP OF GIRDERS AND STRINGERS SHALL NOT BE PAINTED EXCEPT THAT OVER SUPPORTS AND LINES SUCH SURFACES SHALL BE PAINTED WITH 2 SHOP COATS FOR A DISTANCE OF 3 FEET EACH WAY FROM THE CENTERLINE OF THE SUPPORT OR LINE. CONTACT SURFACES WITHIN FRICTION TYPE BOLTED JOINTS SHALL BE FREE OF PAINT OR LACQUER.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF GIRDERS AND STRINGERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE CENTER OF SUPPORTS OVER WHICH THE GIRDER OR STRINGER IS CONTINUOUS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING CROSSFRAMES OVER SUPPORTS.

SHOP INSPECTION OF THE STRUCTURAL STEEL SHALL BE BY ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING.

FOR NOTES ON BEARINGS, SEE BEARING DETAILS SHEETS.

BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF ± 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.

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45	AVIATION OBSTRUCTION LIGHT DETAILS
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* 80	PLAN & PROFILE - MISSISSIPPI BANK
81	DRAINAGE DETAILS

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(AS REVISED)

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
19 S. WABASH AVE., CHICAGO, ILLINOIS

INDEX OF SHEETS, QUANTITIES & GENERAL NOTES
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(40)
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
BEG. 1181+89.78 TO STA. 1188 + 79.88

(Revised) 3-7-74 L.W.

F.A.I. 57	706		81	28
			PROJECT 1-57-0	

SUMMARY OF QUANTITIES
SECTION (02-1B-1) F&E

QUANTITY	UNIT	ITEM	CODE NO.
1	L. SUM	FURNISHING & ERECTING STRUCTURAL STEEL	507030
294	LIN. FT.	PIPE HANDRAIL	631061
1	EACH	ENGINEER'S FIELD OFFICE, TYPE A	666001
1,000	HOUR	TRAINEES	X21100

TABULATION OF CALCULATED PLAIN WEIGHT OF STRUCTURAL STEEL

GIRDER SPANS 1 TO 9A AND 15 TO 19

A36 -	4,087,040 LBS.
A572 -	1,238,140 LBS.
A588 -	2,129,020 LBS.
A514 (CLASS H) -	131,870 LBS.

TRUSS SPANS 12, 13 AND 14

A36 -	6,873,220 LBS.
A572 -	9,475,[illegible] LBS.
A588 -	1,821,760 LBS.
A517 -	437,160 LBS.
A486 (CLASS 90 & 120) -	37,870 LBS.

TOTAL CALCULATED PLAIN WEIGHT OF STRUCTURAL STEEL 22,243,400 LBS.

GENERAL NOTES

ALL STEEL SHALL BE STRUCTURAL CARBON STEEL, A.S.T.M. A36, UNLESS OTHERWISE NOTED ON DRAWINGS OR IN THE SPECIAL PROVISIONS.

ALL STEEL DESIGNATED ON THE PLANS AS CONFORMING TO A.S.T.M. SPECIFICATION A572 SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 POUNDS PER SQUARE INCH.

ALL FIELD CONNECTIONS AND ALL SHOP CONNECTIONS UTILIZING MECHANICAL FASTENERS SHALL BE MADE WITH HIGH STRENGTH BOLTS, A.S.T.M. A325, EXCEPT AS OTHERWISE NOTED. ALL HIGH STRENGTH BOLTS SHALL BE INSTALLED IN HOLES OF A DIAMETER OF 1/16" LARGER THAN THE NOMINAL BOLT SIZE. ALL JOINTS UTILIZING HIGH STRENGTH BOLTS TO CONNECT MAIN MEMBERS SHALL BE FRICTION-TYPE.

IN THE APPLICATION OF THE STANDARD SPECIFICATION AND SPECIAL PROVISIONS AND THE SUPPLEMENTARY REQUIREMENTS STATED HEREIN, THE FOLLOWING STRUCTURAL PARTS SHALL BE CLASSIFIED AS MAIN MEMBERS: GIRDERS; STRINGERS; FLOORBEAMS; TRUSS MEMBERS (CHORDS, DIAGONALS AND VERTICALS); STRUTS BETWEEN THE TRUSSES; AND THE COMPONENTS OF SWAY FRAMES, PORTALS, CROSSFRAMES AND THE LATERAL BRACING SYSTEM.

STRUCTURAL STEEL WELDMENTS OF EQUAL SECTION AND STRENGTH MAY BE SUBSTITUTED FOR CASTINGS AT THE OPTION OF THE CONTRACTOR, SUBJECT TO APPROVAL BY THE ENGINEER PRIOR TO FABRICATION. NO ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR THIS SUBSTITUTION.

ROADWAY EXPANSION GUARDS SHALL BE ASSEMBLED IN THE FROZEN POSITION WITH THE ENDS IN PLACE AND SHALL BE LEFT ASSEMBLED FOR SHOP INSPECTION. THE EXPANSION GUARDS ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. THE ROADWAY EXPANSION PLATES SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04 (1) OF THE STANDARD SPECIFICATIONS.

STRUCTURAL STEEL SHALL BE SHOP PAINTED UNDER SECTION (02-1B-1) F & E AND FIELD PAINTED UNDER SECTION (02-1B-1) P. ALL PAINT IS TO BE FURNISHED AND APPLIED BY THE CONTRACTOR FOR THE RESPECTIVE SECTIONS. THE STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT AND TWO FIELD COATS EXCEPT AS OTHERWISE SPECIFIED. THE BASIC LEAD SAUCO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING.

THE EXPOSED SURFACES OF THE EXPANSION GUARDS SHALL BE GIVEN TWO SHOP COATS OF PAINT AND THE CONTACT SURFACES ONE SHOP COAT OF PAINT. ANCHOR STUDS SHALL NOT BE PAINTED. THE TOP OF GIRDERS AND STRINGERS SHALL NOT BE PAINTED EXCEPT THAT OVER SUPPORTS AND LINKS SUCH SURFACES SHALL BE PAINTED WITH 2 SHOP COATS FOR A DISTANCE OF 5 FEET EACH WAY FROM THE CENTERLINE OF THE SUPPORT OR LINK. CONTACT SURFACES WITHIN FRICTION TYPE BOLTED JOINTS SHALL BE FREE OF PAINT OR LACQUER.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF GIRDERS AND STRINGERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE CENTER OF SUPPORTS OVER WHICH THE GIRDER OR STRINGER IS CONTINUOUS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE ERECTING CROSSFRAMES OVER SUPPORT.

SHOP INSPECTION OF THE STRUCTURAL STEEL SHALL BE BY ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING.

FOR NOTES ON BEARINGS, SEE BEARING DETAILS SHEETS.

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 MODIFICATIONS TO 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.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2, 2A, 2B	INDEX OF SHEETS, QUANTITIES AND GENERAL NOTES
3	GENERAL PLAN AND ELEVATION
4	FRAMING PLAN - SPANS 1, 2, 3 & 4
5	FRAMING PLAN - SPANS 1, 2, 3 & 4
6	FRAMING PLAN - SPANS 5, 6 & 7
7	FRAMING PLAN - SPANS 5, 6 & 7
8	FRAMING PLAN - SPANS 8A & 9A
9	FRAMING PLAN - SPANS 15 TO 19
10	GIRDER CROSSFRAMES AND LINK DETAILS
11	GIRDER CROSSFRAMES AND BRACING DETAILS
12, 13, 14	STEEL DETAILS - SPANS 8A & 9A
15	FIELD SPLICES AND DETAILS - SPANS 1 TO 9A AND 15 TO 19
16	BEARING DETAILS - SPANS 1 TO 9A AND 15 TO 19
17, 18	EXPANSION GUARD - PIERS 11 AND 16
19	BLOCKING DIAGRAMS - SPANS 1 TO 8A AND 15 TO 19
20	DESIGN DATA AND STRESS TABLE - SPANS 1 TO 9A AND 15 TO 19
21	TRUSS LAYOUT AND BLOCKING ORDINATES
22, 23	STRESS TABLE FOR TRUSS MEMBERS
24	FRAMING PLAN - SPANS 12, 13 & 14
25	STRINGER ELEVATIONS & DESIGN DATA - SPANS 12, 13 & 14
26	FLOOR STEEL DETAILS - SPANS 12, 13 & 14
27	FLOOR BEAMS - SPANS 12, 13 & 14
28	TRUSS DETAILS - L_0 TO L_{10} & U_0 TO U_2
29	TRUSS DETAILS - L_2 TO L_7 & U_2 TO U_7
30	TRUSS DETAILS - L_8 TO L_{12} & U_8 TO U_{12}
31	TRUSS DETAILS - L_{11} TO L_{13} & U_{11} TO U_{13}
32	TRUSS DETAILS - L_{14} TO M_{15}, M_{16} & U_{14} TO U_{16}
33	TRUSS DETAILS - M_{17} TO M_{19} & U_{17} TO U_{19}
34	TRUSS DETAILS - M_{20} TO M_{22} & U_{20} TO U_{22}
35	TRUSS DETAILS - M_{23} TO M_{25} & U_{23} TO U_{25}
36	TRUSS DETAILS - L_{15} TO L_{20}
37	TRUSS DETAILS - MISCELLANEOUS
38	SWAY FRAMES - SPANS 12, 13 & 14
39	PORTALS - SPANS 12, 13 & 14
40	TRUSS DIAGONALS AT PIERS 12 & 13
41	TRUSS DIAGONALS AT PIERS 13 & 14
42	NAVIGATION & AVIATION OBSTRUCTION LIGHTS
43	PIER LIGHT, LADDER & RAILING DETAILS
44	CENTER OF CHANNEL NAVIGATION LIGHT DETAILS
45	AVIATION OBSTRUCTION LIGHT DETAILS
46, 47	TOP OF SLAB ELEVATIONS - SPANS 1, 2, 3 & 4
48, 48.5	TOP OF SLAB ELEVATIONS - SPANS 5, 6 & 7
49, 49.5	TOP OF SLAB ELEVATIONS - SPANS 8A & 9A
50, 50.5	TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
51, 52	TOP OF SLAB ELEVATIONS - SPANS 15 TO 19
53	DECK CROSS SECTIONS AND DETAILS - SPANS 1 TO 9A AND 15 TO 19
54	DECK CROSS SECTION AND DETAILS - SPANS 12, 13 & 14
55	DECK WORK POINTS - SPANS 1 TO 9A AND 15 TO 19
56	DECK WORK POINTS - SPANS 12, 13 & 14
57	NORTH ABUTMENT
58	SOUTH ABUTMENT
59	ABUTMENT DETAILS
60, 60A	PIER 11
61, 61A	PIER 12
62	PIER 13
63	PIER 14
64, 65	SOUNDINGS
66, 67	HYDROGRAPHS
68	PLAN & PROFILE - ILLINOIS BANK
69	PLAN & PROFILE - MISSOURI BANK
70	DRAINAGE DETAILS

* THESE SHEETS ARE INCLUDED FOR INFORMATION ONLY — NOT PART OF CONTRACT (02-1B-1) F & E.

AS REVISED

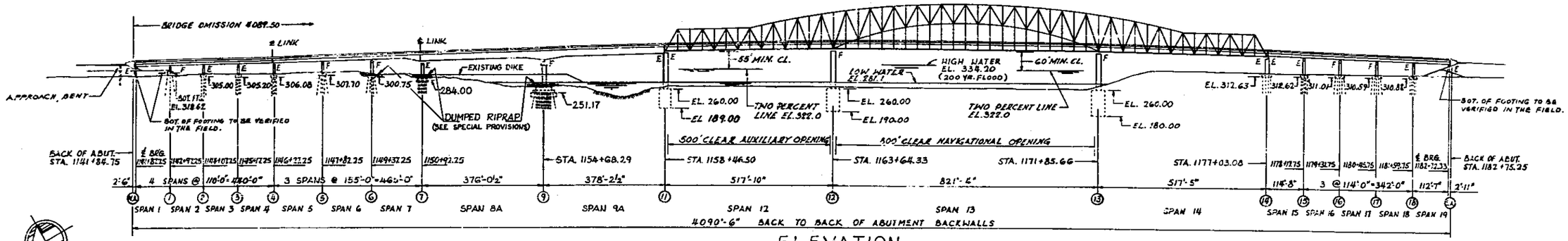
As Revised 2-4-76 L.W.

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-1B-1) F&E	ALEXANDER (ILLINOIS) (MISSISSIPPI) ILLINOIS (MISSOURI)	81	3
F.H.W.A. REG. NO. 4 / F.H.W.A. REG. NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9( )0	

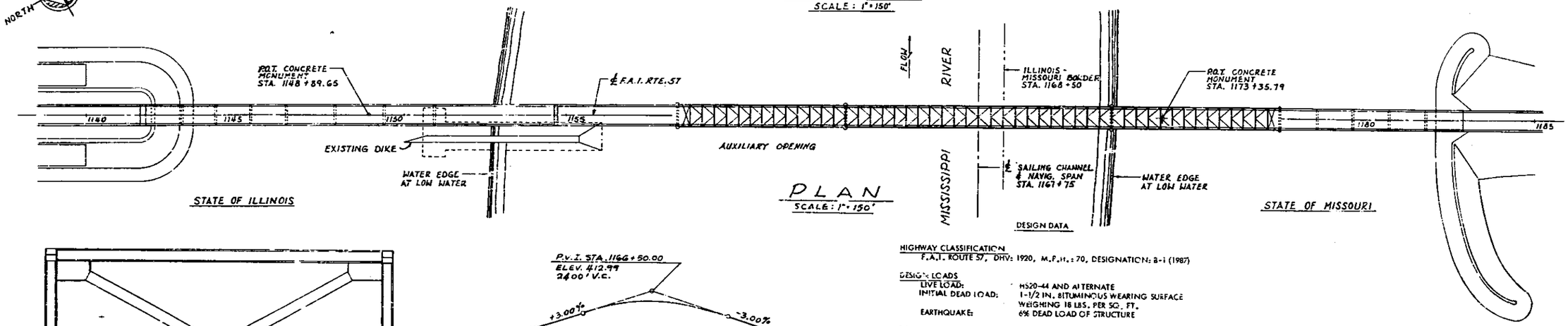
BENCH MARKS

CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1148+89.65 ℄ ℄ MEDIAN EL. 317.12

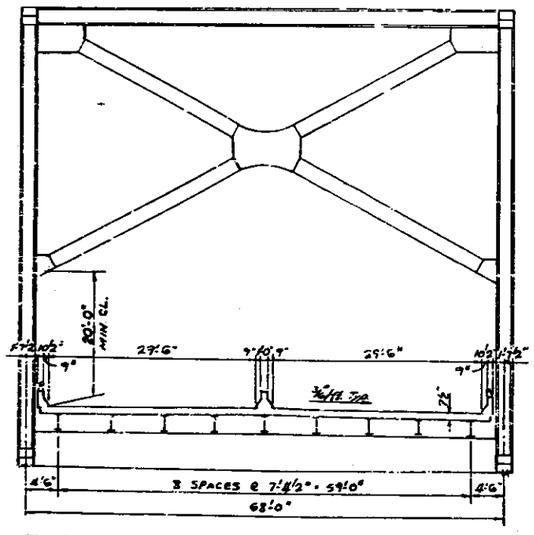
CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1173+35.79 ℄ ℄ MEDIAN EL. 319.31



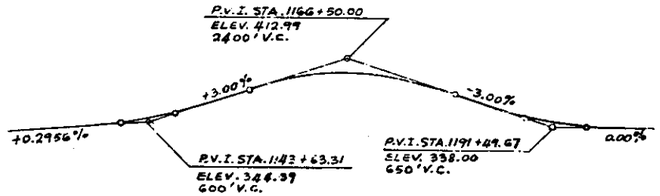
ELEVATION
SCALE: 1"=150'



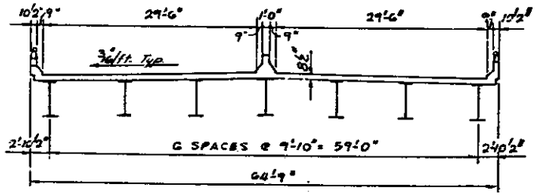
PLAN
SCALE: 1"=150'



TYPICAL SECTION THRU TRUSS SPANS



PROFILE GRADE - F.A.I. RTE 57
(4'-0" LT. AND RT. OF ℄ MEDIAN)



TYPICAL SECTION THRU GIRDER SPANS

DESIGN DATA

HIGHWAY CLASSIFICATION
F.A.I. ROUTE 57, DHV= 1920, M.P.H.= 70, DESIGNATION: B-1 (1987)

DESIGN LOADS
LIVE LOAD: HS20-44 AND ALTERNATE
INITIAL DEAD LOAD: 1-1/2 IN. BITUMINOUS WEARING SURFACE WEIGHING 18 LBS. PER SQ. FT.
EARTHQUAKE: 6% DEAD LOAD OF STRUCTURE

DESIGN STRESSES
(1) CONCRETE
f'c = 3,500 P.S.I.
fc = 1,750 P.S.I. (CURB AND PARAPET)
fc = 1,200 P.S.I. (DECK SLAB)
n = 10
(2) REINFORCEMENT BARS
fs = 20,000 P.S.I.
(3) STRUCTURAL STEEL
A36 fs = 20,000 P.S.I.
A572 fs = 27,000 P.S.I.; t = UP TO 1-1/2 IN. INCL.
A588 fs = 27,000 P.S.I.; t = UP TO 4 IN. INCL.
A517 fs = 53,000 P.S.I.; t = UP TO 2-1/2 IN. INCL.
ALL STRUCTURAL STEEL SHALL BE WELDABLE.
CASTINGS:
A486 (CLASS 70) Fy = 36,000 P.S.I.
A486 (CLASS 90) Fy = 60,000 P.S.I.
A486 (CLASS 120) Fy = 95,000 P.S.I.

LIVE LOAD DEFLECTIONS (INCLUDING IMPACT)
GIRDERS (COMPOSITE): Δ ≤ L/1200 (L = SPAN LENGTH)
TRUSSES: Δ ≤ L/1000 (L = SPAN LENGTH)
CANTILEVER ARMS OF GIRDERS AND STRINGERS:
Δ ≤ L/300 (L = LENGTH OF CANTILEVER ARM)
OTHER STRUCTURAL COMPONENTS:
Δ ≤ L/800 (L = DISTANCE BETWEEN CENTER OF SUPPORTS)

DESIGN SPECIFICATIONS
A.A.S.H.O., 1969 AS APPLICABLE & INTERIM SPECIFICATION 1970
A.W.S., EIGHTH EDITION, 1969.

CONSTRUCTION SPECIFICATIONS
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF ILLINOIS, DEPARTMENT OF PUBLIC WORKS AND BUILDINGS, DIVISION OF HIGHWAYS, ADOPTED JANUARY 2, 1971.

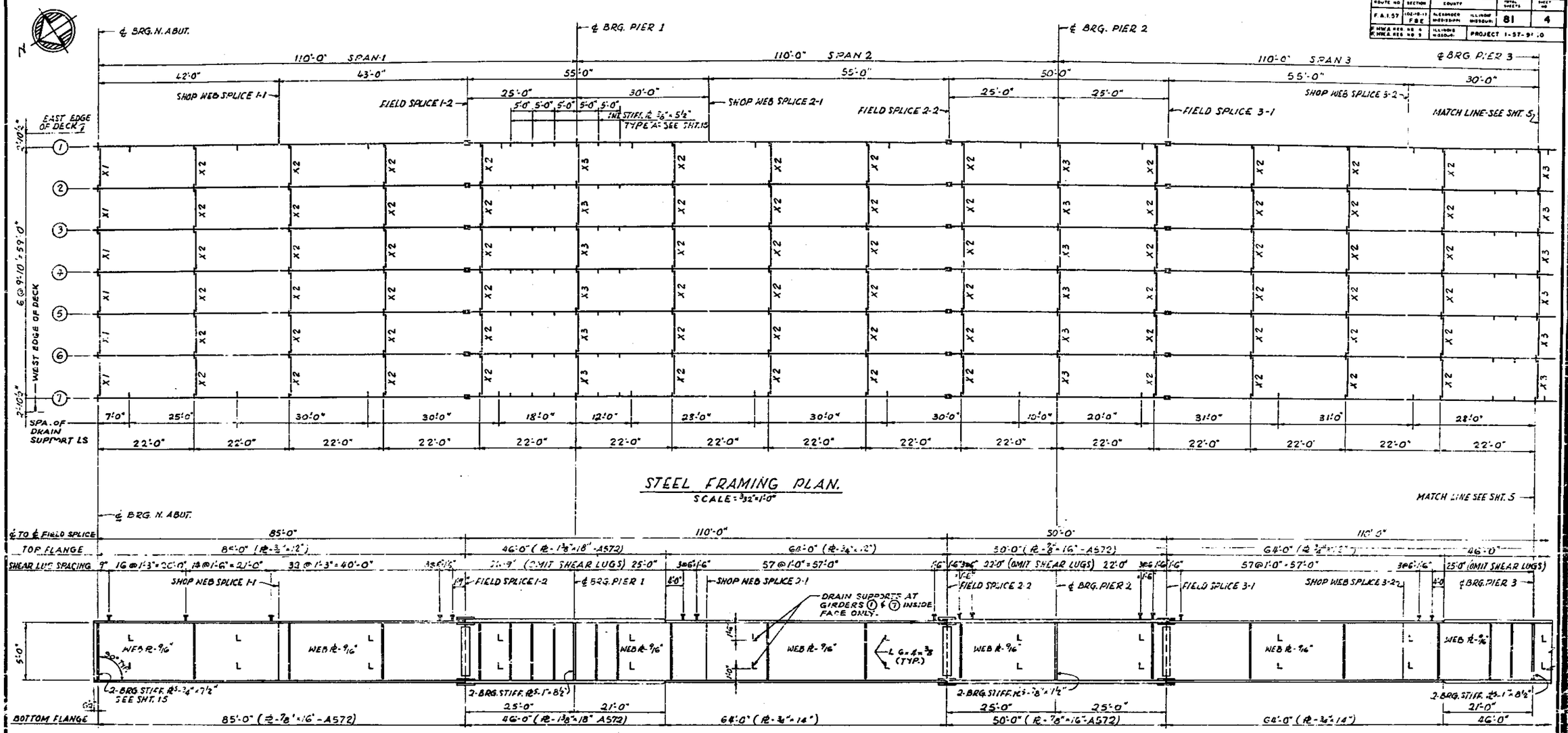
WATERWAY INFORMATION

50 YEAR FLOOD WATER ELEV. 332.0 DISCHARGE 1,200,000 C.F.S.
200 YEAR FLOOD WATER ELEV. 334.2 DISCHARGE 1,460,000 C.F.S.
VELOCITY FOR 200 YEAR FLOOD MAIN CHANNEL 8.0 F.P.S.
OPENING PROVIDED BELOW ELEV. 334.2 = 195,670 S.F.
HIGH WATER OF RECORD ELEV. 330.0 - 1937
2 PER CENT LINE ELEV. 322.0

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

GENERAL PLAN & ELEVATION
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) FBE	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	4
F. HWA REG NO 4 / F. HWA REG NO 7		ILLINOIS / MISSOURI	PROJECT I-57-9( )0	



STEEL FRAMING PLAN.
SCALE: 3/32" = 1'-0"

ELEVATION
NO SCALE
GIRDER 3 SHOWN

S.W.S. = SHOP WEB SPLICE
F.S. = FIELD SPLICE

GIRDER ELEVATIONS - FOR FABRICATION ONLY

GIRDER \ LOCATION	℄ BRG. N. ABUT.	S.W.S. 1-1	F.S. 1-2	PIER 1	S.W.S. 2-1	F.S. 2-2	PIER 2	F.S. 3-1	S.W.S. 3-2	PIER 3	F.S. 4-1	S.W.S. 4-2	℄ BRG. PIER 3
1	343.026	343.597	343.890	344.197	344.565	345.534	345.996	346.457	347.518	348.258	348.858	350.125	350.877
2	343.180	343.751	344.044	344.350	344.719	345.688	346.150	346.611	347.672	348.411	349.012	350.279	351.031
3	343.334	343.904	344.198	344.504	344.872	345.841	346.304	346.764	347.826	348.565	349.165	350.432	351.184
4	343.487	344.058	344.351	344.658	345.026	345.995	346.457	346.918	347.979	348.718	349.319	350.586	351.338
5	343.334	343.904	344.198	344.504	344.872	345.841	346.304	346.764	347.826	348.565	349.165	350.432	351.184
6	343.180	343.751	344.044	344.350	344.719	345.688	346.150	346.611	347.672	348.411	349.012	350.279	351.031
7	343.026	343.597	343.890	344.197	344.565	345.534	345.996	346.457	347.518	348.258	348.858	350.125	350.877

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE.

FILLET WELD TABLE

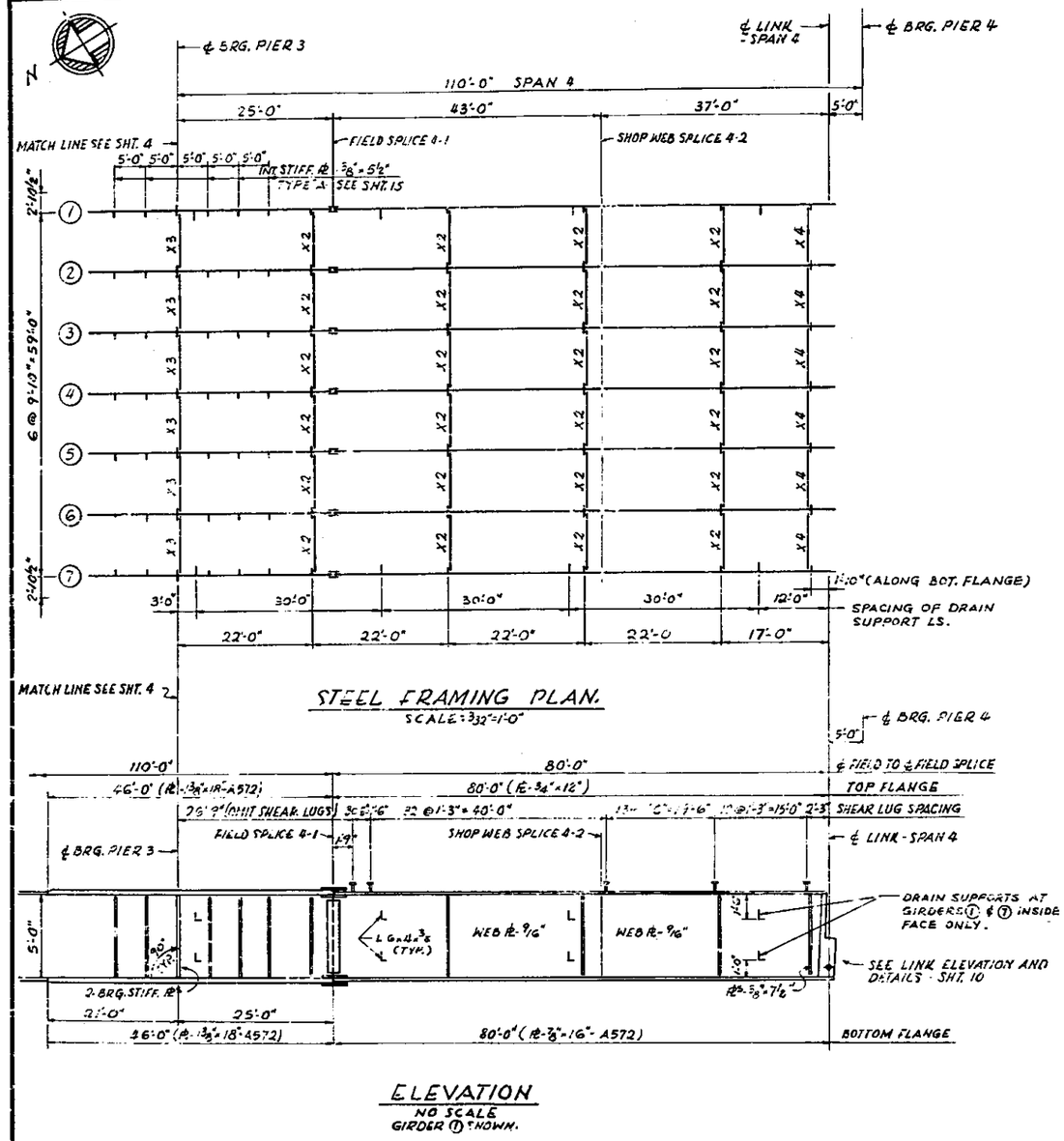
FLANGE & THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16

NOTES:
MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (02-18-1) D.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

ALFRED SENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 1, 2, 3 &
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-18-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	5
F.HWA.REG. NO. 1 F.HWA.REG. NO. 2		ILLINOIS MISSOURI	PROJECT I-57-9 0		

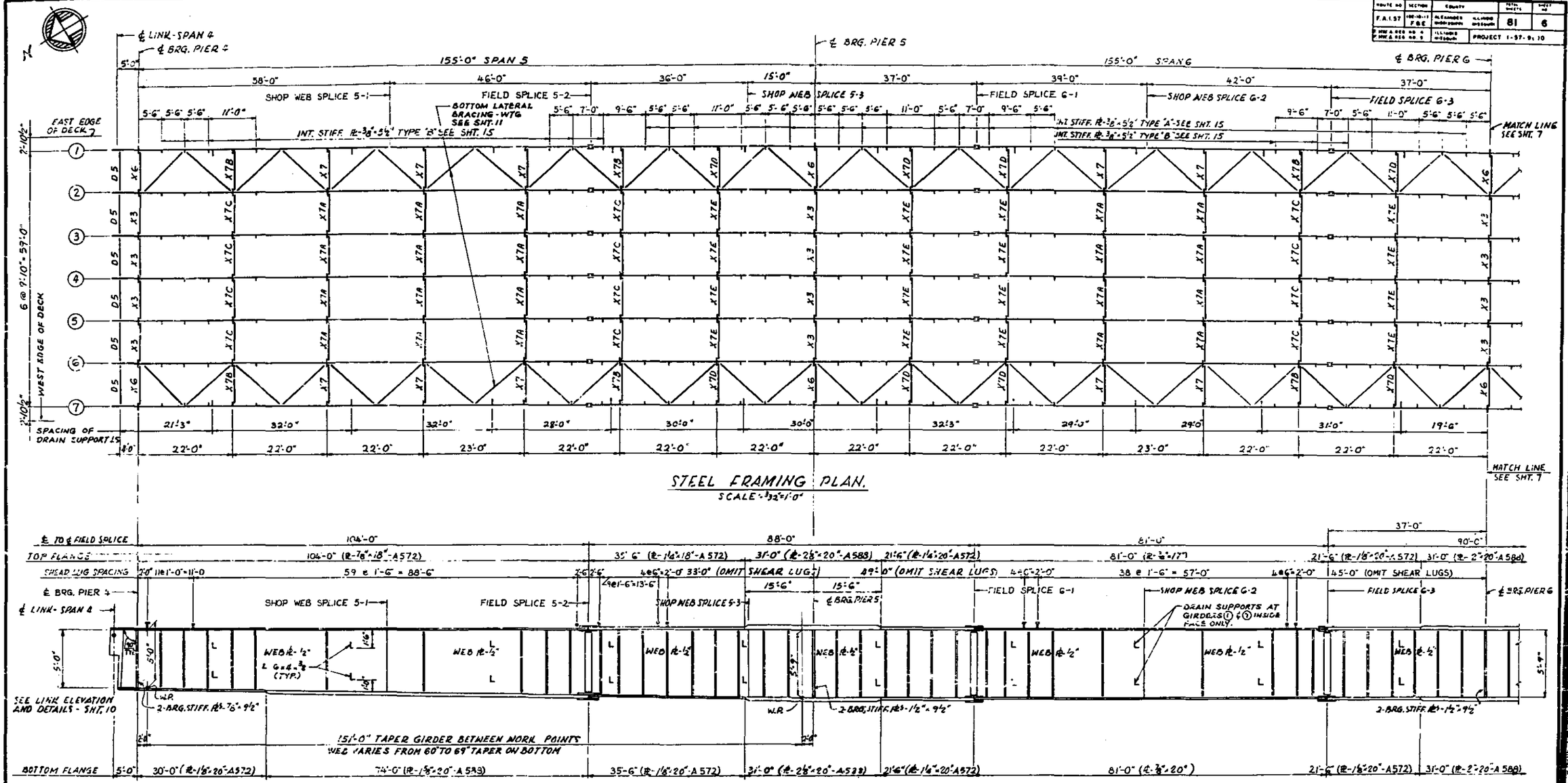


ELEVATION
NO SCALE
GIRDER 1 SHOWN.

FRAMING PLAN - SPANS 1, [illegible] 4
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 64.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1(B)-1 F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	6
F.A.I. 57 SEC NO A 102 NO B 1		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



STEEL FRAMING PLAN.
SCALE: 3/32"=1'-0"

ELEVATION
NO SCALE
GIRDER ① SHOWN

FILLET WELD TABLE

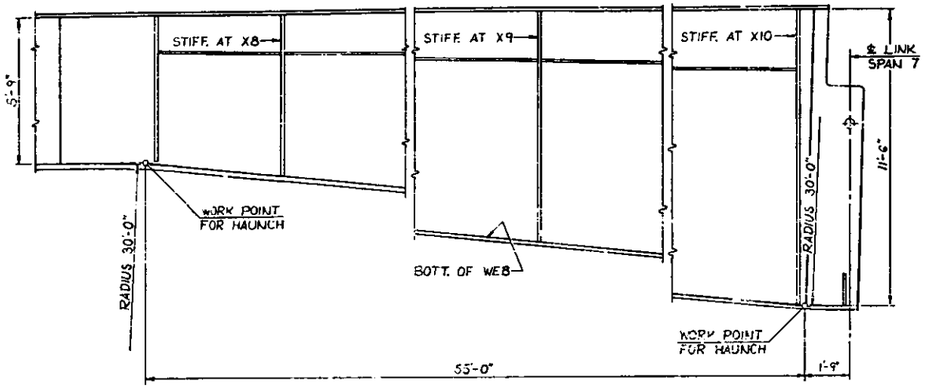
FLANGE PL THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16
OVER 1 1/2 TO 2 1/4"	3/8

NOTES:
MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (102-1B-1) D.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

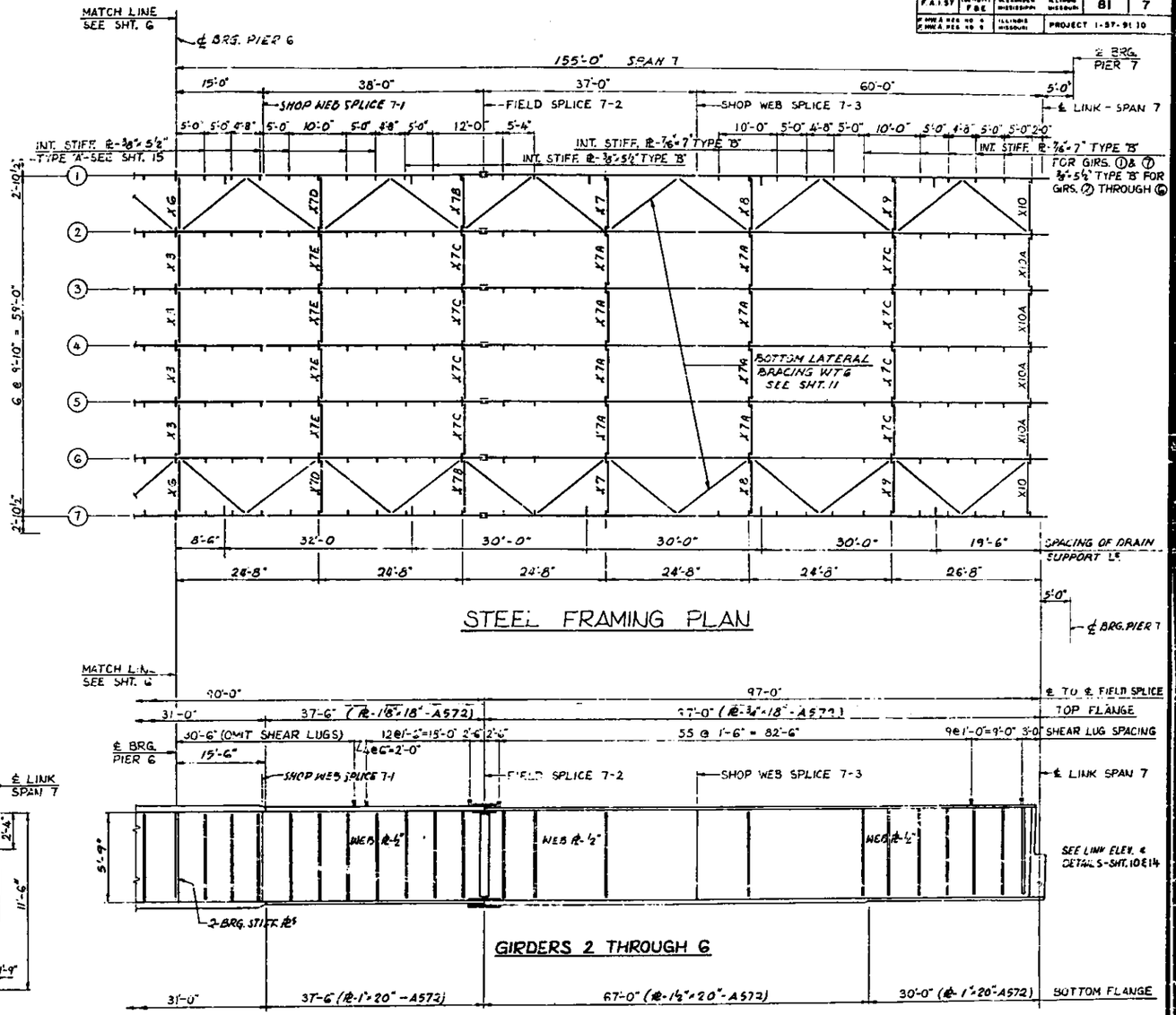
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 5, 6 AND 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION 102-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

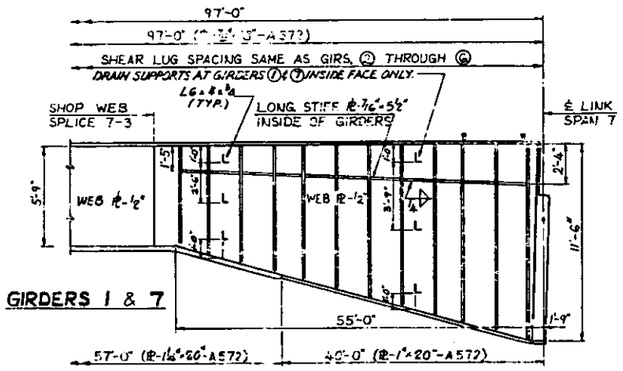
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHT NO
F.A.I. ST	137-(6-1) F&E	ALEXANDER ILLINOIS	MISSISSIPPI MISSOURI	81	7
F.H.W.A. REG. NO. 6		ILLINOIS		PROJECT I-57-9(10)	
F.H.W.A. REG. NO. 7		MISSOURI			



DETAIL OF HAUNCH
FOR GIRDERS 1 & 7 ONLY



STEEL FRAMING PLAN



GIRDERS 1 & 7

ELEVATION

GIRDER ELEVATIONS-FOR FABRICATION ONLY

S.W.S = SHOP WEB SPLICE
F.S. = FIELD SPLICE

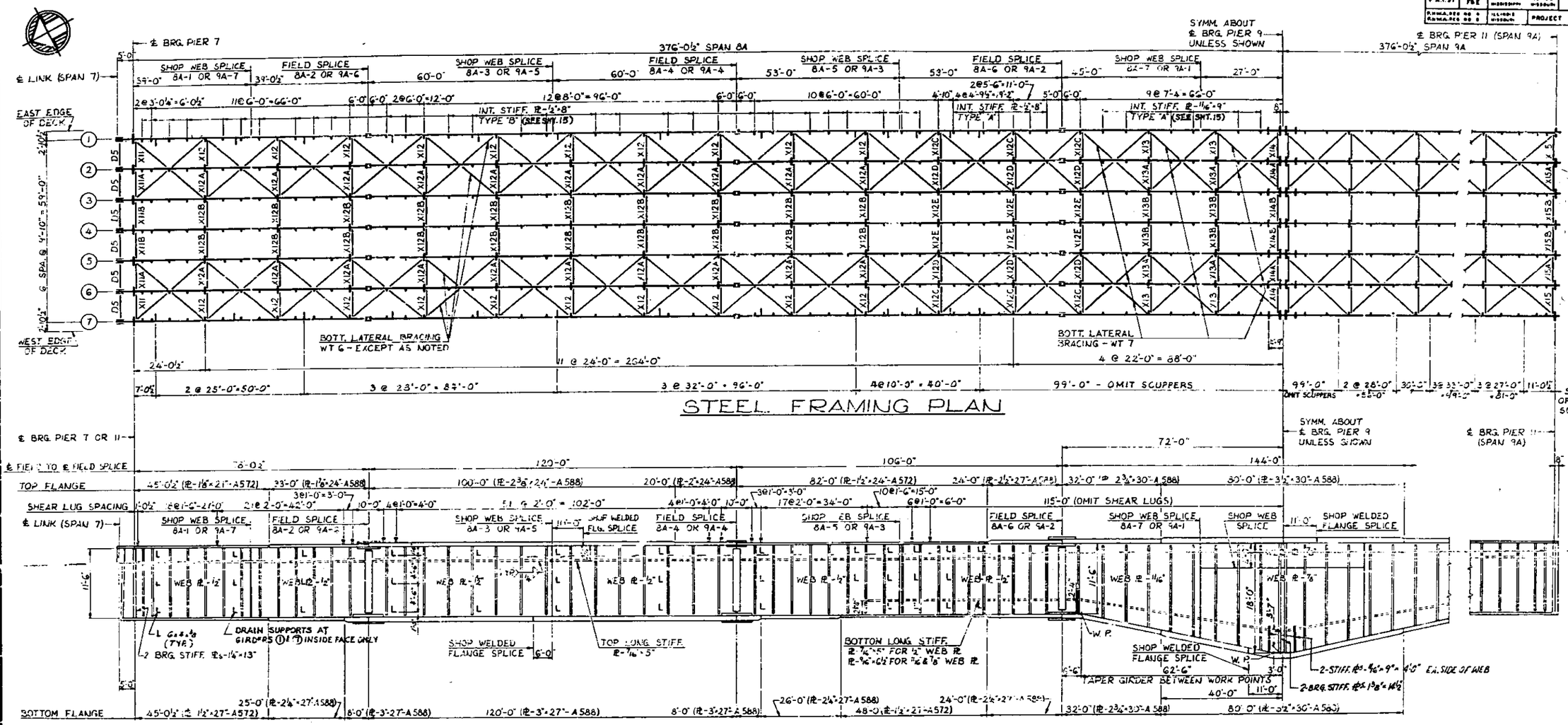
GIRDER \ LOCATION	℄ LINK-SPAN 6	PIER 6	S.W.S 5-1	F.S. 5-2	S.W.S. 5-3	PIERS	F.S. 6-1	S.W.S. 6-2	F.S. 6-3	PIER 6	S.W.S. 7-1	F.S. 7-2	S.W.S. 7-3	℄ LINK SPAN 7
1	350.877	351.062	353.177	354.391	355.193	355.612	356.646	357.975	359.089	360.267	360.745	362.125	363.328	364.761
2	351.031	351.216	353.331	354.544	355.347	355.766	356.800	358.129	359.242	360.421	360.899	362.279	363.482	364.914
3	351.184	351.370	353.485	354.698	355.500	355.919	356.953	358.283	359.396	360.575	361.052	362.433	363.636	365.068
4	351.338	351.523	353.638	354.852	355.654	356.073	357.107	358.436	359.550	360.728	361.206	362.586	363.789	365.222
5	351.184	351.370	353.485	354.698	355.500	355.919	356.953	358.283	359.396	360.575	361.052	362.433	363.636	365.068
6	351.031	351.216	353.331	354.544	355.347	355.766	356.800	358.129	359.242	360.421	360.899	362.279	363.482	364.914
7	350.877	351.062	353.177	354.391	355.193	355.612	356.646	357.975	359.089	360.267	360.745	362.125	363.328	364.761

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 5, 6 AND 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 94.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 F&E	ALEXANDER COUNTY, ILLINOIS	MISSISSIPPI COUNTY, MISSOURI	81	6
FAI-RTE-062 & 062 B FAI-RTE-062 & 062 B		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



GIRDER ELEVATIONS — FOR FABRICATION ONLY

LOCATION / GIRDER	℄ LINK SPAN 7	PIER 7	S. W. S. 8A-1	F. S. 8A-2	S. W. S. 8A-3	F. S. 8A-4	S. W. S. 8A-5	F. S. 8A-6	S. W. S. 8A-7	PIER 9	S. W. S. 9A-1	F. S. 9A-2	S. W. S. 9A-3	F. S. 9A-4	S. W. S. 9A-5	F. S. 9A-6	S. W. S. 9A-7	℄ BRG. PIER 11 SPAN 9A
1	364.761	364.964	366.552	367.840	369.939	371.596	372.965	373.981	375.245	376.050	376.854	378.215	380.231	381.908	383.424	384.497	385.203	385.620
2	364.914	365.118	366.706	368.067	370.181	371.832	373.171	374.150	375.398	376.203	377.008	378.384	380.437	382.062	383.671	384.718	385.398	385.773
3	365.068	365.272	366.860	368.221	370.336	371.987	373.325	374.304	375.553	376.357	377.162	378.539	380.591	382.216	383.825	384.872	385.553	385.928
4	365.222	365.425	367.013	368.371	370.489	372.140	373.478	374.458	375.706	376.511	377.315	378.692	380.744	382.369	383.978	385.025	385.706	386.081
5	365.068	365.272	366.860	368.221	370.336	371.987	373.325	374.304	375.553	376.357	377.162	378.539	380.591	382.216	383.825	384.872	385.553	385.928
6	364.914	365.118	366.706	368.067	370.181	371.832	373.171	374.150	375.398	376.203	377.008	378.384	380.437	382.062	383.671	384.718	385.398	385.773
7	364.761	364.964	366.552	367.840	369.939	371.596	372.965	373.981	375.245	376.050	376.854	378.215	380.231	381.908	383.424	384.497	385.203	385.620

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE

F. S. = FIELD SPLICE
S. W. S. = SHOP WEB SPLICE

FILLET WELD TABLE

FLANGE PL THICKNESS	WELD SIZE
OVER ¾" TO 1½"	5/16"
OVER 1½" TO 2¼"	⅜"
OVER 2¼" TO 6"	½"

NOTES:

ALL MATERIAL ASTM A36 - *EXCEPT AS NOTED.*

ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.

SHEAR LUGS ARE TO BE FURNISHED & INSTALLED UNDER SECTION (02-1B-1)D.

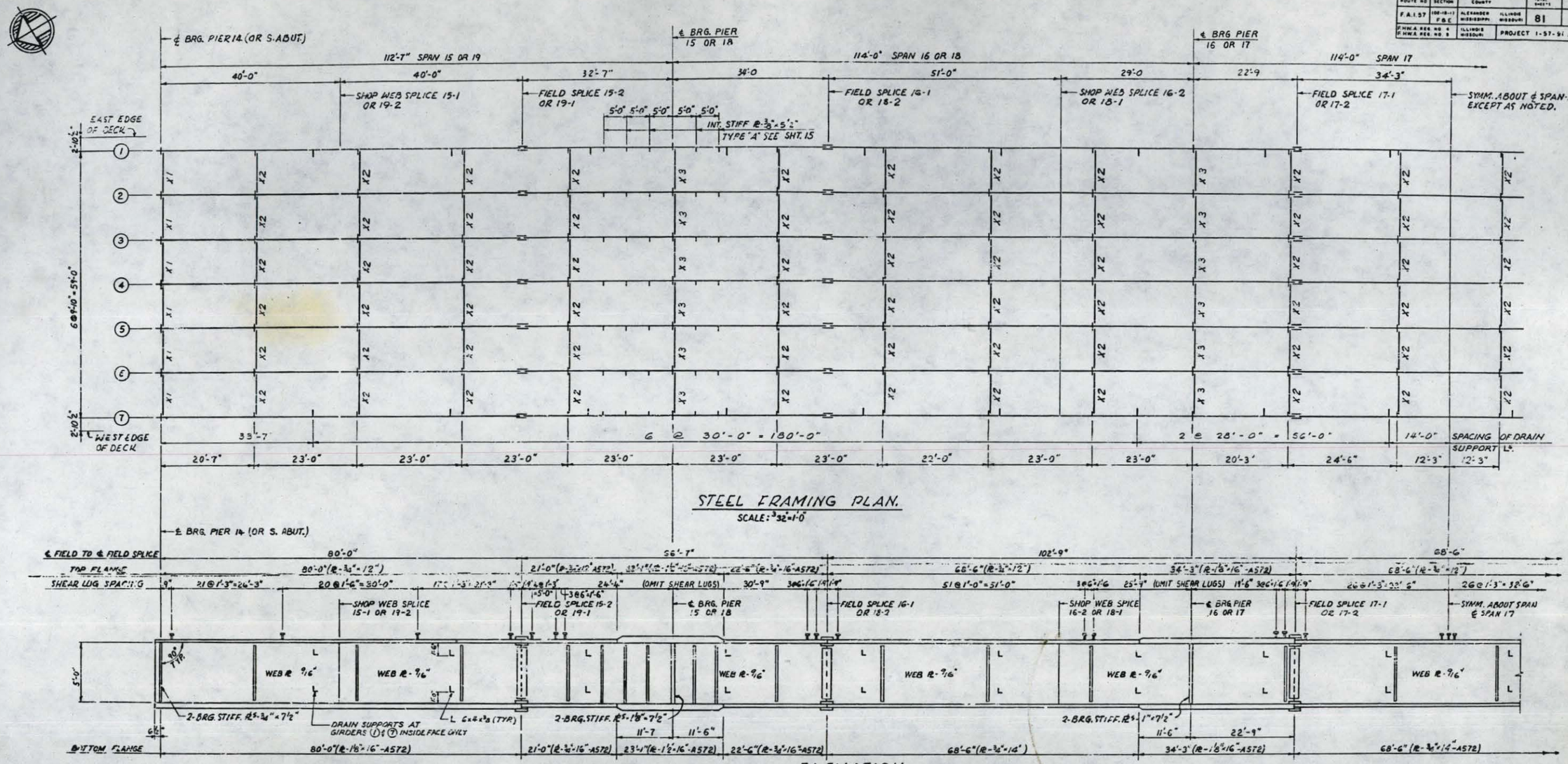
LONGITUDINAL STIFFENERS TO BE ON SIDE OF WEB OPPOSITE TRANSVERSE STIFFENERS ON GIRDERS ① TO ⑦.

SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN — SPANS 8A & 9A
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 64.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	9
FHWA REG. NO. 5		ILLINOIS		PROJECT I-57-9( )10	
FHWA REG. NO. 7		MISSOURI			



STEEL FRAMING PLAN.

SCALE: 3/32"=1'-0"

ELEVATION

NO SCALE
GIRDER 1 SHOWN

GIRDER ELEVATIONS-FOR FABRICATION ONLY

S.W.S. = SHOP WEB SPLICE
F. S. = FIELD SPLICE

GIRDER \ LOCATION	℄ BRG. PIER 14	S.W.S. 15-1	F.S. 15-2	PIER 15	F.S. 16-1	S.W.S. 16-2	PIER 16	F.S. 17-1	F.S. 17-2	PIER 17	S.W.S. 18-1	F.S. 18-2	PIER 18	F.S. 19-1	S.W.S. 19-2	℄ BRG. S.ABUT.
1	379.882	378.993	377.697	376.692	375.644	374.160	373.316	372.654	370.599	369.896	369.000	367.410	366.445	365.521	364.516	363.130
2	380.036	379.147	377.851	376.846	375.798	374.314	373.470	372.807	370.752	370.050	369.154	367.564	366.599	365.674	364.669	363.283
3	380.190	379.301	378.004	376.999	375.951	374.467	373.623	372.961	370.906	370.203	369.307	367.717	366.752	365.828	364.823	363.437
4	380.343	379.454	378.158	377.153	376.105	374.621	373.777	373.115	371.060	370.357	369.461	367.871	366.906	365.982	364.977	363.591
5	380.190	379.301	378.004	376.999	375.951	374.467	373.623	372.961	370.906	370.203	369.307	367.717	366.752	365.828	364.823	363.437
6	380.036	379.147	377.851	376.846	375.798	374.314	373.470	372.807	370.752	370.050	369.154	367.564	366.599	365.674	364.669	363.283
7	379.882	378.993	377.697	376.692	375.644	374.160	373.316	372.654	370.599	369.896	369.000	367.410	366.445	365.521	364.516	363.130

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE.

FILLET WELD TABLE

FLANGE PL THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16

NOTES:

MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (02-1B-1) D.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
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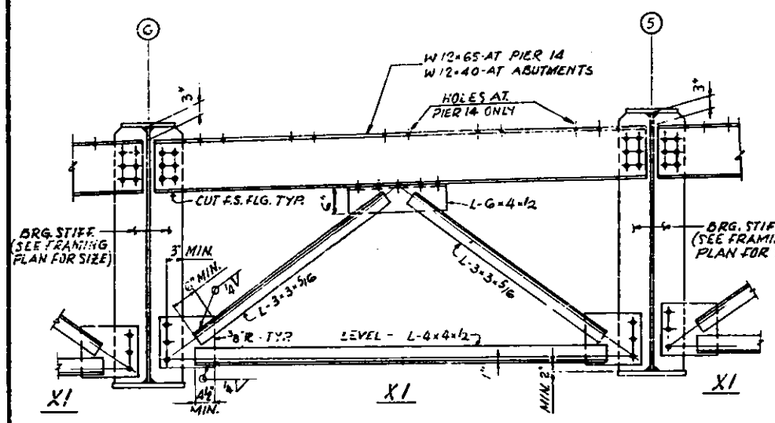
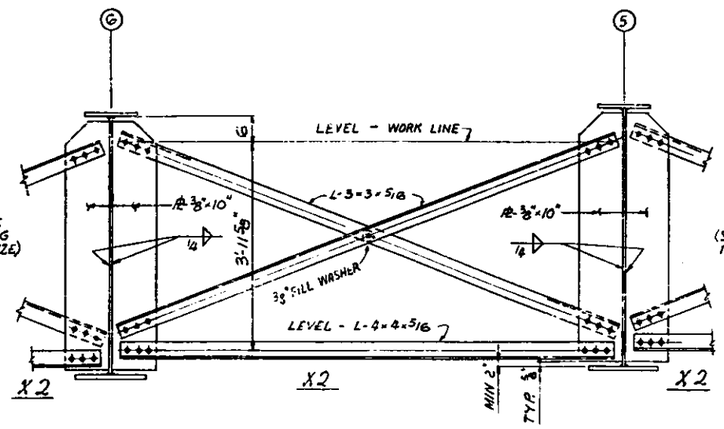
FRAMING PLAN - SPANS 15 T
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.88

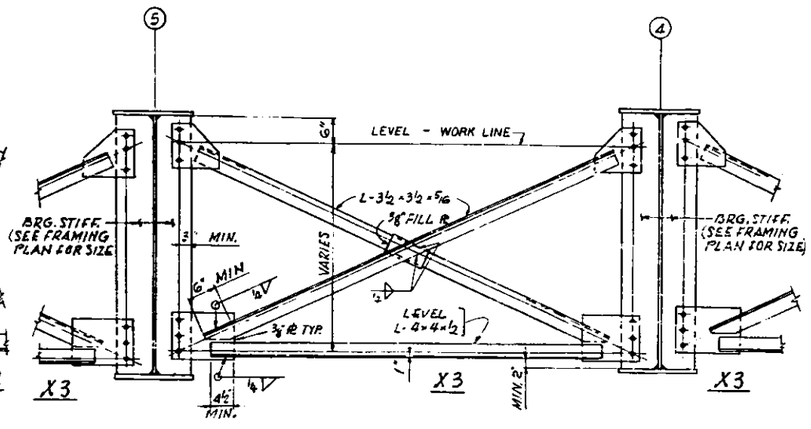
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) F&E	ALEXANDER	ILLINOIS	81	10
F.HW.A. REG. NO. 4		MISSISSIPPI	MISSOURI		
F.HW.A. REG. NO. 5		ILLINOIS	MISSOURI	PROJECT I-57-9(.0	



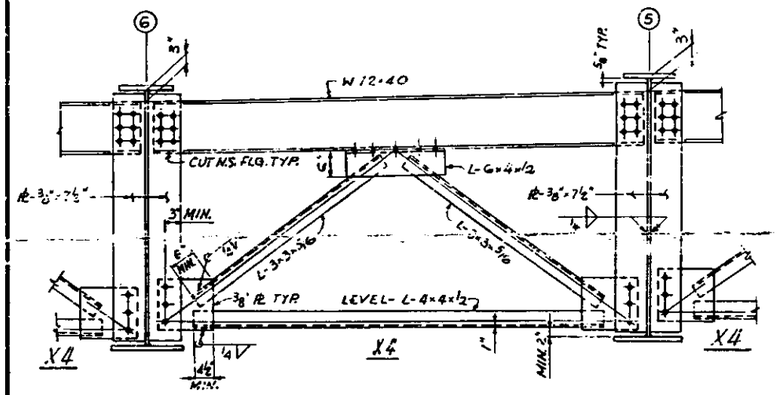
CROSSFRAME-X1 (AT ABUTMENT & PIER)
SCALE: 3/4"=1'-0"



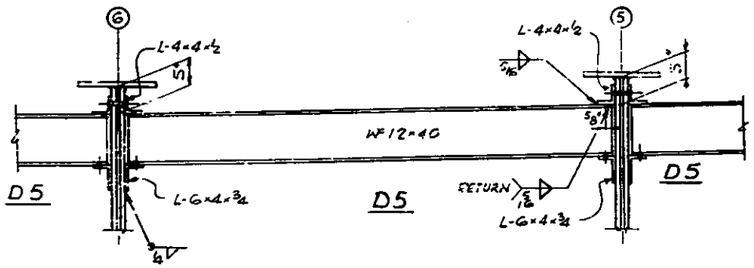
INTERMEDIATE CROSSFRAME - X2
SCALE: 3/4"=1'-0"



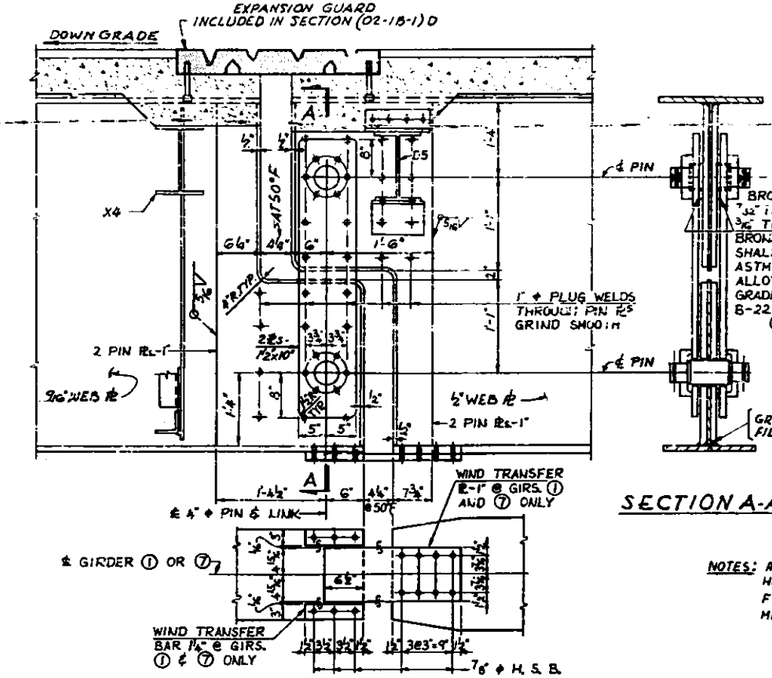
CROSSFRAME-X3 (AT PIER)
SCALE: 3/4"=1'-0"



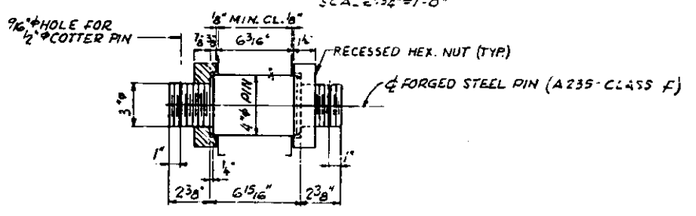
CROSSFRAME-X4 (AT LINK)
SCALE: 3/4"=1'-0"



DIAPHRAGM-D5 (AT LINK)
SCALE: 3/4"=1'-0"



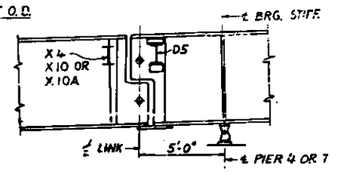
LINK DETAILS — SPAN 4



PIN DETAIL

NUTS SHALL BE SNUGGED UP FINGER TIGHT AGAINST SHOULDERS OF PIN.
TOTAL NO. OF PINS REQUIRED = 14.

SECTION A-A



LINK SETTING ELEVATION
LINK IN SPAN 4 SHOWN, LINK IN SPAN 7 SIMILAR

NOTE: LINK SHALL BE TRULY VERTICAL AT 50°F. CROSSFRAMES & DIAPHRAGMS SHALL BE AT RIGHT ANGLES TO GIRDER FLANGE.

NOTES: ALL FASTENERS SHALL BE ¾"⌀ ASTM A 325 HIGH STRENGTH BOLTS UNLESS NOTED.
FOR DETAIL OF STIFFENERS SEE SHT. 15
MATERIAL - A 36 - EXCEPT AS NOTED.

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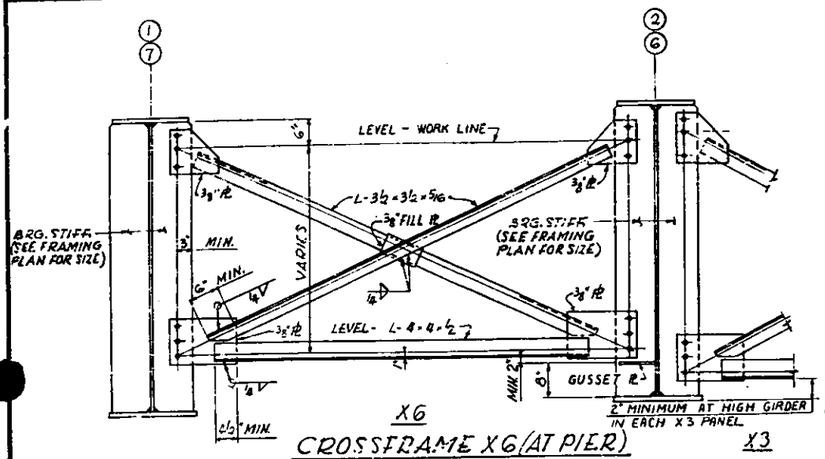
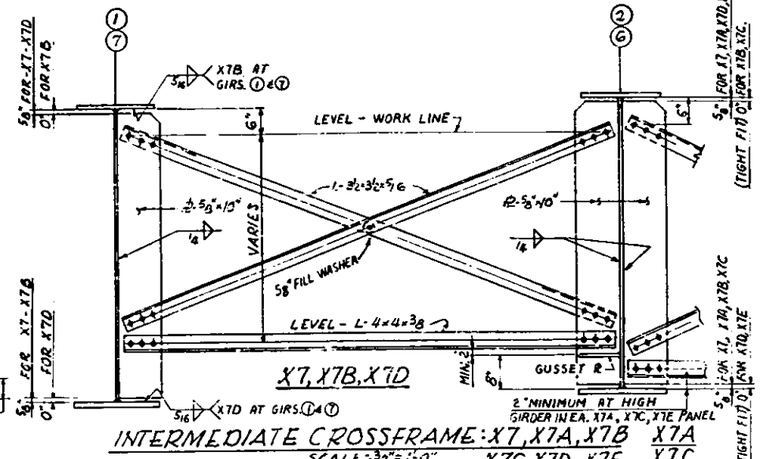
GIRDER CROSSFRAMES AND LINK DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(.10)
SECTION (02-18-1) F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25



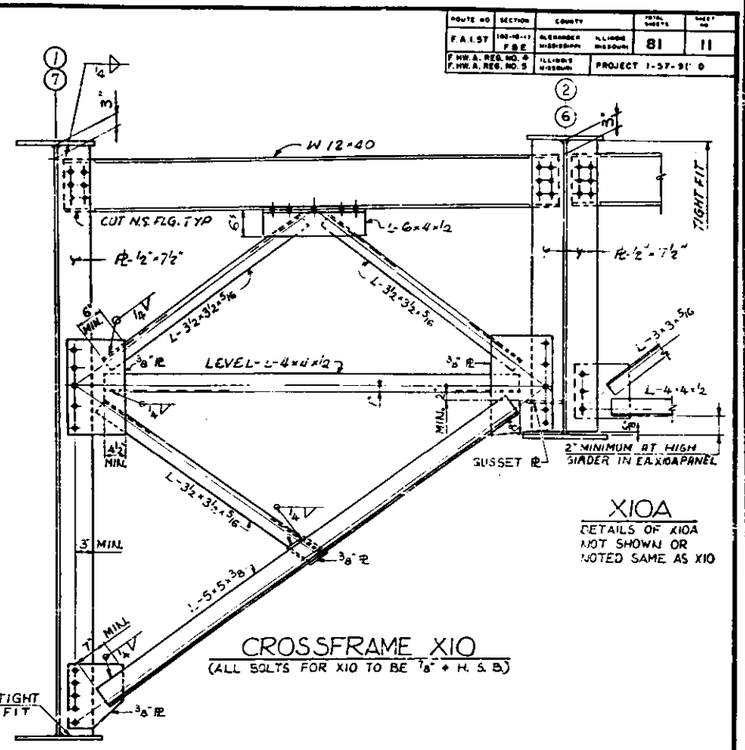
CROSSFRAME X6 (AT PIER)

SCALE: 3/4" = 1'-0"



INTERMEDIATE CROSSFRAME: X7, X7A, X7B, X7C, X7D, X7E

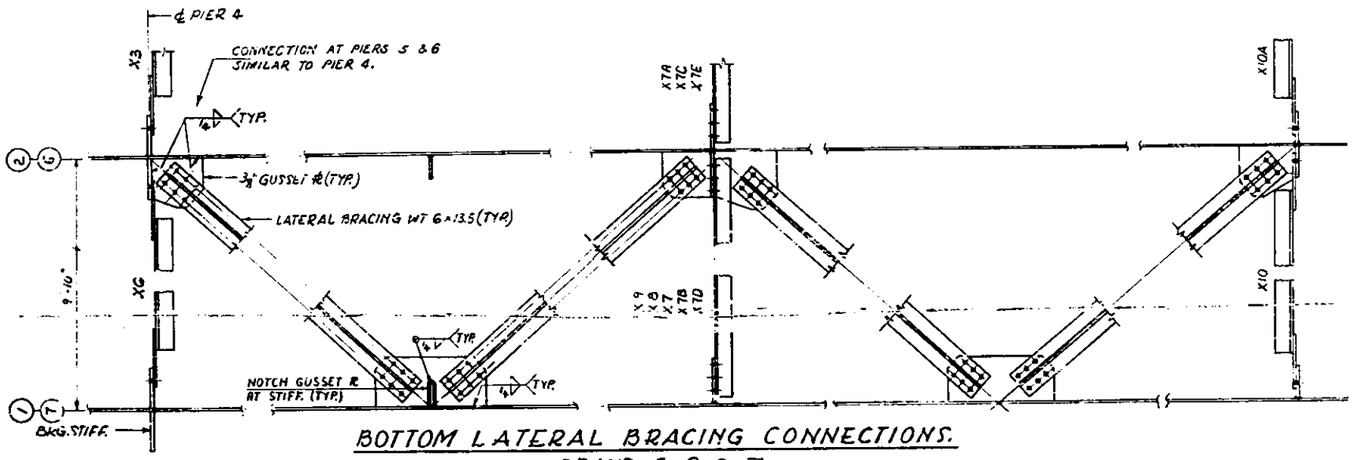
SCALE: 3/4" = 1'-0"



DETAILS OF X10A NOT SHOWN OR NOTED SAME AS X10

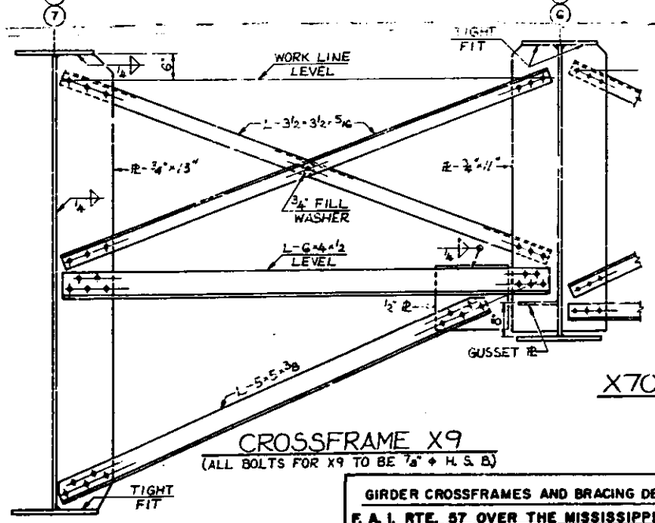
CROSSFRAME X10

(ALL BOLTS FOR X10 TO BE 7/8" ϕ H. S. B.)



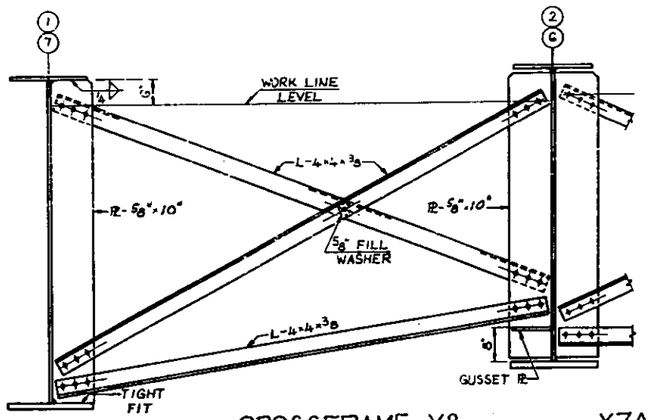
BOTTOM LATERAL BRACING CONNECTIONS.

SPANS 5, 6 & 7



CROSSFRAME X9

(ALL BOLTS FOR X9 TO BE 7/8" ϕ H. S. B.)



CROSSFRAME X8

(ALL BOLTS FOR X8 TO BE 7/8" ϕ H. S. B.)

NOTES:

ALL MATERIAL ASTM A 36 UNLESS NOTED.

ALL FASTENERS SHALL BE 3/4" ϕ ASTM A 325 HIGH STRENGTH BOLTS UNLESS NOTED.

FOR DETAIL OF STIFFENERS, SEE SHT. 15

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. ST	(02-18-1) F&E	ALEXANDER	ILLINOIS	81	11
		MISSISSIPPI	MISSOURI		
F.HW.A. REG. NO. 4		ILLINOIS		PROJECT I-57-9( )	
F.HW.A. REG. NO. 7		MISSOURI			

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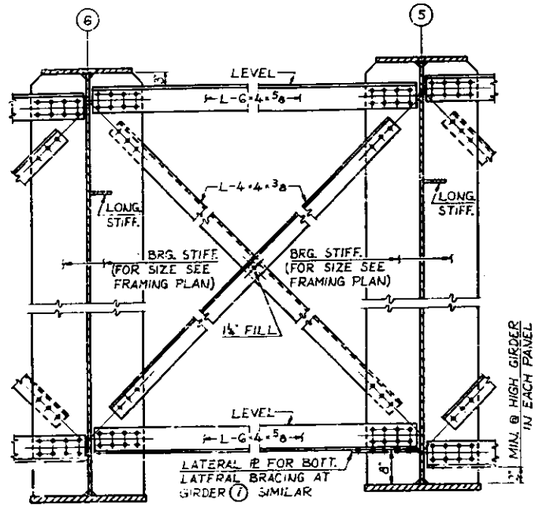
GIRDER CROSSFRAMES AND BRACING DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

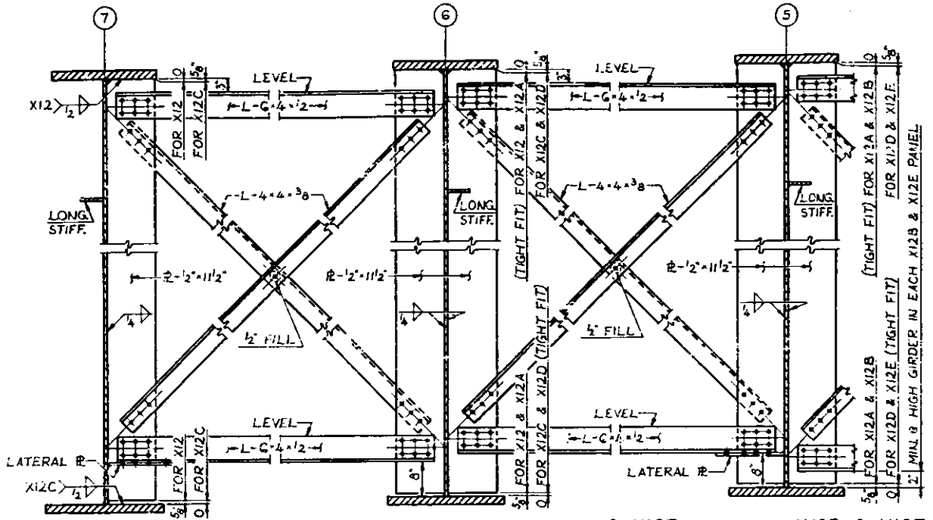
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	102-10-1 F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	12
FED.AID PROJ NO 1 / FED.AID PROJ NO 2		ILLINOIS / MISSOURI	PROJECT 1-57-9( )0	



X11 X11A X11B

CROSSFRAME X11, X11A & X11B

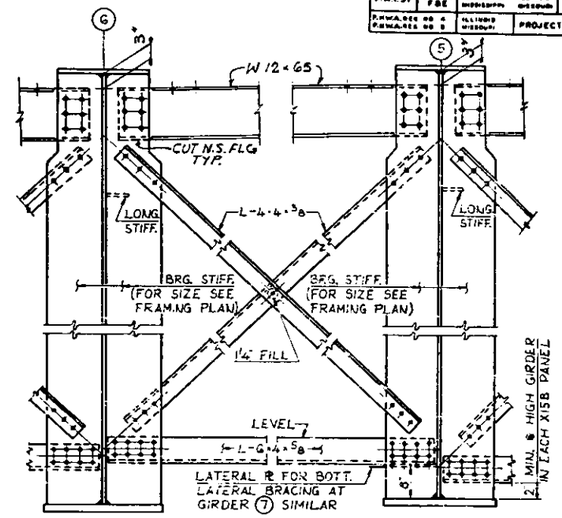
DETAILS OF X11 & X11B NOT SHOWN OR NOTED, SIMILAR TO X11A



X12 & X12C X12A & X12D X12B & X12E

INTERMEDIATE CROSSFRAME X12, X12A, X12B, X12C, X12D & X12E

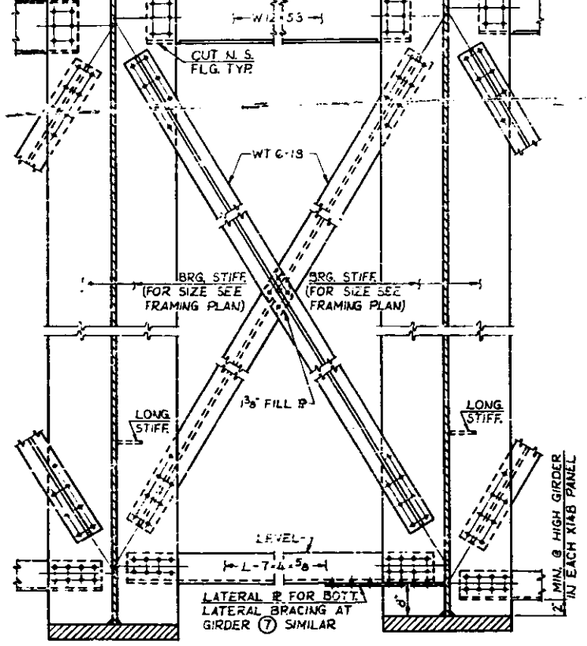
DETAILS OF X12B & X12E NOT SHOWN OR NOTED, SIMILAR TO X12A & X12D



X15 X15A X15B

CROSSFRAME X15, X15A & X15B

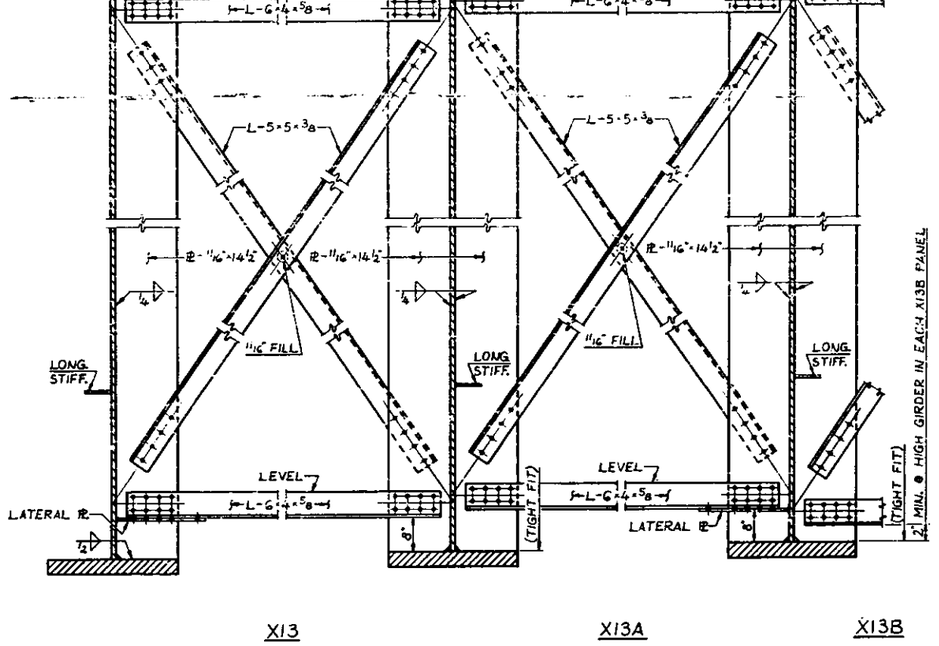
DETAILS OF X15 & X15B NOT SHOWN OR NOTED, SIMILAR TO X15A



X14 X14A X14B

CROSSFRAME X14, X14A & X14B

DETAILS OF X14 & X14B NOT SHOWN OR NOTED, SIMILAR TO X14A



X13 X13A X13B

INTERMEDIATE CROSSFRAME X13, X13A & X13B

DETAILS OF X13B NOT SHOWN OR NOTED, SIMILAR TO X13A

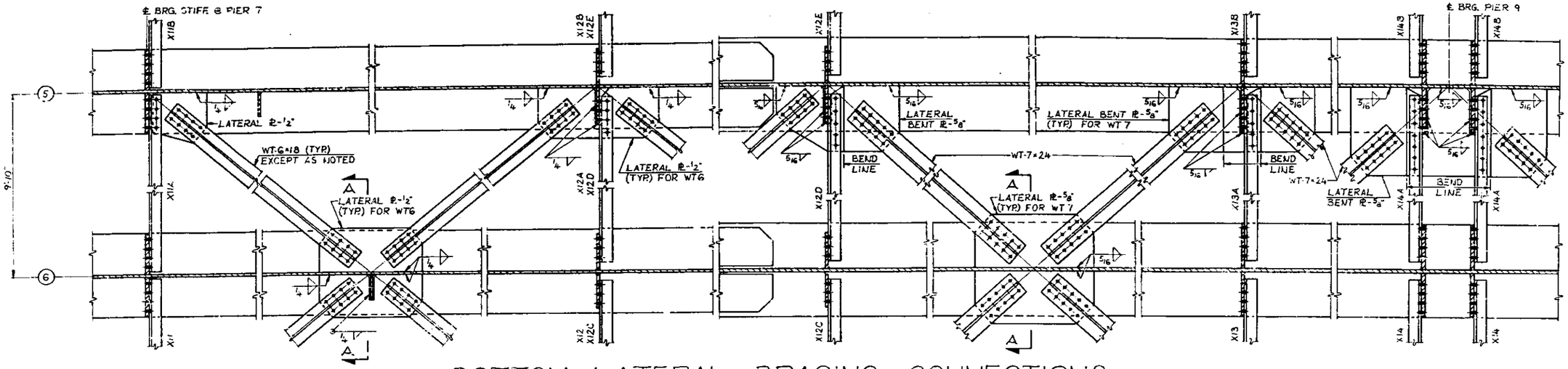
NOTES:

ALL MATERIAL ASTM A 36 UNLESS NOTED.

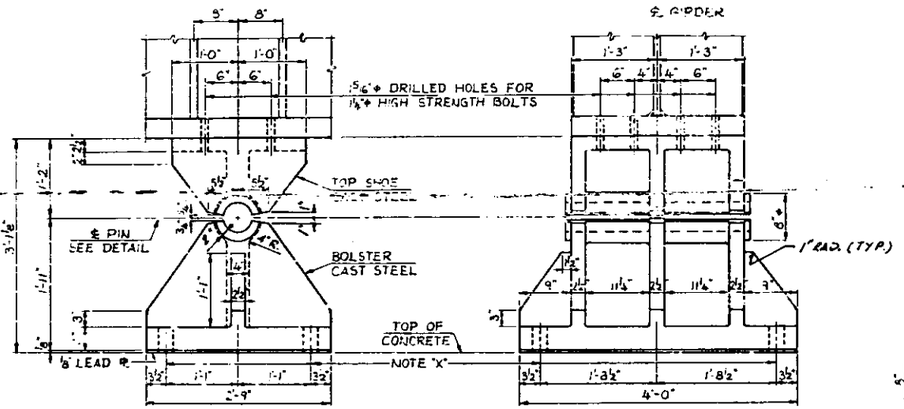
ALL FASTENERS SHALL BE 7/8" ϕ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.

STEEL DETAILS - SPANS 8A 9A
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(102-1B-1) F.B.E.	ALEXANDER ILLINOIS MISSOURI	81	13
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9(..)0	



BOTTOM LATERAL BRACING CONNECTIONS

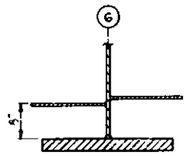


NOTE "X"

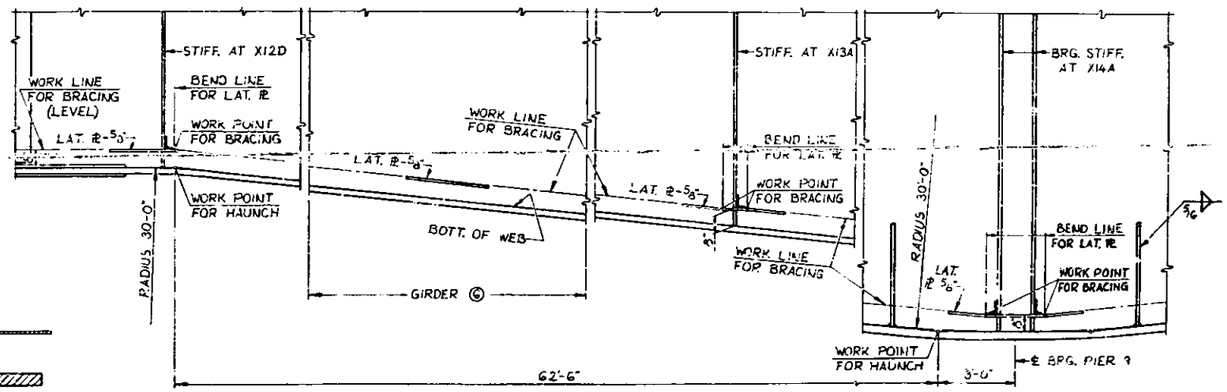
2½"ϕ HOLES FOR 2'-6" × 2'-9" SWEDGE ANCHOR BOLTS, TO PROJECT 7½" ABOVE TOP OF CONC. WITH ⅜" ℞ WASHER AND HEAVY HEX. NUT.

PIN DETAIL

FIXED BEARING AT PIER 9



SECTION A-A



DETAIL OF HAUNCH

GIRDER ⑤ SHOWN EXCEPT AS NOTED

NOTES:

ALL MATERIAL ASTM A36 UNLESS NOTED.

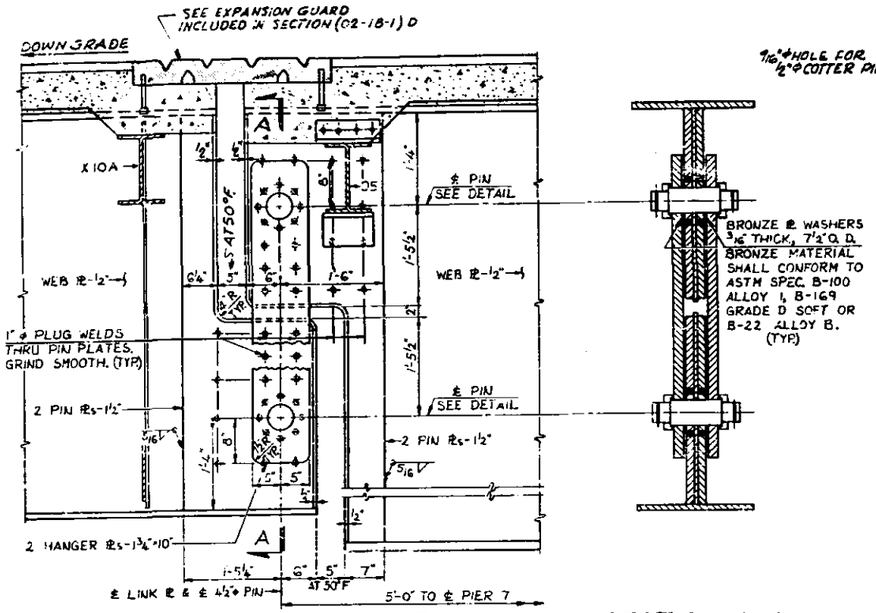
ALL FASTENERS SHALL BE ⅞"ϕ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.

FOR BEARING NOTES SEE SHT. 16.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

STEEL DETAILS - SPANS 8A [illegible]
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (102-1B-1)F.B.E.
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

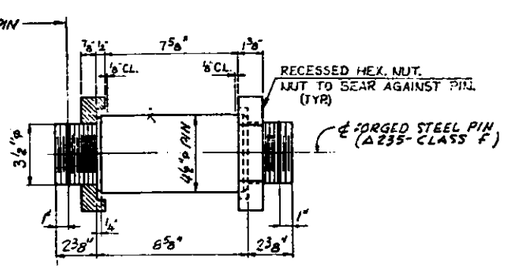
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. ST	(02-18-1) F&E	ALEXANDER, ILLINOIS / MISSISSIPPI, MISSOURI		81	14
FAI NO. 155 & 255		ILLINOIS / MISSOURI	PROJECT I-57-9( )0		



LINK DETAILS — SPAN 7

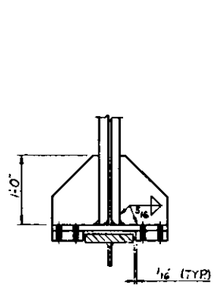
GIRDER 2 TO 6 SHOWN
GIRDERS 1 & 7 SIMILAR EXCEPT FOR WIND BRACING

SECTION A-A

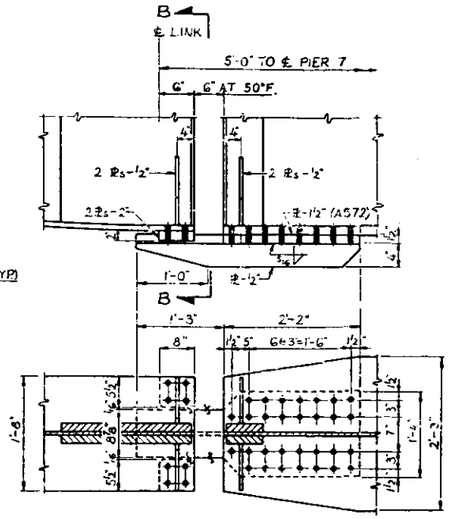


PIN DETAIL

NUTS SHALL BE SNUGGED UP FINGER TIGHT AGAINST SHOULDERS OF PIN
TOTAL NO OF PINS REQUIRED = 14.



SECTION B-B



WIND BRACING AT LINK-SPAN 7

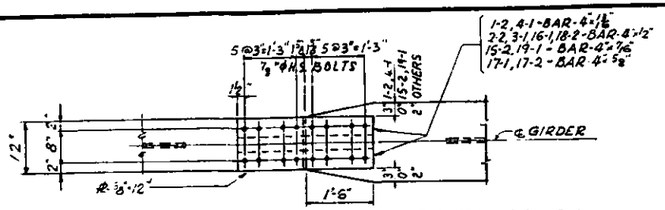
GIRDER 1 & 7

NOTES:

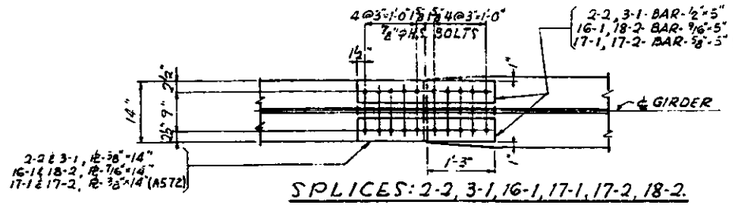
ALL MATERIAL ASTM A 36 UNLESS NOTED.

ALL FASTENERS SHALL BE ⅞" ø ASTM A 325 HIGH STRENGTH BOLTS UNLESS NOTED.

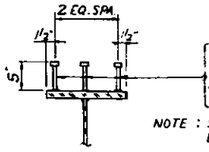
STEEL DETAILS - SPANS [illegible] 9A
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25



SPLICES: 1-2, 2-2, 3-1, 4-1, 15-2, 16-1, 17-1, 17-2, 18-2, 19-1.



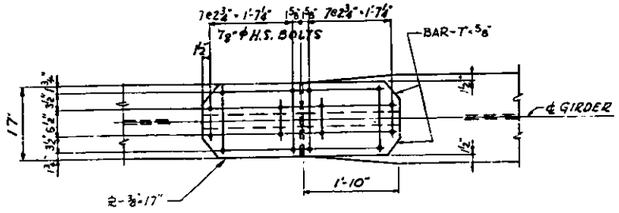
SPLICES: 2-2, 3-1, 16-1, 17-1, 17-2, 18-2.



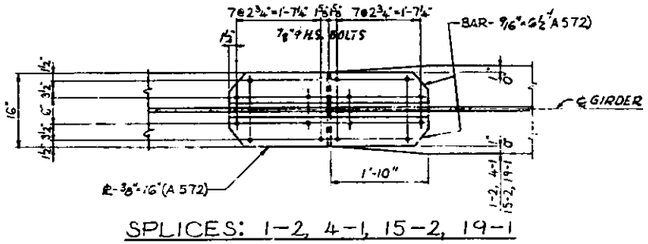
3/8"ϕx5" CR 1020 STL GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED TO GIRDER.

NOTE : SHEAR LUGS TO BE FURNISHED AND ERECTED UNDER SECTION (02-18-1)D

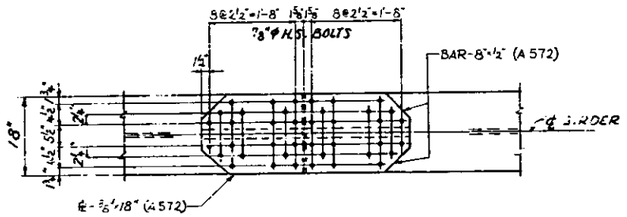
SHEAR LUG DETAIL



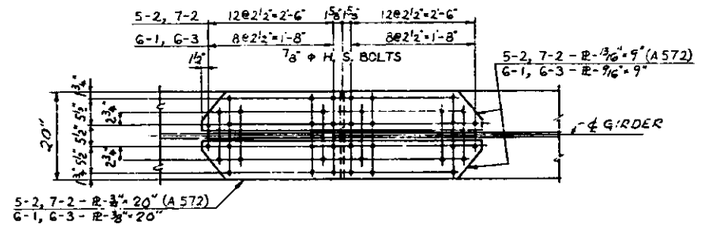
SPLICES: G-1, G-3



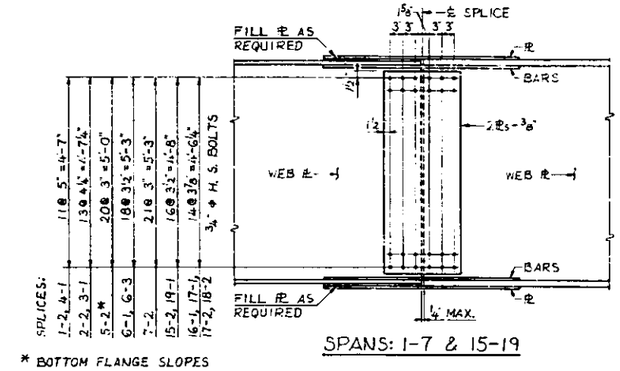
SPLICES: 1-2, 4-1, 15-2, 19-1



SPLICES: 5-2, 7-2

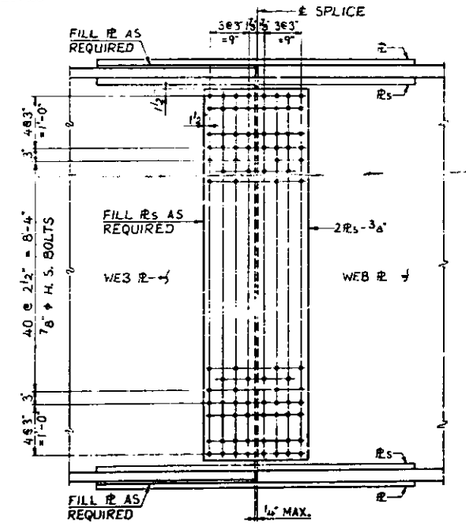


SPLICES: 5-2, G-1, G-3, 7-2



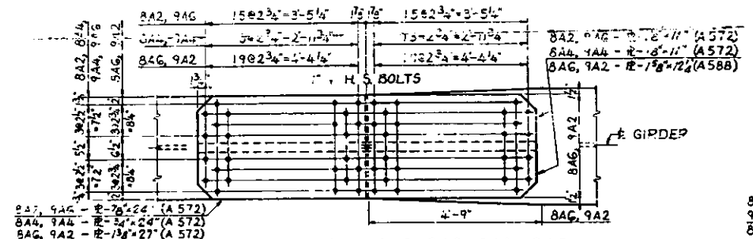
* BOTTOM FLANGE SLOPES

SPANS: 1-7 & 15-19



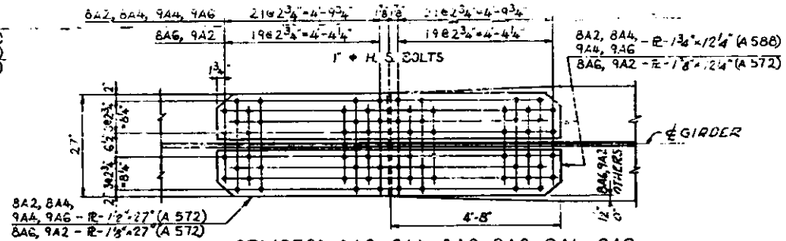
SPANS: 8A & 9A

WEB SPLICES



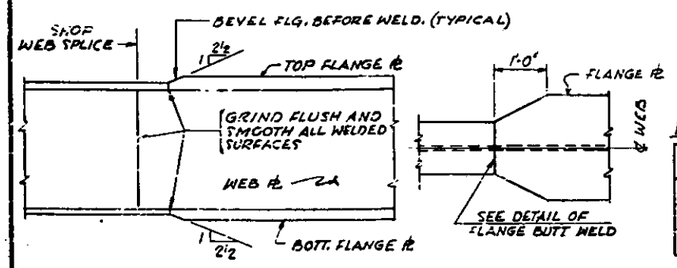
SPLICES: 8A2, 8A4, 8A6, 9A2, 9A4, 9A6

FIELD SPLICES - TOP FLANGE



SPLICES: 8A2, 8A4, 8A6, 9A2, 9A4, 9A6

FIELD SPLICES - BOTTOM FLANGE.

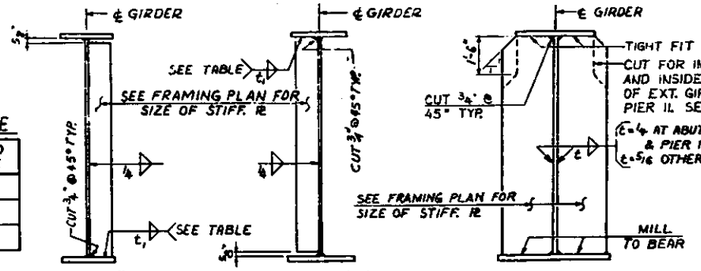


BUTT WELD DETAILS

FLANGE TRANSITION DETAIL

FILLET WELD (t_1) TABLE

FLANGE ℄ THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16
OVER 1 1/2" TO 2 1/4"	3/8



INTERMEDIATE STIFFENERS

BEARING STIFFENERS

NOTE:
ALL MATERIAL ASTM A 36 UNLESS NOTED

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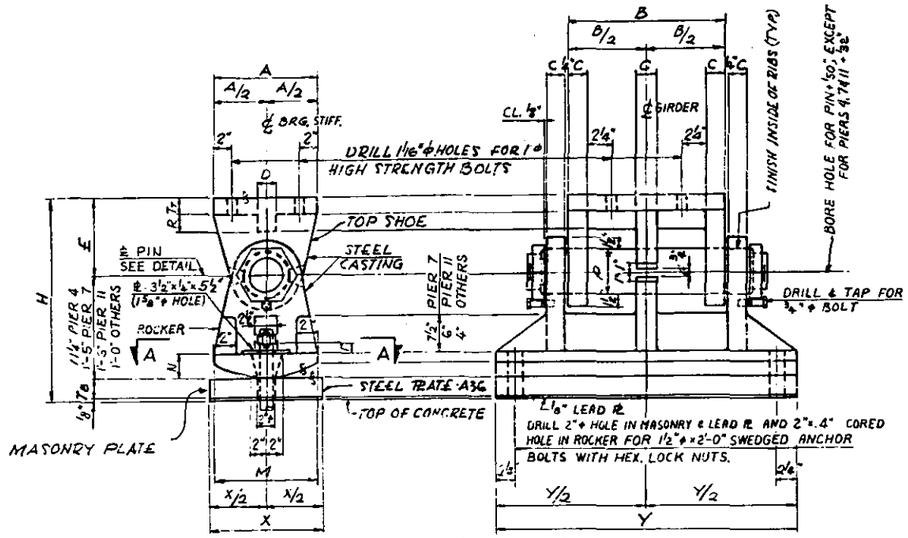
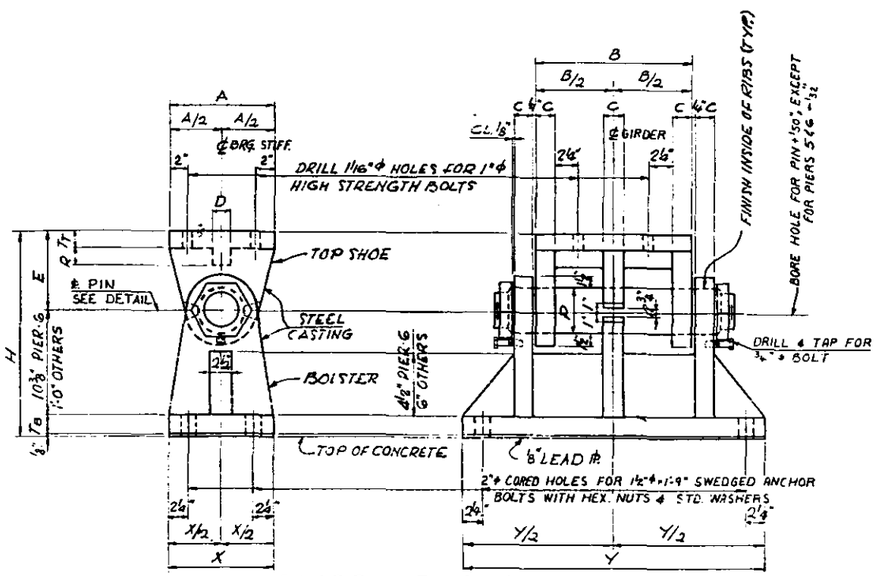
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.ST	180-1B-1) F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	15
F.AM.A.-AEC NO. * / F.AM.A.-BRS NO. 1		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

FIELD SPLICES & DETAILS-SPANS 1 T 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+76.25

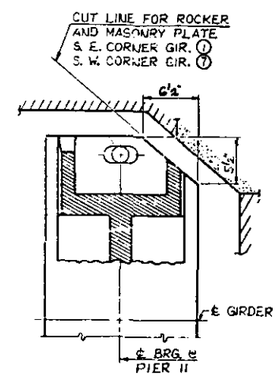
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(102-1B-1) F.B.E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	16
FHWA REG NO 4 FHWA REG NO 7		ILLINOIS MISSOURI		PROJECT I-57-9( )10	



EXPANSION BEARING



FIXED BEARING

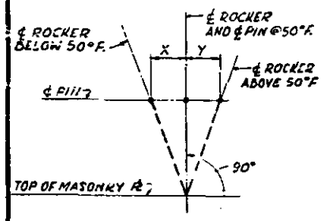


SECTION A-A

FOR GIRDERS ① & ⑦ @ PIER II ONLY

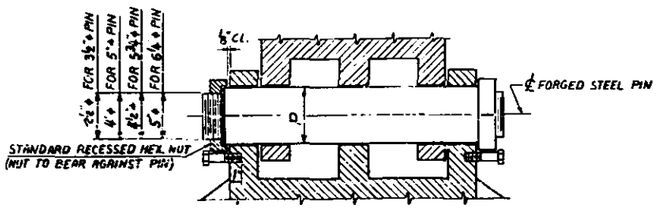
LOCATION	TOP SHOE A	B	Tr	C	D	E	R	PIN ϕ P	ROCKER M	N	MASONRY PLATE X	Y	Tb	H
NORTH ABUTMENT	1'-0"	1'-4"	1 1/2"	1 1/2"	1 1/2"	9"	2"	3 1/2"	1'-0"	2 1/2"	1'-0"	2'-7"	1 1/2"	1'-10 5/8"
PIER 2	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-0"	2 1/2"	1'-0"	2'-9"	2"	1'-11 1/8"
PIER 3	1'-0"	1'-6"	2"	2 1/4"	2"	9"	2"	5"	1'-0"	2 1/2"	1'-1"	3'-11"	2 1/8"	1'-11 3/8"
PIER 4	1'-3"	1'-8"	2"	2 1/2"	2"	9"	2 1/2"	5 3/8"	1'-0"	2 3/8"	1'-3"	3'-2"	2 1/4"	1'-10 5/8"
PIER 7	1'-3"	2'-3"	2 1/2"	3 1/4"	3 1/2"	10 1/2"	4 1/2"	6 1/2"	1'-3"	3 1/2"	1'-10"	4'-0"	3"	2'-7 1/2"
PIER 11-SPAN 9A	1'-3"	2'-0"	2"	2 1/2"	2 1/2"	9"	3 1/2"	5 3/4"	1'-3"	3 1/2"	1'-6"	3'-7"	2 3/4"	2'-2 7/8"
PIER 14-SPAN 15	1'-0"	1'-4"	1 1/2"	1 1/2"	1 1/2"	9"	2"	3 1/2"	1'-0"	2 1/2"	1'-0"	2'-7"	1 1/2"	1'-10 5/8"
PIER 15	1'-0"	1'-6"	2"	2 1/4"	2"	9"	2"	5"	1'-0"	2 1/2"	1'-1"	3'-9"	2 1/8"	1'-11 3/8"
PIER 18	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-0"	2 1/2"	1'-1"	3'-9"	2 1/4"	1'-11 3/8"
SOUTH ABUTMENT	1'-0"	1'-4"	1 1/2"	1 1/2"	1 1/2"	9"	2"	3 1/2"	1'-0"	2 1/2"	1'-0"	2'-7"	1 1/2"	1'-10 5/8"

LOCATION	TOP SHOE A	B	Tr	C	D	E	R	PIN ϕ P	BOLSTER X	Y	Tb	H
PIER 1	1'-0"	1'-6"	2"	2 1/4"	2"	9"	2"	5"	1'-2"	2'-11"	2 1/2"	1'-11 5/8"
PIER 5	1'-3"	1'-8"	2"	2 1/2"	2"	9"	2 1/2"	5 3/8"	1'-3"	3'-2"	2 3/4"	1'-11 3/8"
PIER 6	1'-3"	1'-8"	2"	2 1/2"	2"	9"	2 1/2"	5 3/8"	1'-3"	3'-2"	2 3/4"	1'-10 1/4"
PIER 16	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-2"	2'-9"	2 1/2"	1'-11 5/8"
PIER 17	1'-0"	1'-4"	2"	2 1/4"	2"	9"	2"	5"	1'-2"	2'-9"	2 1/2"	1'-11 5/8"



LOCATION	X -10°F	10°F	30°F	X OR Y 50°F	Y 70°F	90°F	110°F
N. ABUT.	1/2"	3/8"	3/16"	0"	3/16"	3/8"	1/2"
PIER 2	1/2"	3/8"	3/16"	0"	3/16"	3/8"	1/2"
PIER 3	1"	11/16"	3/8"	0"	3/8"	11/16"	1"
PIER 4	1/8"	3/8"	3/8"	0"	3/8"	3/8"	1/8"
PIER 7	1 3/16"	1 5/16"	9/16"	0"	9/16"	1 3/16"	1 5/16"
PIER 11-SPAN 9A	1 3/16"	1 5/16"	9/16"	0"	9/16"	1 3/16"	1 3/16"
PIER 14-SPAN 15	1 5/16"	7/8"	7/16"	0"	7/16"	7/8"	1 5/16"
PIER 15	1 3/16"	9/16"	1/8"	0"	1/8"	9/16"	1 3/16"
PIER 18	1 3/16"	9/16"	1/8"	0"	1/8"	9/16"	1 3/16"
S. ABUT.	1 5/16"	7/8"	7/16"	0"	7/16"	7/8"	1 5/16"

CORRECTION FOR TEMPERATURE-ROCKER SETTING



PIN DETAIL

NOTES:

FOR DETAILS OF FIXED BEARING AT PIER 9 SEE SHT. 13

CAST STEEL SHALL CONFORM TO A. S. T. M. A486-65, CLASS TQ NORMALIZED.

FORGED STEEL SHALL CONFORM TO A. S. T. M. A235-65, CLASS F.

ALL OTHER MATERIAL SHALL CONFORM TO A. S. T. M. A36 EXCEPT AS OTHERWISE NOTED.

STRUCTURAL STEEL WELDMENTS OF EQUAL SECTION AND STRENGTH MAY BE SUBSTITUTED FOR THE CASTINGS SUBJECT TO APPROVAL OF ENGINEER.

CASTINGS, BEARING PLATES, LEVEL PLATES, ANCHOR BOLTS AND MISCELLANEOUS ITEMS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH SECTION 507 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. PLAN WEIGHT OF BEARINGS IS 189,785 POUNDS WHICH INCLUDES 131,840 POUNDS OF CAST STEEL.

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BEARING DETAILS - SPANS 1 TO TO 19

F. A. I. RTE. 57 OVER THE MISSI I RIVER

PROJECT I-57-9( )0

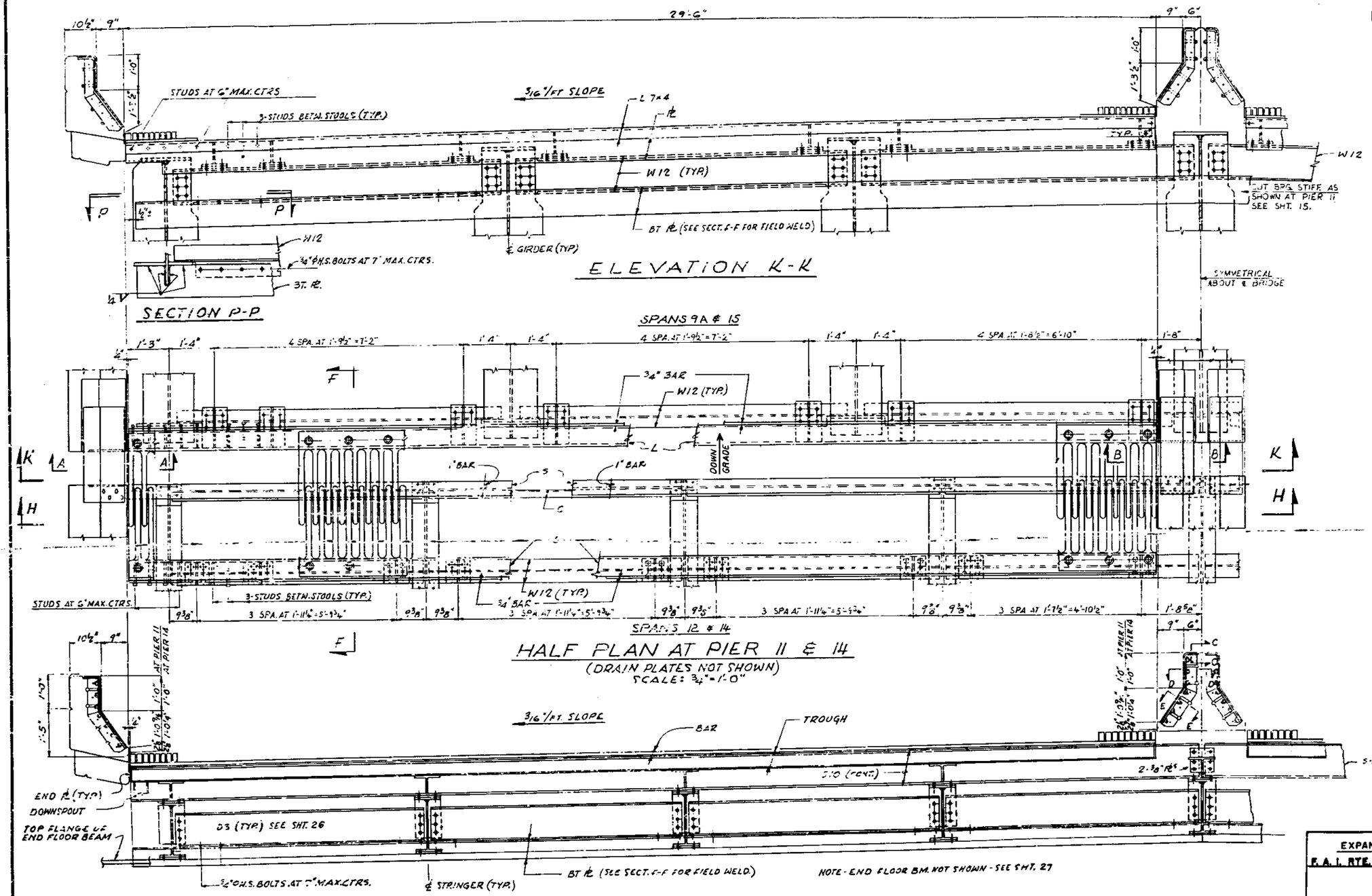
SECTION (02-1B-1)FBE

ALEXANDER COUNTY, ILLINOIS

MISSISSIPPI COUNTY, MISSOURI

STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) F.B.G.	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	17
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



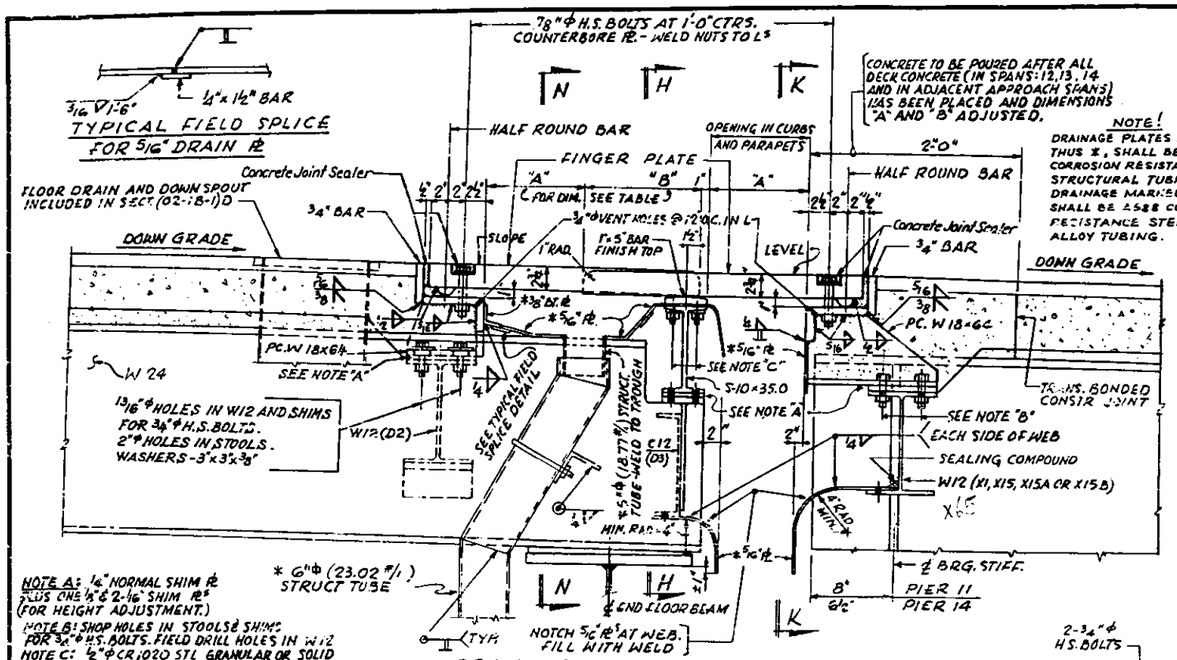
EXPANSION GUARD – PIER
F. A. I. RTE. 57 OVER THE MISSIS[illegible] RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)FBG
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
109 S. WABASH AVE. CHICAGO, ILLINOIS

Rev. Curb Dimensions 10-16-73 J.M.J.

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	100-1B-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	18
F.AI.M.A. REG. NO. = F.AI.M.A. REG. NO. =		ILLINOIS MISSOURI		PROJECT I-57-9(..)0	

TYPICAL FIELD SPLICE FOR 5/16" DRAIN ℄



NOTE A: 1/4" NORMAL SHIM ℞ PLUS ONE 1/8" & 2-1/16" SHIM ℞S (FOR HEIGHT ADJUSTMENT.)

NOTE B: SHOP HOLES IN STOOLS & SHIMS FOR 3/4" ϕ H.S. BOLTS. FIELD DRILL HOLES IN W12

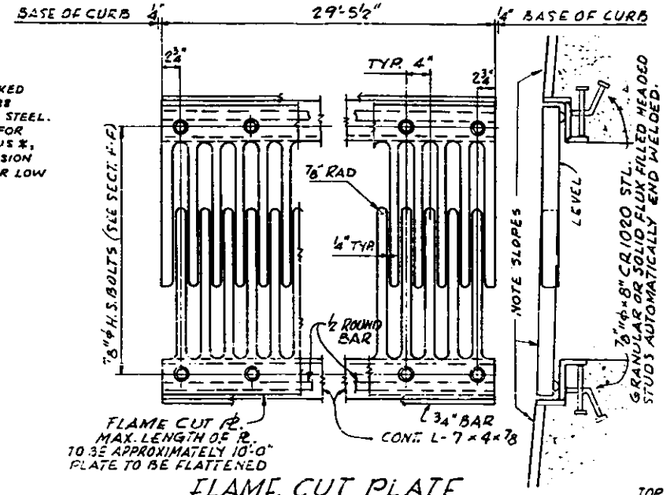
NOTE C: 1/2" ϕ CR.1020 STL GRANULAR OR SOLID FLUX FILLED THREADED STUDS AUTO. END WELDED AT 7/12 ALT. CTRS. 11/16" ϕ HOLES IN FLG. OF S10. BEVELED WASHERS AND SELF-LOCK NUTS.

NOTE D: 3/4" ϕ x 8" CR.1020 STL GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED.

SPANS: 12 OR 14 — SPANS: 9A OR 15

SECTION F-F
SCALE: 1/2" = 1'-0"

NOTE!
DRAINAGE PLATES MARKED THUS *, SHALL BE A588 CORROSION RESISTANCE STEEL. STRUCTURAL TUBING FOR DRAINAGE MARKED THUS *, SHALL BE A588 CORROSION RESISTANCE STEEL OR LOW ALLOY TUBING.

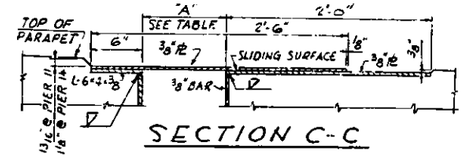


FLAME CUT PLATE
SCALE: 1" = 1'-0"

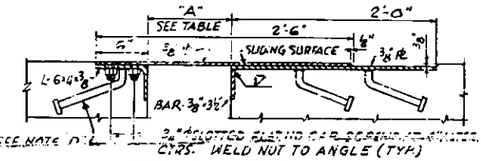
TABLE OF "A" AND "B" DIMENSIONS

TEMP (°F)*	BEFORE DECK CONCRETE IN SPANS 12, 13 & 14 IS POURED				AFTER DECK CONCRETE IN SPANS 12, 13 & 14 IS POURED			
	PIER 11		PIER 14		PIER 11		PIER 14	
	A	B	A	B	A	B	A	B
130	6 5/16	10 11/16	6 7/16	18 9/16	3 13/16	21 3/16	3 15/16	21 1/16
110	8 1/4	16 3/4	8 5/16	16 11/16	5 3/4	19 1/4	5 7/8	19 3/16
90	10 3/16	16 13/16	10 3/16	14 15/16	7 11/16	17 5/16	7 11/16	17 3/16
70	12 1/16	12 15/16	12 1/8	12 1/8	9 9/16	15 1/16	9 5/8	15 3/8
50	14	11	14	11	11 1/2	13 1/2	11 1/2	13 1/2
30	15 15/16	9 1/16	15 7/8	9 1/8	13 1/16	11 1/16	13 3/8	11 5/8
10	17 13/16	7 3/16	17 13/16	7 3/16	15 3/16	9 11/16	15 5/16	9 11/16
-10	19 5/8	5 1/4	19 11/16	5 5/16	17 1/4	7 3/4	17 3/16	7 13/16
-30	21 11/16	3 5/16	21 7/16	3 7/16	19 3/16	5 13/16	19 1/16	5 15/16

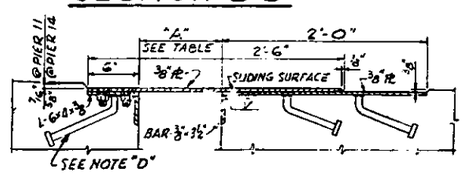
* TEMPERATURE AT TIME OF ADJUSTMENT OF EXPANSION GUARD



SECTION C-C

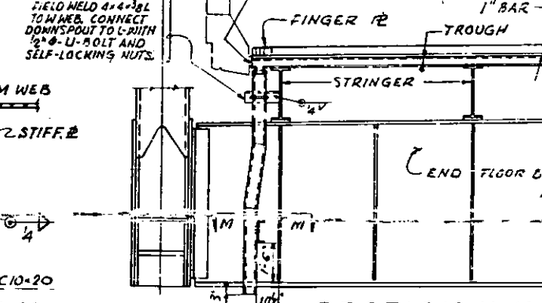


SECTION D-D



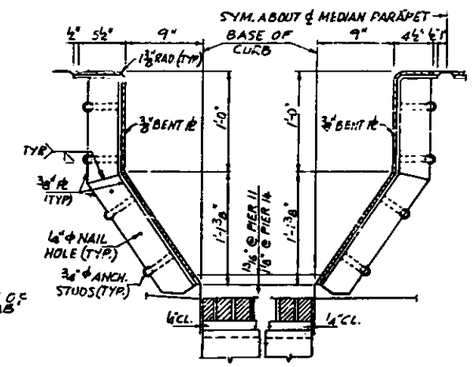
SECTION E-E
SCALE: 1 1/2" = 1'-0"

NOTE:
EXPANSION GUARD MATERIAL IN CURBS & PARAPETS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) D. ALL OTHER MATERIAL SHOWN ON THIS SHEET IS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) F & E EXCEPT AS NOTED.

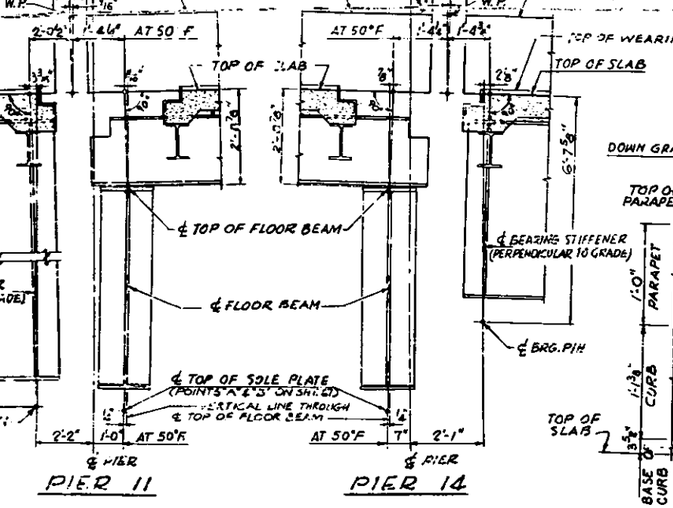


SECTION M-M
SCALE: 1" = 1'-0"

SECTION N-N
SCALE: 3/8" = 1'-0"

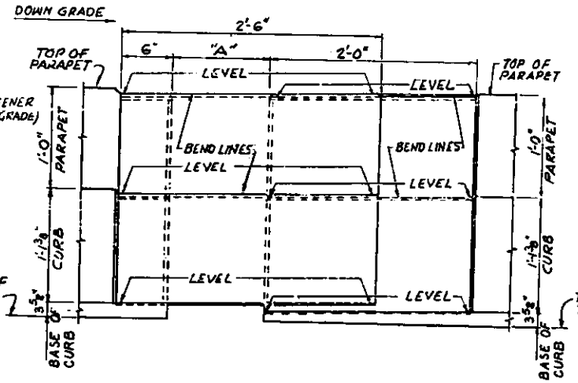


SECTION A-A SECTION B-B
SCALE: 1 1/2" = 1'-0"



PIER 11 PIER 14

WORK LINES
SCALE: 1/2" = 1'-0"



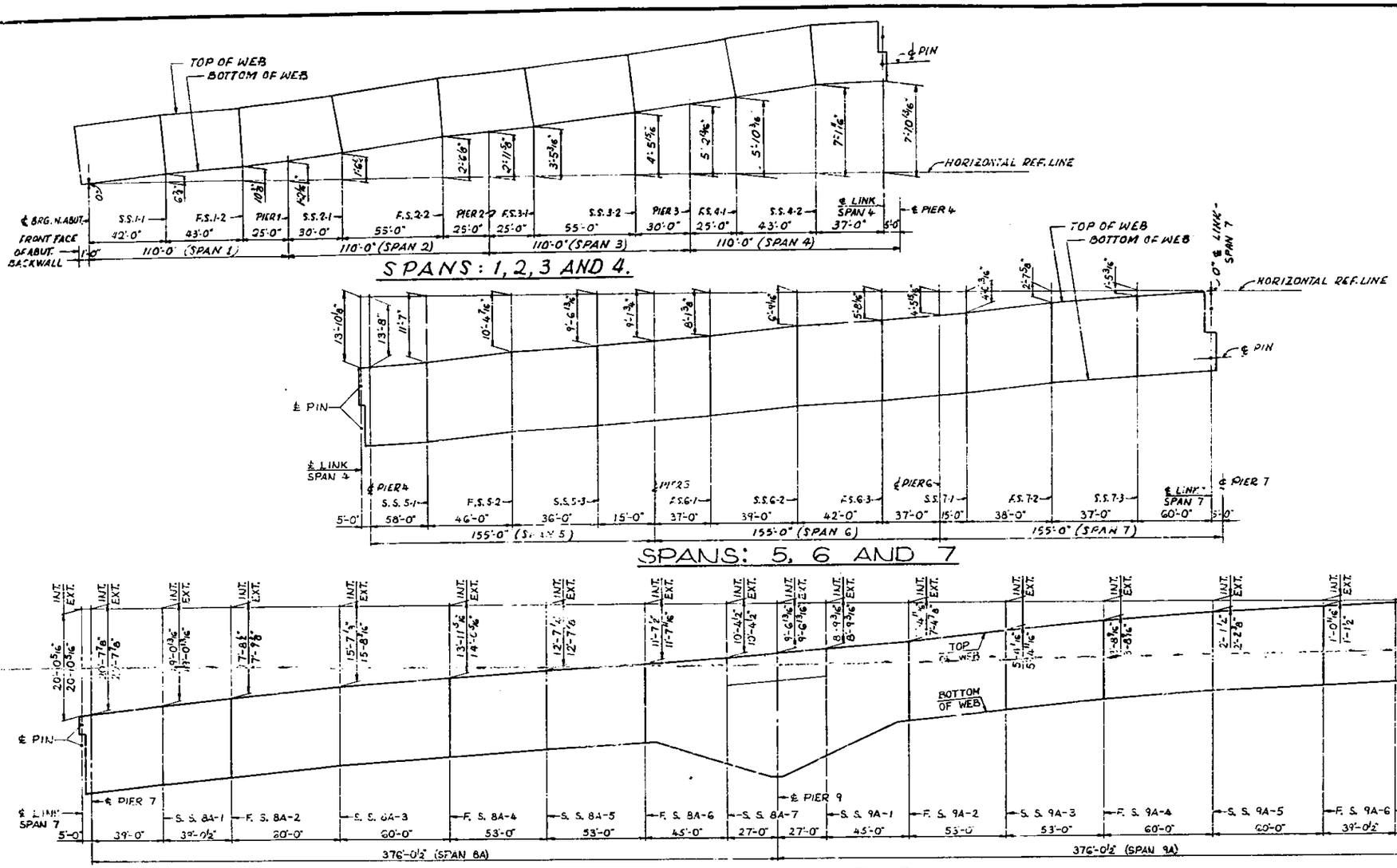
ELEVATION OF CURB AND PARAPET
SCALE: 1 1/2" = 1'-0"

EXPANSION GUARD - PIERS 11
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1) F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

Rev. 2-13-73

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) FBE	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	19
F.H.W.A. REG. NO. 5 / F.H.W.A. REG. NO. 6		ILLINOIS / MISSOURI	PROJECT I-57-9(10)	



NOTE:
CAMBERS SHOWN TAKE INTO ACCOUNT TOTAL DEAD LOAD DEFLECTION AND CURVATURE DUE TO THE PROFILE GRADE.

NOTES:
S. S. = SHOP SPLICE
F. S. = FIELD SPLICE
INT. = INTERIOR GIRDER ② TO ⑥
EXT. = EXTERIOR GIRDER ① & ⑦

BLOCKING DIAGRAMS - SPANS 1 TO [illegible]5 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 F&E	ALEXANDER MISSOURI	ILLINOIS	81	20
F.H.W.A. REG. NO. 5 F.M.C.S. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9( )10		

INTERIOR GIRDER DESIGN DATA TABLE

SECTION PROPERTIES

		0.4 SPAN 1 0.6 SPAN 4	PIER 1 OR 3	0.5 SPAN 2 OR 3	PIER 2	0.4 SPAN 5	PIER 5	0.5 SPAN 6	PIER 6	0.6 SPAN 7	0.4 SPAN 8A	PIER 9	0.6 SPAN 9A					0.4 SPAN 15 0.6 SPAN 19	PIER 15 OR 18	0.5 SPAN 16 OR 18	PIER 16 OR 17	0.5 SPAN 17	
STEEL SECTION	I_S (IN⁴)	30,998	56,757	28,080	36,076	58,041	121,219	50,129	114,534	62,978	778,856	3,264,509	778,856					33,993	55,530	28,087	43,764	28,087	
	S_S TOP (IN³)	927	1,809	888	1,168	1,465	3,310	1,325	3,138	1,472	9,780	29,278	9,780					962	1,763	889	1,406	889	
	S_S BOT. (IN³)	1,096	1,809	939	1,168	2,185	3,310	1,528	3,138	2,211	12,219	29,278	12,219					1,279	1,763	940	1,406	940	
COMP. SECTION	I_C N=10 (IN⁴)	79,145	—	70,158	—	143,918	—	118,692	—	161,104	1,223,627	—	1,224,461					88,959	—	70,172	—	70,172	
	S_C TOP (IN³)	6,941	—	6,970	—	8,944	—	8,925	—	9,418	22,466	—	22,491					6,922	—	6,970	—	6,970	
	S_C BOT. (IN³)	1,576	—	1,364	—	2,872	—	2,070	—	2,975	13,762	—	13,768					1,314	—	1,354	—	1,364	

MAXIMUM MOMENTS AND STRESSES

D.L.	(K/I)	1.278	1.749	1.265	1.669	1.418	1.979	1.351	1.962	1.409	1.958	3.096	1.958					1.293	1.743	1.265	1.699	1.265	
M.D.L.	(IK)	1,061	−2,435	427	−1,306	2,397	−4,589	507	−2,219	2,433	14,947	−49,473	15,197					1,249	−2,352	424	−1,739	705	
f_S	(KSI)	11.7	16.2	5.5	13.4	13.2	16.7	4.8	16.1	13.2	14.7	20.3	15.0					11.8	16.0	5.4	14.8	9.0	
S.D.L.	(K/I)	0.372	—	0.372	—	0.372	—	0.372	—	0.372	0.372	—	0.372					0.372	—	0.372	—	0.372	
M.S.D.L.	(I-K)	361	—	199	—	597	—	263	—	589	2,824	—	2,894					402	—	206	—	252	
M.L.L.	(I-K)	1,264	−1,061	1,052	− 840	1,886	−1,883	1,432	−1,835	1,825	8,520	−12,742	8,660					1,351	−1,065	1,054	− 997	1,150	
M.IMP.	(I-K)	269	− 226	224	− 179	408	−407	310	−348	396	841	−1,266	867					282	− 222	220	− 208	240	
M TOTAL	(I-K)	1,894	−1,287	1,475	−1,019	2,891	−2,290	2,005	−2,233	2,810	12,155	−14,008	12,420					2,035	−1,287	1,480	−1,205	1,642	
f_S	(KSI)	14.0	8.6	13.0	10.5	12.1	8.3	11.6	8.5	11.3	10.6	5.7	10.8					13.4	8.8	13.0	10.3	14.5	
f_S TOTAL	(KSI)	26.0	24.8	18.5	23.9	25.3	25.0	15.6	24.6	24.5	25.3	26.0	25.8					25.2	24.8	18.4	25.1	23.5	
f_S (ALLOW.)	(KSI)	26.0	26.5	20.0	26.2	26.4	26.6	20.0	26.6	26.4	26.6	26.3	26.6					26.1	26.5	20.0	26.3	25.7	
VR	(K)	74.2	—	66.3	—	80.8	—	71.4	—	80.2	143.6	—	143.6					70.5	—	71.5	—	71.4	

REACTIONS

	ABUT. NORTH	PIER 1 OR 3	PIER 2	LINK — SPAN 4	PIER 4	PIER 5	PIER 6	LINK — SPAN 7	PIER 7	PIER 9	℄ BRG. PIER 11 — SPAN 9A			℄ BRG. PIER 14 — SPAN 15 OR S. ABUT.	PIER 15 OR 18	PIER 16 OR 17
D.L. (K)	68.8	217.4	161.4	60.5	175.2	302.6	292.9	101.5	389.3	1,156.0	276.3			73.3	216.2	184.5
L.L. (K)	60.8	101.0	94.0	60.8	93.6	124.0	122.8	61.7	165.3	298.3	115.9			61.4	103.0	100.0
IMP. (K)	13.0	22.0	20.4	13.0	20.2	26.8	26.6	13.3	20.7	29.8	11.6			12.7	21.1	20.8
TOTAL (K)	142.6	340.4	275.8	134.3	289.0	453.4	442.3	176.5	575.3	1,484.1	403.8			147.9	340.3	305.3

LEGEND

I_S — MOMENT OF INERTIA OF STEEL SECTION AT LOCATION OF MAXIMUM MOMENT
S_S — SECTION MODULUS FOR STEEL SECTION
I_C — MOMENT OF INERTIA OF COMPOSITE SECTION AT LOCATION OF MAXIMUM MOMENT
S_C — SECTION MODULUS FOR COMPOSITE SECTION
D.L. — DEAD LOAD (INCLUDES SUPERIMPOSED DEAD LOAD AT INTERIOR SUPPORT)
S.D.L. — SUPERIMPOSED DEAD LOAD ACTING ON COMPOSITE SECTION
M.L.L. — LIVE LOAD MOMENT
M.IMP. — IMPACT MOMENT
f_S — FLEXURAL STRESS
f_S (ALLOW) — MAXIMUM ALLOWABLE FLEXURAL STRESS
VR — MAXIMUM LIVE LOAD PLUS IMPACT SHEAR RANGE IN SPAN USED TO DETERMINE SHEAR CONNECTOR SPACING.

ALFRED BENESCH & COMPANY
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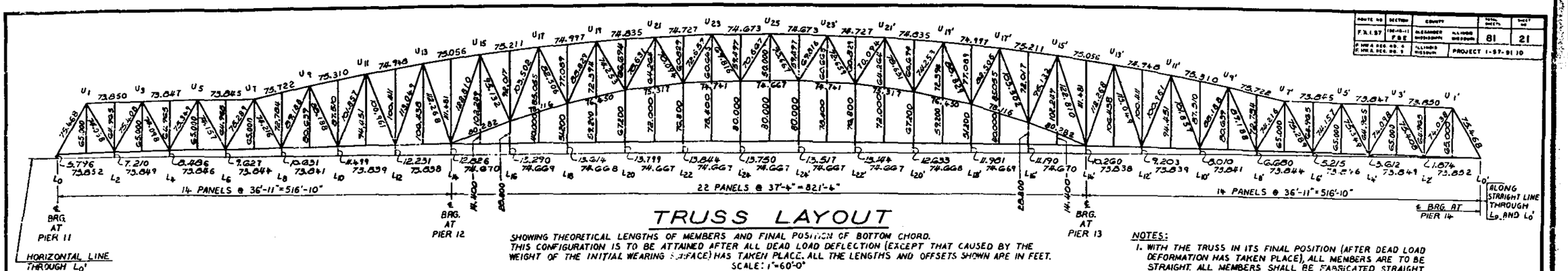
DESIGN DATA & STRESS TABLE-SPANS 1 TO S... TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION 102-1B-1 F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.76 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(102-1B-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	21
F. AID A PROJ. NO. 0					
F. AID A PROJ. NO. 0		ILLINOIS MISSOURI		PROJECT I-57-91 10	

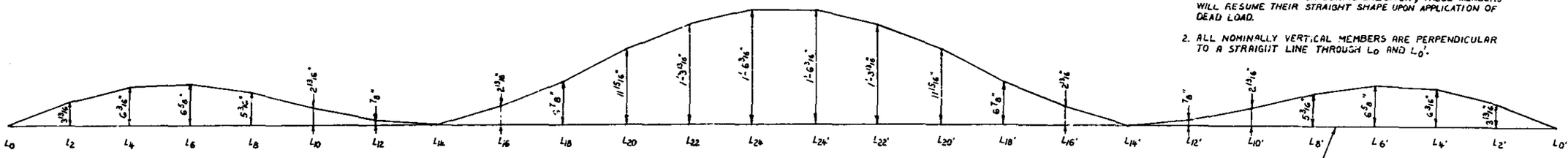


TRUSS LAYOUT

SHOWING THEORETICAL LENGTHS OF MEMBERS AND FINAL POSITION OF BOTTOM CHORD.
THIS CONFIGURATION IS TO BE ATTAINED AFTER ALL DEAD LOAD DEFLECTION (EXCEPT THAT CAUSED BY THE WEIGHT OF THE INITIAL WEARING SURFACE) HAS TAKEN PLACE. ALL THE LENGTHS AND OFFSETS SHOWN ARE IN FEET.
SCALE: 1"=60'-0"

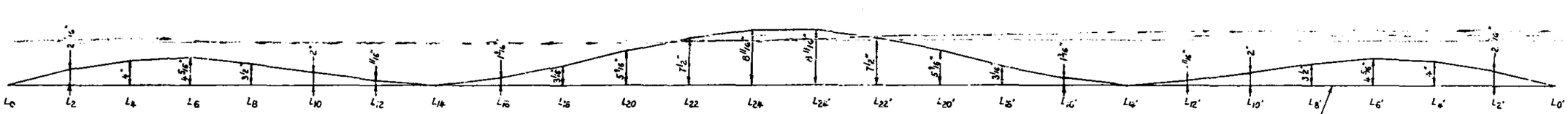
NOTES:

1. WITH THE TRUSS IN ITS FINAL POSITION (AFTER DEAD LOAD DEFORMATION HAS TAKEN PLACE), ALL MEMBERS ARE TO BE STRAIGHT. ALL MEMBERS SHALL BE FABRICATED STRAIGHT. THE FABRICATED LENGTHS OF MEMBERS ARE SUCH THAT SOME CHORD MEMBERS WILL HAVE TO BE FORCED INTO A CURVED POSITION DURING ERECTION; THESE MEMBERS WILL RESUME THEIR STRAIGHT SHAPE UPON APPLICATION OF DEAD LOAD.
2. ALL NOMINALLY VERTICAL MEMBERS ARE PERPENDICULAR TO A STRAIGHT LINE THROUGH L0 AND L0'.



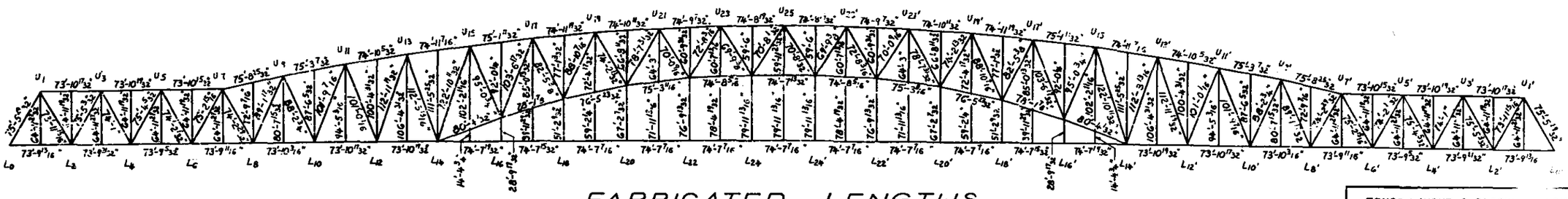
BLOCKING ORDINATES FOR TOTAL DEAD LOAD*

ORDINATES ARE SHOWN RELATIVE TO THE FINAL POSITION OF THE BOTTOM CHORD
* EXCLUDING WEIGHT OF INITIAL WEARING SURFACE



BLOCKING ORDINATES FOR WEIGHT OF DECK CONCRETE

ORDINATES ARE SHOWN RELATIVE TO THE FINAL POSITION OF THE BOTTOM CHORD



FABRICATED LENGTHS

THE LENGTHS SHOWN ARE THE THEORETICAL LENGTHS OF MEMBERS CORRECTED FOR DEFORMATION DUE TO DEAD LOAD.
SCALE: 1"=60'-0"

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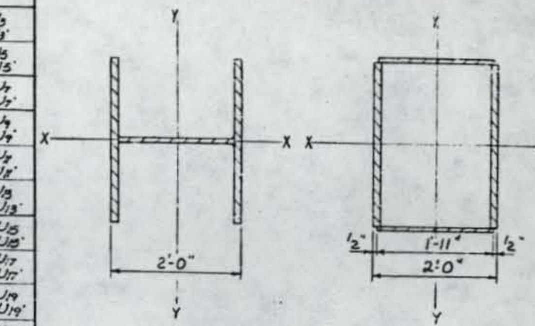
TRUSS LAYOUT & BLOCKING ORDINATES
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	22
F.HW.A. REG. NO. 4 F.HW.A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9( )0		

MEMBER	SECTION: OUTSIDE GUSSETS	SECTION: WITHIN GUSSETS	GRADE OF STEEL [a]	UNSUPPORTED LENGTH-FT. L_x	L_y	RADIUS OF GYRATION-IN. r_x	r_y	MAX. L/r	AREA-SQ. IN. GROSS OUTSIDE GUSSETS	GROSS WITHIN GUSSETS	NET WITHIN GUSSETS	STRESSES [b] - KIPS: DEAD LOAD [e], D STRUCT. STEEL	DEAD LOAD DECK CONCRETE	L. LOAD + IMPACT L+I	75#/SQ.FT. WIND W	100#/FT. WIND WL	TEMP. ±80°F T	Σ STRESSES BY GROUPS [b] - KIPS: GR. I D+L+I	GR. II D+W	GR. III GR.I+WL+.3W	GR. IV GR.I+T	GR. V GR.II+T	UNIT STRESSES BY GROUPS KIPS PER SQ. IN.: GR. I	GR. II	GR. III	GR. IV	GR. V	ALLOWABLE UNIT STRESSES BY GROUPS [c] (INCL. FATIGUE REQUIREMENTS) KIPS PER SQ. IN.: GR. I	GR. II	GR. III	GR. IV	GR. V	TOTAL [d] DEAD LOAD DEFORM IN.	MEMBER
U1-U3 U1'-U3'	2-1¼×30 1-½×21½	2-1¼×30 1-½×21½	A36	36.925	36.925	8.15	10.91	54	85.75	85.75	63.25	-342	-643	+75 -280	±70	±3	±36	-811 -1166	-915 -1055	-787 -1190	-775 -1202	-879 -1091	-13.60	-12.30	-13.88	-14.02	-12.72	-15.12	-18.90	-18.90	-18.90	-21.18	-0.323	U1-U3 U1'-U3'
U3-U5 U3'-U5'	2-1¼×30 1-⅝×21½	2-1¼×30 1-⅝×21½	A572	36.923	36.923	8.04	10.81	55	88.42	88.42	65.92	-463	-915	+150 -440	±150	±6	±71	-1090 -1680	-1228 -1528	-1039 -1731	-1019 -1751	-1157 -1599	-19.02	-17.29	-19.58	-19.82	-18.09	-20.30	-25.38	-25.38	-25.38	-28.42	-0.438	U3-U5 U3'-U5'
U5-U7 U5'-U7'	2-1½×30 1-9/16×21	2-1½×30 1-9/16×21	A36	36.922	36.922	8.19	10.78	54	101.81	101.81	74.81	-354	-818	+225 -483	±241	±8	±108	-829 -1537	-931 -1413	-749 -1617	-701 -1645	-823 -1521	-15.10	-13.89	-15.89	-16.18	-14.95	-15.12	-18.90	-18.90	-18.90	-21.18	-0.322	U5-U7 U5'-U7'
U7-U9 U7'-U9'	2-1¼×30 1-7/16×21½	2-1¼×30 1-7/16×21½	A36	37.861	37.861	8.16	10.98	56	84.41	84.41	71.91	-12	-322	+274 -378	±318	±7	±130	-60 -712	-16 -652	+42 -834	+70 -842	+114 -782	-8.45	-7.74	+0.58 -7.88	+0.97 -9.99	+1.59 -9.27	-15.06	-18.46f	+25.00 -18.82	+16.07f -18.82	+14.75f -21.08	-0.109	U7-U9 U7'-U9'
U9-U11 U9'-U11'	2-11/16×30 1-7/16×22⅝	2-11/16×30 1-7/16×22⅝	A572	37.655	37.655	7.78	10.81	58	51.15	51.15	44.27	+451	+429	+284 -179	±364	±4	±129	+1076 +613	+1244 +516	+1189 +500	+1205 +484	+1373 +387	+24.31	+28.10	+26.86	+27.22	+31.01	+27.00	+29.95f	+33.75	+33.75	+31.18f	+0.503	U9-U11 U9'-U11'
U11-U13 U11'-U13'	2-¾×30 1-7/16×22½	2-¾×30 1-7/16×22½	A517	37.474	37.474	7.85	10.81	57	54.85	54.85	47.35	+977	+1175	+393 -65	±420	±2	±135	+2329 +1871	+2572 +1732	+2457 +1743	+2464 +1736	+2707 +1597	+49.19	+54.32	+51.89	+52.04	+57.17	+53.00	+53.74f	+66.25	+66.25	+58.06f	+1.217	U11-U13 U11'-U13'
U13-U15 U13'-U15'	2-1¼×30 1-½×21½	2-1¼×30 1-½×21½	A517	37.739	37.739	8.15	10.91	56	85.75	85.75	73.25	+1615	+1992	+601 -22	±473	±2	±146	+3847 +3224	+4080 +3134	+3991 +3080	+3993 +3078	+4226 +2988	+52.52	+55.70	+54.48	+54.51	+57.69	+53.00	+66.25	+66.25	+66.25	+72.95f	+1.225	U13-U15 U13'-U15'
U15-U17 U15'-U17'	2-11/16×30 1-½×22⅝	2-11/16×30 1-½×22⅝	A517	37.605	37.605	7.68	10.73	59	52.56	52.56	45.68	+907	+1272	+441 -79	±159	±2	±102	+2402 +1882	+2338 +2020	+2452 +1832	+2504 +1780	+2440 +1918	+52.58	+51.18	+53.68	+54.82	+53.42	+53.00	+66.25	+66.25	+66.25	+74.20	+1.198	U15-U17 U15'-U17'
U17-U19 U17'-U19'	2-11/16×30 1-7/16×22⅝	2-11/16×30 1-7/16×22⅝	A36	37.498	37.498	7.78	10.81	58	51.15	51.15	44.27	+165	+432	+322 -210	±407	±6	±57	+859 +327	+1004 +190	+987 +199	+916 +270	+1051 +133	+19.40	+22.68	+22.30	+20.69	+23.97	+20.00	+22.22f	+25.00	+25.00	+23.47f	+0.367	U17-U19 U17'-U19'
U19-U21 U19'-U21'	2-1¼×30 1-11/16×21½	2-1¼×30 1-11/16×21½	A36	37.417	37.417	8.03	10.69	55	89.79	89.79	67.29	-573	-455	+263 -407	±647	±10	±16	-661 -1332	-581 -1675	-457 -1536	-645 -1348	-565 -1691	-14.83	-18.66	-17.10	-15.00	-18.83	-15.09	-18.88	-18.88	-18.88	-21.14	-0.335	U19-U21 U19'-U21'
U21-U23 U21'-U23'	2-2×30 1-⅞×20	2-2×30 1-⅞×20	A572 & A588‡	37.363	37.363	8.15	10.48	55	137.50	137.50	101.50	-1183	-1191	+252 -614	±816	±13	±18	-1884 -2750	-1558 -3190	-1626 -3008	-1865 -2768	-1540 -3208	-20.00	-23.20	-21.88	-20.15	-23.36	-20.30	-25.38	-25.38	-25.38	-28.42	-0.501	U21-U23 U21'-U23'
U23-U25 U23'-U25	2-2¾×30 1-9/16×18½	2-2¾×30 1-9/16×18½	A572 & A588‡	37.336	37.336	8.42	10.39	53	175.40	175.40	125.90	-1512	-1594	+242 -726	±910	±15	±32	-2553 -3521	-3196 -4016	-2265 -3806	-2521 -3553	-3164 -4048	-24.07	-22.68	-21.71	-20.23	-23.07	-20.42	-25.55	-25.55	-25.55	-28.60	-0.513	U23-U25 U23'-U25
L0-L2 L0'-L2'	2-½×30 1-⅜×23	2-½×30 1-⅜×23	A36	36.926	36.926	7.65	10.81	58	38.62	38.62	33.38	+200	+366	+155 -37	±111	±5	±16	+664 +472	+677 +455	+702 +434	+680 +456	+693 +439	+19.89	+20.28	+21.03	+20.37	+20.76	+20.00	+25.00	+25.00	+25.00	+28.00	+0.412	L0-L2 L0'-L2'
L2-L4 L2'-L4'	2-⅞×30 1-9/16×22¼	2-⅞×30 1-9/16×22¼	A572	36.924	36.924	7.78	10.75	57	65.01	65.01	55.83	+432	+825	+374 -112	±226	±10	±54	+1505 +1019	+1483 +1031	+1583 +941	+1559 +965	+1537 +977	+26.95	+26.56	+28.35	+27.92	+27.53	+27.00	+33.75	+33.75	+33.75	+37.80	+0.543	L2-L4 L2'-L4'
L4-L6 L4'-L6'	2-1×30 1-9/16×22	2-1×30 1-9/16×22	A572	36.923	36.923	7.90	10.81	57	72.38	72.38	61.90	+439	+912	+475 -187	±263	±8	±88	+1690 +1028	+1614 +1088	+1717 +941	+1778 +940	+1702 +1000	+27.30	+26.07	+28.70	+28.72	+27.49	+27.00	+33.75	+33.75	+33.75	+37.80	+0.980	L4-L6 L4'-L6'
L6-L8 L6'-L8'	2-11/16×30 1-½×22⅝	2-11/16×30 1-½×22⅝	A572	36.922	36.922	7.68	10.73	58	52.56	52.56	45.35	+213	+630	+460 -262	±250	0	±123	+1218 +496	+1093 +593	+1293 +421	+1341 +373	+1216 +470	+26.85	+24.10	+28.51	+29.57	+26.81	+27.00	+32.94f	+33.75	+30.97f	+34.20f	+0.445	L6-L8 L6'-L8'
L8-L10 L8'-L10'	2-1¼×30 1-7/16×21½	2-1¼×30 1-7/16×21½	A36	36.921	36.921	8.16	10.98	54	84.41	84.41	71.31	-209	-77	+270 -272	±223	±13	±128	-16 -558	-63 -509	+64 -638	+112 -686	+65 -637	-6.61	-6.03	+0.90 -7.56	+1.57 -8.14	+0.91 -7.55	-15.12	-18.90	-18.90	+14.28f -18.90	+16.78f -21.19	-0.100	L8-L10 L8'-L10'
L10-L12 L10'-L12'	2-1¼×30 1-⅝×21½	2-1¼×30 1-⅝×21½	A572	36.920	36.920	8.04	10.81	55	88.42	88.42	65.92	-688	-779	+108 -323	±290	±34	±131	-1212 -1643	-1177 -1757	-1091 -1754	-1081 -1774	-1046 -1828	-18.60	-19.87	-19.95	-20.07	-21.35	-20.30	-25.38	-25.38	-25.38	-28.42	-0.474	L10-L12 L10'-L12'
L12-L14 L12'-L14'	2-2¼×30 1-⅞×19½	2-2¼×30 1-⅞×17½	A572 & A588‡	36.919	36.919	8.21	10.41	54	152.08	152.08	111.58	-1258	-1550	+34 -495	±474	±63	±141	-2493 -3022	-2334 -3282	-2288 -3227	-2352 -3163	-2193 -3423	-18.88	-21.58	-21.22	-20.80	-22.51	-20.36	-25.43	-25.43	-25.43	-28.50	-0.526	L12-L14 L12'-L14'
L14-L16 L14'-L16'	2-1¼×30 1-⅝×21½	2-1¼×30 1-⅝×21½	A572	37.335	37.335	8.04	10.81	56	88.42	88.42	75.39	+716	+669	+396 -211	±646	±51	±317	+1642 +1035	+2031 +739	+1873 +790	+1959 +718	+2348 +422	+21.80	+26.96	+24.86	+26.00	+31.17	+27.00	+28.32f	+33.75	+33.75	30.64f	+0.455	L14-L16 L14'-L16'
L16-L18 L16'-L18'	2-1×30 1-½×22	2-1×30 1-½×22	A572	37.334	37.334	7.96	10.86	56	71.00	71.00	60.52	+716	+669	+396 -211	±350	±14	±317	+1642 +1035	+1735 +1035	+1761 +916	+1959 +718	+2052 +718	+27.13	+28.66	+29.09	+32.36	+33.90	+27.00	+33.75	+33.75	+33.75	36.29f	+0.567	L16-L18 L16'-L18'
L18-L20 L18'-L20'	2-1×30 1-½×22	2-1×30 1-½×22	A572	37.334	37.334	7.96	10.86	56	71.00	71.00	60.52	+716	+669	+396 -211	±203	±15	±317	+1642 +1035	+1588 +1182	+1712 +959	+1959 +718	+1905 +865	+27.13	+26.24	+29.39	+32.36	+31.48	+27.00	+33.75	+33.75	+33.75	37.80	+0.567	L18-L20 L18'-L20'
L20-L22 L20'-L22'	2-1×30 1-½×22	2-1×30 1-½×22	A572	37.333	37.333	7.96	10.86	56	71.00	71.00	60.52	+716	+669	+396 -211	±371	±35	±317	+1642 +1035	+1756 +1014	+1738 +889	+1959 +718	+2073 +697	+27.13	+29.02	+29.54	+32.36	+34.25	+27.00	+33.75	+33.75	+33.75	37.80	+0.567	L20-L22 L20'-L22'
L22-L24 L22'-L24'	2-1×30 1-½×22	2-1×30 1-½×22	A572	37.333	37.333	7.96	10.86	56	71.00	71.00	60.52	+716	+669	+396 -211	±471	±47	±317	+1642 +1035	+1856 +914	+1830 +847	+1959 +718	+2173 +597	+27.13	+30.67	+30.24	+32.36	+35.91	+27.00	+33.75	+33.75	+33.75	+36.10f	+0.567	L22-L24 L22'-L24'
L24-L24'	2-1×30 1-½×22	2-1×30 1-½×22	A572	37.333	37.333	7.96	10.86	56	71.00	71.00	60.52	+716	+669	+396 -211	±496	±51	±317	+1642 +1035	+1881 +889	+1842 +835	+1959 +718	+2159 +518	+27.13	+31.08	+30.44	+32.36	+35.67	+27.00	+33.28f	+33.75	+33.75	+35.14f	+0.567	L24-L24'
L14-M16 L14'-M16'	2-2½×36 1-2×19	2-2½×36 1-2×19	A517	40.141	80.282	9.45	10.03	96	218.00	218.00	173.00	-2104	-2496	+143 -894	±411	±9	±97	-3997 -5034	-4189 -5011	-3865 -5166	-3900 -5131	-4092 -5108	-23.09	-22.99	-23.70	-23.54	-23.43	-23.50	-29.37	-29.37	-29.37	-32.90	-0.654	L14-M16 L14'-M16'
M16-M18 M16'-M18'	2-3×30 1-⅝×18	2-3×30 1-⅝×18	A572 & A588‡	38.058	76.116	8.43	10.34	91	191.25	191.25	137.25	-1310	-1645	[illegible] -645	±375	±5	±141	[illegible] -3304	[illegible] -3330	[illegible] -3421	[illegible] -3445	[illegible] -3471	-17.29	[illegible]	[illegible]	[illegible]	[illegible]	-17.36	-21.70	-21.70	-21.70	[illegible]	[illegible]	M16-M18 M16'-M18'
M18-M20 M18'-M20'	2-1¾×30 1-½×22½	2-1¾×30 1-½×22½	A36	38.225	76.450	8.26	10.81	85	115.25	115.25	83.75	-534	-751	+240 -431	±350	±1	±186	-916 -1587	-935 -1635	-810 -1693	-730 -1773	-749 -1821	-13.18	-14.19	-14.70	-15.39	-15.81	-13.84	-17.31	-17.31	-17.31	-19.39	-0.327	M18-M20 M18'-M20'
M20-M22 M20'-M22'	2-1¼×30 1-7/16×21½	2-1¼×30 1-7/16×21½	A36	37.658	75.317	8.16	10.26	88	84.41	84.41	71.91	+179	+175	+307 -243	±374	±3	±226	+661 +111	+728 -20	+776 -4	+887 -115	+954 -246	+9.19	+10.12 -0.24	+10.79 -0.05	+12.33 -1.36	+13.27 -2.92	+20.00	+20.18f -17.09	+25.00 -17.09	+25.00 -17.09	+23.26f -15.97f	+0.123	M20-M22 M20'-M22'
M22-M24 M22'-M24'	2-1×30 1-7/16×22	2-1×30 1-7/16×22	A572	37.370	74.741	8.04	10.93	82	69.63	69.63	59.63	+553	+760	+344 -152	±364	±5	±249	+1615 +1169	+1777 +1049	+1729 +1055	+1864 +920	+2026 +800	+27.08	+29.60	+29.00	+31.26	+33.98	+27.00	+33.75	+33.75	+33.75	+35.71f	-0.586	M22-M24 M22'-M24'
M24-M24'	2-1¼×30 1-7/16×21½	2-1¼×30 1-7/16×21½	A572	37.3[illegible]	74.667	8.16	10.26	88	84.41	84.41	71.91	+824	+762	+338 -36	±347	±6	±256	+1745 +1571	+2133 +1439	+2055 +1461	+2201 +1315	+2389 +1183	+27.05	+29.66	+28.58	+30.61	+33.22	+27.00	+33.75	+33.75	+33.75	+37.80	+0.611	M24-M24'
U1-L1 U1'-L1'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	65.000	65.000	6.72*	9.40*	116	33.25	24.54	20.04	+44	+163	+147 0	—	—	—	+354 +207	—	—	—	—	+17.65**	—	—	—	—	+20.00	—	—	—	—	+0.152	U1-L1 U1'-L1'
U2-L2 U2'-L2'	2-½×16 2-½×23	2-½×16 1-½×23	A36	64.965	64.965	7.00*	9.06*	111	38.88	27.44	22.94	-27	—	—	—	—	—	-27	—	—	—	—	-0.69*	—	—	—	—	-12.30*	—	—	—	—	-0.019	U2-L2 U2'-L2'
U3-L3 U3'-L3'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	65.000	37.917	6.72*	9.40*	116	33.25	24.54	20.04	+52	+163	+147 0	±2	—	±1	+362 +215	—	—	—	—	+18.05**	—	—	—	—	+20.00	—	—	—	—	+0.159	U3-L3 U3'-L3'
U4-L4 U4'-L4'	2-½×16 2-½×23	2-½×16 1-½×23	A36	64.965	64.965	7.00*	9.06*	111	38.88	27.44	22.94	-27	—	—	—	—	—	-27	—	—	—	—	-0.69*	—	—	—	—	-12.30*	—	—	—	—	-0.019	U4-L4 U4'-L4'
U5-L5 U5'-L5'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	65.000	37.917	6.72*	9.40*	116	33.25	24.54	20.04	+48	+163	+147 0	±3	—	±3	+358 +211	—	—	—	—	+18.04**	—	—	—	—	+20.00	—	—	—	—	+0.155	U5-L5 U5'-L5'
U6-L6 U6'-L6'	2-½×16 2-½×23	2-½×16 1-½×23	A36	64.965	64.965	7.00*	9.06*	111	38.88	27.44	22.94	-29	—	—	—	—	—	-29	—	—	—	—	-0.75*	—	—	—	—	-12.30*	—	—	—	—	-0.020	U6-L6 U6'-L6'
U7-L7 U7'-L7'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	65.000	37.917	6.72*	9.40*	116	33.25	24.54	20.04	+47	+163	+147 0	±3	—	±2	+359 +212	—	—	—	—	+17.90**	—	—	—	—	+20.00	—	—	—	—	+0.156	U7-L7 U7'-L7'
U8-L8 U8'-L8'	2-½×16 2-½×23	2-½×16 1-½×23	A36	72.784	72.784	7.00*	9.06*	125	38.88	27.44	22.94	-28	—	—	—	—	—	-28	—	—	—	—	-0.72*	—	—	—	—	-11.31*	—	—	—	—	-0.022	U8-L8 U8'-L8'
U9-L9 U9'-L9'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	80.639	53.599	6.72*	9.40*	144	33.25	24.54	20.04	+61	+163	+147 0	±6	—	—	+371 +224	—	—	—	—	+18.51**	—	—	—	—	+20.00	—	—	—	—	+0.206	U9-L9 U9'-L9'
U10-L10 U10'-L10'	2-½×16 2-½×23	2-½×16 1-½×23	A36	87.510	87.510	7.00*	9.06*	150	38.88	27.44	22.94	-25	—	—	—	—	—	-25	—	—	—	—	-0.64*	—	—	—	—	-1.45*	—	—	—	—	-0.023	U10-L10 U10'-L10'
U11-L11 U11'-L11'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	94.451	67.367	6.72*	9.40*	169	33.25	24.54	20.04	+63	+163	+147 0	±3	—	±1	+373 +226	—	—	—	—	+18.61**	—	—	—	—	+20.00	—	—	—	—	+0.243	U11-L11 U11'-L11'
U12-L12 U12'-L12'	2-½×18 2-½×23	2-½×18 1-½×23	A36	100.411	100.411	7.74*	9.20*	156	40.88	29.44	24.94	-27	—	—	—	—	—	-27	—	—	—	—	-0.66*	—	—	—	—	-8.80*	—	—	—	—	-0.027	U12-L12 U12'-L12'
U13-L13 U13'-L13'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	106.438	106.438	6.72*	9.40*	190	33.25	24.54	20.04	+66	+163	+147 0	—	—	—	+376 +229	—	—	—	—	+18.74**	—	—	—	—	+20.00	—	—	—	—	+0.278	U13-L13 U13'-L13'
U14-L14 U14'-L14'	2-3½×33 2-1×23	2-3½×33 1-3×17 †	A572 & A588‡	111.481	46.481	11.10*	9.70*	120	276.75	281.63	250.13	-170	—	—	±401 (2370)	—	—	-170	+231 (2370) -571 (2370)	—	—	—	-0.61*	+16.41** -15.18**	—	—	—	-13.92*	+16.57f** -16.73f**	—	—	—	-0.028	U14-L14 U14'-L14'
U15-M15 U15'-M15'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	102.249	102.249	6.72*	9.40*	183	33.25	24.54	20.04	+90	+165	+148 0	—	—	—	+402 +254	—	—	—	—	+20.05**	—	—	—	—	+20.00	—	—	—	—	+0.300	U15-M15 U15'-M15'
M15-L15 M15'-L15'	2-½×16 2-⅜×23	2-½×16 1-⅜×23	A36	14.400	14.400	6.72*	9.40*	26	33.25	24.54	20.04	+49	+166	+149 0	—	—	—	+364 +215	—	—	—	—	+18.14**	—	—	—	—	+20.00	—	—	—	—	+0.035	M15-L15 M15'-L15'



TYPICAL SECTIONS AND AXIS ORIENTATION

a ALL A572 STEEL IS TO HAVE 50 KIPS PER SQ. IN. MINIMUM YIELD STRENGTH.

b WHERE STRESSES ARE VARIABLE, MINIMUM AND MAXIMUM VALUES ARE SHOWN. MOMENTS ARE SHOWN IN PARENTHESES. ALL MOMENTS ACT ABOUT THE Y-AXIS AND ARE EXPRESSED IN FT. KIPS.

c THE LETTER "f" FOLLOWING A NUMBER INDICATES THAT THE ALLOWABLE STRESS IS GOVERNED BY FATIGUE REQUIREMENTS.

d EXCLUDING DEFORMATION DUE TO THE WEIGHT OF THE INITIAL WEARING SURFACE.

e THE INITIAL WEARING SURFACE IS INCLUDED WITH THE DECK CONCRETE.

* BASED ON SECTION OUTSIDE GUSSETS.

** BASED ON SECTION WITHIN GUSSETS.

‡ A572 FOR PLATE THICKNESSES OF 1½" OR LESS; A588 FOR THICKER PLATES.

† SECTION SHOWN IS AT L_{14} ONLY. SECTION AT U_{14}: 2-3½×33 (A 588), 1-1×17 (A 572).

NOTE:
IN GROUPS I, III AND IV DEAD LOAD STRESSES HAVE BEEN REDUCED 10% IN ALL MEMBERS EXCEPT HANGERS AND MEMBERS SUBJECT TO STRESS REVERSAL.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEER
10 S WABASH AVE, CHICAGO ILLINOIS

STRESS TABLE FOR TRUSS MEMBERS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	102-10-1 I F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	23
F.H.W.A REG NO. 4					
F.H.W.A REG NO. 6		ILLINOIS MISSOURI		PROJECT I-57-9( )0	

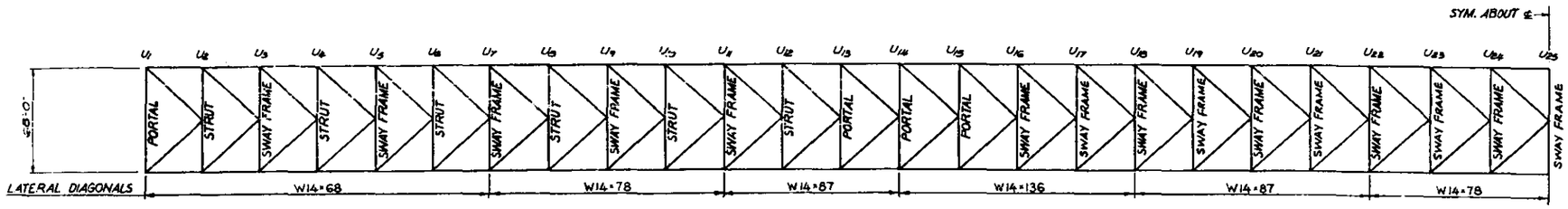
MEMBER	SECTION: OUTSIDE GUSSETS	SECTION: WITHIN GUSSETS	GRADE[a] OF STEEL	UNSUPPORTED LENGTH-FT.: L_x	UNSUPPORTED LENGTH-FT.: L_y	RADIUS OF GYRATION-IN: r_x	RADIUS OF GYRATION-IN: r_y	MAX. $\frac{L}{r}$	AREA-SQ.IN.: GROSS OUTSIDE GUSSETS	AREA-SQ.IN.: GROSS WITHIN GUSSETS	AREA-SQ.IN.: NET WITHIN GUSSETS	STRESSES[b]-KIPS: DEAD LOAD[c,d] STRUCT STEEL	DEAD LOAD[c,d] DECK CONCRETE	L. LOAD +IMPACT L+I	75#/SQ.FT. WIND W	100#/FT. WIND WL	TEMP ±80°F T	I STRESSES BY GROUPS[b]-KIPS: GR I D+L+I	GR II D+W	GR III GR I-WL F.3W	GR III GR I+T	GR V GR I+T	I STRESSES BY GROUPS[b]-KIPS: GR V GR I+T	UNIT STRESSES BY GROUPS KIPS PER SQ.IN.[c]: GR I	GR II	GR III	GR III	GR V	ALLOWABLE UNIT STRESSES BY GROUPS (INCL. FATIGUE REQUIREMENTS) KIPS PER SQ.IN.: GR I	GR II	GR III	GR IV	GR V	TOTAL[d] DEAD LOAD DEFORM IN.	MEMBER
U_{16}-M_{16} / U_{16}-M_{16}'	2-3/4 x 16 / 2-3/4 x 25	2-3/4 x 16 / 1-1/2 x 22 1/2	A36	42.017	45.009	7.09*	9.04*	156	58.50	35.25	28.50	-41	—	—	±39	—	±12	-41 / +365 +216	-2 -80	—	—	+15 -92	+18.20*	-0.70*	-1.37*	—	—	-1.57*	-8.84*	-11.05*	—	—	+12.38*	-0.027	U_{16}-M_{16} / U_{16}-M_{16}'
M_{16}-L_{16} / M_{16}'-L_{16}	2-1/2 x 16 / 2-3/8 x 25	2-1/2 x 16 / 1-3/8 x 25	A36	28.800	28.800	6.72*	9.40*	52	33.25	24.54	20.04	+50	+166	+149 0	—	—	—	+400 +252	—	—	—	—	+19.94**	—	—	—	—	+20.00	—	—	—	—	+0.071	M_{16}-L_{16} / M_{16}'-L_{16}
U_{17}-M_{17} / U_{17}'-M_{17}'	2-1/2 x 16 / 2-3/8 x 25	2-1/2 x 16 / 1-3/8 x 25	A36	85.056	85.056	6.72*	9.40*	152	33.25	24.54	20.04	+88	+165	+148 0	—	—	—	+366 +217	—	—	—	—	+18.25*	—	—	—	—	+20.00	—	—	—	—	+0.248	U_{17}-M_{17} / U_{17}'-M_{17}'
M_{17}-L_{17} / M_{17}'-L_{17}'	2-1/2 x 16 / 2-3/8 x 25	2-1/2 x 16 / 1-3/8 x 25	A36	40.000	40.000	6.72*	9.40*	71	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+366 +217	—	—	—	—	+18.25*	—	—	—	—	+20.00	—	—	—	—	+0.099	M_{17}-L_{17} / M_{17}'-L_{17}'
U_{18}-M_{18} / U_{18}'-M_{18}'	2-1/2 x 16 / 2-1/2 x 23	2-1/2 x 16 / 1-1/2 x 23	A36	77.089	37.545	7.00*	9.06*	132	38.88	27.44	22.94	-37	—	—	±39	—	±12	37	+2 -76	—	—	+14 -88	-0.95*	-1.95*	—	—	-2.26*	-10.65*	-13.30*	—	—	-14.90*	-0.030	U_{18}-M_{18} / U_{18}'-M_{18}'
M_{18}-L_{18} / M_{18}'-L_{18}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	51.200	51.200	6.72*	9.40*	91	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+366 +217	—	—	—	—	+18.25*	—	—	—	—	+20.00	—	—	—	—	+0.126	M_{18}-L_{18} / M_{18}'-L_{18}'
U_{19}-M_{19} / U_{19}'-M_{19}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	72.394	72.394	6.72*	9.40*	129	33.25	24.54	20.04	+77	+165	+148 0	—	—	—	+387 +261	—	—	—	—	+19.32**	—	—	—	—	+20.00	—	—	—	—	+0.201	U_{19}-M_{19} / U_{19}'-M_{19}'
M_{19}-L_{19} / M_{19}'-L_{19}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	59.200	59.200	6.72*	9.40*	106	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+366 +217	—	—	—	—	+18.25*	—	—	—	—	+20.00	—	—	—	—	+0.146	M_{19}-L_{19} / M_{19}'-L_{19}'
U_{20}-M_{20} / U_{20}'-M_{20}'	2-1/2 x 16 / 2-1/2 x 23	2-1/2 x 16 / 1-1/2 x 23	A36	66.694	32.347	7.00*	9.06*	114	38.88	27.44	22.94	-42	—	—	±25	—	±7	-42 / +366 +217	-17 -67	—	—	-10 -74	-1.08*	-1.72*	—	—	-1.90*	-12.10*	-15.12*	—	—	-16.93*	-0.030	U_{20}-M_{20} / U_{20}'-M_{20}'
M_{20}-L_{20} / M_{20}'-L_{20}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	67.200	67.200	6.72*	9.40*	120	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+366 +217	—	—	—	—	+18.25*	—	—	—	—	+20.00	—	—	—	—	+0.165	M_{20}-L_{20} / M_{20}'-L_{20}'
U_{21}-M_{21} / U_{21}'-M_{21}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	64.264	64.264	6.72*	9.40*	115	33.25	24.54	20.04	+72	+165	+148 0	—	—	—	+384 +234	—	—	—	—	+19.15**	—	—	—	—	+20.00	—	—	—	—	+0.174	U_{21}-M_{21} / U_{21}'-M_{21}'
M_{21}-L_{21} / M_{21}'-L_{21}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	72.000	72.000	6.72*	9.40*	129	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+364 +217	—	—	—	—	+18.25**	—	—	—	—	+20.00	—	—	—	—	+0.177	M_{21}-L_{21} / M_{21}'-L_{21}'
U_{22}-M_{22} / U_{22}'-M_{22}'	2-1/2 x 16 / 2-1/2 x 23	2-1/2 x 16 / 1-1/2 x 23	A36	60.829	29.415	7.00*	9.06*	104	38.88	27.44	22.94	-46	—	—	±22	—	±5	-46 / +366 +217	-24 -68	—	—	-19 -73	-1.18*	-1.75*	—	—	-1.88*	-12.75*	-15.92*	—	—	-17.85*	-0.030	U_{22}-M_{22} / U_{22}'-M_{22}'
M_{22}-L_{22} / M_{22}'-L_{22}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	76.800	76.800	6.72*	9.40*	137	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+366 +217	—	—	—	—	+18.25**	—	—	—	—	+20.00	—	—	—	—	+0.189	M_{22}-L_{22} / M_{22}'-L_{22}'
U_{23}-M_{23} / U_{23}'-M_{23}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	60.666	60.666	6.72*	9.40*	108	33.25	24.54	20.04	+58	+165	+148 0	—	—	—	+370 +222	—	—	—	—	+18.66**	—	—	—	—	+20.00	—	—	—	—	+0.154	U_{23}-M_{23} / U_{23}'-M_{23}'
M_{23}-L_{23} / M_{23}'-L_{23}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	78.400	78.400	6.72*	9.40*	140	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+366 +217	—	—	—	—	+18.25**	—	—	—	—	+20.00	—	—	—	—	+0.193	M_{23}-L_{23} / M_{23}'-L_{23}'
U_{24}-M_{24} / U_{24}'-M_{24}'	2-1/2 x 16 / 2-1/2 x 23	2-1/2 x 16 / 1-1/2 x 23	A36	54.497	28.749	7.00*	9.06*	102	38.88	27.44	22.94	-50	—	—	±21	—	±4	-50 / +366 +217	-29 -71	—	—	-25 -75	-1.29*	-1.83*	—	—	-1.93*	-12.87*	-16.08*	—	—	-18.02*	-0.032	U_{24}-M_{24} / U_{24}'-M_{24}'
M_{24}-L_{24} / M_{24}'-L_{24}'	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	80.000	80.000	6.72*	9.40*	143	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+366 +217	—	—	—	—	+18.25**	—	—	—	—	+20.00	—	—	—	—	+0.197	M_{24}-L_{24} / M_{24}'-L_{24}'
U_{25}-M_{25}	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	60.000	60.000	6.72*	9.40*	107	33.25	24.54	20.04	+17	+165	+148 0	—	—	—	+381 +233	—	—	—	—	+19.01**	—	—	—	—	+20.00	—	—	—	—	+0.168	U_{25}-M_{25}
M_{25}-L_{25}	2-1/2 x 16 / 2-3/8 x 23	2-1/2 x 16 / 1-3/8 x 23	A36	80.000	80.000	6.72*	9.40*	143	33.25	24.54	20.04	+51	+166	+149 0	—	—	—	+366 +217	—	—	—	—	+18.25**	—	—	—	—	+20.00	—	—	—	—	+0.197	M_{25}-L_{25}
L_0-U_1 / L_0-U_1'	2-1 3/4 x 30 / 1-1/2 x 20 1/2	2-1 3/4 x 30 / 1-1/2 x 20 1/2	A36	75.468	43.500	8.26	10.69	110	115.19	115.1	33.69	-409	-750	+76 -316	±127 (123)	±2	±39	-967 / -1359	-1032(123) -1286(123)	-927(217) -1339(217)	-928 -1398	-993(123) -1325(123)	-11.80	-11.16	-12.13	-12.12	-11.50	-12.39	-2.42	-17.31	-15.50	-14.50	-0.269	L_0-U_1 / L_0'-U_1'
U_1-L_2 / U_1'-L_2'	2-5/8 x 30 / 1-3/8 x 22 3/4	2-5/8 x 30 / 1-3/8 x 22 3/4	A572	74.038	74.038	7.83	10.88	114	45.99	45.99	39.73	285	+554	+260 -83	±68	±3	±38	+1015 / +672	+907 +771	+1038 +649	+1053 +634	+905 +733	+25.55	+22.83	+26.13	+24.50	+23.79	+27.00	+33.75	+33.75	+33.75	+37.80	+0.514	U_1-L_2 / U_1'-L_2'
L_2-U_3 / L_2'-U_3'	2-1/4 x 30 / 1-7/16 x 21/2	2-1/4 x 30 / 1-7/16 x 21/2	A36	75.408	75.408	8.16	10.20	111	84.34	84.34	61.84	-184	-374	+95 -216	±69	±4	±39	-404 / -718	-489 -627	-382 -743	-368 -757	-450 -666	-8.51	-7.44	-8.81	-8.90	-7.90	-12.70	-15.38	-15.38	-15.38	-17.21	-0.189	L_2-U_3 / L_2'-U_3'
U_3-L_4 / U_3'-L_4'	2-1/2 x 30 / 1-3/8 x 23	2-1/2 x 30 / 1-3/8 x 23	A36	74.098	74.098	7.65	10.75	116	38.59	38.59	33.35	+61	+183	+172 -118	±75	±3	±38	+391 / +101	+319 +169	+416 +76	+429 +63	+357 +131	+14.72	+9.57	+12.47	+12.86	+10.70	+20.00	+25.00	+25.00	+24.971	+28.00	-0.177	U_3-L_4 / U_3'-L_4'
L_4-U_5 / L_4'-U_5'	2-1/4 x 30 / 1-7/16 x 21/2	2-1/4 x 30 / 1-7/16 x 21/2	A36	75.349	75.349	8.16	10.20	111	84.34	84.34	61.84	-46	+5	+141 -138	±76	±4	±39	+94 / -85	+129 -23	-22 -112	+233 -124	+168 -62	+2.70 -1.01	+1.80 -0.27	+3.08 -1.33	+3.24 -1.47	+2.34 -0.74	+16.51 -12.30	+18.67 -15.38	+25.00 -15.38	+18.431 -14.231	+21.62 -14.00	+0.020	L_4-U_5 / L_4'-U_5'
U_5-L_6 / U_5'-L_6'	2-1/4 x 30 / 1-7/16 x 21/2	2-1/4 x 30 / 1-7/16 x 21/2	A36	74.157	74.157	8.16	10.20	109	84.34	84.34	61.84	-176	-206	+107 -73	±81	±3	±38	-236 / -516	-301 -463	-26 -543	-198 -554	-263 -501	-6.12	-5.49	-6.44	-6.57	-5.95	-12.44	-15.57	-15.57	-15.57	-17.42	-0.130	U_5-L_6 / U_5'-L_6'
L_6-U_7 / L_6'-U_7'	2-1/2 x 30 / 1-3/8 x 23	2-1/2 x 30 / 1-3/8 x 23	A572	75.288	75.288	7.65	10.75	118	38.59	38.59	33.35	-206	+316	+206 -82	±62	±4	±39	+822 / +535	+753 +604	+852 +506	+881 +496	+807 +565	+24.58	+20.53	+25.55	+25.85	+24.20	+27.00	+33.75	+33.75	+33.75	+37.80	+0.513	L_6-U_7
U_7-L_8 / U_7'-L_8'	2-1/2 x 30 / 1-1/2 x 21	2-1/2 x 30 / 1-1/2 x 21	A36	74.216	74.216	9.20	10.71	103	100.44	100.44	13.44	-405	-641	+8 -230	±17	±1	±5	-1023 / -1171	-1029 -1063	-926 -1177	-928 -826	-1024 -1068	-11.66	-10.58	-11.71	-11.70	-10.62	-12.43	-15.53	-15.53	-15.53	-17.41	-0.296	U_7-L_8 / U_7'-L_8'
L_8-U_9 / L_8'-U_9'	2-3/4 x 30 / 2-3/8 x 23	2-3/4 x 30 / 1-7/16 x 22 1/2	A572	89.188	89.188	10.84*	10.33*	104	62.16	60.48	52.98	-508	+799	+275 -6	±18	±2	±5	+1451 / +1170	+1325 +1289	+1458 +1163	+1456 +1165	+1329 +1284	+22.39**	+25.01**	+27.52**	+27.68**	+25.08**	+27.00	+33.75	+33.75	+33.75	+37.80	+0.717	L_8-U_9 / L_8'-U_9'
U_9-L_{10} / U_9'-L_{10}'	2-1/8 x 30 / 2-5/8 x 23	2-1/8 x 30 / 1-5/8 x 21 3/4	A572	88.188	88.188	11.08*	10.24*	103	96.10	81.10	60.85	-658	-825	+6 -217	±30	±2	±8	-1238 / -1521	-1353 -1413	-1277 -1533	-1230 -1529	-1345 -1421	-15.72*	-14.11*	-15.17*	-15.91*	-14.70*	-16.05*	-20.07*	-20.07*	-20.07*	-22.48*	0.487	U_9-L_{10} / U_9'-L_{10}'
L_{10}-U_{11} / L_{10}'-U_{11}'	2-1 x 30 / 2-3/8 x 23	2-1 x 30 / 1-7/8 x 22	A572	101.857	101.857	10.46*	10.58*	117	77.16	79.16	59.16	-614	+986	+322 -4	±30	±3	±7	-1815 / +1490	+1690 +1630	+1628 +1678	+1823 +1683	+1617 +1623	+20.26*	+24.44*	+22.43*	+24.36*	+24.58*	+27.00	+33.75	+33.75	+33.75	+37.80	+0.840	L_{10}-U_{11} / L_{10}'-U_{11}'
U_{11}-L_{12} / U_{11}'-L_{12}'	2-1/2 x 36 / 3/8 x 23	2-1/2 x 36 / 1-7/16 x 21	A572	100.961	100.961	12.30*	10.52*	115	133.78	119.81	92.81	-754	-1038	+3 -333	±36	±3	±10	-1609 / -1745	-1756 -1828	-1595 -1959	-1599 -1955	-1746 -1838	-14.53*	-13.67*	-14.63*	-14.61*	-13.72*	-14.59*	-18.23*	-18.23*	-18.23*	-20.42*	-0.520	U_{11}-L_{12} / U_{11}'-L_{12}'
L_{12}-U_{13} / L_{12}'-U_{13}'	2-1/4 x 30 / 2-3/8 x 23	2-1/4 x 30 / 1-1 x 21/2	A572	113.049	113.049	10.41*	10.69*	130	92.16	76.36	83.67	+900	+1200	+378 -2	±36	±4	±10	+2268 / +1888	+2136 +2064	+2283 +1873	+2278 +1878	+2146 +2054	+27.06*	+25.61*	+27.22*	+27.16*	+25.59*	+27.00	+33.75	+33.75	+33.75	+37.80	+0.970	L_{12}-U_{13} / L_{12}'-U_{13}'
U_{13}-L_{14} / U_{13}'-L_{14}'	2-1 x 33 / 2-7/8 x 23	2-1/2 x 33 / 1-1/2 x 20	A572 64588 #	112.268	43.292	11.69*	10.10*	115	172.05	161.80	125.80	-1038	-1280	+2 -397	±278 (188)	±9	±13	-2044 / -2483	-2046(66) -2516(66)	-1982(35) -2575(35)	-2071 -2496	-2026(66) -2509(66)	-14.42*	-15.04*	-14.96*	-14.51*	-15.18*	-14.59*	-18.10*	-18.22*	-18.22*	-20.26*	-0.587	U_{13}-L_{14} / U_{13}'-L_{14}'
L_{14}-U_{15} / L_{14}'-U_{15}'	2-1 x 33 / 2-7/8 x 23	2-1/2 x 33 / 1-1/2 x 20	A572 64588 #	122.810	53.984	12.13*	9.91*	121	183.50	161.80	125.80	-1195	1175	+1 -367	±278 (188)	±6	±14	-2132 / -2500	-2090(66) -2646(66)	-2043(35) -2753(35)	-2068 -2554	-2066(66) -2714(66)	-13.63*	-14.43*	-14.11*	-13.99*	-14.77*	-13.80*	-17.26*	-17.26*	-17.26*	-19.31*	-0.616	L_{14}-U_{15} / L_{14}'-U_{15}'
U_{16}-M_{16} / U_{16}'-M_{16}'	2-1 x 30 / 2-3/8 x 23	2-1 x 30 / 1-7/8 x 22	A572	95.132	95.132	10.48*	10.58*	109	77.16	79.16	69.16	+852	+891	+284 -2	±76	±4	±56	+1852 / +1565	+1819 +1667	+1879 +1539	+1908 +1510	+1875 +1611	+26.78**	+26.30**	+27.17**	+27.51**	+27.11**	+27.00	+33.75	+33.75	+33.75	+39.20	+0.834	U_{16}-M_{16} / U_{16}'-M_{16}'
M_{16}-U_{17} / M_{16}'-U_{17}'	2-2 x 36 / 2-7/8 x 23	2-2 x 36 / 1-1/2 x 20	A572 64588 #	103.502	103.502	11.90*	10.43*	117	169.75	154.00	118.00	-1040	-1167	+13 -374	±122	±5	±57	-1973 / -2360	-2085 -2329	-1931 -2402	-1916 -2417	-2028 -2386	-13.90*	-13.72*	-14.17*	-14.22*	-14.08*	-14.08*	-17.61*	-17.61*	-17.61*	-19.71*	-0.520	M_{16}-U_{17} / M_{16}'-U_{17}'
U_{17}-M_{18} / U_{17}'-M_{18}'	2-1 x 30 / 2-3/8 x 23	2-1 x 30 / 1-7/8 x 22	A572	82.506	82.506	10.48*	10.58*	95	77.16	79.16	69.16	+300	+913	+297 -12	±38	±4	±56	+1838 / +1527	+1751 +1675	+1823 +1512	+1894 +1671	+1807 +1619	+26.58**	+25.32**	+26.36**	+27.39**	+26.13**	+27.00	+33.75	+33.75	+33.75	+39.20	+0.709	U_{17}-M_{18} / U_{17}'-M_{18}'
M_{18}-U_{19} / M_{18}'-U_{19}'	2-1 3/4 x 30 / 2-5/8 x 23	2-1 3/4 x 30 / 1-9/16 x 20 1/2	A572 64588 #	88.829	88.829	10.42*	10.33*	103	133.60	116.53	85.53	-888	-1068	+38 -368	±64	±5	±49	-1722 / -2128	-1692 -2020	-1698 -2152	-1673 -2117	-1683 -2069	-15.72*	-15.11*	-16.10*	-16.28*	-15.49*	-16.06*	-20.08*	-20.08*	-20.08*	-22.49*	-0.501	M_{18}-U_{19} / M_{18}'-U_{19}'
U_{19}-M_{20} / U_{19}'-M_{20}'	2-1 x 30 / 1-5/8 x 22	2-1 x 30 / 1-5/8 x 22	A572	74.253	44.253	7.81	10.67	114	73.69	73.69	63.69	+718	+851	+303 -60	±39	±4	±50	+1715 / +1372	+1608 +1530	+1731 +1356	+1765 +1322	+1658 +1480	+26.93	+25.22	+27.20	+27.72	+26.01	+27.00	+33.75	+33.75	+33.75	+39.20	+0.623	U_{19}-M_{20} / L_{19}'-M_{20}'
M_{20}-U_{21} / M_{20}'-U_{21}'	2-1 3/4 x 30 / 1-1/2 x 20 1/2	2-1 3/4 x 30 / 1-1/2 x 20 1/2	A572 64588 #	78.631	78.631	8.26	10.75	114	115.19	115.19	83.69	-579	-834	+78 -336	±40	±4	±34	-1283 / -1697	-1473 -1553	-1267 -1713	-1249 -1713	-1439 -1587	-14.71	-13.48	-14.87	-15.02	-13.78	-14.72	-18.41	-18.41	-18.41	-20.62	-0.399	M_{20}-U_{21} / M_{20}'-U_{21}'
U_{21}-M_{22} / U_{21}'-M_{22}'	2-3/4 x 30 / 1-7/16 x 22 1/2	2-3/4 x 30 / 1-9/16 x 21/2	A572	70.094	70.094	7.65	10.62	110	57.59	57.59	50.09	+543	+654	+285 -85	±39	±3	±36	+1362 / +992	+1236 +1158	+1377 +977	+1398 +956	+1272 +1122	+27.19	+24.68	+27.49	+27.91	+25.39	+27.00	+33.75	+33.75	+33.75	+39.20	+0.559	U_{21}-M_{22} / U_{21}'-M_{22}'
M_{22}-U_{23} / M_{22}'-U_{23}'	2-1 1/4 x 30 / 1-1/2 x 21/2	2-1 1/4 x 30 / 1-1/2 x 21/2	A36	72.659	72.659	8.10	10.15	107	85.69	85.69	63.19	-363	-464	+132 -276	±37	±2	±12	-612 / -1020	-790 -864	-599 -1033	-600 -1032	-778 -876	-11.90	-10.09	-12.07	-12.06	-10.22	-12.55	-15.69	-15.69	-15.69	-17.58	-0.270	M_{22}-U_{23} / M_{22}'-U_{23}'
U_{23}-M_{24} / U_{23}'-M_{24}'	2-1/2 x 30 / 1-3/8 x 23	2-1/2 x 30 / 1-3/8 x 21/2	A572	69.816	69.816	7.65	10.75	110	38.59	38.59	33.35	+268	+309	+239 -147	±26	±2	±13	+758 / +372	+603 +551	+768 +362	+771 +359	-626 +538	+22.73	+18.08	+23.03	+23.12	+18.77	+27.00	+33.75	+33.75	+33.75	+39.20	+0.404	U_{23}-M_{24} / U_{23}'-M_{24}'
M_{24}-U_{25} / M_{24}'-U_{25}'	2-1/4 x 30 / 1-7/16 x 21/2	2-1/4 x 30 / 1-7/16 x 21/2	A36	70.667	70.667	8.16	10.20	104	84.34	84.34	71.84	-53	-72	+183 -208	±27	±2	±1	+58 / -333	-98 -152	+69 -344	+59 -334	-99 -153	+0.81 -3.95	-1.80	+0.96 -4.08	+0.83 -3.96	-1.81	+18.70* -12.75	-15.93	+25.00 -15.93	+18.67* -15.93	-17.85	-0.040	M_{24}-U_{25} / M_{24}'-U_{25}'

SEE SHT. 22 FOR NOTES AND EXPLANATION OF SYMBOLS.

STRESS TABLE FOR TRUSS ERS
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1) F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

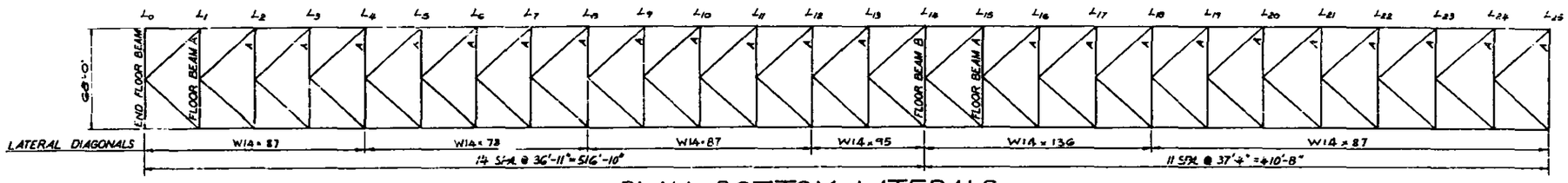
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) F&E	ALEXANDER & ILLINOIS / MISSISSIPPI & MISSOURI	81	24
F.A.P. RTE. NO.		ILLINOIS / MISSOURI	PROJECT I-57-9( )0	



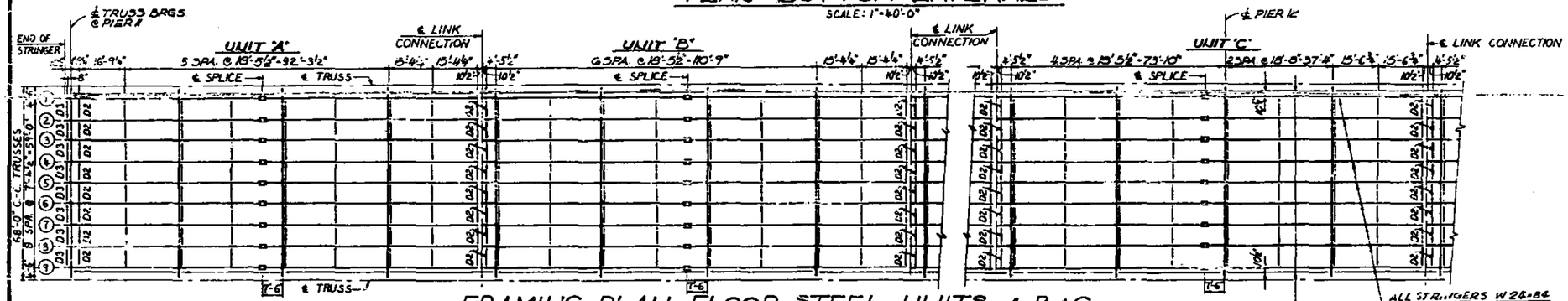
PLAN - TOP LATERAL SYSTEM

SCALE: 1"=40'-0"



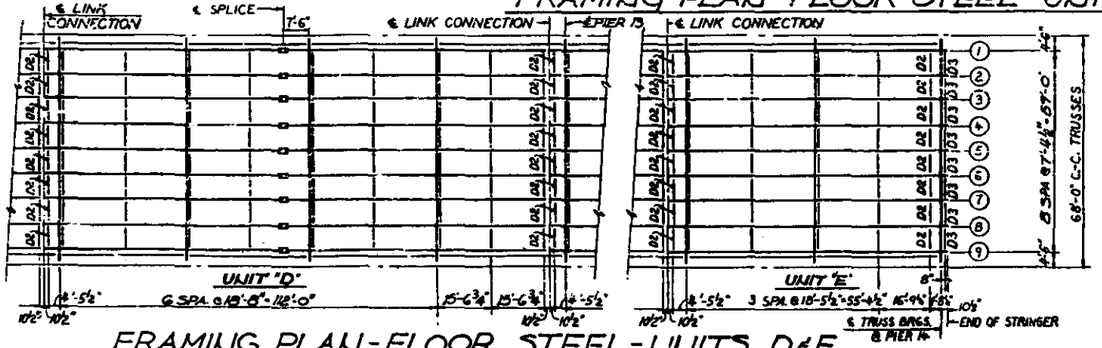
PLAN - BOTTOM LATERALS

SCALE: 1"=40'-0"



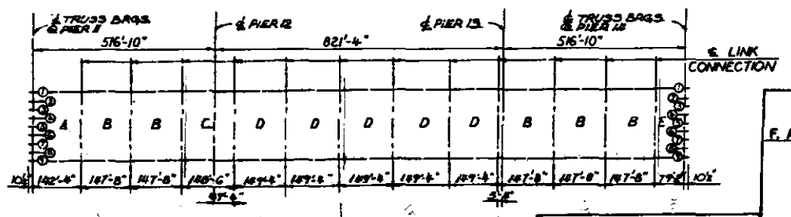
FRAMING PLAN - FLOOR STEEL - UNITS A, B & C

SCALE: 1"=20'-0"



FRAMING PLAN - FLOOR STEEL - UNITS D & E

SCALE: 1"=20'-0"



KEY PLAN

NOTES:

ALL DIAPHRAGMS ARE DI UNLESS NOTED.

ALL MATERIAL ASTM A36 UNLESS NOTED.

ALL DIMENSIONS PERPENDICULAR TO TRUSS ARE HORIZONTAL.

ALL DIMENSIONS PARALLEL TO TRUSS ARE ALONG A STRAIGHT LINE THROUGH L_0 AND L_0' (SEE TRUSS LAYOUT, SHT. 21)

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 12, ... 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

TRUSS PANEL POINT	PROFILE GRADE EL.EV.	ELEV.* OF ℄ BOTTOM CHORD	TOP OF STRINGER ELEVATIONS * (SEE DETAIL A) 1 AND 9	2 AND 8	3 AND 7	4 AND 6	5	FILL ℄ THICKNESS "C" INCHES (SEE DETAIL A)	DEAD LOAD DEFLECTION OF TRUSS-INCHES TOTAL DEAD LOAD	WEIGHT OF CONCRETE ONLY
L_0	386.933	378.946	385.772	385.538	386.003	386.118	386.233	1/2"	0"	0"
L_1	387.663	379.653	386.496	386.612	386.727	386.842	386.957	11/16"	2 1/16"	1 15/16"
L_2	388.353	380.360	387.186	387.302	387.417	387.532	387.647	1/2"	3 3/16"	2 7/16"
L_3	389.008	380.998	387.841	387.957	388.072	388.187	388.302	11/16"	5 3/8"	3 7/16"
L_4	389.629	381.636	388.462	388.578	388.693	388.808	388.923	1/2"	6 3/16"	4"
L_5	390.217	382.206	389.050	389.166	389.281	389.396	389.511	11/16"	6 15/16"	4 1/2"
L_6	390.770	382.777	389.603	389.719	389.834	389.949	390.064	1/2"	6 5/8"	4 5/16"
L_7	391.289	383.279	390.122	390.238	390.353	390.468	390.583	11/16"	6 11/16"	4 5/16"
L_8	391.774	383.781	390.607	390.723	390.838	390.953	391.068	1/2"	5 15/16"	3 1/2"
L_9	392.225	384.215	391.058	391.174	391.289	391.404	391.519	11/16"	4 1/16"	2 13/16"
L_{10}	392.642	384.649	391.475	391.591	391.706	391.821	391.936	1/2"	2 13/16"	2"
L_{11}	393.025	385.015	391.858	391.974	392.089	392.204	392.319	11/16"	1 7/8"	1 3/8"
L_{12}	393.374	385.381	392.207	392.323	392.438	392.553	392.668	1/2"	7/8"	11/16"
L_{13}	393.689	385.678	392.522	392.638	392.753	392.868	392.983	11/16	5/8"	3/8"
L_{14}	393.969	385.976	392.802	392.918	393.033	393.148	393.263	1/2"	0"	0"
L_{15}	394.219	386.208	393.052	393.168	393.283	393.398	393.513	11/16	1 1/2"	11/16"
L_{16}	394.433	386.440	393.266	393.382	393.497	393.612	393.727	1/2"	2 3/16	1 5/8"
L_{17}	394.613	386.602	393.446	393.562	393.677	393.792	393.907	11/16"	5"	2 1/4"
L_{18}	394.757	386.764	393.590	393.706	393.821	393.936	394.051	1/2"	6 7/8"	3 1/16"
L_{19}	394.867	386.856	393.700	393.816	393.931	394.046	394.161	11/16"	9 5/16"	4 1/4"
L_{20}	394.942	386.949	393.775	393.891	394.006	394.121	394.236	1/2"	11 7/16"	5 5/16"
L_{21}	394.982	386.971	393.815	393.931	394.046	394.161	394.276	11/16"	1'-2"	6"
L_{22}	394.987	386.994	393.820	393.936	394.051	394.166	394.281	1/2"	1'-3 13/16"	7 1/2"
L_{23}	394.958	386.967	393.791	393.907	394.022	394.137	394.252	11/16"	1'-5 5/16"	8 1/4"
L_{24}	394.893	386.900	393.726	393.842	393.957	394.072	394.187	1/2"	1'-6 3/16"	8 11/16"
L_{25}	394.796	386.783	393.627	393.743	393.858	393.973	394.088	11/16"	1'-6 5/8"	8 15/16"
L_{24}	394.669	386.667	393.493	393.609	393.724	393.839	393.954	1/2"	1'-6 3/16"	8 11/16"
L_{23}'	394.491	386.480	393.324	393.440	393.555	393.670	393.785	11/16"	1'-5 5/16"	8 1/4"
L_{22}'	394.267	386.294	393.126	393.242	393.357	393.472	393.587	1/2"	1'-3 7/16"	7 7/8"
L_{21}'	394.049	386.038	392.882	392.998	393.113	393.228	393.343	11/16"	1'-2"	6 5/8"
L_{20}'	393.775	385.782	392.608	392.724	392.839	392.954	393.069	1/2"	11 5/16"	5 9/16"
L_{19}'	393.467	385.456	392.300	392.416	392.531	392.646	392.761	11/16"	9 5/16"	4 1/4"
L_{18}'	393.124	385.131	391.957	392.073	392.188	392.303	392.418	1/2"	6 7/8"	3 1/16"
L_{17}'	392.746	384.735	391.579	391.695	391.810	391.925	392.040	11/16"	5"	2 1/4"
L_{16}'	392.333	384.340	391.166	391.282	391.397	391.512	391.627	1/2"	2 13/16"	1 3/16
L_{15}'	391.885	383.815	390.718	390.834	390.949	391.064	391.179	11/16"	1/2"	11/16"
L_{14}'	391.403	383.410	390.236	390.352	390.467	390.582	390.697	1/2"	0"	0"
L_{13}'	390.891	382.881	389.724	389.840	389.955	390.070	390.185	11/16"	3/8"	3/8"
L_{12}'	390.346	382.353	389.179	389.295	389.410	389.525	389.640	1/2"	7/8"	11/16"
L_{11}'	389.766	381.756	388.599	388.715	388.830	388.945	389.060	11/16"	1 7/8"	1 3/8"
L_{10}'	389.153	381.160	387.986	388.102	388.217	388.332	388.447	1/2"	2 3/16"	2"
L_9'	388.505	380.495	387.338	387.454	387.569	387.684	387.799	11/16"	4 1/16"	2 13/16"
L_8'	387.823	379.830	386.656	386.772	386.887	387.002	387.117	1/2"	5 3/16"	3 1/2"
L_7'	387.107	379.097	385.940	386.056	386.171	386.286	386.401	11/16"	6 1/16"	4 1/16"
L_6'	386.358	378.365	385.191	385.307	385.422	385.537	385.652	1/2"	6 5/8"	4 5/16"
L_5'	385.574	377.563	384.407	384.523	384.638	384.753	384.868	11/16"	6 15/16"	4 1/2"
L_4'	384.755	376.722	383.588	383.704	383.819	383.934	384.049	1/2"	6 3/16"	4"
L_3'	383.903	375.893	382.736	382.852	382.967	383.082	383.197	11/16"	5 3/8"	3 7/16"
L_2'	383.017	375.024	381.850	381.966	382.081	382.196	382.311	1/2"	3 13/16"	2 1/16"
L_1'	382.097	374.087	380.930	381.046	381.161	381.276	381.391	11/16"	2 1/16"	1 5/16"
L_0'	381.143	373.150	379.976	380.092	380.207	380.322	380.437	1/2"	0"	0"

* ELEVATIONS GIVEN ARE AFTER TOTAL DEAD LOAD DEFLECTION

INTERIOR STRINGER MOMENT AND REACTION TABLES FOR UNIT "A"

℄ STRINGER	PP1 PANEL 1	PP2 PANEL 2	PP3 PANEL 3	PP4 PANEL 4	℄ PIN
1	36'-11"	36'-11"	36'-11"	31'-7"	

SECTION: W24×84 (A572)

MOMENT TABLE

	PP1	0.4 PANEL 1	PP2	0.5 PANEL 2	PP3	0.5 PANEL 3	PP4	0.4 PANEL 4
I. (IN^4)	2364	2364	2364	2364	2364	2364	2364	2364
D.L.[a] (K/I)	1.072	1.072	1.072	1.072	1.072	1.072	1.072	1.072
D.L.M.[a] ('K)	0	116	-158	51	-114	64	-133	79
L.L.M. ('K)	0	225*	-157	168	-145	165	-143	169
IMP.M. ('K)	0	67*	- 47	50	- 44	49	- 43	51
M_{TOTAL} ('K)	0	408	-362	269	-303	278	-319	299
f_s (KSI)	0.00	24.94**	22.13	16.45	18.52	17.00	19.50	18.28

REACTION TABLE

	PP1	PP2	PP3	PP4	℄ PIN
D.L.R.[a] (K)	15.7	45.3	38.3	41.8	12.9
L.L.R. (K)	38.6	48.5	46.5	46.5	36.8
IMP.R. (K)	11.6	14.5	14.0	14.0	11.0
R_{TOTAL} (K)	65.9	108.3	98.8	102.3	60.7

* INCLUDES ADDITIONAL MOMENT DUE TO LIVE LOAD DEFLECTION OF FLOOR BEAM.
** ALLOWABLE FATIGUE STRESS = 25.98 KSI.
[a] INCLUDING WEARING SURFACE

INTERIOR STRINGER MOMENT AND REACTION TABLES FOR UNIT "B", "C" OR "D"

	℄ PIN	PP1 PANEL 1	PP2 PANEL 2	PP3 PANEL 3	PP4 PANEL 4	℄ PIN
UNIT "B"	5'-6"	36'-11"	36'-11"	36'-11"	31'-7"	
UNIT "C"	5'-6"	36'-11"	36'-11"	37'-4"	32'-0"	
UNIT "D"	5'-6"	37'-4"	37'-4"	37'-4"	32'-0"	

SECTION: W24×84 (A572)

MOMENT TABLE (VALUES FOR UNIT "D" SHOWN)

	PP1	0.4 PANEL 1	PP2	0.5 PANEL 2	PP3	0.5 PANEL 3	PP4	0.4 PANEL 4
I. (IN^4)	2364	2364	2364	2364	2364	2364	2364	2364
D.L.[a] (K/I)	1.072	1.072	1.072	1.072	1.072	1.072	1.072	1.072
D.L.M.[a] ('K)	- 84	74	-137	59	-119	62	-132	79
L.L.M. ('K)	-172	225*	-157	168	-145	165	-143	169
IMP.M. ('K)	- 51	67*	- 47	50	- 44	49	- 43	51
M_{TOTAL} ('K)	-307	366	-341	277	-308	276	-318	299
f_s (KSI)	18.77	22.38**	20.85	16.93	18.83	16.87	19.44	18.28

REACTION TABLE (VALUES FOR UNIT "D" SHOWN)

	PP1	PP2	PP3	PP4	℄ PIN
D.L.R.[a] (K)	37.1	41.8	39.1	41.6	12.9
L.L.R. (K)	38.6	48.5	46.5	46.5	36.8
IMP.R. (K)	11.6	14.5	14.0	14.0	11.0
R_{TOTAL} (K)	87.3	104.8	99.6	102.1	60.7

* INCLUDES ADDITIONAL MOMENT DUE TO LIVE LOAD DEFLECTION OF FLOOR BEAM.
** ALLOWABLE FATIGUE STRESS = 22.63 KSI.
[a] INCLUDING WEARING SURFACE

INTERIOR STRINGER MOMENT AND REACTION TABLES FOR UNIT "E"

℄ PIN	PP1 PANEL 1	PP2 PANEL 2	PP3
5'-6"	36'-11"	36'-11"	

SECTION: W24×84 (A572)

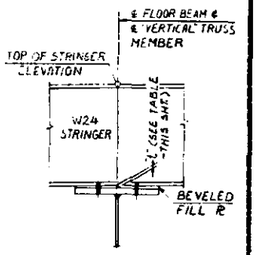
MOMENT TABLE

	PP1	0.4 PANEL 1	PP2	0.4 PANEL 2
I. (IN^4)	2364	2364	2364	2364
D.L.[a] (K/I)	1.072	1.072	1.072	1.072
D.L.M.[a] ('K)	- 84	59	-161	109
L.L.M. ('K)	-172	225*	-162	225*
IMP.M. ('K)	- 51	67*	- 49	67*
M_{TOTAL} ('K)	-307	351	-372	401
f_s (KSI)	18.77	21.46**	22.74	24.51**

REACTION TABLE

	PP1	PP2	PP3
D.L.R.[a] (K)	36.2	46.0	15.4
L.L.R. (K)	38.7	48.0	38.7
IMP.R. (K)	11.6	14.4	11.6
R_{TOTAL} (K)	86.5	108.4	65.7

* INCLUDES ADDITIONAL MOMENT DUE TO LIVE LOAD DEFLECTION OF FLOOR BEAM.
** ALLOWABLE FATIGUE STRESS = 21.92 KSI.
* ALLOWABLE FATIGUE STRESS = 25.29 KSI.
[a] INCLUDING WEARING SURFACE



DETAIL A

(NOTE: ℄ FLOOR BEAM AND ℄ "VERTICAL" TRUSS MEMBER ARE PERPENDICULAR TO A STRAIGHT LINE THROUGH TRUSS PANEL POINTS L_0 AND L_0'. SEE TRUSS LAYOUT, SHT. 21

FLOOR BEAM MOMENT AND REACTION TABLES

MOMENT TABLE

LOCATION	END FLOOR BEAM AT PIERS 11 & 14 (JACKING) END	AT ℄ JACK**	END FLOOR BEAM AT PIERS 11 & 14 (EXCLUDING JACKING) END	0.5	TYPICAL INTERIOR FLOOR BEAM IN SPANS 12 & 14 END	0.5	INTERIOR FLOOR BEAM AT PIERS 12 & 13 2'-6" FROM ℄ TRUSS	0.5	TYPICAL INTERIOR FLOOR BEAM IN SPAN 13 END	0.5
I. (IN^4)	74,289	76,854	74,289	82,159	89,258	109,888	248,571	144,397	89,258	109,888
D.L.M.[a] ('K)	—	4536	—	1418	—	3420	486	3454	—	3454
L.L.M. ('K)	—	—	—	1345	—	1975	—	1985	—	1985
IMP.M. ('K)	—	—	—	402	—	514	—	516	—	516
WIND NORMAL ('K)	—	—	—	—	—	—	5226	—	—	—
M_{TOTAL} ('K)	—	4536	—	3365	—	5909	5712	5955	—	5955
f_s (KSI)	—	25.66	—	19.26	—	25.41	9.94*	19.44	—	25.61
SEC. FLG. WEB	1'-8×1" 36×0.691	1'-8×1" 36×0.746	1'-8×1" 42×0.691	1'-8×1" 42×0.746	1'-8×1 1/2" 96×0.691	1'-8×1 1/2" 96×0.754	3'-3×3" 42×0.691	3'-3×3" 42×0.754	1'-8×1 1/2" 96×0.691	1'-8×1 1/2" 96×0.754
GRADE OF STEEL	A36		A36		HYBRID A572 & A36		A36		HYBRID A572 & A36	

REACTION TABLE

	END FLOOR BEAM AT PIERS 11 & 14 (JACKING) END	AT JACK**	END FLOOR BEAM AT PIERS 11 & 14 (EXCLUDING JACKING)	TYPICAL INTERIOR FLOOR BEAM IN SPANS 12 & 14	INTERIOR FLOOR BEAM AT PIERS 12 & 13	TYPICAL INTERIOR FLOOR BEAM IN SPAN 13
D.L.R.[a] (K)	1008	1168	81.9	193.2	202.2	195.2
L.L.R. (K)	—	—	88.0	113.5	114.0	114.0
IMP.R. (K)	—	—	22.9	29.5	29.6	29.6
R_{TOTAL} (K)	1008	1168	192.8	336.2	345.8	338.8

* ALLOWABLE FATIGUE STRESS = 9.98 KSI.
** JACK APPLIED AT 4'-6" FROM ℄ TRUSS
[a] INCLUDING WEARING SURFACE

TRUSS REACTIONS

LOADING \ DIRECTION OF REACTION	REACTIONS PER TRUSS AT PIERS 11 & 14 - KIPS VERTICAL	HORIZONTAL PARALLEL TO TRUSS	HORIZONTAL NORMAL TO TRUSS	REACTIONS PER TRUSS AT PIERS 12 & 13 - KIPS VERTICAL	HORIZONTAL PARALLEL TO TRUSS	HORIZONTAL NORMAL TO TRUSS
DEAD LOAD STRUCT. STEEL	390	—	—	3136	—	—
DEAD LOAD CONCRETE	390			937		
LIVE LOAD	273	—	—	957	196	—
IMPACT	21	—	—	60	12	—
WIND NORMAL TO TRUSS	±53	—	±154	±980	±263	±692
WIND AT SKEW ANGLE OF 60°	±17	—	±34	±310	±603	±225
WIND ON LIVE LOAD	±1	—	±7	±19	±26	±37
EARTHQUAKE (6% OF D.L.)	±3	—	±63	±297	±137	±360
TEMPERATURE (±80° FROM NORMAL)	—	—	—	—	±559	—
D.L. + L.L. + I.	1384	—	—	7531	584	—

[a] INCLUDING FUTURE WEARING SURFACE

FLOOR BEAM DEAD LOAD DEFLECTIONS

LOCATION \ FLOOR BEAM	DEFLECTION DUE TO TOTAL DEAD LOAD-IN. END FLOOR BEAM	TYPICAL INTERIOR FLOOR BEAM	FLOOR BEAM AT PIERS 12 & 13	DEFLECTION DUE TO CONCRETE ONLY-IN. END FLOOR BEAM	TYPICAL INTERIOR FLOOR BEAM	FLOOR BEAM AT PIERS 12 & 13
AT STRINGERS 1 & 9	1/8	3/16	1/8	1/16	3/16	1/8
AT STRINGERS 2 & 8	1/4	1/2	3/8	3/16	3/8	1/4
AT STRINGERS 3 & 7	3/8	11/16	1/2	5/16	9/16	7/16
AT STRINGERS 4 & 6	7/16	13/16	5/8	3/8	11/16	1/2
AT STRINGER 5	1/2	7/8	5/8	3/8	3/4	1/2

PANEL DEAD LOAD REACTIONS ON TRUSS

LOAD \ PANEL LOCATION	REACTIONS - KIPS L_0 AND L_0'	TYPICAL PANEL IN SPANS 12 & 14	L_{14} AND L_{14}'	TYPICAL PANEL IN SPAN 13
FLOOR STEEL	17.1	30.6	28.7	30.9
ROADWAY SLAB	46.0	119.2	119.8	120.4
PARAPETS AND RAILINGS	9.1	23.5	23.7	23.8
WEARING SURFACE	7.1	19.9	20.0	20.1
TOTAL	81.9	193.2	202.2	195.2

PANEL LIVE LOAD REACTIONS ON TRUSS (IMPACT NOT INCLUDED)

LOADING \ PANEL LOCATION	REACTIONS - KIPS L_0 AND L_0'	TYPICAL PANEL IN SPANS 12 & 14	L_{14} AND L_{14}'	TYPICAL PANEL IN SPAN 13
LANE - UNIFORM	16.2	42.5	42.8	43.0
LANE - CONCENTRATED	31.4	31.4	31.4	31.4
TRUCK	88.0	113.5	114.0	114.0

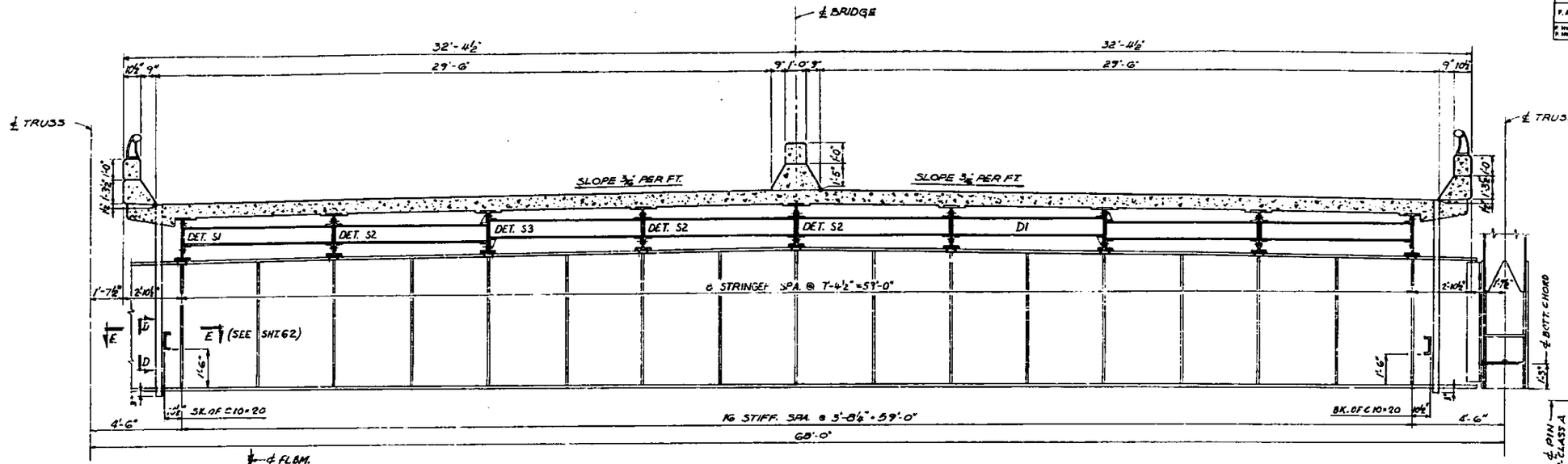
NOTES:
DEAD LOAD DOES NOT INCLUDE WEIGHT OF WEARING SURFACE UNLESS NOTED OTHERWISE
FOR LOCATION OF UNITS "A", "B", "C", "D" & "E" SEE KEY PLAN ON SHT. 24

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1)F,B,E	ALEXANDER ILLINOIS MISSOURI	81	25
F.W.A. REG. NO.		ILLINOIS MISSOURI	PROJECT I-57-9(10)	
F.W.A. REG. NO.				

STRINGER ELEVATIONS AND DATA
SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F,B,E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

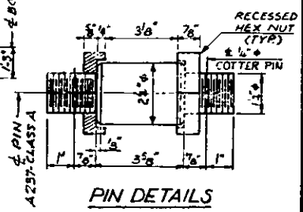
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) F&E	ALEXANDER	ILLINOIS	61	26
		MISSISSIPPI	MISSOURI		
			ILLINOIS	PROJECT I-57-91 0	
			MISSOURI		

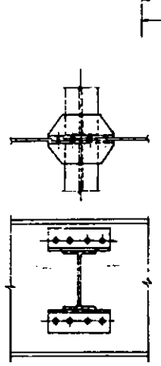


TYPICAL CROSS - SECTION

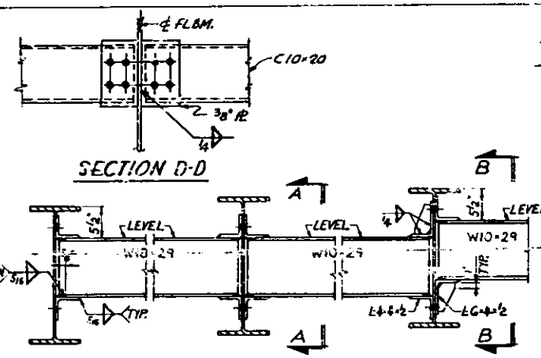
SCALE: 3/8"=1'-0"



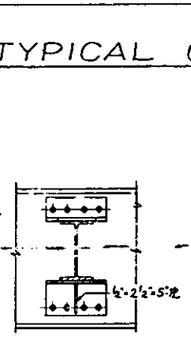
PIN DETAILS



SECTION A-A



DETAIL S1 DETAIL S2 DETAIL S3



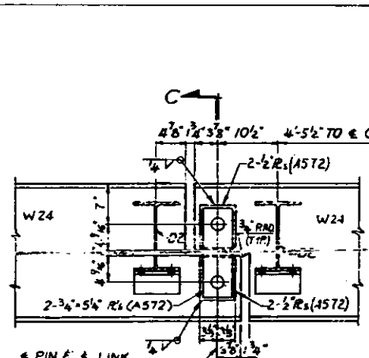
SECTION B-B

DIAPHRAGM D1 DETAILS

SCALE: 1"=1'-0"

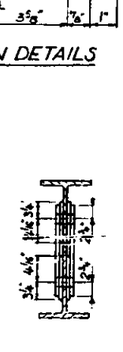
DIAPHRAGM D2 DETAILS

SCALE: 1"=1'-0"

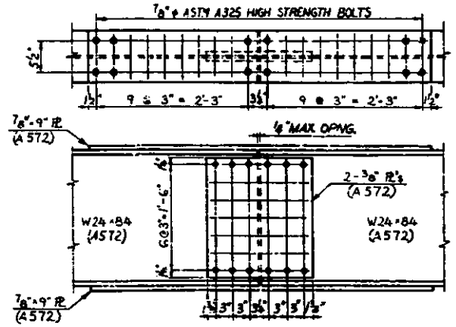


LINK CONNECTION

SCALE: 1"=1'-0"

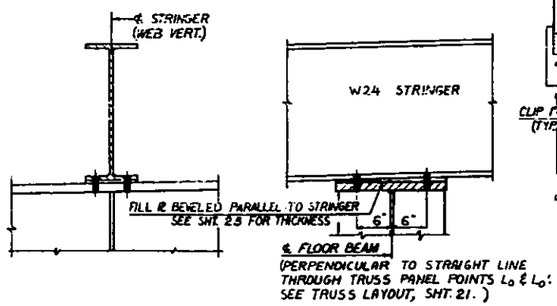


SECTION C-C



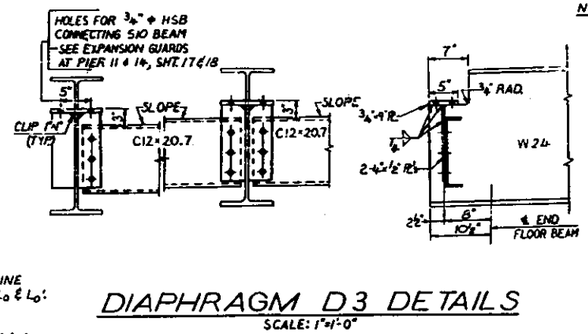
TYPICAL STRINGER SPLICE

SCALE: 1"=1'-0"



CONNECTION OF STRINGER TO FLOOR BEAM

SCALE: 1"=1'-0"



DIAPHRAGM D3 DETAILS

SCALE: 1"=1'-0"

NOTES:
ALL MATERIAL ASTM A36 UNLESS NOTED
ALL FASTENERS SHALL BE ¾" ø ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.
FOR FLOOR BEAMS, SEE SHT. 27

FLOOR STEEL DETAILS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.78 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 F.B.E.	ALEXANDER	ILLINOIS	81	27
		MISSISSIPPI	MISSOURI		
		ILLINOIS	MISSOURI	PROJECT I-57-9..10	

68'-0" C.-C. TRUSSES

℄ TRUSS

SYM. ABOUT ℄ FLOOR BEAM "A" — SYM. ABOUT ℄ FLOOR BEAM "B"

1½"x20" (A572) FLANGE PL TOP AND BOTTOM

3" FLANGE PL TOP AND BOTTOM

VARIES SEE TRUSS DETAILS

1-⅜"x5" INTERMEDIATE STIFFENER PL

2-⅞"x9" BEARING STIFFENER PLS

9/16" WEB PL

SEE BOT. LAT. CONN. AT ℄ OF BRIDGE - THIS SHEET

1-⅜"x5" INTERMEDIATE STIFFENER PL

2-⅝"x7" BEARING STIFFENER PLS

½" WEB PL

E PL's "E"

2-⅞"x10" BRG. STIFF. PLS

R PL's "D"

1-7/16"x7" INT. STIFF. PL

2-1¼"x14" BRG. STIFF. PLS

6"x⅜" BAR*

SEE TRUSS DETAILS

16 STIFF. SPS. @ 3'-8¼" = 59'-0"

4'-6"

4'-6"

HALF ELEVATION INTERMEDIATE FLOOR BEAM "A"

SCALE: ⅜"=1'-0"

NOTE: FOR LOCATION OF FLOOR BEAMS "A" & "B" SEE FRAMING PLAN, SHT. 24

HALF ELEVATION INTERMEDIATE FLOOR BEAM "B"

SCALE: ⅜"=1'-0"

* SLOPE 6"x⅜" BAR TO CONFORM WITH THE PLANE OF THE BOTTOM LATERAL BRACING

SYM. ABOUT ℄ FLOOR BEAM "A" — SYM. ABOUT ℄ FLOOR BEAM "B"

LEVEL — LEVEL

5'-9⅝" | 5'-11³/₁₆" | 6'-0⅛" | 6'-2⅝" | 6'-3¾" | 6'-0⅛" | 5'-11⅛" | 5'-9⅝" | 5'-8⅛" | 5'-6½"

8 SPS. @ 7'-4½" = 59'-0"

WEB PLATE OFFSETS CAMBERED FOR CROWN & TOTAL DEAD LOAD DEFLECTIONS OF FLOOR BEAMS "A" ℄ "B"

℄ TRUSS — 34'-0" — ℄ — 17'-0" — 14'-4" — ℄ TRUSS 2'-8"

GRIND SMOOTH

1'-8"

HALF PLAN INTERMEDIATE FLOOR BEAM "A"

(LATERAL PLs NOT SHOWN)

SCALE: ⅜"=1'-0"

HALF PLAN INTERMEDIATE FLOOR BEAM "B"

(LATERAL PLs NOT SHOWN)

SCALE: ⅜"=1'-0"

MILL TO EXACT LENGTH

2¼"

LENGTH TOLERANCE (+0" −1/16")

BOLTS AS SHOWN IN TRUSS DETAILS

3 SIDES

2 L's 8x8x¾

¼" BEVEL

1'-8"

FLOOR BEAM "A" CONNECTION

(LATERAL PLs NOT SHOWN)

SCALE: 1"=1'-0"

MILL TO EXACT LENGTH

8 SPS. @ 3'-6" = 27'-7"

½" PL

CLIP WEB & RAD.

6" BEVEL

1'-7"

END FLOOR BEAM CONNECTION

SCALE: 1"=1'-0"

℄ TRUSS — 34'-0" — SYMMETRICAL ABOUT ℄

1'-6"x19" FLANGE PL TOP AND BOTTOM

PL's "C"

GRIND SMOOTH

1-⅜"x5" INTERMEDIATE STIFFENER PL

2-⅞"x9" BEARING STIFFENER PLS

¾" WEB PL

½" WEB PL

1'-6"x18¾"x1'-6" PL FOR JACKING

SEE BOT. LAT. CONN. AT ℄ OF BRIDGE - THIS SHEET

WIND TRANSFER DEVICE SEE SHT. 41

4'-1½" — 3'-3⅜" — 7 STIFF. SPS. @ 3'-8¼" = 25'-9¾"

HALF ELEVATION END FLOOR BEAM

SCALE: ⅜"=1'-0"

LEVEL ℄

5'-10⅜" | 5'-11¾" | 6'-1¼" | 6'-2⅛" | 6'-4⅛"

LEVEL

℄ SPS. @ 7'-4½" = 29'-6"

WEB PLATE OFFSETS CAMBERED FOR CROWN & TOTAL DEAD LOAD DEFLECTION OF END FLOOR BEAM

HOLES FOR ¾"ø H.S. BOLTS CONNECTING STRINGERS

MILL

CLIP 1"x1"

L_2=5"x3½" BEAM "B"; = ¼" IN OTHERS

L_2=4" FOR ⅝" STIFF. PL's = 5" FOR ⅞" & 1¼" STIFF. PL's

SEE BEAM ELEV's FOR SIZE OF STIFF. PL's

PL's "C" @ "D" (CLIP 1x1) ALL OTHERS

MILL | PL's "C" | PL's "D" | TIGHT FIT

BEARING STIFFENER

SCALE: 1"=1'-0"

CLIP 1"x1"

PL's "E" (CLIP 1x1) ALL OTHERS

INTERMEDIATE STIFFENER

SCALE: 1"=1'-0"

THE THICKNESS OF THE LATERAL PL's AND THE NUMBER OF BOLTS CONNECTING EACH W14 LATERAL TO THE LATERAL PL's SHALL BE THE SAME AS AT THE CONNECTION OF THE LATERAL TO THE TRUSS. (SEE TRUSS DETAILS)

℄ BRIDGE

W14 LATERALS (FOR SIZE SEE FRAMING PLAN)

CLIP 1"x1"

PLAN

℄ FLOOR BEAM

TOP LAT. PL

D=DEPTH OF W14 LATERAL

ELEV.

BOT. LAT. PL

BOTTOM LATERAL CONNECTION AT ℄ OF BRIDGE

SCALE: 1"=1'-0"

MILL TO EXACT LENGTH

1'-0"

6½"

5/16

5/16

7'-1¾"

18 SPS. @ 3½" = 5'-3"

CLIP WEB AND BRACKETS 2" RAD.

½" PLS

3/16" BEVEL

2½" PL

FLOOR BEAM "B" CONNECTION

(LATERAL PLs NOT SHOWN)

SCALE: 1"=1'-0"

NOTES:

ALL MATERIAL ASTM A36 UNLESS NOTED.

TOTAL DEAD LOAD DEFLECTION DOES NOT INCLUDE DEFLECTION DUE TO FUTURE WEARING SURFACE.

FOR CONNECTION OF STRINGERS TO FLOOR BEAMS SEE FLOOR STEEL DETAILS, SHT. 26.

ALL FASTENERS SHALL BE 1" ø ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.

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CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FLOOR BEAMS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION 102-1B-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 79.25

GENERAL NOTES ON TRUSS DETAILS

ALL MATERIAL SHALL BE ASTM A36 UNLESS NOTED.

ALL SHOP FASTENERS (DENOTED THUS: ⊕) AND FIELD FASTENERS (DENOTED THUS: +) SHALL BE 1" ϕ ASTM A 325 HIGH STRENGTH BOLTS. SHOP & FIELD CONNECTIONS MAY BE INTERCHANGED.

FOR DETAILS OF WEB TO FLANGE FILLET WELDS IN TRUSS MEMBERS AND DETAILS AT CHANGE OF SECTION IN TRUSS MEMBERS (WHERE SECTIONS "WITHIN GUSSETS" AND "OUTSIDE GUSSETS" ARE DIFFERENT) SEE MISCELLANEOUS TRUSS DETAILS, SHT. 39

FOR DETAILS OF GUSSET PLATE STIFFENERS, GUSSET PLATE DIAPHRAGMS, AND CHORD DIAPHRAGMS SEE MISCELLANEOUS TRUSS DETAILS, SHT. 39

FOR TOP LATERAL CONNECTIONS ALONG ℄ OF BRIDGE SEE MISCELLANEOUS TRUSS DETAILS, SHT. 39

FOR BOTTOM LATERAL CONNECTIONS ALONG ℄ OF BRIDGE SEE FLOOR BEAMS, SHT. 29

FOR DETAILS OF FLOOR BEAM CONNECTIONS SEE SHT. 29

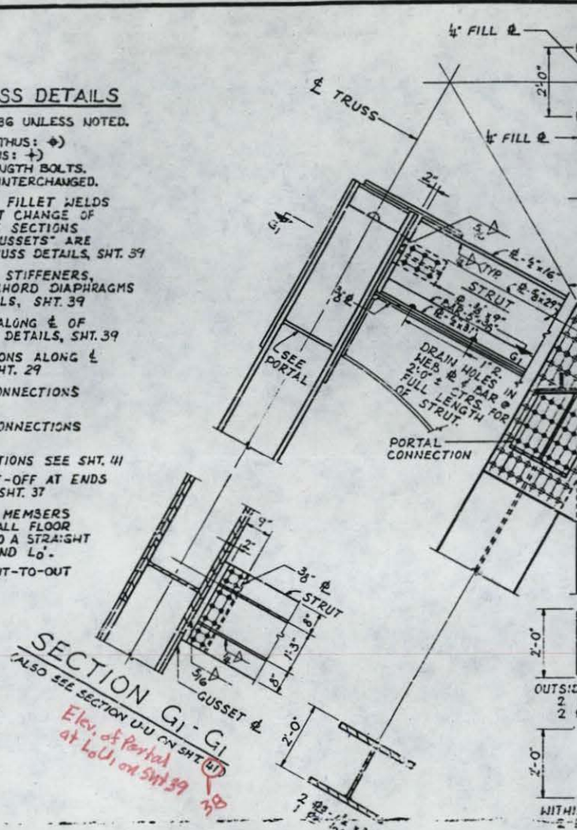
FOR DETAILS OF SWAY FRAME CONNECTIONS SEE SHT. 40

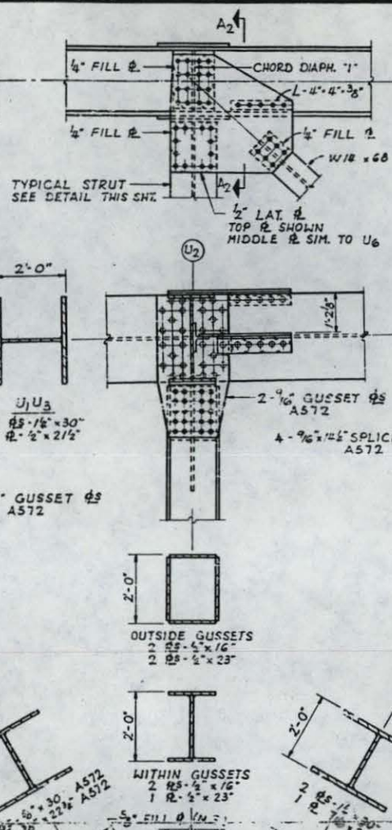
FOR DETAILS OF PORTAL CONNECTIONS SEE SHT. 41

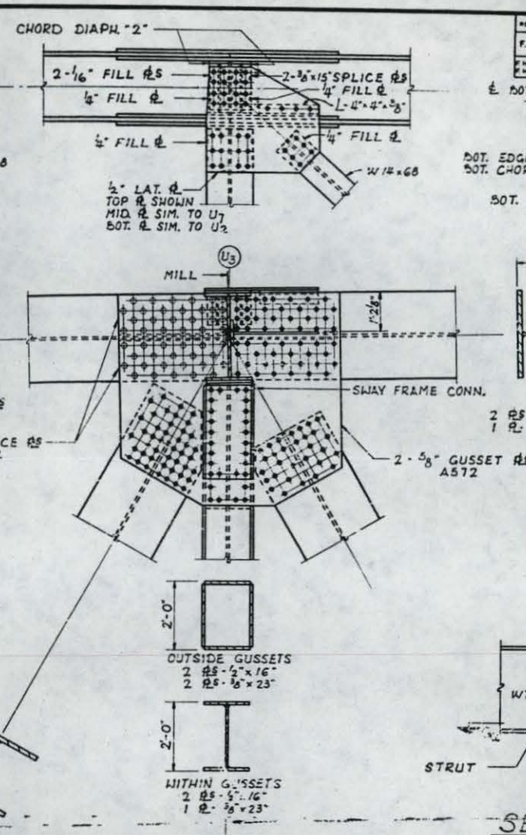
FOR DETAILS OF WEB PLATE CUT-OFF AT ENDS OF DIAGONAL TRUSS MEMBERS, SEE SHT. 37

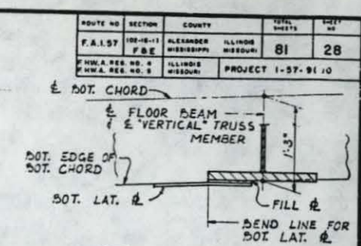
ALL NOMINALLY VERTICAL TRUSS MEMBERS AND THE NOMINALLY VERTICAL ℄ OF ALL FLOOR BEAMS ARE TO BE PERPENDICULAR TO A STRAIGHT LINE THROUGH PANEL POINTS L_0 AND L_0'.

THE WIDTH OF TRUSS MEMBERS, OUT-TO-OUT OF FLANGES, SHALL BE AS FOLLOWS:
CHORDS : 2'-0" (+1/16", -0)
DIAGONALS: 2'-0" (+0, -1/16")
VERTICALS: 2'-0" (+0, -1/16")





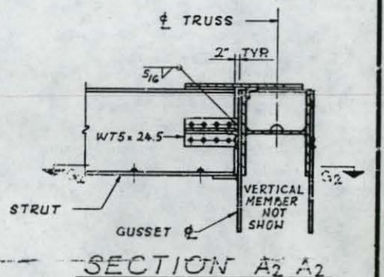




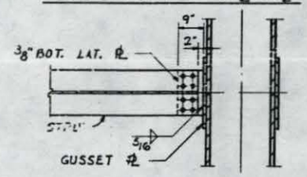
DETAIL "A"

(NOT TO SCALE)

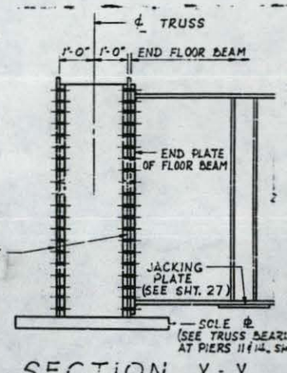
PROVIDE BEVELED SHIM PLS ABOVE & BELOW BOT. LATERAL DIAGONALS AT CONNECTION.



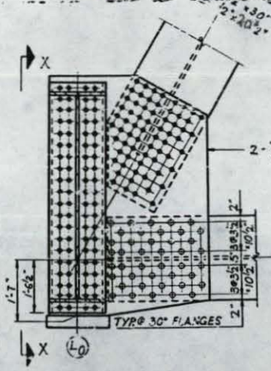
SECTION A_2 A_2

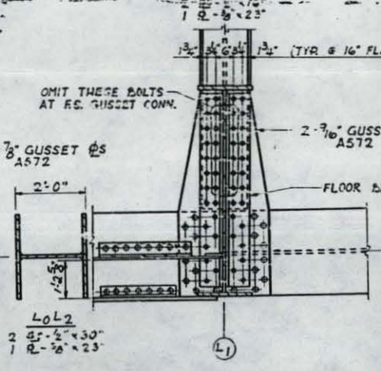


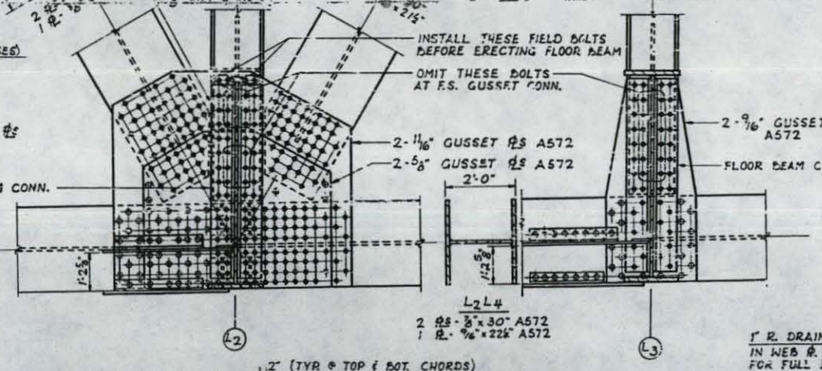
SECTION G_2 - G_2

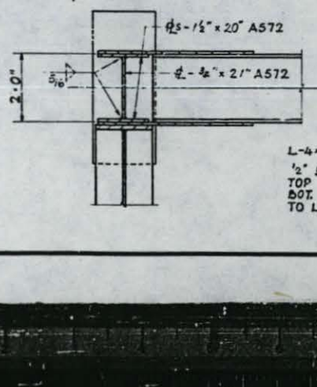


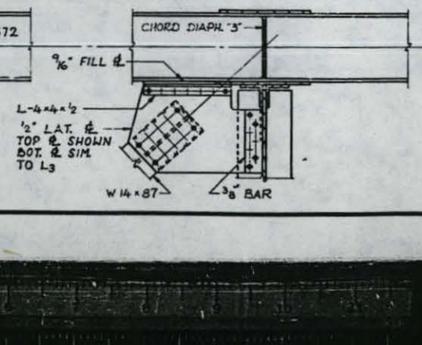
SECTION X - X

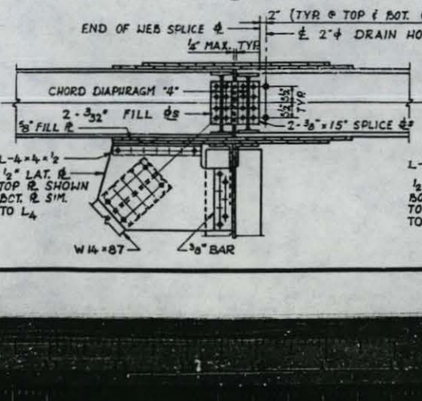


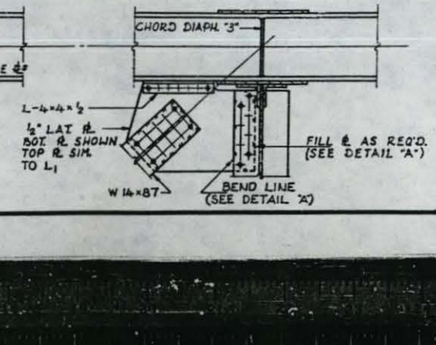


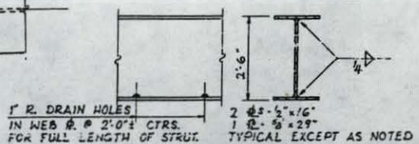








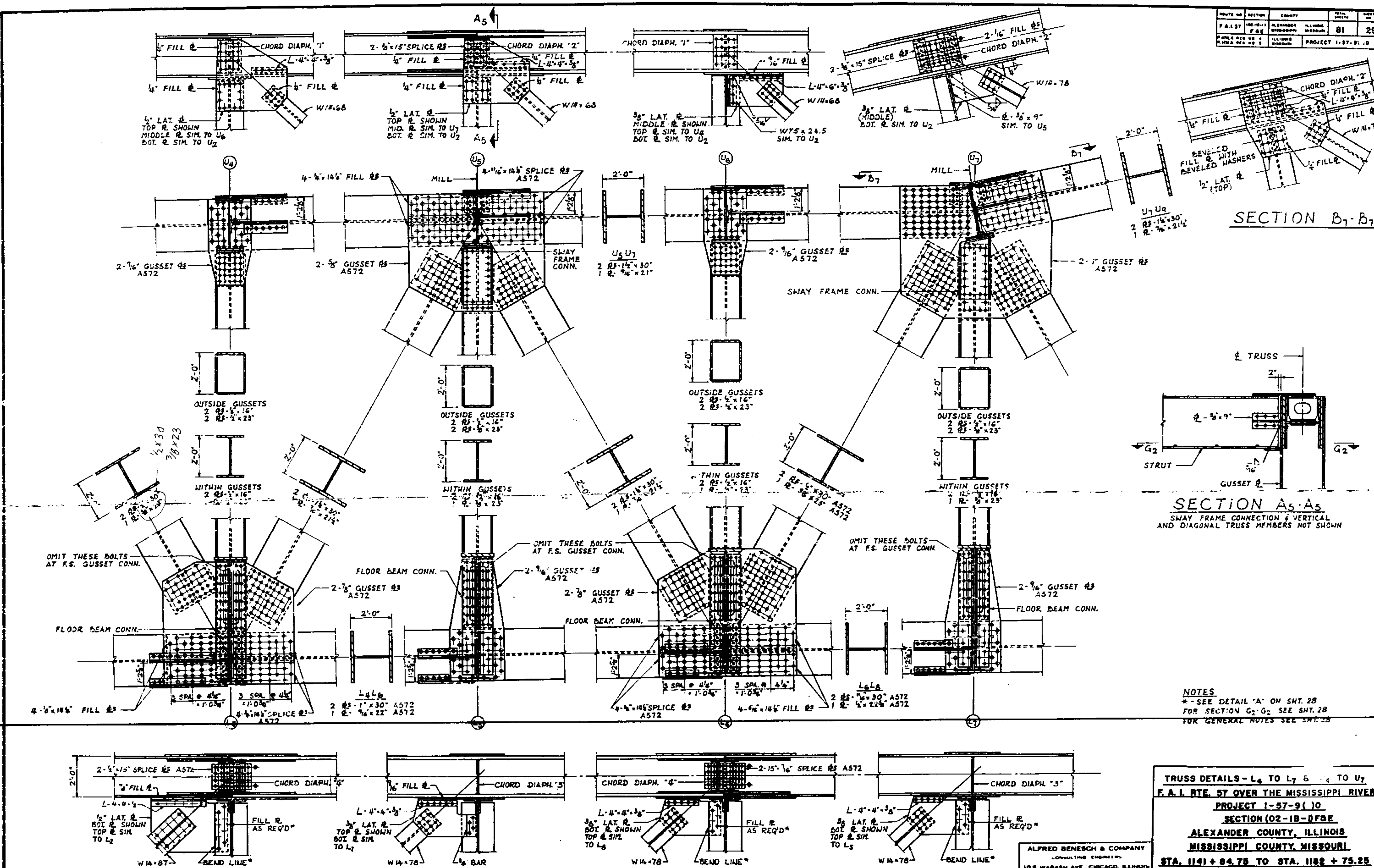




STRUT

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	(02-1B-1) F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	28
F.H.W.A. REG. NO. 4 / F.H.W.A. REG. NO. 7		ILLINOIS / MISSOURI	PROJECT I-57-9( )0	

TRUSS DETAILS - L_0 TO L_3 & [illegible]0 U_3
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25



ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	29
FHWA REG NO. 4 FHWA REG NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9( )0		

NOTES
* - SEE DETAIL "A" ON SHT. 28
FOR SECTION G_2-G_2 SEE SHT. 28
FOR GENERAL NOTES SEE SHT. 28

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TRUSS DETAILS – L_4 TO L_7 & [illegible]$_4$ TO U_7

F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER

PROJECT I-57-9( )0

SECTION (02-18-0FBE

ALEXANDER COUNTY, ILLINOIS

MISSISSIPPI COUNTY, MISSOURI

STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-18-1 F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	81	30
F.H.W.A. REG. NO. 5	F.H.W.A. REG. NO. 7	ILLINOIS MISSOURI	PROJECT I-57-9(10)	

CHORD DIAPH. "1"
¼" FILL ℄
¼" FILL ℄
¼" FILL ℄
L-4"×4"×⅜
W18×78
½" LAT. ℄ TOP ℄ SHOWN MID ℄ SIM. TO U_{10} BOT. ℄ SIM. TO U_{12}

CHORD DIAPH. "2" BEVELED FILL ℄
2-⅜"×15" SPLICE ℄S
⅛" FILL ℄
¼" FILL ℄
L-4"×4"×⅜
W18×78
½" LAT. ℄ TOP ℄ SHOWN MID ℄ SIM. TO U_7 BOT. ℄ SIM. TO U_{12}
STRUT 2 PLS - ½"×16½" 1 ℄ - ⅝"×29"

CHORD DIAPH. "1"
9/16" FILL ℄
L-4"×6"×⅜
W18×78
WT5×24.5 SIM. TO U_2
⅜" LAT. ℄ MIDDLE ℄ SHOWN TOP ℄ SIM. TO U_8 BOT. ℄ SIM. TO U_{12}

U_8
2-9/16" GUSSET ℄S A572
2'-0"
OUTSIDE GUSSETS
2 PLS - ½"×16"
2 PLS - ½"×23"
2'-0"
WITHIN GUSSETS
2 PLS - ½"×16"
1 ℄ - ½"×23"
2'-0"
2 PLS - 1½"×30" 1 ℄ - ½"×21"
OMIT THESE BOLTS AT F.S. GUSSET CONN.
2'-0"
OUTSIDE GUSSETS
2 PLS - 9/16"×30" A572
2 PLS - ⅝"×23" A572
2'-0"
WITHIN GUSSETS
2 PLS - 11/16"×30" A572
1 ℄ - 1"×22½" A572
2-¾" GUSSET ℄S A572
2-⅝" GUSSET ℄S A572
FLOOR BEAM CONN.
4 SPA. @ 3½"=12"
L_8 L_{10}
2 PLS - 1½"×30"
1 ℄ - 9/16"×21½"

U_9
2'-0"
U_9 U_{11}
2 PLS - 9/16"×30" A572
1 ℄ - ⅞"×22½" A572
SLIDY FRAME CONN.
2-⅝" GUSSET ℄S A572
2-¾" GUSSET ℄S A572
2'-0"
OUTSIDE GUSSETS
2 PLS - ½"×16"
2 PLS - ½"×23"
2'-0"
WITHIN GUSSETS
2 PLS - ½"×16"
1 ℄ - ½"×23"
OMIT THESE BOLTS AT F.S. GUSSET CONN.
FLOOR BEAM CONN.
2-9/16" GUSSET ℄S A572

U_{10}
2-9/16" GUSSET ℄S A572
2'-0"
OUTSIDE GUSSETS
2 PLS - ½"×16"
2 PLS - ½"×23"
2'-0"
WITHIN GUSSETS
2 PLS - ½"×16"
1 ℄ - ½"×23"
2'-0"
OUTSIDE GUSSETS
2 PLS - ⅞"×30" A572
2 PLS - ⅝"×23" A572
2'-0"
WITHIN GUSSETS
2 PLS - 1"×30" A572
2 PLS - ⅞"×22" A572
OMIT THESE BOLTS AT F.S. GUSSET CONN.
FLOOR BEAM CONN.
2-1" GUSSET ℄S A572
2-¾" GUSSET ℄S A572
2'-0"
L_{10} L_{12}
2 PLS - 1⅛"×30" A572
1 ℄ - ⅝"×21⅛" A572

2'-0"
2-⅜"×15" SPLICE ℄S
CHORD DIAPH. "4"
L-4"×4"×⅜
¾" LAT. ℄ TOP ℄ SHOWN BOT. ℄ SIM. TO L_6
⅝" BAR
W18×78

9/16" FILL ℄
CHORD DIAPH. "3"
L-4"×4"×½"
½" LAT. ℄ TOP ℄ SHOWN BOT. ℄ SIM. TO L_{11}
⅝" BAR
W18×87

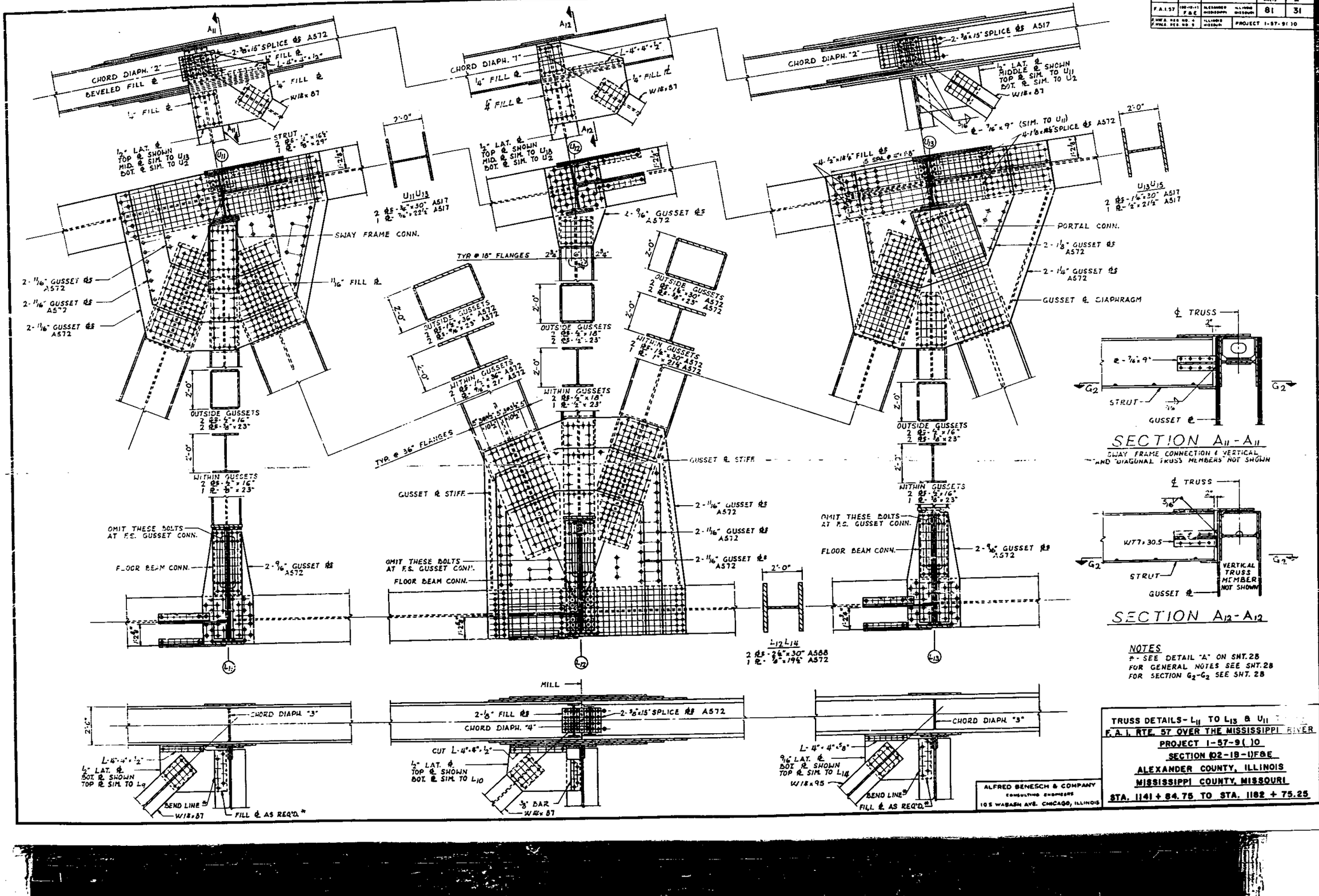
MILL
2-3/32" FILL ℄S
CHORD DIAPH. "4"
2-⅜"×15" SPLICE ℄S
L-4"×4"×½"
½" LAT. ℄ BOT. ℄ SHOWN TOP ℄ SIM. TO L_{12}
BEND LINE
W18×87
FILL ℄ AS REQ'D.

NOTES
* - SEE DETAIL "A" ON SHT. 28
FOR GENERAL NOTES SEE SHT. 28

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - L_8 TO L_{10} ... TO U_{10}
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.76 TO STA. 1182 + 75.26

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	102-18-1 F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	31
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



NOTES
* - SEE DETAIL "A" ON SNT. 28
FOR GENERAL NOTES SEE SNT. 28
FOR SECTION G_2-G_2 SEE SNT. 28

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS- L_{11} TO L_{13} & U_{11} TO U_{13}
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION 102-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 F.B.E.	ALEXANDER	ILLINOIS	81	32
F.M.A. SEC NO.		MISSISSIPPI	MISSOURI		
F.M.A. SEC NO.		ILLINOIS	MISSOURI	PROJECT I-57-9( )0	

SECTION B_{14}-B_{14}

SECTION H_{14}-H_{14}

SECTION C_{16}-C_{16}

SECTION D_{16}-D_{16}

NOTES
FOR SECTIONS A_{14}-A_{16} & A_{15}-A_{15} SEE SHT.33
FOR SECTIONS E_{14}-E_{14} & F_{14}-F_{14} SEE SHT.36
FOR GENERAL NOTES SEE SHT. 28

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - L_{14}, M_{15}, M_{16} TO U_{16}

F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-1B-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	33
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 3		ILLINOIS MISSOURI		PROJECT I-57-9( )10	

2-⅝"x15" SPLICE PLS
CHORD DIAPH. "2"
W14x136
PL-½"x9" SIM. TO U15
3/16" LAT. ℄, MID. ℄ SHOWN, TOP ℄ SIM. TO U15, BOT. ℄ SIM. TO U2
U17
2'-0"
U17 U19
2 PLS - 11/16"x30"
1 PL - 7/16"x22½"
SWAY FRAME CONN.
2 - 1" GUSSET PLS A572
2 - 1⅛" GUSSET PLS A572
OUTSIDE GUSSETS
2 PLS - ½"x15"
2 PLS - ⅜"x23"
2'-0"
WITHIN GUSSETS
2 PLS - ½"x16"
1 PL - ⅜"x23"
M17
2 - 11/16" GUSSET PLS A572

CHORD DIAPH. "1"
9/16" FILL ℄
L-4"x6"x½"
W14x87
W77x30.5 SIM. TO U12
½" LAT. ℄ MID. ℄ SHOWN TOP ℄ SIM. TO U12 BOT. ℄ SIM. TO U2
U18
SWAY FRAME CONN.
2 - 9/16" GUSSET PLS A572
OUTSIDE GUSSETS
2 PLS - ½"x16"
2 PLS - ⅜"x23"
WITHIN GUSSETS
2 PLS - ½"x16"
1 PL - ⅜"x23"
OUTSIDE GUSSETS
2 PLS - 1"x30" A572
2 PLS - ⅜"x23" A572
WITHIN GUSSETS
2 PLS - ½"x30" A572
1 PL - ⅜"x22" A572
OUTSIDE GUSSETS
2 PLS - ⅞"x30" A588
2 PLS - ⅜"x23" A572
WITHIN GUSSETS
2 PLS - ⅞"x30" A588
1 PL - ⅜"x20½" A572
M18
GUSSET ℄ STIFF.
2 - 1" GUSSET PLS A572
2 - 1" GUSSET PLS A572
SWAY FRAME CONN.
D18
D18
OUTSIDE GUSSETS
2 PLS - ½"x16"
2 PLS - ⅜"x23"
WITHIN GUSSETS
2 PLS - ½"x16"
1 PL - ⅜"x23"
M18 M20
2 PLS - ½"x30"
1 PL - ½"x22½"
20½

2-⅝"x15" SPLICE PLS
2-⅛" FILL PLS
BEVELED FILL ℄ CHORD DIAPH. "2"
¼" FILL ℄
L-4"x4"x½"
½" LAT. ℄ TOP ℄ SHOWN MID. ℄ SIM. TO U21 BOT. ℄ SIM. TO U2
¼" FILL ℄
W14x87
U19
2'-0"
U19 U21
2 PLS - ½"x30"
1 PL - 11/16"x21½"
SWAY FRAME CONN.
2 - ¾" GUSSET PLS A572
2 - 1" GUSSET PLS A572
OUTSIDE GUSSETS
2 PLS - ½"x16"
2 PLS - ⅜"x23"
WITHIN GUSSETS
2 PLS - ½"x16"
1 PL - ⅜"x23"
M19
2 - 11/16" GUSSET PLS A572

2-⅜"x15" SPLICE PLS
2-1/16" FILL PLS
SECTION D_{18}-D_{18}

℄ TRUSS
2"
W77x30.5
G_2
STRUT
5/16
GUSSET ℄
SECTION A_{14}-A_{14}
PORTAL CONNECTION & VERTICAL TRUSS MEMBER NOT SHOWN

℄ TRUSS
2"
2-½"x9"
G_2
STRUT
5/16
GUSSET ℄
SECTION A_{15}-A_{15}
PORTAL CONNECTION & DIAGONAL TRUSS MEMBERS NOT SHOWN

NOTES
FOR SECTION G_2-G_2 SEE SHT. 28
FOR GENERAL NOTES SEE SHT. 28

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
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TRUSS DETAILS — M_{17} TO M_{19} & M_{17} TO U_{19}
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. ST	(02-18-1) F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	34
F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

SECTION B_{20}-B_{20}

SECTION D_{20}-D_{20}

SECTION D_{22}-D_{22}

FOR GENERAL NOTES SEE SHT. 28

TRUSS DETAILS - M_{20} TO M_{22} & U_{20}

F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER

PROJECT I-57-9( )0

SECTION (02-18-1)F&E

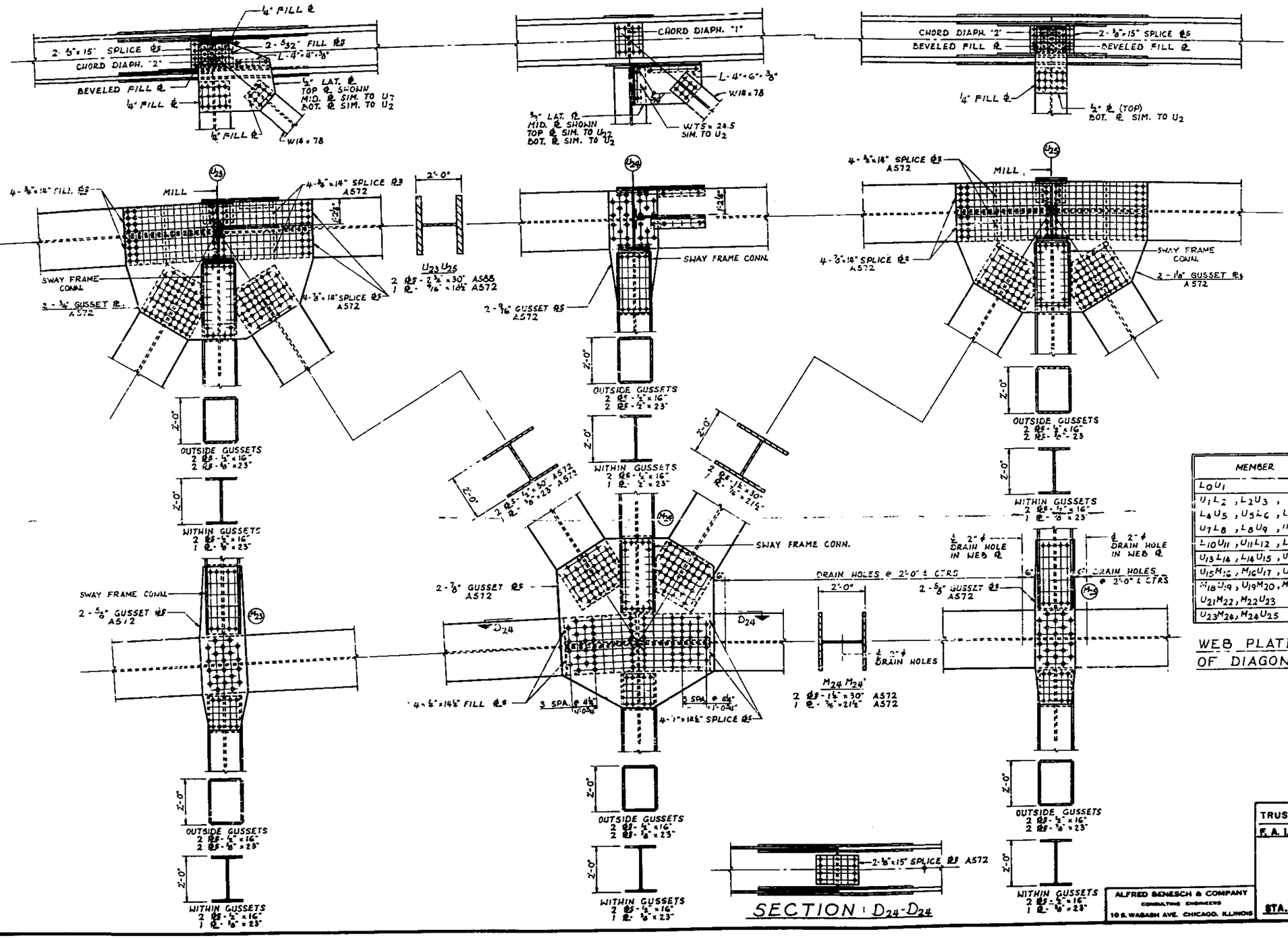
ALEXANDER COUNTY, ILLINOIS

MISSISSIPPI COUNTY, MISSOURI

STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(102-1B-1) F&E	ALEXANDER (MISSOURI)	ILLINOIS (MISSOURI)	81	35
F.H.W.A. REG. NO. 5 F.H.E.A. REG. NO. 5		ILLINOIS (MISSOURI)	PROJECT I-57-9(10)		



MEMBER	"Y" AT LOWER END	"Y" AT UPPER END
L_0U_1	1'-3"	0'-0"
U_1L_2 , L_2U_3 , L_4U_5 , U_5L_6 , L_6U_7 U_7L_8 , L_8U_9 , U_9L_{10}	1'-3"	1'-3"
$L_{10}U_{11}$, $U_{11}L_{12}$, $L_{12}U_{13}$	1'-6"	1'-6"
$U_{13}L_{14}$, $L_{14}U_{15}$, U_3L_4	0'-0"	0'-0"
$U_{15}M_{16}$, $M_{16}U_{17}$, $U_{17}M_{18}$	1'-6"	1'-6"
$M_{18}U_{19}$, $U_{19}M_{20}$, $M_{20}U_{21}$ $U_{21}M_{22}$, $M_{22}U_{23}$	1'-3"	1'-3"
$U_{23}M_{24}$, $M_{24}U_{25}$	1'-0"	1'-0"

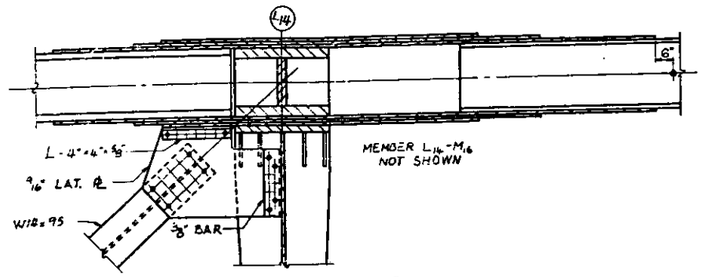
WEB PLATE CUT-OFF AT ENDS OF DIAGONAL TRUSS MEMBERS

FOR GENERAL NOTES SEE SHT. 28

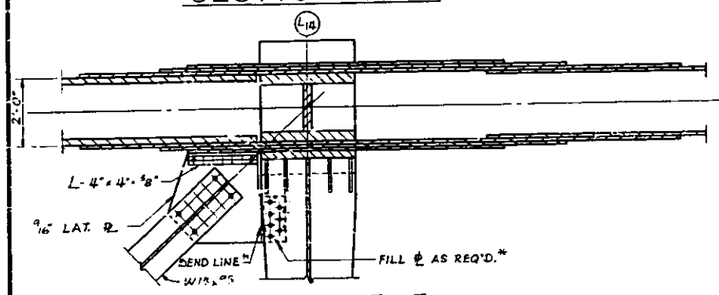
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS – M_{23} TO M_{25} & U_{23} TO
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (102-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

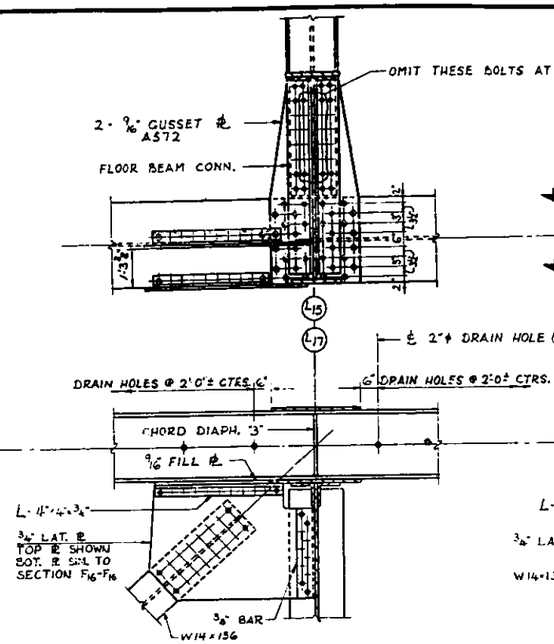
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-10-1 F.B.E.	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	81	36
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

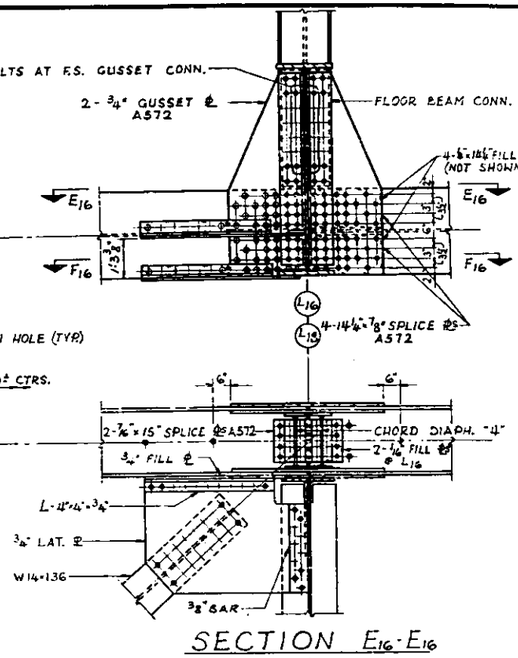


SECTION E_{14}-E_{14}

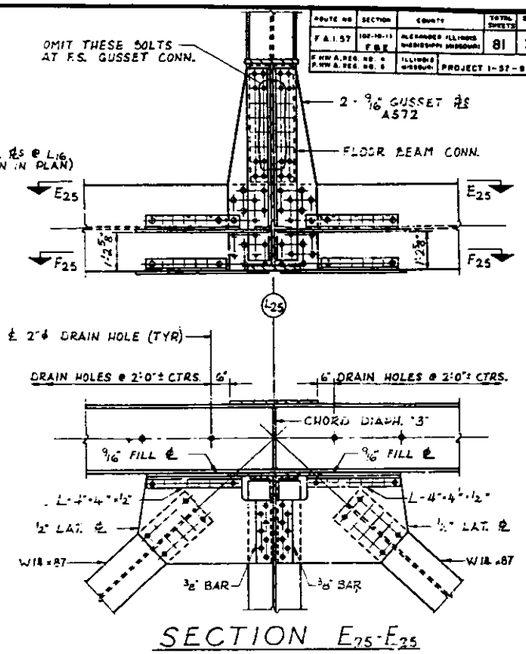


SECTION F_{14}-F_{14}

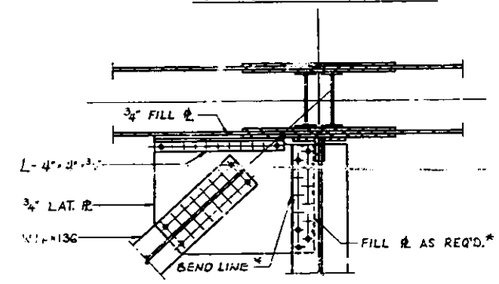




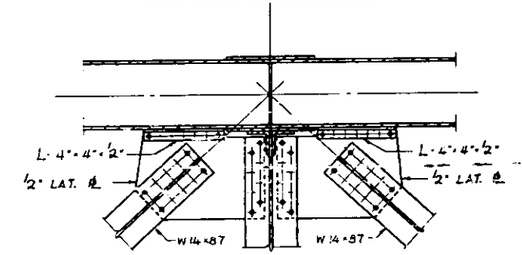
SECTION E_{16}-E_{16}



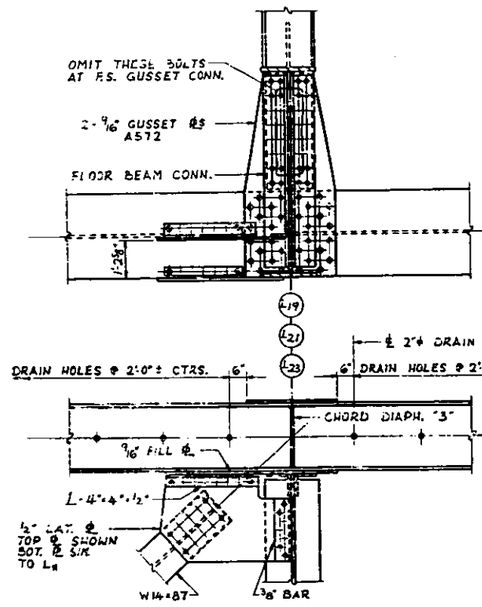
SECTION E_{25}-E_{25}

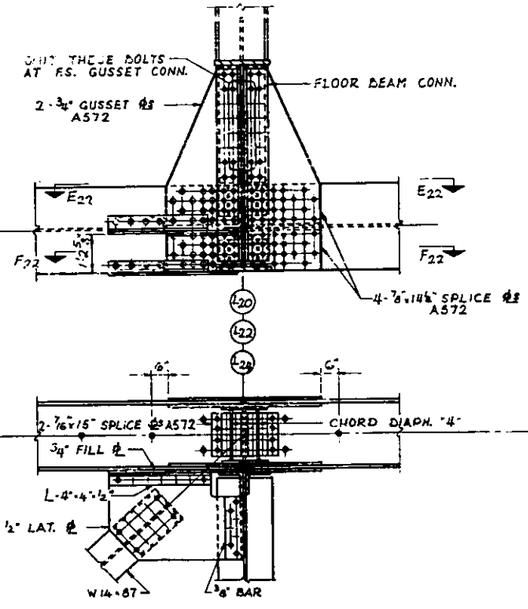


SECTION F_{16}-F_{16}

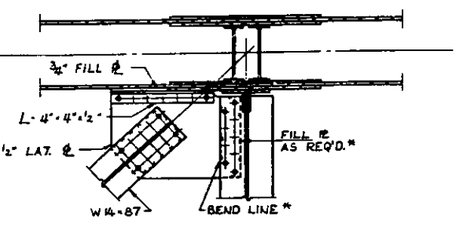


SECTION F_{25}-F_{25}





SECTION E_{22}-E_{22}



SECTION F_{22}-F_{22}

L_{14} L_{16}
2 @S - 7/8" x 30" A572
1 @ - 5/8" x 21½" A572

L_{16} L_{18}, L_{18} L_{20}, L_{20} L_{22}, L_{22} L_{24}, L_{24} L_{24}'
2 @S - 1" x 30" A572
1 @ - 1/2" x 22" A572

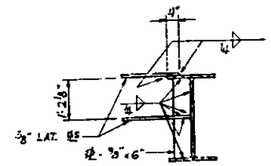
CROSS SECTION OF TIE

NOTES
* - SEE DETAIL "A" ON SHT. 28
FOR GENERAL NOTES SEE SHT. 28

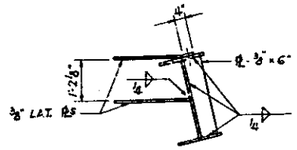
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - L_{14} - L_{25}
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

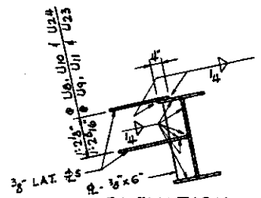
ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) FBE	ALEXANDER ILLINOIS / MISSOURI		81	37
F.H.W.A. REG. NO. 5 / F.H.W.A. REG. NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9( )0		



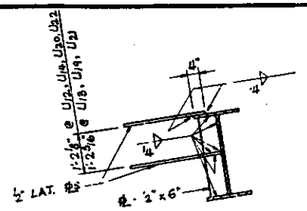
ELEVATION



ELEVATION



ELEVATION



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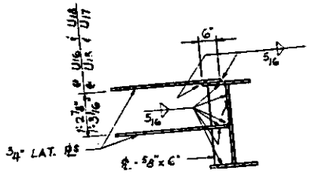

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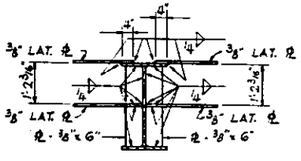

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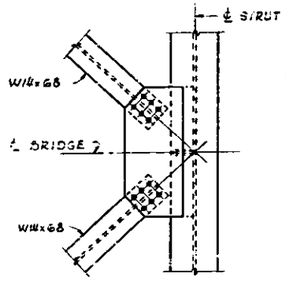
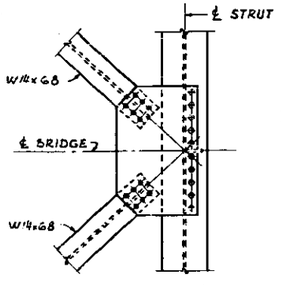
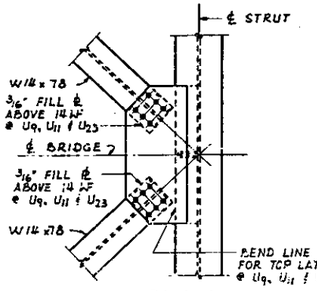


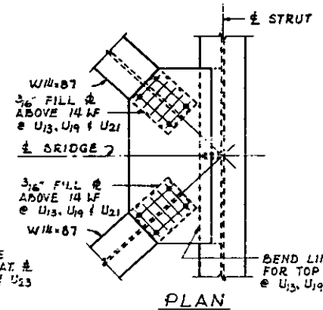
PLAN
U2 THRU U6



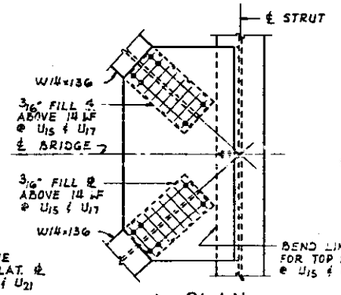
PLAN
U7



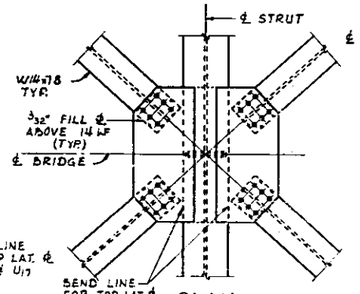
PLAN
U8 THRU U11, U23 & U24



PLAN
U12 THRU U14 & U19 THRU U22

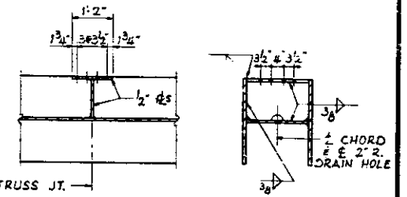


PLAN
U15 THRU U18

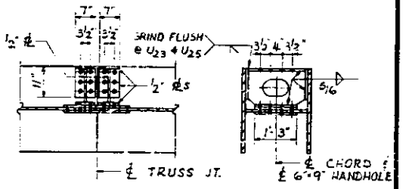


PLAN
U25

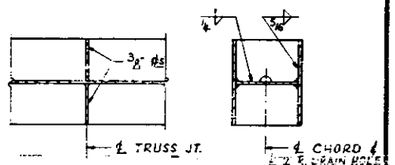
TOP LATERAL CONNECTIONS ALONG ℄ BRIDGE



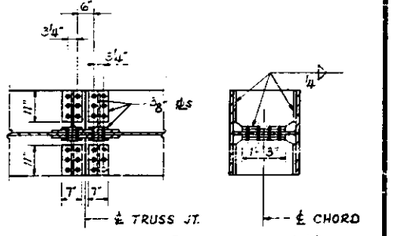
CHORD DIAPHRAGM "1"



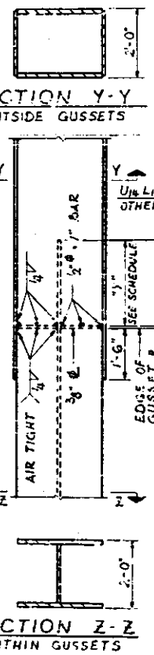
CHORD DIAPHRAGM "2"



CHORD DIAPHRAGM "3"

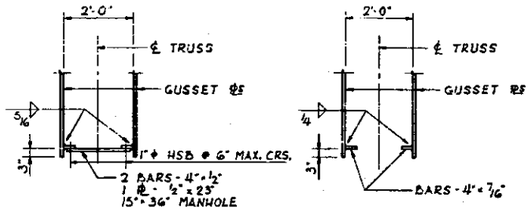


CHORD DIAPHRAGM "4"



SCHEDULE OF "X" DIMENSIONS

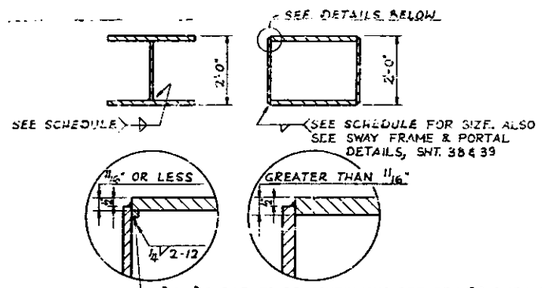
MEMBER		"X"
DIAGONALS	L8 U9	3'-0"
	U9 L10	2'-0"
	L10 U11	3'-0"
	U11 L12	2'-0"
	L12 U13	3'-0"
	U13 L14	3'-0"
	L14 U15	3'-0"
	U15 M16	2'-0"
	M16 U17	2'-0"
	U17 M18	3'-0"
	M18 U19	2'-0"
	U14 L14	3'-0"
VERTICALS	ALL OTHERS	1'-6"



GUSSET PL DIAPHRAGM

GUSSET PL STIFFENER

FOR LOCATIONS SEE ELEVATION OF TRUSS



FILLET WELD SIZES FOR TRUSS MEMBERS*

MATERIAL THICKNESS OF THICKER PART JOINED (IN.)	SIZE OF FILLET WELD (IN.)
TO 3/4" INCL.	1/4
OVER 3/4 TO 1 1/2	5/16
OVER 1 1/2 TO 2 1/4	3/8
OVER 2 1/4	1/2

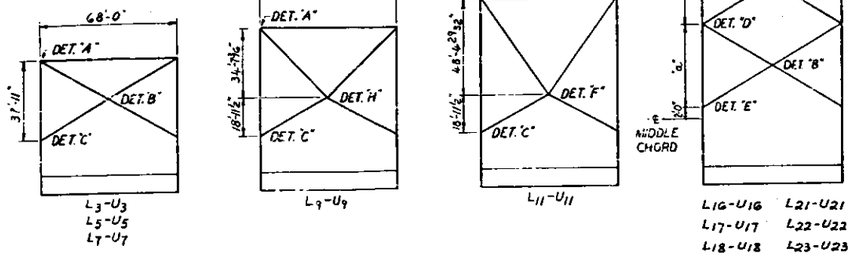
* - UNLESS OTHERWISE NOTED

WELD DETAILS

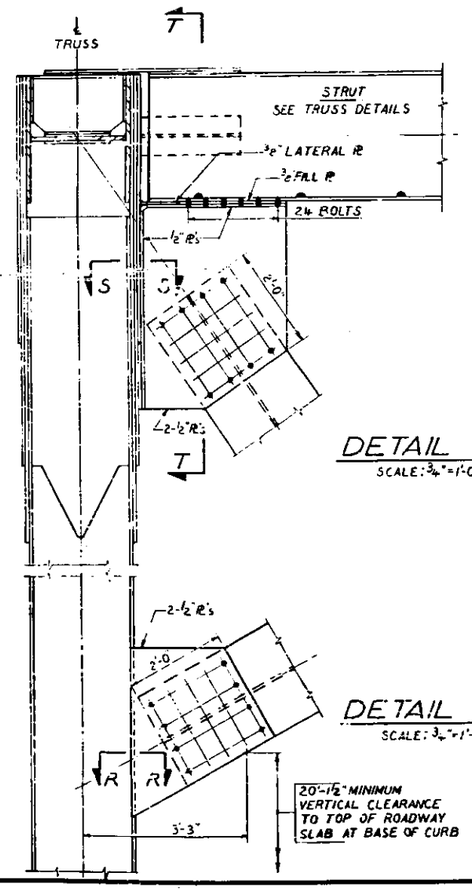
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS DETAILS - MISCELLANEOUS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

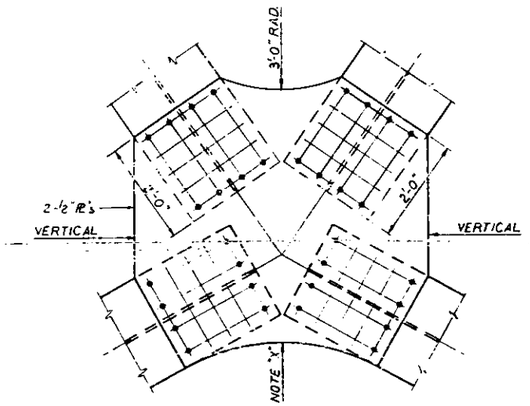
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	38
F.H.W.A. REG. NO. 4		ILLINOIS		PROJECT I-57-9( )0	
F.H.W.A. REG. NO. 7		MISSOURI			



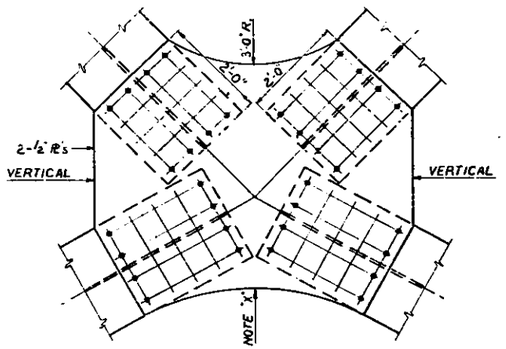
SWAY FRAMES



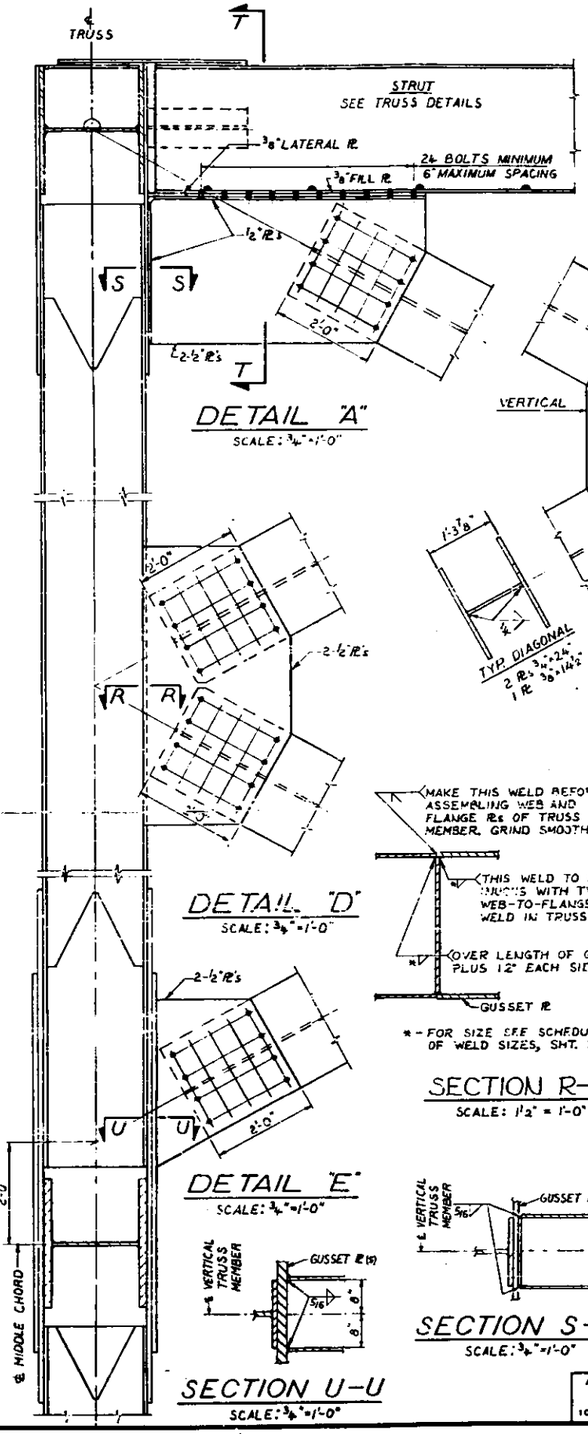
DETAIL "G"
SCALE: 3/4"=1'-0"



DETAIL "F"
SCALE: 3/4"=1'-0"



DETAIL "H"
SCALE: 3/4"=1'-0"



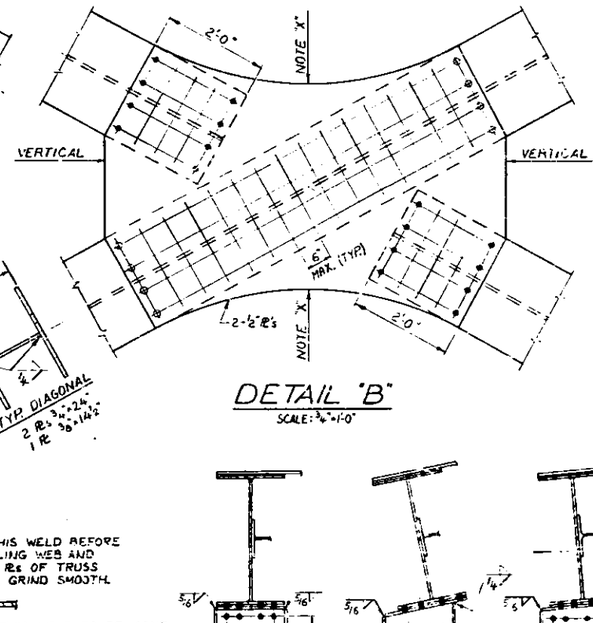
DETAIL "A"
SCALE: 3/4"=1'-0"

DETAIL "D"
SCALE: 3/4"=1'-0"

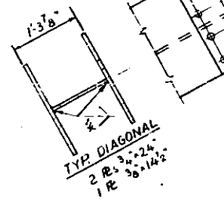
DETAIL "E"
SCALE: 3/4"=1'-0"

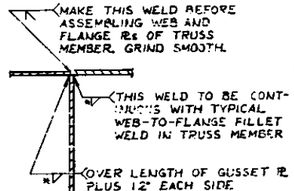
SECTION U-U
SCALE: 3/4"=1'-0"

NOTE "X"
CURVE TANGENTIAL TO MEMBERS. RADIUS AS REQUIRED.

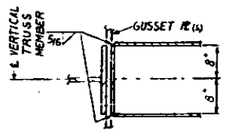


DETAIL "B"
SCALE: 3/4"=1'-0"

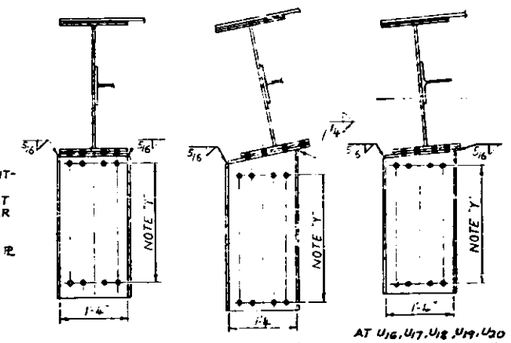




SECTION R-R
SCALE: 1 1/2" = 1'-0"



SECTION S-S
SCALE: 3/4"=1'-0"



SECTION T-T
SCALE: 3/4"=1'-0"

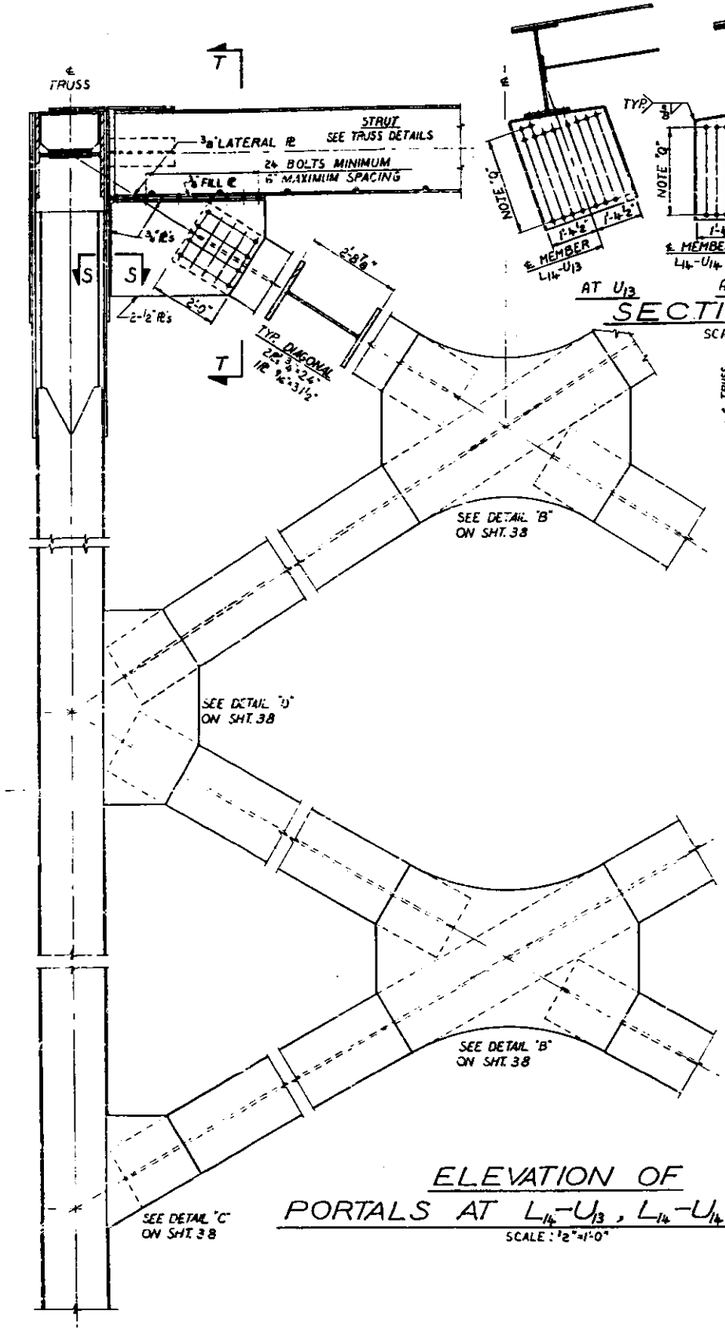
NOTE 'Y': SEE TRUSS DETAILS FOR BOLTS

NOTES:
ALL MATERIAL ASTM A36.
ALL SHOP FASTENERS (DENOTED THUS: ⊕) AND FIELD FASTENERS (DENOTED THUS: ⊕) SHALL BE 1" ASTM A325 HIGH STRENGTH BOLTS.
SEE TRUSS DETAILS FOR CONNECTION OF STRUT TO TRUSS.

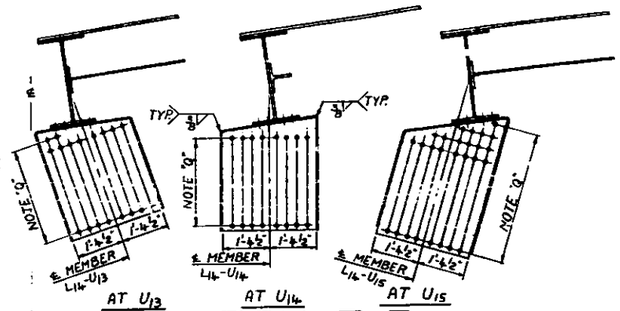
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO ILLINOIS

SWAY FRAMES - SPANS 12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-1B-1) F&E	ALEXANDER	ILLINOIS	81	39
		MISSISSIPPI	MISSOURI		
				PROJECT I-57-9( )10	

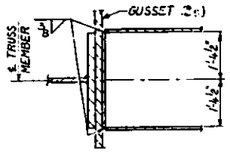


ELEVATION OF
PORTALS AT L_{14}-U_{13}, L_{14}-U_{14} & L_{14}-U_{15}
SCALE: 1/2"=1'-0"

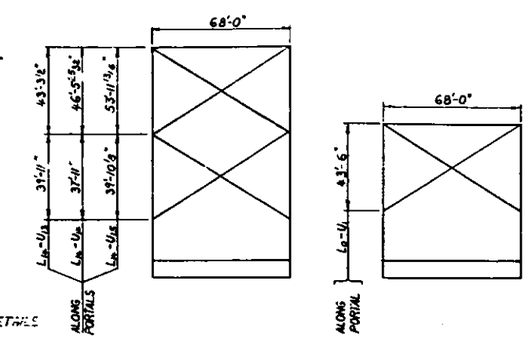


SECTION T-T
SCALE: 1/2"=1'-0"

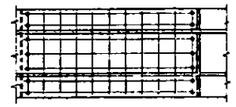
NOTE "Q": SEE TRUSS DETAILS FOR BOLTS



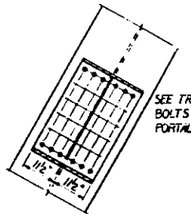
SECTION S-S
SCALE: 1/2"=1'-0"



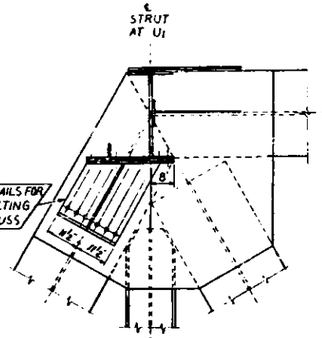
DIMENSIONS OF PORTALS



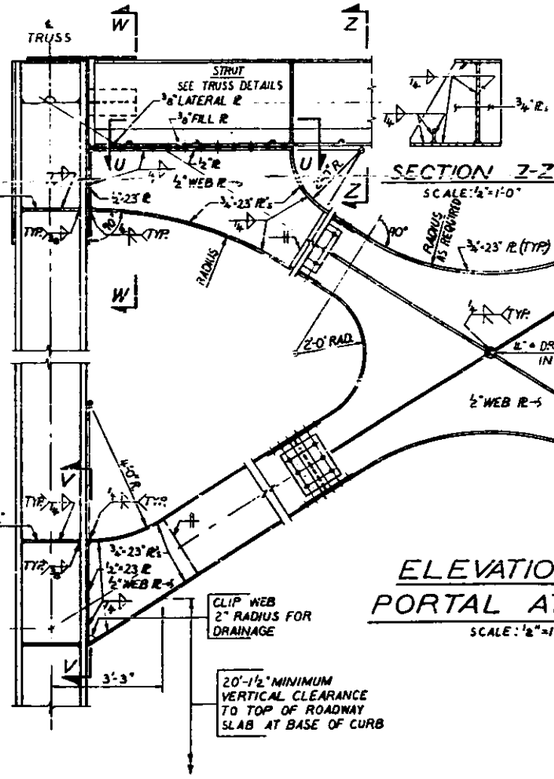
SECTION U-U
SCALE: 1/2"=1'-0"



SECTION V-V
SCALE: 1/2"=1'-0"

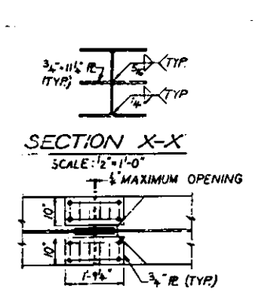


SECTION W-W
SCALE: 1/2"=1'-0"



SECTION Z-Z
SCALE: 1/2"=1'-0"

ELEVATION OF
PORTAL AT L_0-U_1
SCALE: 1/2"=1'-0"



SECTION X-X
SCALE: 1/2"=1'-0"

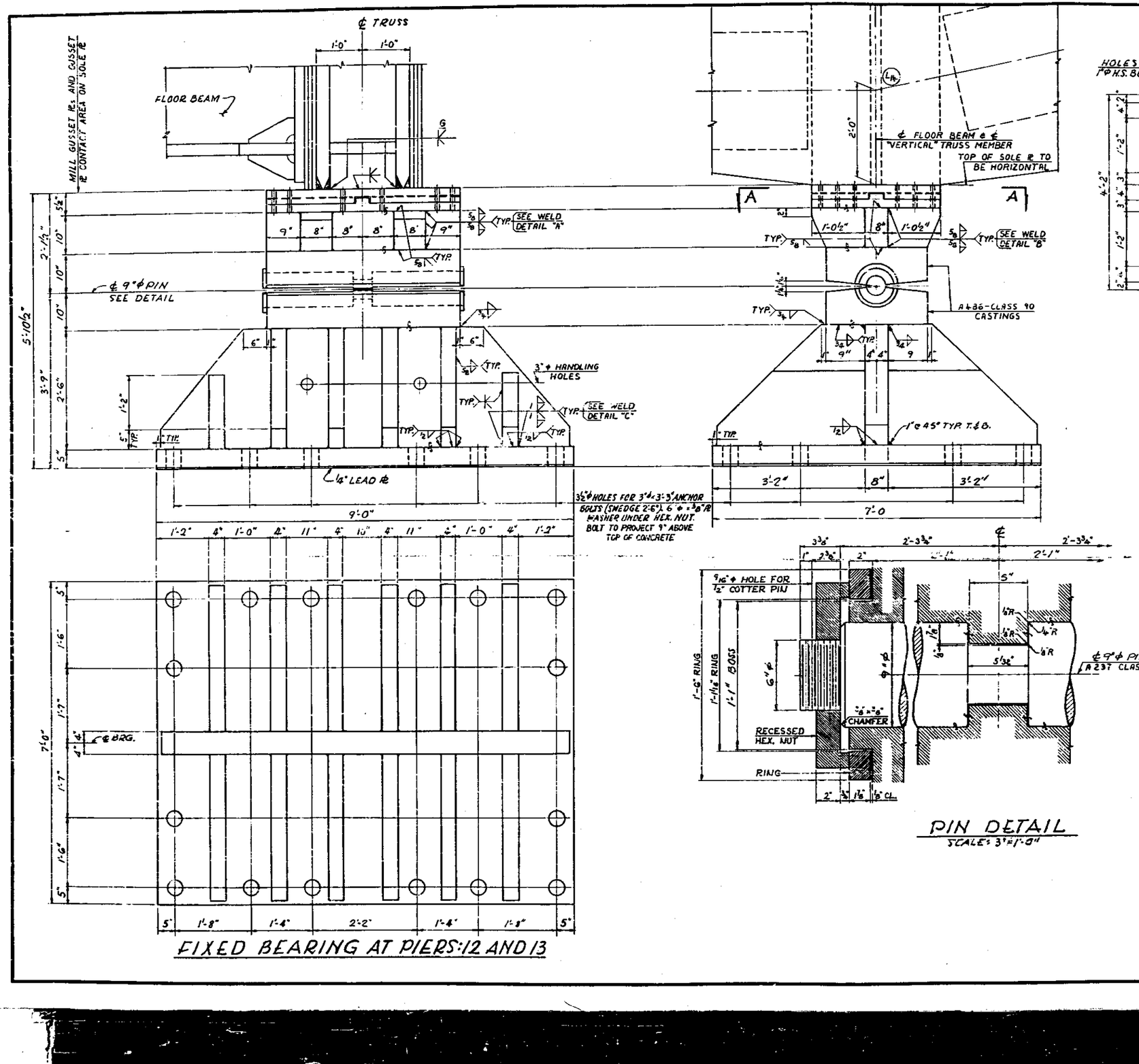
SECTION Y-Y
SCALE: 1/2"=1'-0"

FOR NOTES SEE SWAY FRAMES, SHT. 33

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

PORTALS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	(02-1B-1) F&E	ALEXANDER ILLINOIS and MISSOURI	81	40
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9( )0	

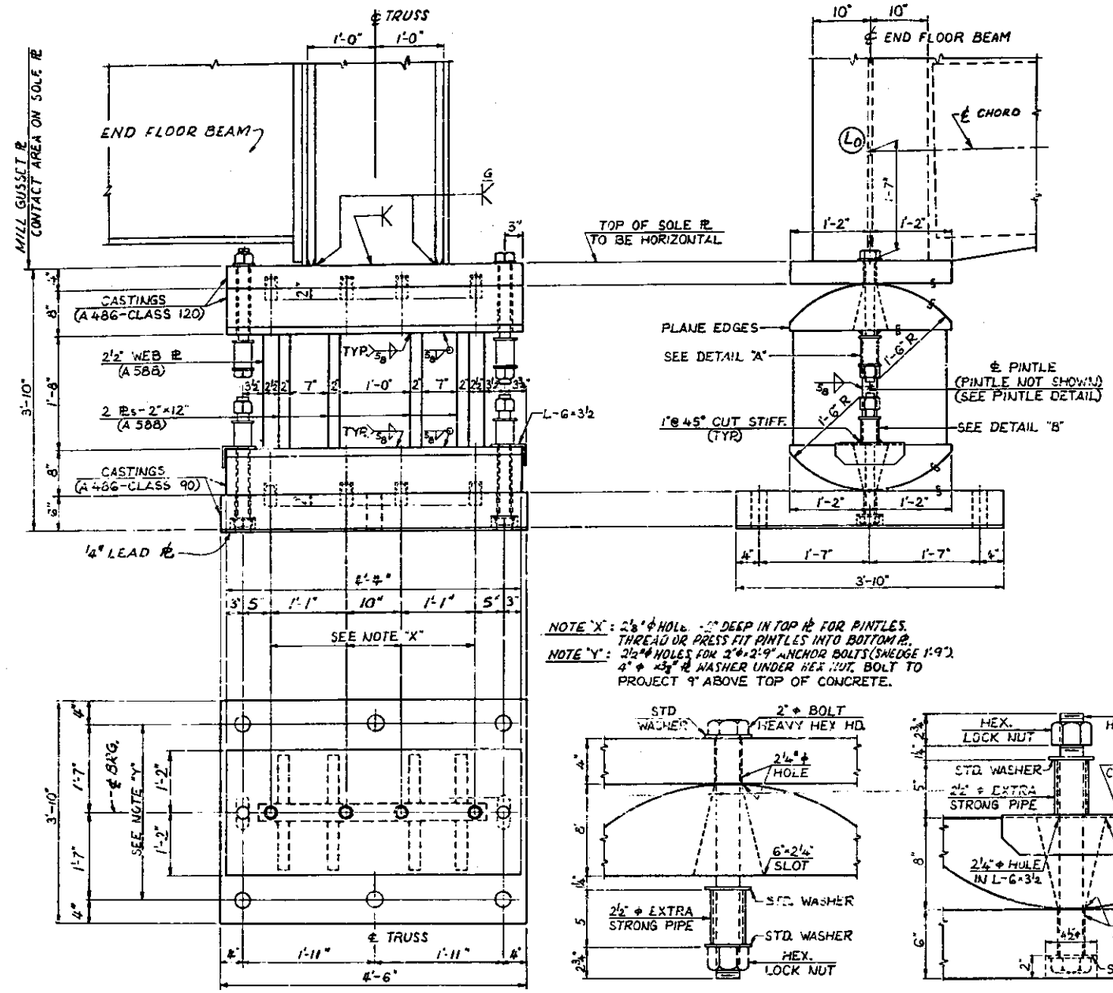


NOTES:
- ALL MATERIAL ASTM A36 UNLESS NOTED.
- ALL WELDS SHALL BE BY THE SUBMERGED ARC PROCESS.
- FINISHES PER USASI, B46.1, PART I.
- ASTM A486 (CLASS 90) CASTINGS OF EQUAL STRENGTH AND SECTION MAY BE SUBSTITUTED FOR THE WELDMENTS COMPRISING THE BOLSTER AND TOP SHOE.
- PLATES OF EQUAL STRENGTH AND SECTION MAY BE SUBSTITUTED FOR CASTINGS.

TRUSS BEARINGS AT PIERS 12 & 13
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-18-1) F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	81	41
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9( )0	

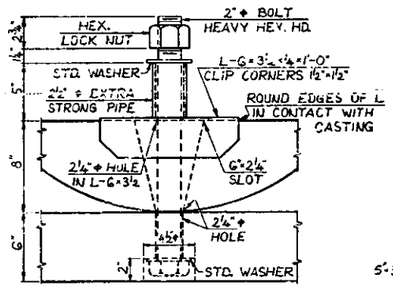


NOTE "X": 2⅛"℄ HOLE ... DEEP IN TOP ℞ FOR PINTLES. THREAD OR PRESS FIT PINTLES INTO BOTTOM ℞.

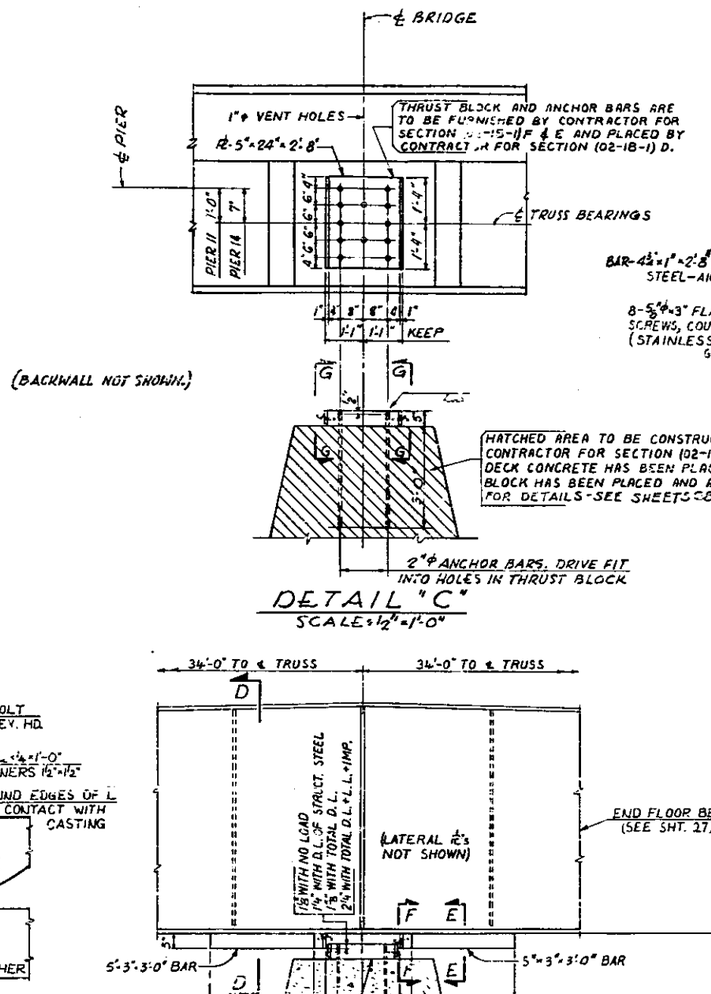
NOTE "Y": 2½"℄ HOLES FOR 2"℄×2'-9" ANCHOR BOLTS (SWEDGE 1:9). 4"℄×⅝" ℞ WASHER UNDER HEX NUT. BOLT TO PROJECT 9" ABOVE TOP OF CONCRETE.

EXPANSION BEARINGS AT PIERS: 11 & 14
SCALE: 1"=1'-0"

DETAIL "A"
(ON FLOOR BEAM SIDE INSTALL WITH NUT ON TOP)
SCALE: 2"=1'-0"



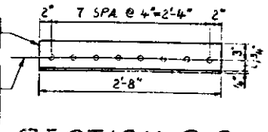
DETAIL "B"
SCALE: 2"=1'-0"



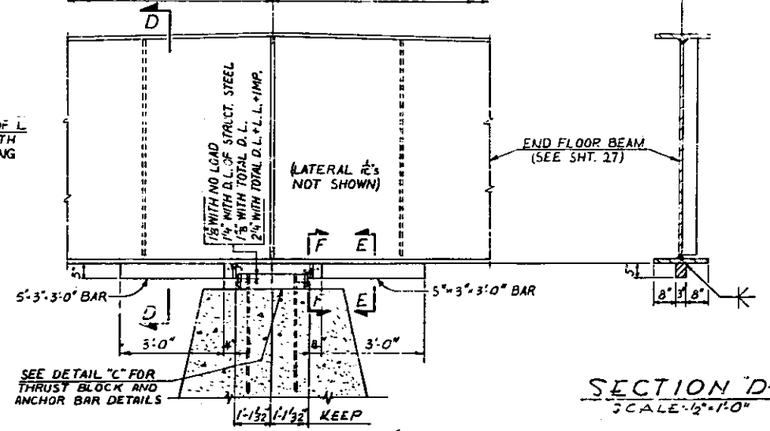
DETAIL "C"
SCALE: ½"=1'-0"

BAR-4½"×1"×2'-8" (STAINLESS STEEL-A167 TYPE 302)

8-⅝"℄×3" FLAT HD. CAP SCREWS, COUTERSINK ½" (STAINLESS STEEL-A193, GRADE B8)



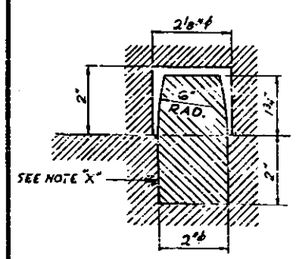
SECTION G-G
SCALE: 1"=1'-0"



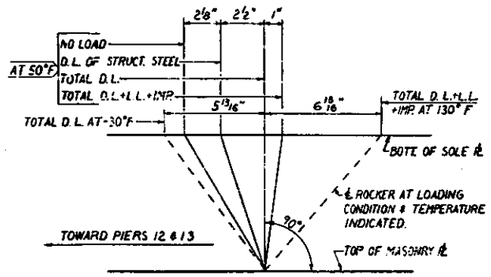
WIND TRANSFER DEVICE (PIERS 11 & 14)
SCALE: ½"=1'-0"

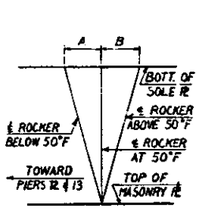
SECTION "D-D"
SCALE: ½"=1'-0"

FOR NOTES, SEE SHT. 40



PINTLE
HALF SIZE

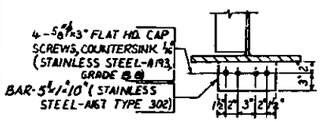




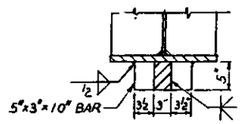
TEMP. (°F)	A	B
130	—	5 13/16"
110	—	4 5/16"
90	—	2 7/8"
70	—	1 7/16"
50	0	0
30	1 7/16"	—
10	2 7/8"	—
-10	4 5/16"	—
-30	5 13/16"	—

CORRECTION FOR TEMPERATURE

ROCKER SETTING DIMENSIONS



SECTION F-F
SCALE: 1"=1'-0"



SECTION E-E
SCALE: 1"=1'-0"

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
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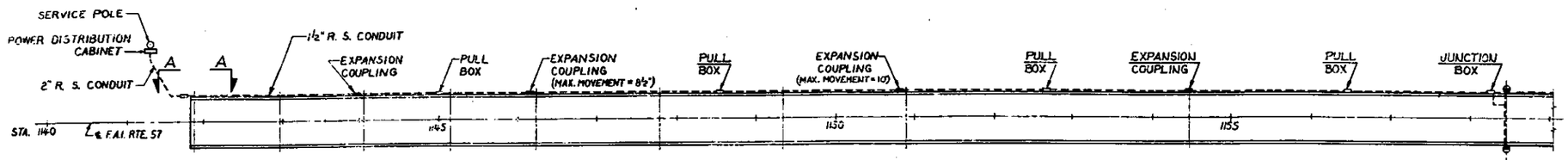
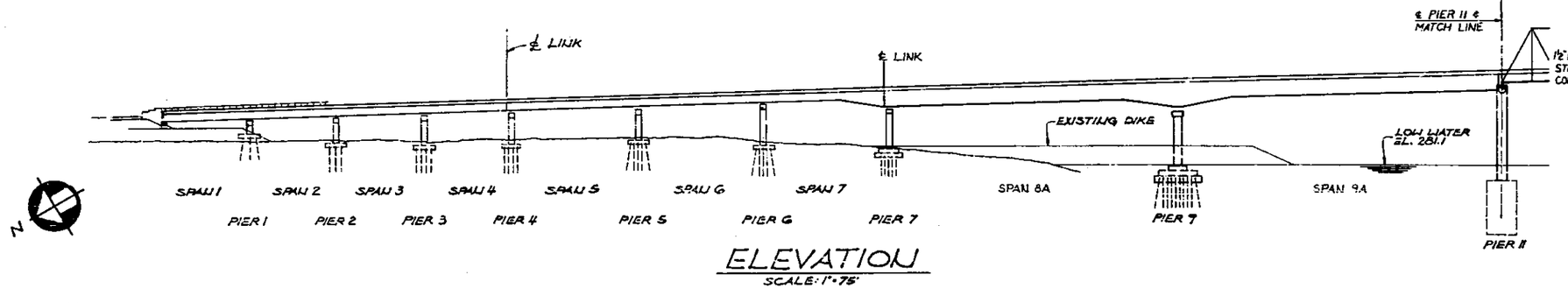
TRUSS BEARINGS AT PIERS 11 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

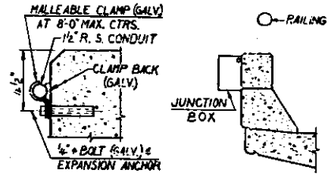
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) F&E	ALEXANDER (ILLINOIS)	MISSOURI	81	42
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI		PROJECT I-57-9(.)10	



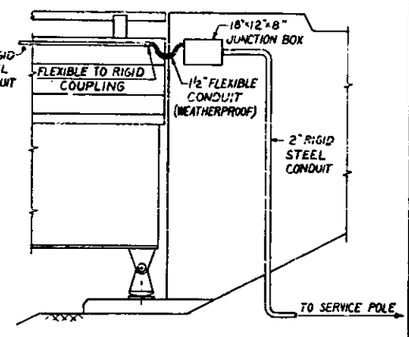
PLAN
SCALE: 1" = 75'



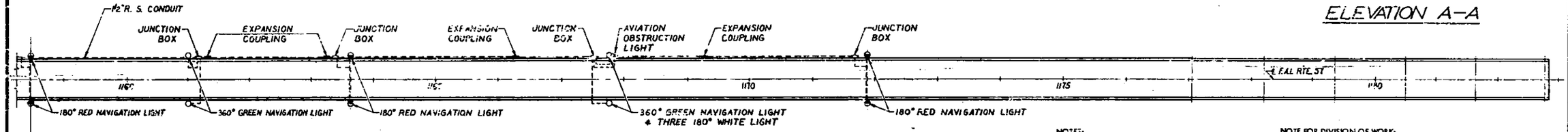
ELEVATION
SCALE: 1" = 75'



TYPICAL SECTION THROUGH EAST PARAPET
SPANS 1 THRU 13



ELEVATION A-A



PLAN
SCALE: 1" = 75'

NOTES:

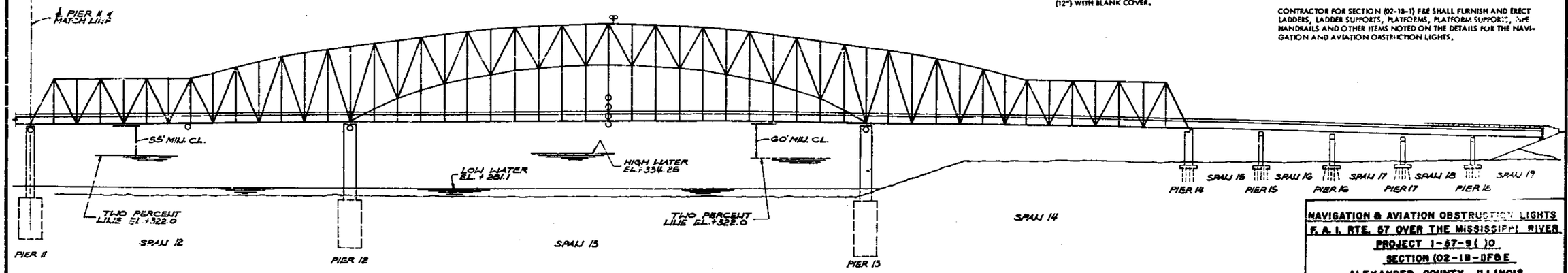
ALL JUNCTION BOXES SHALL BE 18" X 12" X 8".

ALL PULL BOXES SHALL BE APPLETON TYPE PBC (12") WITH BLANK COVER.

NOTE FOR DIVISION OF WORK:

CONTRACTOR FOR SECTION (02-18-1) D SHALL FURNISH AND INSTALL THE NAVIGATION LIGHTING SYSTEM AND THE AVIATION OBSTRUCTION LIGHT SYSTEM BOTH COMPLETE. SEE SPECIAL PROVISIONS.

CONTRACTOR FOR SECTION (02-18-1) F&E SHALL FURNISH AND ERECT LADDERS, LADDER SUPPORTS, PLATFORMS, PLATFORM SUPPORTS, PIPE HANDRAILS AND OTHER ITEMS NOTED ON THE DETAILS FOR THE NAVIGATION AND AVIATION OBSTRUCTION LIGHTS.

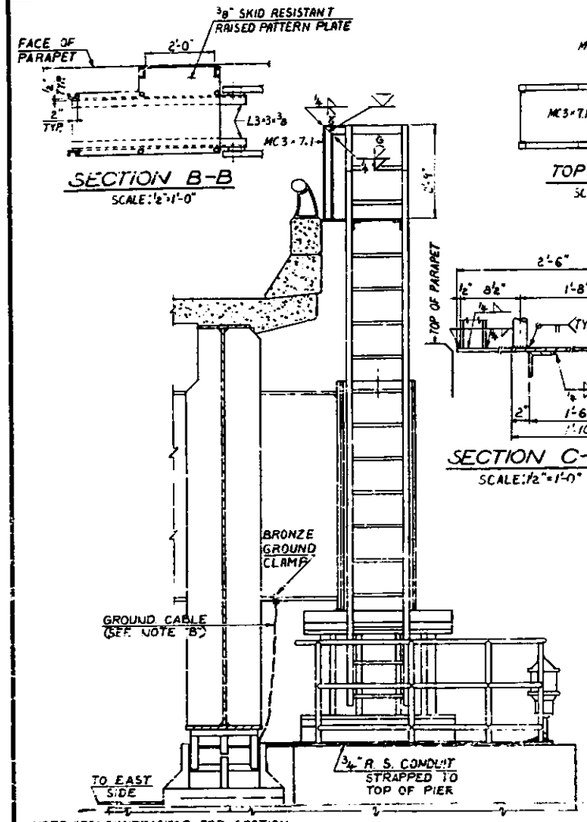


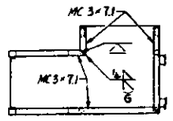
ELEVATION
SCALE: 1" = 75'

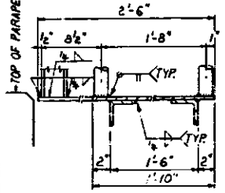
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

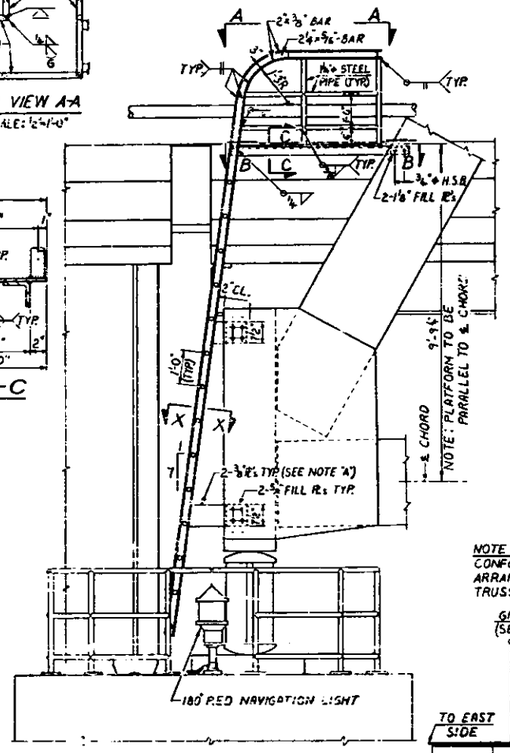
NAVIGATION & AVIATION OBSTRUCTION LIGHTS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-0)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

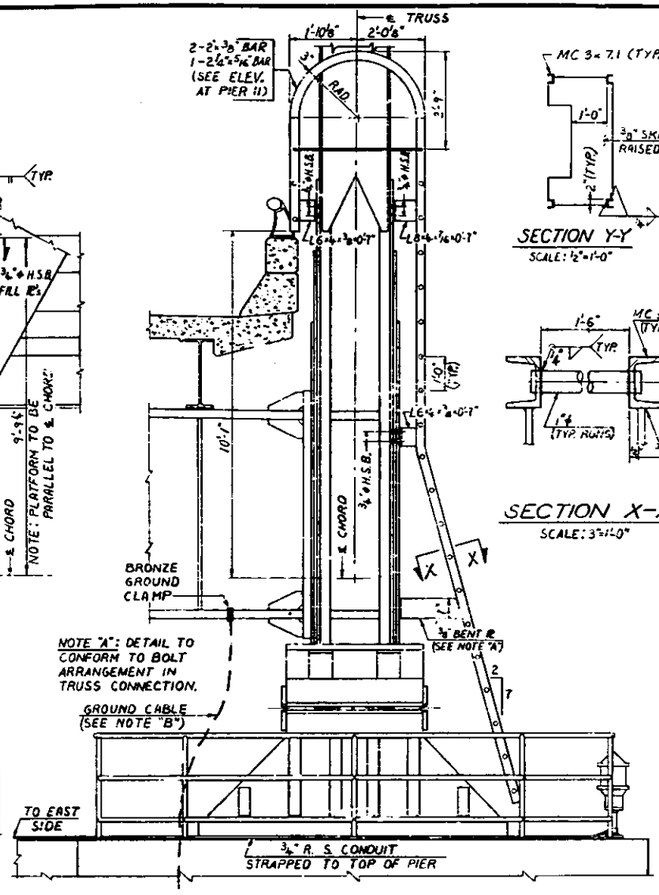
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	81	43
FHWA REG NO 5 FHWA REG NO 7		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

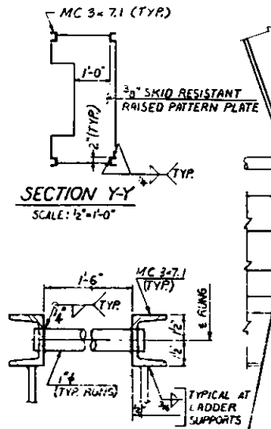


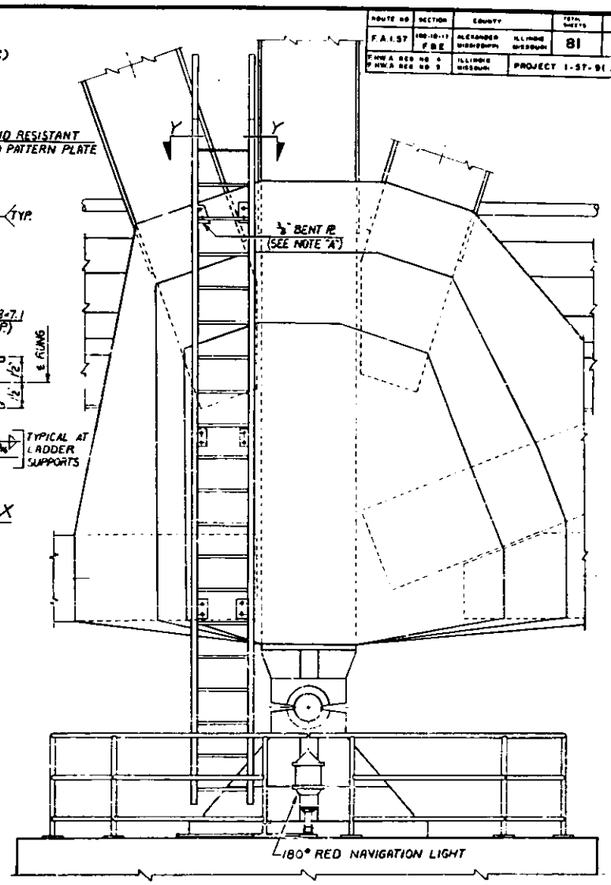










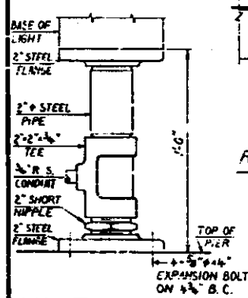


NOTE "B": CONTRACTOR FOR SECTION (02-18-1)B WILL FURNISH & INSTALL GROUND CABLES AT PIERS 11, 12, 13 & 14 AS SHOWN ON SHTS. 68, 69, 70 & 71. CONTRACTOR FOR SECTION (02-18-1) D SHALL CONNECT GROUND CABLES TO FLOOR BEAMS.

ELEVATIONS AT PIER 11

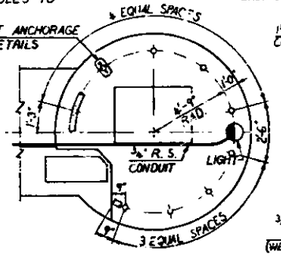
ELEVATIONS AT PIER 12

WEST SIDE SHOWN
EAST SIDE SIMILAR (EXCEPT CONDUITS)
PIER 13 SIMILAR
SCALE: 1/2"=1'-0"



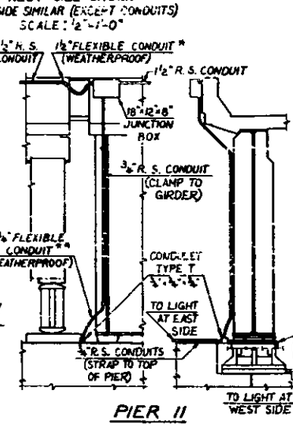
LIGHT MOUNTING

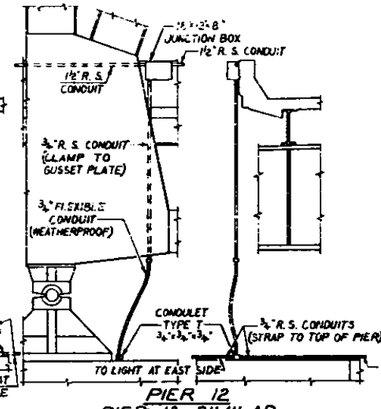
SCALE: 3"=1'-0"



RAILING PLAN AT PIER 11

SCALE: 1/4"=1'-0"

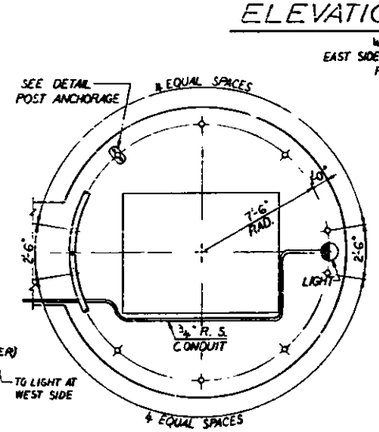




CONDUITS AT EAST SIDE

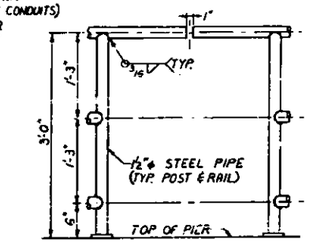
SCALE: 1/4"=1'-0"

* MAX. HORIZONTAL MOVEMENT BETWEEN ENDS = 1'-10"
** MAX. HORIZONTAL MOVEMENT BETWEEN ENDS = 7"



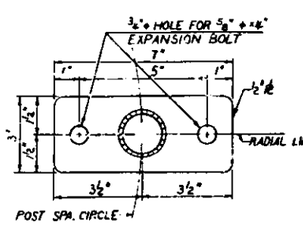
RAILING PLAN AT PIERS 12 & 13

SCALE: 1/4"=1'-0"



DETAILS AT END OF RAIL

SCALE: 1"=1'-0"



POST ANCHORAGE DETAILS

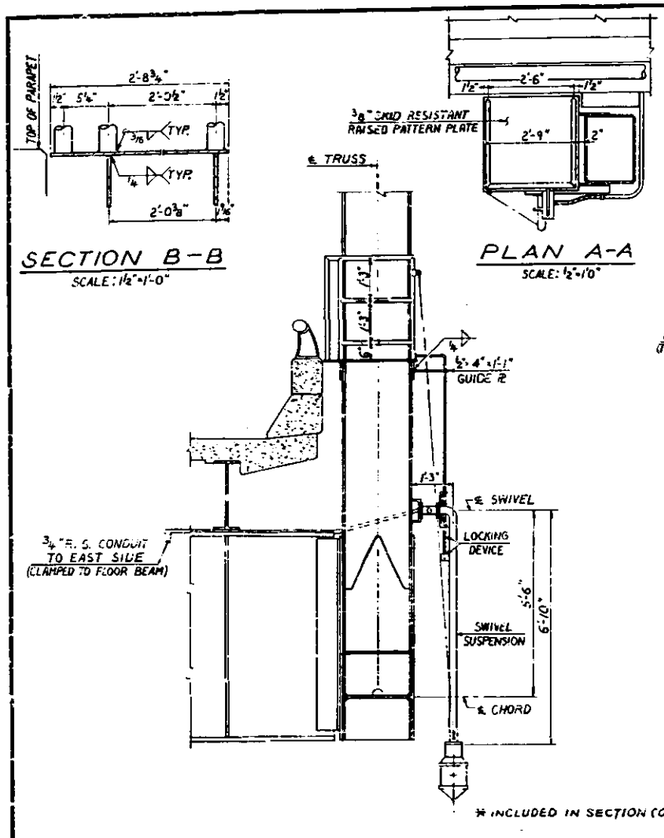
SCALE: 4 1/2"=1'-0"

NOTE: AT PIER 14 PROVIDE LADDERS & RAILINGS SIMILAR TO THOSE AT PIER 11

PIER LIGHT, LADDER & RAILING DETAILS
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

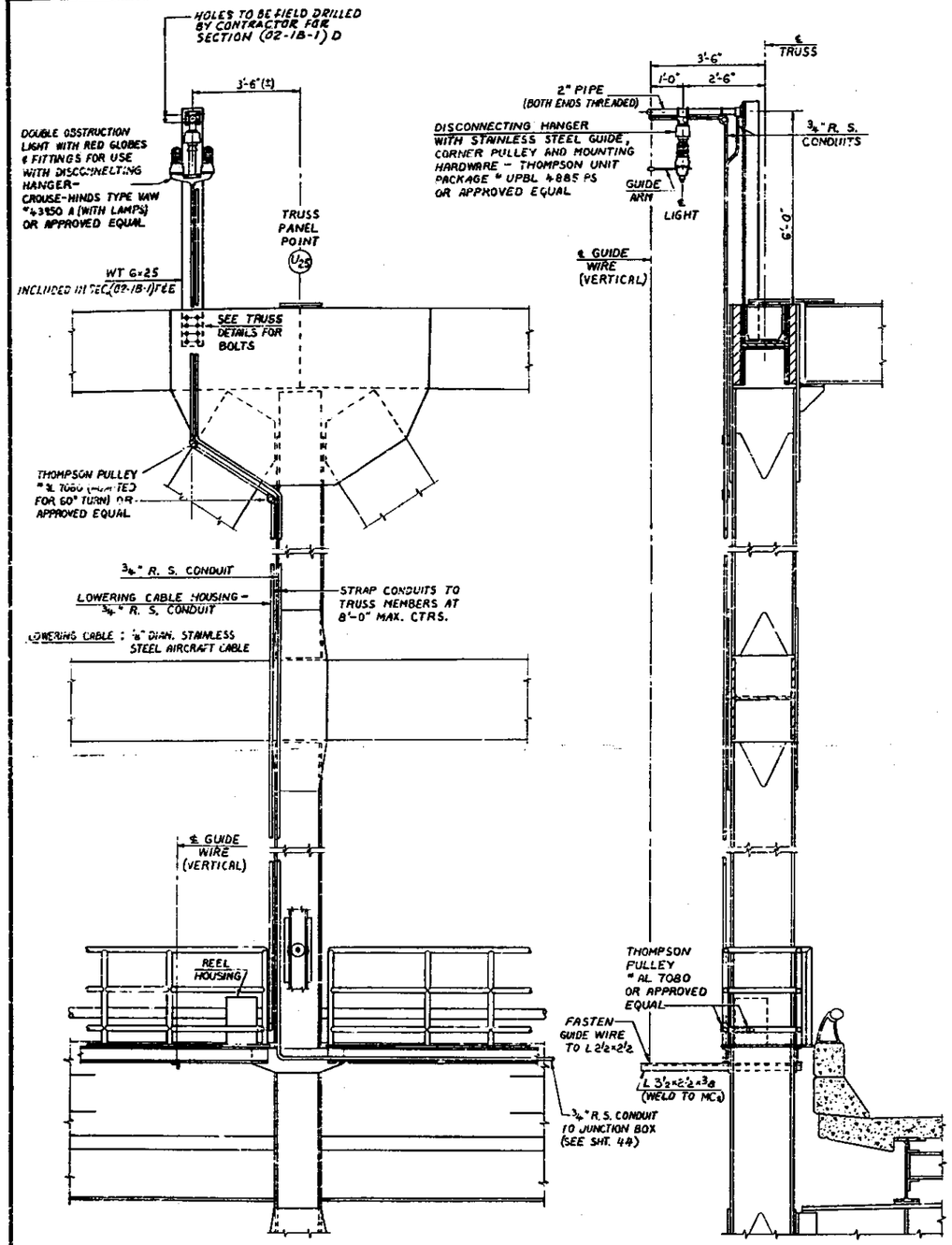
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	192-1F	ALEXANDER	ILLINOIS	81	44
	F.A.	DIVISION	DIVISION		
F.H.W.A. REG. NO.		ILLINOIS			
F.H.W.A. REG. NO.		DIVISION		PROJECT I-57-9( )0	



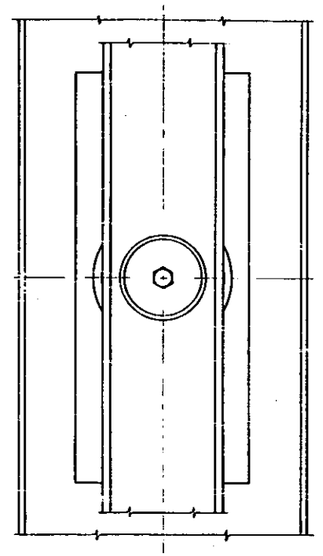
CENTER OF CHANNEL NAVIGAT
LIGHT DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

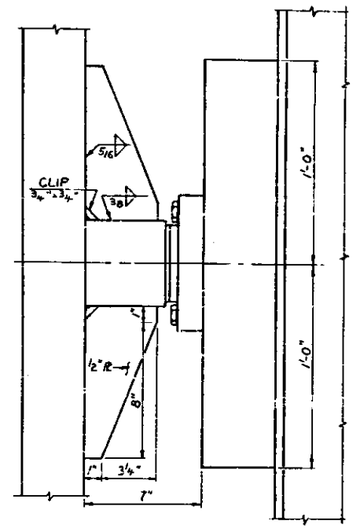
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-10-1 F&E	ALEXANDER	ILLINOIS	81	45
F. NW. A. RES. NO. 3		MISSISSIPPI	MISSOURI		
F. NW. A. RES. NO. 5				PROJECT I-57-9(10)	



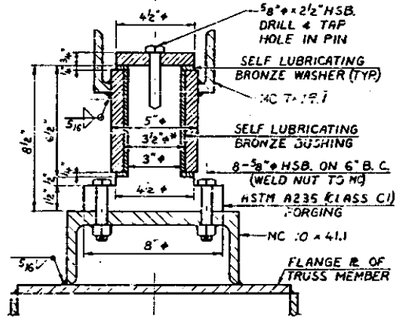
AVIATION OBSTRUCTION LIGHTING DETAILS

ON EAST SIDE OF BRIDGE
SCALE: 1/2"=1'-0"





℄ SWIVEL AND ℄ TRUSS MEMBER L_{25}-M_{25}



CLEARANCES AND SURFACE FINISHES SHALL BE AS REQUIRED FOR PROPER OPERATION OF THE SELF LUBRICATING BUSHING AND WASHERS

* INTERFERENCE FIT BETWEEN BUSHING & HOUSING

SWIVEL FOR NAVIGATION LIGHT SUSPENSION IN SPAN 13

SCALE: 3"=1'-0"

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

AVIATION OBSTRUCTION LIGHTING DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) FBE	ALEXANDER	ILLINOIS	81	46
F. MISS. RTE. NO. 80			MISSOURI		
F. MISS. REG. NO.		ILLINOIS		PROJECT I-57-9( )0	
			MISSOURI		

SPAN 1

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ BRG. NA	1	114187.250	29.500	343.817	343.817
	2	114187.250	19.667	343.971	343.971
	3	114187.250	9.833	344.125	344.125
	4	114187.250	0.000	344.278	344.278
	5	114187.250	-9.833	344.125	344.125
	6	114187.250	-19.667	343.971	343.971
	7	114187.250	-29.500	343.817	343.817
1A	1	114197.250	29.500	343.905	343.955
	2	114197.250	19.667	344.059	344.108
	3	114197.250	9.833	344.212	344.262
	4	114197.250	0.000	344.366	344.416
	5	114197.250	-9.833	344.212	344.262
	6	114197.250	-19.667	344.059	344.108
	7	114197.250	-29.500	343.905	343.955
1B	1	114207.250	29.500	343.997	344.090
	2	114207.250	19.667	344.151	344.244
	3	114207.250	9.833	344.305	344.397
	4	114207.250	0.000	344.458	344.550
	5	114207.250	-9.833	344.305	344.397
	6	114207.250	-19.667	344.151	344.244
	7	114207.250	-29.500	343.997	344.090
1C	1	114217.250	29.500	344.094	344.219
	2	114217.250	19.667	344.248	344.373
	3	114217.250	9.833	344.401	344.526
	4	114217.250	0.000	344.553	344.680
	5	114217.250	-9.833	344.401	344.526
	6	114217.250	-19.667	344.248	344.373
	7	114217.250	-29.500	344.094	344.219
1D	1	114227.250	29.500	344.195	344.338
	2	114227.250	19.667	344.349	344.492
	3	114227.250	9.833	344.502	344.646
	4	114227.250	0.000	344.656	344.799
	5	114227.250	-9.833	344.502	344.646
	6	114227.250	-19.667	344.349	344.492
	7	114227.250	-29.500	344.195	344.338
1E	1	114237.250	29.500	344.301	344.447
	2	114237.250	19.667	344.454	344.601
	3	114237.250	9.833	344.608	344.755
	4	114237.250	0.000	344.762	344.908
	5	114237.250	-9.833	344.608	344.755
	6	114237.250	-19.667	344.454	344.601
	7	114237.250	-29.500	344.301	344.447
1F	1	114247.250	29.500	344.411	344.546
	2	114247.250	19.667	344.565	344.700
	3	114247.250	9.833	344.718	344.853
	4	114247.250	0.000	344.872	345.007
	5	114247.250	-9.833	344.718	344.853
	6	114247.250	-19.667	344.565	344.700
	7	114247.250	-29.500	344.411	344.546
1G	1	114257.250	29.500	344.526	344.637
	2	114257.250	19.667	344.679	344.791
	3	114257.250	9.833	344.833	344.944
	4	114257.250	0.000	344.987	345.098
	5	114257.250	-9.833	344.833	344.944
	6	114257.250	-19.667	344.679	344.791
	7	114257.250	-29.500	344.526	344.637

SPAN 1 (CONT.)

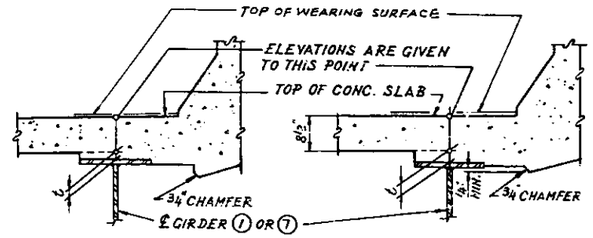
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
1H	1	114267.250	29.500	344.645	344.725
	2	114267.250	19.667	344.799	344.879
	3	114267.250	9.833	344.952	345.032
	4	114267.250	0.000	345.106	345.186
	5	114267.250	-9.833	344.952	345.032
	6	114267.250	-19.667	344.799	344.879
	7	114267.250	-29.500	344.645	344.725
SPLICE 1-2	1	114272.250	29.500	344.706	344.770
	2	114272.250	19.667	344.860	344.923
	3	114272.250	9.833	345.014	345.077
	4	114272.250	0.000	345.167	345.231
	5	114272.250	-9.833	345.014	345.077
	6	114272.250	-19.667	344.860	344.923
	7	114272.250	-29.500	344.706	344.770
1I	1	114277.250	29.500	344.769	344.816
	2	114277.250	19.667	344.922	344.970
	3	114277.250	9.833	345.076	345.123
	4	114277.250	0.000	345.230	345.277
	5	114277.250	-9.833	345.076	345.123
	6	114277.250	-19.667	344.922	344.970
	7	114277.250	-29.500	344.769	344.816
1J	1	114287.250	29.500	344.897	344.916
	2	114287.250	19.667	345.051	345.070
	3	114287.250	9.833	345.204	345.223
	4	114287.250	0.000	345.358	345.377
	5	114287.250	-9.833	345.204	345.223
	6	114287.250	-19.667	345.051	345.070
	7	114287.250	-29.500	344.897	344.916

SPAN 2

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 1	1	114297.250	29.500	345.036	345.030
	2	114297.250	19.667	345.183	345.183
	3	114297.250	9.833	345.337	345.337
	4	114297.250	0.000	345.491	345.491
	5	114297.250	-9.833	345.337	345.337
	6	114297.250	-19.667	345.183	345.183
	7	114297.250	-29.500	345.030	345.030
2A	1	114307.250	29.500	345.167	345.163
	2	114307.250	19.667	345.321	345.316
	3	114307.250	9.833	345.474	345.470
	4	114307.250	0.000	345.628	345.624
	5	114307.250	-9.833	345.474	345.470
	6	114307.250	-19.667	345.321	345.316
	7	114307.250	-29.500	345.167	345.163
2B	1	114317.250	29.500	345.309	345.310
	2	114317.250	19.667	345.462	345.464
	3	114317.250	9.833	345.616	345.618
	4	114317.250	0.000	345.770	345.771
	5	114317.250	-9.833	345.616	345.618
	6	114317.250	-19.667	345.462	345.464
	7	114317.250	-29.500	345.309	345.310

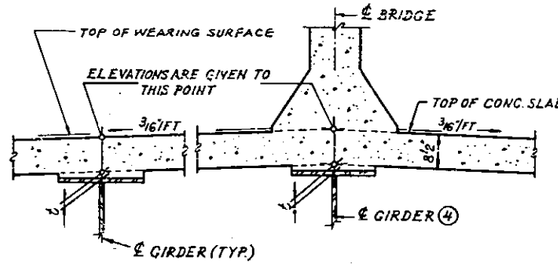
SPAN 2 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
2C	1	114327.250	29.500	345.455	345.468
	2	114327.250	19.667	345.609	345.621
	3	114327.250	9.833	345.762	345.775
	4	114327.250	0.000	345.916	345.929
	5	114327.250	-9.833	345.762	345.775
	6	114327.250	-19.667	345.609	345.621
	7	114327.250	-29.500	345.455	345.468
2D	1	114337.250	29.500	345.606	345.632
	2	114337.250	19.667	345.759	345.785
	3	114337.250	9.833	345.913	345.939
	4	114337.250	0.000	346.067	346.093
	5	114337.250	-9.833	345.913	345.939
	6	114337.250	-19.667	345.759	345.785
	7	114337.250	-29.500	345.606	345.632
2E	1	114347.250	29.500	345.761	345.798
	2	114347.250	19.667	345.915	345.952
	3	114347.250	9.833	346.068	346.105
	4	114347.250	0.000	346.222	346.259
	5	114347.250	-9.833	346.068	346.105
	6	114347.250	-19.667	345.915	345.952
	7	114347.250	-29.500	345.761	345.798
2F	1	114357.250	29.500	345.921	345.963
	2	114357.250	19.667	346.074	346.116
	3	114357.250	9.833	346.228	346.270
	4	114357.250	0.000	346.382	346.424
	5	114357.250	-9.833	346.228	346.270
	6	114357.250	-19.667	346.074	346.116
	7	114357.250	-29.500	345.921	345.963
2G	1	114367.250	29.500	346.085	346.124
	2	114367.250	19.667	346.239	346.278
	3	114367.250	9.833	346.392	346.432
	4	114367.250	0.000	346.546	346.585
	5	114367.250	-9.833	346.392	346.432
	6	114367.250	-19.667	346.239	346.278
	7	114367.250	-29.500	346.085	346.124
2H	1	114377.250	29.500	346.254	346.284
	2	114377.250	19.667	346.408	346.436
	3	114377.250	9.833	346.561	346.592
	4	114377.250	0.000	346.715	346.745
	5	114377.250	-9.833	346.561	346.592
	6	114377.250	-19.667	346.409	346.438
	7	114377.250	-29.500	346.254	346.284
SPLICE 2-2	1	114382.250	29.500	346.340	346.364
	2	114382.250	19.667	346.494	346.518
	3	114382.250	9.833	346.647	346.672
	4	114382.250	0.000	346.801	346.825
	5	114382.250	-9.833	346.647	346.672
	6	114382.250	-19.667	346.494	346.518
	7	114382.250	-29.500	346.340	346.364
2I	1	114387.250	29.500	346.427	346.445
	2	114387.250	19.667	346.581	346.599
	3	114387.250	9.833	346.735	346.752
	4	114387.250	0.000	346.889	346.906
	5	114387.250	-9.833	346.735	346.752
	6	114387.250	-19.667	346.581	346.599
	7	114387.250	-29.500	346.427	346.445
2J	1	114397.250	29.500	346.605	346.611
	2	114397.250	19.667	346.759	346.765
	3	114397.250	9.833	346.912	346.918
	4	114397.250	0.000	347.066	347.072
	5	114397.250	-9.833	346.912	346.918
	6	114397.250	-19.667	346.759	346.765
	7	114397.250	-29.500	346.604	346.611

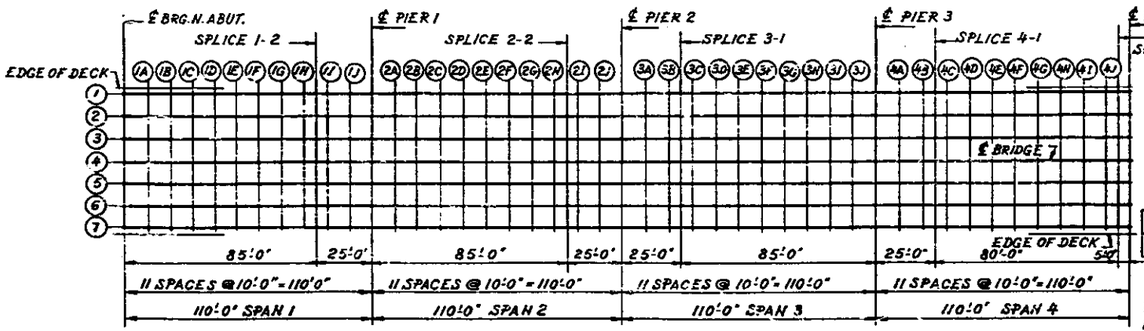


AT MINIMUM FILLET — AT MAXIMUM FILLET

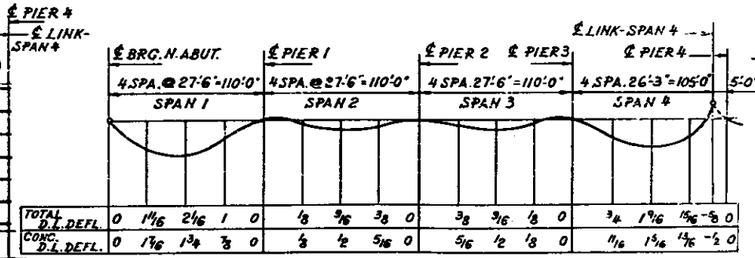
TO DETERMINE "C": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "C" ABOVE TOP FLANGE OF GIRDERS.



FILLET HEIGHTS



PLAN



NOTE: GIRDER OFFSET ARE REFERENCED TO ℄ BRIDGE.

DEAD LOAD DEFLECTION DIAGRAM

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS — [illegible] 1, 2, 3 & 4
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-1B-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	47
P.HW.A.RES NO.		ILLINOIS MISSOURI		PROJECT I-57-9( )0	
P.HW.A.RES NO.					

SPAN 3

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 2	1	114407.250	29.500	346.787	346.787
	2	114407.250	19.667	346.941	346.941
	3	114407.250	9.833	347.095	347.095
	4	114407.250	0.000	347.248	347.095
	5	114407.250	-9.833	347.095	347.095
	6	114407.250	-19.667	346.941	346.941
	7	114407.250	-29.500	346.787	346.787
3A	1	114417.250	29.500	346.974	346.980
	2	114417.250	19.667	347.128	347.134
	3	114417.250	9.833	347.282	347.287
	4	114417.250	0.000	347.435	347.441
	5	114417.250	-9.833	347.282	347.287
	6	114417.250	-19.667	347.128	347.134
	7	114417.250	-29.500	346.974	346.980
3B	1	114427.250	29.500	347.186	347.186
	2	114427.250	19.667	347.339	347.337
	3	114427.250	9.833	347.493	347.491
	4	114427.250	0.000	347.627	347.644
	5	114427.250	-9.831	347.473	347.491
	6	114427.250	-19.667	347.319	347.337
	7	114427.250	-29.500	347.166	347.184
SPLICE 3-I	1	114432.250	29.500	347.263	347.287
	2	114432.250	19.667	347.417	347.441
	3	114432.250	9.833	347.570	347.595
	4	114432.250	0.000	347.724	347.748
	5	114432.250	-9.833	347.570	347.595
	6	114432.250	-19.667	347.417	347.441
	7	114432.250	-29.500	347.263	347.287
3C	1	114437.250	29.500	347.361	347.392
	2	114437.250	19.667	347.515	347.546
	3	114437.250	9.833	347.669	347.699
	4	114437.250	0.000	347.822	347.853
	5	114437.250	-9.833	347.669	347.699
	6	114437.250	-19.667	347.515	347.546
	7	114437.250	-29.500	347.361	347.392
3D	1	114447.250	29.500	347.562	347.601
	2	114447.250	19.667	347.715	347.755
	3	114447.250	9.833	347.869	348.008
	4	114447.250	0.000	348.023	348.062
	5	114447.250	-9.833	347.869	347.908
	6	114447.250	-19.667	347.715	347.755
	7	114447.250	-29.500	347.562	347.601
3E	1	114457.250	29.500	347.767	347.808
	2	114457.250	19.667	347.920	347.962
	3	114457.250	9.833	348.074	348.116
	4	114457.250	0.000	348.228	348.269
	5	114457.250	-9.833	348.074	348.116
	6	114457.250	-19.667	347.920	347.962
	7	114457.250	-29.500	347.767	347.808
3F	1	114467.250	29.500	347.974	348.01-
	2	114467.250	19.667	348.130	348.165
	3	114467.250	9.833	348.283	348.320
	4	114467.250	0.000	348.437	348.474
	5	114467.250	-9.833	348.283	348.320
	6	114467.250	-19.667	348.130	348.167
	7	114467.250	-29.500	347.976	348.013
3G	1	114477.250	29.500	348.190	348.216
	2	114477.250	19.667	348.344	348.370
	3	114477.250	9.833	348.497	348.523
	4	114477.250	0.000	348.651	348.677
	5	114477.250	-9.833	348.497	348.523
	6	114477.250	-19.667	348.344	348.370
	7	114477.250	-29.500	348.190	348.216

SPAN 3 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
3H	1	114487.250	29.500	348.408	348.421
	2	114487.250	19.667	348.562	348.575
	3	114487.250	9.833	348.716	348.728
	4	114487.250	0.000	348.869	348.882
	5	114487.250	-9.833	348.716	348.728
	6	114487.250	-19.667	348.562	348.575
	7	114487.250	-29.500	348.408	348.421
3I	1	114497.250	29.500	348.631	348.633
	2	114497.250	19.667	348.785	348.786
	3	114497.250	9.833	348.938	348.940
	4	114497.250	0.000	349.092	349.094
	5	114497.250	-9.833	348.938	348.940
	6	114497.250	-19.667	348.785	348.786
	7	114497.250	-29.500	348.631	348.633
3J	1	114507.250	29.500	348.859	348.856
	2	114507.250	19.667	349.012	349.008
	3	114507.250	9.833	349.166	349.162
	4	114507.250	0.000	349.320	349.315
	5	114507.250	-9.833	349.166	349.162
	6	114507.250	-19.667	349.012	349.008
	7	114507.250	-29.500	348.859	348.856

SPAN 4

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 3	1	114517.250	29.500	349.091	349.091
	2	114517.250	19.667	349.244	349.244
	3	114517.250	9.833	349.398	349.398
	4	114517.250	0.000	349.551	349.551
	5	114517.250	-9.833	349.398	349.398
	6	114517.250	-19.667	349.244	349.244
	7	114517.250	-29.500	349.091	349.091
4A	1	114527.250	29.500	349.327	349.340
	2	114527.250	19.667	349.481	349.494
	3	114527.250	9.833	349.634	349.647
	4	114527.250	0.000	349.788	349.801
	5	114527.250	-9.833	349.634	349.647
	6	114527.250	-19.667	349.481	349.494
	7	114527.250	-29.500	349.327	349.340
B	1	114537.250	29.500	349.568	349.582
	2	114537.250	19.667	349.721	349.736
	3	114537.250	9.833	349.875	349.909
	4	114537.250	0.000	350.029	350.063
	5	114537.250	-9.833	349.875	349.909
	6	114537.250	-19.667	349.721	349.736
	7	114537.250	-29.500	349.568	349.602
SPLICE 4-I	1	114542.250	29.500	349.690	349.737
	2	114542.250	19.667	349.844	349.891
	3	114542.250	9.833	349.997	350.045
	4	114542.250	0.000	350.151	350.198
	5	114542.250	-9.833	349.997	350.045
	6	114542.250	-19.667	349.844	349.891
	7	114542.250	-29.500	349.690	349.737
4C	1	114547.250	29.500	349.813	349.874
	2	114547.250	19.667	349.967	350.028
	3	114547.250	9.833	350.121	350.182
	4	114547.250	0.000	350.274	350.335
	5	114547.250	-9.833	350.121	350.182
	6	114547.250	-19.667	349.967	350.028
	7	114547.250	-29.500	349.813	349.874

SPAN 4 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
4D	1	114557.250	29.500	350.063	350.149
	2	114557.250	19.667	350.217	350.303
	3	114557.250	9.833	350.371	350.457
	4	114557.250	0.000	350.524	350.610
	5	114557.250	-9.833	350.371	350.457
	6	114557.250	-19.667	350.217	350.303
	7	114557.250	-29.500	350.063	350.149
4E	1	114567.250	29.500	350.318	350.421
	2	114567.250	19.667	350.471	350.574
	3	114567.250	9.833	350.625	350.728
	4	114567.250	0.000	350.779	350.882
	5	114567.250	-9.833	350.625	350.728
	6	114567.250	-19.667	350.471	350.574
	7	114567.250	-29.500	350.318	350.421
4F	1	114577.250	29.500	350.577	350.685
	2	114577.250	19.667	350.730	350.838
	3	114577.250	9.833	350.884	350.992
	4	114577.250	0.000	351.038	351.146
	5	114577.250	-9.833	350.884	350.992
	6	114577.250	-19.667	350.730	350.839
	7	114577.250	-29.500	350.577	350.685
4G	1	114587.250	29.500	350.840	350.938
	2	114587.250	19.667	350.994	351.092
	3	114587.250	9.833	351.147	351.246
	4	114587.250	0.000	351.301	351.399
	5	114587.250	-9.833	351.147	351.246
	6	114587.250	-19.667	350.994	351.092
	7	114587.250	-29.500	350.840	350.938
4H	1	114597.250	29.500	351.108	351.182
	2	114597.250	19.667	351.262	351.336
	3	114597.250	9.833	351.415	351.489
	4	114597.250	0.000	351.569	351.643
	5	114597.250	-9.833	351.415	351.489
	6	114597.250	-19.667	351.262	351.336
	7	114597.250	-29.500	351.108	351.182
4I	1	114607.250	29.500	351.381	351.416
	2	114607.250	19.667	351.534	351.570
	3	114607.250	9.833	351.688	351.724
	4	114607.250	0.000	351.841	351.877
	5	114607.250	-9.833	351.688	351.724
	6	114607.250	-19.667	351.534	351.570
	7	114607.250	-29.500	351.381	351.416
4J	1	114617.250	29.500	351.657	351.643
	2	114617.250	19.667	351.811	351.797
	3	114617.250	9.833	351.965	351.951
	4	114617.250	0.000	352.118	352.106
	5	114617.250	-9.833	351.965	351.951
	6	114617.250	-19.667	351.811	351.797
	7	114617.250	-29.500	351.657	351.643
℄ LINK-SPAN 4	1	114622.250	29.500	351.798	351.756
	2	114622.250	19.667	351.951	351.910
	3	114622.250	9.833	352.105	352.063
	4	114622.250	0.000	352.259	352.217
	5	114622.250	-9.833	352.105	352.063
	6	114622.250	-19.667	351.951	351.910
	7	114622.250	-29.500	351.798	351.756

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS- SPANS [illegible] & 4
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1) F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 76.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) F&E	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	81	48
F.H.W.A. REG. NO. 5 / F.H.W.A. REG. NO. 5	ILLINOIS MISSOURI	PROJECT I-57-9( )10			

SPAN 5

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
¢ PIER 4	1	114627.250	29.500	351.938	351.938
	2	114627.250	19.667	352.092	352.092
	3	114627.250	9.833	352.246	352.246
	4	114627.250	0.000	352.399	352.399
	5	114627.250	-9.833	352.246	352.246
	6	114627.250	-19.667	352.092	352.092
	7	114627.250	-29.500	351.938	351.938
5A	1	114637.250	29.500	352.224	352.292
	2	114637.250	19.667	352.378	352.459
	3	114637.250	9.833	352.532	352.612
	4	114637.250	0.000	352.685	352.766
	5	114637.250	-9.833	352.532	352.612
	6	114637.250	-19.667	352.378	352.459
	7	114637.250	-29.500	352.224	352.292
5B	1	114647.250	29.500	352.515	352.646
	2	114647.250	19.667	352.669	352.824
	3	114647.250	9.833	352.822	352.978
	4	114647.250	0.000	352.976	353.131
	5	114647.250	-9.833	352.822	352.978
	6	114647.250	-19.667	352.669	352.824
	7	114647.250	-29.500	352.515	352.646
5C	1	114657.250	29.500	352.810	352.998
	2	114657.250	19.667	352.964	353.187
	3	114657.250	9.833	353.117	353.341
	4	114657.250	0.000	353.271	353.494
	5	114657.250	-9.833	353.117	353.341
	6	114657.250	-19.667	352.964	353.187
	7	114657.250	-29.500	352.810	352.998
5D	1	114667.250	29.500	353.109	353.338
	2	114667.250	19.667	353.263	353.534
	3	114667.250	9.833	353.416	353.688
	4	114667.250	0.000	353.570	353.842
	5	114667.250	-9.833	353.416	353.688
	6	114667.250	-19.667	353.263	353.534
	7	114667.250	-29.500	353.109	353.338
5E	1	114677.250	29.500	353.409	353.669
	2	114677.250	19.667	353.563	353.872
	3	114677.250	9.833	353.716	354.025
	4	114677.250	0.000	353.870	354.179
	5	114677.250	-9.833	353.716	354.025
	6	114677.250	-19.667	353.563	353.872
	7	114677.250	-29.500	353.409	353.669
5F	1	114687.250	29.500	353.709	353.937
	2	114687.250	19.667	353.863	354.192
	3	114687.250	9.833	354.016	354.346
	4	114687.250	0.000	354.170	354.499
	5	114687.250	-9.833	354.016	354.346
	6	114687.250	-19.667	353.863	354.192
	7	114687.250	-29.500	353.709	353.987
5G	1	114697.250	29.500	354.009	354.287
	2	114697.250	19.667	354.163	354.492
	3	114697.250	9.833	354.316	354.645
	4	114697.250	0.000	354.470	354.799
	5	114697.250	-9.833	354.316	354.645
	6	114697.250	-19.667	354.163	354.492
	7	114657.250	-29.500	354.009	354.287

SPAN 5 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
5H	1	114707.250	29.500	354.309	354.577
	2	114707.250	19.667	354.463	354.781
	3	114707.250	9.833	354.616	354.934
	4	114707.250	0.000	354.770	355.088
	5	114707.250	-9.833	354.616	354.934
	6	114707.250	-19.667	354.463	354.781
	7	114707.250	-29.500	354.309	354.577
5I	1	114717.250	29.500	354.609	354.853
	2	114717.250	19.667	354.763	355.053
	3	114717.250	9.833	354.916	355.207
	4	114717.250	0.000	355.070	355.360
	5	114717.250	-9.833	354.916	355.207
	6	114717.250	-19.667	354.763	355.053
	7	114717.250	-29.500	354.609	354.853
5J	1	114727.250	29.500	354.909	355.119
	2	114727.250	19.667	355.063	355.312
	3	114727.250	9.833	355.216	355.466
	4	114727.250	0.000	355.370	355.620
	5	114727.250	-9.833	355.216	355.466
	6	114727.250	-19.667	355.063	355.312
	7	114727.250	-29.500	354.909	355.119
SPLICE 5-2	1	114731.250	29.500	355.029	355.223
	2	114731.250	19.667	355.183	355.414
	3	114731.250	9.833	355.336	355.568
	4	114731.250	0.000	355.490	355.721
	5	114731.250	-9.833	355.336	355.568
	6	114731.250	-19.667	355.183	355.414
	7	114731.250	-29.500	355.029	355.223
5K	1	114737.250	29.500	355.209	355.379
	2	114737.250	19.667	355.363	355.566
	3	114737.250	9.833	355.516	355.719
	4	114737.250	0.000	355.670	355.873
	5	114737.250	-9.833	355.515	355.719
	6	114737.250	-19.667	355.363	355.566
	7	114737.250	-29.500	355.209	355.379
5L	1	114747.250	29.500	355.509	355.634
	2	114747.250	19.667	355.663	355.812
	3	114747.250	9.833	355.816	355.966
	4	114747.250	0.000	355.970	356.120
	5	114747.250	-9.833	355.816	355.966
	6	114747.250	-19.667	355.663	355.812
	7	114747.250	-29.500	355.509	355.634
5M	1	114757.250	29.500	355.809	355.891
	2	114757.250	19.667	355.963	356.061
	3	114757.250	9.833	356.116	356.215
	4	114757.250	0.000	356.270	356.369
	5	114757.250	-9.833	356.116	356.215
		114757.250	-19.667	355.963	356.061
	7	114757.250	-29.500	355.809	355.891
5N	1	114767.250	29.500	356.109	356.150
	2	114767.250	19.667	356.263	356.313
	3	114767.250	9.833	356.416	356.466
	4	114767.250	0.000	356.570	356.620
	5	114767.250	-9.833	356.416	356.466
	6	114767.250	-19.667	356.263	356.313
	7	114767.250	-29.500	356.109	356.150

SPAN 6

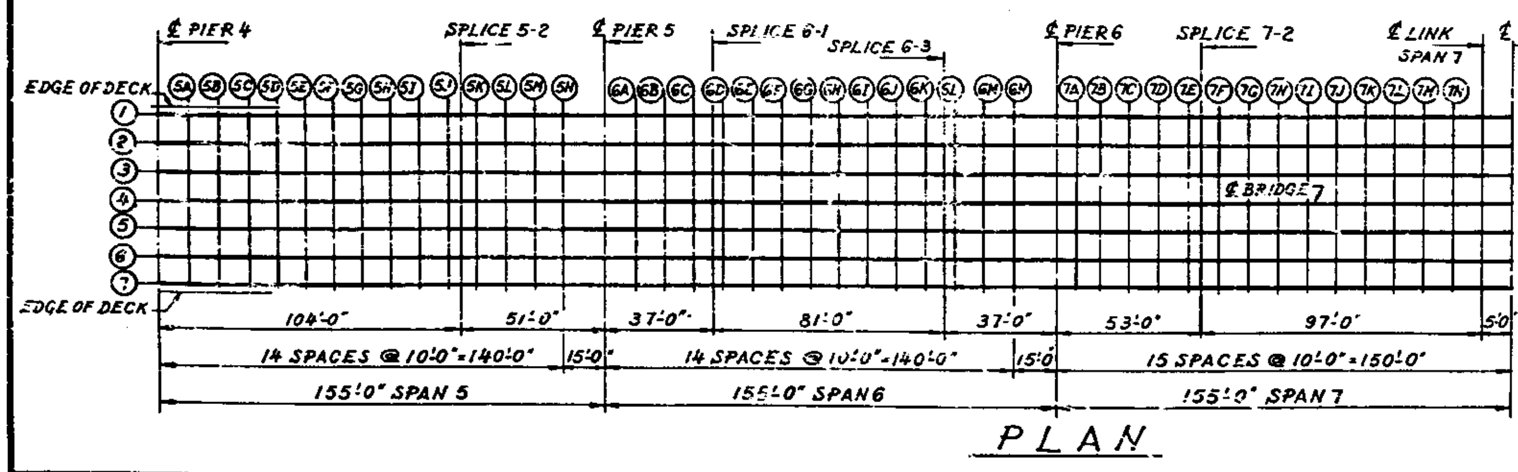
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
¢ PIER 5	1	114782.250	29.500	356.559	356.559
	2	114782.250	19.667	356.713	356.713
	3	114782.250	9.833	356.866	356.866
	4	114782.250	0.000	357.020	357.020
	5	114782.250	-9.833	356.866	356.866
	6	114782.250	-19.667	356.713	356.713
	7	114782.250	-29.500	356.559	356.559
6A	1	114792.250	29.500	356.859	356.846
	2	114792.250	19.667	357.013	356.997
	3	114792.250	9.833	357.166	357.150
	4	114792.250	0.000	357.320	357.304
	5	114792.250	-9.833	357.166	357.150
	6	114792.250	-19.667	357.013	356.997
	7	114792.250	-29.500	356.859	356.846
6B	1	114802.250	29.500	357.159	357.139
	2	114802.250	19.667	357.313	357.287
	3	114802.250	9.833	357.466	357.441
	4	114802.250	0.000	357.620	357.594
	5	114802.250	-9.833	357.466	357.441
	6	114802.250	-19.667	357.313	357.287
	7	114802.250	-29.500	357.159	357.139
6C	1	114812.250	29.500	357.459	357.438
	2	114812.250	19.667	357.613	357.585
	3	114812.250	9.833	357.766	357.739
	4	114812.250	0.000	357.920	357.893
	5	114812.250	-9.833	357.766	357.739
	6	114812.250	-19.667	357.613	357.585
	7	114812.250	-29.500	357.459	357.438
SPLICE 6-1	1	114819.250	29.500	357.669	357.652
	2	114819.250	19.667	357.823	357.799
	3	114819.250	9.833	357.976	357.953
	4	114819.250	0.000	358.130	358.107
	5	114819.250	-9.833	357.976	357.953
	6	114819.250	-19.667	357.823	357.799
	7	114819.250	-29.500	357.669	357.652
6D	1	114822.250	29.500	357.759	357.745
	2	114822.250	19.667	357.913	357.892
	3	114822.250	9.833	358.066	358.045
	4	114822.250	0.000	358.220	358.199
	5	114822.250	-9.833	358.066	358.045
	6	114822.250	-19.667	357.913	357.892
	7	114822.250	-29.500	357.759	357.745
6E	1	114832.250	29.500	358.059	358.053
	2	114832.250	19.667	358.213	358.199
	3	114832.250	9.833	358.366	358.353
	4	114832.250	0.000	358.520	358.507
	5	114832.250	-9.833	358.366	358.353
	6	114832.250	-19.667	358.213	358.199
	7	114832.250	-29.500	358.059	358.053
6F	1	114842.250	29.500	358.359	358.362
	2	114842.250	19.667	358.513	358.508
	3	114842.250	9.833	358.666	358.662
	4	114842.250	0.000	358.820	358.816
	5	114842.250	-9.833	358.666	358.662
	6	114842.250	-19.667	358.513	358.508
	7	114842.250	-29.500	358.359	358.362
6G	1	114852.250	29.500	358.659	358.667
	2	114852.250	19.667	358.813	358.814
	3	114852.250	9.833	358.966	358.968
	4	114852.250	0.000	359.120	359.121
	5	114852.250	-9.833	358.964	358.968
	6	114852.250	-19.667	358.813	358.814
	7	114852.250	-29.500	358.659	358.667

SPAN 6(CONT.)

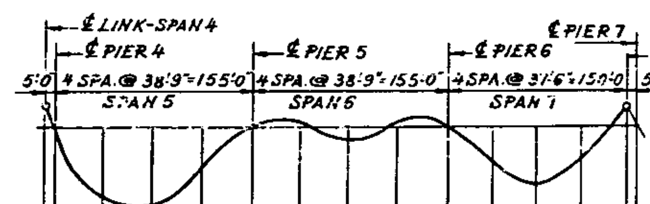
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
6H	1	114862.250	29.500	358.959	358.970
	2	114862.250	19.667	359.113	359.117
	3	114862.250	9.833	359.266	359.271
	4	114862.250	0.000	359.420	359.424
	5	114862.250	-9.833	359.266	359.271
	6	114862.250	-19.667	359.113	359.117
	7	114862.250	-29.500	358.959	358.970
6I	1	114872.250	29.500	359.259	359.267
	2	114872.250	19.667	359.413	359.414
	3	114872.250	9.833	359.566	359.568
	4	114872.250	0.000	359.720	359.722
	5	114872.250	-9.833	359.566	359.568
	6	114872.250	-19.667	359.413	359.414
	7	114872.250	-29.500	359.259	359.267
6J	1	114882.250	29.500	359.559	359.562
	2	114882.250	19.667	359.713	359.707
	3	114882.250	9.833	359.866	359.861
	4	114882.250	0.000	360.020	360.014
	5	114882.250	-9.833	359.866	359.861
	6	114882.250	-19.667	359.713	359.707
	7	114882.250	-29.500	359.559	359.562
6K	1	114892.250	29.500	359.859	359.855
	2	114892.250	19.667	360.013	359.998
	3	114892.250	9.833	360.166	360.152
	4	114892.250	0.000	360.320	360.305
	5	114892.250	-9.833	360.166	360.152
	6	114892.250	-19.667	360.013	359.998
	7	114892.250	-29.500	359.859	359.855
SPLICE 6-3	1	114900.250	29.500	360.099	360.088
	2	114900.250	19.667	360.253	360.232
	3	114900.250	9.833	360.406	360.385
	4	114900.250	0.000	360.560	360.539
	5	114900.250	-9.833	360.406	360.385
	6	114900.250	-19.667	360.253	360.232
	7	114900.250	-29.500	360.099	360.088
6L	1	114902.250	29.500	360.159	360.146
	2	114902.250	19.667	360.313	360.290
	3	114902.250	9.833	360.466	360.444
	4	114902.250	0.000	360.620	360.597
	5	114902.250	-9.833	360.466	360.444
	6	114902.250	-19.667	360.313	360.290
	7	114902.250	-29.500	360.159	360.146
6M	1	114912.250	29.500	360.459	360.442
	2	114912.250	19.667	360.613	360.587
	3	114912.250	9.833	360.766	360.741
	4	114912.250	0.000	360.920	360.895
	5	114912.250	-9.833	360.766	360.741
	6	114912.250	-19.667	360.613	360.587
	7	114912.250	-29.500	360.459	360.442
6N	1	114922.250	29.500	360.759	360.741
	2	114922.250	19.667	360.913	360.889
	3	114922.250	9.833	361.066	361.042
	4	114922.250	0.000	361.220	361.196
	5	114922.250	-9.833	361.066	361.042
	6	114922.250	-19.667	360.913	360.889
	7	114922.250	-29.500	360.759	360.741

NOTE

FOR DETAILS SHOWING LOCATION FOR TOP OF SLAB ELEVATIONS AND DIMENSION "t", SEE SHEET 46.
GIRDER OFFSET ARE REFERENCED TO ¢ BRIDGE.



PLAN



TOTAL D.L. DEFL.	① & ⑦	-3/16	0	3 1/8	4 7/16	2 3/8	0	-5/16	1/8	-3/16	0	1 7/8	3 1/4	2	-3/4	0
	② THRU ⑥	-5/8	0	4 1/8	5 1/16	2 11/16	0	-3/8	0	-5/16	0	2 1/4	4 1/16	2 7/8	-13/16	0
CONC. D.L. DEFL.	① & ⑦	-7/16	0	2 11/16	3 5/16	1 11/16	0	-3/16	1/8	-1/8	0	1 3/8	2 7/16	1 9/16	-7/16	0
	② THRU ⑥	-1/2	0	3 3/16	3 7/8	2 1/16	0	-1/4	1/16	-1/4	0	1 3/4	3 1/8	2 5/16	-1/2	0

D. L. DEFLECTION DIAGRAM

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS – SPANS 5, 6 & 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) F & E	ALEXANDER (ILLINOIS) MISSISSIPPI (MISSOURI)	ILLINOIS MISSOURI	81	49
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS (ILLINOIS)	PROJECT I-57-9(10)		

SPAN 7

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 6	1	114937.250	29.500	361.209	361.209
	2	114937.250	19.667	361.363	361.363
	3	114937.250	9.833	361.516	361.516
	4	114937.250	0.000	361.670	361.670
	5	114937.250	-9.833	361.516	361.516
	6	114937.250	-19.667	361.363	361.363
	7	114937.250	-29.500	361.209	361.209
7A	1	114947.250	29.500	361.509	361.935
	2	114947.250	19.667	361.663	361.695
	3	114947.250	9.833	361.816	361.849
	4	114947.250	0.000	361.970	362.002
	5	114947.250	-9.833	361.816	361.849
	6	114947.250	-19.667	361.663	361.695
	7	114947.250	-29.500	361.509	361.535
7B	1	114957.250	29.500	361.809	361.864
	2	114957.250	19.667	361.963	362.032
	3	114957.250	9.833	362.116	362.186
	4	114957.250	0.000	362.270	362.339
	5	114957.250	-9.833	362.116	362.186
	6	114957.250	-19.667	361.963	362.032
	7	114957.250	-29.500	361.809	361.864
7C	1	114967.250	29.500	362.109	362.197
	2	114967.250	19.667	362.263	362.374
	3	114967.250	9.833	362.416	362.528
	4	114967.250	0.000	362.570	362.682
	5	114967.250	-9.833	362.416	362.528
	6	114967.250	-19.667	362.263	362.374
	7	114967.250	-29.500	362.109	362.197
7D	1	114977.250	29.500	362.409	362.532
	2	114977.250	19.667	362.563	362.719
	3	114977.250	9.833	362.716	362.873
	4	114977.250	0.000	362.870	363.027
	5	114977.250	-9.833	362.716	362.873
	6	114977.250	-19.667	362.563	362.719
	7	114977.250	-29.500	362.409	362.532
7E	1	114987.250	29.500	362.709	362.863
	2	114987.250	19.667	362.863	363.060
	3	114987.250	9.833	363.016	363.213
	4	114987.250	0.000	363.170	363.367
	5	114987.250	-9.833	363.016	363.213
	6	114987.250	-19.667	362.863	363.060
	7	114987.250	-29.500	362.709	362.863
SPLICE 7-8	1	114990.250	29.500	362.799	362.961
	2	114990.250	19.667	362.953	363.160
	3	114990.250	9.833	363.106	363.314
	4	114990.250	0.000	363.260	363.468
	5	114990.250	-9.833	363.106	363.314
	6	114990.250	-19.667	362.953	363.160
	7	114990.250	-29.500	362.799	362.961
7F	1	114997.250	29.500	363.009	363.190
	2	114997.250	19.667	363.163	363.395
	3	114997.250	9.833	363.316	363.549
	4	114997.250	0.000	363.470	363.703
	5	114997.250	-9.833	363.316	363.549
	6	114997.250	-19.667	363.163	363.395
	7	114997.250	-29.500	363.009	363.190
7G	1	115007.250	29.500	363.309	363.503
	2	115007.250	19.667	363.463	363.716
	3	115007.250	9.833	363.616	363.869
	4	115007.250	0.000	363.770	364.023
	5	115007.250	-9.833	363.616	363.869
	6	115007.250	-19.667	363.463	363.716
	7	115007.250	-29.500	363.309	363.503
7H	1	115017.250	29.500	363.609	363.807
	2	115017.250	19.667	363.763	364.025
	3	115017.250	9.833	363.916	364.179
	4	115017.250	0.000	364.070	364.333
	5	115017.250	-9.833	363.916	364.179
	6	115017.250	-19.667	363.763	364.025
	7	115017.250	-29.500	363.609	363.807
7I	1	115027.250	29.500	363.909	364.102
	2	115027.250	19.667	364.063	364.324
	3	115027.250	9.833	364.216	364.472
	4	115027.250	0.000	364.370	364.632
	5	115027.250	-9.833	364.216	364.478
	6	115027.250	-19.667	364.063	364.324
	7	115027.250	-29.500	363.909	364.102
7J	1	115037.250	29.500	364.209	364.377
	2	115037.250	19.667	364.363	364.602
	3	115037.250	9.833	364.516	364.735
	4	115037.250	0.000	364.670	364.909
	5	115037.250	-9.833	364.516	364.735
	6	115037.250	-19.667	364.363	364.602
	7	115037.250	-29.500	364.209	364.377

SPAN 7 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
7K	1	115047.250	29.500	364.509	364.647
	2	115047.250	19.667	364.663	364.868
	3	115047.250	9.833	364.816	365.022
	4	115047.250	0.000	364.970	365.176
	5	115047.250	-9.833	364.816	365.022
	6	115047.250	-19.667	364.663	364.868
	7	115047.250	-29.500	364.509	364.647
7L	1	115057.250	29.500	364.809	364.912
	2	115057.250	19.667	364.963	365.124
	3	115057.250	9.833	365.116	365.278
	4	115057.250	0.000	365.270	365.432
	5	115057.250	-9.833	365.116	365.278
	6	115057.250	-19.667	364.963	365.124
	7	115057.250	-29.500	364.809	364.912
7M	1	115067.250	29.500	365.109	365.167
	2	115067.250	19.667	365.263	365.36[illegible]
	3	115067.250	9.833	365.416	365.516
	4	115067.250	0.000	365.570	365.670
	5	115067.250	-9.833	365.416	365.516
	6	115067.250	-19.667	365.263	365.363
	7	115067.250	-29.500	365.109	365.167
7N	1	115077.250	29.500	365.409	365.421
	2	115077.250	19.667	365.563	365.595
	3	115077.250	9.833	365.716	365.749
	4	115077.250	0.000	365.870	365.902
	5	115077.250	-9.833	365.716	365.749
	6	115077.250	-19.667	365.563	365.595
	7	115077.250	-29.500	365.409	365.421
℄ LINK-SPAN 7	1	115087.250	29.500	365.709	365.674
	2	115087.250	19.667	365.863	365.822
	3	115087.250	9.833	366.016	365.975
	4	115087.250	0.000	366.170	366.129
	5	115087.250	-9.833	366.016	365.975
	6	115087.250	-19.667	365.863	365.822
	7	115087.250	-29.500	365.709	365.674

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 5, 6, 7
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-18-1) F&E	ALEXANDER MISSISSIPPI	81	50
F.H.W.A. REG. NO. 5 F.A.P. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

SPAN 8A

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 7	1	115092.250	29.500	365.859	365.859
	2	115092.250	19.667	366.013	366.013
	3	115092.250	9.833	366.166	366.166
	4	115092.250	0.000	366.320	366.320
	5	115092.250	-9.833	366.166	366.166
	6	115092.250	-19.667	366.013	366.013
	7	115092.250	-29.500	365.859	365.859
8AA	1	115102.250	29.500	366.159	366.231
	2	115102.250	19.667	366.313	366.395
	3	115102.250	9.833	366.466	366.548
	4	115102.250	0.000	366.620	366.702
	5	115102.250	-9.833	366.466	366.548
	6	115102.250	-19.667	366.313	366.395
	7	115102.250	-29.500	366.159	366.231
8AB	1	115112.250	29.500	366.459	366.603
	2	115112.250	19.667	366.613	366.776
	3	115112.250	9.833	366.766	366.930
	4	115112.250	0.000	366.920	367.083
	5	115112.250	-9.833	366.766	366.930
	6	115112.250	-19.667	366.613	366.776
	7	115112.250	-29.500	366.459	366.603
8AC	1	115122.250	29.500	366.759	366.975
	2	115122.250	19.667	366.913	367.153
	3	115122.250	9.833	367.066	367.305
	4	115122.250	0.000	367.220	367.460
	5	115122.250	-9.833	367.066	367.306
	6	115122.250	-19.667	366.913	367.153
	7	115122.250	-29.500	366.759	366.975
8AD	1	115132.250	29.500	367.059	367.343
	2	115132.250	19.667	367.213	367.528
	3	115132.250	9.833	367.366	367.682
	4	115132.250	0.000	367.520	367.835
	5	115132.250	-9.833	367.366	367.682
	6	115132.250	-19.667	367.213	367.528
	7	115132.250	-29.500	367.059	367.343
8AE	1	115142.250	29.500	367.359	367.701
	2	115142.250	19.667	367.513	367.899
	3	115142.250	9.833	367.666	368.053
	4	115142.250	0.000	367.820	368.206
	5	115142.250	-9.833	367.666	368.053
	6	115142.250	-19.667	367.513	367.899
	7	115142.250	-29.500	367.359	367.701
8AF	1	115152.250	29.500	367.659	368.056
	2	115152.250	19.667	367.813	368.264
	3	115152.250	9.833	367.966	368.418
	4	115152.250	0.000	368.120	368.572
	5	115152.250	-9.833	367.966	368.418
	6	115152.250	-19.667	367.813	368.264
	7	115152.250	-29.500	367.659	368.056
8AG	1	115162.250	29.500	367.959	368.404
	2	115162.250	19.667	368.113	368.620
	3	115162.250	9.833	368.266	368.773
	4	115162.250	0.000	368.420	368.927
	5	115162.250	-9.833	368.266	368.773
	6	115162.250	-19.667	368.113	368.620
	7	115162.250	-29.500	367.959	368.404
SPLICE 8A-2	1	115170.292	29.500	368.200	368.681
	2	115170.292	19.667	368.354	368.902
	3	115170.292	9.833	368.508	369.056
	4	115170.292	0.000	368.661	369.209
	5	115170.292	-9.833	368.508	369.056
	6	115170.292	-19.667	368.354	368.902
	7	115170.292	-29.500	368.200	368.681

SPAN 8A (CONT.)

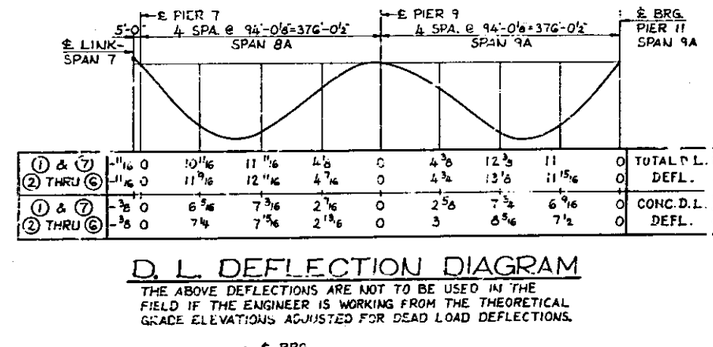
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AH	1	115172.250	29.500	368.259	368.747
	2	115172.250	19.667	368.413	368.969
	3	115172.250	9.833	368.566	369.123
	4	115172.250	0.000	368.720	369.278
	5	115172.250	-9.833	368.566	369.123
	6	115172.250	-19.667	368.413	368.969
	7	115172.250	-29.500	368.259	368.747
8AI	1	115182.250	29.500	368.559	369.084
	2	115182.250	19.667	368.713	369.312
	3	115182.250	9.833	368.866	369.465
	4	115182.250	0.000	369.020	369.619
	5	115182.250	-9.833	368.866	369.465
	6	115182.250	-19.667	368.713	369.312
	7	115182.250	-29.500	368.559	369.084
8AJ	1	115192.250	29.500	368.859	369.416
	2	115192.250	19.667	369.013	369.647
	3	115192.250	9.833	369.166	369.801
	4	115192.250	0.000	369.320	369.954
	5	115192.250	-9.833	369.166	369.801
	6	115192.250	-19.667	369.013	369.647
	7	115192.250	-29.500	368.859	369.416
8AK	1	115202.250	29.500	369.159	369.744
	2	115202.250	19.667	369.313	369.977
	3	115202.250	9.833	369.466	370.131
	4	115202.250	0.000	369.620	370.285
	5	115202.250	-9.833	369.466	370.131
	6	115202.250	-19.667	369.313	369.977
	7	115202.250	-29.500	369.159	369.744
8AL	1	115212.250	29.500	369.459	370.062
	2	115212.250	19.667	369.613	370.298
	3	115212.250	9.833	369.766	370.452
	4	115212.250	0.000	369.920	370.606
	5	115212.250	-9.833	369.766	370.452
	6	115212.250	-19.667	369.613	370.298
	7	115212.250	-29.500	369.459	370.062
8AM	1	115222.250	29.500	369.759	370.377
	2	115222.250	19.667	369.913	370.616
	3	115222.250	9.833	370.066	370.769
	4	115222.250	0.000	370.220	370.923
	5	115222.250	-9.833	370.066	370.769
	6	115222.250	-19.667	369.913	370.616
	7	115222.250	-29.500	369.759	370.377
8AN	1	115232.250	29.500	370.059	370.683
	2	115232.250	19.667	370.213	370.923
	3	115232.250	9.833	370.366	371.076
	4	115232.250	0.000	370.520	371.230
	5	115232.250	-9.833	370.366	371.076
	6	115232.250	-19.667	370.213	370.923
	7	115232.250	-29.500	370.059	370.683
8AO	1	115242.250	29.500	370.359	370.987
	2	115242.250	19.667	370.513	371.228
	3	115242.250	9.833	370.666	371.381
	4	115242.250	0.000	370.820	371.535
	5	115242.250	-9.833	370.666	371.381
	6	115242.250	-19.667	370.513	371.228
	7	115242.250	-29.500	370.359	370.987
8AP	1	115252.250	29.500	370.659	371.286
	2	115252.250	19.667	370.813	371.520
	3	115252.250	9.833	370.966	371.673
	4	115252.250	0.000	371.120	371.827
	5	115252.250	-9.833	370.966	371.673
	6	115252.250	-19.667	370.813	371.520
	7	115252.250	-29.500	370.659	371.286

SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AQ	1	115262.250	29.500	370.959	371.584
	2	115262.250	19.667	371.113	371.810
	3	115262.250	9.833	371.266	371.964
	4	115262.250	0.000	371.420	372.118
	5	115262.250	-9.833	371.266	371.964
	6	115262.250	-19.667	371.113	371.810
	7	115262.250	-29.500	370.959	371.584
8AR	1	115272.250	29.500	371.259	371.870
	2	115272.250	19.667	371.413	372.090
	3	115272.250	9.833	371.566	372.244
	4	115272.250	0.000	371.720	372.397
	5	115272.250	-9.833	371.566	372.244
	6	115272.250	-19.667	371.413	372.090
	7	115272.250	-29.500	371.259	371.870
8AS	1	115282.250	29.500	371.559	372.152
	2	115282.250	19.667	371.713	372.367
	3	115282.250	9.833	371.8[illegible]	372.[illegible]
	4	115282.250	0.000	372.020	372.674
	5	115282.250	-9.833	371.866	372.521
	6	115282.250	-19.667	371.713	372.367
	7	115282.250	-29.500	371.559	372.152
SPLICE 8A-4	1	115290.292	29.500	371.800	372.367
	2	115290.292	19.667	371.954	372.582
	3	115290.292	9.833	372.108	372.736
	4	115290.292	0.000	372.261	372.890
	5	115290.292	-9.833	372.108	372.736
	6	115290.292	-19.667	371.954	372.582
	7	115290.292	-29.500	371.800	372.367
8AT	1	115292.250	29.500	371.859	372.419
	2	115292.250	19.667	372.013	372.635
	3	115292.250	9.833	372.166	372.788
	4	115292.250	0.000	372.320	372.942
	5	115292.250	-9.833	372.166	372.788
	6	115292.250	-19.667	372.013	372.635
	7	115292.250	-29.500	371.859	372.419
8AU	1	115302.250	29.500	371.159	372.683
	2	115302.250	19.667	372.313	372.898
	3	115302.250	9.833	372.466	373.052
	4	115302.250	0.000	372.620	373.205
	5	115302.250	-9.833	372.466	373.052
	6	115302.250	-19.667	372.313	372.898
	7	115302.250	-29.500	372.159	372.683
8AV	1	115312.250	29.500	372.459	372.941
	2	115312.250	19.667	372.613	373.152
	3	115312.250	9.833	372.766	373.305
	4	115312.250	0.000	372.920	373.459
	5	115312.250	-9.833	372.766	373.305
	6	115312.250	-19.667	372.613	373.152
	7	115312.250	-29.500	372.459	372.941
8AM	1	115322.250	29.500	372.[illegible]	373.197
	2	115322.250	19.667	372.[illegible]	373.406
	3	115322.250	9.833	373.066	373.559
	4	115322.250	0.000	373.220	373.713
	5	115322.250	-9.833	373.066	373.559
	6	115322.250	-19.667	372.913	373.406
	7	115322.250	-29.500	372.759	373.197
8AX	1	115332.250	29.500	373.059	373.452
	2	115332.250	19.667	373.213	373.659
	3	115332.250	9.833	373.366	373.813
	4	115332.250	0.000	373.520	373.967
	5	115332.250	-9.833	373.366	373.813
	6	115332.250	-19.667	373.213	373.659
	7	115332.250	-29.500	373.059	373.452

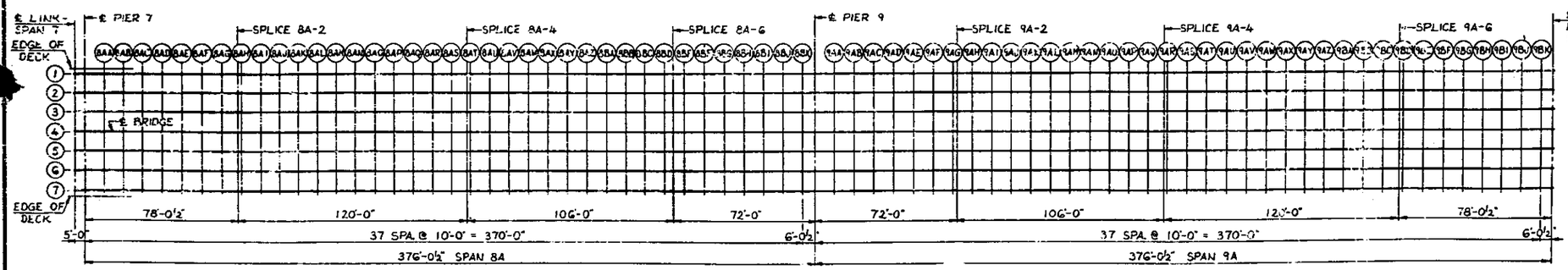
SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AY	1	115342.250	29.500	373.359	373.706
	2	115342.250	19.667	373.513	373.909
	3	115342.250	9.833	373.666	374.063
	4	115342.250	0.000	373.820	374.216
	5	115342.250	-9.833	373.666	374.063
	6	115342.250	-19.667	373.513	373.909
	7	115342.250	-29.500	373.359	373.706
8AZ	1	115352.250	29.500	373.659	373.960
	2	115352.250	19.667	373.813	374.155
	3	115352.250	9.833	373.966	374.309
	4	115352.250	0.000	374.120	374.462
	5	115352.250	-9.833	373.966	374.309
	6	115352.250	-19.667	373.813	374.155
	7	115352.250	-29.500	373.659	373.960
8BA	1	115362.250	29.500	373.959	374.215
	2	115362.250	19.667	374.113	374.403
	3	115362.250	9.833	374.266	374.556
	4	115362.250	0.000	374.420	374.710
	5	115362.250	-9.833	374.266	374.556
	6	115362.250	-19.667	374.113	374.403
	7	115362.250	-29.500	373.959	374.215
8BB	1	115372.250	29.500	374.259	374.469
	2	115372.250	19.667	374.413	374.651
	3	115372.250	9.833	374.565	374.805
	4	115372.250	0.000	374.720	374.958
	5	115372.250	-9.833	374.566	374.805
	6	115372.250	-19.667	374.413	374.651
	7	115372.250	-29.500	374.259	374.469
8BC	1	115382.250	29.500	374.559	374.727
	2	115382.250	19.667	374.713	374.904
	3	115382.250	9.833	374.866	375.057
	4	115382.250	0.000	375.020	375.211
	5	115382.250	-9.833	374.866	375.057
	6	115382.250	-19.667	374.713	374.904
	7	115382.250	-29.500	374.559	374.727
8BD	1	115392.250	29.500	374.859	374.986
	2	115392.250	19.667	375.013	375.157
	3	115392.250	9.833	375.166	375.311
	4	115392.250	0.000	375.320	375.465
	5	115392.250	-9.833	375.166	375.311
	6	115392.250	-19.667	375.013	375.157
	7	115392.250	-29.500	374.859	374.986



D. L. DEFLECTION DIAGRAM

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.



PLAN

NOTES:

FOR DETAILS SHOWING LOCATION FOR TOP OF SLAB ELEVATIONS & DIMENSION "t", SEE SHT. 46

GIRDER OFFSETS ARE REFERENCED TO ℄ BRIDGE.

TOP OF SLAB ELEVATIONS - SPANS 8A & 9A
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-10(1) F.B.E.	ALEXANDER (BEGINNING SECTION)	ILLINOIS (BEGINNING SECTION)	81	150
ILLINOIS (ENDING SECTION)		MISSISSIPPI (ENDING SECTION)	MISSOURI (ENDING SECTION)	PROJECT I-57-9(10)	

SPAN 8A

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 7	1	115092.250	29.500	365.859	365.859
	2	115092.250	19.667	366.013	366.013
	3	115092.250	9.833	366.166	366.166
	4	115092.250	0.000	366.320	366.320
	5	115092.250	-9.833	366.166	366.166
	6	115092.250	-19.667	366.013	366.013
	7	115092.250	-29.500	365.859	365.859
8AA	1	115102.250	29.500	366.159	366.231
	2	115102.250	19.667	366.313	366.395
	3	115102.250	9.833	366.466	366.548
	4	115102.250	0.000	366.620	366.702
	5	115102.250	-9.833	366.466	366.548
	6	115102.250	-19.667	366.313	366.395
	7	115102.250	-29.500	366.159	366.231
8AB	1	115112.250	29.500	366.459	366.603
	2	115112.250	19.667	366.613	366.776
	3	115112.250	9.833	366.766	366.930
	4	115112.250	0.000	366.920	367.083
	5	115112.250	-9.833	366.766	366.930
	6	115112.250	-19.667	366.613	366.776
	7	115112.250	-29.500	366.459	366.603
8AC	1	115122.250	29.500	366.759	366.975
	2	115122.250	19.667	366.913	367.153
	3	115122.250	9.833	367.066	367.306
	4	115122.250	0.000	367.220	367.460
	5	115122.250	-9.833	367.066	367.306
	6	115122.250	-19.667	366.913	367.153
	7	115122.250	-29.500	366.759	366.975
8AD	1	115132.250	29.500	367.059	367.343
	2	115132.250	19.667	367.213	367.528
	3	115132.250	9.833	367.366	367.652
	4	115132.250	0.000	367.520	367.835
	5	115132.250	-9.833	367.366	367.682
	6	115132.250	-19.667	367.213	367.528
	7	115132.250	-29.500	367.059	367.343
8AE	1	115142.250	29.500	367.359	367.701
	2	115142.250	19.667	367.513	367.899
	3	115142.250	9.833	367.666	368.053
	4	115142.250	0.000	367.820	368.206
	5	115142.250	-9.833	367.666	368.053
	6	115142.250	-19.667	367.513	367.899
	7	115142.250	-29.500	367.359	367.701
8AF	1	115152.250	29.500	367.659	368.056
	2	115152.250	19.667	367.813	368.264
	3	115152.250	9.833	367.966	368.418
	4	115152.250	0.000	368.120	368.572
	5	115152.250	-9.833	367.966	368.418
	6	115152.250	-19.667	367.813	368.264
	7	115152.250	-29.500	367.659	368.056
8AG	1	115162.250	29.500	367.959	368.404
	2	115162.250	19.667	368.113	368.620
	3	115162.250	9.833	368.266	368.773
	4	115162.250	0.000	368.420	368.927
	5	115162.250	-9.833	368.266	368.773
	6	115162.250	-19.667	368.113	368.620
	7	115162.250	-29.500	367.959	368.404
SPLICE 8A-2	1	115170.292	29.500	368.200	368.681
	2	115170.292	19.667	368.354	368.902
	3	115170.292	9.833	368.508	369.096
	4	115170.292	0.000	368.661	369.209
	5	115170.292	-9.833	368.508	369.096
	6	115170.292	-19.667	368.354	368.902
	7	115170.292	-29.500	368.200	368.681

SPAN 8A (CONT.)

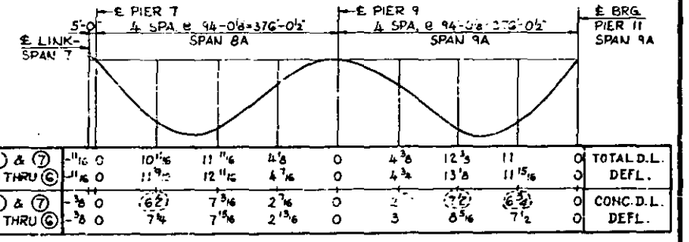
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AH	1	115172.250	29.500	368.259	368.747
	2	115172.250	19.667	368.413	368.969
	3	115172.250	9.833	368.566	369.123
	4	115172.250	0.000	368.720	369.276
	5	115172.250	-9.833	368.566	369.123
	6	115172.250	-19.667	368.413	368.969
	7	115172.250	-29.500	368.259	368.747
8AI	1	115182.250	29.500	368.559	369.084
	2	115182.250	19.667	368.713	369.312
	3	115182.250	9.833	368.866	369.465
	4	115182.250	0.000	369.020	369.619
	5	115182.250	-9.833	368.866	369.465
	6	115182.250	-19.667	368.713	369.312
	7	115182.250	-29.500	368.559	369.084
8AJ	1	115192.250	29.500	368.859	369.416
	2	115192.250	19.667	369.013	369.647
	3	115192.250	9.833	369.166	369.801
	4	115192.250	0.000	369.320	369.954
	5	115192.250	-9.833	369.166	369.801
	6	115192.250	-19.667	369.013	369.647
	7	115192.250	-29.500	368.859	369.416
8AK	1	115202.250	29.500	369.159	369.744
	2	115202.250	19.667	369.313	369.977
	3	115202.250	9.833	369.466	370.131
	4	115202.250	0.000	369.620	370.285
	5	115202.250	-9.833	369.466	370.131
	6	115202.250	-19.667	369.313	369.977
	7	115202.250	-29.500	369.159	369.744
8AL	1	115212.250	29.500	369.459	370.062
	2	115212.250	19.667	369.613	370.298
	3	115212.250	9.833	369.766	370.452
	4	115212.250	0.000	369.920	370.606
	5	115212.250	-9.833	369.766	370.452
	6	115212.250	-19.667	369.613	370.298
	7	115212.250	-29.500	369.459	370.062
8AM	1	115222.250	29.500	369.759	370.377
	2	115222.250	19.667	369.913	370.616
	3	115222.250	9.833	370.066	370.769
	4	115222.250	0.000	370.220	370.923
	5	115222.250	-9.833	370.066	370.769
	6	115222.250	-19.667	369.913	370.616
	7	115222.250	-29.500	369.759	370.377
8AN	1	115232.250	29.500	370.059	370.683
	2	115232.250	19.667	370.213	370.923
	3	115232.250	9.833	370.366	371.076
	4	115232.250	0.000	370.520	371.230
	5	115232.250	-9.833	370.366	371.076
	6	115232.250	-19.667	370.213	370.923
	7	115232.250	-29.500	370.059	370.683
8AO	1	115242.250	29.500	370.359	370.987
	2	115242.250	19.667	370.513	371.228
	3	115242.250	9.833	370.666	371.381
	4	115242.250	0.000	370.820	371.535
	5	115242.250	-9.833	370.666	371.381
	6	115242.250	-19.667	370.513	371.228
	7	115242.250	-29.500	370.359	370.987
8AP	1	115252.250	29.500	370.659	371.286
	2	115252.250	19.667	370.813	371.520
	3	115252.250	9.833	370.966	371.673
	4	115252.250	0.000	371.120	371.827
	5	115252.250	-9.833	370.966	371.673
	6	115252.250	-19.667	370.813	371.520
	7	115252.250	-29.500	370.659	371.286

SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AQ	1	115262.250	29.500	370.959	371.584
	2	115262.250	19.667	371.113	371.810
	3	115262.250	9.833	371.266	371.964
	4	115262.250	0.000	371.420	372.118
	5	115262.250	-9.833	371.266	371.964
	6	115262.250	-19.667	371.113	371.810
	7	115262.250	-29.500	370.959	371.584
8AR	1	115272.250	29.500	371.259	371.870
	2	115272.250	19.667	371.413	372.090
	3	115272.250	9.833	371.566	372.244
	4	115272.250	0.000	371.720	372.397
	5	115272.250	-9.833	371.566	372.244
	6	115272.250	-19.667	371.413	372.090
	7	115272.250	-29.500	371.259	371.870
8AS	1	115282.250	29.500	371.559	372.152
	2	115282.250	19.667	371.713	372.367
	3	115282.250	9.833	371.866	372.521
	4	115282.250	0.000	372.020	372.674
	5	115282.250	-9.833	371.866	372.521
	6	115282.250	-19.667	371.713	372.367
	7	115282.250	-29.500	371.559	372.152
SPLICE 8A-4	1	115290.292	29.500	371.830	372.367
	2	115290.292	19.667	371.954	372.582
	3	115290.292	9.833	372.108	372.736
	4	115290.292	0.000	372.261	372.890
	5	115290.292	-9.833	372.108	372.736
	6	115290.292	-19.667	371.954	372.582
	7	115290.292	-29.500	371.800	372.367
8AT	1	115292.250	29.500	371.859	372.419
	2	115292.250	19.667	372.013	372.635
	3	115292.250	9.833	372.166	372.788
	4	115292.250	0.000	372.320	372.942
	5	115292.250	-9.833	372.166	372.788
	6	115292.250	-19.667	372.013	372.635
	7	115292.250	-29.500	371.859	372.419
8AU	1	115302.250	29.500	372.159	372.665
	2	115302.250	19.667	372.313	372.898
	3	115302.250	9.833	372.466	373.052
	4	115302.250	0.000	372.620	373.205
	5	115302.250	-9.833	372.466	373.052
	6	115302.250	-19.667	372.313	372.898
	7	115302.250	-29.500	372.159	372.665
8AV	1	115312.250	29.500	372.459	372.941
	2	115312.250	19.667	372.613	373.158
	3	115312.250	9.833	372.766	373.305
	4	115312.250	0.000	372.920	373.459
	5	115312.250	-9.833	372.766	373.305
	6	115312.250	-19.667	372.613	373.152
	7	115312.250	-29.500	372.459	372.941
8AW	1	115322.250	29.500	372.759	373.197
	2	115322.250	19.667	372.913	373.408
	3	115322.250	9.833	373.066	373.559
	4	115322.250	0.000	373.220	373.713
	5	115322.250	-9.833	373.066	373.559
	6	115322.250	-19.667	372.913	373.406
	7	115322.250	-29.500	372.759	373.197
8AX	1	115332.250	29.500	373.059	373.452
	2	115332.250	19.667	373.213	373.659
	3	115332.250	9.833	373.366	373.813
	4	115332.250	0.000	373.520	373.967
	5	115332.250	-9.833	373.366	373.813
	6	115332.250	-19.667	373.213	373.659
	7	115332.250	-29.500	373.059	373.452

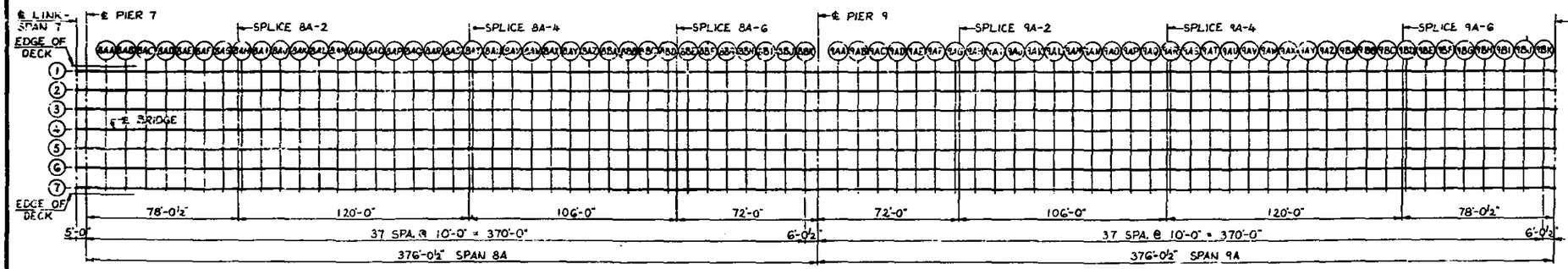
SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AY	1	115342.250	29.500	373.359	373.906
	2	115342.250	19.667	373.513	373.909
	3	115342.250	9.833	373.666	374.063
	4	115342.250	0.000	373.820	374.216
	5	115342.250	-9.833	373.666	374.063
	6	115342.250	-19.667	373.513	373.909
	7	115342.250	-29.500	373.359	373.906
8AZ	1	115352.250	29.500	373.659	373.960
	2	115352.250	19.667	373.813	374.155
	3	115352.250	9.833	373.966	374.309
	4	115352.250	0.000	374.120	374.462
	5	115352.250	-9.833	373.966	374.309
	6	115352.250	-19.667	373.813	374.155
	7	115352.250	-29.500	373.659	373.960
8BA	1	115362.250	29.500	373.959	374.215
	2	115362.250	19.667	374.113	374.403
	3	115362.250	9.833	374.266	374.556
	4	115362.250	0.000	374.420	374.710
	5	115362.250	-9.833	374.266	374.556
	6	115362.250	-19.667	374.113	374.403
	7	115362.250	-29.500	373.959	374.215
8BB	1	115372.250	29.500	374.259	374.469
	2	115372.250	19.667	374.413	374.651
	3	115372.250	9.833	374.566	374.805
	4	115372.250	0.000	374.720	374.958
	5	115372.250	-9.833	374.566	374.805
	6	115372.250	-19.667	374.413	374.651
	7	115372.250	-29.500	374.259	374.469
8BC	1	115382.250	29.500	374.559	374.727
	2	115382.250	19.667	374.713	374.904
	3	115382.250	9.833	374.866	375.057
	4	115382.250	0.000	375.020	375.211
	5	115382.250	-9.833	374.866	375.057
	6	115382.250	-19.667	374.713	374.904
	7	115382.250	-29.500	374.559	374.727
8BD	1	115392.250	29.500	374.859	374.986
	2	115392.250	19.667	375.013	375.157
	3	115392.250	9.833	375.166	375.311
	4	115392.250	0.000	375.320	375.465
	5	115392.250	-9.833	375.166	375.311
	6	115392.250	-19.667	375.013	375.157
	7	115392.250	-29.500	374.859	374.986



D. L. DEFLECTION DIAGRAM

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.



PLAN

(AS REVISED)

NOTES:

FOR DETAILS SHOWING LOCATION FOR TOP OF SLAB ELEVATIONS & DIMENSION "t", SEE SHT. 46

GIRDER OFFSETS ARE REFERENCED TO ℄ BRIDGE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPAN 8A & 9A
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

(REVISED) 3-7-74 L.W.

SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
SPLICE 8A-6	1	115396.292	29.500	374.980	375.095
	2	115396.292	19.667	375.134	375.264
	3	115396.292	9.833	375.287	375.418
	4	115396.292	0.000	375.441	375.571
	5	115396.292	-9.833	375.287	375.418
	6	115396.292	-19.667	375.134	375.264
	7	115396.292	-29.500	374.980	375.095
8BE	1	115402.250	29.500	375.159	375.255
	2	115402.250	19.667	375.313	375.422
	3	115402.250	9.833	375.466	375.576
	4	115402.250	0.000	375.620	375.729
	5	115402.250	-9.833	375.466	375.576
	6	115402.250	-19.667	375.313	375.422
	7	115402.250	-29.500	375.159	375.255
8BF	1	115412.250	29.500	375.359	375.525
	2	115412.250	19.667	375.513	375.688
	3	115412.250	9.833	375.766	375.842
	4	115412.250	0.000	375.920	375.996
	5	115412.250	-9.833	375.756	375.842
	6	115412.250	-19.667	375.613	375.688
	7	115412.250	-29.500	375.459	375.525
8BG	1	115422.250	29.500	375.759	375.804
	2	115422.250	19.667	375.913	375.964
	3	115422.250	9.833	376.066	376.118
	4	115422.250	0.000	376.220	376.272
	5	115422.250	-9.833	376.066	376.118
	6	115422.250	-19.667	375.913	375.964
	7	115422.250	-29.500	375.759	375.804
8BH	1	115432.250	29.500	376.059	376.085
	2	115432.250	19.667	376.213	376.242
	3	115432.250	9.833	376.366	376.396
	4	115432.250	0.000	376.520	376.550
	5	115432.250	-9.833	376.366	376.396
	6	115432.250	-19.667	376.213	376.242
	7	115432.250	-29.500	376.059	376.085
8BI	1	115442.250	29.500	376.359	376.373
	2	115442.250	19.667	376.513	376.529
	3	115442.250	9.833	376.666	376.682
	4	115442.250	0.000	376.820	376.836
	5	115442.250	-9.833	376.666	376.682
	6	115442.250	-19.667	376.513	376.529
	7	115442.250	-29.500	376.359	376.373
8BJ	1	115452.250	29.500	376.659	376.664
	2	115452.250	19.667	376.813	376.818
	3	115452.250	9.833	376.966	376.972
	4	115452.250	0.000	377.120	377.125
	5	115452.250	-9.833	376.966	376.972
	6	115452.250	-19.667	376.813	376.818
		115452.250	-29.500	376.659	376.664
8BK	1	115462.250	29.500	376.957	376.959
	2	115462.250	19.667	377.111	377.113
	3	115462.250	9.833	377.264	377.266
	4	115462.250	0.000	377.418	377.420
	5	115462.250	-9.833	377.264	377.266
	6	115462.250	-19.667	377.111	377.113
	7	115462.250	-29.500	376.957	376.959

SPAN 9A

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
	1	115468.292	29.500	377.136	377.136
	2	115468.292	19.667	377.290	377.290
℄ PIER 9	3	115468.292	9.833	377.443	377.443
	4	115468.292	0.000	377.597	377.597
	5	115468.292	-9.833	377.443	377.443
	6	115468.292	-19.667	377.290	377.290
	7	115468.292	-29.500	377.136	377.136
9AA	1	115478.292	29.500	377.430	377.476
	2	115478.292	19.667	377.584	377.589
	3	115478.292	9.833	377.737	377.743
	4	115478.292	0.000	377.891	377.897
	5	115478.292	-9.833	377.737	377.743
	6	115478.292	-19.667	377.584	377.589
	7	115478.292	-29.500	377.430	377.476
9AB	1	115488.292	29.500	377.722	377.805
	2	115488.292	19.667	377.875	377.888
	3	115488.292	9.833	378.029	378.041
	4	115488.292	0.000	378.183	378.195
	5	115488.292	-9.833	378.029	378.041
	6	115488.292	-19.667	377.875	377.888
	7	115488.292	-29.500	377.722	377.805
9AC	1	115498.292	29.500	378.011	378.066
	2	115498.292	19.667	378.165	378.193
	3	115498.292	9.833	378.318	378.347
	4	115498.292	0.000	378.472	378.500
	5	115498.292	-9.833	378.318	378.347
	6	115498.292	-19.667	378.165	378.193
	7	115498.292	-29.500	378.011	378.066
9AD	1	115508.292	29.500	378.298	378.357
	2	115508.292	19.667	378.451	378.499
	3	115508.292	9.833	378.605	378.653
	4	115508.292	0.000	378.759	378.806
	5	115508.292	-9.833	378.605	378.653
	6	115508.292	-19.667	378.451	378.499
	7	115508.292	-29.500	378.298	378.357

SPAN 9A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9AE	1	115518.292	29.500	378.582	378.644
	2	115518.292	19.667	378.736	378.809
	3	115518.292	9.833	378.889	378.963
	4	115518.292	0.000	379.043	379.116
	5	115518.292	-9.833	378.889	378.963
	6	115518.292	-19.667	378.736	378.809
	7	115518.292	-29.500	378.582	378.644
9AF	1	115528.292	29.500	378.864	378.952
	2	115528.292	19.667	379.017	379.121
	3	115528.292	9.833	379.171	379.274
	4	115528.292	0.000	379.324	379.428
	5	115528.292	-9.833	379.171	379.274
	6	115528.292	-19.667	379.017	379.121
	7	115528.292	-29.500	378.864	378.952
9AG	1	115538.292	29.500	379.143	379.263
	2	115538.292	19.667	379.296	379.436
	3	115538.292	9.833	379.450	379.589
	4	115538.292	0.000	379.604	379.743
	5	115538.292	-9.833	379.450	379.589
	6	115538.292	-19.667	379.296	379.436
	7	115538.292	-29.500	379.143	379.263
SPLICE 9A-2	1	115540.292	29.500	379.198	379.325
	2	115540.292	19.667	379.352	379.498
	3	115540.292	9.833	379.506	379.652
	4	115540.292	0.000	379.659	379.808
	5	115540.292	-9.833	379.506	379.652
	6	115540.292	-19.667	379.352	379.498
	7	115540.292	-29.500	379.198	379.325
9AH	1	115548.292	29.500	379.419	379.576
	2	115548.292	19.667	379.573	379.755
	3	115548.292	9.833	379.727	379.909
	4	115548.292	0.000	379.880	380.062
	5	115548.292	-9.833	379.727	379.909
	6	115548.292	-19.667	379.573	379.755
	7	115548.292	-29.500	379.419	379.576
9AI	1	115558.292	29.500	379.694	379.893
	2	115558.292	19.667	379.847	380.077
	3	115558.292	9.833	380.001	380.231
	4	115558.292	0.000	380.154	380.384
	5	115558.292	-9.833	380.001	380.231
	6	115558.292	-19.667	379.847	380.077
	7	115558.292	-29.500	379.694	379.893
9AJ	1	115568.292	29.500	379.965	380.210
	2	115568.292	19.667	380.119	380.400
	3	115568.292	9.833	380.274	380.554
	4	115568.292	0.000	380.426	380.708
	5	115568.292	-9.833	380.273	380.554
	6	115568.292	-19.667	380.119	380.400
	7	115568.292	-29.500	379.965	380.210
9AK	1	115578.292	29.500	380.234	380.526
	2	115578.292	19.667	380.388	380.723
	3	115578.292	9.833	380.542	380.877
	4	115578.292	0.000	380.695	381.030
	5	115578.292	-9.833	380.542	380.877
	6	115578.292	-19.665	380.388	380.723
	7	115578.292	-29.500	380.234	380.526
9AL	1	115588.292	29.500	380.501	380.841
	2	115588.292	19.667	380.655	381.045
	3	115588.292	9.833	380.808	381.198
	4	115588.292	0.000	380.962	381.352
	5	115588.292	-9.833	380.808	381.198
	6	115588.292	-19.666	380.655	381.045
	7	115588.292	-29.500	380.501	380.841
9AM	1	115598.292	29.500	380.765	381.153
	2	115598.292	19.667	380.919	381.364
	3	115598.292	9.833	381.073	381.517
	4	115598.292	0.000	381.226	381.671
	5	115598.292	-9.833	381.073	381.517
	6	115598.292	-19.666	380.919	381.364
	7	115598.292	-29.500	380.765	381.153
9AN	1	115608.292	29.500	381.027	381.460
	2	115608.292	19.667	381.181	381.677
	3	115608.292	9.833	381.334	381.831
	4	115608.292	0.000	381.488	381.984
	5	115608.292	-9.833	381.334	381.831
	6	115608.292	-19.666	381.181	381.677
	7	115608.292	-29.500	381.027	381.460
9AO	1	115618.292	29.500	381.286	381.764
	2	115618.292	19.667	381.440	381.967
	3	115618.292	9.833	381.593	382.141
	4	115618.292	0.000	381.747	382.295
	5	115618.292	-9.833	381.593	382.141
	6	115618.292	-19.666	381.440	381.987
	7	115618.292	-29.500	381.286	381.764
9AP	1	115628.292	29.500	381.543	382.065
	2	115628.292	19.667	381.696	382.287
	3	115628.292	9.833	381.850	382.441
	4	115628.292	0.000	382.004	382.594
	5	115628.292	-9.833	381.850	382.441
	6	115628.292	-19.666	381.696	382.287
	7	115628.292	-29.500	381.543	382.065

SPAN 9A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9AQ	1	115638.292	29.500	381.797	382.362
	2	115638.292	19.667	381.951	382.583
	3	115638.292	9.833	382.104	382.736
	4	115638.292	0.000	382.258	382.890
	5	115638.292	-9.833	382.104	382.736
	6	115638.292	-19.666	381.951	382.583
	7	115638.292	-29.500	381.797	382.362
SPLICE 9A-4	1	115646.292	29.500	381.998	382.590
	2	115646.292	19.667	382.152	382.810
	3	115646.292	9.833	382.306	382.964
	4	115646.292	0.000	382.459	383.118
	5	115646.292	-9.833	382.306	382.964
	6	115646.292	-19.666	382.152	382.810
	7	115646.292	-29.500	381.998	382.590
9AR	1	115648.292	29.500	382.049	382.647
	2	115648.292	19.667	382.202	382.867
	3	115648.292	9.833	382.356	383.021
	4	115648.292	0.000	382.510	383.174
	5	115648.292	-9.833	382.356	383.021
	6	115648.292	-19.666	382.202	382.867
	7	115648.292	-29.500	382.049	382.647
9AS	1	115658.292	29.500	382.298	382.926
	2	115658.292	19.667	382.451	383.146
	3	115658.292	9.833	382.605	383.299
	4	115658.292	0.000	382.759	383.453
	5	115658.292	-9.833	382.605	383.299
	6	115658.292	-19.666	382.451	383.146
	7	115658.292	-29.500	382.298	382.926
9AT	1	115668.292	29.500	382.544	383.186
	2	115668.292	19.667	382.698	383.414
	3	115668.292	9.833	382.852	383.567
	4	115668.292	0.000	383.005	383.721
	5	115668.292	-9.833	382.852	383.567
	6	115668.292	-19.666	382.698	383.414
	7	115668.292	-29.500	382.544	383.186
9AU	1	115678.292	29.500	382.789	383.439
	2	115678.292	19.667	382.942	383.674
	3	115678.292	9.833	383.096	383.827
	4	115678.292	0.000	383.250	383.981
	5	115678.292	-9.833	383.096	383.827
	6	115678.292	-19.666	382.942	383.674
	7	115678.292	-29.500	382.789	383.439
9AV	1	115688.292	29.500	383.030	383.680
	2	115688.292	19.667	383.184	383.923
	3	115688.292	9.833	383.338	384.077
	4	115688.292	0.000	383.491	384.231
	5	115688.292	-9.833	383.338	384.077
	6	115688.292	-19.666	383.184	383.923
	7	115688.292	-29.500	383.030	383.680
9AW	1	115698.292	29.500	383.269	383.917
	2	115698.292	19.667	383.423	384.186
	3	115698.292	9.833	383.577	384.317
	4	115698.292	0.000	383.730	384.471
	5	115698.292	-9.833	383.577	384.317
	6	115698.292	-19.666	383.423	384.186
	7	115698.292	-29.500	383.269	383.917
9AX	1	115708.292	29.500	383.506	384.152
	2	115708.292	19.667	383.660	384.389
	3	115708.292	9.833	383.813	384.549
	4	115708.292	0.000	383.967	384.702
	5	115708.292	-9.833	383.813	384.549
	6	115708.292	-19.666	383.660	384.395
	7	115708.292	-29.500	383.506	384.152
9AY	1	115718.292	29.500	383.740	384.377
	2	115718.292	19.667	383.894	384.616
	3	115718.292	9.833	384.048	384.769
	4	115718.292	0.000	384.201	384.923
	5	115718.292	-9.833	384.048	384.769
	6	115718.292	-19.666	383.894	384.616
	7	115718.292	-29.500	383.740	384.377
9AZ	1	115728.292	29.500	383.972	384.594
	2	115728.292	19.667	384.126	384.829
	3	115728.292	9.833	384.279	384.983
	4	115728.292	0.000	384.433	385.136
	5	115728.292	-9.833	384.279	384.983
	6	115728.292	-19.666	384.126	384.829
	7	115728.292	-29.500	383.972	384.594
9BA	1	115738.292	29.500	384.201	384.799
	2	115738.292	19.667	384.355	385.030
	3	115738.292	9.833	384.508	385.184
	4	115738.292	0.000	384.662	385.338
	5	115738.292	-9.833	384.508	385.184
	6	115738.292	-19.666	384.355	385.030
	7	115738.292	-29.500	384.201	384.799
9BB	1	115748.292	29.500	384.428	384.997
	2	115748.292	19.667	384.582	385.226
	3	115748.292	9.833	384.735	385.380
	4	115748.292	0.000	384.889	385.533
	5	115748.292	-9.833	384.735	385.380
	6	115748.292	-19.666	384.582	385.226
	7	115748.292	-29.500	384.428	384.997

SPAN 9A (CONT)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9BC	1	115758.292	29.500	384.652	385.184
	2	115758.292	19.667	384.806	385.408
	3	115758.292	9.833	384.959	385.562
	4	115758.292	0.000	385.113	385.715
	5	115758.292	-9.833	384.959	385.562
	6	115758.292	-19.666	384.806	385.408
	7	115758.292	-29.500	384.652	385.184
SPLICE 9A-6	1	115766.292	29.500	384.830	385.331
	2	115766.292	19.667	384.983	385.550
	3	115766.292	9.833	385.137	385.704
	4	115766.292	0.000	385.291	385.858
	5	115766.292	-9.833	385.137	385.704
	6	115766.292	-19.666	384.983	385.550
	7	115766.292	-29.500	384.830	385.331
9BD	1	115768.292	29.500	384.874	385.367
	2	115768.292	19.667	385.027	385.586
	3	115768.292	9.833	385.181	385.739
	4	115768.292	0.000	385.335	385.893
	5	115768.292	-9.833	385.181	385.739
	6	115768.292	-19.666	385.027	385.586
	7	115768.292	-29.500	384.874	385.367
9BE	1	115778.292	29.500	385.093	385.537
	2	115778.292	19.667	385.247	385.748
	3	115778.292	9.833	385.400	385.901
	4	115778.292	0.000	385.554	386.059
	5	115778.292	-9.833	385.400	385.901
	6	115778.292	-19.666	385.247	385.748
	7	115778.292	-29.500	385.093	385.537
9BF	1	115788.292	29.500	385.310	385.703
	2	115788.292	19.667	385.463	385.906
	3	115788.292	9.833	385.617	386.059
	4	115788.292	0.000	385.771	386.213
	5	115788.292	-9.833	385.617	386.059
	6	115788.292	-19.666	385.463	385.906
	7	115788.292	-29.500	385.310	385.703
9BG	1	115798.292	29.500	385.524	385.856
	2	115798.292	19.667	385.677	386.051
	3	115798.292	9.833	385.831	386.205
	4	115798.292	0.000	385.985	386.359
	5	115798.292	-9.833	385.831	386.205
	6	115798.292	-19.666	385.677	386.051
	7	115798.292	-29.500	385.524	385.856
9BH	1	115808.292	29.500	385.735	386.006
	2	115808.292	19.667	385.889	386.191
	3	115808.292	9.833	386.043	386.345
	4	115808.292	0.000	386.196	386.499
	5	115808.292	-9.833	386.043	386.345
	6	115808.292	-19.666	385.889	386.191
	7	115808.292	-29.500	385.735	386.006
9BI	1	115818.292	29.500	385.945	386.145
	2	115818.292	19.667	386.098	386.320
	3	115818.292	9.833	386.252	386.474
	4	115818.292	0.000	386.406	386.628
	5	115818.292	-9.833	386.252	386.474
	6	115818.292	-19.666	386.098	386.320
	7	115818.292	-29.500	385.945	386.145
9BJ	1	115828.292	29.500	386.151	386.279
	2	115828.292	19.667	386.305	386.443
	3	115828.292	9.833	386.459	386.597
	4	115828.292	0.000	386.612	386.750
	5	115828.292	-9.833	386.459	386.597
	6	115828.292	-19.666	386.305	386.443
	7	115828.292	-29.500	386.151	386.279
9BK	1	115838.292	29.500	386.355	386.404
	2	115838.292	19.667	386.509	386.557
	3	115838.292	9.833	386.663	386.710
	4	115838.292	0.000	386.816	386.864
	5	115838.292	-9.833	386.663	386.710
	6	115838.292	-19.666	386.509	386.557
	7	115838.292	-29.500	386.355	386.404
℄ BRG.PIER II SPAN 9A	1	115844.333	29.500	386.478	387.478
	2	115844.333	19.667	386.631	387.631
	3	115844.333	9.833	386.785	387.785
	4	115844.333	0.000	386.939	387.939
	5	115844.333	-9.833	386.785	387.785
	6	115844.333	-19.666	386.631	387.631
	7	115844.333	-29.500	386.478	387.478

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I 57	102-1B-1) F&E	ALEXANDER MISSISSIPPI ILLINOIS MISSOURI	81	51
FAI-RTE NO 4 FAI-RTE NO 5		ILLINOIS MISSOURI	PROJECT I-57-9( )10	

TOP OF SLAB ELEVATIONS - SPANS 8A & 9A
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-1B-1) F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE., CHICAGO, ILLINOIS

SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
SPLICE 8A-6	1	115396+292	29.500	374.980	375.095
	2	115396+292	19.667	375.134	375.264
	3	115396+292	9.833	375.287	375.418
	4	115396+292	0.000	375.441	375.571
	5	115396+292	-9.833	375.287	375.418
	6	115396+292	-19.667	375.134	375.264
	7	115396+292	-29.500	374.980	375.095
8BE	1	115402+250	29.500	375.159	375.255
	2	115402+250	19.667	375.313	375.422
	3	115402+250	9.833	375.466	375.576
	4	115402+250	0.000	375.620	375.729
	5	115402+250	-9.833	375.466	375.576
	6	115402+250	-19.667	375.313	375.422
	7	115402+250	-29.500	375.159	375.255
8BF	1	115412+250	29.500	375.459	375.525
	2	115412+250	19.667	375.613	375.688
	3	115412+250	9.833	375.766	375.842
	4	115412+250	0.000	375.920	375.996
	5	115412+250	-9.833	375.766	375.842
	6	115412+250	-19.667	375.613	375.688
	7	115412+250	-29.500	375.459	375.525
8BG	1	115422+250	29.500	375.759	375.804
	2	115422+250	19.667	375.913	375.964
	3	115422+250	9.833	376.066	376.118
	4	115422+250	0.000	376.220	376.272
	5	115422+250	-9.833	376.066	376.118
	6	115422+250	-19.667	375.913	375.964
	7	115422+250	-29.500	375.759	375.804
8BH	1	115432+250	29.500	376.059	376.085
	2	115432+250	19.667	376.213	376.242
	3	115432+250	9.833	376.366	376.396
	4	115432+250	0.000	376.520	376.550
	5	115432+250	-9.833	376.366	376.396
	6	115432+250	-19.667	376.213	376.242
	7	115432+250	-29.500	376.059	376.085
8BI	1	115442+250	29.500	376.359	376.373
	2	115442+250	19.667	376.513	376.529
	3	115442+250	9.833	376.666	376.682
	4	115442+250	0.000	376.820	376.836
	5	115442+250	-9.833	376.666	376.682
	6	115442+250	-19.667	376.513	376.529
	7	115442+250	-29.500	376.359	376.373
8BJ	1	115452+250	29.500	376.659	376.664
	2	115452+250	19.667	376.813	376.818
	3	115452+250	9.833	376.966	376.977
	4	115452+250	0.000	377.120	377.125
	5	115452+250	-9.833	376.966	376.972
	6	115452+250	-19.667	376.813	376.818
	7	115452+250	-29.500	376.659	376.664
8BK	1	115462+250	29.500	376.957	376.959
	2	115462+250	19.667	377.111	377.113
	3	115462+250	9.833	377.264	377.266
	4	115462+250	0.000	377.418	377.420
	5	115462+250	-9.833	377.264	377.266
	6	115462+250	-19.667	377.111	377.113
	7	115462+250	-29.500	376.957	376.959

SPAN 9A

	1	115468+292	29.500	377.136	377.136
	2	115468+292	19.667	377.290	377.290
℄ PIER 9	3	115468+292	9.833	377.443	377.443
	4	115468+292	0.000	377.597	377.597
	5	115468+292	-9.833	377.443	377.443
	6	115468+292	-19.667	377.290	377.290
	7	115468+292	-29.500	377.136	377.136
9AA	1	115478+292	29.500	377.430	377.495
	2	115478+292	19.667	377.584	377.589
	3	115478+292	9.833	377.737	377.743
	4	115478+292	0.000	377.891	377.897
	5	115478+292	-9.833	377.737	377.743
	6	115478+292	-19.667	377.584	377.589
	7	115478+292	-29.500	377.430	377.495
9AB	1	115488+292	29.500	377.722	377.787
	2	115488+292	19.667	377.875	377.888
	3	115488+292	9.833	378.029	378.041
	4	115488+292	0.000	378.183	378.195
	5	115488+292	-9.833	378.029	378.041
	6	115488+292	-19.667	377.875	377.888
	7	115488+292	-29.500	377.722	377.787
9AC	1	115498+292	29.500	378.011	378.085
	2	115498+292	19.667	378.165	378.193
	3	115498+292	9.833	378.318	378.347
	4	115498+292	0.000	378.472	378.500
	5	115498+292	-9.833	378.318	378.347
	6	115498+292	-19.667	378.165	378.193
	7	115498+292	-29.500	378.011	378.085
9AD	1	115508+292	29.500	378.298	378.337
	2	115508+292	19.667	378.451	378.499
	3	115508+292	9.833	378.605	378.653
	4	115508+292	0.000	378.759	378.806
	5	115508+292	-9.833	378.605	378.653
	6	115508+292	-19.667	378.451	378.499
	7	115508+292	-29.500	378.298	378.337

SPAN 9A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9AE	1	115518+292	29.500	378.582	378.644
	2	115518+292	19.667	378.736	378.809
	3	115518+292	9.833	378.889	378.963
	4	115518+292	0.000	379.043	379.116
	5	115518+292	-9.833	378.889	378.963
	6	115518+292	-19.667	378.736	378.809
	7	115518+292	-29.500	378.582	378.644
9AF	1	115528+292	29.500	378.864	378.952
	2	115528+292	19.667	379.017	379.121
	3	115528+292	9.833	379.171	379.274
	4	115528+292	0.000	379.324	379.428
	5	115528+292	-9.833	379.171	379.274
	6	115528+292	-19.667	379.017	379.121
	7	115528+292	-29.500	378.864	378.952
9AG	1	115538+292	29.500	379.143	379.263
	2	115538+292	19.667	379.296	379.436
	3	115538+292	9.833	379.450	379.589
	4	115538+292	0.000	379.604	379.743
	5	115538+292	-9.833	379.450	379.589
	6	115538+292	-19.667	379.296	379.436
	7	115538+292	-29.500	379.143	379.263
SPLICE 9A-2	1	115540+292	29.500	379.198	379.325
	2	115540+292	19.667	379.352	379.498
	3	115540+292	9.833	379.506	379.652
	4	115540+292	0.000	379.659	379.806
	5	115540+292	-9.833	379.506	379.652
	6	115540+292	-19.667	379.352	379.498
	7	115540+292	-29.500	379.198	379.325
9AH	1	115548+292	29.500	379.419	379.576
	2	115548+292	19.667	379.573	379.755
	3	115548+292	9.833	379.727	379.909
	4	115548+292	0.000	379.880	380.062
	5	115548+292	-9.833	379.727	379.909
	6	115548+292	-19.667	379.573	379.755
	7	115548+292	-29.500	379.419	379.576
9AI	1	115558+292	29.500	379.694	379.893
	2	115558+292	19.667	379.847	380.077
	3	115558+292	9.833	380.001	380.231
	4	115558+292	0.000	380.154	380.384
	5	115558+292	-9.833	380.001	380.231
	6	115558+292	-19.667	379.847	380.077
	7	115558+292	-29.500	379.694	379.893
9AJ	1	115568+292	29.500	379.965	380.210
	2	115568+292	19.667	380.119	380.400
	3	115578+292	9.833	380.542	380.877
	4	115578+292	0.000	380.695	381.030
	5	115578+292	-9.833	380.542	380.877
	6	115578+292	-19.666	380.388	380.723
	7	115578+292	-29.500	380.234	380.526
9AL	1	115588+292	29.500	380.501	380.841
	2	115588+292	19.667	380.655	381.045
	3	115588+292	9.833	380.808	381.198
	4	115588+292	0.000	380.962	381.352
	5	115588+292	-9.833	380.808	381.198
	6	115588+292	-19.666	380.655	381.045
	7	115588+292	-29.500	380.501	380.841
9AM	1	115598+292	29.500	380.765	381.153
	2	115598+292	19.667	380.919	381.364
	3	115598+292	9.833	381.073	381.517
	4	115598+292	0.000	381.226	381.671
	5	115598+292	-9.833	381.073	381.517
	6	115598+292	-19.666	380.919	381.364
	7	115598+292	-29.500	380.765	381.153
9AN	1	115608+292	29.500	381.027	381.460
	2	115608+292	19.667	381.181	381.677
	3	115608+292	9.833	381.334	381.831
	4	115608+292	0.000	381.488	381.984
	5	115608+292	-9.833	381.334	381.831
	6	115608+292	-19.666	381.181	381.677
	7	115608+292	-29.500	381.027	381.469
9AO	1	115618+292	29.500	381.286	381.764
	2	115618+292	19.667	381.440	381.987
	3	115618+292	9.833	381.593	382.141
	4	115618+292	0.000	381.747	382.295
	5	115618+292	-9.833	381.593	382.141
	6	115618+292	-19.666	381.440	381.987
	7	115618+292	-29.500	381.286	381.764
9AP	1	115628+292	29.500	381.543	382.065
	2	115628+292	19.667	381.696	382.287
	3	115628+292	9.833	381.850	382.441
	4	115628+292	0.000	382.004	382.594
	5	115628+292	-9.833	381.850	382.441
	6	115628+292	-19.666	381.695	382.287
	7	115628+292	-29.500	381.543	382.065

SPAN 9A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9AQ	1	115638+292	29.500	381.797	382.362
	2	115638+292	19.667	381.951	382.583
	3	115638+292	9.833	382.104	382.735
	4	115638+292	0.000	382.258	382.890
	5	115638+292	-9.833	382.104	382.736
	6	115638+292	-19.665	381.951	382.583
	7	115638+292	-29.500	381.797	382.362
SPLICE 9A-4	1	115646+292	29.500	381.998	382.590
	2	115646+292	19.667	382.152	382.810
	3	115646+292	9.833	382.306	382.964
	4	115646+292	0.000	382.459	383.118
	5	115646+292	-9.833	382.306	382.964
	6	115646+292	-19.666	382.152	382.810
	7	115646+292	-29.500	381.998	382.590
9AR	1	115648+292	29.500	382.049	382.647
	2	115648+292	19.667	382.202	382.867
	3	115648+292	9.833	382.356	383.021
	4	115648+292	0.000	382.510	383.174
	5	115648+292	-9.833	382.356	383.021
	6	115648+292	-19.666	382.202	382.867
	7	115648+292	-29.500	382.049	382.647
9AS	1	115658+292	29.500	382.298	382.926
	2	115658+292	19.667	382.451	383.146
	3	115658+292	9.833	382.605	383.299
	4	115658+292	0.000	382.759	383.453
	5	115658+292	-9.833	382.605	383.299
	6	115658+292	-19.666	382.451	383.146
	7	115658+292	-29.500	382.298	382.926
9AT	1	115668+292	29.500	382.544	383.186
	2	115668+292	19.667	382.698	383.414
	3	115668+292	9.833	382.852	383.567
	4	115668+292	0.000	383.005	383.721
	5	115668+292	-9.833	382.852	383.567
	6	115668+292	-19.666	382.698	383.414
	7	115668+292	-29.500	382.544	383.186
9AU	1	115678+292	29.500	382.789	383.439
	2	115678+292	19.667	382.942	383.674
	3	115678+292	9.833	383.096	383.827
	4	115678+292	0.000	385.250	383.981
	5	115678+292	-9.833	383.096	383.827
	6	115678+292	-19.666	382.942	383.674
	7	115678+292	-29.500	382.789	383.439
9AV	1	115688+292	29.500	383.030	383.680
	2	115688+292	19.667	383.184	383.923
	3	115688+292	9.833	383.338	384.077
	4	115688+292	0.000	383.491	384.231
	5	115688+292	-9.833	383.338	384.077
	6	115688+292	-19.666	383.184	383.923
	7	115688+292	-29.500	383.030	383.680
9AW	1	115698+292	29.500	383.269	383.917
	2	115698+292	19.667	383.423	384.164
	3	115698+292	9.833	383.577	384.317
	4	115698+292	0.000	383.730	384.471
	5	115698+292	-9.833	383.577	384.317
	6	115698+292	-19.666	383.423	384.164
	7	115698+292	-29.500	383.269	383.917
9AX	1	115708+292	29.500	383.506	384.152
	2	115708+292	19.667	383.660	384.395
	3	115708+292	9.833	383.813	384.549
	4	115708+292	0.000	383.967	384.702
	5	115708+292	-9.833	383.813	384.549
	6	115708+292	-19.666	383.660	384.395
	7	115708+292	-29.500	383.506	384.152
9AY	1	115718+292	29.500	383.740	384.377
	2	115718+292	19.667	383.894	384.616
	3	115718+292	9.833	384.048	384.769
	4	115718+292	0.000	384.201	384.923
	5	115718+292	-9.833	384.048	384.769
	6	115718+292	-19.666	383.894	384.616
	7	115718+292	-29.500	383.740	384.377
9AZ	1	115728+292	29.500	383.972	384.594
	2	115728+292	19.667	384.126	384.829
	3	115728+292	9.833	384.279	385.063
	4	115728+292	0.000	384.433	385.136
	5	115728+292	-9.833	384.279	384.983
	6	115728+292	-19.666	384.126	384.829
	7	115728+292	-29.500	383.972	384.594
9BA	1	115738+292	29.500	384.201	384.799
	2	115738+292	19.667	384.355	385.030
	3	115738+292	9.833	384.508	385.184
	4	115738+292	0.000	384.662	385.338
	5	115738+292	-9.833	384.508	385.184
	6	115738+292	-19.666	384.355	385.030
	7	115738+292	-29.500	384.201	384.799
9BB	1	115748+292	29.500	384.428	384.997
	2	115748+292	19.667	384.582	385.226
	3	115748+292	9.833	384.735	385.380
	4	115748+292	0.000	384.889	385.533
	5	115748+292	-9.833	384.735	385.380
	6	115748+292	-19.666	384.582	385.226
	7	115748+292	-29.500	384.428	384.997

SPAN 9A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9BC	1	115758+292	29.500	384.652	385.184
	2	115758+292	19.667	384.806	385.408
	3	115758+292	9.833	384.959	385.562
	4	115758+292	0.000	385.113	385.715
	5	115758+292	-9.833	384.959	385.562
	6	115758+292	-19.666	384.806	385.408
	7	115758+292	-29.500	384.652	385.184
SPLICE 9A-6	1	115768+292	29.500	384.830	385.331
	2	115768+292	19.667	384.983	385.550
	3	115768+292	9.833	385.137	385.704
	4	115768+292	0.000	385.291	385.858
	5	115768+292	-9.833	385.137	385.704
	6	115768+292	-19.666	384.983	385.550
	7	115768+292	-29.500	384.830	385.331
9BD	1	115778+292	29.500	384.874	385.367
	2	115778+292	19.667	385.027	385.586
	3	115778+292	9.833	385.181	385.739
	4	115778+292	0.000	385.335	385.893
	5	115778+292	-9.833	385.181	385.739
	6	115778+292	-19.666	385.027	385.586
	7	115778+292	-29.500	384.874	385.367
9BE	1	115778+292	29.500	385.093	385.537
	2	115778+292	19.667	385.247	385.748
	3	115778+292	9.833	385.401	385.901
	4	115778+292	0.000	385.554	386.055
	5	115778+292	-9.833	385.400	385.901
	6	115778+292	-19.666	385.247	385.748
	7	115778+292	-29.500	385.093	385.537
9BF	1	115788+292	29.500	385.310	385.703
	2	115788+292	19.667	385.463	385.906
	3	115788+292	9.833	385.617	386.059
	4	115788+292	0.000	385.771	386.213
	5	115788+292	-9.833	385.617	386.059
	6	115788+292	-19.666	385.463	385.906
	7	115788+292	-29.500	385.310	385.703
9BG	1	115798+292	29.500	385.524	385.856
	2	115798+292	19.667	385.677	386.051
	3	115798+292	9.833	385.831	386.205
	4	115798+292	0.000	385.985	386.359
	5	115798+292	-9.833	385.831	386.205
	6	115798+292	-19.666	385.677	386.051
	7	115798+292	-29.500	385.524	385.856
9BH	1	115808+292	29.500	385.735	386.006
	2	115808+292	19.667	385.889	386.191
	3	115808+292	9.833	386.043	386.345
	4	115808+292	0.000	386.196	386.499
	5	115808+292	-9.833	386.043	386.345
	6	115808+292	-19.666	385.889	386.191
	7	115808+292	-29.500	385.735	386.006
9BI	1	115818+292	29.500	385.945	386.145
	2	115818+292	19.667	386.098	386.320
	3	115818+292	9.833	386.252	386.474
	4	115818+292	0.000	386.406	386.628
	5	115818+292	-9.833	386.252	386.474
	6	115818+292	-19.666	386.098	386.320
	7	115818+292	-29.500	385.945	386.145
9BJ	1	115828+292	29.500	386.151	386.279
	2	115828+292	19.667	386.305	386.443
	3	115828+292	9.833	386.459	386.597
	4	115828+292	0.000	386.612	386.750
	5	115828+292	-9.833	386.459	386.597
	6	115828+292	-19.666	386.305	386.443
	7	115828+292	-29.500	386.151	386.279
9BK	1	115838+292	29.500	386.355	386.406
	2	115838+292	19.667	386.509	386.557
	3	115838+292	9.833	386.663	386.710
	4	115838+292	0.000	386.816	386.864
	5	115838+292	-9.833	386.663	386.710
	6	115838+292	-19.666	386.509	386.557
	7	115838+292	-29.500	386.355	386.406
℄ BRG.PIER II SPAN 9A	1	115844+333	29.500	386.478	386.478
	2	115844+333	19.667	386.631	386.631
	3	115844+333	9.833	386.785	386.785
	4	115844+333	0.000	386.939	386.939
	5	115844+333	-9.833	386.785	386.785
	6	115844+333	-19.666	386.631	386.631
	7	115844+333	-29.500	386.478	386.478

(AS REVISED)

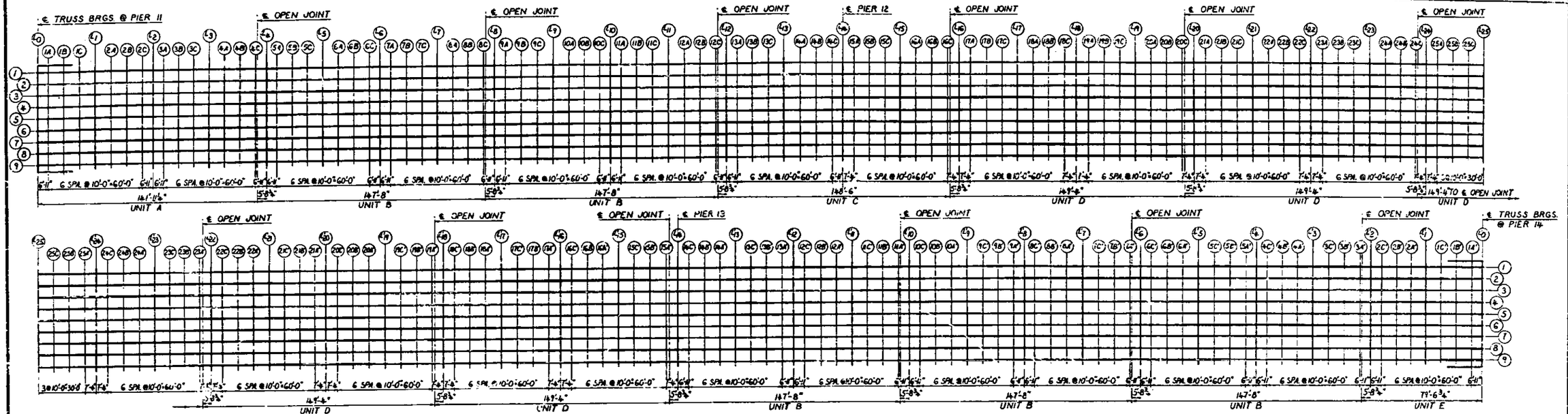
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F A I 57	(02-18-1) F&E	ALEXANDER & MISSISSIPPI	81	(514)
F.A.M.A. RTE. NO.		ILLINOIS & MISSOURI		
F.A.M.A. RTE. NO.		ILLINOIS & MISSOURI	PROJECT I-57-9( )0	

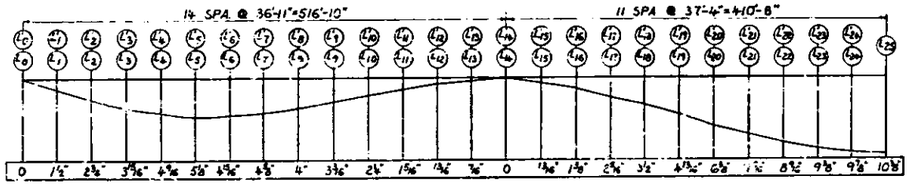
TOP OF SLAB ELEVATIONS - SPANS 8A & 9A
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1) F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

(Revised 3-7-74 L.W.

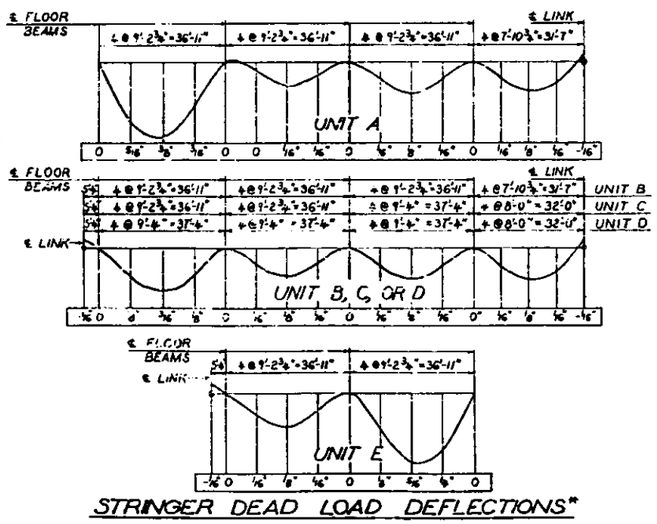
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 F&E	ALEXANDER MISSISSIPPI	81	52
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(.)0	



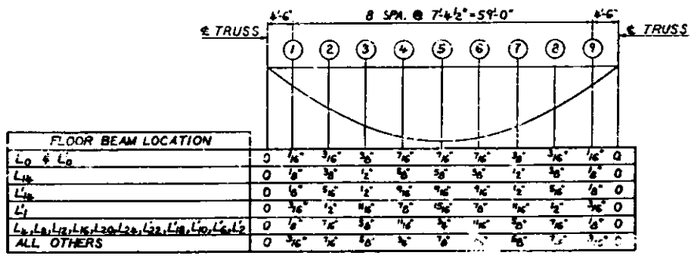
KEY PLAN



TRUSS DEAD LOAD DEFLECTIONS*



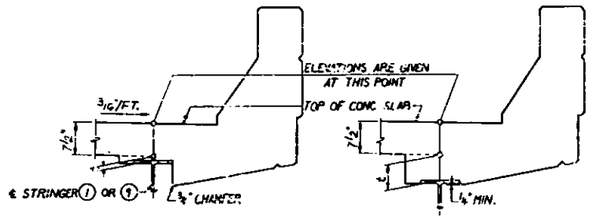
STRINGER DEAD LOAD DEFLECTIONS*



FLOOR BEAM LOCATION									
L_0 & L_{26}	0	1/16"	3/16"	5/16"	7/16"	7/16"	3/8"	3/16"	0
L_{1A}	0	1/8"	3/8"	5/8"	5/8"	5/8"	1/2"	1/8"	0
L_{1B}	0	1/8"	5/8"	1/2"	9/16"	7/16"	1/2"	1/8"	0
L_1	0	3/16"	1/2"	7/8"	15/16"	7/8"	9/16"	3/16"	0
$L_2, L_3, L_4, L_5, L_{20}, L_{21}, L_{22}, L_{23}, L_{24}, L_{25}$ & L_1 ALL OTHERS	0	1/8"	7/16"	3/8"	11/16"	3/8"	11/16"	7/16"	1/8"
	0	3/16"	1/16"	5/8"	3/8"	1/8"	5/8"	7/16"	1/8"

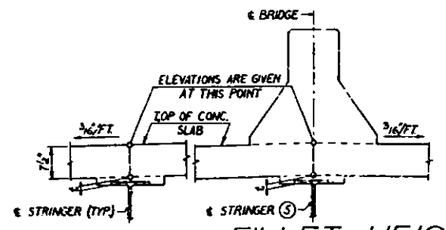
FLOOR BEAM DEAD LOAD DEFLECTIONS*

* INCLUDES WEIGHT OF CONCRETE AND WEARING SURFACE ONLY. THE ABOVE DEFLECTIONS ARE NOT FOR USE IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION.



AT MINIMUM FILLET
SCALE: ¾"=1'-0"

AT MAXIMUM FILLET
SCALE: ¾"=1'-0"



FILLET HEIGHTS

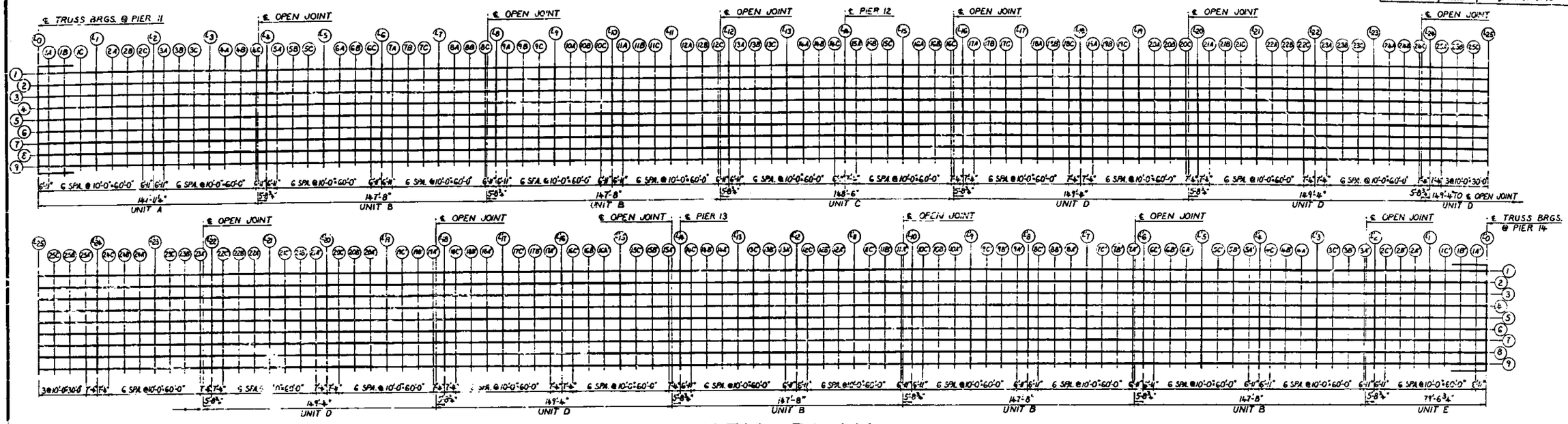
SCALE: ¾"=1'-0"

TO DETERMINE "E": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP OF THE STRINGERS SHALL BE TAKEN AT THE INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION," MINUS SLAB THICKNESS, EQUAL THE FILLET HEIGHTS "E" ABOVE TOP FLANGE OF STRINGERS.

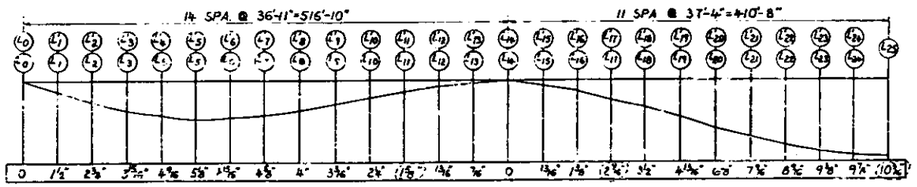
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

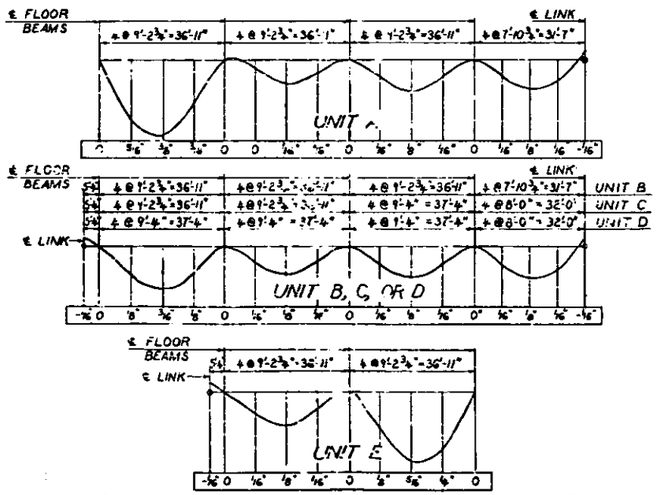
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 FBE	ALEXANDER	ILLINOIS MISSOURI	81	52A
F.A.S. RTE. NO. 1 / F.A.S. RTE. NO. 2		ILLINOIS MISSOURI		PROJECT I-57-9( )10	



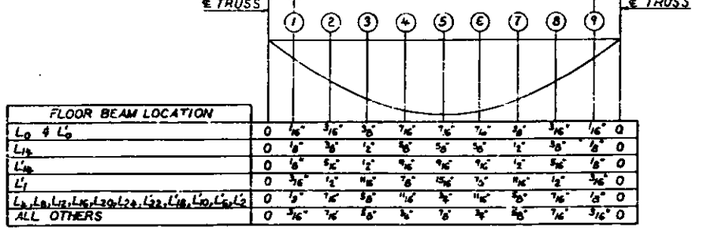
KEY PLAN



TRUSS DEAD LOAD DEFLECTIONS*



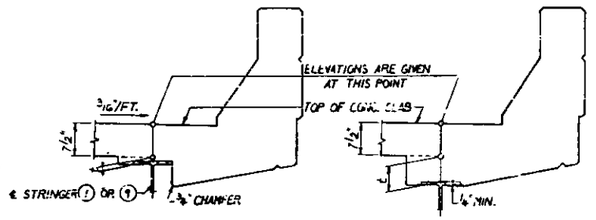
STRINGER DEAD LOAD DEFLECTIONS*



FLOOR BEAM LOCATION									
L_0 & L_9	0	1/16"	3/16"	5/16"	7/16"	7/16"	7/16"	5/16"	3/16"	1/16"	0
L_{1a}	0	1/8"	3/8"	1/2"	5/8"	5/8"	5/8"	1/2"	3/8"	1/8"	0
L_{2a}	0	1/16"	5/16"	1/2"	9/16"	9/16"	9/16"	1/2"	5/16"	1/8"	0
L_1	0	3/16"	1/2"	11/16"	7/8"	15/16"	15/16"	11/16"	1/2"	3/16"	0
$L_2, L_3, L_4, L_5, L_6, L_7, L_8, L_{10}, L_{11}, L_{12}, L_{13}, L_{14}, L_{15}, L_{16}, L_{17}, L_{18}, L_{19}, L_{20}, L_{21}, L_{22}, L_{23}, L_{24}, L_{25}, L_{26}$	0	1/8"	3/8"	1/2"	5/8"	11/16"	11/16"	5/8"	1/2"	3/16"	0
ALL OTHERS	0	3/16"	7/16"	5/8"	3/4"	7/8"	7/8"	3/4"	5/8"	7/16"	3/16"	0

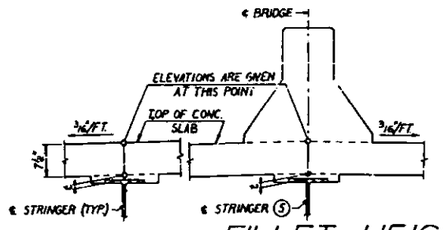
FLOOR BEAM DEAD LOAD DEFLECTIONS*

* INCLUDES WEIGHT OF CONCRETE AND WEARING SURFACE ONLY. THE ABOVE DEFLECTIONS ARE NOT FOR USE IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION.



AT MINIMUM FILLET
SCALE: ¾"=1'-0"

AT MAXIMUM FILLET
SCALE: ¾"=1'-0"



FILLET HEIGHTS

SCALE: ¾"=1'-0"

TO DETERMINE "E":
AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP OF THE STRINGERS SHALL BE TAKEN AT THE INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION" MINUS SLAB THICKNESS, EQUAL THE FILLET HEIGHTS "E" ABOVE TOP FLANGE OF STRINGERS.

(AS REVISED)

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-1B-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

(Revised) 3-7-74 L.W.

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F A I 57	(02-18-1) F&E	ALEXANDER	ILLINOIS	81	63
	F&E	MISSISSIPPI	MISSOURI		
FAI(-)(-) NO. & SECT. NO.		ILLINOIS		PROJECT I-57-9(10)	
FAI(-)(-) NO. & SECT. NO.		MISSOURI			

SPAN 12

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L_0	1	115847.500	29.500	386.542	386.550
	2	115847.500	22.125	386.657	386.677
	3	115847.500	14.750	386.773	386.801
℄ TRUSS	4	115847.500	7.375	386.888	386.923
BRG. AT	5	115847.500	0.000	387.003	387.040
PIER II	6	115847.500	-7.375	386.888	386.923
	7	115847.500	-14.750	386.773	386.801
	8	115847.500	-22.125	386.657	386.677
	9	115847.500	-29.500	386.542	386.550
1A	1	115854.417	29.500	386.680	386.729
	2	115854.417	22.125	386.796	386.859
	3	115854.417	14.750	386.911	386.988
	4	115854.417	7.375	387.026	387.108
	5	115854.417	0.000	387.141	387.225
	6	115854.417	-7.375	387.026	387.108
	7	115854.417	-14.750	386.911	386.988
	8	115854.417	-22.125	386.796	386.859
	9	115854.417	-29.500	386.680	386.729
1B	1	115864.417	29.500	386.874	386.972
	2	115864.417	22.125	386.993	387.106
	3	115864.417	14.750	387.109	387.237
	4	115864.417	7.375	387.224	387.361
	5	115864.417	0.000	387.339	387.479
	6	115864.417	-7.375	387.224	387.361
	7	115864.417	-14.750	387.109	387.237
	8	115864.417	-22.125	386.993	387.106
	9	115864.417	-29.500	386.878	386.972
1C	1	115874.417	29.500	387.073	387.195
	2	115874.417	22.125	387.188	387.331
	3	115874.417	14.750	387.304	387.465
	4	115874.417	7.375	387.419	387.590
	5	115874.417	0.000	387.534	387.709
	6	115874.417	-7.375	387.419	387.590
	7	115874.417	-14.750	387.304	387.465
	8	115874.417	-22.125	387.188	387.331
	9	115874.417	-29.500	387.073	387.195
L_1	1	115884.417	29.500	387.266	387.407
	2	115884.417	22.125	387.381	387.547
	3	115884.417	14.750	387.496	387.680
	4	115884.417	7.375	387.612	387.807
	5	115884.417	0.000	387.727	387.927
	6	115884.417	-7.375	387.612	387.807
	7	115884.417	-14.750	387.496	387.680
	8	115884.417	-22.125	387.381	387.547
	9	115884.417	-29.500	387.266	387.407
2A	1	115894.417	29.500	387.456	387.629
	2	115894.417	22.125	387.571	387.769
	3	115894.417	14.750	387.686	387.909
	4	115894.417	7.375	387.802	388.031
	5	115894.417	0.000	387.917	388.150
	6	115894.417	-7.375	387.802	388.031
	7	115894.417	-14.750	387.686	387.903
	8	115894.417	-22.125	387.571	387.769
	9	115894.417	-29.500	387.456	387.629
2B	1	115904.417	29.500	387.644	387.849
	2	115904.417	22.125	387.759	387.988
	3	115904.417	14.750	387.874	388.121
	4	115904.417	7.375	387.989	388.248
	5	115904.417	0.000	388.105	388.368
	6	115904.417	-7.375	387.989	388.248
	7	115904.417	-14.750	387.874	388.121
	8	115904.417	-22.125	387.759	387.988
	9	115904.417	-29.500	387.644	387.849
2C	1	115914.417	29.500	387.829	388.059
	2	115914.417	22.125	387.944	388.197
	3	115914.417	14.750	388.059	388.330
	4	115914.417	7.375	388.174	388.455
	5	115914.417	0.000	388.290	388.575
	6	115914.417	-7.375	388.174	388.455
	7	115914.417	-14.750	388.059	388.330
	8	115914.417	-22.125	387.944	388.197
	9	115914.417	-29.500	387.829	388.059
L_2	1	115921.333	29.500	387.955	388.202
	2	115921.333	22.125	388.071	388.339
	3	115921.333	14.750	388.186	388.472
	4	115921.333	7.375	388.301	388.597
	5	115921.333	0.000	388.416	388.716
	6	115921.333	-7.375	388.301	388.597
	7	115921.333	-14.750	388.186	388.472
	8	115921.333	-22.125	388.071	388.339
	9	115921.333	-29.500	387.955	388.202
3A	1	115928.250	29.500	388.081	388.350
	2	115928.250	22.125	388.196	388.487
	3	115928.250	14.750	388.311	388.620
	4	115928.250	7.375	388.428	388.745
	5	115928.250	0.000	388.542	388.864
	6	115928.250	-7.375	388.428	388.745
	7	115928.250	-14.750	388.311	388.620
	8	115928.250	-22.125	388.196	388.487
	9	115928.250	-29.500	388.081	388.350

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
3B	1	115938.250	29.500	388.260	388.361
	2	115938.250	22.125	388.375	388.498
	3	115938.250	14.750	388.490	388.630
	4	115938.250	7.375	388.606	388.756
	5	115938.250	0.000	388.721	389.074
	6	115938.250	-7.375	388.606	388.756
	7	115938.250	-14.750	388.490	388.630
	8	115938.250	-22.125	388.375	388.498
	9	115938.250	-29.500	388.260	388.361
3C	1	115948.250	29.500	388.437	388.759
	2	115948.250	22.125	388.552	388.897
	3	115948.250	14.750	388.667	389.030
	4	115948.250	7.375	388.782	389.156
	5	115948.250	0.000	388.898	389.274
	6	115948.250	-7.375	388.782	389.156
	7	115948.250	-14.750	388.667	389.030
	8	115948.250	-22.125	388.552	388.897
	9	115948.250	-29.500	388.437	388.759
L_3	1	115958.250	29.500	388.611	388.952
	2	115958.250	22.125	388.726	389.089
	3	115958.250	14.750	388.841	389.222
	4	115958.250	7.375	388.957	389.348
	5	115958.250	0.000	389.072	389.467
	6	115958.250	-7.375	388.957	389.348
	7	115958.250	-14.750	388.841	389.222
	8	115958.250	-22.125	388.726	389.089
	9	115958.250	-29.500	388.611	388.952
4A	1	115968.250	29.500	388.783	389.144
	2	115968.250	22.125	388.898	389.282
	3	115968.250	14.750	389.013	389.414
	4	115968.250	7.375	389.128	389.541
	5	115968.250	0.000	389.243	389.659
	6	115968.250	-7.375	389.128	389.541
	7	115968.250	-14.750	389.013	389.414
	8	115968.250	-22.125	388.898	389.282
	9	115968.250	-29.500	388.783	389.144
4B	1	115978.250	29.500	388.952	389.330
	2	115978.250	22.125	389.067	389.467
	3	115978.250	14.750	389.182	389.599
	4	115978.250	7.375	389.297	389.724
	5	115978.250	0.000	389.413	389.843
	6	115978.250	-7.375	389.297	389.724
	7	115978.250	-14.750	389.182	389.599
	8	115978.250	-22.125	389.067	389.467
	9	115978.250	-29.500	388.952	389.330
4C	1	115988.250	29.500	389.118	389.500
	2	115988.250	22.125	389.234	389.636
	3	115988.250	14.750	389.349	389.768
	4	115988.250	7.375	389.464	389.893
	5	115988.250	0.000	389.579	390.011
	6	115988.250	-7.375	389.464	389.893
	7	115988.250	-14.750	389.349	389.768
	8	115988.250	-22.125	389.234	389.636
	9	115988.250	-29.500	389.118	389.500
℄ OPEN JOINT	1	115989.438	29.500	389.138	389.520
	2	115989.438	22.125	389.253	389.656
	3	115989.438	14.750	389.368	389.787
	4	115989.438	7.375	389.484	389.912
	5	115989.438	0.000	389.599	390.031
	6	115989.438	-7.375	389.484	389.912
	7	115989.438	-14.750	389.368	389.787
	8	115989.438	-22.125	389.253	389.656
	9	115989.438	-29.500	389.138	389.520
4	1	115995.167	29.500	389.232	389.624
	2	115995.167	22.125	389.347	389.760
	3	115995.167	14.750	389.463	389.892
	4	115995.167	7.375	389.578	390.017
	5	115995.167	0.000	389.693	390.136
	6	115995.167	-7.375	389.578	390.017
	7	115995.167	-14.750	389.463	389.892
	8	115995.167	-22.125	389.347	389.760
	9	115995.167	-29.500	389.232	389.624
5A	1	116002.083	29.500	389.345	389.755
	2	116002.083	22.125	389.460	389.891
	3	116002.083	14.750	389.575	390.024
	4	116002.083	7.375	389.691	390.149
	5	116002.083	0.000	389.806	390.268
	6	116002.083	-7.375	389.691	390.149
	7	116002.083	-14.750	389.575	390.024
	8	116002.083	-22.125	389.460	389.891
	9	116002.083	-29.500	389.345	389.755
5B	1	116012.083	29.500	389.506	389.935
	2	116012.083	22.125	389.621	390.074
	3	116012.083	14.750	389.736	390.206
	4	116012.083	7.375	389.851	390.337
	5	116012.083	0.000	389.966	390.450
	6	116012.083	-7.375	389.851	390.332
	7	116012.083	-14.750	389.736	390.206
	8	116012.083	-22.125	389.621	390.074
	9	116012.083	-29.500	389.506	389.939

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
5C	1	116022.083	29.500	389.664	390.102
	2	116022.083	22.125	389.779	390.240
	3	116022.083	14.750	389.894	390.373
	4	116022.083	7.375	390.009	390.499
	5	116022.083	0.000	390.125	390.618
	6	116022.083	-7.375	390.009	390.499
	7	116022.083	-14.750	389.894	390.373
	8	116022.083	-22.125	389.779	390.240
	9	116022.083	-29.500	389.664	390.102
L_5	1	116032.083	29.500	389.820	390.260
	2	116032.083	22.125	389.935	390.399
	3	116032.083	14.750	390.050	390.531
	4	116032.083	7.375	390.165	390.658
	5	116032.083	0.000	390.280	390.777
	6	116032.083	-7.375	390.165	390.658
	7	116032.083	-14.750	390.050	390.531
	8	116032.083	-22.125	389.935	390.399
	9	116032.083	-29.500	389.820	390.260
6A	1	116042.083	29.500	389.973	390.416
	2	116042.083	22.125	390.088	390.554
	3	116042.083	14.750	390.203	390.687
	4	116042.083	7.375	390.318	390.814
	5	116042.083	0.000	390.434	390.933
	6	116042.083	-7.375	390.318	390.814
	7	116042.083	-14.750	390.203	390.687
	8	116042.083	-22.125	390.088	390.554
	9	116042.083	-29.500	389.973	390.416
6B	1	116052.083	29.500	390.123	390.566
	2	116052.083	22.125	390.239	390.704
	3	116052.083	14.750	390.354	390.837
	4	116052.083	7.375	390.469	390.969
	5	116052.083	0.000	390.584	391.082
	6	116052.083	-7.375	390.469	390.969
	7	116052.083	-14.750	390.354	390.837
	8	116052.083	-22.125	390.239	390.704
	9	116052.083	-29.500	390.123	390.566
6C	1	116062.083	29.500	390.272	390.705
	2	116062.083	22.125	390.387	390.843
	3	116062.083	14.750	390.502	390.975
	4	116062.083	7.375	390.617	391.102
	5	116062.083	0.000	390.733	391.221
	6	116062.083	-7.375	390.617	391.102
	7	116062.083	-14.750	390.502	390.975
	8	116062.083	-22.125	390.387	390.843
	9	116062.083	-29.500	390.272	390.705
L_6	1	116069.000	29.500	390.373	390.800
	2	116069.000	22.125	390.488	390.937
	3	116069.000	14.750	390.603	391.069
	4	116069.000	7.375	390.718	391.196
	5	116069.000	0.000	390.834	391.315
	6	116069.000	-7.375	390.718	391.196
	7	116069.000	-14.750	390.603	391.069
	8	116069.000	-22.125	390.488	390.937
	9	116069.000	-29.500	390.373	390.800
7A	1	116075.917	29.500	390.473	390.900
	2	116075.917	22.125	390.588	391.038
	3	116075.917	14.750	390.703	391.170
	4	116075.917	7.375	390.818	391.296
	5	116075.917	0.000	390.934	391.414
	6	116075.917	-7.375	390.818	391.296
	7	116075.917	-14.750	390.703	391.170
	8	116075.917	-22.125	390.588	391.038
	9	116075.917	-29.500	390.473	390.900
7B	1	116085.917	29.500	390.615	391.040
	2	116085.917	22.125	390.730	391.179
	3	116085.917	14.750	390.845	391.311
	4	116085.917	7.375	390.961	391.437
	5	116085.917	0.000	391.076	391.556
	6	116085.917	-7.375	390.961	391.437
	7	116085.917	-14.750	390.845	391.311
	8	116085.917	-22.125	390.730	391.179
	9	116085.917	-29.500	390.615	391.040
7C	1	116095.917	29.500	390.755	391.158
	2	116095.917	22.125	390.870	391.307
	3	116095.917	14.750	390.985	391.439
	4	116095.917	7.375	391.100	391.566
	5	116095.917	0.000	391.216	391.685
	6	116095.917	-7.375	391.100	391.566
	7	116095.917	-14.750	390.985	391.439
	8	116095.917	-22.125	390.870	391.307
	9	116095.917	-29.500	390.755	391.168
L_7	1	116105.917	29.500	390.892	391.291
	2	116105.917	22.125	391.007	391.430
	3	116105.917	14.750	391.122	391.562
	4	116105.917	7.375	391.238	391.689
	5	116105.917	0.000	391.353	391.808
	6	116105.917	-7.375	391.238	391.689
	7	116105.917	-14.750	391.122	391.562
	8	116105.917	-22.125	391.007	391.430
	9	116105.917	-29.500	390.892	391.291

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8A	1	116115.917	29.500	391.027	391.420
	2	116115.917	22.125	391.142	391.557
	3	116115.917	14.750	391.257	391.690
	4	116115.917	7.375	391.372	391.815
	5	116115.917	0.000	391.488	391.934
	6	116115.917	-7.375	391.372	391.815
	7	116115.917	-14.750	391.257	391.690
	8	116115.917	-22.125	391.142	391.557
	9	116115.917	-29.500	391.027	391.420
8B	1	116125.917	29.500	391.159	391.540
	2	116125.917	22.125	391.274	391.676
	3	116125.917	14.750	391.389	391.807
	4	116125.917	7.375	391.505	391.933
	5	116125.917	0.000	391.620	392.051
	6	116125.917	-7.375	391.505	391.933
	7	116125.917	-14.750	391.389	391.807
	8	116125.917	-22.125	391.274	391.674
	9	116125.917	-29.500	391.159	391.540
8C	1	116135.917	29.500	391.289	391.663
	2	116135.917	22.125	391.404	391.779
	3	116135.917	14.750	391.519	391.910
	4	116135.917	7.375	391.634	392.035
	5	116135.917	0.000	391.750	392.154
	6	116135.917	-7.375	391.634	392.035
	7	116135.917	-14.750	391.519	391.910
	8	116135.917	-22.125	391.404	391.779
	9	116135.917	-29.500	391.289	391.663
℄ OPEN JOINT	1	116137.104	29.500	391.304	391.654
	2	116137.104	22.125	391.419	391.790
	3	116137.104	14.750	391.534	391.921
	4	116137.104	7.375	391.650	392.047
	5	116137.104	0.000	391.765	392.165
	6	116137.104	-7.375	391.650	392.047
	7	116137.104	-14.750	391.534	391.921
	8	116137.104	-22.125	391.419	391.790
	9	116137.104	-29.500	391.304	391.654
L_8	1	116142.833	29.500	391.377	391.721
	2	116142.833	22.125	391.492	391.857
	3	116142.833	14.750	391.607	391.989
	4	116142.833	7.375	391.723	392.114
	5	116142.833	0.000	391.838	392.253
	6	116142.833	-7.375	391.723	392.114
	7	116142.833	-14.750	391.607	391.989
	8	116142.833	-22.125	391.492	391.857
	9	116142.833	-29.500	391.377	391.721
9A	1	116149.750	29.500	391.464	391.805
	2	116149.750	22.125	391.579	391.942
	3	116149.750	14.750	391.695	392.074
	4	116149.750	7.375	391.810	392.200
	5	116149.750	0.000	391.925	392.318
	6	116149.750	-7.375	391.810	392.200
	7	116149.750	-14.750	391.695	392.074
	8	116149.750	-22.125	391.579	391.942
	9	116149.750	-29.500	391.464	391.805
9B	1	116159.750	29.500	391.588	391.919
	2	116159.750	22.125	391.703	392.057
	3	116159.750	14.750	391.818	392.189
	4	116159.750	7.375	391.934	392.315
	5	116159.750	0.000	392.049	392.434
	6	116159.750	-7.375	391.934	392.315
	7	116159.750	-14.750	391.818	392.189
	8	116159.750	-22.125	391.703	392.057
	9	116159.750	-29.500	391.588	391.919
9C	1	116169.750	29.500	391.709	392.048
	2	116169.750	22.125	391.824	392.156
	3	116169.750	14.750	391.940	392.289
	4	116169.750	7.375	392.055	392.414
	5	116169.750	0.000	392.170	392.534
	6	116169.750	-7.375	392.055	392.414
	7	116169.750	-14.750	391.940	392.289
	8	116169.750	-22.125	391.824	392.156
	9	116169.750	-29.500	391.709	392.016

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS- SPANS 12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
FAI 57	(02-18-1) F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		81	54
FUNDS 100 NO. 1 FUNDS 200 NO. 1		ILLINOIS MISSOURI	PROJECT I-57-9( )0		

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L_9	1	116179.750	29.500	391.826	392.109
	2	116179.750	22.125	391.743	392.267
	3	116179.750	14.750	392.695	392.920
	4	116179.750	7.375	392.174	392.907
	5	116179.750	0.000	392.295	392.676
	6	116179.750	-7.375	392.174	392.907
	7	116179.750	-14.750	392.059	392.380
	8	116179.750	-22.125	391.943	392.267
	9	116179.750	-29.500	391.828	392.109
10A	1	116189.750	29.500	391.944	392.211
	2	116189.750	22.125	392.060	392.348
	3	116189.750	14.750	392.175	392.462
	4	116189.750	7.375	392.290	392.609
	5	116189.750	0.000	392.405	392.727
	6	116189.750	-7.375	392.290	392.609
	7	116189.750	-14.750	392.175	392.482
	8	116189.750	-22.125	392.060	392.348
	9	116189.750	-29.500	391.944	392.211
10B	1	116199.750	29.500	392.058	392.307
	2	116199.750	22.125	392.173	392.445
	3	116199.750	14.750	392.289	392.578
	4	116199.750	7.375	392.404	392.704
	5	116199.750	0.000	392.519	392.824
	6	116199.750	-7.375	392.404	392.704
	7	116199.750	-14.750	392.289	392.578
	8	116199.750	-22.125	392.173	392.445
	9	116199.750	-29.500	392.058	392.307
10C	1	116209.750	29.500	392.169	392.393
	2	116209.750	22.125	392.285	392.531
	3	116209.750	14.750	392.400	392.665
	4	116209.750	7.375	392.515	392.790
	5	116209.750	0.000	392.630	392.909
	6	116209.750	-7.375	392.515	392.790
	7	116209.750	-14.750	392.400	392.663
	8	116209.750	-22.125	392.285	392.531
	9	116209.750	-29.500	392.169	392.393
L_{10}	1	116216.667	29.500	392.245	392.450
	2	116216.667	22.125	392.360	392.587
	3	116216.667	14.750	392.475	392.719
	4	116216.667	7.375	392.591	392.846
	5	116216.667	0.000	392.706	392.965
	6	116216.667	-7.375	392.591	392.846
	7	116216.667	-14.750	392.475	392.719
	8	116216.667	-22.125	392.360	392.587
	9	116216.667	-29.500	392.245	392.450
11A	1	116223.583	29.500	392.319	392.519
	2	116223.583	22.125	392.435	392.656
	3	116223.583	14.750	392.550	392.788
	4	116223.583	7.375	392.665	392.914
	5	116223.583	0.000	392.780	393.034
	6	116223.583	-7.375	392.665	392.914
	7	116223.583	-14.750	392.550	392.788
	8	116223.583	-22.125	392.435	392.656
	9	116223.583	-29.500	392.319	392.519
11B	1	116233.583	29.500	392.425	392.614
	2	116233.583	22.125	392.540	392.752
	3	116233.583	14.750	392.655	392.884
	4	116233.583	7.375	392.770	393.011
	5	116233.583	0.000	392.886	393.130
	6	116233.583	-7.375	392.770	393.011
	7	116233.583	-14.750	392.655	392.884
	8	116233.583	-22.125	392.540	392.752
	9	116233.583	-29.500	392.425	392.614
11C	1	116243.583	29.500	392.528	392.697
	2	116243.583	22.125	392.643	392.836
	3	116243.583	14.750	392.758	392.969
	4	116243.583	7.375	392.873	393.095
	5	116243.583	0.000	392.988	393.214
	6	116243.583	-7.375	392.873	393.095
	7	116243.583	-14.750	392.758	392.969
	8	116243.583	-22.125	392.643	392.836
	9	116243.583	-29.500	392.528	392.697
L_{11}	1	116253.583	29.500	392.628	392.775
	2	116253.583	22.125	392.743	392.914
	3	116253.583	14.750	392.858	393.047
	4	116253.583	7.375	392.974	393.174
	5	116253.583	0.000	393.089	393.291
	6	116253.583	-7.375	392.974	393.174
	7	116253.583	-14.750	392.858	393.047
	8	116253.583	-22.125	392.743	392.914
	9	116253.583	-29.500	392.628	392.775
12A	1	116263.583	29.500	392.726	392.864
	2	116263.583	22.125	392.841	393.002
	3	116263.583	14.750	392.956	393.134
	4	116263.583	7.375	393.071	393.260
	5	116263.583	0.000	393.187	393.379
	6	116263.583	-7.375	393.071	393.260
	7	116263.583	-14.750	392.956	393.134
	8	116263.583	-22.125	392.841	393.002
	9	116263.583	-29.500	392.726	392.864

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
12B	1	116273.583	29.500	392.821	392.945
	2	116273.583	22.125	392.936	393.081
	3	116273.583	14.750	393.052	393.212
	4	116273.583	7.375	393.167	393.337
	5	116273.583	0.000	393.282	393.457
	6	116273.583	-7.375	393.167	393.337
	7	116273.583	-14.750	393.052	393.212
	8	116273.583	-22.125	392.936	393.081
	9	116273.583	-29.500	392.821	392.945
12C	1	116283.583	29.500	392.914	393.008
	2	116283.583	22.125	393.029	393.140
	3	116283.583	14.750	393.144	393.275
	4	116283.583	7.375	393.260	393.399
	5	116283.583	0.000	393.375	393.519
	6	116283.583	-7.375	393.260	393.399
	7	116283.583	-14.750	393.144	393.275
	8	116283.583	-22.125	393.029	393.140
	9	116283.583	-29.500	392.914	393.008
℄ OPEN JOINT	1	116284.771	29.500	392.925	393.015
	2	116284.771	22.125	393.040	393.146
	3	116284.771	14.750	393.155	393.282
	4	116284.771	7.375	393.271	393.406
	5	116284.771	0.000	393.386	393.525
	6	116284.771	-7.375	393.271	393.406
	7	116284.771	-14.750	393.155	393.282
	8	116284.771	-22.125	393.040	393.146
	9	116284.771	-29.500	392.925	393.015
L_{12}	1	116290.500	29.500	392.977	393.058
	2	116290.500	22.125	393.092	393.187
	3	116290.500	14.750	393.207	393.326
	4	116290.500	7.375	393.322	393.452
	5	116290.500	0.000	393.438	393.570
	6	116290.500	-7.375	393.322	393.452
	7	116290.500	-14.750	393.207	393.326
	8	116290.500	-22.125	393.092	393.187
	9	116290.500	-29.500	392.977	393.058
13A	1	116297.417	29.500	393.038	393.123
	2	116297.417	22.125	393.154	393.258
	3	116297.417	14.750	393.269	393.392
	4	116297.417	7.375	393.384	393.518
	5	116297.417	0.000	393.499	393.637
	6	116297.417	-7.375	393.384	393.518
	7	116297.417	-14.750	393.269	393.392
	8	116297.417	-22.125	393.154	393.268
	9	116297.417	-29.500	393.038	393.123
13B	1	116307.417	29.500	393.125	393.209
	2	116307.417	22.125	393.240	393.347
	3	116307.417	14.750	393.356	393.480
	4	116307.417	7.375	393.471	393.605
	5	116307.417	0.000	393.586	393.725
	6	116307.417	-7.375	393.471	393.605
	7	116307.417	-14.750	393.356	393.480
	8	116307.417	-22.125	393.240	393.347
	9	116307.417	-29.500	393.125	393.209
13C	1	116317.417	29.500	393.210	393.280
	2	116317.417	22.125	393.325	393.418
	3	116317.417	14.750	393.440	393.551
	4	116317.417	7.375	393.555	393.677
	5	116317.417	0.000	393.671	393.797
	6	116317.417	-7.375	393.555	393.677
	7	116317.417	-14.750	393.440	393.551
	8	116317.417	-22.125	393.325	393.428
	9	116317.417	-29.500	393.210	393.280
L_{13}	1	116327.417	29.500	393.291	393.342
	2	116327.417	22.125	393.407	393.480
	3	116327.417	14.750	393.522	393.613
	4	116327.417	7.375	393.637	393.740
	5	116327.417	0.000	393.752	393.857
	6	116327.417	-7.375	393.637	393.740
	7	116327.417	-14.750	393.522	393.613
	8	116327.417	-22.125	393.407	393.480
	9	116327.417	-29.500	393.291	393.342
14A	1	116337.417	29.500	393.371	393.418
	2	116337.417	22.125	393.486	393.554
	3	116337.417	14.750	393.601	393.686
	4	116337.417	7.375	393.717	393.811
	5	116337.417	0.000	393.832	393.929
	6	116337.417	-7.375	393.717	393.811
	7	116337.417	-14.750	393.601	393.686
	8	116337.417	-22.125	393.486	393.554
	9	116337.417	-29.500	393.371	393.418
14B	1	116347.417	29.500	393.448	393.487
	2	116347.417	22.125	393.563	393.620
	3	116347.417	14.750	393.678	393.751
	4	116347.417	7.375	393.793	393.875
	5	116347.417	0.000	393.909	393.995
	6	116347.417	-7.375	393.793	393.875
	7	116347.417	-14.750	393.678	393.751
	8	116347.417	-22.125	393.563	393.627
	9	116347.417	-29.500	393.448	393.487

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
14C	1	116357.417	29.500	393.527	393.544
	2	116357.417	22.125	393.637	393.678
	3	116357.417	14.750	393.753	393.837
	4	116357.417	7.375	393.868	393.931
	5	116357.417	0.000	393.983	394.050
	6	116357.417	-7.375	393.868	393.931
	7	116357.417	-14.750	393.753	393.837
	8	116357.417	-22.125	393.637	393.678
	9	116357.417	-29.500	393.522	393.544

SPAN 13

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L_{14} ℄ PIER 12	1	116364.333	29.500	393.572	393.583
	2	116364.333	22.125	393.687	393.716
	3	116364.333	14.750	393.803	393.849
	4	116364.333	7.375	393.918	393.969
	5	116364.333	0.000	394.033	394.086
	6	116364.333	-7.375	393.918	393.969
	7	116364.333	-14.750	393.803	393.849
	8	116364.333	-22.125	393.687	393.716
	9	116364.333	-29.500	393.572	393.583
15A	1	116371.667	29.500	393.624	393.653
	2	116371.667	22.125	393.739	393.786
	3	116371.667	14.750	393.854	393.915
	4	116371.667	7.375	393.970	394.039
	5	116371.667	0.000	394.085	394.157
	6	116371.667	-7.375	393.970	394.039
	7	116371.667	-14.750	393.854	393.915
	8	116371.667	-22.125	393.739	393.786
	9	116371.667	-29.500	393.624	393.653
15B	1	116381.667	29.500	393.692	393.744
	2	116381.667	22.125	393.807	393.875
	3	116381.667	14.750	393.923	394.009
	4	116381.667	7.375	394.038	394.134
	5	116381.667	0.000	394.153	394.253
	6	116381.667	-7.375	394.038	394.134
	7	116381.667	-14.750	393.923	394.009
	8	116381.667	-22.125	393.807	393.879
	9	116381.667	-29.500	393.692	393.744
15C	1	116391.667	29.500	393.758	393.825
	2	116391.667	22.125	393.873	393.961
	3	116391.667	14.750	393.988	394.092
	4	116391.667	7.375	394.104	394.218
	5	116391.667	0.000	394.219	394.337
	6	116391.667	-7.375	394.104	394.218
	7	116391.667	-14.750	393.988	394.092
	8	116391.667	-22.125	393.873	393.961
	9	116391.667	-29.500	393.758	393.825
L_{15}	1	116401.667	29.500	393.821	393.899
	2	116401.667	22.125	393.937	394.036
	3	116401.667	14.750	394.052	394.169
	4	116401.667	7.375	394.167	394.295
	5	116401.667	0.000	394.282	394.414
	6	116401.667	-7.375	394.167	394.295
	7	116401.667	-14.750	394.052	394.169
	8	116401.667	-22.125	393.937	394.036
	9	116401.667	-29.500	393.821	393.899
16A	1	116411.667	29.500	393.882	393.982
	2	116411.667	22.125	393.997	394.119
	3	116411.667	14.750	394.113	394.252
	4	116411.667	7.375	394.228	394.377
	5	116411.667	0.000	394.343	394.497
	6	116411.667	-7.375	394.228	394.377
	7	116411.667	-14.750	394.113	394.252
	8	116411.667	-22.125	393.997	394.119
	9	116411.667	-29.500	393.882	393.982
16B	1	116421.667	29.500	393.940	394.056
	2	116421.667	22.125	394.056	394.192
	3	116421.667	14.750	394.171	394.325
	4	116421.667	7.375	394.286	394.450
	5	116421.667	0.000	394.401	394.569
	6	116421.667	-7.375	394.286	394.450
	7	116421.667	-14.750	394.171	394.325
	8	116421.667	-22.125	394.056	394.192
	9	116421.667	-29.500	393.940	394.056
16C	1	116431.667	29.500	393.996	394.114
	2	116431.667	22.125	394.112	394.250
	3	116431.667	14.750	394.227	394.381
	4	116431.667	7.375	394.342	394.506
	5	116431.667	0.000	394.457	394.625
	6	116431.667	-7.375	394.342	394.506
	7	116431.667	-14.750	394.227	394.381
	8	116431.667	-22.125	394.112	394.250
	9	116431.667	-29.500	393.996	394.114

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ OPEN JOINT	1	116433.271	29.500	394.005	394.122
	2	116433.271	22.125	394.120	394.258
	3	116433.271	14.750	394.236	394.389
	4	116433.271	7.375	394.351	394.514
	5	116433.271	0.000	394.466	394.633
	6	116433.271	-7.375	394.351	394.514
	7	116433.271	-14.750	394.236	394.389
	8	116433.271	-22.125	394.120	394.258
	9	116433.271	-29.500	394.005	394.122
L_{16}	1	116439.000	29.500	394.036	394.162
	2	116439.000	22.125	394.151	394.298
	3	116439.000	14.750	394.266	394.430
	4	116439.000	7.375	394.381	394.578
	5	116439.000	0.000	394.497	394.674
	6	116439.000	-7.375	394.381	394.556
	7	116439.000	-14.750	394.266	394.430
	8	116439.000	-22.125	394.151	394.298
	9	116439.000	-29.500	394.036	394.162
17A	1	116446.333	29.500	394.074	394.229
	2	116446.333	22.125	394.189	394.364
	3	116446.333	14.750	394.304	394.498
	4	116446.333	7.375	394.419	394.624
	5	116446.333	0.000	394.535	394.742
	6	116446.333	-7.375	394.419	394.624
	7	116446.333	-14.750	394.304	394.498
	8	116446.333	-22.125	394.189	394.366
	9	116446.333	-29.500	394.074	394.229
17B	1	116456.333	29.500	394.123	394.312
	2	116456.333	22.125	394.239	394.456
	3	116456.333	14.750	394.354	394.583
	4	116456.333	7.375	394.469	394.708
	5	116456.333	0.000	394.584	394.827
	6	116456.333	-7.375	394.469	394.708
	7	116456.333	-14.750	394.354	394.583
	8	116456.333	-22.125	394.239	394.456
	9	116456.333	-29.500	394.123	394.312
17C	1	116466.333	29.500	394.171	394.381
	2	116466.333	22.125	394.286	394.519
	3	116466.333	14.750	394.401	394.652
	4	116466.333	7.375	394.516	394.777
	5	116466.333	0.000	394.631	394.897
	6	116466.333	-7.375	394.516	394.777
	7	116466.333	-14.750	394.401	394.652
	8	116466.333	-22.125	394.286	394.519
	9	116466.333	-29.500	394.171	394.381
L_{17}	1	116476.333	29.500	394.213	394.442
	2	116476.333	22.125	394.330	394.580
	3	116476.333	14.750	394.446	394.713
	4	116476.333	7.375	394.561	394.840
	5	116476.333	0.000	394.676	394.959
	6	116476.333	-7.375	394.561	394.840
	7	116476.333	-14.750	394.446	394.713
	8	116476.333	-22.125	394.330	394.580
	9	116476.333	-29.500	394.215	394.442
18A	1	116486.333	29.500	394.257	394.512
	2	116486.333	22.125	394.373	394.649
	3	116486.333	14.750	394.488	394.783
	4	116486.333	7.375	394.603	394.909
	5	116486.333	0.000	394.718	395.078
	6	116486.333	-7.375	394.603	394.909
	7	116486.333	-14.750	394.488	394.783
	8	116486.333	-22.125	394.373	394.649
	9	116486.333	-29.500	394.257	394.512
18B	1	116496.333	29.500	394.297	394.576
	2	116496.333	22.125	394.412	394.714
	3	116496.333	14.750	394.527	394.846
	4	116496.333	7.375	394.643	394.973
	5	116496.333	0.000	394.758	395.092
	6	116496.333	-7.375	394.643	394.973
	7	116496.333	-14.750	394.527	394.846
	8	116496.333	-22.125	394.412	394.714
	9	116496.333	-29.500	394.297	394.576

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-1(-)F&E	ALEXANDER ILLINOIS	MISSISSIPPI MISSOURI	81	55
FUNCTIONAL REG NO 6 FUNCTIONAL REG NO 5		ALEXANDER ILLINOIS		PROJECT I-57-9(-)0	

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
18C	1	116506.333	29.500	394.334	394.630
	2	116506.333	22.125	394.449	394.767
	3	116506.333	14.750	394.565	394.899
	4	116506.333	7.375	394.680	394.026
	5	116506.333	0.000	394.795	395.145
	6	116506.333	-7.375	394.680	394.026
	7	116506.333	-14.750	394.565	394.899
	8	116506.333	-22.125	394.449	394.767
	9	116506.333	-29.500	394.334	394.630
L18	1	116513.667	29.500	394.360	394.667
	2	116513.667	22.125	394.475	394.803
	3	116513.667	14.750	394.590	394.935
	4	116513.667	7.375	394.706	395.062
	5	116513.667	0.000	394.821	395.182
	6	116513.667	-7.375	394.706	395.062
	7	116513.667	-14.750	394.590	394.935
	8	116513.667	-22.125	394.475	394.803
	9	116513.667	-29.500	394.360	394.667
19A	1	116521.000	29.500	394.284	394.718
	2	116521.000	22.125	394.399	394.056
	3	116521.000	14.750	394.515	394.988
	4	116521.000	7.375	394.630	395.114
	5	116521.000	0.000	394.745	395.233
	6	116521.000	-7.375	394.630	395.114
	7	116521.000	-14.750	394.515	394.988
	8	116521.000	-22.125	394.399	394.856
	9	116521.000	-29.500	394.284	394.718
19B	1	116531.000	29.500	394.415	394.785
	2	116531.000	22.125	394.530	394.923
	3	116531.000	14.750	394.646	395.056
	4	116531.000	7.375	394.761	395.182
	5	116531.000	0.000	394.876	395.301
	6	116531.000	-7.375	394.761	395.182
	7	116531.000	-14.750	394.646	395.056
	8	116531.000	-22.125	394.530	394.923
	9	116531.000	-29.500	394.415	394.785
19C	1	116541.000	29.500	394.441	394.840
	2	116541.000	22.125	394.519	394.979
	3	116541.000	14.750	394.674	395.112
	4	116541.000	7.375	394.785	395.238
	5	116541.000	0.000	394.905	395.356
	6	116541.000	-7.375	394.798	395.238
	7	116541.000	-14.750	394.674	395.112
	8	116541.000	-22.125	394.559	394.979
	9	116541.000	-29.500	394.444	394.840
L19	1	116551.000	29.500	394.470	394.890
	2	116551.000	22.125	394.585	395.028
	3	116551.000	14.750	394.700	395.162
	4	116551.000	7.375	394.815	395.288
	5	116551.000	0.000	394.931	395.408
	6	116551.000	-7.375	394.815	395.288
	7	116551.000	-14.750	394.700	395.162
	8	116551.000	-22.125	394.585	395.028
	9	116551.000	-29.500	394.470	394.890
20A	1	116561.000	29.500	394.493	394.954
	2	116561.000	22.125	394.608	395.092
	3	116561.000	14.750	394.724	395.254
	4	116561.000	7.375	394.839	395.350
	5	116561.000	0.000	394.954	395.469
	6	116561.000	-7.375	394.839	395.350
	7	116561.000	-14.750	394.724	395.224
	8	116561.000	-22.125	394.608	395.092
	9	116561.000	-29.500	394.493	394.954
20B	1	116571.000	29.500	394.614	395.011
	2	116571.000	22.125	394.629	395.147
	3	116571.000	14.750	394.745	395.279
	4	116571.000	7.375	394.860	395.404
	5	116571.000	0.000	394.975	395.523
	6	116571.000	-7.375	394.860	395.404
	7	116571.000	-14.750	394.745	395.279
	8	116571.000	-22.125	394.629	395.147
	9	116571.000	-29.500	394.514	395.011
20C	1	116581.000	29.500	394.533	395.051
	2	116581.000	22.125	394.648	395.186
	3	116581.000	14.750	394.763	395.318
	4	116581.000	7.375	394.878	395.443
	5	116581.000	0.000	394.993	395.562
	6	116581.000	-7.375	394.878	395.443
	7	116581.000	-14.750	394.763	395.318
	8	116581.000	-22.125	394.648	395.186
	9	116581.000	-29.500	394.533	395.051
℄ OPEN JOINT	1	116582.604	29.500	394.535	395.056
	2	116582.604	22.125	394.651	395.192
	3	116582.604	14.750	394.766	395.324
	4	116582.604	7.375	394.881	395.448
	5	116582.604	0.000	394.996	395.567
	6	116582.604	-7.375	394.881	395.448
	7	116582.604	-14.750	394.766	395.324
	8	116582.604	-22.125	394.651	395.192
	9	116582.604	-29.500	394.535	395.056

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L20	1	116588.333	29.500	394.545	395.085
	2	116588.333	22.125	394.660	395.222
	3	116588.333	14.750	394.775	395.353
	4	116588.333	7.375	394.890	395.479
	5	116588.333	0.000	395.006	395.597
	6	116588.333	-7.375	394.890	395.479
	7	116588.333	-14.750	394.775	395.353
	8	116588.333	-22.125	394.660	395.222
	9	116588.333	-29.500	394.545	395.085
21A	1	116595.667	29.500	394.555	395.126
	2	116595.667	22.125	394.671	395.263
	3	116595.667	14.750	394.786	395.396
	4	116595.667	7.375	394.901	395.521
	5	116595.667	0.000	395.016	395.640
	6	116595.667	-7.375	394.901	395.521
	7	116595.667	-14.750	394.786	395.396
	8	116595.667	-22.125	394.671	395.263
	9	116595.667	-29.500	394.555	395.126
21B	1	116605.667	29.500	394.568	395.172
	2	116605.667	22.125	394.683	395.311
	3	116605.667	14.750	394.798	395.443
	4	116605.667	7.375	394.913	395.569
	5	116605.667	0.000	395.029	395.687
	6	116605.667	-7.375	394.913	395.569
	7	116605.667	-14.750	394.798	395.443
	8	116605.667	-22.125	394.683	395.311
	9	116605.667	-29.500	394.568	395.172
21C	1	116615.667	29.500	394.577	395.204
	2	116615.667	22.125	394.693	395.343
	3	116615.667	14.750	394.808	395.476
	4	116615.667	7.375	394.923	395.602
	5	116615.667	0.000	395.038	395.720
	6	116615.667	-7.375	394.923	395.602
	7	116615.667	-14.750	394.808	395.476
	8	116615.667	-22.125	394.693	395.343
	9	116615.667	-29.500	394.577	395.204
L21	1	116625.667	29.500	394.585	395.228
	2	116625.667	22.125	394.700	395.368
	3	116625.667	14.750	394.815	395.499
	4	116625.667	7.375	394.930	395.626
	5	116625.667	0.000	395.046	395.746
	6	116625.667	-7.375	394.930	395.626
	7	116625.667	-14.750	394.815	395.499
	8	116625.667	-22.125	394.700	395.368
	9	116625.667	-29.500	394.585	395.228
22A	1	116635.667	29.500	394.590	395.261
	2	116635.667	22.125	394.705	395.400
	3	116635.667	14.750	394.820	395.533
	4	116635.667	7.375	394.935	395.660
	5	116635.667	0.000	395.051	395.779
	6	116635.667	-7.375	394.935	395.660
	7	116635.667	-14.750	394.820	395.533
	8	116635.667	-22.125	394.705	395.400
	9	116635.667	-29.500	394.590	395.261
22B	1	116645.667	29.500	394.592	395.290
	2	116645.667	22.125	394.707	395.428
	3	116645.667	14.750	394.822	395.560
	4	116645.667	7.375	394.938	395.687
	5	116645.667	0.000	395.053	395.806
	6	116645.667	-7.375	394.938	395.687
	7	116645.667	-14.750	394.822	395.560
	8	116645.667	-22.125	394.707	395.428
	9	116645.667	-29.500	394.592	395.290
22C	1	116655.667	29.500	394.592	395.307
	2	116655.667	22.125	394.707	395.445
	3	116655.667	14.750	394.822	395.577
	4	116655.667	7.375	394.937	395.704
	5	116655.667	0.000	395.053	395.823
	6	116655.667	-7.375	394.937	395.704
	7	116655.667	-14.750	394.822	395.577
	8	116655.667	-22.125	394.707	395.445
	9	116655.667	-29.500	394.592	395.307
L22	1	116663.000	29.500	394.590	395.317
	2	116663.000	22.125	394.705	395.454
	3	116663.000	14.750	394.821	395.586
	4	116663.000	7.375	394.936	395.712
	5	116663.000	0.000	395.051	395.832
	6	116663.000	-7.375	394.936	395.712
	7	116663.000	-14.730	394.821	395.586
	8	116663.000	-22.125	394.705	395.454
	9	116663.000	-29.500	394.590	395.317
23A	1	116670.333	29.500	394.587	395.333
	2	116670.333	22.125	394.702	395.472
	3	116670.333	14.750	394.817	395.603
	4	116670.333	7.375	394.933	395.730
	5	116670.333	0.000	395.048	395.848
	6	116670.333	-7.375	394.933	395.720
	7	116670.333	-14.750	394.817	395.603
	8	116670.333	-22.125	394.702	395.472
	9	116670.333	-29.500	394.587	395.333

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
23B	1	116680.333	29.500	394.581	395.352
	2	116680.333	22.125	394.696	395.490
	3	116680.333	14.750	394.811	395.623
	4	116680.333	7.375	394.926	395.749
	5	116680.333	0.000	395.042	395.868
	6	116680.333	-7.375	394.926	395.749
	7	116680.333	-14.750	394.811	395.623
	8	116680.333	-22.125	394.696	395.490
	9	116680.333	-29.500	394.581	395.352
23C	1	116690.333	29.500	394.572	395.359
	2	116690.333	22.125	394.687	395.497
	3	116690.333	14.750	394.802	395.630
	4	116690.333	7.375	394.918	395.756
	5	116690.333	0.000	395.033	395.875
	6	116690.333	-7.375	394.918	395.756
	7	116690.333	-14.750	394.802	395.630
	8	116690.333	-22.125	394.687	395.497
	9	116690.333	-29.500	394.572	395.359
L23	1	116700.333	29.500	394.560	395.360
	2	116700.333	22.125	394.676	395.498
	3	116700.333	14.750	394.791	395.631
	4	116700.333	7.375	394.906	395.758
	5	116700.333	0.000	395.021	395.876
	6	116700.333	-7.375	394.906	395.758
	7	116700.333	-14.750	394.791	395.631
	8	116700.333	-22.125	394.676	395.498
	9	116700.333	-29.500	394.560	395.360
24A	1	116710.333	29.500	394.547	395.365
	2	116710.333	22.125	394.662	395.502
	3	116710.333	14.750	394.777	395.635
	4	116710.333	7.375	394.892	395.760
	5	116710.333	0.000	395.008	395.880
	6	116710.333	-7.375	394.892	395.760
	7	116710.333	-14.750	394.777	395.635
	8	116710.333	-22.125	394.662	395.502
	9	116710.333	-29.500	394.547	395.365
24B	1	116720.333	29.500	394.530	395.362
	2	116720.333	22.125	394.646	395.498
	3	116720.333	14.750	394.761	395.630
	4	116720.333	7.375	394.876	395.755
	5	116720.333	0.000	394.991	395.874
	6	116720.333	-7.375	394.876	395.755
	7	116720.333	-14.750	394.761	395.630
	8	116720.333	-22.125	394.646	395.498
	9	116720.333	-29.500	394.530	395.362
24C	1	116730.333	29.500	394.511	395.342
	2	116730.333	22.125	394.627	395.478
	3	116730.333	14.750	394.742	395.609
	4	116730.333	7.375	394.857	395.734
	5	116730.333	0.000	394.972	395.853
	6	116730.333	-7.375	394.857	395.734
	7	116730.333	-14.750	394.742	395.609
	8	116730.333	-22.125	394.627	395.478
	9	116730.333	-29.500	394.511	395.342
℄ OPEN JOINT	1	116731.937	29.500	394.508	395.338
	2	116731.937	22.125	394.623	395.474
	3	116731.937	14.750	394.739	395.605
	4	116731.937	7.375	394.854	395.730
	5	116731.937	0.000	394.969	395.849
	6	116731.937	-7.375	394.854	395.730
	7	116731.937	-14.750	394.739	395.605
	8	116731.937	-22.125	394.623	395.474
	9	116731.937	-29.500	394.508	395.338
L24	1	116737.667	29.500	394.496	395.334
	2	116737.667	22.125	394.611	395.470
	3	116737.667	14.750	394.727	395.601
	4	116737.667	7.375	394.842	395.727
	5	116737.667	0.000	394.957	395.845
	6	116737.667	-7.375	394.842	395.727
	7	116737.667	-14.750	394.727	395.601
	8	116737.667	-22.125	394.611	395.470
	9	116737.667	-29.500	394.496	395.334
25A	1	116745.000	29.500	394.479	395.331
	2	116745.000	22.125	394.595	395.468
	3	116745.000	14.750	394.710	395.600
	4	116745.000	7.375	394.825	395.726
	5	116745.000	0.000	394.940	395.844
	6	116745.000	-7.375	394.825	395.726
	7	116745.000	-14.750	394.710	395.600
	8	116745.000	-22.125	394.595	395.468
	9	116745.000	-29.500	394.479	395.331
25B	1	116755.000	29.500	394.464	395.319
	2	116755.000	22.125	394.579	395.458
	3	116755.000	14.750	394.685	395.590
	4	116755.000	7.375	394.800	395.716
	5	116755.000	0.000	394.915	395.834
	6	116755.000	-7.375	394.800	395.716
	7	116755.000	-14.750	394.685	395.590
	8	116755.000	-22.125	394.570	395.458
	9	116755.000	-29.500	394.454	395.319

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
25C	1	116765.000	29.500	394.427	395.293
	2	116765.000	22.125	394.542	395.431
	3	116765.000	14.750	394.657	395.564
	4	116765.000	7.375	394.773	395.690
	5	116765.000	0.000	394.888	395.808
	6	116765.000	-7.375	394.773	395.690
	7	116765.000	-14.750	394.657	395.564
	8	116765.000	-22.125	394.542	395.431
	9	116765.000	-29.500	394.427	395.293
L25	1	116775.000	29.500	394.397	395.259
	2	116775.000	22.125	394.512	395.398
	3	116775.000	14.750	394.627	395.531
	4	116775.000	7.375	394.743	395.657
	5	116775.000	0.000	394.858	395.776
	6	116775.000	-7.375	394.743	395.657
	7	116775.000	-14.750	394.627	395.531
	8	116775.000	-22.125	394.512	395.398
	9	116775.000	-29.500	394.397	395.259
25C'	1	116785.000	29.500	394.364	395.227
	2	116785.000	22.125	394.480	395.365
	3	116785.000	14.750	394.595	395.498
	4	116785.000	7.375	394.710	395.624
	5	116785.000	0.000	394.825	395.743
	6	116785.000	-7.375	394.710	395.624
	7	116785.000	-14.750	394.595	395.498
	8	116785.000	-22.125	394.480	395.365
	9	116785.000	-29.500	394.364	395.227
25B'	1	116795.000	29.500	394.329	395.189
	2	116795.000	22.125	394.445	395.327
	3	116795.000	14.750	394.560	395.459
	4	116795.000	7.375	394.675	395.586
	5	116795.000	0.000	394.790	395.705
	6	116795.000	-7.375	394.675	395.586
	7	116795.000	-14.750	394.560	395.459
	8	116795.000	-22.125	394.445	395.327
	9	116795.000	-29.500	394.329	395.189
25A'	1	116805.000	29.500	394.292	395.140
	2	116805.000	22.125	394.407	395.278
	3	116805.000	14.750	394.522	395.410
	4	116805.000	7.375	394.638	395.537
	5	116805.000	0.000	394.753	395.656
	6	116805.000	-7.375	394.638	395.537
	7	116805.000	-14.750	394.522	395.410
	8	116805.000	-22.125	394.407	395.278
	9	116805.000	-29.500	394.292	395.140
L'24	1	116812.333	29.500	394.263	395.101
	2	116812.333	22.125	394.378	395.238
	3	116812.333	14.750	394.493	395.371
	4	116812.333	7.375	394.608	395.498
	5	116812.333	0.000	394.724	395.616
	6	116812.333	-7.375	394.608	395.498
	7	116812.333	-14.750	394.493	395.371
	8	116812.333	-22.125	394.378	395.238
	9	116812.333	-29.500	394.263	395.101
24C'	1	116819.667	29.500	394.232	395.069
	2	116819.667	22.125	394.348	395.206
	3	116819.667	14.750	394.463	395.339
	4	116819.667	7.375	394.578	395.465
	5	116819.667	0.000	394.693	395.584
	6	116819.667	-7.375	394.578	395.465
	7	116819.667	-14.750	394.463	395.339
	8	116819.667	-22.125	394.348	395.206
	9	116819.667	-29.500	394.232	395.069
24B'	1	116829.667	29.500	394.189	395.020
	2	116829.667	22.125	394.304	395.158
	3	116829.667	14.750	394.419	395.291
	4	116829.667	7.375	394.534	395.417
	5	116829.667	0.000	394.650	395.536
	6	116829.667	-7.375	394.534	395.417
	7	116829.667	-14.750	394.419	395.291
	8	116829.667	-22.125	394.304	395.158
	9	116829.667	-29.500	394.189	395.020

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-10-()F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	102-10-1) F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	56
F.A.I.M.&R.S. NO. 4 / F.A.I.M.&R.S. NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9(10)	

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
24A'	1	116839.667	29.500	394.142	394.960
	2	116839.667	22.125	394.258	395.098
	3	116839.667	14.750	394.373	395.231
	4	116839.667	7.375	394.488	395.357
	5	116839.667	0.000	394.603	395.476
	6	116839.667	-7.375	394.488	395.357
	7	116839.667	-14.750	394.373	395.231
	8	116839.667	-22.125	394.258	395.098
	9	116839.667	-29.500	394.142	394.960
L'23	1	116849.667	29.500	394.094	394.893
	2	116849.667	22.125	394.209	395.032
	3	116849.667	14.750	394.324	395.164
	4	116849.667	7.375	394.440	395.291
	5	116849.667	0.000	394.555	395.411
	6	116849.667	-7.375	394.440	395.291
	7	116849.667	-14.750	394.324	395.164
	8	116849.667	-22.125	394.209	395.032
	9	116849.667	-29.500	394.094	394.893
23C'	1	116859.667	29.500	394.043	394.829
	2	116859.667	22.125	394.158	394.966
	3	116859.667	14.750	394.273	395.099
	4	116859.667	7.375	394.388	395.224
	5	116859.667	0.000	394.504	395.343
	6	116859.667	-7.375	394.388	395.224
	7	116859.667	-14.750	394.273	395.099
	8	116859.667	-22.125	394.158	394.966
	9	116859.667	-29.500	394.043	394.829
23B'	1	116869.667	29.500	393.989	394.755
	2	116869.667	22.125	394.104	394.891
	3	116869.667	14.750	394.219	395.023
	4	116869.667	7.375	394.335	395.148
	5	116869.667	0.000	394.450	395.267
	6	116869.667	-7.375	394.335	395.148
	7	116869.667	-14.750	394.219	395.023
	8	116869.667	-22.125	394.104	394.891
	9	116869.667	-29.500	393.989	394.755
23A'	1	116879.667	29.500	393.933	394.666
	2	116879.667	22.125	394.048	394.802
	3	116879.667	14.750	394.163	394.933
	4	116879.667	7.375	394.279	395.058
	5	116879.667	0.000	394.394	395.177
	6	116879.667	-7.375	394.279	395.058
	7	116879.667	-14.750	394.163	394.933
	8	116879.667	-22.125	394.048	394.802
	9	116879.667	-29.500	393.933	394.666
‡ OPEN JOINT	1	116881.271	29.500	393.924	394.650
	2	116881.271	22.125	394.039	394.787
	3	116881.271	14.750	394.154	394.918
	4	116881.271	7.375	394.269	395.042
	5	116881.271	0.000	394.385	395.162
	6	116881.271	-7.375	394.269	395.042
	7	116881.271	-14.750	394.154	394.918
	8	116881.271	-22.125	394.039	394.787
	9	116881.271	-29.500	393.924	394.650
L'22	1	116887.000	29.500	393.890	394.619
	2	116887.000	22.125	394.005	394.752
	3	116887.000	14.750	394.120	394.883
	4	116887.000	7.375	394.236	395.008
	5	116887.000	0.000	394.351	395.127
	6	116887.000	-7.375	394.236	395.008
	7	116887.000	-14.750	394.120	394.883
	8	116887.000	-22.125	394.005	394.752
	9	116887.000	-29.500	393.890	394.619
22C'	1	116894.333	29.500	393.846	394.564
	2	116894.333	22.125	393.961	394.701
	3	116894.333	14.750	394.076	394.834
	4	116894.333	7.375	394.192	394.959
	5	116894.333	0.000	394.307	395.078
	6	116894.333	-7.375	394.192	394.959
	7	116894.333	-14.750	394.076	394.834
	8	116894.333	-22.125	393.961	394.701
	9	116894.333	-29.500	393.846	394.564
22B'	1	116904.333	29.500	393.784	394.487
	2	116904.333	22.125	393.899	394.625
	3	116904.333	14.750	394.014	394.758
	4	116904.333	7.375	394.129	394.883
	5	116904.333	0.000	394.245	395.002
	6	116904.333	-7.375	394.129	394.883
	7	116904.333	-14.750	394.014	394.758
	8	116904.333	-22.125	393.899	394.625
	9	116904.333	-29.500	393.784	394.487
22A'	1	116914.333	29.500	393.719	394.395
	2	116914.333	22.125	393.834	394.533
	3	116914.333	14.750	393.949	394.666
	4	116914.333	7.375	394.064	394.791
	5	116914.333	0.000	394.180	394.911
	6	116914.333	-7.375	394.064	394.791
	7	116914.333	-14.750	393.949	394.666
	8	116914.333	-22.125	393.834	394.533
	9	116914.333	-29.500	393.719	394.395

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'21	1	116924.333	29.500	393.[illegible]	394.295
	2	116924.333	22.125	393.[illegible]	394.434
	3	116924.333	14.750	393.582	394.566
	4	116924.333	7.375	393.997	394.693
	5	116924.333	0.000	394.112	394.812
	6	116924.333	-7.375	393.997	394.693
	7	116924.333	-14.750	393.882	394.566
	8	116924.333	-22.125	393.767	394.434
	9	116924.333	-29.500	393.651	394.295
21C'	1	116934.333	29.500	393.582	394.205
	2	116934.333	22.125	393.697	394.343
	3	116934.333	14.750	393.812	394.476
	4	116934.333	7.375	393.927	394.602
	5	116934.333	0.000	394.043	394.722
	6	116934.333	-7.375	393.927	394.602
	7	116934.333	-14.750	393.[illegible]	394.476
	8	116934.333	-22.125	393.697	394.343
	9	116934.333	-29.500	393.582	394.205
21B'	1	116944.333	29.500	393.509	394.109
	2	116944.333	22.125	393.624	394.247
	3	116944.333	14.750	393.740	394.379
	4	116944.333	7.375	393.855	394.506
	5	116944.333	0.000	393.970	394.625
	6	116944.333	-7.375	393.855	394.506
	7	116944.333	-14.750	393.740	394.379
	8	116944.333	-22.125	393.624	394.247
	9	116944.333	-29.500	393.509	394.109
21A'	1	116954.333	29.500	393.434	394.001
	2	116954.333	22.125	393.550	394.139
	3	116954.333	14.750	393.665	394.271
	4	116954.333	7.375	393.780	394.398
	5	116954.333	0.000	393.895	394.517
	6	116954.333	-7.375	393.780	394.398
	7	116954.333	-14.750	393.665	394.271
	8	116954.333	-22.125	393.550	394.139
	9	116954.333	-29.500	393.434	394.001
L'20	1	116961.667	29.500	393.378	393.720
	2	116961.667	22.125	393.493	394.057
	3	116961.667	14.750	393.608	394.189
	4	116961.667	7.375	393.724	394.316
	5	116961.667	0.000	393.839	394.439
	6	116961.667	-7.375	393.724	394.316
	7	116961.667	-14.750	393.608	394.189
	8	116961.667	-22.125	393.493	394.057
	9	116961.667	-29.500	393.378	393.920
20C'	1	116969.000	29.500	393.320	393.843
	2	116969.000	22.125	393.435	393.981
	3	116969.000	14.750	393.551	394.114
	4	116969.000	7.375	393.666	394.239
	5	116969.000	0.000	393.781	394.359
	6	116969.000	-7.375	393.666	394.239
	7	116969.000	-14.750	393.551	394.114
	8	116969.000	-22.125	393.435	393.981
	9	116969.000	-29.500	393.320	393.843
20B'	1	116979.000	29.500	393.239	393.735
	2	116979.000	22.125	393.354	393.874
	3	116979.000	14.750	393.470	394.006
	4	116979.000	7.375	393.585	394.132
	5	116979.000	0.000	393.700	394.251
	6	116979.000	-7.375	393.585	394.132
	7	116979.000	-14.750	393.470	394.006
	8	116979.000	-22.125	393.354	393.874
	9	116979.000	-29.500	393.239	393.735
20A'	1	116989.000	29.500	393.156	393.616
	2	116989.000	22.125	393.271	393.753
	3	116989.000	14.750	393.386	393.887
	4	116989.000	7.375	393.501	394.013
	5	116989.000	0.000	393.617	394.132
	6	116989.000	-7.375	393.501	394.013
	7	116989.000	-14.750	393.386	393.887
	8	116989.000	-22.125	393.271	393.753
	9	116989.000	-29.500	393.156	393.616
L'19	1	116999.000	29.500	393.070	393.490
	2	116999.000	22.125	393.185	393.628
	3	116999.000	14.750	393.300	393.762
	4	116999.000	7.375	393.415	393.888
	5	116999.000	0.000	393.531	394.006
	6	116999.000	-7.375	393.415	393.888
	7	116999.000	-14.750	393.300	393.762
	8	116999.000	-22.125	393.185	393.628
	9	116999.000	-29.500	393.070	393.490
19C'	1	117009.000	29.500	392.981	393.380
	2	117009.000	22.125	393.096	393.517
	3	117009.000	14.750	393.212	393.650
	4	117009.000	7.375	393.327	393.775
	5	117009.000	0.000	393.442	393.894
	6	117009.000	-7.375	393.327	393.775
	7	117009.000	-14.750	393.212	393.650
	8	117009.000	-22.125	393.096	393.517
	9	117009.000	-29.500	392.981	393.380

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
19B'	1	117019.000	29.500	392.890	393.261
	2	117019.000	22.125	393.005	393.397
	3	117019.000	14.750	393.121	393.528
	4	117019.000	7.375	393.236	393.654
	5	117019.000	0.000	393.351	393.773
	6	117019.000	-7.375	393.236	393.654
	7	117019.000	-14.750	393.121	393.528
	8	117019.000	-22.125	393.005	393.397
	9	117019.000	-29.500	392.890	393.261
19A'	1	117029.000	29.500	392.797	393.125
	2	117029.000	22.125	392.912	393.261
	3	117029.000	14.750	393.027	393.392
	4	117029.000	7.375	393.142	393.517
	5	117029.000	0.000	393.258	393.636
	6	117029.000	-7.375	393.[illegible]	393.517
	7	117029.000	-14.750	393.027	393.392
	8	117029.000	-22.125	392.912	393.261
	9	117029.000	-29.500	392.797	393.125
‡ OPEN JOINT	1	117030.604	29.500	392.781	393.102
	2	117030.604	22.125	392.897	393.238
	3	117030.604	14.750	393.012	393.370
	4	117030.604	7.375	393.127	393.494
	5	117030.604	0.000	393.242	393.613
	6	117030.604	-7.375	393.127	393.494
	7	117030.604	-14.750	393.012	393.370
	8	117030.604	-22.125	392.897	393.238
	9	117030.604	-29.500	392.781	393.102
L'18	1	117036.333	29.500	392.726	393.032
	2	117036.333	22.125	392.842	393.168
	3	117036.333	14.750	392.957	393.299
	4	117036.333	7.375	393.072	393.425
	5	117036.333	0.000	393.187	393.543
	6	117036.333	-7.375	393.072	393.425
	7	117036.333	-14.750	392.957	393.299
	8	117036.333	-22.125	392.842	393.168
	9	117036.333	-29.500	392.726	393.032
18C'	1	117043.667	29.500	392.655	392.954
	2	117043.667	22.125	392.770	393.091
	3	117043.667	14.750	392.885	393.223
	4	117043.667	7.375	393.001	393.349
	5	117043.667	0.000	393.116	393.467
	6	117043.667	-7.375	393.001	393.349
	7	117043.667	-14.750	392.885	393.223
	8	117043.667	-22.125	392.770	393.091
	9	117043.667	-29.500	392.655	392.954
18B'	1	117053.667	29.500	392.555	392.840
	2	117053.667	22.125	392.671	392.979
	3	117053.667	14.750	392.786	393.110
	4	117053.667	7.375	392.901	393.236
	5	117053.667	0.000	393.016	393.355
	6	117053.667	-7.375	392.901	393.236
	7	117053.667	-14.750	392.786	393.110
	8	117053.667	-22.125	392.671	392.978
	9	117053.667	-29.500	392.[illegible]	392.840
18A'	1	117069.667	29.500	392.653	392.711
	2	117069.667	22.125	392.768	392.849
	3	117063.667	14.750	392.684	392.982
	4	117063.667	7.375	392.799	393.108
	5	117063.667	0.000	392.914	393.227
	6	117063.667	-7.375	392.799	393.108
	7	117063.667	-14.750	392.684	392.982
	8	117063.667	-22.125	392.768	392.849
	9	117063.667	-29.500	392.653	392.711
17B'	1	117073.667	29.500	392.548	392.574
	2	117073.667	22.125	392.664	392.714
	3	117073.667	14.750	392.579	392.846
	4	117073.667	7.375	392.694	392.973
	5	117073.667	0.000	392.809	393.092
	6	117073.667	-7.375	392.694	392.973
	7	117073.667	-14.750	392.579	392.846
	8	117073.667	-22.125	392.664	392.714
	9	117073.667	-29.500	392.548	392.575
17C'	1	117083.667	29.500	392.241	392.447
	2	117083.667	22.125	392.357	392.586
	3	117083.667	14.750	392.472	392.719
	4	117083.667	7.375	392.587	392.846
	5	117083.667	0.000	392.702	392.964
	6	117083.667	-7.375	392.587	392.846
	7	117083.667	-14.750	392.472	392.719
	8	117083.667	-22.125	392.357	392.586
	9	117083.667	-29.500	392.241	392.447
17A'	1	117093.667	29.500	392.132	392.319
	2	117093.667	22.125	392.247	392.453
	3	117093.667	14.750	392.362	392.585
	4	117093.667	7.375	392.477	392.712
	5	117093.667	0.000	392.593	392.831
	6	117093.667	-7.375	392.477	392.712
	7	117093.667	-14.750	392.362	392.585
	8	117093.667	-22.125	392.247	392.453
	9	117093.667	-29.500	392.132	392.319

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'16	1	117111.000	29.500	391.956	392.083
	2	117111.000	22.125	392.051	392.201
	3	117111.000	14.750	392.166	392.333
	4	117111.000	7.375	392.281	392.460
	5	117111.000	0.000	392.397	392.578
	6	117111.000	-7.375	392.281	392.460
	7	117111.000	-14.750	392.166	392.333
	8	117111.000	-22.125	392.051	392.201
	9	117111.000	-29.500	391.936	392.064
16C'	1	117118.333	29.500	391.850	391.974
	2	117118.333	22.125	391.966	392.112
	3	117118.333	14.750	392.081	392.244
	4	117118.333	7.375	392.196	392.370
	5	117118.333	0.000	392.311	392.489
	6	117118.333	-7.375	392.196	392.370
	7	117118.333	-14.750	392.081	392.244
	8	117118.333	-22.125	391.966	392.112
	9	117118.333	-29.500	391.850	391.974
16B'	1	117128.333	29.500	391.732	391.847
	2	117128.333	22.125	391.847	391.986
	3	117128.333	14.750	391.963	392.118
	4	117128.333	7.375	392.078	392.245
	5	117128.333	0.000	392.193	392.386
	6	117128.333	-7.375	392.078	392.245
	7	117128.333	-14.750	391.963	392.118
	8	117128.333	-22.125	391.847	391.986
	9	117128.333	-29.500	391.732	391.847
16A'	1	117138.333	29.500	391.611	391.710
	2	117138.333	22.125	391.726	391.848
	3	117138.333	14.750	391.842	391.981
	4	117138.333	7.375	391.957	392.107
	5	117138.333	0.000	392.072	392.226
	6	117138.333	-7.375	391.957	392.107
	7	117138.333	-14.750	391.842	391.981
	8	117138.333	-22.125	391.726	391.848
	9	117138.333	-29.500	391.611	391.710
L'15	1	117148.333	29.500	391.488	391.565
	2	117148.333	22.125	391.603	391.709
	3	117148.333	14.750	391.718	391.837
	4	117148.333	7.375	391.834	391.984
	5	117145.333	0.000	391.949	392.081
	6	117148.333	-7.375	391.834	391.984
	7	117148.333	-14.750	391.718	391.837
	8	117148.333	-22.125	391.603	391.709
	9	117148.333	-29.500	391.488	391.565
15C'	1	117158.333	29.500	391.362	391.425
	2	117158.333	22.125	391.477	391.560
	3	117158.333	14.750	391.593	391.692
	4	117158.333	7.375	391.708	391.817
	5	117158.333	0.000	391.823	391.936
	6	117158.333	-7.375	391.708	391.817
	7	117158.333	-14.750	391.593	391.692
	8	117158.333	-22.125	391.477	391.560
	9	117158.333	-29.500	391.362	391.425
15B'	1	117168.333	29.500	391.234	391.276
	2	117168.333	22.125	391.349	391.410
	3	117168.333	14.750	391.464	391.539
	4	117168.333	7.375	391.579	391.663
	5	117168.333	0.000	391.695	391.781
	6	117168.333	-7.375	391.579	391.663
	7	117168.333	-14.750	391.464	391.539
	8	117168.333	-22.125	391.349	391.410
	9	117168.333	-29.500	391.234	391.276

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 E. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	100-10-1 F.A.S.	ALEXANDER ILLINOIS / PULASKI MISSOURI	81	57
FUNCTIONAL REG NO 6 / FUNCTIONAL REG NO 5		ILLINOIS / MISSOURI	PROJECT I-57-9(10)	

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
15A'	1	117178.333	29.500	391.103	391.113
	2	117178.333	22.125	391.218	391.243
	3	117178.333	14.750	391.293	391.371
	4	117178.333	7.375	391.449	391.494
	5	117178.333	0.000	391.564	391.612
	6	117178.333	-7.375	391.449	391.494
	7	117178.333	-14.750	391.293	391.371
	8	117178.333	-22.125	391.218	391.243
	9	117178.333	-29.500	391.103	391.113
℄ OPEN JOINT	1	117179.938	29.500	391.082	391.086
	2	117179.938	22.125	391.197	391.215
	3	117179.938	14.750	391.312	391.343
	4	117179.938	7.375	391.427	391.466
	5	117179.938	0.000	391.543	391.583
	6	117179.938	-7.375	391.427	391.466
	7	117179.938	-14.750	391.312	391.343
	8	117179.938	-22.125	391.197	391.215
	9	117179.938	-29.500	391.082	391.086

SPAN 14

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'14	1	117185.667	29.500	391.005	391.015
	2	117185.667	22.125	391.121	391.146
	3	117185.667	14.750	391.236	391.274
℄ PIER 13	4	117185.667	7.375	391.351	391.399
	5	117185.667	0.000	391.466	391.516
	6	117185.667	-7.375	391.351	391.399
	7	117185.667	-14.750	391.236	391.274
	8	117185.667	-22.125	391.121	391.146
	9	117185.667	-29.500	391.005	391.015
14C'	1	117192.583	29.500	390.912	390.938
	2	117192.583	22.125	391.027	391.071
	3	117192.583	14.750	391.143	391.200
	4	117192.583	7.375	391.258	391.324
	5	117192.583	0.000	391.375	391.442
	6	117192.583	-7.375	391.258	391.324
	7	117192.583	-14.750	391.143	391.200
	8	117192.583	-22.125	391.027	391.071
	9	117192.583	-29.500	390.912	390.938
14B'	1	117202.583	29.500	390.775	390.820
	2	117202.583	22.125	390.890	390.954
	3	117202.583	14.750	391.006	391.086
	4	117202.583	7.375	391.121	391.210
	5	117202.583	0.000	391.236	391.329
	6	117202.583	-7.375	391.121	391.210
	7	117202.583	-14.750	391.006	391.086
	8	117202.583	-22.125	390.890	390.954
	9	117202.583	-29.500	390.775	390.820
14A'	1	117212.583	29.500	390.636	390.686
	2	117212.583	22.125	390.751	390.823
	3	117212.583	14.750	390.866	390.956
	4	117212.583	7.375	390.982	391.081
	5	117212.583	0.000	391.097	391.200
	6	117212.583	-7.375	390.982	391.081
	7	117212.583	-14.750	390.866	390.956
	8	117212.583	-22.125	390.751	390.823
	9	117212.583	-29.500	390.636	390.686
L'15	1	117222.583	29.500	390.494	390.545
	2	117222.583	22.125	390.609	390.683
	3	117222.583	14.750	390.724	390.816
	4	117222.583	7.375	390.840	390.942
	5	117222.583	0.000	390.955	391.061
	6	117222.583	-7.375	390.840	390.942
	7	117222.583	-14.750	390.724	390.816
	8	117222.583	-22.125	390.609	390.683
	9	117222.583	-29.500	390.494	390.545
13C'	1	117232.583	29.500	390.350	390.416
	2	117232.583	22.125	390.465	390.555
	3	117232.583	14.750	390.580	390.668
	4	117232.583	7.375	390.695	390.814
	5	117232.583	0.000	390.811	390.932
	6	117232.583	-7.375	390.695	390.814
	7	117232.583	-14.750	390.580	390.688
	8	117232.583	-22.125	390.465	390.555
	9	117232.583	-29.500	390.350	390.416
13B'	1	117242.583	29.500	390.203	390.281
	2	117242.583	22.125	390.318	390.419
	3	117242.583	14.750	390.433	390.552
	4	117242.583	7.375	390.548	390.679
	5	117242.583	0.000	390.664	390.797
	6	117242.583	-7.375	390.548	390.679
	7	117242.583	-14.750	390.433	390.552
	8	117242.583	-22.125	390.318	390.419
	9	117242.583	-29.500	390.203	390.281

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
13A'	1	117252.583	29.500	390.053	390.135
	2	117252.583	22.125	390.169	390.272
	3	117252.583	14.750	390.284	390.405
	4	117252.583	7.375	390.399	390.531
	5	117252.583	0.000	390.514	390.650
	6	117252.583	-7.375	390.399	390.531
	7	117252.583	-14.750	390.284	390.405
	8	117252.583	-22.125	390.169	390.272
	9	117252.583	-29.500	390.053	390.135
L'12	1	117259.500	29.500	389.948	390.031
	2	117259.500	22.125	390.064	390.169
	3	117259.500	14.750	390.179	390.301
	4	117259.500	7.375	390.294	390.427
	5	117259.500	0.000	390.409	390.546
	6	117259.500	-7.375	390.294	390.427
	7	117259.500	-14.750	390.179	390.301
	8	117259.500	-22.125	390.064	390.169
	9	117259.500	-29.500	389.948	390.031
12C'	1	117266.417	29.500	389.842	389.942
	2	117266.417	22.125	389.958	390.078
	3	117266.417	14.750	390.073	390.212
	4	117266.417	7.375	390.188	390.338
	5	117266.417	0.000	390.303	390.457
	6	117266.417	-7.375	390.188	390.338
	7	117266.417	-14.750	390.073	390.212
	8	117266.417	-22.125	389.958	390.078
	9	117266.417	-29.500	389.842	389.942
12B'	1	117276.417	29.500	389.687	389.809
	2	117276.417	22.125	389.802	389.947
	3	117276.417	14.750	389.918	390.080
	4	117276.417	7.375	390.033	390.207
	5	117276.417	0.000	390.148	390.325
	6	117276.417	-7.375	390.033	390.207
	7	117276.417	-14.750	389.918	390.080
	8	117276.417	-22.125	389.802	389.947
	9	117276.417	-29.500	389.687	389.809
12A'	1	117286.417	29.500	389.529	389.667
	2	117286.417	22.125	389.643	389.804
	3	117286.417	14.750	389.760	389.938
	4	117286.417	7.375	389.875	390.064
	5	117286.417	0.000	389.990	390.183
	6	117286.417	-7.375	389.875	390.064
	7	117286.417	-14.750	389.760	389.936
	8	117286.417	-22.125	389.645	389.804
	9	117286.417	-29.500	389.529	389.667
L'11	1	117296.417	29.500	389.369	389.516
	2	117296.417	22.125	389.485	389.655
	3	117296.417	14.750	389.599	389.786
	4	117296.417	7.375	389.714	389.914
	5	117296.417	0.000	389.830	390.032
	6	117296.417	-7.375	389.715	389.914
	7	117296.417	-14.750	389.599	389.788
	8	117296.417	-22.125	389.484	389.655
	9	117296.417	-29.500	389.369	389.516
11C'	1	117306.417	29.500	389.206	389.378
	2	117306.417	22.125	389.321	389.515
	3	117306.417	14.750	389.437	389.647
	4	117306.417	7.375	389.552	389.773
	5	117306.417	0.000	389.667	389.892
	6	117306.417	-7.375	389.552	389.773
	7	117306.417	-14.750	389.437	389.647
	8	117306.417	-22.125	389.321	389.515
	9	117306.417	-29.500	389.206	389.379
11B'	1	117316.417	29.500	389.041	389.231
	2	117316.417	22.125	389.156	389.367
	3	117316.417	14.750	389.271	389.498
	4	117316.417	7.375	389.386	389.624
	5	117316.417	0.000	389.502	389.743
	6	117316.417	-7.375	389.386	389.624
	7	117316.417	-14.750	389.271	389.495
	8	117316.417	-22.125	389.156	389.367
	9	117316.417	-29.500	389.041	389.231
11A'	1	117326.417	29.500	388.873	389.066
	2	117326.417	22.125	388.988	389.202
	3	117326.417	14.750	389.103	389.333
	4	117326.417	7.375	389.219	389.458
	5	117326.417	0.000	389.334	389.577
	6	117326.417	-7.375	389.219	389.458
	7	117326.417	-14.750	389.103	389.333
	8	117326.417	-22.125	388.988	389.202
	9	117326.417	-29.500	388.873	389.066
℄ OPEN JOINT	1	117327.604	29.500	388.853	389.045
	2	117327.604	22.125	388.968	389.181
	3	117327.604	14.750	389.083	389.312
	4	117327.604	7.375	389.198	389.438
	5	117327.604	0.000	389.314	389.556
	6	117327.604	-7.375	389.198	389.438
	7	117327.604	-14.750	389.083	389.312
	8	117327.604	-22.125	388.968	389.181
	9	117327.604	-29.500	388.853	389.045

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'10	1	117333.333	29.500	388.755	388.959
	2	117333.333	22.125	388.871	389.096
	3	117333.333	14.750	388.986	389.227
	4	117333.333	7.375	389.101	389.353
	5	117333.333	0.000	389.216	389.470
	6	117333.333	-7.375	389.101	389.353
	7	117333.333	-14.750	388.986	389.227
	8	117333.333	-22.125	388.871	389.096
	9	117333.333	-29.500	388.755	388.959
10C'	1	117340.250	29.500	388.637	388.663
	2	117340.250	22.125	388.752	389.000
	3	117340.250	14.750	388.867	389.132
	4	117340.250	7.375	388.982	389.258
	5	117340.250	0.000	389.097	389.377
	6	117340.250	-7.375	388.982	389.258
	7	117340.250	-14.750	388.867	389.132
	8	117340.250	-22.125	388.752	389.000
	9	117340.250	-29.500	388.637	388.863
10B'	1	117350.250	29.500	388.463	388.718
	2	117350.250	22.125	388.578	388.855
	3	117350.250	14.750	388.693	388.988
	4	117350.250	7.375	388.808	389.113
	5	117350.250	0.000	388.924	389.233
	6	117350.250	-7.375	388.808	389.113
	7	117350.250	-14.750	388.693	388.988
	8	117350.250	-22.125	388.578	388.855
	9	117350.250	-29.500	388.463	388.718
10A'	1	117360.250	29.500	388.286	388.557
	2	117360.250	22.125	388.402	388.695
	3	117360.250	14.750	388.517	388.828
	4	117360.250	7.375	388.632	388.954
	5	117360.250	0.000	388.747	389.073
	6	117360.250	-7.375	388.632	388.954
	7	117360.250	-14.750	388.517	388.828
	8	117360.250	-22.125	388.402	388.695
	9	117360.250	-29.500	388.286	388.557
L'9	1	117370.250	29.500	388.108	388.388
	2	117370.250	22.125	388.223	388.527
	3	117370.250	14.750	388.338	388.660
	4	117370.250	7.375	388.453	388.787
	5	117370.250	0.000	388.569	388.905
	6	117370.250	-7.375	388.453	388.787
	7	117370.250	-14.750	388.338	388.660
	8	117370.250	-22.125	388.223	388.527
	9	117370.250	-29.500	388.108	388.388
9C'	1	117380.250	29.500	387.926	388.231
	2	117380.250	22.125	388.042	388.369
	3	117380.250	14.750	388.157	388.502
	4	117380.250	7.375	388.272	388.629
	5	117380.250	0.000	388.387	388.747
	6	117360.250	-7.375	388.272	388.629
	7	117380.250	-14.750	388.157	388.502
	8	117380.250	-22.125	388.042	388.369
	9	117380.250	-29.500	387.926	388.231
9B'	1	117390.250	29.500	387.742	388.046
	2	117390.250	22.125	387.856	388.206
	3	117390.250	14.750	387.973	388.338
	4	117390.250	7.375	388.088	388.465
	5	117390.250	0.000	388.204	388.586
	6	117390.250	-7.375	388.088	388.465
	7	117390.250	-14.750	387.973	388.338
	8	117390.250	-22.125	387.856	388.206
	9	117390.250	-29.500	387.742	388.068
9A'	1	117400.250	29.500	387.596	387.894
	2	117400.250	22.125	387.671	388.031
	3	117400.250	14.750	387.787	388.164
	4	117400.250	7.375	387.902	388.290
	5	117400.250	0.000	388.017	388.409
	6	117400.250	-7.375	387.902	388.290
	7	117400.250	-14.750	387.787	388.164
	8	117400.250	-22.125	387.671	388.031
	9	117400.250	-29.500	387.596	387.894
L'8	1	117407.167	29.500	387.426	387.771
	2	117407.167	22.125	387.541	387.909
	3	117407.167	14.750	387.656	388.040
	4	117407.167	7.375	387.772	388.167
	5	117407.167	0.000	387.887	388.286
	6	117407.167	-7.375	387.772	388.167
	7	117407.167	-14.750	387.656	388.040
	8	117407.167	-22.125	387.541	387.909
	9	117407.167	-29.500	387.426	387.771
8C'	1	117414.083	29.500	387.294	387.656
	2	117414.083	22.125	387.410	387.793
	3	117414.083	14.750	387.525	387.925
	4	117414.083	7.375	387.640	388.051
	5	117414.083	0.000	387.755	388.171
	6	117414.083	-7.375	387.640	388.051
	7	117414.083	-14.750	387.525	387.925
	8	117414.083	-22.125	387.410	387.793
	9	117414.083	-29.500	387.294	387.656

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8B'	1	117424.083	29.500	387.102	387.483
	2	117424.083	22.125	387.217	387.622
	3	117424.083	14.750	387.333	387.756
	4	117424.083	7.375	387.448	387.880
	5	117424.083	0.000	387.563	387.999
	6	117424.083	-7.375	387.448	387.880
	7	117424.083	-14.750	387.333	387.756
	8	117424.083	-22.125	387.217	387.622
	9	117424.083	-29.500	387.102	387.483
8A'	1	117434.083	29.500	386.907	387.299
	2	117434.083	22.125	387.023	387.438
	3	117434.083	14.750	387.138	387.570
	4	117434.083	7.375	387.253	387.696
	5	117434.083	0.000	387.368	387.816
	6	117434.083	-7.375	387.253	387.696
	7	117434.083	-14.750	387.138	387.570
	8	117434.083	-22.125	387.023	387.438
	9	117434.083	-29.500	386.907	387.299
L'7	1	117444.083	29.500	386.710	387.109
	2	117444.083	22.125	386.825	387.248
	3	117444.083	14.750	386.940	387.380
	4	117444.083	7.375	387.056	387.507
	5	117444.083	0.000	387.171	387.626
	6	117444.083	-7.375	387.056	387.507
	7	117444.083	-14.750	386.940	387.380
	8	117444.083	-22.125	386.825	387.248
	9	117444.083	-29.500	386.710	387.109
7C'	1	117454.083	29.500	386.510	386.926
	2	117454.083	22.125	386.625	387.063
	3	117454.083	14.750	386.741	387.196
	4	117454.083	7.375	386.856	387.322
	5	117454.083	0.000	386.971	387.440
	6	117454.083	-7.375	386.856	387.322
	7	117454.083	-14.750	386.741	387.196
	8	117454.083	-22.125	386.625	387.063
	9	117454.083	-29.500	386.510	386.926
7B'	1	117464.083	29.500	386.308	386.734
	2	117464.083	22.125	386.423	386.869
	3	117464.083	14.750	386.538	387.001
	4	117464.083	7.375	386.654	387.127
	5	117464.083	0.000	386.769	387.246
	6	117464.083	-7.375	386.654	387.127
	7	117464.083	-14.750	386.538	387.001
	8	117464.083	-22.125	386.423	386.869
	9	117464.083	-29.500	386.308	386.734
7A'	1	117474.083	29.500	386.103	386.524
	2	117474.083	22.125	386.219	386.660
	3	117474.083	14.750	386.334	386.792
	4	117474.083	7.375	386.449	386.916
	5	117474.083	0.000	386.564	387.036
	6	117474.083	-7.375	386.449	386.916
	7	117474.083	-14.750	386.334	386.792
	8	117474.083	-22.125	386.219	386.660
	9	117474.083	-29.500	386.103	386.524
℄ OPEN JOINT	1	117475.271	29.500	386.079	386.492
	2	117475.271	22.125	386.194	386.634
	3	117475.271	14.750	386.309	386.766
	4	117475.271	7.375	386.424	386.891
	5	117475.271	0.000	386.540	387.010
	6	117475.271	-7.375	386.424	386.891
	7	117475.271	-14.750	386.309	386.766
	8	117475.271	-22.125	386.194	386.634
	9	117475.271	-29.500	386.079	386.498
L'6	1	117481.000	29.500	385.960	386.386
	2	117481.000	22.125	386.075	386.522
	3	117481.000	14.750	386.191	386.654
	4	117481.000	7.375	386.306	386.779
	5	117481.000	0.000	386.421	386.898
	6	117481.000	-7.375	386.306	386.779
	7	117481.000	-14.750	386.191	386.654
	8	117481.000	-22.125	386.075	386.522
	9	117481.000	-29.500	385.960	386.386

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - S[illegible]12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-10-1 F&E	ALEXANDER (ILLINOIS)	MISSISSIPPI (MISSOURI)	81	58
F.A.M.A. RTE. NO.		ILLINOIS (MISSOURI)	PROJECT I-57-9(10)		
F.A.M.A. RTE. NO.					

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
5C'	1	117487.917	29.500	385.816	386.254
	2	117487.917	22.125	385.931	386.390
	3	117487.917	14.750	386.046	386.522
	4	117487.917	7.375	386.162	386.648
	5	117487.917	0.000	386.277	386.767
	6	117487.917	-7.375	386.162	386.648
	7	117487.917	-14.750	386.046	386.522
	8	117487.917	-22.125	385.931	386.390
	9	117487.917	-29.500	385.816	386.254
5B'	1	117497.917	29.500	385.605	386.054
	2	117497.917	22.125	385.720	386.191
	3	117497.917	14.750	385.838	386.324
	4	117497.917	7.375	385.951	386.469
	5	117497.917	0.000	386.066	386.569
	6	117497.917	-7.375	385.951	386.449
	7	117497.917	-14.750	385.836	386.324
	8	117497.917	-22.125	385.720	386.191
	9	117497.917	-29.500	385.605	386.054
6A'	1	117507.917	29.500	385.392	385.839
	2	117507.917	22.125	385.507	385.977
	3	117507.917	14.750	385.622	386.110
	4	117507.917	7.375	385.738	386.236
	5	117507.917	0.000	385.853	386.355
	6	117507.917	-7.375	385.738	386.236
	7	117507.917	-14.750	385.622	386.110
	8	117507.917	-22.125	385.507	385.977
	9	117507.917	-29.500	385.392	385.839
L'5	1	117517.917	29.500	385.176	385.616
	2	117517.917	22.125	385.291	385.756
	3	117517.917	14.750	385.407	385.887
	4	117517.917	7.375	385.522	386.014
	5	117517.917	0.000	385.637	386.134
	6	117517.917	-7.375	385.522	386.014
	7	117517.917	-14.750	385.407	385.887
	8	117517.917	-22.125	385.291	385.756
	9	117517.917	-29.500	385.176	385.616
5C'	1	117527.917	29.500	384.958	385.392
	2	117527.917	22.125	385.073	385.530
	3	117527.917	14.750	385.188	385.663
	4	117527.917	7.375	385.304	385.790
	5	117527.917	0.000	385.419	385.909
	6	117527.917	-7.375	385.304	385.790
	7	117527.917	-14.750	385.188	385.663
	8	117527.917	-22.125	385.073	385.530
	9	117527.917	-29.500	384.958	385.392
5B'	1	117537.917	-29.500	384.737	385.162
	2	117537.917	22.125	384.852	385.300
	3	117537.917	14.750	384.968	385.432
	4	117537.917	7.375	385.083	385.559
	5	117537.917	0.000	385.198	385.678
	6	117537.917	-7.375	385.083	385.559
	7	117537.917	-14.750	384.968	385.432
	8	117537.917	-22.125	384.852	385.300
	9	117537.917	-29.500	384.737	385.162
5A'	1	117547.917	29.500	384.514	384.920
	2	117547.917	22.125	384.629	385.058
	3	117547.917	14.750	384.744	385.190
	4	117547.917	7.375	384.860	385.317
	5	117547.917	0.000	384.975	385.436
	6	117547.917	-7.375	384.860	385.317
	7	117547.917	-14.750	384.744	385.190
	8	117547.917	-22.125	384.629	385.058
	9	117547.917	-29.500	384.514	384.920
L'4	1	117554.833	29.500	384.358	384.751
	2	117554.833	22.125	384.473	384.888
	3	117554.833	14.750	384.589	385.020
	4	117554.833	7.375	384.704	385.147
	5	117554.833	0.000	384.819	385.266
	6	117554.833	-7.375	384.704	385.147
	7	117554.833	-14.750	384.589	385.020
	8	117554.833	-22.125	384.473	384.888
	9	117554.833	-29.500	384.358	384.751
4C'	1	117561.750	29.500	384.201	384.589
	2	117561.750	22.125	384.316	384.727
	3	117561.750	14.750	384.431	384.859
	4	117561.750	7.375	384.547	384.985
	5	117561.750	0.000	384.662	385.104
	6	117561.750	-7.375	384.547	384.985
	7	117561.750	-14.750	384.431	384.859
	8	117561.750	-22.125	384.316	384.727
	9	117561.750	-29.500	384.201	384.589
4B'	1	117571.750	29.500	383.972	384.351
	2	117571.750	22.125	384.087	384.490
	3	117571.750	14.750	384.202	384.622
	4	117571.750	7.375	384.318	384.749
	5	117571.750	0.000	384.433	384.867
	6	117571.750	-7.375	384.318	384.749
	7	117571.750	-14.750	384.202	384.622
	8	117571.750	-22.125	384.087	384.490
	9	117571.750	-29.500	383.972	384.351

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
4A'	1	117581.75	29.500	383.740	384.102
	2	117581.750	22.125	383.855	384.240
	3	117581.750	14.750	383.971	384.374
	4	117581.750	7.375	384.086	384.499
	5	117581.750	0.000	384.201	384.618
	6	117581.750	-7.375	384.086	384.499
	7	117581.750	-14.750	383.971	384.374
	8	117581.750	-22.125	383.855	384.240
	9	117581.750	-29.500	383.740	384.102
L'3	1	117591.750	29.500	383.506	383.647
	2	117591.750	22.125	383.621	383.985
	3	117591.750	14.750	383.736	384.118
	4	117591.750	7.375	383.852	384.244
	5	117591.750	0.000	383.967	384.363
	6	117591.750	-7.375	383.852	384.244
	7	117591.750	-14.750	383.736	384.118
	8	117591.750	-22.125	383.621	383.985
	9	117591.750	-29.500	383.506	383.647
3C'	1	117601.750	29.500	383.269	383.593
	2	117601.750	22.125	383.384	383.730
	3	117601.750	14.750	383.500	383.863
	4	117601.750	7.375	383.615	383.988
	5	117601.750	0.000	383.730	384.107
	6	117601.750	-7.375	383.615	383.988
	7	117601.750	-14.750	383.500	383.863
	8	117601.750	-22.125	383.384	383.730
	9	117601.750	-29.500	383.269	383.593
3B'	1	117611.750	29.500	383.030	383.331
	2	117611.750	22.125	383.145	383.467
	3	117611.750	14.750	383.261	383.598
	4	117611.750	7.375	383.376	383.724
	5	117611.750	0.000	383.491	383.863
	6	117611.750	-7.375	383.376	383.724
	7	117611.750	-14.750	383.261	383.598
	8	117611.750	-22.125	383.145	383.467
	9	117611.750	-29.500	383.030	383.331
3A'	1	117621.750	29.500	382.788	383.053
	2	117621.750	22.125	382.904	383.188
	3	117621.750	14.750	383.019	383.319
	4	117621.750	7.375	383.134	383.443
	5	117621.750	0.000	383.249	383.562
	6	117621.750	-7.375	383.134	383.443
	7	117621.750	-14.750	383.019	383.319
	8	117621.750	-22.125	382.904	383.188
	9	117621.750	-29.500	382.788	383.053
℄ OPEN JOINT	1	117622.937	29.500	382.760	383.019
	2	117622.937	22.125	382.875	383.155
	3	117622.937	14.750	382.990	383.285
	4	117622.937	7.375	383.105	383.409
	5	117622.937	0.000	383.220	383.528
	6	117622.937	-7.375	383.105	383.409
	7	117622.937	-14.750	382.990	383.285
	8	117622.937	-22.125	382.875	383.155
	9	117622.937	-29.500	382.760	383.019
L'2	1	117628.667	29.500	382.620	382.866
	2	117628.667	22.125	382.735	382.002
	3	117628.667	14.750	382.850	383.133
	4	117628.667	7.375	382.965	383.259
	5	117628.667	0.000	383.081	383.377
	6	117628.667	-7.375	382.965	383.259
	7	117628.667	-14.750	382.850	383.133
	8	117628.667	-22.125	382.735	383.002
	9	117628.667	-29.500	382.620	382.866
2C'	1	117635.583	29.500	382.450	382.682
	2	117635.583	22.125	382.565	382.819
	3	117635.583	14.750	382.680	382.952
	4	117635.583	7.375	382.796	383.079
	5	117635.583	0.000	382.911	383.197
	6	117635.583	-7.375	382.796	383.079
	7	117635.583	-14.750	382.680	382.952
	8	117635.583	-22.125	382.565	382.819
	9	117635.583	-29.500	382.450	382.682
2B'	1	117645.583	29.500	382.202	382.412
	2	117645.583	22.125	382.318	382.550
	3	117645.583	14.750	382.433	382.684
	4	117645.583	7.375	382.548	382.812
	5	117645.583	0.000	382.663	382.931
	6	117645.583	-7.375	382.548	382.812
	7	117645.583	-14.750	382.433	382.684
	8	117645.583	-22.125	382.318	382.550
	9	117645.583	-29.500	382.202	382.412
2A'	1	117655.583	29.500	381.952	382.128
	2	117655.583	22.125	382.067	382.268
	3	117655.583	14.750	382.183	382.403
	4	117655.583	7.375	382.298	382.531
	5	117655.583	0.000	382.413	382.650
	6	117655.583	-7.375	382.298	382.531
	7	117655.583	-14.750	382.183	382.403
	8	117655.583	-22.125	382.067	382.268
	9	117655.583	-29.500	381.952	382.128

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'1	1	117665.583	29.500	381.699	381.842
	2	117665.583	22.125	381.815	381.981
	3	117665.583	14.750	381.930	382.116
	4	117665.583	7.375	382.045	382.244
	5	117665.583	0.000	382.160	382.362
	6	117665.583	-7.375	382.045	382.244
	7	117665.583	-14.750	381.930	382.116
	8	117665.583	-22.125	381.815	381.981
	9	117665.583	-29.500	381.699	381.842
1C'	1	117675.583	29.500	381.444	381.585
	2	117675.583	22.125	381.560	381.702
	3	117675.583	14.750	381.675	381.836
	4	117675.583	7.375	381.790	381.962
	5	117675.583	0.000	381.905	382.081
	6	117675.583	-7.375	381.790	381.962
	7	117675.583	-14.750	381.675	381.836
	8	117675.583	-22.125	381.560	381.702
	9	117675.583	-29.500	381.444	381.565
1B'	1	117685.583	29.500	381.187	381.280
	2	117685.583	22.125	381.302	381.415
	3	117685.583	14.750	381.417	381.545
	4	117685.583	7.375	381.532	381.669
	5	117685.583	0.000	381.648	381.788
	6	117685.583	-7.375	381.532	381.669
	7	117685.583	-14.750	381.417	381.545
	8	117685.583	-22.125	381.302	381.415
	9	117685.583	-29.500	381.187	381.280
1A'	1	117695.583	29.500	380.927	380.975
	2	117695.583	22.125	381.042	381.109
	3	117695.583	14.750	381.157	381.232
	4	117695.583	7.375	381.272	381.354
	5	117695.583	0.000	381.387	381.471
	6	117695.583	-7.375	381.272	381.354
	7	117695.583	-14.750	381.157	381.232
	8	117695.583	-22.125	381.042	381.109
	9	117695.583	-29.500	380.927	380.975
L'0 ℄ TRUSS BRG. AT PIER 14	1	117702.500	29.500	380.744	380.753
	2	117702.500	22.125	380.860	380.880
	3	117702.500	14.750	380.976	381.004
	4	117702.500	7.375	381.091	381.125
	5	117702.500	0.000	381.206	381.242
	6	117702.500	-7.375	381.091	381.125
	7	117702.500	-14.750	380.976	381.004
	8	117702.500	-22.125	380.860	380.880
	9	117702.500	-29.500	380.745	380.753

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 5, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-19-1) F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	59
			PROJECT I-57-9(10)	

SPAN 15

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ BRG.-SPAN 15	1	117705.167	29.500	380.674	380.674
	2	117705.167	19.667	380.828	380.828
	3	117705.167	9.833	380.982	380.982
	4	117705.167	0.000	381.135	381.135
	5	117705.167	-9.833	380.982	380.982
	6	117705.167	-19.667	380.828	380.828
	7	117705.167	-29.500	380.674	380.674
15A	1	117715.167	29.500	380.409	380.461
	2	117715.167	19.667	380.563	380.615
	3	117715.167	9.833	380.717	380.769
	4	117715.167	0.000	380.870	380.922
	5	117715.167	-9.833	380.717	380.769
	6	117715.167	-19.667	380.563	380.615
	7	117715.167	-29.500	380.409	380.461
15B	1	117725.167	29.500	380.142	380.240
	2	117725.167	19.667	380.295	380.393
	3	117725.167	9.833	380.449	380.547
	4	117725.167	0.000	380.603	380.701
	5	117725.167	-9.833	380.449	380.547
	6	117725.167	-19.667	380.295	380.393
	7	117725.167	-29.500	380.142	380.240
15C	1	117735.167	29.500	379.872	380.005
	2	117735.167	19.667	380.025	380.158
	3	117735.167	9.833	380.179	380.312
	4	117735.167	0.000	380.333	380.466
	5	117735.167	-9.833	380.179	380.312
	6	117735.167	-19.667	380.025	380.158
	7	117735.167	-29.500	379.872	380.005
15D	1	117745.167	29.500	379.760	379.753
	2	117745.167	19.667	379.753	379.907
	3	117745.167	9.833	379.907	380.061
	4	117745.167	0.000	380.060	380.214
	5	117745.167	-9.833	379.907	380.061
	6	117745.167	-19.667	379.753	379.907
	7	117745.167	-29.500	379.599	379.753
15E	1	117755.167	29.500	379.324	379.484
	2	117755.167	19.667	379.478	379.638
	3	117755.167	9.833	379.631	379.792
	4	117755.167	0.000	379.785	379.945
	5	117755.167	-9.833	379.631	379.792
	6	117755.167	-19.667	379.478	379.638
	7	117755.167	-29.500	379.324	379.484
15F	1	117765.167	29.500	379.047	379.197
	2	117765.167	19.667	379.200	379.351
	3	117765.167	9.833	379.354	379.505
	4	117765.167	0.000	379.508	379.658
	5	117765.167	-9.833	379.354	379.505
	6	117765.167	-19.667	379.200	379.351
	7	117765.167	-29.500	379.047	379.197
15G	1	117775.167	29.500	378.767	378.895
	2	117775.167	19.667	378.920	379.049
	3	117775.167	9.833	379.074	379.203
	4	117775.167	0.000	379.228	379.356
	5	117775.167	-9.833	379.074	379.203
	6	117775.167	-19.667	378.920	379.049
	7	117775.167	-29.500	378.767	378.895

SPAN 15 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
SPLICE 15-2	1	117795.167	29.500	378.484	378.581
	2	117795.167	19.667	378.638	378.735
	3	117795.167	9.833	378.791	378.889
	4	117795.167	0.000	378.945	379.042
	5	117795.167	-9.833	378.791	378.889
	6	117795.167	-19.667	378.638	378.735
	7	117795.167	-29.500	378.484	378.581
15H	1	117795.167	29.500	378.199	378.260
	2	117795.167	19.667	378.353	378.414
	3	117795.167	9.833	378.506	378.568
	4	117795.167	0.000	378.660	378.721
	5	117795.167	-9.833	378.506	378.568
	6	117795.167	-19.667	378.353	378.414
	7	117795.167	-29.500	378.199	378.260
15I	1	117805.167	29.500	377.811	377.940
	2	117805.167	19.667	378.065	378.094
	3	117805.167	9.833	378.219	378.247
	4	117805.167	0.000	378.372	378.401
	5	117805.167	-9.833	378.219	378.247
	6	117805.167	-19.667	378.065	378.094
	7	117805.167	-29.500	377.911	377.940

SPAN 16

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
PIER 15	1	117817.750	29.500	377.546	377.546
	2	117817.750	19.667	377.700	377.700
	3	117817.750	9.833	377.853	377.853
	4	117817.750	0.000	378.007	378.007
	5	117817.750	-9.833	377.853	377.853
	6	117817.750	-19.667	377.700	377.700
	7	117817.750	-29.500	377.546	377.546
16A	1	117827.750	29.500	377.253	377.246
	2	117827.750	19.667	377.407	377.400
	3	117827.750	9.833	377.560	377.553
	4	117827.750	0.000	377.714	377.707
	5	117827.750	-9.833	377.560	377.553
	6	117827.750	-19.667	377.407	377.400
	7	117827.750	-29.500	377.253	377.246
16B	1	117837.750	29.500	376.957	376.954
	2	117837.750	19.667	377.111	377.108
	3	117837.750	9.833	377.265	377.261
	4	117837.750	0.000	377.418	377.415
	5	117837.750	-9.833	377.265	377.261
	6	117837.750	-19.667	377.111	377.108
	7	117837.750	-29.500	376.957	376.954
16C	1	117847.750	29.500	376.659	376.661
	2	117847.750	19.667	376.813	376.821
	3	117847.750	9.833	376.966	376.974
	4	117847.750	0.000	377.120	377.128
	5	117847.750	-9.833	376.966	376.974
	6	117847.750	-19.667	376.813	376.821
	7	117847.750	-29.500	376.659	376.667

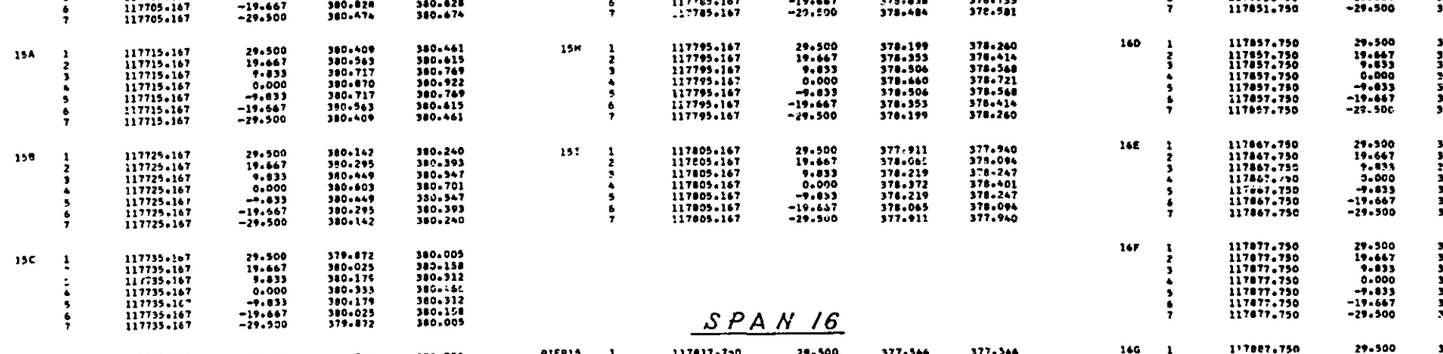
SPAN 16 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
SPLICE 16-1	1	117851.750	29.500	376.539	376.583
	2	117851.750	19.667	376.693	376.736
	3	117851.750	9.833	376.846	376.890
	4	117851.750	0.000	377.000	377.044
	5	117851.750	-9.833	376.846	376.890
	6	117851.750	-19.667	376.693	376.736
	7	117851.750	-29.500	376.539	376.583
16D	1	117857.750	29.500	376.359	376.380
	2	117857.750	19.667	376.513	376.534
	3	117857.750	9.833	376.666	376.688
	4	117857.750	0.000	376.820	376.841
	5	117857.750	-9.833	376.666	376.688
	6	117857.750	-19.667	376.513	376.534
	7	117857.750	-29.500	376.359	376.380
16E	1	117867.750	29.500	376.059	376.091
	2	117867.750	19.667	376.213	376.244
	3	117867.750	9.833	376.366	376.398
	4	117867.750	0.000	376.520	376.551
	5	117867.750	-9.833	376.366	376.398
	6	117867.750	-19.667	376.213	376.244
	7	117867.750	-29.500	376.059	376.091
16F	1	117877.750	29.500	375.759	375.795
	2	117877.750	19.667	375.913	375.948
	3	117877.750	9.833	376.066	376.102
	4	117877.750	0.000	376.220	376.256
	5	117877.750	-9.833	376.066	376.102
	6	117877.750	-19.667	375.913	375.948
	7	117877.750	-29.500	375.759	375.795
16G	1	117887.750	29.500	375.459	375.492
	2	117887.750	19.667	375.613	375.646
	3	117887.750	9.833	375.766	375.799
	4	117887.750	0.000	375.920	375.953
	5	117887.750	-9.833	375.766	375.799
	6	117887.750	-19.667	375.613	375.646
	7	117887.750	-29.500	375.459	375.492
16H	1	117897.750	29.500	375.159	375.183
	2	117897.750	19.667	375.313	375.337
	3	117897.750	9.833	375.466	375.491
	4	117897.750	0.000	375.620	375.644
	5	117897.750	-9.833	375.466	375.491
	6	117897.750	-19.667	375.313	375.337
	7	117897.750	-29.500	375.159	375.183
16I	1	117907.750	29.500	374.859	374.871
	2	117907.750	19.667	375.013	375.025
	3	117907.750	9.833	375.166	375.179
	4	117907.750	0.000	375.320	375.332
	5	117907.750	-9.833	375.166	375.179
	6	117907.750	-19.667	375.013	375.025
	7	117907.750	-29.500	374.859	374.871
16J	1	117917.750	29.500	374.559	374.561
	2	117917.750	19.667	374.713	374.719
	3	117917.750	9.833	374.866	374.868
	4	117917.750	0.000	375.020	375.022
	5	117917.750	-9.833	374.866	374.866
	6	117917.750	-19.667	374.713	374.713
	7	117917.750	-29.500	374.559	374.561

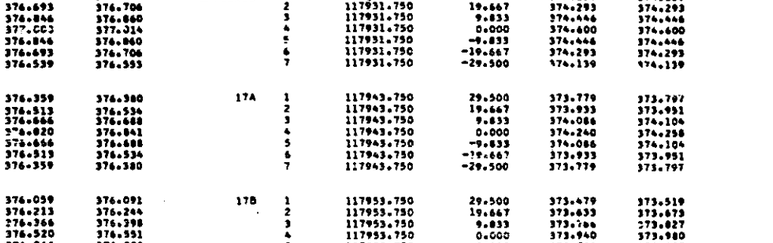
SPAN 17

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 16	1	117931.750	29.500	374.139	374.139
	2	117931.750	19.667	374.293	374.293
	3	117931.750	9.833	374.446	374.446
	4	117931.750	0.000	374.600	374.600
	5	117931.750	-9.833	374.446	374.446
	6	117931.750	-19.667	374.293	374.293
	7	117931.750	-29.500	374.139	374.139
17A	1	117943.750	29.500	373.779	373.797
	2	117943.750	19.667	373.933	373.951
	3	117943.750	9.833	374.086	374.104
	4	117943.750	0.000	374.240	374.258
	5	117943.750	-9.833	374.086	374.104
	6	117943.750	-19.667	373.933	373.951
	7	117943.750	-29.500	373.779	373.797
17B	1	117953.750	29.500	373.479	373.519
	2	117953.750	19.667	373.633	373.673
	3	117953.750	9.833	373.786	373.827
	4	117953.750	0.000	373.940	373.980
	5	117953.750	-9.833	373.786	373.827
	6	117953.750	-19.667	373.633	373.673
	7	117953.750	-29.500	373.479	373.519
SPLICE 17-1	1	117954.500	29.500	373.457	373.498
	2	117954.500	19.667	373.610	373.652
	3	117954.500	9.833	373.764	373.806
	4	117954.500	0.000	373.918	373.960
	5	117954.500	-9.833	373.764	373.806
	6	117954.500	-19.667	373.610	373.652
	7	117954.500	-29.500	373.457	373.498
17C	1	117963.750	29.500	373.179	373.243
	2	117963.750	19.667	373.333	373.396
	3	117963.750	9.833	373.486	373.550
	4	117963.750	0.000	373.640	373.704
	5	117963.750	-9.833	373.486	373.550
	6	117963.750	-19.667	373.333	373.396
	7	117963.750	-29.500	373.179	373.243
17D	1	117973.750	29.500	372.879	372.962
	2	117973.750	19.667	373.033	373.115
	3	117973.750	9.833	373.186	373.269
	4	117973.750	0.000	373.340	373.423
	5	117973.750	-9.833	373.186	373.269
	6	117973.750	-19.667	373.033	373.115
	7	117973.750	-29.500	372.879	372.962
17E	1	117983.750	29.500	372.579	372.672
	2	117983.750	19.667	372.733	372.826
	3	117983.750	9.833	372.886	372.980
	4	117983.750	0.000	373.040	373.133
	5	117983.750	-9.833	372.886	372.980
	6	117983.750	-19.667	372.733	372.826
	7	117983.750	-29.500	372.579	372.672
17F	1	117993.750	29.500	372.279	372.372
	2	117993.750	19.667	372.433	372.526
	3	117993.750	9.833	372.586	372.680
	4	117993.750	0.000	372.740	372.833
	5	117993.750	-9.833	372.586	372.680
	6	117993.750	-19.667	372.433	372.526
	7	117993.750	-29.500	372.279	372.372

NOTE A.
THE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.



PLAN



DEAD LOAD DEFLECTION DIAGRAM
(SEE NOTE A)

NOTE:
FOR DETAILS SHOWING LOCATION FOR TOP OF SLAB ELEVATIONS AND DIMENSION "L" SEE SHEET 40
GIRDER OFFSET ARE REFERENCED TO ℄ BRIDGE.

TOP OF SLAB ELEVATIONS - 15 TO 19
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-19-1) F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+94.75 TO STA. 1182+75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	102-18-1 I FSE	ALEXANDER (MISSOURI)	ILLINOIS (MISSISSIPPI)	81	60
F.H.A. DES. NO.	F.A.S. DES. NO.	ILLINOIS (MISSOURI)		PROJECT I-57-9(10)	

SPAN 17 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
17G	1	118003.750	29.500	371.979	372.062
	2	118003.750	19.667	372.133	372.215
	3	118003.750	9.833	372.286	372.369
	4	118003.750	0.000	372.440	372.523
	5	118003.750	-9.833	372.286	372.369
	6	118003.750	-19.667	372.133	372.215
	7	118003.750	-29.500	371.979	372.062
17H	1	118013.750	29.500	371.679	371.763
	2	118013.750	19.667	371.833	371.896
	3	118013.750	9.833	371.986	372.050
	4	118013.750	0.000	372.140	372.204
	5	118013.750	-9.833	371.986	372.050
	6	118013.750	-19.667	371.833	371.896
	7	118013.750	-29.500	371.679	371.763
SPLICE 17-2	1	118023.000	29.500	371.402	371.444
	2	118023.000	19.667	371.555	371.597
	3	118023.000	9.833	371.709	371.751
	4	118023.000	0.000	371.863	371.905
	5	118023.000	-9.833	371.709	371.751
	6	118023.000	-19.667	371.555	371.597
	7	118023.000	-29.500	371.402	371.444
17I	1	118023.750	29.500	371.379	371.419
	2	118023.750	19.667	371.533	371.573
	3	118023.750	9.833	371.686	371.727
	4	118023.750	0.000	371.840	371.880
	5	118023.750	-9.833	371.686	371.727
	6	118022.750	-19.667	371.533	371.573
	7	118023.750	-29.500	371.379	371.419
17J	1	118033.750	29.500	371.079	371.097
	2	118033.750	19.667	371.233	371.251
	3	118033.750	9.833	371.386	371.404
	4	118033.750	0.000	371.540	371.558
	5	118033.750	-9.833	371.386	371.404
	6	118033.750	-19.667	371.233	371.251
	7	118033.750	-29.500	371.079	371.097

SPAN 18

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 17	1	118045.750	29.500	370.719	370.719
	2	118045.750	19.667	370.873	370.873
	3	118045.750	9.833	371.026	371.026
	4	118045.750	0.000	371.180	371.180
	5	118045.750	-9.833	371.026	371.026
	6	118045.750	-19.667	370.873	370.873
	7	118045.750	-29.500	370.719	370.719
18A	1	118059.750	29.500	370.299	370.301
	2	118059.750	19.667	370.453	370.455
	3	118059.750	9.833	370.606	370.608
	4	118059.750	0.000	370.760	370.762
	5	118059.750	-9.833	370.606	370.608
	6	118059.750	-19.667	370.453	370.455
	7	118059.750	-29.500	370.299	370.301

SPAN 18 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
18B	1	118069.750	29.500	369.999	370.011
	2	118069.750	19.667	370.153	370.165
	3	118069.750	9.833	370.306	370.319
	4	118069.750	0.000	370.460	370.472
	5	118069.750	-9.833	370.306	370.319
	6	118069.750	-19.667	370.153	370.165
	7	118069.750	-29.500	369.999	370.011
18C	1	118079.750	29.500	369.699	369.723
	2	118079.750	19.667	369.853	369.877
	3	118079.750	9.833	370.006	370.031
	4	118079.750	0.000	370.160	370.184
	5	118079.750	-9.833	370.006	370.031
	6	118079.750	-19.667	369.853	369.877
	7	118079.750	-29.500	369.699	369.723
18D	1	118089.750	29.500	369.399	369.432
	2	118089.750	19.667	369.553	369.586
	3	118089.750	9.833	369.706	369.739
	4	118089.750	0.000	369.860	369.893
	5	118089.750	-9.833	369.706	369.739
	6	118089.750	-19.667	369.553	369.586
	7	118089.750	-29.500	369.399	369.432
18E	1	118099.750	29.500	369.099	369.135
	2	118099.750	19.667	369.253	369.288
	3	118099.750	9.833	369.406	369.442
	4	118099.750	0.000	369.560	369.596
	5	118099.750	-9.833	369.406	369.442
	6	118099.750	-19.667	369.253	369.288
	7	118099.750	-29.500	369.099	369.135
18F	1	118109.750	29.500	368.799	368.831
	2	118109.750	19.667	368.953	368.984
	3	118109.750	9.833	369.106	369.138
	4	118109.750	0.000	369.260	369.291
	5	118109.750	-9.833	369.106	369.138
	6	118109.750	-19.667	368.953	368.984
	7	118109.750	-29.500	368.799	368.831
18G	1	118119.750	29.500	368.499	368.528
	2	118119.750	19.667	368.653	368.674
	3	118119.750	9.833	368.806	368.828
	4	118119.750	0.000	368.960	368.981
	5	118119.750	-9.833	368.806	368.828
	6	118119.750	-19.667	368.653	368.674
	7	118119.750	-29.500	368.499	368.520
SPLICE 18-2	1	118125.750	29.500	368.319	368.333
	2	118125.750	19.667	368.473	368.486
	3	118125.750	9.833	368.626	368.640
	4	118125.750	0.000	368.780	368.794
	5	118125.750	-9.833	368.626	368.640
	6	118125.750	-19.667	368.473	368.486
	7	118125.750	-29.500	368.319	368.333
18H	1	118129.750	29.500	368.199	368.207
	2	118129.750	19.667	368.353	368.361
	3	118129.750	9.833	368.506	368.515
	4	118129.750	0.000	368.660	368.668
	5	118129.750	-9.833	368.506	368.515
	6	118129.750	-19.667	368.353	368.361
	7	118129.750	-29.500	368.199	368.207

SPAN 18 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
18I	1	118139.750	29.500	367.899	367.896
	2	118139.750	19.667	368.053	368.050
	3	118139.750	9.833	368.206	368.203
	4	118139.750	0.000	368.360	368.357
	5	118139.750	-9.833	368.206	368.203
	6	118139.750	-19.667	368.053	368.050
	7	118139.750	-29.500	367.899	367.896
18J	1	118149.750	29.500	367.599	367.592
	2	118149.750	19.667	367.753	367.746
	3	118149.750	9.833	367.906	367.900
	4	118149.750	0.000	368.060	368.053
	5	118149.750	-9.833	367.906	367.900
	6	118149.750	-19.667	367.753	367.746
	7	118149.750	-29.500	367.599	367.592

SPAN 19

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 18	1	118159.750	29.500	367.299	367.299
	2	118159.750	19.667	367.453	367.453
	3	118159.750	9.833	367.606	367.606
	4	118159.750	0.000	367.760	367.760
	5	118159.750	-9.833	367.606	367.606
	6	118159.750	-19.667	367.453	367.453
	7	118159.750	-29.500	367.299	367.299
19A	1	118172.333	29.500	366.922	366.950
	2	118172.333	19.667	367.075	367.104
	3	118172.333	9.833	367.229	367.258
	4	118172.333	0.000	367.383	367.411
	5	118172.333	-9.833	367.229	367.258
	6	118172.333	-19.667	367.075	367.104
	7	118172.333	-29.500	366.922	366.950
19B	1	118182.333	29.500	366.622	366.683
	2	118182.333	19.667	366.775	366.837
	3	118182.333	9.833	366.929	366.990
	4	118182.333	0.000	367.083	367.144
	5	118182.333	-9.833	366.929	366.990
	6	118182.333	-19.667	366.775	366.837
	7	118182.333	-29.500	366.622	366.683
SPLICE 19-1	1	118192.333	29.500	366.322	366.419
	2	118192.333	19.667	366.475	366.573
	3	118192.333	9.833	366.629	366.726
	4	118192.333	0.000	366.783	366.880
	5	118192.333	-9.833	366.629	366.726
	6	118192.333	-19.667	366.475	366.573
	7	118192.333	-29.500	366.322	366.419
19C	1	118202.333	29.500	366.022	366.150
	2	118202.333	19.667	366.175	366.304
	3	118202.333	9.833	366.329	366.458
	4	118202.333	0.000	366.482	366.611
	5	118202.333	-9.833	366.329	366.458
	6	118202.333	-19.667	366.175	366.304
	7	118202.333	-29.500	366.022	366.150

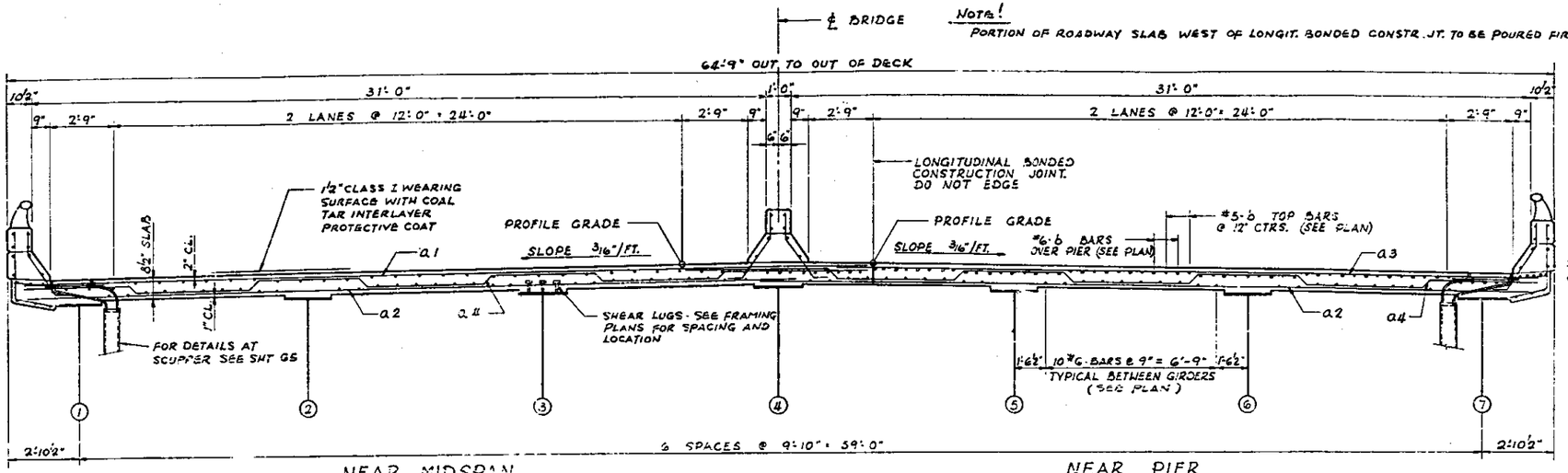
SPAN 19 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
19D	1	118212.333	29.500	365.722	365.872
	2	118212.333	19.667	365.875	366.026
	3	118212.333	9.833	366.029	366.180
	4	118212.333	0.000	366.183	366.333
	5	118212.333	-9.833	366.029	366.180
	6	118212.333	-19.667	365.875	366.026
	7	118212.333	-29.500	365.722	365.872
19E	1	118222.333	29.500	365.422	365.582
	2	118222.333	19.667	365.575	365.735
	3	118222.333	9.833	365.729	365.889
	4	118222.333	0.000	365.883	366.043
	5	118222.333	-9.833	365.729	365.889
	6	118222.333	-19.667	365.575	365.735
	7	118222.333	-29.500	365.422	365.582
19F	1	118232.333	29.500	365.122	365.276
	2	118232.333	19.667	365.275	365.430
	3	118232.333	9.833	365.429	365.583
	4	118232.333	0.000	365.583	365.737
	5	118232.333	-9.833	365.429	365.583
	6	118232.333	-19.667	365.275	365.430
	7	118232.333	-29.500	365.122	365.276
19G	1	118242.333	29.500	364.822	364.954
	2	118242.333	19.667	364.975	365.108
	3	118242.333	9.833	365.129	365.262
	4	118242.333	0.000	365.283	365.415
	5	118242.333	-9.833	365.129	365.262
	6	118242.333	-19.667	364.975	365.108
	7	118242.333	-29.500	364.822	364.954
19H	1	118252.333	29.500	364.522	364.619
	2	118252.333	19.667	364.675	364.773
	3	118252.333	9.833	364.829	364.927
	4	118252.333	0.000	364.981	365.080
	5	118252.333	-9.833	364.829	364.927
	6	118252.333	-19.667	364.675	364.773
	7	118252.333	-29.500	364.522	364.619
19I	1	118262.333	29.500	364.222	364.274
	2	118262.333	19.667	364.375	364.427
	3	118262.333	9.833	364.529	364.581
	4	118262.333	0.000	364.683	364.735
	5	118262.333	-9.833	364.529	364.581
	6	118262.333	-19.667	364.375	364.427
	7	118262.333	-29.500	364.222	364.274
℄ BRG. S.A.	1	118272.333	29.500	363.822	363.922
	2	118272.333	19.667	364.075	364.075
	3	118272.333	9.833	364.229	364.229
	4	118272.333	0.000	364.383	364.383
	5	118272.333	-9.833	364.229	364.229
	6	118272.333	-19.667	364.075	364.075
	7	118272.333	-29.500	363.922	363.922

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

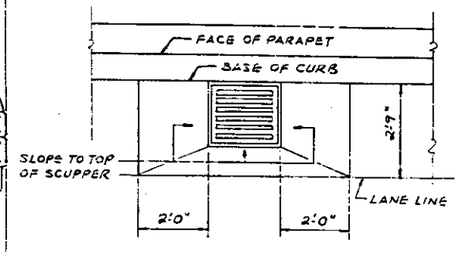
TOP OF SLAB ELEVATIONS - SPANS 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)FSE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) F&E	ALEXANDER ILLINOIS / MISSOURI		81	61
F.A.I. RES. NO. 4 / F.A.I. RES. NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9(10)		



NEAR MIDSPAN NEAR PIER

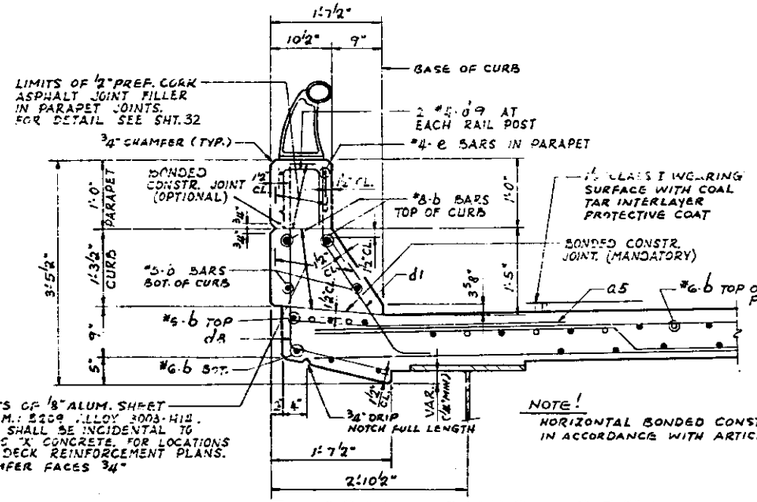
TYPICAL CROSS SECTION
LOOKING SOUTH
SCALE: 3/8" = 1'-0"



DEPRESSION DETAIL AT SCUPPER

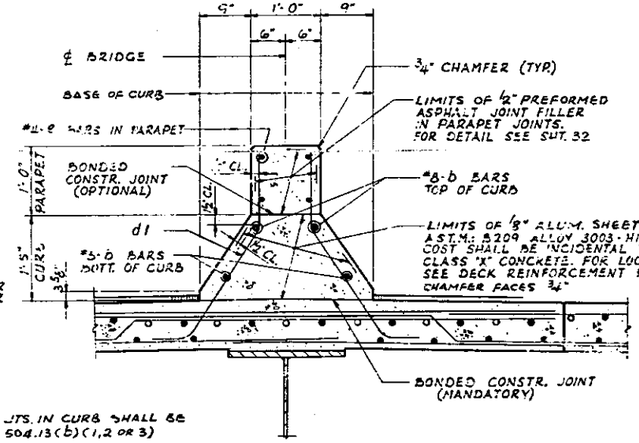
NOTE!
CUT a & b BARS IN FIELD AS REQUIRED TO CLEAR SCUPPER

NOTE!
PORTION OF ROADWAY SLAB WEST OF LONGIT. BONDED CONSTR. JT. TO BE POURED FIRST.

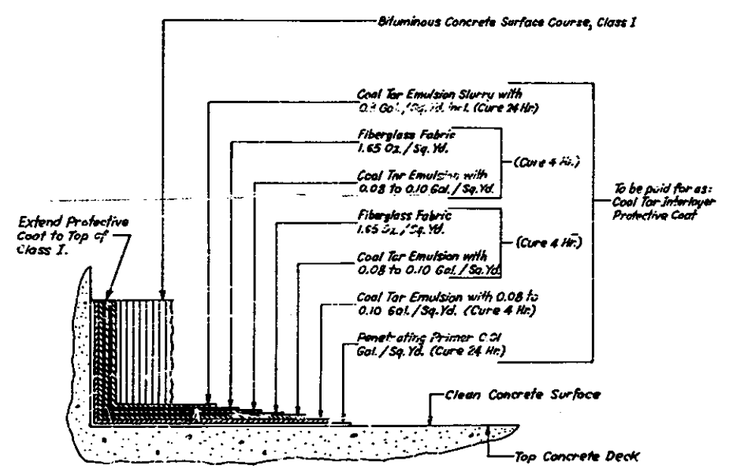


FASCIA CURB DETAIL
SCALE: 1" = 1'-0"

NOTE!
HORIZONTAL BONDED CONSTR. JTS. IN CURB SHALL BE IN ACCORDANCE WITH ARTICLE 504.13(b)(1,2 OR 3)



MEDIAN CURB DETAIL
SCALE: 1" = 1'-0"



DECK SURFACING
WITH COAL TAR INTERLAYER PROTECTIVE COAT

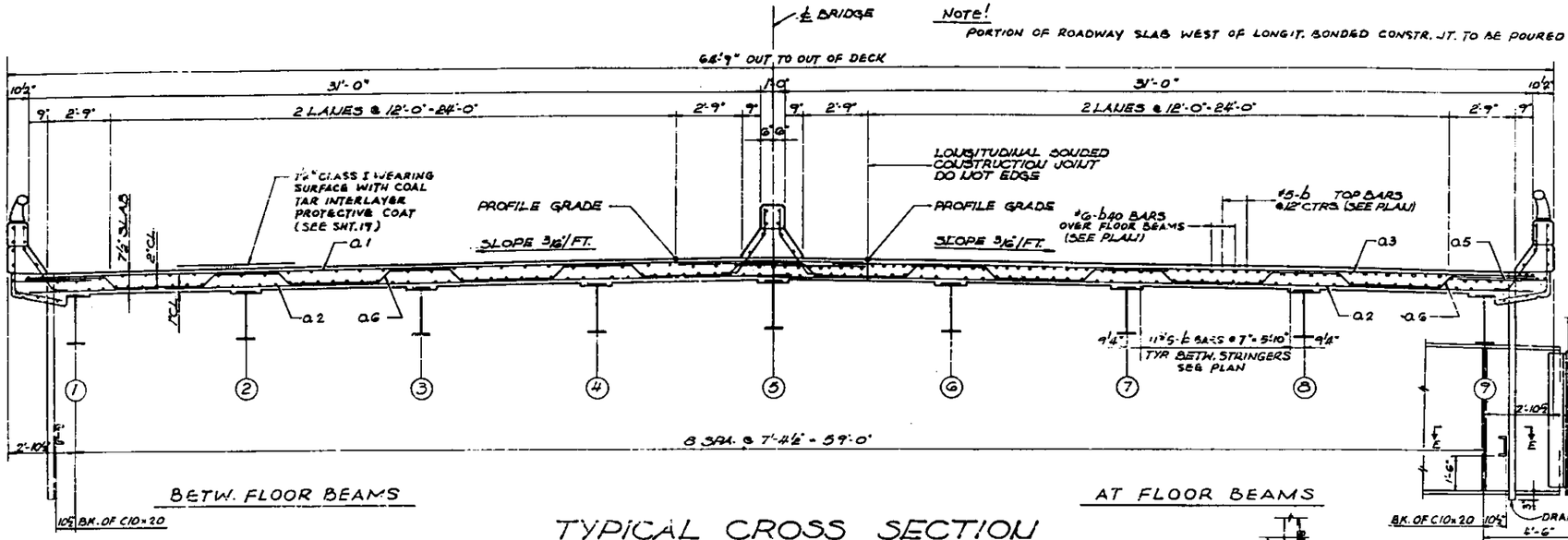
DECK CROSS SECTION & DETAILS-SPANS [illegible] 815 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1) F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

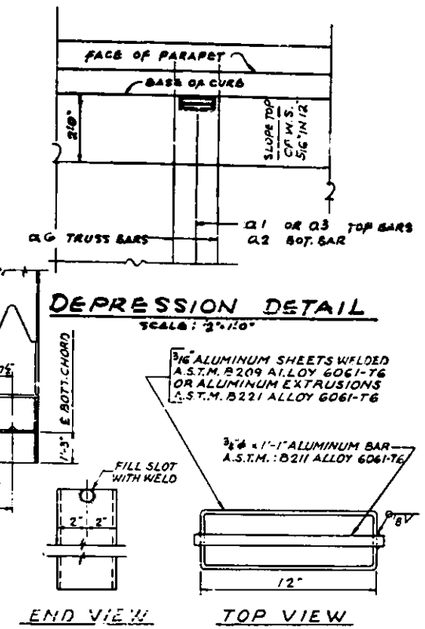
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-1 F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	62
F.AP.RTE. & SEC. NO. 1 / F.AP.RTE. & SEC. NO. 2		ILLINOIS / MISSOURI	PROJECT I-57-9(10)	

Note!
PORTION OF ROADWAY SLAB WEST OF LONGIT. BONDED CONSTR. JT. TO BE POURED FIRST.

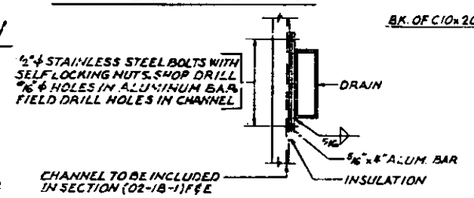
TYPICAL CROSS SECTION
LOOKING SOUTH
SCALE: 3/8"=1'-0"



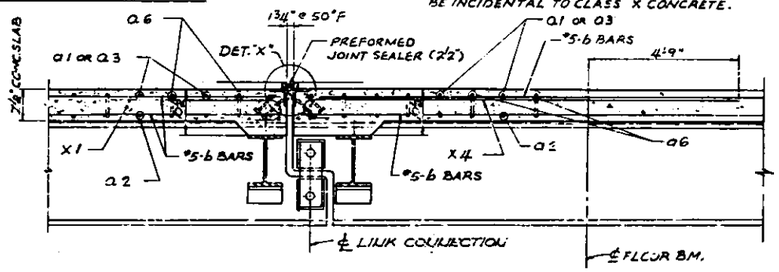


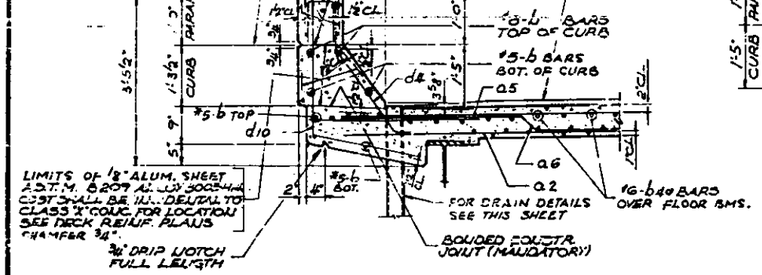
DEPRESSION DETAIL
SCALE: 3/4"=1'-0"

DETAIL OF DRAIN

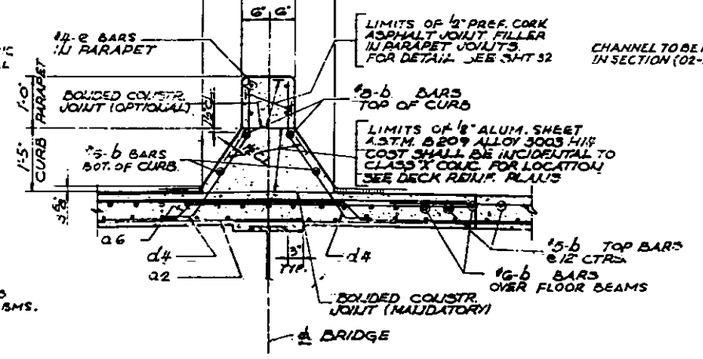


SECTION E-E

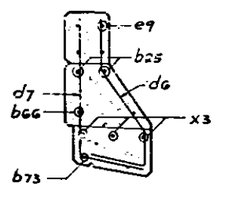




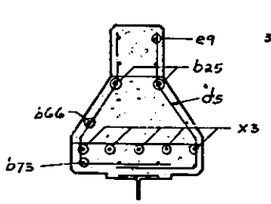
FASCIA CURB DETAIL
SCALE: 3/4"=1'-0"



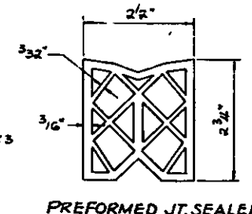
MEDIAN CURB DETAIL
SCALE: 3/4"=1'-0"



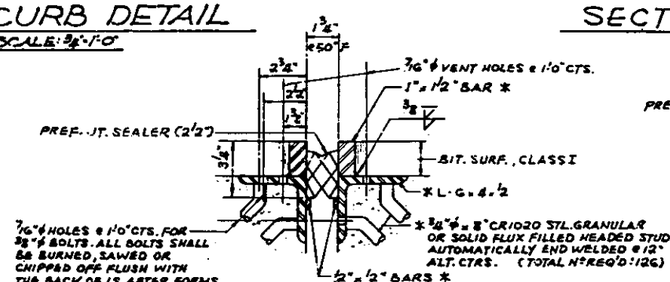
SECTION "R-R"
SCALE: 3/4"=1'-0"



SECTION "S-S"
SCALE: 3/4"=1'-0"



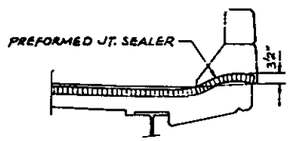
PREFORMED JT. SEALER (2½")



DETAIL "X"
SCALE: 3"=1'-0"

* TO BE PAID FOR UNDER ITEM "PREFORMED JOINT SEALER"

SECTION AT PREFORMED JT. SEALER
SCALE: 3/4"=1'-0"

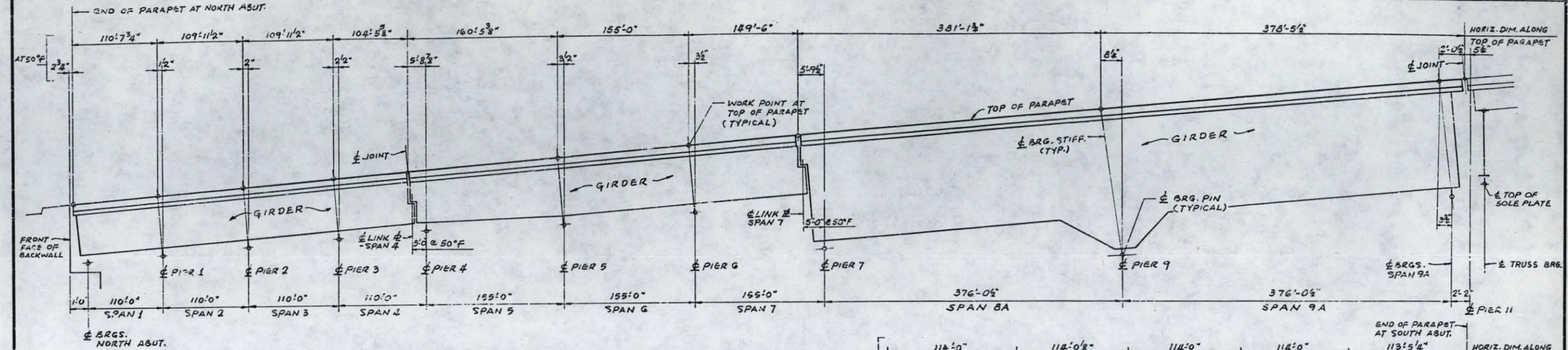


TYPICAL END OF SEALER TREATMENT

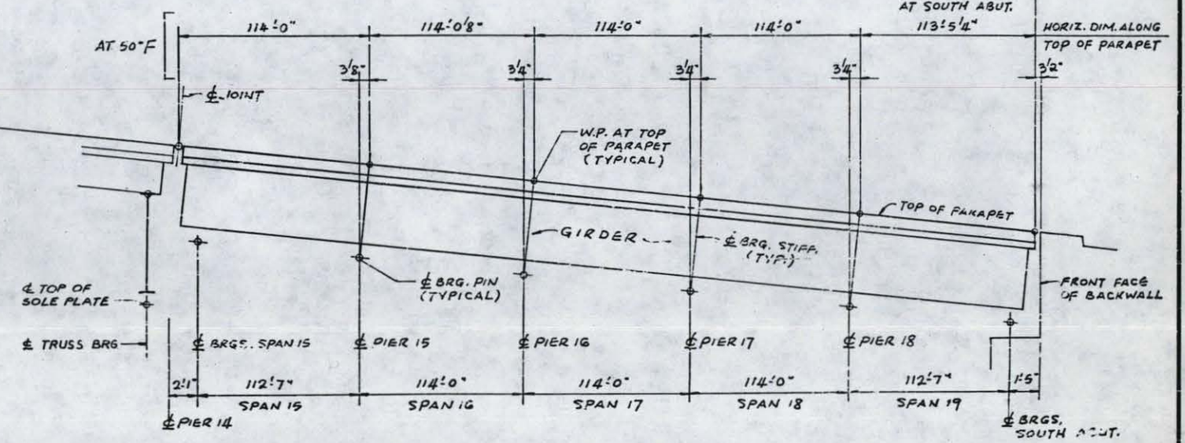
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

DECK CROSS SECTION & DETAILS-SPANS 3 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-18-1) F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		81	63
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9( )10		



TRUSS SPANS 12,13 & 14

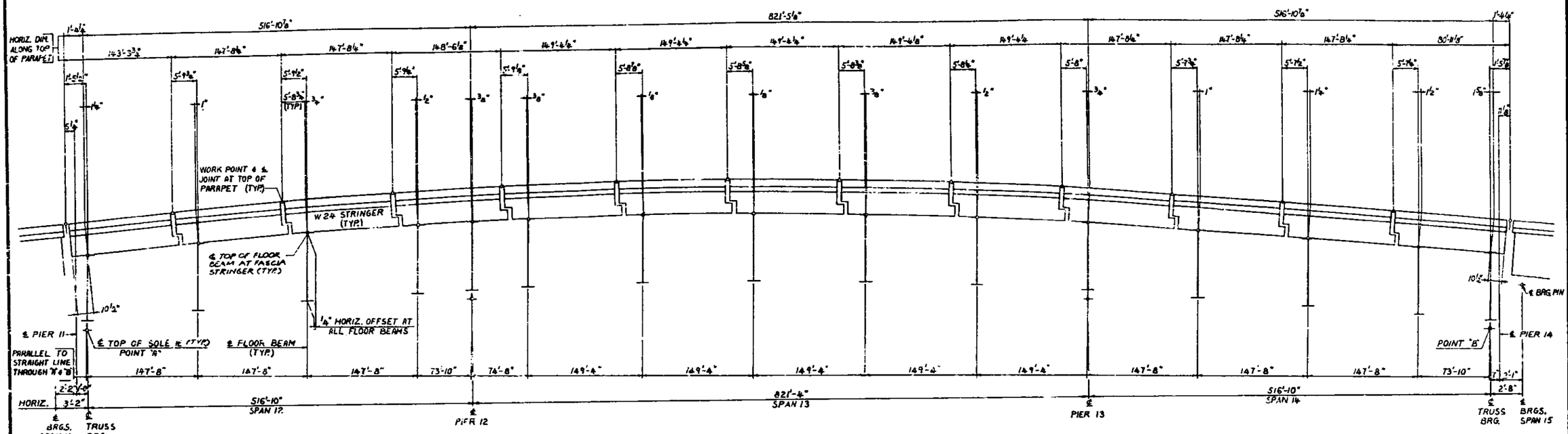


DECK WORK POINTS

DECK WORK POINTS - SPANS 1 TO SPANS 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1) F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY		SHEET NO.	SHEET NO.
F.A.I 57	(02-18-1) F & E	ALEXANDER ILLINOIS	MISSISSIPPI MISSOURI	81	64
F. NOS. & RTE. NO. 1		ILLINOIS		PROJECT I-57-9(10)	
R. NOS., RTE. NO. 2		MISSOURI			



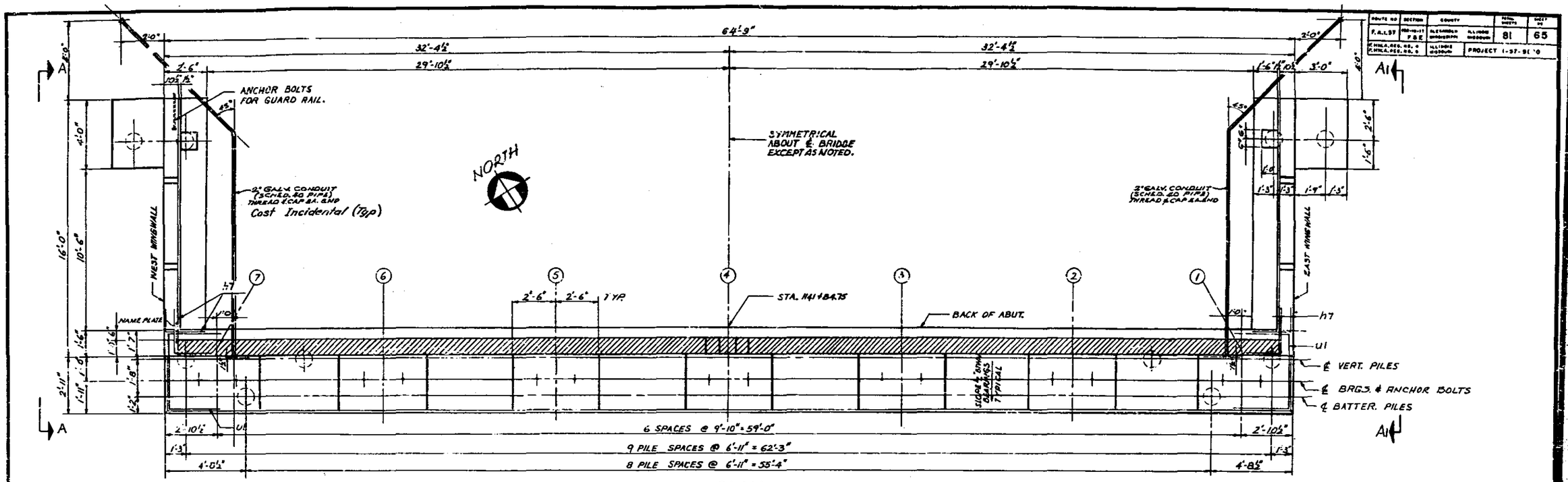
DECK WORK POINTS
SPANS 12, 13 & 14

NOTES:-ALL FLOOR BEAMS NOT SHOWN
-ALL DIMENSIONS AT 56°F
-ALL FLOOR BEAMS ARE PERPENDICULAR TO A STRAIGHT LINE THROUGH POINTS "A" & "B".

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

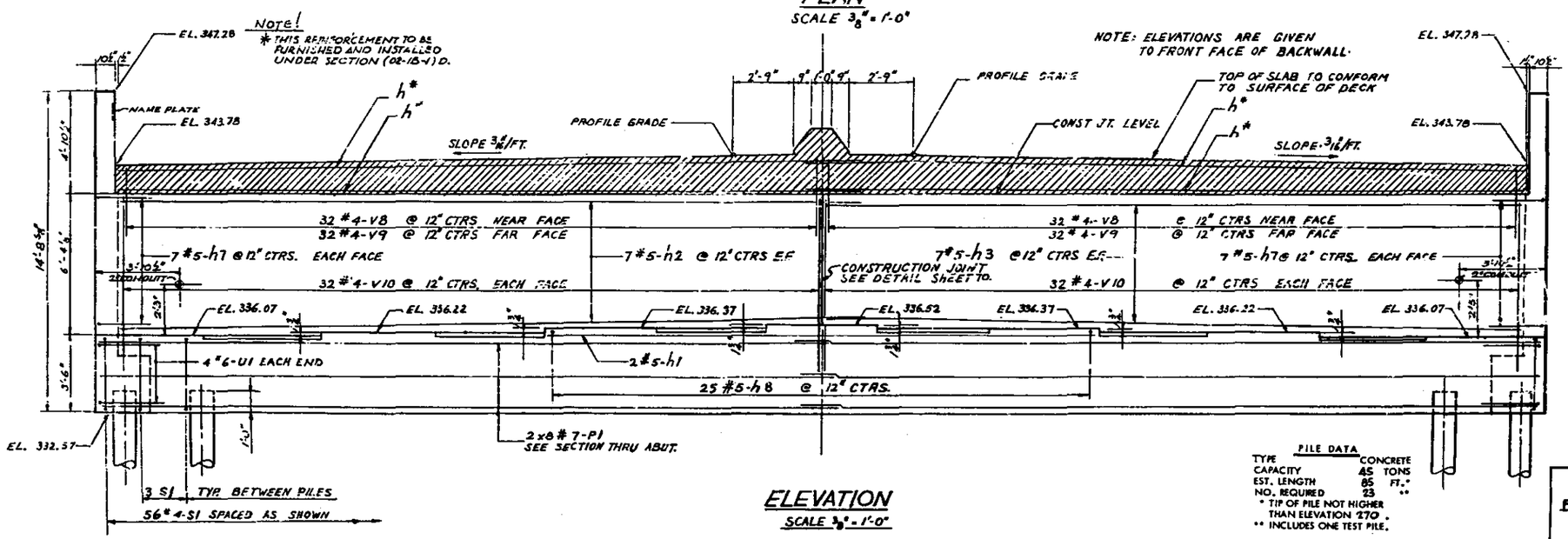
DECK WORK POINTS - SPA 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1) F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-1B-1) F & E	ALEXANDER & MISSISSIPPI / ILLINOIS & MISSOURI	81	65
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS & MISSOURI	PROJECT I-57-9( )0	



PLAN

SCALE $\frac{3}{8}$" = 1'-0"



ELEVATION

SCALE $\frac{3}{8}$" = 1'-0"

NOTE:
THE CONCRETE PILES SHALL BE DRIVEN THRU OVERSIZE SHELLS.

FOR SECTIONS AND DETAILS SEE SHT. 67
End post conc. to be used in wings.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

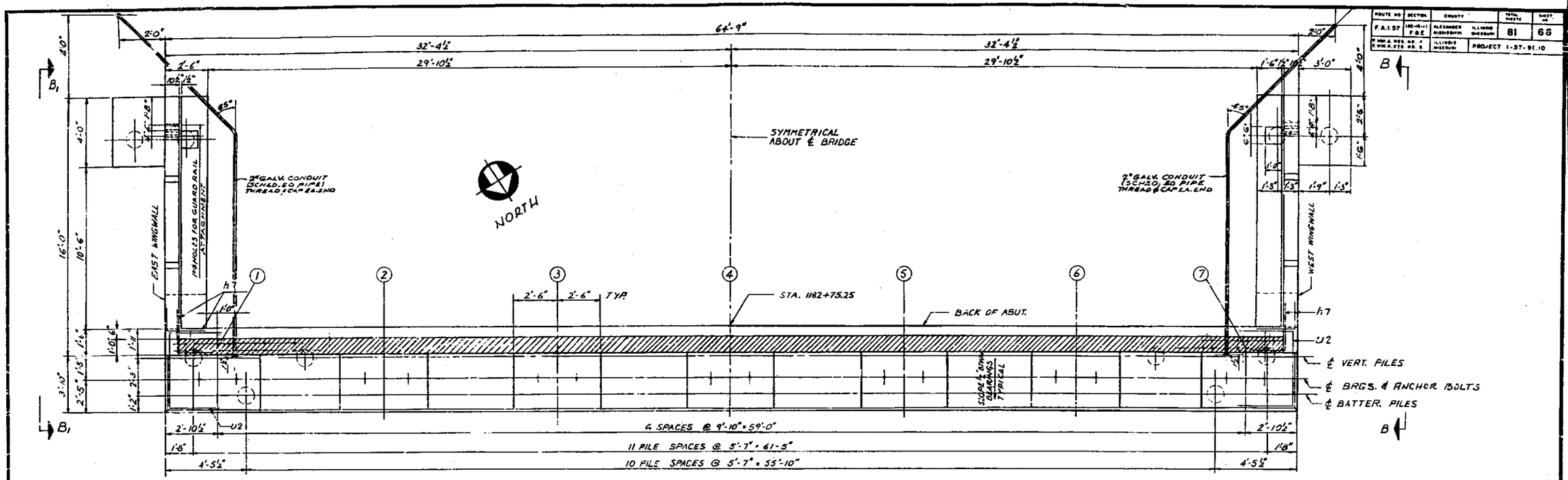
TYPE	CONCRETE
CAPACITY	45 TONS
EST. LENGTH	85 FT.*
NO. REQUIRED	23 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 270.
** INCLUDES ONE TEST PILE.

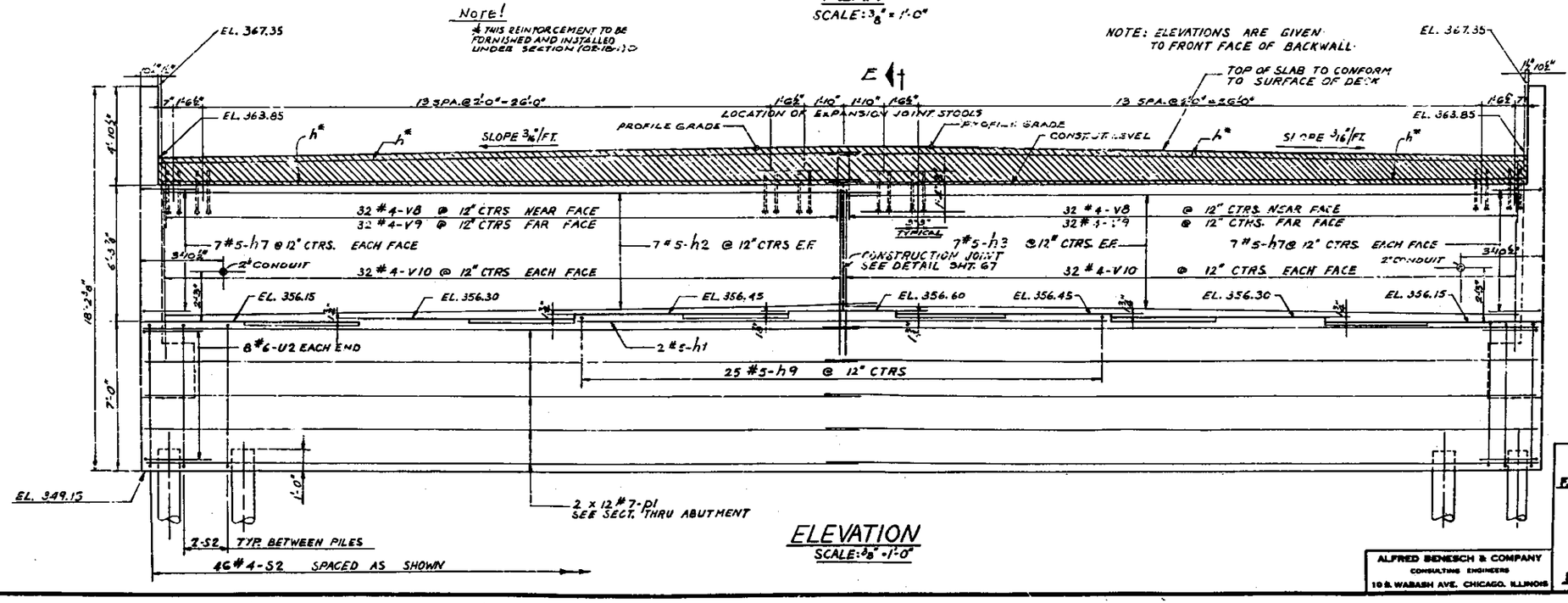
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

NORTH ABUTMENT
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1) F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-1B-1) F&E	ALEXANDER	ILLINOIS	81	66
			MISSISSIPPI		
F.H.W.A. REG. NO. 4 F.H.W.A. STS. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(.)0	



Note!
* THIS REINFORCEMENT TO BE FURNISHED AND INSTALLED UNDER SECTION (02-1B-1)D



ELEVATION
SCALE: ⅜" = 1'-0"

NOTE: ELEVATIONS ARE GIVEN TO FRONT FACE OF BACKWALL.

NOTE:
FOR SECTIONS AND DETAILS SEE SHT. 67
THE CONCRETE PILES SHALL BE DRIVEN THRU OVERSIZE SHELLS.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD ¾" CHAMFERS EXCEPT AS NOTED.
FOUR STEPS MONOLITHICALLY WITH CAP.

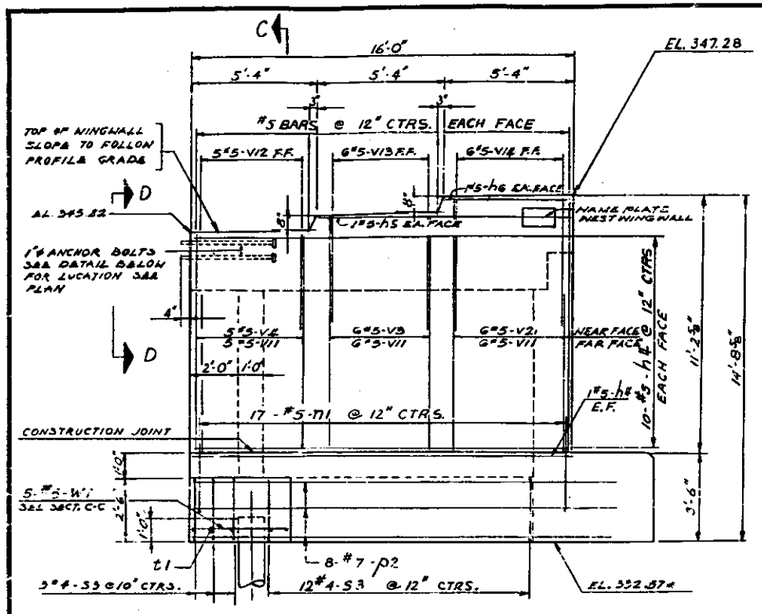
PILE DATA	
TYPE	CONCRETE
CAPACITY	45 TONS
EST. LENGTH	55 FT.*
NO. REQUIRED	27 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 275.
** INCLUDES ONE TEST PILE.

SOUTH ABUTMENT
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	102-18-1) F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	81	67
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9( ) 0	

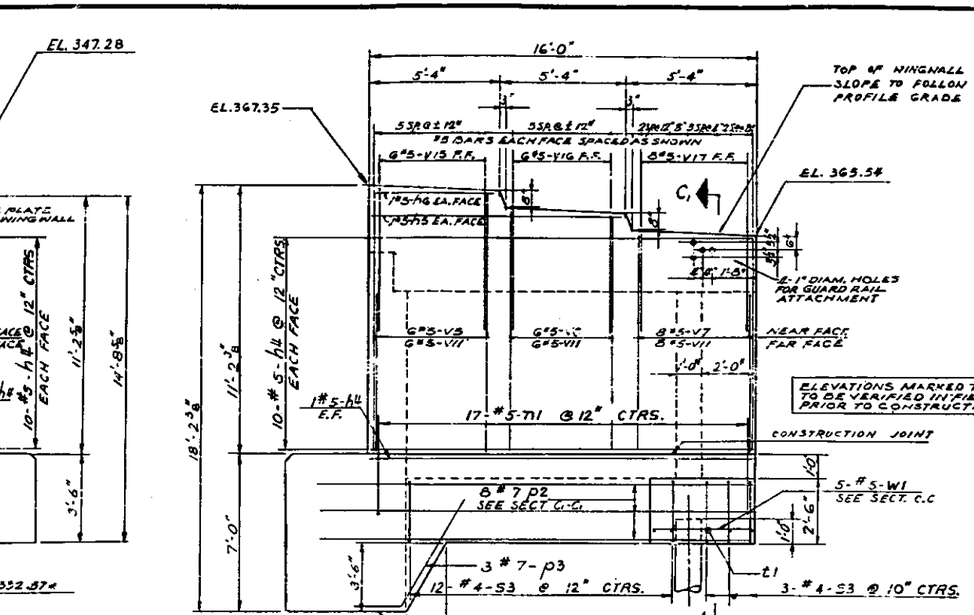


C ELEVATION A-A

ELEVATION A-A, SIMILAR

SCALE 3/8"=1'-0"

NORTH ABUTMENT

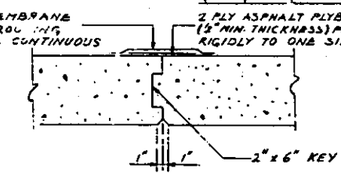


C1 ELEVATION B-B

ELEVATION B-B, SIMILAR

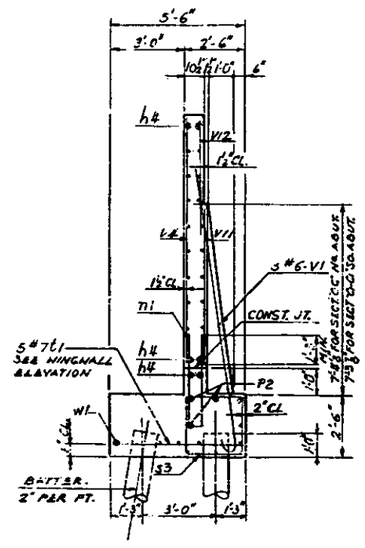
SCALE 3/8"=1'-0"

SOUTH ABUTMENT



CONSTRUCTION JOINT DETAIL

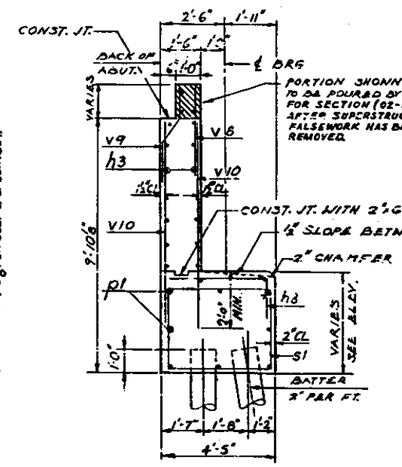
SCALE 1"=1'-0"



SECTION C-C

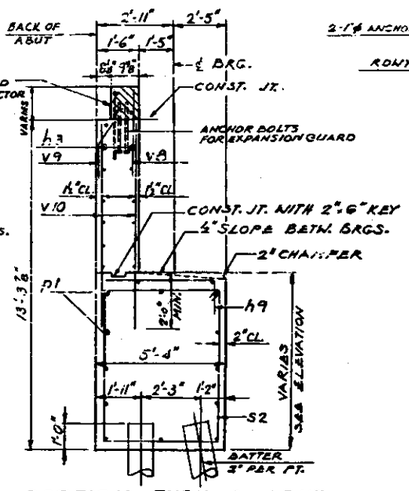
SECTION C-C, SIMILAR

SCALE 3/8"=1'-0"



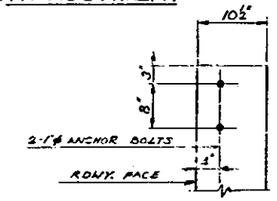
SECTION THRU N. ABUT.

SCALE 3/8"=1'-0"



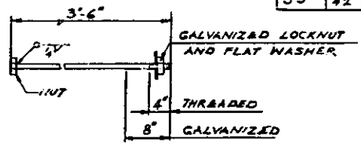
SECTION THRU S. ABUT.

SCALE 3/8"=1'-0"



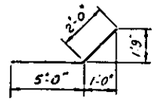
VIEW D-D

SCALE 1"=1'-0"

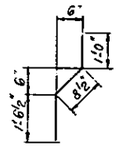


1"ø ANCHOR BOLT

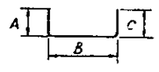
COST OF BOLTS TO BE INCIDENTAL TO BRIDGE STRUCTURE



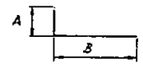
BAR P3



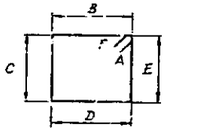
BAR V9



BAR	A	B	C
n1	3'-9"	9"	3'-9"
U1	3'-0"	4'-0"	3'-0"
U2	3'-0½"	4'-11"	3'-0½"



BAR	A	B
h7	2'-0"	2'-6"
h8	1'-6"	3'-9"
h9	1'-6"	4'-9"



BAR	A	B	C	D	E	F
S1	2½"	4'-1"	3'-2"	4'-1"	3'-2"	4½"
S2	2½"	5'-3"	6'-8"	5'-0"	6'-8"	6½"
S3	4½"	2'-2"	2'-2"	2'-2"	2'-2"	4½"

BAR V1

BILL OF MATERIAL

BARS	NUMBER N. ABUT.	NUMBER S. ABUT.	SIZE	LENGTH	SHAPE
h1	2	2	#5	24'-3"	
h2	14	14	#5	32'-9"	
h3	14	14	#5	31'-0"	
h4	44	44	#5	15'-9"	
h5	4	4	#5	10'-3"	
h6	4	4	#5	5'-0"	
h7	28	28	#5	4'-6"	
h8	25	—	#5	5'-3"	
h9	—	25	#5	6'-3"	
n1	34	34	#5	8'-3"	
P1	16	24	#7	33'-0"	
P2	16	16	#7	18'-0"	
P3	—	6	#7	7'-0"	
S1	56	—	#4	15'-3"	
S2	—	46	#4	24'-1"	
S3	30	30	#4	9'-5"	
t1	10	10	#5	5'-0"	
U1	8	—	#6	10'-0"	
U2	—	16	#6	11'-9"	
V1	6	6	#6	12'-3"	
V2	12	—	#5	11'-0"	
V3	12	—	#5	10'-3"	
V4	10	—	#5	9'-6"	
V5	—	12	#5	10'-9"	
V6	—	12	#5	10'-0"	
V7	—	16	#5	9'-3"	
V11	36	40	#5	7'-0"	
W2	10	—	#5	4'-0"	
W3	12	—	#5	4'-9"	
W4	12	—	#5	5'-6"	
W5	—	12	#5	5'-3"	
W6	—	12	#5	4'-6"	
W7	—	16	#5	3'-9"	
W8	64	64	#4	3'-0"	
W9	64	64	#4	5'-5"	
W10	128	128	#4	8'-6"	
W1	10	10	#5	3'-6"	

ITEM	UNIT	TOTAL N. ABUT.	TOTAL S. ABUT.
CLASS "X" CONCRETE	CU. YDS.	820	135.1
REINFORCEMENT BARS	LBS.	6,850	7,930
CONCRETE PILES (ASTON)	LIN. FT.	1870	2210
TEST PILE CONCRETE (ASTON)	EACH	1	1
CLASS "A" EXCAVATION	CU. YDS.	190	195

NOTE:

ALL BAR DIMENSIONS ARE OUT TO OUT.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
19 S. WABASH AVE. CHICAGO, ILLINOIS

ABUTMENT DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION(02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		81	68
F.AIRR. RTE NO F.AHR. RTE NO		ILLINOIS MISSOURI	PROJECT I-57-9(.)10		

TOP PLAN

SCALE: 1/8"=1'-0"

ELEVATION

SCALE: 1/8"=1'-0"

END VIEW

SCALE: 1/8"=1'-0"

STRUT DETAIL

CUT STRUT ALONG THESE LINES AFTER COFFERDAM HAS BEEN BRACED AGAINST PIER.

SECTION "L-L"

FILL HOLE WITH CONCR. AND RUB JOINTS AFTER CUTTING OFF STRUT.

Note!
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.

DETAIL "X"

SCALE: 3/4"=1'-0"

CONSTRUCTED BY CONTRACTOR FOR SECTION (02-18-1)D AFTER DECK CONCRETE HAS BEEN PLACED. CONTRACTOR FOR SECT. (02-18-1)B SHALL FURNISH AND PLACE REINFORCEMENT AND SHALL PROVIDE AN APPROVED PROTECTIVE DEVICE TO PREVENT DAMAGE TO THE EXPOSED REINFORCEMENT.

Thrust block and anchor bolts are to be furnished by the Contractor for Section (02-18-1)F&E and placed by the Contractor for Section (02-18-1)D

SECTION "M-M"

SCALE: 3/8"=1'-0"

SECTION "R"

SCALE: 1/4"=1'-0"

SECTION "S"

SCALE: 1/4"=1'-0"

NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'-0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS. SEE SPECIAL PROVISIONS FOR REQUIREMENT OF CONCRETE FOR COLUMNS.
SEE SHEET 2 FOR DETAILS OF CLEARANCE GAUGE.
SEE SHT. 21A FOR PLAN A-A & SECTIONS B-B THRU K-K
SEE SHT. 22A FOR BAR LIST.
SEE PIER 12 FOR GROUNDING SYSTEM.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

NOTE!
ALL WORK BELOW EL. 260.0, EXCEPT FOR SEAL COAT CONCRETE, SHALL BE INCLUDED IN THE ITEM "OPEN DREDGED CAISSON-PIER II"

OPEN DREDGED CAISSON-PIER II — CLASS X CONCRETE

REVISED MAR. 27, 1972

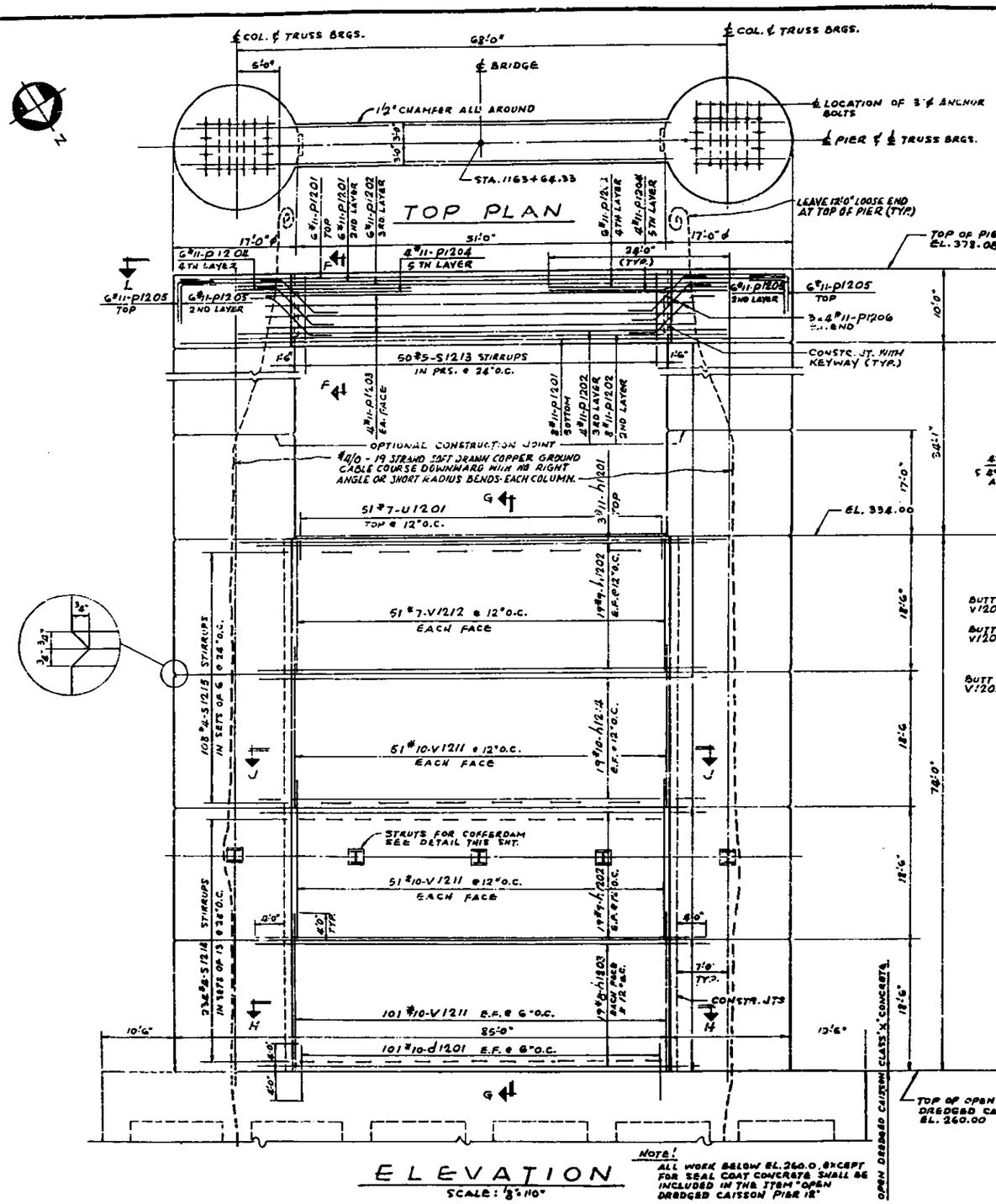
PIER II
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(.)10
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

Rev. Ground Cable location. 5-17-71 S.F.M.

ROUTE	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1) FBE	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	ALL ILLINOIS MISSOURI	81	69
F.H.W.A. REG. NO. 5 / F.H.W.A. REG. NO. 7				PROJECT I-57-9(10)	

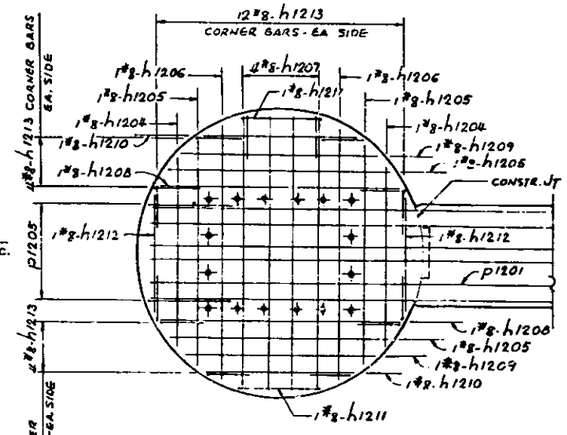
NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'-0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS.



ELEVATION
SCALE: 1/8"=1'0"

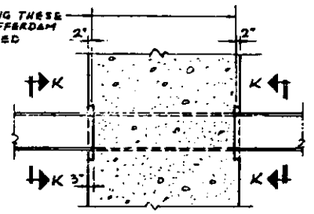
Note!
ALL WORK BELOW EL. 260.0, EXCEPT FOR SEAL COAT CONCRETE, SHALL BE INCLUDED IN THE ITEM "OPEN DREDGED CAISSON PIER 12"

END VIEW
TWO COLUMNS THUS
SCALE: 1/8"=1'0"

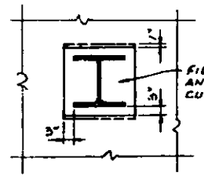


PLAN "L"
SHOWING ADDIT. REINF. AT COL'S 2 COL'S THUS
SCALE: 1/4"=1'0"

CUT STRUT ALONG THESE LINES AFTER COFFERDAM HAS BEEN BRACED AGAINST PIER.



STRUT DETAIL



SECTION "K-K"

Note!
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.

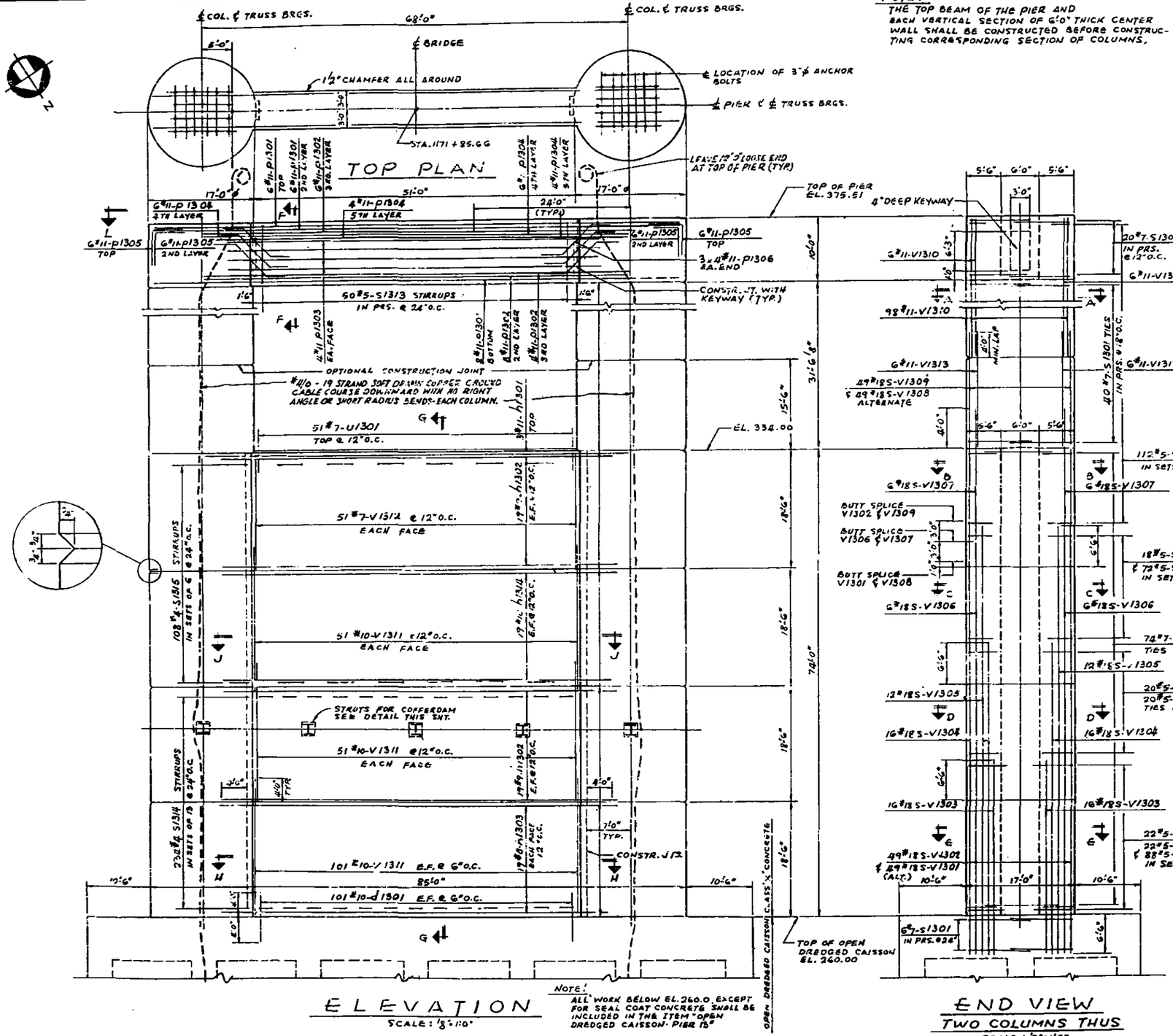
NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

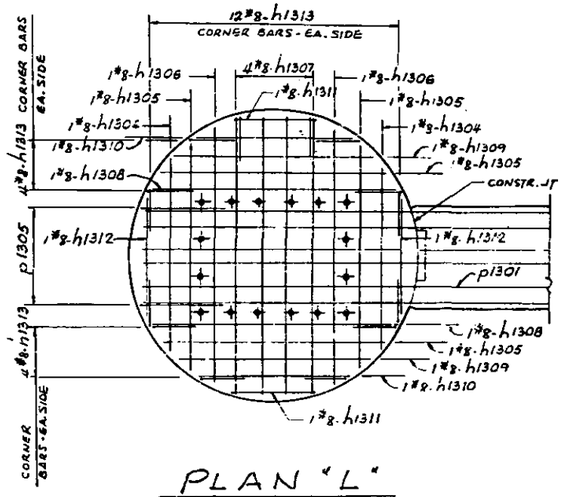
PIER 12
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-1B-1) FBE
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-18-1) F.B.E.	ALEXANDER	ILLINOIS	81	70
F.H.W.A. REG. NO. 5		MISSISSIPPI	MISSOURI		
F.H.W.A. REG. NO. 5			ILLINOIS MISSOURI	PROJECT I-57-9( )0	

NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS.

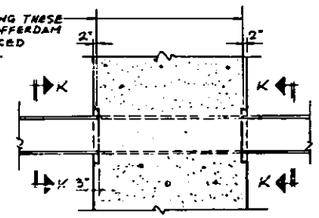


NOTE!
ALL WORK BELOW EL. 260.0 EXCEPT FOR SEAL COAT CONCRETE SHALL BE INCLUDED IN THE ITEM "OPEN DREDGED CAISSON- PIER 13"

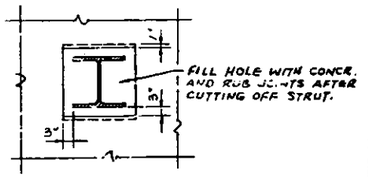


PLAN "L"
SHOWING ADDIT. REINF. AT COL'S.
2 COL'S THUS
SCALE: 1/4"=1'0"

CUT STRUT ALONG THESE LINES AFTER COFFERDAM HAS BEEN BRACED AGAINST PIER.



STRUT DETAIL



SECTION "K-K"

NOTE!
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

PIER 13
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1) FBE.
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

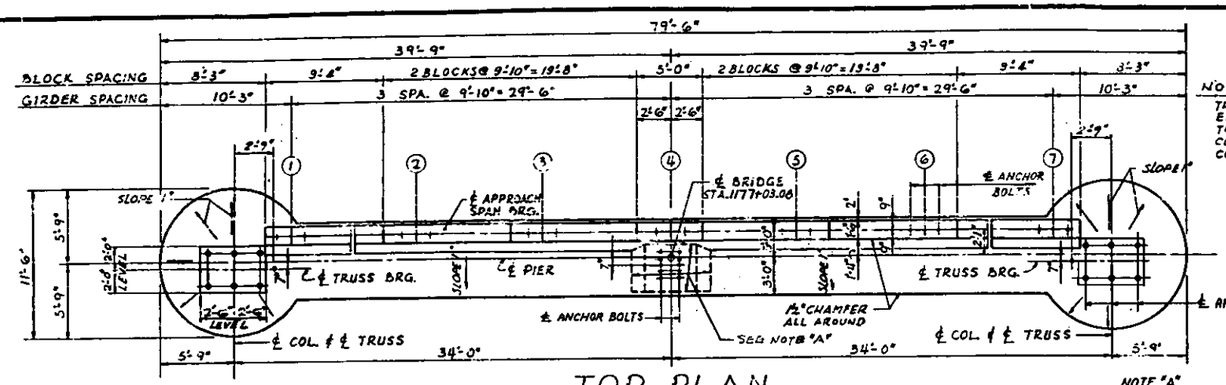
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-18-1) F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	71
F.H.W.A. REG. NO. 5				
F.A.M.S. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

BLOCK SPACING 8'-3" 9'-4" 2 BLOCKS @ 9'-10" = 19'-8" 5'-0" 2 BLOCKS @ 9'-10" = 19'-8" 9'-4" 8'-3"

GIRDER SPACING 10'-3" 3 SPA. @ 9'-10" = 29'-6" 2'-6" 2'-6" 3 SPA. @ 9'-10" = 29'-6" 10'-3"

79'-6"

39'-9" 39'-9"

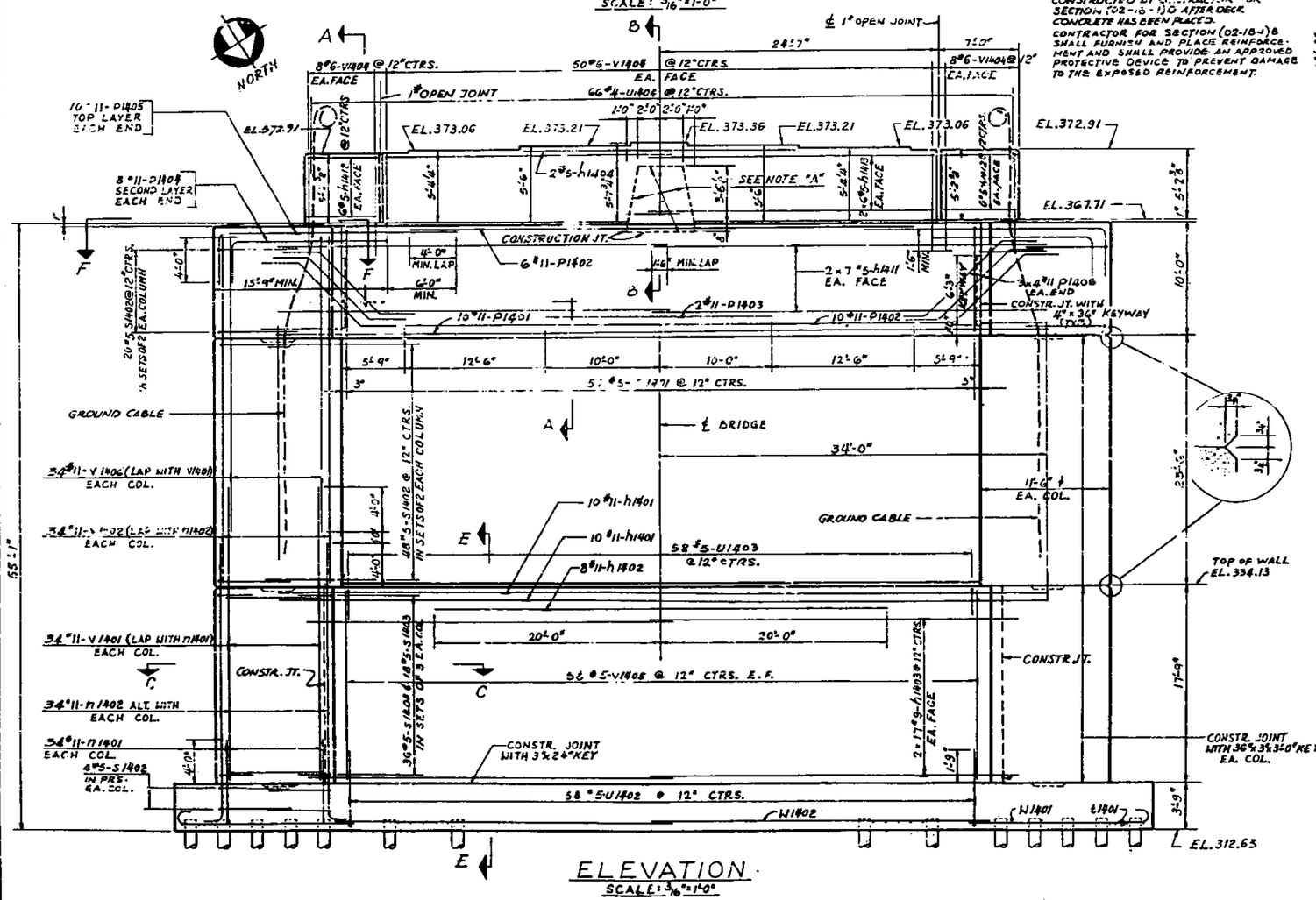


TOP PLAN

SCALE: 3/16" = 1'-0"

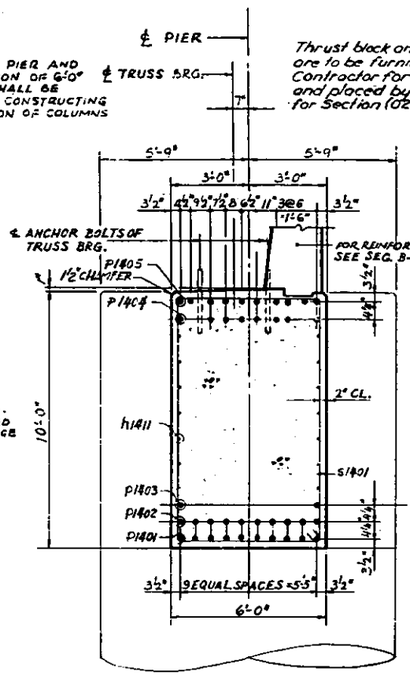
NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'-0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS

NOTE "A"
CONSTRUCTED BY CONTRACTOR FOR SECTION (02-18-1)D AFTER DECK CONCRETE HAS BEEN PLACED. CONTRACTOR FOR SECTION (02-18-1)B SHALL FURNISH AND PLACE REINFORCEMENT AND SHALL PROVIDE AN APPROVED PROTECTIVE DEVICE TO PREVENT DAMAGE TO THE EXPOSED REINFORCEMENT.



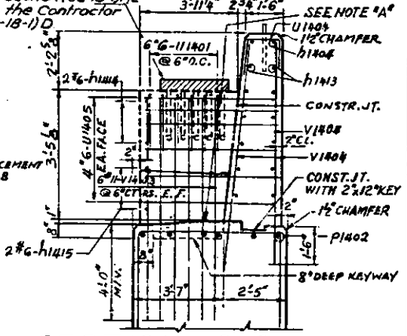
ELEVATION

SCALE: 3/16" = 1'-0"



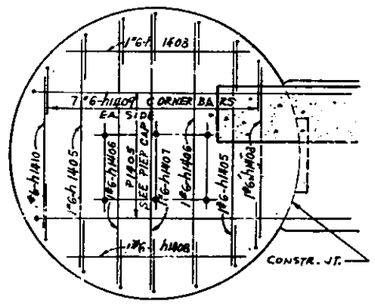
SECTION A-A

SCALE: 3/8" = 1'-0"



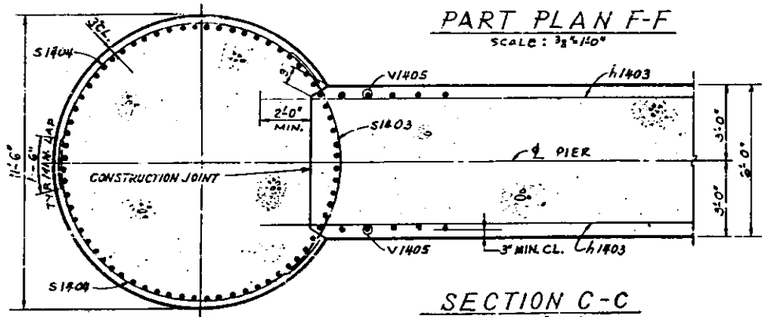
SECTION B-B

SCALE: 3/8" = 1'-0"



PART PLAN F-F

SCALE: 3/8" = 1'-0"



SECTION C-C

SCALE: 3/8" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD ¾" CHAMFERS EXCEPT AS NOTED

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

SOIL TEST BORINGS

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-10-1 F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		81	72
F.A.P. & SEC. NO.		ILLINOIS MISSOURI	PROJECT I-57-9( )10		

BORING No.1
PIER #1

Boring No. 1
Station 1142 + 97.50
Offset
Ground Surface 306+
Surface Water El. —
Groundwater El. at Completion 298
After — Hours

Elevation	N	Qu t/s.f.	w (%)
0			
	7	-	33
-5	5	-	24
	4	1.0	37
-10	3	0.6	44
	4	1.0	49
-15	5	1.0	41
	7	0.8	45
-20	8	0.8	36
	31	-	-
-25	20	-	-
	4	-	-
-30	3	-	-
	4	-	-
-35	17	-	-
	14	-	-
-40	8	-	36
	30	-	17
-45			

Gray Silty CLAY(CL) To Clayey SILT (ML)
Elev. 283.5
Gray Fine to Coarse Grained SAND (SW)
Elev. 278.5
Gray Fine Grained SAND (SP)
Elev. 266.0
Gray Sandy CLAY (SC)
Elev. 261.0

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	29	-	-
	35	-	-
-50	37	-	-
	40	-	-
-55	42	-	-
	34	-	-
-60	19	-	-
	29	-	-
-65	28	-	-
	33	-	-
-70	23	-	-
	42	-	-
-75	38	-	-

Gray Fine Grained SAND (SP)
Elev. 245
Gray Sand and Gravel (SW-GW)
Elev. 230
End of Boring

BORING No.2
PIER #2

Boring No. 2
Station 1144 + 07.50
Offset
Ground Surface 309 +
Surface Water El. —
Groundwater El. at Completion 298
After — Hours

Elevation	N	Qu t/s.f.	w (%)
0			
	4	0.7	30
-5	4	0.8	37
	3	0.9	33
-10	3	-	30
	3	0.8	45
-15	2	0.4	37
	2	1.0	35
-20	3	1.1	43
	4	-	59
-25	9	-	56
	16	-	-
-30	13	-	-
	10	-	-
-35	18	-	17
	22	-	19
-40	23	-	-
	23	-	-
-45			

Gray Silty CLAY (CL) to Clayey SILT (ML)
Elev. 283
Gray Fine Grained SAND (SP)
Elev. 274
Gray Silty CLAY (CL)
Elev. 269
Gray Fine Grained SAND (SP)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	49	-	-
	20	-	-
-50	18	-	-
	19	-	-
-55	10	-	-
	10	-	-
-60	12	-	-
	12	-	-
-65	14	-	-
	20	-	-
-70	21	-	-
	56	-	-
-75	62	-	-
	105	-	-
-80	122	-	-
	111	-	-
-85	62	-	-
	95	-	-
-90	Type failure	87	-

Gray Fine Grained SAND (SP)
Elev. 247
Gray Sand and Gravel (SW-GW)
Gray Sand and Gravel (SW-GW)
Elev. 232
Gray Fine to Coarse Grained SAND (SW)
Elev. 218
End of Boring

BORING No.3
PIER #4

Boring No. 3
Station 1146 + 27.50
Offset
Ground Surface 310 +
Surface Water El. —
Groundwater El. at Completion 297
After — Hours

Elevation	N	Qu t/s.f.	w (%)
0			
	8	1.2	27
-5	2	1.5	29
	3	0.8	21
-10	3	0.9	35
	3	0.6	36
-15	3	0.6	50
	3	0.7	40
-20	3	0.8	39
	4	-	-
-25	5	-	-
	6	-	-
-30	7	-	-
	13	-	-
-35	15	-	-
	24	-	-
-40	24	-	-
	16	-	-
-45			

Gray Silty CLAY (CL) to Clayey SILT (ML)
Elev. 288
Gray Fine Grained SAND (SP)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	14	-	-
	12	-	-
-50	32	-	-
	41	-	-
-55	52	-	-
	55	-	-
-60	43	-	-
	26	-	-
-65	39	-	-
	120	-	-
-70	87	-	-
	60	-	-
-75	76	-	-
	78	-	-
-80	99	-	-

Gray Fine Grained SAND (SP)
Elev. 245
Gray Sand and Gravel (SW-GW)
Elev. 235
Gray Fine Grained SAND (SP)
Elev. 229
End of Boring

BORING No.4
PIER #5

Boring No. 4
Station 1147 + 82.50
Offset
Ground Surface 312 +
Surface Water El. —
Groundwater El. at Completion 295
After — Hours

Elevation	N	Qu t/s.f.	w (%)
0			
	6	-	25
-5	4	1.2	32
	4	1.0	29
-10	5	1.3	33
	5	1.3	34
-15	6	0.8	26
	7	-	30
-20	14	-	-
	7	-	-
-25	6	-	39
	5	-	99
-30	6	0.7	50
	11	-	38
-35	18	0.4	52
	21	-	-
-40	22	-	-
	28	-	-

Gray Silty CLAY (CL) to Clayey SILT (ML)
Elev. 292
Gray Fine to Medium Grained Sand (SW)
Elev. 287
Gray Silty CLAY (CL) To Clayey SILT (ML)
Elev. 275
Gray Fine to Medium Grained SAND (SW)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	33	-	-
	29	-	-
-50	27	-	-
	30	-	-
-55	30	-	-
	34	-	-
-60	35	-	-
	46	-	-
-65	48	-	-
	41	-	-
-70	35	-	-

Gray Fine to Medium Grained SAND (SW)
Elev. 262
Gray Sand and Gravel (SW-GW)
Elev. 260
Gray Fine to Coarse Grained SAND (SW)
Elev. 241
End of Boring

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

BORINGS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

SOIL TEST BORINGS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-1B-1) F&E	ALEXANDER (ILLINOIS)	MISSOURI	81	73
F.A.P. RTE. NO. 4 / F.A.I. RTE. NO. 57		ILLINOIS	MISSOURI	PROJECT I-57-9( )0	

BORING No. 5
PIER #6

Boring No. 5
Station 1149 + 37.50
Offset
Ground Surface 309 ± 0

Surface Water El. 293
Groundwater El. at Completion —
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
309 ±			
	4	1.4	22
	8	1.1	18
Elev. 302.5			
	6	1.7	14
Elev. 300			
	12	-	-
Elev. 297.5			
	15	-	-
	3	-	-
Elev. 290			
	14	-	-
	13	-	-
	15	-	-
	10	-	-
	9	-	-
	11	-	-
	12	-	-
	10	-	-
Elev. 265	16	-	-
	22	-	-
	10	-	-
	16	-	-
	29	-	-
	33	-	-
	30	-	-
	21	-	-
	31	-	-
	30	-	-
	39	-	-
	62	-	-
	88	-	-
Elev. 235	66	-	-

Brown Silty Sand to Sandy SILT (SM)

Dark Brown to Dark Gray Clayey SILT (ML)

Brown Fine Grained SAND (SP)

Brown to Gray Coarse Grained SAND (SW)

Brown Fine to Medium Grained SAND (SW) with occasional clay seams

Brown Gravel (GP)

(continued)
Brown Gravel (GP) Elev. 265

Brown Fine to Medium Grained SAND (SW) with traces of gravel

Brown Gravel (GP)

Brown Coarse Grained SAND (SP)

Brown GRAVEL (GP)

Elev. 223
End of Boring

BORING No. 6
PIER #7

Boring No. 6
Station 1150 + 92.50
Offset
Ground Surface 301 ± 0

Surface Water El. 293
Groundwater El. at Completion —
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
301 ±			
	7	-	-
	6	-	-
Elev. 295			
	1	-	35
	1	-	34
	7	0.5	61
Elev. 285			
	4	-	-
	5	-	-
	16	-	-
	19	-	-
	18	-	-
Elev. 274			
	20	-	-
	17	-	-
	15	-	-
	21	-	-
	24	-	-
	25	-	-
	27	-	-
	32	-	-
	37	-	-
	43	-	-
	41	-	-
	34	-	-
	36	-	-
	44	-	-
	48	-	-
	45	-	-
	41	-	-
	39	-	-
	35	-	-
	37	-	-
	40	-	-
	40	-	-
	38	-	-
	42	-	-
	37	-	-
	50	-	-
	69	-	-
	62	-	-
	71	-	-
	65	-	-
	69	-	-
	80	-	-
	64	-	-

Brown Fine Grained SAND (SP)

Gray Silty CLAY (CL) to Clayey SILT (ML)

Gray Fine Grained SAND (SP)

Gray Fine to Coarse Grained SAND (SW)

Gray Fine Grained SAND (SP)

Gray Fine to Coarse Grained SAND (SW)

(continued)

Gray Fine to Coarse Grained SAND (SW)

Elev. 239

Gray Fine Grained SAND (SP)

Gray Fine to Coarse Grained SAND (SW)

Elev. 150
End of Boring

BORING No. 7
PIER #8

Boring No. 7
Station 1152 + 47.50
Offset
Ground Surface 286 ± 0

Surface Water El. —
Groundwater El. at Completion 293
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
286 ±			
	-	-	-
	-	-	-
Elev. 280			
	10	-	-
Elev. 275			
	13	-	-
	9	-	-
	13	-	-
	18	-	-
	23	-	-
	19	-	-
	15	-	-
	17	-	-
	21	-	-
	15	-	-
	16	-	-
	29	-	-
	46	-	-
	33	-	-
	22	-	-
	32	-	-
	53	-	-
	51	-	-
	66	-	-
	46	-	-
	58	-	-
	51	-	-
	64	-	-
	56	-	-
	49	-	-
	62	-	-
	56	-	-
	69	-	-
	112	-	-
	52	-	-
	38	-	-
	85	-	-
	37	-	21
	43	-	20

Black Clayey SILT (ML-CL)

Gray Medium Grained SAND (SP)

Gray Fine to Coarse Grained SAND (SW)

Gray Fine to Coarse Grained SAND (SW)

Gray Fine Grained SAND (SP)

(continued)

Gray Fine to Coarse Grained SAND (SW)

Elev. 236

Gray Sand and Gravel (SW-GW)

Elev. 221

Gray Fine to Coarse Grained SAND (SW)

Gray Fine Grained SAND (SP)

(continued)

Gray Fine Grained SAND (SP)

Elev. 191

Light Brown Sandy CLAY (SC)

Elev. 187.5
End of Boring

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

BORINGS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

SOIL TEST BORINGS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	102-10-11 F & E	ALEXANDER MISSISSIPPI	81	74
FHWA REG NO 4 / FHWA REG NO 7		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

BORING No. 8-PIER #9

Boring No. 8
Station 1154 + 47.50
Offset

Surface Water El. 292
Groundwater El. at Completion
After ____ Hours

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 282 +			
0			
Gray Silty CLAY (CL) to Clayey SILT (ML)			
-5	-	-	-
	-	-	-
	9	-	-
Elev. 271			
-15	10	-	-
Gray Fine to Coarse Grained SAND (SW)			
	9	-	-
-20	17	-	-
	24	-	-
	20	-	-
Gray Fine to Coarse Grained SAND (SW)			
Elev. 257			
-25	16	-	-
Gray Sand and Gravel (SW-GW)	19	-	-
	23	-	-
-30	32	-	-
	24	-	-
Elev. 247			
-35	29	-	-
Gray Fine to Coarse Grained SAND (SW)			
	28	-	-
-40	36	-	-
	30	-	-
-45			

Surface Water El. 292
Groundwater El. at Completion
After ____ Hours

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 282 + (continued)			
-45	39	-	-
	23	-	-
-50	20	-	-
	20	-	-
Gray Fine to Coarse Grained SAND (SW)			
-55	29	-	-
	29	-	-
-60	28	-	-
	16	-	-
Elev. 217			
-65	12		17
Light Brown to Light Gray Sandy CLAY (SC)			
-70	12	?	17
Light Brown to Light Gray Sandy CLAY (SC)	15	?	19
	17	?	20
-75	31	-	18
	38	-	23
Elev. 202			
-80	67	-	-
Light Gray Fine Grained SAND (SP)			
-85	71	-	-
	74	-	-
-90	67	-	-

Surface Water El. 292
Groundwater El. at Completion
After ____ Hours

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 282 + (continued)			
-90	58	-	-
Light Gray Fine Grained SAND (SP)			
-95	45	-	-
	41	-	-
Elev. 185.5			
-100	47	-	-
End of Boring			

BORING No. 9-PIER #10

Boring No. 9
Station 1156 + 32.50
Offset 18' Rt.

Surface Water El. 295
Groundwater El. at Completion
After ____ Hours

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 254 +			
0			
Gray Fine to Coarse grained SAND (SW)			
-5	7	-	-
	13	-	-
	13	-	-
Elev. 245			
-10	27	-	-
Gray Fine to Coarse grained SAND (SW) with gravel			
	23	-	-
-15	24	-	-
	28	-	-
-20	39	-	-
	36	-	-
Gray Fine to Coarse grained SAND (SW) with gravel			
-25	44	-	-
	49	-	-
-30	33	-	-
Elev. 222			
Gray Clayey SAND (SC)	36	-	-
Elev. 219			
-35	25	-	23
Pink Silty CLAY (CH)			
	7	-	23
-40	6	-	26
	8	-	22
-45			

Surface Water El. 295
Groundwater El. at Completion
After ____ Hours

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 254 + (Continued)			
-45	5	-	27
Pink Silty CLAY (CH)			
Elev. 207			
	37	-	-
-50	35	-	-
Light Gray Medium to Coarse grained SAND (SW)			
	36	-	-
Elev. 197			
-55	37	-	-
Light Brown Fine to Coarse Grained SAND (SW)			
	39	-	-
-60	38	-	-
	58	-	-
Elev. 188			
-65	75	-	-
Light Pink Clayey SAND (SC) with some gravel			
	101	-	-
-70	185	-	-
Elev. 183			
End of Boring			

BORING No. 10-PIER #11

Boring No. 10
Station 1158 + 47.50
Offset

Surface Water El. 295
Groundwater El. at Completion
After ____ Hours

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 268 +			
0			
Brown Fine to Medium Grained SAND (SW)			
	16	-	-
-5	13	-	-
Elev. 262			
	11	-	-
-10	11	-	-
Fine to Coarse grained SAND (SW) with traces of gravel			
	17	-	-
-15	17	-	-
	21	-	-
Elev. 247			
-20	22	-	-
Fine to Medium grained SAND (SW) with traces of gravel			
	24	-	-
-25	27	-	-
	34	-	-
-30	30	-	-
	21	-	-
-35	43	-	-
	52	-	-
-50	54	-	-
Elev. 225			
Brown Clayey SAND (SC)	42	-	-
-45			

Surface Water El. 295
Groundwater El. at Completion
After ____ Hours

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 268 + (Continued)			
-45	87	-	-
Brown Clayey SAND (SC)			
	96	-	-
-50	113	-	-
Elev. 216			
	174	-	-
-55	100/6	-	-
Light Brown Fine grained SAND (SP)			
	100/6	-	-
-60	100/5	-	-
Elev. 207			
Light Gray Fine to Medium Grained SAND (SW)	111/6	-	-
Elev. 204			
-65	100/6	-	21
Light Gray SILT (ML)			
Light Gray SILT (ML)	100/6	-	24
Elev. 199			
-70	102/6	-	-
	100/6	-	-
-75	100/6	-	-
Light Brown Fine to Medium Grained SAND (SW)	111/5	-	-
-80	100/6	-	-
	100/6	-	-
-85	100/6	-	-
	111/6	-	-
-90			

Surface Water El. 295
Groundwater El. at Completion
After ____ Hours

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 268 + (Continued)			
-90	100/6	-	-
Light Brown Fine to Medium Grained SAND (SW)			
	100/6	-	-
-95	100/6	-	-
	100/6	-	-
-100	111/6	-	-
	100/6	-	-
	100/6	-	-
-105	100/5	-	-
-110	100/6	-	-
	100/6	-	-
-115	100/6	-	-
	100/6	-	-
-120	100/6	-	-
Light Brown Fine to Medium Grained SAND (SW)			
-125	100/6	-	-
	100/6	-	-
-130	100/6	-	-
Elev. 137 End of Boring			

Note: 110 feet of 6 inch casing and 20 feet of 10 inch casing left in hole.

N = Standard Penetration Test - Blows per foot to drive a 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu = Unconfined Compressive Strength - t/sf

w = Water Content - percentage of oven dry weight - %

Type Failure: B = Bulge Failure; S = Shear Failure; E = Estimated Value

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
100 E. WABASH AVE. CHICAGO, ILLINOIS

BORINGS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1) F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 78.25

SOIL TEST BORINGS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1) F&E	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	81	75
F.H.W.A. DES. NO. 0 F.H.L.A. DES. NO. 0		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

BORING No. 11-PIER #12

Boring No. 11
Station 1163 + 64.33
Offset
Surface Water El. 298
Groundwater El. at Completion —
After — Hours

Ground Surface 265 +

Gray Fine to Coarse Grained SAND (SW)

Gray Fine to Coarse Grained SAND (SW)

Brown Sand and Gravel (SW-GW)

Elev. 225

Gray Fine to Medium Grained SAND (SW) with occasional Clay Seams

Elev. 225

Gray Medium to Coarse Grained SAND (SW) with some Gravel

Ground Surface 265 + (Continued)

Gray Medium to Coarse Grained SAND (SW) with some Gravel

Elev. 209.5

Brown Sand and Gravel (SW-GW)

Ground Surface 265 + (Continued)

Brown Sand and Gravel (SW-GW)

Elev. 174

Light Gray Fine to Coarse Grained SAND (SW)

Elev. 139

End of Boring

Elevation	N	Qu t/s.f.	w (%)
0			
	12	-	-
	12	-	-
-5	13	-	-
	18	-	-
-10	21	-	-
	41	-	-
-15	95	-	-
	58	-	-
-20	18	-	-
	11	-	-
-25	17	-	-
	20	-	-
-30	21	-	-
	41	-	-
-35	80	-	-
	70	-	-
-40	42	-	-
-45			
-45	41	-	-
	39	-	-
-50	35	-	-
	34	-	-
-55	38	-	-
	50	-	-
-60	71	-	-
	70	-	-
-65	115	-	-
	159	-	-
-70	207	-	-
	WOH/12	-	-
-75	WOH/12	-	-
	WOH/12	-	-
-80	WOH/12	-	-
	WOH/12	-	-
-85	WOH/12	-	-
	WOH/12	-	-
-90	WOH/12	-	-
-95	WOH/12	-	-
	WOH/12	-	-
-100	WOH/12	-	-
	WOH/12	-	-
-105	WOH/12	-	-
	WOH/12	-	-
-110	WOH/12	-	-
	WOH/12	-	-
-115	WOH/12	-	-
	WOH/12	-	-
-120	WOH/12	-	-
	WOH/12	-	-
-125	WOH/12	-	-

BORING No. 12-PIER #13

Boring No. 12
Station 1171 + 85.67
Offset
Surface Water El. 297
Groundwater El. at Completion —
After — Hours

Ground Surface +269 +

Dark Gray Silty CLAY (CL) to Clayey SILT (ML)

Elev. 257

Gray Fine Grained SAND (SP)

Elev. 266

Gray Fine Grained SAND (SP)

Elev. 229

Gray Fine to Medium Grained SAND (SW)

Ground Surface 269 + (Continued)

Gray Fine to Medium Grained SAND (SW)

Elev. 201

Light Pink & Light Brown Silty CLAY (CL) to Clayey SILT (ML)

Elev. 197

Light Gray Medium to Coarse Grained SAND (SW) with several Clay seams

Elev. 193

Light Gray Fine to Coarse Grained SAND (SW)

Elev. 151

Light Gray Coarse Grained SAND (SW) with a trace of Gravel

Elev. 187

Light Gray Fine to Coarse Grained SAND (SW)

Ground Surface 269 + (Continued)

Light Gray Fine to Coarse Grained SAND (SW)

Elev. 166

Light Brown Fine to Medium Grained SAND (SW)

Elev. 155

Light Gray Fine to Coarse Grained SAND (SW)

Elev. 138

End of Boring

Elevation	N	Qu t/s.f.	w (%)
0			
	5	-	34
	12	-	36
-5	13	-	39
	12	-	37
-10	14	-	-
	23	-	-
-15	25	-	-
	26	-	-
-20	28	-	-
	34	-	-
-25	36	-	-
	38	-	-
-30	39	-	-
	42	-	-
-35	45	-	-
	42	-	-
-40	37	-	-
-45			
-45	46	-	-
	39	-	-
-50	33	-	-
	32	-	-
-55	34	-	-
	42	-	-
-60	44	-	-
	48	-	-
-65	49	-	-
	68	-	-
-70	19	-	21
	25	-	21
-75	44	-	-
	43	-	-
-80	67	-	-
	41	-	-
-85	65	-	-
-90			
-90	115	-	-
	144	-	-
-95	143	-	-
	186	-	-
-100	WOH/12	-	-
	WOH/12	-	-
-105	WOH/12	-	-
	WOH/12	-	-
-110	WOH/12	-	-
	WOH/12	-	-
-115	WOH/12	-	-
	WOH/12	-	-
-120	WOH/12	-	-
	WOH/12	-	-
-125	WOH/12	-	-
	WOH/12	-	-
-130	WOH/12	-	-

BORING No. 13-PIER #14

Boring No. 13
Station 1177 + 02.50
Offset
Surface Water El. —
Groundwater El. at Completion 298
After — Hours

Ground Surface 318 +

Dark Brown to Gray Silty CLAY (CL) to Clayey SILT (ML)

Elev. 294

Dark Brown to Gray Silty CLAY (CL) to Clayey SILT (ML)

Elev. 299.5

End of Boring

Brown Fine to Medium Grained SAND (SW)

Ground Surface 318 + (Continued)

Brown Fine to Medium Grained SAND (SW)

Elev. 270

Gray Sand and Gravel (SW-GW)

Gray Sand and Gravel (SW-GW)

Elev. 239.5

End of Boring

Elevation	N	Qu t/s.f.	w (%)
0			
	13	1.3	30
-5	10	1.5	26
	4	1.0	30
-10	4	1.0	29
	5	1.0	34
-15	4	1.0	34
	6	0.5	31
-20	4	1.5	35
	5	0.5	34
-25	4	-	-
	4	-	-
-30	7	-	-
	33	-	-
-35	57	-	-
	60	-	-
-40	31	-	-
-45			
-45	26	-	-
	24	-	-
-50	23	-	-
	22	-	-
-55	23	-	-
	46	-	-
-60	24	-	-
	38	-	-
-65	21	-	-
	46	-	-
-70			

N = Standard Penetration Test — blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu = Unconfined Compressive Strength — t/sf

w = Water Content — percentage of oven dry weight — %.

Type failure: B = Bulge Failure; S = Shear Failure; E = Estimated Value

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 E. WABASH AVE. CHICAGO, ILLINOIS

BORINGS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

SOIL TEST BORINGS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	76
F.H.W.A. REG. NO. 4 / F.H.W.A. REG. NO. 3	ILLINOIS MISSOURI	PROJECT I-57-9( )0		

BORING No. 14
PIER #15

Boring No. 14
Station 1178 + 16.50
Offset
Ground Surface 318 ±
Surface Water El. —
Groundwater El. at Completion 298
After — Hours

Elevation	N	Qu t/s.f.	w (%)
	10	3.1	23
	7	2.4	25
	3	0.3	36
	2	0.7	22
	4	0.8	18
	2	0.7	19
	4	1.2	19
	4	0.4	20
Elev. 296			
Brown Fine to Coarse Grained SAND (SW)	14	-	-
	10	-	-
	21	-	-
	30	-	-
	44	-	-
	16	-	-
Elev. 280.5			
Gray Fine Grained SAND (SP)	30	-	-
	30	-	-
	28	-	-

(continued)

Elevation	N	Qu t/s.f.	w (%)
	36	-	-
Gray Fine Grained SAND (SP)			
Elev. 270.5			
	22	-	-
	23	-	-
Gray Sand and Gravel (SW-GW)			
	33	-	-
	23	-	-
	70	-	-
Elev. 257	39	-	-
End of Boring			

BORING No. 15
PIER #17

Boring No. 15
Station 1180 + 46.50
Offset
Ground Surface 318 ± 0
Surface Water El. —
Groundwater El. at Completion 298
After — Hours

Elevation	N	Qu t/s.f.	w (%)
	15	4.5	25
	9	3.5	26
	5	[illegible]	17
	7	1.5	19
	2	1.5	22
	5	1.5	18
Elev. 300	12	-	16
	16	-	-
	15	-	-
Brown Fine Grained SAND (SP)	7	-	-
	14	-	-
Elev. 288			
Gray Fine to Medium Grained SAND (SW)	28	-	-
	22	-	-
	27	-	-
	39	-	-
	38	-	-

(continued)

Elevation	N	Qu t/s.f.	w (%)
	37	-	-
Gray Fine to Medium Grained SAND (SW)			
	40	-	-
	28	-	-
	30	-	-
	33	-	4
	32	-	-
Elev. 258			
Gray Fine to Coarse Grained SAND (SW)	36	-	-
	47	-	-
	52	-	-
	52	-	-
Elev. 247	54	-	-
End of Boring			

BORING No. 16
PIER #18

Boring No. 16
Station 1181 + 58.50
Offset
Ground Surface [illegible] 0
Surface Water El. —
Groundwater El. at Completion 298
After — Hours

Elevation	N	Qu t/s.f.	w (%)
	14	1.6	27
	9	3.6	30
	8	1.3	37
	6	1.3	48
	6	1.2	36
	5	-	34
	3	1.1	36
Elev. 299			
	15	-	-
	9	-	-
	3	-	-
Gray Fine to Medium Grained SAND (SW)	8	-	-
	9	-	-
	12	-	-
	16	-	-
Elev. 280			
Gray Fine to Coarse Graded SAND (SW)	22	-	-
	36	-	-
	37	-	-

(Continued)

Elevation	N	Qu t/s.f.	w (%)
	25	-	-
Gray Fine to Coarse Graded SAND (SW)			
	30	-	-
	32	-	-
	30	-	-
	23	-	-
	21	-	-
Elev. 258			
	17	-	-
	34	-	-
	40	-	-
	42	-	-
	36	-	-
	25	-	-
	38	-	-
Gray Sand and Gravel (SW-GW)			
	22	-	-
	24	-	-
	30	-	-
	31	-	-
	34	-	-
	40	-	-

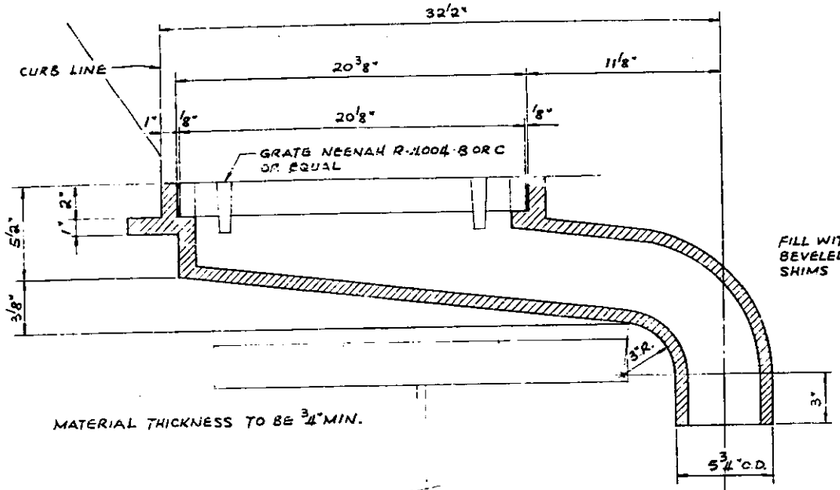
(Continued)

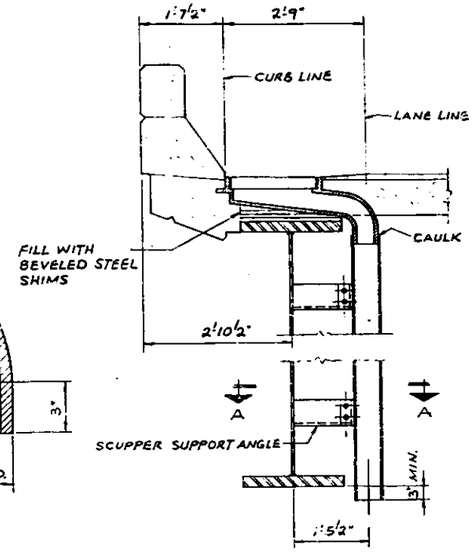
Elevation	N	Qu t/s.f.	w (%)
	69	-	-
Gray Sand and Gravel (SW-GW)			
	47	-	-
Elev. 222	40	-	-
End of Boring			

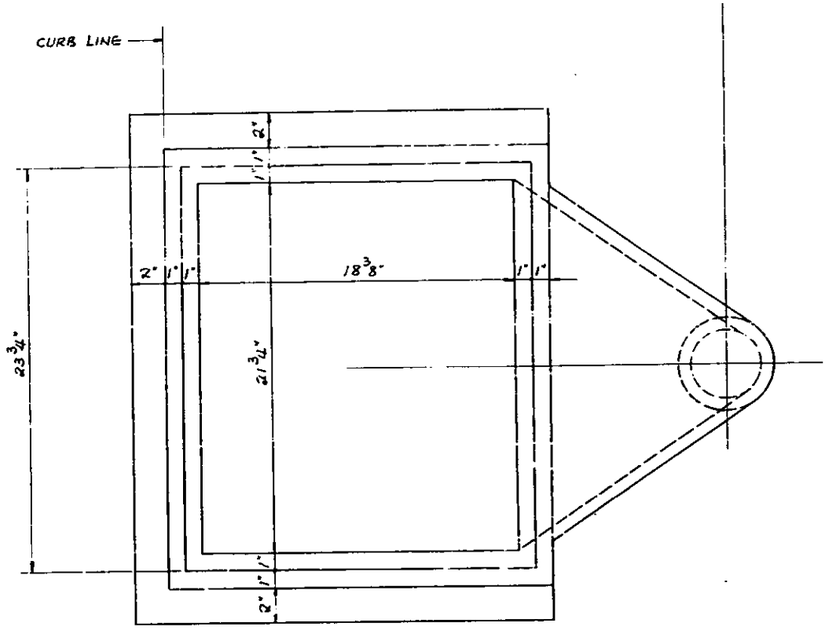
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

BORINGS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)F&E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

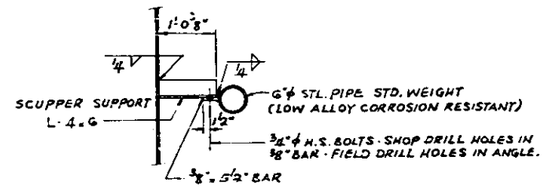
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-1 F&E	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	81	81
F.A.M.A.-920 00 A / F.A.M.A.-920 00 B		ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	PROJECT I-57-9( )0	







DETAILS OF SCUPPER



SECTION A-A

DETAIL AT GIRDER SPANS
SPANS 1 TO 9A & 15 TO 19

NOTES:

FOR LOCATION OF SCUPPERS SEE FRAMING PLAN.

SCUPPER SUPPORT ANGLES ARE TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) F & E.

ALL OTHER MATERIAL SHOWN ON THIS SHEET IS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) D.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

DRAINAGE DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1) F & E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I 57	(02-1B-1) D	ALEXANDER ILLINOIS	MISSOURI	33	1
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)0	

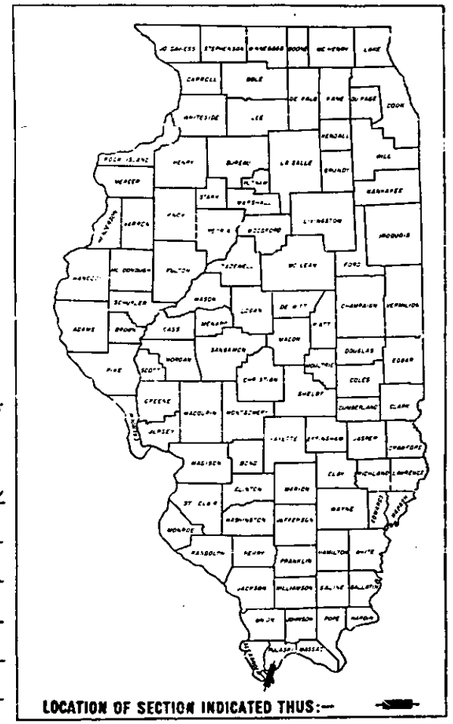
P-99-012-64

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

MISSOURI
STATE HIGHWAY COMMISSION

PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY
BRIDGE OVER MISSISSIPPI RIVER
WEST OF CAIRO, ILLINOIS
ALEXANDER COUNTY, ILLINOIS - MISSISSIPPI COUNTY, MISSOURI
F.A.I. ROUTE 57 PROJECT I-57-9(5)0
SUPERSTRUCTURE SECTION (02-1B-1) D

C-99-109-71



LOCATION OF SECTION INDICATED THUS:—

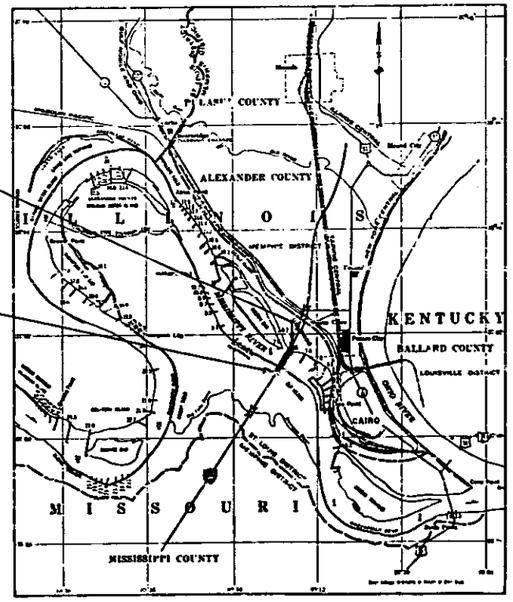
PREPARED BY ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 SO. WABASH AVENUE
CHICAGO, ILLINOIS

EXAMINED BY _____ DIST. DESIGN ENGINEER
EXAMINED BY _____ DIST. CONST. ENGINEER
EXAMINED BY _____ DIST. MAINT. ENGINEER
EXAMINED BY _____ DIST. TRAFFIC ENGINEER
EXAMINED BY _____ DIST. M.T.L.S. ENGINEER
EXAMINED BY _____ DIST. R.O.W. ENGINEER

INDEX OF SHEETS, SHEET NO. 2
SUMMARY OF QUANTITES, SHEET NO. 2

PROPOSED IMPROVEMENT BEGINS
PROJECT I-57-9(5)0
SECTION (02-1B-1)D
STA. 1141+85.25

PROPOSED IMPROVEMENT ENDS
PROJECT I-57-9(5)0
SECTION (02-1B-1)D
STA. 1182+74.75



LAYOUT

SECTION (02-1B-1)D INCLUDES FURNISHING ALL MATERIALS AND THE COMPLETE CONSTRUCTION OF THE CONCRETE DECK FOR (A) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 9 SPANS (4 @ 110 FT, 3 @ 155 FT AND 2 @ 376 FT), (B) A THREE SPAN CONTINUOUS THROUGH TRUSS STRUCTURE OVER THE MAIN AND AUXILIARY NAVIGATION CHANNELS (518 FT, 821 FT AND 518 FT) (C) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 5 SPANS OF 114 FT CARRYING F.A.I. ROUTE 57 OVER THE MISSISSIPPI RIVER AT CAIRO, ILLINOIS.

NET LENGTH OF PROJECT
4089.50 LIN. FT. = 0.7745 MILES

A-2000
MISSOURI
STATE HIGHWAY COMMISSION
SUBMITTED _____
HIGHWAY ENGINEER
APPROVED _____
STATE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT ENGINEER
EXAMINED
CHIEF ENGINEER
APPROVED
DIRECTOR OF HIGHWAYS

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges & Traffic Structures

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR — DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR — DATE

Harold P. Bradley E-16822
Harold P. Bradley #1994

CONTRACT NUMBER 32072

REEL 9-94

ALEXANDER COUNTY ILLINOIS SECTION(02-1B-1)D F.A.I. ROUTE 57
MISSISSIPPI COUNTY MISSOURI

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	102-15-1 D	ALEXANDER (MISSOURI)	ILLINOIS (MISSOURI)	83	2
F.A.I. REG. NO. 0 F.A.P. REG. NO. 0		ILLINOIS (MISSOURI)		PROJECT I-57-9(5)10	

GENERAL NOTES

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE NOTED.

THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THAT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF HANDRAIL CONCRETE.

PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE FLOOR.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF GIRDERS AND STRINGERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE CENTER OF SUPPORTS OVER WHICH THE GIRDER OR STRINGER IS CONTINUOUS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

A PROTECTIVE COAT SHALL BE APPLIED TO THE TOPS OF PARAPETS, THE FACES OF THE MEDIAN PARAPET AND CURB AND THE INSIDE FACES OF THE FASCIA PARAPETS AND CURBS IN ACCORDANCE WITH ARTICLE 503.12 OF THE STANDARD SPECIFICATIONS.

BRIDGE SEAT SEALER SHALL BE APPLIED TO THE TOPS OF PIERS 11 AND 14 IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED.

The three coat zinc chromate paint system shall be used for shop and field painting of Structural Steel.

SUMMARY OF QUANTITIES
SECTION (02-18-1)D

CODE NO.	QUANTITY	UNIT	ITEM
X40615	2,212	TON	BITUMINOUS CONCRETE SURFACE COURSE, Mixture D, Class I
503004	6,074	SQ.YD.	PROTECTIVE COAT
504003	8,246	CU.YD.	CLASS X CONCRETE
507001	35,250	POUND	F & E STRUCTURAL STEEL
507025	22,302	EACH	STUD SHEAR CONNECTORS
508005	8,175	LIN.FT.	ALUMINUM RAILING
512001	2,195,140	POUND	REINFORCEMENT BARS
XZ1073	1	L.SUM	BRIDGE SEAT SEALER
X04961	26,808	SQ.YD.	Waterproofing Membrane System
XZ1104	777.0	LIN.FT.	PREFORMED JOINT SEALER, 2-1/2"
XZ1187	63.0	LIN.FT.	PREFORMED JOINT SEALER, 4"
XZ1093	63.0	LIN.FT.	NEOPRENE EXPANSION JOINT, 4"
XZ1201	1288	LIN.FT.	NEOPRENE EXPANSION JOINT, 9"
XZ1324	142	EACH	SCUPPERS
L04947	1	L. SUM	NAVIGATION LIGHTING SYSTEM
XZ1100	6,000	HOURS	TRAINEES
L05848	5,000	LIN.FT.	ELECTRIC CABLE IN TRENCH 15,000 V XLP: #2/CONC. GROUND
L05849	500	LIN.FT.	ELECTRIC CABLE IN CONDUIT, 15000 V XLP: #2/CONC. GROUND
L04320	5,000	LIN.FT.	TRENCH AND BACKFILL (48"DEPTH)
L00056	500	LIN.FT.	CONDUIT ATTACHED TO STRUCTURE, 2" DIA. GALV. STEEL
L03123	1	EACH	TRANSFORMER, PAD MOUNTED, 25 KVA, 7200/480/240 (SINGLE PHASE)

INDEX OF SHEETS

SHEET	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, QUANTITIES AND GENERAL NOTES
3	GENERAL PLAN AND ELEVATION
4, 5	TOP OF SLAB ELEVATIONS - SPANS 1, 2, 3 AND 4
6, 7	TOP OF SLAB ELEVATIONS - SPANS 5, 6 AND 7
8, 9	TOP OF SLAB ELEVATIONS - SPANS 8A AND 9A
10-16	TOP OF SLAB ELEVATIONS - SPANS 12, 13 AND 14
17, 18	TOP OF SLAB ELEVATIONS - SPANS 15 TO 19
19	DECK CROSS SECTION AND DETAILS - SPANS 1 TO 9A AND 15 TO 19
20	DECK CROSS SECTION AND DETAILS - SPANS 12, 13 AND 14
21	DECK REINFORCEMENT PLAN - SPANS 1, 2, 3 AND 4
22	DECK REINFORCEMENT PLAN - SPANS 5, 6 AND 7
23	DECK REINFORCEMENT PLAN - SPANS 8A AND 9A
24	DECK REINFORCEMENT PLAN - SPANS 12, 13 AND 14
25	DECK REINFORCEMENT PLAN - SPANS 15 TO 19
26	DECK WORK POINTS - SPANS 1 TO 9A AND 15 TO 19
27	DECK WORK POINTS - SPANS 12, 13 AND 14
28	REINFORCEMENT BAR LIST - SPANS 1 TO 9A AND 15 TO 19
29	REINFORCEMENT BAR LIST - SPANS 12, 13 AND 14
30	HANDRAIL ELEVATIONS - SPANS 1 TO 13
31	HANDRAIL ELEVATIONS - SPANS 14 TO 19
32	ALUMINUM RAILING DETAILS - SPANS 1 TO 19
33, 33A	EXPANSION GUARD - NORTH AND SOUTH ABUTMENTS
34	EXPANSION GUARD - SPANS 4 AND 7
35, 36	EXPANSION GUARD - PIERS 11 AND 14
37	TRUSS BEARINGS AT PIERS 11 & 14
38	FRAMING PLAN - SPANS 1, 2, 3 AND 4
39	FRAMING PLAN - SPANS 1, 2, 3 AND 4
40	FRAMING PLAN - SPANS 5, 6 AND 7
41	FRAMING PLAN - SPANS 5, 6 AND 7
42	FRAMING PLAN - SPANS 8A AND 9A
43	FRAMING PLAN - SPANS 15 TO 19
44	FIELD SPLICE AND DETAILS - SPANS 1 TO 9A AND 15 TO 19
* 45	GIRDER CROSSFRAMES AND LINK DETAILS
* 46	GIRDER CROSSFRAMES AND BRACING DETAILS
* 47	STEEL DETAILS - SPANS 8A AND 9A
* 48	TRUSS LAYOUT & BLOCKING ORDINATES
* 49	FRAMING PLAN - SPANS 12, 13 AND 14
* 50	STRINGER ELEVATIONS & DESIGN DATA - SPANS 12, 13 AND 14
* 51	FLOOR STEEL DETAILS - SPANS 12, 13 AND 14
* 52	FLOOR BEAMS - SPANS 12, 13 AND 14
53	NAVIGATION & AVIATION OBSTRUCTION LIGHTS
54	PIER LIGHT, LADDER & RAILING DETAILS
55	CENTER OF CHANNEL NAVIGATION LIGHT DETAILS
56	AVIATION OBSTRUCTION LIGHT DETAILS
57	WIRING DIAGRAM
58	NORTH ABUTMENT
59	SOUTH ABUTMENT
60	ABUTMENT DETAILS
61	PIER 11
62	PIER 14
63	DRAINAGE DETAILS
* 64A	Revised Pier Cap Details
* 64B	Revised Pier Cap Details

* THESE SHEETS ARE INCLUDED FOR REFERENCE ONLY - NOT PART OF SECTION (02-18-1)D

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 E. WABASH AVE. CHICAGO, ILLINOIS

INDEX OF SHEETS, QUANTITIES & GENERAL NOTES
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. 2-4-76 Rev. 8-23-76

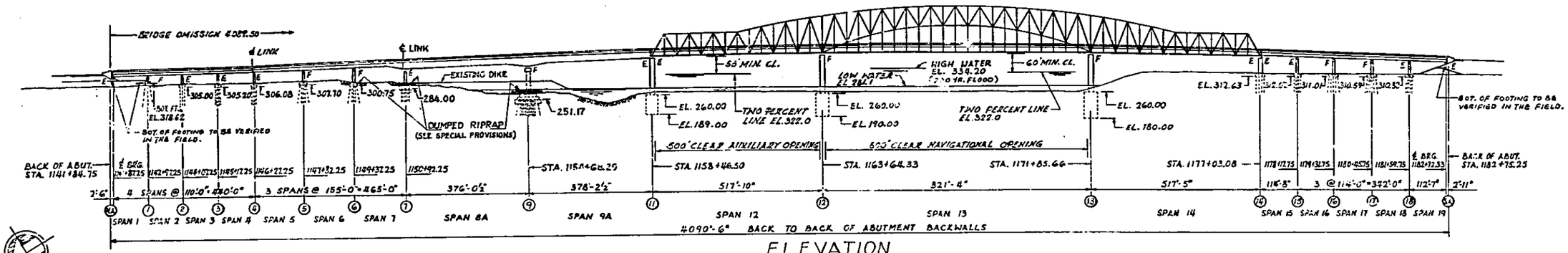
Rev. Cl. X Conc from 8,232.1 Cu. Yds. to 8,241.6 Cu. Yds. Reinf. Bars from 2,186,300# to 2,195,140#. 2-18-76 L.W.

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	3
STATE ROUTE NO. / FHWA ROUTE NO.		ILLINOIS MISSOURI		PROJECT I-57-9(5)10	

BENCH MARKS

CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1148+89.65 Rt. ℄ MEDIAN EL. 317.12

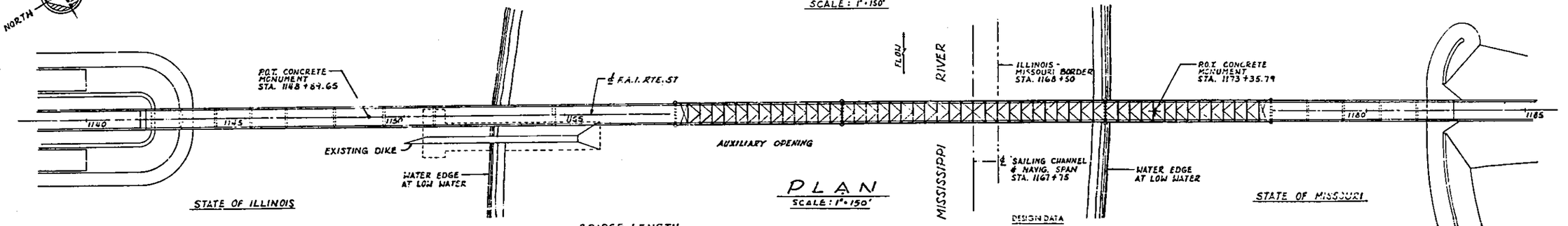
CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1173+35.79 Rt. ℄ MEDIAN EL. 319.31



ELEVATION

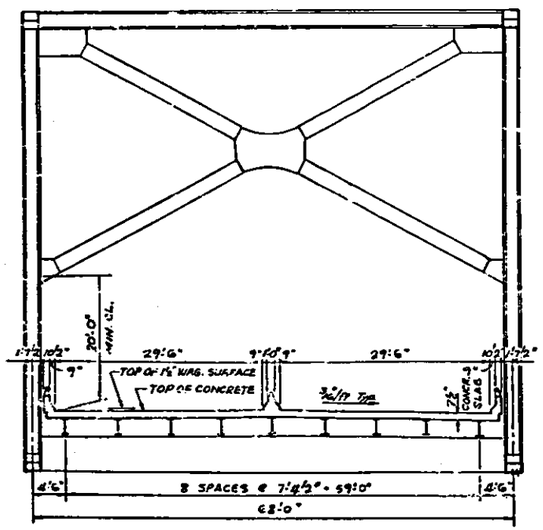
SCALE : 1" = 150'

NORTH

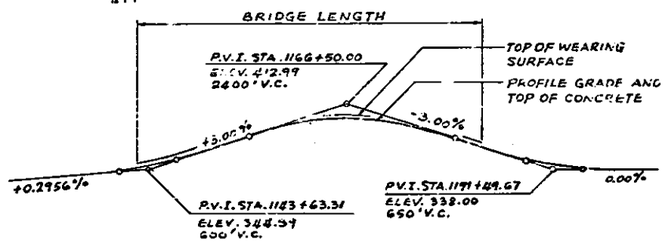


PLAN

SCALE : 1" = 150'

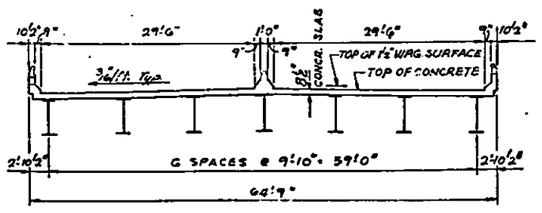


TYPICAL SECTION THRU TRUSS SPANS



PROFILE GRADE - F.A.I. RTE. 57

(4'-0" LT. AND RT. OF ℄ MEDIAN)



TYPICAL SECTION THRU GIRDER SPANS

DESIGN DATA

HIGHWAY CLASSIFICATION
F.A.I. ROUTE 57, DHV: 1920, M.P.H.: 70, DESIGNATION: B-1 (1987)

DESIGN LOADS
LIVE LOAD: HS20-44 AND ALTERNATE
INITIAL DEAD LOAD: 1 1/2 IN. BITUMINOUS WEARING SURFACE WEIGHING 18 LBS. PER SQ. FT.
EARTHQUAKE: 6% DEAD LOAD OF STRUCTURE

DESIGN STRESSES
(1) CONCRETE
f'c = 3,500 P.S.I.
fc = 1,400 P.S.I. (CURB AND PARAPET)
fc = 1,200 P.S.I. (DECK SLAB)
n = 10
(2) REINFORCEMENT BARS
fs = 20,000 P.S.I.
(3) STRUCTURAL STEEL
A36 Fy = 36,000 P.S.I.
A572 Fy = 50,000 P.S.I.; t = UP TO 1-1/2 IN. INCL.
A588 Fy = 50,000 P.S.I.; t = UP TO 4 IN. INCL.
A517 Fy = 100,000 P.S.I.; t = UP TO 2-1/2 IN. INCL.
ALL STRUCTURAL STEEL SHALL BE WELDABLE.
CASTINGS:
A486 (CLASS 70) Fy = 36,000 P.S.I.
A486 (CLASS 90) Fy = 65,000 P.S.I.
A486 (CLASS 120) Fy = 95,000 P.S.I.

LIVE LOAD DEFLECTIONS (INCLUDING IMPACT)
GIRDERS (COMPOSITE): Δ ≤ L/1200 (L = SPAN LENGTH)
TRUSSES: Δ ≤ L/1000 (L = SPAN LENGTH)
CANTILEVER ARMS OF GIRDERS AND STRINGERS:
Δ ≤ L/300 (L = LENGTH OF CANTILEVER ARM)
OTHER STRUCTURAL COMPONENTS:
Δ ≤ L/800 (L = DISTANCE BETWEEN CENTER OF SUPPORTS)

DESIGN SPECIFICATIONS
A.A.S.H.O., 1969 AS APPLICABLE & INTERIM SPECIFICATION 1970
A.W.S., EIGHTH EDITION, 1969.

WATERWAY INFORMATION

50 YEAR FLOOD WATER ELEV. 332.0 DISCHARGE 1,200,000 C.F.S.
200 YEAR FLOOD WATER ELEV. 334.2 DISCHARGE 1,460,000 C.F.S.
VELOCITY FOR 200 YEAR FLOOD MAIN CHANNEL 8.0 F.P.S.
OPENING PROVIDED BELOW ELEV. 334.2 = 195,600 S.F.
HIGH WATER OF RECORD ELEV. 330.0 - 1937
2 PER CENT LINE ELEV. 322.0

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

GENERAL PLAN & ELEVATION
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. 2-4-76 Rev. 2-18-76

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	4
FHWA REG NO 4 / FHWA REG NO 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)10	

SPAN 1

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ BRG.NA	1	114187.250	29.500	343.817	343.817
	2	114187.250	19.667	343.971	343.971
	3	114187.250	9.833	344.125	344.125
	4	114187.250	0.000	344.278	344.278
	5	114187.250	-9.833	344.125	344.125
	6	114187.250	-19.667	343.971	343.971
	7	114187.250	-29.500	343.817	343.817
1A	1	114197.250	29.500	343.805	343.955
	2	114197.250	19.667	344.019	344.108
	3	114197.250	9.833	344.212	344.262
	4	114197.250	0.000	344.366	344.416
	5	114197.250	-9.833	344.212	344.262
	6	114197.250	-19.667	344.059	344.108
	7	114197.250	-29.500	343.905	343.955
1B	1	114207.250	29.500	343.997	344.093
	2	114207.250	19.667	344.151	344.244
	3	114207.250	9.833	344.305	344.397
	4	114207.250	0.000	344.458	344.551
	5	114207.250	-9.833	344.305	344.397
	6	114207.250	-19.667	344.151	344.244
	7	114207.250	-29.500	343.997	344.093
1C	1	114217.250	29.500	344.094	344.219
	2	114217.250	19.667	344.248	344.373
	3	114217.250	9.833	344.401	344.526
	4	114217.250	0.000	344.555	344.680
	5	114217.250	-9.833	344.401	344.526
	6	114217.250	-19.667	344.248	344.373
	7	114217.250	-29.500	344.094	344.219
1D	1	114227.250	29.500	344.195	344.338
	2	114227.250	19.667	344.349	344.492
	3	114227.250	9.833	344.502	344.646
	4	114227.250	0.000	344.656	344.799
	5	114227.250	-9.833	344.502	344.646
	6	114227.250	-19.667	344.349	344.492
	7	114227.250	-29.500	344.195	[illegible]
1E	1	114237.250	29.500	344.301	344.447
	2	114237.250	19.667	344.454	344.601
	3	114237.250	9.833	344.608	344.755
	4	114237.250	0.000	344.762	344.908
	5	114237.250	-9.833	344.608	344.755
	6	114237.250	-19.667	344.454	344.601
	7	114237.250	-29.500	344.301	[illegible]
1F	1	114247.250	29.500	344.411	344.566
	2	114247.250	19.667	344.565	344.700
	3	114247.250	9.833	344.718	344.853
	4	114247.250	0.000	344.872	345.007
	5	114247.250	-9.833	344.718	[illegible]
	6	114247.250	-19.667	344.565	344.700
	7	114247.250	-29.500	344.411	344.566
1G	1	114257.250	29.500	344.526	344.637
	2	114257.250	19.667	344.679	344.791
	3	114257.250	9.833	344.833	344.944
	4	114257.250	0.000	344.987	345.098
	5	114257.250	-9.833	344.833	344.944
	6	114257.250	-19.667	344.679	344.791
	7	114257.250	-29.500	344.526	344.637

SPAN 1 (CONT.)

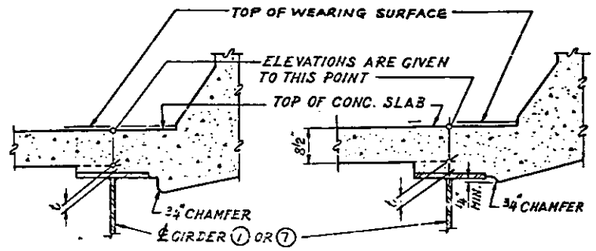
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
1H	1	114267.250	29.500	344.645	344.725
	2	114267.250	19.667	344.799	344.879
	3	114267.250	9.833	344.953	345.032
	4	114267.250	0.000	345.106	345.186
	5	114267.250	-9.833	344.952	345.032
	6	114267.250	-19.667	344.799	344.879
	7	114267.250	-29.500	344.645	344.725
SPLICE 1-2	1	114272.250	29.500	344.706	344.770
	2	114272.250	19.667	344.860	344.923
	3	114272.250	9.833	345.014	345.077
	4	114272.250	0.000	345.167	345.231
	5	114272.250	-9.833	345.014	345.077
	6	114272.250	-19.667	344.860	344.923
	7	114272.250	-29.500	344.706	344.770
1I	1	114277.250	29.500	344.769	344.816
	2	114277.250	19.667	344.922	344.970
	3	114277.250	9.833	345.076	345.123
	4	114277.250	0.000	345.230	345.277
	5	114277.250	-9.833	345.076	345.123
	6	114277.250	-19.667	344.922	344.970
	7	114277.250	-29.500	344.769	344.816
1J	1	114287.250	29.500	344.897	344.916
	2	114287.250	19.667	345.051	345.070
	3	114287.250	9.833	345.204	345.223
	4	114287.250	0.000	345.358	345.377
	5	114287.250	-9.833	345.204	345.223
	6	114287.250	-19.667	345.051	345.070
	7	114287.250	-29.500	344.897	344.916

SPAN 2

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 1	1	114297.250	29.500	345.030	345.030
	2	114297.250	19.667	345.183	345.183
	3	114297.250	9.833	345.337	345.337
	4	114297.250	0.000	345.491	345.491
	5	114297.250	-9.833	345.337	345.337
	6	114297.250	-19.667	345.183	345.183
	7	114297.250	-29.500	345.030	345.030
2A	1	114307.250	29.500	345.157	345.163
	2	114307.250	19.667	345.321	345.316
	3	114307.250	9.833	345.474	345.470
	4	114307.250	0.000	345.628	345.624
	5	114307.250	-9.833	345.474	345.470
	6	114307.250	-19.667	345.321	345.316
	7	114307.250	-29.500	345.167	345.163
2B	1	114317.250	29.500	345.308	345.310
	2	114317.250	19.667	345.462	345.464
	3	114317.250	9.833	345.616	345.618
	4	114317.250	0.000	345.770	345.771
	5	114317.250	-9.833	345.616	345.618
	6	114317.250	-19.667	345.462	345.464
	7	114317.250	-29.500	345.309	345.310

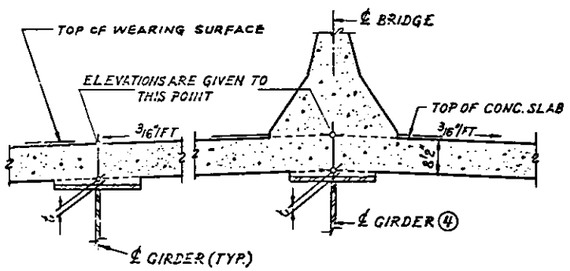
SPAN 2 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
2C	1	114327.250	29.500	345.459	345.468
	2	114327.250	19.667	345.609	345.621
	3	114327.250	9.833	345.762	345.775
	4	114327.250	0.000	345.916	345.929
	5	114327.250	-9.833	345.762	345.775
	6	114327.250	-19.667	345.609	345.621
	7	114327.250	-29.500	345.459	345.468
2D	1	114337.250	29.500	345.606	345.632
	2	114337.250	19.667	345.759	345.785
	3	114337.250	9.833	345.913	345.939
	4	114337.250	0.000	346.067	346.093
	5	114337.250	-9.833	345.913	345.939
	6	114337.250	-19.667	345.759	345.785
	7	114337.250	-29.500	345.606	345.632
2E	1	114347.250	29.500	345.761	345.798
	2	114347.250	19.667	345.915	345.952
	3	114347.250	9.833	346.068	346.105
	4	114347.250	0.000	346.222	346.259
	5	114347.250	-9.833	346.068	346.105
	6	114347.250	-19.667	345.915	345.952
	7	114347.250	-29.500	345.761	345.798
2F	1	114357.250	29.500	345.921	345.963
	2	114357.250	19.667	346.074	346.116
	3	114357.250	9.833	346.228	346.270
	4	114357.250	0.000	346.382	346.424
	5	114357.250	-9.833	346.228	346.270
	6	114357.250	-19.667	346.074	346.116
	7	114357.250	-29.500	345.921	345.963
2G	1	114367.250	29.500	346.085	346.124
	2	114367.250	19.667	346.239	346.278
	3	114367.250	9.833	346.392	346.432
	4	114367.250	0.000	346.546	346.585
	5	114367.250	-9.833	346.392	346.432
	6	114367.250	-19.667	346.239	346.278
	7	114367.250	-29.500	346.085	346.124
2H	1	114377.250	29.500	346.294	346.284
	2	114377.250	19.667	346.428	346.438
	3	114377.250	9.833	346.561	346.592
	4	114377.250	0.000	346.715	346.745
	5	114377.250	-9.833	346.561	346.592
	6	114377.250	-19.667	346.408	346.438
	7	114377.250	-29.500	346.254	346.284
SPLICE 2-2	1	114382.250	29.500	346.340	346.304
	2	114382.250	19.667	346.494	346.518
	3	114382.250	9.833	346.647	346.672
	4	114382.250	0.000	346.801	346.825
	5	114382.250	-9.833	346.647	346.672
	6	114382.250	-19.667	346.494	346.518
	7	114382.250	-29.500	346.340	346.364
2I	1	114387.250	29.500	346.427	346.445
	2	114387.250	19.667	346.581	346.599
	3	114387.250	9.833	346.735	346.752
	4	114387.250	0.000	346.888	346.906
	5	114387.250	-9.833	346.735	346.752
	6	114387.250	-19.667	346.581	346.599
	7	114387.250	-29.500	346.427	346.445
2J	1	114397.250	29.500	346.429	346.611
	2	114397.250	19.667	346.759	346.765
	3	114397.250	9.833	346.912	346.918
	4	114397.250	0.000	347.066	347.072
	5	114397.250	-9.833	346.912	346.918
	6	114397.250	-19.667	346.759	346.765
	7	114397.250	-29.500	346.605	346.611

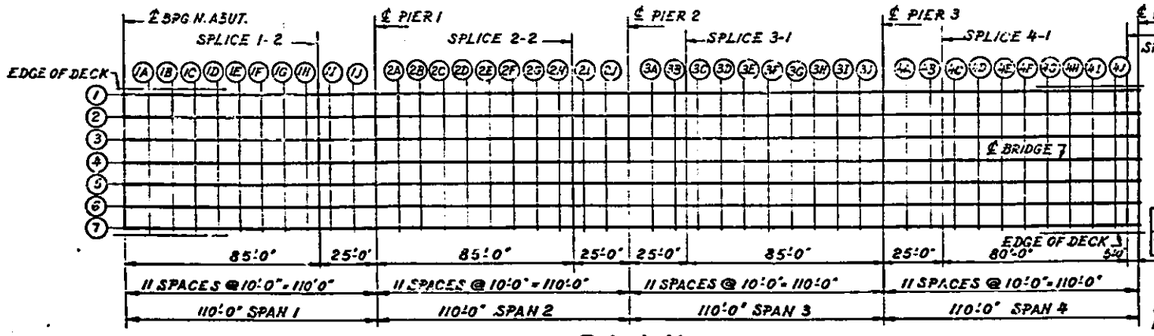


AT MINIMUM FILLET — AT MAXIMUM FILLET

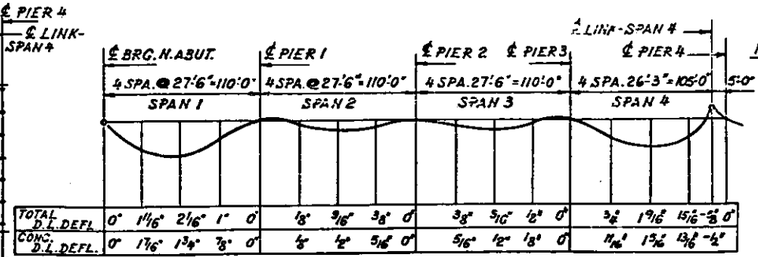
TO DETERMINE "6": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "6" ABOVE TOP FLANGE OF GIRDERS.



FILLET HEIGHTS



PLAN



NOTE: GIRDER OFFSETS ARE REFERENCED TO ℄ BRIDGE.

DEAD LOAD DEFLECTION DIAGRAM

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS – SPANS 1, 2, 3 & 4
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (102-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. 2-18-76

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-18-1)D	ALEXANDER	ILLINOIS	63	5
	0	MISSISSIPPI	MISSOURI		
F.A.I.NO.& SEC. NO.		ILLINOIS		PROJECT I-57-9(5)0	
F.A.I.NO.& SEC. NO.		MISSOURI			

SPAN 3

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 2	1	114407.250	29.500	346.787	346.787
	2	114407.250	19.667	346.941	346.941
	3	114407.250	9.833	347.095	347.095
	4	114407.250	0.000	347.248	347.248
	5	114407.250	-9.833	347.095	347.095
	6	114407.250	-19.667	346.941	346.941
	7	114407.250	-29.500	346.787	346.787
3A	1	114417.250	29.500	346.974	346.980
	2	114417.250	19.667	347.128	347.134
	3	114417.250	9.833	347.282	347.287
	4	114417.250	0.000	347.435	347.441
	5	114417.250	-9.833	347.282	347.287
	6	114417.250	-19.667	347.128	347.134
	7	114417.250	-29.500	346.974	346.980
3B	1	114427.250	29.500	347.166	347.184
	2	114427.250	19.667	347.319	347.337
	3	114427.250	9.833	347.473	347.491
	4	114427.250	0.000	347.627	347.644
	5	114427.250	-9.833	347.473	347.491
	6	114427.250	-19.667	347.319	347.337
	7	114427.250	-29.500	347.166	347.184
SPLICE 3-4	1	114432.250	29.500	347.263	347.287
	2	114432.250	19.667	347.417	347.441
	3	114432.250	9.833	347.570	347.595
	4	114432.250	0.000	347.724	347.748
	5	114432.250	-9.833	347.570	347.595
	6	114432.250	-19.667	347.417	347.441
	7	114432.250	-29.500	347.263	347.287
3C	1	114437.250	29.500	347.361	347.392
	2	114437.250	19.667	347.515	347.546
	3	114437.250	9.833	347.669	347.699
	4	114437.250	0.000	347.822	347.853
	5	114437.250	-9.833	347.669	347.699
	6	114437.250	-19.667	347.515	347.546
	7	114437.250	-29.500	347.361	347.392
3D	1	114447.250	29.500	347.562	347.601
	2	114447.250	19.667	347.715	347.755
	3	114447.250	9.833	347.869	347.908
	4	114447.250	0.000	348.023	348.062
	5	114447.250	-9.833	347.869	347.908
	6	114447.250	-19.667	347.715	347.755
	7	114447.250	-29.500	347.562	347.601
3E	1	114457.250	29.500	347.767	347.808
	2	114457.250	19.667	347.920	347.962
	3	114457.250	9.833	348.074	348.116
	4	114457.250	0.000	348.228	348.269
	5	114457.250	-9.833	348.074	348.116
	6	114457.250	-19.667	347.920	347.962
	7	114457.250	-29.500	347.767	347.808
3F	1	114467.250	29.500	347.976	348.013
	2	114467.250	19.667	348.130	348.167
	3	114467.250	9.833	348.283	348.320
	4	114467.250	0.000	348.437	348.474
	5	114467.250	-9.833	348.283	348.320
	6	114467.250	-19.667	348.130	348.167
	7	114467.250	-29.500	347.976	348.013
3G	1	114477.250	29.500	348.190	348.216
	2	114477.250	19.667	348.344	348.370
	3	114477.250	9.833	348.497	348.523
	4	114477.250	0.000	348.651	348.677
	5	114477.250	-9.833	348.497	348.523
	6	114477.250	-19.667	348.344	348.370
	7	114477.250	-29.500	348.190	348.216

SPAN 3 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
3H	1	114487.250	29.500	348.408	348.421
	2	114487.250	19.667	348.562	348.575
	3	114487.250	9.833	348.716	348.728
	4	114487.250	0.000	348.869	348.882
	5	114487.250	-9.833	348.716	348.728
	6	114487.250	-19.667	348.562	348.575
	7	114487.250	-29.500	348.408	348.421
3I	1	114497.250	29.500	348.631	348.633
	2	114497.250	19.667	348.785	348.786
	3	114497.250	9.833	348.938	348.940
	4	114497.250	0.000	349.092	349.094
	5	114497.250	-9.833	348.938	348.940
	6	114497.250	-19.667	348.785	348.786
	7	114497.250	-29.500	348.631	348.633
3J	1	114507.250	29.500	348.859	348.854
	2	114507.250	19.667	349.012	349.008
	3	114507.250	9.833	349.166	349.162
	4	114507.250	0.000	349.320	349.315
	5	114507.250	-9.833	349.166	349.162
	6	114507.250	-19.667	349.012	349.008
	7	114507.250	-29.500	348.859	348.854

SPAN 4

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 3	1	114517.250	29.500	349.091	349.091
	2	114517.250	19.667	349.244	349.244
	3	114517.250	9.833	349.398	349.398
	4	114517.250	0.000	349.551	349.551
	5	114517.250	-9.833	349.398	349.398
	6	114517.250	-19.667	349.244	349.244
	7	114517.250	-29.500	349.091	349.091
4A	1	114527.250	29.500	349.327	349.340
	2	114527.250	19.667	349.481	349.494
	3	114527.250	9.833	349.634	349.647
	4	114527.250	0.000	349.788	349.801
	5	114527.250	-9.833	349.634	349.647
	6	114527.250	-19.667	349.481	349.494
	7	114527.250	-29.500	349.327	349.340
4B	1	114537.250	29.500	349.568	349.602
	2	114537.250	19.667	349.721	349.756
	3	114537.250	9.833	349.879	349.909
	4	114537.250	0.000	350.029	350.063
	5	114537.250	-9.833	349.879	349.909
	6	114537.250	-19.667	349.721	349.756
	7	114537.250	-29.500	349.568	349.602
SPLICE 4-I	1	114542.250	29.500	349.690	349.737
	2	114542.250	19.667	349.844	349.891
	3	114542.250	9.833	349.997	350.045
	4	114542.250	0.000	350.151	350.198
	5	114542.250	-9.833	349.997	350.045
	6	114542.250	-19.667	349.844	349.891
	7	114542.250	-29.500	349.690	349.737
4C	1	114547.250	29.500	349.813	349.874
	2	114547.250	19.667	349.967	350.028
	3	114547.250	9.833	350.121	350.182
	4	114547.250	0.000	350.274	350.335
	5	114547.250	-9.833	350.121	350.182
	6	114547.250	-19.667	349.967	350.028
	7	114547.250	-29.500	349.813	349.874

SPAN 4 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
4D	1	114557.250	29.500	350.063	350.149
	2	114557.250	19.667	350.217	350.303
	3	114557.250	9.833	350.371	350.457
	4	114557.250	0.000	350.524	350.610
	5	114557.250	-9.833	350.371	350.457
	6	114557.250	-19.667	350.217	350.303
	7	114557.250	-29.500	350.063	350.149
4E	1	114567.250	29.500	350.318	350.421
	2	114567.250	19.667	350.471	350.574
	3	114567.250	9.833	350.625	350.728
	4	114567.250	0.000	350.779	350.882
	5	114567.250	-9.833	350.625	350.728
	6	114567.250	-19.667	350.471	350.574
	7	114567.250	-29.500	350.318	350.421
4F	1	114577.250	29.500	350.577	350.685
	2	114577.250	19.667	350.730	350.839
	3	114577.250	9.833	350.884	350.992
	4	114577.250	0.000	351.038	351.146
	5	114577.250	-9.833	350.884	350.992
	6	114577.250	-19.667	350.730	350.839
	7	114577.250	-29.500	350.577	350.685
4G	1	114587.250	29.500	350.840	350.938
	2	114587.250	19.667	350.994	351.092
	3	114587.250	9.833	351.147	351.246
	4	114587.250	0.000	351.301	351.399
	5	114587.250	-9.833	351.147	351.246
	6	114587.250	-19.667	350.994	351.092
	7	114587.250	-29.500	350.840	350.938
4H	1	114597.250	29.500	351.108	351.182
	2	114597.250	19.667	351.262	351.336
	3	114597.250	9.833	351.415	351.489
	4	114597.250	0.000	351.569	351.643
	5	114597.250	-9.833	351.415	351.489
	6	114597.250	-19.667	351.262	351.336
	7	114597.250	-29.500	351.108	351.182
4I	1	114607.250	29.500	351.381	351.416
	2	114607.250	19.667	351.534	351.570
	3	114607.250	9.833	351.688	351.724
	4	114607.250	0.000	351.841	351.877
	5	114607.250	-9.833	351.688	351.724
	6	114607.250	-19.667	351.534	351.570
	7	114607.250	-29.500	351.381	351.416
4J	1	114617.250	29.500	351.657	351.643
	2	114617.250	19.667	351.811	351.797
	3	114617.250	9.833	351.965	351.951
	4	114617.250	0.000	352.118	352.104
	5	114617.250	-9.833	351.965	351.951
	6	114617.250	-19.667	351.811	351.797
	7	114617.250	-29.500	351.657	351.643
℄ LINK-SPAN 4	1	114622.250	29.500	351.798	351.756
	2	114622.250	19.667	351.951	351.910
	3	114622.250	9.833	352.105	352.063
	4	114622.250	0.000	352.259	352.217
	5	114622.250	-9.833	352.105	352.063
	6	114622.250	-19.667	351.951	351.910
	7	114622.250	-29.500	351.798	351.756

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 1, 2, 3 & 4
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		SHEET NO
F.A.I. 57	(02-18-1) D	ALEXANDER & MISSISSIPPI	ILLINOIS & MISSOURI	67	6
FINAL PLANS NO. 6		ILLINOIS DIVISION		PROJECT I-57-9(5)0
FINAL PLANS NO. 5				

SPAN 5

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 4	1	114627.250	29.500	351.938	351.938
	2	114627.250	19.667	352.092	352.092
	3	114627.250	9.833	352.246	352.246
	4	114627.250	0.000	352.399	352.399
	5	114627.250	-9.833	352.246	352.246
	6	114627.250	-19.667	352.092	352.092
	7	114627.250	-29.500	351.938	351.938
5A	1	114637.250	29.500	352.224	352.292
	2	114637.250	19.667	352.378	352.459
	3	114637.250	9.833	352.532	352.612
	4	114637.250	0.000	352.685	352.766
	5	114637.250	-9.833	352.532	352.612
	6	114637.250	-19.667	352.378	352.459
	7	114637.250	-29.500	352.224	352.292
5B	1	114647.250	29.500	352.918	352.846
	2	114647.250	19.667	352.669	352.824
	3	114647.250	9.833	352.872	352.978
	4	114647.250	0.000	352.976	353.131
	5	114647.250	-9.833	352.822	352.978
	6	114647.250	-19.667	352.669	352.824
	7	114647.250	-29.500	352.515	352.646
5C	1	114657.250	29.500	352.810	352.998
	2	114657.250	19.667	352.964	353.187
	3	114657.250	9.833	353.117	353.341
	4	114657.250	0.000	353.271	353.494
	5	114657.250	-9.833	353.117	353.341
	6	114657.250	-19.667	352.964	353.187
	7	114657.250	-29.500	352.810	352.998
5D	1	114667.250	29.500	353.108	353.338
	2	114667.250	19.667	353.263	353.534
	3	114667.250	9.833	353.416	353.688
	4	114667.250	0.000	353.570	353.842
	5	114667.250	-9.833	353.416	353.688
	6	114667.250	-19.667	353.263	353.534
	7	114667.250	-29.500	353.109	353.338
5E	1	114677.250	29.500	353.409	353.669
	2	114677.250	19.667	353.563	353.872
	3	114677.250	9.833	353.716	354.025
	4	114677.250	0.000	353.870	354.179
	5	114677.250	-9.833	353.716	354.025
	6	114677.250	-19.667	353.563	353.872
	7	114677.250	-29.500	353.409	353.669
5F	1	114687.250	29.500	353.709	353.987
	2	114687.250	19.667	353.863	354.192
	3	114687.250	9.833	354.016	354.346
	4	114687.250	0.000	354.170	354.499
	5	114687.250	-9.833	354.016	354.346
	6	114687.250	-19.667	353.863	354.192
	7	114687.250	-29.500	353.709	353.987
5G	1	114697.250	29.500	354.009	354.287
	2	114697.250	19.667	354.163	354.492
	3	114697.250	9.833	354.316	354.649
	4	114697.250	0.000	354.470	354.799
	5	114697.250	-9.833	354.316	354.649
	6	114697.250	-19.667	354.163	354.492
	7	114697.250	-29.500	354.009	354.287

SPAN 5 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
5H	1	114707.250	29.500	354.309	354.577
	2	114707.250	19.667	354.463	354.781
	3	114707.250	9.833	354.616	354.934
	4	114707.250	0.000	354.770	355.088
	5	114707.250	-9.833	354.616	354.934
	6	114707.250	-19.667	354.463	354.781
	7	114707.250	-29.500	354.309	354.577
5I	1	114717.250	29.500	354.606	354.853
	2	114717.250	19.667	354.763	355.093
	3	114717.250	9.833	354.916	355.207
	4	114717.250	0.000	355.070	355.360
	5	114717.250	-9.833	354.916	355.207
	6	114717.250	-19.667	354.763	355.093
	7	114717.250	-29.500	354.609	354.853
5J	1	114727.250	29.500	354.909	355.119
	2	114727.250	19.667	355.063	355.312
	3	114727.250	9.833	355.216	355.466
	4	114727.250	0.000	355.370	355.620
	5	114727.250	-9.833	355.216	355.466
	6	114727.250	-19.667	355.063	355.312
	7	114727.250	-29.500	354.909	355.119
SPLICE 5-2	1	114731.250	29.500	355.029	355.223
	2	114731.250	19.667	355.183	355.414
	3	114731.250	9.833	355.336	355.568
	4	114731.250	0.000	355.490	355.721
	5	114731.250	-9.833	355.336	355.568
	6	114731.250	-19.667	355.183	355.414
	7	114731.250	-29.500	355.029	355.223
5K	1	114737.250	29.500	355.209	355.379
	2	114737.250	19.667	355.363	355.568
	3	114737.250	9.833	355.516	355.719
	4	114737.250	0.000	355.670	355.873
	5	114737.250	-9.833	355.516	355.719
	6	114737.250	-19.667	355.363	355.566
	7	114737.250	-29.500	355.209	355.379
5L	1	114747.250	29.500	355.509	355.634
	2	114747.250	19.667	355.663	355.812
	3	114747.250	9.833	355.816	355.966
	4	114747.250	0.000	355.970	356.120
	5	114747.250	-9.833	355.816	355.966
	6	114747.250	-19.667	355.663	355.812
	7	114747.250	-29.500	355.509	355.634
5M	1	114757.250	29.500	355.809	355.891
	2	114757.250	19.667	355.963	356.061
	3	114757.250	9.833	356.116	356.215
	4	114757.250	0.000	356.270	356.369
	5	114757.250	-9.833	356.116	356.215
	6	114757.250	-19.667	355.963	356.061
	7	114757.250	-29.500	355.809	355.891
5N	1	114767.250	29.500	356.109	356.150
	2	114767.250	19.667	356.263	356.313
	3	114767.250	9.833	356.416	356.466
	4	114767.250	0.000	356.570	356.620
	5	114767.250	-9.833	356.416	356.466
	6	114767.250	-19.667	356.263	356.313
	7	114767.250	-29.500	356.109	356.150

SPAN 6

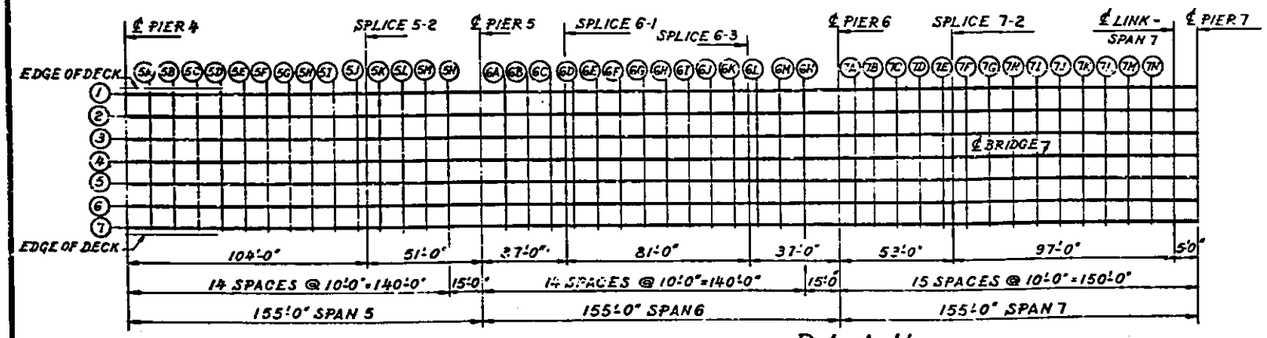
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 5	1	114782.250	29.500	356.559	356.559
	2	114782.250	19.667	356.713	356.713
	3	114782.250	9.833	356.866	356.866
	4	114782.250	0.000	357.020	357.020
	5	114782.250	-9.833	356.866	356.866
	6	114782.250	-19.667	356.713	356.713
	7	114782.250	-29.500	356.559	356.559
6A	1	114792.250	29.500	356.859	356.846
	2	114792.250	19.667	357.013	356.997
	3	114792.250	9.833	357.166	357.150
	4	114792.250	0.000	357.320	357.304
	5	114792.250	-9.833	357.166	357.150
	6	114792.250	-19.667	357.013	356.997
	7	114792.250	-29.500	356.859	356.846
6B	1	114802.250	29.500	357.159	357.139
	2	114802.250	19.667	357.313	357.297
	3	114802.250	9.833	357.466	357.441
	4	114802.250	0.000	357.620	357.594
	5	114802.250	-9.833	357.466	357.441
	6	114802.250	-19.667	357.313	357.287
	7	114802.250	-29.500	357.159	357.139
6C	1	114812.250	29.500	357.459	357.438
	2	114812.250	19.667	357.613	357.593
	3	114812.250	9.833	357.766	357.739
	4	114812.250	0.000	357.920	357.893
	5	114812.250	-9.833	357.766	357.739
	6	114812.250	-19.667	357.613	357.585
	7	114812.250	-29.500	357.459	357.438
SPLICE G-1	1	114819.250	29.500	357.669	357.652
	2	114819.250	19.667	357.823	357.799
	3	114819.250	9.833	357.976	357.993
	4	114819.250	0.000	358.130	358.107
	5	114819.250	-9.833	357.976	357.993
	6	114819.250	-19.667	357.823	357.799
	7	114819.250	-29.500	357.669	357.652
6D	1	114822.250	29.500	357.759	357.745
	2	114822.250	19.667	357.913	357.892
	3	114822.250	9.833	358.066	358.045
	4	114822.250	0.000	358.220	358.199
	5	114822.250	-9.833	358.066	358.045
	6	114822.250	-19.667	357.913	357.892
	7	114822.250	-29.500	357.759	357.745
6E	1	114832.250	29.500	358.059	358.053
	2	114832.250	19.667	358.213	358.199
	3	114832.250	9.833	358.366	358.353
	4	114832.250	0.000	358.520	358.507
	5	114832.250	-9.833	358.366	358.353
	6	114832.250	-19.667	358.213	358.199
	7	114832.250	-29.500	358.059	358.053
6F	1	114842.250	29.500	358.359	358.362
	2	114842.250	19.667	358.513	358.508
	3	114842.250	9.833	358.666	358.662
	4	114842.250	0.000	358.820	358.816
	5	114842.250	-9.833	358.666	358.662
	6	114842.250	-19.667	358.513	358.508
	7	114842.250	-29.500	358.359	358.362
6G	1	114852.250	29.500	358.659	358.667
	2	114852.250	19.667	358.813	358.814
	3	114852.250	9.833	358.966	358.968
	4	114852.250	0.000	359.120	359.121
	5	114852.250	-9.833	358.966	358.968
	6	114852.250	-19.667	358.813	358.814
	7	114852.250	-29.500	358.659	358.667

SPAN 6 (CONT.)

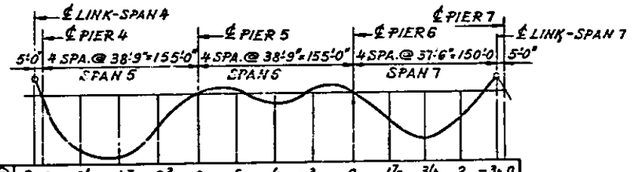
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
6H	1	114862.250	29.500	358.959	358.970
	2	114862.250	19.667	359.113	359.117
	3	114862.250	9.833	359.266	359.271
	4	114862.250	0.000	359.420	359.424
	5	114862.250	-9.833	359.266	359.271
	6	114862.250	-19.667	359.113	359.117
	7	114862.250	-29.500	358.959	358.970
6I	1	114872.250	29.500	359.259	359.267
	2	114872.250	19.667	359.413	359.414
	3	114872.250	9.833	359.566	359.568
	4	114872.250	0.000	359.720	359.722
	5	114872.250	-9.833	359.566	359.568
	6	114872.250	-19.667	359.413	359.414
	7	114872.250	-29.500	359.259	359.267
6J	1	114882.250	29.500	359.559	359.562
	2	114882.250	19.667	359.713	359.707
	3	114882.250	9.833	359.866	359.861
	4	114882.250	0.000	360.020	360.014
	5	114882.250	-9.833	359.866	359.861
	6	114882.250	-19.667	359.713	359.707
	7	114882.250	-29.500	359.559	359.562
6K	1	114892.250	29.500	359.859	359.858
	2	114892.250	19.667	360.013	359.998
	3	114892.250	9.833	360.166	360.192
	4	114892.250	0.000	360.320	360.305
	5	114892.250	-9.833	360.166	360.192
	6	114892.250	-19.667	360.013	359.998
	7	114892.250	-29.500	359.859	359.858
SPLICE G-3	1	114900.250	29.500	360.099	360.088
	2	114900.250	19.667	360.253	360.232
	3	114900.250	9.833	360.406	360.385
	4	114900.250	0.000	360.560	360.539
	5	114900.250	-9.833	360.406	360.385
	6	114900.250	-19.667	360.253	360.232
	7	114900.250	-29.500	360.099	360.088
6L	1	114902.250	29.500	360.159	360.146
	2	114902.250	19.667	360.313	360.290
	3	114902.250	9.833	360.466	360.444
	4	114902.250	0.000	360.620	360.597
	5	114902.250	-9.833	360.466	360.444
	6	114902.250	-19.667	360.313	360.290
	7	114902.250	-29.500	360.159	360.146
6M	1	114912.250	29.500	360.439	360.442
	2	114912.250	19.667	360.613	360.587
	3	114912.250	9.833	360.766	360.741
	4	114912.250	0.000	360.920	360.895
	5	114912.250	-9.833	360.766	360.741
	6	114912.250	-19.667	360.613	360.587
	7	114912.250	-29.500	360.459	360.442
6N	1	114922.250	29.500	360.759	360.741
	2	114922.250	19.667	360.913	360.889
	3	114922.250	9.833	361.066	361.042
	4	114922.250	0.000	361.220	361.196
	5	114922.250	-9.833	361.066	361.042
	6	114922.250	-19.667	360.913	360.889
	7	114922.250	-29.500	360.759	360.741

NOTE

FOR DETAILS SHOWING LOCATION FOR TOP OF SLAB ELEVATIONS AND DIMENSION "C", SEE SHEET 4
GIRDER OFFSET ARE REFERENCED TO ℄ BRIDGE.



PLAN



TOTAL D.L. DEFL.	① ℄ ⑦	-5/16	0	3 3/8	4 7/16	2 3/8	0	-5/16	1/8	-3/16	0	1 7/8	3 1/4	2	-3/8	0					
	② THRU ⑥	-5/8	0	4 1/8	5 1/16	2 7/16	0	-3/8	0	-5/16	0	2 1/4	4 1/16	2 1/3	-13/16	0					
CONC. D.L. DEFL.	① ℄ ⑦	-7/16	0	2 11/16	3 5/16	1 11/16	0	-3/16	1/8	-1/8	0	1 3/8	2 7/16	1 3/16	-7/16	0					
	② THRU ⑥	-1/2	0	3 3/16	3 3/8	2 1/16	0	-1/4	1/16	-1/4	0	1 3/4	3 1/8	2 5/16	-1/2	0					

D.L. DEFLECTION DIAGRAM

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 5, 6 & 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F A I 57	(02-18-1) D	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	61	7
F.H.W.A. REG NO 5 / F.A.S. REG NO 5		ILLINOIS / MISSOURI	PROJECT I-57-9(5)10	

SPAN 7

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 6	1	114937.250	29.500	361.209	361.209
	2	114937.250	19.667	361.363	361.363
	3	114937.250	9.833	361.516	361.516
	4	114937.250	0.000	361.670	361.670
	5	114937.250	-9.833	361.516	361.516
	6	114937.250	-19.667	361.363	361.363
	7	114937.250	-29.500	361.209	361.209
7A	1	114947.250	29.500	361.509	361.535
	2	114947.250	19.667	361.663	361.695
	3	114947.250	9.833	361.816	361.849
	4	114947.250	0.000	361.970	362.002
	5	114947.250	-9.833	361.816	361.849
	6	114947.250	-19.667	361.663	361.695
	7	114947.250	-29.500	361.509	361.535
7B	1	114957.250	29.500	361.809	361.864
	2	114957.250	19.667	361.963	362.032
	3	114957.250	9.833	362.116	362.196
	4	114957.250	0.000	362.270	362.339
	5	114957.250	-9.833	362.116	362.186
	6	114957.250	-19.667	361.963	362.032
	7	114957.250	-29.500	361.809	361.864
7C	1	114967.250	29.500	362.109	362.197
	2	114967.250	19.667	362.263	362.374
	3	114967.250	9.833	362.416	362.528
	4	114967.250	0.000	362.570	362.682
	5	114967.250	-9.833	362.416	362.528
	6	114967.250	-19.667	362.263	362.374
	7	114967.250	-29.500	362.109	362.197
7D	1	114977.250	29.500	362.409	362.532
	2	114977.250	19.667	362.563	362.719
	3	114977.250	9.833	362.716	362.873
	4	114977.250	0.000	362.870	363.027
	5	114977.250	-9.833	362.716	362.873
	6	114977.250	-19.667	362.563	362.719
	7	114977.250	-29.500	362.409	362.532
7E	1	114987.250	29.500	362.709	362.863
	2	114987.250	19.667	362.863	363.060
	3	114987.250	9.833	363.016	363.213
	4	114987.250	0.000	363.170	363.367
	5	114987.250	-9.833	363.016	363.213
	6	114987.250	-19.667	362.863	363.060
	7	114987.250	-29.500	362.709	362.863
SPLICE 7-2	1	114990.250	29.500	362.799	362.981
	2	114990.250	19.667	362.953	363.160
	3	114990.250	9.833	363.106	363.314
	4	114990.250	0.000	363.260	363.468
	5	114990.250	-9.833	363.106	363.314
	6	114990.250	-19.667	362.953	363.160
	7	114990.250	-29.500	362.799	362.981
7F	1	114997.250	29.500	363.009	363.190
	2	114997.250	19.667	363.163	363.395
	3	114997.250	9.833	363.316	363.549
	4	114997.250	0.000	363.470	363.703
	5	114997.250	-9.833	363.316	363.549
	6	114997.250	-19.667	363.163	363.395
	7	114997.250	-29.500	363.009	363.190
7G	1	115007.250	29.500	363.309	363.507
	2	115007.250	19.667	363.463	363.716
	3	115007.250	9.833	363.616	363.869
	4	115007.250	0.000	363.770	364.023
	5	115007.250	-9.833	363.616	363.869
	6	115007.250	-19.667	363.463	363.716
	7	115007.250	-29.500	363.309	363.507
7H	1	115017.250	29.500	363.609	363.807
	2	115017.250	19.667	363.763	364.025
	3	115017.250	9.833	363.916	364.179
	4	115017.250	0.000	364.070	364.333
	5	115017.250	-9.833	363.916	364.179
	6	115017.250	-19.667	363.763	364.025
	7	115017.250	-29.500	363.609	363.807
7I	1	115027.250	29.500	363.909	364.102
	2	115027.250	19.667	364.063	364.324
	3	115027.250	9.833	364.216	364.478
	4	115027.250	0.000	364.370	364.632
	5	115027.250	-9.833	364.216	364.478
	6	115027.250	-19.667	364.063	364.324
	7	115027.250	-29.500	363.909	364.102
7J	1	115037.250	29.500	364.209	364.377
	2	115037.250	19.667	364.363	364.602
	3	115037.250	9.833	364.516	364.755
	4	115037.250	0.000	364.670	364.909
	5	115037.250	-9.833	364.516	364.755
	6	115037.250	-19.667	364.363	364.602
	7	115037.250	-29.500	364.209	364.377

SPAN 7 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
7K	1	115047.250	29.500	364.509	364.647
	2	115047.250	19.667	364.663	364.868
	3	115047.250	9.833	364.816	365.022
	4	115047.250	0.000	364.970	365.176
	5	115047.250	-9.833	364.816	365.022
	6	115047.250	-19.667	364.663	364.868
	7	115047.250	-29.500	364.509	364.647
7L	1	115057.250	29.500	364.809	364.912
	2	115057.250	19.667	364.963	365.124
	3	115057.250	9.833	365.116	365.278
	4	115057.250	0.000	365.270	365.432
	5	115057.250	-9.833	365.116	365.278
	6	115057.250	-19.667	364.963	365.124
	7	115057.250	-29.500	364.809	364.912
7M	1	115067.250	29.500	365.109	365.167
	2	115067.250	19.667	365.263	365.383
	3	115067.250	9.833	365.416	365.516
	4	115067.250	0.000	365.570	365.670
	5	115067.250	-9.833	365.416	365.516
	6	115067.250	-19.667	365.263	365.363
	7	115067.250	-29.500	365.109	365.167
7N	1	115077.250	29.500	365.409	365.421
	2	115077.250	19.667	365.563	365.595
	3	115077.250	9.833	365.716	365.749
	4	115077.250	0.000	365.870	365.902
	5	115077.250	-9.833	365.716	365.749
	6	115077.250	-19.667	365.563	365.595
	7	115077.250	-29.500	365.409	365.421
℄ LINK-SPAN 7	1	115087.250	29.500	365.709	365.674
	2	115087.250	19.667	365.863	365.822
	3	115087.250	9.833	366.016	365.975
	4	115087.250	0.000	366.170	366.129
	5	115087.250	-9.833	366.016	365.975
	6	115087.250	-19.667	365.863	365.822
	7	115087.250	-29.500	365.709	365.674

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
106 WABASH AVE CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 5, 6 & 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 57	(02-18-1)D	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	63	8
F.A.M.A.S.S.P. NO. 0 F.A.M.A.P.E.C. NO. 0		ILLINOIS 0150.0 MISSOURI	PROJECT I-57 9(5)10	

SPAN 8A

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 7	1	115092.250	29.500	365.859	365.859
	2	115092.250	19.667	366.013	366.013
	3	115092.250	9.833	366.166	366.166
	4	115092.250	0.000	366.320	366.320
	5	115092.250	-9.833	366.166	366.166
	6	115092.250	-19.667	366.013	366.013
	7	115092.250	-29.500	365.859	365.859
8AA	1	115102.250	29.500	366.159	366.231
	2	115102.250	19.667	366.313	366.385
	3	115102.250	9.833	366.466	366.548
	4	115102.250	0.000	366.620	366.702
	5	115102.250	-9.833	366.466	366.548
	6	115102.250	-19.667	366.313	366.395
	7	115102.250	-29.500	366.159	366.231
8AB	1	115112.250	29.500	366.459	366.603
	2	115112.250	19.667	366.613	366.776
	3	115112.250	9.833	366.766	366.930
	4	115112.250	0.000	366.920	367.083
	5	115112.250	-9.833	366.766	366.930
	6	115112.250	-19.667	366.613	366.776
	7	115112.250	-29.500	366.459	366.603
8AC	1	115122.250	29.500	366.759	366.975
	2	115122.250	19.667	366.913	367.193
	3	115122.250	9.833	367.066	367.306
	4	115122.250	0.000	367.220	367.460
	5	115122.250	-9.833	367.066	367.306
	6	115122.250	-19.667	366.913	367.053
	7	115122.250	-29.500	366.759	366.979
8AD	1	115132.250	29.500	367.059	367.343
	2	115132.250	19.667	367.213	367.528
	3	115132.250	9.833	367.366	367.662
	4	115132.250	0.000	367.520	367.835
	5	115132.250	-9.833	367.356	367.682
	6	115132.250	-19.667	367.212	367.528
	7	115132.250	-29.500	367.059	367.343
8AE	1	115142.250	29.500	367.359	367.701
	2	115142.250	19.667	367.513	367.879
	3	115142.250	9.833	367.666	368.053
	4	115142.250	0.000	367.820	368.205
	5	115142.250	-9.833	367.666	368.053
	6	115142.250	-19.667	367.513	367.899
	7	115142.250	-29.500	367.359	367.701
8AF	1	115152.250	29.500	367.659	368.056
	2	115152.250	19.667	367.813	368.264
	3	115152.250	9.833	367.966	368.418
	4	115152.250	0.000	368.120	368.572
	5	115152.250	-9.833	367.966	368.418
	6	115152.250	-19.667	367.813	368.264
	7	115152.250	-29.500	367.659	368.056
8AG	1	115162.250	29.500	367.959	368.404
	2	115162.250	19.667	368.113	368.620
	3	115162.250	9.833	368.266	368.773
	4	115162.250	0.000	368.420	368.927
	5	115162.250	-9.833	368.266	368.773
	6	115162.250	-19.667	368.113	368.620
	7	115162.250	-29.500	367.959	368.404
SPLICE 8A-2	1	115170.292	29.500	368.200	368.681
	2	115170.292	19.667	368.354	368.902
	3	115170.292	9.833	368.508	369.056
	4	115170.292	0.000	368.661	369.209
	5	115170.292	-9.833	368.508	369.056
	6	115170.292	-19.667	368.354	368.902
	7	115170.292	-29.500	368.200	368.681

SPAN 8A (CONT.)

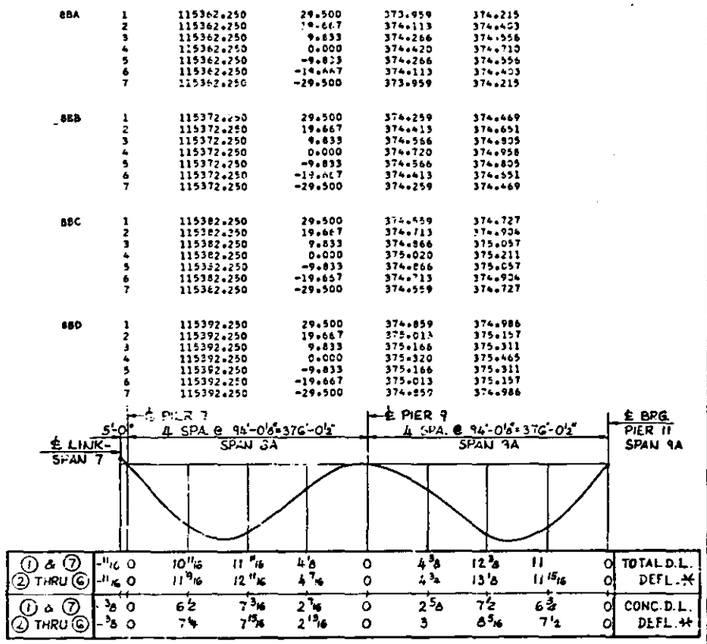
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AH	1	115172.250	29.500	368.259	368.747
	2	115172.250	19.667	368.413	368.969
	3	115172.250	9.833	368.566	369.123
	4	115172.250	0.000	368.720	369.276
	5	115172.250	-9.833	368.566	369.123
	6	115172.250	-19.667	368.413	368.969
	7	115172.250	-29.500	368.259	368.747
8AI	1	115182.250	29.500	368.959	369.084
	2	115182.250	19.667	368.813	369.312
	3	115182.250	9.833	368.866	369.465
	4	115182.250	0.000	369.020	369.619
	5	115182.250	-9.833	368.866	369.465
	6	115182.250	-19.667	368.713	369.312
	7	115182.250	-29.500	368.559	369.084
8AJ	1	115192.250	29.500	368.859	369.416
	2	115192.250	19.667	369.013	369.667
	3	115192.250	9.833	369.166	369.801
	4	115192.250	0.000	369.320	369.954
	5	115192.250	-9.833	369.166	369.801
	6	115192.250	-19.667	369.013	369.647
	7	115192.250	-29.500	368.859	369.416
8AK	1	115202.250	29.500	369.159	369.744
	2	115202.250	19.667	369.313	369.977
	3	115202.250	9.833	369.466	370.131
	4	115202.250	0.000	369.620	370.285
	5	115202.250	-9.833	369.466	370.131
	6	115202.250	-19.667	369.313	369.977
	7	115202.250	-29.500	369.159	369.744
8AL	1	115212.250	29.500	369.459	370.062
	2	115212.250	19.667	369.613	370.298
	3	115212.250	9.833	369.766	370.452
	4	115212.250	0.000	369.920	370.606
	5	115212.250	-9.833	369.766	370.452
	6	115212.250	-19.667	369.613	370.298
	7	115212.250	-29.500	369.459	370.062
8AM	1	115222.250	29.500	369.759	370.377
	2	115222.250	19.667	369.913	370.616
	3	115222.250	9.833	370.066	370.769
	4	115222.250	0.000	370.220	370.923
	5	115222.250	-9.833	370.066	370.769
	6	115222.250	-19.667	369.913	370.616
	7	115222.250	-29.500	369.759	370.377
8AN	1	115232.250	29.500	370.059	370.683
	2	115232.250	19.667	370.213	370.923
	3	115232.250	9.833	370.366	371.076
	4	115232.250	0.000	370.520	371.230
	5	115232.250	-9.833	370.366	371.076
	6	115232.250	-19.667	370.213	370.923
	7	115232.250	-29.500	370.059	370.683
8AO	1	115242.250	29.500	370.359	370.987
	2	115242.250	19.667	370.513	371.228
	3	115242.250	9.833	370.666	371.381
	4	115242.250	0.000	370.820	371.535
	5	115242.250	-9.833	370.666	371.381
	6	115242.250	-19.667	370.513	371.228
	7	115242.250	-29.500	370.359	370.987
8AP	1	115252.250	29.500	370.659	371.286
	2	115252.250	19.667	370.813	371.520
	3	115252.250	9.833	370.966	371.673
	4	115252.250	0.000	371.120	371.827
	5	115252.250	-9.833	370.966	371.673
	6	115252.250	-19.667	370.813	371.520
	7	115252.250	-29.500	370.659	371.286

SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AQ	1	115262.250	29.500	370.959	371.584
	2	115262.250	19.667	371.113	371.810
	3	115262.250	9.833	371.266	371.964
	4	115262.250	0.000	371.420	372.118
	5	115262.250	-9.833	371.266	371.964
	6	115262.250	-19.667	371.113	371.810
	7	115262.250	-29.500	370.959	371.584
8AR	1	115272.250	29.500	371.259	371.870
	2	115272.250	19.667	371.413	372.090
	3	115272.250	9.833	371.566	372.244
	4	115272.250	0.000	371.720	372.397
	5	115272.250	-9.833	371.566	372.244
	6	115272.250	-19.667	371.413	372.090
	7	115272.250	-29.500	371.259	371.870
8AS	1	115282.250	29.500	371.559	372.152
	2	115282.250	19.667	371.713	372.367
	3	115282.250	9.833	371.866	372.521
	4	115282.250	0.000	372.020	372.674
	5	115282.250	-9.833	371.866	372.521
	6	115282.250	-19.667	371.713	372.367
	7	115282.250	-29.500	371.559	372.152
SPLICE 8A-4	1	115290.292	29.500	371.800	372.367
	2	115290.292	19.667	371.954	372.582
	3	115290.292	9.833	372.108	372.736
	4	115290.292	0.000	372.261	372.890
	5	115290.292	-9.833	372.108	372.736
	6	115290.292	-19.667	371.954	372.582
	7	115290.292	-29.500	371.800	372.367
8AT	1	115292.250	29.500	371.859	372.419
	2	115292.250	19.667	372.013	372.635
	3	115292.250	9.833	372.166	372.788
	4	115292.250	0.000	372.320	372.942
	5	115292.250	-9.833	372.166	372.788
	6	115292.250	-19.667	372.013	372.635
	7	115292.250	-29.500	371.859	372.419
8AU	1	115302.250	29.500	372.159	372.683
	2	115302.250	19.667	372.313	372.898
	3	115302.250	9.833	372.466	373.052
	4	115302.250	0.000	372.620	373.205
	5	115302.250	-9.833	372.466	373.052
	6	115302.250	-19.667	372.313	372.898
	7	115302.250	-29.500	372.159	372.683
8AV	1	115312.250	29.500	372.459	372.941
	2	115312.250	19.667	372.613	373.152
	3	115312.250	9.833	372.766	373.305
	4	115312.250	0.000	372.920	373.459
	5	115312.250	-9.833	372.766	373.305
	6	115312.250	-19.667	372.613	373.152
	7	115312.250	-29.500	372.459	372.941
8AW	1	115322.250	29.500	372.759	373.197
	2	115322.250	19.667	372.913	373.406
	3	115322.250	9.833	373.066	373.559
	4	115322.250	0.000	373.220	373.713
	5	115322.250	-9.833	373.066	373.559
	6	115322.250	-19.667	372.913	373.406
	7	115322.250	-29.500	372.759	373.197
8AX	1	115332.250	29.500	373.059	373.452
	2	115332.250	19.667	373.213	373.659
	3	115332.250	9.833	373.366	373.813
	4	115332.250	0.000	373.520	373.967
	5	115332.250	-9.833	373.366	373.813
	6	115332.250	-19.667	373.213	373.659
	7	115332.250	-29.500	373.059	373.452

SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8AY	1	115342.250	29.500	373.359	373.706
	2	115342.250	19.667	373.513	373.909
	3	115342.250	9.833	373.666	374.063
	4	115342.250	0.000	373.820	374.216
	5	115342.250	-9.833	373.666	374.063
	6	115342.250	-19.667	373.513	373.909
	7	115342.250	-29.500	373.359	373.706
8AZ	1	115352.250	29.500	373.653	373.960
	2	115352.250	19.667	373.813	374.165
	3	115352.250	9.833	373.966	374.309
	4	115352.250	0.000	374.120	374.462
	5	115352.250	-9.833	373.966	374.309
	6	115352.250	-19.667	373.813	374.165
	7	115352.250	-29.500	373.659	373.960
8BA	1	115362.250	29.500	373.959	374.215
	2	115362.250	19.667	374.113	374.423
	3	115362.250	9.833	374.266	374.566
	4	115362.250	0.000	374.420	374.710
	5	115362.250	-9.833	374.266	374.566
	6	115362.250	-19.667	374.113	374.403
	7	115362.250	-29.500	373.959	374.215
8BB	1	115372.250	29.500	374.259	374.469
	2	115372.250	19.667	374.413	374.651
	3	115372.250	9.833	374.566	374.805
	4	115372.250	0.000	374.720	374.958
	5	115372.250	-9.833	374.566	374.805
	6	115372.250	-19.667	374.413	374.651
	7	115372.250	-29.500	374.259	374.469
8BC	1	115382.250	29.500	374.459	374.727
	2	115382.250	19.667	374.713	374.904
	3	115382.250	9.833	374.866	375.057
	4	115382.250	0.000	375.020	375.211
	5	115382.250	-9.833	374.866	375.057
	6	115382.250	-19.667	374.713	374.904
	7	115382.250	-29.500	374.559	374.727
8BD	1	115392.250	29.500	374.859	374.986
	2	115392.250	19.667	375.013	375.157
	3	115392.250	9.833	375.166	375.311
	4	115392.250	0.000	375.320	375.465
	5	115392.250	-9.833	375.166	375.311
	6	115392.250	-19.667	375.013	375.157
	7	115392.250	-29.500	374.859	374.986

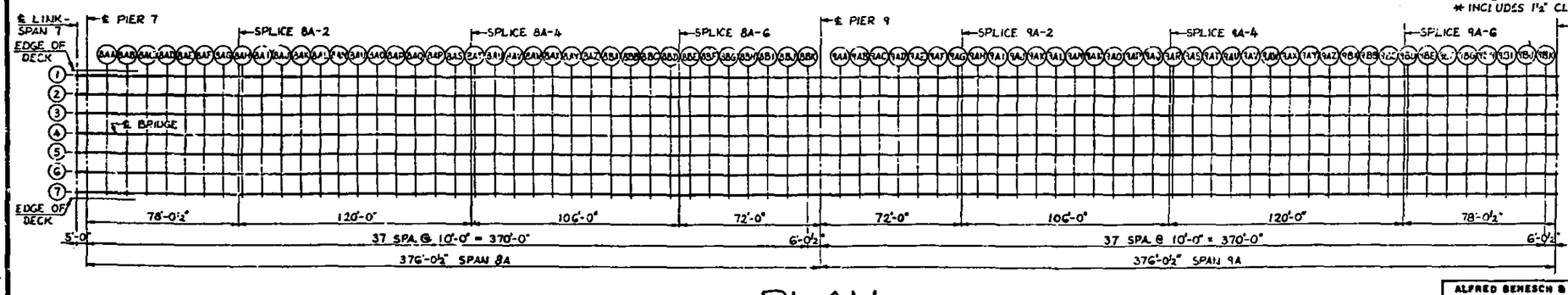


① & ⑦	-11/16	0	10 11/16	11 11/16	4 5/8	0	4 5/8	12 3/8	11	0	TOTAL D.L. DEFL.*
② THRU ⑥	-11/16	0	11 13/16	12 11/16	4 7/16	0	4 3/4	13 1/8	11 15/16	0	
① & ⑦	-3/8	0	6 1/2	7 3/16	2 7/16	0	2 5/8	7 1/2	6 3/8	0	CONC. D.L. DEFL.**
② THRU ⑥	-3/8	0	7 1/4	7 15/16	2 13/16	0	3	8 5/16	7 1/2	0	

D. L. DEFLECTION DIAGRAM

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.

* INCLUDES 1½" CLASS I



PLAN

NOTES:

FOR DETAILS SHOWING LOCATION FOR TOP OF SLAB ELEVATIONS & DIMENSION "C", SEE SHT. 4.

GIRDER OFFSETS ARE REFERENCED TO ℄ BRIDGE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 8A & 9A
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

SPAN 8A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
SPLICE 8A-6	1	1153962.292	29.500	374.980	375.095
	2	1153962.292	19.667	375.134	375.264
	3	1153962.292	9.833	375.267	375.418
	4	1153962.292	0.000	375.441	375.571
	5	1153962.292	-9.833	375.287	375.418
	6	1153962.292	-19.667	375.134	375.264
	7	1153962.292	-29.500	374.980	375.095
8SE	1	1154022.250	29.500	375.149	375.259
	2	1154022.250	19.667	375.313	375.422
	3	1154022.250	9.833	375.466	375.576
	4	1154022.250	0.000	375.620	375.729
	5	1154022.250	-9.833	375.466	375.576
	6	1154022.250	-19.667	375.313	375.422
	7	1154022.250	-29.500	375.159	375.255
8BF	1	1154122.250	29.500	375.459	375.525
	2	1154122.250	19.667	375.613	375.688
	3	1154122.250	9.833	375.766	375.842
	4	1154122.250	0.000	375.920	375.996
	5	1154122.250	-9.833	375.766	375.842
	6	1154122.250	-19.667	375.613	375.688
	7	1154122.250	-29.500	375.459	375.525
8AG	1	1154222.250	29.500	375.759	375.824
	2	1154222.250	19.667	375.913	375.964
	3	1154222.250	9.833	376.066	376.118
	4	1154222.250	0.000	376.220	376.272
	5	1154222.250	-9.833	376.066	376.118
	6	1154222.250	-19.667	375.913	375.964
	7	1154222.250	-29.500	375.759	375.804
8BH	1	1154322.250	29.500	376.059	376.071
	2	1154322.250	19.667	376.213	376.242
	3	1154322.250	9.833	376.366	376.396
	4	1154322.250	0.000	376.520	376.550
	5	1154322.250	-9.833	376.366	376.396
	6	1154322.250	-19.667	376.213	376.242
	7	1154322.250	-29.500	376.059	376.085
8BI	1	1154422.250	29.500	376.359	376.373
	2	1154422.250	19.667	376.513	376.529
	3	1154422.250	9.833	376.666	376.68[illegible]
	4	1154422.250	0.000	376.820	376.83[illegible]
	5	1154422.250	-9.833	376.666	376.682
	6	1154422.250	-19.667	376.513	376.529
	7	1154422.250	-29.500	376.359	376.373
8BJ	1	1154522.250	29.500	376.659	376.664
	2	1154522.250	19.667	376.813	376.818
	3	1154522.250	9.833	376.966	376.972
	4	1154522.250	0.000	377.120	377.125
	5	1154522.250	-9.833	376.966	376.972
	6	1154522.250	-19.667	376.813	376.818
	7	1154522.250	-29.500	376.659	376.664
8BK	1	1154622.250	29.500	376.957	376.963
	2	1154622.250	19.667	377.111	377.113
	3	1154622.250	9.833	377.266	377.266
	4	1154622.250	0.000	377.418	377.420
	5	1154622.250	-9.833	377.266	377.266
	6	1154622.250	-19.667	377.111	377.113
	7	1154622.250	-29.500	376.957	376.959

SPAN 9A

	1	1154682.292	29.500	377.136	377.136
	2	1154682.292	19.667	377.290	377.290
℄ PIER 9	3	1154682.292	9.833	377.443	377.443
	4	1154682.292	0.000	377.597	377.597
	5	1154682.292	-9.833	377.443	377.443
	6	1154682.292	-19.667	377.290	377.290
	7	1154682.292	-29.500	377.136	377.136
9AA	1	1154782.292	29.500	377.430	377.495
	2	1154782.292	19.667	377.584	377.589
	3	1154782.292	9.833	377.737	377.743
	4	1154782.292	0.000	377.891	377.897
	5	1154782.292	-9.833	377.737	377.743
	6	1154782.292	-19.667	377.584	377.589
	7	1154782.292	-29.500	377.430	377.495
9AB	1	1154882.292	29.500	377.722	377.732
	2	1154882.292	19.667	377.875	377.888
	3	1154882.292	9.833	378.029	378.041
	4	1154882.292	0.000	378.183	378.195
	5	1154882.292	-9.833	378.029	378.041
	6	1154882.292	-19.667	377.875	377.888
	7	1154882.292	-29.500	377.722	377.732
9AC	1	1154982.292	29.500	378.011	378.035
	2	1154982.292	19.667	378.165	378.193
	3	1154982.292	9.833	378.318	378.347
	4	1154982.292	0.000	378.472	378.500
	5	1154982.292	-9.833	378.318	378.347
	6	1154982.292	-19.667	378.165	378.193
	7	1154982.292	-29.500	378.011	378.039
9AD	1	1155082.292	29.500	378.298	378.357
	2	1155082.292	19.667	378.452	378.499
	3	1155082.292	9.833	378.605	378.653
	4	1155082.292	0.000	378.759	378.806
	5	1155082.292	-9.833	378.605	378.653
	6	1155082.292	-19.667	378.451	378.499
	7	1155082.292	-29.500	378.298	378.337

SPAN 9A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9AE	1	1155182.292	29.500	378.582	378.644
	2	1155182.292	19.667	378.736	378.809
	3	1155182.292	9.833	378.889	378.963
	4	1155182.292	0.000	379.043	379.116
	5	1155182.292	-9.833	378.889	378.963
	A	1155182.292	-19.667	378.736	378.809
	7	1155192.292	-29.500	378.582	378.644
9AF	1	1155282.292	29.500	378.804	378.952
	2	1155282.292	19.667	379.017	379.121
	3	1155282.292	9.833	379.171	379.274
	4	1155282.292	0.000	379.324	379.428
	5	1155282.292	-9.833	379.171	379.274
	6	1155282.292	-19.667	379.017	379.121
	7	1155282.292	-29.500	378.864	378.952
9AG	1	1155382.292	29.500	379.143	379.263
	2	1155382.292	19.667	379.296	379.436
	3	1155382.292	9.833	379.450	379.589
	4	1155382.292	0.000	379.604	379.743
	5	1155382.292	-9.833	379.450	379.589
	6	1155382.292	-19.667	379.295	379.436
	7	1155392.292	-29.500	379.143	379.263
SPLICE 9A-2	1	1155402.292	29.500	379.198	379.225
	2	1155402.292	19.667	379.352	379.498
	3	1155402.292	9.833	379.506	379.652
	4	1155402.292	0.000	379.659	379.806
	5	1155402.292	-9.833	379.506	379.652
	6	1155402.292	-19.667	379.352	379.498
	7	1155402.292	-29.500	379.198	379.325
9AH	1	1155482.292	29.500	379.419	379.576
	2	1155482.292	19.667	379.573	379.755
	3	1155482.292	9.833	379.727	379.909
	4	1155482.292	0.000	379.880	380.062
	5	1155482.292	-9.833	379.727	379.909
	6	1155482.292	-19.667	379.573	379.755
	7	1155482.292	-29.500	379.419	379.576
9AI	1	1155582.292	29.500	379.694	379.893
	2	1155582.292	19.667	379.847	380.017
	3	1155582.292	9.833	380.001	380.231
	4	1155582.292	0.000	380.154	380.384
	5	1155582.292	-9.833	380.001	380.231
	6	1155582.292	-19.667	379.847	380.077
	7	1155592.292	-29.500	379.694	379.893
9AJ	1	1155682.292	29.500	379.965	380.210
	2	1155682.292	19.667	380.119	380.400
	3	1155682.292	9.833	380.273	380.554
	4	1155682.292	0.000	380.426	380.708
	5	1155682.292	-9.833	380.273	380.554
	6	1155682.292	-19.667	380.119	380.400
	7	1155682.292	-29.500	379.965	380.210
9AK	1	1155782.292	29.500	380.234	380.526
	2	1155782.292	19.667	380.388	380.723
	3	1155782.292	9.833	380.542	380.877
	4	1155782.292	0.000	380.695	381.030
	5	1155782.292	-9.833	380.542	380.877
	6	1155782.292	-19.666	380.388	380.723
	7	1155782.292	-29.500	380.234	380.526
9AL	1	1155882.292	29.500	380.501	380.841
	2	1155882.292	19.667	380.655	381.045
	3	1155882.292	9.833	380.808	381.198
	4	1155882.292	0.000	380.962	381.352
	5	1155882.292	-9.833	380.808	381.198
	6	1155882.292	-19.666	380.655	381.045
	7	1155882.292	-29.500	380.501	380.841
9AM	1	1155982.292	29.500	380.765	381.153
	2	1155982.292	19.666	380.919	381.364
	3	1155982.292	9.833	381.073	381.517
	4	1155982.292	0.000	381.226	381.671
	5	1155982.292	-9.833	381.073	381.517
	6	1155982.292	-19.666	380.919	381.364
	7	1155982.292	-29.500	380.765	381.153
9AN	1	1156082.292	29.500	381.027	381.460
	2	1156082.292	19.667	381.181	381.677
	3	1156082.292	9.833	381.334	381.831
	4	1156082.292	0.000	381.488	381.984
	5	1156082.292	-9.833	381.334	381.831
	6	1156082.292	-19.666	381.181	381.677
	7	1156082.292	-29.500	381.027	381.460
9AO	1	1156182.292	29.500	381.286	381.764
	2	1156182.292	19.667	381.440	381.987
	3	1156182.292	9.833	381.593	382.141
	4	1156182.292	0.000	381.747	382.295
	5	1156182.292	-9.833	381.593	382.141
	6	1156182.292	-19.666	381.440	381.987
	7	1156182.292	-29.500	381.286	381.764
9AP	1	1156282.292	29.500	381.543	382.065
	2	1156282.292	19.667	381.696	382.287
	3	1156282.292	9.833	381.850	382.441
	4	1156282.292	0.000	382.004	382.594
	5	1156282.292	-9.833	381.850	382.441
	6	1156282.292	-19.666	381.696	382.287
	7	1156282.292	-29.500	381.543	382.065

SPAN 9A (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9AQ	1	1156382.292	29.500	381.797	382.362
	2	1156382.292	19.667	381.951	382.583
	3	1156382.292	9.833	382.104	382.736
	4	1156382.292	0.000	382.258	382.890
	5	1156382.292	-9.833	382.104	382.736
	6	1156382.292	-19.666	381.951	382.583
	7	1156382.292	-29.500	381.797	382.362
SPLICE 9A-4	1	1156462.292	-9.500	381.998	382.590
	2	1156462.292	19.667	382.152	382.810
	3	1156462.292	9.833	382.306	382.964
	4	1156462.292	0.000	382.459	383.118
	5	1156462.292	-9.833	382.306	382.964
	6	1156462.292	-19.666	382.152	382.810
	7	1156462.292	-29.500	381.998	382.590
9AR	1	1156482.292	29.500	382.049	382.647
	2	1156482.292	19.667	382.202	382.867
	3	1156482.292	9.833	382.356	383.021
	4	1156482.292	0.000	382.510	383.174
	5	1156482.292	-9.833	382.356	383.021
	6	1156482.292	-19.666	382.202	382.867
	7	1156482.292	-29.500	382.049	382.647
9AS	1	1156582.292	29.500	382.298	382.926
	2	1156582.292	19.667	382.451	383.144
	3	1156582.292	9.833	382.605	383.299
	4	1156582.292	0.000	382.759	383.453
	5	1156582.292	-9.833	382.605	383.299
	6	1156582.292	-19.666	382.451	383.146
	7	1156582.292	-29.500	382.298	382.926
9AT	1	1156682.292	29.500	382.444	383.186
	2	1156682.292	19.667	382.698	383.414
	3	1156682.292	9.833	382.852	383.567
	4	1156682.292	0.000	383.005	383.721
	5	1156682.292	-9.833	382.852	383.567
	6	1156682.292	-19.666	382.698	383.414
	7	1156682.292	-29.500	382.544	383.186
9AU	1	1156782.292	29.500	382.789	383.439
	2	1156782.292	19.667	382.942	383.674
	3	1156782.292	9.833	383.096	383.827
	4	1156782.292	0.000	383.250	383.981
	5	1156782.292	-9.833	383.096	383.827
	6	1156782.292	-19.666	382.942	383.674
	7	1156782.292	-29.500	382.789	383.439
9AV	1	1156882.292	29.500	383.030	383.680
	2	1156882.292	19.667	383.184	383.923
	3	1156882.292	9.833	383.338	384.077
	4	1156882.292	0.000	383.491	384.231
	5	1156882.292	-9.833	383.338	384.077
	6	1156882.292	-19.666	383.184	383.923
	7	1156882.292	-29.500	383.030	383.680
9AW	1	1156982.292	29.500	383.269	383.917
	2	1156982.292	19.667	383.423	384.164
	3	1156982.292	9.833	383.577	384.317
	4	1156982.292	0.000	383.730	384.471
	5	1156982.292	-9.833	383.577	384.317
	6	1156982.292	-19.666	383.423	384.164
	7	1156982.292	-29.500	383.269	383.917
9AX	1	1157082.292	29.500	383.506	384.152
	2	1157082.292	19.667	383.660	384.305
	3	1157082.292	9.833	383.813	384.569
	4	1157082.292	0.000	383.967	384.702
	5	1157082.292	-9.833	383.813	384.549
	6	1157082.292	-19.666	383.660	384.395
	7	1157082.292	-29.500	383.506	384.152
9AY	1	1157182.292	29.500	383.740	384.377
	2	1157182.292	19.667	383.894	384.616
	3	1157182.292	9.833	384.048	384.769
	4	1157182.292	0.000	384.201	384.923
	5	1157182.292	-9.833	384.048	384.769
	6	1157182.292	-19.666	383.894	384.616
	7	1157182.292	-29.500	383.740	384.377
9AZ	1	1157282.292	29.500	383.972	384.594
	2	1157282.292	19.667	384.126	384.829
	3	1157282.292	9.833	384.279	384.983
	4	1157282.292	0.000	384.433	385.136
	5	1157282.292	-9.833	384.279	384.983
	6	1157282.292	-19.666	384.126	384.829
	7	1157282.292	-29.500	383.972	384.594
9BA	1	1157382.292	29.500	384.201	384.799
	2	1157382.292	19.667	384.355	385.030
	3	1157382.292	9.833	384.508	385.186
	4	1157382.292	0.000	384.662	385.338
	5	1157382.292	-9.833	384.508	385.186
	6	1157382.292	-19.666	384.355	385.030
	7	1157382.292	-29.500	384.201	384.799
9BB	1	1157482.292	29.500	384.428	384.997
	2	1157482.292	19.667	384.582	385.226
	3	1157482.292	9.833	384.735	385.380
	4	1157482.292	0.000	384.889	385.533
	5	1157482.292	-9.833	384.735	385.380
	6	1157482.292	-19.666	384.582	385.226
	7	1157482.292	-29.500	384.428	384.997

SPAN 9A (CONT.)

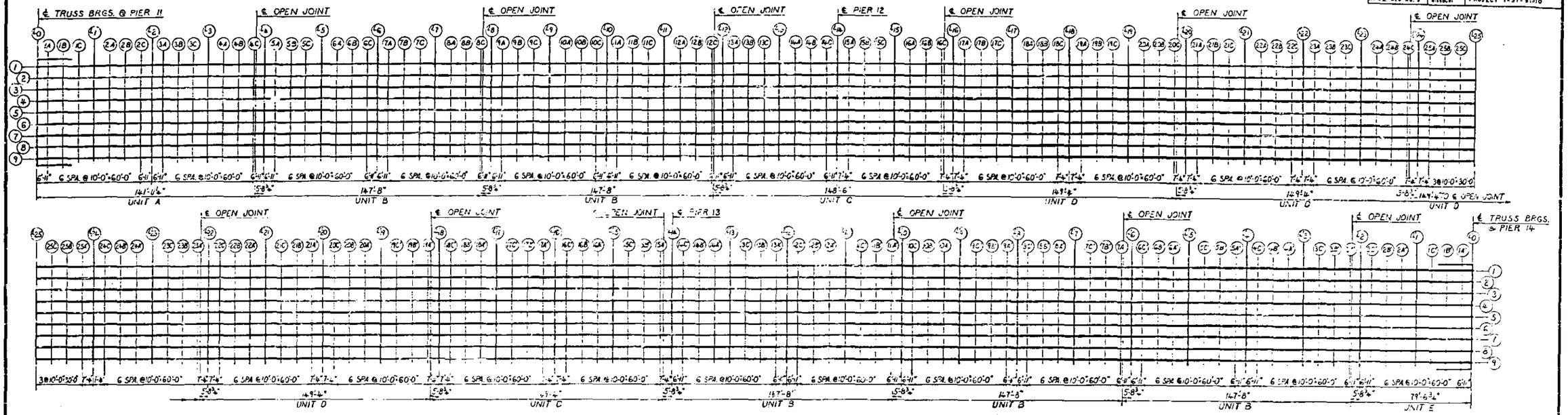
LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
9BC	1	1157582.292	29.500	384.652	385.184
	2	1157582.292	19.667	384.806	385.408
	3	1157582.292	9.833	384.959	385.562
	4	1157582.292	0.000	385.113	385.715
	5	1157582.292	-9.833	384.959	385.562
	6	1157582.292	-19.666	384.806	385.408
	7	1157582.292	-29.500	384.652	385.184
SPLICE 9A-6	1	1157662.292	29.500	384.830	385.331
	2	1157662.292	19.667	384.983	385.550
	3	1157662.292	9.833	385.137	385.704
	4	1157662.292	0.000	385.291	385.858
	5	1157662.292	-9.833	385.137	385.704
	6	1157662.292	-19.666	384.983	385.550
	7	1157662.292	-29.500	384.830	385.331
9BD	1	1157682.292	29.500	384.874	385.367
	2	1157682.292	19.667	385.027	385.586
	3	1157682.292	9.833	385.181	385.739
	4	1157682.292	0.000	385.335	385.893
	5	1157682.292	-9.833	385.181	385.739
	6	1157682.292	-19.666	385.027	385.586
	7	1157682.292	-29.500	384.874	385.367
9BE	1	1157782.292	29.500	385.093	385.537
	2	1157782.292	19.667	385.247	385.748
	3	1157782.292	9.833	385.400	385.901
	4	1157782.292	0.000	385.554	386.055
	5	1157782.292	-9.833	385.400	385.901
	6	1157782.292	-19.666	385.247	385.748
	7	1157782.292	-29.500	385.093	385.537
9BF	1	1157882.292	29.500	385.310	385.703
	2	1157882.292	19.667	385.463	385.906
	3	1157882.292	9.833	385.617	386.059
	4	1157882.292	0.000	385.771	386.213
	5	1157882.292	-9.833	385.617	386.059
	6	1157882.292	-19.666	385.463	385.906
	7	1157882.292	-29.500	385.310	385.703
9BG	1	1157982.292	29.500	385.524	385.856
	2	1157982.292	19.667	385.677	386.051
	3	1157982.292	9.833	385.831	386.205
	4	1157982.292	0.000	385.985	386.359
	5	1157982.292	-9.833	385.831	386.205
	6	1157982.292	-19.666	385.677	386.051
	7	1157982.292	-29.500	385.524	385.856
9BH	1	1158082.292	29.500	385.739	386.006
	2	1158082.292	19.667	385.889	386.191
	3	1158082.292	9.833	386.043	386.345
	4	1158082.292	0.000	386.196	386.499
	5	1158082.292	-9.833	386.043	386.345
	6	1158082.292	-19.666	385.889	386.191
	7	1158082.292	-29.500	385.735	386.006
9BI	1	1158182.292	29.500	385.945	386.165
	2	1158182.292	19.667	386.098	386.320
	3	1158182.292	9.833	386.252	386.474
	4	1158182.292	0.000	386.406	386.628
	5	1158182.292	-9.833	386.252	386.474
	6	1158182.292	-19.666	386.098	386.320
	7	1158182.292	-29.500	385.945	386.165
9BJ	1	1158282.292	29.500	386.151	386.279
	2	1158282.292	19.667	386.305	386.443
	3	1158282.292	9.833	386.459	386.597
	4	1158282.292	0.000	386.612	386.750
	5	1158282.292	-9.833	386.459	386.597
	6	1158282.292	-19.666	386.305	386.443
	7	1158282.292	-29.500	386.151	386.279
9BK	1	1158382.292	29.500	386.355	386.404
	2	1158382.292	19.667	386.509	386.557
	3	1158382.292	9.833	386.663	386.710
	4	1158382.292	0.000	386.816	386.864
	5	1158382.292	-9.833	386.663	386.710
	6	1158382.292	-19.666	386.509	386.557
	7	1158382.292	-29.500	386.355	386.404
℄ BRG.PIER 11 SPAN 9A	1	1158442.333	29.500	386.478	386.478
	2	1158442.333	19.667	386.631	386.631
	3	1158442.333	9.833	386.785	386.785
	4	1158442.333	0.000	386.939	386.939
	5	1158442.333	-9.833	386.785	386.785
	6	1158442.333	-19.666	386.631	386.631
	7	1158442.333	-29.500	386.478	386.478

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

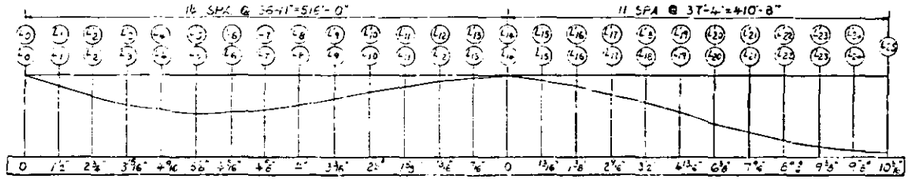
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-18-1 D	ALEXANDER MISSOURI ILLINOIS MISSOURI	63	9
FAI ROUTE NO.	STATE			
FAI ROUTE NO.	STATE	PROJECT I-57-9(5)0		

TOP OF SLAB ELEVATIONS - SPANS 8A & 9A
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

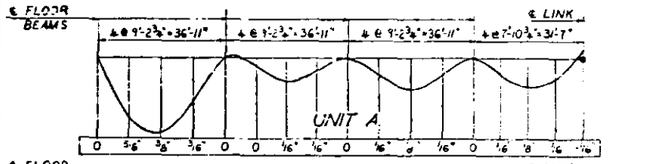
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1D	ALEXANDER ILLINOIS	63	10
	D	MISSISSIPPI MISSOURI		
F.A.P. REC. NO. A F.A.S. REC. NO. B		ILLINOIS MISSOURI	PROJECT I-57-9(5)0	



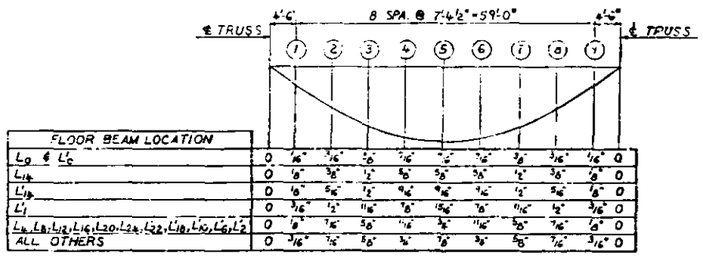
KEY PLAN



TRUSS DEAD LOAD DEFLECTIONS*

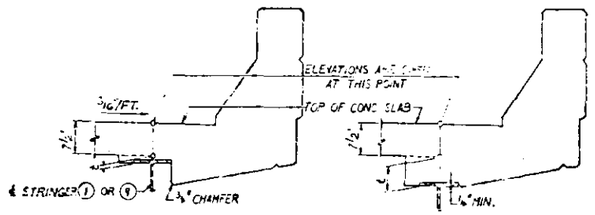


STRINGER DEAD LOAD DEFLECTIONS*



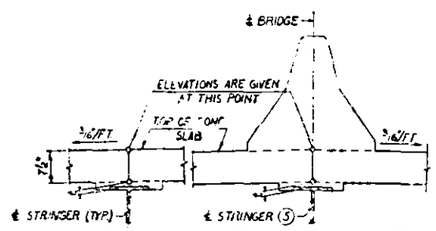
FLOOR BEAM LOCATION										
L_0 & L'_0	0	1/16"	1/16"	1/8"	1/16"	1/16"	1/16"	3/16"	3/16"	1/16"	0
$L_{1/8}$	0	1/8"	3/8"	1/2"	5/8"	5/8"	5/8"	1/2"	3/8"	1/8"	0
$L_{1/8}$	0	1/8"	5/16"	1/2"	9/16"	9/16"	7/16"	1/2"	5/16"	1/8"	0
L'_1	0	3/16"	1/2"	11/16"	7/8"	15/16"	1"	11/16"	1/2"	3/16"	0
$L_4, L_8, L_{12}, L_{16}, L_{20}, L_{24}, L_{22}, L_{18}, L_{14}, L_{10}, L_6, L'_2$	0	1/8"	7/16"	5/8"	11/16"	3/4"	11/16"	5/8"	7/16"	1/8"	0
ALL OTHERS	0	3/16"	7/16"	5/8"	3/4"	7/8"	3/4"	5/8"	7/16"	3/16"	0

* INCLUDES WEIGHT OF CONCRETE AND WEARING SURFACE ONLY. THE ABOVE DEFLECTIONS ARE NOT FOR USE IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION.



AT MINIMUM FILLET
SCALE: ¾"=1'-0"

AT MAXIMUM FILLET
SCALE: ¾"=1'-0"



FILLET HEIGHTS

SCALE: ¾"=1'-0"

TO DETERMINE "E": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP OF THE STRINGERS SHALL BE TAKEN AT THE INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION," MINUS SLAB THICKNESS, EQUAL THE FILLET HEIGHTS "E" ABOVE TOP FLANGE OF STRINGERS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. 2-18-76

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F A I 57	(02-1B-1) 9	ALEXANDER MISSISSIPPI ILLINOIS MISSOURI	63	1
FEDERAL AID NO.		ILLINOIS MISSOURI	PROJECT I-57-9(5)0	

SPAN 12

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L_0	1	115847+500	29+500	386+542	386+550
	2	115847+500	22+125	386+657	386+677
	3	115847+500	14+750	386+773	386+801
℄ TRUSS	4	115847+500	7+375	386+888	386+923
BRG. AT	5	115847+500	0+000	387+003	387+048
PIER II	6	115847+500	+7+375	386+888	386+923
	7	115847+500	+14+750	386+773	386+801
	8	115847+500	+22+125	386+657	386+677
	9	115847+500	+29+500	386+542	386+550
1A	1	115854+417	29+500	386+680	386+729
	2	115854+417	22+125	386+796	386+839
	3	115854+417	14+750	386+913	386+985
	4	115854+417	7+375	387+026	387+108
	5	115854+417	0+000	387+141	387+225
	6	115854+417	-7+375	387+026	387+108
	7	115854+417	-14+750	386+911	386+985
	8	115854+417	-22+125	386+796	386+839
	9	115854+417	-29+500	386+680	386+729
1B	1	115864+417	29+500	386+878	386+972
	2	115864+417	22+125	386+953	387+106
	3	115864+417	14+750	387+109	387+237
	4	115864+417	7+375	387+224	387+361
	5	115864+417	0+000	387+335	387+479
	6	115864+417	-7+375	387+224	387+361
	7	115864+417	-14+750	387+109	387+237
	8	115864+417	-22+125	386+953	387+106
	9	115864+417	-29+500	386+878	386+972
1C	1	115874+417	29+500	387+073	387+195
	2	115874+417	22+125	387+188	387+331
	3	115874+417	14+750	387+304	387+465
	4	115874+417	7+375	387+419	387+590
	5	115874+417	0+000	387+534	387+709
	6	115874+417	-7+375	387+419	387+590
	7	115874+417	-14+750	387+304	387+465
	8	115874+417	-22+125	387+188	387+331
	9	115874+417	-29+500	387+073	387+195
L_1	1	115884+417	29+500	387+268	387+407
	2	115884+417	22+125	387+351	387+547
	3	115884+417	14+750	387+496	387+680
	4	115884+417	7+375	387+612	387+807
	5	115884+417	0+000	387+727	387+927
	6	115884+417	-7+375	387+612	387+807
	7	115884+417	-14+750	387+496	387+680
	8	115884+417	-22+125	387+381	387+547
	9	115884+417	-29+500	387+266	387+407
2A	1	115894+417	29+500	387+456	387+629
	2	115894+417	22+125	387+571	387+769
	3	115894+417	14+750	387+686	387+909
	4	115894+417	7+375	387+802	388+031
	5	115894+417	0+000	387+917	388+150
	6	115894+417	-7+375	387+802	388+031
	7	115894+417	-14+750	387+686	387+909
	8	115894+417	-22+125	387+571	387+769
	9	115894+417	-29+500	387+456	387+629
2B	1	115904+417	29+500	387+644	387+849
	2	115904+417	22+125	387+759	387+988
	3	115904+417	14+750	387+874	388+121
	4	115904+417	7+375	387+989	388+248
	5	115904+417	0+000	388+105	388+368
	6	115904+417	-7+375	387+989	388+248
	7	115904+417	-14+750	387+874	388+121
	8	115904+417	-22+125	387+759	387+988
	9	115904+417	-29+500	387+644	387+849
2C	1	115914+417	29+500	387+829	388+059
	2	115914+417	22+125	387+944	388+197
	3	115914+417	14+750	388+059	388+330
	4	115914+417	7+375	388+174	388+455
	5	115914+417	0+000	388+290	388+575
	6	115914+417	-7+375	388+174	388+455
	7	115914+417	-14+750	388+059	388+330
	8	115914+417	-22+125	387+944	388+197
	9	115914+417	-29+500	387+829	388+059
L_2	1	115921+333	29+500	387+955	388+202
	2	115921+333	22+125	388+071	388+339
	3	115921+333	14+750	388+186	388+472
	4	115921+333	7+375	388+301	388+597
	5	115921+333	0+000	388+416	388+716
	6	115921+333	-7+375	388+301	388+597
	7	115921+333	-14+750	388+186	388+472
	8	115921+333	-22+125	388+071	388+339
	9	115921+333	-29+500	387+955	388+202
3A	2	115928+250	29+500	388+081	388+350
	2	115928+250	22+125	388+196	388+487
	3	115928+250	14+750	388+311	388+620
	4	115928+250	7+375	388+426	388+745
	5	115928+250	0+000	388+542	388+864
	6	115928+250	-7+375	388+426	388+745
	7	115928+250	-14+750	388+311	388+620
	8	115928+250	-22+125	388+196	388+487
	9	115928+250	-29+500	388+081	388+350

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
3B	1	115938+250	29+500	388+260	388+561
	2	115938+250	22+125	388+375	388+694
	3	115938+250	14+750	388+490	388+830
	4	115938+250	7+375	388+606	388+956
	5	115938+250	0+000	388+721	389+074
	6	115938+250	-7+375	388+606	388+956
	7	115938+250	-14+750	388+490	388+830
	8	115938+250	-22+125	388+375	388+698
	9	115938+250	-29+500	388+260	388+561
3C	1	115948+250	29+500	388+437	388+759
	2	115948+250	22+125	388+552	388+897
	3	115948+250	14+750	388+667	389+030
	4	115948+250	7+375	388+782	389+156
	5	115948+250	0+000	388+898	389+274
	6	115948+250	-7+375	388+782	389+156
	7	115948+250	-14+750	388+667	389+030
	8	115948+250	-22+125	388+552	388+897
	9	115948+250	-29+500	388+437	388+759
L_3	1	115958+250	29+500	388+611	388+952
	2	115958+250	22+125	388+726	389+089
	3	115958+250	14+750	388+841	389+222
	4	115958+250	7+375	388+957	389+348
	5	115958+250	0+000	389+072	389+467
	6	115958+250	-7+375	388+957	389+348
	7	115958+250	-14+750	388+841	389+222
	8	115958+250	-22+125	388+726	389+089
	9	115958+250	-29+500	388+611	388+952
4A	1	115968+250	29+500	388+783	389+144
	2	115965+250	22+125	388+898	389+282
	3	115962+250	14+750	389+013	389+414
	4	115968+250	7+375	389+128	389+541
	5	115965+250	0+000	389+243	389+659
	6	115968+250	-7+375	389+128	389+541
	7	115968+250	-14+750	389+013	389+414
	8	115968+250	-22+125	388+898	389+282
	9	115968+250	-29+500	388+783	389+144
4B	1	115978+250	29+500	388+952	389+330
	2	115975+250	22+125	389+067	389+467
	3	115978+250	14+750	389+182	389+599
	4	115978+250	7+375	389+297	389+724
	5	115978+250	0+000	389+413	389+843
	6	115978+250	-7+375	389+297	389+724
	7	115978+250	-14+750	389+182	389+599
	8	115978+250	-22+125	389+067	389+467
	9	115978+250	-29+500	388+952	389+330
4C	1	115988+250	29+500	389+118	389+500
	2	115985+250	22+125	389+234	389+636
	3	115988+250	14+750	389+349	389+768
	4	115988+250	7+375	389+464	389+893
	5	115988+250	0+000	389+579	390+031
	6	115988+250	-7+375	389+464	389+893
	7	115988+250	-14+750	389+349	389+768
	8	115988+250	-22+125	389+234	389+636
	9	115988+250	-29+500	389+118	389+500
℄ OPEN JOINT	1	115989+438	29+500	389+138	389+520
	2	115989+438	22+125	389+253	389+656
	3	115989+438	14+750	389+368	389+787
	4	115989+438	7+375	389+484	389+912
	5	115989+438	0+000	389+599	390+031
	6	115989+438	-7+375	389+484	389+912
	7	115989+438	-14+750	389+368	389+787
	8	115989+438	-22+125	389+253	389+656
	9	115989+438	-29+500	389+138	389+520
L_4	1	115995+167	29+500	389+232	389+624
	2	115995+167	22+125	389+347	389+760
	3	115995+167	14+750	389+463	389+892
	4	115995+167	7+375	389+578	390+017
	5	115995+167	0+000	389+692	390+136
	6	115995+167	-7+375	389+578	390+017
	7	115995+167	-14+750	389+463	389+892
	8	115995+167	-22+125	389+347	389+760
	9	115995+167	-29+500	389+232	389+624
5A	1	116002+083	29+500	389+345	389+755
	2	116002+083	22+125	389+460	389+891
	3	116002+083	14+750	389+575	390+024
	4	116002+083	7+375	389+691	390+149
	5	116002+083	0+000	389+806	390+268
	6	116002+083	-7+375	389+691	390+149
	7	116002+083	-14+750	389+575	390+024
	8	116002+083	-22+125	389+460	389+891
	9	116002+083	-29+500	389+345	389+755
5B	1	116012+083	29+500	389+506	389+935
	2	116012+083	22+125	389+621	390+074
	3	116012+083	14+750	389+736	390+206
	4	116012+083	7+375	389+851	390+332
	5	116012+083	0+000	389+966	390+450
	6	116012+083	-7+375	389+851	390+332
	7	116012+083	-14+750	389+736	390+206
	8	116012+083	-22+125	389+621	390+074
	9	116012+083	-29+500	389+506	389+935

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
5C	1	116022+083	29+500	389+664	390+102
	2	116022+083	22+125	389+779	390+240
	3	116022+083	14+750	389+894	390+378
	4	116022+083	7+375	390+009	390+499
	5	116022+083	0+000	390+125	390+615
	6	116022+083	-7+375	390+009	390+499
	7	116022+083	-14+750	389+894	390+378
	8	116022+083	-22+125	389+779	390+240
	9	116022+083	-29+500	389+664	390+102
L_5	1	116032+083	29+500	389+820	390+260
	2	116032+083	22+125	389+935	390+399
	3	116032+083	14+750	390+050	390+531
	4	116032+083	7+375	390+165	390+658
	5	116032+083	0+000	390+280	390+777
	6	116032+083	-7+375	390+165	390+658
	7	116032+083	-14+750	390+050	390+531
	8	116032+083	-22+125	389+935	390+399
	9	116032+083	-29+500	389+820	390+260
6A	1	116042+083	29+500	389+973	390+416
	2	116042+083	22+125	390+088	390+554
	3	116042+083	14+750	390+203	390+687
	4	116042+083	7+375	390+318	390+814
	5	116042+083	0+000	390+434	390+933
	6	116042+083	-7+375	390+318	390+814
	7	116042+083	-14+750	390+203	390+687
	8	116042+083	-22+125	390+088	390+554
	9	116042+083	-29+500	389+973	390+416
6B	1	116052+083	29+500	390+123	390+566
	2	116052+083	22+125	390+239	390+704
	3	116052+083	14+750	390+354	390+843
	4	116052+083	7+375	390+469	390+983
	5	116052+083	0+000	390+584	391+122
	6	116052+083	-7+375	390+469	390+983
	7	116052+083	-14+750	390+354	390+837
	8	116052+083	-22+125	390+239	390+704
	9	116052+083	-29+500	390+123	390+566
6C	1	116062+083	29+500	390+272	390+705
	2	116062+083	22+125	390+387	390+843
	3	116062+083	14+750	390+502	390+975
	4	116062+083	7+375	390+617	391+102
	5	116062+083	0+000	390+733	391+221
	6	116062+083	-7+375	390+617	391+102
	7	116062+083	-14+750	390+502	390+975
	8	116062+083	-22+125	390+387	390+843
	9	116062+083	-29+500	390+272	390+705
L_6	1	116069+000	29+500	390+373	390+800
	2	116069+000	22+125	390+488	390+937
	3	116069+000	14+750	390+603	391+069
	4	116069+000	7+375	390+718	391+196
	5	116069+000	0+000	390+834	391+315
	6	116069+000	-7+375	390+718	391+196
	7	116069+000	-14+750	390+603	391+069
	8	116069+000	-22+125	390+488	390+937
	9	116069+000	-29+500	390+373	390+800
7A	1	116075+917	29+500	390+473	390+960
	2	116075+917	22+125	390+588	391+038
	3	116075+917	14+750	390+703	391+170
	4	116075+917	7+375	390+818	391+296
	5	116075+917	0+000	390+934	391+414
	6	116075+917	-7+375	390+818	391+296
	7	116075+917	-14+750	390+703	391+170
	8	116075+917	-22+125	390+588	391+038
	9	116075+917	-29+500	390+473	390+900
7B	1	116085+917	29+500	390+615	391+040
	2	116085+917	22+125	390+730	391+179
	3	116085+917	14+750	390+845	391+311
	4	116085+917	7+375	390+961	391+437
	5	116085+917	0+000	391+076	391+556
	6	116085+917	-7+375	390+961	391+437
	7	116085+917	-14+750	390+845	391+311
	8	116085+917	-22+125	390+730	391+179
	9	116085+917	-29+500	390+615	391+040
7C	1	116095+917	29+500	390+755	391+168
	2	116095+917	22+125	390+870	391+307
	3	116095+917	14+750	390+985	391+439
	4	116095+917	7+375	391+100	391+566
	5	116095+917	0+000	391+216	391+685
	6	116095+917	-7+375	391+100	391+566
	7	116095+917	-14+750	390+985	391+439
	8	116095+917	-22+125	390+870	391+307
	9	116095+917	-29+500	390+755	391+168
L_7	1	116105+917	29+500	390+892	391+291
	2	116105+917	22+125	391+007	391+430
	3	116105+917	14+750	391+122	391+562
	4	116105+917	7+375	391+238	391+689
	5	116105+917	0+000	391+353	391+808
	6	116105+917	-7+375	391+238	391+689
	7	116105+917	-14+750	391+122	391+562
	8	116105+917	-22+125	391+007	391+430
	9	116105+917	-29+500	390+892	391+291

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8A	1	116115+917	29+500	391+027	391+420
	2	116115+917	22+125	391+142	391+557
	3	116115+917	14+750	391+257	391+690
	4	116115+917	7+375	391+372	391+819
	5	116115+917	0+000	391+488	391+934
	6	116115+917	+7+375	391+372	391+815
	7	116115+917	+14+750	391+257	391+690
	8	116115+917	+22+125	391+142	391+557
	9	116115+917	+29+500	391+027	391+420
8B	1	116125+917	29+500	391+159	391+540
	2	116125+917	22+125	391+274	391+676
	3	116125+917	14+750	391+386	391+807
	4	116125+917	7+375	391+505	391+933
	5	116125+917	0+000	391+620	392+061
	6	116125+917	-7+375	391+505	391+933
	7	116125+917	-14+750	391+389	391+807
	8	116125+917	-22+125	391+274	391+676
	9	116125+917	-29+500	391+159	391+540
8C	1	116135+917	29+500	391+289	391+643
	2	116135+917	22+125	391+404	391+779
	3	116135+917	14+750	391+519	391+910
	4	116135+917	7+375	391+634	392+035
	5	116135+917	0+000	391+750	392+194
	6	116135+917	-7+375	391+634	392+035
	7	116135+917	-14+750	391+519	391+910
	8	116135+917	-22+125	391+404	391+779
	9	116135+917	-29+500	391+289	391+643
℄ OPEN JOINT	1	116137+104	29+500	391+304	391+654
	2	116137+104	22+125	391+419	391+760
	3	116137+104	14+750	391+534	391+921
	4	116137+104	7+375	391+650	392+047
	5	116137+104	0+000	391+765	392+165
	6	116137+104	-7+375	391+650	392+047
	7	116137+104	-14+750	391+534	391+921
	8	116137+104	-22+125	391+419	391+760
	9	116137+104	-29+500	391+304	391+654
L_8	1	116142+833	29+500	391+377	391+721
	2	116142+833	22+125	391+492	391+857
	3	116142+833	14+750	391+607	391+989
	4	116142+833	7+375	391+723	392+114
	5	116142+833	0+000	391+838	392+233
	6	116142+833	-7+375	391+723	392+114
	7	116142+833	-14+750	391+607	391+989
	8	116142+833	-22+125	391+492	391+857
	9	116142+833	-29+500	391+377	391+721
9A	1	116149+750	29+500	391+484	391+805
	2	116149+750	22+125	391+579	391+942
	3	116149+750	14+750	391+695	392+074
	4	116149+750	7+375	391+810	392+200
	5	116149+750	0+000	391+925	392+318
	6	116149+750	+7+375	391+810	392+200
	7	116149+750	+14+750	391+695	392+074
	8	116149+750	+22+125	391+579	391+942
	9	116149+750	+29+500	391+484	391+805
9B	1	116159+750	29+500	391+588	391+919
	2	116159+750	22+125	391+703	392+057
	3	116159+750	14+750	391+818	392+189
	4	116159+750	7+375	391+934	392+314
	5	116159+750	0+000	392+049	392+434
	6	116159+750	+7+375	391+934	392+315
	7	116159+750	+14+750	391+818	392+189
	8	116159+750	+22+125	391+703	392+057
	9	116159+750	+29+500	391+588	391+919
9C	1	116169+750	29+500	391+709	392+018
	2	116169+750	22+125	391+824	392+156
	3	116169+750	14+750	391+940	392+289
	4	116169+750	7+375	392+055	392+414
	5	116169+750	0+000	392+170	392+534
	6	116169+750	+7+375	392+055	392+414
	7	116169+750	+14+750	391+940	392+289
	8	116169+750	+22+125	391+824	392+156
	9	116169+750	+29+500	391+709	392+018

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS- SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1-1D	ALEXANDER	ILLINOIS	63	12
		MISSISSIPPI	MISSOURI		
			PROJECT I-57-9(5)0		

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L9	1	116179.750	29.500	391.828	392.109
	2	116179.750	22.125	391.943	392.247
	3	116179.750	14.750	392.059	392.380
	4	116179.750	7.375	392.174	392.507
	5	116179.750	0.000	392.289	392.625
	6	116179.750	-7.375	392.174	392.507
	7	116179.750	-14.750	392.059	392.380
	8	116179.750	-22.125	391.943	392.247
	9	116179.750	-29.500	391.828	392.109
12A	1	116189.750	29.500	391.944	392.211
	2	116189.750	22.125	392.060	392.348
	3	116189.750	14.750	392.175	392.482
	4	116189.750	7.375	392.290	392.609
	5	116189.750	0.000	392.405	392.727
	6	116189.750	-7.375	392.290	392.609
	7	116189.750	-14.750	392.175	392.482
	8	116189.750	-29.125	392.060	392.348
	9	116189.750	-29.500	391.944	392.211
12B	1	116199.750	29.500	392.058	392.307
	2	116199.750	22.125	392.173	392.445
	3	116199.750	14.750	392.289	392.578
	4	116199.750	7.375	392.404	392.704
	5	116199.750	0.000	392.519	392.824
	6	116199.750	-7.375	392.404	392.704
	7	116199.750	-14.750	392.289	392.578
	8	116199.750	-22.125	392.173	392.445
	9	116199.750	-29.500	392.058	392.307
12C	1	116209.750	29.500	392.169	392.393
	2	116209.750	22.125	392.285	392.531
	3	116209.750	14.750	392.400	392.663
	4	116209.750	7.375	392.515	392.790
	5	116209.750	0.000	392.630	392.909
	6	116209.750	-7.375	392.515	392.790
	7	116209.750	-14.750	392.400	392.663
	8	116209.750	-22.125	392.289	392.531
	9	116209.750	-29.500	392.169	392.393
L10	1	116216.667	29.500	392.245	392.450
	2	116216.667	22.125	392.360	392.587
	3	116216.667	14.750	392.475	392.719
	4	116216.667	7.375	392.591	392.846
	5	116216.667	0.000	392.706	392.965
	6	116216.667	-7.375	392.591	392.846
	7	116216.667	-14.750	392.475	392.719
	8	116216.667	-22.125	392.360	392.587
	9	116216.667	-29.500	392.245	392.450
11A	1	116223.583	29.500	392.319	392.519
	2	116223.583	22.125	392.435	392.656
	3	116223.583	14.750	392.550	392.788
	4	116223.583	7.375	392.665	392.914
	5	116223.583	0.000	392.780	393.034
	6	116223.583	-7.375	392.665	392.914
	7	116223.583	-14.750	392.550	392.788
	8	116223.583	-22.125	392.435	392.656
	9	116223.583	-29.500	392.319	392.519
11B	1	116233.583	29.500	392.425	392.614
	2	116233.583	22.125	392.540	392.752
	3	116233.583	14.750	392.655	392.884
	4	116233.583	7.375	392.770	393.011
	5	116233.583	0.000	392.886	393.130
	6	116233.583	-7.375	392.770	393.011
	7	116233.583	-14.750	392.655	392.884
	8	116233.583	-22.125	392.540	392.752
	9	116233.583	-29.500	392.425	392.614
11C	1	116243.583	29.500	392.528	392.697
	2	116243.583	22.125	392.643	392.836
	3	116243.583	14.750	392.758	392.969
	4	116243.583	7.375	392.873	393.095
	5	116243.583	0.000	392.988	393.214
	6	116243.583	-7.375	392.873	393.095
	7	116243.583	-14.750	392.758	392.959
	8	116243.583	-22.125	392.643	392.836
	9	116243.583	-29.500	392.528	392.697
L11	1	116253.583	29.500	392.628	392.775
	2	116253.583	22.125	392.743	392.914
	3	116253.583	14.750	392.858	393.047
	4	116253.583	7.375	392.974	393.174
	5	116253.583	0.000	393.089	393.291
	6	116253.583	-7.375	392.974	393.174
	7	116253.583	-14.750	392.858	393.047
	8	116253.583	-22.125	392.743	392.914
	9	116253.583	-29.500	392.628	392.775
12A	1	116263.583	29.500	392.726	392.864
	2	116263.583	22.125	392.841	393.002
	3	116263.583	14.750	392.956	393.134
	4	116263.583	7.375	393.071	393.260
	5	116263.583	0.000	393.187	393.379
	6	116263.583	-7.375	393.071	393.260
	7	116263.583	-14.750	392.956	393.134
	8	116263.583	-22.125	392.841	393.002
	9	116263.583	-29.500	392.726	392.864

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
12B	1	116273.583	29.500	392.821	392.945
	2	116273.583	22.125	392.936	393.081
	3	116273.583	14.750	393.052	393.212
	4	116273.583	7.375	393.167	393.337
	5	116273.583	0.000	393.282	393.457
	6	116273.583	-7.375	393.167	393.337
	7	116273.583	-14.750	393.052	393.212
	8	116273.583	-22.125	392.936	393.081
	9	116273.583	-29.500	392.821	392.945
12C	1	116283.583	29.500	392.914	393.008
	2	116283.583	22.125	393.029	393.140
	3	116283.583	14.750	393.144	393.275
	4	116283.583	7.375	393.260	393.399
	5	116283.583	0.000	393.375	393.519
	6	116283.583	-7.375	393.260	393.399
	7	116283.583	-14.750	393.144	393.275
	8	116283.583	-22.125	393.029	393.140
	9	116283.583	-29.500	392.914	393.008
℄ OPEN JOINT	1	116284.771	29.500	392.925	393.015
	2	116284.771	22.125	393.040	393.146
	3	116284.771	14.750	393.155	393.282
	4	116284.771	7.375	393.271	393.406
	5	116284.771	0.000	393.386	393.525
	6	116284.771	-7.375	393.271	393.406
	7	116284.771	-14.750	393.155	393.282
	8	116284.771	-22.125	393.040	393.146
	9	116284.771	-29.500	392.925	393.015
L12	1	116290.500	29.500	392.977	393.058
	2	116290.500	22.125	393.092	393.187
	3	116290.500	14.750	393.207	393.326
	4	116290.500	7.375	393.322	393.452
	5	116290.500	0.000	393.438	393.570
	6	116290.500	-7.375	393.322	393.452
	7	116290.500	-14.750	393.207	393.326
	8	116290.500	-22.125	393.092	393.187
	9	116290.500	-29.500	392.977	393.058
13A	1	116297.417	29.500	393.038	393.123
	2	116297.417	22.125	393.154	393.258
	3	116297.417	14.750	393.269	393.392
	4	116297.417	7.375	393.384	393.518
	5	116297.417	0.000	393.499	393.637
	6	116297.417	-7.375	393.384	393.518
	7	116297.417	-14.750	393.269	393.392
	8	116297.417	-22.125	393.154	393.258
	9	116297.417	-29.500	393.038	393.123
13B	1	116307.417	29.500	393.125	393.209
	2	116307.417	22.125	393.240	393.347
	3	116307.417	14.750	393.356	393.480
	4	116307.417	7.375	393.471	393.605
	5	116307.417	0.000	393.586	393.725
	6	116307.417	-7.375	393.471	393.605
	7	116307.417	-14.750	393.356	393.480
	8	116307.417	-22.125	393.240	393.347
	9	116307.417	-29.500	393.125	393.209
13C	1	116317.417	29.500	393.210	393.280
	2	116317.417	22.125	393.325	393.418
	3	116317.417	14.750	393.440	393.551
	4	116317.417	7.375	393.555	393.677
	5	116317.417	0.000	393.671	393.797
	6	116317.417	-7.375	393.555	393.677
	7	116317.417	-14.750	393.440	393.551
	8	116317.417	-22.125	393.325	393.418
	9	116317.417	-29.500	393.210	393.280
L13	1	116327.417	29.500	393.291	393.342
	2	116327.417	22.125	393.407	393.480
	3	116327.417	14.750	393.522	393.613
	4	116327.417	7.375	393.637	393.740
	5	116327.417	0.000	393.752	393.857
	6	116327.417	-7.375	393.637	393.740
	7	116327.417	-14.750	393.522	393.613
	8	116327.417	-22.125	393.407	393.480
	9	116327.417	-29.500	393.291	393.342
14A	1	116337.417	29.500	393.371	393.418
	2	116337.417	22.125	393.486	393.554
	3	116337.417	14.750	393.601	393.686
	4	116337.417	7.375	393.717	393.811
	5	116337.417	0.000	393.832	393.929
	6	116337.417	-7.375	393.717	393.811
	7	116337.417	-14.750	393.601	393.686
	8	116337.417	-22.125	393.486	393.554
	9	116337.417	-29.500	393.371	393.418
14B	1	116347.417	29.500	393.448	393.487
	2	116347.417	22.125	393.563	393.620
	3	116347.417	14.750	393.678	393.751
	4	116347.417	7.375	393.793	393.875
	5	116347.417	0.000	393.909	393.998
	6	116347.417	-7.375	393.793	393.875
	7	116347.417	-14.750	393.678	393.751
	8	116347.417	-22.125	393.563	393.620
	9	116347.417	-29.500	393.448	393.487

SPAN 12 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
14C	1	116357.417	29.500	393.522	393.544
	2	116357.417	22.125	393.637	393.678
	3	116357.417	14.750	393.753	393.807
	4	116357.417	7.375	393.868	393.931
	5	116357.417	0.000	393.983	394.050
	6	116357.417	-7.375	393.868	393.931
	7	116357.417	-14.750	393.753	393.807
	8	116357.417	-22.125	393.637	393.678
	9	116357.417	-29.500	393.522	393.544

SPAN 13

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L14	1	116364.333	29.500	393.572	393.583
	2	116364.333	22.125	393.687	393.716
℄ PIER 12	3	116364.333	14.750	393.803	393.849
	4	116364.333	7.375	393.918	393.969
	5	116364.333	0.000	394.033	394.086
	6	116364.333	-7.375	393.918	393.969
	7	116364.333	-14.750	393.803	393.865
	8	116364.333	-22.125	393.687	393.716
	9	116364.333	-29.500	393.572	393.583
15A	1	116371.667	29.500	393.624	393.653
	2	116371.667	22.125	393.739	393.786
	3	116371.667	14.750	393.854	393.918
	4	116371.667	7.375	393.970	394.039
	5	116371.667	0.000	394.085	394.157
	6	116371.667	-7.375	393.970	394.039
	7	116371.667	-14.750	393.854	393.915
	8	116371.667	-22.125	393.739	393.786
	9	116371.667	-29.500	393.624	393.653
15B	1	116381.667	29.500	393.692	393.744
	2	116381.667	22.125	393.807	393.879
	3	116381.667	14.750	393.923	394.009
	4	116381.667	7.375	394.038	394.134
	5	116381.667	0.000	394.153	394.253
	6	116381.667	-7.375	394.038	394.134
	7	116381.667	-14.750	393.923	394.009
	8	116381.667	-22.125	393.807	393.879
	9	116381.667	-29.500	393.692	393.744
15C	1	116391.667	29.500	393.758	393.825
	2	116391.667	22.125	393.873	393.961
	3	116391.667	14.750	393.988	394.092
	4	116391.667	7.375	394.104	394.218
	5	116391.667	0.000	394.219	394.337
	6	116391.667	-7.375	394.104	394.218
	7	116391.667	-14.750	393.988	394.092
	8	116391.667	-22.125	393.873	393.961
	9	116391.667	-29.500	393.758	393.825
L15	1	116401.667	29.500	393.821	393.899
	2	116401.667	22.125	393.937	394.036
	3	116401.667	14.750	394.052	394.169
	4	116401.667	7.375	394.167	394.295
	5	116401.667	0.000	394.282	394.414
	6	116401.667	-7.375	394.167	394.295
	7	116401.667	-14.750	394.052	394.169
	8	116401.667	-22.125	393.937	394.036
	9	116401.667	-29.500	393.821	393.899
16A	1	116411.667	29.500	393.882	393.982
	2	116411.667	22.125	393.997	394.119
	3	116411.667	14.750	394.113	394.252
	4	116411.667	7.375	394.228	394.377
	5	116411.667	0.000	394.343	394.497
	6	116411.667	-7.375	394.228	394.377
	7	116411.667	-14.750	394.113	394.252
	8	116411.667	-22.125	393.997	394.119
	9	116411.667	-29.500	393.882	393.982
16B	1	116421.667	29.500	393.940	394.056
	2	116421.667	22.125	394.056	394.192
	3	116421.667	14.750	394.171	394.325
	4	116421.667	7.375	394.286	394.460
	5	116421.667	0.000	394.401	394.569
	6	116421.667	-7.375	394.286	394.460
	7	116421.667	-14.750	394.171	394.325
	8	116421.667	-22.125	394.056	394.192
	9	116421.667	-29.500	393.940	394.056
16C	1	116431.667	29.500	393.996	394.114
	2	116431.667	22.125	394.112	394.250
	3	116431.667	14.750	394.227	394.381
	4	116431.667	7.375	394.342	394.506
	5	116431.667	0.000	394.457	394.625
	6	116431.667	-7.375	394.342	394.506
	7	116431.667	-14.750	394.227	394.381
	8	116431.667	-22.125	394.112	394.250
	9	116431.667	-29.500	393.996	394.114

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ OPEN JOINT	1	116433.271	29.500	394.005	394.122
	2	116433.271	22.125	394.120	394.258
	3	116433.271	14.750	394.236	394.389
	4	116433.271	7.375	394.351	394.514
	5	116433.271	0.000	394.466	394.633
	6	116433.271	-7.375	394.351	394.514
	7	116433.271	-14.750	394.236	394.389
	8	116433.271	-22.125	394.120	394.258
	9	116433.271	-29.500	394.005	394.122
L16	1	116439.000	29.500	394.036	394.162
	2	116439.000	22.125	394.151	394.298
	3	116439.000	14.750	394.266	394.430
	4	116439.000	7.375	394.381	394.564
	5	116439.000	0.000	394.497	394.674
	6	116439.000	-7.375	394.381	394.564
	7	116439.000	-14.750	394.266	394.430
	8	116439.000	-22.125	394.151	394.298
	9	116439.000	-29.500	394.036	394.162
17A	1	116446.333	29.500	394.074	394.229
	2	116446.333	22.125	394.189	394.366
	3	116446.333	14.750	394.304	394.498
	4	116446.333	7.375	394.419	394.624
	5	116446.333	0.000	394.535	394.742
	6	116446.333	-7.375	394.419	394.624
	7	116446.333	-14.750	394.304	394.498
	8	116446.333	-22.125	394.189	394.366
	9	116446.333	-29.500	394.074	394.229
17B	1	116456.333	29.500	394.123	394.312
	2	116456.333	22.125	394.239	394.450
	3	116456.333	14.750	394.354	394.583
	4	116456.333	7.375	394.469	394.708
	5	116456.333	0.000	394.584	394.827
	6	116456.333	-7.375	394.469	394.708
	7	116456.333	-14.750	394.354	394.583
	8	116456.333	-22.125	394.239	394.450
	9	116456.333	-29.500	394.123	394.312
17C	1	116466.333	29.500	394.171	394.381
	2	116466.333	22.125	394.286	394.519
	3	116466.333	14.750	394.401	394.652
	4	116466.333	7.375	394.516	394.777
	5	116466.333	0.000	394.631	394.897
	6	116466.333	-7.375	394.516	394.777
	7	116466.333	-14.750	394.401	394.652
	8	116466.333	-22.125	394.286	394.519
	9	116466.333	-29.500	394.171	394.381
L17	1	116476.333	29.500	394.215	394.442
	2	116476.333	22.125	394.330	394.580
	3	116476.333	14.750	394.446	394.713
	4	116476.333	7.375	394.561	394.840
	5	116476.333	0.000	394.676	394.958
	6	116476.333	-7.375	394.561	394.840
	7	116476.333	-14.750	394.446	394.713
	8	116476.333	-22.125	394.330	394.580
	9	116476.333	-29.500	394.215	394.442
18A	1	116486.333	29.500	394.257	394.512
	2	116486.333	22.125	394.373	394.649
	3	116486.333	14.750	394.488	394.783
	4	116486.333	7.375	394.603	394.909
	5	116486.333	0.000	394.718	395.028
	6	116486.333	-7.375	394.603	394.909
	7	116486.333	-14.750	394.488	394.783
	8	116486.333	-22.125	394.373	394.649
	9	116486.333	-29.500	394.257	394.512
18B	1	116496.333	29.500	394.297	394.576
	2	116496.333	22.125	394.412	394.714
	3	116496.333	14.750	394.527	394.846
	4	116496.333	7.375	394.643	394.973
	5	116496.333	0.000	394.758	395.092
	6	116496.333	-7.375	394.643	394.973
	7	116496.333	-14.750	394.527	394.846
	8	116496.333	-22.125	394.412	394.714
	9	116496.333	-29.500	394.297	394.576

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13
F.A.I. RTE. 57 OVER THE MISSISSIPPI RI
PROJECT I-57-9(5)0
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+78

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-1B-1) D	ALEXANDER (ILLINOIS)	ALEXANDER (MISSOURI)	63	13
FAI-(A.R.B. 80 0		ILLINOIS (ILLINOIS)		PROJECT I-57-9(5)10	
FAI-(A.R.B. 80 5					

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
18C	1	116506.333	29.500	394.334	394.630
	2	116506.333	22.125	394.449	394.767
	3	116506.333	14.750	394.565	394.899
	4	116506.333	7.375	394.682	395.026
	5	116506.333	0.000	394.795	395.165
	6	116506.333	-7.375	394.680	395.026
	7	116506.333	-14.750	394.565	394.899
	8	116506.333	-22.125	394.449	394.767
	9	116506.333	-29.500	394.334	394.630
L18	1	116513.667	29.500	394.360	394.667
	2	116513.667	22.125	394.475	394.803
	3	116513.667	14.750	394.590	394.935
	4	116513.667	7.375	394.706	395.062
	5	116513.667	0.000	394.821	395.182
	6	116513.667	-7.375	394.706	395.062
	7	116513.667	-14.750	394.590	394.935
	8	116513.667	-22.125	394.475	394.803
	9	116513.667	-29.500	394.360	394.667
19A	1	116521.000	29.500	394.384	394.713
	2	116521.000	22.125	394.499	394.856
	3	116521.000	14.750	394.615	394.988
	4	116521.000	7.375	394.730	395.114
	5	116521.000	0.000	394.845	395.233
	6	116521.000	-7.375	394.730	395.114
	7	116521.000	-14.750	394.615	394.988
	8	116521.000	-22.125	394.499	394.856
	9	116521.000	-29.500	394.384	394.713
19B	1	116531.000	29.500	394.415	394.785
	2	116531.000	22.125	394.530	394.928
	3	116531.000	14.750	394.646	395.056
	4	116531.000	7.375	394.761	395.182
	5	116531.000	0.000	394.876	395.301
	6	116531.000	-7.375	394.761	395.182
	7	116531.000	-14.750	394.646	395.056
	8	116531.000	-22.125	394.530	394.923
	9	116531.000	-29.500	394.415	394.785
19C	1	116541.000	29.500	394.444	394.840
	2	116541.000	22.125	394.559	394.979
	3	116541.000	14.750	394.674	395.112
	4	116541.000	7.375	394.789	395.238
	5	116541.000	0.000	394.905	395.356
	6	116541.000	-7.375	394.789	395.238
	7	116541.000	-14.750	394.674	395.112
	8	116541.000	-22.125	394.559	394.979
	9	116541.000	-29.500	394.444	394.840
L19	1	116551.000	29.500	394.470	394.890
	2	116551.000	22.125	394.585	395.028
	3	116551.000	14.750	394.700	395.162
	4	116551.000	7.375	394.815	395.288
	5	116551.000	0.000	394.931	395.406
	6	116551.000	-7.375	394.815	395.288
	7	116551.000	-14.750	394.700	395.162
	8	116551.000	-22.125	394.585	395.028
	9	116551.000	-29.500	394.470	394.890
20A	1	116561.000	29.500	394.493	394.954
	2	116561.000	22.125	394.608	395.092
	3	116561.000	14.750	394.724	395.224
	4	116561.000	7.375	394.839	395.350
	5	116561.000	0.000	394.954	395.469
	6	116561.000	-7.375	394.839	395.350
	7	116561.000	-14.750	394.724	395.224
	8	116561.000	-22.125	394.608	395.092
	9	116561.000	-29.500	394.493	394.954
20B	1	116571.000	29.500	394.514	395.011
	2	116571.000	22.125	394.629	395.147
	3	116571.000	14.750	394.745	395.279
	4	116571.000	7.375	394.860	395.404
	5	116571.000	0.000	394.975	395.523
	6	116571.000	-7.375	394.860	395.404
	7	116571.000	-14.750	394.745	395.279
	8	116571.000	-22.125	394.629	395.147
	9	116571.000	-29.500	394.514	395.011
20C	1	116581.000	29.500	394.533	395.051
	2	116581.000	22.125	394.648	395.186
	3	116581.000	14.750	394.763	395.318
	4	116581.000	7.375	394.878	395.443
	5	116581.000	0.000	394.994	395.562
	6	116581.000	-7.375	394.878	395.443
	7	116581.000	-14.750	394.763	395.318
	8	116581.000	-22.125	394.648	395.186
	9	116581.000	-29.500	394.533	395.051
℄ OPEN JOINT	1	116582.604	29.500	394.535	395.056
	2	116582.604	22.125	394.651	395.192
	3	116582.604	14.750	394.766	395.324
	4	116582.604	7.375	394.881	395.448
	5	116582.604	0.000	394.996	395.567
	6	116582.604	-7.375	394.881	395.448
	7	116582.604	-14.750	394.766	395.324
	8	116582.604	-22.125	394.651	395.192
	9	116582.604	-29.500	394.535	395.056

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L20	1	116588.333	29.500	394.545	395.085
	2	116588.333	22.125	394.660	395.222
	3	116588.333	14.750	394.775	395.358
	4	116588.333	7.375	394.890	395.479
	5	116588.333	0.000	395.006	395.597
	6	116588.333	-7.375	394.890	395.479
	7	116588.333	-14.750	394.775	395.353
	8	116588.333	-22.125	394.660	395.222
	9	116588.333	-29.500	394.545	395.085
21A	1	116595.667	29.500	394.555	395.126
	2	116595.667	22.125	394.671	395.263
	3	116595.667	14.750	394.786	395.396
	4	116595.667	7.375	394.901	395.521
	5	116595.667	0.000	395.016	395.640
	6	116595.667	-7.375	394.901	395.521
	7	116595.667	-14.750	394.786	395.396
	8	116595.667	-22.125	394.671	395.263
	9	116595.667	-29.500	394.555	395.126
21B	1	116605.667	29.500	394.568	395.172
	2	116605.667	22.125	394.683	395.311
	3	116605.667	14.750	394.798	395.443
	4	116605.667	7.375	394.913	395.569
	5	116605.667	0.000	395.029	395.687
	6	116605.667	-7.375	394.913	395.569
	7	116605.667	-14.750	394.798	395.443
	8	116605.667	-22.125	394.683	395.311
	9	116605.667	-29.500	394.568	395.172
21C	1	116615.667	29.500	394.577	395.204
	2	116615.667	22.125	394.693	395.343
	3	116615.667	14.750	394.808	395.476
	4	116615.667	7.375	394.923	395.602
	5	116615.667	0.000	395.038	395.720
	6	116615.667	-7.375	394.923	395.602
	7	116615.667	-14.750	394.808	395.476
	8	116615.667	-22.125	394.693	395.343
	9	116615.667	-29.500	394.577	395.204
L21	1	116625.667	29.500	394.585	395.228
	2	116625.667	22.125	394.700	395.368
	3	116625.667	14.750	394.815	395.499
	4	116625.667	7.375	394.930	395.626
	5	116625.667	0.000	395.046	395.744
	6	116625.667	-7.375	394.930	395.626
	7	116625.667	-14.750	394.815	395.499
	8	116625.667	-22.125	394.700	395.368
	9	116625.667	-29.500	394.585	395.228
22A	1	116635.667	29.500	394.590	395.261
	2	116635.667	22.125	394.705	395.400
	3	116635.667	14.750	394.820	395.533
	4	116635.667	7.375	394.935	395.660
	5	116635.667	0.000	395.051	395.779
	6	116635.667	-7.375	394.935	395.660
	7	116635.667	-14.750	394.820	395.533
	8	116635.667	-22.125	394.705	395.400
	9	116635.667	-29.500	394.590	395.261
22B	1	116645.667	29.500	394.592	395.290
	2	116645.667	22.125	394.707	395.428
	3	116645.667	14.750	394.823	395.560
	4	116645.667	7.375	394.938	395.687
	5	116645.667	0.000	395.053	395.806
	6	116645.667	-7.375	394.938	395.687
	7	116645.667	-14.750	394.822	395.560
	8	116645.667	-22.125	394.707	395.428
	9	116645.667	-29.500	394.592	395.290
22C	1	116655.667	29.500	394.592	395.307
	2	116655.667	22.125	394.707	395.445
	3	116655.667	14.750	394.822	395.577
	4	116655.667	7.375	394.937	395.704
	5	116655.667	0.000	395.053	395.823
	6	116655.667	-7.375	394.937	395.704
	7	116655.667	-14.750	394.822	395.577
	8	116655.667	-22.125	394.707	395.445
	9	116655.667	-29.500	394.592	395.307
23A	1	116670.333	29.500	394.587	395.333
	2	116670.333	22.125	394.702	395.472
	3	116670.333	14.750	394.817	395.603
	4	116670.333	7.375	394.933	395.730
	5	116670.333	0.000	395.048	395.848
	6	116670.333	-7.375	394.933	395.730
	7	116670.333	-14.750	394.817	395.603
	8	116670.333	-22.125	394.702	395.472
	9	116670.333	-29.500	394.587	395.333

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
23B	1	116680.333	29.500	394.581	395.352
	2	116680.333	22.125	394.696	395.490
	3	116680.333	14.750	394.813	395.623
	4	116680.333	7.375	394.926	395.749
	5	116680.333	0.000	395.042	395.868
	6	116680.333	-7.375	394.926	395.749
	7	116680.333	-14.750	394.811	395.623
	8	116680.333	-22.125	394.696	395.490
	9	116680.333	-29.500	394.581	395.352
23C	1	116690.333	29.500	394.572	395.359
	2	116690.333	22.125	394.687	395.497
	3	116690.333	14.750	394.802	395.630
	4	116690.333	7.375	394.918	395.756
	5	116690.333	0.000	395.033	395.875
	6	116690.333	-7.375	394.918	395.756
	7	116690.333	-14.750	394.802	395.630
	8	116690.333	-22.125	394.687	395.497
	9	116690.333	-29.500	394.572	395.359
L23	1	116700.333	29.500	394.580	395.360
	2	116700.333	22.125	394.676	395.498
	3	116700.333	14.750	394.791	395.631
	4	116700.333	7.375	394.906	395.758
	5	116700.333	0.000	395.021	395.876
	6	116700.333	-7.375	394.906	395.758
	7	116700.333	-14.750	394.791	395.631
	8	116700.333	-22.125	394.676	395.498
	9	116700.333	-29.500	394.560	395.360
24A	1	116710.333	29.500	394.547	395.365
	2	116710.333	22.125	394.662	395.502
	3	116710.333	14.750	394.777	395.635
	4	116710.333	7.375	394.892	395.760
	5	116710.333	0.000	395.008	395.880
	6	116710.333	-7.375	394.892	395.760
	7	116710.333	-14.750	394.777	395.635
	8	116710.333	-22.125	394.662	395.502
	9	116710.333	-29.500	394.547	395.365
24B	1	116720.333	29.500	394.530	395.362
	2	116720.333	22.125	394.646	395.498
	3	116720.333	14.750	394.761	395.630
	4	116720.333	7.375	394.876	395.755
	5	116720.333	0.000	394.991	395.874
	6	116720.333	-7.375	394.876	395.755
	7	116720.333	-14.750	394.761	395.630
	8	116720.333	-22.125	394.646	395.498
	9	116720.333	-29.500	394.530	395.362
24C	1	116730.333	29.500	394.511	395.342
	2	116730.333	22.125	394.627	395.478
	3	116730.333	14.750	394.742	395.609
	4	116730.333	7.375	394.857	395.734
	5	116730.333	0.000	394.972	395.853
	6	116730.333	-7.375	394.857	395.734
	7	116730.333	-14.750	394.742	395.609
	8	116730.333	-22.125	394.627	395.478
	9	116730.333	-29.500	394.511	395.342
℄ OPEN JOINT	1	116731.937	29.500	394.508	395.338
	2	116731.937	22.125	394.623	395.474
	3	116731.937	14.750	394.739	395.605
	4	116731.937	7.375	394.854	395.730
	5	116731.937	0.000	394.969	395.849
	6	116731.937	-7.375	394.854	395.730
	7	116731.937	-14.750	394.739	395.605
	8	116731.937	-22.125	394.623	395.474
	9	116731.937	-29.500	394.508	395.338
L24	1	116737.667	29.500	394.496	395.334
	2	116737.667	22.125	394.611	395.470
	3	116737.667	14.750	394.727	395.601
	4	116737.667	7.375	394.842	395.727
	5	116737.667	0.000	394.957	395.848
	6	116737.667	-7.375	394.842	395.727
	7	116737.667	-14.750	394.727	395.601
	8	116737.667	-22.125	394.611	395.470
	9	116737.667	-29.500	394.496	395.334
25A	1	116745.000	29.500	394.479	395.331
	2	116745.000	22.125	394.595	395.468
	3	116745.000	14.750	394.710	395.600
	4	116745.000	7.375	394.825	395.726
	5	116745.000	0.000	394.940	395.844
	6	116745.000	-7.375	394.825	395.726
	7	116745.000	-14.750	394.710	395.600
	8	116745.000	-22.125	394.595	395.468
	9	116745.000	-29.500	394.479	395.331
25B	1	116755.000	29.500	394.454	395.319
	2	116755.000	22.125	394.570	395.458
	3	116755.000	14.750	394.685	395.590
	4	116755.000	7.375	394.800	395.716
	5	116755.000	0.000	394.915	395.834
	6	116755.000	-7.375	394.800	395.716
	7	116755.000	-14.750	394.685	395.590
	8	116755.000	-22.125	394.570	395.458
	9	116755.000	-29.500	394.454	395.319

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
25C	1	116765.000	29.500	394.427	395.293
	2	116765.000	22.125	394.542	395.431
	3	116765.000	14.750	394.657	395.564
	4	116765.000	7.375	394.773	395.690
	5	116765.000	0.000	394.888	395.809
	6	116765.000	-7.375	394.773	395.690
	7	116765.000	-14.750	394.657	395.564
	8	116765.000	-22.125	394.542	395.431
	9	116765.000	-29.500	394.427	395.293
L25	1	116775.000	29.500	394.397	395.259
	2	116775.000	22.125	394.512	395.398
	3	116775.000	14.750	394.627	395.531
	4	116775.000	7.375	394.743	395.657
	5	116775.000	0.000	394.858	395.776
	6	116775.000	-7.375	394.743	395.657
	7	116775.000	-14.750	394.627	395.531
	8	116775.000	-22.125	394.512	395.398
	9	116775.000	-29.500	394.397	395.259
25C'	1	116785.000	29.500	394.364	395.227
	2	116785.000	22.125	394.480	395.365
	3	116785.000	14.750	394.595	395.498
	4	116785.000	7.375	394.710	395.624
	5	116785.000	0.000	394.825	395.743
	6	116785.000	-7.375	394.710	395.624
	7	116785.000	-14.750	394.595	395.498
	8	116785.000	-22.125	394.480	395.365
	9	116785.000	-29.500	394.364	395.227
25B'	1	116795.000	29.500	394.329	395.189
	2	116795.000	22.125	394.445	395.327
	3	116795.000	14.750	394.560	395.459
	4	116795.000	7.375	394.675	395.586
	5	116795.000	0.000	394.790	395.705
	6	116795.000	-7.375	394.675	395.586
	7	116795.000	-14.750	394.560	395.459
	8	116795.000	-22.125	394.445	395.327
	9	116795.000	-29.500	394.329	395.189
25A'	1	116805.000	29.500	394.292	395.140
	2	116805.000	22.125	394.407	395.278
	3	116805.000	14.750	394.522	395.410
	4	116805.000	7.375	394.638	395.537
	5	116805.000	0.000	394.753	395.656
	6	116805.000	-7.375	394.638	395.537
	7	116805.000	-14.750	394.522	395.410
	8	116805.000	-22.125	394.407	395.278
	9	116805.000	-29.500	394.292	395.140
L'24	1	116812.333	29.500	394.263	395.101
	2	116812.333	22.125	394.378	395.238
	3	116812.333	14.750	394.493	395.371
	4	116812.333	7.375	394.608	395.498
	5	116812.333	0.000	394.724	395.616
	6	116812.333	-7.375	394.608	395.498
	7	116812.333	-14.750	394.493	395.371
	8	116812.333	-22.125	394.378	395.238
	9	116812.333	-29.500	394.263	395.101
24C'	1	116819.667	29.500	394.232	395.069
	2	116819.667	22.125	394.348	395.206
	3	116819.667	14.750	394.463	395.339
	4	116819.667	7.375	394.578	395.465
	5	116819.667	0.000	394.693	395.584
	6	116819.667	-7.375	394.578	395.465
	7	116819.667	-14.750	394.463	395.339
	8	116819.667	-22.125	394.348	395.206
	9	116819.667	-29.500	394.232	395.069
24B'	1	116829.667	29.500	394.189	395.020
	2	116829.667	22.125	394.304	395.158
	3	116829.667	14.750	394.419	395.291
	4	116829.667	7.375	394.534	395.417
	5	116829.667	0.000	394.650	395.538
	6	116829.667	-7.375	394.534	395.417
	7	116829.667	-14.750	394.419	395.291
	8	116829.667	-22.125	394.304	395.158
	9	116829.667	-29.500	394.189	395.020

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) D	ALEXANDER (MISS-BANK)	ILLINOIS (MISSOURI)	63	14
ALTERNATE ROUTE NO. 1 / ALTERNATE ROUTE NO. 2		ILLINOIS (MISSOURI)		PROJECT I-57-9(5)O	

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
24A'	1	116839.667	29.500	394.142	394.960
	2	116839.667	22.125	394.258	395.098
	3	116839.667	14.750	394.373	395.231
	4	116839.667	7.375	394.488	395.357
	5	116839.667	0.000	394.603	395.476
	6	116839.667	-7.375	394.488	395.357
	7	116839.667	-14.750	394.373	395.231
	8	116839.667	-22.125	394.258	395.098
	9	116839.667	-29.500	394.142	394.960
L'25	1	116849.667	29.500	394.094	394.893
	2	116849.667	22.125	394.209	395.032
	3	116849.667	14.750	394.324	395.164
	4	116849.667	7.375	394.440	395.291
	5	116849.667	0.000	394.555	395.411
	6	116849.667	-7.375	394.440	395.291
	7	116849.667	-14.750	394.324	395.164
	8	116849.667	-22.125	394.209	395.032
	9	116849.667	-29.500	394.094	394.893
23C'	1	116859.667	29.500	394.043	394.829
	2	116859.667	22.125	394.158	394.966
	3	116859.667	14.750	394.273	395.099
	4	116859.667	7.375	394.388	395.224
	5	116859.667	0.000	394.504	395.343
	6	116859.667	-7.375	394.388	395.224
	7	116859.667	-14.750	394.273	395.099
	8	116859.667	-22.125	394.158	394.966
	9	116859.667	-29.500	394.043	394.829
23B'	1	116869.667	29.500	393.989	394.755
	2	116869.667	22.125	394.104	394.891
	3	116869.667	14.750	394.219	395.023
	4	116869.667	7.375	394.335	395.148
	5	116869.667	0.000	394.450	395.267
	6	116869.667	-7.375	394.335	395.148
	7	116869.667	-14.750	394.219	395.023
	8	116869.667	-22.125	394.104	394.891
	9	116869.667	-29.500	393.989	394.755
23A'	1	116879.667	29.500	393.933	394.666
	2	116879.667	22.125	394.048	394.802
	3	116879.667	14.750	394.163	394.933
	4	116879.667	7.375	394.279	395.058
	5	116879.667	0.000	394.394	395.177
	6	116879.667	-7.375	394.279	395.058
	7	116879.667	-14.750	394.163	394.929
	8	116879.667	-22.125	394.048	394.802
	9	116879.667	-29.500	393.933	394.666
℄ OPEN JOINT	1	116881.271	29.500	393.924	394.650
	2	116881.271	22.125	394.039	394.787
	3	116881.271	14.750	394.154	394.918
	4	116881.271	7.375	394.269	395.042
	5	116881.271	0.000	394.385	395.162
	6	116881.271	-7.375	394.269	395.042
	7	116881.271	-14.750	394.154	394.918
	8	116881.271	-22.125	394.039	394.787
	9	116881.271	-29.500	393.924	394.650
L'22	1	116887.000	29.500	393.890	394.615
	2	116887.000	22.125	394.005	394.752
	3	116887.000	14.750	394.120	394.883
	4	116887.000	7.375	394.236	395.008
	5	116887.000	0.000	394.351	395.127
	6	116887.000	-7.375	394.236	395.008
	7	116887.000	-14.750	394.120	394.883
	8	116887.000	-22.125	394.005	394.752
	9	116887.000	-29.500	393.890	394.615
22C'	1	116894.333	29.500	393.846	394.564
	2	116894.333	22.125	393.961	394.701
	3	116894.333	14.750	394.076	394.834
	4	116894.333	7.375	394.192	394.959
	5	116894.333	0.000	394.307	395.078
	6	116894.333	-7.375	394.192	394.959
	7	116894.333	-14.750	394.076	394.834
	8	116894.333	-22.125	393.961	394.701
	9	116894.333	-29.500	393.846	394.564
22B'	1	116904.333	29.500	393.784	394.487
	2	116904.333	22.125	393.899	394.625
	3	116904.333	14.750	394.014	394.758
	4	116904.333	7.375	394.129	394.889
	5	116904.333	0.000	394.245	395.002
	6	116904.333	-7.375	394.129	394.883
	7	116904.333	-14.750	394.014	394.758
	8	116904.333	-22.125	393.899	394.625
	9	116904.333	-29.500	393.784	394.487
22A'	1	116914.333	29.500	393.719	394.395
	2	116914.333	22.125	393.834	394.533
	3	116914.333	14.750	393.949	394.666
	4	116914.333	7.375	394.064	394.791
	5	116914.333	0.000	394.180	394.911
	6	116914.333	-7.375	394.064	394.791
	7	116914.333	-14.750	393.949	394.666
	8	116914.333	-22.125	393.834	394.533
	9	116914.333	-29.500	393.719	394.395

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'21	1	116924.333	29.500	393.651	394.295
	2	116924.333	22.125	393.767	394.434
	3	116924.333	14.750	393.882	394.566
	4	116924.333	7.375	393.997	394.693
	5	116924.333	0.000	394.112	394.812
	6	116924.333	-7.375	393.997	394.693
	7	116924.333	-14.750	393.882	394.566
	8	116924.333	-22.125	393.767	394.434
	9	116924.333	-29.500	393.651	394.295
21C'	1	116934.333	29.500	393.582	394.205
	2	116934.333	22.125	393.697	394.343
	3	116934.333	14.750	393.812	394.476
	4	116934.333	7.375	393.927	394.602
	5	116934.333	0.000	394.043	394.722
	6	116934.333	-7.375	393.927	394.602
	7	116934.333	-14.750	393.812	394.476
	8	116934.333	-22.125	393.697	394.343
	9	116934.333	-29.500	393.582	394.205
21B'	1	116944.333	29.500	393.509	394.109
	2	116944.333	22.125	393.624	394.247
	3	116944.333	14.750	393.740	394.379
	4	116944.333	7.375	393.855	394.506
	5	116944.333	0.000	393.970	394.625
	6	116944.333	-7.375	393.855	394.506
	7	116944.333	-14.750	393.740	394.379
	8	116944.333	-22.125	393.624	394.247
	9	116944.333	-29.500	393.509	394.109
21A'	1	116954.333	29.500	393.434	394.001
	2	116954.333	22.125	393.550	394.139
	3	116954.333	14.750	393.665	394.271
	4	116954.333	7.375	393.780	394.398
	5	116954.333	0.000	393.895	394.517
	6	116954.333	-7.375	393.780	394.398
	7	116954.333	-14.750	393.665	394.271
	8	116954.333	-22.125	393.550	394.139
	9	116954.333	-29.500	393.434	394.001
L'20	1	116961.667	29.500	393.378	393.920
	2	116961.667	22.125	393.493	394.057
	3	116961.667	14.750	393.608	394.189
	4	116961.667	7.375	393.724	394.316
	5	116961.667	0.000	393.839	394.435
	6	116961.667	-7.375	393.724	394.316
	7	116961.667	-14.750	393.608	394.189
	8	116961.667	-22.125	393.493	394.057
	9	116961.667	-29.500	393.378	393.920
20C'	1	116969.000	29.500	393.320	393.843
	2	116969.000	22.125	393.435	393.981
	3	116969.000	14.750	393.551	394.114
	4	116969.000	7.375	393.666	394.239
	5	116969.000	0.000	393.781	394.359
	6	116969.000	-7.375	393.666	394.239
	7	116969.000	-14.750	393.551	394.114
	8	116969.000	-22.125	393.435	393.981
	9	116969.000	-29.500	393.320	393.843
20B'	1	116979.000	29.500	393.239	393.735
	2	116979.000	22.125	393.354	393.874
	3	116979.000	14.750	393.470	394.006
	4	116979.000	7.375	393.585	394.132
	5	116979.000	0.000	393.700	394.261
	6	116979.000	-7.375	393.585	394.132
	7	116979.000	-14.750	393.470	394.006
	8	116979.000	-22.125	393.354	393.874
	9	116979.000	-29.500	393.239	393.735
20A'	1	116989.000	29.500	393.156	393.616
	2	116989.000	22.125	393.271	393.753
	3	116989.000	14.750	393.386	393.887
	4	116989.000	7.375	393.501	394.013
	5	116989.000	0.000	393.617	394.132
	6	116989.000	-7.375	393.501	394.013
	7	116989.000	-14.750	393.386	393.887
	8	116989.000	-22.125	393.271	393.753
	9	116989.000	-29.500	393.156	393.616
L'19	1	116999.000	29.500	393.070	393.490
	2	116999.000	22.125	393.185	393.628
	3	116999.000	14.750	393.300	393.762
	4	116999.000	7.375	393.415	393.888
	5	116999.000	0.000	393.531	394.006
	6	116999.000	-7.375	393.415	393.888
	7	116999.000	-14.750	393.300	393.762
	8	116999.000	-22.125	393.185	393.628
	9	116999.000	-29.500	393.070	393.490
19C'	1	117009.000	29.500	392.981	393.380
	2	117009.000	22.125	393.096	393.517
	3	117009.000	14.750	393.212	393.650
	4	117009.000	7.375	393.327	393.775
	5	117009.000	0.000	393.442	393.894
	6	117009.000	-7.375	393.327	393.775
	7	117009.000	-14.750	393.212	393.650
	8	117009.000	-22.125	393.096	393.517
	9	117009.000	-29.500	392.981	393.380

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
19B'	1	117019.000	29.500	392.890	393.261
	2	117019.000	22.125	393.005	393.397
	3	117019.000	14.750	393.121	393.528
	4	117019.000	7.375	393.236	393.654
	5	117019.000	0.000	393.351	393.773
	6	117019.000	-7.375	393.236	393.654
	7	117019.000	-14.750	393.121	393.528
	8	117019.000	-22.125	393.005	393.397
	9	117019.000	-29.500	392.890	393.261
19A'	1	117029.000	29.500	392.797	393.125
	2	117029.000	22.125	392.912	393.261
	3	117029.000	14.750	393.027	393.392
	4	117029.000	7.375	393.142	393.517
	5	117029.000	0.000	393.258	393.636
	6	117029.000	-7.375	393.142	393.517
	7	117029.000	-14.750	393.027	393.392
	8	117029.000	-22.125	392.912	393.261
	9	117029.000	-29.500	392.797	393.125
℄ OPEN JOINT	1	117030.604	29.500	392.781	393.102
	2	117030.604	22.125	392.897	393.238
	3	117030.604	14.750	393.012	393.370
	4	117030.604	7.375	393.127	393.494
	5	117030.604	0.000	393.242	393.613
	6	117030.604	-7.375	393.127	393.494
	7	117030.604	-14.750	393.012	393.370
	8	117030.604	-22.125	392.897	393.238
	9	117030.604	-29.500	392.781	393.102
L'18	1	117036.333	29.500	392.726	393.032
	2	117036.333	22.125	392.842	393.168
	3	117036.333	14.750	392.957	393.299
	4	117036.333	7.375	393.072	393.425
	5	117036.333	0.000	393.187	393.543
	6	117036.333	-7.375	393.072	393.425
	7	117036.333	-14.750	392.957	393.299
	8	117036.333	-22.125	392.842	393.169
	9	117036.333	-29.500	392.726	393.032
18C'	1	117043.667	29.500	392.655	392.654
	2	117043.667	22.125	392.770	393.091
	3	117043.667	14.750	392.885	393.223
	4	117043.667	7.375	393.001	393.349
	5	117043.667	0.000	393.116	393.467
	6	117043.667	-7.375	393.001	393.349
	7	117043.667	-14.750	392.885	393.223
	8	117043.667	-22.125	392.770	393.091
	9	117043.667	-29.500	392.655	392.954
18B'	1	117053.667	29.500	392.555	392.840
	2	117053.667	22.125	392.671	392.978
	3	117053.667	14.750	392.786	393.110
	4	117053.667	7.375	392.901	393.236
	5	117053.667	0.000	393.016	393.355
	6	117053.667	-7.375	392.901	393.236
	7	117053.667	-14.750	392.786	393.110
	8	117053.667	-22.125	392.671	392.978
	9	117053.667	-29.500	392.555	392.840
18A'	1	117063.667	29.500	392.453	392.711
	2	117063.667	22.125	392.568	392.849
	3	117063.667	14.750	392.684	392.982
	4	117063.667	7.375	392.799	393.108
	5	117063.667	0.000	392.914	393.227
	6	117063.667	-7.375	392.799	393.108
	7	117063.667	-14.750	392.684	392.982
	8	117063.667	-22.125	392.568	392.849
	9	117063.667	-29.500	392.453	392.711
L'17	1	117073.667	29.500	392.348	392.575
	2	117073.667	22.125	392.464	392.714
	3	117073.667	14.750	392.579	392.846
	4	117073.667	7.375	392.694	392.979
	5	117073.667	0.000	392.809	393.092
	6	117073.667	-7.375	392.694	392.979
	7	117073.667	-14.750	392.579	392.846
	8	117073.667	-22.125	392.464	392.714
	9	117073.667	-29.500	392.348	392.575
17C'	1	117083.667	29.500	392.241	392.447
	2	117083.667	22.125	392.357	392.586
	3	117083.667	14.750	392.472	392.719
	4	117083.667	7.375	392.587	392.846
	5	117083.667	0.000	392.702	392.964
	6	117083.667	-7.375	392.587	392.846
	7	117083.667	-14.750	392.472	392.719
	8	117083.667	-22.125	392.357	392.586
	9	117083.667	-29.500	392.241	392.447
17B'	1	117093.667	29.500	392.132	392.315
	2	117093.667	22.125	392.247	392.453
	3	117093.667	14.750	392.362	392.585
	4	117093.667	7.375	392.477	392.712
	5	117093.667	0.000	392.593	392.831
	6	117093.667	-7.375	392.477	392.712
	7	117093.667	-14.750	392.362	392.585
	8	117093.667	-22.125	392.247	392.453
	9	117093.667	-29.500	392.132	392.315

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
17A'	1	117103.667	29.500	392.019	392.171
	2	117103.667	22.125	392.135	392.309
	3	117103.667	14.750	392.250	392.441
	4	117103.667	7.375	392.365	392.568
	5	117103.667	0.000	392.480	392.687
	6	117103.667	-7.375	392.365	392.568
	7	117103.667	-14.750	392.250	392.441
	8	117103.667	-22.125	392.135	392.309
	9	117103.667	-29.500	392.019	392.171
L'16	1	117111.000	29.500	391.936	392.063
	2	117111.000	22.125	392.051	392.201
	3	117111.000	14.750	392.166	392.333
	4	117111.000	7.375	392.281	392.460
	5	117111.000	0.000	392.397	392.576
	6	117111.000	-7.375	392.281	392.460
	7	117111.000	-14.750	392.166	392.333
	8	117111.000	-22.125	392.051	392.201
	9	117111.000	-29.500	391.936	392.063
16C'	1	117118.333	29.500	391.850	391.974
	2	117118.333	22.125	391.966	392.112
	3	117118.333	14.750	392.081	392.244
	4	117118.333	7.375	392.196	392.376
	5	117118.333	0.000	392.311	392.489
	6	117118.333	-7.375	392.196	392.376
	7	117118.333	-14.750	392.081	392.244
	8	117118.333	-22.125	391.966	392.112
	9	117118.333	-29.500	391.850	391.974
16B'	1	117128.333	29.500	391.732	391.847
	2	117128.333	22.125	391.847	391.986
	3	117128.333	14.750	391.963	392.118
	4	117128.333	7.375	392.078	392.265
	5	117128.333	0.000	392.193	392.364
	6	117128.333	-7.375	392.078	392.265
	7	117128.333	-14.750	391.963	392.118
	8	117128.333	-22.125	391.847	391.986
	9	117128.333	-29.500	391.732	391.847
16A'	1	117138.333	29.500	391.611	391.710
	2	117138.333	22.125	391.726	391.848
	3	117138.333	14.750	391.842	391.981
	4	117138.333	7.375	391.957	392.107
	5	117138.333	0.000	392.072	392.226
	6	117138.333	-7.375	391.957	392.107
	7	117138.333	-14.750	391.842	391.981
	8	117138.333	-22.125	391.726	391.848
	9	117138.333	-29.500	391.611	391.710
L'15	1	117148.333	29.500	391.488	391.565
	2	117148.333	22.125	391.603	391.703
	3	117148.333	14.750	391.718	391.837
	4	117148.333	7.375	391.834	391.964
	5	117148.333	0.000	391.949	392.081
	6	117148.333	-7.375	391.834	391.964
	7	117148.333	-14.750	391.718	391.837
	8	117148.333	-22.125	391.603	391.703
	9	117148.333	-29.500	391.488	391.565
15C'	1	117158.333	29.500	391.362	391.425
	2	117158.333	22.125	391.477	391.560
	3	117158.333	14.750	391.593	391.692
	4	117158.333	7.375	391.708	391.817
	5	117158.333	0.000	391.823	391.936
	6	117158.333	-7.375	391.708	391.817
	7	117158.333	-14.750	391.593	391.692
	8	117158.333	-22.125	391.477	391.560
	9	117158.333	-29.500	391.362	391.425
15B'	1	117168.333	29.500	391.234	391.276
	2	117168.333	22.125	391.249	391.410
	3	117168.333	14.750	391.464	391.539
	4	117168.333	7.375	391.579	391.663
	5	117168.333	0.000	391.695	391.781
	6	117168.333	-7.375	391.579	391.663
	7	117168.333	-14.750	391.464	391.539
	8	117168.333	-22.125	391.349	391.410
	9	117168.333	-29.500	391.234	391.276

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)O
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-1B-1)D	ALEXANDER DIVISION	ILLINOIS DIVISION	63	15
FAP/ALT. ROUTE NO.		ILLINOIS DIVISION		PROJECT I-57-9(5)O	

SPAN 13 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
14A'	1	117178.333	29.500	391.103	391.119
	2	117178.333	22.125	391.218	391.243
	3	117178.333	14.750	391.333	391.371
	4	117178.333	7.375	391.449	391.494
	5	117178.333	0.000	391.564	391.612
	6	117178.333	-7.375	391.449	391.494
	7	117178.333	-14.750	391.333	391.371
	8	117178.333	-22.125	391.218	391.243
	9	117178.333	-29.500	391.103	391.119
	1	117179.938	29.500	391.082	391.086
℄ OPEN JOINT	2	117179.938	22.125	391.197	391.215
	3	117179.938	14.750	391.312	391.343
	4	117179.938	7.375	391.427	391.466
	5	117179.938	0.000	391.543	391.583
	6	117179.938	-7.375	391.427	391.466
	7	117179.938	-14.750	391.312	391.343
	8	117179.938	-22.125	391.197	391.215
	9	117179.938	-29.500	391.082	391.086

SPAN 14

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'14	1	117185.667	29.500	391.005	391.015
	2	117185.667	22.125	391.121	391.146
	3	117185.667	14.750	391.236	391.276
℄ PIER 13	4	117185.667	7.375	391.351	391.399
	5	117185.667	0.000	391.466	391.516
	6	117185.667	-7.375	391.351	391.399
	7	117185.667	-14.750	391.236	391.274
	8	117185.667	-22.125	391.121	391.146
	9	117185.667	-29.500	391.005	391.015
14C'	1	117192.583	29.500	390.912	390.938
	2	117192.583	22.125	391.027	391.071
	3	117192.583	14.750	391.143	391.200
	4	117192.583	7.375	391.258	391.324
	5	117192.583	0.000	391.373	391.442
	6	117192.583	-7.375	391.258	391.324
	7	117192.583	-14.750	391.143	391.200
	8	117192.583	-22.125	391.027	391.071
	9	117192.583	-29.500	390.912	390.938
14B'	1	117202.583	29.500	390.775	390.820
	2	117202.583	22.125	390.890	390.954
	3	117202.583	14.750	391.006	391.088
	4	117202.583	7.375	391.121	391.210
	5	117202.583	0.000	391.236	391.329
	6	117202.583	-7.375	391.121	391.210
	7	117202.583	-14.750	391.006	391.086
	8	117202.583	-22.125	390.890	390.954
	9	117202.583	-29.500	390.775	390.820
14A'	1	117212.583	29.500	390.636	390.686
	2	117212.583	22.125	390.751	390.823
	3	117212.583	14.750	390.866	390.958
	4	117212.583	7.375	390.982	391.081
	5	117212.583	0.000	391.097	391.203
	6	117212.583	-7.375	390.982	391.081
	7	117212.583	-14.750	390.866	390.958
	8	117212.583	-22.125	390.751	390.823
	9	117212.583	-29.500	390.636	390.686
L'13	1	117222.583	29.500	390.494	390.545
	2	117222.583	22.125	390.609	390.683
	3	117222.583	14.750	390.724	390.816
	4	117222.583	7.375	390.840	390.942
	5	117222.583	0.000	390.955	391.061
	6	117222.583	-7.375	390.840	390.942
	7	117222.583	-14.750	390.724	390.816
	8	117222.583	-22.125	390.609	390.683
	9	117222.583	-29.500	390.494	390.545
13C'	1	117232.583	29.500	390.350	390.416
	2	117232.583	22.125	390.465	390.555
	3	117232.583	14.750	390.580	390.688
	4	117232.583	7.375	390.695	390.814
	5	117232.583	0.000	390.811	390.932
	6	117232.583	-7.375	390.695	390.814
	7	117232.583	-14.750	390.580	390.688
	8	117232.583	-22.125	390.465	390.555
	9	117232.583	-29.500	390.350	390.416
13B'	1	117242.583	29.500	390.203	390.281
	2	117242.583	22.125	390.318	390.419
	3	117242.583	14.750	390.433	390.552
	4	117242.583	7.375	390.548	390.679
	5	117242.583	0.000	390.664	390.797
	6	117242.583	-7.375	390.548	390.679
	7	117242.583	-14.750	390.433	390.552
	8	117242.583	-22.125	390.318	390.419
	9	117242.583	-29.500	390.203	390.281

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
13A'	1	117252.583	29.500	390.053	390.135
	2	117252.583	22.125	390.169	390.272
	3	117252.583	14.750	390.284	390.409
	4	117252.583	7.375	390.399	390.531
	5	117252.583	0.000	390.514	390.650
	6	117252.583	-7.375	390.399	390.531
	7	117252.583	-14.750	390.284	390.409
	8	117252.583	-22.125	390.169	390.272
	9	117252.583	-29.500	390.053	390.135
L'12	1	117259.500	29.500	389.948	390.031
	2	117259.500	22.125	390.064	390.169
	3	117259.500	14.750	390.179	390.301
	4	117259.500	7.375	390.294	390.427
	5	117259.500	0.000	390.409	390.545
	6	117259.500	-7.375	390.294	390.427
	7	117259.500	-14.750	390.179	390.301
	8	117259.500	-22.125	390.064	390.169
	9	117259.500	-29.500	389.948	390.031
12C'	1	117266.417	29.500	389.842	389.942
	2	117266.417	22.125	389.958	390.078
	3	117266.417	14.750	390.073	390.212
	4	117266.417	7.375	390.188	390.338
	5	117266.417	0.000	390.303	390.457
	6	117266.417	-7.375	390.188	390.338
	7	117266.417	-14.750	390.073	390.212
	8	117266.417	-22.125	389.958	390.078
	9	117266.417	-29.500	389.842	389.942
12B'	1	117276.417	29.500	389.687	389.809
	2	117276.417	22.125	389.802	389.947
	3	117276.417	14.750	389.918	390.080
	4	117276.417	7.375	390.033	390.207
	5	117276.417	0.000	390.148	390.325
	6	117276.417	-7.375	390.033	390.207
	7	117276.417	-14.750	389.918	390.080
	8	117276.417	-22.125	389.802	389.947
	9	117276.417	-29.500	389.687	389.809
12A'	1	117286.417	29.500	389.529	389.667
	2	117286.417	22.125	389.645	389.804
	3	117286.417	14.750	389.760	389.938
	4	117286.417	7.375	389.875	390.064
	5	117286.417	0.000	389.990	390.183
	6	117286.417	-7.375	389.875	390.064
	7	117286.417	-14.750	389.760	389.938
	8	117286.417	-22.125	389.645	389.804
	9	117286.417	-29.500	389.529	389.667
L'11	1	117296.417	29.500	389.369	389.516
	2	117296.417	22.125	389.484	389.655
	3	117296.417	14.750	389.599	389.788
	4	117296.417	7.375	389.715	389.934
	5	117296.417	0.000	389.830	390.032
	6	117296.417	-7.375	389.715	389.914
	7	117296.417	-14.750	389.599	389.788
	8	117296.417	-22.125	389.484	389.655
	9	117296.417	-29.500	389.369	389.516
11C'	1	117306.417	29.500	389.206	389.378
	2	117306.417	22.125	389.321	389.515
	3	117306.417	14.750	389.437	389.667
	4	117306.417	7.375	389.552	389.773
	5	117306.417	0.000	389.667	389.892
	6	117306.417	-7.375	389.552	389.773
	7	117306.417	-14.750	389.437	389.667
	8	117306.417	-22.125	389.321	389.515
	9	117306.417	-29.500	389.206	389.378
11B'	1	117316.417	29.500	389.041	389.231
	2	117316.417	22.125	389.156	389.367
	3	117316.417	14.750	389.271	389.498
	4	117316.417	7.375	389.386	389.624
	5	117316.417	0.000	389.502	389.743
	6	117316.417	-7.375	389.386	389.624
	7	117316.417	-14.750	389.271	389.498
	8	117316.417	-22.125	389.156	389.367
	9	117316.417	-29.500	389.041	389.231
11A'	1	117326.417	29.500	388.873	389.066
	2	117326.417	22.125	388.988	389.202
	3	117326.417	14.750	389.103	389.333
	4	117326.417	7.375	389.219	389.458
	5	117326.417	0.000	389.334	389.577
	6	117326.417	-7.375	389.219	389.458
	7	117326.417	-14.750	389.103	389.333
	8	117326.417	-22.125	388.988	389.202
	9	117326.417	-29.500	388.873	389.066
℄ OPEN JOINT	1	117327.604	29.500	388.853	389.045
	2	117327.604	22.125	388.968	389.181
	3	117327.604	14.750	389.083	389.312
	4	117327.604	7.375	389.198	389.438
	5	117327.604	0.000	389.314	389.556
	6	117327.604	-7.375	389.198	389.438
	7	117327.604	-14.750	389.083	389.312
	8	117327.604	-22.125	388.968	389.181
	9	117327.604	-29.500	388.853	389.045

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'10	1	117333.333	29.500	388.755	388.959
	2	117333.333	22.125	388.871	389.096
	3	117333.333	14.750	388.986	389.227
	4	117333.333	7.375	389.101	389.353
	5	117333.333	0.000	389.216	389.470
	6	117333.333	-7.375	389.101	389.353
	7	117333.333	-14.750	388.986	389.227
	8	117333.333	-22.125	388.871	389.096
	9	117333.333	-29.500	388.755	388.959
10C'	1	117340.250	29.500	388.637	388.863
	2	117340.250	22.125	388.752	389.000
	3	117340.250	14.750	388.867	389.132
	4	117340.250	7.375	388.982	389.258
	5	117340.250	0.000	389.097	389.377
	6	117340.250	-7.375	388.982	389.258
	7	117340.250	-14.750	388.867	389.132
	8	117340.250	-22.125	388.752	389.000
	9	117340.250	-29.500	388.637	388.863
10B'	1	117350.250	29.500	388.463	388.718
	2	117350.250	22.125	388.578	388.855
	3	117350.250	14.750	388.693	388.988
	4	117350.250	7.375	388.808	389.113
	5	117350.250	0.000	388.924	389.233
	6	117350.250	-7.375	388.808	389.113
	7	117350.250	-14.750	388.693	388.988
	8	117350.250	-22.125	388.578	388.855
	9	117350.250	-29.500	388.463	388.718
10A'	1	117360.250	29.500	388.286	388.557
	2	117360.250	22.125	388.402	388.695
	3	117360.250	14.750	388.517	388.828
	4	117360.250	7.375	388.632	388.954
	5	117360.250	0.000	388.747	389.073
	6	117360.250	-7.375	388.632	388.954
	7	117360.250	-14.750	388.517	388.826
	8	117360.250	-22.125	388.402	388.695
	9	117360.250	-29.500	388.286	388.557
L'9	1	117370.250	29.500	388.108	388.398
	2	117370.250	22.125	388.223	388.527
	3	117370.250	14.750	388.338	388.660
	4	117370.250	7.375	388.453	388.787
	5	117370.250	0.000	388.569	388.905
	6	117370.250	-7.375	388.453	388.787
	7	117370.250	-14.750	388.338	388.660
	8	117370.250	-22.125	388.223	388.527
	9	117370.250	-29.500	388.108	388.388
9C'	1	117380.250	29.500	387.926	388.231
	2	117380.250	22.125	388.042	388.369
	3	117380.250	14.750	388.157	388.502
	4	117380.250	7.375	388.272	388.629
	5	117380.250	0.000	388.387	388.747
	6	117380.250	-7.375	388.272	388.629
	7	117380.250	-14.750	388.157	388.502
	8	117380.250	-22.125	388.042	388.369
	9	117380.250	-29.500	387.926	388.231
9B'	1	117390.250	29.500	387.742	388.063
	2	117390.250	22.125	387.859	388.206
	3	117390.250	14.750	387.973	388.338
	4	117390.250	7.375	388.088	388.465
	5	117390.250	0.000	388.203	388.584
	6	117390.250	-7.375	388.088	388.465
	7	117390.250	-14.750	387.973	388.338
	8	117390.250	-22.125	387.858	388.206
	9	117390.250	-29.500	387.742	388.068
9A'	1	117400.250	29.500	387.536	387.894
	2	117400.250	22.125	387.673	388.031
	3	117400.250	14.750	387.787	388.164
	4	117400.250	7.375	387.902	388.290
	5	117400.250	0.000	388.017	388.409
	6	117400.250	-7.375	387.902	388.290
	7	117400.250	-14.750	387.787	388.164
	8	117400.250	-22.125	387.673	388.031
	9	117400.250	-29.500	387.536	387.894
L'8	1	117407.167	29.500	387.426	387.771
	2	117407.167	22.125	387.541	387.905
	3	117407.167	14.750	387.656	388.040
	4	117407.167	7.375	387.772	388.167
	5	117407.167	0.000	387.887	388.286
	6	117407.167	-7.375	387.772	388.167
	7	117407.167	-14.750	387.656	388.040
	8	117407.167	-22.125	387.541	387.909
	9	117407.167	-29.500	387.426	387.771
8C'	1	117414.083	29.500	387.294	387.656
	2	117414.083	22.125	387.410	387.793
	3	117414.083	14.750	387.525	387.925
	4	117414.083	7.375	387.640	388.051
	5	117414.083	0.000	387.755	388.171
	6	117414.083	-7.375	387.640	388.051
	7	117414.083	-14.750	387.525	387.925
	8	117414.083	-22.125	387.410	387.793
	9	117414.083	-29.500	387.294	387.656

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
8B'	1	117424.083	29.500	387.102	387.483
	2	117424.083	22.125	387.217	387.622
	3	117424.083	14.750	387.333	387.754
	4	117424.083	7.375	387.448	387.880
	5	117424.083	0.000	387.563	387.999
	6	117424.083	-7.375	387.448	387.880
	7	117424.083	-14.750	387.333	387.754
	8	117424.083	-22.125	387.217	387.622
	9	117424.083	-29.500	387.102	387.483
8A'	1	117434.083	29.500	386.907	387.299
	2	117434.083	22.125	387.023	387.438
	3	117434.083	14.750	387.138	387.570
	4	117434.083	7.375	387.253	387.696
	5	117434.083	0.000	387.368	387.816
	6	117434.083	-7.375	387.253	387.696
	7	117434.083	-14.750	387.138	387.570
	8	117434.083	-22.125	387.023	387.438
	9	117434.083	-29.500	386.907	387.299
L'7	1	117444.083	29.500	386.710	387.109
	2	117444.083	22.125	386.825	387.248
	3	117444.083	14.750	386.940	387.380
	4	117444.083	7.375	387.056	387.507
	5	117444.083	0.000	387.171	387.626
	6	117444.083	-7.375	387.056	387.507
	7	117444.083	-14.750	386.940	387.380
	8	117444.083	-22.125	386.825	387.248
	9	117444.083	-29.500	386.710	387.109
7C'	1	117454.083	29.500	386.510	386.926
	2	117454.083	22.125	386.625	387.063
	3	117454.083	14.750	386.741	387.196
	4	117454.083	7.375	386.856	387.322
	5	117454.083	0.000	386.971	387.440
	6	117454.083	-7.375	386.856	387.322
	7	117454.083	-14.750	386.741	387.196
	8	117454.083	-22.125	386.625	387.063
	9	117454.083	-29.500	386.510	386.926
7B'	1	117464.083	29.500	386.308	386.724
	2	117464.083	22.125	386.423	386.869
	3	117464.083	14.750	386.538	387.001
	4	117464.083	7.375	386.654	387.127
	5	117464.083	0.000	386.769	387.246
	6	117464.083	-7.375	386.654	387.127
	7	117464.083	-14.750	386.538	387.001
	8	117464.083	-22.125	386.423	386.869
	9	117464.083	-29.500	386.308	386.724
7A'	1	117474.083	29.500	386.103	386.524
	2	117474.083	22.125	386.218	386.660
	3	117474.083	14.750	386.334	386.792
	4	117474.083	7.375	386.449	386.926
	5	117474.083	0.000	386.564	387.036
	6	117474.083	-7.375	386.449	386.926
	7	117474.083	-14.750	386.334	386.792
	8	117474.083	-22.125	386.218	386.660
	9	117474.083	-29.500	386.103	386.524
℄ OPEN JOINT	1	117475.271	29.500	386.079	386.498
	2	117475.271	22.125	386.194	386.634
	3	117475.271	14.750	386.309	386.766
	4	117475.271	7.375	386.424	386.891
	5	117475.271	0.000	386.540	387.010
	6	117475.271	-7.375	386.424	386.891
	7	117475.271	-14.750	386.309	386.766
	8	117475.271	-22.125	386.194	386.634
	9	117475.271	-29.500	386.079	386.498
L'6	1	117481.000	29.500	385.960	386.386
	2	117481.000	22.125	386.075	386.522
	3	117481.000	14.750	386.191	386.654
	4	117481.000	7.375	386.306	386.779
	5	117481.000	0.000	386.421	386.899
	6	117481.000	-7.375	386.306	386.779
	7	117481.000	-14.750	386.191	386.654
	8	117481.000	-22.125	386.075	386.522
	9	117481.000	-29.500	385.960	386.386

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)O
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
FAI 57	102-1B-1)D	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		63	16
ALTERNATE RTE NO		ILLINOIS MISSOURI	PROJECT I-57-9(5)D		

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
6C'	1	117487.917	29.500	385.816	386.254
	2	117487.917	22.125	385.931	386.390
	3	117487.917	14.750	386.046	386.522
	4	117487.917	7.375	386.162	386.648
	5	117487.917	0.000	386.277	386.767
	6	117487.917	-7.375	386.162	386.648
	7	117487.917	-14.750	386.046	386.522
	8	117487.917	-22.125	385.931	386.390
	9	117487.917	-29.500	385.816	386.254
6B'	1	117497.917	29.500	385.605	386.054
	2	117497.917	22.125	385.720	386.191
	3	117497.917	14.750	385.835	386.324
	4	117497.917	7.375	385.951	386.449
	5	117497.917	0.000	386.066	386.569
	6	117497.917	-7.375	385.951	386.449
	7	117497.917	-14.750	385.836	386.324
	8	117497.917	-22.125	385.720	386.191
	9	117497.917	-29.500	385.605	386.054
6A'	1	117507.917	29.500	385.392	385.839
	2	117507.917	22.125	385.507	385.977
	3	117507.917	14.750	385.622	386.110
	4	117507.917	7.375	385.738	386.236
	5	117507.917	0.000	385.853	386.355
	6	117507.917	-7.375	385.738	386.236
	7	117507.917	-14.750	385.622	386.110
	8	117507.917	-22.125	385.507	385.977
	9	117507.917	-29.500	385.392	385.839
L'5	1	117517.917	29.500	385.176	385.616
	2	117517.917	22.125	385.291	385.756
	3	117517.917	14.750	385.407	385.887
	4	117517.917	7.375	385.522	386.014
	5	117517.917	0.000	385.637	386.134
	6	117517.917	-7.375	385.522	386.014
	7	117517.917	-14.750	385.407	385.887
	8	117517.917	-22.125	385.291	385.756
	9	117517.917	-29.500	385.176	385.616
5C'	1	117527.917	29.500	384.958	385.392
	2	117527.917	22.125	385.073	385.530
	3	117527.917	14.750	385.188	385.663
	4	117527.917	7.375	385.304	385.790
	5	117527.917	0.000	385.419	385.909
	6	117527.917	-7.375	385.304	385.790
	7	117527.917	-14.750	385.188	385.663
	8	117527.917	-22.125	385.073	385.530
	9	117527.917	-29.500	384.958	385.392
5B'	1	117537.917	29.500	384.737	385.162
	2	117537.917	22.125	384.852	385.300
	3	117537.917	14.750	384.968	385.432
	4	117537.917	7.375	385.083	385.559
	5	117537.917	0.000	385.198	385.678
	6	117537.917	-7.375	385.083	385.559
	7	117537.917	-14.750	384.968	385.432
	8	117537.917	-22.125	384.852	385.300
	9	117537.917	-29.500	384.737	385.162
5A'	1	117547.917	29.500	384.514	384.920
	2	117547.917	22.125	384.629	385.058
	3	117547.917	14.750	384.744	385.190
	4	117547.917	7.375	384.860	385.317
	5	117547.917	0.000	384.975	385.436
	6	117547.917	-7.375	384.860	385.317
	7	117547.917	-14.750	384.744	385.190
	8	117547.917	-22.125	384.629	385.058
	9	117547.917	-29.500	384.514	384.920
L'6	1	117554.833	29.500	384.358	384.751
	2	117554.833	22.125	384.473	384.888
	3	117554.833	14.750	384.589	385.020
	4	117554.833	7.375	384.704	385.147
	5	117554.833	0.000	384.819	385.266
	6	117554.833	-7.375	384.704	385.147
	7	117554.833	-14.750	384.589	385.020
	8	117554.833	-22.125	384.473	384.888
	9	117554.833	-29.500	384.358	384.751
4C'	1	117561.750	29.500	384.201	384.589
	2	117561.750	22.125	384.316	384.727
	3	117561.750	14.750	384.431	384.859
	4	117561.750	7.375	384.547	384.985
	5	117561.750	0.000	384.662	385.104
	6	117561.750	-7.375	384.547	384.985
	7	117561.750	-14.750	384.431	384.859
	8	117561.750	-22.125	384.316	384.727
	9	117561.750	-29.500	384.201	384.589
4B'	1	117571.750	29.500	383.972	384.351
	2	117571.750	22.125	384.087	384.490
	3	117571.750	14.750	384.202	384.622
	4	117571.750	7.375	384.318	384.749
	5	117571.750	0.000	384.433	384.867
	6	117571.750	-7.375	384.318	384.749
	7	117571.750	-14.750	384.202	384.622
	8	117571.750	-22.125	384.087	384.490
	9	117571.750	-29.500	383.972	384.351

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
4A'	1	117581.750	29.500	383.740	384.102
	2	117581.750	22.125	383.855	384.240
	3	117581.750	14.750	383.971	384.374
	4	117581.750	7.375	384.086	384.499
	5	117581.750	0.000	384.201	384.618
	6	117581.750	-7.375	384.086	384.499
	7	117581.750	-14.750	383.971	384.374
	8	117581.750	-22.125	383.855	384.240
	9	117581.750	-29.500	383.740	384.102
L'3	1	117591.750	29.500	383.506	383.867
	2	117591.750	22.125	383.621	383.985
	3	117591.750	14.750	383.736	384.118
	4	117591.750	7.375	383.852	384.244
	5	117591.750	0.000	383.967	384.363
	6	117591.750	-7.375	383.852	384.244
	7	117591.750	-14.750	383.736	384.118
	8	117591.750	-22.125	383.621	383.985
	9	117591.750	-29.500	383.506	383.847
3C'	1	117601.750	29.500	383.269	383.593
	2	117601.750	22.125	383.384	383.730
	3	117601.750	14.750	383.500	383.863
	4	117601.750	7.375	383.615	383.988
	5	117601.750	0.000	383.730	384.107
	6	117601.750	-7.375	383.615	383.988
	7	117601.750	-14.750	383.500	383.863
	8	117601.750	-22.125	383.384	383.730
	9	117601.750	-29.500	383.269	383.593
3B'	1	117611.750	29.500	383.030	383.331
	2	117611.750	22.125	383.145	383.467
	3	117611.750	14.750	383.261	383.598
	4	117611.750	7.375	383.376	383.724
	5	117611.750	0.000	383.491	383.843
	6	117611.750	-7.375	383.376	383.724
	7	117611.750	-14.750	383.261	383.592
	8	117611.750	-22.125	383.145	383.467
	9	117611.750	-29.500	383.030	383.331
3A'	1	117621.750	29.500	382.788	383.093
	2	117621.750	22.125	382.904	383.188
	3	117621.750	14.750	383.019	383.319
	4	117621.750	7.375	383.134	383.443
	5	117621.750	0.000	383.249	383.562
	6	117621.750	-7.375	383.134	383.443
	7	117621.750	-14.750	383.019	383.319
	8	117621.750	-22.125	382.904	383.188
	9	117621.750	-29.500	382.788	383.053
℄ OPEN JOINT	1	117622.937	29.500	382.760	383.017
	2	117622.937	22.125	382.875	383.155
	3	117622.937	14.750	382.990	383.285
	4	117622.937	7.375	383.105	383.409
	5	117622.937	0.000	383.220	383.528
	6	117622.937	-7.375	383.105	383.409
	7	117622.937	-14.750	382.990	383.285
	8	117622.937	-22.125	382.875	383.155
	9	117622.937	-29.500	382.760	383.019
L'2	1	117628.667	29.500	382.620	382.866
	2	117628.667	22.125	382.735	383.002
	3	117628.667	14.750	382.850	383.133
	4	117628.667	7.375	382.965	383.259
	5	117628.667	0.000	383.081	383.377
	6	117628.667	-7.375	382.965	383.259
	7	117628.667	-14.750	382.850	383.133
	8	117628.667	-22.125	382.735	383.002
	9	117628.667	-29.500	382.620	382.866
2C'	1	117635.583	29.500	382.450	382.682
	2	117635.583	22.125	382.565	382.819
	3	117635.583	14.750	382.680	382.952
	4	117635.583	7.375	382.796	383.079
	5	117635.583	0.000	382.911	383.197
	6	117635.583	-7.375	382.796	383.079
	7	117635.583	-14.750	382.680	382.952
	8	117635.583	-22.125	382.565	382.819
	9	117635.583	-29.500	382.450	382.682
2B'	1	117645.583	29.500	382.202	382.412
	2	117645.583	22.125	382.318	382.550
	3	117645.583	14.750	382.433	382.684
	4	117645.583	7.375	382.548	382.812
	5	117645.583	0.000	382.663	382.931
	6	117645.583	-7.375	382.548	382.812
	7	117645.583	-14.750	382.433	382.684
	8	117645.583	-22.125	382.318	382.550
	9	117645.583	-29.500	382.202	382.412
2A'	1	117655.583	29.500	381.952	382.128
	2	117655.583	22.125	382.067	382.268
	3	117655.583	14.750	382.183	382.403
	4	117655.583	7.375	382.298	382.531
	5	117655.583	0.000	382.413	382.659
	6	117655.583	-7.375	382.298	382.531
	7	117655.583	-14.750	382.183	382.403
	8	117655.583	-22.125	382.067	382.268
	9	117655.583	-29.500	381.952	382.128

SPAN 14 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
L'1	1	117665.583	29.500	381.699	381.842
	2	117665.583	22.125	381.815	381.961
	3	117665.583	14.750	381.930	382.116
	4	117665.583	7.375	382.045	382.244
	5	117665.583	0.000	382.160	382.362
	6	117665.583	-7.375	382.045	382.244
	7	117665.583	-14.750	381.930	382.116
	8	117665.583	-22.125	381.815	381.981
	9	117665.583	-29.500	381.699	381.842
1C'	1	117675.583	29.500	381.444	381.565
	2	117675.583	22.125	381.560	381.702
	3	117675.583	14.750	381.675	381.836
	4	117675.583	7.375	381.790	381.962
	5	117675.583	0.000	381.905	382.081
	6	117675.583	-7.375	381.790	381.962
	7	117675.583	-14.750	381.675	381.836
	8	117675.583	-22.125	381.560	381.702
	9	117675.583	-29.500	381.444	381.565
1B'	1	117685.583	29.500	381.187	381.280
	2	117685.583	22.125	381.302	381.415
	3	117685.583	14.750	381.417	381.545
	4	117685.583	7.375	381.532	381.669
	5	117685.583	0.000	381.648	381.788
	6	117685.583	-7.375	381.532	381.669
	7	117685.583	-14.750	381.417	381.545
	8	117685.583	-22.125	381.302	381.415
	9	117685.583	-29.500	381.187	381.280
1A'	1	117695.583	29.500	380.927	380.975
	2	117695.583	22.125	381.042	381.105
	3	117695.583	14.750	381.157	381.232
	4	117695.583	7.375	381.272	381.354
	5	117695.583	0.000	381.387	381.471
	6	117695.583	-7.375	381.272	381.354
	7	117695.583	-14.750	381.157	381.232
	8	117695.583	-22.125	381.042	381.105
	9	117695.583	-29.500	380.927	380.975
L'0 ℄ TRUSS BRG. AT PIER 14	1	117702.500	29.500	380.745	380.753
	2	117702.500	22.125	380.860	380.880
	3	117702.500	14.750	380.976	381.004
	4	117702.500	7.375	381.091	381.125
	5	117702.500	0.000	381.206	381.242
	6	117702.500	-7.375	381.091	381.125
	7	117702.500	-14.750	380.976	381.004
	8	117702.500	-22.125	380.860	380.880
	9	117702.500	-29.500	380.745	380.753

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)D
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1) D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	17
F.A.I. SEC. NO. 4		ILLINOIS MISSOURI	PROJECT I-57-9(5)0		
F.A.I. SEC. NO. 5					

SPAN 15

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ BRG.-SPAN 15	1	1177705.167	29.500	380.674	380.674
	2	1177705.167	19.667	380.828	380.828
	3	1177705.167	9.833	380.982	380.982
	4	1177705.167	0.000	381.135	381.135
	5	1177705.167	-9.833	380.982	380.982
	6	1177705.167	-19.667	380.828	380.828
	7	1177705.167	-29.500	380.674	380.674
15A	1	1177715.167	29.500	380.409	380.461
	2	1177715.167	19.667	380.563	380.615
	3	1177715.167	9.833	380.717	380.769
	4	1177715.167	0.000	380.870	380.922
	5	1177715.167	-9.833	380.717	380.769
	6	1177715.167	-19.667	380.563	380.615
	7	1177715.167	-29.500	380.409	380.461
15B	1	1177725.167	29.500	380.142	380.240
	2	1177725.167	19.667	380.295	380.393
	3	1177725.167	9.833	380.449	380.547
	4	1177725.167	0.000	380.603	380.701
	5	1177725.167	-9.833	380.449	380.547
	6	1177725.167	-19.667	380.295	380.393
	7	1177725.167	-29.500	380.142	380.240
15C	1	1177735.167	29.500	379.872	380.005
	2	1177735.167	19.667	380.025	380.158
	3	1177735.167	9.833	380.179	380.312
	4	1177735.167	0.000	380.333	380.466
	5	1177735.167	-9.833	380.179	380.312
	6	1177735.167	-19.667	380.025	380.158
	7	1177735.167	-29.500	379.872	380.005
15D	1	1177745.167	29.500	379.599	379.753
	2	1177745.167	19.667	379.753	379.907
	3	1177745.167	9.833	379.907	380.061
	4	1177745.167	0.000	380.060	380.214
	5	1177745.167	-9.833	379.907	380.061
	6	1177745.167	-19.667	379.753	379.907
	7	1177745.167	-29.500	379.599	379.753
15E	1	1177755.167	29.500	379.324	379.484
	2	1177755.167	19.667	379.478	379.638
	3	1177755.167	9.833	379.631	379.792
	4	1177755.167	0.000	379.785	379.945
	5	1177755.167	-9.833	379.631	379.792
	6	1177755.167	-19.667	379.478	379.638
	7	1177755.167	-29.500	379.324	379.484
15F	1	1177765.167	29.500	379.047	379.197
	2	1177765.167	19.667	379.200	379.351
	3	1177765.167	9.833	379.354	379.505
	4	1177765.167	0.000	379.508	379.658
	5	1177765.167	-9.833	379.354	379.505
	6	1177765.167	-19.667	379.200	379.351
	7	1177765.167	-29.500	379.047	379.197
15G	1	1177775.167	29.500	378.767	378.895
	2	1177775.167	19.667	378.920	379.049
	3	1177775.167	9.833	379.074	379.203
	4	1177775.167	0.000	379.228	379.356
	5	1177775.167	-9.833	379.074	379.203
	6	1177775.167	-19.667	378.920	379.049
	7	1177775.167	-29.500	378.767	378.895

SPAN 15 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
SPLICE 15-2	1	1177745.167	29.500	378.484	378.581
	2	1177785.167	19.667	378.638	378.735
	3	1177785.167	9.833	378.791	378.889
	4	1177785.167	0.000	378.945	379.042
	5	1177785.167	-9.833	378.791	378.889
	6	1177785.167	-19.667	378.638	378.735
	7	1177785.167	-29.500	378.484	378.581
15H	1	1177795.167	29.500	378.199	378.260
	2	1177795.167	19.667	378.353	378.414
	3	1177795.167	9.833	378.506	378.568
	4	1177795.167	0.000	378.660	378.721
	5	1177795.167	-9.833	378.506	378.568
	6	1177795.167	-19.667	378.353	378.414
	7	1177795.167	-29.500	378.199	378.260
15I	1	1177805.167	29.500	377.911	377.940
	2	1177805.167	19.667	378.065	378.094
	3	1177805.167	9.833	378.219	378.247
	4	1177805.167	0.000	378.372	378.401
	5	1177805.167	-9.833	378.219	378.247
	6	1177805.167	-19.667	378.065	378.094
	7	1177805.167	-29.500	377.911	377.940

SPAN 16

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
PIER 15	1	1177817.750	29.500	377.546	377.546
	2	1177817.750	19.667	377.700	377.700
	3	1177817.750	9.833	377.853	377.853
	4	1177817.750	0.000	378.007	378.007
	5	1177817.750	-9.833	377.853	377.853
	6	1177817.750	-19.667	377.700	377.700
	7	1177817.750	-29.500	377.546	377.546
16A	1	1177827.750	29.500	377.253	377.246
	2	1177827.750	19.667	377.407	377.400
	3	1177827.750	9.833	377.560	377.553
	4	1177827.750	0.000	377.714	377.707
	5	1177827.750	-9.833	377.560	377.553
	6	1177827.750	-19.667	377.407	377.400
	7	1177827.750	-29.500	377.253	377.246
16B	1	1177837.750	29.500	376.957	376.954
	2	1177837.750	19.667	377.111	377.108
	3	1177837.750	9.833	377.265	377.261
	4	1177837.750	0.000	377.416	377.415
	5	1177837.750	-9.833	377.265	377.261
	6	1177837.750	-19.667	377.111	377.108
	7	1177837.750	-29.500	376.957	376.954
16C	1	1177847.750	29.500	376.659	376.667
	2	1177847.750	19.667	376.813	376.821
	3	1177847.750	9.833	376.966	376.974
	4	1177847.750	0.000	377.120	377.128
	5	1177847.750	-9.833	376.966	376.974
	6	1177847.750	-19.667	376.813	376.821
	7	1177847.750	-29.500	376.659	376.667

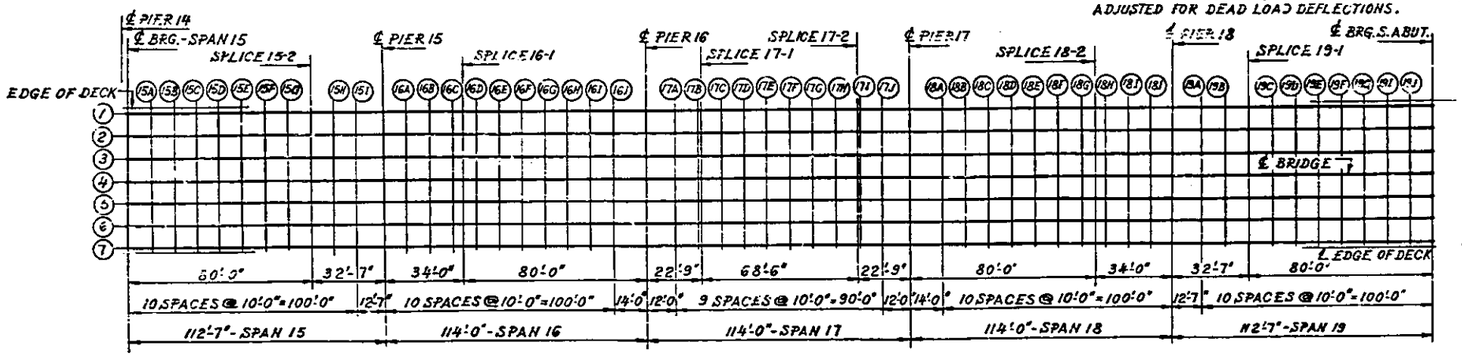
SPAN 16 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
SPLICE 16-1	1	1177851.750	29.500	376.539	376.553
	2	1177851.750	19.667	376.693	376.706
	3	1177851.750	9.833	376.846	376.860
	4	1177851.750	0.000	377.000	377.014
	5	1177851.750	-9.833	376.846	376.860
	6	1177851.750	-19.667	376.693	376.706
	7	1177851.750	-29.500	376.539	376.553
16D	1	1177857.750	29.500	376.359	376.380
	2	1177857.750	19.667	376.513	376.534
	3	1177857.750	9.833	376.666	376.688
	4	1177857.750	0.000	376.820	376.841
	5	1177857.750	-9.833	376.666	376.688
	6	1177857.750	-19.667	376.513	376.534
	7	1177857.750	-29.500	376.359	376.380
16E	1	1177867.750	29.500	376.059	376.091
	2	1177867.750	19.667	376.213	376.244
	3	1177867.750	9.833	376.366	376.398
	4	1177867.750	0.000	376.520	376.551
	5	1177867.750	-9.833	376.366	376.398
	6	1177867.750	-19.667	376.213	376.244
	7	1177867.750	-29.500	376.059	376.091
16F	1	1177877.750	29.500	375.759	375.795
	2	1177877.750	19.667	375.913	375.948
	3	1177877.750	9.833	376.066	376.102
	4	1177877.750	0.000	376.220	376.256
	5	1177877.750	-9.833	376.066	376.102
	6	1177877.750	-19.667	375.913	375.948
	7	1177877.750	-29.500	375.759	375.795
16G	1	1177887.750	29.500	375.459	375.492
	2	1177887.750	19.667	375.613	375.646
	3	1177887.750	9.833	375.766	375.799
	4	1177887.750	0.000	375.920	375.953
	5	1177887.750	-9.833	375.766	375.799
	6	1177887.750	-19.667	375.613	375.646
	7	1177887.750	-29.500	375.459	375.492
16H	1	1177897.750	29.500	375.159	375.183
	2	1177897.750	19.667	375.313	375.337
	3	1177897.750	9.833	375.466	375.491
	4	1177897.750	0.000	375.620	375.644
	5	1177897.750	-9.833	375.466	375.491
	6	1177897.750	-19.667	375.313	375.337
	7	1177897.750	-29.500	375.159	375.183
16I	1	1177907.750	29.500	374.859	374.871
	2	1177907.750	19.667	375.013	375.025
	3	1177907.750	9.833	375.166	375.179
	4	1177907.750	0.000	375.320	375.332
	5	1177907.750	-9.833	375.166	375.179
	6	1177907.750	-19.667	375.013	375.025
	7	1177907.750	-29.500	374.859	374.871
16J	1	1177917.750	29.500	374.559	374.561
	2	1177917.750	19.667	374.713	374.715
	3	1177917.750	9.833	374.866	374.868
	4	1177917.750	0.000	375.020	375.022
	5	1177917.750	-9.833	374.866	374.868
	6	1177917.750	-19.667	374.713	374.715
	7	1177917.750	-29.500	374.559	374.561

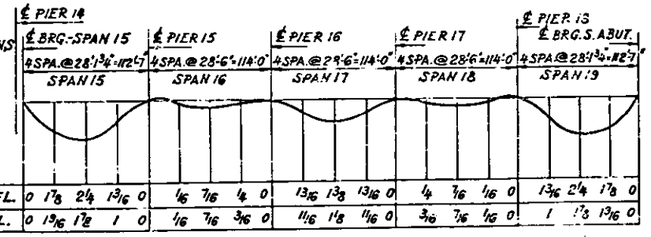
SPAN 17

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄ PIER 16	1	1177931.750	29.500	374.139	374.139
	2	1177931.750	19.667	374.293	374.295
	3	1177931.750	9.833	374.446	374.446
	4	1177931.750	0.000	374.600	374.600
	5	1177931.750	-9.833	374.446	374.446
	6	1177931.750	-19.667	374.293	374.293
	7	1177931.750	-29.500	374.139	374.139
17A	1	1177943.750	29.500	373.779	373.797
	2	1177943.750	19.667	373.933	373.951
	3	1177943.750	9.833	374.086	374.104
	4	1177943.750	0.000	374.240	374.258
	5	1177943.750	-9.833	374.086	374.104
	6	1177943.750	-19.667	373.933	373.951
	7	1177943.750	-29.500	373.779	373.797
17B	1	1177953.750	29.500	373.479	373.519
	2	1177953.750	19.667	373.633	373.673
	3	1177953.750	9.833	373.786	373.827
	4	1177953.750	0.000	373.940	373.980
	5	1177953.750	-9.833	373.786	373.827
	6	1177953.750	-19.667	373.633	373.673
	7	1177953.750	-29.500	373.479	373.519
SPLICE 17-1	1	1177954.500	29.500	373.657	373.499
	2	1177954.500	19.667	373.610	373.652
	3	1177954.500	9.833	373.764	373.806
	4	1177954.500	0.000	373.918	373.960
	5	1177954.500	-9.833	373.764	373.806
	6	1177954.500	-19.667	373.610	373.652
	7	1177954.750	-29.500	373.457	373.499
17C	1	1177963.750	29.500	373.179	373.243
	2	1177963.750	19.667	373.333	373.396
	3	1177963.750	9.833	373.486	373.550
	4	1177963.750	0.000	373.640	373.704
	5	1177963.750	-9.833	373.486	373.550
	6	1177963.750	-19.667	373.333	373.396
	7	1177963.750	-29.500	373.179	373.243
17D	1	1177973.750	29.500	372.879	372.962
	2	1177973.750	19.667	373.033	373.115
	3	1177973.750	9.833	373.186	373.269
	4	1177973.750	0.000	373.340	373.423
	5	1177973.750	-9.833	373.186	373.269
	6	1177973.750	-19.667	373.033	373.115
	7	1177973.750	-29.500	372.879	372.962
17E	1	1177983.750	29.500	372.579	372.672
	2	1177983.750	19.667	372.733	372.826
	3	1177983.750	9.833	372.886	372.980
	4	1177983.750	0.000	373.040	373.133
	5	1177983.750	-9.833	372.886	372.980
	6	1177983.750	-19.667	372.733	372.826
	7	1177983.750	-29.500	372.579	372.672
17F	1	1177993.750	29.500	372.279	372.372
	2	1177993.750	19.667	372.433	372.526
	3	1177993.750	9.833	372.586	372.680
	4	1177993.750	0.000	372.740	372.833
	5	1177993.750	-9.833	372.586	372.680
	6	1177993.750	-19.667	372.433	372.526
	7	1177993.750	-29.500	372.279	372.372

NOTE A
THE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEOPETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.



PLAN



TOTAL D.L. DEFL.	0	1 7/8	2 1/4	1 3/16	0
CONC. D.L. DEFL.	0	1 3/16	1 1/2	1	0

TOTAL D.L. DEFL.	1/16	7/16	4	0	
CONC. D.L. DEFL.	1/16	7/16	3/16	0	

TOTAL D.L. DEFL.	13/16	1 3/8	1 3/16	0	
CONC. D.L. DEFL.	11/16	1 1/8	1 1/16	0	

TOTAL D.L. DEFL.	1/4	7/16	1/16	0	
CONC. D.L. DEFL.	3/16	7/16	1/16	0	

TOTAL D.L. DEFL.	13/16	2 1/4	1 7/8	0	
CONC. D.L. DEFL.	1	1 3/8	1 3/16	0	

DEAD LOAD DEFLECTION DIAGRAM
(SEE NOTE A)

NOTE:
FOR DETAILS SHOWING LOCATION FOR TOP OF SLAB ELEVATIONS AND DIMENSION "E" SEE SHEET 4.
GIRDER OFFSET ARE REFERENCED TO ℄ BRIDGE.

TOP OF SLAB ELEVATIONS - SPANS 15 TO 19
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9(5)0
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-(1) D	ALEXANDER / MISSISSIPPI	ILLINOIS / MISSOURI	63	18
F.H.W.A. REG. NO. 4 / F.H.W.A. REG. NO. 5		ILLINOIS / MISSOURI		PROJECT I-57-9(510)	

SPAN 17(CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
17G	1	118003.750	29.500	371.979	372.062
	2	118003.750	19.667	372.133	372.215
	3	118003.750	9.833	372.286	372.369
	4	118003.750	0.000	372.440	372.523
	5	118003.750	-9.833	372.286	372.369
	6	118003.750	-19.667	372.133	372.215
	7	118003.750	-29.500	371.979	372.062
17H	1	118013.750	29.500	371.679	371.743
	2	118013.750	19.667	371.833	371.896
	3	118013.750	9.833	371.986	372.050
	4	118013.750	0.000	372.140	372.204
	5	118013.750	-9.833	371.986	372.050
	6	118013.750	-19.667	371.833	371.896
	7	118013.750	-29.500	371.679	371.743
SPLICE 17-2	1	118023.000	29.500	371.442	371.444
	2	118023.000	19.667	371.555	371.597
	3	118023.000	9.833	371.709	371.751
	4	118023.000	0.000	371.863	371.905
	5	118023.000	-9.833	371.709	371.751
	6	118023.000	-19.667	371.555	371.597
	7	118023.000	-29.500	371.402	371.444
17I	1	118023.750	29.500	371.379	371.419
	2	118023.750	19.667	371.533	371.573
	3	118023.750	9.833	371.686	371.727
	4	118023.750	0.000	371.840	371.880
	5	118023.750	-9.833	371.686	371.727
	6	118023.750	-19.667	371.533	371.573
	7	118023.750	-29.500	371.379	371.419
17J	1	118033.750	29.500	371.079	371.097
	2	118033.750	19.667	371.233	371.251
	3	118033.750	9.833	371.386	371.404
	4	118033.750	0.000	371.540	371.558
	5	118033.750	-9.833	371.386	371.404
	6	118033.750	-19.667	371.233	371.251
	7	118033.750	-29.500	371.079	371.097

SPAN 18

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄PIER17	1	118045.750	29.500	370.719	370.719
	2	118045.750	19.667	370.873	370.873
	3	118045.750	9.833	371.026	371.026
	4	118045.750	0.000	371.180	371.180
	5	118045.750	-9.833	371.026	371.026
	6	118045.750	-19.667	370.873	370.873
	7	118045.750	-29.500	370.719	370.719
18A	1	118059.750	29.500	370.299	370.301
	2	118059.750	19.667	370.453	370.455
	3	118059.750	9.833	370.606	370.608
	4	118059.750	0.000	370.760	370.762
	5	118059.750	-9.833	370.606	370.608
	6	118059.750	-19.667	370.453	370.455
	7	118059.750	-29.500	370.299	370.301

SPAN 18 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
18B	1	118069.750	29.500	369.999	370.011
	2	118069.750	19.667	370.153	370.165
	3	118069.750	9.833	370.306	370.319
	4	118069.750	0.000	370.460	370.472
	5	118069.750	-9.833	370.306	370.319
	6	118069.750	-19.667	370.153	370.165
	7	118069.750	-29.500	369.999	370.011
18C	1	118079.750	29.500	369.699	369.723
	2	118079.750	19.667	369.853	369.877
	3	118079.750	9.833	370.006	370.031
	4	118079.750	0.000	370.160	370.184
	5	118079.750	-9.833	370.006	370.031
	6	118079.750	-19.667	369.853	369.877
	7	118079.750	-29.500	369.699	369.723
18D	1	118089.750	29.500	369.399	369.432
	2	118089.750	19.667	369.553	369.586
	3	118089.750	9.833	369.706	369.739
	4	118089.750	0.000	369.860	369.893
	5	118089.750	-9.833	369.706	369.739
	6	118089.750	-19.667	369.553	369.586
	7	118089.750	-29.500	369.399	369.432
18E	1	118099.750	29.500	369.099	369.135
	2	118099.750	19.667	369.253	369.288
	3	118099.750	9.833	369.406	369.442
	4	118099.750	0.000	369.560	369.596
	5	118099.750	-9.833	369.406	369.442
	6	118099.750	-19.667	369.253	369.288
	7	118099.750	-29.500	369.099	369.135
18F	1	118109.750	29.500	368.799	368.831
	2	118109.750	19.667	368.953	368.984
	3	118109.750	9.833	369.106	369.138
	4	118109.750	0.000	369.260	369.291
	5	118109.750	-9.833	369.106	369.138
	6	118109.750	-19.667	368.953	368.984
	7	118109.750	-29.500	368.799	368.831
18G	1	118119.750	29.500	368.499	368.520
	2	118119.750	19.667	368.653	368.674
	3	118119.750	9.833	368.806	368.828
	4	118119.750	0.000	368.960	368.981
	5	118119.750	-9.833	368.806	368.828
	6	118119.750	-19.667	368.653	368.674
	7	118119.750	-29.500	368.499	368.520
SPLICE 18-2	1	118125.750	29.500	368.319	368.333
	2	118125.750	19.667	368.473	368.486
	3	118125.750	9.833	368.626	368.640
	4	118125.750	0.000	368.780	368.794
	5	118125.750	-9.833	368.626	368.640
	6	118125.750	-19.667	368.473	368.486
	7	118125.750	-29.500	368.319	368.333
18H	1	118129.750	29.500	368.199	368.207
	2	118129.750	19.667	368.353	368.361
	3	118129.750	9.833	368.506	368.515
	4	118129.750	0.000	368.660	368.668
	5	118129.750	-9.833	368.506	368.514
	6	118129.750	-19.667	368.353	368.361
	7	118129.750	-29.500	368.199	368.207

SPAN 18 (CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
18I	1	118139.750	29.500	367.899	367.896
	2	118139.750	19.667	368.053	368.050
	3	118139.750	9.833	368.206	368.203
	4	118139.750	0.000	368.360	368.357
	5	118139.750	-9.833	368.206	368.203
	6	118139.750	-19.667	368.053	368.050
	7	118139.750	-29.500	367.899	367.896
18J	1	118149.750	29.500	367.599	367.592
	2	118149.750	19.667	367.753	367.746
	3	118149.750	9.833	367.906	367.900
	4	118149.750	0.000	368.060	368.053
	5	118149.750	-9.833	367.906	367.900
	6	118149.750	-19.667	367.753	367.746
	7	118149.750	-29.500	367.599	367.592

SPAN 19

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
℄PIER18	1	118159.750	29.500	367.299	367.299
	2	118159.750	19.667	367.453	367.453
	3	118159.750	9.833	367.606	367.606
	4	118159.750	0.000	367.760	367.760
	5	118159.750	-9.833	367.606	367.606
	6	118159.750	-19.667	367.453	367.453
	7	118159.750	-29.500	367.299	367.299
19A	1	118172.333	29.500	366.922	366.950
	2	118172.333	19.667	367.075	367.104
	3	118172.333	9.833	367.229	367.258
	4	118172.333	0.000	367.383	367.411
	5	118172.333	-9.833	367.229	367.258
	6	118172.333	-19.667	367.075	367.104
	7	118172.333	-29.500	366.922	366.950
19B	1	118182.333	29.500	366.622	366.683
	2	118182.333	19.667	366.775	366.837
	3	118182.333	9.833	366.929	366.990
	4	118182.333	0.000	367.083	367.144
	5	118182.333	-9.833	366.929	366.990
	6	118182.333	-19.667	366.775	366.837
	7	118182.333	-29.500	366.622	366.683
SPLICE 19-1	1	118192.333	29.500	366.322	366.419
	2	118192.333	19.667	366.475	366.573
	3	118192.333	9.833	366.629	366.726
	4	118192.333	0.000	366.783	366.880
	5	118192.333	-9.833	366.629	366.726
	6	118192.333	-19.667	366.475	366.573
	7	118192.333	-29.500	366.322	366.419
19C	1	118202.333	29.500	366.022	366.150
	2	118202.333	19.667	366.175	366.204
	3	118202.333	9.833	366.329	366.458
	4	118202.333	0.000	366.483	366.611
	5	118202.333	-9.833	366.329	366.458
	6	118202.333	-19.667	366.175	366.304
	7	118202.333	-29.500	366.022	366.150

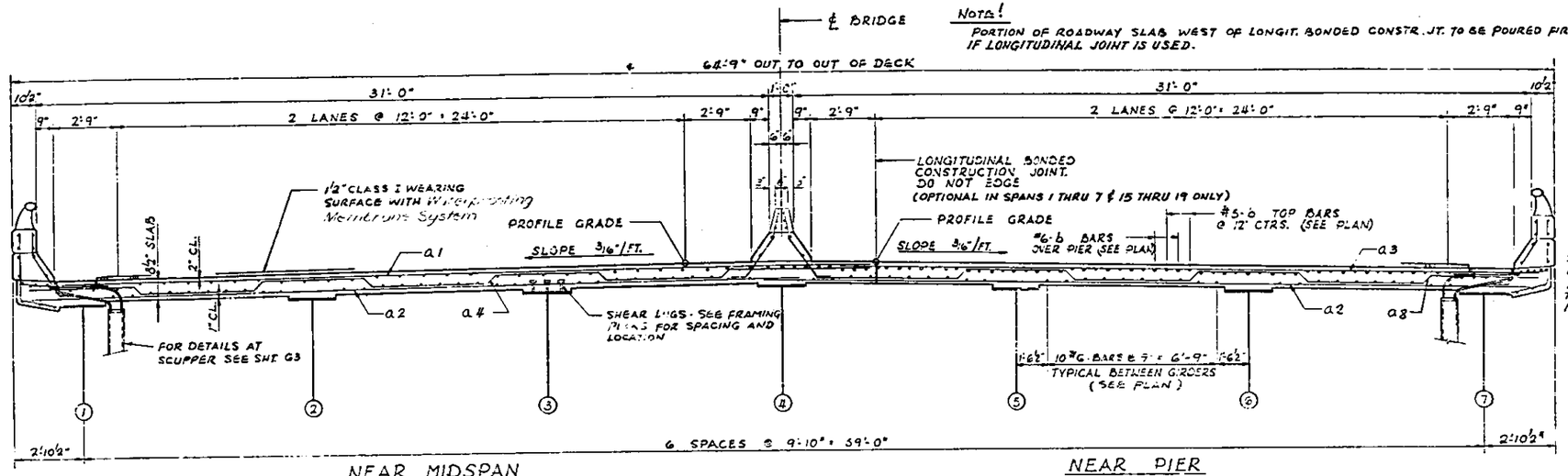
SPAN 19(CONT.)

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
19D	1	118212.333	29.500	365.722	365.872
	2	118212.333	19.667	365.875	366.026
	3	118212.333	9.833	366.029	366.180
	4	118212.333	0.000	366.183	366.333
	5	118212.333	-9.833	366.029	366.180
	6	118212.333	-19.667	365.875	366.026
	7	118212.333	-29.500	365.722	365.872
19E	1	118222.333	29.500	365.422	365.582
	2	118222.333	19.667	365.575	365.735
	3	118222.333	9.833	365.729	365.889
	4	118222.333	0.000	365.883	366.043
	5	118222.333	-9.833	365.729	365.889
	6	118222.333	-19.667	365.575	365.735
	7	118222.333	-29.500	365.422	365.582
19F	1	118232.333	29.500	365.122	365.276
	2	118232.333	19.667	365.275	365.430
	3	118232.333	9.833	365.429	365.583
	4	118232.333	0.000	365.583	365.737
	5	118232.333	-9.833	365.429	365.583
	6	118232.333	-19.667	365.275	365.430
	7	118232.333	-29.500	365.122	365.276
19G	1	118242.333	29.500	364.822	364.954
	2	118242.333	19.667	364.975	365.108
	3	118242.333	9.833	365.129	365.262
	4	118242.333	0.000	365.283	365.415
	5	118242.333	-9.833	365.129	365.262
	6	118242.333	-19.667	364.975	365.108
	7	118242.333	-29.500	364.822	364.954
19H	1	118252.333	29.500	364.321	364.619
	2	118252.333	19.667	364.475	364.773
	3	118252.333	9.833	364.629	364.927
	4	118252.333	0.000	364.783	365.080
	5	118252.333	-9.833	364.629	364.927
	6	118252.333	-19.667	364.475	364.773
	7	118252.333	-29.500	364.322	364.619
19I	1	118262.333	29.500	364.222	364.274
	2	118262.333	19.667	364.375	364.427
	3	118262.333	9.833	364.529	364.581
	4	118262.333	0.000	364.683	364.735
	5	118262.333	-9.833	364.529	364.581
	6	118262.333	-19.667	364.375	364.427
	7	118262.333	-29.500	364.222	364.274
℄BRG.S.A.	1	118272.333	29.500	363.922	363.922
	2	118272.333	19.667	364.075	364.075
	3	118272.333	9.833	364.229	364.229
	4	118272.333	0.000	364.383	364.383
	5	118272.333	-9.833	364.229	364.229
	6	118272.333	-19.667	364.075	364.075
	7	118272.333	-29.500	363.922	363.922

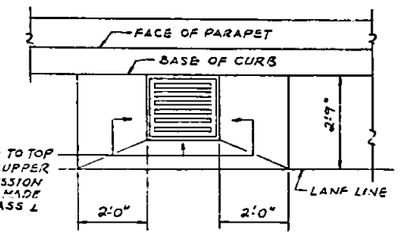
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TOP OF SLAB ELEVATIONS- SPANS 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(510)
SECTION 102-18-1D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) D	ALEXANDER	ILLINOIS	63	19
		MISSISSIPPI	MISSOURI		
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)0	



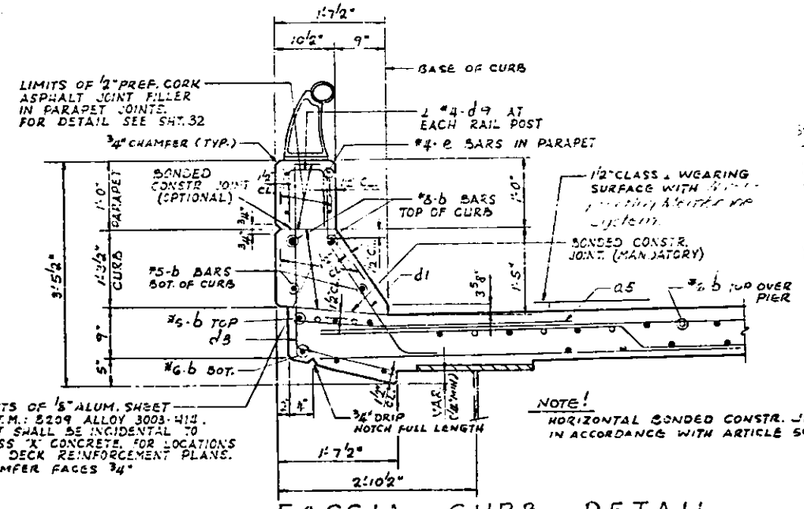
TYPICAL CROSS SECTION
LOOKING SOUTH
SCALE: ⅜" = 1'-0"



DEPRESSION DETAIL AT SCUPPER

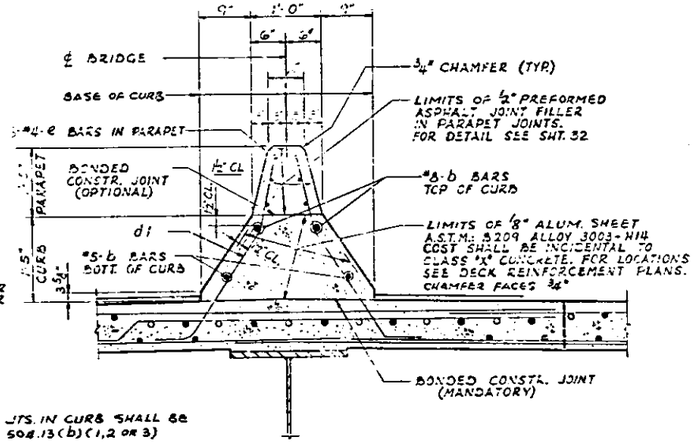
NOTE!
CUT a & b BARS IN FIELD AS REQUIRED TO CLEAR SCUPPER

NOTE!
PORTION OF ROADWAY SLAB WEST OF LONGIT. BONDED CONSTR. JT. TO BE POURED FIRST IF LONGITUDINAL JOINT IS USED.



FASCIA CURB DETAIL
SCALE: 1" = 1'-0"

NOTE!
HORIZONTAL BONDED CONSTR. JTS. IN CURB SHALL BE IN ACCORDANCE WITH ARTICLE 504.13(b)(1,2 OR 3)



MEDIAN CURB DETAIL
SCALE: 1" = 1'-0"

DECK CROSS SECTION & DETAILS-SPANS 1 TO 9A & 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

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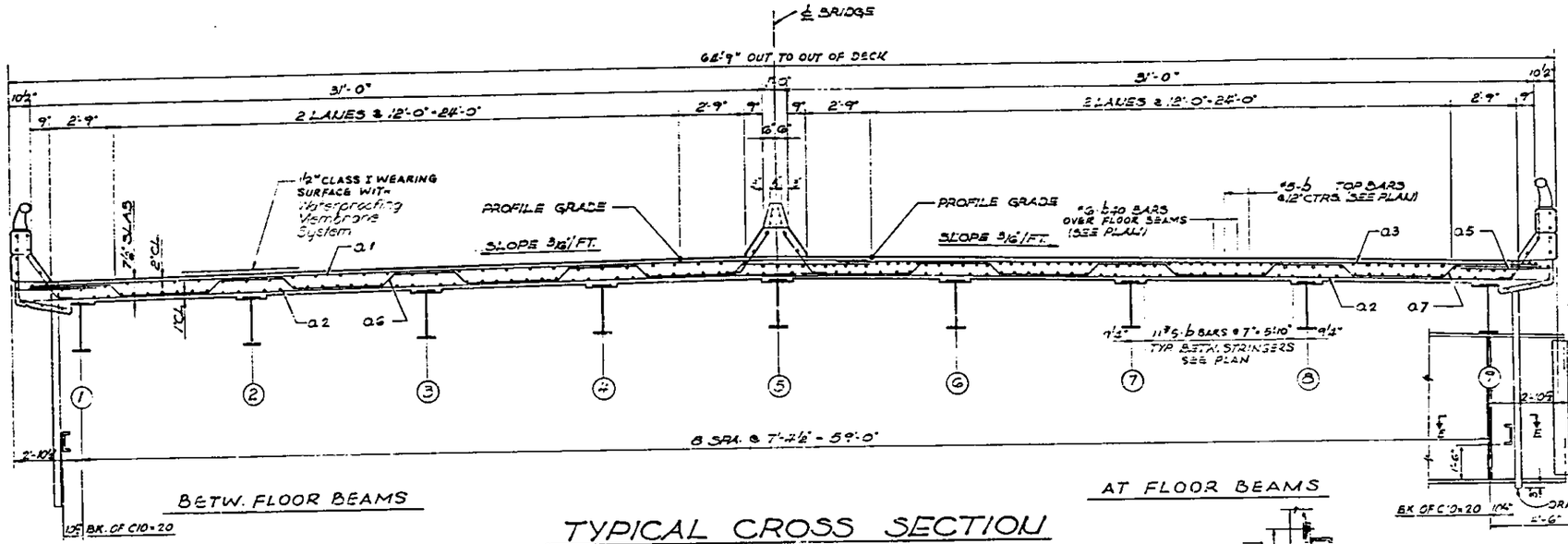
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

Rev. 2-18-76

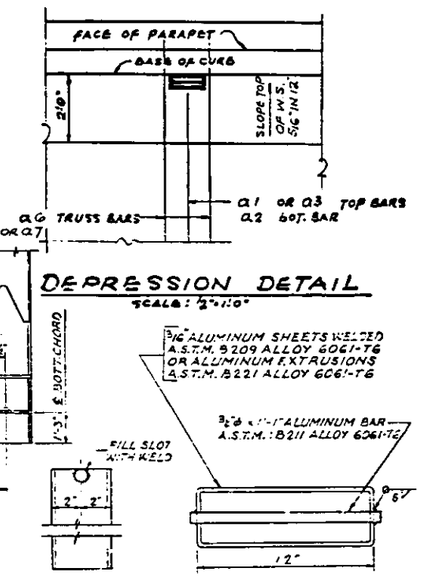
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) D	ALEXANDER	ILLINOIS	63	20
F.A.I. & SEC. NO. &		MISSISSIPPI	MISSOURI		
F.A.I. & SEC. NO. &		ILLINOIS	MISSOURI	PROJECT I-57-9(5)0	



TYPICAL CROSS SECTION

LOOKING SOUTH

SCALE: 3/8"=1'-0"



DEPRESSION DETAIL

SCALE: 1/2"=1'-0"

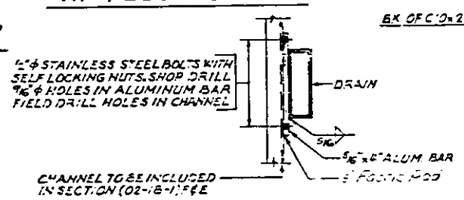
3/16" ALUMINUM SHEETS WELDED A.S.T.M. B209 ALLOY 6061-T6 OR ALUMINUM EXTRUSIONS A.S.T.M. B221 ALLOY 6061-T6

3 1/2" x 1/4" ALUMINUM BAR A.S.T.M. B211 ALLOY 6061-T6

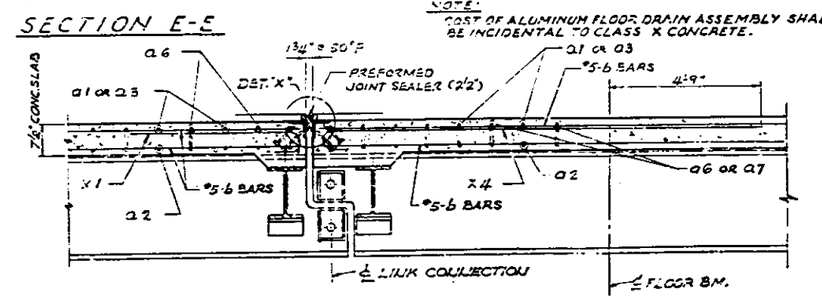
FILL SLOT WITH WELD

END VIEW TOP VIEW

DETAIL OF DRAIN

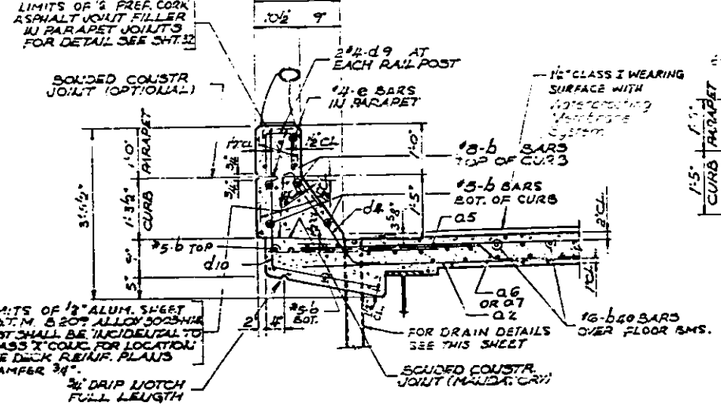


SECTION E-E



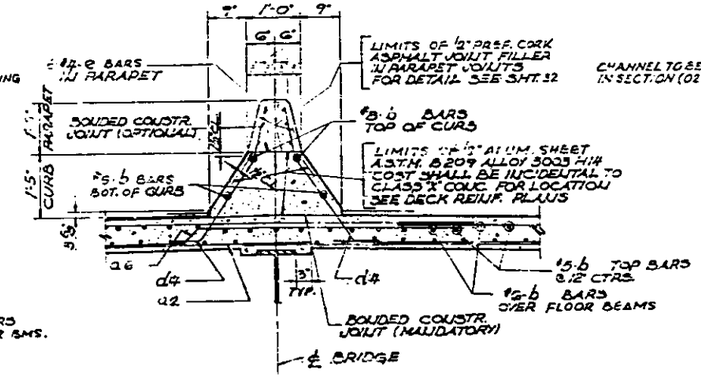
SECTION AT PREFORMED JT. SEALER

SCALE: 3/4"=1'-0"



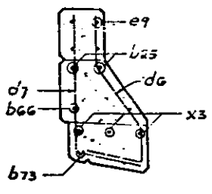
FASCIA CURB DETAIL

SCALE: 3/8"=1'-0"



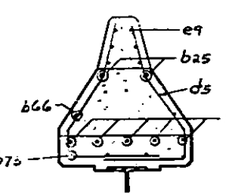
MEDIAN CURB DETAIL

SCALE: 3/8"=1'-0"



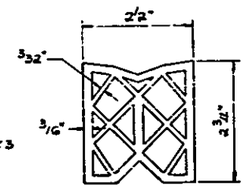
SECTION "R-R"

SCALE: 3/4"=1'-0"

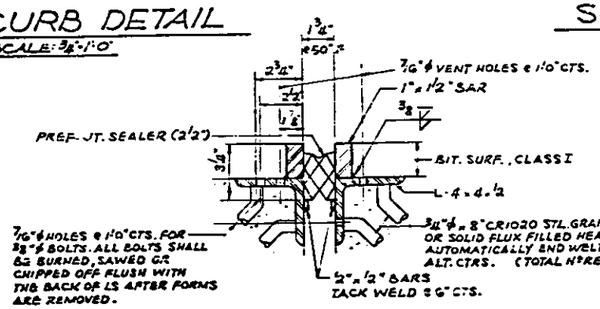


SECTION "S-S"

SCALE: 3/4"=1'-0"



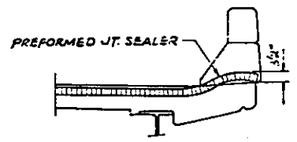
PREFORMED JT. SEALER (2 1/2")



7/16"ϕ HOLES @ 1'-0" CTS. FOR 3/8"ϕ BOLTS. ALL BOLTS SHALL BE BURNED, SAWED OR CHIPPED OFF FLUSH WITH THE BACK OF LS AFTER FORMS ARE REMOVED.

DETAIL "X"

SCALE: 3"=1'-0"



TYPICAL END OF SEALER TREATMENT

DECK CROSS SECTION & DETAILS-SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

Rev. 2-18-76

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(102-18-1) D	ALEXANDER (ILLINOIS)	ALEXANDER (MISSOURI)	63	21
F.H.W.A. SER. NO. 0 F.H.W.A. REG. NO. 0		ILLINOIS MISSOURI		PROJECT I-57-9(5)0	

W.P. & END OF PARAPET AT NORTH ABUT.

WORK POINT AT PIER 1

WORK POINT AT PIER 2

WORK POINT AT PIER 3

2¾" JT. @ 50°F

110'-7¾" SPAN 1

109'-11½" SPAN 2

109'-11½" SPAN 3

104'-5⅝" SPAN 4

HORIZ. DIMENSIONS ALONG TOP OF PARAPET

DEFL. JT. SPA. IN FASCIA & MEDIAN PARAPETS

16'-0¾" | 4 SPACES @ 18'-11" = 75'-8" | 18'-11" | 20'-0" | 4 SPACES @ 20'-0" = 80'-0" | 9'-11½" | 9'-11½" | 4 SPACES @ 20'-0" = 80'-0" | 20'-0" | 19'-5" | 4 SPACES @ 19'-5" = 77'-8" | 7'-2½"

JOINT & WORK POINT AT LINK - SPAN 4

2⅛" | 2⅛" AT 50°F

CONST. JOINTS IN FASCIA & MEDIAN CURBS TO TOP OF SLAB (16 ALUM. SHEETS)

**4 #8-e6 IN PARAPET

**4 #8-e1 IN PARAPET TYP. FOR 18'-11" PANELS

**4 #8-e3 IN PARAPET TYP. FOR 20'-0" PANELS

**4 #8-e4 IN PARAPET TYP. FOR 9'-11½" PANELS

**4 #8-e5 IN PARAPET TYP. FOR 19'-5" PANELS

**2 #8-e7 IN PARAPET

PARAPET

BASE OF CURB

2" ø Drain Holes (Typ.) (See Detail)

401 #6-a1 @ 13" CTRS. (TOP)

2 - 401 #6-a2 @ 13" CTRS. (BOTT.)

400 #6-a4 @ 13" CTRS. (TRUSS BARS) ALT. WITH STRAIGHT TOP & BOT. BARS

65 #6-b32 TOP OF SLAB OVER PIER SEE CROSS SECT. FOR SPACING

65 #6-b31 TOP OF SLAB OVER PIER SEE CROSS SECT. FOR SPACING

65 #6-b32 TOP OF SLAB OVER PIER SEE CROSS SECT. FOR SPACING

PROFILE GRADE

PROFILE GRADE AND LONGIT. BONDED CONST. JT. (OPTIONAL)

56 #6-x1 @ 6" CTRS. (TOP)

56 #6-x1 @ 6" CTRS. (TOP)

℄ BRIDGE

#36 #5-d1 @ 12" CTRS. EA. FACE OF MEDIAN-PARAPET

401 #6-a3 @ 13" CTRS. (TOP)

400 #6-a5 @ 13" CTRS. (TRUSS BARS) ALT. WITH STRAIGHT TOP & BOT. BARS

2 #8-b3 TOP OF CURB | 2 #5-b54 BOT. OF CURB | 25'-0"

2 #8-b4 TOP OF CURB | 2 #5-b55 BOT. OF CURB | 2 #5-b56 BOT. OF CURB | 16'-3"

2 #8-b4 TOP OF CURB | 2 #5-b55 BOT. OF CURB | 10'-3"

2 #8-b3 TOP OF CURB | 2 #5-b55 BOT. OF CURB | 2'-0"

2 #8-b6 TOP OF CURB | 2 #5-b57 BOT. OF CURB | 21'-0"

2 #8-b7 TOP OF CURB | 2 #5-b58 BOT. OF CURB

14 #6-G6 #6-b30 SEE CROSS SECT.

68 #5-b51 SEE CROSS SECT.

66 #6-b33 SEE CROSS SECT.

DETAIL "X"

15 SCUPPERS AT BACK FASCIA CURB - SEE FRAMING PLAN FOR SPACING

432 #5-d1 @ 12" CTRS. (INSIDE FACE OF PARAPET & CURB)

436 #4-d8 @ 12" CTRS. (OUTSIDE FACE OF PARAPET & CURB)

401 #6-a5 @ 13" CTRS. (TOP OF SLAB)

**6-#4 e bars in median parapet

DECK REINFORCEMENT PLAN - SPANS 1, 2, 3 & 4

SCALE: 1" = 15'-0"

N

Note!

REINFORCEMENT IN EAST CURB SAME AS WEST CURB.
REINFORCEMENT IN WEST PARAPET SAME AS EAST PARAPET.

FOR DETAIL OF SCUPPER SEE SHT. 63

BARS INDICATED THUS : 14 x 66 #6-b ETC. INDICATES 66 LINES OF BARS WITH 14 LENGTHS PER LINE.

FOR REINFORCEMENT BAR LIST SEE SHT. 28

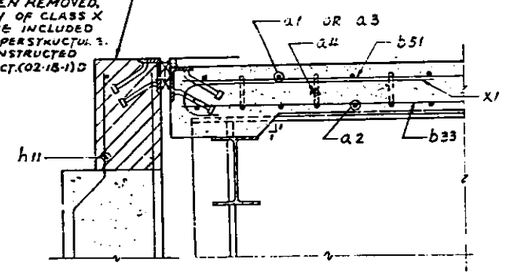
FOR TYP. CROSS SECTION & DETAILS AND FOR ADDITIONAL REINF. AT RAILPOSTS SEE SHT. 19.

FOR DECK WORK POINT DETAILS SEE SHT. 26

FOR ADDITIONAL NOTES SEE SHT. 32

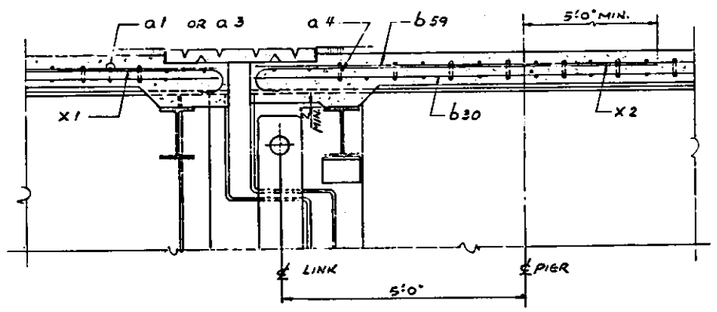
MIN. BAR LAP = 24 DIAMETER UNLESS NOTED.

Note "A":
HATCHED AREA TO BE POURED AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS X CONCRETE INCLUDED WITH SUPERSTRUCTURE TO BE CONSTRUCTED UNDER SECT. (02-18-1)D



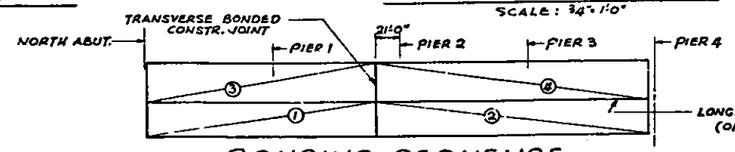
SECTION A-A

SCALE: 1" = 1'-0"

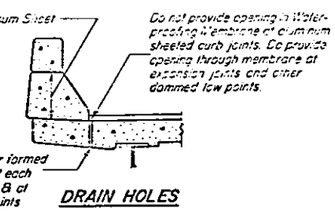


SECTION B-B

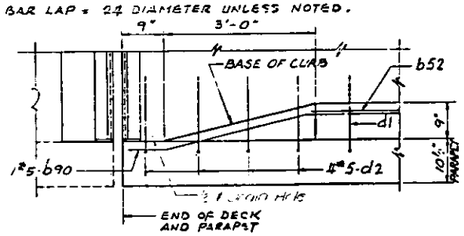
SCALE: ¾" = 1'-0"



POURING SEQUENCE



DRAIN HOLES



DETAIL "X"

SCALE: ¾" = 1'-0"

BILL OF MATERIAL

I T & M	UNIT	QUANTITY
CLASS X CONCRETE	CU. YDS.	905.3
REINFORCEMENT BARS	LBS.	239,030

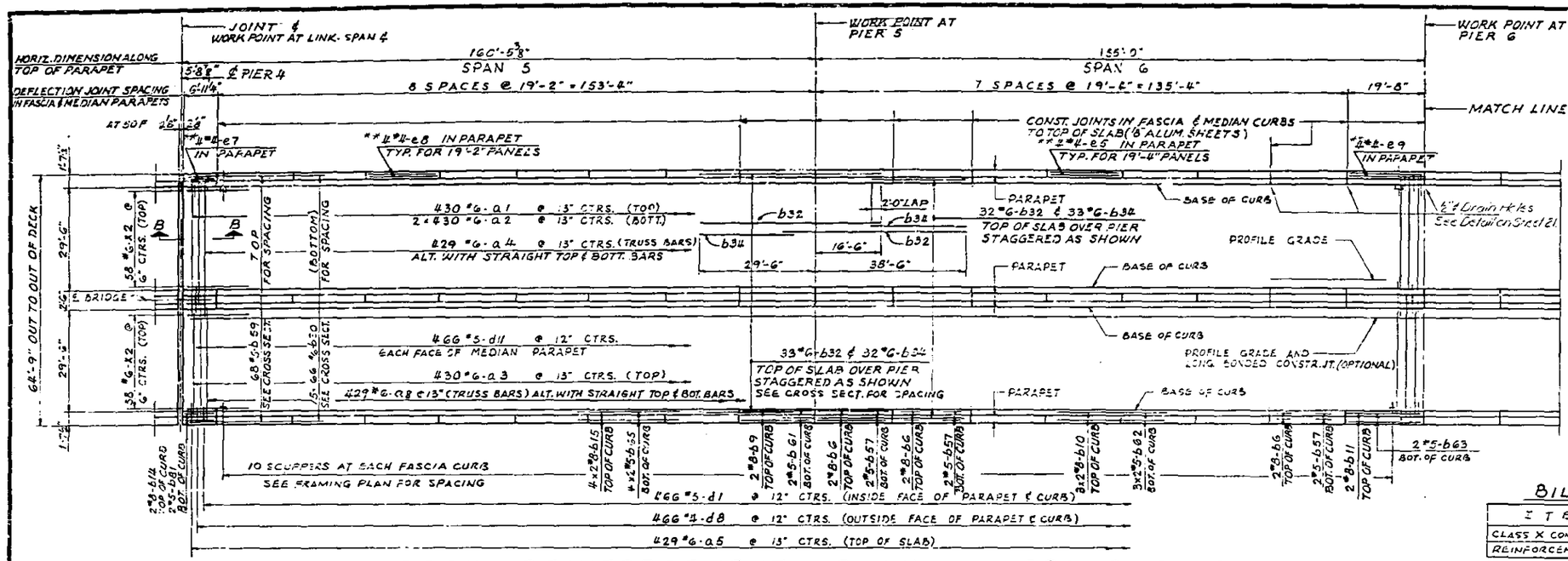
DECK REINFORCEMENT PLAN - SPANS 1, 2, 3 & 4
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

Rev. 2-18-76

21

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-18-1) D	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	63	22
F. AID & SEC. NO. & F. AID & REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(5)10	



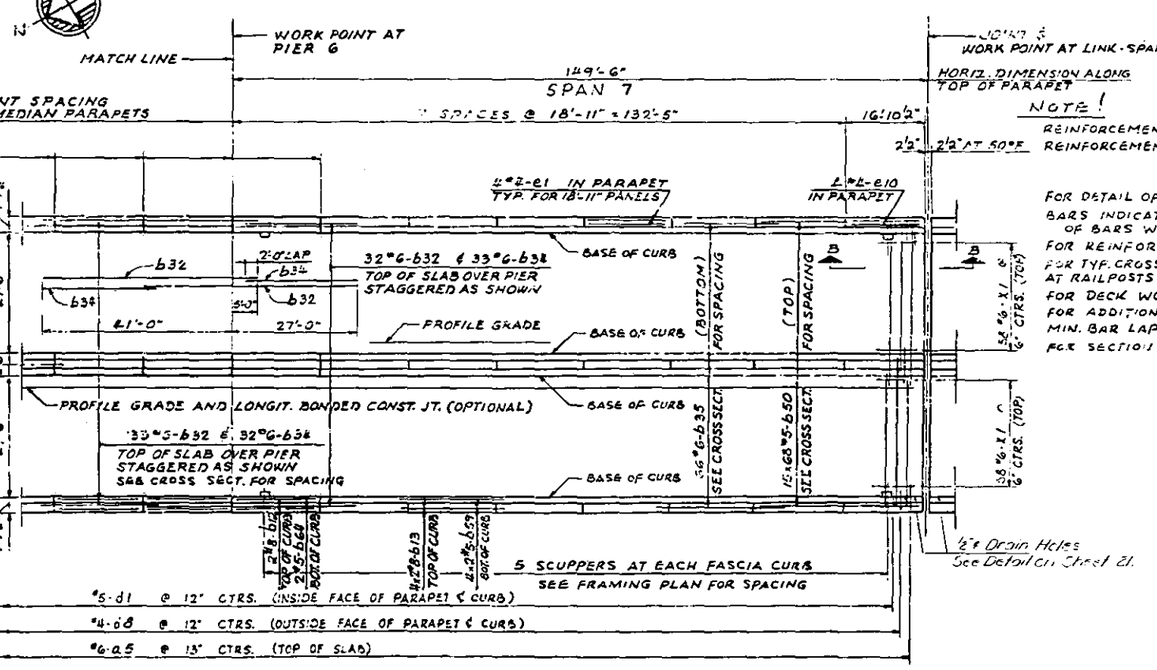
#6-#4 ϕ bars in median parapet

DECK REINFORCEMENT PLAN SPANS 5 & 6

SCALE: 1" = 15'-0"

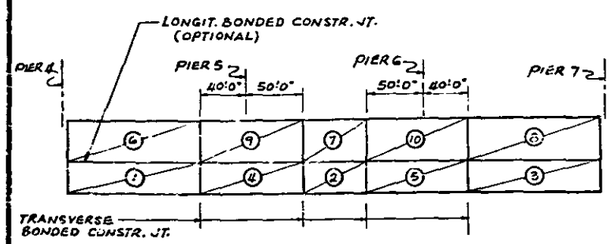
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CLASS X CONCRETE	CU.YDS.	1,238.7
REINFORCEMENT BARS	LBS.	257,410



DECK REINFORCEMENT PLAN - SPAN 7

SCALE: 1" = 15'-0"



POURING SEQUENCE

NOTE!
PORTIONS ① ② & ③ AND ⑥, ⑦ & ⑧ TO BE POURED IN SEQUENCE AS NOTED IN THE SAME DAY POUR.

NOTE!
REINFORCEMENT IN EAST CURB SAME AS WEST CURB.
REINFORCEMENT IN WEST PARAPET SAME AS EAST PARAPET.

FOR DETAIL OF SCUPPER SEE SHT. 63
BARS INDICATED THUS 15 x 66 #6-b ETC. INDICATES 66 LINES OF BARS WITH 15 LENGTHS PER LINE
FOR REINFORCEMENT BAR LIST SEE SHT. 28
FOR TYP. CROSS SECTION & DETAILS AND FOR ADDITIONAL REINF. AT RAILPOSTS SEE SHT. 19.
FOR DECK WORK POINT DETAILS SEE SHT. 26
FOR ADDITIONAL NOTES SEE SHT. 32
MIN. BAR LAP = 24 DIAMETER UNLESS NOTED.
FOR SECTION B-B SEE SHT. 21

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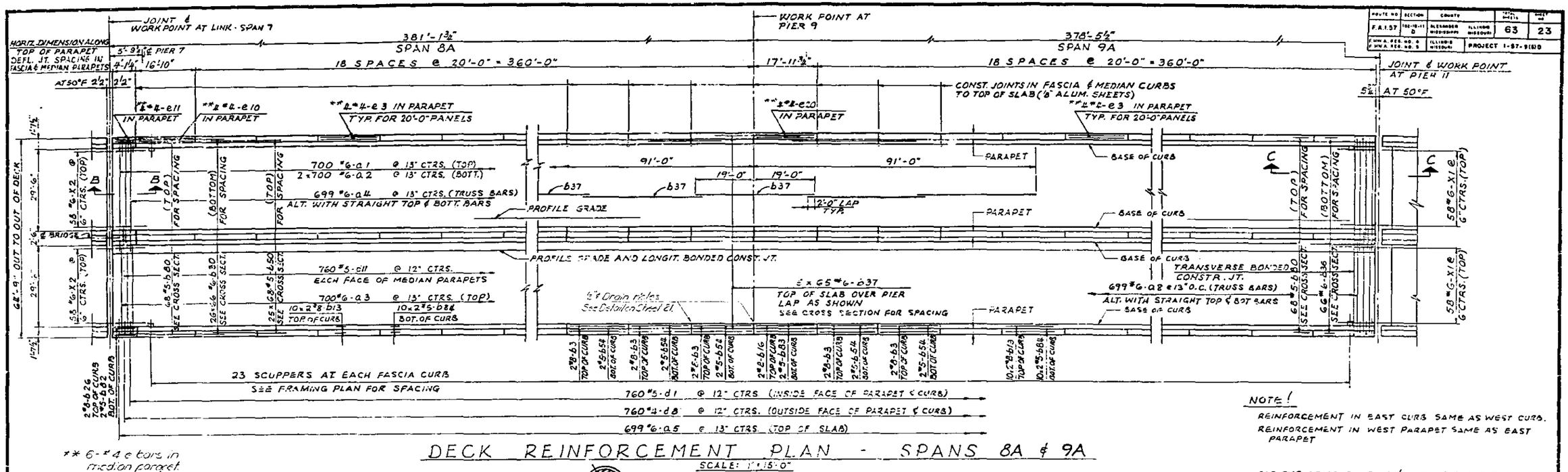
10 S. WABASH AVE. CHICAGO, ILLINOIS

DECK REINFORCEMENT PLAN - SPANS 5, 6 & 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9(5)10
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. 2-18-76

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1D	ALEXANDER	ILLINOIS	63	23
		MISSISSIPPI	MISSOURI		
F.H.W.A. REG. NO. 6 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)D	



** 6-#4 c bars in median parapet

DECK REINFORCEMENT PLAN - SPANS 8A & 9A

SCALE: 1"=15'-0"

N

NOTE!
REINFORCEMENT IN EAST CURB SAME AS WEST CURB.
REINFORCEMENT IN WEST PARAPET SAME AS EAST PARAPET

FOR TYP. CROSS SECTION & DETAILS SEE SHT. 19.

BARS INDICATED THUS: 26₆ 66 #6-b ETC. INDICATES 66 LINES OF BARS WITH 26 LENGTHS PER LINE

FOR REINFORCEMENT BAR LIST SEE SHT. 28

FOR ADDIT. PARAPET REINF. AT RAILPOST SEE FASCIA CURB DETAIL, SHT. 19

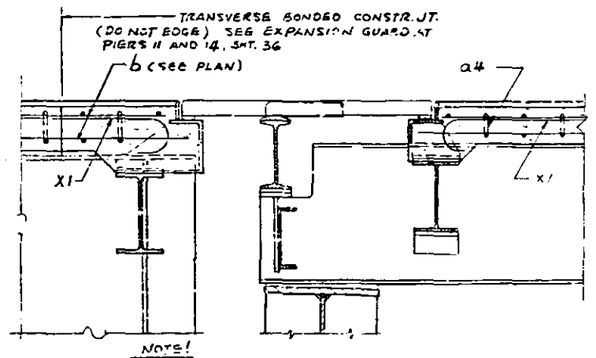
FOR DECK WORK POINT DETAILS SEE SHT. 26

FOR ADDITIONAL NOTES SEE SHT. 32

MIN. BAR LAP = 44 DIAMETER UNLESS NOTED.

FOR SECTION B-B SEE SHT. 21

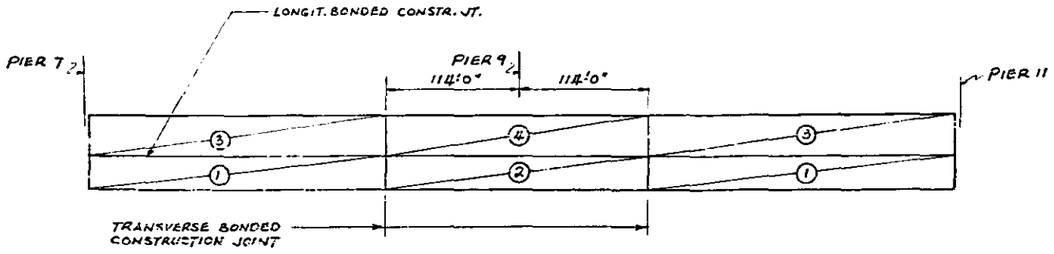
FOR DETAIL OF SCUPPER SEE SHT. 63



NOTE!
TRANSVERSE BONDED CONSTRUCTION JOINT SHALL BE IN ACCORDANCE WITH ARTICLE 504.13(b)(1,2 & 3)

SECTION C-C

SCALE: 1"=1'-0"



POURING SEQUENCE

NOTE:
PORTIONS (1) AND (3) TO BE POURED SIMULTANEOUSLY. SEE SPECIAL PROVISIONS.

BILL OF MATERIAL

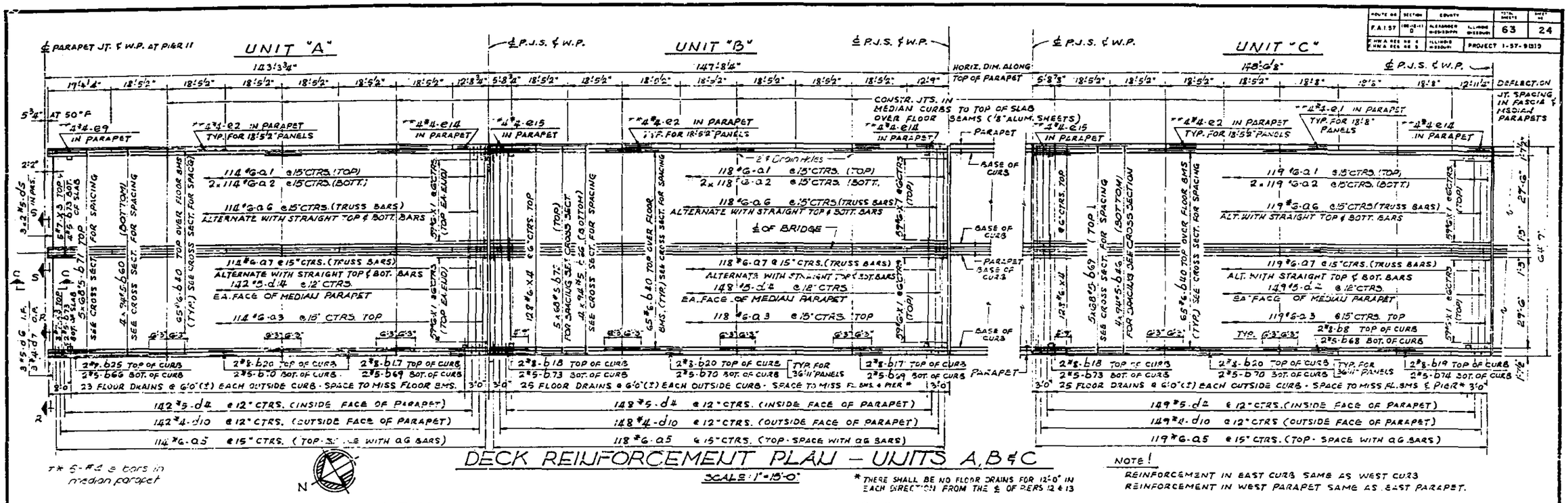
ITEM	UNIT	QUANTITY
CLASS X CONCRETE	CU.YDS.	1,320
REINFORCEMENT BARS	LBS.	815,000

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

DECK REINFORCEMENT PLAN- SPANS 8A & 9A
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)D
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

Rev. 2-18-76

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(102-1B-1) D	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	63	24
F.H.W.A. REG. NO. 6 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(13)	



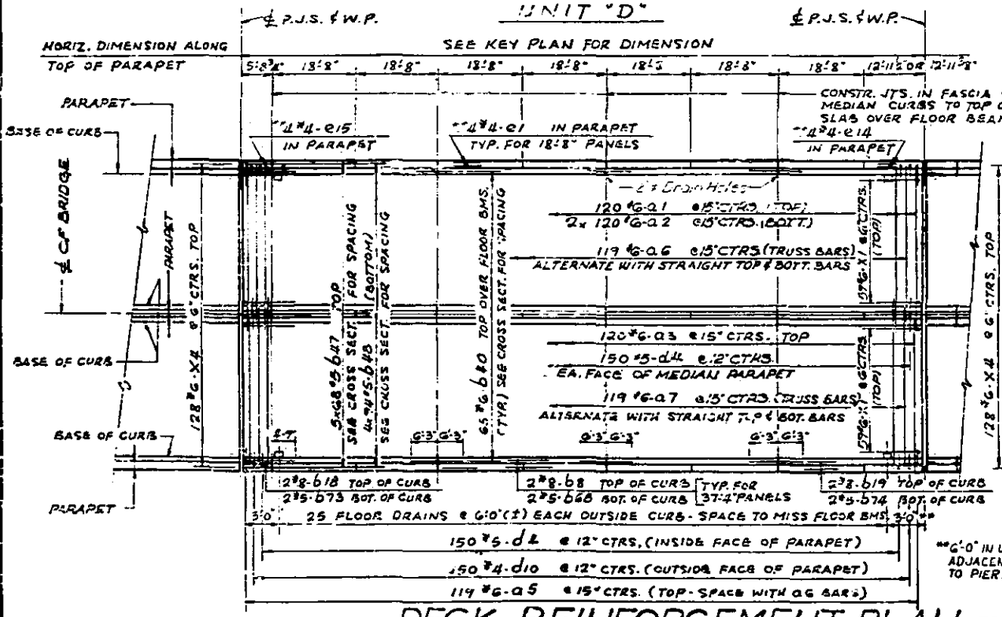
* 6 - #4 @ bars in median parapet

DECK REINFORCEMENT PLAN – UNITS A, B & C

SCALE: 1"=15'-0"

* THERE SHALL BE NO FLOOR DRAINS FOR 12'-0" IN EACH DIRECTION FROM THE ℄ OF PIERS 12 & 13

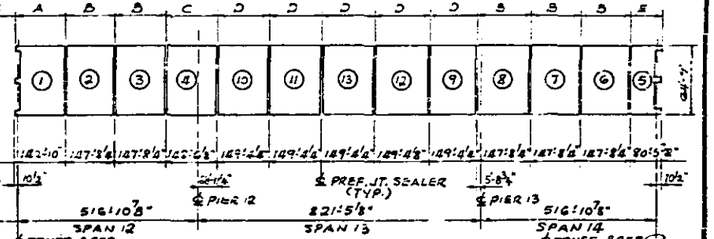
NOTE!
REINFORCEMENT IN EAST CURB SAME AS WEST CURB
REINFORCEMENT IN WEST PARAPET SAME AS EAST PARAPET.



DECK REINFORCEMENT PLAN – UNITS D & E

SCALE: 1"=15'-0"

BARS INDICATED THUS : 4 - 7 #5-b ETC. INDICATES 94 LINES OF BARS WITH 4 LENGTHS PER LINE.



KEY PLAN AND POURING SEQUENCE

(SEE DECK WORK POINTS, SHT. 27, FOR ADDITIONAL DIMENSIONS)

NOTES:
- FOR TYP. CROSS SECTION & DETAILS, SECT. AT PREF. JT. SEALER, ADDIT. REINF. AT RAILPOSTS, DETAIL OF DRAIN AND FOR SECTIONS R-R & S-S SEE SHT. 20.
- FOR DECK WORK POINTS SEE SHT. 27
- FOR REINFORCEMENT BAR LIST SEE SHT. 29
- MIN. BAR LAP = 24 DIAMETER UNLESS NOTED.
- FOR SECT. C-C SEE SHT. 23

For ℄ Crain Hole Details see Sheet 21.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY SPAN 12	SPAN 13	SPAN 14
CLASS X CONCRETE	CU.YDS.	@Δ 1,131.2	1,141.4 Δ	(010.5
REINFORCING BARS	LBS.	@ 304,540	289,300	274,940

@ THE WHOLE OF UNIT "C" IS INCLUDED WITH SPAN 12
Δ WIND TRANSFER BLOCK INCLUDED

ALFRED BENESCH & COMPANY
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10 S. WABASH AVE. CHICAGO, ILLINOIS

DECK REINFORCEMENT PLAN - SPANS 12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. 2-18-76

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-1 D	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	63	25
FHWA REG. NO. 6 FHWA REG. NO. 5		ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		PROJECT I-57-9(5)0	

DEFLECTION JOINT SPACING IN FASCIA & MEDIAN PARAPETS

JOINT & WORK POINT AT PIER 14

WORK POINT AT PIER 15

WORK POINT AT PIER 16

WORK POINT AT PIER 17
HORIZ. DIMENSION ALONG TOP OF PARAPET

114'-0" SPAN 15 — 18½" + 5 SPACES @ 19'-1" = 95'-5"

114'-0⅛" SPAN 16 — 9'-0⅛" + 5 SPACES @ 19'-0" = 95'-0"

114'-0" SPAN 17 — 6 SPACES @ 19'-0" = 114'-0"

MATCH LINE

5¾" 5¾" AT 50°F

**#4@4-E19 IN PARAPET

**#4@4-E8 IN PARAPET TYP. FOR 19'-1" PANELS

**#4@4-E8 IN PARAPET TYP. FOR 19'-0" PANELS

CONSTR. JOINTS IN FASCIA & MEDIAN CURBS TO TOP OF SLAB ('8" ALUM. SHEET)

TRANSVERSE BONDED CONSTR. JT.

#4@4-E9 IN PARAPET

½" ø Drain Holes See Detail on Sheet 21

526 #6-a1 @ 13" CTRS. (TOP)
2 · 526 #6-a2 @ 13" CTRS. (BOTT.)
525 #6-a4 @ 13" CTRS. (TRUSS BARS)
ALT. WITH STRAIGHT TOP & BOTT. BARS

65 #6-b45
TOP OF SLAB OVER PIER SEE CROSS SECTION FOR SPACING.

65 #6-b22
TOP OF SLAB OVER PIER SEE CROSS SECTION FOR SPACING

65 #6-b24
TOP OF SLAB OVER PIER SEE CROSS SECTION FOR SPACING

PARAPET — BASE OF CURB — PROFILE GRADE

64'-5" OUT TO OUT OF DECK

℄ BRIDGE

36 #6-X1 @ 6" CTRS. (TOP)

19 #6-b10 SEE CROSS SECT. FOR SPACING (TOP)

19 #6-b23 SEE CROSS SECT. FOR SPACING (BOTTOM)

526 #6-a3 @ 13" CTRS. (TOP)
569 #5-d11 @ 12" CTRS.
EACH FACE OF MEDIAN PARAPET
525 #6-a8 @ 13" CTRS. (TRUSS BARS)
ALT. WITH STRAIGHT TOP & BOT. BARS

19'-6" — 25'-6" — 21'-0" — 18'-0" — 21'-0"

2#8-b5 TOP OF CURB
2#5-b61 BOT. OF CURB
3×2#8-b22 TOP OF CURB
3×2#5-b77 BOT. OF CURB
2#8-b9 TOP OF CURB
2#5-b61 BOT. OF CURB
2×2#8-b23 TOP OF CURB
2×2#5-b78 BOT. OF CURB
2#8-b9 TOP OF CURB
2#5-b61 BOT. OF CURB
2×2#8-b4 TOP OF CURB
2#5-b61 BOT. OF CURB
2#8-b9 TOP OF CURB
2#5-b21 BOT. OF CURB

11 SCUPPERS AT EACH FASCIA CURB
SEE FRAMING PLAN FOR SPACING

565 #5-d1 @ 12" CTRS. (INSIDE FACE OF PARAPET & CURB)
569 #4-d8 @ 12" CTRS. (OUTSIDE FACE OF PARAPET & CURB)
525 #6-a5 @ 13" CTRS. (TOP OF SLAB)

**5-#4 e bars in median parapet.

DECK REINFORCEMENT PLAN SPANS 15, 16 & 17

SCALE: 1" = 15'-0"

N

NOTE!
REINFORCEMENT IN EAST CURB SAME AS WEST CURB.
REINFORCEMENT IN WEST PARAPET SAME AS EAST PARAPET.

FOR TYP. CROSS SECTION & DETAILS & ADDIT. REINF. AT RAILPOSTS SEE SHT. 19
BARS INDICATED THUS: 19×66 #6-b ETC. INDICATES 66 LINES OF BARS WITH 19 LENGTHS PER LINE.
FOR REINFORCEMENT BAR LIST SEE SHT. 28
FOR DETAIL OF SCUPPER SEE SHT. 63
FOR DECK WORK POINT DETAILS SEE SHT. 26
FOR SECTION C-C SEE SHT. 23
MIN. BAR LAP = 24 DIAMATER UNLESS NOTED.
FOR ADDITIONAL NOTES SEE SHT. 32

WORK POINT AT PIER 17

HORIZ. DIM. ALONG TOP OF PARAPET

114'-0" SPAN 18 — DEFLECTION JOINT SPACING IN FASCIA & MEDIAN PARAPETS — 6 SPACES @ 19'-0" = 114'-0"

WORK POINT AT PIER 18

113'-5¼" SPAN 19 — 5 SPACES @ 19'-5" = 97'-1"

W.P. & END OF PARAPET AT SOUTH ABUT.

16'-4¼"

MATCH LINE

CONSTR. JOINTS IN FASCIA & MEDIAN CURBS TO TOP OF SLAB ('8" ALUM. SHEET)

**#4@4-E8 IN PARAPET TYPICAL FOR 19'-0" PANEL

**#4@4-E5 IN PARAPET TYPICAL FOR 19'-5" PANELS

**#4@4-E13 IN PARAPET

3½" JT. @ 50°F

½" ø Drain Holes See Detail on Sheet 21

#5-a1 @ 13" CTRS. (TOP)
#5-a2 @ 13" CTRS. (BOTT.)
#6-a4 @ 13" CTRS. (TRUSS BARS)
ALT. WITH STRAIGHT TOP & BOTT. BARS

65 #6-b45
TOP OF SLAB OVER PIER SEE CROSS SECTION FOR SPACING

2-4#6-h11

D — D

38 #6-X1 @ 6" CTRS. (TOP)

38 #6-X1 @ 6" CTRS. (BOTTOM)

SEE SHT. 59 FOR DET. AT MEDIAN

2×2#5-d11

64'-5" OUT TO OUT OF DECK

℄ BRIDGE

#5-d11 @ 12" CTRS. EA. FACE OF MEDIAN PARAPET

#6-a3 @ 13" CTRS. (TRUSS BARS) ALT. WITH STRAIGHT TOP & BOT. BARS

#6-a3 @ 13" CTRS. (TOP)

25'-0" — 19'-6"

2#5-b61 BOT. OF CURB
2#5-b57 TOP OF CURB
2#8-b6 TOP OF CURB
3×2#8-b24 TOP OF CURB
3×2#5-b79 BOT. OF CURB
19×66 #6-b30 SEE CROSS SECT.
68 #5-b54 SEE CROSS SECT.
38 #6-X1 @ 6" CTRS. (TOP)

DETAIL "Y"

7 SCUPPERS AT EACH FASCIA CURB
SEE FRAMING PLAN FOR SPACING

2×2#8-b23 TOP OF CURB
2×2#5-b78 BOT. OF CURB
2#8-b9 TOP OF CURB

#5-d1 @ 12" CTRS. (INSIDE FACE OF PARAPET & CURB)
#4-d8 @ 12" CTRS. (OUTSIDE FACE OF PARAPET & CURB)
#6-a5 @ 13" CTRS. (TOP OF SLAB)

DECK REINFORCEMENT PLAN SPANS 18 & 19

SCALE: 1" = 15'

See Sheet 33A for Neoprene Expansion Joint Det.

654 — a1 OR a3 — a4 — h11 — b30 — X1 — See Note "A" Sect. A-A Sht. 21

SECTION D-D

679 — BASE OF CURB — 3'-0" — 1'-3" — d1 — #5-b91 — 4#5-d2 — 2#5-d3 IN PAIRS — 9" — 10½" PARAPET — END OF PARAPET AND DECK

DETAIL "Y"

SCALE: ¾" = 1'-0"

SCALE: 1" = 1'-0"

PIER 14 — PIER 15 — 73'-0" — PIER 16 — PIER 17 — 125'-0" — PIER 18 — S. ABUT.

LONGIT BONDED CONST. JT. (OPTIONAL)

TRANSVERSE BONDED CONSTRUCTION JOINT

POURING SEQUENCE

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CLASS X CONCRETE	CU.YDS.	1,186.9
REINFORCEMENT BARS	LBS.	314,920

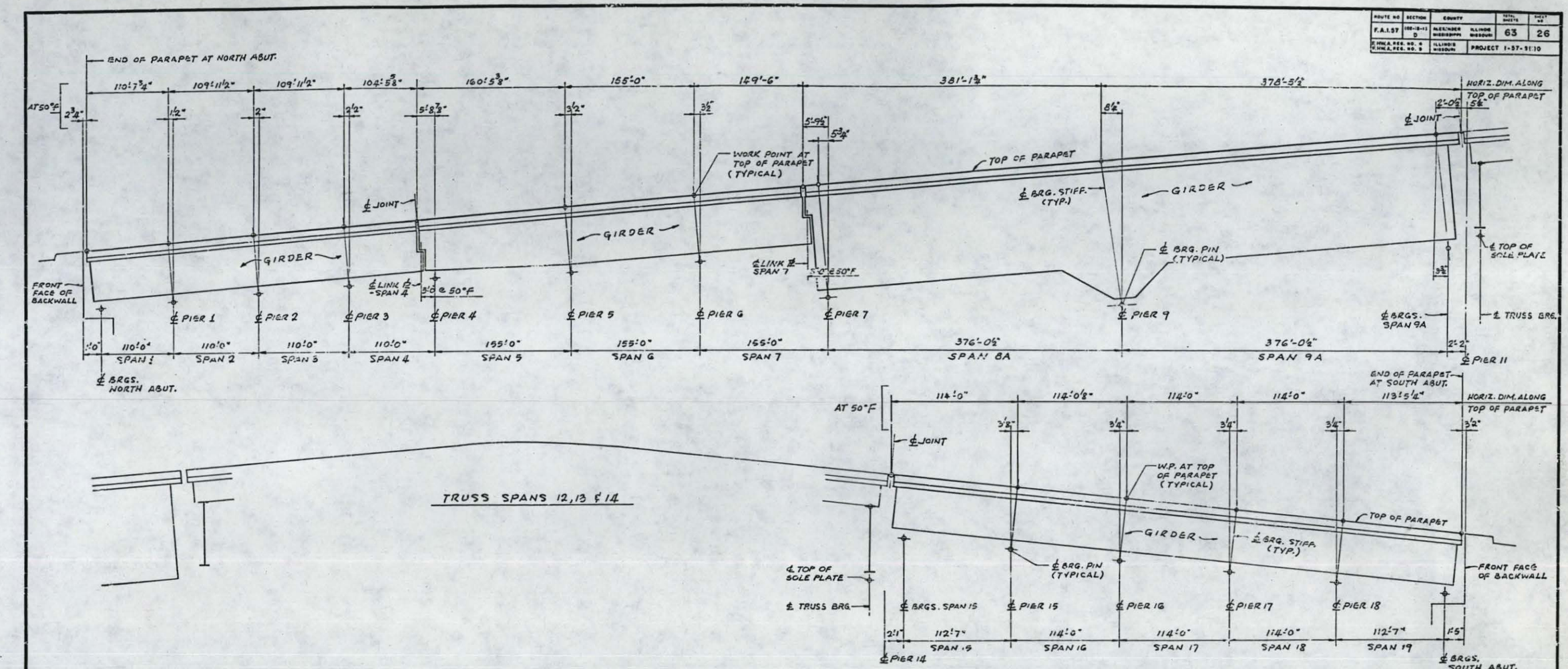
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

DECK REINFORCEMENT PLAN - SPANS 15 TO 19
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

REV. 2-18-76

X

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	26
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI		PROJECT I-57-9(5)0	

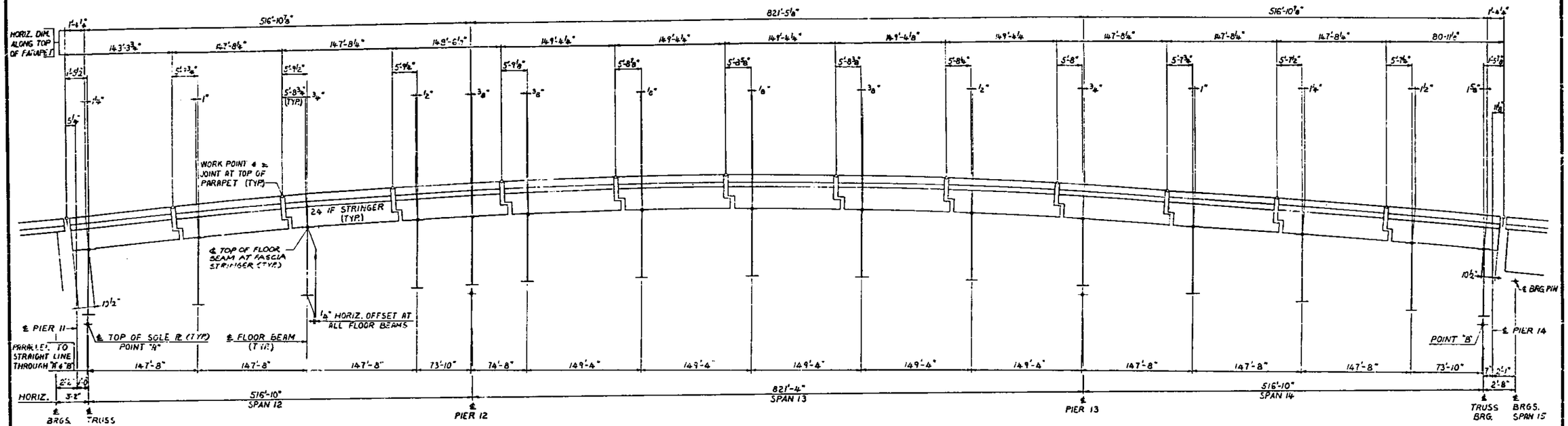


DECK WORK POINTS

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

DECK WORK POINTS - SPANS 1 TO 9A & 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	27
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI		PROJECT I-57-9(5)O	



DECK WORK POINTS
SPANS 12, 13 & 14

NOTES:-ALL FLOOR BEAMS NOT SHOWN
-ALL DIMENSIONS AT 50°F
-ALL FLOOR BEAMS ARE PERPENDICULAR TO A STRAIGHT LINE THROUGH POINTS "A" & "B".

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

DECK WORK POINTS – SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)O
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

REINFORCEMENT BAR LISTS
SUPERSTRUCTURE

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-18-00 D	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	63	28
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-8(51)0	

SPANS 1 TO 4 — STRAIGHT

NO REQUIRED	SIZE	LENGTH	MARK	TYPE
18	#8	32'-0"	b1	
6	#8	18'-6"	b2	
12	#8	19'-9"	b3	
24	#8	41'-0"	b4	
12	#8	9'-9"	b5	
6	#8	19'-0"	b6	
12	#8	43'-6"	b7	
401	#6	35'-6"	a1	
802	#6	32'-6"	a2	
401	#6	29'-3"	a3	
924	#6	30'-0"	b30	
65	#6	32'-6"	b31	
130	#6	46'-0"	b32	
66	#6	36'-0"	b33	
6	#6	32'-0"	b11	
952	#5	30'-0"	b50	
136	#5	16'-6"	b51	
18	#5	31'-6"	b52	
6	#5	18'-6"	b53	
12	#5	19'-9"	b54	
24	#5	40'-6"	b55	
12	#5	9'-9"	b56	
6	#5	19'-0"	b57	
12	#5	43'-0"	b58	
70	#4	18'-6"	e1	
140	#4	19'-9"	e3	
28	#4	9'-9"	e4	
70	#4	19'-0"	e5	
14	#4	18'-9"	e6	
14	#4	6'-9"	e7	

BENT

NO REQUIRED	SIZE	LENGTH	MARK	TYPE	A	S	H	O	W	N	
400	#6	36'-9"	a4	A	S		S	H	O	W	N	
802	#6	34'-9"	a5	3		2'-6"	1'-3"				2"	1'-3"
400	#6	31'-3"	a8	A	S		S	H	O	W	N	
232	#6	4'-6"	x1	1	8"	3'-10"						6"
2	#5	5'-0"	b90	3		7"	3'-1"	1'-4"			7"	3'-0"
864	#5	4'-0"	d1	14	1'-1"	2'-2"	9"				1'-10"	1'-2"
8	#5	3'-9"	d2	2	1'-0"	2'-9"						
872	#4	4'-0"	d8	3		2'-9"	1'-3"				1'-2½"	4"
180	#4	2'-3"	d9	2	10½"	6½"				10"		
872	#5	4'-5"	d11	18	1'-6"	2'-2"	9"		5½"		1'-10"	1'-2"

SPANS 5 TO 8 — STRAIGHT

NO REQUIRED	SIZE	LENGTH	MARK	TYPE
18	#8	19'-9"	b6	
6	#8	18'-9"	b9	
18	#8	27'-0"	b10	
6	#8	19'-3"	b11	
6	#8	18'-6"	b12	
24	#8	38'-0"	b13	
8	#8	6'-6"	b14	
24	#8	35'-0"	b15	
430	#6	35'-6"	a1	
860	#6	32'-6"	a2	
430	#6	29'-3"	a3	
990	#6	30'-0"	b30	
130	#6	46'-0"	b32	
130	#6	28'-0"	b34	
66	#6	37'-3"	b35	
1020	#5	30'-0"	b50	
18	#5	19'-0"	b57	
92	#5	33'-6"	b59	
6	#5	18'-9"	b61	
18	#5	26'-6"	b62	
6	#5	19'-3"	b63	
6	#5	18'-6"	b64	
24	#5	34'-3"	b65	
8	#5	6'-6"	b81	
70	#4	18'-6"	e1	
98	#4	19'-0"	e5	
14	#4	6'-9"	e7	
112	#4	18'-9"	e8	
14	#4	19'-3"	e9	
14	#4	16'-6"	e10	

BENT

NO REQUIRED	SIZE	LENGTH	MARK	TYPE	A	S	H	O	W	N	
429	#6	36'-9"	a4	A	S		S	H	O	W	N	
858	#6	34'-9"	a5	3		2'-6"	1'-3"				2"	1'-3"
429	#6	31'-6"	a8	A	S		S	H	O	W	N	
116	#6	4'-6"	x1	1	8"	3'-10"						6"
116	#6	11'-0"	x2	1	8"	10'-4"						6"
932	#5	4'-0"	d1	18	1'-1"	2'-2"	9"				1'-10"	1'-2"
932	#4	4'-0"	d8	3		2'-9"	1'-3"				1'-2½"	4"
196	#4	2'-3"	d9	2	10½"	6½"				10"		
932	#5	4'-5"	d11	18	1'-6"	2'-2"	9"		5½"		1'-10"	1'-2"

SPANS 9A TO 14 — STRAIGHT

NO REQUIRED	SIZE	LENGTH	MARK	TYPE
30	#8	19'-9"	b3	
120	#8	34'-0"	b13	
6	#8	17'-9"	b16	
8	#8	3'-9"	b26	
700	#6	35'-6"	a1	
1400	#6	32'-6"	a2	
700	#6	29'-3"	a3	
1716	#6	30'-0"	b30	
66	#6	18'-0"	b36	
325	#6	36'-0"	b37	
1700	#5	30'-0"	b50	
30	#5	19'-9"	b54	
136	#5	21'-0"	b60	
8	#5	3'-9"	b82	
6	#5	17'-9"	b83	
120	#5	33'-3"	b84	
70	#4	19'-9"	e3	
28	#4	16'-6"	e10	
14	#4	3'-9"	e11	
112	#4	17'-9"	e20	

BENT

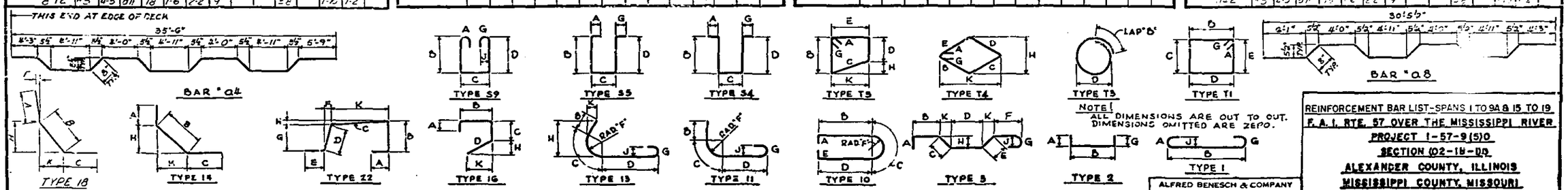
NO REQUIRED	SIZE	LENGTH	MARK	TYPE	A	S	H	O	W	N	
699	#6	36'-9"	a4	A	S		S	H	O	W	N	
1398	#6	34'-9"	a5	3		2'-6"	1'-3"				2"	1'-3"
699	#6	31'-6"	a8	A	S		S	H	O	W	N	
116	#6	4'-6"	x1	1	8"	3'-10"						6"
116	#6	11'-0"	x2	1	8"	10'-4"						6"
1520	#4	4'-0"	d8	3		2'-9"	1'-3"				1'-2½"	4"
304	#4	2'-3"	d9	2	10½"	6½"				10"		
1520	#5	4'-5"	d11	18	1'-6"	2'-2"	9"		5½"		1'-10"	1'-2"

SPANS 15 TO 19 — STRAIGHT

NO REQUIRED	SIZE	LENGTH	MARK	TYPE
6	#8	19'-0"	b6	
82	#8	18'-9"	b9	
18	#8	32'-9"	b22	
36	#8	39'-0"	b23	
18	#8	32'-6"	b28	
526	#6	35'-6"	a1	
1052	#6	32'-6"	a2	
526	#6	29'-3"	a3	
1276	#6	30'-0"	b30	
66	#6	21'-0"	b43	
130	#6	39'-0"	b44	
130	#6	45'-0"	b45	
8	#6	32'-0"	b11	
1312	#5	30'-0"	b50	
68	#5	19'-9"	b54	
6	#5	19'-0"	b57	
82	#5	18'-9"	b61	
18	#5	32'-3"	b77	
36	#5	38'-6"	b78	
18	#5	32'-0"	b79	
0	#4	19'-0"	e5	
82	#4	18'-9"	e8	
1	#4	16'-0"	e13	
1	#4	17'-6"	e19	

BENT

NO REQUIRED	SIZE	LENGTH	MARK	TYPE	A	S	H	O	W	N	
525	#6	36'-9"	a4	A	S		S	H	O	W	N	
1050	#6	34'-9"	a5	3		2'-6"	1'-3"				2"	1'-3"
525	#6	31'-6"	a8	A	S		S	H	O	W	N	
232	#6	4'-6"	x1	1	8"	3'-10"						6"
2	#5	5'-6"	b91	3		1'-1"	3'-1"	1'-4"			7"	3'-0"
1130	#5	4'-0"	d1	14	1'-1"	2'-2"	9"				1'-10"	1'-2"
8	#5	3'-9"	d2	2	1'-0"	2'-9"						
4	#5	3'-0"	d3	2		2'-9"	7"					
1138	#4	4'-0"	d8	3		2'-9"	1'-3"				1'-2½"	4"
240	#4	2'-3"	d9	2	10½"	6½"				10"		
1122	#5	4'-5"	d11	18	1'-6"	2'-2"	9"		5½"		1'-10"	1'-2"



REINFORCEMENT BAR LIST-SPANS 1 TO 9A & 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9(5)0
SECTION (02-18-00)
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
100 E. WABASH AVE. CHICAGO, ILLINOIS

Rev. 2-18-76

REINFORCEMENT BAR LISTS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-18-11 D	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	ILLINOIS MISSOURI	G3	29
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5			PROJECT I-57-9(5)0		

SPAN 12

NO REQUIRED	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	K	J
STRAIGHT														
6	#8	37-0	b8											
18	#8	30-9	b17											
18	#8	5-3	b18											
6	#8	31-3	b19											
60	#8	36-9	b20											
6	#8	37-9	b25											
469	#6	35-6	a1											
938	#6	32-6	a2											
469	#6	29-3	a3											
780	#6	12-6	b40											
376	#5	38-0	b46											
376	#5	36-3	b60											
758	#5	37-9	b66											
6	#5	37-9	b68											
358	#5	30-9	b69											
60	#5	36-9	b70											
340	#5	29-3	b71											
680	#5	30-6	b72											
26	#5	5-3	b73											
6	#5	31-3	b74											
42	#4	18-6	e1											
336	#4	18-3	e2											
14	#4	19-3	e9											
56	#4	12-6	e14											
42	#4	5-3	e15											
BENT														
11	#7	7-9	x3	1	10"	3-11								7"
938	#6	3-9	a5	3		2-6	1-3					2"	1-3	
469	#6	36-9	a6	AS	SHOWN									
469	#6	32-6	a7	AS	SHOWN									
590	#6	4-6	x1	1	8"	3-10								6"
384	#6	11-0	x4	1	8"	10-4								6"
1174	#5	3-9	d4	14	1-1	2-1	7"					1-9	1-2	
6	#5	5-2	d5	15	1-6	1-3	7"	1-10		3'6"		1-02	8½"	
6	#5	4-3	d6	17	1-1	1-3	9"	1-2	2½"	1-2		1-02	8½"	
6	#4	3-11	d7	3		2-9	1-2					1-2	2½"	
252	#4	2-3	d9	2	10"	6½"					10½"			
1174	#4	4-9	d10	3		2-9	2-0					1-11½	4½"	
1174	#5	6'2"	d14	19	1'6"	2'1"	1"			5'6"		1'9"	1'2"	

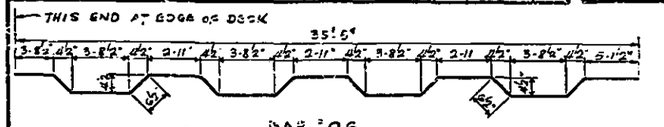
SPAN 13

NO REQUIRED	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	K	J
STRAIGHT														
90	#8	37-0	b8											
30	#8	5-3	b18											
30	#8	31-3	b19											
600	#6	35-6	a1											
1200	#6	32-6	a2											
600	#6	29-3	a3											
975	#6	12-6	b40											
1700	#5	31-0	b47											
1820	#5	38-3	b48											
90	#5	37-0	b68											
30	#5	5-3	b73											
30	#5	31-3	b74											
480	#4	18-6	e1											
70	#4	12-6	e14											
70	#4	5-3	e15											
BENT														
1170	#5	3-9	a5	3		2-6	1-3					2"	1-3	
595	#6	36-9	a6	AS	SHOWN									
595	#6	32-6	a7	AS	SHOWN									
590	#6	4-6	x1	1	8"	3-10								6"
640	#6	11-0	x4	1	8"	10-4								6"
1300	#5	3-9	d4	14	1-1	2-1	7"					1-9	1-2	
320	#4	2-3	d9	2	10"	6½"					10½"			
1500	#4	4-9	d10	3		2-9	2-0					1-11½	4½"	
1500	#5	6'2"	d14	19	1'6"	2'1"	1"			5'6"		1'9"	1'2"	

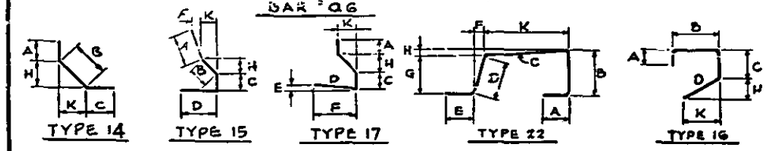
SPAN 14

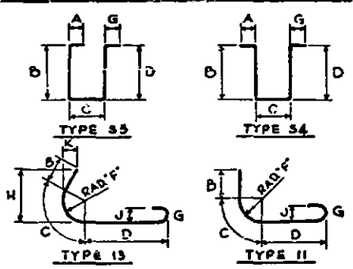
NO REQUIRED	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	K	J
STRAIGHT														
18	#8	30-9	b17											
24	#8	5-3	b18											
60	#8	36-9	b20											
6	#8	37-9	b25											
417	#6	35-6	a1											
834	#6	32-6	a2											
417	#6	29-3	a3											
650	#6	12-6	b40											
188	#5	41-0	b49											
1134	#5	57-9	b66											
18	#5	30-9	b69											
30	#5	36-9	b70											
1020	#5	30-6	b72											
32	#5	5-3	b73											
209	#5	27-0	b75											
336	#4	18-3	e2											
14	#4	19-3	e9											
42	#4	12-6	e14											
56	#4	5-3	e15											
BENT														
11	#7	7-9	x3	1	10"	6-11								
832	#6	3-9	a5	3		2-6	1-3					2"	1-3	
416	#6	36-9	a6	AS	SHOWN									
416	#6	32-6	a7	AS	SHOWN									
472	#6	4-6	x1	1	8"	3-10								6"
512	#6	11-0	x4	1	8"	10-4								6"
1048	#5	3-9	d4	14	1-1	2-1	7"					1-9	1-2	
6	#5	5-2	d5	15	1-6	1-3	7"	1-10		3'6"		1-02	8½"	
6	#5	4-3	d6	17	1-1	1-3	9"	1-2	2½"	1-2		1-02	8½"	
6	#4	3-11	d7	3		2-9	1-2					1-2	2½"	
228	#4	2-3	d9	2	10"	6½"					10½"			
1046	#4	4-7	d10	3		2-9	2-0					1-11½	4½"	
1046	#5	6'2"	d14	19	1'6"	2'1"	1"			5'6"		1'9"	1'2"	

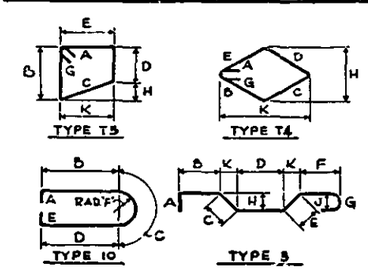
NO REQUIRED	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	K	J

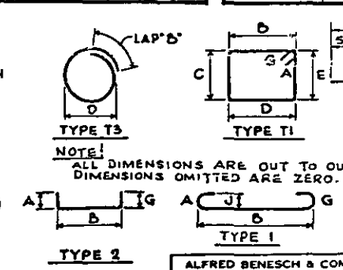


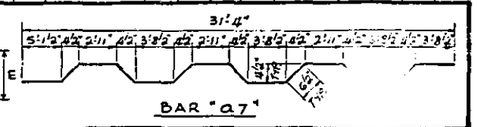
BAR "a6"











BAR "a7"

NOTE! ALL DIMENSIONS ARE OUT TO OUT. DIMENSIONS OMITTED ARE ZERO.

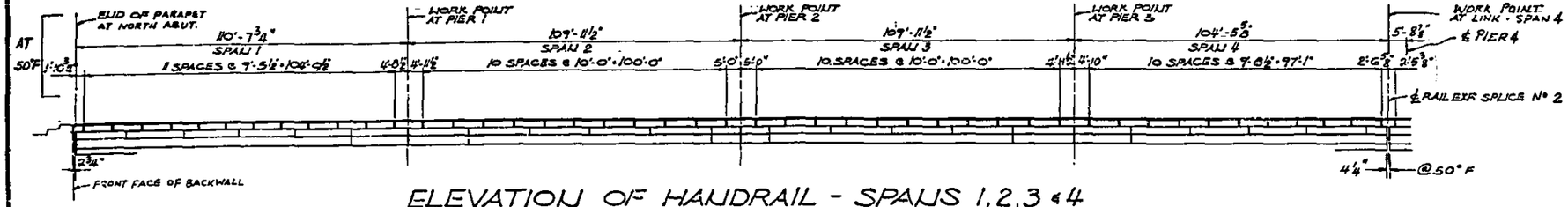
Note: See sheet 28 for detail of Type 18 bar.

REINFORCEMENT BAR LIST - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION 102-18-0D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

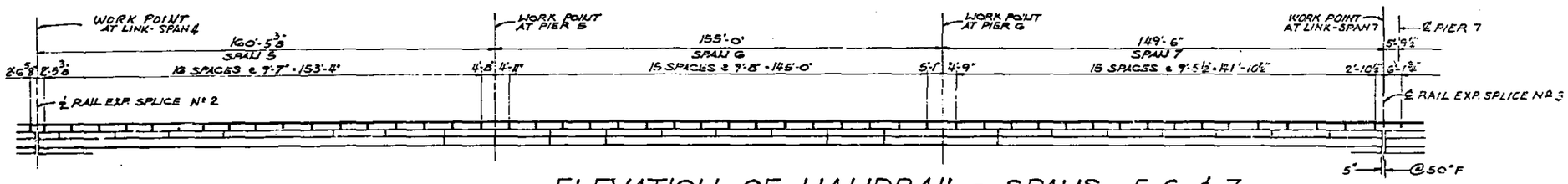
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

Rev. 3-8-76

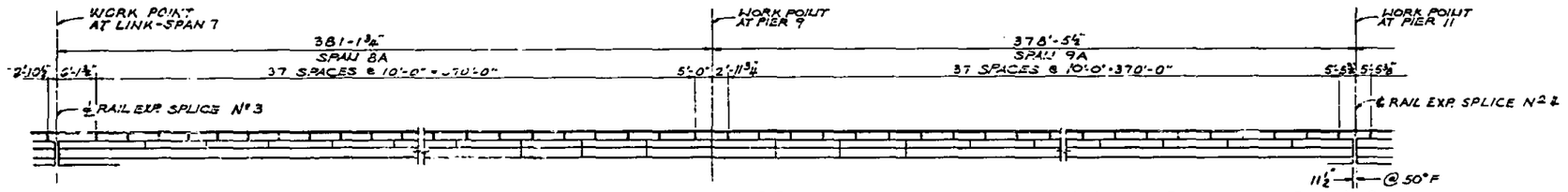
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1D	ALEXANDER, ILLINOIS / MISSISSIPPI, MISSOURI		63	30
F. HWY. A. REG. NO. 0 / HWY. A. REG. NO. 0		ILLINOIS / MISSOURI	PROJECT I-57-9(5)10		



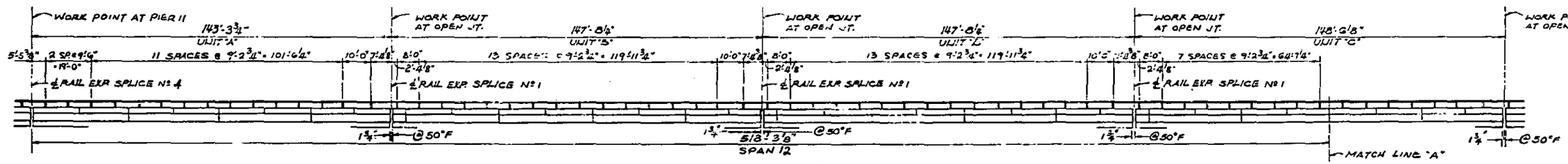
ELEVATION OF HANDRAIL - SPANS 1, 2, 3 & 4



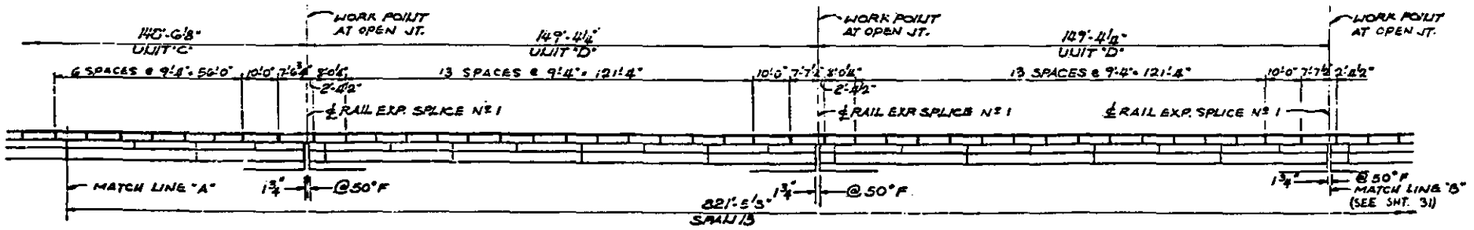
ELEVATION OF HANDRAIL - SPANS 5, 6 & 7



ELEVATION OF HANDRAIL - SPANS 8A & 9A



ELEVATION OF HANDRAIL - SPAN 12



PART ELEVATION OF HANDRAIL - SPAN 13

NOTES:

ELEVATIONS OF HANDRAIL SHOWN ARE SAME FOR EAST AND WEST FASCIA CURBS.

DIMENSIONS ARE GIVEN HORIZONTALLY ALONG TOP OF PARAPET.

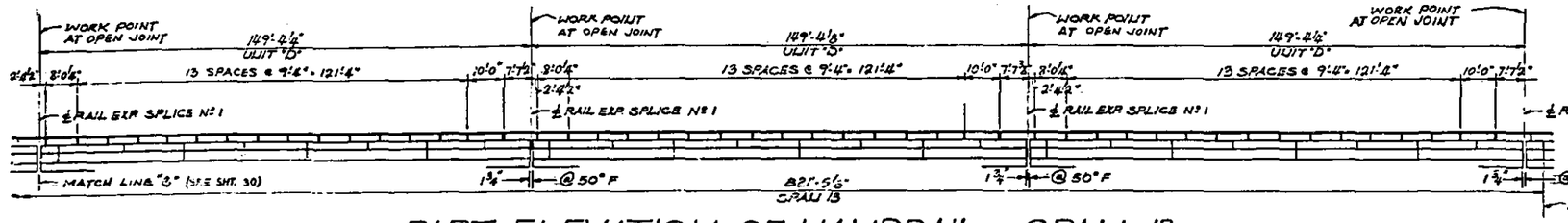
FOR ALUMINUM RAILING DETAILS SEE SHT. 32

FOR DECK WORK POINTS SEE SHT'S 26 & 27

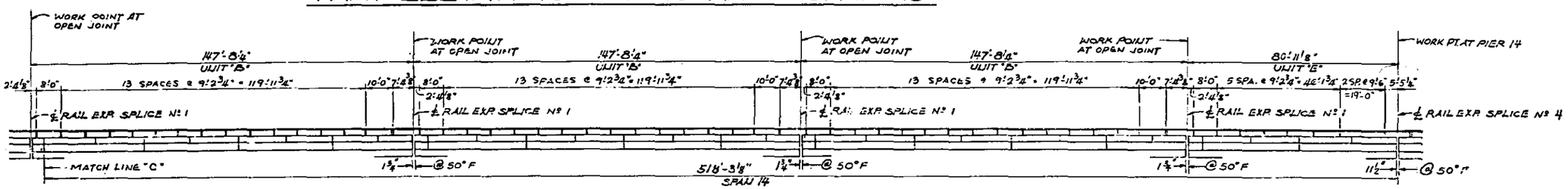
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

HANDRAIL ELEVATIONS - SPANS 1 TO 13
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION 102-1B-1D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

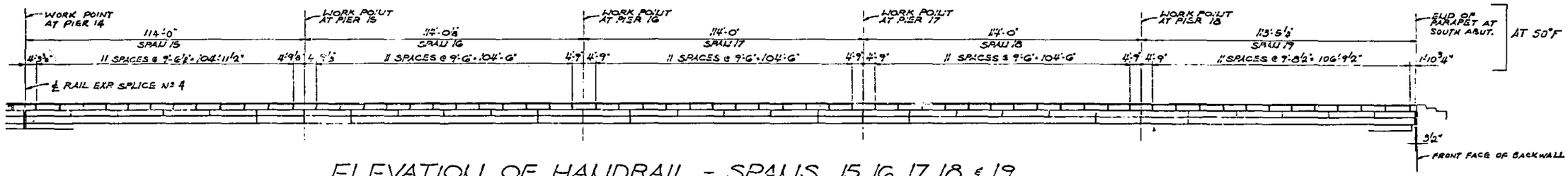
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1D	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	63	31
F.H.W.A. REG. NO. 5 / F.H.W.A. REG. NO. 7		ILLINOIS / MISSOURI	PROJECT I-57-9(5)D	



PART ELEVATION OF HANDRAIL - SPAN 13



ELEVATION OF HANDRAIL - SPAN 14



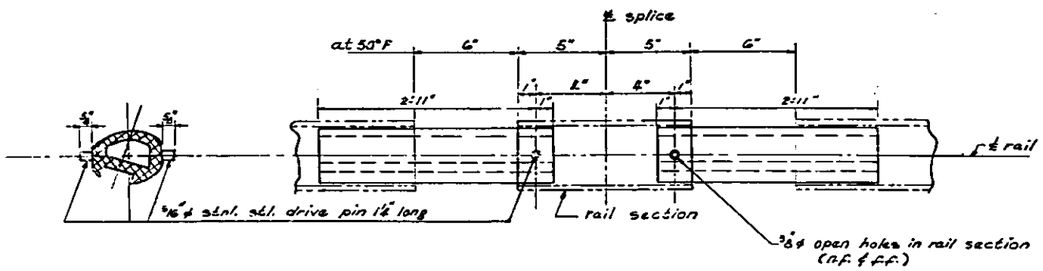
ELEVATION OF HANDRAIL - SPANS 15, 16, 17, 18 & 19

FOR NOTES SEE SHT. 30.

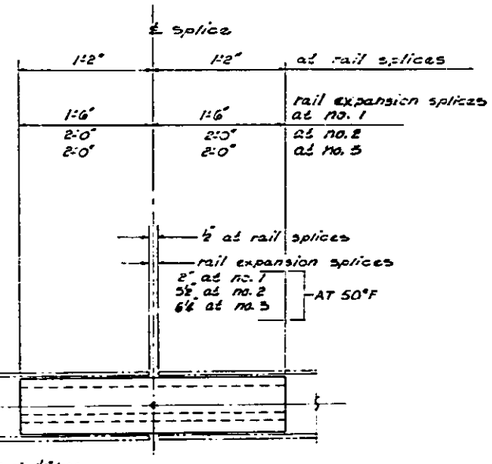
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

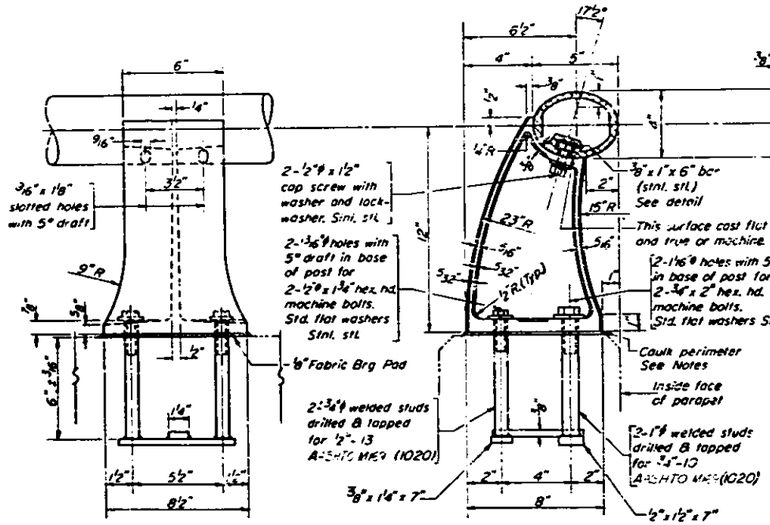
HANDRAIL ELEVATIONS - SPANS 13 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)D
SECTION 102-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

F.A.I. 57	02-18-110	ALEXANDER & MISSISSIPPI COUNTIES	63	32
			PROJECT I-57-9(E)10	

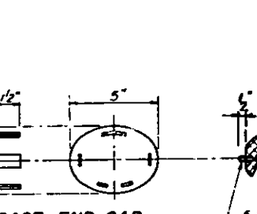


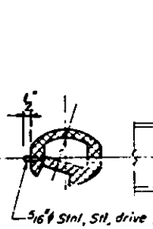
RAIL EXPANSION SPLICE NO. 4



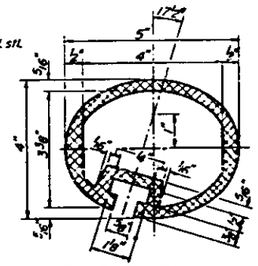


RAIL POST DETAILS

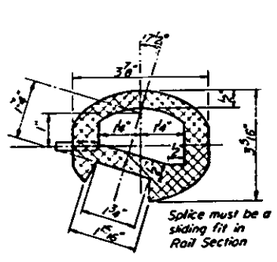




RAIL SPLICES AND EXPANSION SPLICES NO. 1-2-3

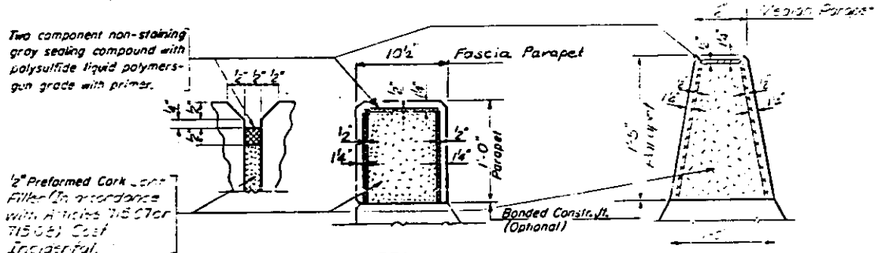


SEC. THRU ELLIPTICAL RAIL SECTION



SEC. THRU SPLICE

CLAMP BAR



PARAPET JOINT DETAIL

NOTES:

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

Provide 1 - 1/8" and 2 - 1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade, with primer. Fabric Bearing Pad shall have same dimensions as base of post.

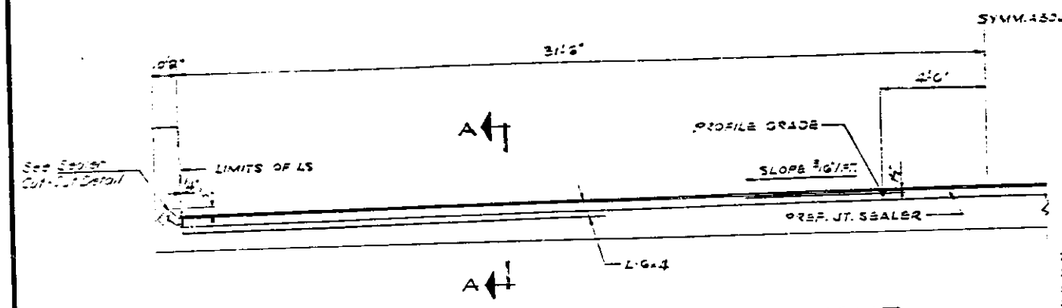
Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T6 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

ALFRED BE... COMPANY
CONS... ENGINEERS
10 S. WABASH AVE., CHICAGO, ILLINOIS

ALUMINUM RAILING DETAILS - SPANS 1 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(E)0
SECTION 02-18-110
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

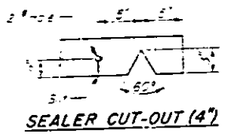
Rev. 2-18-76

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	102-1B-1 D	ALEXANDER COUNTY MISSISSIPPI COUNTY	ILLINOIS MISSOURI	63	33
ALTERNATE ROUTE NO. 1 ALTERNATE ROUTE NO. 2		ILLINOIS MISSOURI		PROJECT I-57-9(5)D	

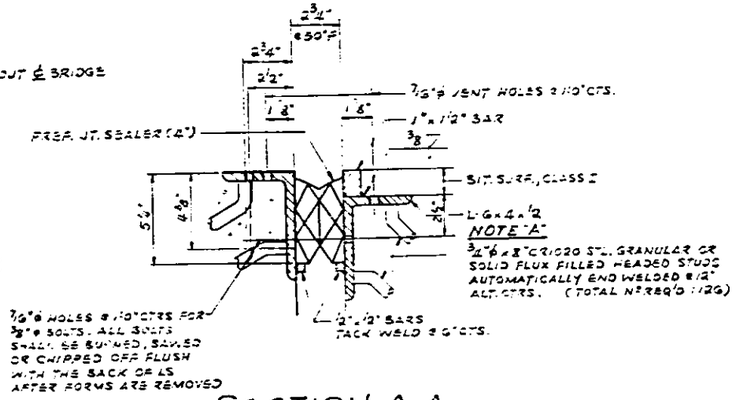


EXP GUARD AT NORTH ABUTMENT

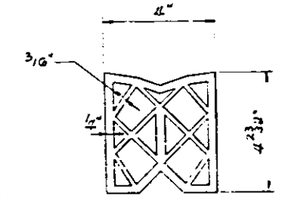
CHOKING ABUTMENT BACKWALL



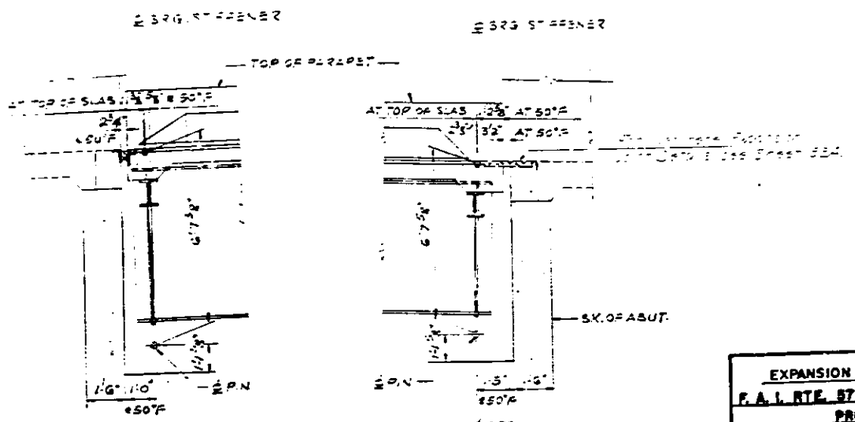
SEALER CUT-OUT (4")



SECTION A-A



PREFORMED JT. SEALER (4")



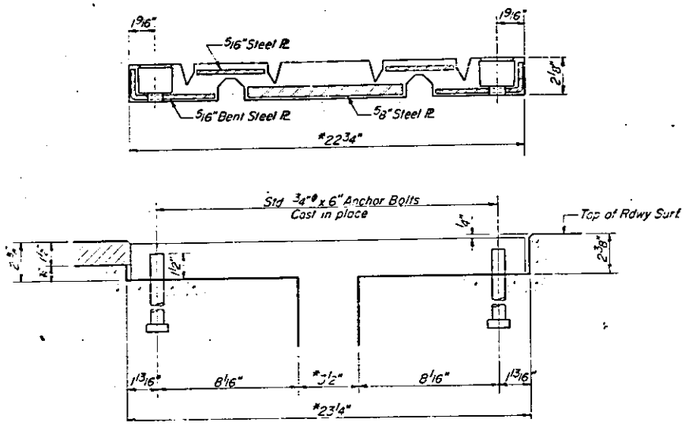
WORK LINES

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

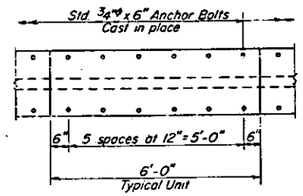
EXPANSION GUARD - NORTH & SOUTH ABUT.
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)D
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(C2-12-1) D	ALEXANDER CO. ILL. & MISSISSIPPI CO. MO.	68	33A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		



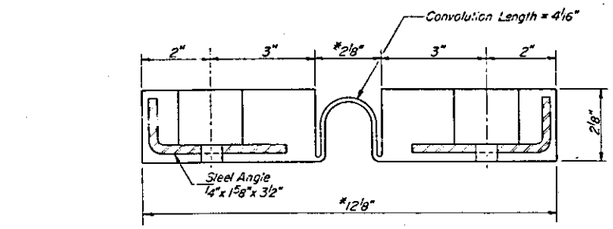
CROSS SECTION
*At 50°F.
Dimensions are at right angles.

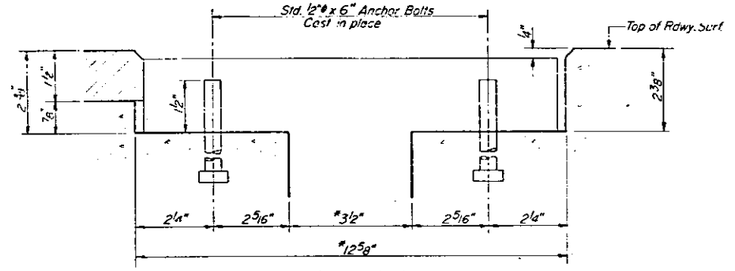


PLAN

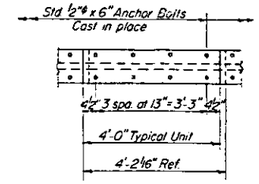
Note: Anchor bolts require a clipped washer, lockwasher and hex nut.

TRANSFLEX MODEL 400A
(Structural Rubber Products Co.)





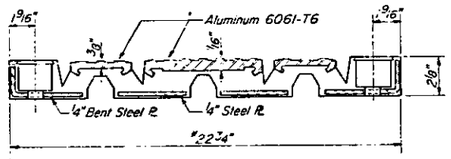
CROSS SECTION
*At 50°F
Dimensions are at right angles

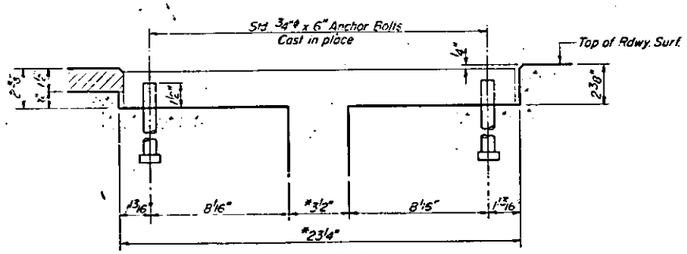


PLAN

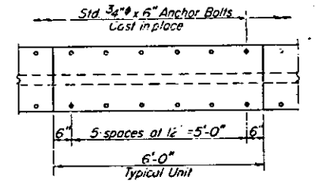
Note: Anchor bolts require a flat washer and locknut

FEL-SPAN MODEL T-40
(Fel-Pro Building Products Inc.)





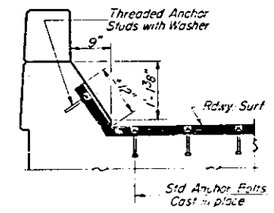
CROSS SECTION
*At 50°F.
Dimensions are at right angles.



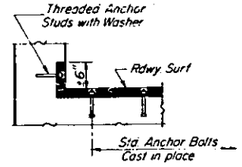
PLAN

Note: Anchor bolts require a clipped washer, lockwasher and hex nut

WABOFLEX MODEL SR 4
(Watson-Bowman Associates Inc.)



AT CURBS



AT ABUTMENT

TYPICAL END TREATMENTS

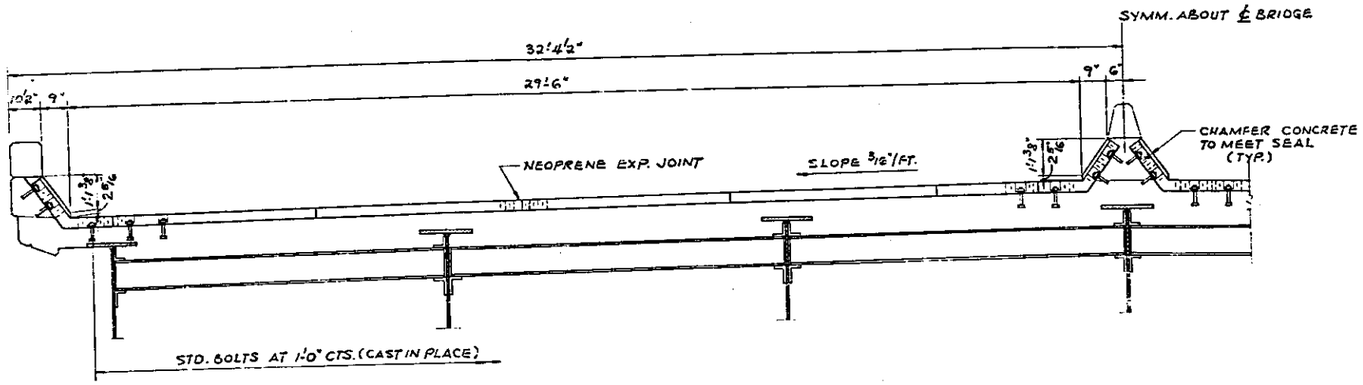
NOTE:
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Std. Specs when the deck is poured at an ambient temperature other than 50°F.

*Max. Expansion Length for the Fel-Span Model T-40 = 300'-0"

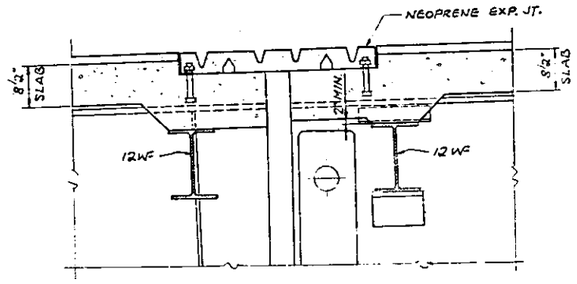
NEOPRENE EXPANSION JOINTS (4")
FOR EXPANSION LENGTH OF DECK 0'-0" TO *320'-0"

F.A.I. RTE. 57 OVER MISSISSIPPI RIVER
SECTION (C2-12-1) D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

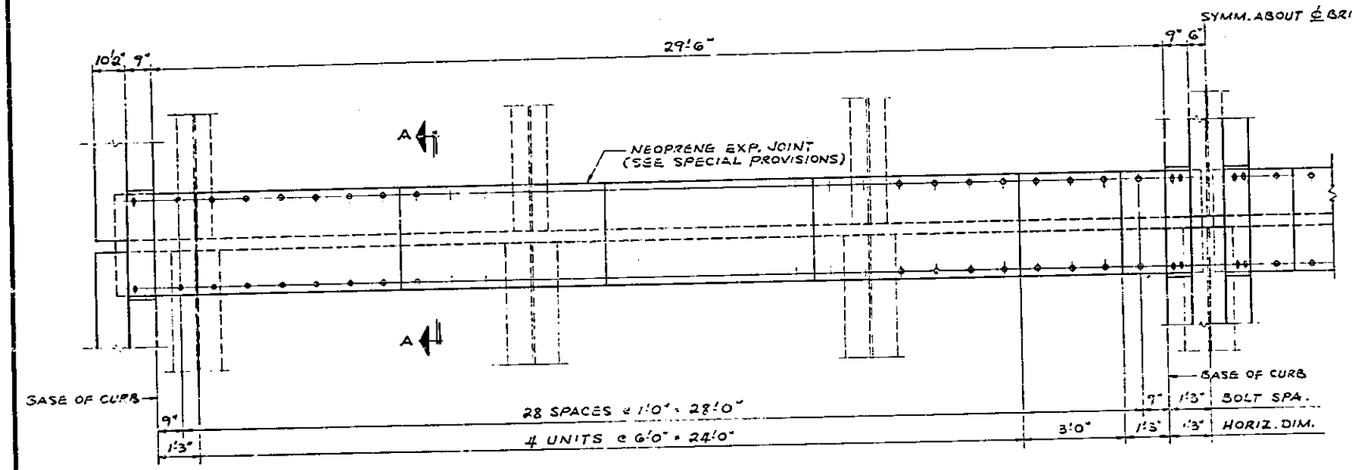
ROUTE NO	SECTION	COUNTY		SHEET NO	SHEETS NO
F.A.I. 57	(02-18-1) D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	34
PLANIMETRIC NO. 4 PLANIMETRIC NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)10	



ELEVATION



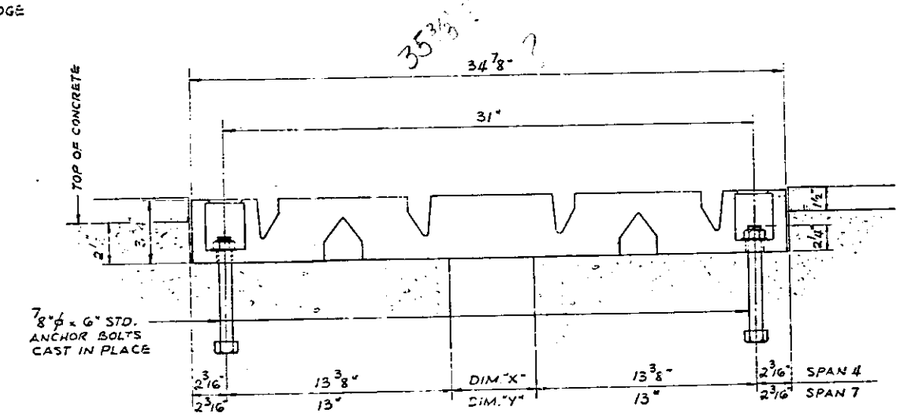
SECTION A-A



PLAN

EXP GUARD - SPAN 4

SPAN 7 SIMILAR



DETAIL OF NEOPRENE EXP. JT. (9")

TABLE OF TEMP. CORRECTIONS

TEMP. °F	SPAN 4 DIM. "X"	SPAN 7 DIM. "Y"*
130	¾"	0"
110	1⅜"	1/2"
90	2 1/2"	2 1/2"
70	3⅜"	3 1/2"
50	4¼"	4 1/2"
30	5⅛"	5 1/2"
10	6"	6 1/2"
-10	6⅞"	7 1/2"
-30	7¾"	8 1/2"

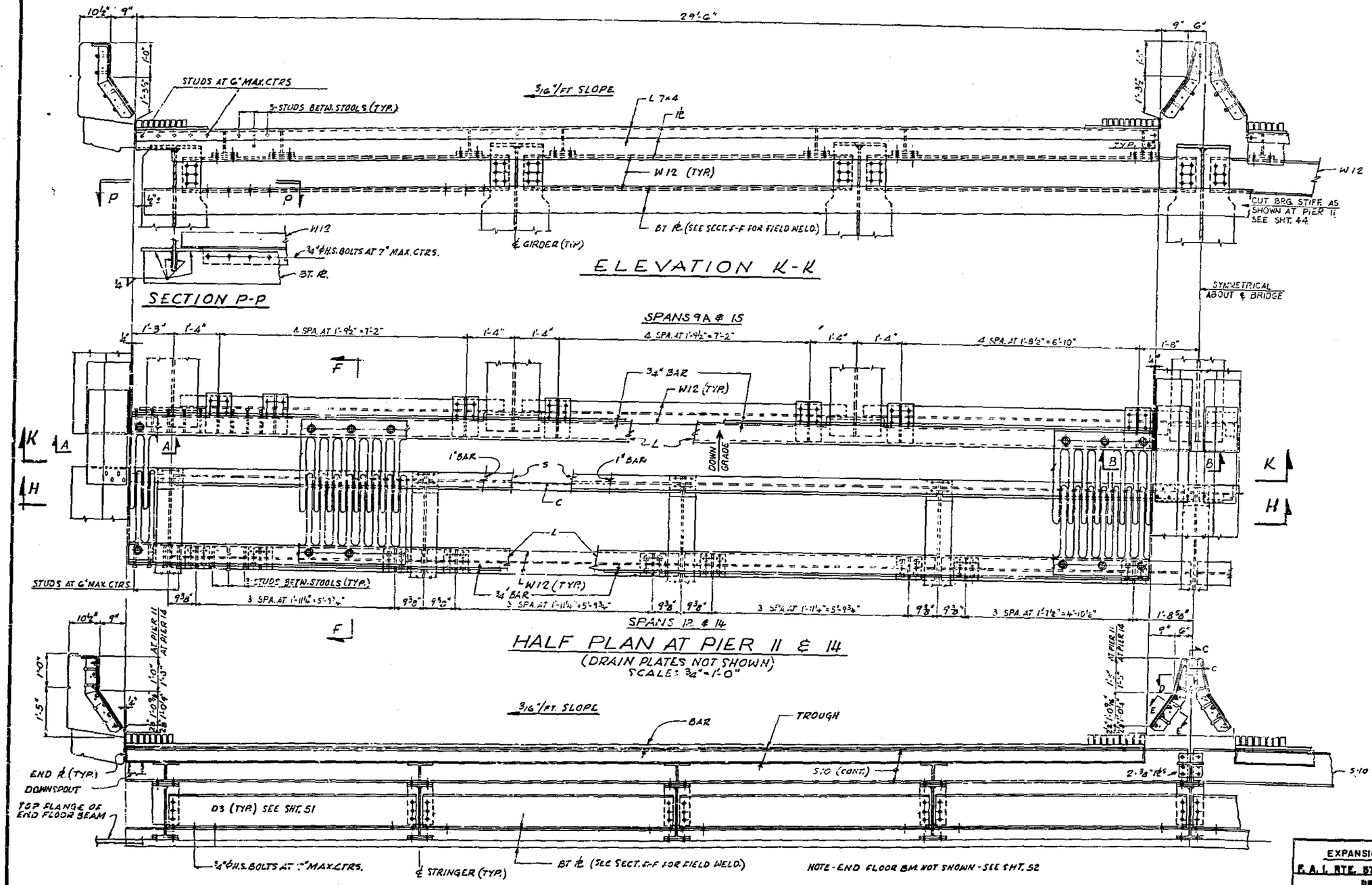
* DIMENSION "Y" IS GIVEN FOR SETTING ANCHOR BOLTS PRIOR TO POURING CONCRETE FOR SPAN 8 A. AFTER CONCRETE IN SPAN 8 A IS POURED, DIMENSION "Y" WILL INCREASE APPROXIMATELY ½".

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

EXPANSION GUARD - SPANS 4 & 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1) D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. 2-18-76

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	102-15-1D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	35
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)10	



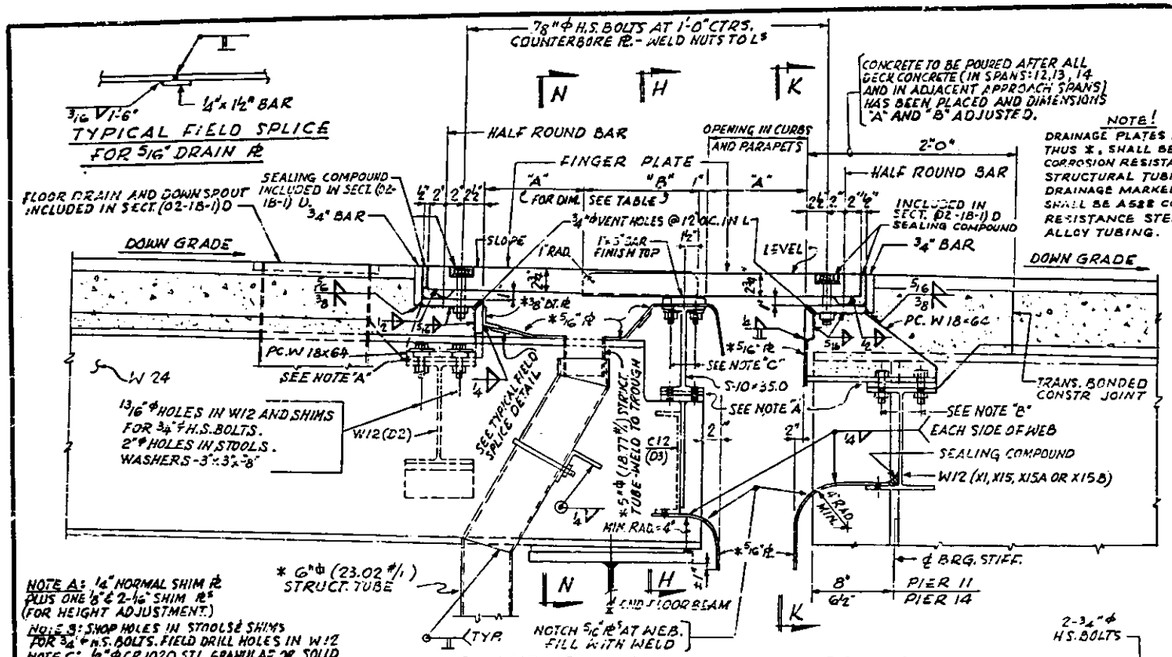
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

EXPANSION GUARD - PIERS 11 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-15-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 76.25

Rev. 2-18-76

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	36
F.H.W.A. REG. NO. 5		ILLINOIS			
F.H.W.A. REG. NO. 7		MISSOURI	PROJECT I-57-9(5)10		

TYPICAL FIELD SPLICE FOR 5/16" DRAIN Ø



NOTE A: 1/4" NORMAL SHIM Ø PLUS ONE 1/8" & 2-1/16" SHIM Ø (FOR HEIGHT ADJUSTMENT.)

NOTE B: SHOP HOLES IN STOOLS & SHIMS FOR 3/4" Ø H.S. BOLTS. FIELD DRILL HOLES IN W12

NOTE C: 1/2" Ø CR 1020 STL GRANULAR OR SOLID FLUX FILLED - THREADED STUDS AUTO. END WELDED AT 7 1/2" ALT. CTRS. 11/16" Ø HOLES IN FLG. OF S10. BEVELED WASHERS AND SELF-LOCK NUTS.

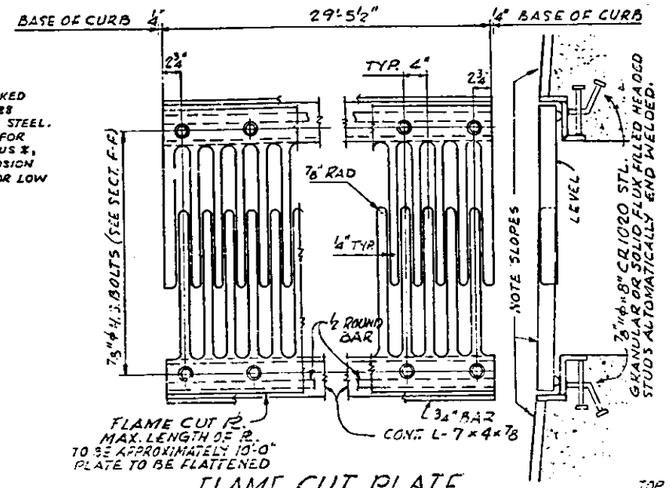
NOTE D: 3/4" Ø x 8" CR 1020 STL GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED.

SPANS: 12 OR 14 — SPANS: 9A OR 15

SECTION F-F
SCALE: 1/2" = 1'-0"

* 6" Ø (23.02 #/L) STRUCT. TUBE

NOTE!
DRAINAGE PLATES MARKED THUS *, SHALL BE AS28 CORROSION RESISTANCE STEEL. STRUCTURAL TUBING FOR DRAINAGE MARKED THUS *, SHALL BE AS28 CORROSION RESISTANCE STEEL OR LOW ALLOY TUBING.

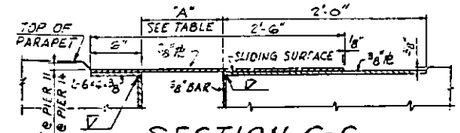


FLAME CUT PLATE
SCALE: 1" = 1'-0"

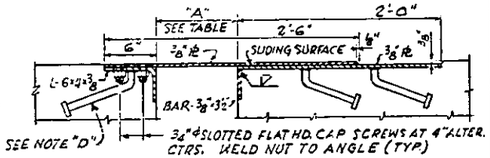
TABLE OF "A" AND "B" DIMENSIONS

TEMP (°F)*	BEFORE DECK CONCRETE IN SPANS 12, 13 & 14 IS POURED				AFTER DECK CONCRETE IN SPANS 12, 13 & 14 IS POURED			
	PIER 11		PIER 14		PIER 11		PIER 14	
	A	B	A	B	A	B	A	B
130	6 5/16"	10 11/16"	6 7/16"	18 9/16"	3 13/16"	21 3/16"	3 15/16"	21 1/16"
110	8 1/4"	16 3/4"	8 5/16"	16 11/16"	5 3/4"	19 1/4"	5 11/16"	19 3/16"
90	10 3/16"	14 13/16"	10 3/16"	14 13/16"	7 11/16"	17 5/16"	7 11/16"	17 5/16"
70	12 1/16"	12 5/16"	12 1/8"	12 7/8"	9 5/16"	15 7/16"	9 5/8"	15 3/8"
50	14"	11"	14"	11"	11 1/2"	13 1/2"	11 1/2"	13 1/2"
30	15 15/16"	9 1/16"	15 7/8"	9 1/16"	13 1/16"	11 9/16"	13 3/8"	11 5/8"
10	17 13/16"	7 3/16"	17 13/16"	7 3/16"	15 5/16"	9 11/16"	15 5/16"	9 11/16"
-10	19 3/4"	5 1/4"	19 11/16"	5 5/16"	17 1/4"	7 3/4"	17 3/16"	7 13/16"
-30	21 11/16"	3 5/16"	21 9/16"	3 1/16"	19 3/16"	5 13/16"	19 1/16"	5 15/16"

* TEMPERATURE AT TIME OF ADJUSTMENT OF EXPANSION GUARD

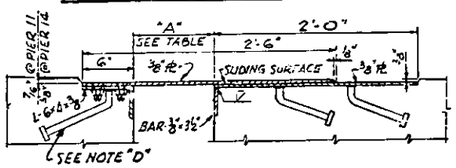


SECTION C-C



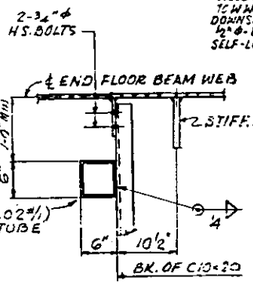
3/4" Ø SLOTTED FLAT HD. CAP SCREWS AT 4" ALTER. CTRS. WELD NUT TO ANGLE (TYP.)

SECTION D-D

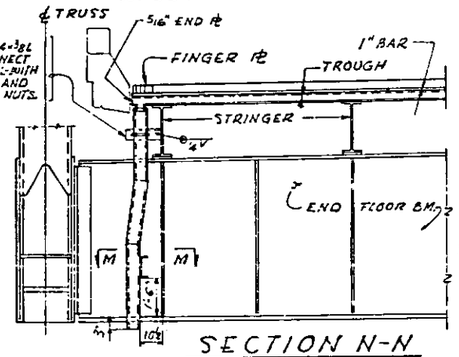


SECTION E-E
SCALE: 1 1/2" = 1'-0"

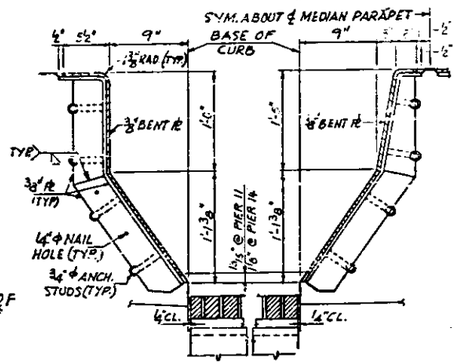
NOTE
EXPANSION GUARD MATERIAL IN CURBS & PARAPETS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) D. ALL OTHER MATERIAL SHOWN ON THIS SHEET IS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) D EXCEPT AS NOTED.



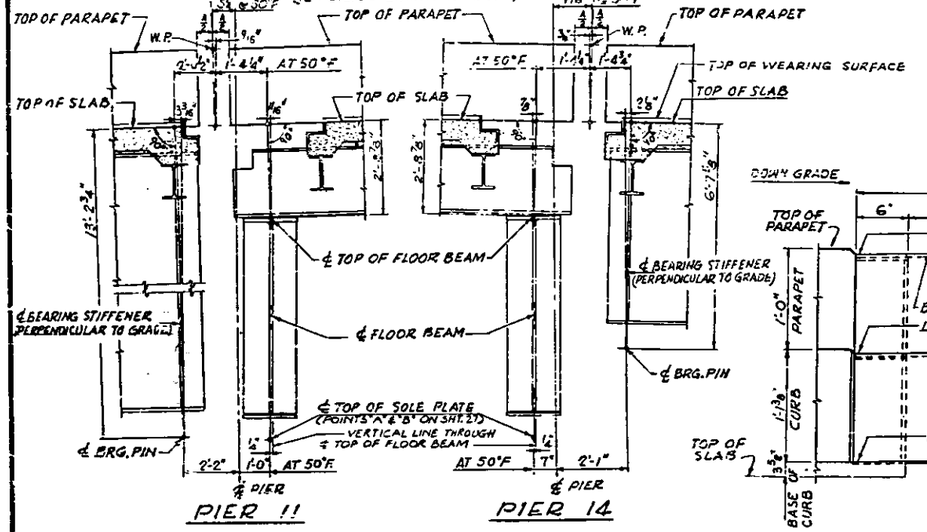
SECTION M-M
SCALE: 1" = 1'-0"



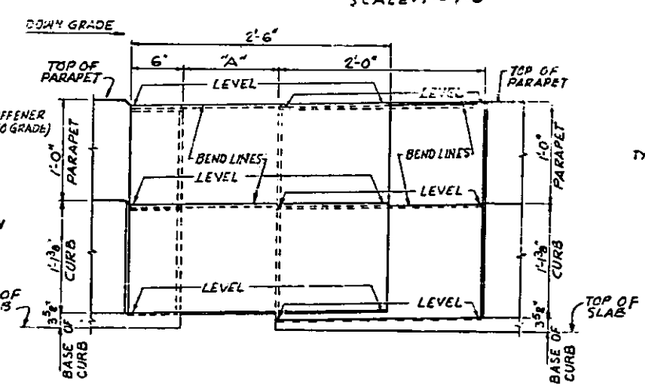
SECTION N-N
SCALE: 3/8" = 1'-0"



SECTION A-A SECTION B-B
SCALE: 1 1/2" = 1'-0"



WORK LINES
SCALE: 1 1/2" = 1'-0"



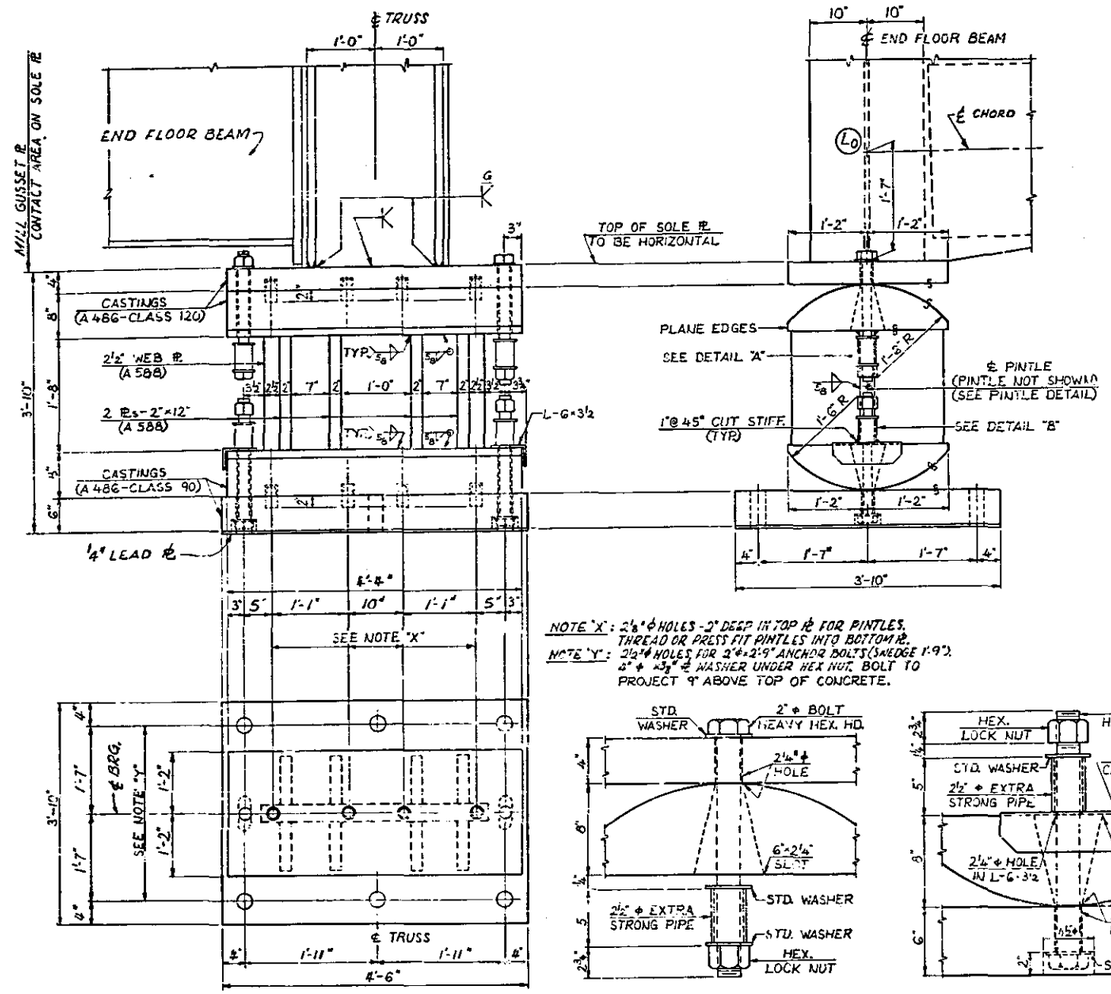
ELEVATION OF CURB AND PARAPET
SCALE: 1 1/2" = 1'-0"

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

EXPANSION GUARD - PIERS 11 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-18-1) D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. 2-18-76

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	37
F.M.W.A. RES NO. 4 F.M.W.A. RES NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)0	



NOTE "X": 2⅛"ø HOLES - 2" DEEP IN TOP PL FOR PINTLES. THREAD OR PRESS FIT PINTLES INTO BOTTOM PL.

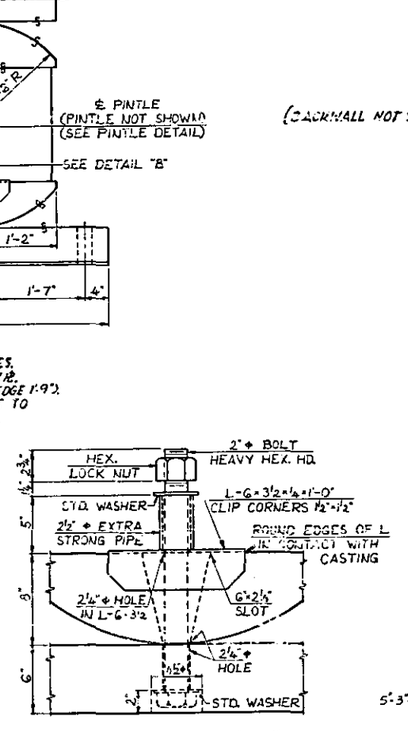
NOTE "Y": 2½"ø HOLES FOR 2"ø×2'-9" ANCHOR BOLTS (SWEDGE 1'-9"). 4"ø × .43"ø WASHER UNDER HEX NUT. BOLT TO PROJECT 9" ABOVE TOP OF CONCRETE.

EXPANSION BEARINGS AT PIERS: 11 & 14

SCALE: 1"=1'-0"

DETAIL "A"

(ON FLOOR BEAM SIDE INSTALL WITH NUT ON TOP)
SCALE: 2"=1'-0"

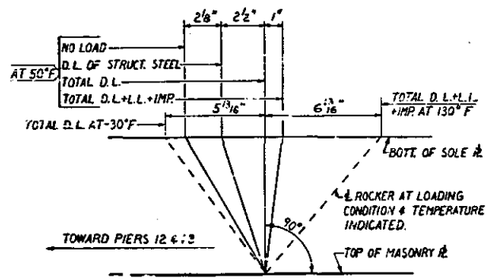


DETAIL "B"

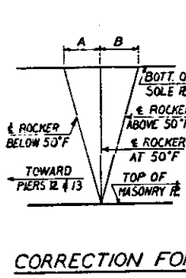
SCALE: 2"=1'-0"

PINTLE

HALF SIZE

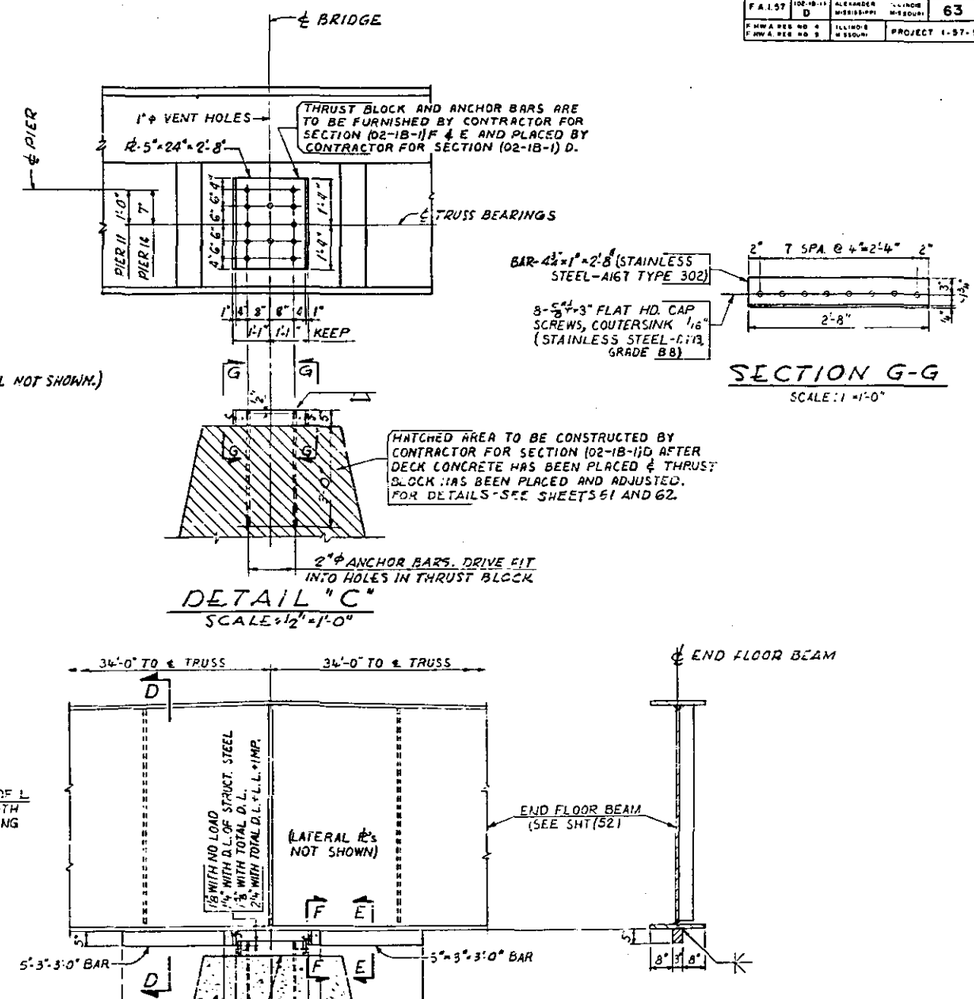


ROCKER SETTING DIMENSIONS



TEMP. (°F)	A	B
130	—	5 13/16"
110	—	4 5/16"
90	—	2 7/8"
70	—	1 7/16"
50	0	0
30	1 7/16"	—
10	2 7/8"	—
-10	4 5/16"	—
-30	5 13/16"	—

CORRECTION FOR TEMPERATURE



DETAIL "C"

SCALE: 1½"=1'-0"

BAR-4½"×1"×2'-8" (STAINLESS STEEL-A167 TYPE 302)

8-⅝"ø×3" FLAT HD. CAP SCREWS, COUTERSINK 1/16" (STAINLESS STEEL-A193, GRADE B8)

SECTION G-G

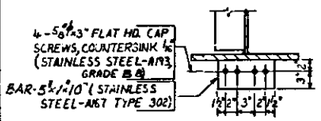
SCALE: 1"=1'-0"

WIND TRANSFER DEVICE (PIERS 11 & 14)

SCALE: ½"=1'-0"

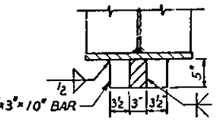
SECTION "D-D"

SCALE: ½"=1'-0"



SECTION F-F

SCALE: 1"=1'-0"



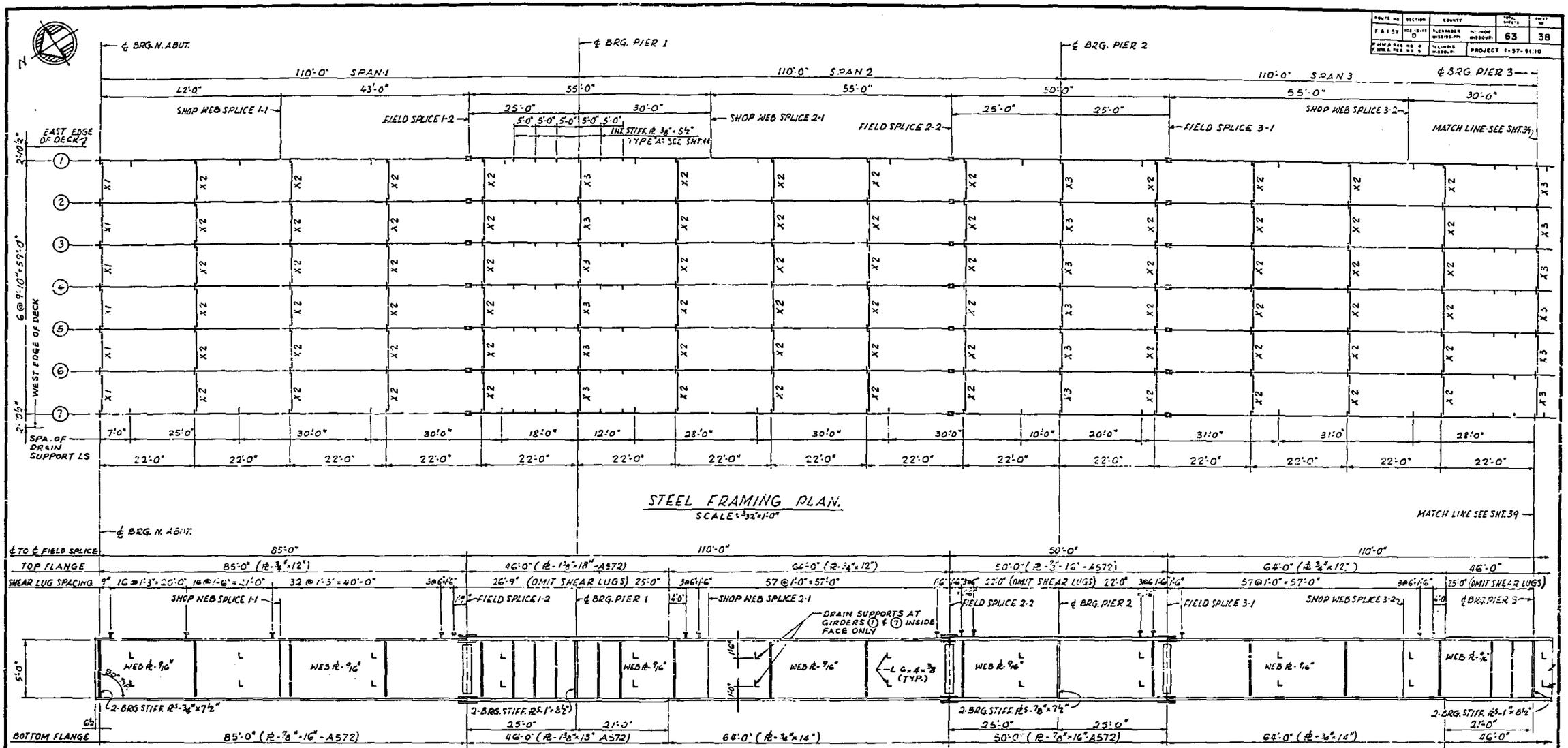
SECTION E-E

SCALE: 1"=1'-0"

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

TRUSS BEARINGS AT PIERS 11 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1B-1 D	ALEXANDER WISSISSIPPI	ILLINOIS MISSOURI	63	38
C.H.W.A. PER NO. 4 F.H.W.A. PER NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)10	



STEEL FRAMING PLAN.

SCALE: 3/32" = 1'-0"

ELEVATION

NO SCALE
GIRDER ① SHOWN

S.W.S. = SHOP WEB SPLICE
F.S. = FIELD SPLICE

FILLET WELD TABLE

FLANGE PL THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16

GIRDER ELEVATIONS - FOR FABRICATION ONLY

GIRDER \ LOCATION	℄ BRG. N. ABUT.	S.W.S. 1-1	F.S. 1-2	PIER 1	S.W.S. 2-1	F.S. 2-2	PIER 2	F.S. 3-1	S.W.S. 3-2	PIER 3	F.S. 4-1	S.W.S. 4-2	℄ LINK SPAN 4
1	343.026	343.597	343.890	344.197	344.565	345.534	345.996	346.457	347.518	348.258	348.858	350.125	350.877
2	343.180	343.751	344.044	344.350	344.719	345.688	346.150	346.611	347.672	348.411	349.012	350.279	351.031
3	343.334	343.904	344.198	344.504	344.872	345.841	346.304	346.764	347.826	348.565	349.165	350.432	351.184
4	343.487	344.058	344.351	344.658	345.026	345.995	346.457	346.918	347.979	348.718	349.319	350.586	351.338
5	343.334	343.904	344.198	344.504	344.872	345.841	346.304	346.764	347.826	348.565	349.165	350.432	351.184
6	343.180	343.751	344.044	344.350	344.719	345.688	346.150	346.611	347.672	348.411	349.012	350.279	351.031
7	343.026	343.597	343.890	344.197	344.565	345.534	345.996	346.457	347.518	348.258	348.858	350.125	350.877

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE.

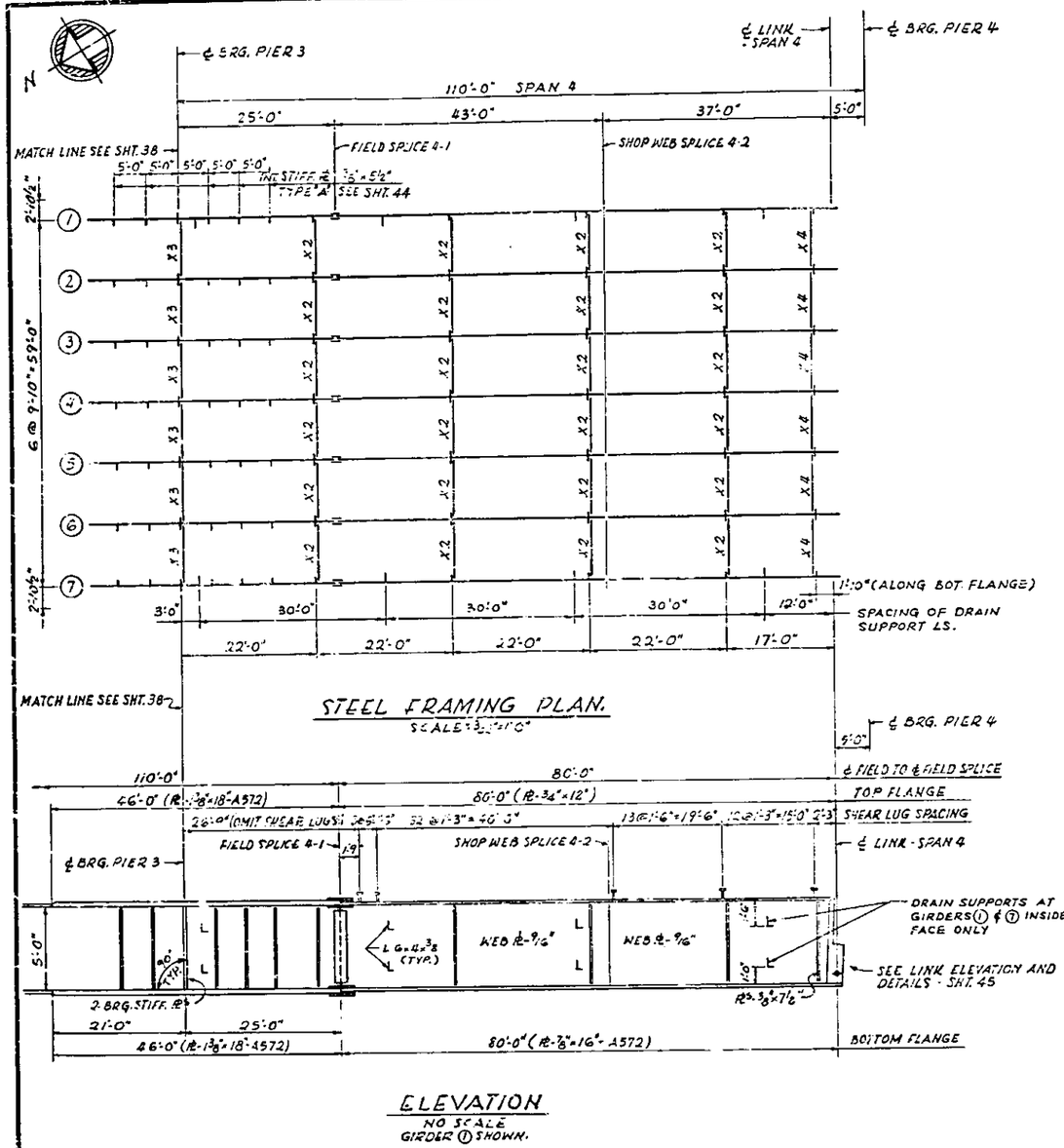
NOTES:

MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (02-18-1) D.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 1, 2, 3 & 4
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1) D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	39
F.HW.A. REG. NO. 5 F.HW.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9(5)0		

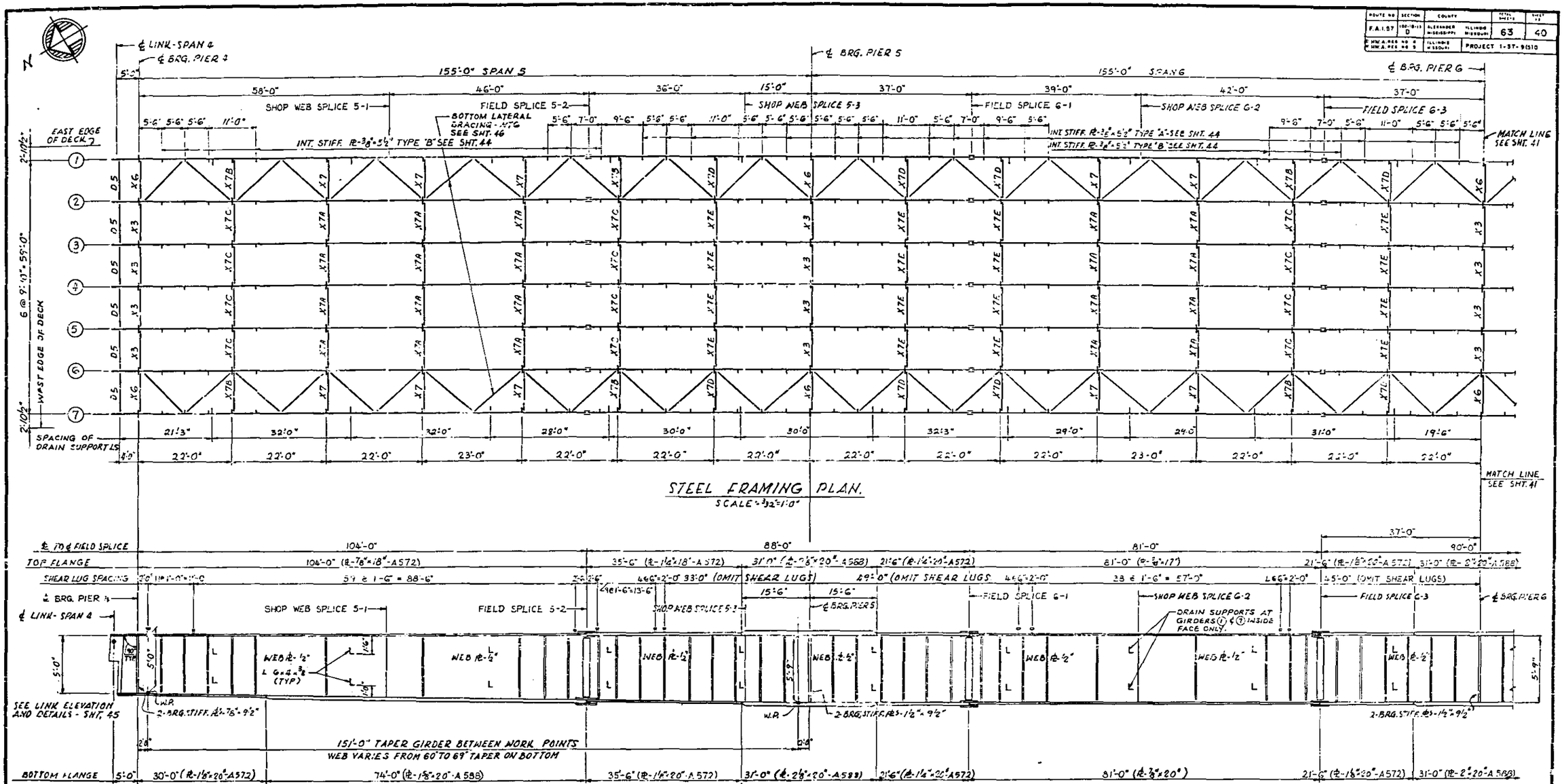


ELEVATION
NO SCALE
GIRDER 1 SHOWN.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 1, [illegible] 4
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1) D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	40
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT 1-57-9(5)0	



STEEL FRAMING PLAN.

SCALE - 3/32" = 1'-0"

ELEVATION

NO SCALE
GIRDER 1 SHOWN

FILLET WELD TABLE

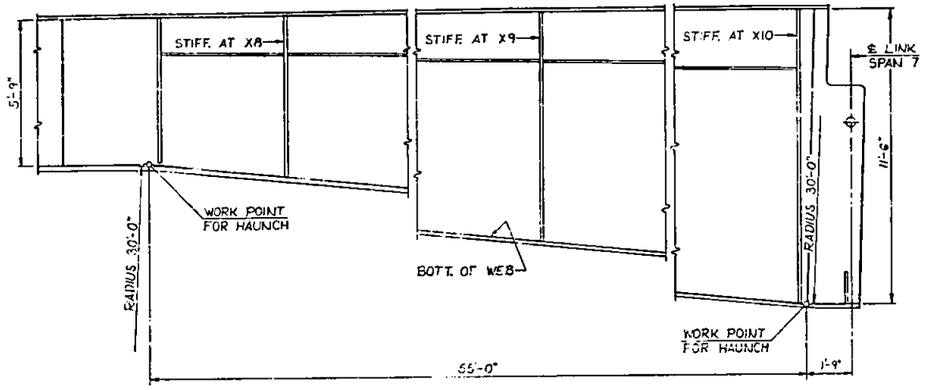
FLANGE PL THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16
OVER 1 1/2 TO 2 1/4"	3/8

NOTES:

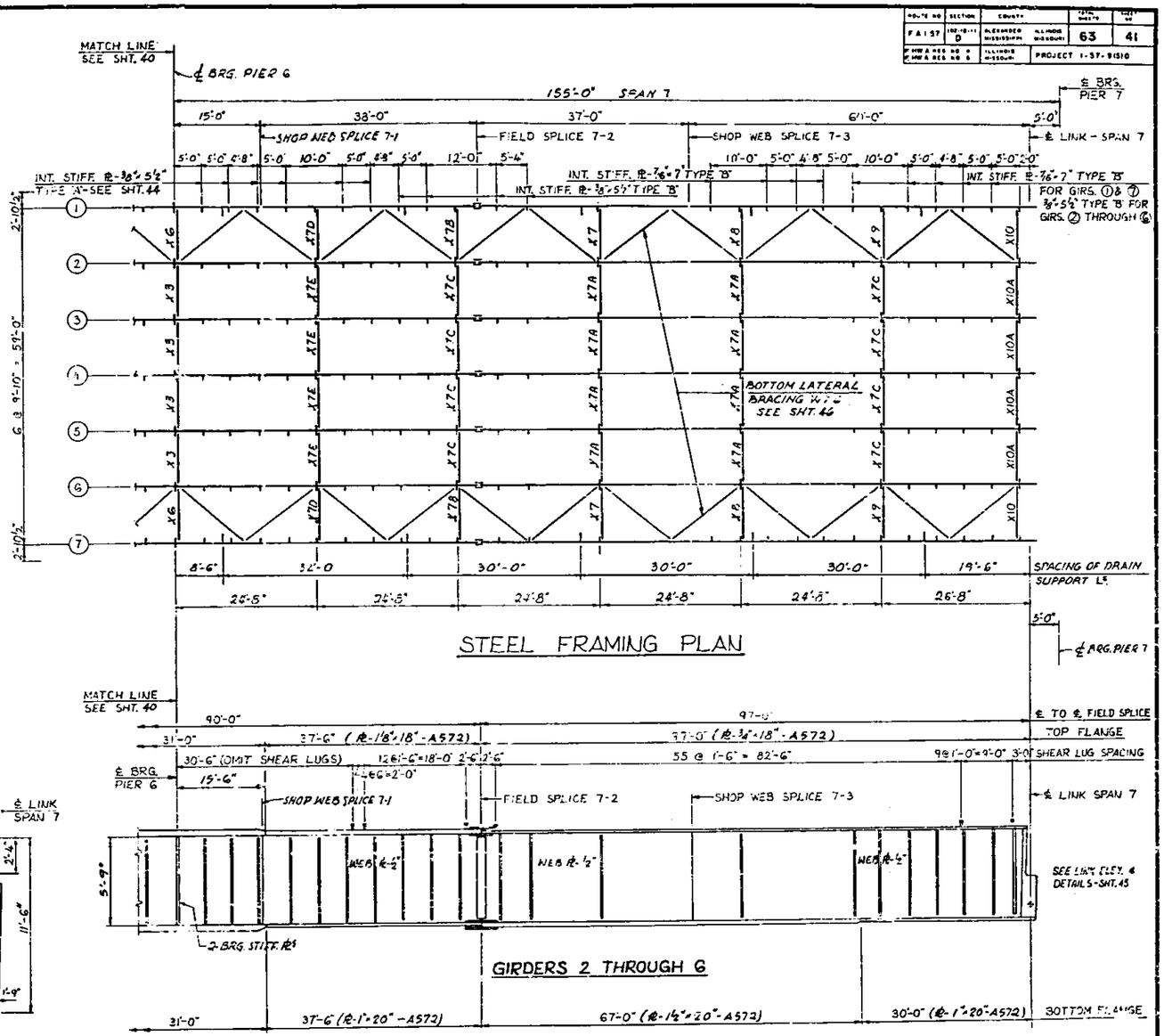
MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (02-18-1) D.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 WABASH AVE. CHICAGO, ILLINOIS

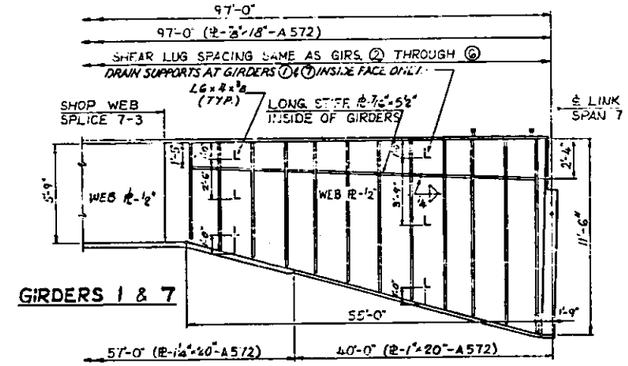
FRAMING PLAN - SPANS 5, 6 AND 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9(5)0
SECTION (02-18-1) D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25



DETAIL OF HAUNCH
FOR GIRDERS 1 & 7 ONLY



STEEL FRAMING PLAN



GIRDERS 1 & 7

GIRDERS 2 THROUGH 6

ELEVATION

GIRDER ELEVATIONS-FOR FABRICATION ONLY

S.W.S. = SHOP WEB SPLICE
F. S. = FIELD SPLICE

GIRDER \ LOCATION	℄ LINK-SPAN 6	PIER 7	S.W.S. 5-1	F.S. 5-2	S.W.S. 5-3	PIER 5	F.S. 6-1	S.W.S. 6-2	F.S. 6-3	PIER 6	S.W.S. 7-1	F. S. 7-2	S.W.S. 7-3	℄ LINK SPAN 7
1	350.877	351.062	353.177	354.391	355.193	355.612	356.046	357.975	359.089	360.267	360.745	362.125	363.328	364.761
2	351.931	351.216	353.331	354.544	355.347	355.766	356.800	358.129	359.242	360.421	360.899	362.279	363.482	364.914
3	351.184	351.370	353.485	354.698	355.500	355.919	356.953	358.283	359.396	360.575	361.052	362.433	363.636	365.068
4	351.338	351.523	353.638	354.852	355.654	356.073	357.107	358.436	359.550	360.728	361.206	362.586	363.789	365.222
5	351.184	351.370	353.485	354.698	355.500	355.919	356.953	358.283	359.396	360.575	361.052	362.433	363.636	365.068
6	351.031	351.216	353.331	354.544	355.347	355.766	356.800	358.129	359.242	360.421	360.899	362.279	363.482	364.914
7	350.877	351.062	353.177	354.391	355.193	355.612	356.046	357.975	359.089	360.267	360.745	362.125	363.328	364.761

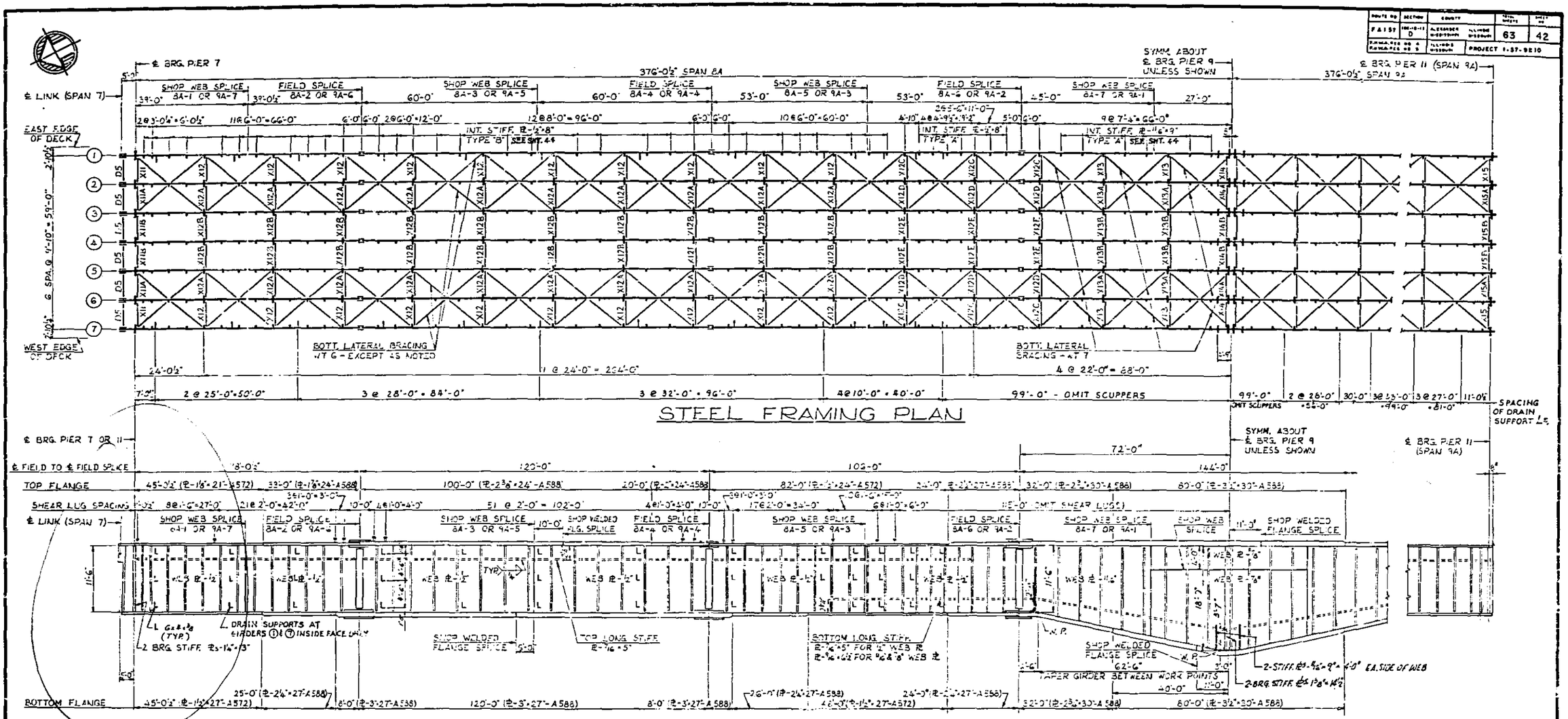
ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) D	ALEXANDER	ILLINOIS	63	41
F.H.W.A. REG. NO.		MISSISSIPPI	MISSOURI		
F.H.W.A. REG. NO.		ILLINOIS		PROJECT I-57-9(5)10	

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 5, 6 AND 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1)D	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	63	42
F.A.I.-(02-1B-1)D F.A.I.-(02-1B-1)D		ILLINOIS MISSOURI	PROJECT I-57-9(5)10	



ELEVATION
GIRDER ① SHOWN

GIRDER ELEVATIONS — FOR FABRICATION ONLY

LOCATION / GIRDER	℄ LINK SPAN 7	PIER 7	S.W.S. 8A-1	F.S. 8A-2	S.W.S. 8A-3	F.S. 8A-4	S.W.S. 8A-5	F.S. 8A-6	S.W.S. 8A-7	PIER 9	S.W.S. 9A-1	F.S. 9A-2	S.W.S. 9A-3	F.S. 9A-4	S.W.S. 9A-5	F.S. 9A-6	S.W.S. 9A-7	℄ BRG. PIER 11 SPAN 9A
1	364.761	364.964	366.552	367.840	369.939	371.596	372.965	373.981	375.245	376.050	376.854	378.215	380.231	381.908	383.424	384.497	385.203	385.620
2	364.914	365.118	366.706	368.067	370.191	371.832	373.171	374.150	375.398	376.203	377.008	378.384	380.437	382.062	383.671	384.718	385.398	385.773
3	365.068	365.272	366.860	368.221	370.336	371.987	373.325	374.304	375.553	376.357	377.162	378.539	380.591	382.216	383.825	384.872	385.553	385.928
4	365.222	365.425	367.013	368.371	370.489	372.140	373.478	374.458	375.706	376.511	377.315	378.692	380.744	382.369	383.978	385.025	385.706	386.081
5	365.068	365.272	366.860	368.221	370.336	371.987	373.325	374.304	375.553	376.357	377.162	378.539	380.591	382.216	383.825	384.872	385.553	385.928
6	364.914	365.118	366.706	368.067	370.191	371.832	373.171	374.150	375.398	376.203	377.008	378.384	380.437	382.062	383.671	384.718	385.398	385.773
7	364.761	364.964	366.552	367.840	369.939	371.596	372.965	373.981	375.245	376.050	376.854	378.215	380.231	381.908	383.424	384.497	385.203	385.620

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE

F. S. = FIELD SPLICE
S. W. S. = SHOP WEB SPLICE

FILLET WELD TABLE

FLANGE ℄ THICKNESS	WELD SIZE
OVER ¾" TO 1½"	⅝"
OVER 1½" TO 2¼"	¾"
OVER 2¼" TO 6"	⅞"

NOTES:

ALL MATERIAL ASTM A36 - EXCEPT AS NOTED.

ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.

SHEAR LUGS ARE TO BE FURNISHED & INSTALLED UNDER SECTION (02-1B-1)D.

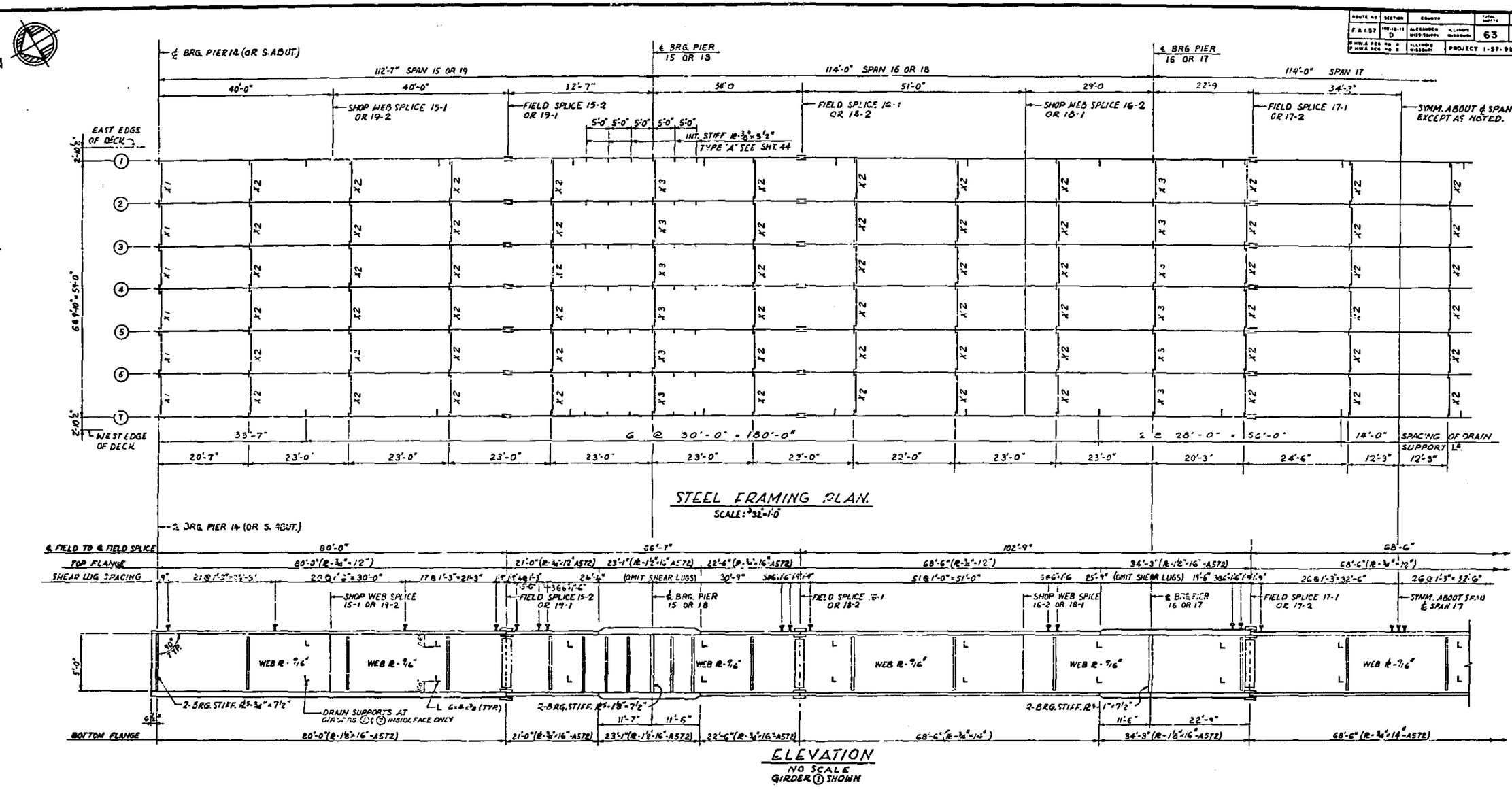
LONGITUDINAL STIFFENERS TO BE ON SIDE OF WEB OPPOSITE TRANSVERSE STIFFENERS ON GIRDERS ① TO ⑦

SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN — SPANS 8A AND 9A
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	(02-1B-1) D	ALEXANDER (ILLINOIS)	MISSISSIPPI (MISSOURI)	63	43
F.H.W.A. REG. NO. 5 / F.H.W.A. REG. NO. 7		ILLINOIS / MISSOURI		PROJECT I-57-9(5)0	



STEEL FRAMING PLAN.

SCALE: 3/32"=1'-0

ELEVATION

NO SCALE
GIRDER 1 SHOWN

GIRDER ELEVATIONS-FOR FABRICATION ONLY

S.W.S. = SHOP WEB SPLICE
F.S. = FIELD SPLICE

GIRDER \ LOCATION	℄ BRG. PIER 14	S.W.S. 15-1	F.S. 15-2	PIER 15	F.S. 19-1	S.W.S. 19-2	PIER 16	F.S. 17-1	F.S. 17-2	PIER 17	S.W.S. 18-1	F.S. 18-2	PIER 18	F.S. 19-1	S.W.S. 19-2	℄ BRG. S.ABUT.
1	379.882	379.773	377.697	376.692	375.644	374.160	373.316	372.654	370.599	369.896	369.000	367.410	366.445	365.521	364.516	363.130
2	380.036	379.147	377.851	376.846	375.798	374.314	373.470	372.807	370.752	370.050	369.154	367.564	366.599	365.674	364.669	363.283
3	380.190	379.301	378.004	376.999	375.951	374.467	373.623	372.961	370.906	370.203	369.307	367.717	366.752	365.828	364.823	363.437
4	380.343	379.454	378.159	377.153	376.105	374.621	373.777	373.115	371.060	370.357	369.461	367.871	366.906	365.982	364.977	363.591
5	380.190	379.301	378.004	376.999	375.951	374.467	373.623	372.961	370.906	370.203	369.307	367.717	366.752	365.828	364.823	363.437
6	380.036	379.147	377.851	376.846	375.798	374.314	373.470	372.807	370.752	370.050	369.154	367.564	366.599	365.674	364.669	363.283
7	379.882	379.773	377.697	376.692	375.644	374.160	373.316	372.654	370.599	369.896	369.000	367.410	366.445	365.521	364.516	363.130

ELEVATIONS ARE GIVEN TO TOP OF GIRDER WEB PLATE.

FILLET WELD TABLE

FLANGE ℄ THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16

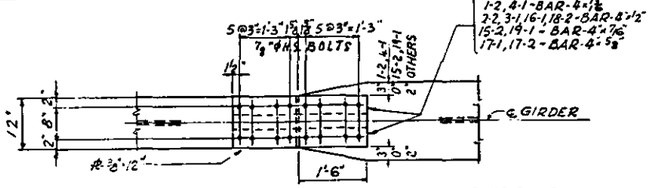
NOTES:

MATERIAL - A36 - EXCEPT AS NOTED.
ALL DIMENSIONS SHOWN ARE IN A HORIZONTAL PLANE.
SHEAR LUGS ARE TO BE FURNISHED AND INSTALLED UNDER SECTION (02-1B-1) D.
SHEAR LUGS ARE TO BE OMITTED AT SCUPPER LOCATIONS.

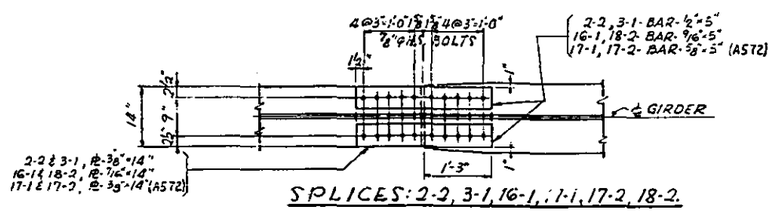
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I.57	102-18-11 D	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	63	44
F.A.M.A. PRS NO 6 / F.A.M.A. SEC NO 5		ILLINOIS / MISSOURI	PROJECT I-57-9(510)	



SPLICES: 1-2, 2-2, 3-1, 4-1, 15-2, 16-1, 17-1, 17-2, 18-2, 19-1.



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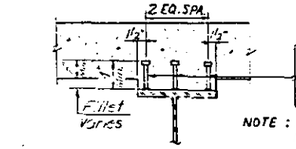
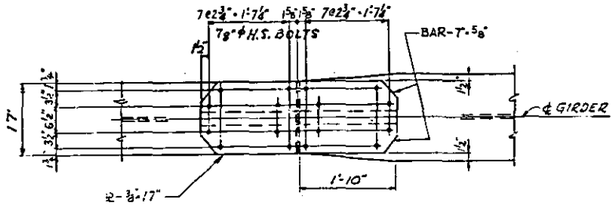
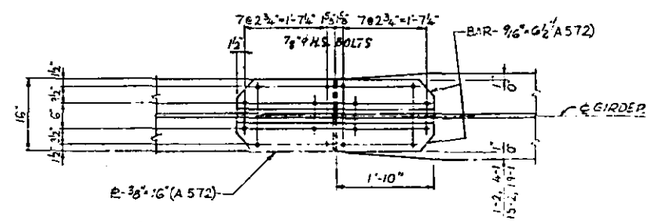


NOTE : SHEAR LUGS TO BE FURNISHED AND ERECTED UNDER SECTION (02-18-1)D

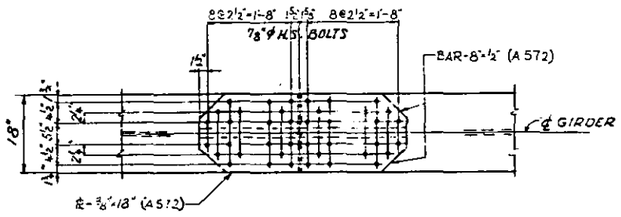
SHEAR LUG DETAIL



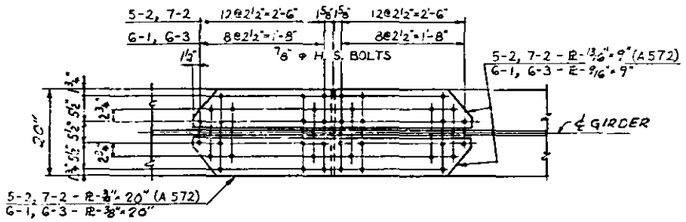
SPLICES: G-1, G-3



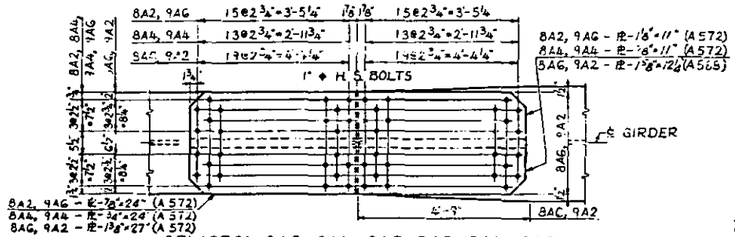
SPLICES: 1-2, 4-1, 15-2, 19-1



SPLICES: 5-2, 7-2

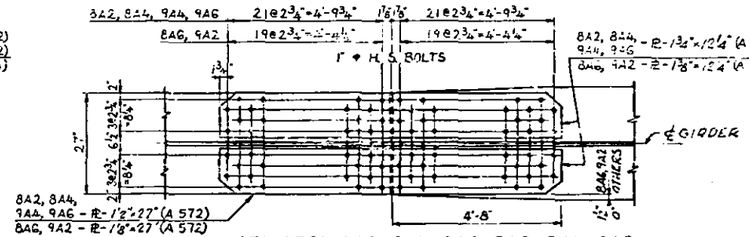


SPLICES: 5-2, G-1, G-3, 7-2



SPLICES: 8A2, 8A4, 8A6, 9A2, 9A4, 9A6

FIELD SPLICES - TOP FLANGE



SPLICES: 8A2, 8A4, 8A6, 9A2, 9A4 9A6

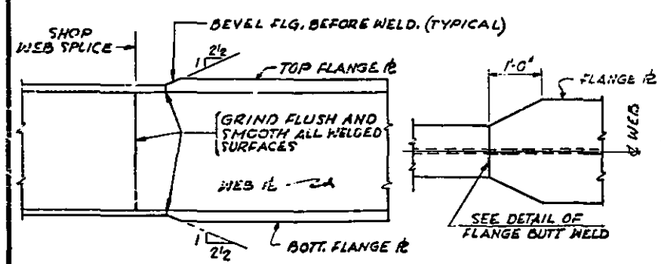
FIELD SPLICES - BOTTOM FLANGE

* BOTTOM FLANGE SLOPES

SPANS: 1-7 & 15-19

SPANS: 8A & 9A

WEB SPLICES

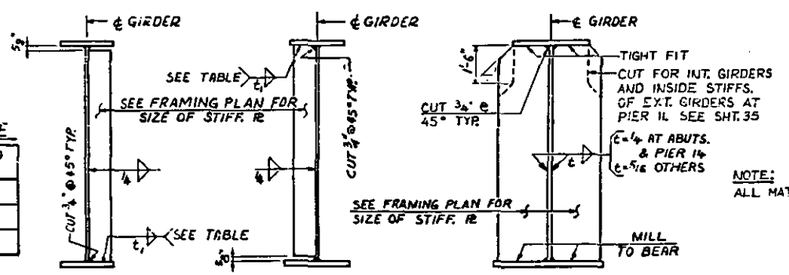


BUTT WELD DETAILS

FLANGE TRANSITION DETAIL

FILLET WELD (t1) TABLE

FLANGE ℙ THICKNESS	WELD SIZE
OVER 1/2" TO 3/4"	1/4
OVER 3/4" TO 1 1/2"	5/16
OVER 1 1/2" TO 2 1/4"	3/8



INTERMEDIATE STIFFENERS

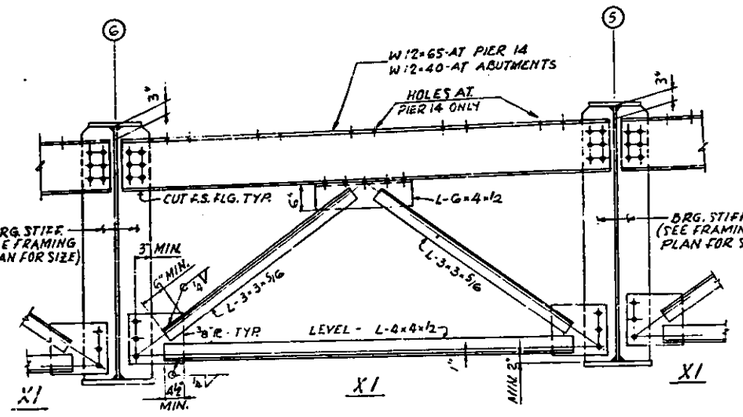
BEARING STIFFENERS

NOTE:
ALL MATERIAL ASTM A 36 UNLESS NOTED

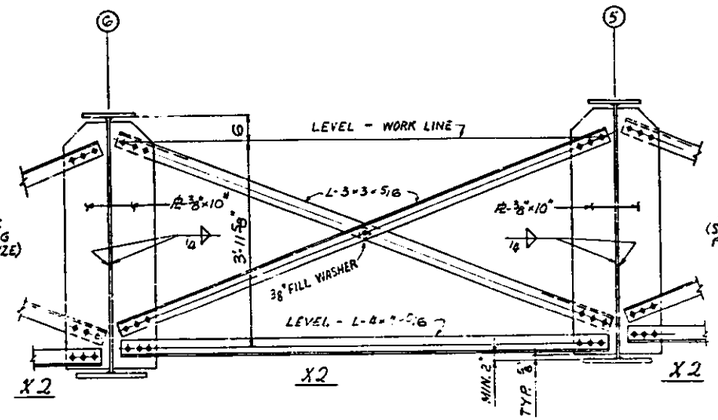
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FIELD SPLICES & DETAILS - SPANS 1 TO 9A & 15 TO 19
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

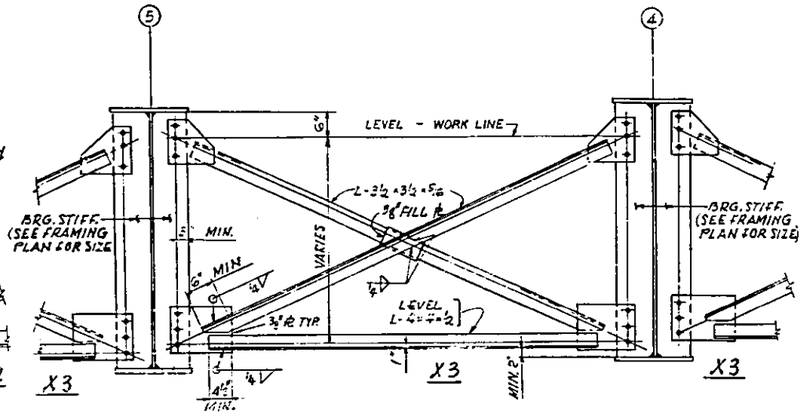
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	102-1B-1.1 D	ALEXANDER & MISSISSIPPI	ILLINOIS MISSOURI	63	45
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)10	



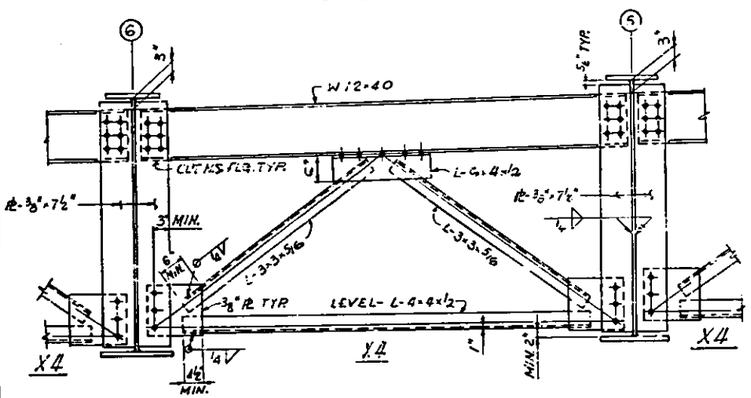
CROSSFRAME - X1 (AT ABUTMENT & PIER)
SCALE: 3/4" = 1'-0"



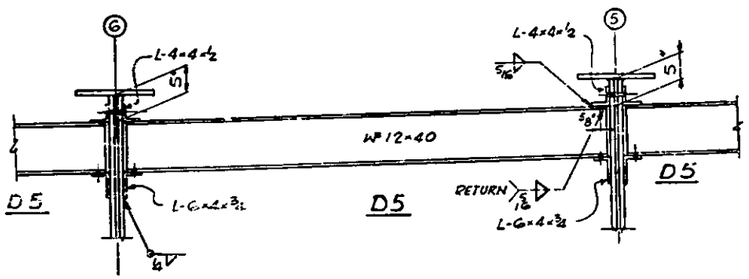
INTERMEDIATE CROSSFRAME - X2
SCALE: 3/4" = 1'-0"



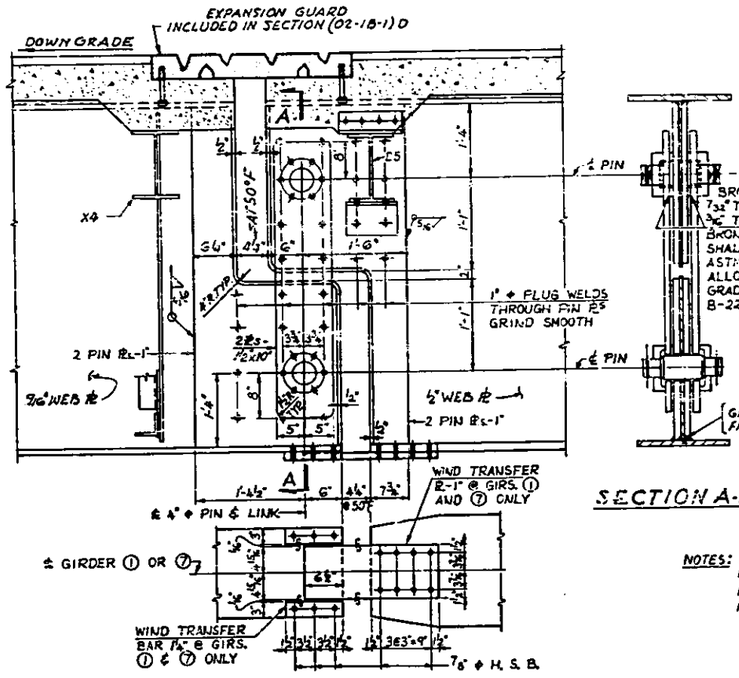
CROSSFRAME - X3 (AT PIER)
SCALE: 3/4" = 1'-0"



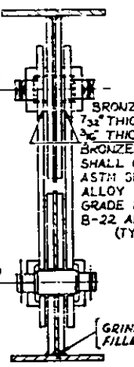
CROSSFRAME - X4 (AT LINK)
SCALE: 3/4" = 1'-0"



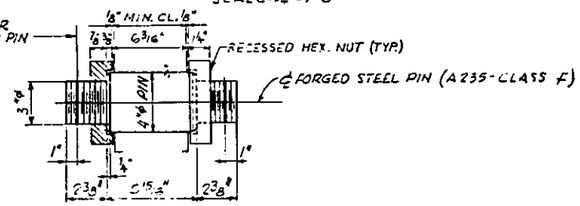
DIAPHRAGM - D5 (AT LINK)
SCALE: 3/4" = 1'-0"



LINK DETAILS — SPAN 4

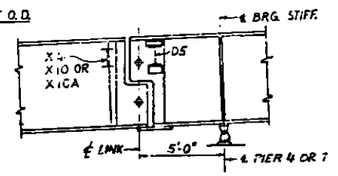


SECTION A-A



PIN DETAIL

NUTS SHALL BE SNUGGED UP FINGER TIGHT AGAINST SHOULDERS OF PIN.
TOTAL NO. OF PINS REQUIRED = 14



LINK SETTING ELEVATION
LINK IN SPAN 4 SHOWN, LINK IN SPAN 7 SIMILAR

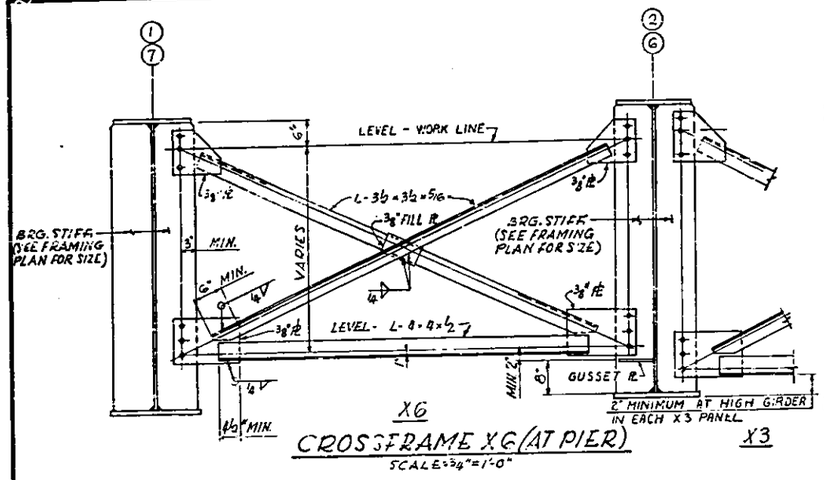
NOTE: LINK SHALL BE TRULY VERTICAL AT 50°F. CROSSFRAMES & DIAPHRAGMS SHALL BE AT RIGHT ANGLES TO GIRDER FLANGE.

NOTES: ALL FASTENERS SHALL BE ¾"Ø ASTM A 325 HIGH STRENGTH BOLTS UNLESS NOTED.
FOR DETAIL OF STIFFENERS SEE SHT. 44
MATERIAL - A36 - EXCEPT AS NOTED.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

GIRDER CROSSFRAMES AND LINK DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.55

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
FAI 57	(02-18-1) D	ALEXANDER	ILLINOIS	63	46
		MISSISSIPPI	MISSOURI		
F.H.W.A. REG. NO. 4		ILLINOIS		PROJECT I-57-9(5)0	
F.H.W.A. REG. NO. 5		MISSOURI			

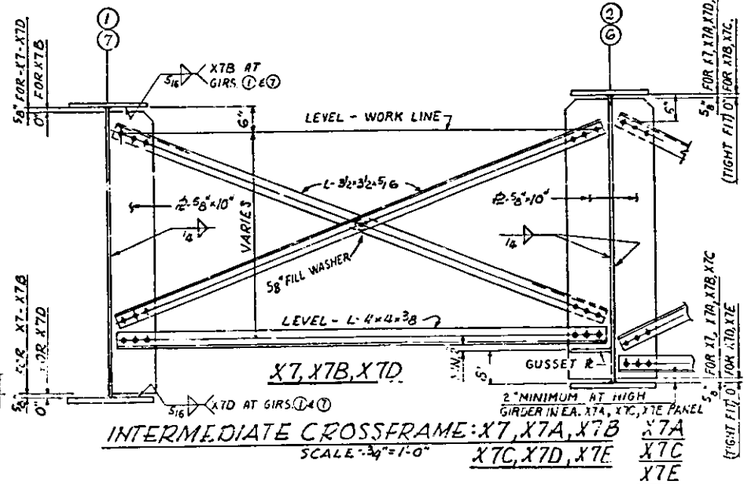


X6

CROSSFRAME X6 (AT PIER)

SCALE: ¾"=1'-0"

X3

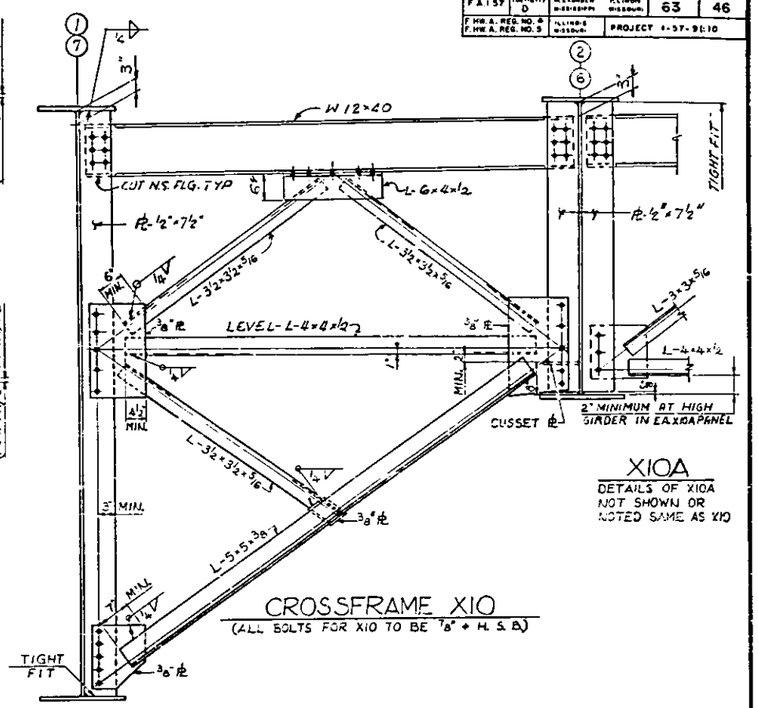


X7, X7B, X7D

INTERMEDIATE CROSSFRAME: X7, X7A, X7B, X7C, X7D, X7E

SCALE: ¾"=1'-0"

X7A X7C X7E

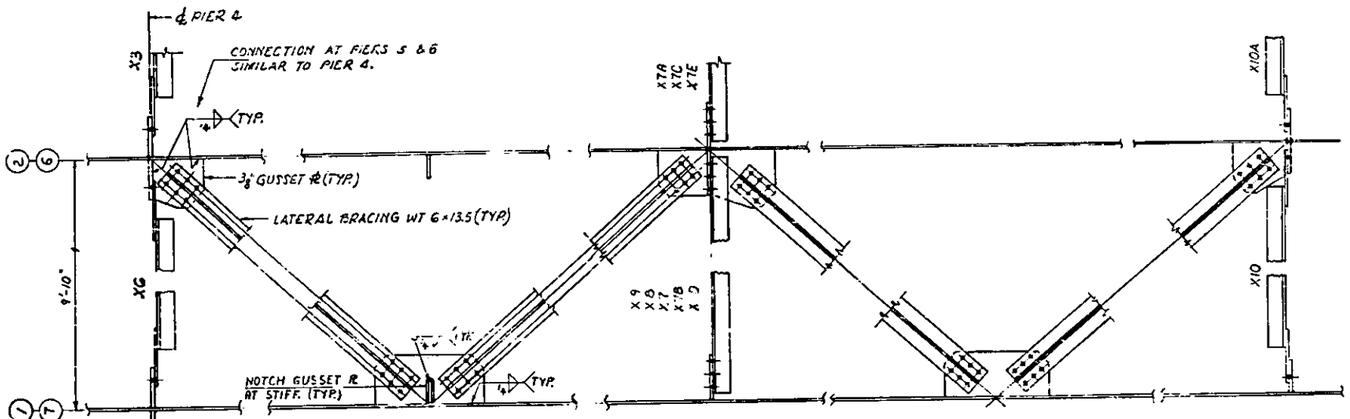


X10A

DETAILS OF X10A NOT SHOWN OR NOTED SAME AS X10

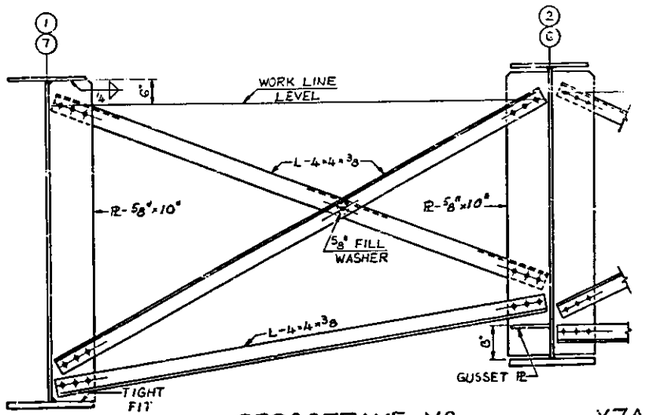
CROSSFRAME X10

(ALL BOLTS FOR X10 TO BE ⅞" ϕ H. S. B.)



BOTTOM LATERAL BRACING CONNECTIONS.

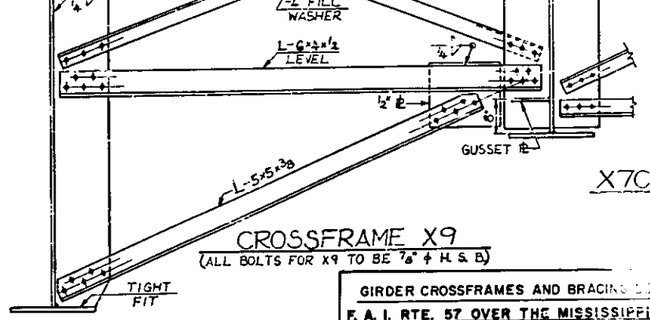
SPANS 5, 6 & 7



CROSSFRAME X8

(ALL BOLTS FOR X8 TO BE ⅞" ϕ H. S. B.)

X7A



X7C

CROSSFRAME X9

(ALL BOLTS FOR X9 TO BE ⅞" ϕ H. S. B.)

NOTES:

ALL MATERIAL ASTM A 36 UNLESS NOTED.

ALL FASTENERS SHALL BE ¾" ϕ ASTM A 325 HIGH STRENGTH BOLTS UNLESS NOTED.

FOR DETAIL OF STIFFENERS, SEE SHT. 44

GIRDER CROSSFRAMES AND BRACING DETAILS

F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER

PROJECT I-57-9(5)0

SECTION (02-18-1)D

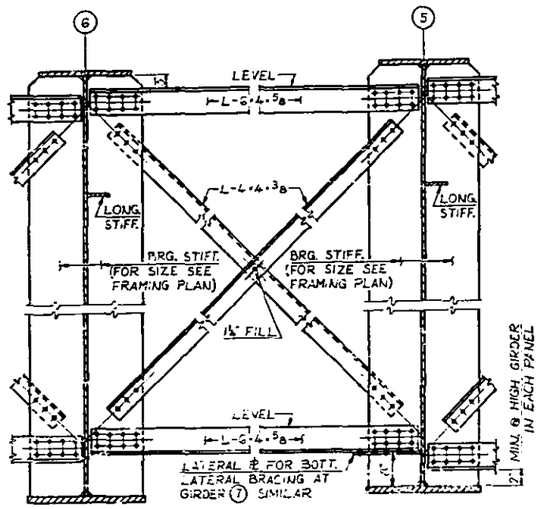
ALEXANDER COUNTY, ILLINOIS

MISSISSIPPI COUNTY, MISSOURI

STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

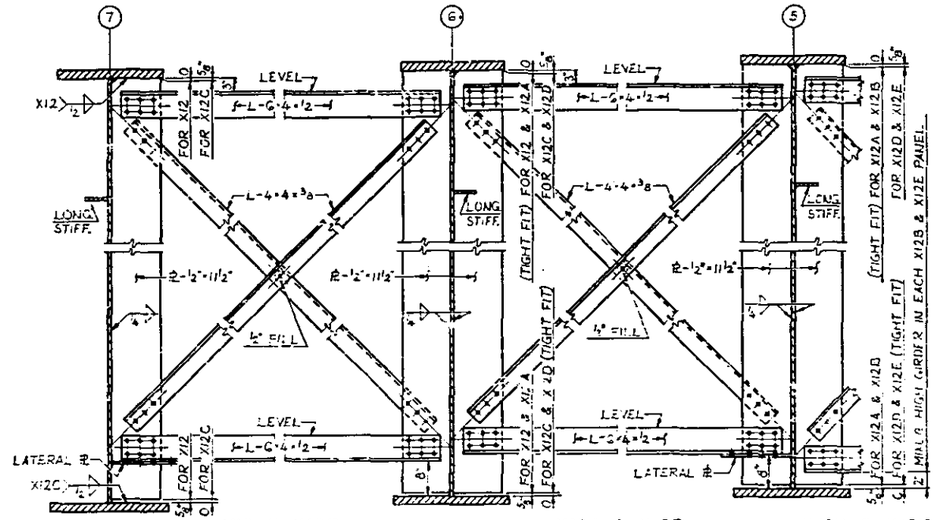
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	102-18-1 D	ALEXANDER MISSISSIPPI	63	47
F.H.P.P. NO. 0 F.H.A. P.E.S. NO. 0		ILL. FED. AID PROJECT MISSOURI	PROJECT I-57-9(5)10	



X11 X11A X11B

CROSSFRAME X11, X11A & X11B

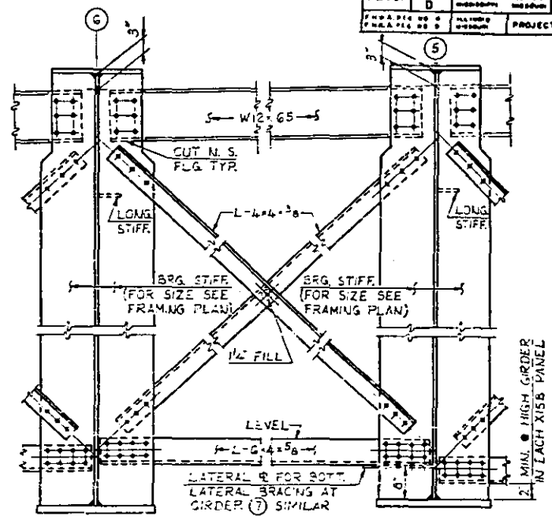
DETAILS OF X11 & X11B NOT SHOWN OR NOTED, SIMILAR TO X11A



X12 & X12C X12A & X12D X12B & X12E

INTERMEDIATE CROSSFRAME X12, X12A, X12B, X12C, X12D & X12E

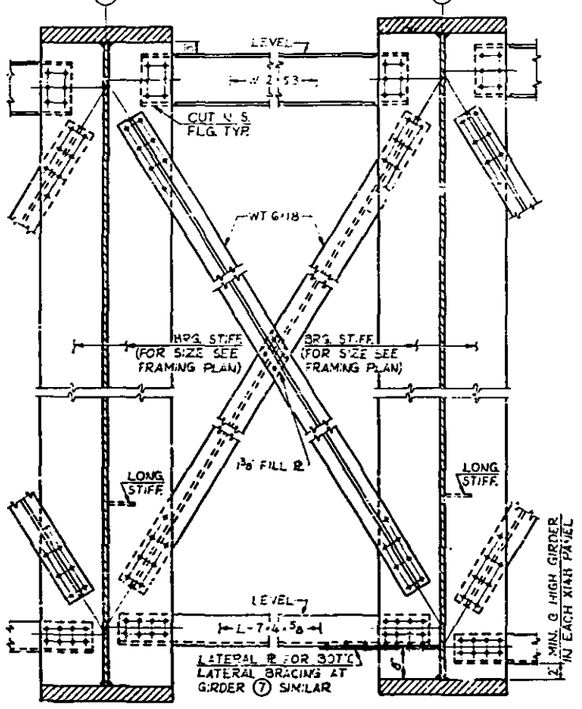
DETAILS OF X12B & X12E NOT SHOWN OR NOTED, SIMILAR TO X12A & X12D



X15 X15A X15B

CROSSFRAME X15, X15A & X15B

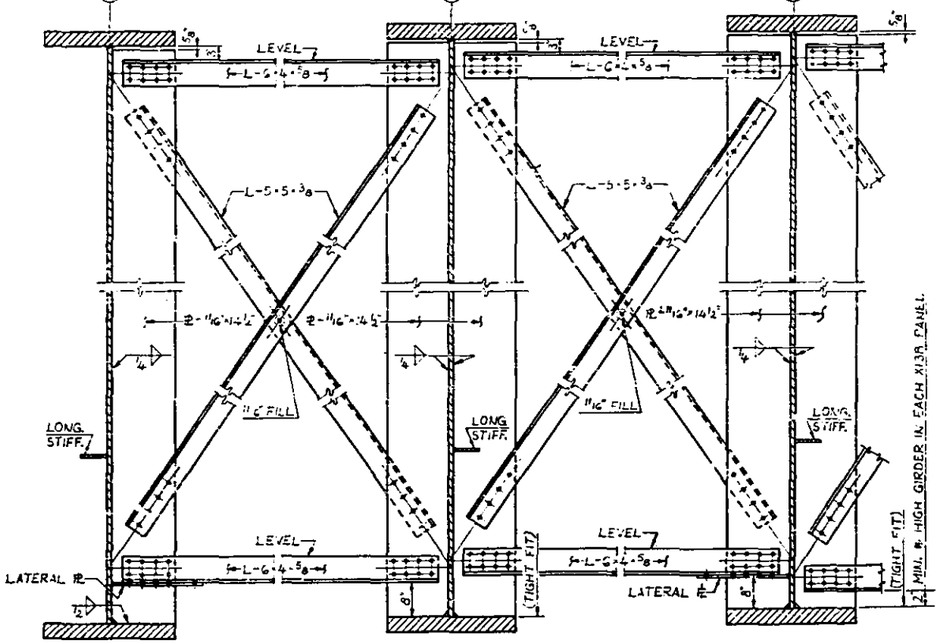
DETAILS OF X15 & X15B NOT SHOWN OR NOTED, SIMILAR TO X15A



X14 X14A X14B

CROSSFRAME X14, X14A & X14B

DETAILS OF X14 & X14B NOT SHOWN OR NOTED, SIMILAR TO X14A



X13 X13A X13B

INTERMEDIATE CROSSFRAME X13, X13A & X13B

DETAILS OF X13B NOT SHOWN OR NOTED, SIMILAR TO X13A

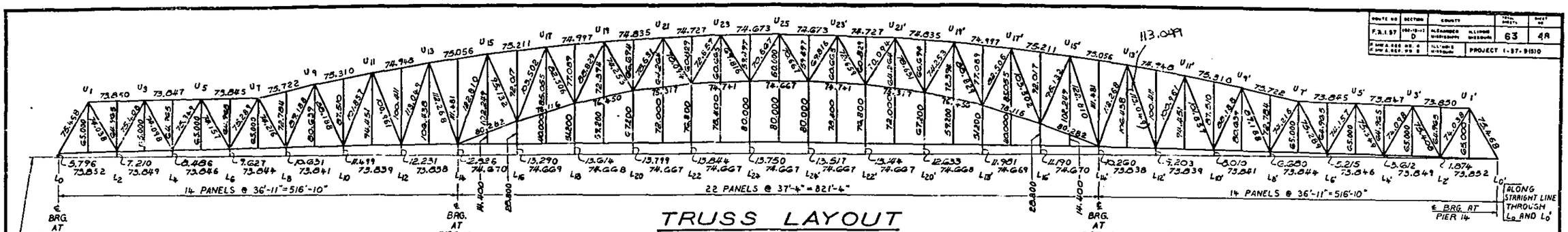
NOTES:

ALL MATERIAL ASTM A 36 UNLESS NOTED.

ALL FASTENERS SHALL BE 7/8"ϕ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.

STEEL DETAILS - SPANS 8A AND 9A
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) D	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI		63	48
F.A.P. 466 OR S. / F.A.S. 902, SEC B		ILLINOIS / MISSOURI	PROJECT I-57-9(5)0		

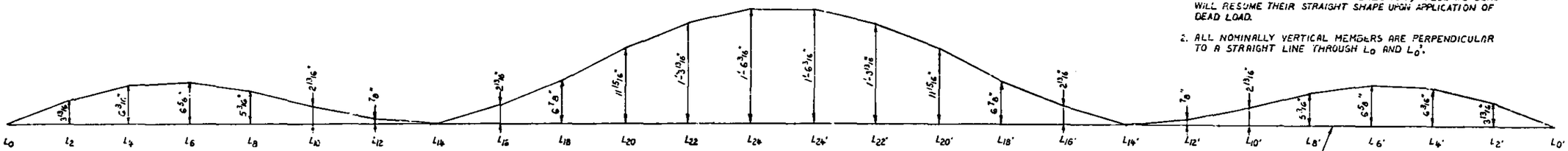


TRUSS LAYOUT

SHOWING THEORETICAL LENGTHS OF MEMBERS AND FINAL POSITION OF BOTTOM CHORD.
THIS CONFIGURATION IS TO BE ATTAINED AFTER ALL DEAD LOAD DEFLECTION (EXCEPT THAT CAUSED BY THE WEIGHT OF THE INITIAL WEARING SURFACE) HAS TAKEN PLACE. ALL THE LENGTHS AND OFFSETS SHOWN ARE IN FEET.
SCALE: 1"=60'-0"

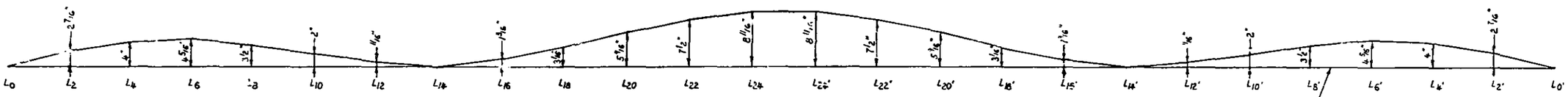
NOTES:

1. WITH THE TRUSS IN ITS FINAL POSITION (AFTER DEAD LOAD DEFORMATION HAS TAKEN PLACE), ALL MEMBERS ARE TO BE STRAIGHT. ALL MEMBERS SHALL BE FABRICATED STRAIGHT. THE FABRICATED LENGTHS OF MEMBERS ARE SUCH THAT SOME CHORD MEMBERS WILL HAVE TO BE FORCED INTO A CURVED POSITION DURING ERECTION; THESE MEMBERS WILL RESUME THEIR STRAIGHT SHAPE UPON APPLICATION OF DEAD LOAD.
2. ALL NOMINALLY VERTICAL MEMBERS ARE PERPENDICULAR TO A STRAIGHT LINE THROUGH L0 AND L0'.



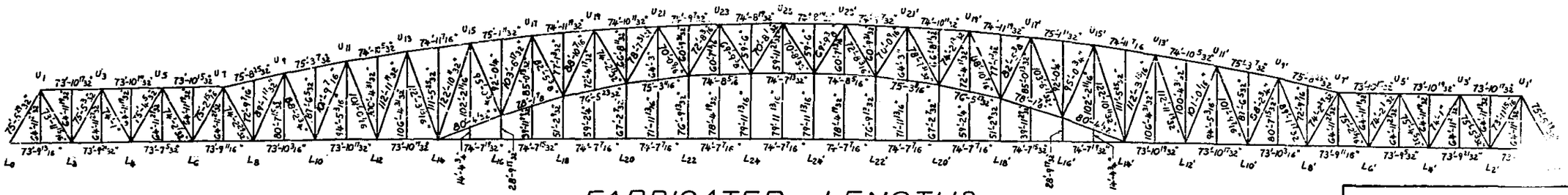
BLOCKING ORDINATES FOR TOTAL DEAD LOAD*

ORDINATES ARE SHOWN RELATIVE TO THE FINAL POSITION OF THE BOTTOM CHORD
* EXCLUDING WEIGHT OF INITIAL WEARING SURFACE



BLOCKING ORDINATES FOR WEIGHT OF DECK CONCRETE

ORDINATES ARE SHOWN RELATIVE TO THE FINAL POSITION OF THE BOTTOM CHORD



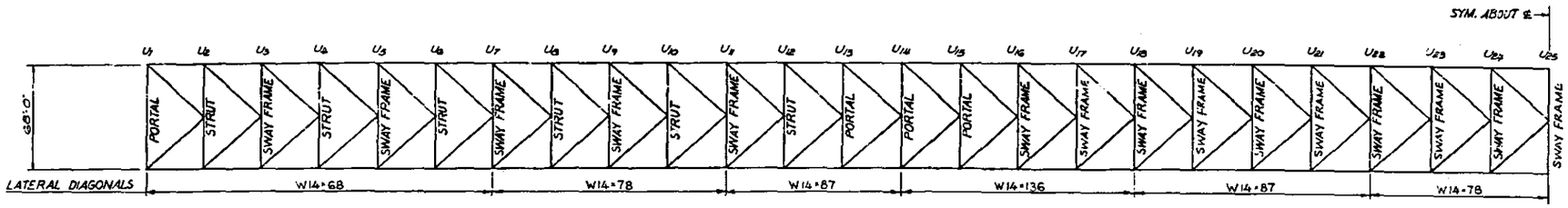
FABRICATED LENGTHS

THE LENGTHS SHOWN ARE THE THEORETICAL LENGTHS OF MEMBERS CORRECTED FOR DEFORMATION DUE TO DEAD LOAD.
SCALE: 1"=60'-0"

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

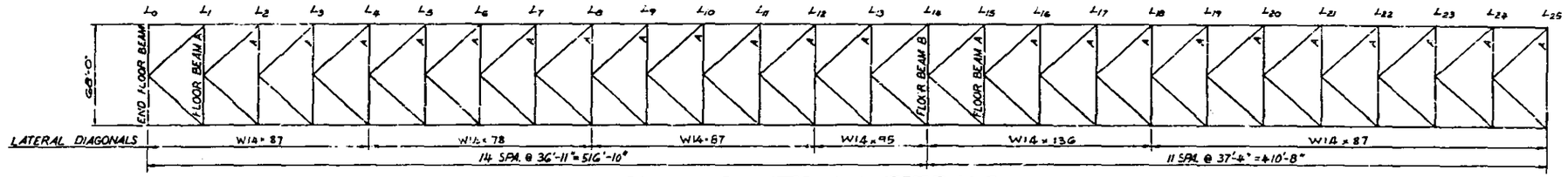
TRUSS LAYOUT & BLOCKING ORDINATES
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	49
F.A.I. 255 & 155 NO. 4 F.A.I. 255 & 155 NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)10	



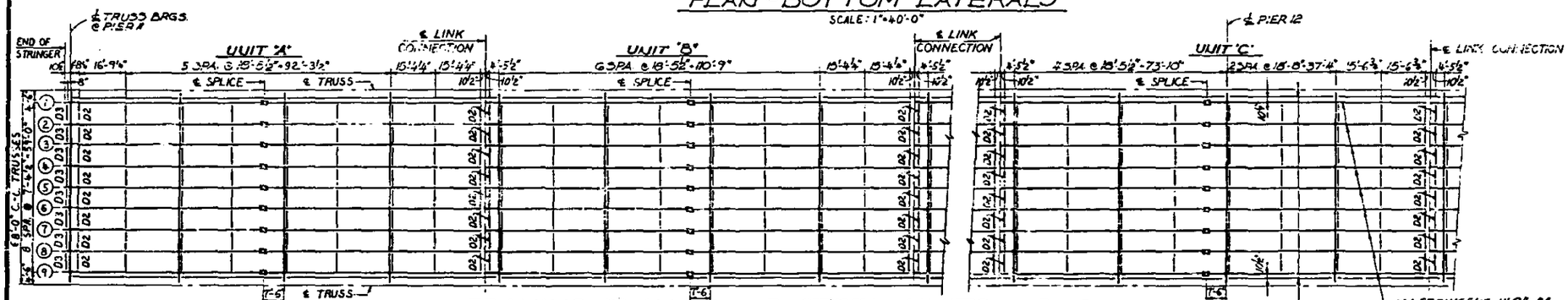
PLAN - TOP LATERAL SYSTEM

SCALE: 1"=40'-0"



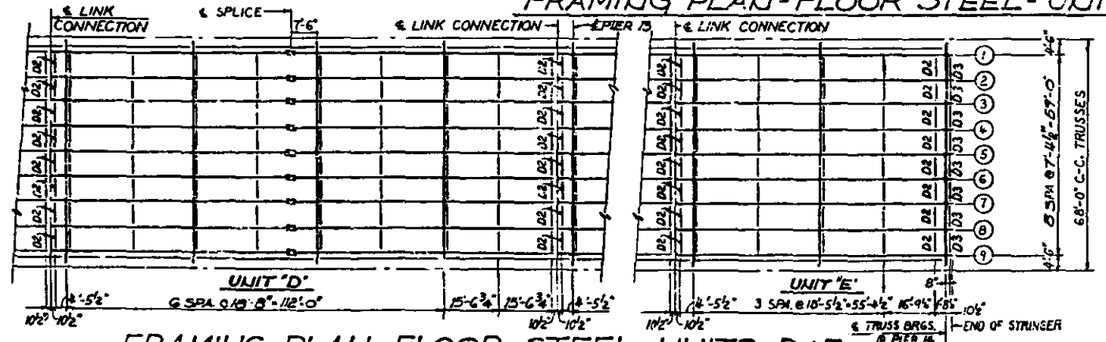
PLAN - BOTTOM LATERALS

SCALE: 1"=40'-0"



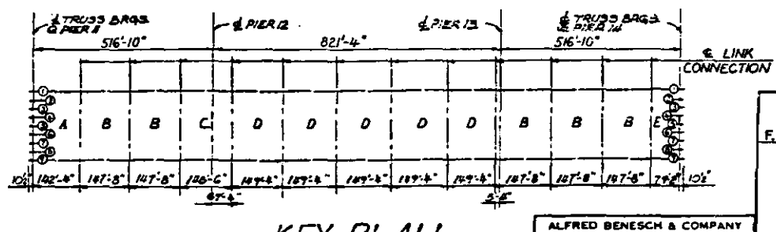
FRAMING PLAN - FLOOR STEEL - UNITS A, B & C

SCALE: 1"=20'-0"



FRAMING PLAN - FLOOR STEEL - UNITS D & E

SCALE: 1"=20'-0"



KEY PLAN

NOTES:

ALL DIAPHRAGMS ARE DI UNLESS NOTED.

ALL MATERIAL ASTM A36 UNLESS NOTED.

ALL DIMENSIONS PERPENDICULAR TO TRUSS ARE HORIZONTAL.

ALL DIMENSIONS PARALLEL TO TRUSS ARE ALONG A STRAIGHT LINE THROUGH L_0 AND L_0' (SEE TRUSS LAYOUT, SHT. 48)

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN - SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION 102-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

TRUSS PANEL POINT	PROFILE GRADE ELEV.	ELEV.* OF ℄ BOTTOM CHORD	TOP OF STRINGER ELEVATIONS * (SEE DETAIL A) 1 AND 9	2 AND 8	3 AND 7	4 AND 6	5	FILL ℄ THICKNESS "t" INCHES (SEE DETAIL A)	DEAD LOAD DEFLECTION OF TRUSS-INCHES TOTAL DEAD LOAD	WEIGHT OF CONCRETE ONLY
L_0	386.939	378.786	385.772	385.338	386.003	386.118	386.233	1/2"	0"	0"
L_1	387.603	379.453	386.496	386.612	386.727	386.842	386.957	11/16"	2 1/16"	1 5/16"
L_2	388.353	380.360	387.186	387.302	387.417	387.532	387.647	1/2"	3 13/16"	2 7/16"
L_3	389.008	380.998	387.821	387.937	388.052	388.187	388.302	11/16"	5 3/8"	3 7/16"
L_4	389.629	381.636	388.464	388.579	388.693	388.808	388.923	1/2"	6 3/16"	4"
L_5	390.217	382.206	389.050	389.166	389.281	389.396	389.511	11/16"	6 15/16"	4 1/2"
L_6	390.770	382.777	389.603	389.719	389.834	389.949	390.064	1/2"	6 5/8"	4 5/16"
L_7	391.289	383.279	390.122	390.238	390.353	390.468	390.583	11/16"	6 1/16"	4 1/16"
L_8	391.774	383.781	390.607	390.723	390.838	390.953	391.068	1/2"	5 3/16"	3 1/2"
L_9	392.225	384.215	391.058	391.174	391.289	391.404	391.519	11/16"	4 1/16"	2 13/16"
L_{10}	392.642	384.649	391.475	391.591	391.706	391.821	391.936	1/2"	2 13/16"	2"
L_{11}	393.025	385.015	391.858	391.974	392.089	392.204	392.319	11/16"	1 7/8"	1 3/8"
L_{12}	393.374	385.381	392.207	392.323	392.438	392.553	392.668	1/2"	7/8"	11/16"
L_{13}	393.689	385.678	392.522	392.638	392.753	392.868	392.983	11/16	5/8"	3/8"
L_{14}	393.969	385.976	392.802	392.918	393.033	393.148	393.263	1/2"	0"	0"
L_{15}	394.219	386.206	393.052	393.168	393.283	393.398	393.513	11/16	1/2"	11/16"
L_{16}	394.433	386.440	393.266	393.382	393.497	393.612	393.727	1/2"	2 3/16"	1 3/16"
L_{17}	394.613	386.602	393.446	393.562	393.677	393.792	393.907	11/16"	5"	2 1/16"
L_{18}	394.757	386.764	393.590	393.706	393.821	393.936	394.051	1/2"	6 7/8"	3 1/16"
L_{19}	394.867	386.856	393.700	393.816	393.931	394.046	394.161	11/16"	6 5/16"	4"
L_{20}	394.942	386.949	393.775	393.891	394.006	394.121	394.236	1/2"	1'-5 5/16"	5 5/16"
L_{21}	394.982	386.971	393.815	393.931	394.046	394.161	394.276	11/16"	1'-2"	6 5/8"
L_{22}	394.987	386.994	393.820	393.936	394.051	394.166	394.281	1/2"	1'-3 13/16"	7 1/2"
L_{23}	394.958	386.947	393.791	393.907	394.022	394.137	394.252	11/16"	1'-5 5/16"	8 1/16"
L_{24}	394.893	386.900	393.726	393.842	393.957	394.072	394.187	1/2"	1'-6 3/16"	8 11/16"
L_{25}	394.794	386.783	393.627	393.743	393.858	393.973	394.088	11/16"	1'-6 5/8"	8 15/16"
$L_{24'}$	394.660	386.667	393.493	393.609	393.724	393.839	393.954	1/2"	1'-6 3/16"	8 11/16"
$L_{23'}$	394.491	386.490	393.324	393.440	393.555	393.670	393.785	11/16"	1'-5 5/16"	8 1/4"
$L_{22'}$	394.287	386.294	393.120	393.236	393.351	393.466	393.581	1/2"	1'-3 13/16"	7 1/2"
$L_{21'}$	394.049	386.038	392.882	392.998	393.113	393.228	393.343	11/16"	1'-2"	6 5/8"
$L_{20'}$	393.775	385.782	392.608	392.724	392.839	392.954	393.069	1/2"	1 11/16"	5 9/16"
$L_{19'}$	393.467	385.456	392.300	392.416	392.531	392.646	392.761	11/16"	9 5/16"	4 1/4"
$L_{18'}$	393.124	385.131	391.957	392.073	392.188	392.303	392.418	1/2"	6 1/8"	3 1/16"
$L_{17'}$	392.746	384.735	391.579	391.695	391.810	391.925	392.040	11/16"	5"	2 1/4"
$L_{16'}$	392.333	384.340	391.166	391.282	391.397	391.512	391.627	1/2"	2 13/16"	1 3/16"
$L_{15'}$	391.885	383.875	390.718	390.834	390.949	391.064	391.179	11/16"	1 1/2"	11/16"
$L_{14'}$	391.403	383.410	390.236	390.352	390.467	390.582	390.697	1/2"	0"	0"
$L_{13'}$	390.891	382.881	389.724	389.840	389.955	390.070	390.185	11/16"	5/8"	3/8"
$L_{12'}$	390.346	382.353	389.179	389.295	389.410	389.525	389.640	1/2"	1/8"	11/16"
$L_{11'}$	389.766	381.756	388.599	388.715	388.830	388.945	389.060	11/16"	1 1/8"	1 3/8"
$L_{10'}$	389.153	381.160	387.986	388.102	388.217	388.332	388.447	1/2"	2 3/16"	2"
$L_{9'}$	388.505	380.495	387.338	387.454	387.569	387.684	387.799	11/16"	4 1/16"	2 13/16"
$L_{8'}$	387.823	379.830	386.656	386.772	386.887	387.002	387.117	1/2"	5 3/16"	3 1/2"
$L_{7'}$	387.107	379.097	385.940	386.056	386.171	386.286	386.401	11/16"	6 1/16"	4 1/16"
$L_{6'}$	386.358	378.365	385.191	385.307	385.422	385.537	385.652	1/2"	6 5/8"	4 5/16"
$L_{5'}$	385.574	377.583	384.407	384.523	384.638	384.753	384.868	11/16"	6 15/16"	4 1/2"
$L_{4'}$	384.755	376.762	383.588	383.704	383.819	383.934	384.049	1/2"	6 3/16"	4"
$L_{3'}$	383.903	375.893	382.736	382.852	382.967	383.082	383.197	11/16"	5 3/8"	3 7/16"
$L_{2'}$	383.017	375.024	381.850	381.966	382.081	382.196	382.311	1/2"	3 13/16"	2 7/16"
$L_{1'}$	382.097	374.087	380.930	381.046	381.161	381.276	381.391	11/16"	2 1/16"	1 5/16"
$L_{0'}$	381.143	373.150	379.976	380.092	380.207	380.322	380.437	1/2"	0"	0"

*ELEVATIONS GIVEN ARE AFTER TOTAL DEAD LOAD DEFLECTION

INTERIOR STRINGER MOMENT AND REACTION TABLES FOR UNIT "A"

℄ STRINGER	PP1	PANEL 1	PP2	PANEL 2	PP3	PANEL 3	PP4	PANEL 4	℄ PIN
		36'-11"		36'-11"		36'-11"		31'-7"	

SECTION: W24×84 (A572)

MOMENT TABLE	PP1	0.4 PANEL 1	PP2	0.5 PANEL 2	PP3	0.5 PANEL 3	PP4	0.4 PANEL 4
I. (in^4)	2364	2364	2364	2364	2364	2364	2364	2364
D.L.(1) (K/I)	1.072	1.072	1.072	1.072	1.072	1.072	1.072	1.072
D.L.M.(1) ('K)	0	116	-158	51	-114	64	-133	79
L.L.M. ('K)	0	225*	-157	168	-145	165	-143	169
IMP.M. ('K)	0	67*	- 47	50	- 44	49	- 43	51
M_{TOTAL} ('K)	0	408	-362	269	-303	278	-319	299
f_s (KSI)	0.00	20.94**	22.13	16.45	18.52	17.00	19.50	18.28

REACTION TABLE	PP1	PP2	PP3	PP4	℄ PIN
D.L.R.(1) (K)	15.7	45.3	38.3	41.8	12.9
L.L.R. (K)	38.6	48.5	46.5	46.5	36.8
IMP.R. (K)	11.6	14.5	14.0	14.0	11.0
R_{TOTAL} (K)	65.9	108.3	98.8	102.3	60.7

* INCLUDES ADDITIONAL MOMENT DUE TO LIVE LOAD DEFLECTION OF FLOOR BEAM.
** ALLOWABLE FATIGUE STRESS = 23.18 KSI.
(1) INCLUDING WEARING SURFACE

INTERIOR STRINGER MOMENT AND REACTION TABLES FOR UNIT "B", "C" OR "D"

	℄ PIN	PP1	PANEL 1	PP2	PANEL 2	PP3	PANEL 3	PP4	PANEL 4	℄ PIN
UNIT "B"	5'-4"		36'-11"		36'-11"		36'-11"		31'-7"	
UNIT "C"	5'-6"		36'-11"		36'-11"		37'-4"		32'-0"	
UNIT "D"	5'-6"		37'-4"		37'-4"		37'-4"		32'-0"	

SECTION: W24×84 (A572)

MOMENT TABLE (VALUES FOR UNIT "D" SHOWN)

	PP1	0.4 PANEL 1	PP2	0.5 PANEL 2	PP3	0.5 PANEL 3	PP4	0.4 PANEL 4
I. (in^4)	2364	2364	2364	2364	2364	2364	2364	2364
D.L.(1) (K/I)	1.072	1.072	1.072	1.072	1.072	1.072	1.072	1.072
D.L.M.(1) ('K)	- 84	74	-137	59	-119	62	-132	79
L.L.M. ('K)	-172	225*	-157	168	-145	165	-143	169
IMP.M. ('K)	- 51	67*	- 47	50	- 44	49	- 43	51
M_{TOTAL} ('K)	-307	366	-341	277	-303	276	-313	279
f_s (KSI)	18.77	22.38**	20.85	16.93	18.53	16.87	19.44	18.28

REACTION TABLE (VALUES FOR UNIT "D" SHOWN)

	PP1	PP2	PP3	PP4	℄ PIN
D.L.R.(1) (K)	37.1	41.8	39.1	41.6	12.9
L.L.R. (K)	38.6	48.5	46.5	46.5	36.8
IMP.R. (K)	11.6	14.5	14.0	14.0	11.0
R_{TOTAL} (K)	87.3	104.8	99.6	102.1	60.7

* INCLUDES ADDITIONAL MOMENT DUE TO LIVE LOAD DEFLECTION OF FLOOR BEAM.
** ALLOWABLE FATIGUE STRESS = 22.63 KSI.
(1) INCLUDING WEARING SURFACE

INTERIOR STRINGER MOMENT AND REACTION TABLES FOR UNIT "E"

	PP1	PANEL 1	PP2	PANEL 2	PP3	℄ PIN
℄ PIN		5'-4"		36'-11"		36'-11"

SECTION: W24×84 (A572)

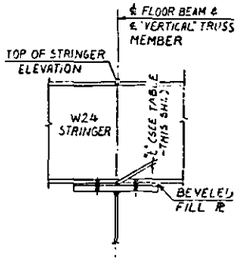
MOMENT TABLE

	PP1	0.4 PANEL 1	PP2	0.4 PANEL 2
I. (in^4)	2364	2364	2364	2364
D.L.(1) (K/I)	1.072	1.072	1.072	1.072
D.L.M.(1) ('K)	- 84	59	-161	109
L.L.M. ('K)	-172	225*	-162	225*
IMP.M. ('K)	- 51	67*	- 49	67*
M_{TOTAL} ('K)	-307	351	-372	401
f_s (KSI)	18.77	21.46**	22.74	24.51**

REACTION TABLE

	PP1	PP2	PP3
D.L.R.(1) (K)	36.2	46.0	15.4
L.L.R. (K)	38.7	48.0	38.7
IMP.R. (K)	11.6	14.4	11.6
R_{TOTAL} (K)	86.5	108.4	65.7

* INCLUDES ADDITIONAL MOMENT DUE TO LIVE LOAD DEFLECTION OF FLOOR BEAM.
** ALLOWABLE FATIGUE STRESS = 21.92 KSI.
* ALLOWABLE FATIGUE STRESS = 25.29 KSI.
(1) INCLUDING WEARING SURFACE



DETAIL A

(NOTE: ℄ FLOOR BEAM AND ℄ "VERTICAL" TRUSS MEMBER ARE PERPENDICULAR TO A STRAIGHT LINE THROUGH TRUSS PANEL POINTS L_0 AND $L_{0'}$. SEE TRUSS LAYOUT, SHT. 48

FLOOR BEAM MOMENT AND REACTION TABLES

MOMENT TABLE	END FLOOR BEAM AT PIERS 11 & 14 (JACKING) END	AT ℄ JACK**	END FLOOR BEAM AT PIERS 11 & 14 (EXCLUDING JACKING) END	0.5	TYPICAL INTERIOR FLOOR BEAM IN SPANS 12 & 14 END	0.5	INTERIOR FLOOR BEAM AT PIERS 12 & 13 2'-6" FROM ℄ TRUSS	0.5	TYPICAL INTERIOR FLOOR BEAM IN SPAN 13 END	0.5
LOCATION										
I (in^4)	74,289	76,854	74,289	82,159	89,258	109,888	248,370	244,321	89,258	109,888
D.L.M.(3) ('K)	—	4536	—	1418	—	3420	486	3454	—	3454
L.L.M. ('K)	—	—	—	1545	—	1975	—	1985	—	1985
IMP. M. ('K)	—	—	—	402	—	514	—	516	—	516
WIND M. ('K)	—	—	—	—	—	—	5226	—	—	—
M_{TOTAL} ('K)	—	4536	—	3365	—	5909	5712	5955	—	5955
f_s (KSI)	—	25.66	—	19.26	—	25.41	9.94*	19.44	—	25.61
SEC. FLG. WEB	15×19 3/4×69 1/2		15×19 3/4×70 1/16		15×19 7/8×69 1/2	15×19 7/8×70 1/16	15×20 9/16×68 3/8	15×20 9/16×75 1/4	3×33 1/2×66 1/2	3×15 1/2×70 1/16	15×20 1 1/4×55 3/4	15×20 9/16×75 1/4
GRADE OF STEEL	A36		A36		HYBRID A572 & A36		A36		A572 & A36	

REACTION TABLE	END FLOOR BEAM AT PIERS 11 & 14 (JACKING) END	AT JACK**	END FLOOR BEAM AT PIERS 11 & 14 (EXCLUDING JACKING)	TYPICAL INTERIOR FLOOR BEAM IN SPANS 12 & 14	INTERIOR FLOOR BEAM AT PIERS 12 & 13	TYPICAL INTERIOR FLOOR BEAM IN SPAN 13
D.L.R.(3) (K)	1008	1168	81.9	193.2	202.2	195.2
L.L.R. (K)	—	—	88.0	113.5	114.0	114.0
IMP. R. (K)	—	—	22.9	29.5	29.6	29.6
R_{TOTAL} (K)	1008	1168	192.8	336.2	345.8	338.8

* ALLOWABLE FATIGUE STRESS = 9.98 KSI.
** JACK APPLIED AT 4'-6" FROM ℄ TRUSS
(3) INCLUDING WEARING SURFACE

TRUSS REACTIONS

LOADING / DIRECTION OF REACTION		REACTIONS PER TRUSS AT PIERS 11 & 14 – KIPS VERTICAL	HORIZONTAL PARALLEL TO TRUSS	HORIZONTAL NORMAL TO TRUSS	REACTIONS PER TRUSS AT PIERS 12 & 13 – KIPS VERTICAL	HORIZONTAL PARALLEL TO TRUSS	HORIZONTAL NORMAL TO TRUSS
DEAD LOAD	STRUCT. STEEL	390	—	—	3136	—	—
	DECK CONCRETE(2)	700	—	—	3378	3.7	—
LIVE LOAD		273	—	—	957	196	—
IMPACT		21	—	—	60	12	—
WIND NORMAL TO TRUSS		±53	—	±154	±980	±263	±692
WIND AT SKEW ANGLE OF 60°		±17	—	±39	±310	±603	±225
WIND ON LIVE LOAD		±1	—	±7	±19	±26	±37
EARTHQUAKE (6% OF D.L.)		±3	—	±63	±297	±137	±360
TEMPERATURE (100°F FROM NORMAL)		—	—	—	—	±559	—
D.L. + L.L. + I.		1384	—	—	7531	584	—

(2) INCLUDING FUTURE WEARING SURFACE

FLOOR BEAM DEAD LOAD DEFLECTIONS

LOCATION / FLOOR BEAM	DEFLECTION DUE TO TOTAL DEAD LOAD-IN. END FLOOR BEAM	TYPICAL INTERIOR FLOOR BEAM	FLOOR BEAM AT PIERS 12 & 13	DEFLECTION DUE TO CONCRETE ONLY-IN. END FLOOR BEAM	TYPICAL INTERIOR FLOOR BEAM	FLOOR BEAM AT PIERS 12 & 13
AT STRINGERS 1 & 9	1/8	3/16	1/8	1/16	3/16	1/8
AT STRINGERS 2 & 8	1/4	1/2	3/8	3/16	3/8	1/4
AT STRINGERS 3 & 7	3/8	11/16	1/2	5/16	4/16	7/16
AT STRINGERS 4 & 6	7/16	13/16	5/8	3/8	11/16	1/2
AT STRINGER 5	1/2	7/8	5/8	3/8	3/4	1/2

PANEL DEAD LOAD REACTIONS ON TRUSS

LOAD / PANEL LOCATION	REACTIONS – KIPS L_0 AND $L_{0'}$	TYPICAL PANEL IN SPANS 12 & 14	L_{13} AND $L_{13'}$	TYPICAL PANEL IN SPAN 13
FLOOR STEEL	19.1	30.6	38.7	30.9
ROADWAY SLAB	46.0	119.2	119.8	120.4
PARAPETS AND RAILINGS	9.1	23.5	23.7	23.8
WEARING SURFACE	7.7	19.9	20.0	20.1
TOTAL	81.9	193.2	202.2	195.2

PANEL LIVE LOAD REACTIONS ON TRUSS

(IMPACT NOT INCLUDED)

LOADING / PANEL LOCATION	REACTIONS – KIPS L_0 AND $L_{0'}$	TYPICAL PANEL IN SPANS 12 & 14	L_{13} AND $L_{13'}$	TYPICAL PANEL IN SPAN 13
LANE – UNIFORM	16.2	42.5	42.8	43.0
LANE – CONCENTRATED	31.4	31.4	31.4	31.4
TRUCK	88.0	113.5	114.0	114.0

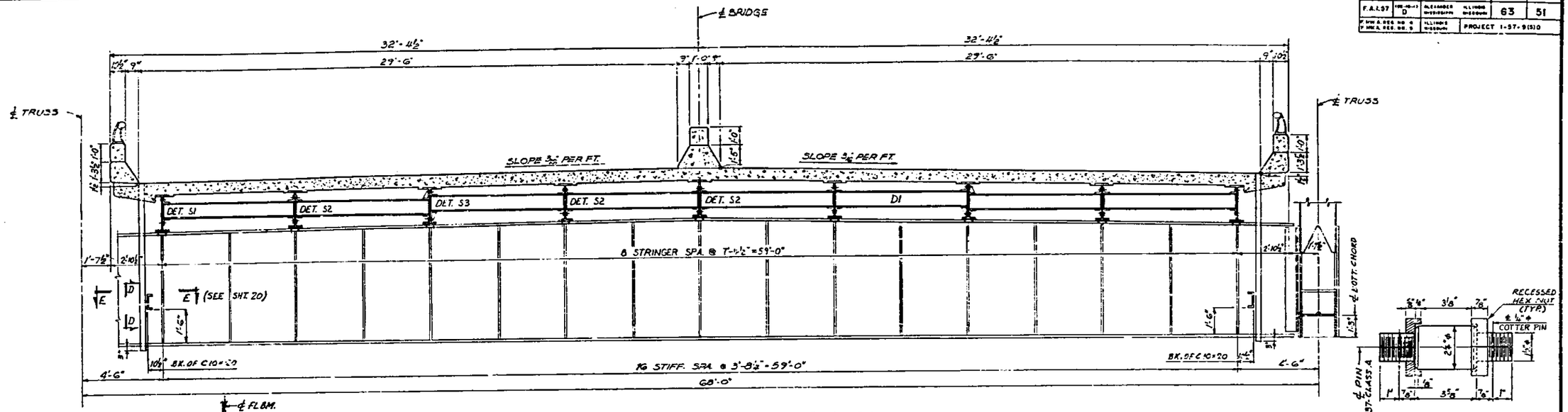
NOTES:
DEAD LOAD DOES NOT INCLUDE WEIGHT OF WEARING SURFACE UNLESS NOTED OTHERWISE.
FOR LOCATION OF UNITS "A", "B", "C", "D" SEE KEY PLAN ON SHT. 49

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	12-13-14 D	ALEXANDER MISSISSIPPI / ILLINOIS MISSOURI	63	30
F.H.W.A. REG. NO. 5				
F.H.W.A. REG. NO. 6		ILLINOIS MISSOURI	PROJECT I-57-9(510)	

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO ILLINOIS

STRINGER ELEVATIONS & DATA
SPANS 12, 13 & 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(510)
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

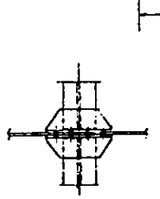
ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	51
F. AID A. PROJ. NO. 0 F. AID A. PROJ. NO. 0		ILLINOIS MISSOURI		PROJECT I-57-9(5)0	



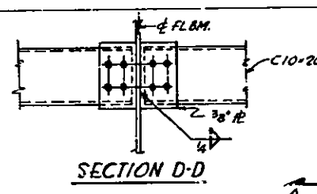
TYPICAL CROSS - SECTION

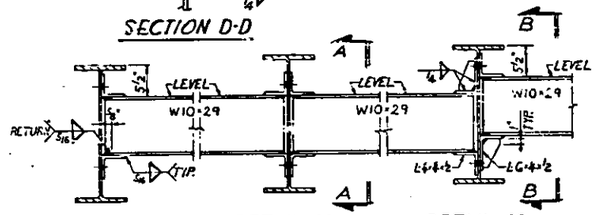
SCALE: 3/8"=1'-0"

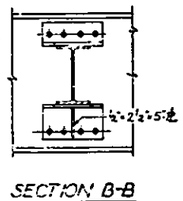
PIN DETAILS



SECTION A-A

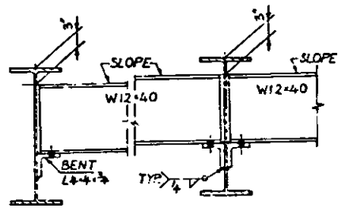






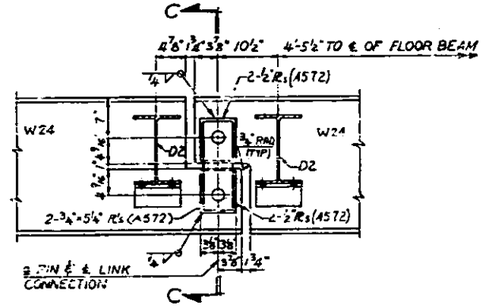
DIAPHRAGM DI DETAILS

SCALE: 1"=1'-0"



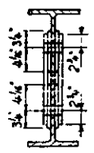
DIAPHRAGM D2 DETAILS

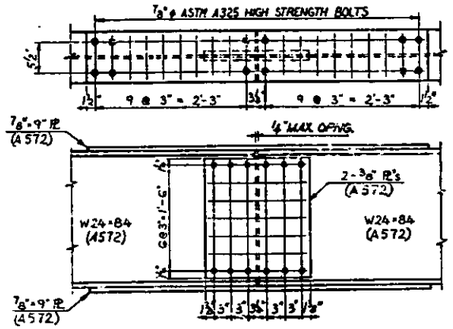
SCALE: 1"=1'-0"



LINK CONNECTION

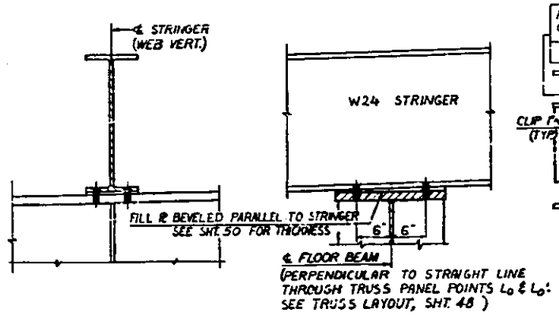
SCALE: 1"=1'-0"





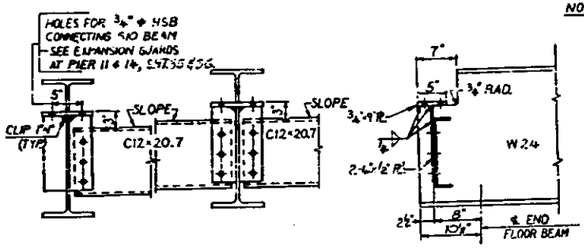
TYPICAL STRINGER SPLICE

SCALE: 1"=1'-0"



CONNECTION OF STRINGER TO FLOOR BEAM

SCALE: 1"=1'-0"



DIAPHRAGM D3 DETAILS

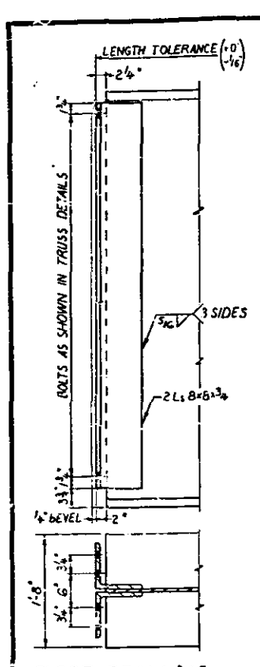
SCALE: 1"=1'-0"

NOTES:
ALL MATERIAL ASTM A36 UNLESS NOTED
ALL FASTENERS SHALL BE ¾" ℄ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.
FOR FLOOR BEAMS, SEE SHT. 52

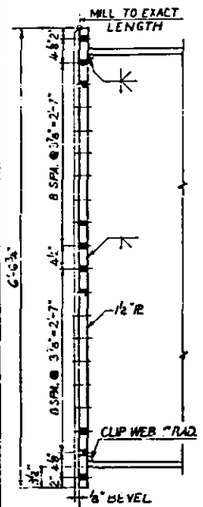
FLOOR STEEL DETAILS - SPANS 12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

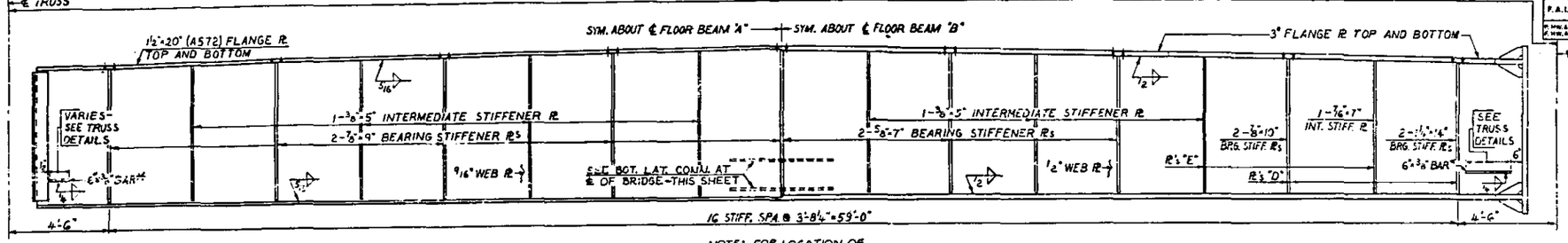
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1)D	ALEXANDER ILLINOIS MISSOURI	63	52
STATE ROUTE NO.		ILLINOIS MISSOURI	PROJECT I-57-9(5)0	



FLOOR BEAM "A" CONNECTION
(LATERAL Rs NOT SHOWN)
SCALE: 1"=1'-0"



END FLOOR BEAM CONNECTION
SCALE: 1"=1'-0"

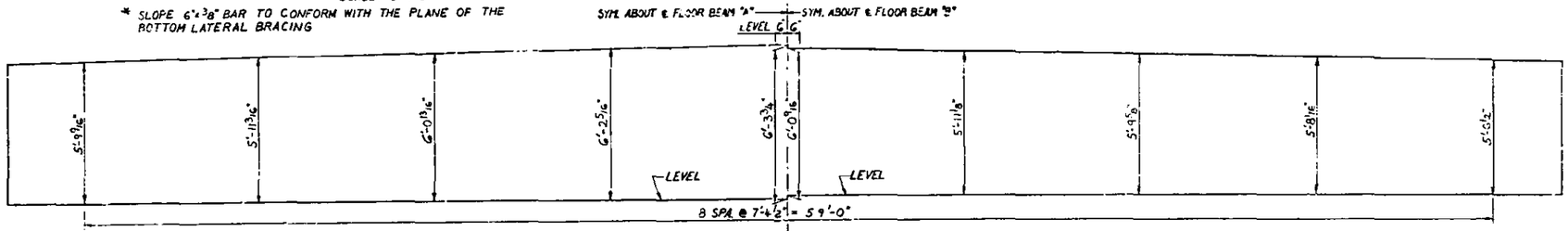


HALF ELEVATION INTERMEDIATE FLOOR BEAM "A"
SCALE: ⅜"=1'-0"

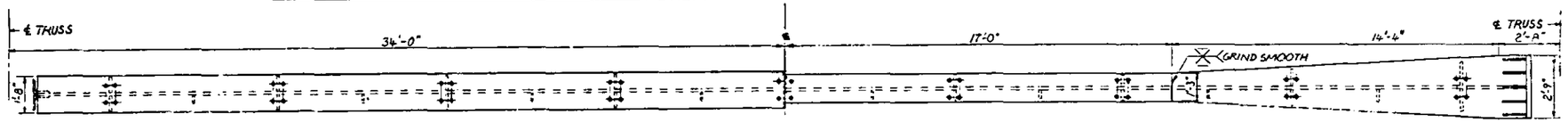
NOTE: FOR LOCATION OF FLOOR BEAMS "A" & "B" SEE FRAMING PLAN, SHT. 49

HALF ELEVATION INTERMEDIATE FLOOR BEAM "B"
SCALE: ⅜"=1'-0"

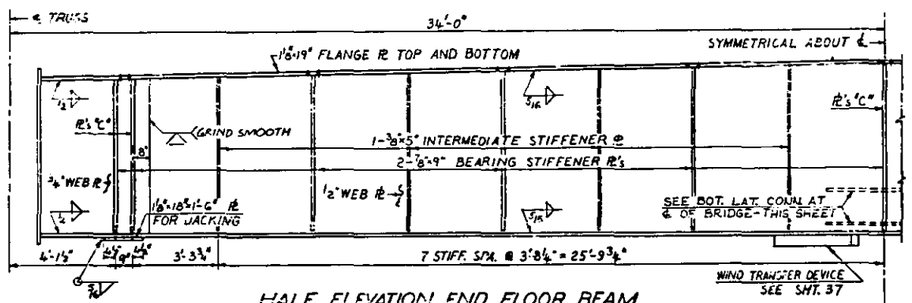
* SLOPE 6"x⅜" BAR TO CONFORM WITH THE PLANE OF THE BOTTOM LATERAL BRACING



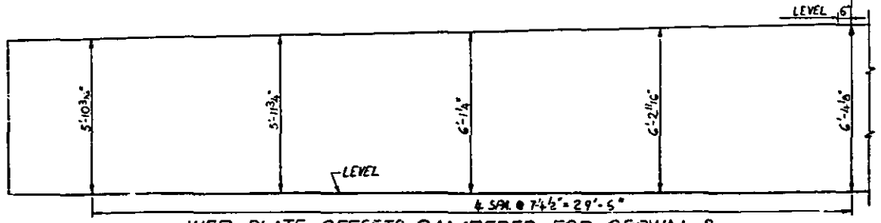
WEB PLATE OFFSETS CAMBERED FOR CROWN & TOTAL DEAD LOAD DEFLECTIONS OF FLOOR BEAMS "A" & "B"



HALF PLAN INTERMEDIATE FLOOR BEAM "A"
(LATERAL Rs NOT SHOWN)
SCALE: ⅜"=1'-0"

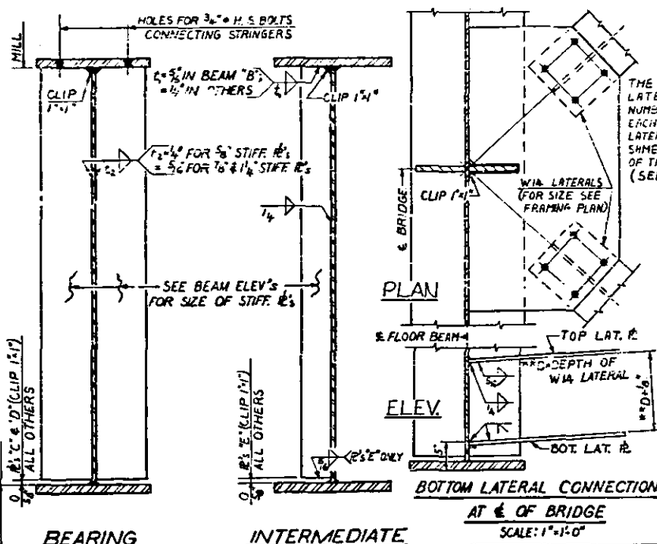


HALF ELEVATION END FLOOR BEAM
SCALE: ⅜"=1'-0"



WEB PLATE OFFSETS CAMBERED FOR CROWN & TOTAL DEAD LOAD DEFLECTION OF END FLOOR BEAM

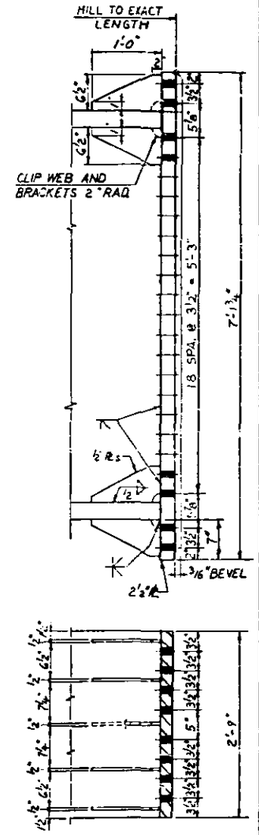
HALF PLAN INTERMEDIATE FLOOR BEAM "B"
(LATERAL Rs NOT SHOWN)
SCALE: ⅜"=1'-0"



BEARING STIFFENER
SCALE: 1"=1'-0"

INTERMEDIATE STIFFENER
SCALE: 1"=1'-0"

BOTTOM LATERAL CONNECTION AT ℄ OF BRIDGE
SCALE: 1"=1'-0"



FLOOR BEAM "B" CONNECTION
(LATERAL Rs NOT SHOWN)
SCALE: 1"=1'-0"

NOTES:
ALL MATERIAL ASTM A36 UNLESS NOTED.
TOTAL DEAD LOAD DEFLECTION DOES NOT INCLUDE DEFLECTION DUE TO FUTURE WEARING SURFACE.
FOR CONNECTION OF STRINGERS TO FLOOR BEAMS SEE FLOOR STEEL DETAILS, SHT. 51
ALL FASTENERS SHALL BE 1" ϕ ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED.

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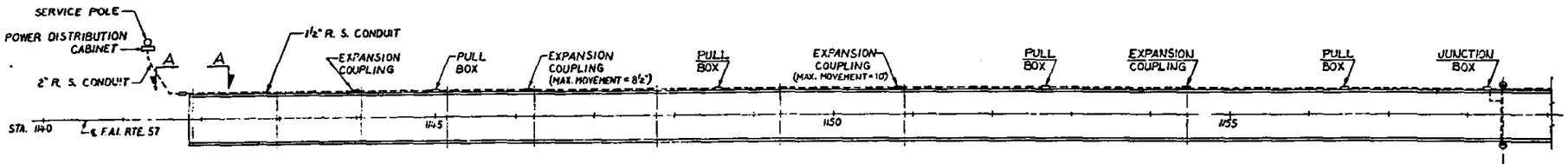
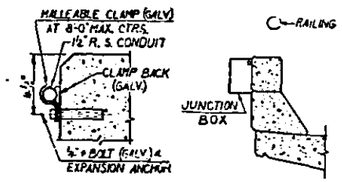
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

FLOOR BEAMS - SPANS 12, 13 & 14
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

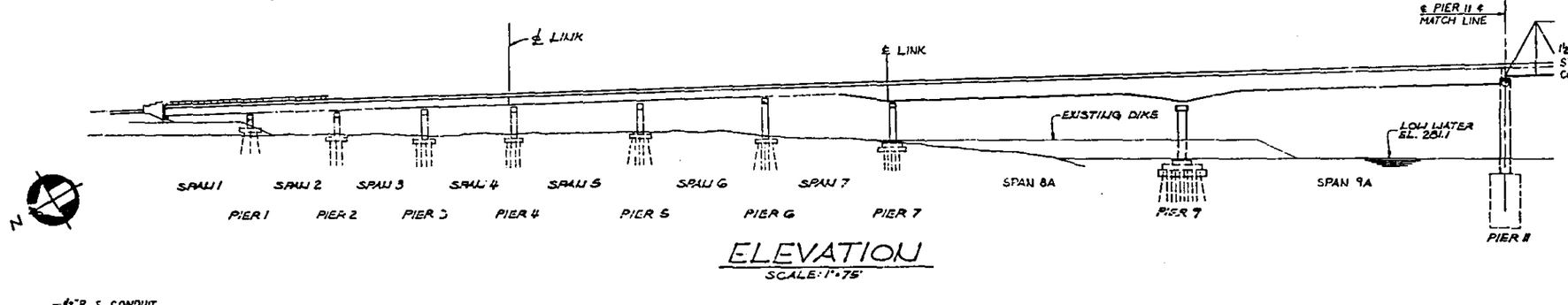
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 D	ALEXANDER (ILLINOIS) DUNKLIN (MISSOURI)		63	53
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS DIVISION	MISSOURI DIVISION	PROJECT I-57-9(5)10	



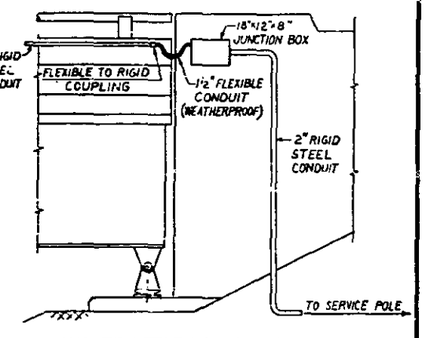
PLAN
SCALE: 1" = 75'



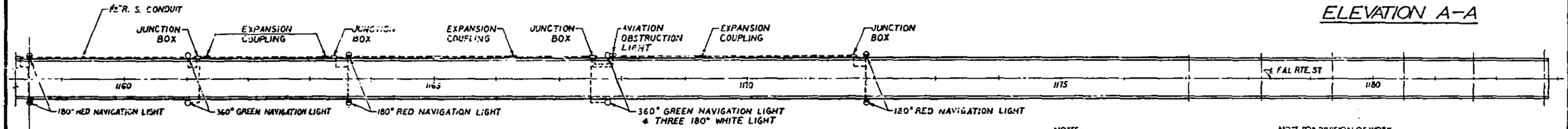
TYPICAL SECTION THROUGH EAST PARAPET
SPANS 1 THRU 13



ELEVATION
SCALE: 1" = 75'



ELEVATION A-A



PLAN
SCALE: 1" = 75'

NOTES:

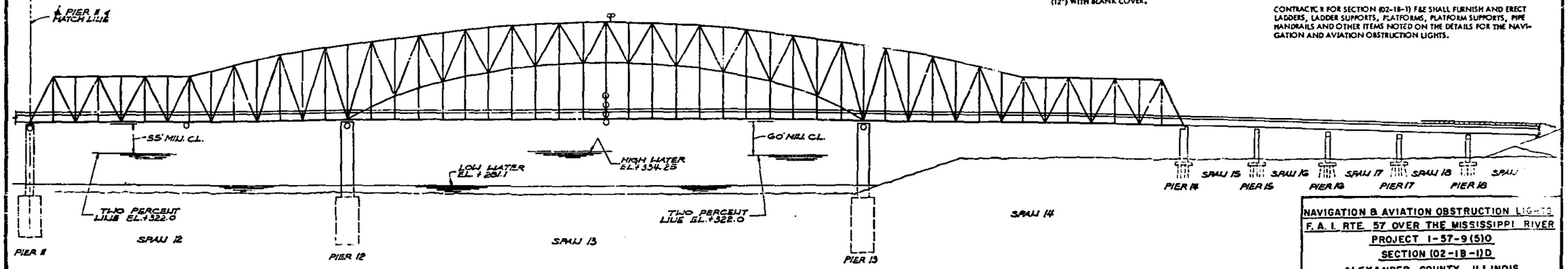
ALL JUNCTION BOXES SHALL BE 18" X 12" X 8".

ALL PULL BOXES SHALL BE APPLETON TYPE PBC (12") WITH BLANK COVER.

NOTE FOR DIVISION OF WORK:

CONTRACTOR FOR SECTION (02-1B-1) D SHALL FURNISH AND INSTALL THE NAVIGATION LIGHTING SYSTEM AND THE AVIATION OBSTRUCTION LIGHT SYSTEM BOTH COMPLETE. SEE SPECIAL PROVISIONS.

CONTRACTOR FOR SECTION (02-1B-1) F&E SHALL FURNISH AND ERECT LADDERS, LADDER SUPPORTS, PLATFORMS, PLATFORM SUPPORTS, PIPE HANDRAILS AND OTHER ITEMS NOTED ON THE DETAILS FOR THE NAVIGATION AND AVIATION OBSTRUCTION LIGHTS.



ELEVATION
SCALE: 1" = 75'

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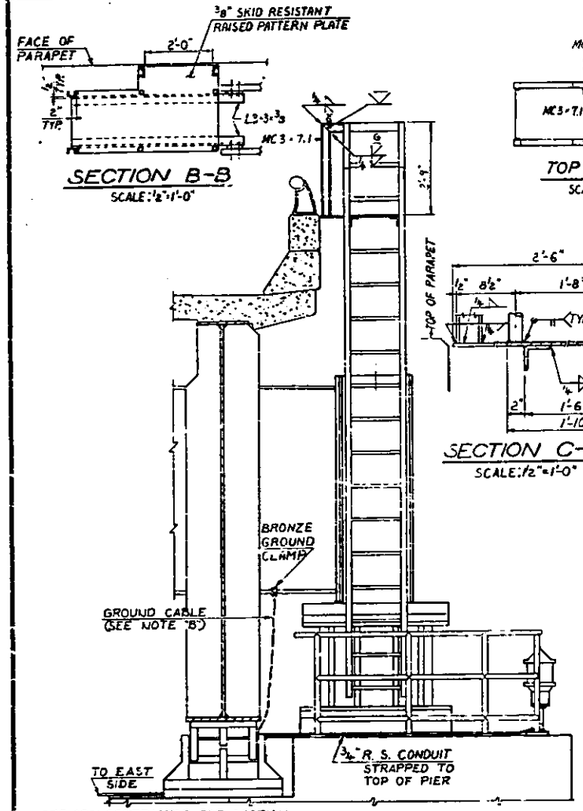
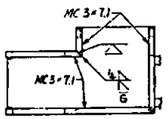
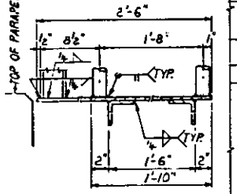
CONSULTING ENGINEERS
100 S. WABASH AVE. CHICAGO, ILLINOIS

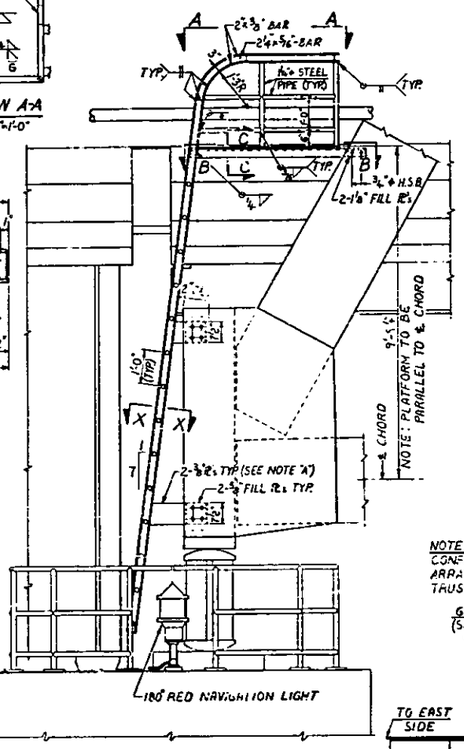
NAVIGATION & AVIATION OBSTRUCTION LIGHTS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182 + 75.25

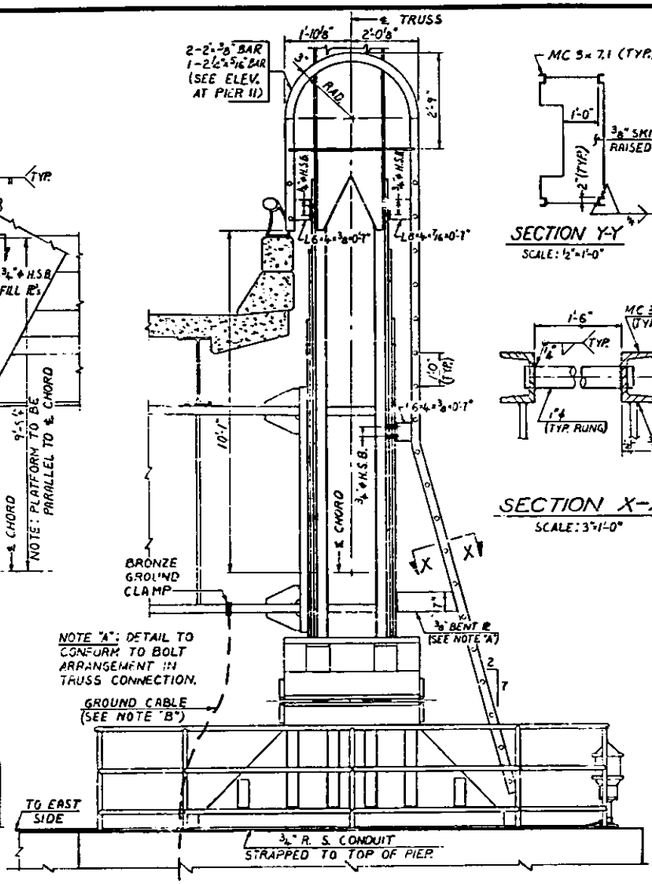
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1 D	ALEXANDER (ILLINOIS)	MISSOURI	63	54
F.A.S. SEC. NO. 4 / F.A.S. SEC. NO. 5		ILLINOIS / MISSOURI		PROJECT I-57-9(5)D	

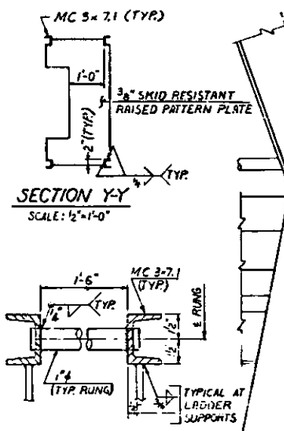


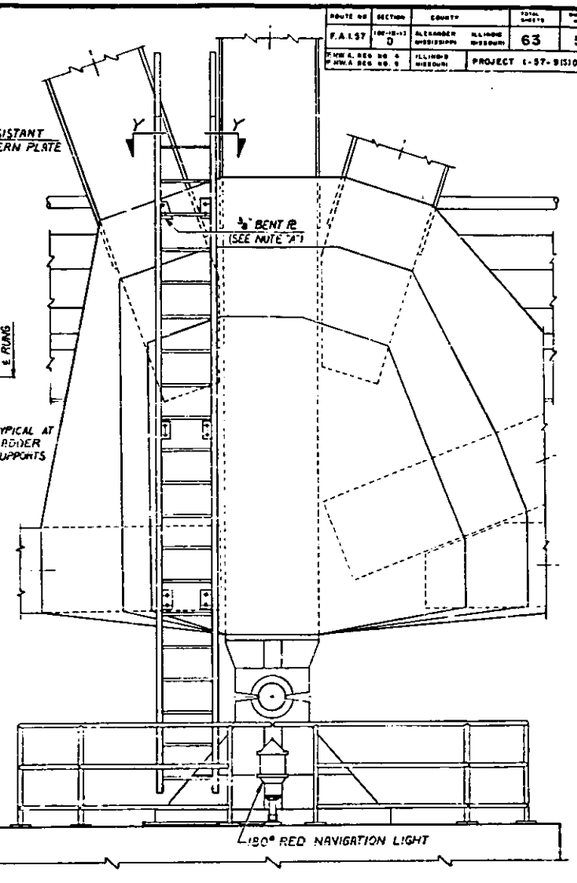










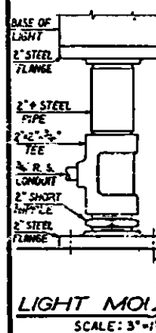


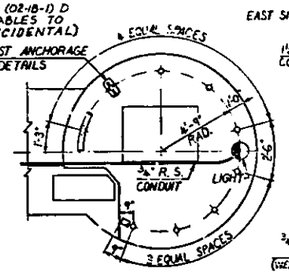
ELEVATIONS AT PIER 11

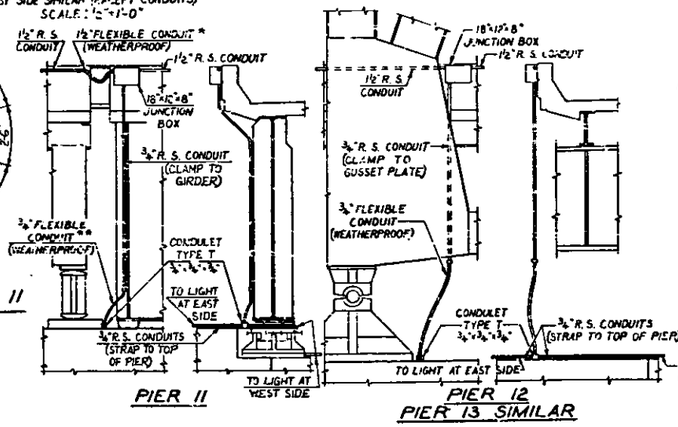
NOTE "B": CONTRACTOR FOR SECTION (02-1B-1)B WILL FURNISH & INSTALL GROUND CABLES AT PIERS 11, 12, 13 & 14. CONTRACTOR FOR SECTION (02-1B-1) D SHALL CONNECT GROUND CABLES TO FLOOR BEAMS. (COST INCIDENTAL)

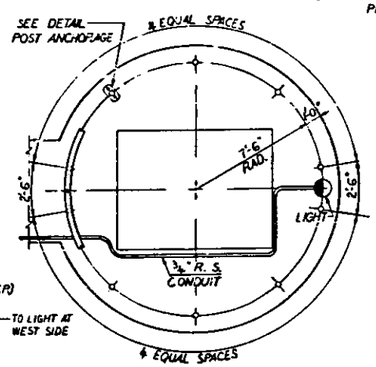
ELEVATIONS AT PIER 12

WEST SIDE SHOWN
EAST SIDE SIMILAR (EXCEPT CONDUITS)
PIER 13 SIMILAR
SCALE: 1/2"=1'-0"

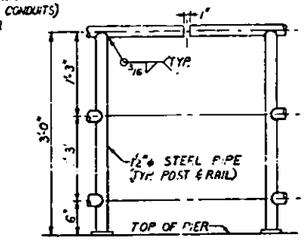


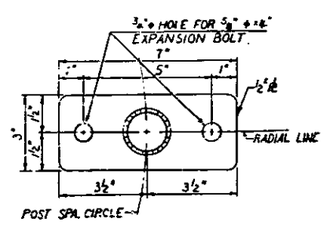






NOTE: AT PIER 14 PROVIDE LADDERS & RAILINGS SIMILAR TO THOSE AT PIER 11



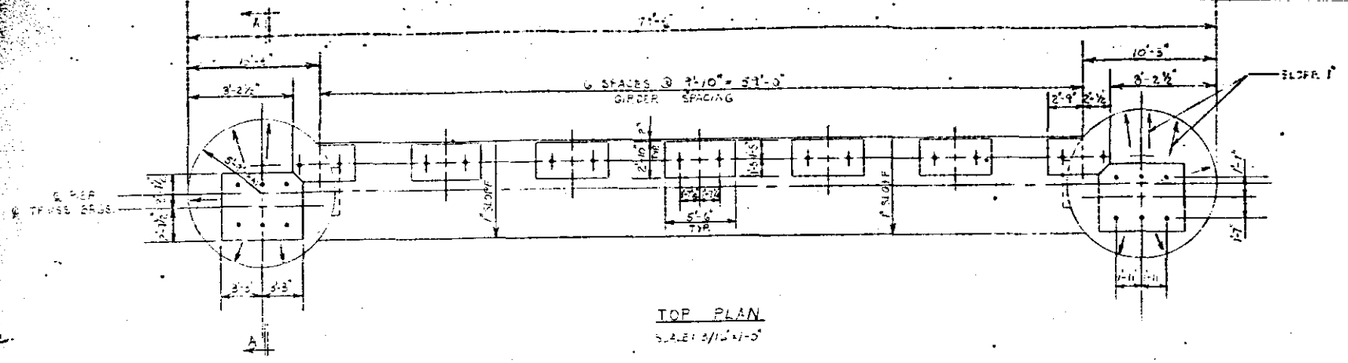


Note: See Sheets 54A & 54B for Revised Pier Cap Details.

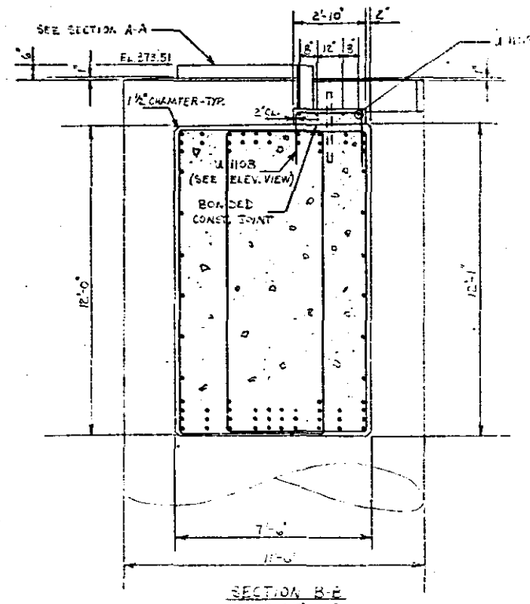
PIER LIGHT, LADDER & RAILING DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)D
SECTION (02-1B-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

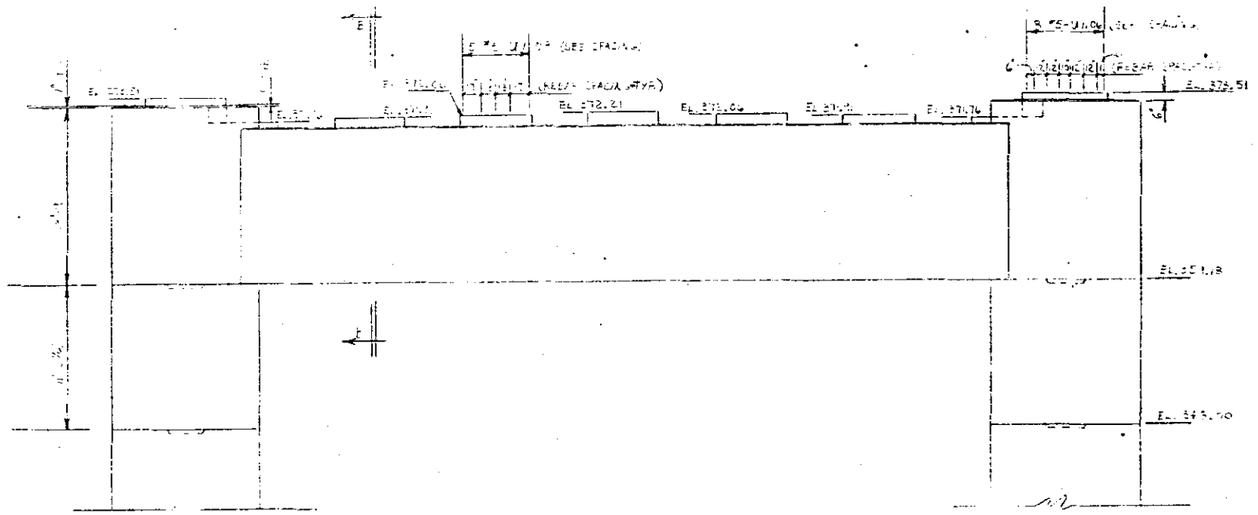
Rev. 2-4-76



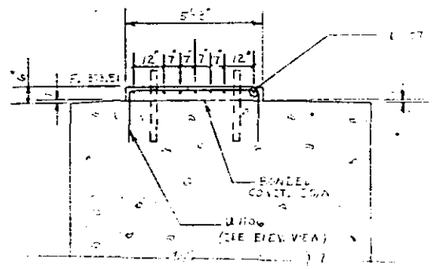
TOP PLAN
SCALE: 3/16"=1'-0"



SECTION B-B
SCALE: 3/8"=1'-0"



ELEVATION
SCALE: 3/16"=1'-0"



SECTION A-A
SCALE: 3/8"=1'-0"

NOTE !

1. VERTICAL REBARS IN THE COLUMNS ABOVE EL. 368.00 (V105 & V106) WILL BE SHORTENED, IF NECESSARY, TO MAINTAIN PROPER CLEARANCE FROM TOP OF PIER.

2. ALTHOUGH TOP, BETWEEN EL. 369.00 AND EL. 368.18 (SKIRT) WILL BE SPACED SLIGHTLY CLOSER TOGETHER THAN REQUIRED.

(REFER TO CAP, B-A OF CONTRACT DRAWINGS FOR ADDITIONAL INFORMATION NOT REPEATED HERE.)

NOTE:

ALL BAR DIMENSIONS ARE OUT TO OUT.

BAR	NO.	SIZE	LENGTH	SHAPE	A	B	C
U106	16	#5	7'-11"	⌊⌋	1'-6"	4'-11"	1'-6"
U107	14	#5	9'-0"	⌊⌋	1'-6"	6'-0"	1'-6"
U108	35	#5	12'-6"	⌊⌋	2'-0"	8'-6"	2'-0"
U109	28	#5	9'-2"	⌊⌋	2'-0"	5'-2"	2'-0"

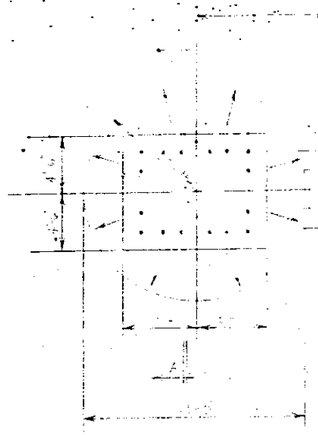
A ⌊ B C

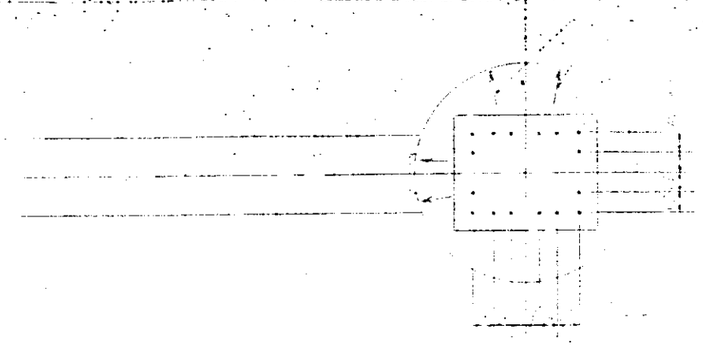
F.A.I. ROUTE 57
SECTION (CE [illegible]-3
ALEXANDER CO., ILLINOIS
MISSISSIPPI CO., MISSOURI

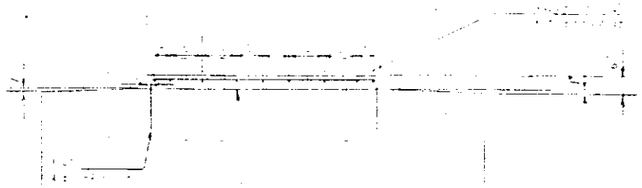
PIER II
REVISED CAP DETAILS

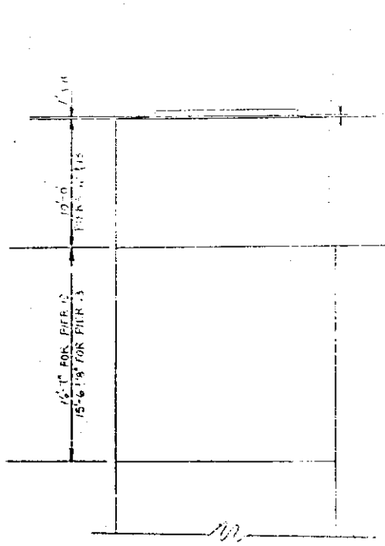
SCALE
DATE: 2-24-76
APPROVED BY
DRAWN BY: R.E.P.
I-57 BRIDGE AT CAIRO
SHEET 10 OF [illegible]

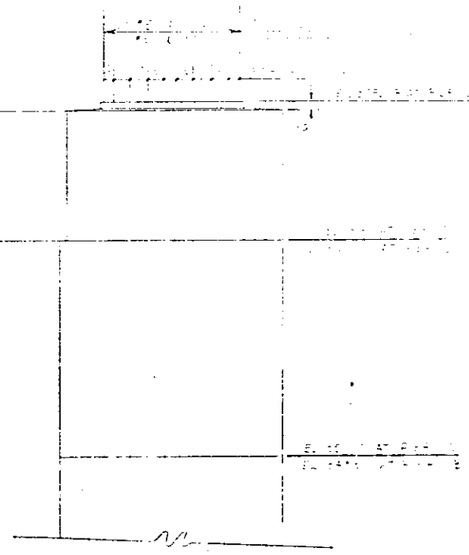
Added 2-18-76

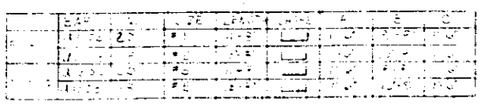












F.A.I. ROUTE 57
SECTION (02-1B-1)D
ALEXANDER CO., ILLINOIS
MISSISSIPPI CO., MISSOURI

P. I. R. S. 1215
REVISED CAP DETAILS

DATE 9-21-78
I-57 BRIDGE AT DARO
2-57-1.5

Added 2-18-76

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F A I 57	(02-1B-1) D	ALEXANDER & MISSISSIPPI ILLINOIS & MISSOURI	63	55
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS & MISSOURI	PROJECT I-57-9(5)0	

SECTION B-B
SCALE: 1½"=1'-0"

PLAN A-A
SCALE: ½"=1'0"

BRACKETS AT UPPER LOCKING DEVICE
(OTHER DETAILS SIMILAR TO LOWER LOCKING DEVICE)

LOCKING Æ
SCALE: 1"=1'-0"

PLAN C-C
SCALE: ½"=1'-0"

MOUNTING OF LIGHT ON CHANNEL
SCALE: 1½"=1'-0"

SECTION D-D
SCALE: 1½"=1'-0"

NAVIGATION LIGHT IN SPAN 12
WEST SIDE SHOWN
EAST SIDE SIMILAR (EXCEPT CONDUITS)
SCALE: ½"=1'-0"

NOTE
* ITEMS MARKED THUS ON THIS SHEET ARE INCLUDED IN SECTION (02-1B-1) F&E.
** ITEMS MARKED THUS ON THIS SHEET ARE INCLUDED IN SECTION (02-1B-1) D.

CONDUITS AT EAST SIDE
SCALE: ½"=1'-0"

SPAN 12 — ** ALL MATERIALS NOTED AND CONNECTIONS — SPAN 13

NAVIGATION LIGHTS IN SPAN 13
WEST SIDE SHOWN
EAST SIDE SIMILAR (EXCEPT CONDUITS, ALSO SEE AVIATION LIGHT DETAILS, SHT. 56)
SCALE: ½"=1'-0"

VIEW X-X — LOWER LOCKING DEVICE — VIEW Z-Z
SCALE: 1½"=1'-0"

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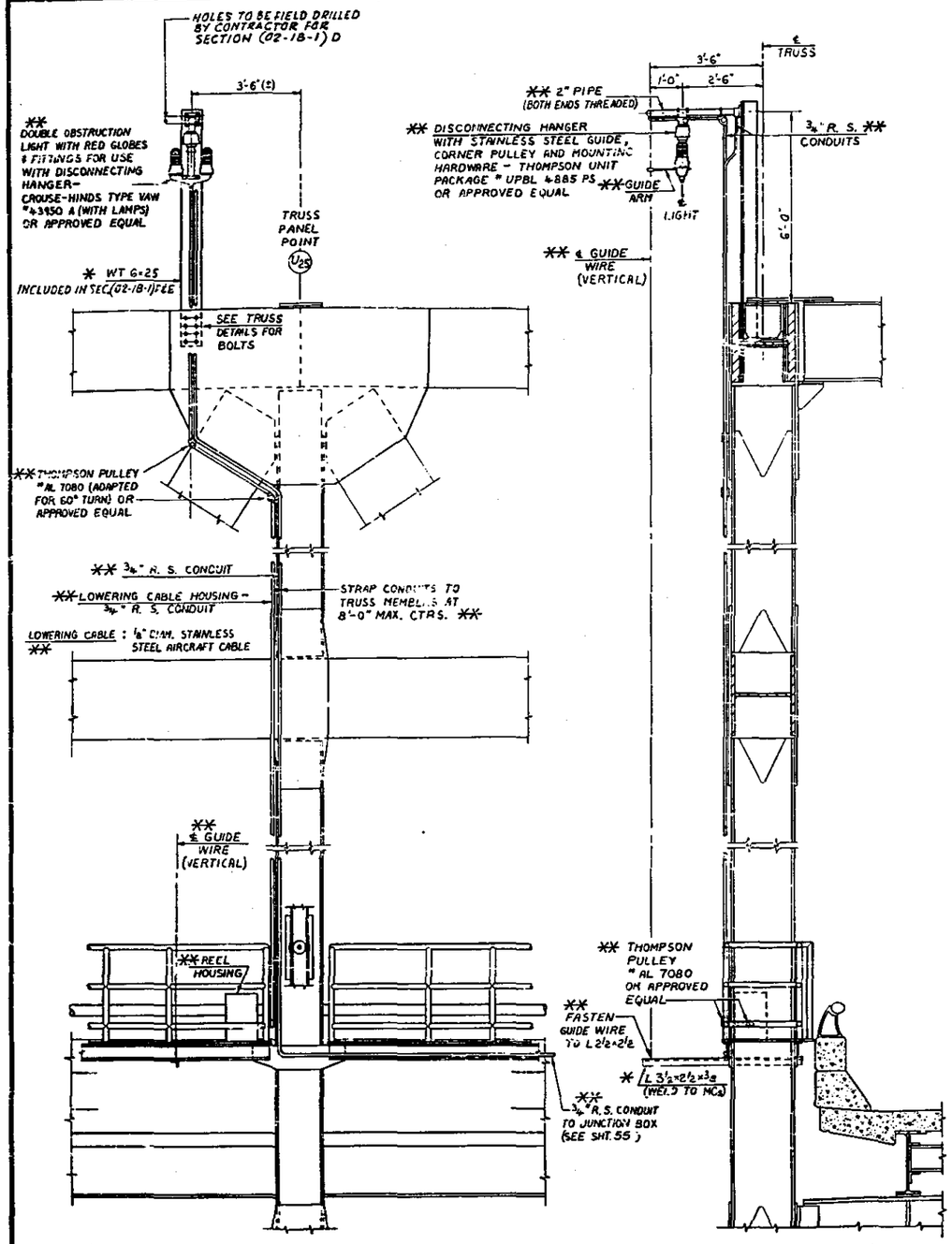
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

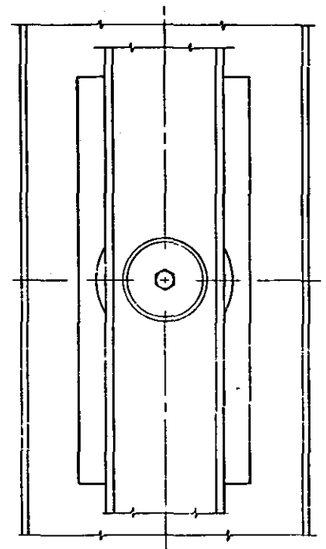
CENTER OF CHANNEL SPAN
LIGHT DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-1B-1) D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

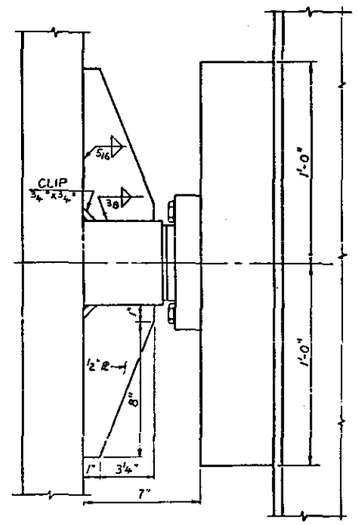
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	102-1B-1) D	ALEXANDER	ILLINOIS	63	56
		MISSISSIPPI	MISSOURI		
F.(NA.)REG NO.		ILLINOIS		PROJECT I-57-9(5)10	
F.(NA.)REG NO.		MISSOURI			



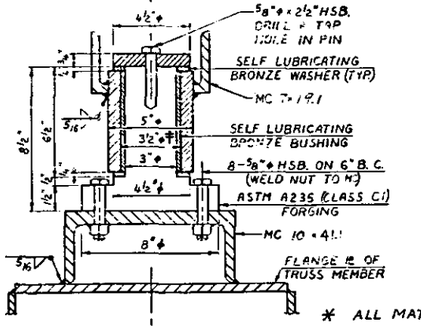
AVIATION OBSTRUCTION LIGHTING DETAILS

ON EAST SIDE OF BRIDGE
SCALE: ½"=1'-0"





℄ SWIVEL AND ℄ TRUSS MEMBER L25-M25



CLEARANCES AND SURFACE FINISHES SHALL BE AS REQUIRED FOR PROPER OPERATION OF THE SELF LUBRICATING BUSHING AND WASHERS

INTERFERENCE FIT BETWEEN BUSHING & HOUSING

* ALL MATERIALS NOTED AND CONNECTIONS

SWIVEL FOR NAVIGATION LIGHT SUSPENSION IN SPAN 13

SCALE: 3"=1'-0"

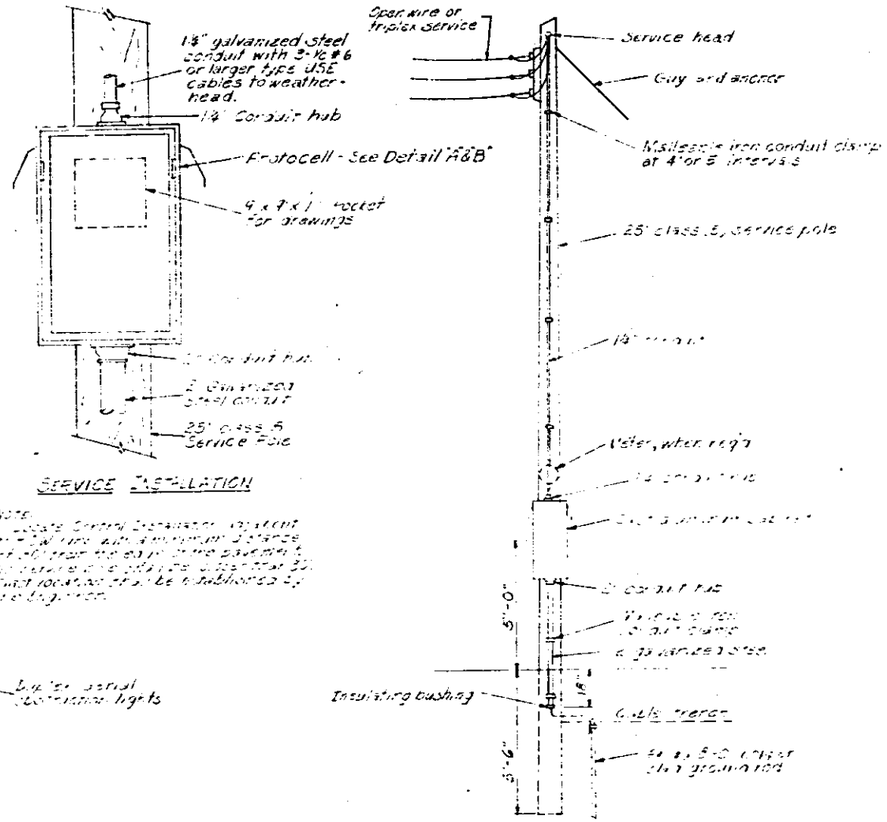
NOTE
*ITEMS MARKED THUS ON THIS SHEET ARE INCLUDED IN SECTION (02-18-1) F&E.
**ITEMS MARKED THUS ON THIS SHEET ARE INCLUDED IN SECTION (02-18-1) D.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
190 S. WABASH AVE. CHICAGO, ILLINOIS

AVIATION OBSTRUCTION LIGHTING DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

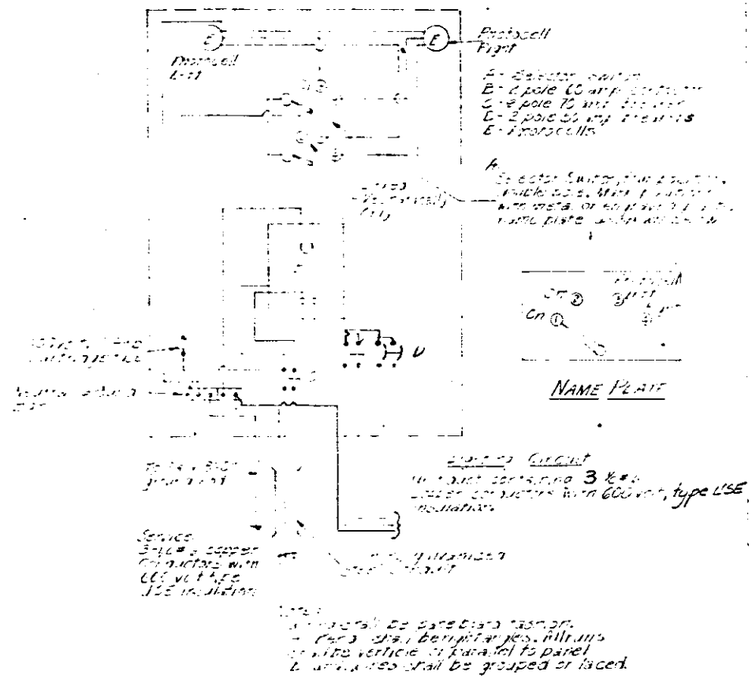
Project	Section	County	Total Sht.	Sheet #
57	(02-18-1) D	ALEXANDER — ILLINOIS; MISSISSIPPI — OSTRICH	63	57

Contract # [illegible] Illinois Fed. Aid Proj. I-57-1(510)



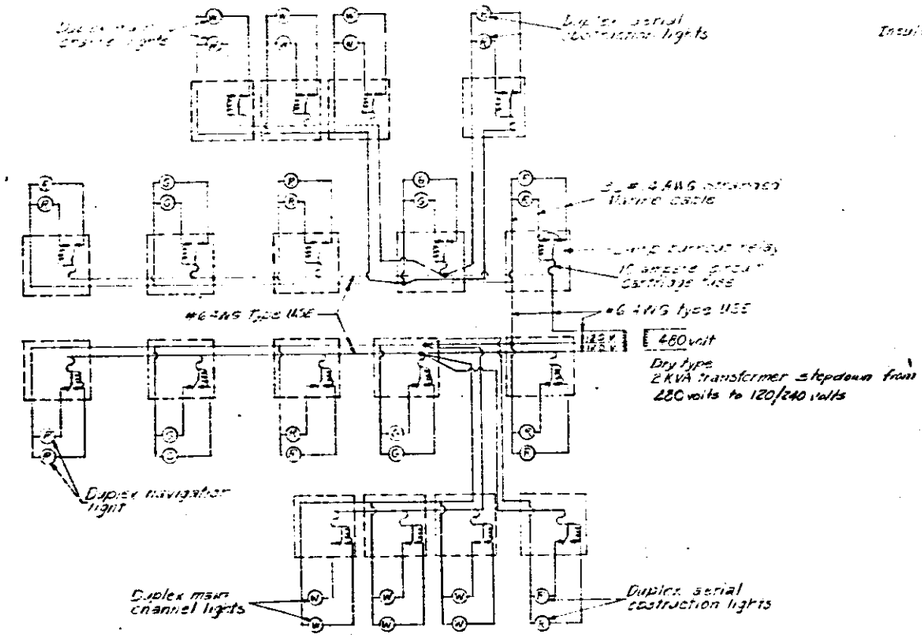
SERVICE INSTALLATION

SERVICE POLE

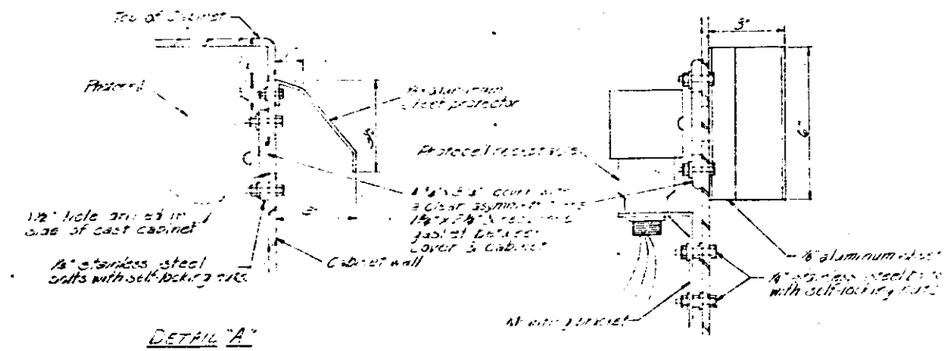


NAME PLATE

WIRING DIAGRAM



WIRING SCHEMATIC



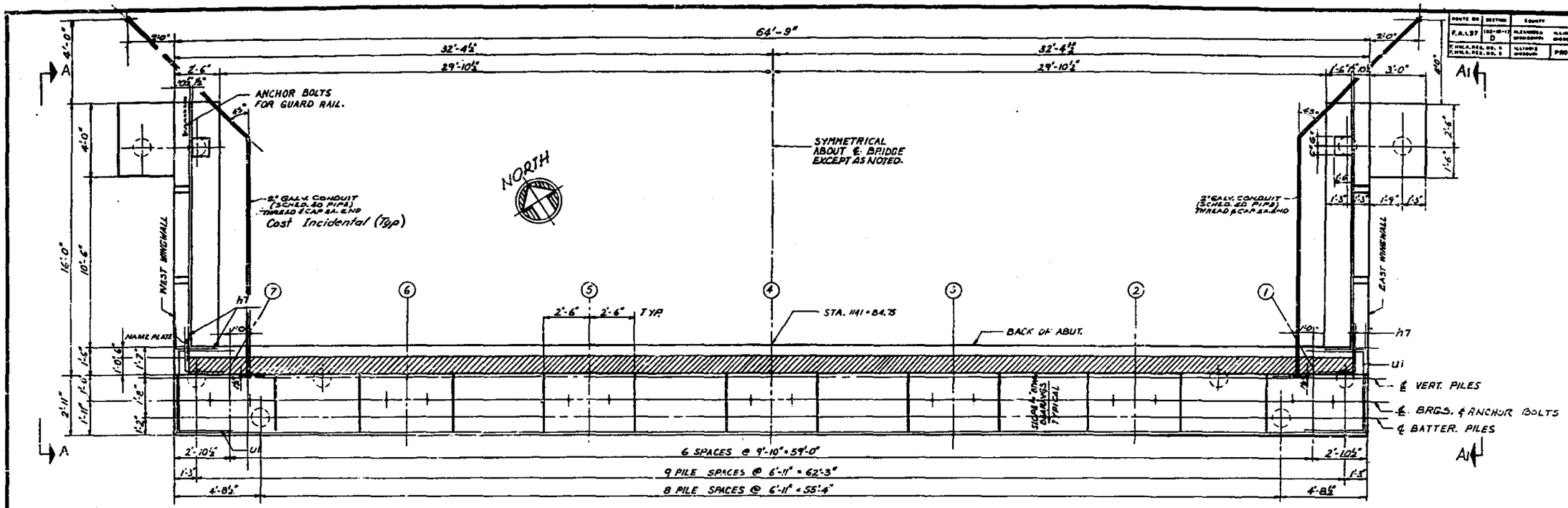
DETAIL "A"

DETAIL "B"

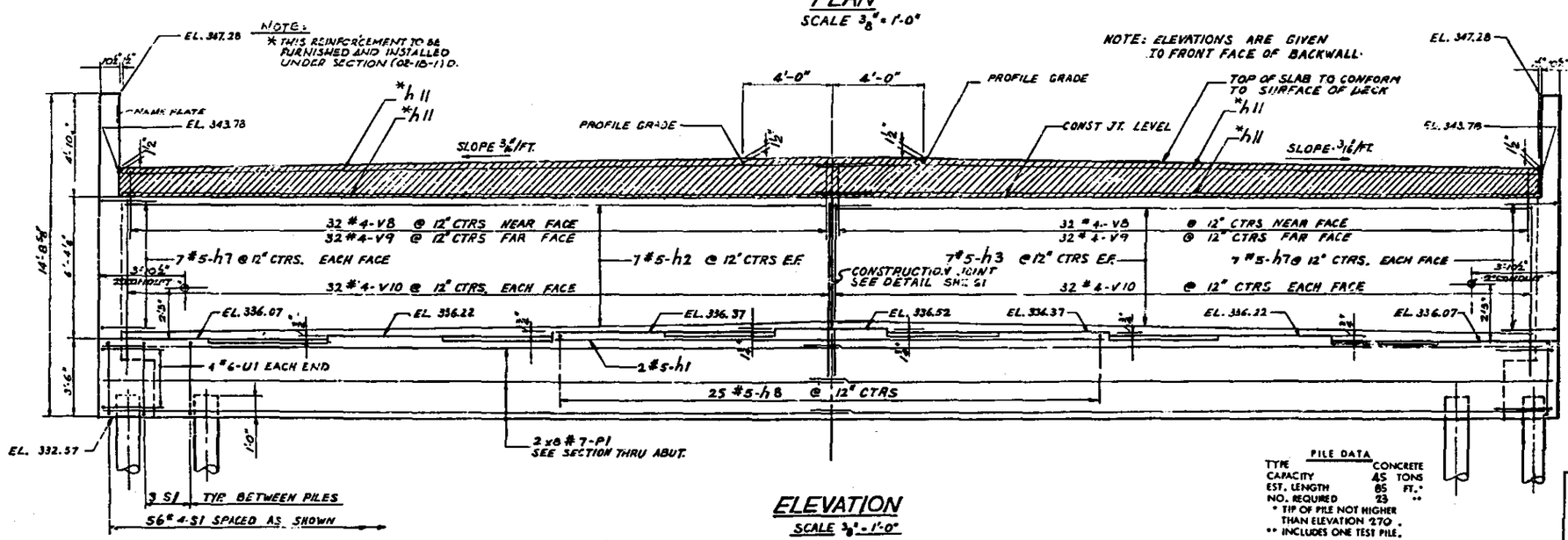
NAVIGATION LIGHT CONTROL INSTALLATION TYPE CB-RCS-60

Drawn by [illegible]	Date [illegible]
Revised	Date

ROUTE SEC	SECTION	COUNTY	STATE SHEET NO.	SHEET NO.
F.A.I. 57	(02-18-1) D	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	63	58
F.H.W.A. REG. NO. 5 F.H.W.A. REG. NO. 7		ILLINOIS MISSOURI	PROJECT I-57-9(5)0	



PLAN
SCALE 3/8" = 1'-0"



ELEVATION
SCALE 3/8" = 1'-0"

PILE DATA	
TYPE	CONCRETE
CAPACITY	45 TONS
EST. LENGTH	85 FT.*
NO. REQUIRED	23 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 270.
** INCLUDES ONE TEST PILE.

NOTE:
THE CONCRETE PILES SHALL BE DRIVEN THRU OVERSIZE SHELLS.

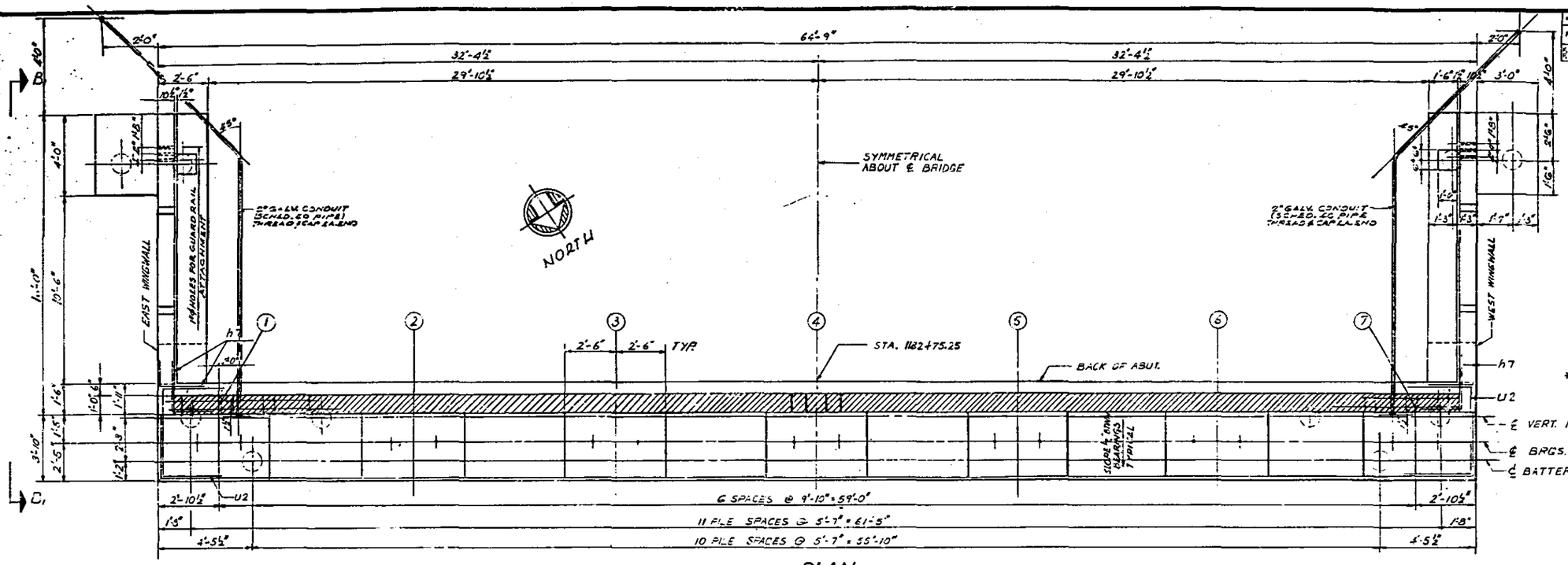
FOR SECTIONS AND DETAILS SEE SHT. 60
End post conc. to be used in wings

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

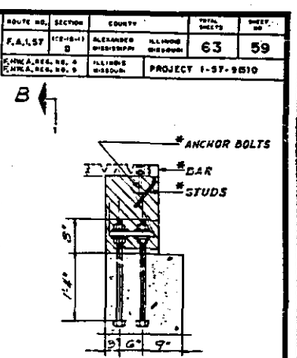
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

NORTH ABUTMENT
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	172-1B-1 D	ALEXANDER (ILLINOIS)	MISSISSIPPI (MISSOURI)	63	59
F.H.W.A. REG. NO. 4 F.H.W.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)10	



PLAN
SCALE: $\frac{3}{8}$" = 1'-0"

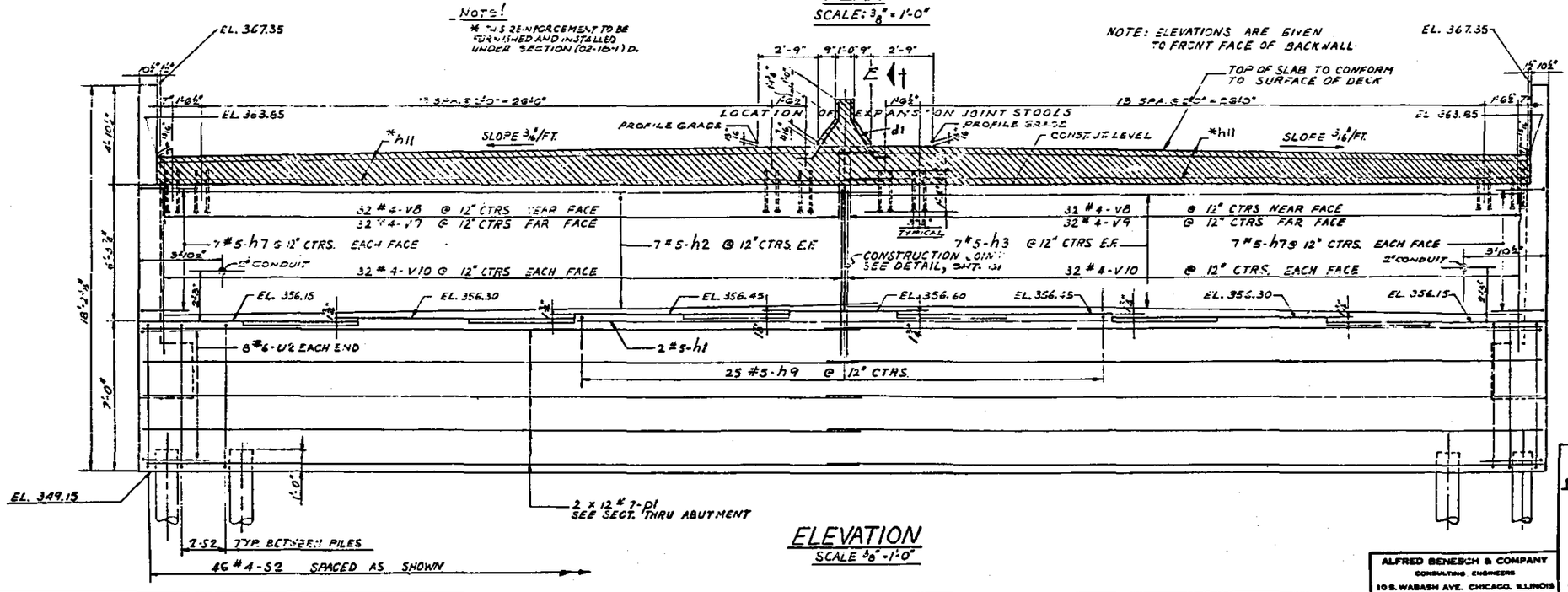


SECTION "E-E"

PROVIDE 8-$\frac{3}{4}$" ϕ x 2'-0" ANCHOR BOLTS AT EACH EXPANSION JOINT STOOL WITH 2 HEX. NUTS AND 2-3 x 3 x $\frac{5}{16}$" SQUARE WASHERS. COST TO BE INCIDENTAL TO CLASS 'A' CONC. FURNISHED AND INSTALLED UNDER SECTION (02-18-D)B.

* FOR LOCATION AND SIZE SEE SHEET 3.1.

Note!
* "H" REINFORCEMENT TO BE FURNISHED AND INSTALLED UNDER SECTION (02-18-1) D.



ELEVATION
SCALE $\frac{3}{8}$" = 1'-0"

NOTE: ELEVATIONS ARE GIVEN TO FRONT FACE OF BACKWALL

NOTE:
FOR SECTIONS AND DETAILS SEE SHT. 60
THE CONCRETE PILES SHALL BE DRIVEN THRU OVERSIZE SHELLS.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
FOUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

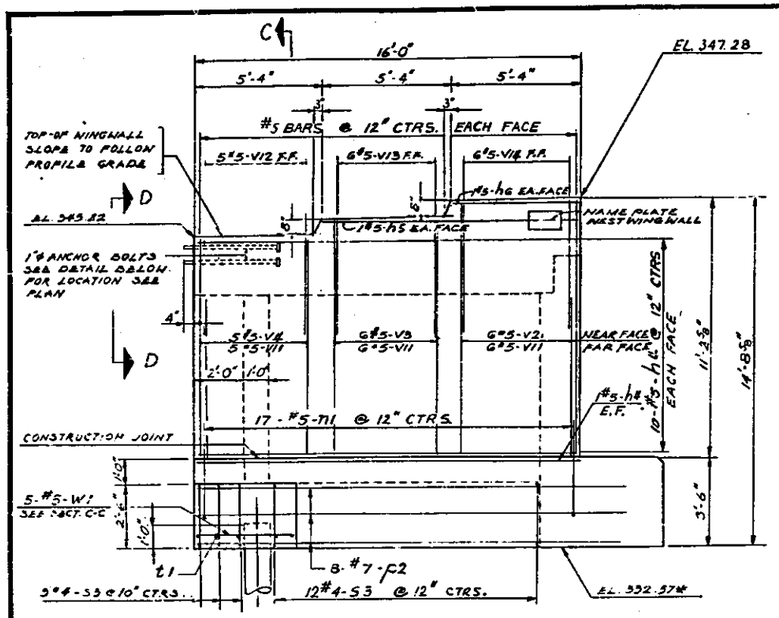
TYPE	CONCRETE
CAPACITY	45 TONS
EST. LENGTH	85 FT.*
NO. REQUIRED	**

* TIP OF PILE NOT HIGHER THAN ELEVATION 275
** INCLUDES ONE TEST PILE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

SOUTH ABUTMENT
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-18-1 D	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	63	60
F.HW.A. REG. NO. 5 F.HW.A. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(5)0	

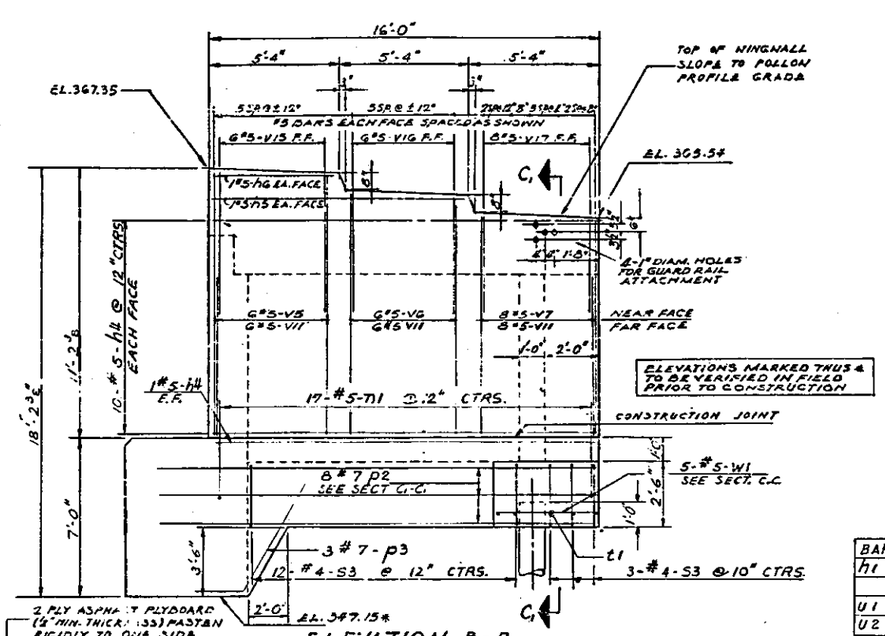


C ELEVATION A-A

ELEVATION A-A, SIMILAR

SCALE 3/8"=1'-0"

NORTH ABUTMENT



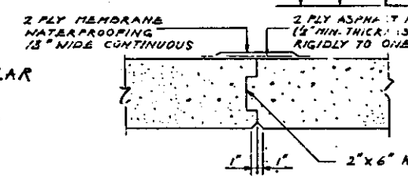
ELEVATIONS MARKED THUS * TO BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION

C1 ELEVATION B-B

ELEVATION B-B, SIMILAR

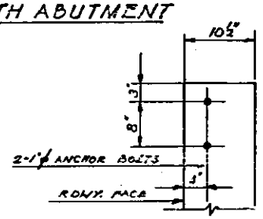
SCALE 3/8"=1'-0"

SOUTH ABUTMENT



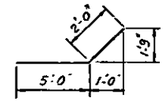
CONSTRUCTION JOINT DETAIL

SCALE 1"=1'-0"

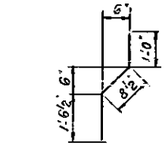


VIEW D-D

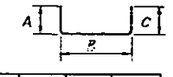
SCALE 1"=1'-0"



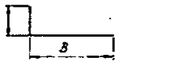
BAR P3



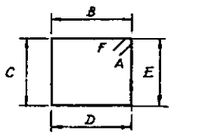
BAR V9



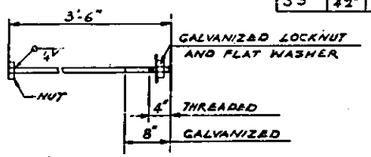
BAR	A	B	C
h1	3'-9"	9"	3'-9"
U1	3'-0"	4'-0"	3'-0"
U2	3'-0½"	4'-11"	3'-0½"



BAR	A	B
h7	2'-0"	2'-6"
h8	1'-6"	3'-9"
h9	1'-6"	4'-9"

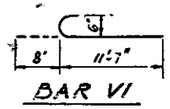


BAR	A	B	C	D	E	F
S1	4½"	4'-1"	3'-2"	4'-1"	3'-2"	4½"
S2	4½"	5'-0"	4'-8"	5'-0"	3'-9"	4½"
S3	4½"	2'-2"	2'-2"	2'-2"	2'-2"	4½"



1" ϕ ANCHOR BOLT

COST OF BOLTS TO BE INCIDENTAL TO BRIDGE STRUCTURE



BAR V1

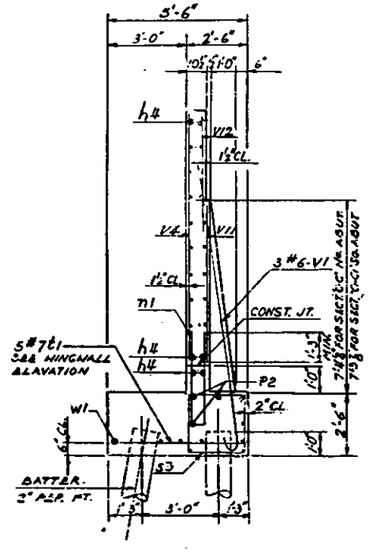
BILL OF MATERIAL

BARS	NUMBER N. ABUT.	NUMBER S. ABUT.	SIZE	LENGTH	SHAPE
h1	2	2	#5	24'-3"	
h2	14	14	#5	32'-9"	
h3	14	14	#5	31'-0"	
h4	44	44	#5	15'-9"	
h5	4	4	#5	10'-3"	
h6	4	4	#5	5'-0"	
h7	28	28	#5	4'-6"	
h8	25	—	#5	5'-3"	
h9	—	25	#5	6'-3"	
T1	34	34	#5	8'-3"	
P1	16	24	#7	33'-0"	
P2	16	16	#7	18'-0"	
P3	—	6	#7	7'-0"	
S1	56	—	#4	15'-3"	
S2	—	46	#4	24'-1"	
S3	30	30	#4	9'-5"	
t1	10	10	#5	5'-0"	
U1	8	—	#6	10'-0"	
U2	—	16	#6	11'-0"	
V1	6	6	#6	12'-3"	
V2	12	—	#5	11'-0"	
V3	12	—	#5	10'-3"	
V4	10	—	#5	9'-6"	
V5	—	12	#5	10'-9"	
V6	—	12	#5	10'-0"	
V7	—	16	#5	9'-3"	
V11	54	40	#5	7'-0"	
V12	10	—	#5	4'-0"	
V13	12	—	#5	4'-9"	
V14	12		#5	5'-6"	
V15	—	12	#5	5'-3"	
V16	—	12	#5	4'-6"	
V17	—	16	#5	3'-9"	
W8	68	68	#4	3'-0"	
W9	68	68	#4	3'-3"	
W10	128	128	#4	6'-6"	
W1	10	10	#5	3'-6"	

ITEM	UNIT	TOTAL N. ABUT	TOTAL S. ABUT.
CLASS "X" CONCRETE	CU. YDS.	82.0	135.1
REINFORCEMENT BARS	LBS.	6850	7930
CONCRETE PILES (45 TON)	LIN. FT.	1870	2210
TEST PILE CONCRETE (45 TON)	EACH	1	1
CLASS A EXCAVATION	CU. YDS.	190	195

NOTE

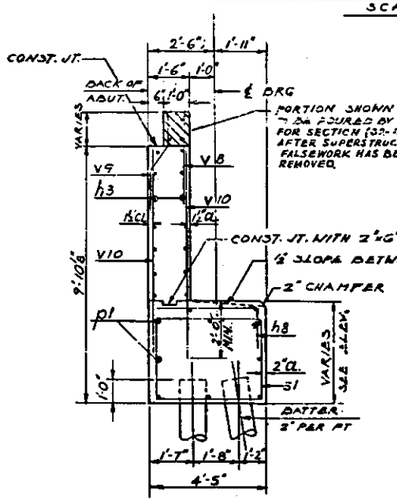
ALL BAR DIMENSIONS ARE OUT TO OUT.



SECTION C-C

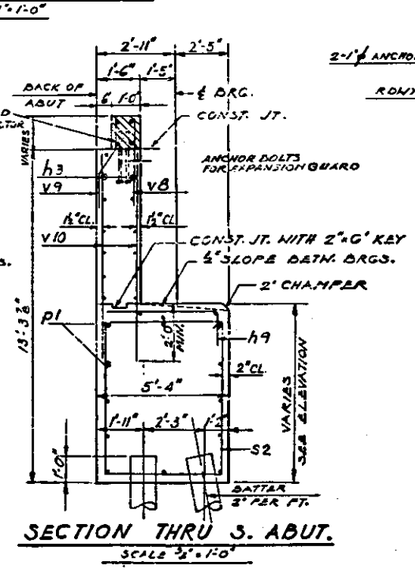
SECTION C-C, SIMILAR

SCALE 3/8"=1'-0"



SECTION THRU N. ABUT.

SCALE 3/8"=1'-0"



SECTION THRU S. ABUT.

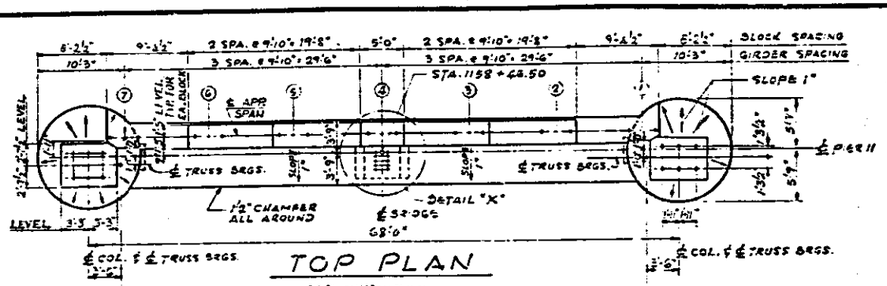
SCALE 3/8"=1'-0"

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

ABUTMENT DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)0
SECTION(02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

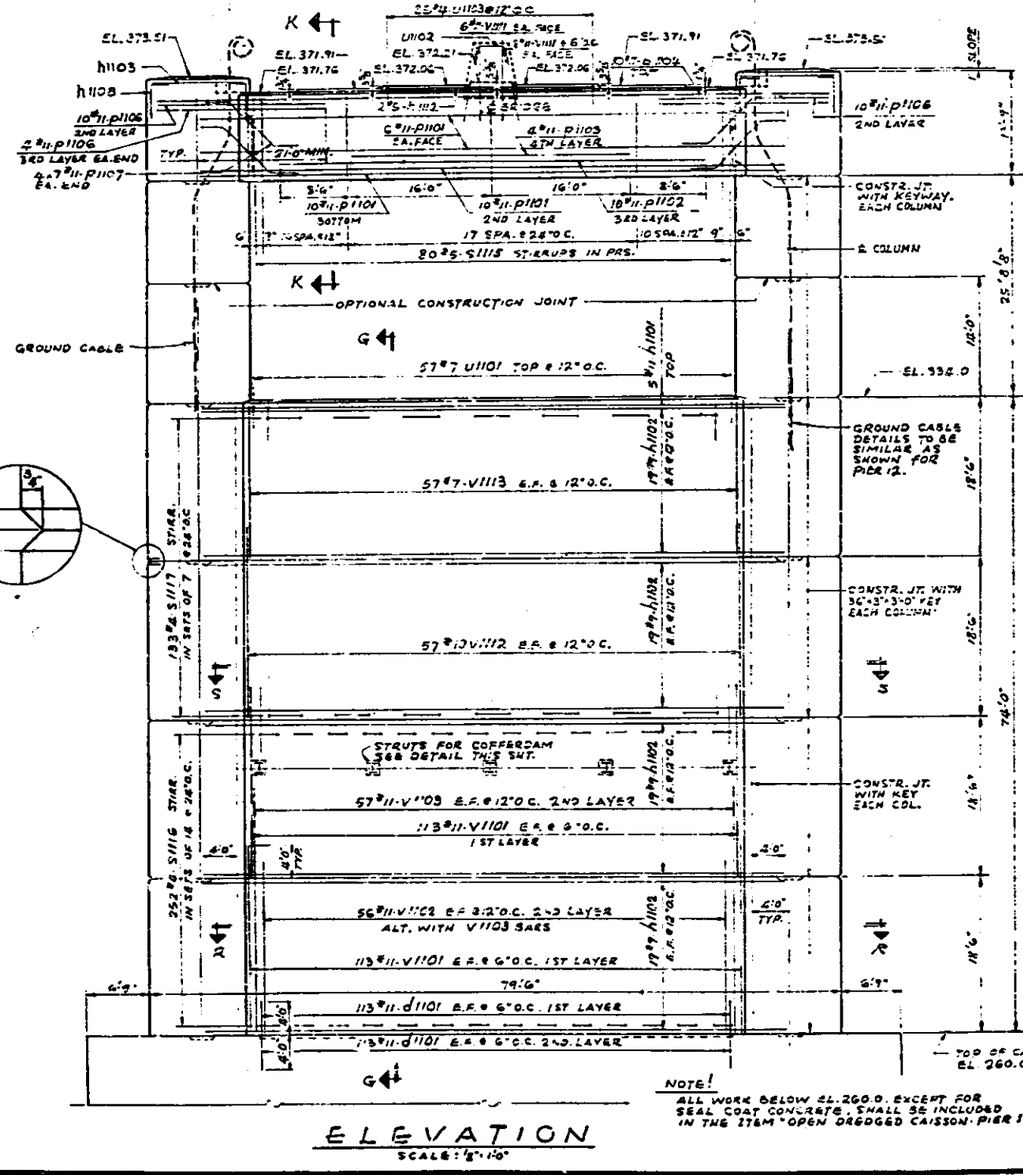
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1)D	ALEXANDER	ILLINOIS	63	61
		MISSISSIPPI	MISSOURI		
F.A.S. SEC NO.		ILLINOIS	MISSOURI	PROJECT I-57-9(5)10	

TOP PLAN



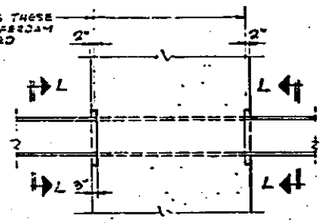
ELEVATION

SCALE: 1/8"=1'-0"

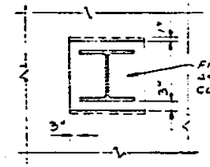


NOTE!
ALL WORK BELOW EL. 260.0, EXCEPT FOR SEAL COAT CONCRETE, SHALL BE INCLUDED IN THE ITEM "OPEN DREDGED CAISSON - PIER 11"

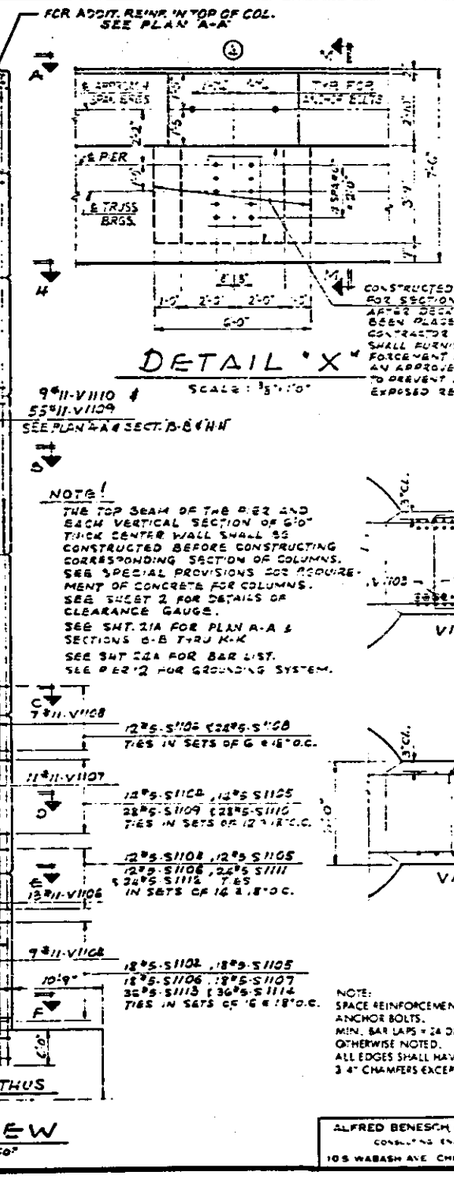
STRUT DETAIL



SECTION "L-L"



NOTE!
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.



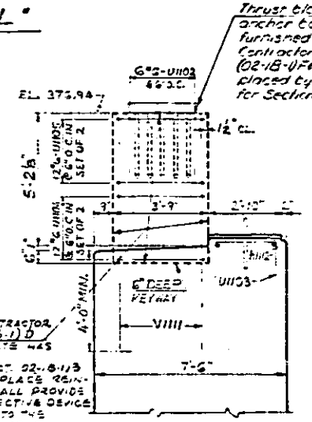
NOTE!
THE TOP SEAM OF THE P.E.Z. AND EACH VERTICAL SECTION OF 6'-0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS.
SEE SPECIAL PROVISIONS FOR REQUIREMENT OF CONCRETE FOR COLUMNS.
SEE SHEET 2 FOR DETAILS OF CLEARANCE GAUGE.
SEE SHT. 21A FOR PLAN A-A & SECTIONS B-B THRU H-K
SEE SHT. 22A FOR BAR LIST.
SEE P.E.Z. 2 FOR GROUNDING SYSTEM.

DETAIL "X"

SCALE: 3/8"=1'-0"

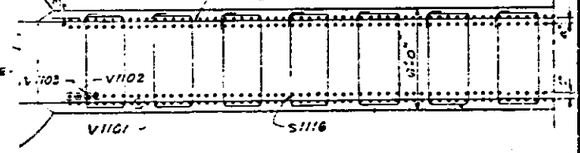
CONSTRUCTED BY CONTRACTOR FOR SECTION (02-18-1)D AFTER DECK CONCRETE HAS BEEN PLACED. CONTRACTOR FOR SECT. (02-18-1)B SHALL FURNISH AND PLACE REINFORCEMENT AND SHALL PROVIDE AN APPROVED PROTECTIVE DEVICE TO PREVENT DAMAGE TO THE EXPOSED REINFORCEMENT.

Thrust block and anchor bolts are to be furnished by the contractor for Section (02-18-1)PEB and placed by the Contractor for Section (02-18-1)D



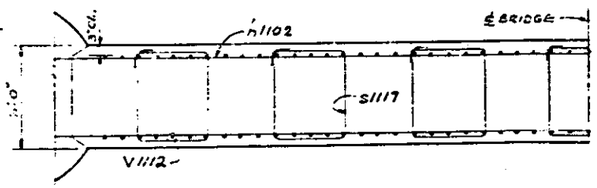
SECTION "M-M"

SCALE: 3/8"=1'-0"



SECTION "R"

SCALE: 1/4"=1'-0"



SECTION "S"

SCALE: 1/4"=1'-0"

REVISED MAR. 27, [illegible]

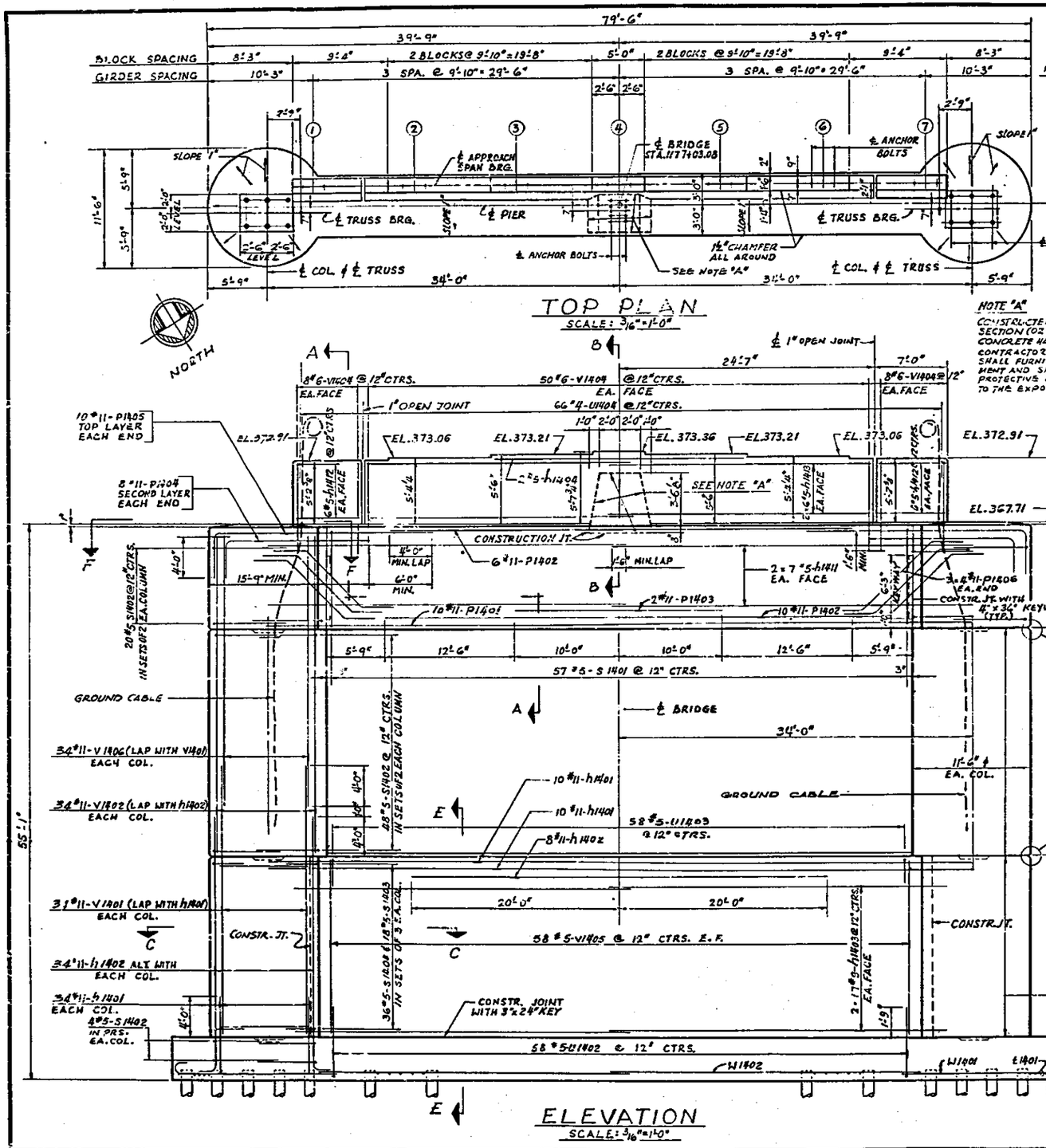
NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

PIER 11
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. Ground Cable location. 5-17-71 S.F.M.

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	102-18-1 D	ALEXANDER	ILLINOIS	63	62
		MISSISSIPPI	MISSOURI		
F.A.M.S.A.-REG. NO. 0 F.A.M.S.A.-SEC. NO. 5		ILLINOIS MISSOURI		PROJECT 1-57-9(5)0	



TOP PLAN

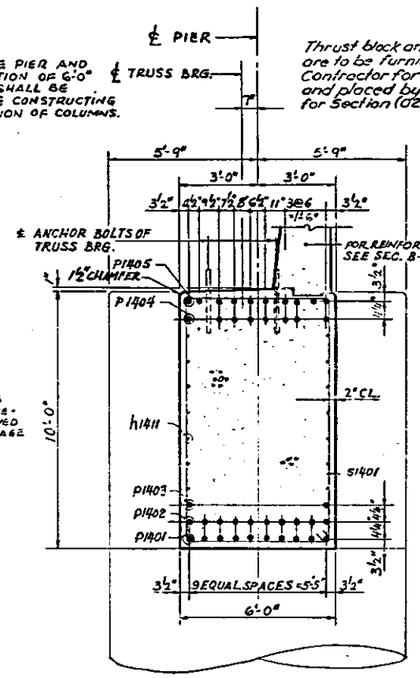
SCALE: 3/16" = 1'-0"

Note!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'-0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS.

NOTE "A"
CONSTRUCTED BY CONTRACTOR FOR SECTION (02-18-1)D AFTER DECK CONCRETE HAS BEEN PLACED.
CONTRACTOR FOR SECTION (02-18-1)B SHALL FURNISH AND PLACE REINFORCEMENT AND SHALL PROVIDE AN APPROVED PROTECTIVE DEVICE TO PREVENT DAMAGE TO THE EXPOSED REINFORCEMENT.

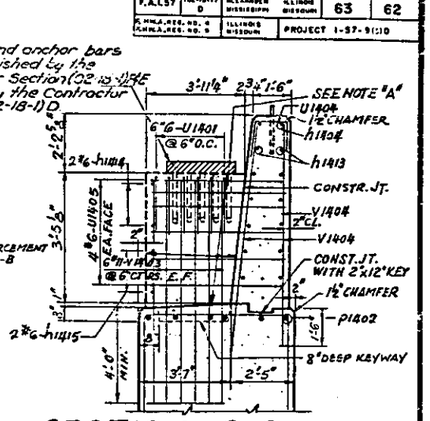
ELEVATION

SCALE: 3/16" = 1'-0"



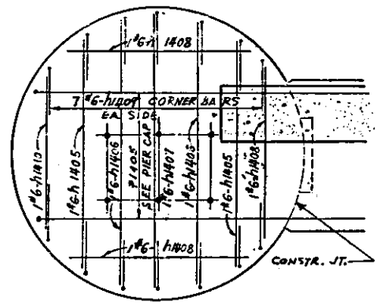
SECTION A-A

SCALE: 3/8" = 1'-0"



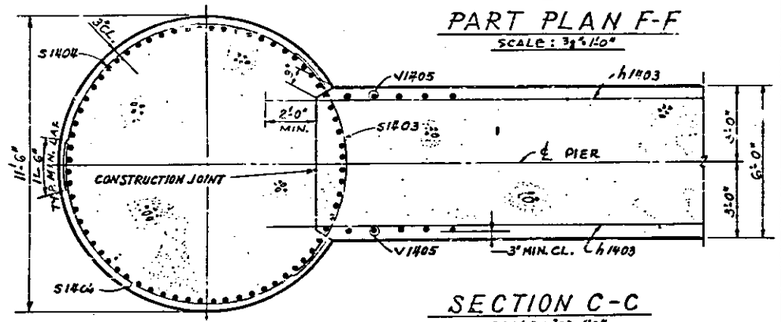
SECTION B-B

SCALE: 3/8" = 1'-0"



PART PLAN F-F

SCALE: 3/4" = 1'-0"



SECTION C-C

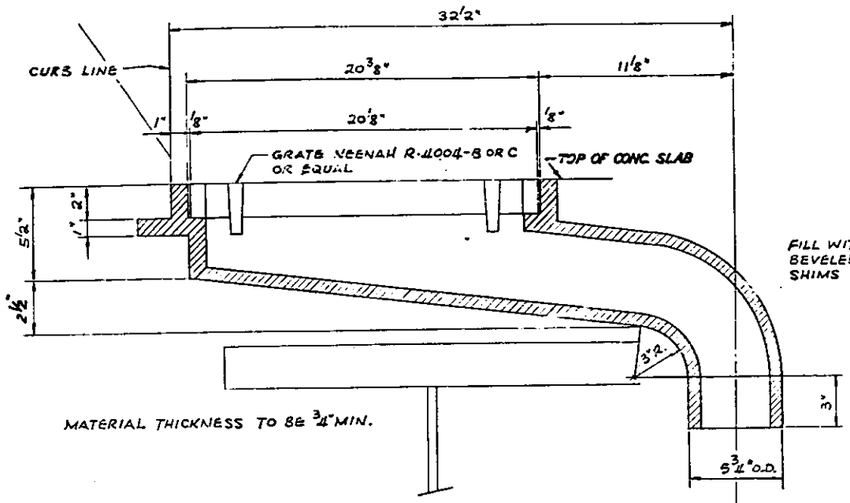
SCALE: 3/8" = 1'-0"

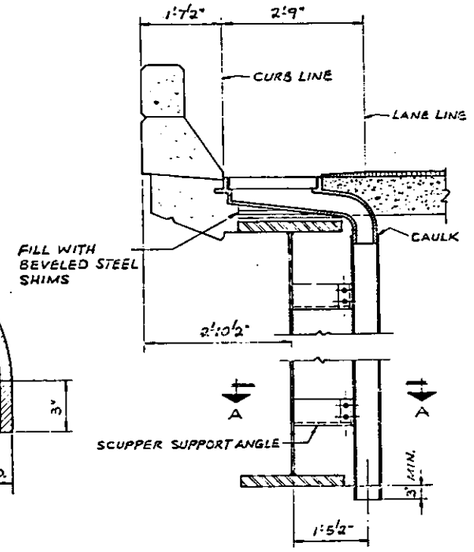
NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED

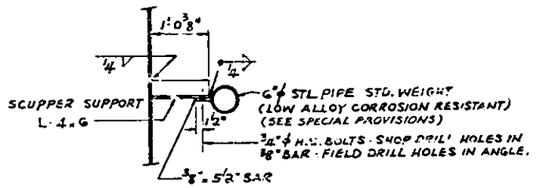
PIER 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9(5)0
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 76.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

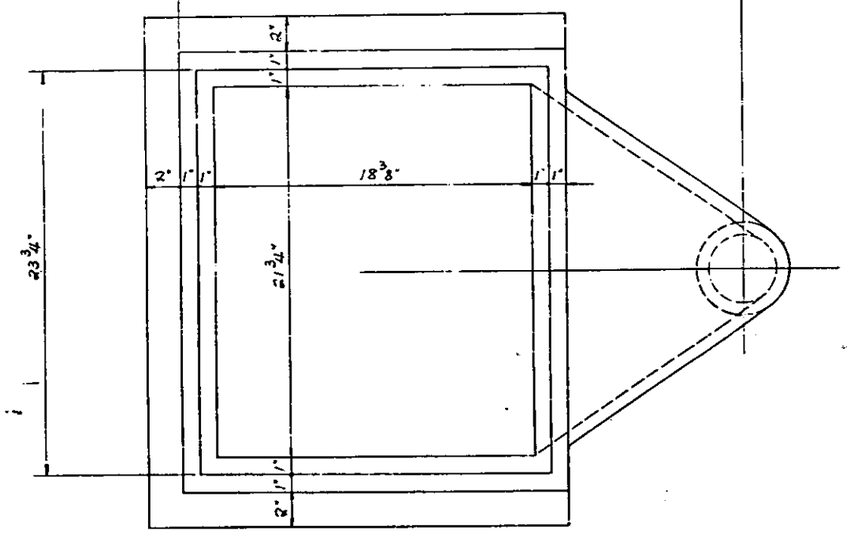
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	(02-18-1) D	ALEXANDER (ILLINOIS)	ILLINOIS (MISSOURI)	63	63
FAI-MO, REG. NO. 4 FAI-MO, REG. NO. 5		ILLINOIS (MISSOURI)		PROJECT I-57-9(5)10	







SECTION A-A



DETAILS OF SCUPPER

DETAIL AT GIRDER SPANS
SPANS 1 TO 9A & 15 TO 19

NOTES:

FOR LOCATION OF SCUPPERS SEE FRAMING PLAN.

SCUPPER SUPPORT ANGLES ARE TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) F & G.

ALL OTHER MATERIAL SHOWN ON THIS SHEET IS TO BE FURNISHED AND ERECTED BY CONTRACTOR FOR SECTION (02-18-1) D.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

DRAINAGE DETAILS
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(5)10
SECTION (02-18-1)D
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1) B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	51	1
ZONING NO. 4 F.H.A.P.E.S. NO. 8		ILLINOIS MISSOURI	PROJECT I-57-9(3)0		

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

MISSOURI
STATE HIGHWAY COMMISSION

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY BRIDGE OVER MISSISSIPPI RIVER

WEST OF CAIRO, ILLINOIS

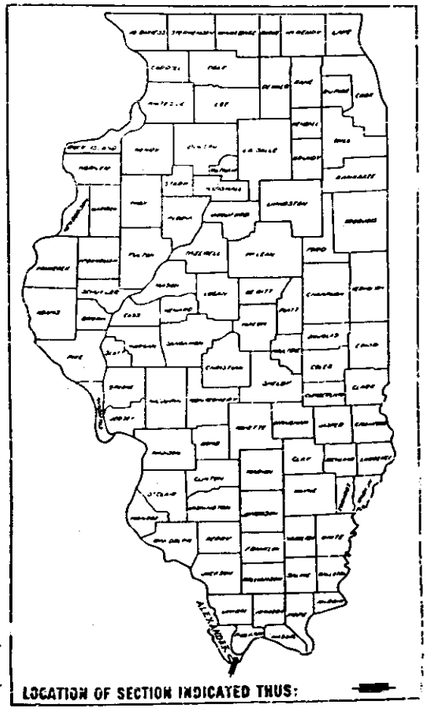
ALEXANDER COUNTY, ILLINOIS - MISSISSIPPI COUNTY, MISSOURI

F.A.I. ROUTE 57 PROJECT I-57-9(3)0

SUBSTRUCTURE SECTION (02-1B-1) B

C-99-105-69

P-99-012-64

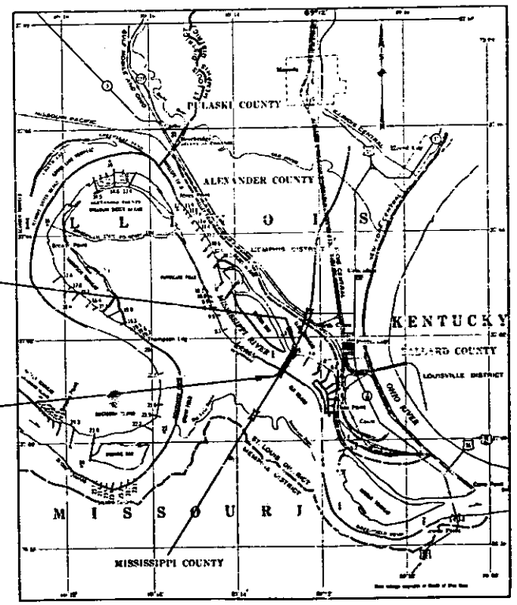


LOCATION OF SECTION INDICATED THUS:

PREPARED BY ALFRED E. BENESCH & COMPANY
CONSULTING ENGINEERS
10 SO. WABASH AVENUE
CHICAGO, ILLINOIS

EXAMINED BY _____ DIST. DESIGN ENGINEER
EXAMINED BY _____ DIST. CONST. ENGINEER
EXAMINED BY _____ DIST. MAINT. ENGINEER
EXAMINED BY _____ DIST. TRAFFIC ENGINEER
EXAMINED BY _____ DIST. M.T.L.S. ENGINEER
EXAMINED BY _____ DIST. R.O.W. ENGINEER

INDEX OF SHEETS, SHEET NO. 2
SUMMARY OF QUANTITIES, SHEET NO. 2



PROPOSED IMPROVEMENT BEGINS
PROJECT I-57-9(3)0
SECTION (02-1B-1)B
STA. 1141+85.25

PROPOSED IMPROVEMENT ENDS
PROJECT I-57-9(3)0
SECTION (02-1B-1)B
STA. 1182+74.75

SECTION (02-1B-1)B CONSISTS OF FURNISHING ALL MATERIALS AND THE COMPLETE CONSTRUCTION OF THE PIERS AND ABUTMENTS SUPPORTING (A) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 11 SPANS (4 @ 110 FT, 4 @ 155 FT AND 3 @ 200 FT), (B) A THREE SPAN CONTINUOUS THROUGH TRUSS STRUCTURE OVER THE MAIN AND AUXILIARY NAVIGATION CHANNELS (518 FT, 821 FT AND 518 FT), (C) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 5 SPANS OF 114 FT CARRYING FAI ROUTE 57 OVER THE MISSISSIPPI RIVER AT CAIRO, ILLINOIS.

NET LENGTH OF PROJECT
4089.50 LIN. FT. = 0.7745 MILES

A-2000
MISSOURI
STATE HIGHWAY COMMISSION
SUBMITTED Oct 14
APPROVED Oct 14

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
SUBMITTED October 9
RECOMMENDED Oct 21
APPROVED Oct 21

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ENGINEER DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ENGINEER DATE

REEL 9-80

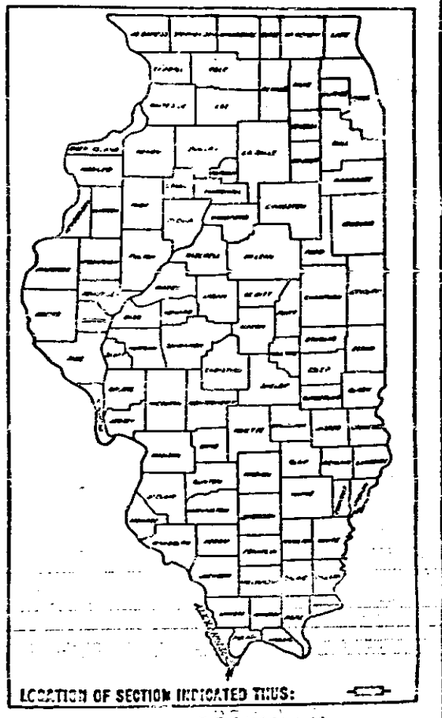
CONTRACT NUMBER 28260

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

MISSOURI
STATE HIGHWAY COMMISSION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1)B	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	51	1A
STATE ROUTE NO.			PROJECT I-57-9(3)0	

P-99-012-64



LOCATION OF SECTION INDICATED THUS:

PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY
BRIDGE OVER MISSISSIPPI RIVER
WEST OF CAIRO, ILLINOIS
ALEXANDER COUNTY, ILLINOIS - MISSISSIPPI COUNTY, MISSOURI
F.A.I. ROUTE 57 PROJECT I-57-9(3)0
SUPERSTRUCTURE SECTION (02-1B-1)B

C-99-105-69

PREPARED BY: ALFRED E. ERICKSEN COMPANY, CONSULTING ENGINEERS, 10 SO. WACKER DRIVE, CHICAGO, ILLINOIS

EXAMINED BY: DIST. DESIGN ENGINEER

EXAMINED BY

EXAMINED BY

EXAMINED BY

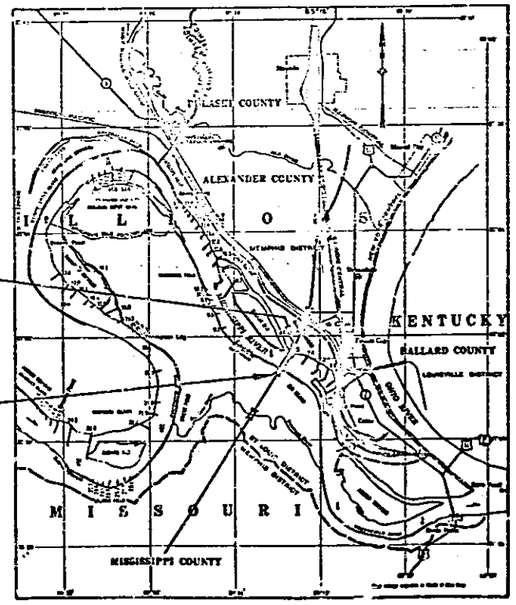
EXAMINED BY

EXAMINED BY

INDEX OF SHEETS, SHEET NO.2
SUMMARY OF QUANTITIES, SHEET NO.2

PROPOSED IMPROVEMENT BEGINS
PROJECT I-57-9(3)0
SECTION (02-1B-1)B
STA. 1141+65.25

PROPOSED IMPROVEMENT ENDS
PROJECT I-57-9(3)0
SECTION (02-1B-1)B
STA. 1182+74.75



SECTION (02-1B-1)B CONSISTS OF FURNISHING ALL MATERIALS AND THE COMPLETE CONSTRUCTION OF THE PILES AND ABUTMENTS SUPPORTING (A) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 11 SPANS (4@110 FT, 3@155 FT AND 2@376 FT), (B) A THREE SPAN CONTINUOUS TRUSS STRUCTURE OVER THE MAIN AND AUXILIARY NAVIGATION CHANNELS (518 FT, 821 FT AND 518 FT), (C) A PLATE GIRDER WITH CONCRETE DECK APPROACH STRUCTURE CONSISTING OF 5 SPANS OF 114 FT CARRYING FAI ROUTE 57 OVER THE MISSISSIPPI RIVER AT CAIRO, ILLINOIS.

NET LENGTH OF PROJECT
4089.50 LIN. FT. = 0.7745 MILES

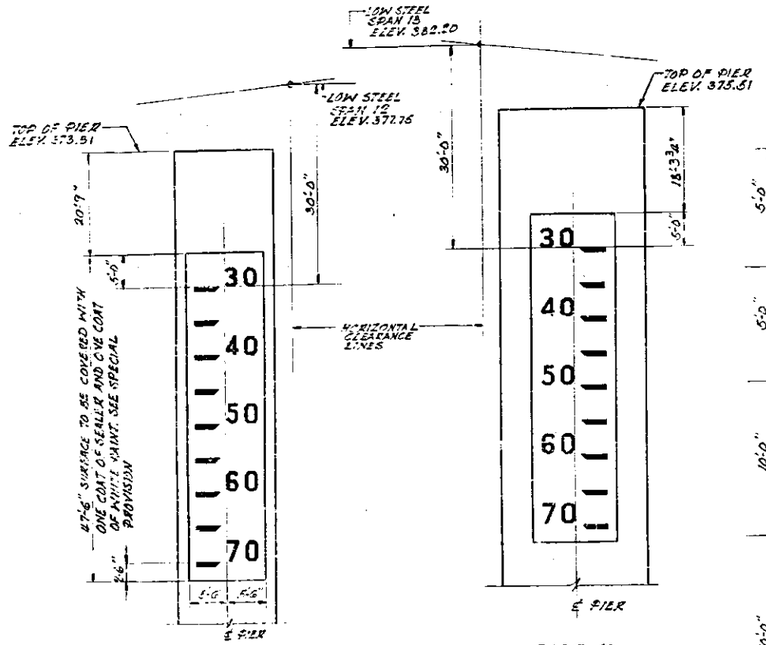
A-2000
MISSOURI
STATE HIGHWAY COMMISSION
SUBMITTED Oct 19
APPROVED Oct 11

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
SUBMITTED October 9
EXAMINED Oct 21
EXAMINED Oct 21
APPROVED October 21
APPROVED

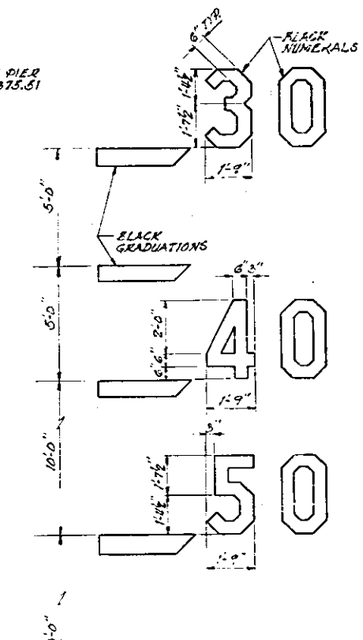
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ENGINEER
DATE

REVISED MAR. 27, 1972
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ENGINEER
DATE

CONTRACT NUMBER 23000



PIER 11



PIER 13

UPSTREAM ELEVATION

PIER 13

PIER 11

DOWNSTREAM ELEVATION

PIER 13

PIER 11

DETAIL OF CLEARANCE GAUGES

DETAIL OF GRADUATIONS & NUMBERS

SCALE: ½"=1'-0"

NOTE: THE COST OF FURNISHING ALL PLANT, LABOR AND MATERIALS AND PERFORMING ALL WORK REQUIRED FOR PAINTING THE CLEARANCE GAUGES, AS SHOWN ON THE DRAWINGS, WILL NOT BE PAID FOR SEPARATELY AND COMPENSATION THEREFORE SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR OTHER ITEMS. FOR FURTHER INFORMATION, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES
SECTION (02-1B-1) B

QUANTITY	UNIT	ITEM	CODE
1	ACRE	TREE REMOVAL, ACRES	201005
2,594	CU.YD.	STRUCTURE EXCAVATION	X50001
4,743	CU.YD.	COFFERDAM EXCAVATION	502003
1	EACH	COFFERDAM (PIER 7)	502012
1	EACH	COFFERDAM (PIER 8)	502013
1	EACH	COFFERDAM (PIER 9)	502014
1	EACH	COFFERDAM (PIER 10)	502015
15,826.0	CU.YD.	CLASS X CONCRETE	504003
2,012.5	CU.YD.	SEAL COAT CONCRETE (PIERS 7, 8, 9 & 10)	X04084
3,512.5	CU.YD.	SEAL COAT CONCRETE (PIERS 11, 12 & 13)	X04085
2,517,960	LB.	REINFORCEMENT BARS	512001
540	LIN.FT.	FURNISHING CREOSOTED PILES OVER 35 FEET	513066
9,520	LIN.FT.	FURNISHING STEEL PILES 14 BP 102	513019
31,640	LIN.FT.	FURNISHING CONCRETE PILES (35 TON & 45 TON)	X04086
12,870	LIN.FT.	FURNISHING CONCRETE PILES (50 TON)	X04087
540	LIN.FT.	DRIVING TIMBER PILES	513022
9,520	LIN.FT.	DRIVING STEEL PILES	513026
44,510	LIN.FT.	DRIVING CONCRETE PILES	513027
1	EACH	TEST PILE STEEL 14 BP 102	513039
10	EACH	TEST PILE CONCRETE (35 TON)	X04088
3	EACH	TEST PILE CONCRETE (45 TON)	X04089
3	EACH	TEST PILE CONCRETE (50 TON)	X04090
10	EACH	PILE TEST LOADING (35 TON)	X04091
1	EACH	PILE TEST LOADING (45 TON)	X04092
4	EACH	PILE TEST LOADING (50 TON)	X04093
2	EACH	PILE TEST LOADING (60 TON)	X04094
1	EACH	ENGINEER'S FIELD OFFICE, TYPE A	666001
1	EACH	ENGINEER'S FIELD LABORATORY	666003
1	L. SUM	OPEN DREDGED CAISSON, PIER 11	X04095
1	L. SUM	OPEN DREDGED CAISSON, PIER 12	X04096
1	L. SUM	OPEN DREDGED CAISSON, PIER 13	X04097
95	SQ.YD.	REMOVAL OF STONE RIPRAP	X04051
95	SQ.YD.	RIPRAP REPLACEMENT	X04052
229	SQ.YD.	NO. 4 STONE SLOPE PROTECTION	X04053
1	L.SUM	GROUNDING SYSTEM	L05066
1	EACH	NAME PLATE	SX4001
14,000	LB.	STRUCTURAL STEEL	XZ1100

THE FOLLOWING PAY ITEMS HAVE BEEN INCLUDED TO ESTABLISHED UNIT PRICES ONLY (SEE SCHEDULE OF PRICES)

1	LIN.FT.	CAISSON ADJUSTMENT, PIER 11, INCREASE	X04098
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 11, DECREASE	X04099
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 12, INCREASE	X04100
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 12, DECREASE	X04101
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 13, INCREASE	X04102
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 13, DECREASE	X04103

NOTE: Two(2) signs conforming to Standard 2153 shall be erected at locations as directed by the Engineer.

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1) B	ALEXANDER	ILLINOIS	54	1
		MISSISSIPPI	MISSOURI		
S.P.R. RES 66 & S.P.R. RES 66.1			ILLINOIS MISSOURI	PROJECT I-57-9(3)0	

INDEX OF SHEETS

SHEET	DESCRIPTION
1	TITLE SHEET
2	QUANTITIES, INDEX OF SHEETS, GAUGES
3	GENERAL PLAN AND ELEVATION
4	NORTH ABUTMENT
5	SOUTH ABUTMENT
6	ABUTMENT DETAILS
7	PIER 1
8	PIER 2
9	PIER 3
10	PIER 4
11	PIER 5
12	PIER 6
13	PIER 7
14, 15	PIER 8
16, 17	PIER 9
18, 19	PIER 10
20 - 24	PIER 11
25 - 29	PIER 12
30	SHOE DETAILS, PIERS 12 & 13
31 - 35	PIER 13
36, 37	PIER 14
38	PIER 15
39	PIER 16
40	PIER 17
41	PIER 18
42	35 TON & 45 TON CONCRETE PILES
43	50 TON CONCRETE PILES
44	EXCAVATION
45 - 49	BORINGS
50 - 51	HYDROGRAPHS
52	PLAN & PROFILE - ILLINOIS BANK
53	PLAN & PROFILE - MISSOURI BANK
54	STANDARDS 2112-1, 2153-8

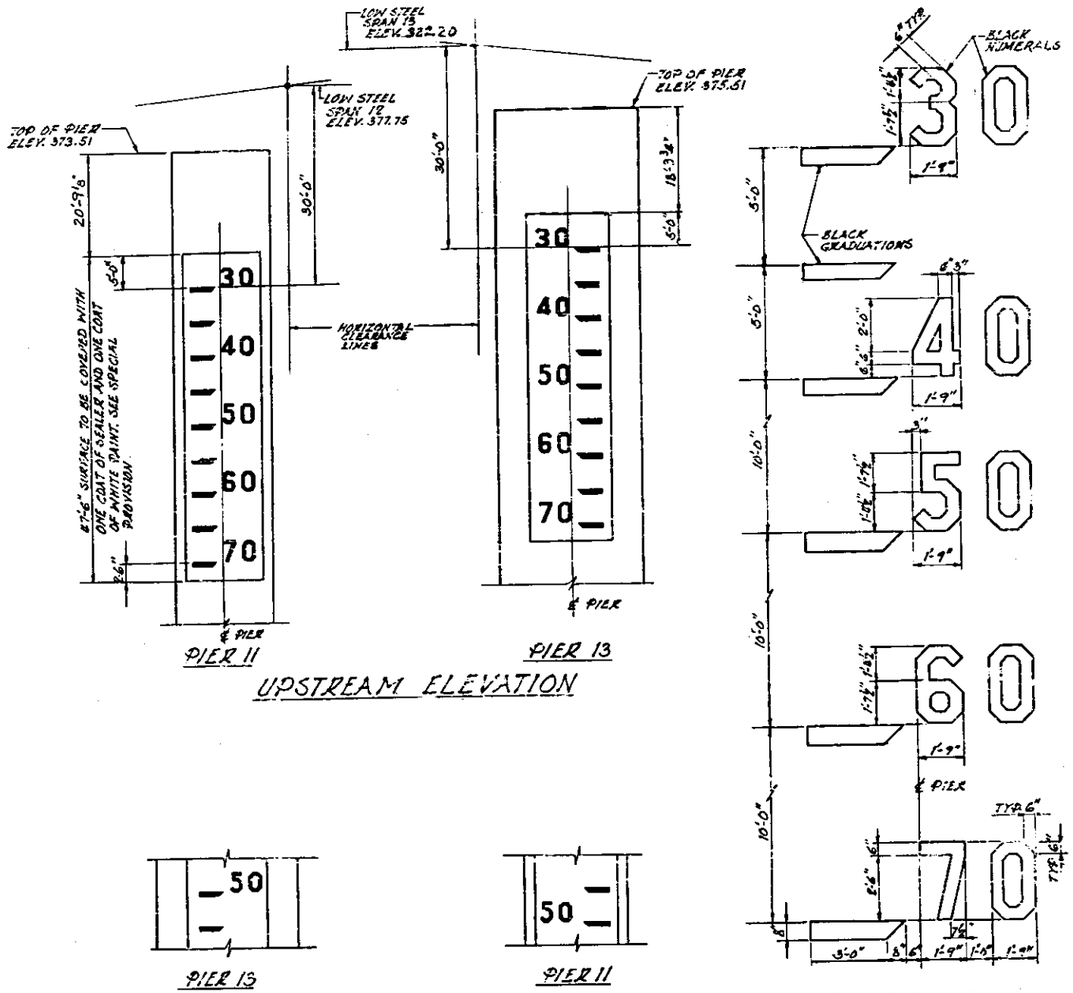
STATION 1107+76
BUILT 197 BY
STATES OF ILLINOIS & MISSOURI
F.A.I. RT. 57 SEC. 02-1B-1
F.A. PROJ. I-57-9(3)
LOADING HS 20 & ALT.

LETTERING FOR NAME PLATE

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

QUANTITIES, INDEX OF SHEETS, GAUGES
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

REVISED 11-20-70 Rev 8-17-71



NOTE: THE COST OF FURNISHING ALL PLANT, LABOR AND MATERIALS AND PERFORMING ALL WORK REQUIRED FOR PAINTING THE CLEARANCE GAUGES, AS SHOWN ON THE DRAWINGS, WILL NOT BE PAID FOR SEPARATELY AND COMPENSATION THEREFORE SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR OTHER ITEMS. FOR FURTHER INFORMATION, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES
SECTION (02-18-1) B

QUANTITY	UNIT	ITEM	CODE
1	ACRE	TREE REMOVAL, ACRES	201005
2,575	CU.YD.	STRUCTURE EXCAVATION	X50201
2,820	CU.YD.	COFFERDAM EXCAVATION	502003
1	EACH	COFFERDAM (PIER 7)	502012
1	EACH	COFFERDAM (PIER 9)	502014
14,160.9	CU.YD.	CLASS X CONCRETE	504003
859.1	CU.YD.	SEAL COAT CONCRETE (PIERS 7 & 9)	X04086
3,512.5	CU.YD.	SEAL COAT CONCRETE (PIERS 11, 12 & 13)	X04085
2,320,530	LB.	REINFORCEMENT BARS	512001
540	LIN.FT.	FURNISHING CREOSOTED PILES OVER 38 FEET	513006
13,570	LIN.FT.	FURNISHING STEEL PILES 12 BP 53	513015
31,995	LIN.FT.	FURNISHING CONCRETE PILES (35 TON & 45 TON)	X04065
3,750	LIN.FT.	FURNISHING CONCRETE PILES (50 TON)	X04067
540	LIN.FT.	DRIVING TIMBER PILES	513022
13,570	LIN.FT.	DRIVING STEEL PILES	513026
33,745	LIN.FT.	DRIVING CONCRETE PILES	513027
1	EACH	TEST FILE STEEL 12 BP 53	513035
10	EACH	TEST PILE CONCRETE (35 TON)	X04088
3	EACH	TEST PILE CONCRETE (45 TON)	X04063
1	EACH	TEST PILE CONCRETE (50 TON)	X04090
10	EACH	PILE TEST LOADING (35 TON)	X04091
1	EACH	PILE TEST LOADING (45 TON)	X04092
2	EACH	PILE TEST LOADING (50 TON)	X04093
2	EACH	PILE TEST LOADING (60 TON)	X04096
1	EACH	ENGINEER'S FIELD OFFICE, TYPE A	646001
1	EACH	ENGINEER'S FIELD LABORATORY	646003
1	L SUM	OPEN DREDGED CAISSON, PIER 11	X04095
1	L SUM	OPEN DREDGED CAISSON, PIER 12	X04096
1	L SUM	OPEN DREDGED CAISSON, PIER 13	X04097
95	SQ.YD.	REMOVAL OF STONE RIPRAP	X04051
95	SQ.YD	RIPRAP REPLACEMENT	X04052
225	SQ.YD.	NO. 4 STONE SLOPE PROTECTION	X04053
1	L.SUM	GROUNDING SYSTEM	L05066
1	EACH	NAME PLATE	516001
14,000	HOUR	TRAINEES	XZ1100

THE FOLLOWING PAY ITEMS HAVE BEEN INCLUDED TO ESTABLISHED UNIT PRICES ONLY (SEE SCHEDULE OF PRICES)

1	LIN.FT.	CAISSON ADJUSTMENT, PIER 11, INCREASE	X04098
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 11, DECREASE	X04099
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 12, INCREASE	X04100
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 12, DECREASE	X04101
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 13, INCREASE	X04102
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 13, DECREASE	X04103
5,660	CU.YD.	DUMPED RIPRAP (PIERS 7 & 9)	

INDEX OF SHEETS

SHEET	DESCRIPTION
1, 1A	TITLE SHEET
2, 2A	QUANTITIES, INDEX OF SHEETS, GAUGES
3, 3A	GENERAL PLAN AND ELEVATION
4	NORTH ABUTMENT
5	SOUTH ABUTMENT
6	ABUTMENT DETAILS
7	PIER 1
8	PIER 2
9	PIER 3
10	PIER 4
11	PIER 5
12, 12A	PIER 6
13, 13A	PIER 7
14, 15	PIER 8 DELETED
16, 17, 16A, 17A	PIER 9
18, 19	PIER 10 DELETED
20-24, 20A, 21A, 24A	PIER 11
25 - 29	PIER 12
30	SHOE DETAILS, PIERS 12 & 13
31 - 35	PIER 13
36, 37, 36A, 37A	PIER 14
38, 38A	PIER 15
39, 39A	PIER 16
40, 40A	PIER 17
41, 41A	PIER 18
42	35 TON & 45 TON CONCRETE PILES
43	50 TON CONCRETE PILES
44	EXCAVATION
45 - 49	BORINGS
50 - 51	HYDROGRAPHS
52	PLAN & PROFILE - ILLINOIS BANK
53	PLAN & PROFILE - MISSOURI BANK
54	STANDARDS 2113 , 2153-8

NOTE: Two(2) signs conforming to Standard 2153 shall be erected at locations as directed by the Engineer.

STATION 1167+76
BUILT 19? BY
STATES OF ILLINOIS & MISSOURI
F.A.I. RT. 57 SEC. 02-1B-1
F.A. PROJ. I-57-9(3)
LOADING H3 20 # ALT.

LETTERING FOR NAME PLATE

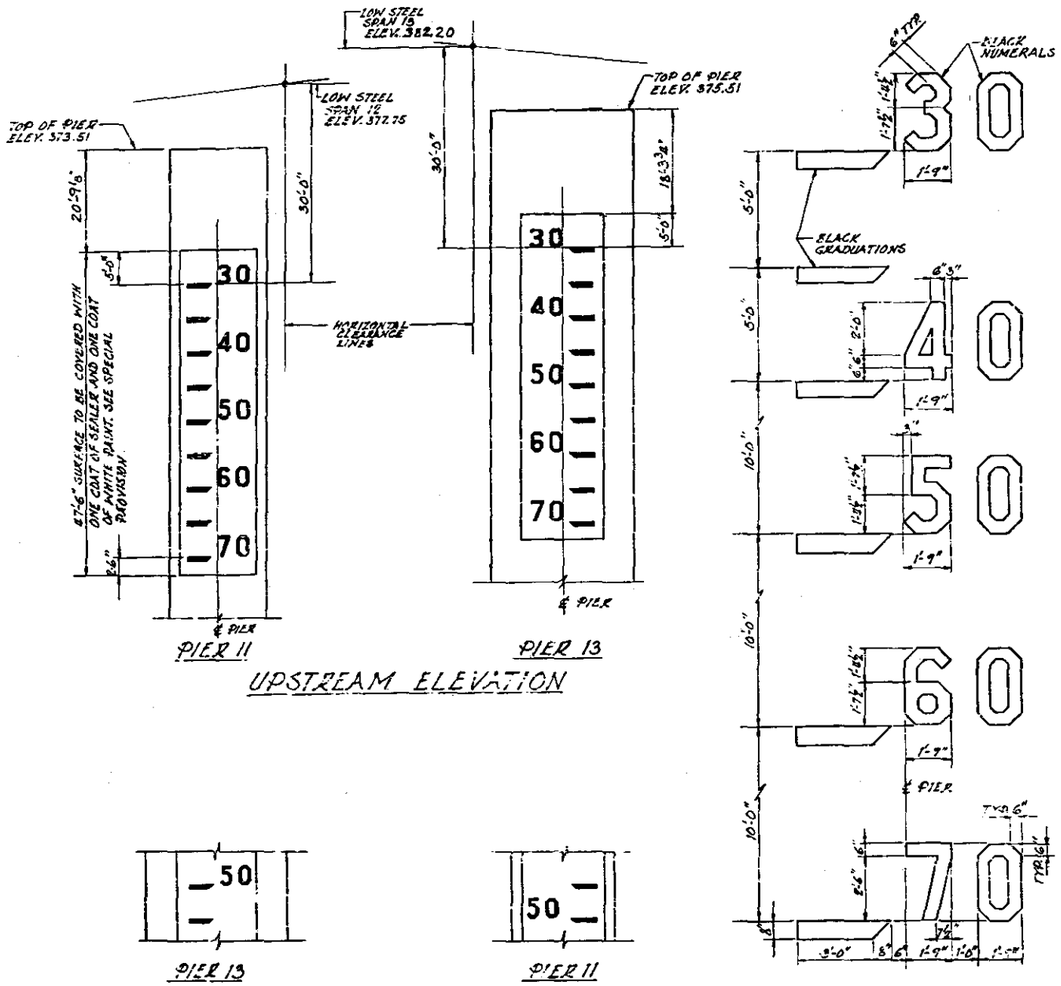
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
166 S. WABASH AVE. CHICAGO, ILLINOIS

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
02-18-1 B	ALEXANDER (ILLINOIS) MISSISSIPPI (MISSOURI)	54	2A
		PROJECT I-57-9(10)	

REVISED MAR 27, 1972

QUANTITIES, INDEX OF SHEETS, GAUGES
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10
SECTION(02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

REVISED 11-20-70 Rev 8-17-71



DETAIL OF GRADUATIONS & NUMBERS
SCALE: 3/8"=1'-0"

NOTE: THE COST OF FURNISHING ALL PLANT, LABOR AND MATERIALS AND PERFORMING ALL WORK REQUIRED FOR PAINTING THE CLEARANCE GAUGES, AS SHOWN ON THE DRAWINGS, WILL NOT BE PAID FOR SEPARATELY AND COMPENSATION THEREFORE SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR OTHER ITEMS. FOR FURTHER INFORMATION, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES
SECTION (02-18-1) B

QUANTITY	UNIT	ITEM	CODE
1	ACRE	TREE REMOVAL, ACRES	201005
2,575	CU.YD.	STRUCTURE EXCAVATION	X50201
2,220	CU.YD.	COFFERDAM EXCAVATION	502003
1	EACH	COFFERDAM (PIER 7)	502012
1	EACH	COFFERDAM (PIER 9)	502014
14,100.9	CU.YD.	CLASS X CONCRETE	504003
859.1	CU.YD.	SEAL COAT CONCRETE (PIERS 7 & 9)	X04084
3,512.5	CU.YD.	SEAL COAT CONCRETE (PIERS 11, 12 & 13)	X04085
2,320,530	LB.	REINFORCEMENT BARS	512001
540	LIN.FT.	FURNISHING CREOSOTED PILES OVER 38 FEET	513006
13,370	LIN.FT.	FURNISHING STEEL PILES 12 BP 53	513015
31,995	LIN.FT.	FURNISHING CONCRETE PILES (35 TON & 45 TON)	X04086
3,750	LIN.FT.	FURNISHING CONCRETE PILES (50 TON)	X04087
540	LIN.FT.	DRIVING TIMBER PILES	513022
13,370	LIN.FT.	DRIVING STEEL PILES	513026
35,745	LIN.FT.	DRIVING CONCRETE PILES	513027
1	EACH	TEST PILE STEEL 12 BP 53	513035
10	EACH	TEST PILE CONCRETE (35 TON)	X04088
3	EACH	TEST PILE CONCRETE (45 TON)	X04089
1	EACH	TEST PILE CONCRETE (50 TON)	X04090
10	EACH	PILE TEST LOADING (35 TON)	X04091
1	EACH	PILE TEST LOADING (45 TON)	X04092
2	EACH	PILE TEST LOADING (50 TON)	X04093
2	EACH	PILE TEST LOADING (60 TON)	X04094
1	EACH	ENGINEER'S FIELD OFFICE, TYPE A	666001
1	EACH	ENGINEER'S FIELD LABORATORY	666003
1	L. SUM	OPEN DREDGED CAISSON, PIER 11	X04095
1	L. SUM	OPEN DREDGED CAISSON, PIER 12	X04096
1	L. SUM	OPEN DREDGED CAISSON, PIER 13	X04097
95	SQ.YD.	REMOVAL OF STONE RIPRAP	X04051
25	SQ.YD.	RIPRAP REPLACEMENT	X04052
229	SQ.YD.	NO. 4 STONE SLOPE PROTECTION	X04053
1	L.SUM	GROUNDING SYSTEM	L05066
1	EACH	NAME PLATE	514001
14,000	HOUR	TRAINEES	XZ1100

THE FOLLOWING PAY ITEMS HAVE BEEN INCLUDED TO ESTABLISHED UNIT PRICES ONLY (SEE SCHEDULE OF PRICES)

1	LIN.FT.	CAISSON ADJUSTMENT, PIER 11, INCREASE	X04098
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 11, DECREASE	X04099
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 12, INCREASE	X04100
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 12, DECREASE	X04101
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 13, INCREASE	X04102
1	LIN.FT.	CAISSON ADJUSTMENT, PIER 13, DECREASE	X04103
8,347	CU.YD.	DUMPED RIPRAP (PIERS 6,7&9)	

ROUTE	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(188-1B-1) 5	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	18
S.P.R. SEC. 68-4 / F.A.P. 97.1 68-8		ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	PROJECT I-57-9(3)10	

INDEX OF SHEETS

SHEET	DESCRIPTION
1, 1A	TITLE SHEET
2, 2A, 2B	QUANTITIES, INDEX OF SHEETS, GAUGES
3, 3A, 3B	GENERAL PLAN AND ELEVATION
4	NORTH ABUTMENT
5	SOUTH ABUTMENT
6	ABUTMENT DETAILS
7	PIER 1
8	PIER 2
9	PIER 3
10	PIER 4
11	PIER 5
12, 12A, 12B	PIER 6
13, 13A	PIER 7
14, 15	PIER 8 DELETED
16, 17, 16A, 17A	PIER 9
18, 19	PIER 10 DELETED
20-24, 20A, 20B, 20C, 21A, 24A, 24B, 24C, 24D, 24E, 24F & 24G	PIER 11
25 - 29	PIER 12
30	SHOE DETAILS, PIERS 12 & 13
31 - 35, 35A, 35B, 35C, 35D, 35E	PIER 13
36, 37, 36A, 37A	PIER 14
38, 38A	PIER 15
39, 39A	PIER 16
40, 40A	PIER 17
41, 41A	PIER 18
42	35 TON & 45 TON CONCRETE PILES
43	50 TON CONCRETE PILES
44	EXCAVATION
45 - 49	BORINGS
50 - 51	HYDROGRAPHS
52	PLAN & PROFILE - ILLINOIS BANK
53	PLAN & PROFILE - MISSOURI BANK
54	STANDARDS 2113 , 2153-B

NOTE: Two(2) signs conforming to Standard 2153 shall be erected at locations as directed by the Engineer.

STATION 1167+76
BUILT 1971 BY
STATES OF ILLINOIS & MISSOURI
F.A.I. RT. 57 SEC. 02-18-1
F.A. PROJ. I-57-9(3)
LOADING HS 20 & ALT.

LETTERING FOR NAME PLATE

(AS REVISED) 11-1-72

REVISED MAR 27, 1972

QUANTITIES, INDEX OF SHEETS, GAUGES
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

REVISED 11-20-70 Rev. 8-7-71

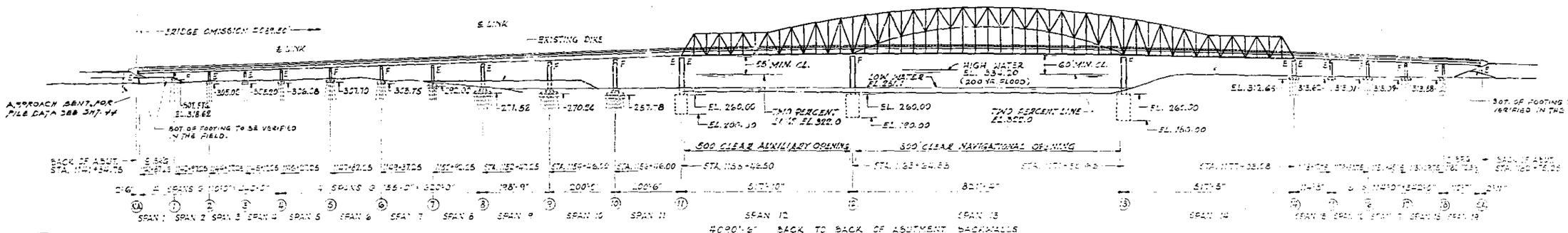
Revised Dumped Riprap (Piers 7 & 9) 5,660 Cu.Yds. to Dumped Riprap (Piers 6, 7 & 9) 8,347 Cu.Yds. 11-1-72 S.F.M.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	C	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	54	3
		ILLINOIS / MISSOURI	PROJECT I-57-9-10	

BENCH MARKS

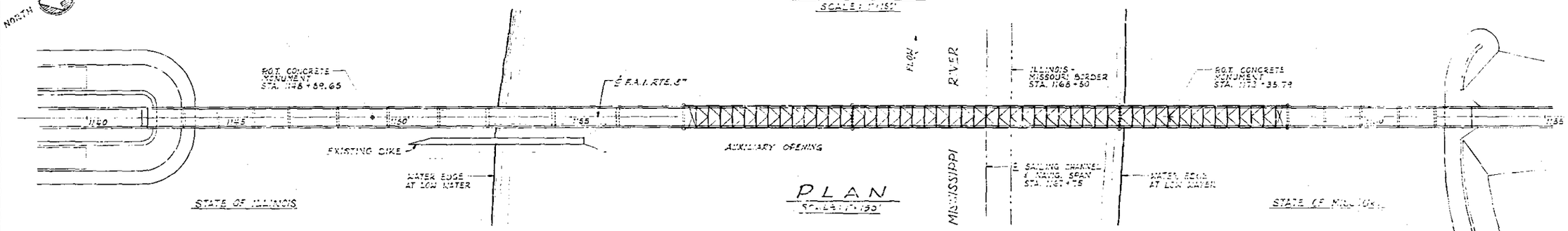
CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISS. RIVER
STA. 1148+89.65 ℄
E MEDIAN EL. 317.72

CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER
STA. 1173-35.79 ℄
E MEDIAN EL. 318.31



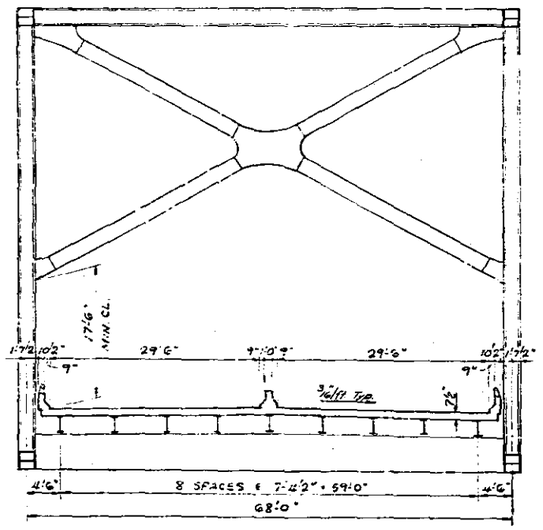
ELEVATION

SCALE: 1"=50'

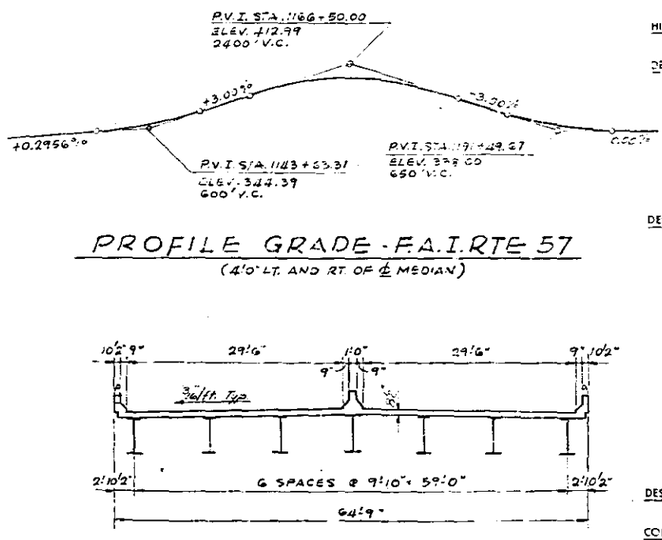


PLAN

SCALE: 1"=150'



TYPICAL SECTION THRU TRUSS SPANS



PROFILE GRADE - F.A.I. RTE. 57

(4'0" LT. AND RT. OF ℄ MEDIAN)

TYPICAL SECTION THRU GIRDER SPANS

DESIGN DATA

HIGHWAY CLASSIFICATION
F.A.I. ROUTE 57 DIV. 1-20, M.P.H. 70, DESIGNATION: B-1 (1967)

DESIGN LOADS
LIVE LOAD: H20-44 AND ALTERNATE
FUTURE DEADLOAD: 1-1/2 IN. BITUMINOUS WEARING SURFACE WEIGHING 15 LBS. PER SQ. FT.
STREAM FLOW: WATER VELOCITY 10 FT. PER SECOND
ICE PRESSURE: 400 P.S.I.
PARALLEL TO PIERS: 12 IN. THICKNESS AT PIERS 6 TO 13 INCL.
PERPENDICULAR TO PIERS: 4 IN. THICKNESS AT PIERS 8, 9 & 10
8 IN. THICKNESS AT PIER 11
8 IN. THICKNESS AT PIERS 12 & 13
EARTHQUAKE: 10% OF DEADLOAD OF STRUCTURE

DESIGN STRESSES
(1) CONCRETE
f'c = 3500 P.S.I.
fc = 1400 P.S.I.
fc = 1000 P.S.I. WITH EARTH PRESSURE
v = 70 P.S.I. IN FOOTINGS
n = 10
(2) REINFORCEMENT BARS
(a) GRADE 40, fs = 20,000 P.S.I.
(b) GRADE 60, fs = 24,000 P.S.I.
(3) STRUCTURAL STEEL
ASTM A36 fs = 20,000 P.S.I.
(4) PILE LOADS
P = 35 TON (CONCRETE) PIERS 2 TO 7 INCL. & PIERS 15 TO 19 INCL.
P = 45 TON (CONCRETE) ABUTMENTS & PIER 1
P = 50 TON (CONCRETE) PIERS 8, 9 AND 14
P = 60 TON (STEEL) PIER 10
(5) OPEN DREDGED CAISSON PIERS 11, 12 AND 13
TOTAL ALLOWABLE SOIL PRESSURE = 20 KIPS/SQ.FT. CONSIDERING BUOYANCY BASED ON WATER ELEVATION 287.

DESIGN SPECIFICATIONS
A.A.S.H.O., 1969 AS APPLICABLE & A.W.S.

CONSTRUCTION SPECIFICATIONS
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF ILLINOIS, DEPARTMENT OF PUBLIC WORKS AND BUILDINGS, DIVISION OF HIGHWAYS ADOPTED JANUARY 2, 1971.

GENERAL NOTES

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AND AT PIERS 7 & 9 AND 14 TO 18 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

THE CONTRACTOR SHALL DRIVE ONE STEEL PILE IN A PERMANENT LOCATION AT PIER 10 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

CONCRETE PILES AT EACH ABUTMENT AND PIER 1 SHALL BE DRIVEN THRU OVERSIZE SHELLS. SEE SECTION [illegible] PROVISIONS.

WATERWAY INFORMATION

50 YEAR FLOOD WATER ELEV. 330.0 DISCHARGE 1,900,000 C.F.S.
200 YEAR FLOOD WATER ELEV. 334.2 DISCHARGE 1,460,000 C.F.S.
VELOCITY FOR 200 YEAR FLOOD MIN. CHANNEL 8.0 F.P.S.
OPENING PROVIDED BELOW ELE. 334.2 195,700 S.F.
HIGH WATER OF RECORD ELEV. 330.0 - 1937
2 PER CENT LINE ELEV. 322.0

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
70 WABASH AVE. CHICAGO, ILLINOIS

Revised Date 8-17-71

GENERAL PLAN & ELEVATION

F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER

PROJECT I-57-9(10)

SECTION (C2-1B-1)B

ALEXANDER COUNTY, ILLINOIS

MISSISSIPPI COUNTY, MISSOURI

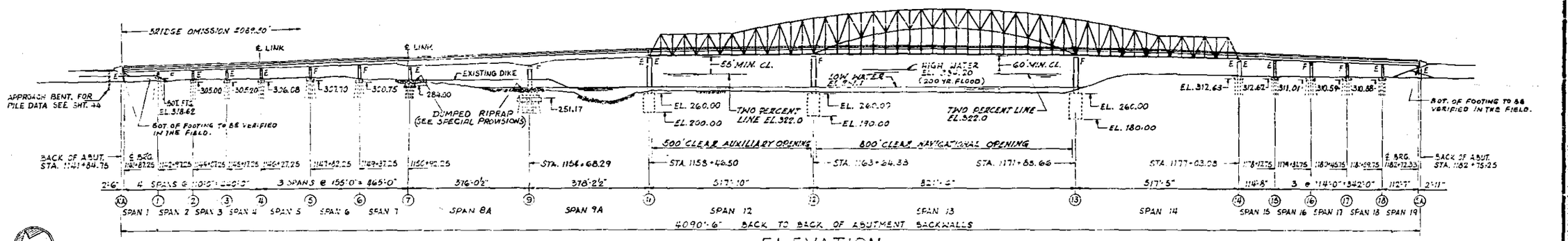
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. ST	(02-18-1) B	ALEXANDER (ILLINOIS) / MISSOURI	54	3A
S.P.R. ADD. NO. 4 S.P.R. ADD. NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9(10)	

BENCH MARKS

CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1148+89.65 ℄ ℄ ℄ MEDIAN EL. 317.12

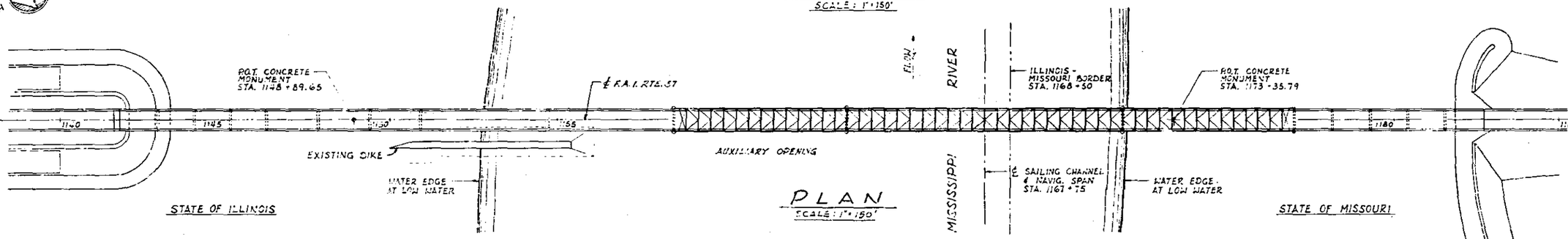
CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1173+35.79 ℄ ℄ ℄ MEDIAN EL. 319.31



ELEVATION

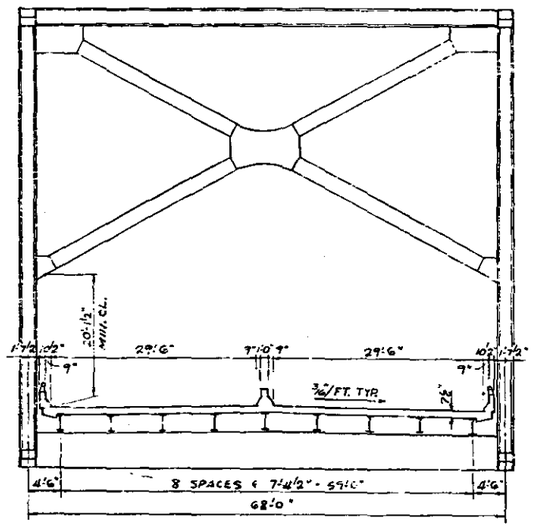
SCALE: 1" = 150'

NORTH

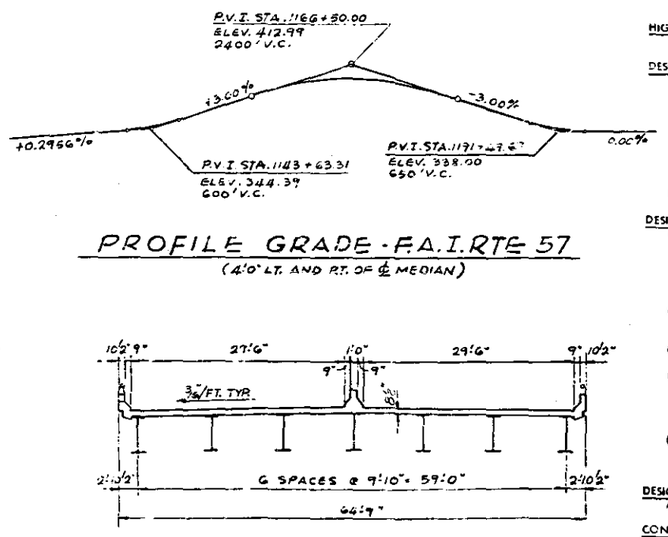


PLAN

SCALE: 1" = 150'



TYPICAL SECTION THRU TRUSS SPANS



PROFILE GRADE - F.A.I. RTE 57

(4'-0" LT. AND RT. OF ℄ MEDIAN)

TYPICAL SECTION THRU GIRDER SPANS

DESIGN DATA

HIGHWAY CLASSIFICATION
F.A.I. ROUTE 57 DHV: 1920, M.P.H.: 70, DESIGNATION: B-1 (1987)

DESIGN LOADS
LIVE LOAD: HS20-44 AND ALTERNATE
FUTURE DEADLOAD: 1-1/2 IN. BITUMINOUS WEARING SURFACE WEIGHING 18 LBS. PER SQ. FT.
STREAM FLOW: WATER VELOCITY 10 FT. PER SECOND
ICE PRESSURE: 400 P.S.I.
PARALLEL TO PIERS: 12 IN. THICKNESS AT PIERS 9 TO 13 INCL.
PERPENDICULAR TO PIERS: 4 IN. THICKNESS AT PIER 9
6 IN. THICKNESS AT PIER 11
8 IN. THICKNESS AT PIERS 12 & 13
EARTHQUAKE: 6% OF DEADLOAD OF STRUCTURE

DESIGN STRESSES
(1) CONCRETE
f'c = 3000 P.S.I.
fc = 1400 P.S.I.
fc = 1050 P.S.I. WITH EARTH PRESSURE
v = 75 P.S.I. IN FOOTINGS
n = 10
(2) REINFORCEMENT BARS
(a) GRADE 40, fs = 20,000 P.S.I.
(b) GRADE 60, fs = 24,000 P.S.I.
(3) STRUCTURAL STEEL
ASTM A36 fs = 20,000 P.S.I.
(4) PILE LOADS
P = 35 TON (CONCRETE) PIERS 2 TO 7 INCL. & PIERS 15 TO 18 INCL.
P = 45 TON (CONCRETE) ABUTMENTS & PIER 1
P = 50 TON (CONCRETE) PIER 14
P = 60 TON (STEEL) PIER 9
(5) OPEN DREDGED CAISSON PIERS 11, 12 AND 13
TOTAL ALLOWABLE SOIL PRESSURE = 20 KIPS/SQ.FT. CONSIDERING BUOYANCY BASED ON WATER ELEVATION 281.

DESIGN SPECIFICATIONS
A.A.S.H.O., 1969 AS APPLICABLE & A.W.S.

CONSTRUCTION SPECIFICATIONS
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF ILLINOIS, DEPARTMENT OF PUBLIC WORKS AND BUILDINGS, DIVISION OF HIGHWAYS ADOPTED JANUARY 2, 1971.

GENERAL NOTES

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AND AT PIERS 1 TO 7 AND 14 TO 19 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

THE CONTRACTOR SHALL DRIVE ONE STEEL PILE IN A PERMANENT LOCATION AT PIER 9 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

CONCRETE PILES AT EACH ABUTMENT AND PIER 1 SHALL BE DRIVEN THRU OVERSIZE SHELLS. SEE SPECIAL PROVISIONS.

WATERWAY INFORMATION

50 YEAR FLOOD WATER ELEV. 332.0 DISCHARGE 1,200,000 C.F.S.
200 YEAR FLOOD WATER ELEV. 334.2 DISCHARGE 1,460,000 C.F.S.
VELOCITY FOR 200 YEAR FLOOD MAIN CHANNEL 8.0 F.P.S.
OPENING PROVIDED BELOW ELEV. 334.2 = 195,600 S.F.
HIGH WATER OF RECORD ELEV. 330.0 - 1937
2 PER CENT LINE ELEV. 322.0

REVISED MAR. 27, 1972

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

GENERAL PLAN & ELEVATION
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1161+84.75 TO STA. 1182+75.25

Rev. Sht. July 8 17-71

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) B	ALEXANDER	ILLINOIS MISSOURI	54	38
S.P.R. REG. NO. 4 S.P.R. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9( )0	

BENCH MARKS

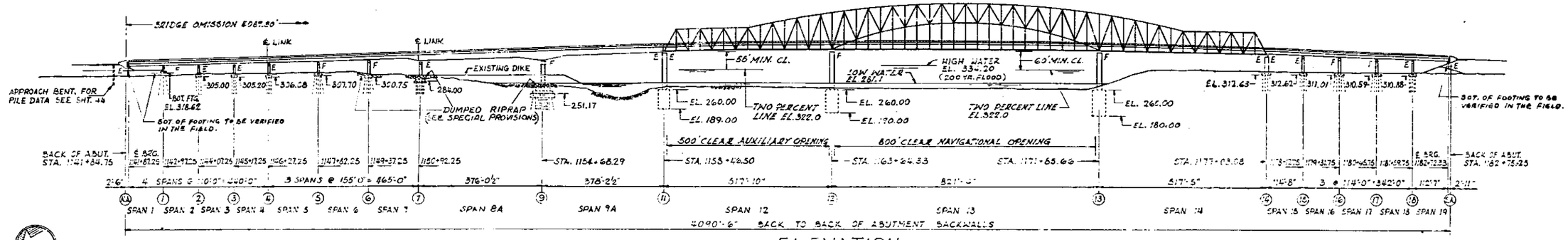
CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1148+89.65 ℄ E MEDIAN EL. 317.12

CONCRETE MONUMENT WITH BRASS CAP TOP OF BANK MISSISSIPPI RIVER STA. 1173+35.79 ℄ E MEDIAN EL. 319.31

LEGEND (PREDICTED SCOUR)

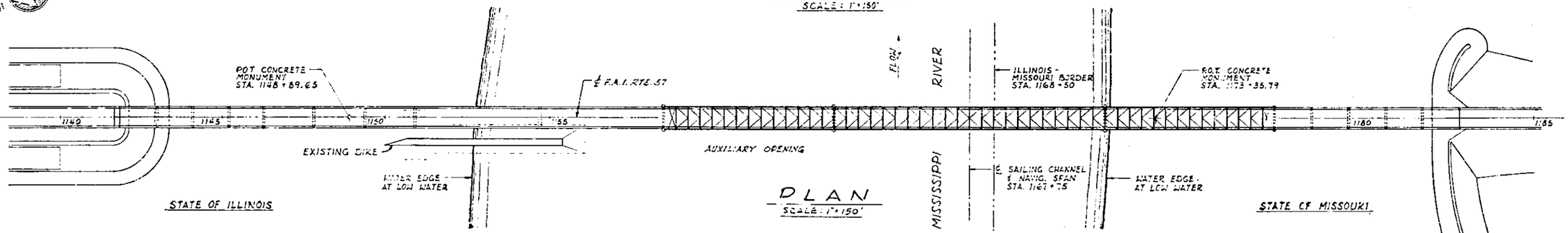
DIKE REMOVED

DIKE NOT REMOVED



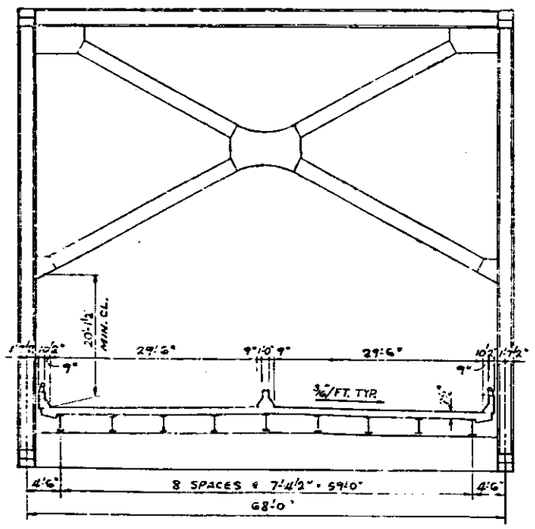
ELEVATION

SCALE: 1"=150'

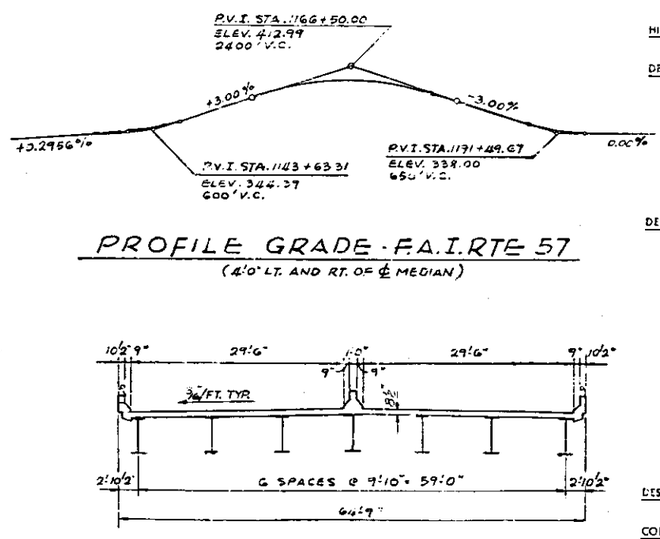


PLAN

SCALE: 1"=150'



TYPICAL SECTION THRU TRUSS SPANS



PROFILE GRADE - F.A.I. RTE 57

(4'-0" LT. AND RT. OF ℄ MEDIAN)

TYPICAL SECTION THRU GIRDER SPANS

DESIGN DATA

HIGHWAY CLASSIFICATION
F.A.I. ROUTE 57 DHV: 1920, M.P.H. = 70, DESIGNATION: B-1 (1987)

DESIGN LOADS
LIVE LOAD: H520-44 AND ALTERNATE
FUTURE DEADLOAD: 1-1/2 IN. BITUMINOUS WEARING SURFACE WEIGHING 12 LBS. PER SQ. FT.
STREAM FLOW: WATER VELOCITY 10 FT. PER SECOND
ICE PRESSURE: 400 P.S.I.
PARALLEL TO PIERS: 12 IN. THICKNESS AT PIERS 9 TO 13 INCL.
PERPENDICULAR TO PIERS: 4 IN. THICKNESS AT PIER 9
6 IN. THICKNESS AT PIER 11
8 IN. THICKNESS AT PIERS 12 & 13
EARTHQUAKE: 6% OF DEADLOAD OF STRUCTURE

DESIGN STRESSES
(1) CONCRETE
f'c = 3500 P.S.I.
fc = 1400 P.S.I.
fc = 1000 P.S.I. WITH EARTH PRESSURE
v = 75 P.S.I. IN FOOTINGS
n = 10
(2) REINFORCEMENT BARS
(a) GRADE 40, fs = 20,000 P.S.I.
(b) GRADE 60, fs = 24,000 P.S.I.
(3) STRUCTURAL STEEL
ASTM A36 fs = 20,000 P.S.I.
(4) PILE LOADS
P = 35 TON (CONCRETE) PIERS 2 TO 7 INCL. & PIERS 15 TO 18 INCL.
P = 45 TON (CONCRETE) ABUTMENTS & PIER 1
P = 50 TON (CONCRETE) PIER 14
P = 60 TON (STEEL) PIER 9
(5) OPEN DREDGED CAISSON PIERS 11, 12 AND 13
TOTAL ALLOWABLE SOIL PRESSURE = 20 KIPS/SQ.FT. CONSIDERING BUOYANCY BASED ON WATER ELEVATION 281.

DESIGN SPECIFICATIONS
A.A.S.H.O., 1969 AS APPLICABLE & A.W.S.

CONSTRUCTION SPECIFICATIONS
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF ILLINOIS, DEPARTMENT OF PUBLIC WORKS AND BUILDINGS, DIVISION OF HIGHWAYS ADOPTED JANUARY 2, 1971.

(AS REVISED) 11-1-72

GENERAL NOTES

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AND AT PIERS 1 TO 7 AND 14 TO 18 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

THE CONTRACTOR SHALL DRIVE ONE STEEL PILE IN A PERMANENT LOCATION AT PIER 9 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

CONCRETE PILES AT EACH ABUTMENT AND PIER 1 SHALL BE DRIVEN THRU OVERSIZE SHELLS. SEE SPECIAL PROVISIONS.

WATERWAY INFORMATION

50 YEAR FLOOD WATER ELEV. 332.0 DISCHARGE 1,200,000 C.F.S.
200 YEAR FLOOD WATER ELEV. 334.2 DISCHARGE 1,460,000 C.F.S.
VELOCITY FOR 200 YEAR FLOOD MAIN CHANNEL 8.0 F.P.S.
OPENING PROVIDED BELOW ELEV. 334.2 = 195,600 S.F.
HIGH WATER OF RECORD ELEV. 330.0 - 1937
2 PER CENT LINE ELEV. 322.0

REVISED MAR. 27, 1972

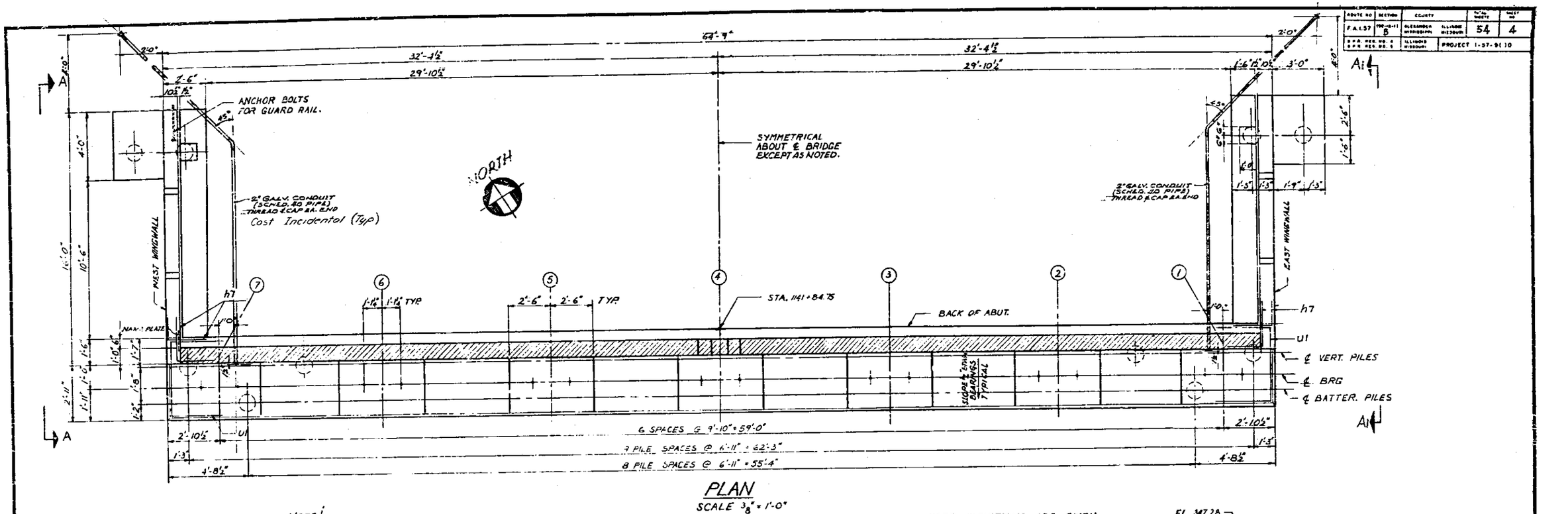
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

GENERAL PLAN & ELEVATION
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

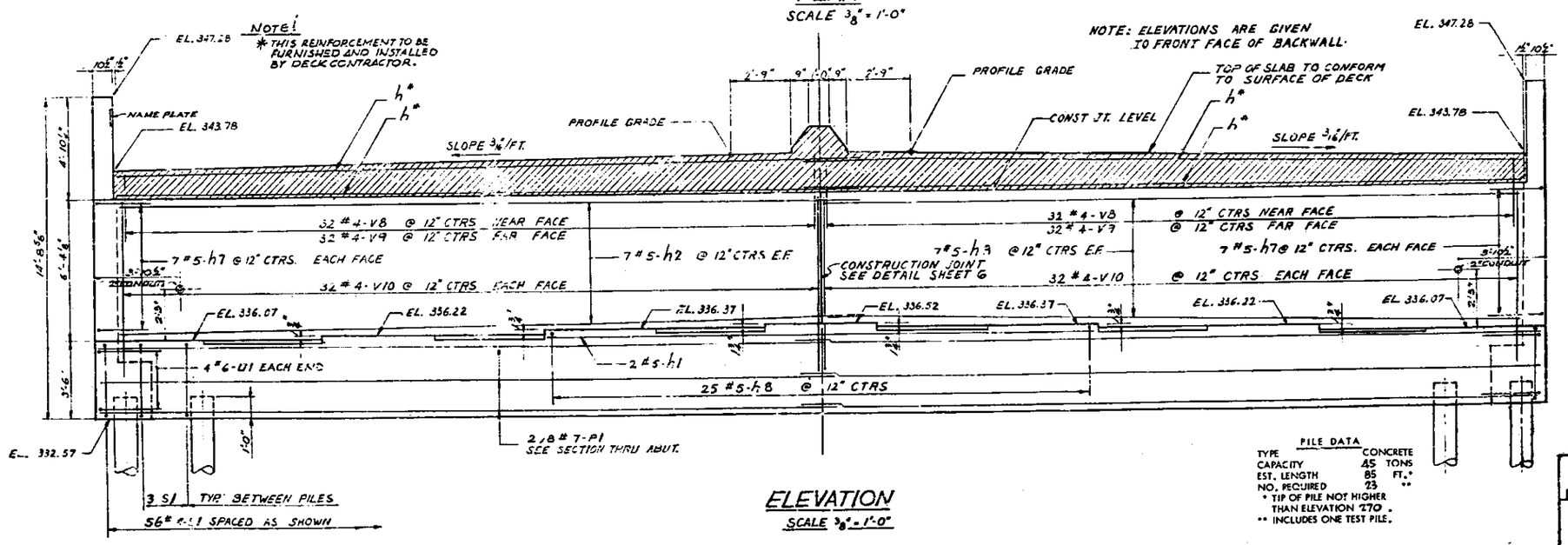
Revised 11-1-72 S.F.M.

Rev. Spec. Date 8-17-71

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	190-1&-1 B	ALEXANDER (ILLINOIS)	ILLINOIS MISSOURI	54	4
S.P.R. RES. NO. 4 S.P.R. RES. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



PLAN
SCALE 3/8" = 1'-0"



ELEVATION
SCALE 3/8" = 1'-0"

NOTE:
THE CONCRETE PILES SHALL BE DRIVEN THRU OVERSIZE SHELLS - SEE SPECIAL PROVISIONS.

FOR SECTIONS AND DETAILS SEE SHEET #6. End post conc. to be used in wings.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

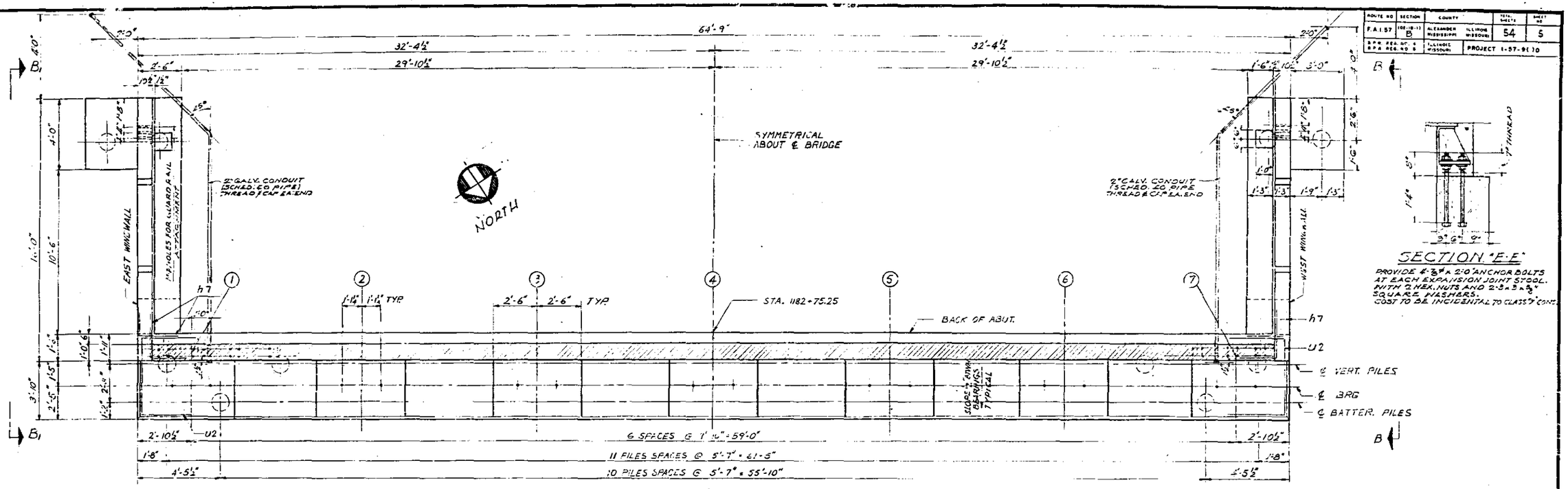
TYPE	CONCRETE
CAPACITY	45 TONS
EST. LENGTH	85 FT.*
NO. REQUIRED	23 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 270.
** INCLUDES ONE TEST PILE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

NORTH ABUTMENT
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1162+75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	102-(B-1) 6	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	5
B.P.R. REG. NO. 5 B.P.R. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



PLAN

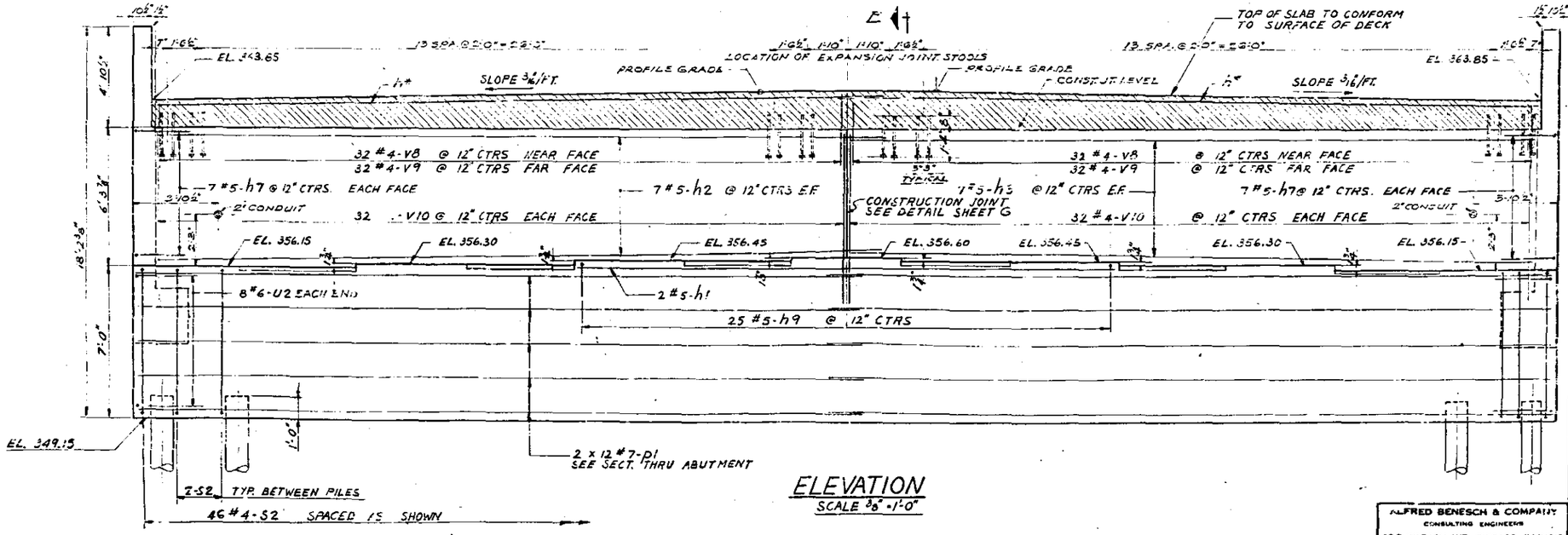
SCALE ⅜" = 1'-0"

SECTION "E-E"

PROVIDE 4-¾" x 2'-0" ANCHOR BOLTS AT EACH EXPANSION JOINT STOOL. WITH 2 HEX. NUTS AND 2-3 x 3 x ¼" SQUARE WASHERS. COST TO BE INCIDENTAL TO CLASS 'S' CONC.

NOTE!
* THIS REINFORCEMENT TO BE FURNISHED AND INSTALLED BY DECK CONTRACTOR.

NOTE: ELEVATIONS ARE GIVEN TO FRONT FACE OF BACKWALL



ELEVATION

SCALE ⅜" = 1'-0"

NOTE:
FOR SECTIONS AND DETAILS SEE SHEET 6. THE CONCRETE PILES SHALL BE DRIVEN THRU OVERSIZE SHELLS - SEE SPECIAL PROVISIONS.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

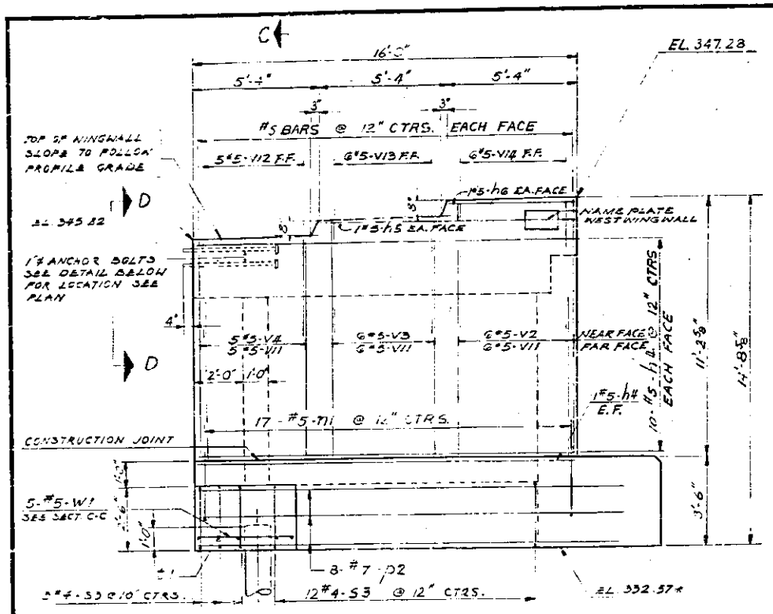
PILE DATA	
TYPE	CONCRETE
CAPACITY	45 TONS
EST. LENGTH	85 FT.*
NO. REQUIRED	27 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 275.
** INCLUDES ONE TEST PILE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

SOUTH ABUTMENT
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+34.75 TO STA. 1182+75.25

ROUTE NO.				TOTAL SHEETS	SHEET NO.
F.A.I. 57			ILLINOIS MISSOURI	64	
S.P. NO.					
S.P. NO.				PROJECT I-57-9(10)	

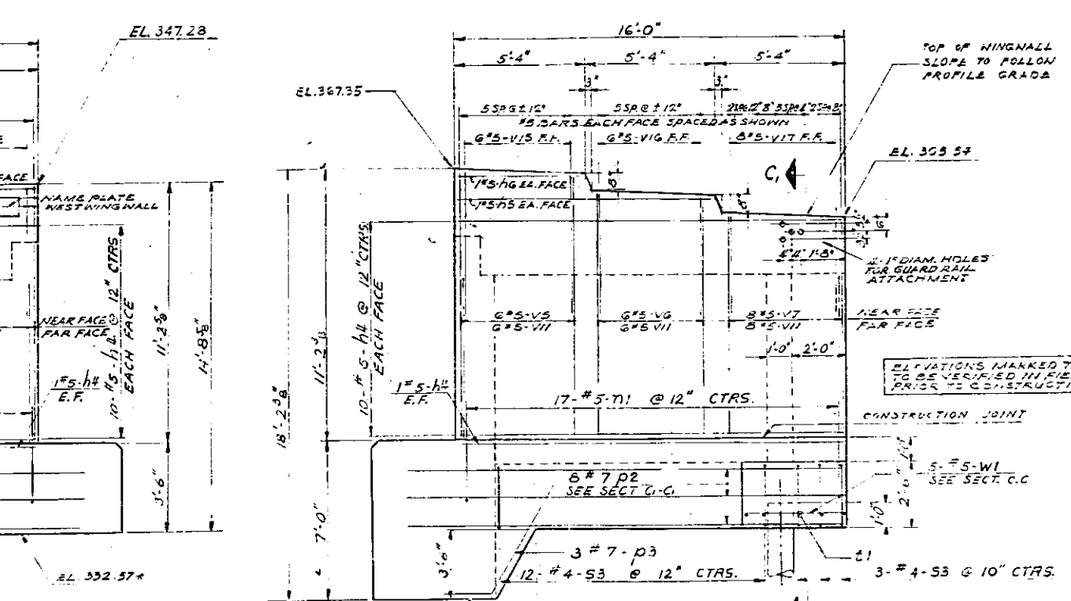


ELEVATION A-A

ELEVATION A,-A, SIMILAR

SCALE 3/8"=1'-0"

NORTH ABUTMENT

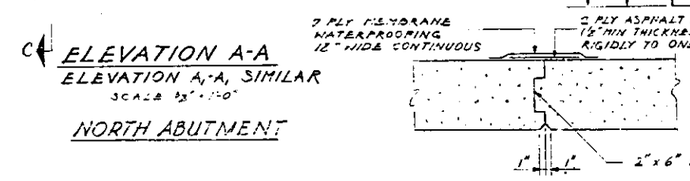


ELEVATION B-B

ELEVATION B-B, SIMILAR

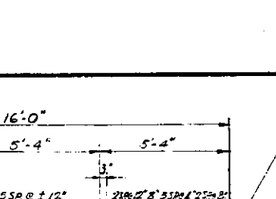
SCALE 3/8"=1'-0"

SOUTH ABUTMENT



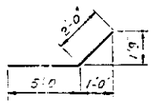
CONSTRUCTION JOINT DETAIL

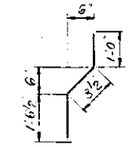
SCALE 1"=1'-0"

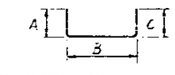


VIEW D-D

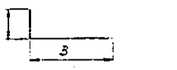
SCALE 1"=1'-0"



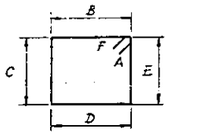




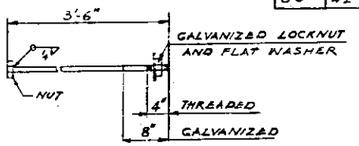
BAR	A	B	C
T1	3'-9"	9"	3'-5"
U1	3'-0"	4'-0"	3'-0"
U2	3'-0½"	4'-11"	3'-0½"



BAR	A	B
h7	2'-0"	2'-5"
h8	1'-6"	3'-8"
h9	1'-6"	4'-3"

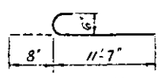


BAR	A	B	C	D	E	F
S1	4'-2"	4'-1"	3'-2"	4'-1"	3'-2"	4'-2"
S2	4'-2"	5'-0"	6'-8"	5'-0"	6'-8"	4'-2"
S3	4'-2"	2'-2"	2'-2"	2'-2"	2'-2"	1'-2"



1"ø ANCHOR BOLT

COST OF BOLTS TO BE INCIDENTAL TO BRIDGE STRUCTURE



BAR VI

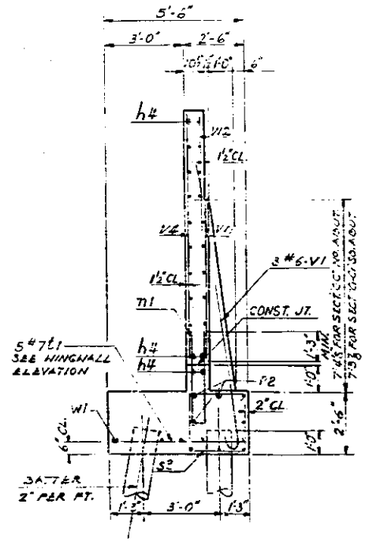
BILL OF MATERIAL

BARS	NUMBER W. ABUT.	NUMBER S. ABUT.	SIZE	LENGTH	SHAPE
h1	2	2	#5	24'-2"	
h2	14	14	#5	32'-9"	
h3	14	14	#5	31'-0"	
h4	44	44	#5	25'-9"	
h5	4	4	#5	0'-3"	
h6	4	4	#5	5'-0"	
h7	28	24	#5	4'-6"	
h8	25	--	#5	5'-3"	
h9	—	25	#5	6'-3"	
n1	34	34	#5	9'-3"	
P1	16	24	#7	33'-0"	
P2	16	16	#7	18'-0"	
P3	—	6	#7	7'-0"	
S1	56	—	#4	15'-3"	
S2	—	46	#4	24'-1"	
S3	30	30	#4	9'-5"	
t1	10	10	#5	5'-0"	
U1	8	—	#6	12'-0"	
U2	—	16	#6	11'-0"	
V1	6	6	#6	12'-3"	
V2	12	—	#5	11'-0"	
V3	12	—	#5	10'-3"	
V4	10	—	#5	9'-6"	
V5	—	12	#5	10'-9"	
V6	—	12	#5	10'-0"	
V7	—	16	#5	9'-3"	
V11	34	40	#5	7'-0"	
V12	10	—	#5	4'-0"	
V13	12	—	#5	7'-6"	
V16	12	—	#5	5'-3"	
V15	—	12	#5	5'-3"	
V16	—	12	#5	4'-6"	
V17	—	16	#5	3'-9"	
V8	64	64	#4	3'-0"	
V9	64	64	#4	5'-3"	
V10	128	128	#4	8'-6"	
W1	10	10	#5	3'-6"	

ITEM	UNIT	TOTAL N. ABUT.	TOTAL S. ABUT.
CLASS "A" CONCRETE	CU.YDS.	82.0	135.1
REINFORCEMENT BARS	LBS.	6850	7930
CONCRETE PILES (45 TON)	L.IN.FT.	1570	2210
TEST PILE CONCRETE (45 TON)	EACH	1	1
Str. Excavation	CU.YDS.	190	193

NOTE

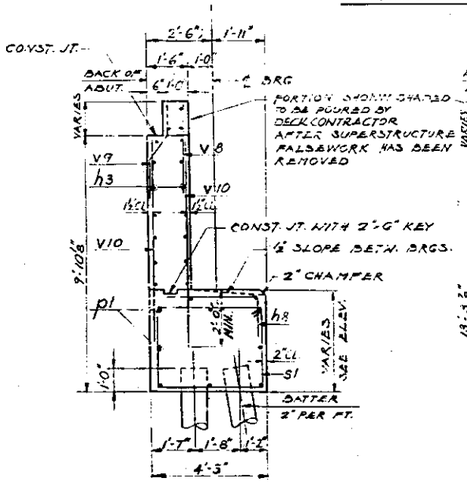
ALL BAR DIMENSIONS ARE CUT TO CUT.



SECTION C-C

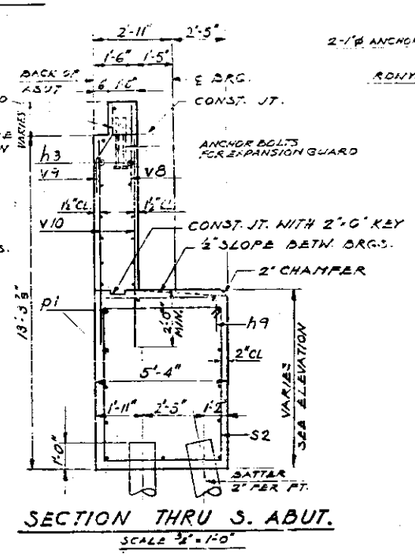
SECTION C,-C, SIMILAR

SCALE 3/8"=1'-0"



SECTION THRU N. ABUT.

SCALE 3/8"=1'-0"



SECTION THRU S. ABUT.

SCALE 3/8"=1'-0"

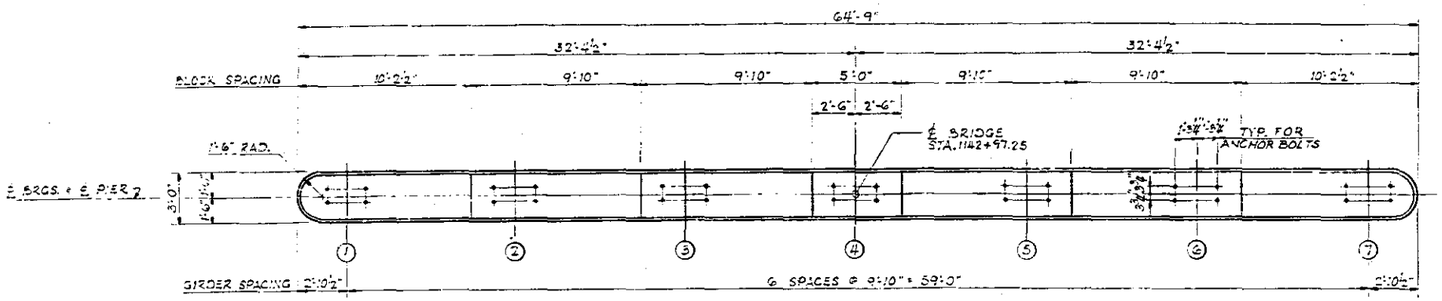
NOTE

ALL BAR DIMENSIONS ARE CUT TO CUT.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

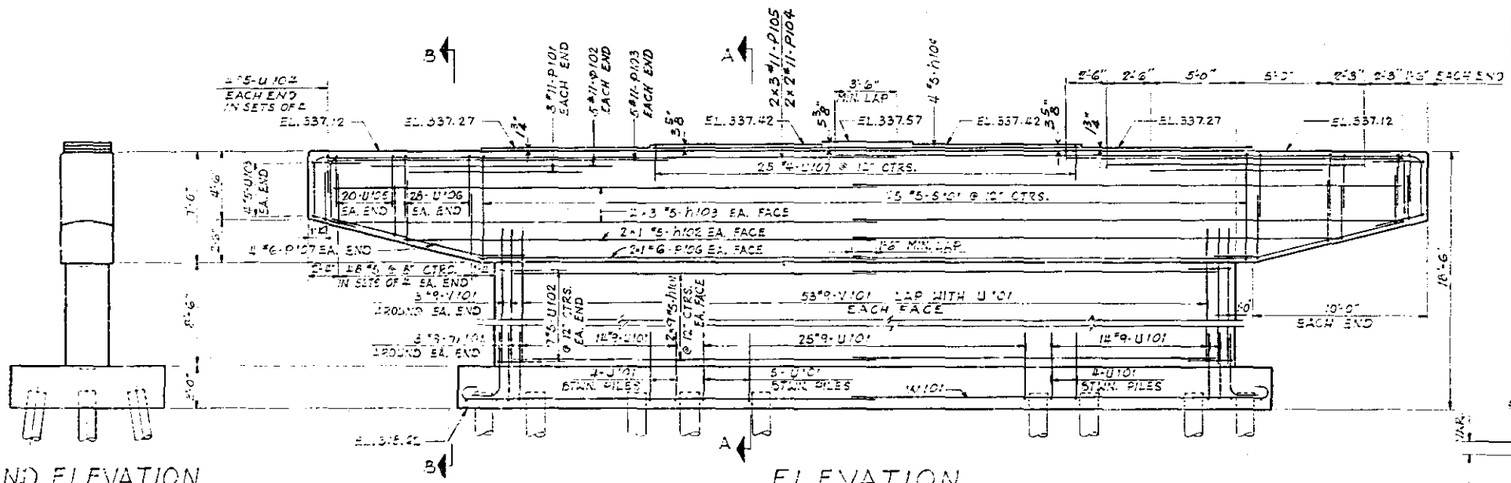
ABUTMENT DETAILS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION(02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1) B	ALEXANDER, MISSISSIPPI	ILLINOIS MISSOURI	54	7
F.A.P. RTE. NO.	F.A.S. NO.	ILLINOIS MISSOURI		PROJECT I-57-9( )0	



TOP PLAN

SCALE: 1/4"=1'-0"

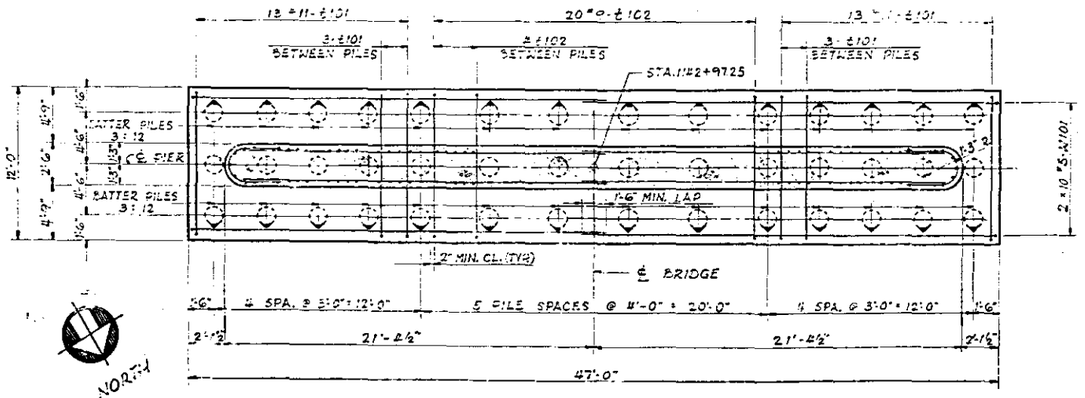


END ELEVATION

SCALE: 1/4"=1'-0"

ELEVATION

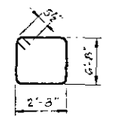
SCALE: 1/4"=1'-0"



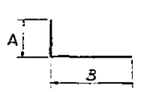
FOOTING PLAN

SCALE: 1/4"=1'-0"

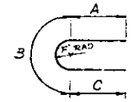
BAR P107



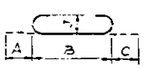
BAR S101



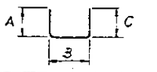
BAR	A	B
h101	1'-9"	5'-0"
h102	5'-0"	32'-9"
h105	2'-0"	38'-0"



BAR	A	B	C	F
U102	1'-0"	33'-2½"	1'-6"	1'-2"
U103	1'-6"	42'-0"	1'-6"	1'-3"



BAR	A	B	C	J
S101	1'-7"	11'-0"	1'-7"	1'-2"
S102	1'-3"	11'-0"	1'-3"	11"
W101	7"	2'-6"	—	5"



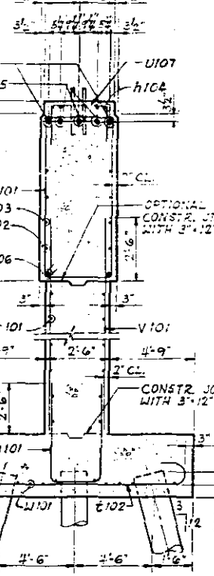
BAR	A	B	C
U101	5'-0½"	2'-2"	5'-0½"
U104	2'-10½"	2'-3"	2'-10½"
U105	3'-6"	2'-3"	3'-6"
U106	2'-0"	2'-3"	2'-0"
U107	1'-7"	2'-3"	1'-7"

NOTE

ALL BAR DIMENSIONS ARE OUT TO OUT.

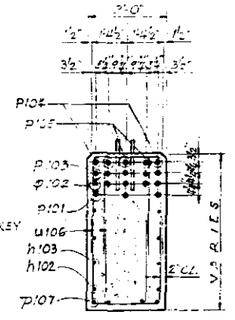
BILL OF MATERIAL

BAR	No	SIZE	LENGTH	SHAPE
h101	36	#5	2'-0"	—
h102	4	#5	2'-6"	—
h103	12	#5	3'-6"	—
h104	4	#5	2'-3"	—
W101	3	#9	6'-9"	L
P101	6	#11	10'-0"	—
P102	10	#11	14'-9"	—
P103	10	#11	19'-6"	—
P104	4	#11	30'-9"	—
P105	6	#11	36'-0"	L
P106	4	#6	23'-3"	—
P107	8	#6	11'-9"	—
S101	45	#5	19'-7"	
S101	26	#11	14'-8"	
S102	20	#9	12'-0"	
U101	53	#9	12'-3"	
U102	18	#5	6'-3"	
U103	8	#5	7'-0"	
U104	6	#5	6'-0"	
U105	40	#5	9'-3"	
U106	56	#5	10'-3"	
U107	25	#4	5'-6"	
V101	112	#9	11'-0"	—
W101	22	#8	3'-9"	L
CLASS X CONCRETE		CU.YDS.	143.0	
REINFORCEMENT BARS		LBS.	12,080	
CONCRETE PILES (45 TON)		LIN. FT.	2870	
TEST PILE CONCRETE (45 TON)		EACH	1	
PILE TEST LOADING (45 TON)		EACH	1	
Sta. Excavation		CU.YDS.	149.0	



SECTION A-A

SCALE: 3/8"=1'-0"



SECTION B-B

SCALE: 3/8"=1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

NOTE:
THE CONCRETE PILES SHALL BE DRIVEN THROUGH OVERSIZE SHELLS. SEE SPECIAL PROVISIONS.

PILE DATA

TYPE	CONCRETE
CAPACITY	45 TON
EST. LENGTH	70 FT.
NO. REQUIRED	

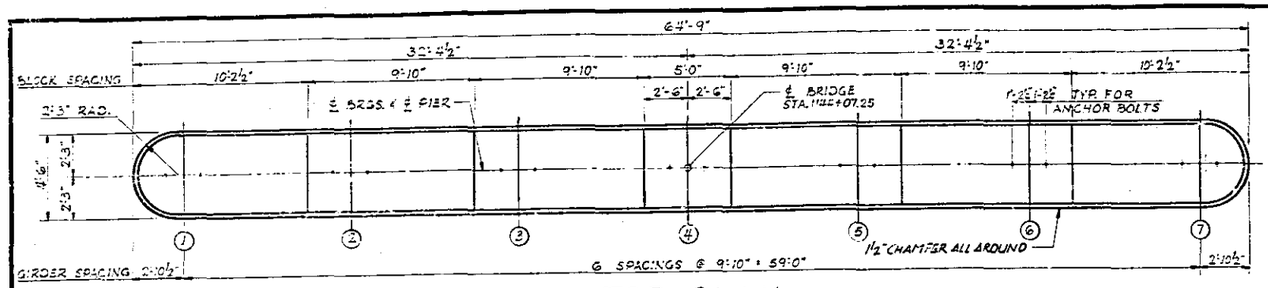
* TIP OF PILE ... THAN ELEV. ...
** INCLUDES ...

PIER 1
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1) B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

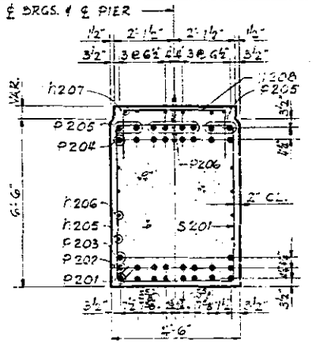
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
135 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-18-1) B	ALEXANDER	ILLINOIS	54	8
		MISSISSIPPI	MISSOURI		
B.R.M. REG. NO. C R.R. REG. NO. S		ILLINOIS	MISSOURI	PROJECT I-57-9( )10	

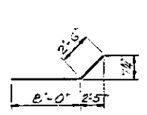
TOP PLAN
SCALE: 1/4"=1'-0"



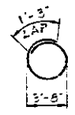
SECTION A-A
SCALE: 3/8"=1'-0"



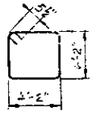
BAR P207



BAR S202



BAR S201



BAR	A	B	C	F
U203	1'-6	6'-4½	1'-6½	2'-1"
U204	1'-7"	6'-3"	1'-7"	2'-0"

BAR	A	B	C	J
S201	10"	10'-0"	10"	7"
W201	1'-5"	18'-7"	—	1'-0½"

BAR	A	B	C
U201	2'-0½"	2'-2"	2'-0½"
U202	5'-1"	2'-2"	5'-1"
U205	2'-10"	2'-10"	2'-10"
U206	3'-3½"	4'-2"	3'-3½"
U207	3'-11"	4'-2"	3'-11"
U208	1'-7"	3'-10"	1'-7"
U209	6'-0½"	4'-2"	6'-0½"

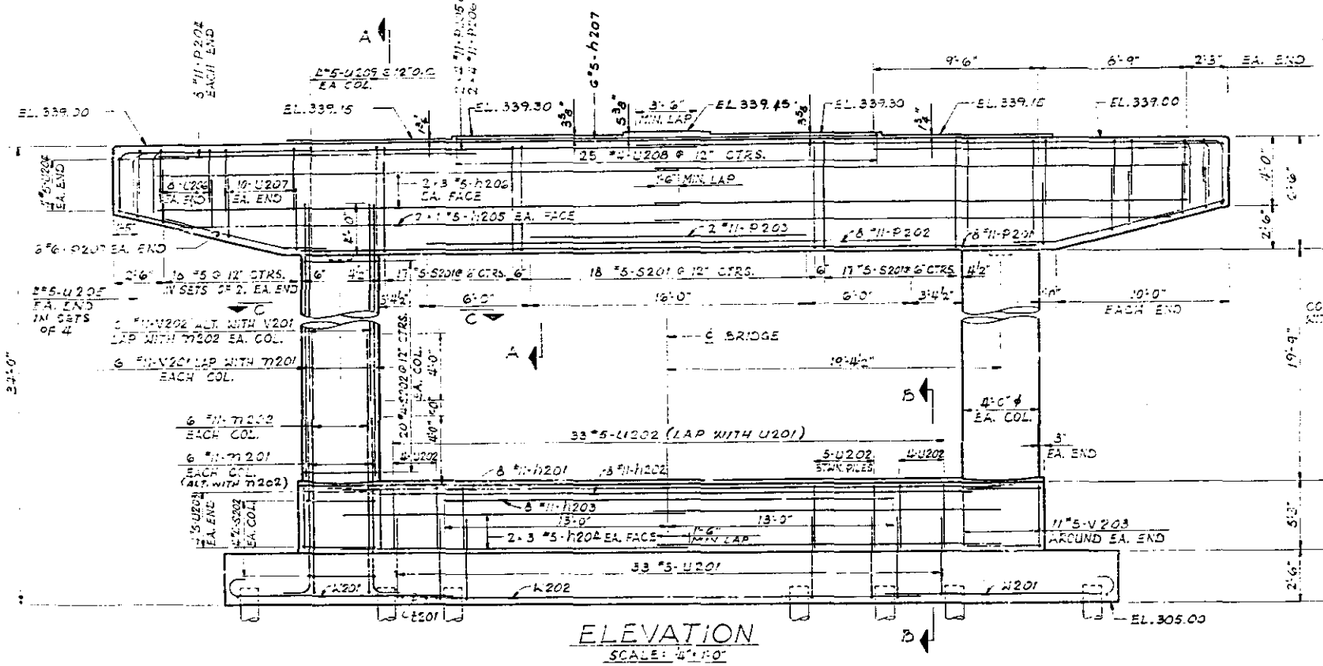
BAR	A	B
h201	2'-3"	11'-3"
h202	2'-3"	16'-3"
P205	3'-6"	33'-3"
P206	3'-6"	32'-0"

BILL OF MATERIAL

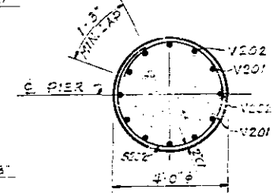
BAR	Nº	SIZE	LENGTH	SHAPE
h201	8	#11	39'-0"	—
h202	8	#11	35'-0"	—
h203	8	#11	26'-0"	—
h204	12	#5	20'-3"	—
h205	4	#5	28'-0"	—
h206	12	#5	31'-0"	—
h207	8	#5	22'-3"	—
m201	12	#11	13'-6"	L
m202	12	#11	18'-6"	L
P201	8	#11	23'-0"	—
P202	8	#11	28'-0"	—
P203	2	#11	16'-0"	—
P204	16	#11	18'-3"	—
P205	8	#11	36'-9"	L
P206	8	#11	37'-6"	L
P207	12	#6	10'-6"	⌒
S201	52	#5	2'-7"	□
S202	28	#4	12'-9"	⊃
t201	96	#7	11'-8"	⊂⊃
U201	33	#5	12'-3"	⊔
U202	33	#5	12'-4"	⊔
U203	8	#5	9'-6"	⊔
U204	8	#5	9'-5"	⊔
U205	8	#5	8'-6"	⊔
U206	16	#5	10'-9"	⊔
U207	20	#5	12'-0"	⊔
U208	25	#4	7'-0"	⊔
U209	8	#5	16'-3"	⊔
V201	12	#11	23'-9"	—
V202	12	#11	18'-9"	—
V203	22	#5	5'-0"	—
W201	28	#10	16'-0"	C
W202	8	#8	29'-0"	—
CLASS X CONCRETE			CU.YDS.	1725
REINFORCEMENT BARS			LBS.	25,040
CONCRETE PILES(35TON)			LIN. FT.	1425
TEST PILE CONC.(35 TON)			EACH	1
PILE TEST LOADING(35TON)			EACH	1
Str Excavation			CU.YDS.	120.0

NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.

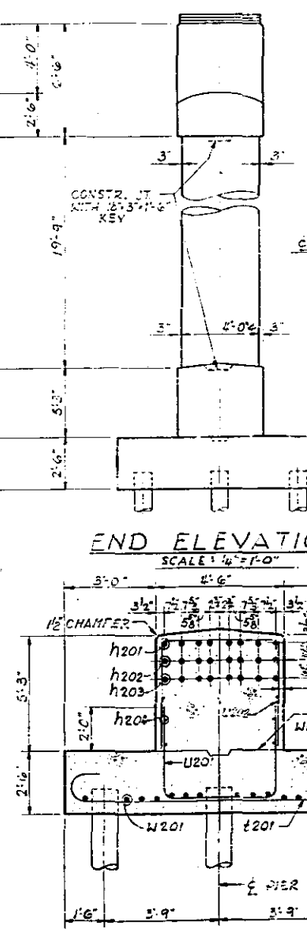
ELEVATION
SCALE: 1/4"=1'-0"



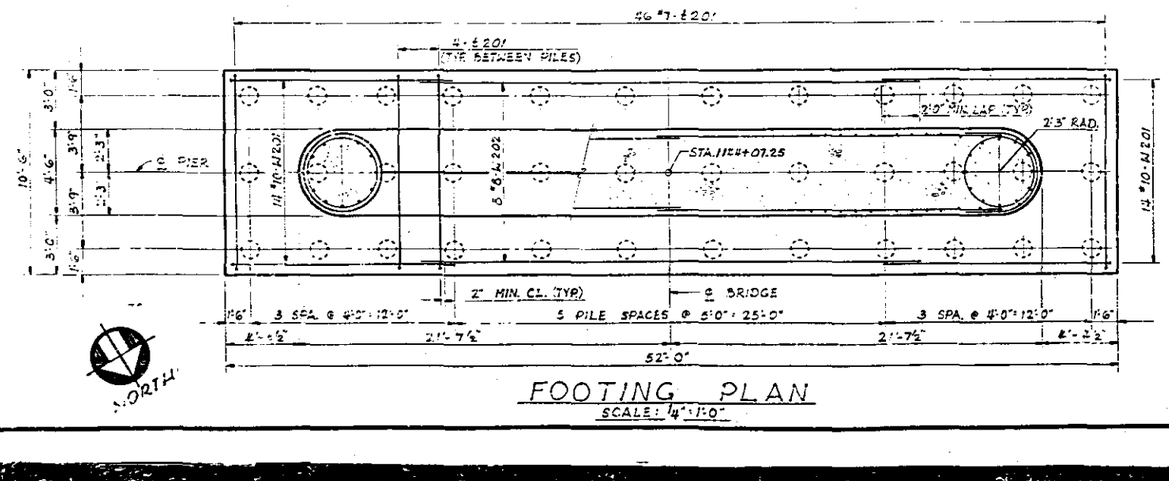
SECTION C-C
SCALE: 3/8"=1'-0"



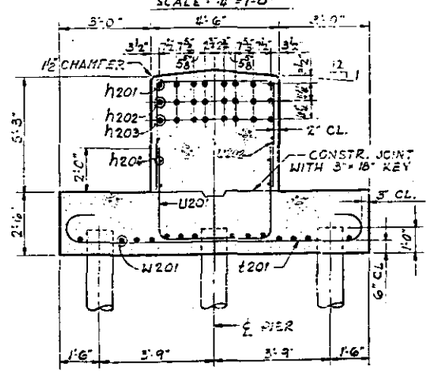
END ELEVATION
SCALE: 1/4"=1'-0"



FOOTING PLAN
SCALE: 1/4"=1'-0"



SECTION B-B
SCALE: 3/8"=1'-0"



NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

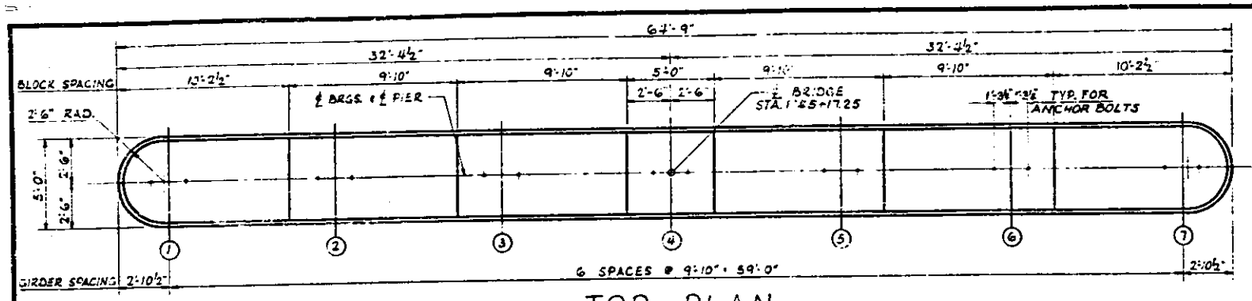
TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	55 FT.*
NO. REQUIRED	96 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 270 .
** INCLUDES ONE TEST PILE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

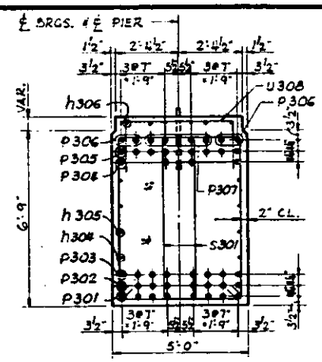
PIER 2
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-181-B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	9
S.P.R. SEC. NO. S		ILLINOIS MISSOURI		PROJECT I-57-9(10)	
S.P.R. SEC. NO. S					



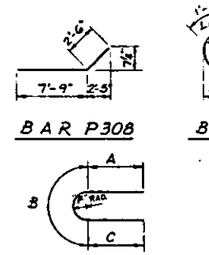
TOP PLAN

SCALE: 1/4" = 1'-0"



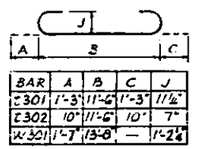
SECTION A-A

SCALE: 3/8" = 1'-0"

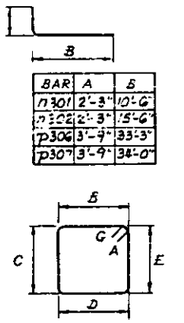


BAR	A	B	C	F
U303	1'-7"	7'-8"	1'-7"	2'-4"
U304	1'-6½"	7'-2"	1'-6½"	2'-3½"

BAR	A	B	C
U301	8'-6½"	2'-8"	11'-6½"
U302	3'-10"	2'-8"	3'-10"
U305	2'-10½"	2'-6"	2'-10½"
U306	3'-3½"	2'-8"	3'-3½"
U307	3'-11"	2'-8"	3'-11"
U308	1'-7"	2'-4"	1'-7"
U309	6'-3"	4'-8"	6'-1¼"



BAR	A	B	C	J
Z301	1'-3"	11'-6"	1'-3"	11½"
Z302	10"	11'-6"	10"	7"
W301	1'-7"	13'-8"	—	1'-2½"



BAR	A	B
n301	2'-3"	10'-6"
n302	2'-3"	15'-6"
p306	3'-9"	33'-3"
p307	3'-9"	38'-0"

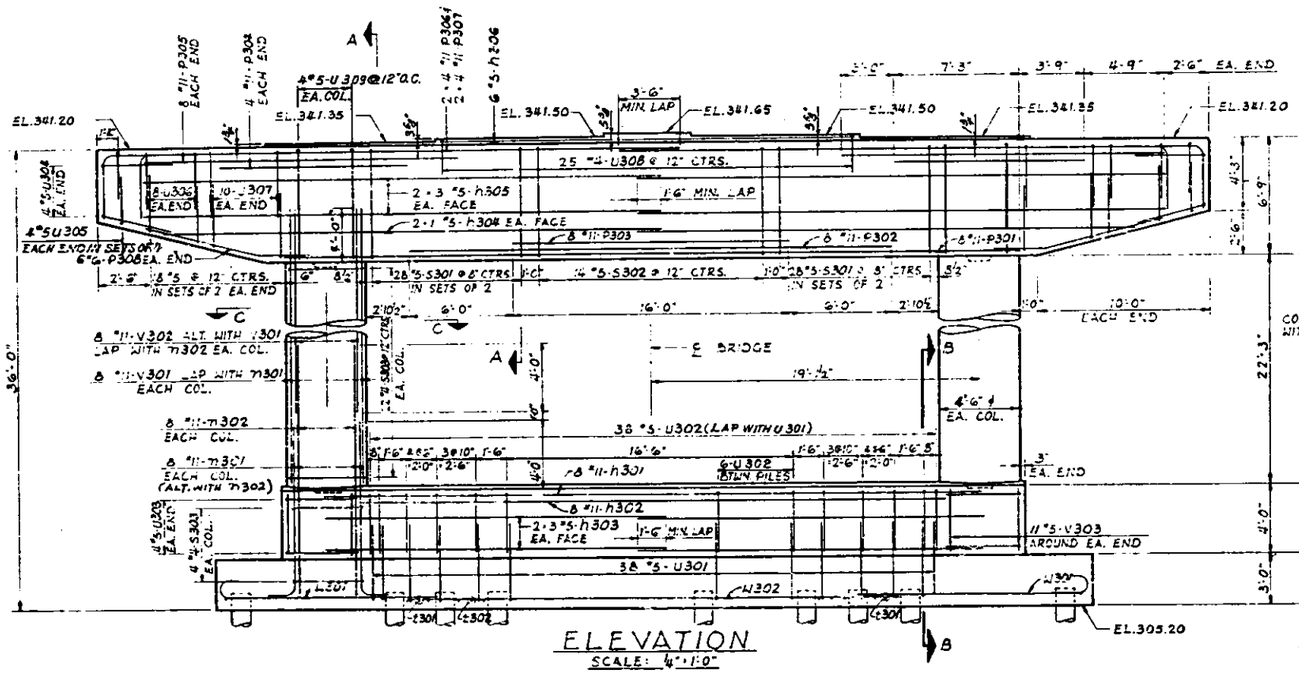
BAR	A	B	C	D	E	F
S301	5½	2'-11"	6'-5"	2'-11"	6'-5"	5½
S302	5½	8'-8"	6'-5"	8'-8"	6'-5"	5½

BILL OF MATERIAL

BAR	N°	SIZE	LENGTH	SHAPE
h301	5	#11	38'-3"	—
h302	8	#11	38'-0"	—
h303	12	#5	20'-0"	—
h304	4	#5	29'-0"	—
h305	12	#5	31'-0"	—
h306	6	#5	28'-3"	—
n301	16	#11	12'-9"	L
n302	16	#11	17'-9"	L
p301	8	#11	43'-0"	—
p302	8	#11	28'-0"	—
p303	8	#11	16'-0"	—
p304	8	#11	11'-0"	—
p305	16	#11	18'-9"	L
p306	8	#11	37'-0"	L
p307	8	#11	37'-9"	L
p308	12	#6	10'-3"	⌐
s301	56	#5	19'-7"	3
s302	14	#5	23'-1"	3
s303	52	#4	14'-6"	3
t301	26	#9	14'-0"	⊂⊃
t302	24	#7	13'-2"	⊂⊃
u301	38	#5	13'-9"	L
u302	38	#5	12'-8"	L
u303	8	#5	10'-6"	L
u304	8	#5	10'-3"	L
u305	8	#5	8'-3"	L
u306	16	#5	11'-3"	L
u307	20	#5	12'-6"	L
u308	25	#4	7'-6"	L
u309	8	#5	17'3"	L
v301	16	#11	26'-3"	—
v302	16	#11	21'-3"	—
v303	22	#5	3'-9"	—
w301	22	#11	15'-3"	C
w302	12	#9	28'-3"	—
CLASS X CONCRETE			CU.YDS.	202.1
REINFORCEMENT BARS			LBS.	28,620
CONCRETE PILES(35TON)			LIN. FT.	2478
TEST PILE CONC.(35TON)			EACH	1
PILE TEST LOADING(35TON)			EACH	1
Structure Excavation			CU.YDS.	140

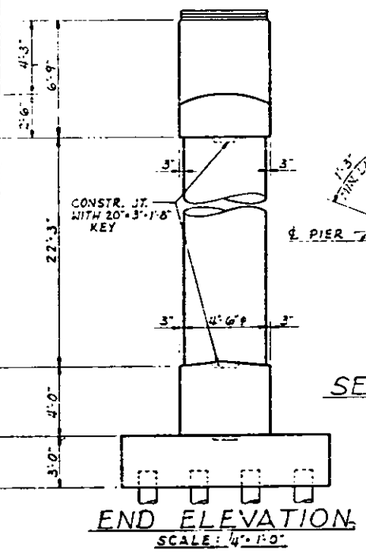
NOTE

ALL BAR DIMENSIONS ARE OUT TO OUT.



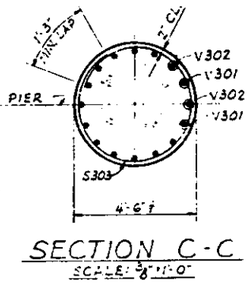
ELEVATION

SCALE: 1/4" = 1'-0"



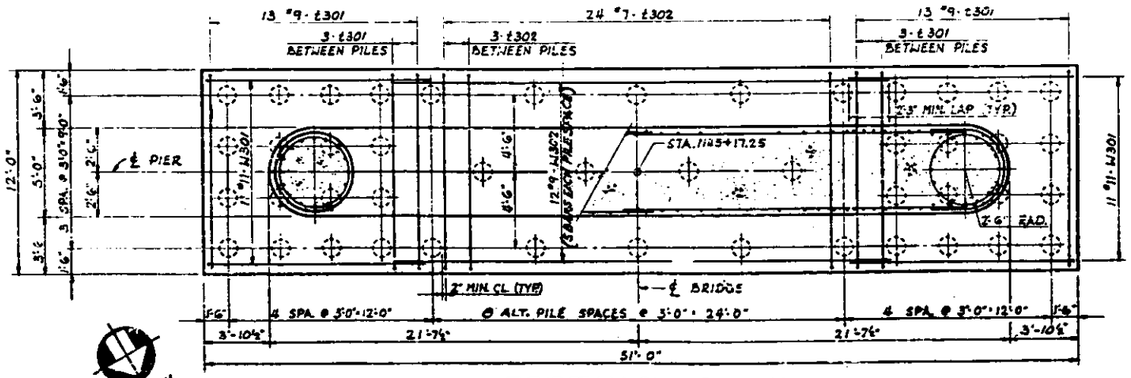
END ELEVATION

SCALE: 1/4" = 1'-0"



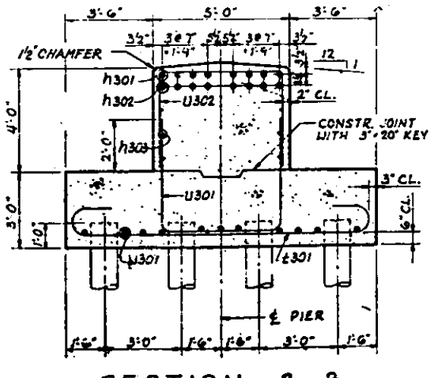
SECTION C-C

SCALE: 3/8" = 1'-0"



FOOTING PLAN

SCALE: 1/4" = 1'-0"



SECTION B-B

SCALE: 3/8" = 1'-0"

PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	55 FT.*
NO. REQUIRED	46 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 270.

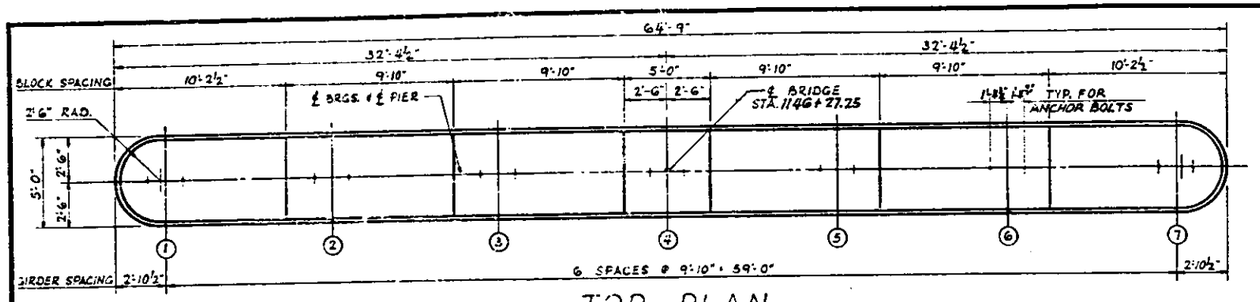
** INCLUDES ONE TEST PILE.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

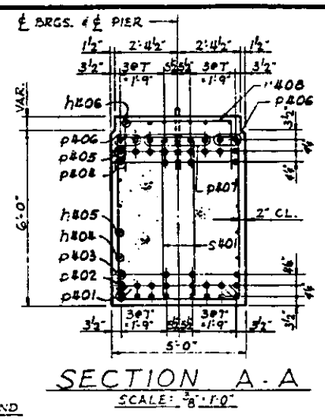
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
189 W. WABASH AVE. CHICAGO, ILLINOIS

PIER 3
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

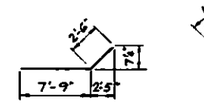
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) 8	ALEXANDER DIVISION	ILLINOIS MISSOURI	54	10
B.P.R. SEC. NO. 1		ILLINOIS MISSOURI	PROJECT I-57-9(10)		
B.P.R. SEC. NO. 2					



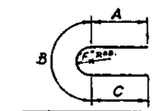
TOP PLAN
SCALE: ¼" = 1'-0"



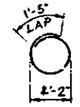
SECTION A-A
SCALE: ⅜" = 1'-0"



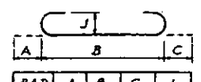
BAR P408



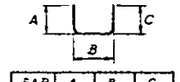
BAR	A	B	C	F
U403	1'-7"	7'-4"	1'-7"	2'-4"
U408	1'-6½"	7'-2"	1'-6½"	2'-3½"



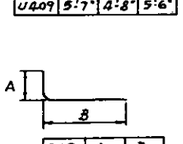
BAR S403



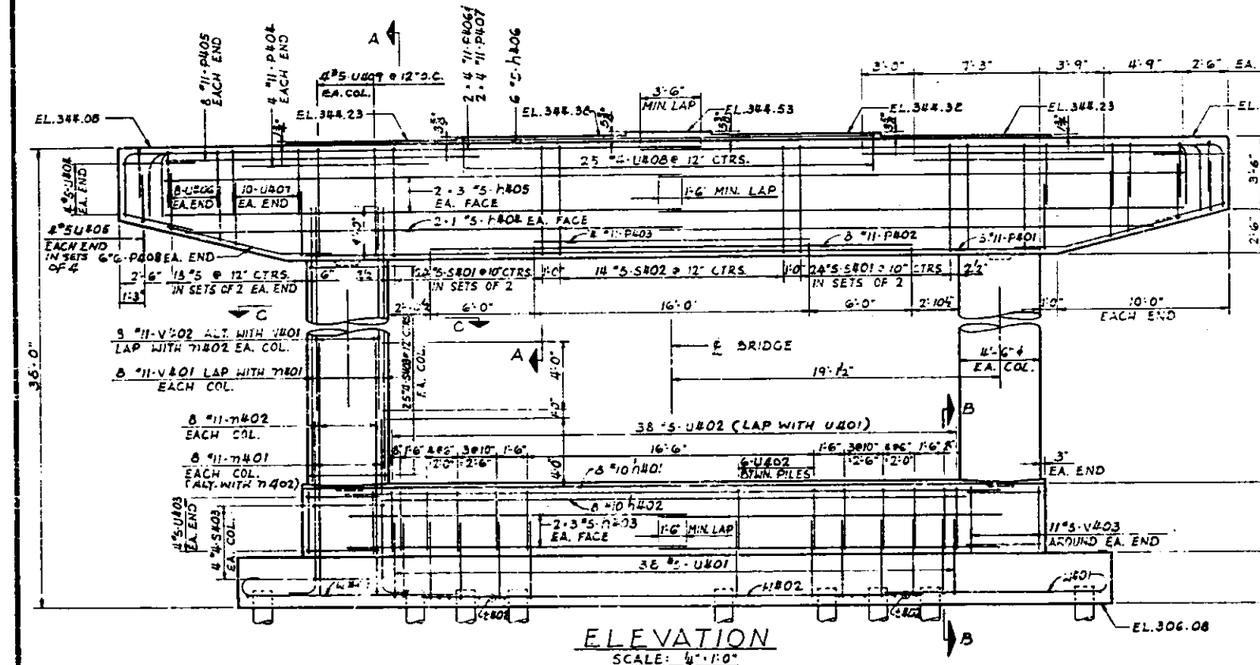
BAR	A	B	C	J
t401	1'-3"	11'-6"	1'-3"	11½"
t402	10"	11'-6"	10"	7"
W401	1'-7"	9'-11"	—	1:24



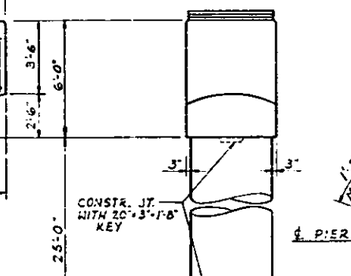
BAR	A	B	C
U401	4'-6½"	4'-8"	4'-6½"
U402	3'-10"	4'-8"	3'-10"
U405	2'-6"	2'-6"	2'-6"
U406	3'-0½"	2'-8"	3'-0½"
U407	3'-8"	2'-8"	3'-8"
U408	1'-7"	8'-4"	1'-7"
U409	5'-7"	4'-8"	5'-6"



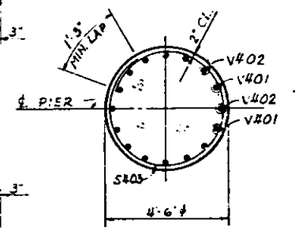
BAR	A	B
n401	2'-3"	10'-6"
n402	2'-3"	15'-6"
p406	3'-0"	33'-3"
p407	3'-0"	34'-0"



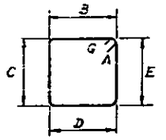
ELEVATION
SCALE: ¼" = 1'-0"



END ELEVATION
SCALE: ¼" = 1'-0"



SECTION C-C
SCALE: ⅜" = 1'-0"

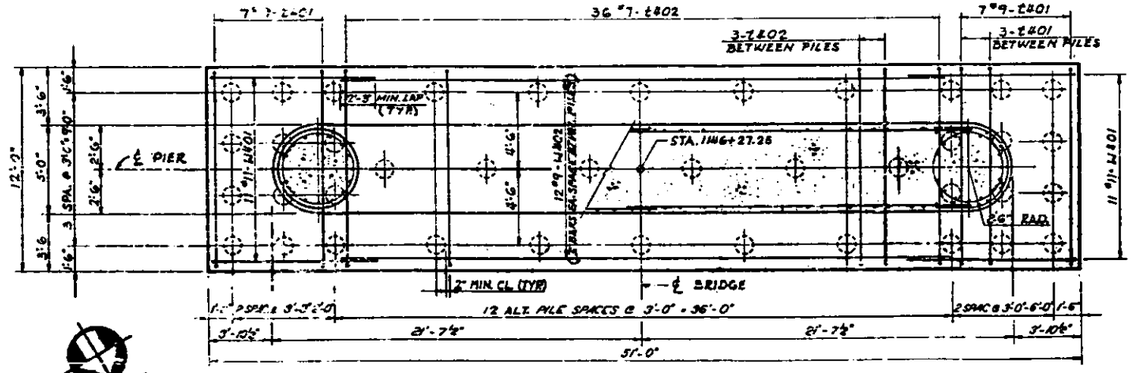


BAR	A	B	C	D	E	G
S401	5'-6"	2'-11"	5'-8"	2'-11"	5'-8"	5'-6"
S402	5'-6"	2'-8"	5'-8"	2'-8"	5'-8"	5'-6"

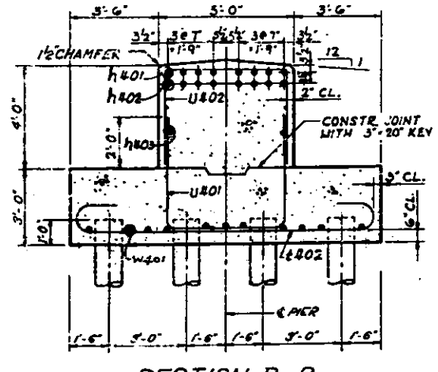
PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	55 FT.*
NO. REQUIRED	40 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 270.
** INCLUDES ONE TEST PILE.



FOOTING PLAN
SCALE: ¼" = 1'-0"



SECTION B-B
SCALE: ⅜" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

BILL OF MATERIAL

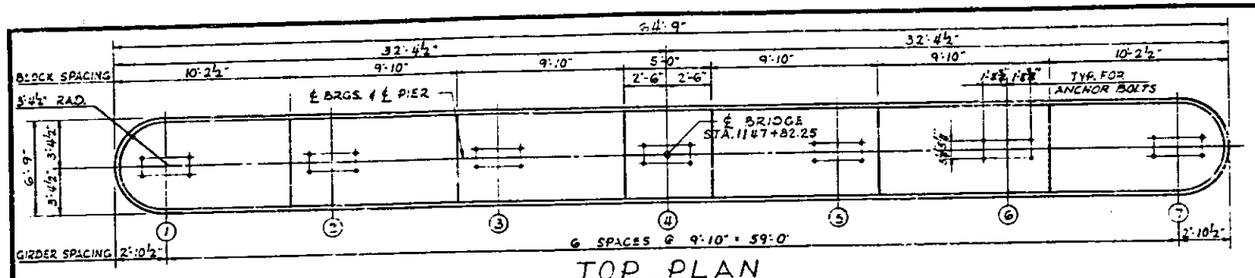
BAR	NO	SIZE	LENGTH	SHAPE
h401	8	#10	38'-3"	—
h402	8	#10	32'-0"	—
h403	12	#5	20'-0"	—
h404	4	#5	29'-0"	—
h405	12	#5	31'-0"	—
h406	6	#5	22'-3"	—
n401	16	#11	12'-9"	L
n402	16	#11	17'-9"	L
p401	8	#11	43'-0"	—
p402	8	#11	28'-0"	—
p403	4	#11	16'-0"	—
p404	8	#11	11'-0"	—
p405	16	#11	16'-9"	—
p406	8	#11	36'-3"	L
p407	8	#11	37'-0"	L
p408	12	#6	10'-3"	✓
S401	48	#5	16'-1"	S
S402	12	#5	21'-7"	S
S403	58	#5	16'-6"	O
t401	12	#9	12'-0"	⊃
t402	36	#7	13'-2"	⊃
U401	38	#5	13'-9"	L
U402	38	#5	12'-8"	L
U403	8	#5	10'-6"	L
U404	8	#5	10'-3"	L
U405	8	#5	7'-6"	L
U406	16	#5	10'-9"	L
U407	20	#5	12'-0"	L
U408	25	#5	7'-6"	L
U409	8	#5	15'-9"	L
V401	16	#11	29'-0"	—
V402	16	#11	28'-0"	—
V403	22	#5	3'-9"	—
W401	22	#11	11'-6"	C
W402	12	#9	36'-0"	—
CLASS X CONCRETE			CU.YDS.	1467
REINFORCEMENT BARS			LBS.	27,890
CONCRETE PILES (35TON)			LIN. FT.	2145
TEST PILE CONC. (35TON)			EACH	1
PILE TEST LOADING (35TON)			EACH	1
Structure Excavation			CU.YDS.	128

NOTE!
ALL BAR DIMENSIONS ARE OUT TO OUT.

PIER 4
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

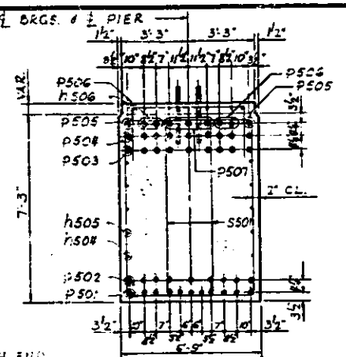
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1) &	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	11
ADD'L REG. NO. 2		ILLINOIS MISSOURI	PROJECT I-57-9( )0		
ADD'L REG. NO. 3					



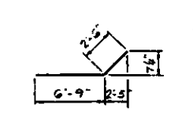
TOP PLAN

SCALE: 1/4" = 1'-0"

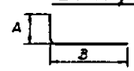


SECTION A-A

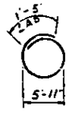
SCALE: 3/8" = 1'-0"



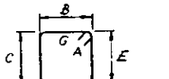
BAR p508



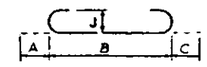
BAR	A	B
h501	2'-3"	10'-6"
h502	2'-3"	13'-5"
p505	8'-3"	30'-9"
p506	8'-3"	33'-6"
p507	8'-3"	36'-0"



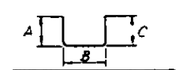
BAR S503



BAR	A	B	C	D	E	G
S501	5½"	8'-3½"	6'-11"	8'-3½"	6'-11"	5½"
S502	5½"	6'-5"	6'-11"	6'-3"	6'-11"	5½"



BAR	A	B	C	J
t 501	1'-7"	18'-6"	1'-7"	1'-2½"
W501	11"	26'-7"	—	8"

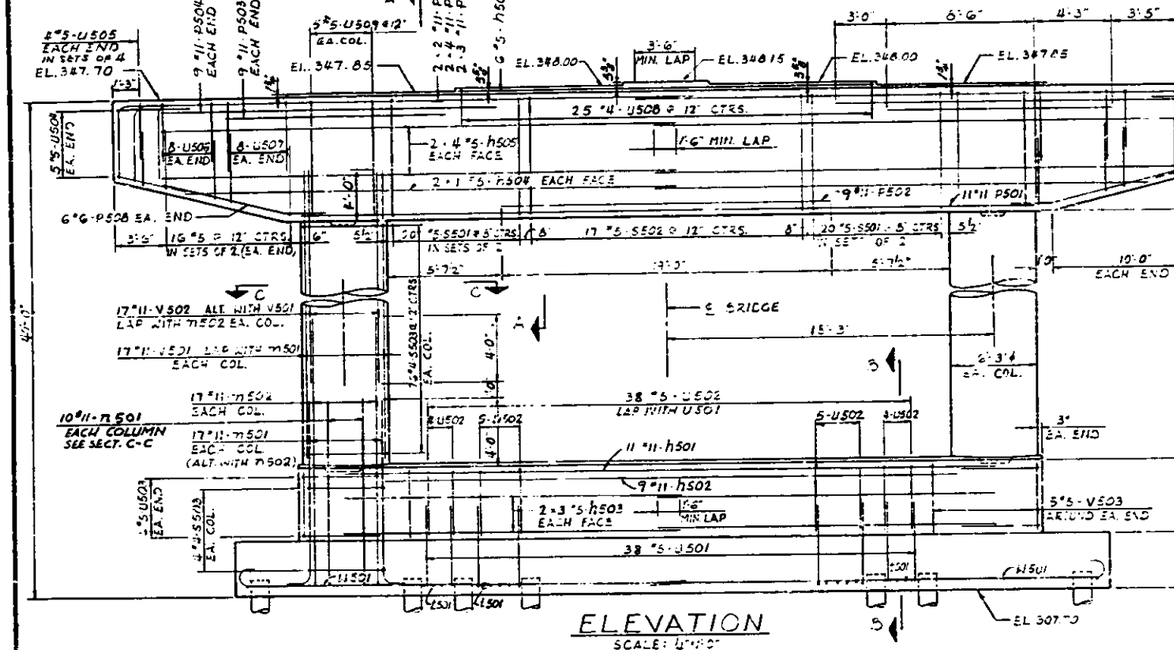


BAR	A	B	C
U501	5'-6½"	6'-5"	5'-6½"
U502	2'-10"	6'-5"	2'-10"
U505	3'-1½"	3'-6"	3'-1½"
U506	3'-6½"	6'-5"	3'-6½"
U507	8'-2"	6'-5"	8'-2"
U508	1'-7"	6'-1"	1'-7"
U509	6'-10"	6'-5"	6'-9"

BILL OF MATERIAL

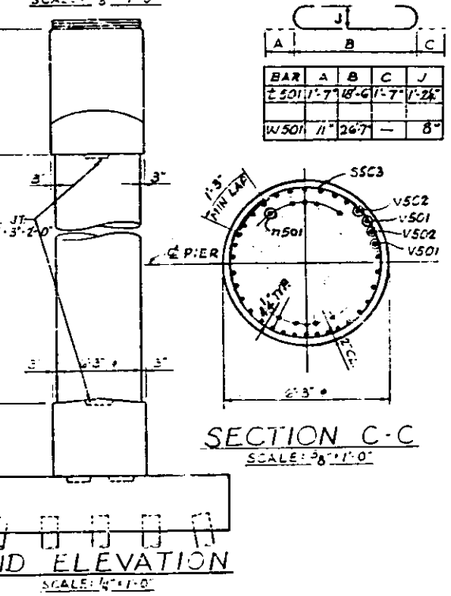
BAR	NO	SIZE	LENGTH	SHAPE
h501	11	#11	36'-6"	—
h502	9	#11	30'-6"	—
h503	12	#5	19'-0"	—
h504	4	#5	29'-0"	—
h505	15	#5	29'-9"	—
h506	6	#5	28'-3"	—
m501	54	#11	12'-9"	L
m502	34	#11	17'-9"	L
p501	11	#11	43'-0"	—
p502	9	#11	19'-3"	—
p503	13	#11	12'-9"	—
p504	18	#11	19'-3"	—
p505	4	#11	35'-0"	L
p506	8	#11	37'-9"	L
p507	6	#11	38'-3"	L
p508	12	#6	9'-3"	⟋
S501	80	#5	23'-4"	3
S502	17	#5	27'-7"	3
S503	60	#8	20'-0"	○
t 501	58	#11	21'-8"	C D
U501	38	#5	17'-6"	L J
U502	38	#5	12'-1"	L
U503	6	#5	13'-3"	C
U504	10	#5	13'-0"	C
U505	8	#5	9'-9"	L
U506	16	#5	13'-6"	L
U507	16	#5	16'-9"	L
U508	25	#4	9'-3"	L
U509	10	#5	20'-0"	C L C L
V501	34	#11	29'-9"	—
V502	34	#11	28'-6"	—
V503	30	#5	2'-9"	—
W501	32	#8	27'-6"	C
CLASS X CONCRETE			CU YDS	388.6
REINFORCEMENT BARS			LBS.	45,290
CONCRETE PILES (35 TON)			LIN. FT.	3100
TEST PILE CONC. (35 TON)			EACH	1
PILE TEST LOADING (35 TON)			EACH	1
Structure Excavation			CU YDS.	202

NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT.



ELEVATION

SCALE: 1/4" = 1'-0"

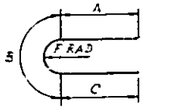


END ELEVATION

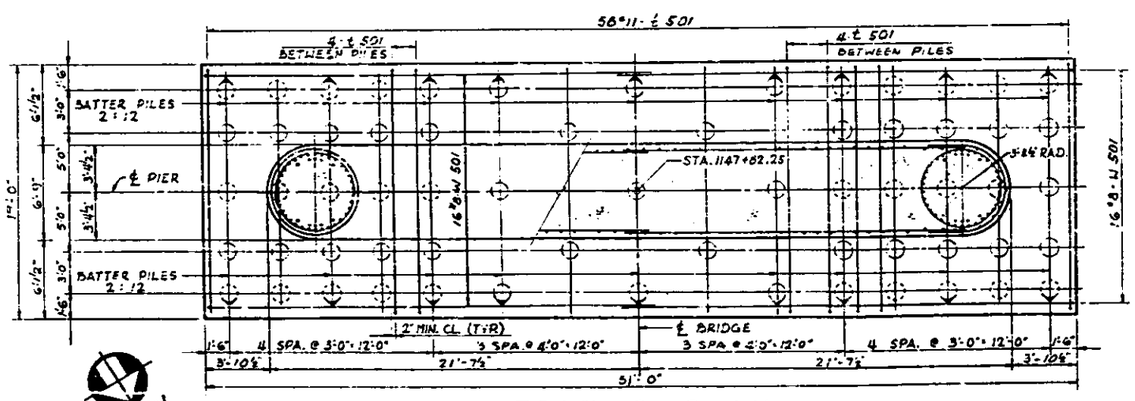
SCALE: 1/4" = 1'-0"

SECTION C-C

SCALE: 3/8" = 1'-0"

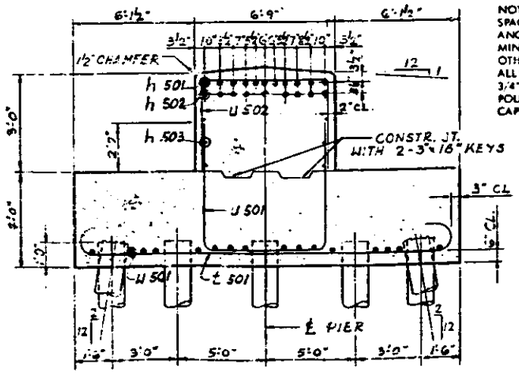


BAR	A	B	C	F
U503	1'-7"	10'-1"	1'-7"	3-2½
U504	1'-6½"	9'-11"	1'-6½"	3-1⅝



FOOTING PLAN

SCALE: 1/4" = 1'-0"



SECTION B-B

SCALE: 3/8" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

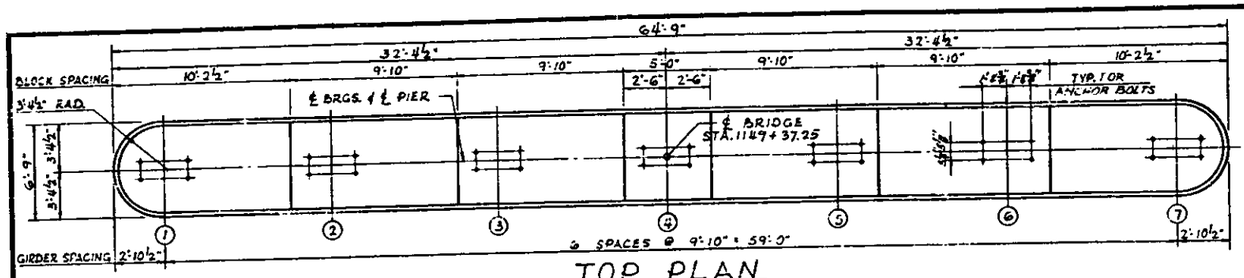
TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	50 FT.*
NO. REQUIRED	63 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 270
** INCLUDES ONE TEST PILE.

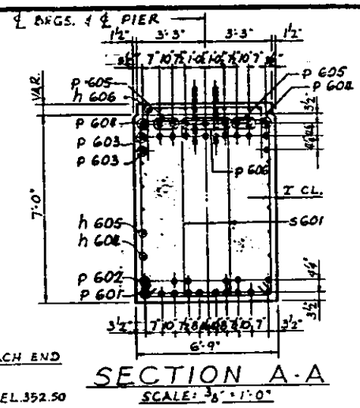
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

PIER 5
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1142 + 75.25

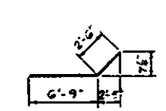
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	150-10-11 B	ALEXANDER (CROSS-SECTION)	ILLINOIS MISSOURI	54	12
D.P.R. RES. NO. - D.P.R. RES. NO. -		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



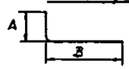
TOP PLAN
SCALE: 1/4" = 1'-0"



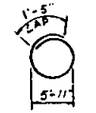
SECTION A-A
SCALE: 3/8" = 1'-0"



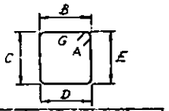
BAR P 601



BAR	A	B
h 601	2'-1½"	18'-1½"
h 602	2'-1½"	10'-1½"
h 603	2'-1½"	15'-1½"
P 602	8'-0"	30'-9"
P 605	8'-0"	33'-6"
P 606	4'-0"	38'-0"

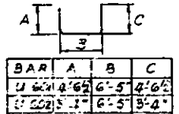


BAR S 602



BAR	A	B	C	D	E	S
S 601	5½"	6'-8"	6'-8"	2'-8½"	6'-8"	5½"

BAR	A	B	C	J
t 601	1'-5"	16'-6"	1'-5"	1'-10¾"
t 602	11"	16'-6"	11"	8"
W 601	1'-5"	16'-7"	—	1'-10¾"

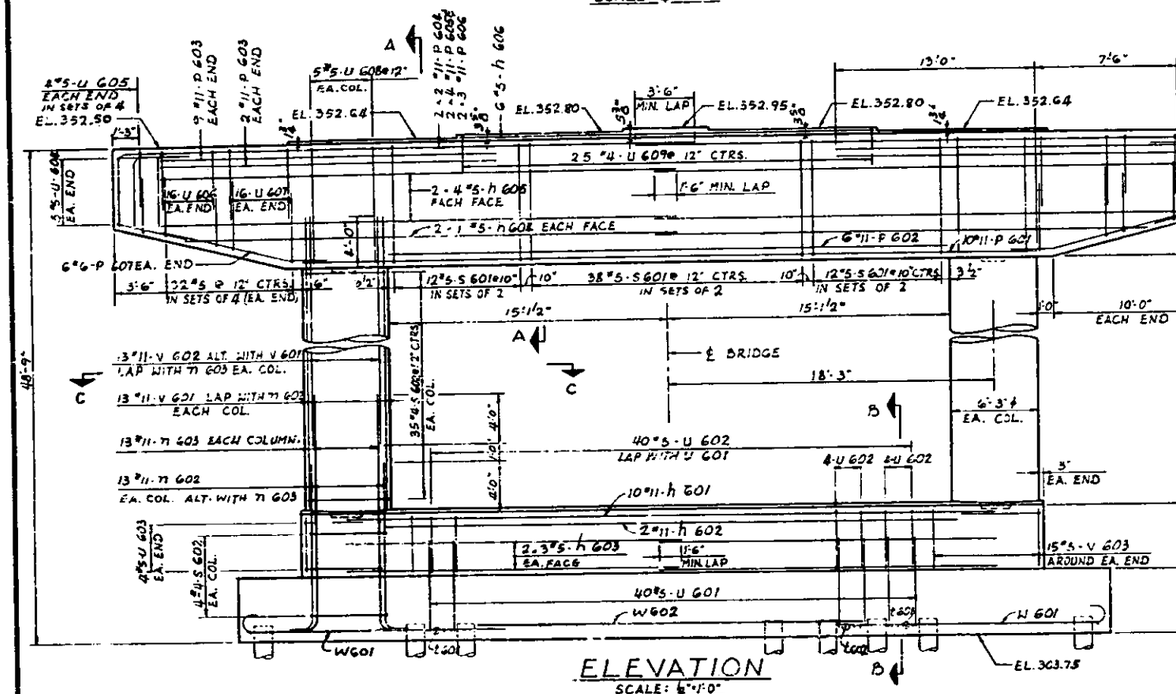


BAR	A	B	C
U 601	4'-6½"	6'-5"	4'-6½"
U 602	3'-1"	6'-5"	5'-4"
U 603	3'-0"	3'-0"	3'-0"
U 606	3'-7½"	8'-3½"	3'-7"
U 607	4'-1½"	4'-3½"	4'-1"
U 608	6'-6½"	6'-5"	6'-6½"
U 609	1'-7"	6'-1"	1'-7"

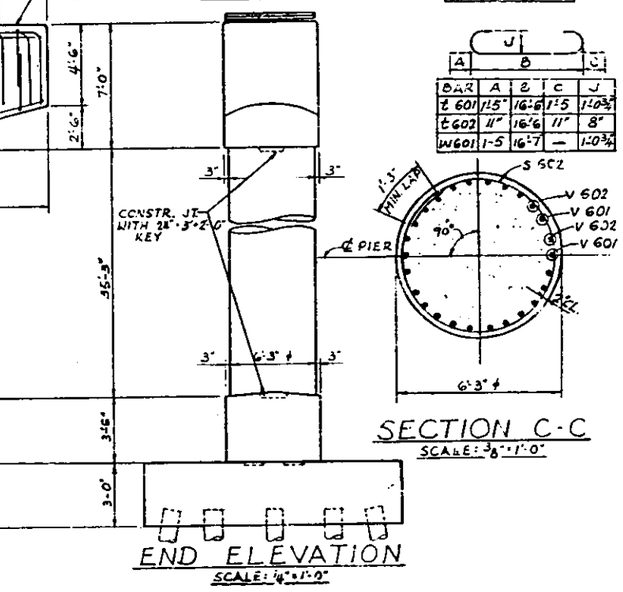
BILL OF MATERIAL

BAR	NO	SIZE	LENGTH	SHAPE
h 601	10	#11	36'-6"	—
h 602	2	#11	30'-6"	—
h 603	12	#8	19'-0"	—
h 604	4	#5	29'-0"	—
h 605	16	#5	29'-9"	—
h 606	6	#5	26'-3"	—
n 602	26	#11	12'-3"	L
n 603	26	#11	17'-3"	L
P 601	10	#11	43'-0"	—
P 602	6	#11	30'-3"	—
P 603	22	#11	20'-6"	—
P 604	4	#11	32'-9"	—
P 605	8	#11	37'-6"	L
P 606	6	#11	38'-0"	L
P 607	12	#6	9'-3"	⌒
S 601	62	#5	23'-0"	⊐
S 602	78	#4	20'-0"	○
t 601	34	#10	19'-4"	⊂
t 602	24	#8	18'-4"	⊂
U 601	40	#5	15'-6"	⊔
U 602	40	#5	13'-1"	⊔
U 603	8	#5	13'-3"	⊔
U 604	10	#5	13'-0"	⊔
U 605	8	#5	9'-0"	⊔
U 606	32	#5	11'-6"	⊔
U 607	32	#5	12'-6"	⊔
U 608	10	#5	19'-6"	⊔
U 609	25	#4	9'-3"	⊔
V 601	26	#11	39'-3"	—
V 602	26	#11	33'-3"	—
V 603	30	#5	3'-3"	—
W 601	36	#10	18'-0"	⊂
W 602	18	#8	72'-0"	—
CLASS X CONCRETE			CU.YDS.	320.5
REINFORCEMENT BARS			LBS.	40,020
CONCRETE PILES (35 TON)			LIN. FT.	2750
TEST PILE CONC. (35 TON)			EACH	1
PILE TEST LOADING (35 TON)			EACH	1
Structure Excavation			CU.YDS.	225

NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT

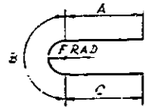


ELEVATION
SCALE: 1/4" = 1'-0"

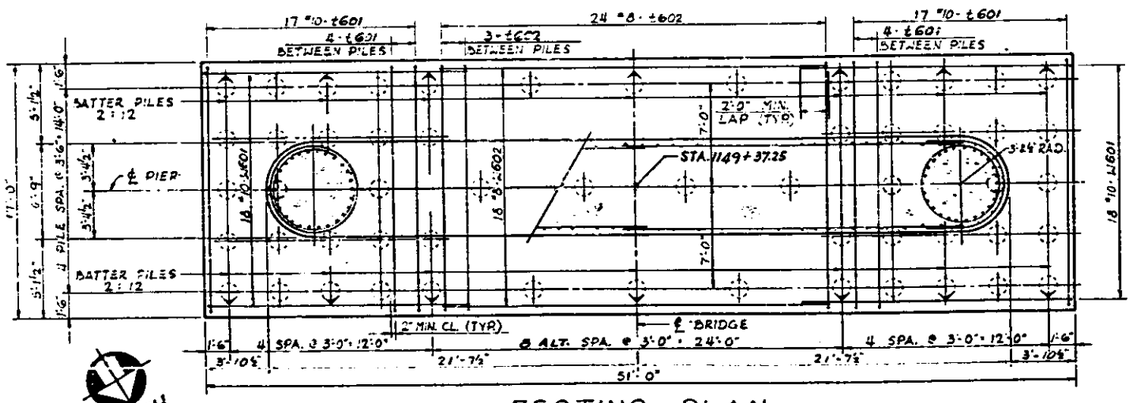


END ELEVATION
SCALE: 1/4" = 1'-0"

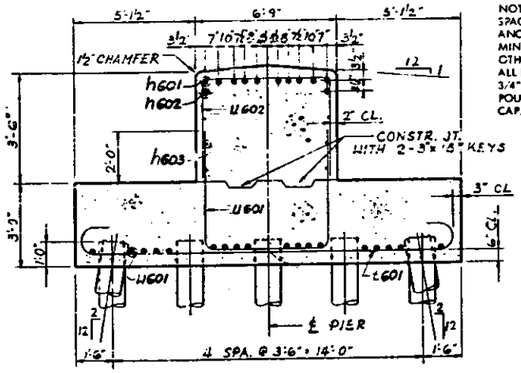
SECTION C-C
SCALE: 3/8" = 1'-0"



BAR	A	B	C	F
U 603	1'-7"	10'-1"	1'-7"	3'-2½"
U 604	1'-6"	9'-11"	1'-6"	3'-1½"



FOOTING PLAN
SCALE: 1/4" = 1'-0"



SECTION B-B
SCALE: 3/8" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	50 FT.#
NO. REQUIRED	64 ##

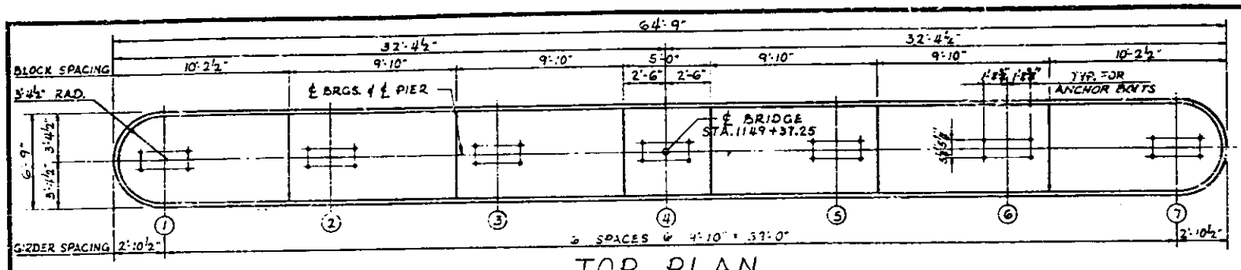
TIP OF PILE NOT HIGHER THAN ELEVATION 365
INCLUDES ONE TEST PILE

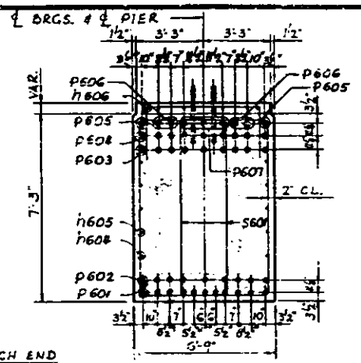
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 6
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

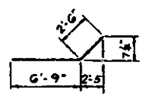
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	8 (102-10-1)	ALEXANDER & MISSISSIPPI COUNTIES, ILLINOIS & MISSOURI	54	12 A
STATE SEC. NO.		F.A. ROUTE NO.	PROJECT I-57-9(10)	

TOP PLAN
SCALE: 1/4" = 1'-0"

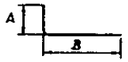




SECTION A-A
SCALE: 3/8" = 1'-0"

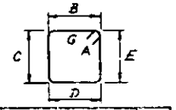


BAR p608

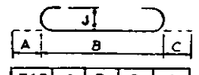


BAR	A	B
h601	2'-3"	10'-6"
h602	2'-3"	13'-6"
P605	8'-3"	30'-9"
P606	8'-3"	33'-6"
P607	8'-3"	36'-0"

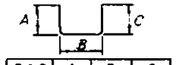
BAR S603



BAR	A	B	C	D	E	G
S601	5½	8'-3½	6'-11	8'-3½	6'-11	5½
S602	5½	6'-5	6'-11	6'-5	6'-11	5½



BAR	A	B	C	J
E601	1'-7"	18'-6"	1'-7"	1'-2½"
W601	1'-1"	26'-7"	—	8"



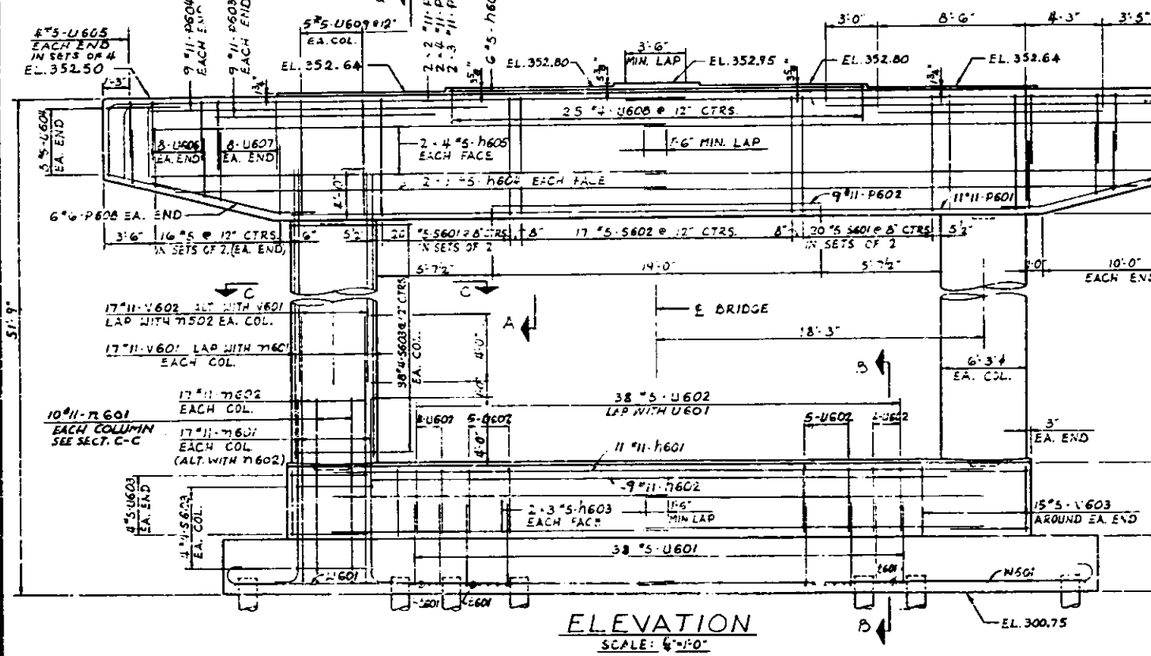
BAR	A	B	C
U601	5'-6½	6'-5	5'-6½
U602	2'-10"	6'-5	2'-10"
U605	3'-1½	3'-6"	3'-1½
U606	3'-6½	6'-5	3'-6½
U607	1'-2"	6'-5	1'-2"
U608	1'-7"	6'-1"	1'-7"
U609	6'-10"	6'-5"	6'-9"

BILL OF MATERIAL

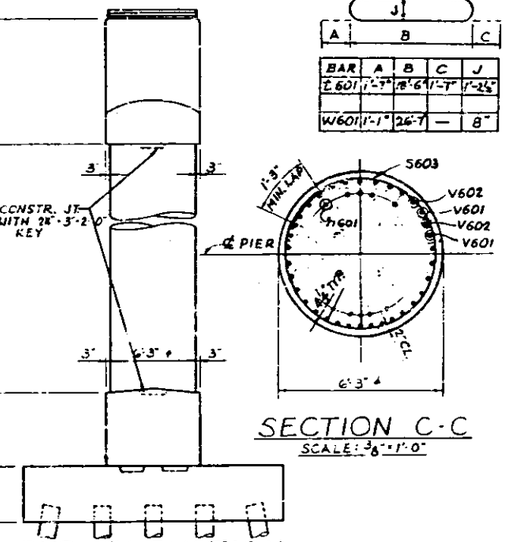
BAR	NO	SIZE	LENGTH	SHAPE
h601	11	#11	36'-6"	
h602	9	#11	30'-6"	
h603	12	#5	19'-0"	
h604	4	#5	29'-0"	
h605	16	#5	29'-9"	
h606	6	#5	28'-3"	
n601	52	#11	12'-9"	
n602	34	#11	17'-9"	
P601	11	#11	83'-0"	
P602	9	#11	19'-9"	
P603	18	#11	12'-9"	
P608	18	#11	19'-3"	
P605	4	#11	35'-0"	
P606	8	#11	37'-9"	
P607	6	#11	38'-3"	
P608	12	#6	9'-3"	
S601	40	#5	23'-4"	
S602	17	#5	27'-7"	
S603	8A	#8	20'-0"	
E601	58	#11	21'6"	
U601	38	#5	17'-2"	
U603	38	#5	12'-7"	
U603	8	#5	13'-3"	
U604	10	#5	13'-0"	
U605	8	#5	9'-9"	
U606	16	#5	13'-6"	
U607	16	#5	18'-9"	
U608	25	#4	9'-3"	
U609	10	#5	20'-0"	
V601	38	#11	41'-6"	
V502	38	#11	36'-0"	
V503	30	#5	2'-7"	
W601	32	#8	27'-6"	
CLASS X CONCRETE		CU.YDS.	371.4	
REINFORCEMENT BARS		LBS.	69,300	
CONCRETE PILES (35 TON)		LIN. FT.	3100	
TEST PILE CONC. (35TON)		EACH	1	
PILE TEST LOADING (35 TON)		EACH	1	
STRUCTURE EXCAVATION		CU.YDS.	387	

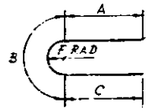
NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT.

ELEVATION
SCALE: 1/4" = 1'-0"



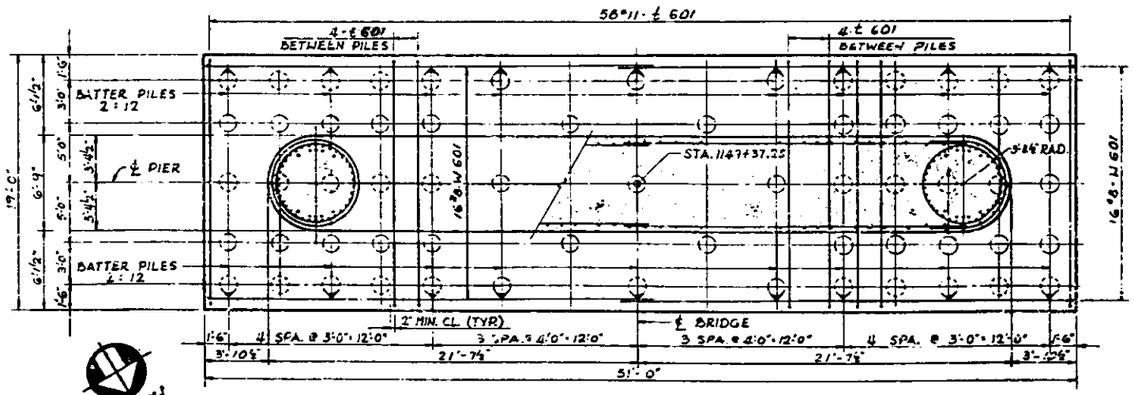
SECTION C-C
SCALE: 3/8" = 1'-0"



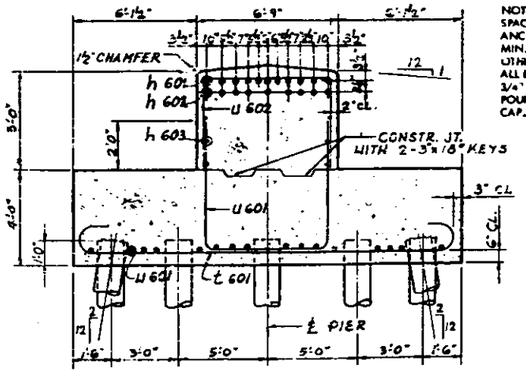


BAR	A	B	C	F
U603	1'-7"	10'-1"	1'-7"	3'-2½
U608	1'-6½	9'-11"	1'-6½	3'-1½

END ELEVATION
SCALE: 1/4" = 1'-0"



FOOTING PLAN
SCALE: 1/4" = 1'-0"



SECTION B-B
SCALE: 3/8" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD ¾" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	50 FT.*
NO. REQUIRED	63 **

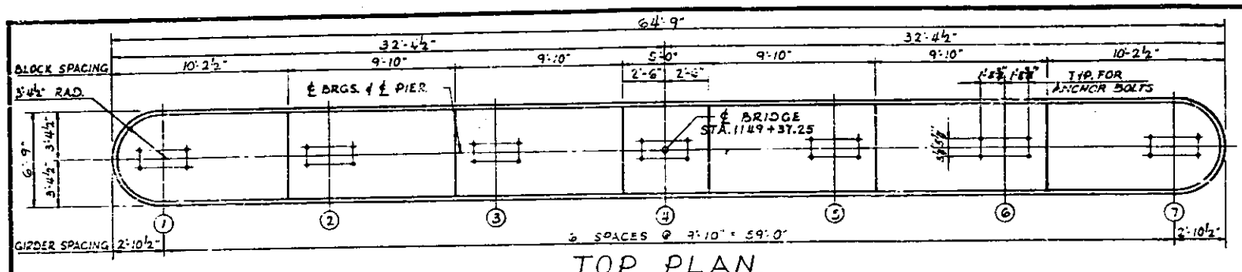
* TIP OF PILE NOT HIGHER THAN ELEVATION 265
** INCLUDES ONE TEST PILE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

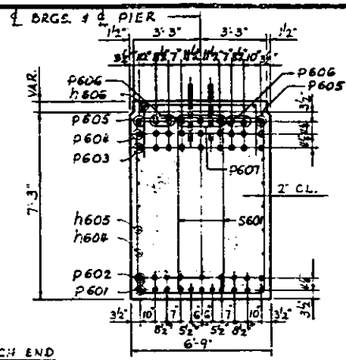
REVISED JAN. 21, 1972

PIER 6
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.76 TO STA. 1182+75.25

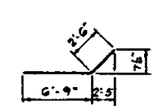
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) B	ALEXANDER & MISSISSIPPI	54	12.5
S.P.R. NOS. NO. 1 & S.P.R. NOS. NO. 2		ILLINOIS & MISSOURI	PROJECT I-57-9(10)	



TOP PLAN
SCALE: 4" = 1'-0"



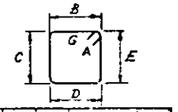
SECTION A-A
SCALE: 3/8" = 1'-0"



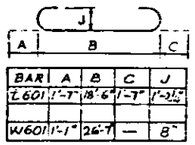
BAR p608

BAR	A	B
h601	2'-3"	10'-6"
h602	2'-3"	13'-6"
p605	8"	30'-9
p606	8'-3	33'-6"
p607	8'-3	36'-0"

BAR S603



BAR	A	B	C	D	E	G
S601	5½	8'-3½	6'-11"	8'-3½	6'-11"	5½
S602	5½	6'-5"	5'-11"	6'-5"	6'-11"	5½

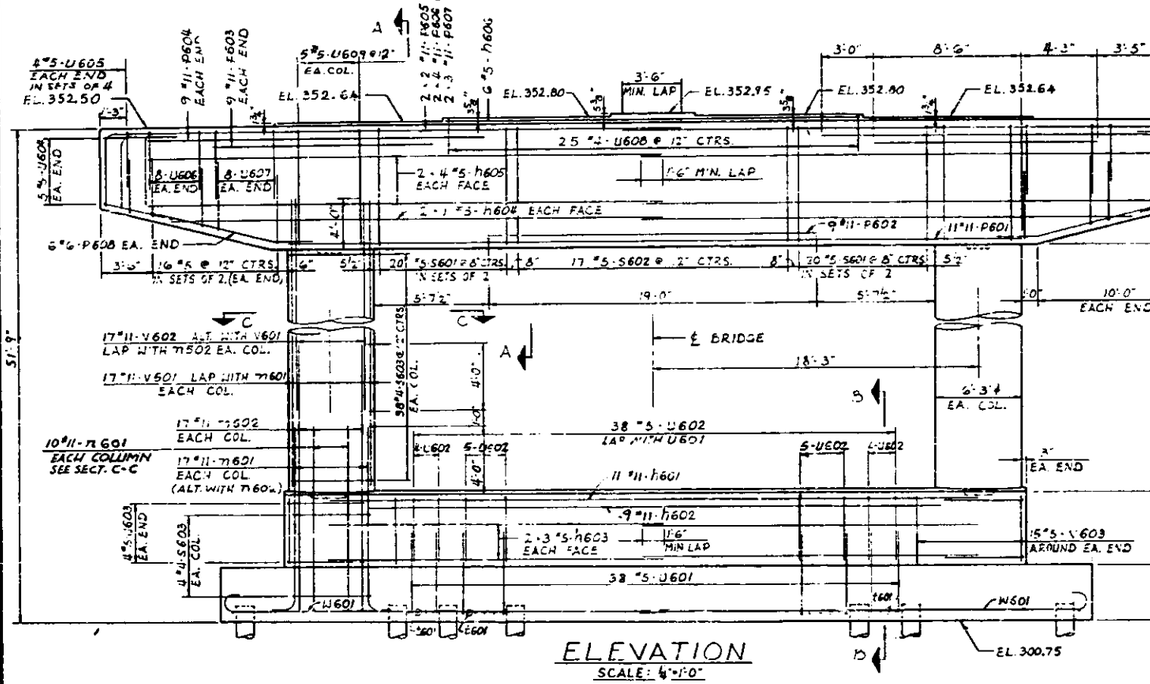


BAR	A	B	C	J
t601	1'-7"	18'-6"	1'-7"	1'-3½"
W601	1'-1"	26'-7"	—	8"

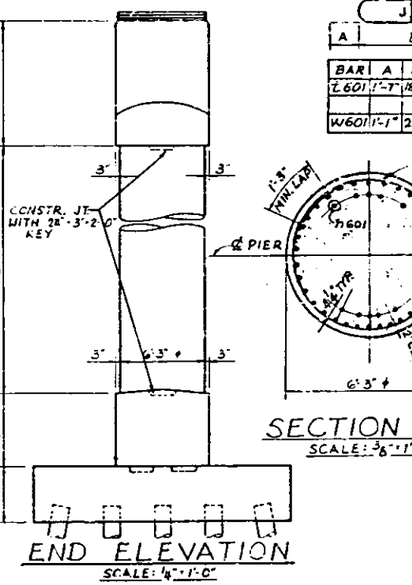
BAR	A	B	C
U601	5'-6½	6'-5"	5'-6½
U602	2'-10"	6'-5"	2'-10"
U605	3'-1½	3'-6"	3'-1½
U606	3'-6½	6'-5"	3'-6½
U607	4'-2"	6'-5"	4'-2"
U608	1'-7"	6'-1"	1'-7"
U609	6'-10"	6'-5"	6'-9"

BILL OF MATERIAL

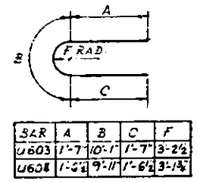
BAR	NO	SIZE	LENGTH	SHAPE
h601	11	#11	36'-6	—
h602	9	#11	30'-6"	—
h603	12	#5	19'-0"	—
h604	4	#5	29'-0"	—
h605	16	#5	29'-9"	—
h606	6	#5	28'-3"	—
P601	54	#11	12'-9"	L
P604	34	#11	17'-9"	L
p601	11	#11	43'-0"	—
p602	9	#11	19'-0"	—
p603	18	#11	12'-9"	—
p604	18	#11	19'-3"	—
p605	4	#11	35'-0"	L
p606	8	#11	37'-9"	L
p607	6	#11	38'-3"	L
P608	12	#6	9'-3"	⌒
S601	40	#5	23'-4"	⌐
S602	17	#5	27'-7"	⌐
S603	84	#4	20'-0"	O
t601	58	#11	21'-8"	⊂
U601	38	#5	17'-6"	⊏⊐
U602	38	#5	12'-1"	⊏⊐
U603	8	#5	13'-3"	⊏⊐
U604	10	#5	13'-0"	⊏⊐
U605	8	#5	9'-9"	⊏⊐
U606	16	#5	13'-6"	⊏⊐
U607	16	#5	14'-9"	⊏⊐
U608	25	#4	9'-3"	⊏⊐
U609	10	#5	20'-0"	⊏⊐
V601	38	#11	41'-6"	—
V602	34	#11	36'-6"	—
V603	30	#5	2'-9"	—
W601	32	#6	27'-6"	C
CLASS X CONCRETE			CU.YDS.	371.4
REINFORCEMENT BARS			LBS.	49,200
CONCRETE PILES (35 TON)			LIN. FT.	3100
TESTPILE CONC. (35 TON)			EACH	1
PILE TEST LOADING (35 TON)			EACH	1
STRUCTURE EXCAVATION			CU.YDS.	387
Dumped Riprap			CU.YDS.	SEE NOTE



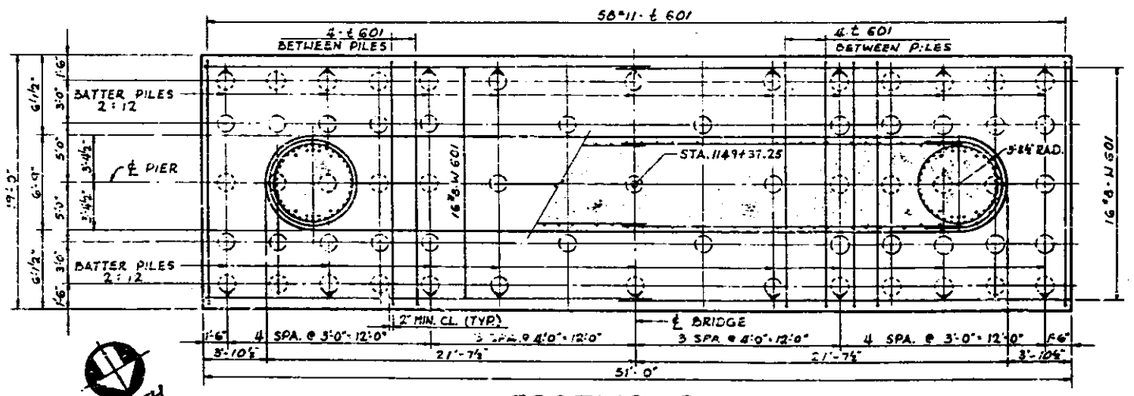
ELEVATION
SCALE: ¼" = 1'-0"



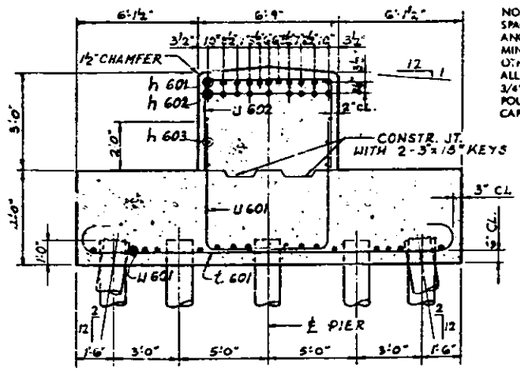
SECTION C-C
SCALE: 3/8" = 1'-0"



BAR	A	B	C	F
U603	1'-7"	10'-1"	1'-7"	3-2½
U608	1'-6½	9'-11	1'-6½	3-1¾



FOOTING PLAN
SCALE: ¼" = 1'-0"



SECTION D-D
SCALE: 3/8" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

(AS REVISED 11-1-72)

PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	50 FT.*
NO. REQUIRED	63 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 265
** INCLUDES ONE TEST PILE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

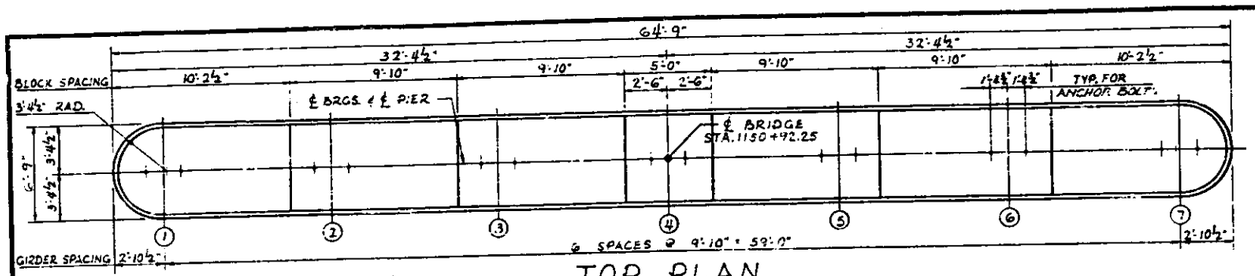
Notes: ALL BAR DIMENSIONS ARE OUT TO OUT
See Special Provisions for Dumped Riprap at Pier

REVISED JAN. 21, 1972

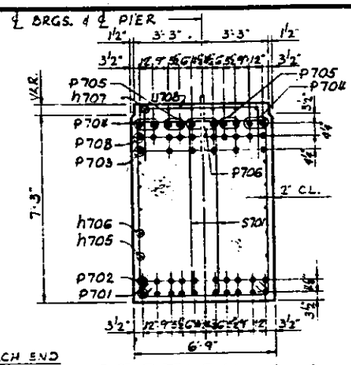
PIER 6
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

Added Dumped Riprap 2,687 Cu.Yds. 11-1-72 S.F.M.

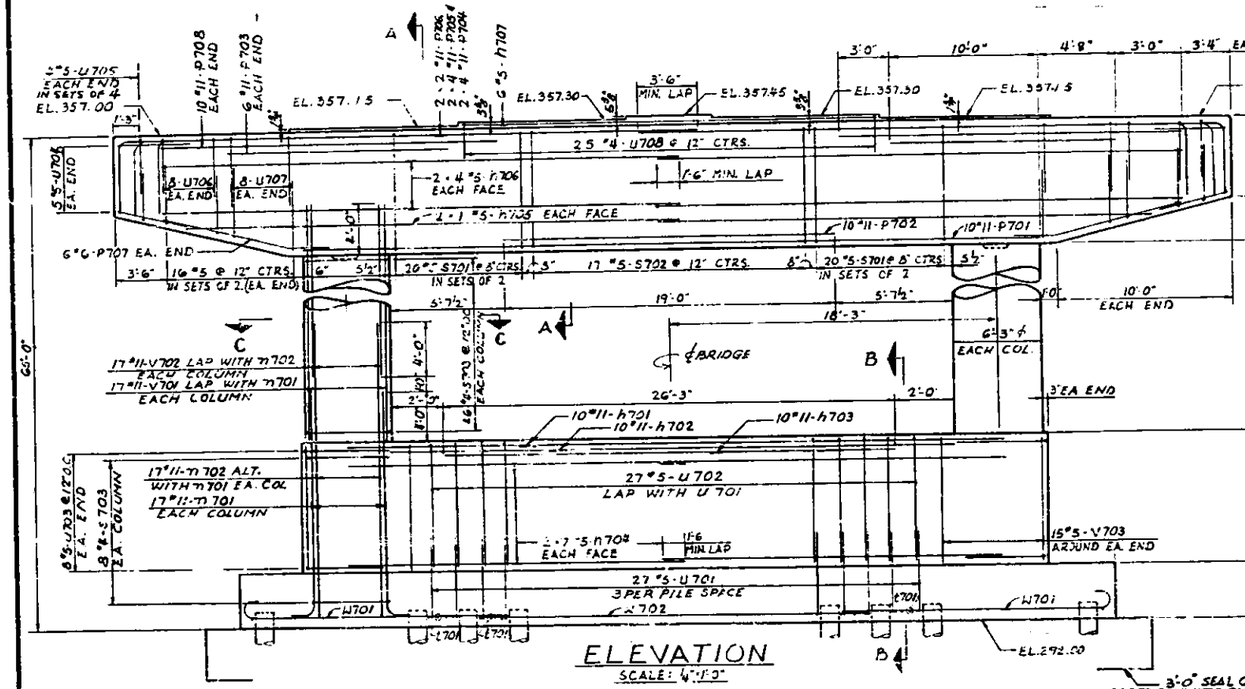
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-1B-1)B	ALEXANDER ILLINOIS MISS. COUNTY MISSOURI	54	13
APP. REF. NO. OF APP. REF. NO. OF		ILLINOIS MISSOURI	PROJECT I-57-9(10)	



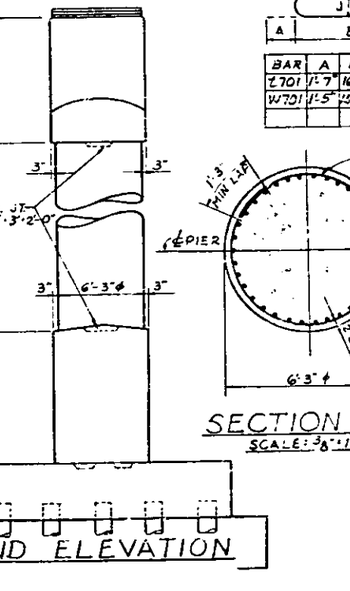
TOP PLAN
SCALE: 4" = 1'-0"



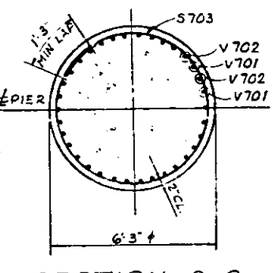
SECTION A-A
SCALE: ⅜" = 1'-0"



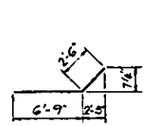
ELEVATION
SCALE: 4" = 1'-0"



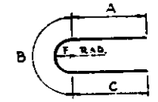
END ELEVATION



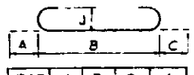
SECTION C-C
SCALE: ⅜" = 1'-0"



BAR p707

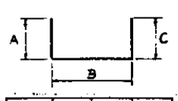


BAR	A	B	C	F
U703	1'-7"	10'-1"	1'-7"	3'-2½"
U708	1'-7"	9'-10½"	1'-6½"	3'-1½"



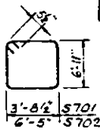
BAR	A	B	C	J
L701	1'-7"	16'-6"	1'-7"	1'-2½
W701	1'-5"	15'-7"	—	1'-0½

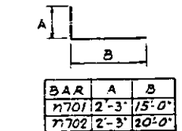
BAR S703



BAR	A	B	C
U701	4'-3½	2'-5"	4'-3½
U702	8'-7"	6'-5"	8'-7"
U705	3'-2"	3'-8"	3'-2"
U706	3'-6"	6'-5"	3'-8"
U707	4'-2"	6'-5"	4'-2"
U708	1'-7"	6'-1"	1'-7"

BARS S701 & S702





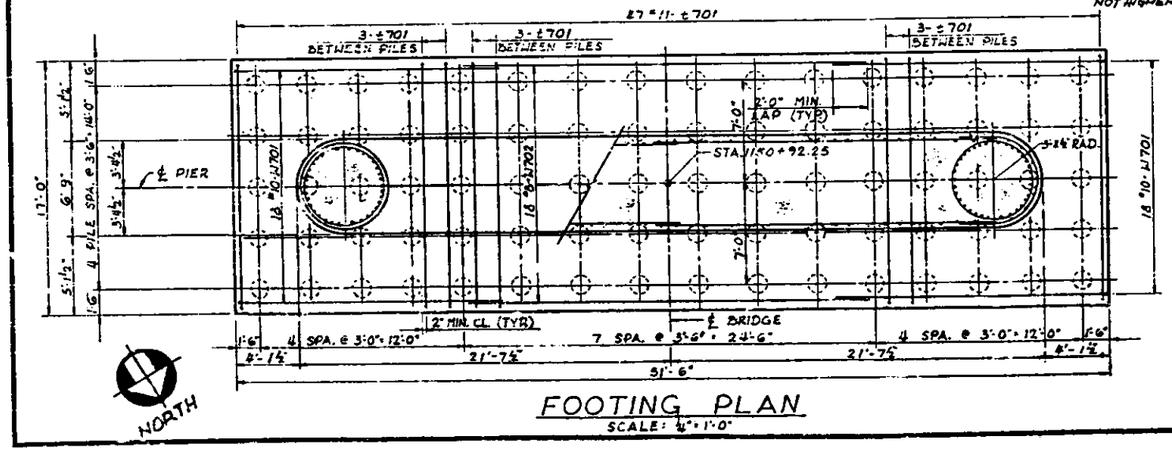
BAR	A	B
h701	2'-3"	15'-0"
h702	2'-3"	20'-0"
P704	4'-3"	33-3
P705	4'-3"	33-9
P706	4'-3"	34'-0"

BILL OF MATERIAL

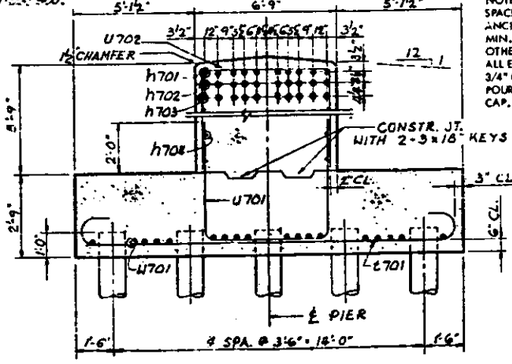
BAR	NO	SIZE	LENGTH	SHAPE
h701	10	#11	36'-6"	—
h702	10	#11	30'-3"	—
h703	10	#11	26'-3"	—
h704	28	#5	19'-0"	—
h705	4	#5	28'-3"	—
h706	16	#5	29'-9"	—
h707	6	#5	24'-3"	—
h701	34	#11	17'-3"	⌐
h702	34	#11	22'-3"	⌐
P701	10	#11	43'-0"	—
P702	10	#11	19'-3"	—
P703	12	#11	14'-9"	—
P704	8	#11	37'-6"	⌐
P705	8	#11	36'-0"	—
P706	4	#11	36'-3"	⌐
P707	12	#6	9'-3"	—
P708	20	#11	20'-9"	—
S701	40	#5	22'-2"	⌐
S702	17	#5	27'-7"	⌐
S703	108	#4	20'-0"	⌐
L701	47	#11	19'-8"	⊂
U701	27	#5	15'-0"	⌐
U702	27	#5	23'-7"	⌐
U703	16	#5	13'-3"	⌐
U708	10	#5	13'-0"	⌐
U705	8	#5	10'-0"	⌐
U706	16	#5	13'-9"	⌐
U707	16	#5	14'-9"	⌐
U708	25	#4	9'-3"	⌐
V701	34	#11	50'-3"	—
V702	34	#11	85'-3"	—
V703	30	#5	8'-6"	—
W701	36	#10	17'-0"	C
W702	18	#8	24'-6"	—

CLASS X CONCRETE	CU.YDS.	396.4
REINFORCEMENT BARS	LBS.	55,300
CONCRETE PILES (35TON)	LIN. FT	3555
TEST PILE CONC. (35TON)	EACH	1
PILE TEST LOADING (250N)	EACH	1
SEAL COAT CONCRETE	CU.YDS	122.6
COFFERDAM EXCAVATION	CU.YDS	618

NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT.



FOOTING PLAN
SCALE: ⅛" = 1'-0"



SECTION B-B
SCALE: ⅜" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

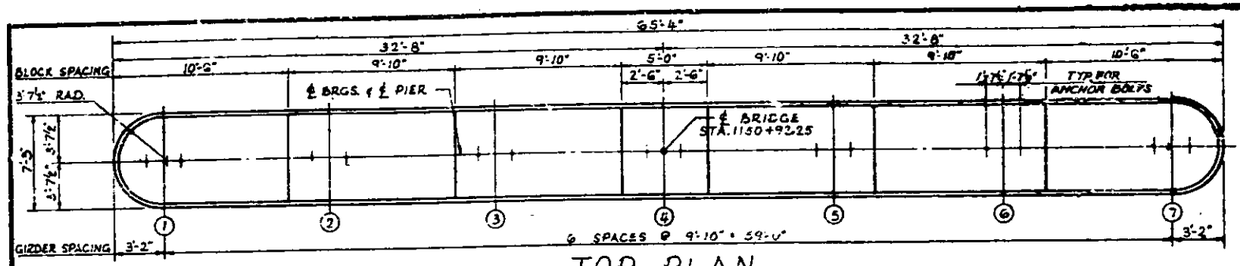
PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	45 FT.*
NO. REQUIRED	80 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 255.
** INCLUDES ONE TEST PILE.

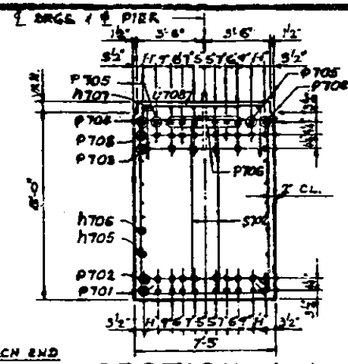
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
104 WABASH AVE. CHICAGO, ILLINOIS

PIER 7
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25



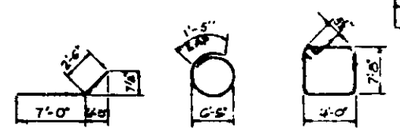
TOP PLAN

SCALE: 4" = 1'-0"



SECTION A-A

SCALE: ⅜" = 1'-0"

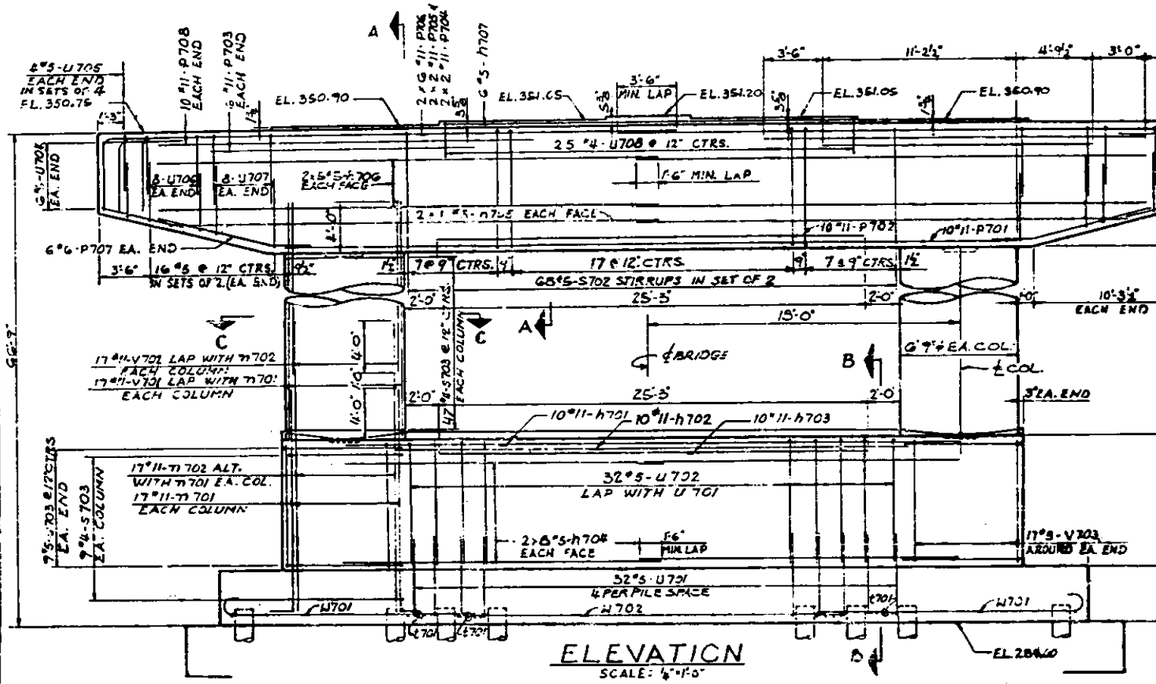


BAR	A	B	C	F
U703	1'-7"	10'-4½"	1'-7"	3'-5½"
U704	1'-2"	10'-8"	1'-2"	3'-4½"

BAR	A	B	C
U701	6'-9½"	6'-9"	4'-8½"
U702	5'-0"	6'-8"	8'-0"
U705	3'-6"	4'-0"	5'-6"
U706	11'-2"	6'-1"	4'-2"
U707	4'-8"	6'-11"	4'-9"
U708	1'-6"	6'-6"	1'-6"

BAR	A	B	C	J
E701	1'-9½"	1'-6"	1'-9½"	1'-5"
W701	1'-7½"	10'-4½"	—	1'-5½"

BAR	A	B
M701	2'-3"	15'-6"
M702	2'-3"	20'-6"
P704	5'-0"	30'-9"
P705	5'-0"	33'-3"
P706	5'-0"	34'-3"



ELEVATION

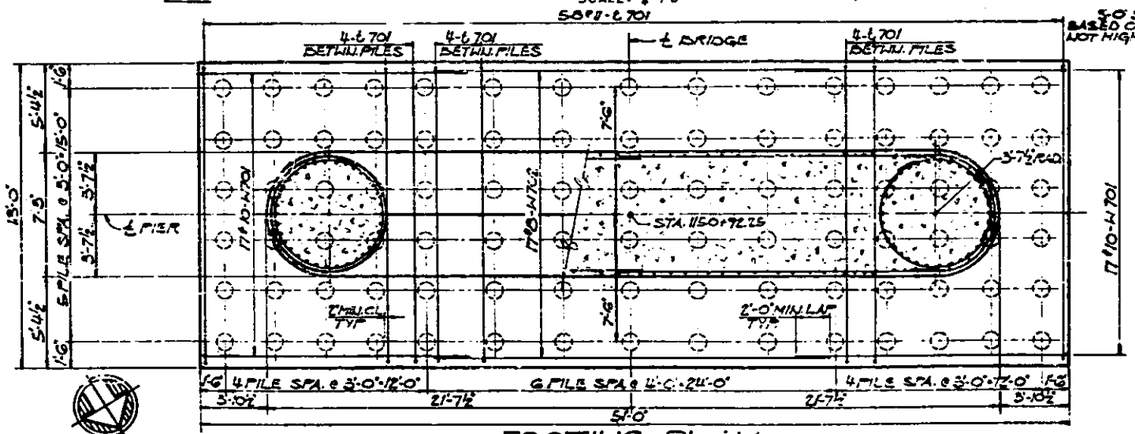
SCALE: ⅛" = 1'-0"

END ELEVATION

SCALE: ⅜" = 1'-0"

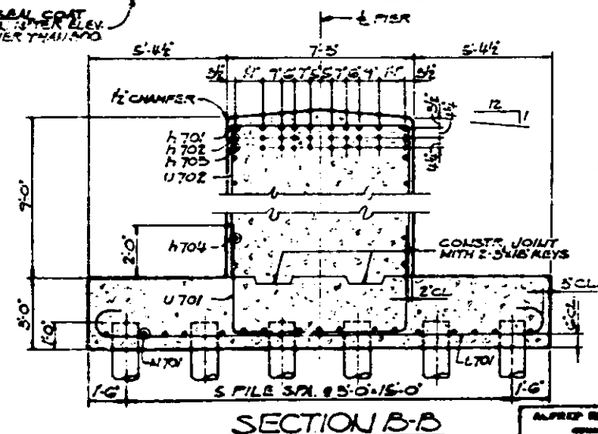
SECTION C-C

SCALE: ⅜" = 1'-0"



FOOTING PLAN

SCALE: ⅛" = 1'-0"



SECTION B-B

SCALE: ⅜" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD ¾" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	40 FT *
NO. REQUIRED	90 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 255
** INCLUDES ONE TEST PILE.

P.A.I. STA.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	B	ALEXANDER MISSISSIPPI	51	13
F.A.P. RTE. NO.		ILLINOIS MISSOURI	PROJECT I-57-(8)10	

BILL OF MATERIAL

BAR	NO	SIZE	LENGTH	SHAPE
h701	10	#11	36'-0"	—
h702	10	#11	29'-3"	—
h703	10	#11	26'-3"	—
h704	32	#5	18'-9"	—
h705	4	#5	28'-3"	—
h706	20	#5	30'-0"	—
h707	6	#5	22'-3"	—
M701	34	#11	17'-9"	L
M702	34	#11	22'-9"	L
P701	10	#11	32'-9"	—
P702	10	#11	25'-3"	—
P703	12	#11	16'-0"	—
P704	4	#11	35'-9"	L
P705	4	#11	38'-3"	L
P706	12	#11	39'-3"	L
P707	12	#6	9'-6"	—
P708	20	#11	23'-6"	—
S702	68	#5	24'-3"	A B C
S703	112	#4	21'-6"	C
E701	58	#11	21'-1"	C
U701	52	#5	16'-0"	L
U702	52	#5	24'-7"	L
U703	18	#5	14'-0"	L
U704	12	#5	13'-9"	L
U705	8	#5	11'-0"	L
U706	16	#5	15'-3"	L
U707	16	#5	16'-3"	L
U708	25	#6	9'-6"	L
V701	34	#11	50'-9"	—
V702	34	#11	85'-9"	—
V703	34	#5	8'-9"	—
W701	34	#10	18'-0"	C
W702	17	#8	22'-0"	—

CLASS X CONCRETE	CU.YDS.	459.3
REINFORCEMENT BARS	LBS.	58,680
CONCRETE PILES (35TON)	LIN. FT.	3,360
TEST PILE CONC. (35TON)	EACH	1
PILE TEST LOADING (35TON)	EACH	1
SEAL COAT CONCRETE	CU.YDS.	126.4
COFFERDAM EXCAVATION	CU.YDS.	500
DUMPED RIPRAP	CU.YDS.	2,760

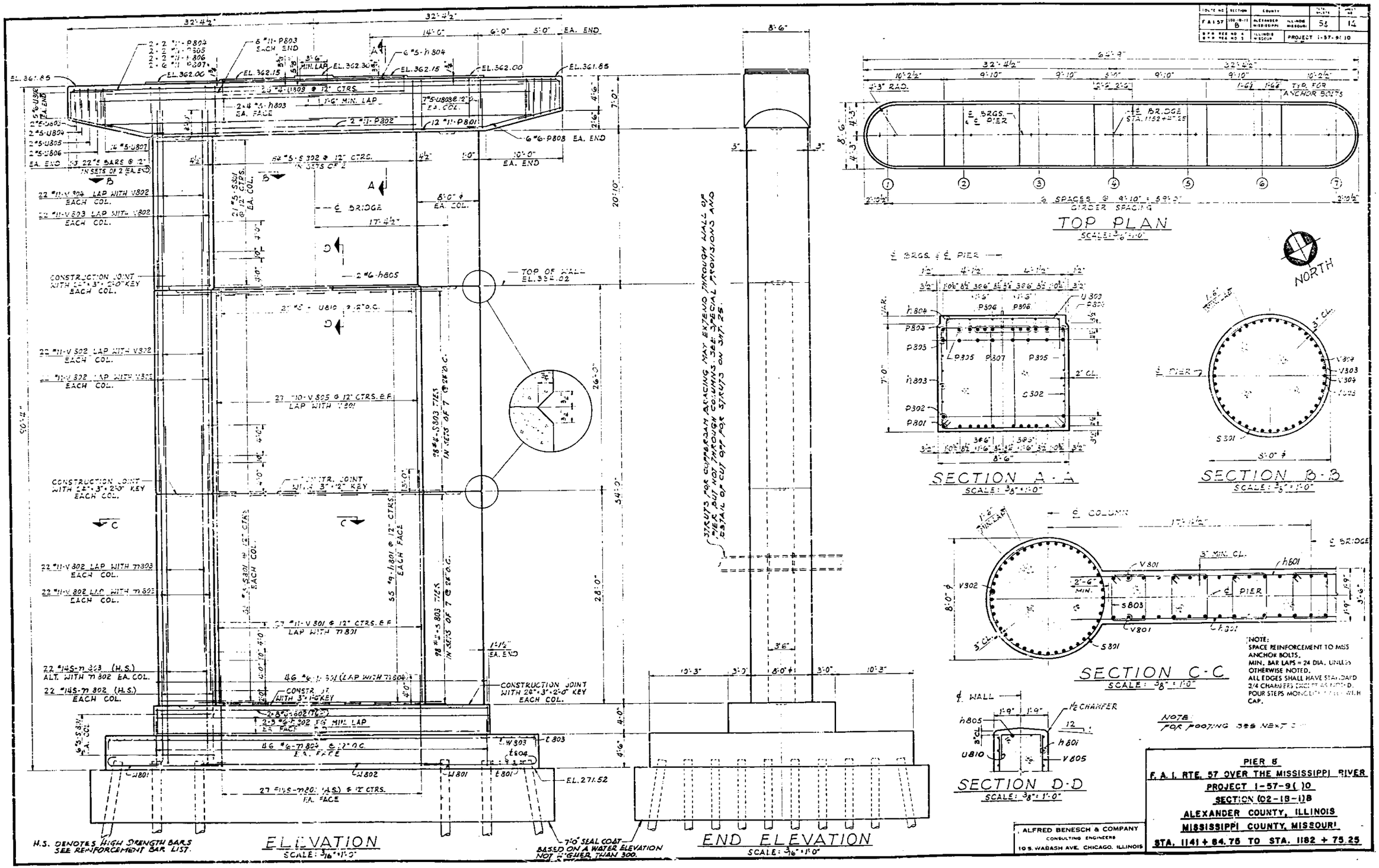
NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT

REVISED MAR. 27, 1972

PIER 7
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-(8)10
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 64.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WARREN AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	55	14
S.P.R. RTE. NO. 4 S.P.R. RTE. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-9(10)		



TOP PLAN
SCALE: 3/16" = 1'-0"

SECTION A-A
SCALE: 3/8" = 1'-0"

SECTION B-B
SCALE: 3/8" = 1'-0"

SECTION C-C
SCALE: 3/8" = 1'-0"

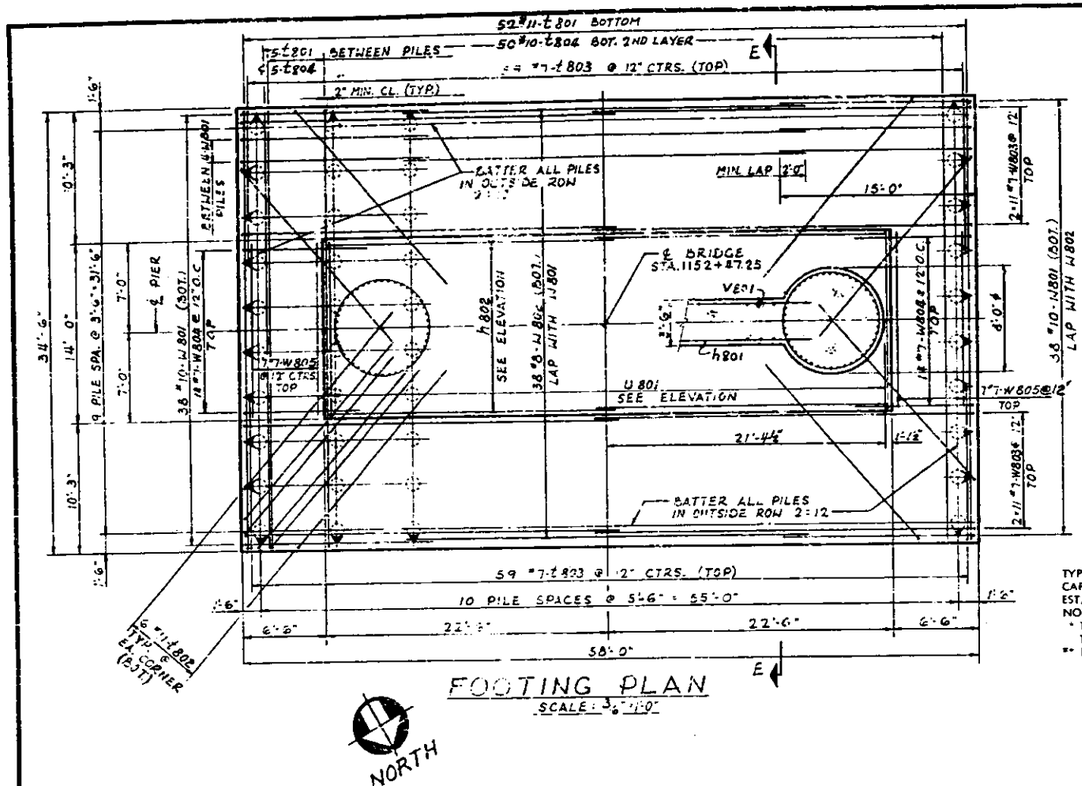
NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4 CHAMFERS UNLESS AS NOTED.
POUR STEPS MONOLITHIC WITH CAP.

SECTION D-D
SCALE: 3/8" = 1'-0"

NOTE
FOR FOOTING SEE NEXT

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 5
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25



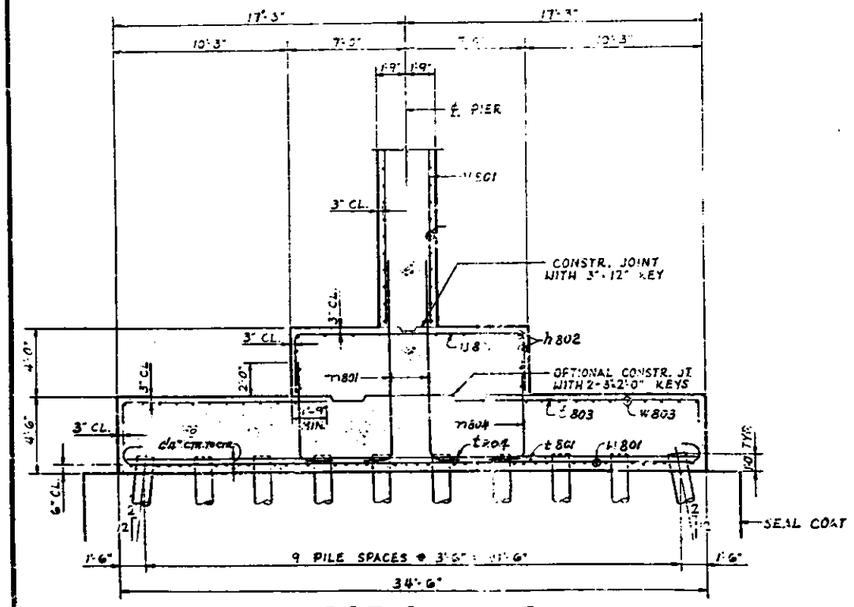
FOOTING PLAN

SCALE: 3/16" = 1'-0"

PILE DATA

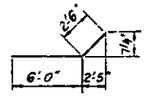
TYPE	CONCRETE
CAPACITY	50 TONS
EST. LENGTH	40 FT.*
NO. REQUIRED	110 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 245.
** INCLUDES ONE TEST PILE.

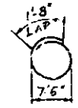


SECTION E E

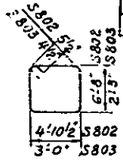
SCALE: 3/16" = 1'-0"



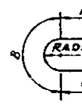
BAR P802



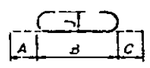
BAR S801



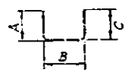
BARS S802 & S803

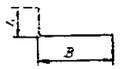


BAR	A	B	C	F
U802	1'-8½"	12'-7½"	1'-8"	4'-0½"



BAR	A	B	C	J
t801	1'-7"	34'-0"	1'-7"	1'-2½
t802	1'-7"	18'-6"	—	1'-2½
W801	1'-5	15'-1"	—	1'-0¾"





BAR	A	B	C
U301	3'-9"	13'-6"	3'-9"
U803	2'-5"	4'-11"	2'-5"
U804	3'-1"	6'-10"	3'-1"
U805	3'-3"	7'-9"	3'-3"
U806	3'-3½	8'-2"	3'-3½
U807	4'-0½	8'-2"	4'-0½
U808	6'-6½	8'-2"	6'-6½
U809	1'-7"	7'-10"	1'-7"
U310	1'-6	2'-7½	1'-5½

BAR	A	B
n801	2'-6½	2'-2½
n802	2'-6½	14'-2½
n803	2'-6½	19'-2½
n804	1'-0½	6'-2½
t803	1'-3"	12'-0"
W803	1'-3"	29'-9"
W801	1'-3"	8'-6"
T304	4'-0"	30'-0"
P805	4'-0"	32'-9"
P806	4'-0"	33'-6"
P807	4'-0"	34'-0"

NOTE:

ALL BAR DIMENSIONS ARE OUT TO OUT

* ALL BARS OF SIZE 18S ARE TO BE HIGH STRENGTH STEEL BARS ASTM A 15, GRADE 60.

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	180-1(B-1)1 B	ALEXANDER MISS-SS MO.	ILLINOIS MISSOURI	54	15
S.N. 088 NO. 4 S.P.S. NO. 5		ILLINOIS DIVISION		PROJECT I-37-9(10)	

BILL OF MATERIAL

BAR	NO	SIZE	LENGTH	SHAPE
h 801	110	# 9	32'-0"	
h 802	28	# 6	23'-3"	
h 803	16	# 5	29'-0"	
h 804	6	# 5	24'-3"	
h 805	2	# 6	32'-0"	
n 801	54	# 14S *	14'-9"	
n 802	44	# 14S *	16'-9"	
n 803	44	# 14S *	21'-9"	
n 804	92	# 6	7'-3	
P 801	12	# 11	43'-0"	
P 802	2	# 11	27'-0"	
P 803	16	# 11	20'-0"	
P 804	4	# 11	34'-0"	
P 805	4	# 11	36'-9"	
P 806	4	# 11	37'-6"	
P 807	12	# 11	38'-0"	
P 808	12	# 6	8'-6"	
S 801	164	# 5	25'-3"	
S 802	54	# 5	24'-0"	
S 803	196	# 4	11'-3"	
t 801	52	# 11	37'-2"	
t 802	24	# 11	20'-0"	
t 803	118	# 7	13'-3"	
t 804	50	# 10	32'-0"	
U 801	46	# 6	21'-0"	
U 802	10	# 6	16'-0"	
U 803	4	# 5	9'-9"	
U 804	4	# 5	13'-0"	
U 805	4	# 5	14'-3"	
U 806	4	# 5	14'-9"	
U 807	28	# 5	16'-3"	
U 808	14	# 5	21'-3"	
U 809	25	# 4	11'-0"	
U 810	27	# 5	5'-9"	
V 801	54	# 11	31'-0"	
V 802	176	# 11	30'-0"	
V 803	44	# 11	25'-0"	
V 804	44	# 11	20'-0	
V 805	54	# 10	25'-9"	
W 801	76	# 10	16'-6"	C
W 802	38	# 8	32'-0"	
W 803	44	# 7	31'-0"	
W 804	28	# 7	9'-9"	
W 805	14	# 7	14'-0"	

CLASS X CONCRETE	CU.YDS.	1027.1
REINFORCEMENT BARS	LBS.	142,582
CONCRETE PILES (BOTTOM)	L.W.FT.	4960
TEST PILE CONC. (BOTTOM)	EACH	1
PILE TEST LOADING	EACH	1
SEAL COAT CONCRETE	CU.YDS.	696.0
COFFERDAM	CU.YDS.	1900

PIER 8

F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER

PROJECT I-57-9(10)

SECTION (02-18-1)B

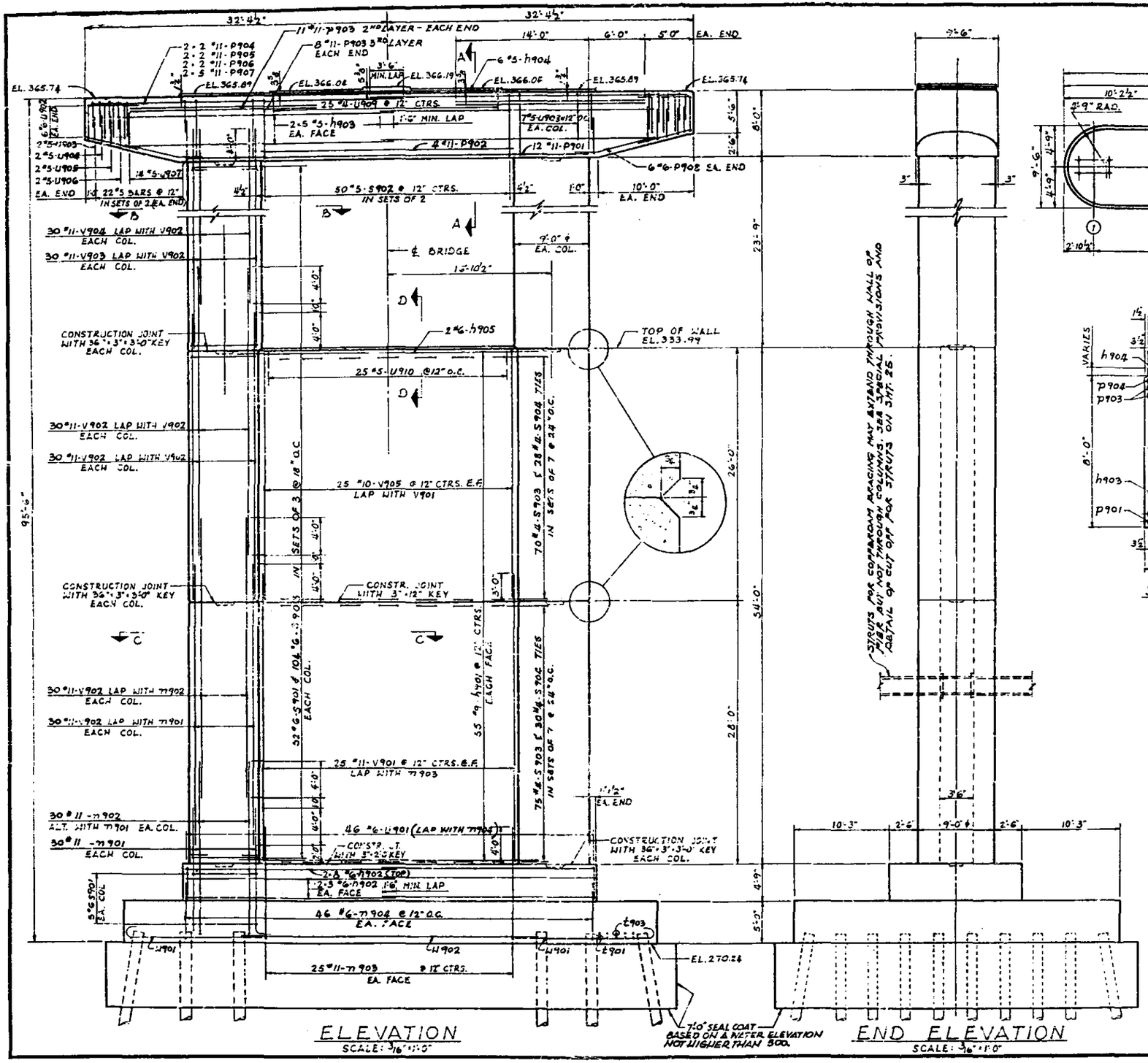
ALEXANDER COUNTY, ILLINOIS

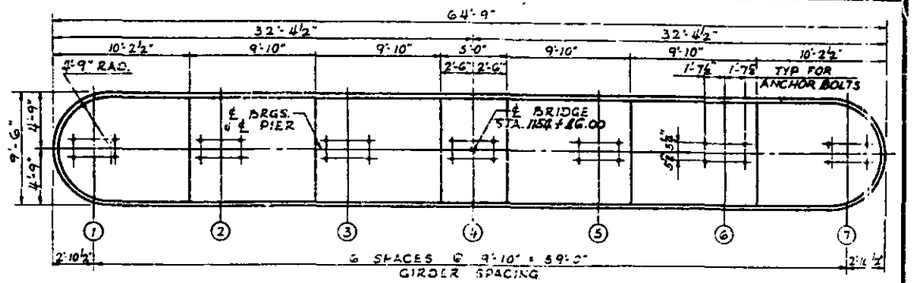
MISSISSIPPI COUNTY, MISSOURI

STA. 1141+84.75 TO STA. 1182+75.25

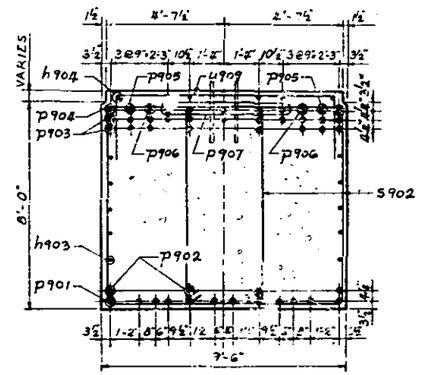
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
109 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1)B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	16
			ILLINOIS MISSOURI	PROJECT I-57-9( )	0

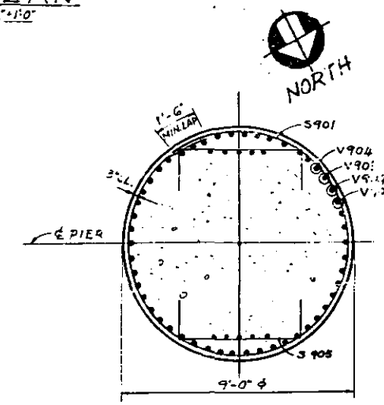




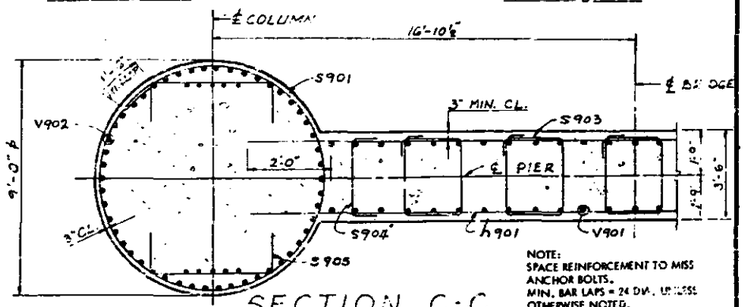
TOP PLAN
SCALE: 3/16"=1'-0"



SECTION A-A
SCALE: 3/8"=1'-0"

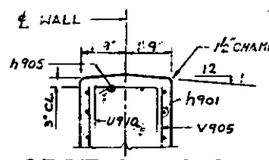


SECTION B-B
SCALE: 3/8"=1'-0"



SECTION C-C
SCALE: 3/8"=1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA., UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD ¾" CHAMFERS EXCEPT AS NOTED.
POLE STEPS MONOLITHICALLY WITH CAP.



SECTION D-D
SCALE: 3/8"=1'-0"

NOTE: FOR FOOTING SEE NEXT

PIER 9
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.5

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
140 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	NO.
F.A.I. 57	102-1B-11S	ALEXANDER / MISSISSIPPI	ILLINOIS / MISSOURI	54	16A
S.A.P. SEC. NO. A / B-2 SEC. NO. B	D	ILLINOIS / MISSOURI		PROJECT I-57-9( )10	

ELEVATION

SCALE: 3/16"-1'-0"

END ELEVATION

SCALE: 3/16"-1'-0"

TOP PLAN

SCALE: 3/32"-1'-0"

SECT. E-E

SECTION A-A

SCALE: 3/16"-1'-0"

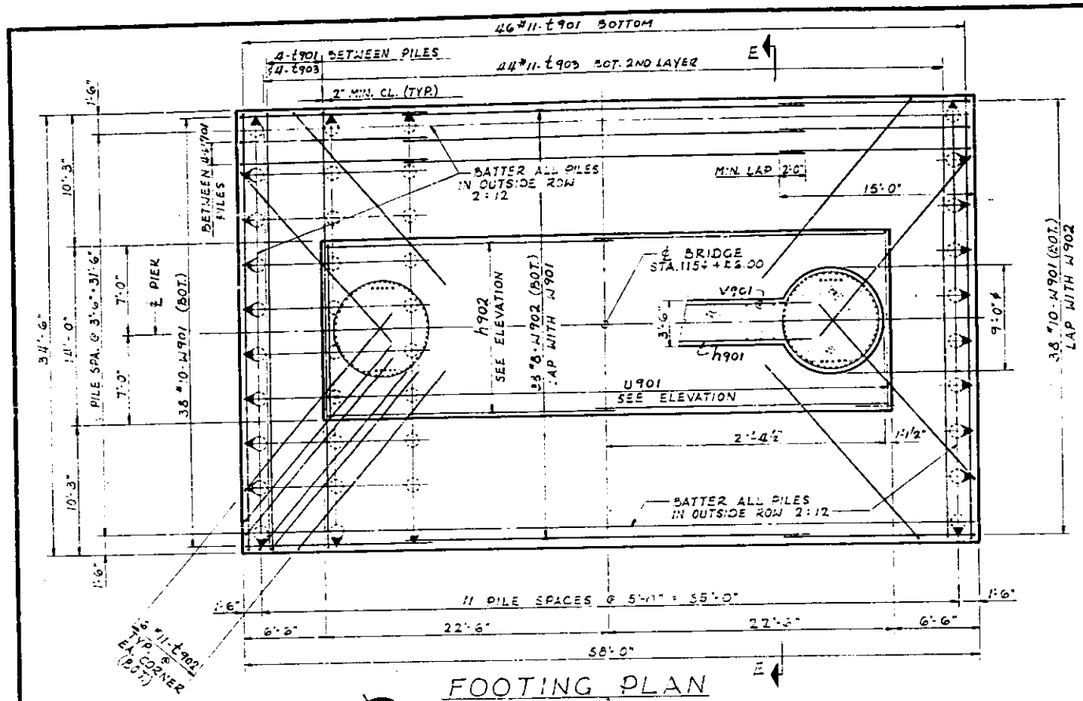
NOTE:
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENG'INEER

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP

REVISED MAR. 27, 1972

PIER 9
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION 102-1B-11S
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 94.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS



FOOTING PLAN

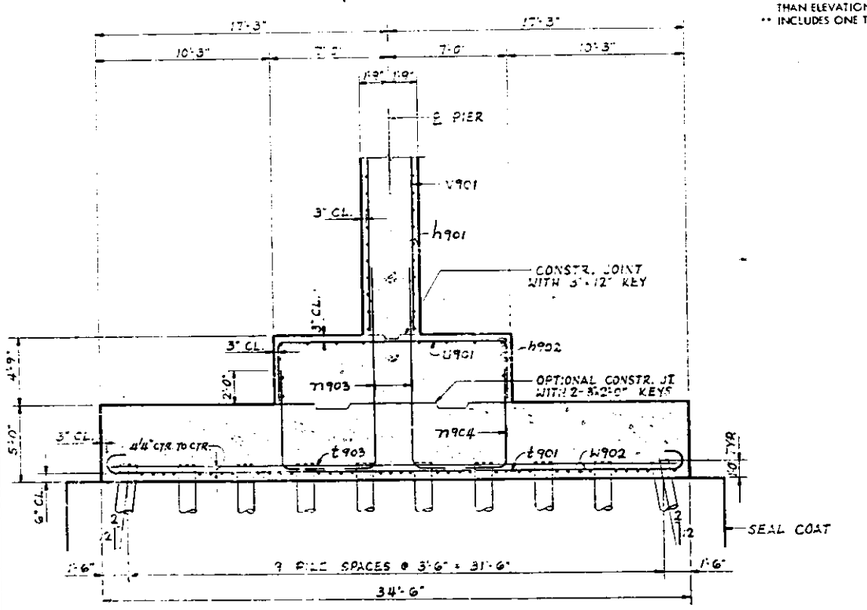
SCALE: 3/16" = 1'-0"

NORTH

PILE DATA

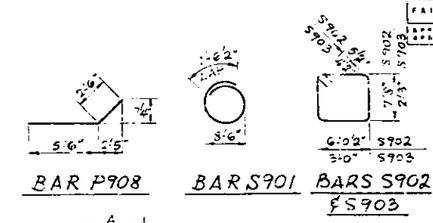
TYPE	CONCRETE
CAPACITY	50 TONS
EST. LENGTH	40 FT.*
NO. REQUIRED	120 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 246.
** INCLUDES ONE TEST PILE.



SECTION E-E

SCALE: 1/4" = 1'-0"



BAR	A	B	C	F
U902	1'-6	14'-2 1/2"	1'-6 1/2"	4'-6 1/2"

BAR	A	B	C	J
t901	1'-7"	34'-0"	1'-7"	1'-4 1/2"
t902	1'-7"	18'-6"	—	1'-2"
W901	1'-5"	15'-1"	—	1'-0 3/4"

BAR	A	B	C
S904	9"	3'-0"	9"
U901	4'-6	13'-6"	4'-6"
U903	3'-6	5'-0"	3'-6"
U904	3'-6	7'-0"	3'-6"
U905	3'-9	8'-0"	3'-9"
U906	3'-9	8'-6"	3'-9"
U907	4'-6 1/2	9'-2"	4'-6 1/2"
U908	7'-6 1/2	9'-2"	7'-6 1/2"
U909	1'-7	8'-10"	1'-7"
U910	1'-6	2'-9 1/2"	1'-5 1/2"
S905	1'-6	4'-9"	1'-6"

BAR	A	B
n901	2'-3"	15'-3"
n902	2'-3"	20'-3"
n903	2'-1 1/2"	13'-4 1/2"
n904	1'-0 1/2"	6'-8 1/2"
p904	5'-0"	29'-6"
p905	5'-0"	31'-0"
p906	5'-0"	32'-9"
p907	5'-0"	32'-0"

NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.

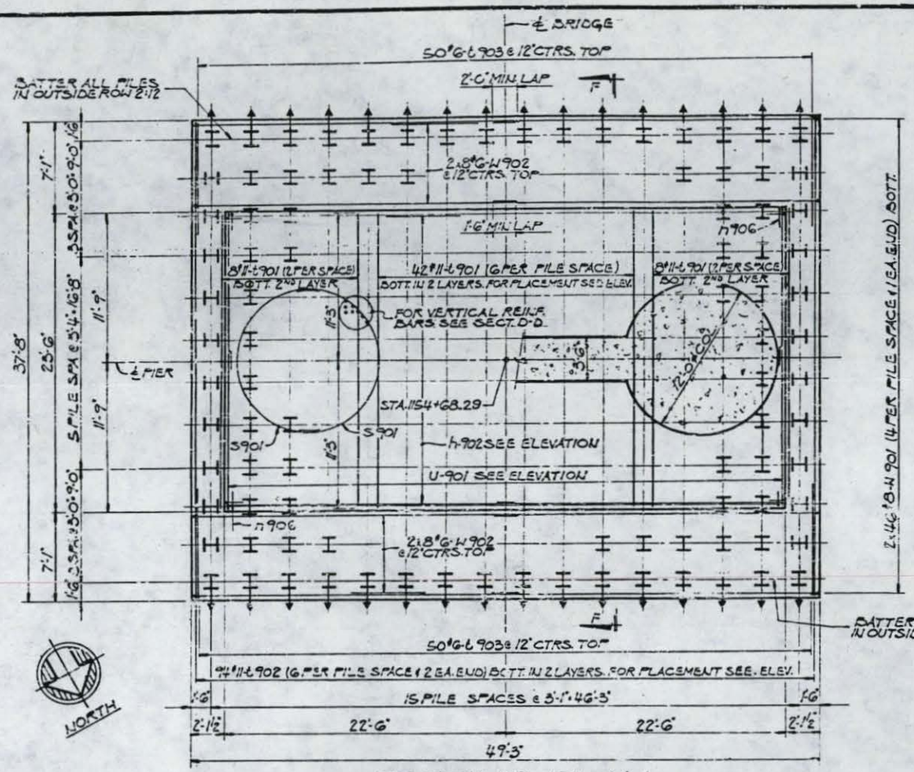
ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) B	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI		54	17
I.S.P.R. REG. NO. 5 / F.P.R. REG. NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9( )0		

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h901	110	#9	30-0	—
h902	28	#6	33-3	—
h903	20	#5	28-6	—
h904	6	#5	24-3	—
h905	2	#6	32-0	—
n901	60	#11	17-6	L
n902	60	#11	22-6	L
n903	50	#11	15-6	L
n904	92	#6	7-9	L
p901	12	#11	43-0	—
p902	2	#11	55-0	—
p903	38	#11	20-0	—
p904	4	#11	34-6	L
p905	4	#11	37-0	L
p906	4	#11	37-9	L
p907	10	#11	39-0	L
p908	12	#6	8-0	L
S901	114	#6	28-3	⊃
S902	50	#5	28-4	⊐
S903	145	#4	11-3	⊐
S904	53	#4	4-6	L
S905	208	#6	7-6	L
t901	46	#11	37-2	⊂⊃
t902	24	#11	20-0	C
t903	44	#11	34-0	—
U901	46	#6	22-6	L
U902	12	#6	17-3	L
U903	4	#5	12-0	L
U904	4	#5	14-0	L
U905	4	#5	15-6	L
U906	4	#5	16-0	L
U907	28	#5	18-3	L
U908	14	#5	25-3	L
U909	25	#4	12-0	L
U910	25	#5	5-9	L
V901	50	#11	31-0	—
V902	240	#11	30-0	—
V903	60	#11	28-0	—
V904	60	#11	23-0	—
V905	50	#10	25-9	—
W901	76	#10	16-6	C
W902	38	#8	32-0	—
CLASS X CONCRETE			CU.YDS.	1192.6
REINFORCEMENT BARS			LBS.	152,670
CONCRETE PILES (STEEL)			LIN.FT.	4760
TEST PILE CONCRETE			EACH	1
PILE TEST LOADING			EACH	1
SEAL COAT CONCRETE			CU.YDS.	594.0
EXCAVATION			CU.YDS.	1950

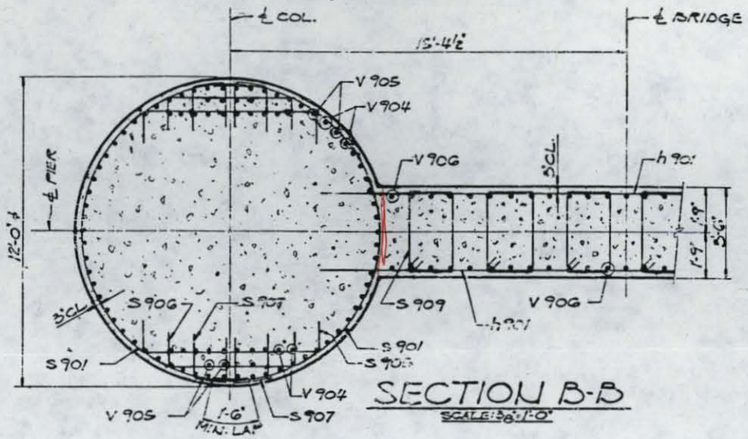
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
175 W. WABASH AVE. CHICAGO, ILLINOIS

PIER 9
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25



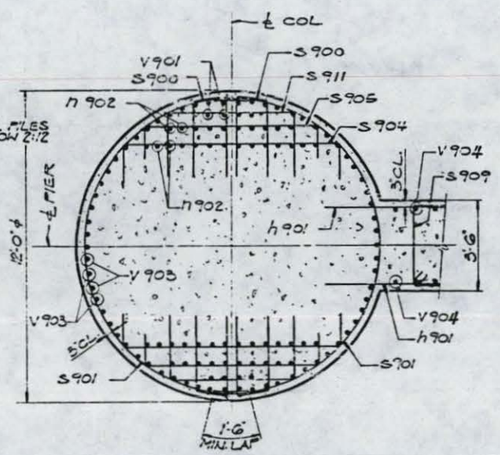
FOOTING PLAN

SCALE: 3/16" = 1'-0"



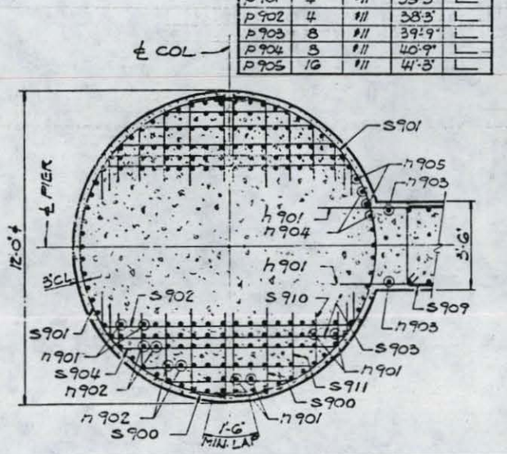
SECTION B-B

SCALE: 3/8" = 1'-0"



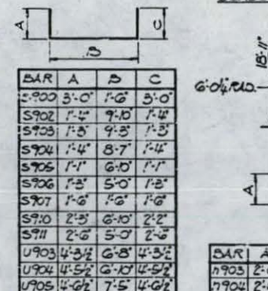
SECTION C-C

SCALE: 3/8" = 1'-0"



SECTION D-D

SCALE: 3/8" = 1'-0"



SECTION F-F

SCALE: 1/4" = 1'-0"

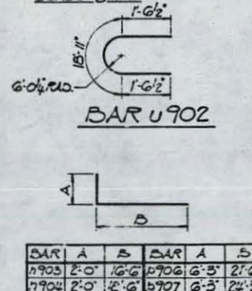
PILE DATA

TYPE	12 BP 53
CAPACITY	60 TONS
EST. LENGTH	70 FT. *
NO. REQ'D.	192 **

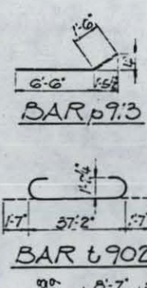
* MIN. PENETRATION TO BE NOT LESS THAN 50% OF LENGTH DETERMINED BY THE TEST PILE. IF REQUIRED, JETTING SHALL BE USED TO ATTAIN THE PENETRATION.

** INCLUDES ONE TEST PILE.

BAR	A	B	C
h 903	3'-0"	1'-6"	3'-0"
S 902	1'-4"	9'-10"	1'-4"
S 903	1'-5"	9'-5"	1'-5"
S 904	1'-4"	8'-7"	1'-4"
S 905	1'-1"	6'-10"	1'-1"
S 906	1'-2"	5'-0"	1'-2"
S 907	1'-6"	1'-6"	1'-6"
S 910	2'-3"	6'-10"	2'-2"
S 911	2'-6"	5'-0"	2'-6"
U 903	4'-3½"	6'-8"	4'-3½"
U 904	4'-5½"	6'-10"	4'-5½"
U 905	4'-6½"	7'-5"	4'-6½"
U 906	4'-8"	7'-11"	4'-8"
U 907	4'-9"	8'-3"	4'-9"
U 908	4'-9½"	8'-5"	4'-9½"
U 909	4'-10½"	8'-6"	4'-10½"
U 910	5'-5½"	8'-7"	5'-5½"
U 912	1'-4½"	11'-9"	1'-4½"



BAR u 902



BAR p 9.3

BAR s 901

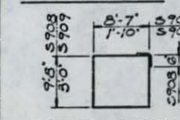
BAR	A	B
h 903	2'-0"	16'-6"
h 902	2'-0"	12'-6"
h 905	2'-0"	23'-6"
h 906	1'-0"	12'-3"
t 901	6'-9"	28'-6"
p 902	6'-9"	31'-6"
p 903	6'-9"	33'-0"
p 904	6'-9"	34'-6"

BAR	A	B
p 906	6'-3"	21'-6"
p 907	6'-3"	24'-3"
p 908	6'-3"	26'-0"
p 909	6'-3"	27'-0"
p 9.10	6'-3"	27'-6"
p 9.11	2'-6"	2'-6"
t 903	1'-0"	8'-9"
U 901	1'-6"	12'-3"
W 902	1'-0"	25'-3"

BAR t 902

BAR t 902

BAR w 901



BARS s 908 & s 909

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
h 901	162	#9	28'-6"	—
h 902	66	#6	25'-0"	—
h 903	4	#5	26'-6"	—
h 904	28	#5	27'-9"	—
h 905	12	#5	24'-5"	—
n 901	144	#14S	13'-9"	—
n 902	96	#14S	18'-9"	—
n 903	50	#11	18'-6"	L
n 904	66	#11	20'-6"	L
n 905	66	#11	25'-6"	L
n 906	140	#6	13'-3"	L
p 901	4	#11	35'-3"	L
p 902	4	#11	38'-3"	L
p 903	8	#11	39'-9"	L
p 904	8	#11	40'-9"	L
p 905	16	#11	41'-3"	L

BAR	No.	SIZE	LENGTH	SHAPE
p 906	4	#11	27'-9"	L
p 907	4	#11	30'-6"	L
p 908	8	#11	32'-3"	L
p 909	8	#11	33'-3"	L
p 9.10	16	#11	33'-9"	L
p 911	40	#11	17'-0"	L
p 912	10	#10	45'-0"	L
p 913	20	#10	8'-0"	L
p 914	20	#6	5'-0"	L
S 900	104	#5	7'-6"	C
S 901	252	#6	19'-9"	C
S 902	36	#5	12'-6"	U
S 903	36	#5	11'-9"	U
S 904	52	#5	11'-3"	U
S 905	208	#5	9'-0"	U
S 906	192	#5	7'-6"	U
S 907	384	#5	4'-6"	U
S 908	58	#5	37'-6"	U
S 909	264	#4	10'-5"	U
S 910	36	#5	11'-3"	U
S 911	52	#5	10'-0"	U
t 901	58	#11	23'-6"	—
t 902	94	#11	40'-4"	C
t 903	100	#6	9'-9"	L
U 901	92	#6	13'-9"	U
U 902	16	#6	22'-0"	U
U 903	4	#5	15'-8"	U
U 904	8	#5	15'-9"	U
U 905	8	#5	16'-6"	U
U 906	8	#5	17'-3"	U
U 907	8	#5	17'-9"	U
U 908	8	#5	18'-0"	U
U 909	8	#5	18'-3"	U
U 910	64	#5	19'-6"	U
U 912	25	#4	14'-6"	U
V 901	16	#11	21'-0"	—
V 902	40	#11	18'-0"	—
V 903	152	#11	22'-0"	—
V 904	552	#11	24'-0"	—
V 905	82	#11	19'-0"	—
V 906	150	#10	24'-0"	—
W 901	92	#8	26'-6"	C
W 902	32	#8	33'-3"	L

BILL OF MATERIAL

CLASS 'A' CONCRETE	CU.YDS.	1,852.5
REINFORCEMENT BARS	LBS.	266,280
STEEL PILES 12 BP 53	LIN. FT.	13,370
TEST PILE STEEL 12 BP 53	EACH	1
PILE TEST LOADING (600 TON)	EACH	2
SEAL COAT CONCRETE	CU.YDS.	732.7
COFFERDAM EXCAVATION	CU.YDS.	2,320
DUMPED RIPRAP	CU.YDS.	2,900

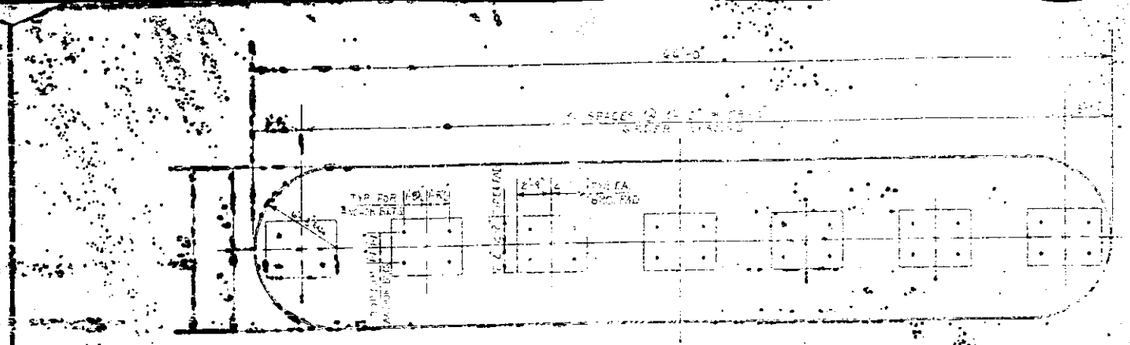
NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.

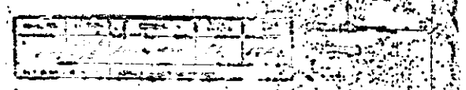
ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(102-18-1) B	ALEXANDER (ILLINOIS)	ALL OTHER (MISSOURI)	54	17A
S.P.R. SEC. NO. 1		CLAYTON (MISSOURI)			
S.P.R. PLAT NO. 9				PROJECT: I-57-2(10)	

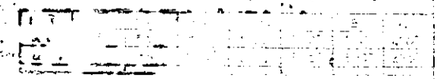
REVISED MAR. 27, 1972

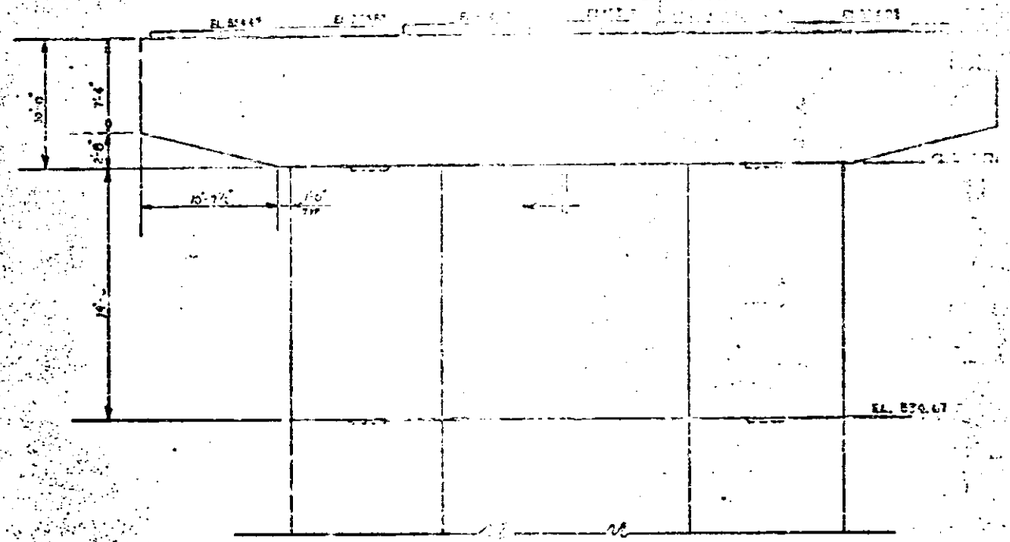
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
19 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 9
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-2( )10
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25





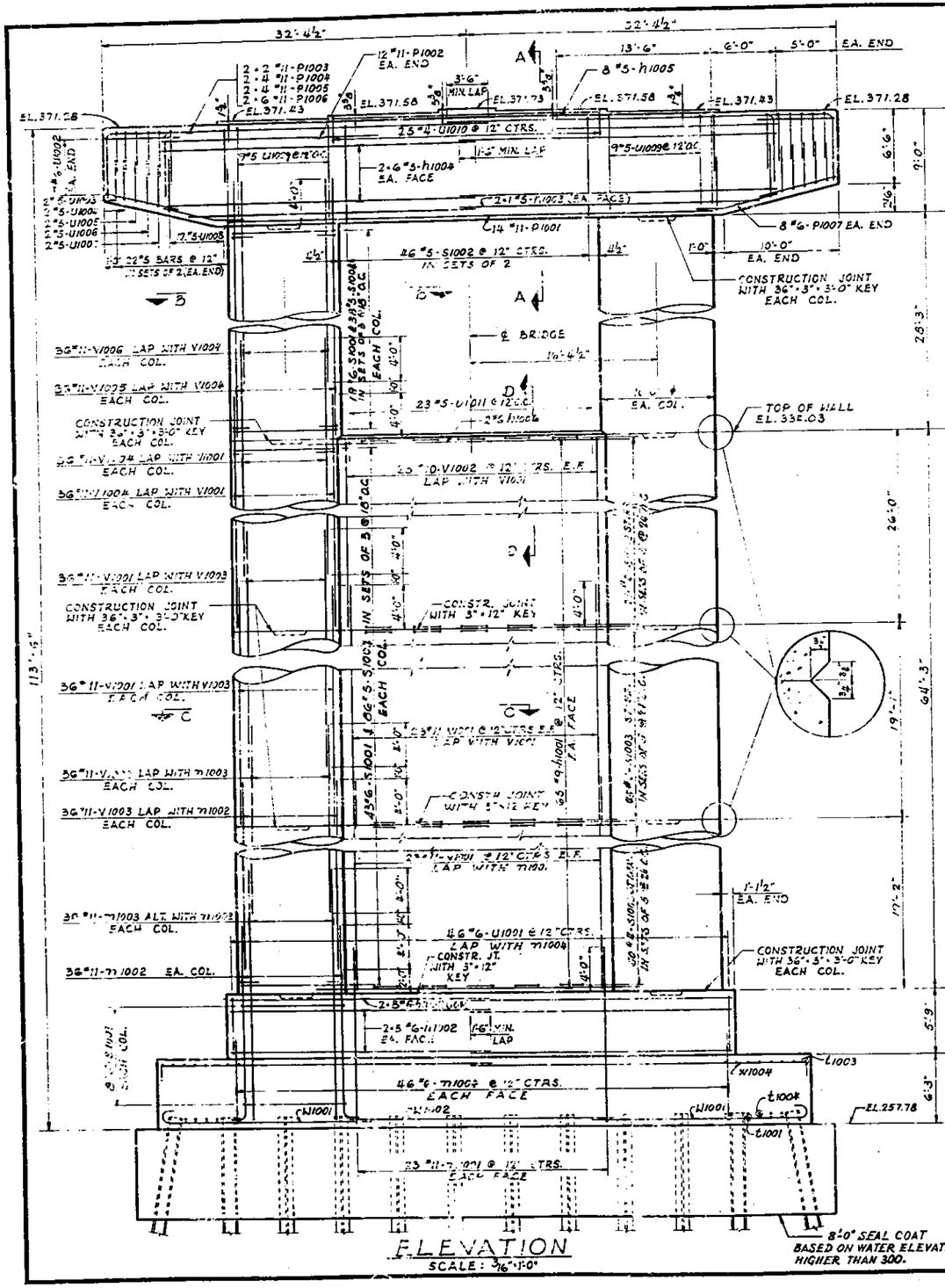




ELEVATION

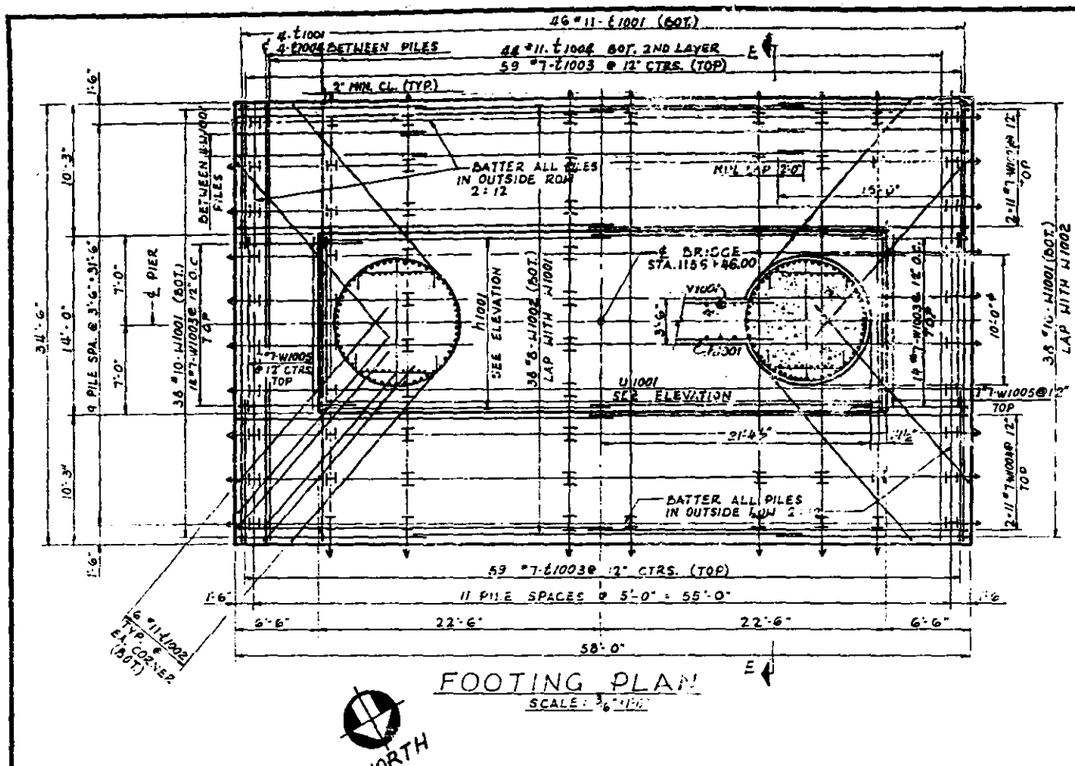
FAI 57 SEC. (OR...
ALEXANDER COUNTY
PLR 9
BE... T...
...
I-57 BRIDGE AT ...

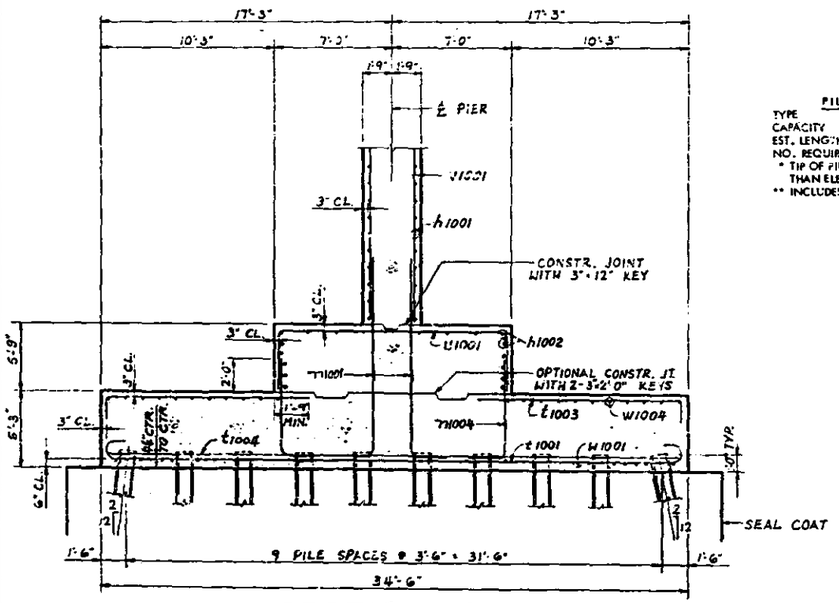
ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-1B-1) 8	ALEXANDER	ILLINOIS	54	18
S.P.R. RTE. NO. 4			ILLINOIS		
S.P.R. RTE. NO. 3			MISSOURI	PROJECT I-57-9( )0	



ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 10
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

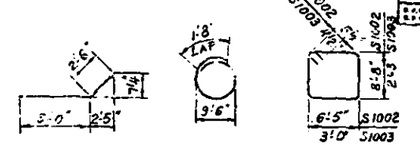




PILE DATA

TYPE	14 BP 102
CAPACITY	60 TONS
EST. LENGTH	80 FT.*
NO. REQUIRED	120 *

* TIP OF PILE NOT HIGHER THAN ELEVATION 180.
** INCLUDES ONE TEST PILE.



BAR	A	B	C	F
U1002	1'-6"	15'-9"	1'-6"	5'-0½"

BAR	A	B	C	J
℄1001	1'-7"	34'-0"	1'-7"	1'-2⅛"
℄1002	1'-7"	18'-5"	—	1'-2⅛"
W1001	1'-5"	16'-1"	—	1'-0⅛"

BAR	A	B	C
U1001	5'-6"	13'-6"	5'-6"
U1003	4'-0"	5'-6"	4'-0"
U1004	4'-1"	7'-10"	4'-1"
U1005	4'-2½"	9'-1"	4'-2½"
U1006	4'-4"	9'-10"	4'-4"
U1007	4'-5½"	10'-1"	4'-5½"
U1008	5'-0½"	10'-1"	5'-0½"
U1009	5'-6½"	10'-2"	5'-6½"
U1010	1'-7"	9'-10"	1'-7"
U1011	1'-6"	2'-9½"	1'-5½"
S1004	1'-6"	6'-0"	1'-6"

BAR	A	B
H1001	2'-3"	15'-6"
H1002	2'-3"	17'-6"
H1003	2'-3"	22'-6"
H1004	1'-3"	1'-9"
P1003	6'-0"	29'-0"
P1004	5'-0"	32'-6"
P1005	6'-0"	33'-6"
P1006	6'-0"	34'-0"
℄1003	1'-3"	12'-0"
W1003	1'-3"	8'-9"
W1004	1'-3"	30'-0"

NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	102-1(B)	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	54	19
B.O.S. REG. NO. 1		ILLINOIS DIVISION	PROJECT I-57-9(10)	
B.O.S. REG. NO. 2		MISSOURI DIVISION		

BILL OF MATERIAL

BAR	No	SIZE	LENGTH	SHAPE
h1001	130	# 9	28'0"	
h1002	36	# 6	23'3"	
h1003	4	# 5	26'6"	
h1004	24	# 5	28'0"	
h1005	8	# 5	24'3"	
h1006	2	#6	32'0"	
H1001	46	# 11	17'9"	
H1002	72	# 11	19'9"	
H1003	72	# 11	26'9"	
H1004	52	#6	9'0"	
P1001	14	# 11	43'0"	
P1002	24	# 11	19'6"	
P1003	4	# 11	33'0"	
P1004	8	# 11	38'6"	
P1005	8	# 11	39'6"	
P1006	12	# 11	40'0"	
P1007	16	# 6	7'6"	
S1001	206	# 5	31'6"	
S1002	46	# 5	31'1"	
S1003	165	# 4	11'3"	
S1004	116	# 5	9'0"	
℄1001	46	# 11	37'2"	
℄1002	24	# 11	20'0"	
℄1003	118	# 7	13'3"	
℄1004	44	# 8	36'0"	
U1001	46	# 6	24'6"	
U1002	14	# 6	18'9"	
U1003	4	# 5	13'6"	
U1004	4	# 5	16'0"	
U1005	4	# 5	17'6"	
U1006	4	# 5	18'6"	
U1007	4	# 5	19'0"	
U1008	24	# 5	20'3"	
U1009	18	# 5	27'3"	
U1010	25	# 4	13'0"	
U1011	29	#5	5'9"	
℄1001	236	# 11	23'3"	
V1002	45	# 10	25'9"	
V1003	144	# 11	21'3"	
V1004	144	# 11	30'0"	
V1005	72	# 11	32'3"	
V1006	72	# 11	27'3"	
W1001	76	# 10	17'6"	C
W1002	38	# 8	30'0"	
W1003	28	# 7	10'0"	
W1004	44	# 7	31'3"	
W1005	14	# 7	14'0"	
CLASS X CONCRETE		CU.YDS.	2581.4	
REINFORCEMENT BARS		LBS.	195,770	
STEEL PILES 14BP102		LIN.FT.	9,480	
TEST PILE STEEL 14BP102		EACH	1	
PILE TEST LOADING (60 TON)		EACH	2	
SEALCOAT CONC.		CU.YDS.	700.0	
COFFERDAM EX.		CU.YDS.	876	

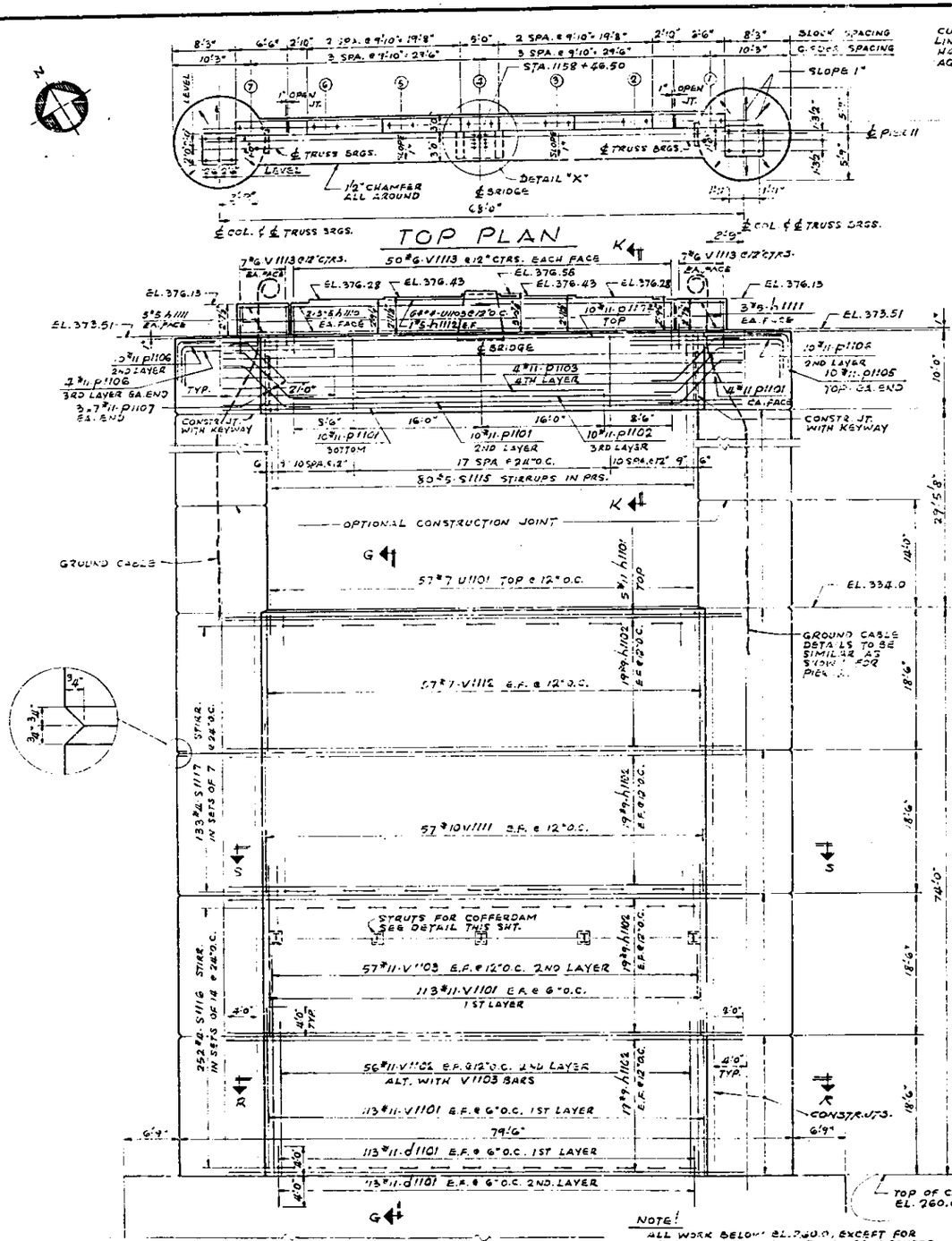
PIER 10
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182 + 75.25

FRED HERSON & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 57	(02-18-1)B	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	54	20
S.P.R. SEC. NO. A S.P.R. SEC. NO. B		ILLINOIS PROJECT	PROJECT I-57-9(10)	

TOP PLAN

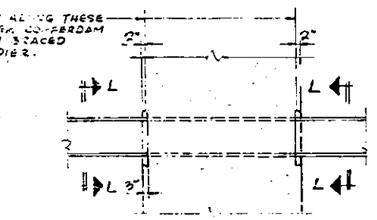
SCALE: 1/8"=1'-0"



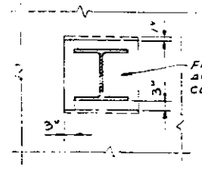
NOTE!
ALL WORK BELOW EL. 260.0, EXCEPT FOR SEAL COAT CONCRETE, SHALL BE INCLUDED IN THE ITEM "OPEN DREDGED CAISSON - PIER 11"

ELEVATION

SCALE: 1/8"=1'-0"

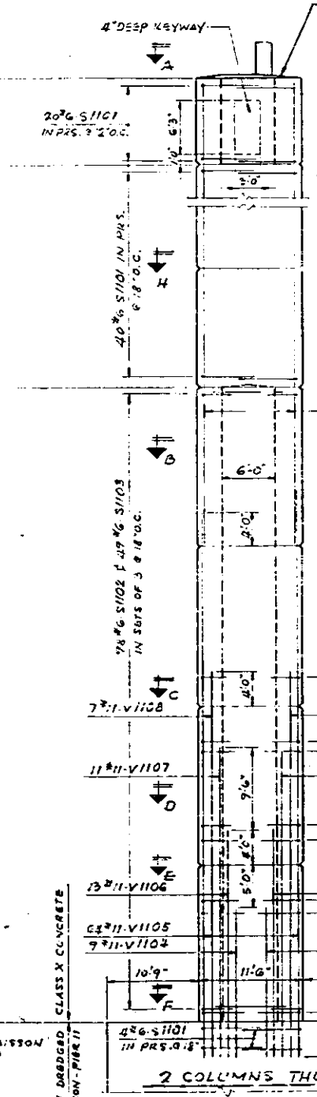


STRUT DETAIL



NOTE!
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.

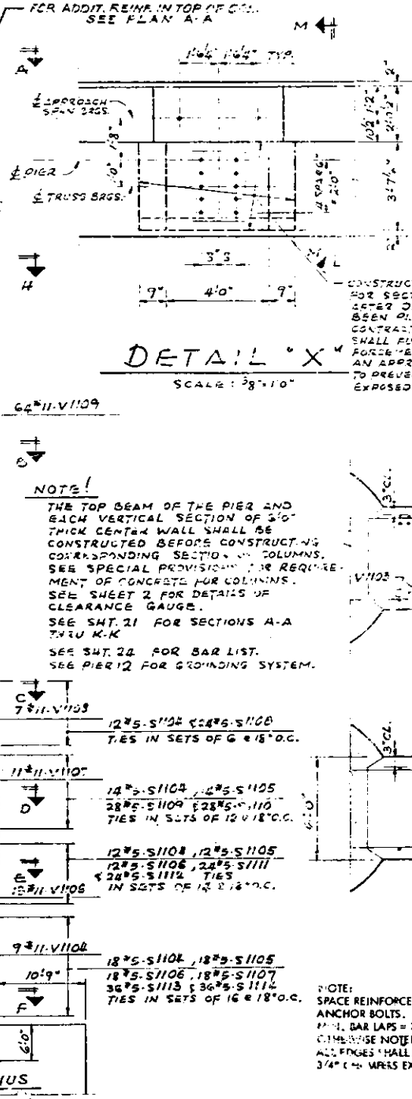
SECTION "L-L"

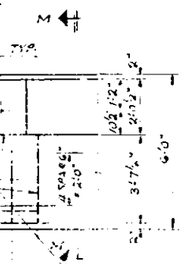


NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 3'-0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS. SEE SPECIAL PROVISION FOR REQUIREMENT OF CONCRETE FOR COLUMNS.
SEE SHEET 2 FOR DETAILS OF CLEARANCE GAUGE.
SEE SHT. 21 FOR SECTIONS A-A THRU K-K
SEE SHT. 22 FOR BAR LIST.
SEE PIER 12 FOR GROUNDING SYSTEM.

END VIEW

SCALE: 1/2"=1'-0"



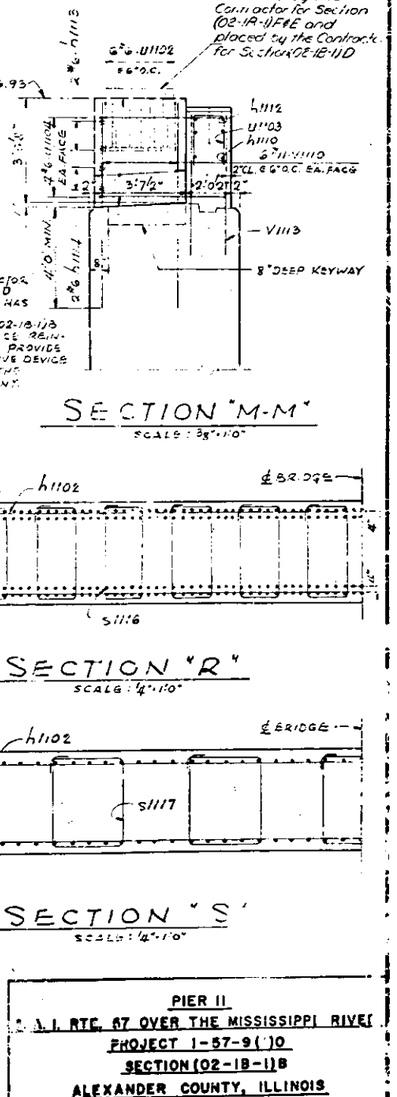


CONSTRUCTED BY CONTRACTOR FOR SECTION (02-18-1) D LATER DECK CONCRETE HAS BEEN PLACED. CONTRACTOR FOR SECT. (02-18-1)B SHALL FURNISH AND PLACE REINFORCEMENT AND SHALL PROVIDE AN APPROVED PROTECTIVE DEVICE TO PREVENT DAMAGE TO THE EXPOSED REINFORCEMENT.

DETAIL "X"

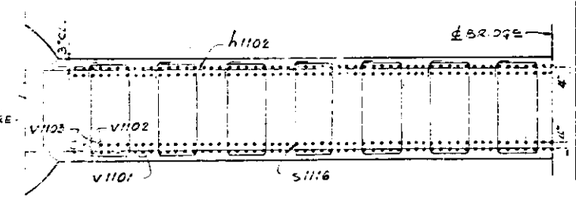
SCALE: 3/8"=1'-0"

Thrust block and anchor bolts are to be furnished by the Contractor for Section (02-18-1)FAE and placed by the Contractor for Section (02-18-1)D



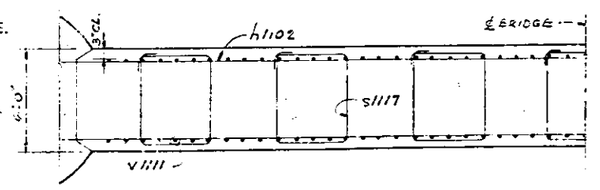
SECTION "M-M"

SCALE: 3/8"=1'-0"



SECTION "R"

SCALE: 1/4"=1'-0"



SECTION "S"

SCALE: 1/4"=1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
LAP BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

FRED BENESCH & COMPANY
CONSULTING ENGINEERS
111 W. WABASH AVE. CHICAGO, ILLINOIS

PIER II
I. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev. Ground Cable location. 5-17-71 S.F.M.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(102-18-1) B	ALEXANDER & MISSISSIPPI	54	20A
S.P.R. SEC. NO. 1 / H.P.R. SEC. NO. 2			PROJECT I-57-9(10)	

TOP PLAN

ELEVATION

END VIEW

STRUT DETAIL

CUT STRUT ALONG THESE LINES AFTER COFFERDAM HAS BEEN BRACED AGAINST PIER.

SECTION "L-L"

FILL HOLE WITH CONCR. AND RUB JOINTS AFTER CUTTING OFF STRUT.

NOTE!
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.

DETAIL "X"

SCALE: 3/8"=1'0"

SECTION "M-M"

SCALE: 3/8"=1'0"

Thrust block and anchor bolts are to be furnished by the Contractor for Section (02-18-1)FAE and placed by the Contractor for Section (02-18-1)B

CONSTRUCTED BY CONTRACTOR FOR SECTION (02-18-1)B AFTER DECK CONCRETE HAS BEEN PLACED. CONTRACTOR FOR SECT. (02-18-1)B SHALL FURNISH AND PLACE REINFORCEMENT AND SHALL PROVIDE AN APPROVED PROTECTIVE DEVICE TO PREVENT DAMAGE TO THE EXPOSED REINFORCEMENT.

NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS. SEE SPECIAL PROVISIONS FOR REQUIREMENT OF CONCRETE FOR COLUMNS
SEE SHEET 2 FOR DETAILS OF CLEARANCE GAUGE.
SEE SHT. 21A FOR PLAN A-A & SECTIONS B-B TO U K-K
SEE SHT. 22A FOR BAR LIST.
SEE PIER 12 FOR GROUNDING SYSTEM.

SECTION "R"

SCALE: 1/2"=1'0"

SECTION "S"

SCALE: 1/2"=1'0"

NOTE!
ALL WORK BELOW EL. 420.0, EXCEPT FOR SEAL COAT CONCRETE, SHALL BE INCLUDED IN THE ITEM "OPEN DREDGED CAISSON-PIER 11"

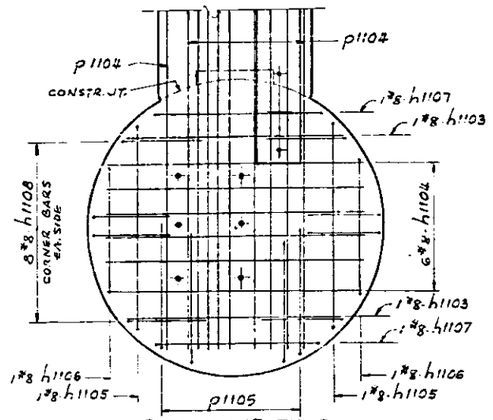
NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

REVISED MAR. 27, 1972

PIER II
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

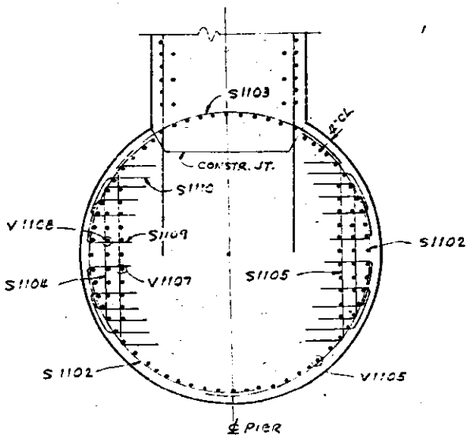
Rev. Ground Cable location. 5-17-71 S.F.M.



2 COLUMNS THUS

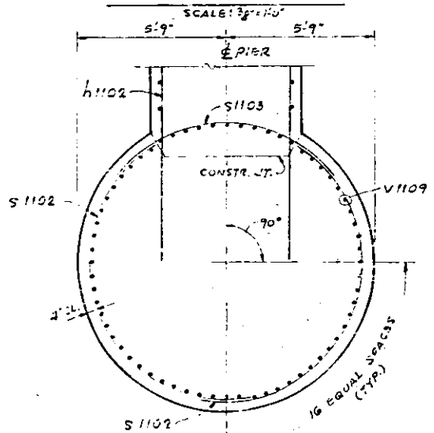
PLAN "A-A"

SCALE: 3/8"=1'0"



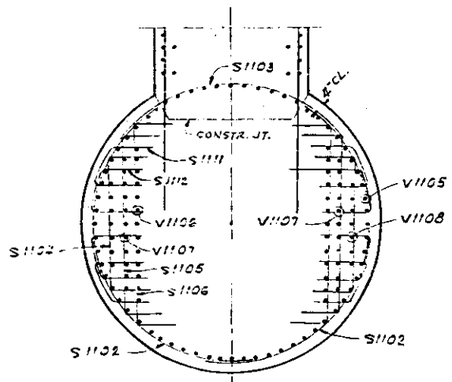
SECTION "D-D"

SCALE: 3/8"=1'0"



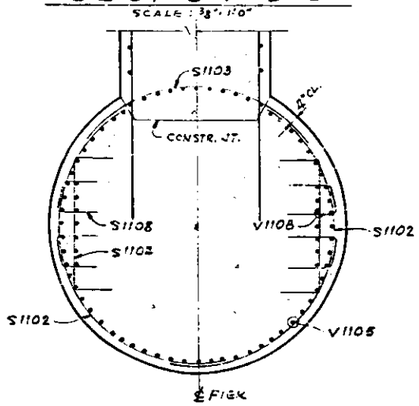
SECTION "B-B"

SCALE: 3/8"=1'0"



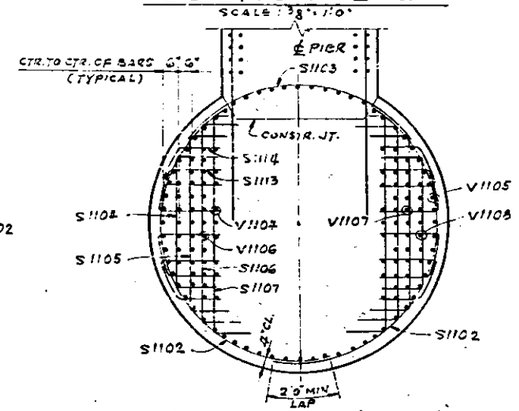
SECTION "E-E"

SCALE: 3/8"=1'0"



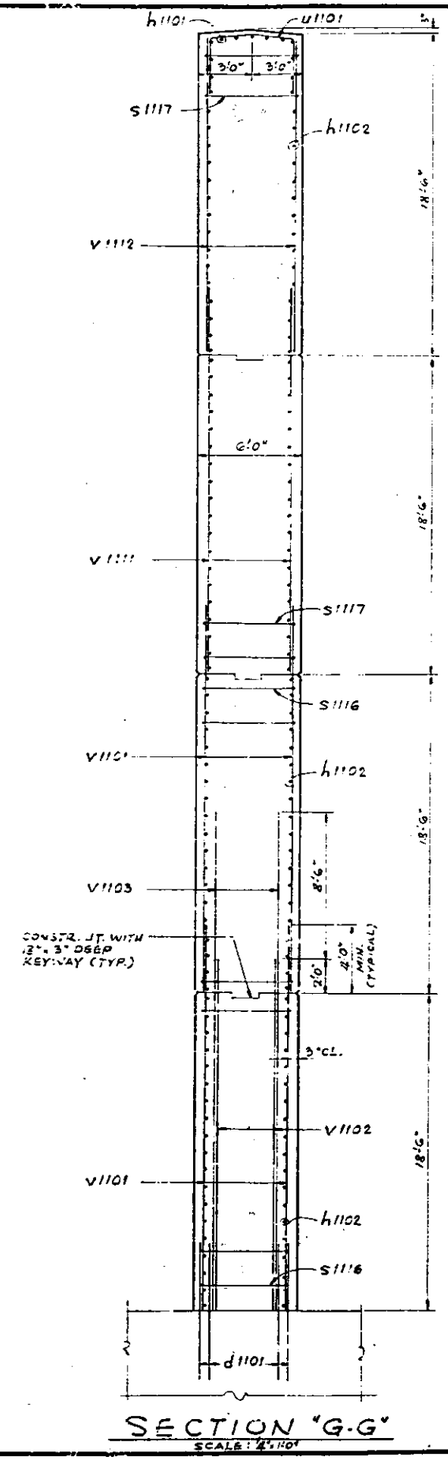
SECTION "C-C"

SCALE: 3/8"=1'0"



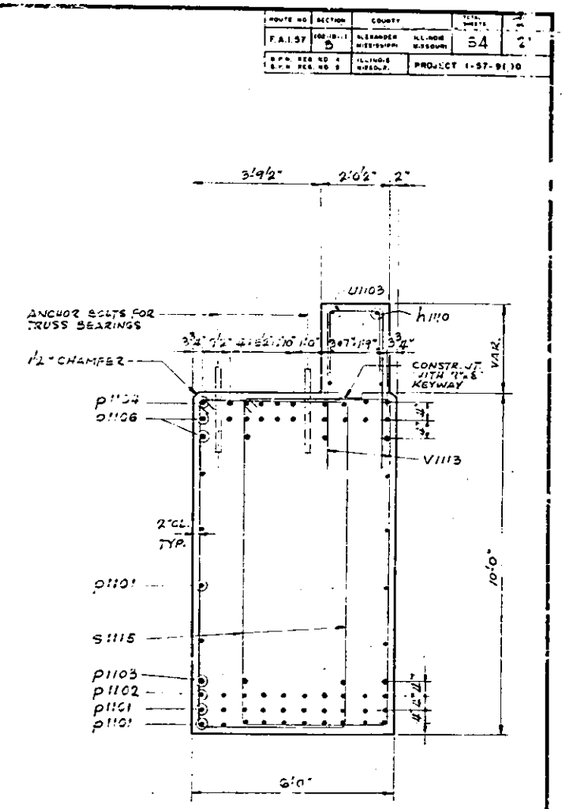
SECTION "F-F"

SCALE: 3/8"=1'0"



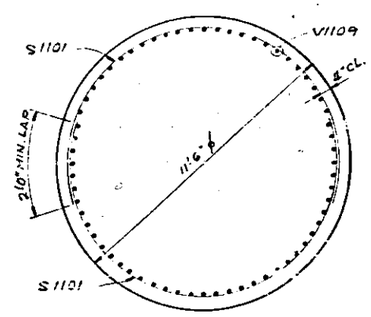
SECTION "G-G"

SCALE: 1/4"=1'0"



SECTION "K-K"

SCALE: 1/2"=1'0"



SECTION "H-H"

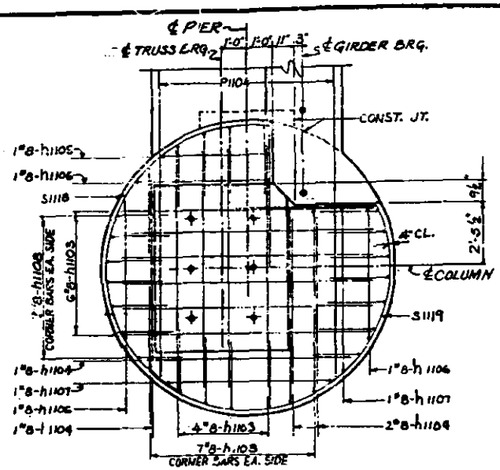
SCALE: 3/8"=1'0"

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	108(B-i) 5	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	2
S.P.N. REG. NO. 1 / S.P.N. REG. NO. 2		ILLINOIS MISSOURI	PROJECT I-57-9( )0		

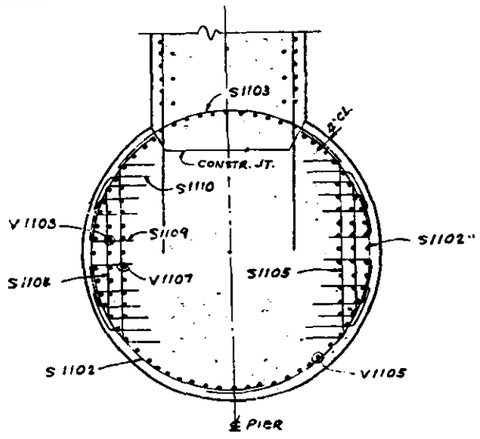
PIER II
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (102-1B-i)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 64.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

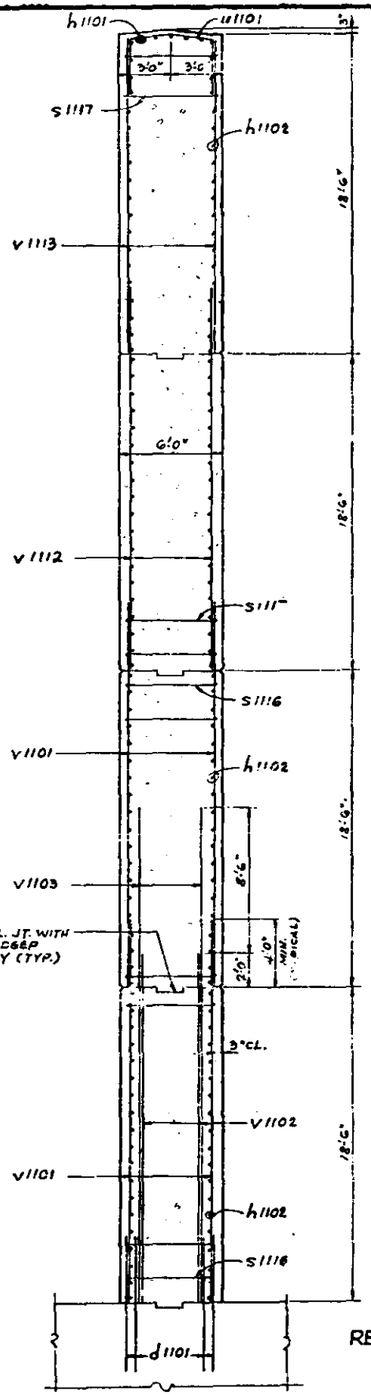
Rev. Anchor Bolt Detail 5-17-71 S.F.M.

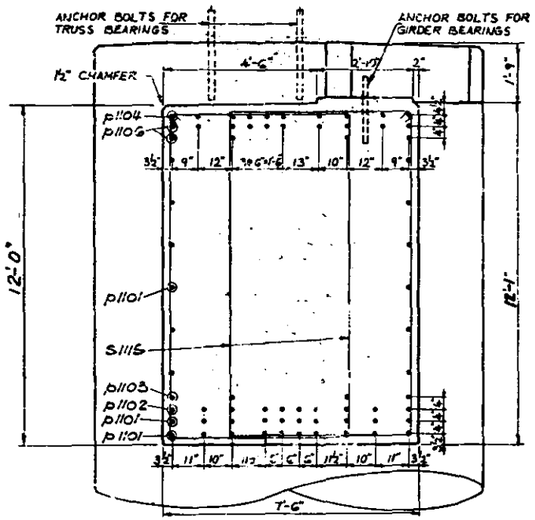


PLAN "A-A
2 COLUMNS THUS
SCALE: ⅜"=1'-0"

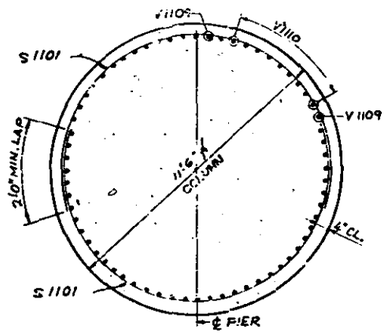


SECTION "D-D"
SCALE: ⅜"=1'-0"

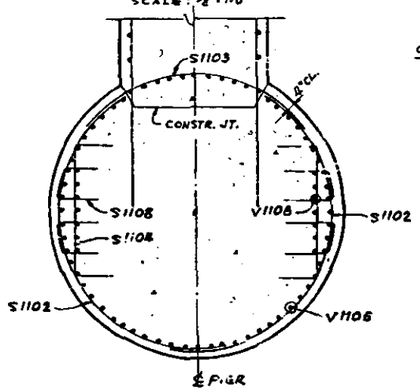




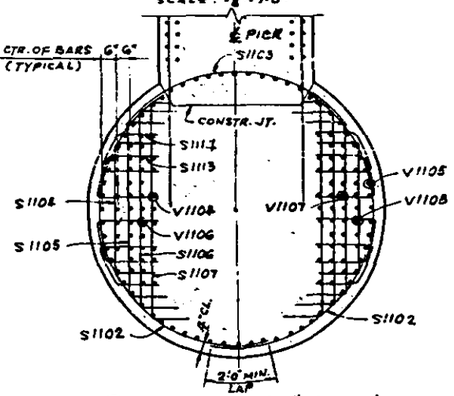
SECTION "K-K"
SCALE: ½"=1'-0"



SECTION "H-H
SCALE: ½"=1'-0"



SECTION "B-B"
SCALE: ⅜"=1'-0"



SECTION "E-E"
SCALE: ⅜"=1'-0"

SECTION "C-C"
SCALE: ⅜"=1'-0"

SECTION "F-F"
SCALE: ⅜"=1'-0"

REVISED MAR. 27, 1972

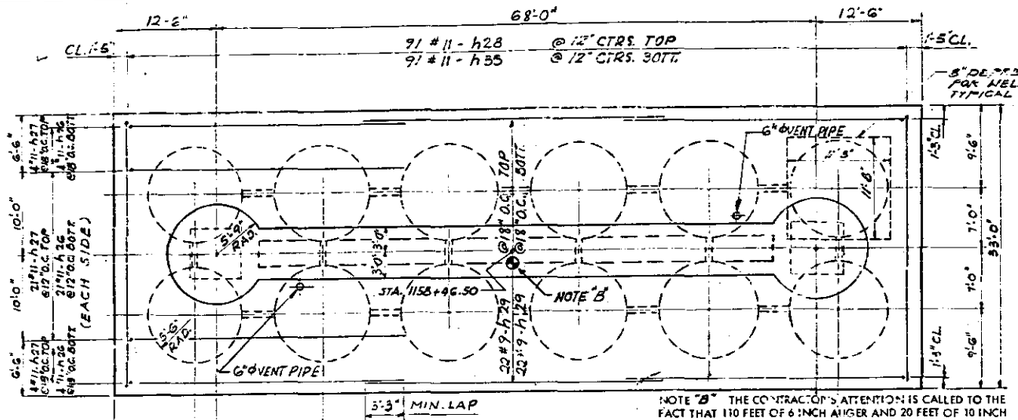
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 11
E.A.I. STK. 5 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

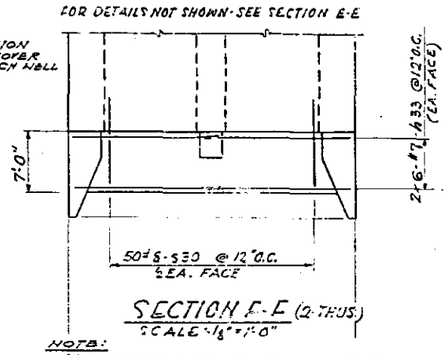
Rev. Anchor Bolt Detail 5-17-71 S.F.M.

ROUTE NO.	SECTION	COUNTY	STATE	SHEET
F.A.I. 57	(02-18-1)B	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	54	22
APP. REG. NO. 1 / APP. REG. NO. 2	ILLINOIS / MISSOURI	PROJECT I-57-5(10)		

TOP VIEW



NOTE "B" THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT 110 FEET OF 6 INCH AUGER AND 20 FEET OF 10 INCH CASING WERE LEFT IN THE BORING AT THIS LOCATION BY THE BORING CONTRACTOR.



NOTE:
6" Ø VENT PIPE TO BE STANDARD WEIGHT WROUGHT IRON PIPE (ASTM A 72) AND SHALL EXTEND THROUGH WELL COVERS.

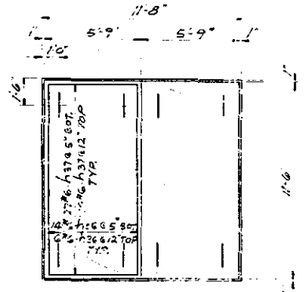
MAXIMUM PRESSURES AT BOTTOM OF OPEN-DREDGED CAISSON (KIPS PER SQ. FT.)

AASHO GROUP	I	II	III	IV	V	VI	VII	VIII	IX
ACTUAL PRESSURE	8.4	10.2	9.0	8.5	10.3	9.1	12.0	20.7	22.7
ALLOW. PRESS'R	20	25	25	25	28	28	26.6	28	30

ASSUMPTIONS:
1. BUOYANCY BASED ON WATER ELEVATION 396.
2. ICE LOAD BASED ON 6 IN. THICKNESS PERPENDICULAR TO PIER AND 12 IN. THICKNESS PARALLEL TO PIER AT ELEVATION 310.
3. EARTHQUAKE LOAD = 6% OF DEAD LOAD.

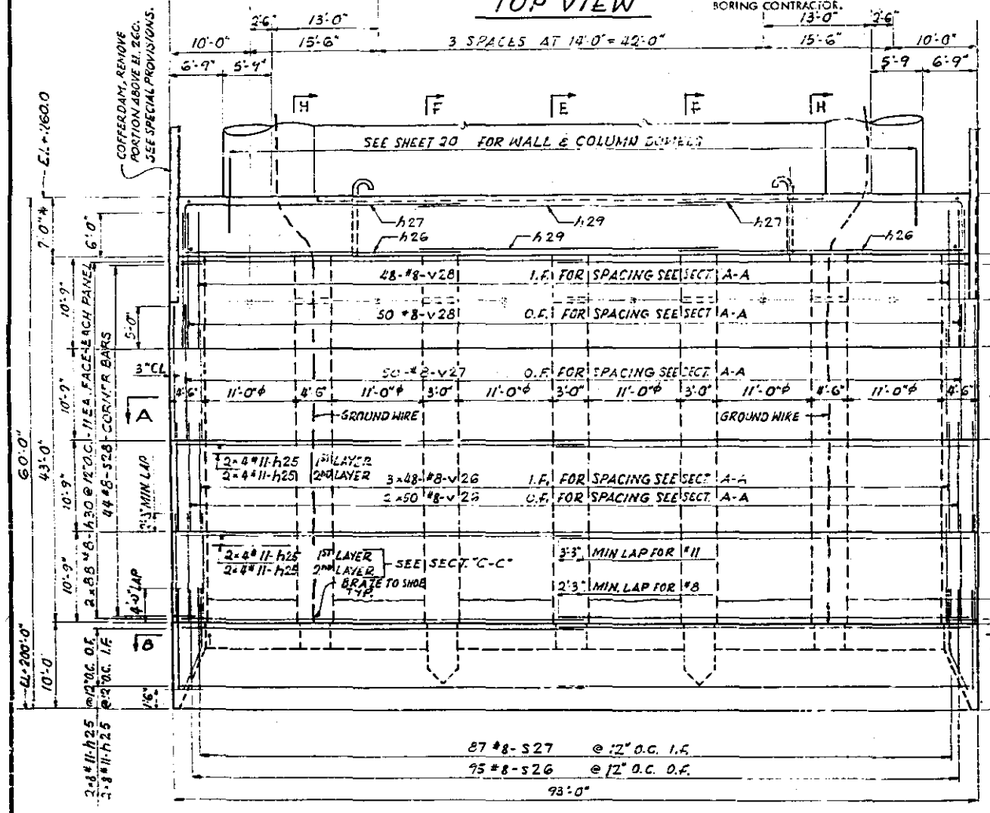
THE CONTRACTOR MAY SUBMIT TO THE ENGINEER FOR APPROVAL HIS OWN DESIGNS FOR THE CAISSONS, MAKING SUCH CHANGES IN SIZE AND ARRANGEMENTS OF DREDGING WELLS AND CUTTING EDGES AS ARE MORE SUITABLE TO HIS PLANT, EQUIPMENT AND METHODS OF CONSTRUCTION. SEE SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.

AREA OF CAISSON - 3059 FT²
GROSS BUOYANT PRESSURE - 7.42 T/S
NET ADDITIONAL PRESSURE - 2.59 T/S

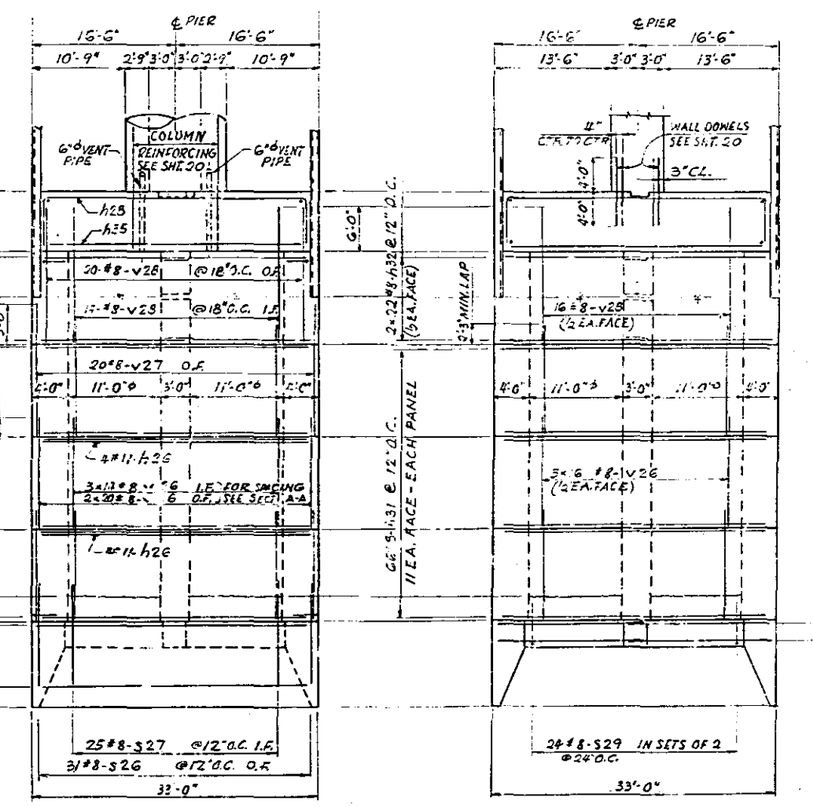


DETAILS FOR LIFTING HOOKS SAME AS FOR COVER FOR 8' THICK 15'-0" WELL See Sht. #30

PRECAST WELL COVERS
(2 PANELS REQD. PER WELL)
SCALE: 1/4"=1'-0"



ELEVATION (2-THUS)
SCALE: 1/8" = 1'-0"



END VIEW (2-THUS)
SCALE: 1/8" = 1'-0"

SECTION E-E
SCALE: 1/8" = 1'-0"

(NOTE "A")
"1'-0" DIMENSION OF DISTRIBUTION BLOCK MAY BE INCREASED OR DECREASED BY 9" TO SUIT FIELD CONDITIONS. ANY INCREASE OR DECREASE GREATER THAN 9" WILL REQUIRE REDESIGN

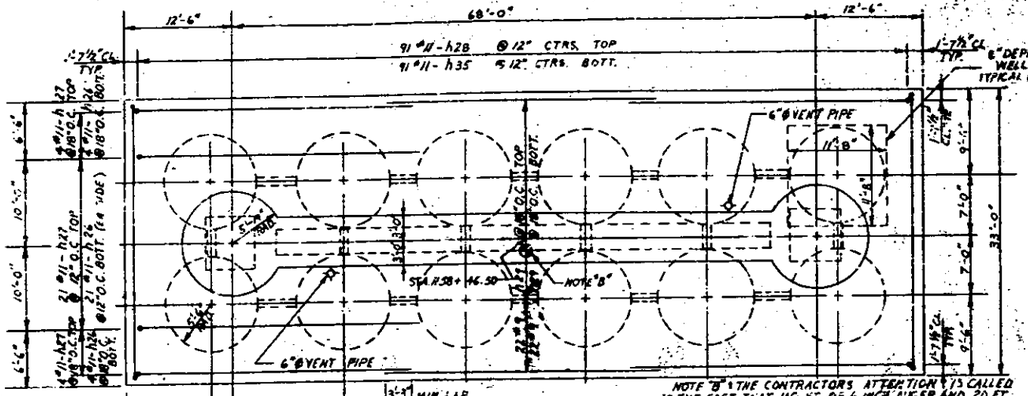
FOR SECTIONS: A-A, B-B, C-C, D-D & H-H SEE SHEET 23.
FOR BAR LIST AND SHOE DETAILS SEE SHEET 24.
I.F. = INNER FACE
O.F. = OUTER FACE

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

PIER II
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-5 ( )10
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 15.25

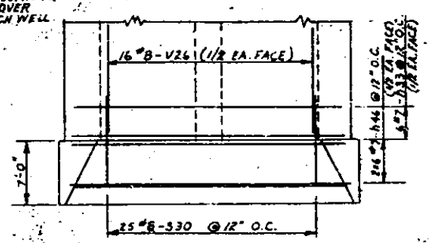
ROUTE NO.	SECTION	COUNTY	TOTAL SHTS.	TWP.
F.A.I. 57	(57-1-1) B	ALEXANDER, ILLINOIS MISSISSIPPI, MISSOURI	56	22 N
B.P.R. REG. NO. 4 B.P.R. REG. NO. 5	ILLINOIS MISSOURI	PROJECT I-57-1(6)10		

FOR DETAILS NOT SHOWN SEE SECT. E-E



TOP VIEW

NOTE "B": THE CONTRACTORS ATTENTION IS CALLED TO THE FACT THAT 110 FT. OF 6 INCH AUGER AND 20 FT. OF 10 INCH CASING WERE LEFT IN THE BORING AT THIS LOCATION BY THE BORING CONTRACTOR.



SECTION F-F (2 THUS)
SCALE: 1/8" = 1'-0"

NOTE: 6" Ø VENT PIPE TO BE STANDARD WEIGHT WROUGHT IRON PIPE (ASTM A72) AND SHALL EXTEND THROUGH WELL COVERS.

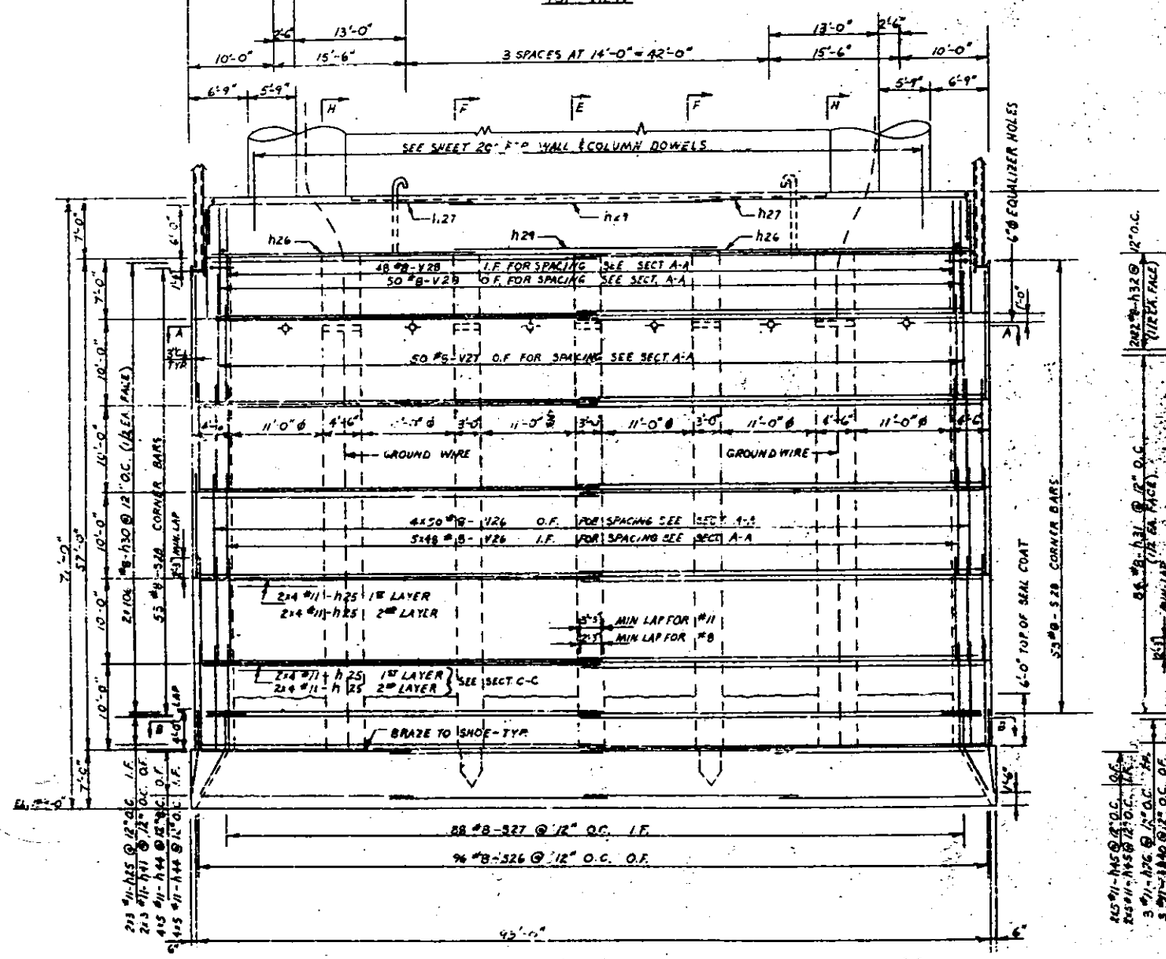
MAXIMUM PRESSURES AT BOTTOM OF OPEN DREDGED CAISSON (KIPS PER SQ. FT.)

AASHO GROUP	I	II	III	IV	V	VI	VII	VIII	IX
ACTUAL PRESSURE	6.4	10.2	9.0	8.4	10.3	9.1	12.0	20.7	22.7
ALLOW. PRESSURE	20	25	25	25	25	25	26.6	28	30

ASSUMPTIONS:
1. BUOYANCY BASED ON WATER ELEVATION 281.
2. ICE LOAD BASED ON 6 IN. THICKNESS PER ICE CULAP TOPIER AND 12 IN. THICKNESS PARALLEL TO PIER AT ELEVATION 310.
3. EARTHQUAKE LOAD = 6% DEAD LOAD.

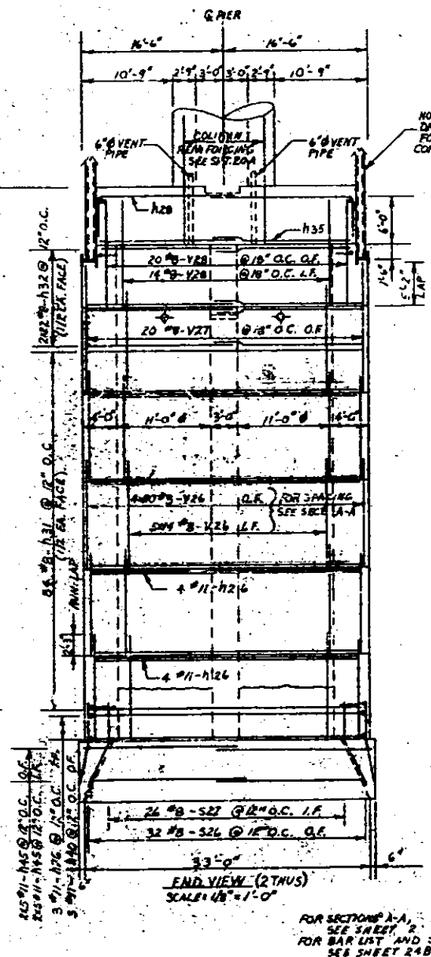
THE CONTRACTOR MAY SUBMIT TO THE ENGINEER FOR APPROVAL HIS OWN DESIGNS FOR THE CAISSONS, MAKING SUCH CHANGES IN SIZE AND ARRANGEMENTS OF DREDGING WELLS AND CUTTING EDGES AS ARE MORE SUITABLE TO HIS PLANT, EQUIPMENT, AND METHODS OF CONSTRUCTION. SEE SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.

AREA OF CAISSON = 3196 FT.²
GROSS BUOYANT DL. PRESSURE = 7.42 K/S
NET ADDITIONAL DL. PRESSURE = 2.39 K/S

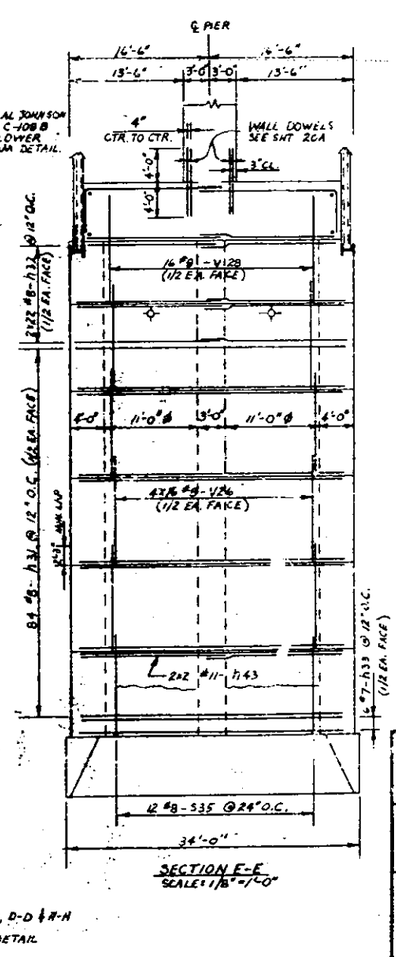


ELEVATION (2 THUS)
SCALE: 1/8" = 1'-0"

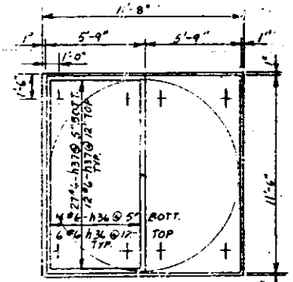
* NOTE "A":
7'-0" DIMENSION OF DISTRIBUTION BLOCK MAY BE INCREASED OR DECREASED BY 9" TO SUIT FIELD CONDITIONS. ANY INCREASE OR DECREASE GREATER THAN 9" WILL REQUIRE REDESIGN.



END VIEW (2 THUS)
SCALE: 1/8" = 1'-0"



SECTION E-E
SCALE: 1/8" = 1'-0"



DETAILS FOR LIFTING HOOKS SAME AS FOR COVER FOR 8" THICK - 13'-0" WELL - SEE SHT. 30

PRECAST WELL COVERS
(2 PANELS REQ'D PER WELL)
SCALE: 1/4" = 1'-0"

FOR SECTIONS A-A, B-B, C-C, D-D & H-H SEE SHEET 21.
FOR BAR LIST AND SHOE DETAIL SEE SHEET 24B.
I.F. = INNER FACE
O.F. = OUTER FACE

APPROVED
For Main Transmission and Materials Only
OCT 30 1972
Engineer of Design & Traffic Services

REVISION A	GENERAL REVISIONS	10-4-72

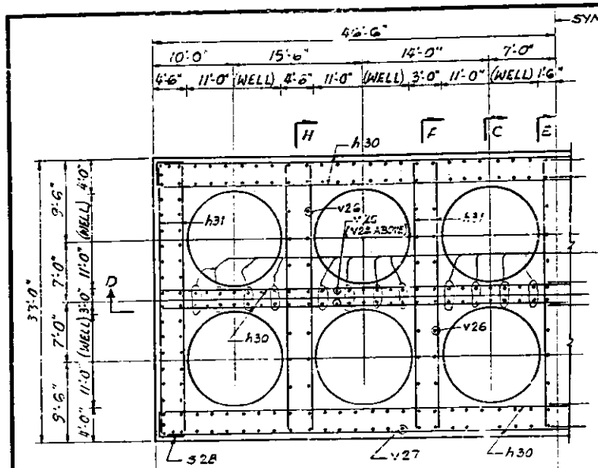
A. JOHNSON CONSTRUCTION CO.
General Contractors
OLIVIA, MINNESOTA

I-57 BRIDGE AT
I-57-1(6)10

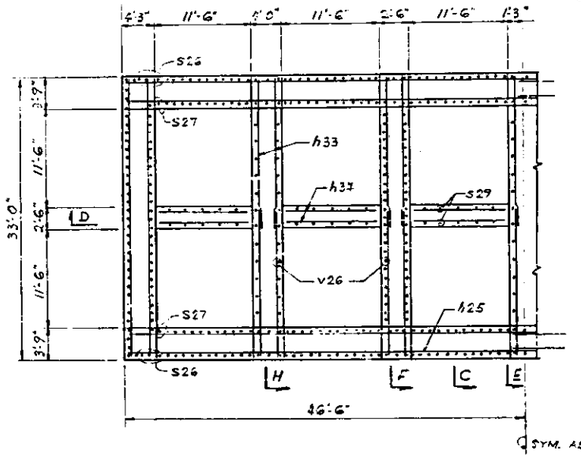
PIER II
CAISSON REINFORCING

DRAWN	CDK	DATE	9-26-72
CHECKED		DRAWING NO.	B-116
APPROVED		SHEET	20

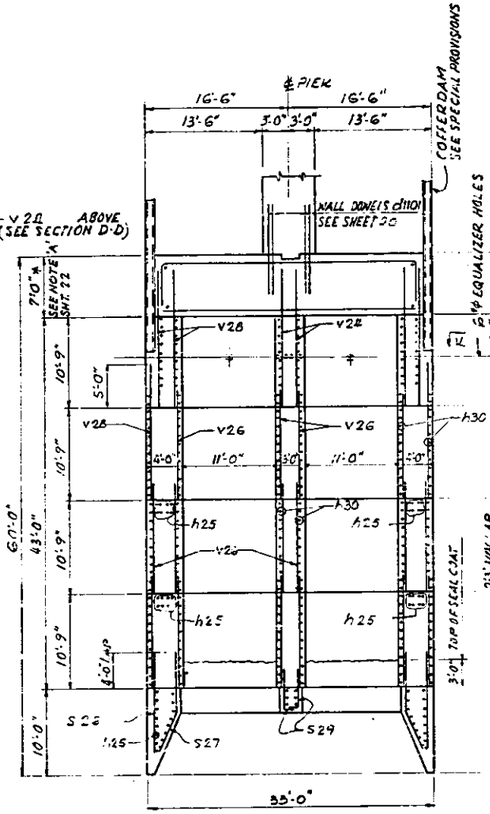
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-18-118 B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	23
DPR REG NO. & DPR REG NO. S		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



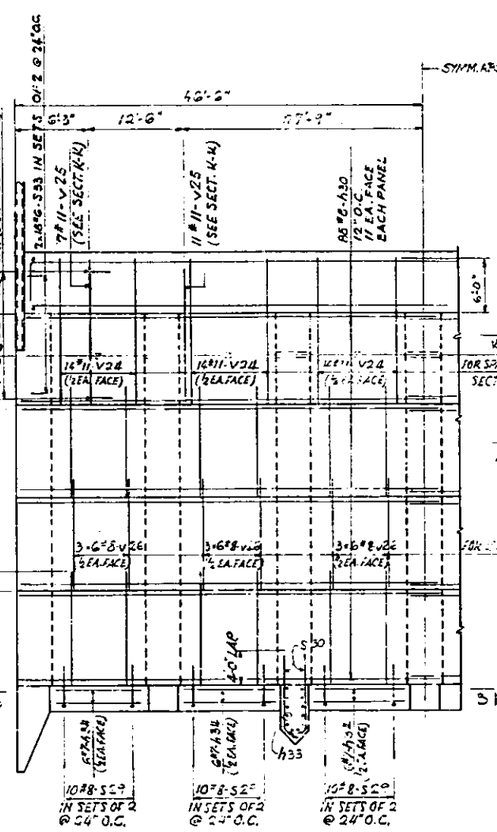
HALF SECTION A-A
SCALE: 1/8" = 1'-0"



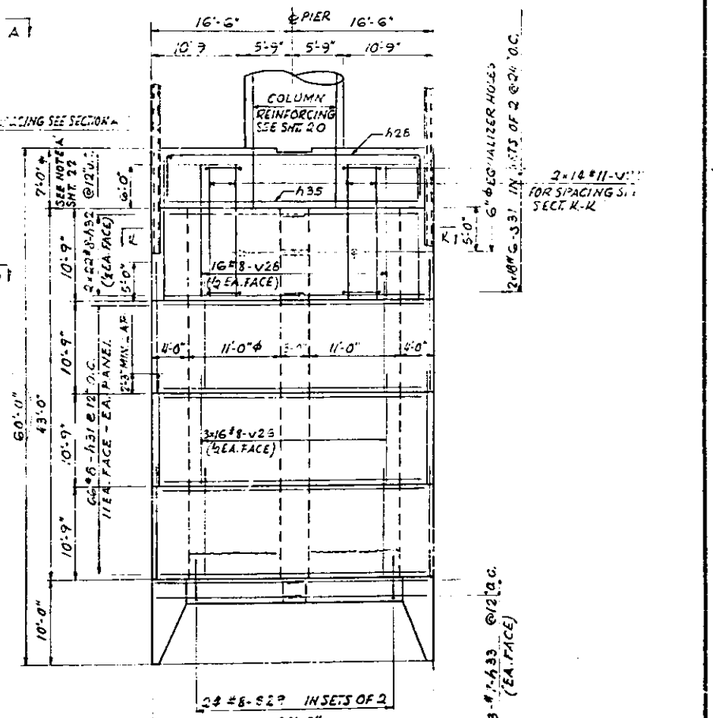
HALF SECTION B-B
SCALE: 1/8" = 1'-0"



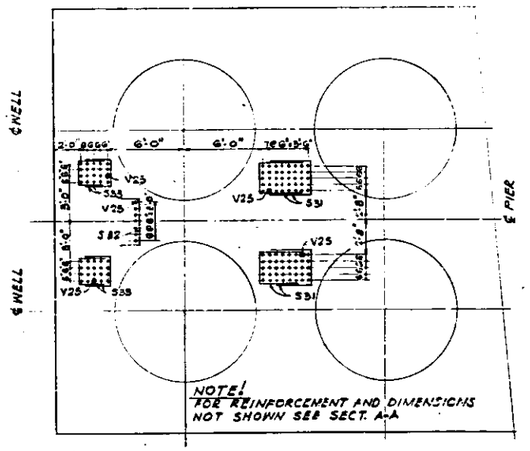
SECTION C-C
SCALE: 1/8" = 1'-0"



SECTION D-D
SCALE: 1/8" = 1'-0"



SECTION H-H (2-THUS)
SCALE: 1/8" = 1'-0"

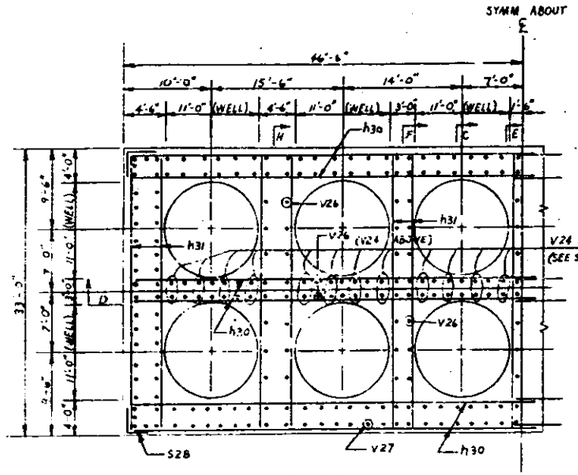


SECTION K-K
SCALE: 3/16" = 1'-0"

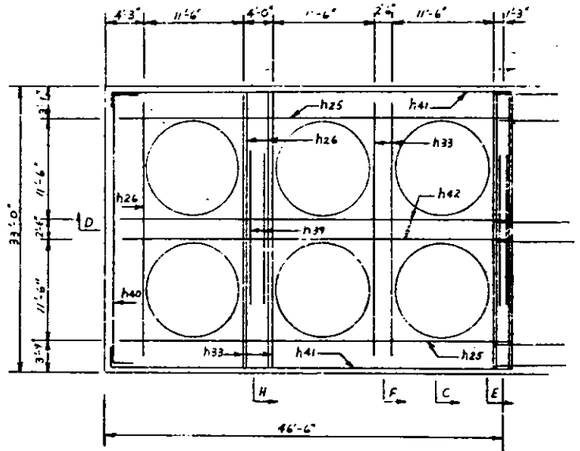
PIER II
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (102-18-118)
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1185+75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	THIS SHEET
F.A.I. 57	(02-18-1)2	ALEXANDER, ILLINOIS; MISSISSIPPI, MISSOURI	54	23B
B.P.R. REG. NO. 4		ILLINOIS	PROJECT I-57-9(3)0	
B.P.R. REG. NO. 5		MISSOURI		

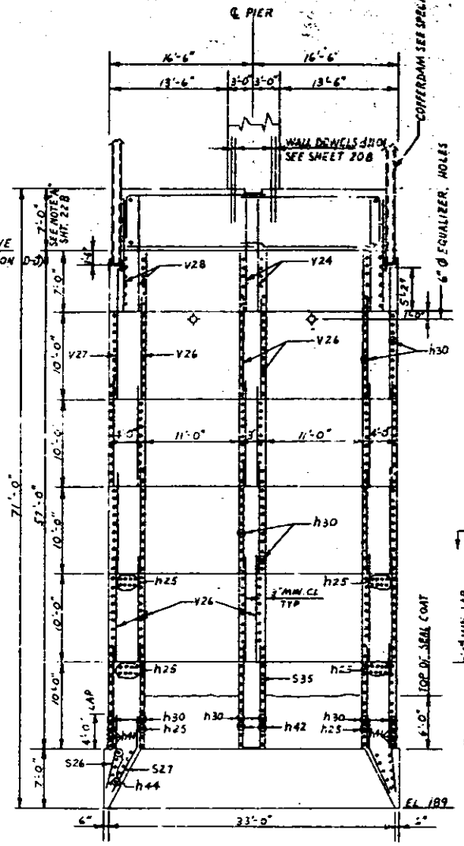


HALF SECTION A-A
SCALE: 1/8"=1'-0"

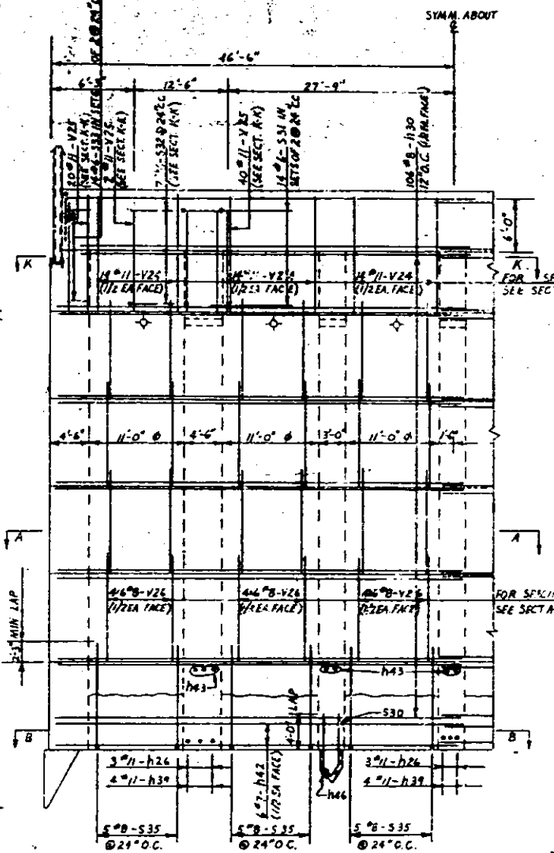


NOTE: VERTICAL STEEL NOT SHOWN.

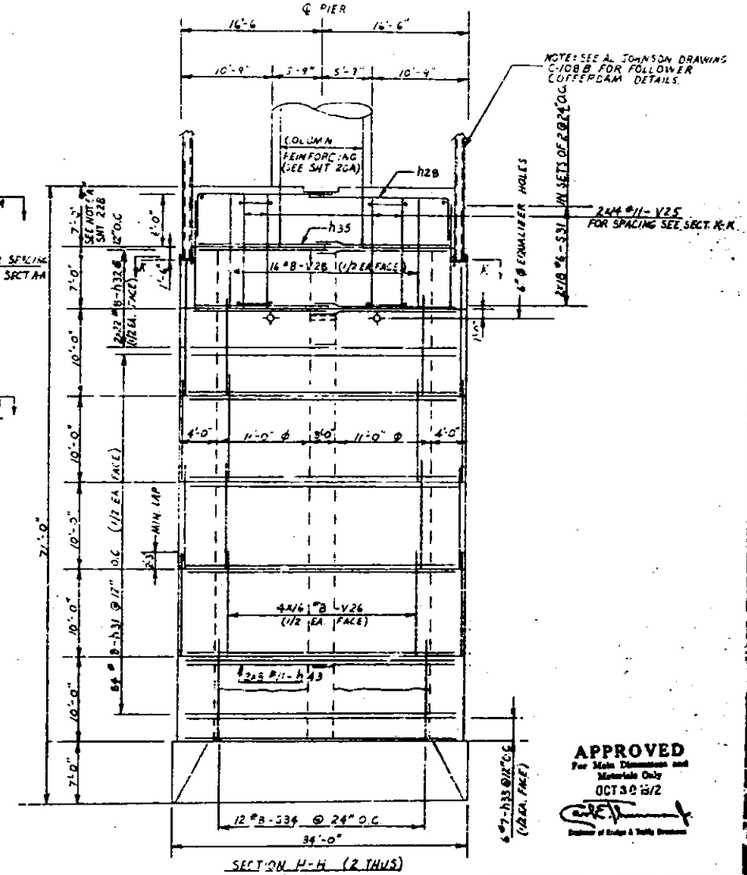
HALF SECTION B-B
SCALE: 1/8"=1'-0"



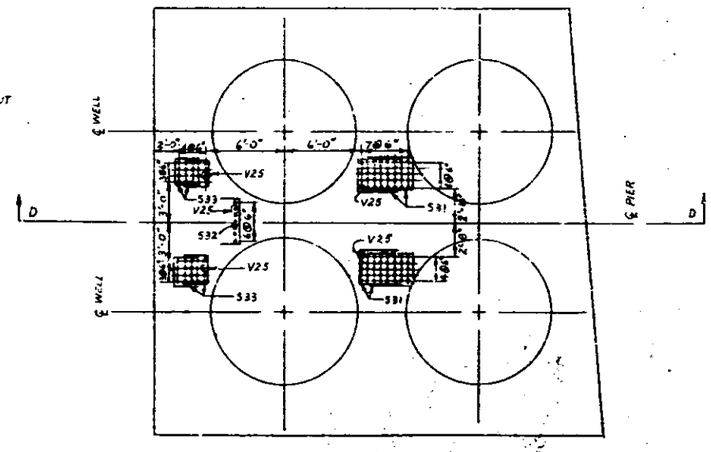
SECTION C-C
SCALE: 1/8"=1'-0"



SECTION D-D
SCALE: 1/8"=1'-0"



SECTION H-H (2 THUS)
SCALE: 1/8"=1'-0"



SECTION K-K
SCALE: 3/16"=1'-0"

NOTE: FOR REINFORCEMENT AND DIMENSIONS NOT SHOWN SEE SECTION A-A.

APPROVED
For Make, Dimensions and Materials Only
OCT 30 1972
Division of Design & Traffic Services

REVISION A	GENERAL REVISIONS	10-4-72

AL JOHNSON CONSTRUCTION CO.
General Contractors

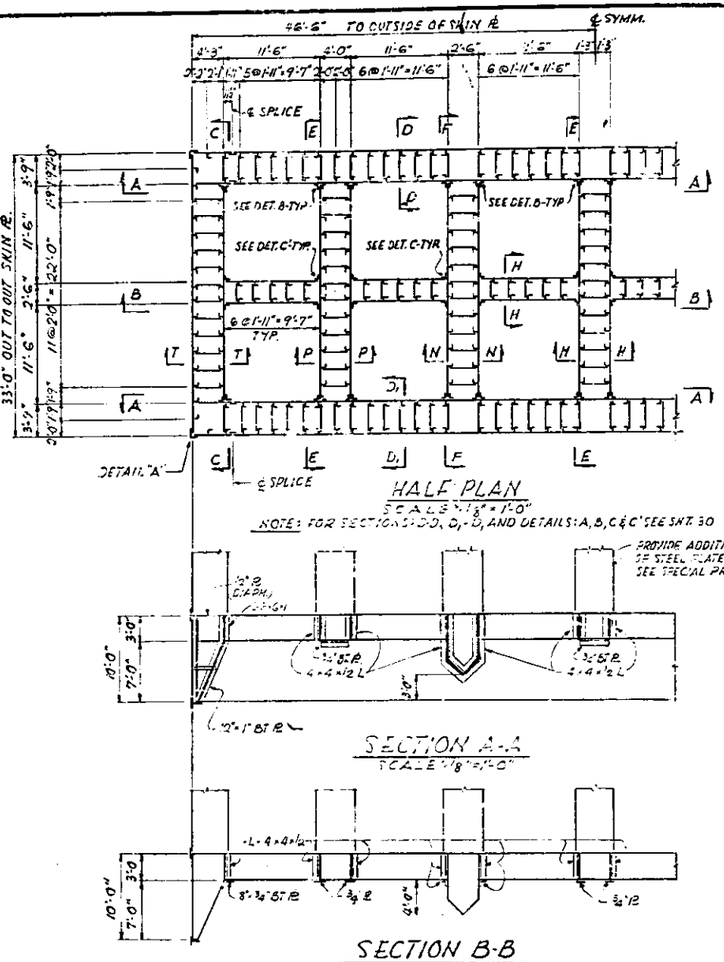
I-57 BRIDGE AT [illegible]

I-57-9(3)0

PIER 11
CAISSON REINFORCING

RDK | 7-22-72

RECEIVED
OCT 30 1972
BUREAU BRIDGES

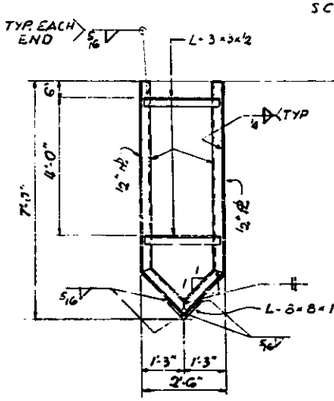


HALF PLAN
SCALE: 1/8" = 1'-0"

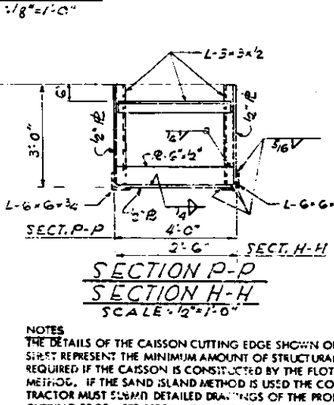
NOTE: FOR SECTIONS D-D, D_1-D_1 AND DETAILS: A, B, C & C' SEE SHT. 30

SECTION A-A
SCALE: 1/8" = 1'-0"

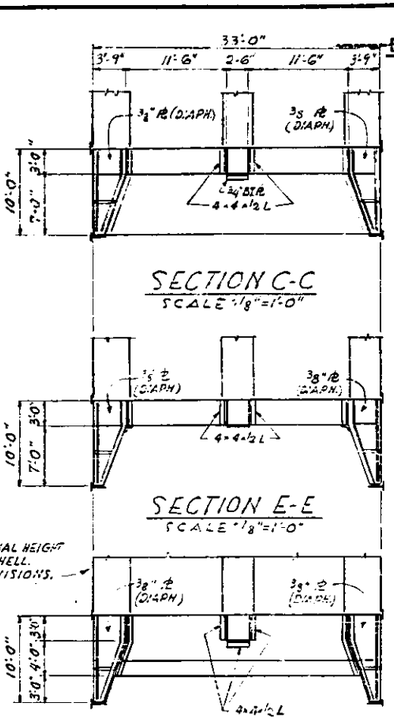
SECTION B-B
SCALE: 1/8" = 1'-0"



SECTION N-N
SCALE: 1/2" = 1'-0"



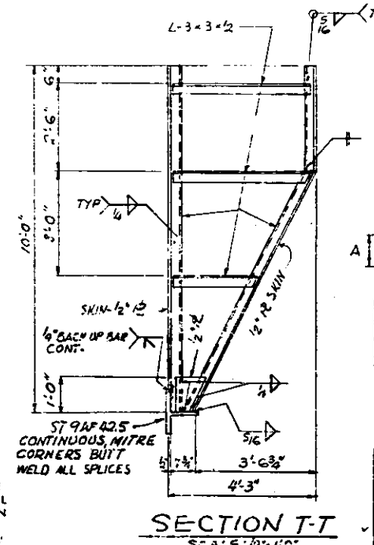
SECTION P-P
SECTION H-H
SCALE: 1/2" = 1'-0"



SECTION C-C
SCALE: 1/8" = 1'-0"

SECTION E-E
SCALE: 1/8" = 1'-0"

SECTION F-F
SCALE: 1/8" = 1'-0"



SECTION T-T
SCALE: 1/2" = 1'-0"

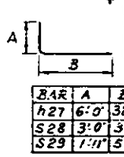
NOTES
THE DETAILS OF THE CAISSON CUTTING EDGE SHOWN ON THE SHEET REPRESENT THE MINIMUM AMOUNT OF STRUCTURAL STEEL REQUIRED IF THE CAISSON IS CONSTRUCTED BY THE FLOTATION METHOD. IF THE SAND ISLAND METHOD IS USED THE CONTRACTOR MUST SUBMIT DETAILED DRAWINGS OF THE PROPOSED CUTTING EDGE. SEE SPECIAL PROVISIONS.
STRUCTURAL STEEL SHALL BE A.S.T.M. A-36. PAINTING WILL NOT BE REQUIRED. ESTIMATED WEIGHT PER SHOE = 251,100 LBS.
STRUCTURAL STEEL WILL NOT BE PAID FOR SEPARATELY BUT THE COST THEREOF SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON PIER II.

NOTE!
BARS NOTED THUS: #11 • ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM GIS, GRADE 60.
ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIALS FOR OPEN DREDGED CAISSON

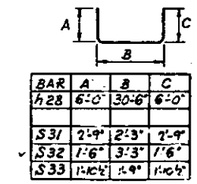
BAR	NO	SIZE	LENGTH	SHAPE
h 25	128	#11	48'-0"	—
h 26	106	#11	32'-6"	—
h 27	58	#11	36'-6"	L
h 28	91	#11	42'-6"	L
h 29	44	#9	36'-0"	—
h 30	528	#8	47'-6	—
h 31	462	#8	32'-6"	—
h 32	308	#8	17'-6"	—
h 33	84	#7	17'-3"	—
h 34	36	#7	11'-0"	—
h 35	91	#11	30'-6"	—
h 36	480	#6	11'-3"	—
h 37	936	#6	5'-6"	—
S 26	252	#8	12'-6"	—
S 27	224	#8	13'-3"	L
S 28	176	#6	6'-0"	L
S 29	132	#6	7'-6"	L
S 30	100	#8	13'-0"	L
S 31	72	#6	7'-9"	L
S 32	18	#6	6'-3"	L
S 33	72	#6	5'-6"	L
V 24	84	#11 •	16'-9"	—
V 25	154	#11 •	16'-9"	—
V 26	1000	#8	13'-0"	—
V 27	140	#8	15'-9"	—
V 28	348	#8	16'-9"	—
+ CLASS X CONCRETE			CU. YDS. 4170.1	
+ REINFORCEMENT BARS			LBS.	367,480
SEAL COAT CONCRETE			CU YDS.	942.7

+ QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY. COST TO BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON, PIER II

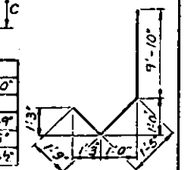


BAR	A	B
h27	6'-0"	32'-6"
S28	3'-0"	3'-0"
S29	1'-11"	5'-7"

BARS S27



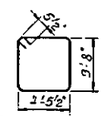
BAR	A	B	C
h28	6'-0"	30'-6"	6'-0"
S31	2'-9"	2'-3"	2'-9"
S32	1'-6"	3'-3"	1'-6"
S33	1'-10½"	4'-9"	1'-10½"



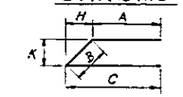
BARS S30

BILL OF MATERIALS FOR PIER

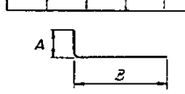
BAR	B	F	H	K
S1102	15'-5"	5'-5"	4'-6⅛"	10'-5"
S1103	11'-0"	5'-5"	2'-7"	9'-3"



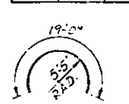
BARS S1115



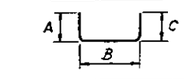
BAR	A	B	C	H	K
S1108	1'-6"	1'-3"	1'-6"	3"	1'-2½"
S1109	1'-6"	1'-9"	1'-6"	5"	1'-8"
S1110	1'-6"	1'-9"	1'-6"	9"	1'-7"
S1111	1'-6"	1'-9"	1'-6"	5"	1'-8"
S1112	1'-6"	1'-9"	2'-0"	9"	1'-7"
S1113	2'-3"	1'-9"	2'-6"	5"	1'-8"
S1114	1'-6"	1'-9"	2'-3"	9"	1'-7"



BAR	A	B
h1103	3'-0"	3'-0"
P1105	5'-0"	5'-0"
P1106	5'-0"	26'-0"



BAR S1101

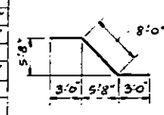


BAR	A	B	C
h1105	2'-0"	8'-0"	2'-0"
h1106	2'-0"	5'-0"	2'-0"
h1107	2'-0"	6'-3"	2'-0"
S1104	1'-6"	5'-3"	1'-6"
S1105	1'-6"	7'-0"	1'-6"
S1106	1'-6"	7'-9"	1'-6"
S1107	1'-6"	8'-6"	1'-6"
U1101	3'-0½"	5'-5"	3'-0½"
U1103	1'-9"	1'-8½"	1'-9½"
U1104	1'-6"	5'-3"	1'-6"

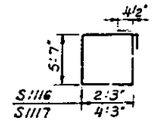
NOTE:
BARS NOTED THUS: #11 • ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM GIS, GRADE 60.
ALL BAR DIMENSIONS ARE OUT TO OUT.

BAR	NO	SIZE	LENGTH	SHAPE
d1101	226	#11 •	8'-0"	—
h1101	5	#11	66'-0"	—
h1102	152	#9	68'-3"	—
h1103	4	#8	8'-3"	—
h1104	12	#8	9'-6"	—
h1105	4	#8	12'-0"	L
h1106	4	#8	9'-0"	L
h1107	4	#8	10'-3"	L
h1108	32	#3	6'-0"	L
h1110	12	#5	26'-5"	—
h1111	12	#5	6'-3"	—
h1112	2	#5	24'-3"	—
h1113	2	#3	3'-9"	—
h1114	2	#3	4'-3"	—
P1101	28	#11	68'-0"	—
P1102	10	#11	49'-0"	—
P1103	4	#11	32'-0"	—
P1104	10	#11	77'-0"	—
P1105	20	#11	10'-0"	L
P1106	28	#11	31'-0"	L
P1107	42	#11	14'-0"	~
S1101	128	#6	19'-0"	C
S1102	196	#6	16'-0"	C
S1103	93	#6	11'-0"	C
S1104	112	#5	8'-3"	L
S1105	88	#5	10'-0"	L
S1106	60	#5	10'-9"	L
S1107	36	#5	11'-6"	L
S1108	48	#5	4'-3"	L
S1109	56	#5	4'-9"	L
S1110	56	#5	5'-0"	L
S1111	48	#5	5'-0"	L
S1112	48	#5	5'-3"	L
S1113	72	#5	6'-6"	L
S1114	72	#5	5'-6"	L
S1115	80	#5	27'-2"	L

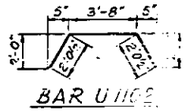
BAR	NO	SIZE	LENGTH	SHAPE
S1116	252	#4	16'-5"	L
S1117	133	#4	20'-2"	L
U1101	57	#7	11'-6"	U
U1102	6	#6	7'-9"	U
U1103	64	#4	5'-5"	U
U1104	8	#6	8'-3"	U
V1101	452	#11 •	22'-6	—
V1102	112	#11 •	20'-6	—
V1103	114	#11 •	29'-0	—
V1104	36	#11 •	19'-6	—
V1105	128	#11 •	65'-6	—
V1106	52	#11 •	28'-6	—
V1107	44	#11 •	38'-0	—
V1108	28	#11 •	7'-0	—
V1109	128	#11 •	57'-6	—
V1110	12	#11	7'-6	—
V1111	114	#10	22'-6	—
V1112	114	#7	18'-3"	—
V1113	128	#6	4'-6"	—
CLASS X CONCRETE			CU. YDS.	947.4
REINFORCEMENT BARS			LBS.	16,636



BAR P1107



BARS S1116 & S1117

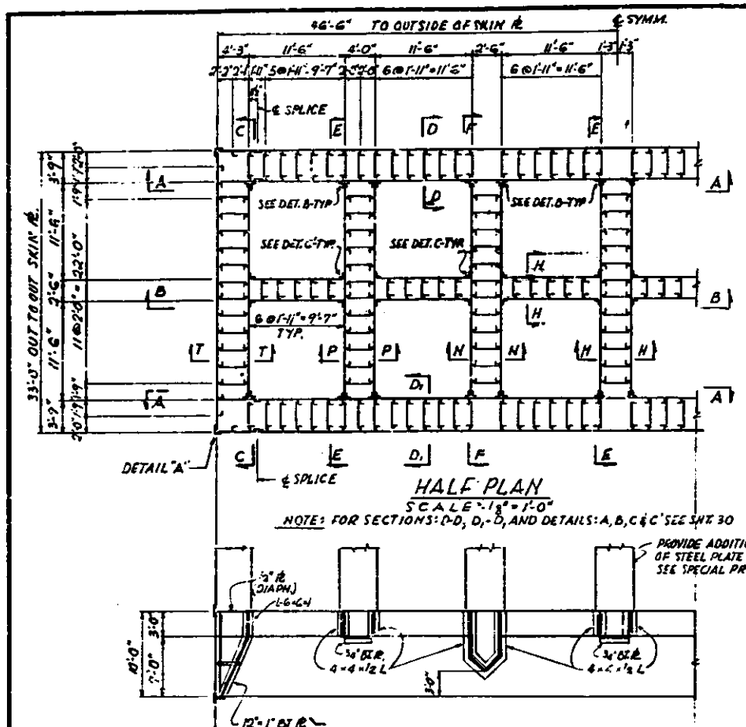


BAR U1102

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	100-1B-1	ALEXANDER, ILLINOIS		52	22
	3	MISSISSIPPI	MISSOURI		
STATE ROAD DIST NO					
F.A. RTE. NO. 5			PROJECT I-57-9(10)		

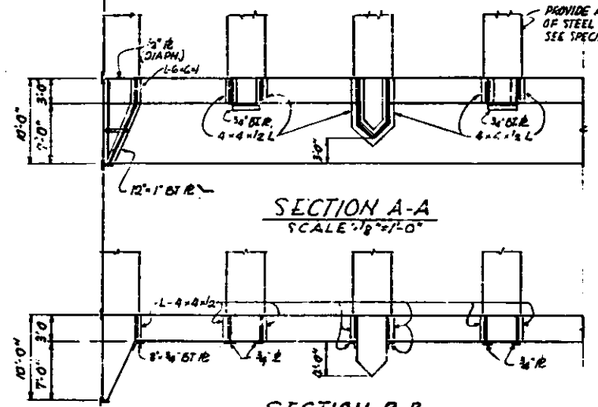
PIER II
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 114+84.75 TO STA. 1182 + 7.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS



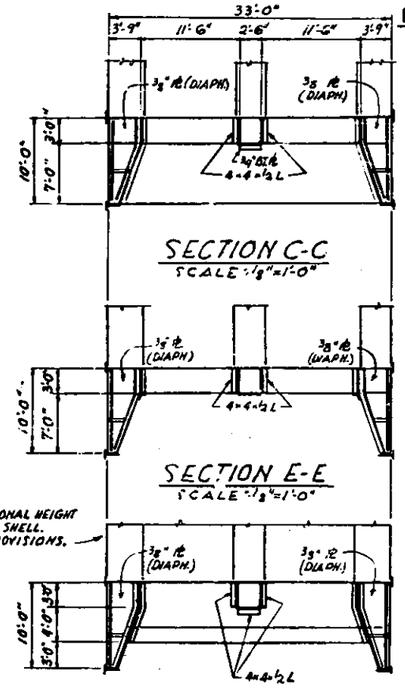
HALF PLAN
SCALE: 1/8" = 1'-0"

NOTE: FOR SECTIONS: D-D, D₁-D₁ AND DETAILS: A, B, C & C' SEE SHT 30



SECTION A-A
SCALE: 1/8" = 1'-0"

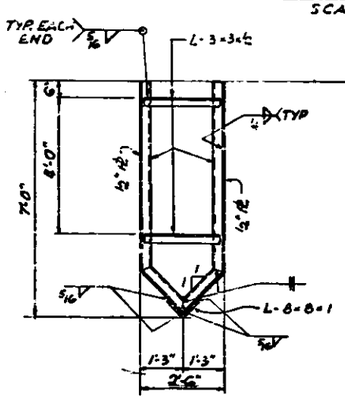
SECTION B-B
SCALE: 1/8" = 1'-0"



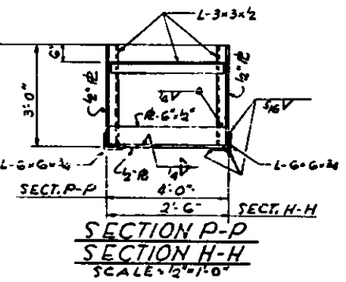
SECTION C-C
SCALE: 1/8" = 1'-0"

SECTION E-E
SCALE: 1/8" = 1'-0"

SECTION F-F
SCALE: 1/8" = 1'-0"

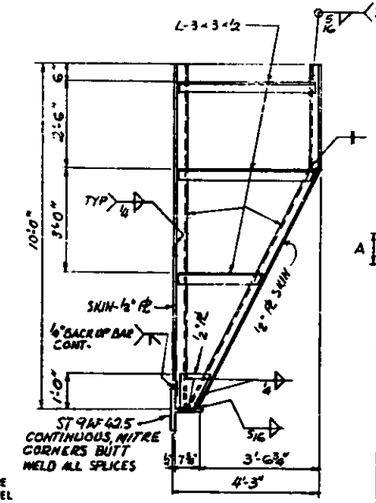


SECTION N-N
SCALE: 1/2" = 1'-0"



SECTION P-P
SECTION H-H
SCALE: 1/2" = 1'-0"

NOTES
THE DETAILS OF THE CAISSON CUTTING EDGE SHOWN ON THE SHEET REPRESENT THE MINIMUM AMOUNT OF STRUCTURAL STEEL REQUIRED IF THE CAISSON IS CONSTRUCTED BY THE FLOTATION METHOD. IF THE SAND ISLAND METHOD IS USED THE CONTRACTOR MUST SUBMIT DETAILED DRAWINGS OF THE PROPOSED CUTTING EDGE. SEE SPECIAL PROVISIONS.
STRUCTURAL STEEL SHALL BE A.S.T.M. A36. PAINTING WILL NOT BE REQUIRED. ESTIMATED WEIGHT PER SHOE = 231,100 LBS.
STRUCTURAL STEEL WILL NOT BE PAID FOR SEPARATELY BUT THE COST THEREOF SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON PIER 11.



SECTION T-T
SCALE: ½" = 1'-0"

NOTE!
BARS NOTED THUS: #11 ● ETC. TO BE HIGH STRENGTH STEEL BARS CONFIRMING TO ASTM G15, GRADE 60.
ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIALS FOR OPEN DREDGED CAISSON

BAR	Nº	SIZE	LENGTH	SHAPE
h 25	128	#11	48'0"	—
h 26	106	#11	32'6"	—
h 27	58	#11	38'6"	L
h 28	91	#11	42'6"	L
h 29	44	#9	36'0"	—
h 30	528	#8	47'6	—
h 31	462	#8	32'6"	—
h 32	308	#8	17'6"	—
h 33	84	#7	17'3"	—
h 34	36	#7	11'0"	—
h 35	91	#11	30'6"	—
h 36	480	#6	11'3"	—
h 37	936	#6	9'6"	—
S 26	252	#8	12'-6"	—
S 27	224	#8	13'-5"	✓
S 28	176	#8	6'0"	L
S 29	132	#8	7'6"	L
S 30	100	#8	13'0"	✓
S 31	72	#6	7'9"	L
S 32	18	#6	6'3"	L
S 33	72	#6	5'-6"	L
V 24	84	#11 ●	16'9"	—
V 25	254	#11 ●	16'9"	—
V 26	1000	#8	13'0"	—
V 27	140	#8	15'9"	—
V 28	384	#8	16'9"	—
✦ CLASS X CONCRETE		CU.YDS.	4170.1	
✦ REINFORCEMENT BARS		LBS.	357,480	
SEAL COAT CONCRETE		CU YDS.	942.7	

✦ QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY. COST TO BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON, PIER 11

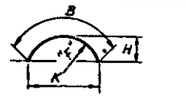
BAR	A	B
h 27	6'-0"	32'6
S 28	3'-0"	3'-0"
S 29	7'11"	5'-7"

BAR S27

BAR	A	B	C
h 28	6'-0"	30'-6"	6'-0"
S 31	2'-9"	2'-3"	2'-9"
S 32	1'-6"	3'-3"	1'-6"
S 33	1'-10½"	1'-9"	1'-10½"

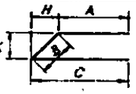
BAR S30

BILL OF MATERIALS FOR PIER

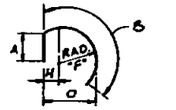


BAR	B	F	H	K
S1102	15'-3"	5'-5"	4'-6½"	10'-8"
S1103	11'-0"	5'-5"	2'-7"	9'-3"

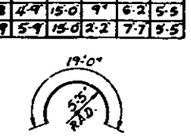
BAR S1115



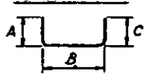
BAR	A	B	C	H	K
S1108	1'-6"	1'-3"	1'-6"	3"	1'-2½"
S1109	1'-6"	1'-9"	1'-6"	5"	1'-3"
S1110	1'-6"	1'-9"	1'-9"	9"	1'-7"
S1111	1'-6"	1'-9"	1'-9"	5"	1'-8"
S1112	1'-6"	1'-9"	2'-0"	9"	1'-7"
S1113	2'-3"	1'-9"	2'-6"	5"	1'-8"
S1114	1'-6"	1'-9"	2'-3"	9"	1'-7"



BAR	A	B	H	O	F
S1118	4'-9"	15'-0"	9"	6'-2"	5'-5"
S1119	5'-9"	15'-0"	2'-2"	7'-7"	5'-5"



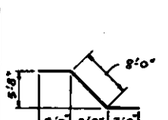
BAR S1101



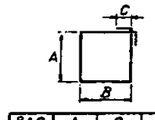
BAR	A	B	C
h1105	3'-3"	4'-0"	3'-3"
h1106	3'-3"	5'-0"	3'-3"
h1107	3'-3"	6'-8"	3'-3"
h1108	3'-3"	3'-3"	—
S1104	1'-6"	5'-3"	1'-6"
S1105	1'-6"	7'-0"	1'-6"
S1106	1'-6"	7'-9"	1'-6"
S1107	1'-6"	8'-6"	1'-6"
U1101	3'-0½"	5'-5"	3'-0½"
U1103	1'-7½"	2'-6"	1'-7½"
U1104	3'-7½"	3'-6"	3'-7½"
U1105	3'-1½"	3'-6"	3'-1½"

BAR	Nº	SIZE	LENGTH	SHAPE
d1101	452	#11 ●	61'0"	—
h1101	5	#11	68'-0"	—
h1102	152	#9	68'-0"	—
h1103	20	#8	10'-0"	—
h1104	8	#8	6'-6"	—
h1105	2	#8	10'-6"	L
h1106	6	#8	11'-6	L
h1107	4	#8	13'-9"	L
h1108	56	#8	6'-6"	L
h1112	2	#5	24'-3"	—
P1101	32	#11	68'-0"	—
P1102	10	#11	49'0"	—
P1103	4	#11	32'0"	—
P1104	10	#11	76'0"	—
P1106	28	#11	26'-6"	—
P1107	56	#11	14'0"	~
S1101	124	#6	19'0"	⌒
S1102	196	#6	16'0"	⌒
S1103	98	#6	11'0"	⌒
S1104	112	#5	8'-3"	⌒
S1105	88	#5	10'-0"	⌒
S1106	60	#5	10'9"	⌒
S1107	36	#5	11'-6"	⌒
S1108	48	#5	8'-3"	⌒
S1109	56	#5	8'-9"	⌒
S1110	56	#5	5'0"	⌒
S1111	48	#5	5'-0"	⌒
S1112	48	#5	5'-9"	⌒
S1113	72	#5	6'-6"	⌒
S1114	72	#5	5'-6"	⌒
S1115	80	#5	35'-3"	⊐

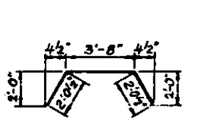
BAR	Nº	SIZE	LENGTH	SHAPE
S1116	252	#4	16'-5"	⊏
S1117	133	#4	20'-5"	⊏
S1118	2	#6	19'9"	⊐
S1119	2	#6	20'9"	⊐
U1101	57	#7	11'6"	L
U1102	6	#6	7'9"	⌒
U1103	25	#4	5'9"	L
U1104	12	#6	10'9"	L
U1105	12	#6	9'9"	L
V1101	452	#11 ●	22'6"	—
V1102	112	#11 ●	20'6"	—
V1103	114	#11 ●	29'0"	—
V1104	36	#11 ●	19'6"	—
V1105	128	#11 ●	65'6"	—
V1106	52	#11 ●	28'6"	—
V1107	44	#11 ●	36'0"	—
V1108	28	#11 ●	47'0"	—
V1109	110	#11 ●	57'6"	—
V1110	18	#11 ●	55'9"	—
V1111	28	#11	9'3"	—
V1112	114	#10	22'6"	—
V1113	114	#7	18'3"	—
CLASS X CONCRETE			CU.YDS	2,089.0
REINFORCEMENT BARS			LBS.	381,220



BAR D1107



BAR	A	B	C
S1116	5'-1"	2'-3"	4½"
S1117	5'-1"	4'-3"	4½"



BAR U1102

NOTE:
BARS NOTED THUS: #11 ● ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM G15 GRADE 60.
ALL BAR DIMENSIONS ARE OUT TO OUT.

REVISED MAR. 27, 1972

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

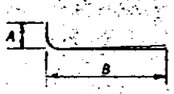
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	155-1(D-1) D	ALEXANDER MISSISSIPPI PULASKI	54	24A
S.P.R. 000, 00, 0		ILLINOIS MISSOURI	PROJECT I-57-9(10)	
S.P.R. 000, 00, 0				

PIER 11
M.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-1B-11)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 79.25

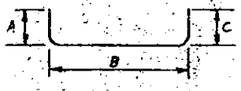
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	7-B	ALEXANDER, ILLINOIS	83	68
B.P.R. REG. NO. 4		MISSISSIPPI, MISSOURI		
B.P.R. REG. NO. 5		MISSOURI		

BILL OF MATERIALS FOR OPEN DREDGED CAISSON

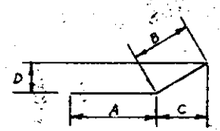
BAR	NO.	SIZE	LENGTH	SHAPE
h25	24	#11	48'-0"	
h24	106	#8	36'-5"	
h27	58	#11	35'-3"	
h28	182	#11	21'-9"	
h29	44	#9	31'-8"	
h30	634	#8	47'-6"	
h31	588	#8	32'-6"	
h32	308	#8	17'-6"	
h33	30	#7	32'-6"	
h35	182	#11	14'-9"	
h36	600	#6	11'-3"	
h37	936	#6	5'-6"	
h39	12	#11	17'-9"	
h40	6	#11	39'-0"	
h41	12	#11	51'-8"	
h42	12	#7	42'-9"	
h43	24	#11	17'-9"	
h44	80	#11	25'-9"	
h45	40	#11	18'-3"	
h46	24	#7	12'-9"	
S26	256	#8	9'-8"	
S27	228	#8	10'-6"	
S28	228	#8	6'-0"	
S30	50	#8	14'-8"	
S31	54	#6	7'-9"	
S32	14	#6	6'-3"	
S33	54	#6	5'-6"	
S34	24	#8	27'-10"	
S35	12	#8	26'-4"	
V24	84	#11	13'-0"	
V25	252	#11	13'-0"	
V26	476	#8	12'-3"	
V27	140	#8	15'-2"	
V28	364	#8	13'-0"	
CLASS X CONCRETE		CU. YD.	1956.1	
REINFORCEMENT BARS		LBS.	338,353	
SEAL COAT CONCRETE		CU. YD.	682.55	



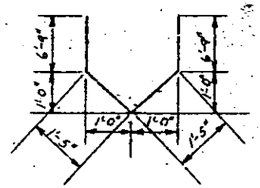
BAR	A	B
h27	5'-0"	32'-3"
h41	3'-3"	48'-5"
h28	3'-0"	8'-0"
h29	5'-0"	16'-9"



BAR	A	B	C
h40	3'-3"	32'-6"	3'-3"
S31	2'-9"	2'-3"	2'-9"
S32	1'-6"	3'-3"	1'-6"
S33	1'-10½"	1'-9"	1'-10½"
S35	12'-0"	3'-10"	12'-0"
S35	12'-0"	2'-6"	12'-0"



BAR	A	B	C	D
S26	4'-0"	5'-8"	5'-7"	6"
S27	4'-8"	6'-6"	5'-8"	3'-2"

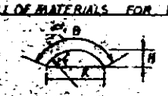


BAR S30

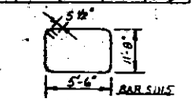
* QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY. COST TO BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON, PIER II

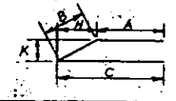
NOTE:
BARS MARKED THUS: #11 * ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM A/S, GRADE 60.
ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIALS FOR PIER

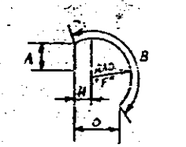


BAR	B	F	H	K
S1102	15'-3"	5'-5"	4'-6½"	10'-8"
S1103	11'-0"	3'-5"	2'-7"	9'-3"



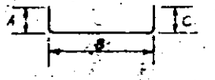


BAR	A	B	C	H	K
S1108	1'-6"	1'-3"	1'-6"	3"	1'-2½"
S1110	1'-6"	1'-9"	1'-6"	5"	1'-8"
S1111	1'-6"	1'-9"	1'-9"	9"	1'-7"
S1113	1'-6"	1'-9"	2'-0"	9"	1'-7"
S1113	2'-3"	1'-9"	2'-6"	5"	1'-8"
S1114	7'-6"	2'-9"	2'-3"	9"	1'-7"



BAR	A	B	H	O	F
S1118	4'-9"	15'-0"	9"	6'-2"	5'-5"
S1119	5'-9"	15'-0"	2'-2"	7'-7"	5'-5"

BAR S1101



BAR	A	B	C
h105	3'-3"	4'-0"	3'-3"
h106	3'-3"	5'-0"	3'-3"
h107	3'-3"	6'-8"	3'-3"
h108	3'-3"	3'-3"	—
S1104	1'-6"	5'-3"	1'-6"
S1105	1'-6"	7'-0"	1'-6"
S1106	1'-6"	7'-9"	1'-6"
S1107	1'-6"	8'-6"	1'-6"
U1101	3'-0½"	5'-5"	3'-0½"
U1103	1'-7½"	2'-6"	1'-7½"
U1104	3'-7½"	3'-6"	3'-7½"
U1105	3'-1½"	3'-6"	3'-1½"

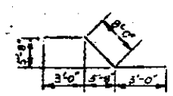
NOTE:
BARS NOTED THUS: #11 * ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM A/S, GRADE 60.
ALL BAR DIMENSIONS ARE OUT TO OUT.

APPROVED
For Main Dimensions and Materials Only
OCT 30 1972
Engineer of Bridge & Traffic Structures

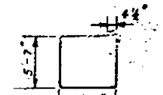
REVISION A	GENERAL REVISIONS	10-4-72

BAR	NO.	SIZE	LENGTH	SHAPE
d H01	452	#11	8'-0"	
h1101	5	#11	48'-0"	
h1102	152	#9	68'-0"	
h1103	20	#9	10'-6"	
h1104	8	#8	6'-6"	
h1105	2	#8	10'-6"	
h1106	6	#9	11'-6"	
h1107	4	#8	13'-9"	
h1109	56	#8	5'-6"	
h1112	2	#5	24'-3"	
P1101	32	#11	68'-0"	
P1102	10	#11	49'-0"	
P1103	4	#11	32'-0"	
P1104	10	#11	76'-0"	
P1106	29	#11	26'-6"	
P1107	54	#11	14'-0"	
S1101	124	#6	19'-0"	
S1102	196	#6	16'-0"	
S1103	98	#6	11'-0"	
S1104	112	#5	8'-3"	
S1105	88	#5	10'-3"	
S1106	10	#5	10'-3"	
S1107	36	#5	11'-6"	
S1108	48	#5	4'-3"	
S1109	56	#5	4'-9"	
S1110	56	#5	5'-0"	
S1111	48	#5	5'-0"	
S1112	48	#5	5'-3"	
S1113	72	#5	6'-6"	
S1114	72	#5	5'-6"	
S1115	80	#5	35'-3"	

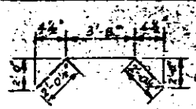
BAR	NO.	SIZE	LENGTH	SHAPE
S1116	252	#6	16'-5"	
S1117	132	#6	20'-5"	
S1118	2	#6	19'-9"	
S1119	2	#6	20'-9"	
U1101	57	#7	11'-6"	
U1102	6	#6	7'-9"	
U1103	25	#6	5'-9"	
U1104	12	#6	10'-9"	
U1105	12	#6	9'-9"	
V1101	452	#11	22'-6"	
V1102	112	#11	20'-6"	
V1103	114	#11	24'-0"	
V1104	36	#11	19'-6"	
V1105	128	#11	65'-6"	
V1106	52	#11	26'-5"	
V1107	44	#11	38'-0"	
V1108	28	#11	47'-6"	
V1109	110	#11	51'-8"	
V1110	18	#11	55'-9"	
V1111	28	#11	9'-3"	
V1112	114	#10	22'-6"	
V1113	114	#7	18'-5"	
CLASS X CONCRETE		CU. YDS.	2082.0	
REINFORCEMENT BARS		LBS.	324,420	



BAR P1107



BARS S1116 & S1117



BAR U1102

AL JOHNSON CONSTRUCTION CO.
General Contractors
MINNEAPOLIS

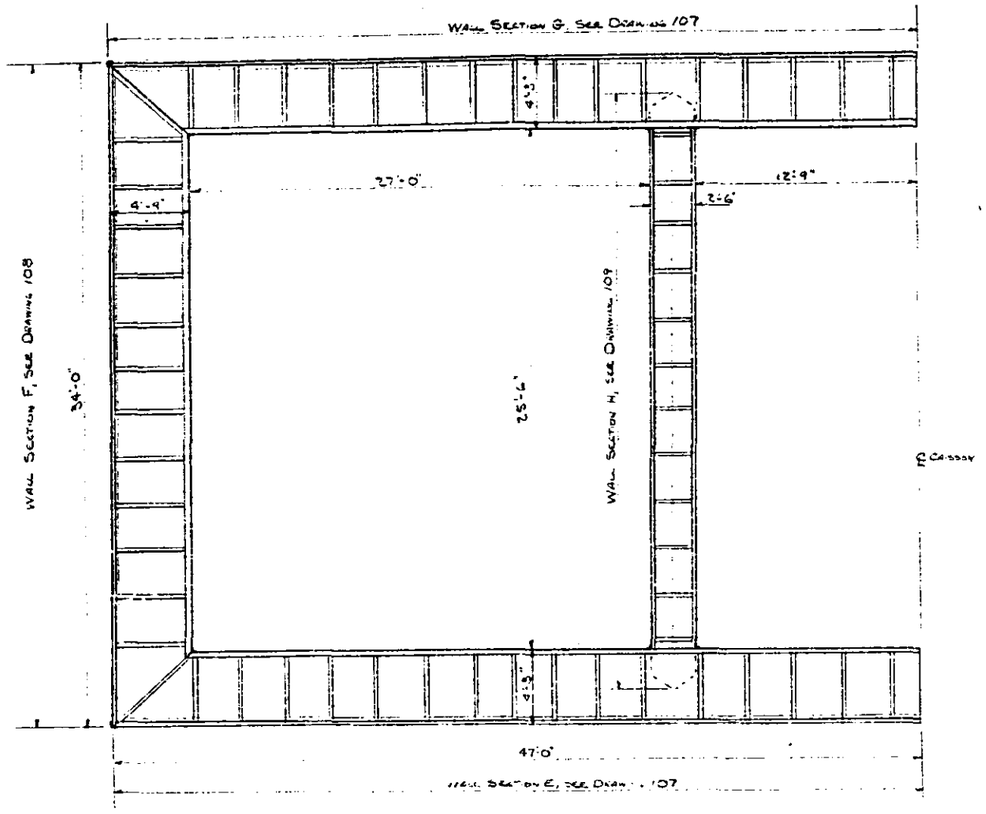
I-57 BRIDGE AT [illegible]
I-57-9(3)0

PIER II
CAISSON REINFORCING

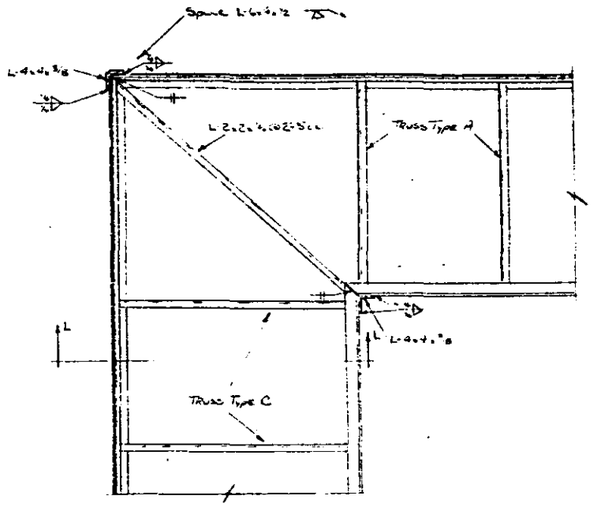
RDK

ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

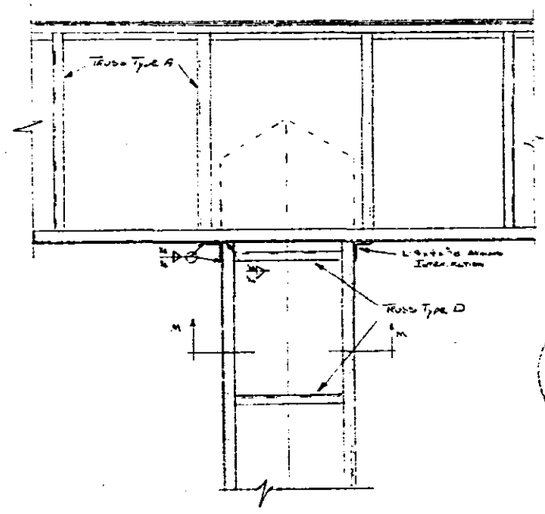
Sheet 1a of 3
54 Sheets



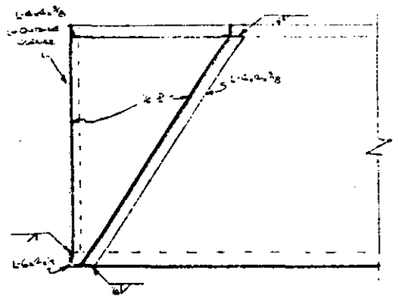
Caisson Shoe Plan Section
1/4"=1'-0"



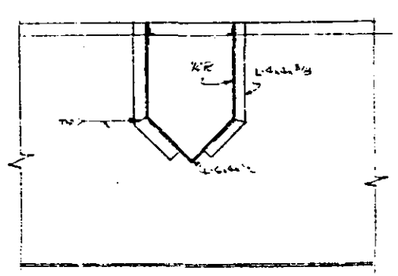
Typ Cell Corner Connection
3/4"=1'-0"



Typical Crossbeam Connection
3/4"=1'-0"



Section LL
Trusses not Shown



Section MM
Trusses not Shown

I HEREBY CERTIFY THAT THIS DRAWING WAS REVIEWED BY ME AND THAT I AM A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF TENNESSEE

Ref. AJC Drawing C-101

A	As Shown	MEM	2-3-72
NO.	REVISION	DRAWN	DATE

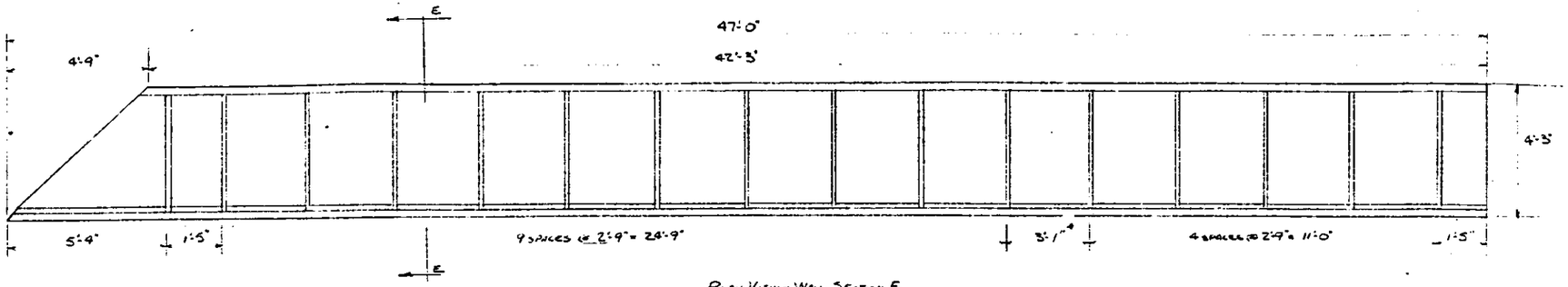
NEW JOHNSONVILLE
TENNESSEE
37134

Caisson Shoes for Cells B and C
Project No. I-87-9(3)0 Section (12-B-1)B
Pier 11
General View

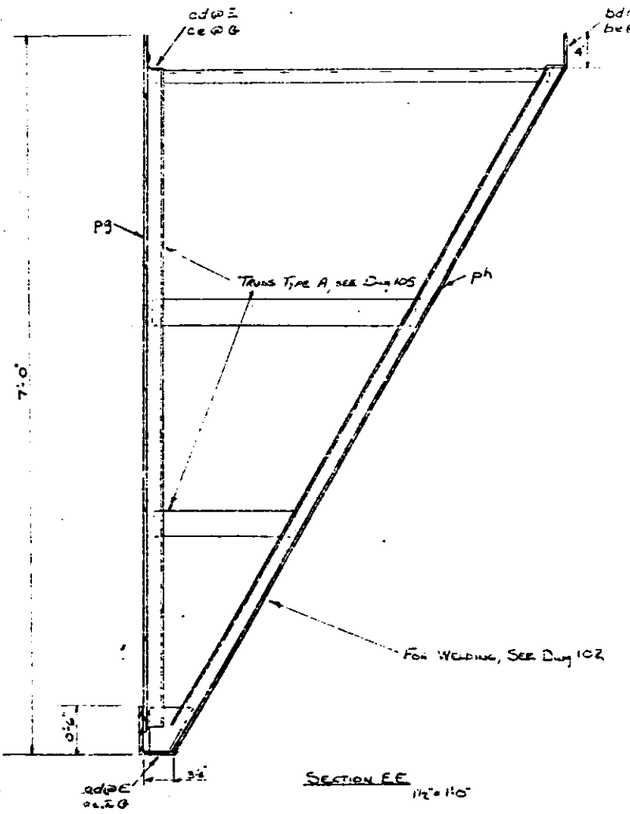
TRACE MEM	DRAWING NO. 106A		
DRAWN MEM	SHEET 1 OF 1	SCALE As Noted	
CHECK			
APPROVED	TOLERANCE	DATE 3-9-72	

ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

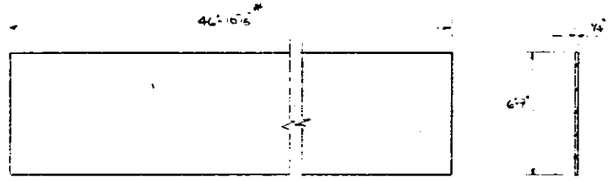
Sheet No. 29 of 54 Sheets



PLAN VIEW - WELL SECTION E
[SECTION 3 OPPOSITE HAND] 1/4"=1'-0"

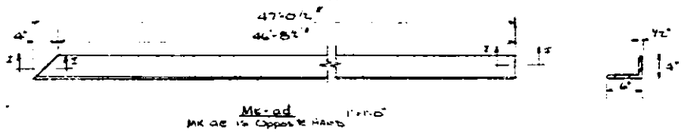


SECTION E-E 1/2"=1'-0"

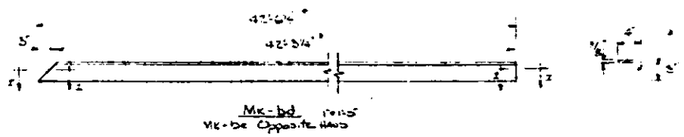


Mk-pg 1/4"=1'-0"

Mk-ph 1/4"=1'-0"

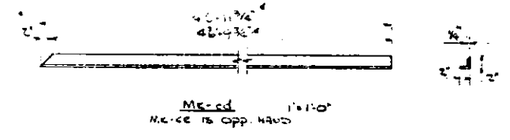


Mk-ad 1/4"=1'-0"
MK-AE IS OPPOSITE HAND



Mk-bd 1/4"=1'-0"
MK-BE OPPOSITE HAND

FOR SECTION II, SEE DRAWING 102



Mk-cd 1/4"=1'-0"
MK-CE IS OPP. HAND

I HEREBY CERTIFY THAT THIS DRAWING WAS PREPARED BY ME AND THAT I AM A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF ALABAMA

NUMBER E-15130 REGISTERED PROFESSIONAL ENGINEER

NO.	REVISION	DRAWN	DATE
A	As noted	AEM	6-1-72

NEW JOHNSONVILLE
TENNESSEE
37134

CAISSON SHORE FOR CARGO BERTH

PROJECT No. E-37-3(3)0 SECTION 102-105-106

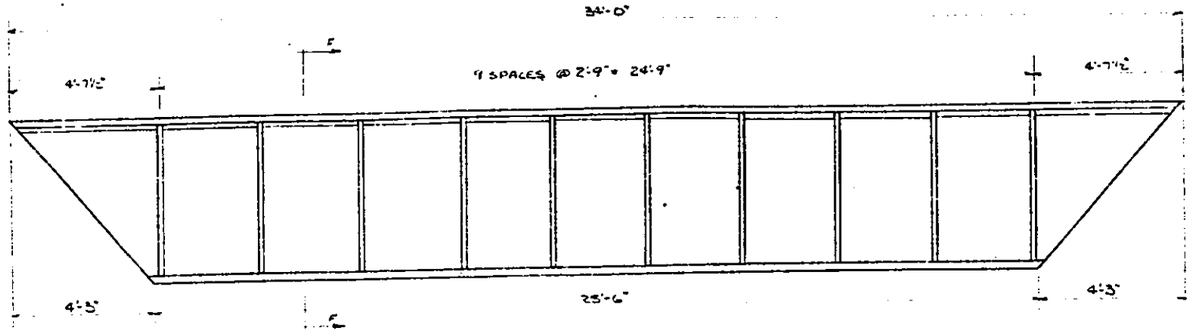
PIER II

WALL SECTIONS E & G

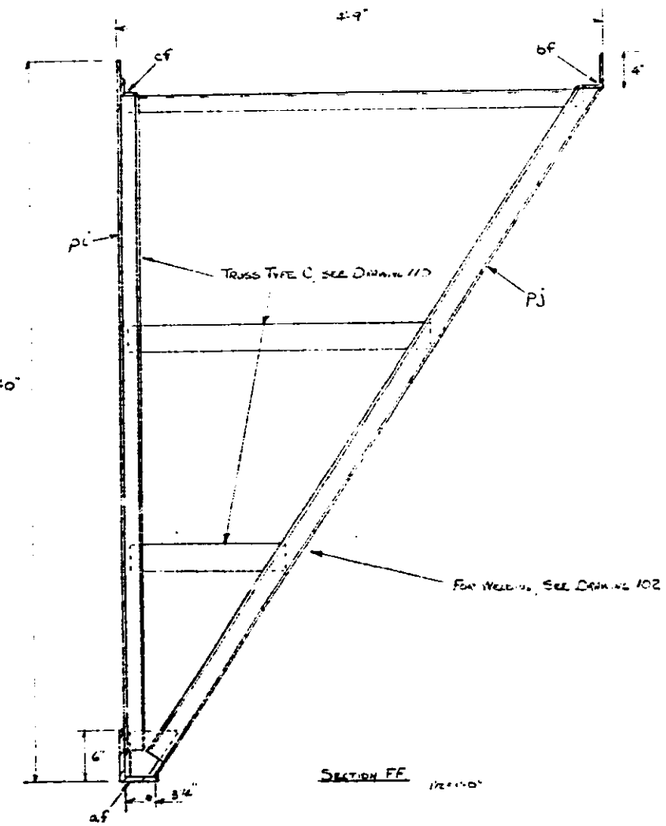
ENG'R. AEM	DRAWING NO. 107 A		
DRAWN MZM	SHEET 1 OF 1	SCALE As Noted	
CHECK	TOLERANCE	DATE 2-9-72	
APPROVED			

ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

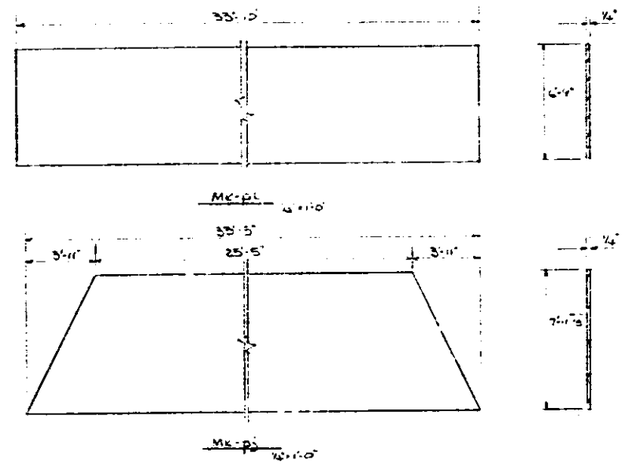
Sheet No. 3 of 64 Sheets

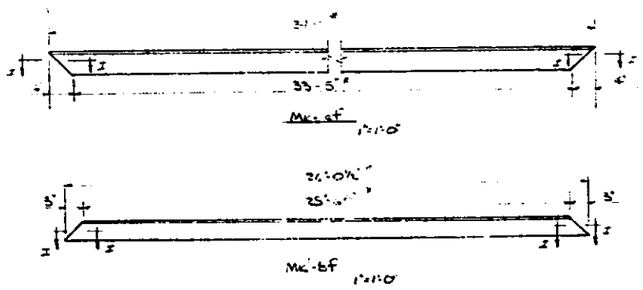


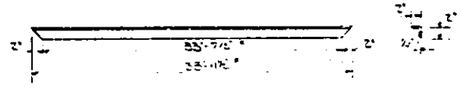
PLAN VIEW - WALL SECTION E
½"=1'-0"



SECTION FF
1"=1'-0"







NO.	REVISION	DRAWN	DATE
A	AS NOTED *		

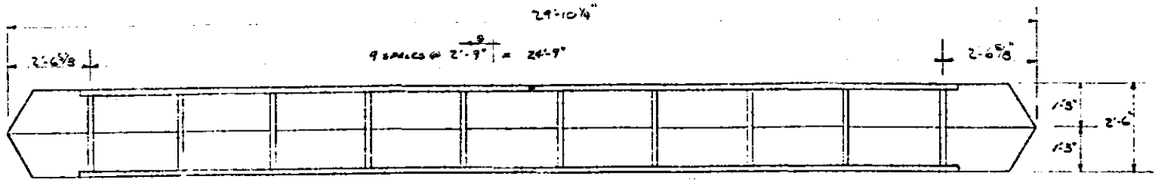
NEW JOHNSONVILLE TENNESSEE VALLEY AUTHORITY

CAISSON SHOES FOR OHIO BRIDGE
PROJECT NO. E-53-3(1) & SECTION (52-18-1)B
PIER 11
WALL SECTION F

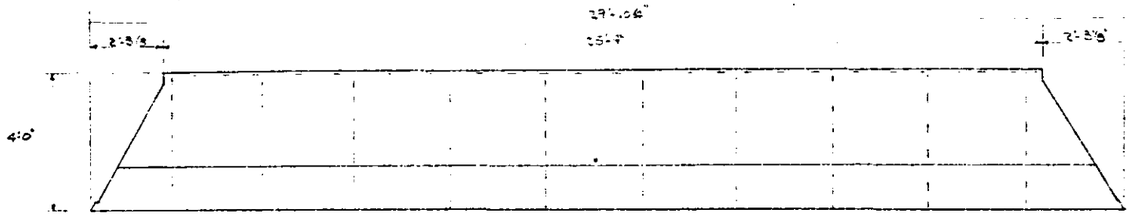
CHIEF MEA	DRAWING NO.	108 A	
DRAWN MEA	SHEET 1 OF 1	SIZE AS NOTED	
CHECK	TOLERANCE	DATE 3-6-72	
APPROVED			

ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

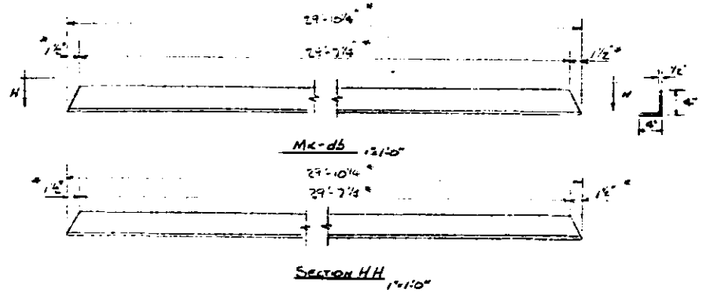
Sheet No. C-F
54 Sheets

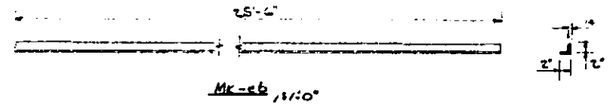


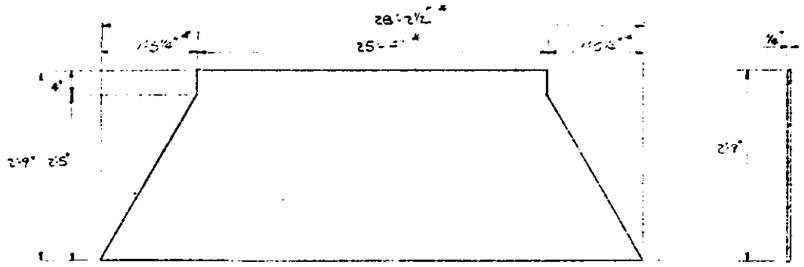
PLAN VIEW - CROSSWALL H
1½"=1'-0"

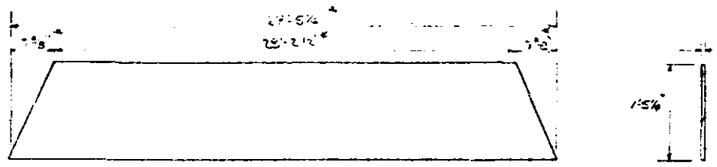


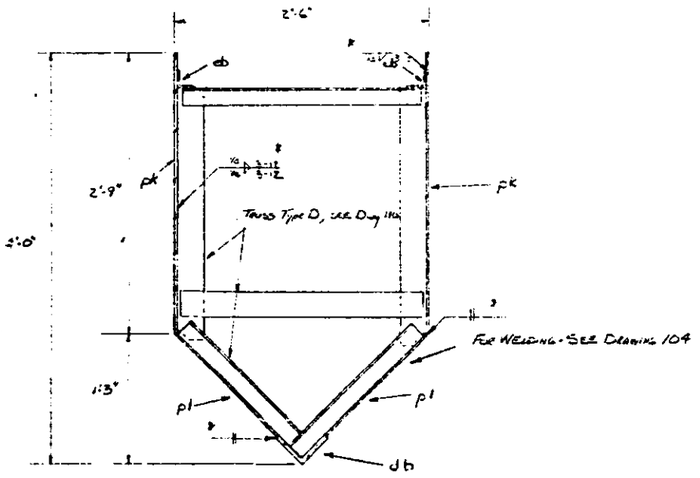
ELEVATION
1½"=1'-0"











SECTION G-G
1½"=1'-0"

I HEREBY CERTIFY THAT THIS DRAWING WAS REVIEWED BY ME AND THAT I AM A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF TENNESSEE.

Ronald Rochon

NO.	REVISION	DRAWN	DATE
A	AS NOTED	M2M	5-1-72

NEW JOHNSONVILLE
TENNESSEE
37134

CAISSON SHOES FOR CELLS BRIDGE
PROJECT No. I-81-9(3)9 SECTION (03-10-1) B

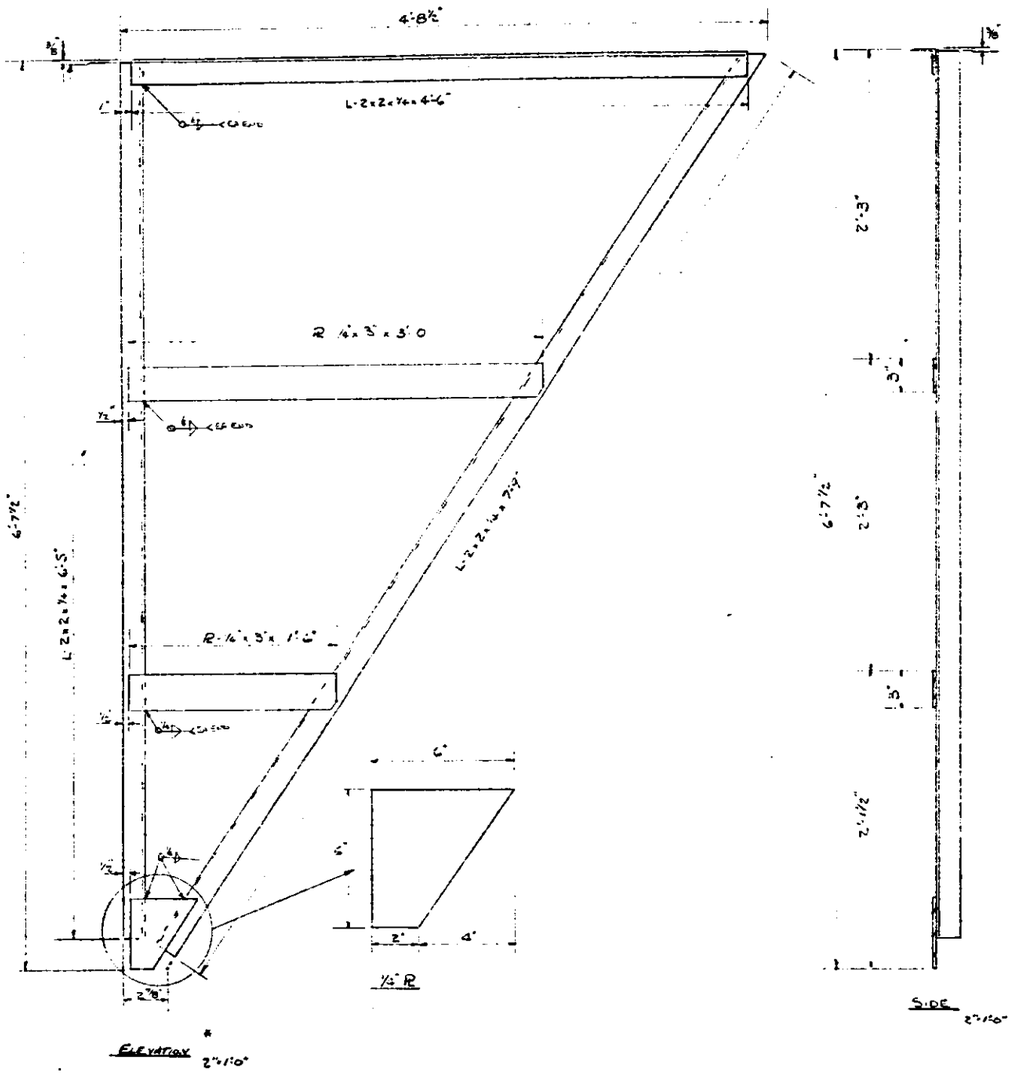
PIER 11

CROSSWALL SECTION H

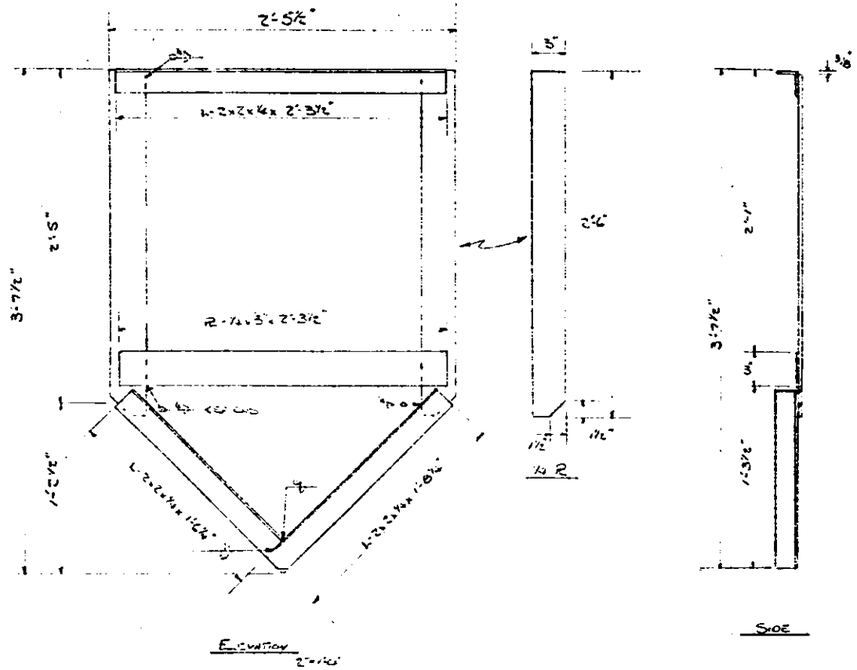
CHKD. MLM	DRAWING No.	109A	
DRAWN M2M			
CHECK	SHEET 1 OF 1	SCALE	As Noted
APPROVED	TOLERANCE	DATE	5-6-72

BILL OF MATERIALS					
ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

Sheet No. 2 of 5 Sheets



TRUSS TYPE C
[20 ROD - P11]



TRUSS TYPE D
[20 ROD - P11]

SHOP NOTE: WELD ALL TRUSS CONNECTIONS

A	AS NOTED		
NO.	REVISION	DRAWN	APP'L

NEW JOHNSONVILLE
TENNESSEE
37134

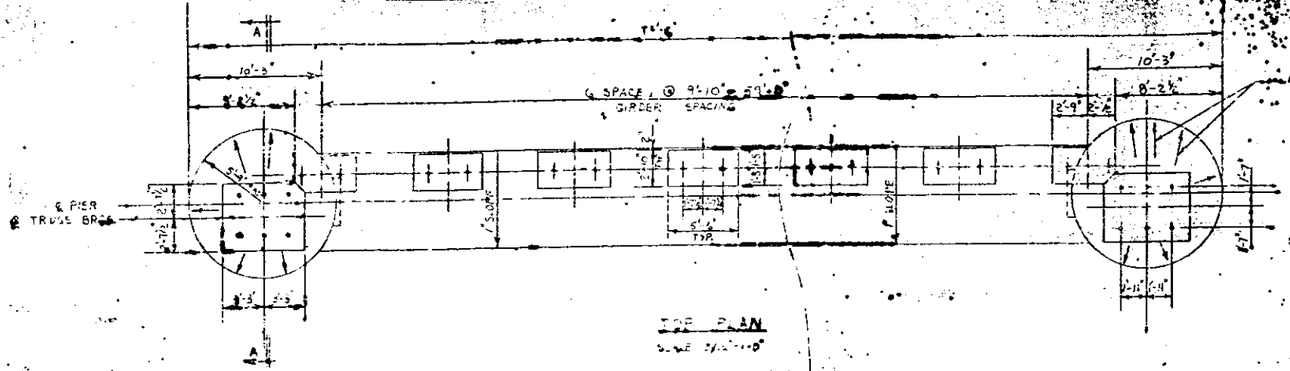
PROJECT No. E-37-9(2)3 SECTION 01-1-3

CAISSON SHOES FOR CAIN BRIDGE

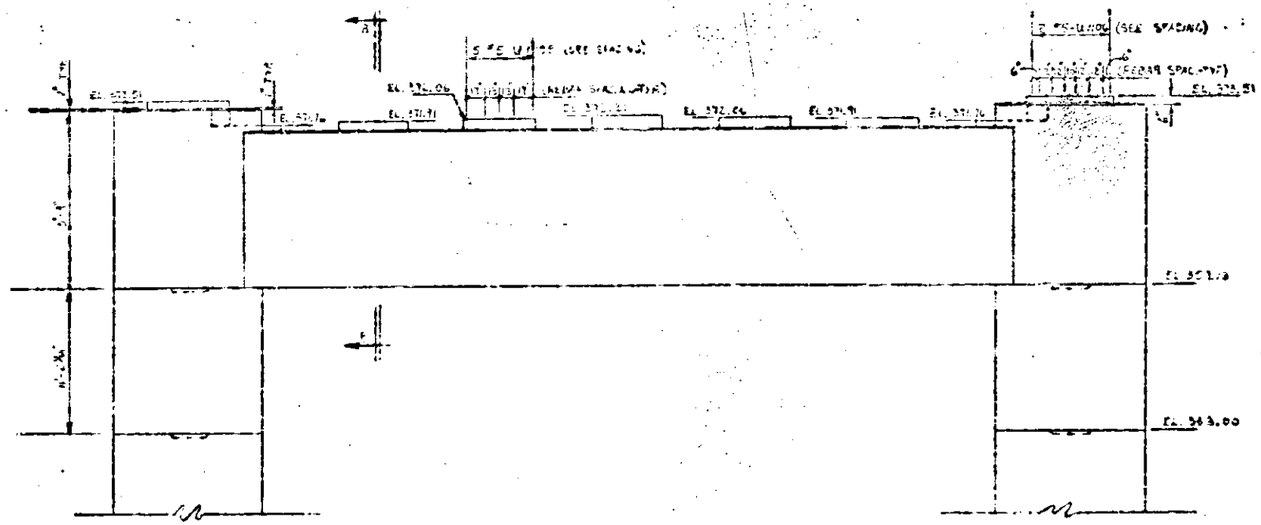
PIER 11

TRUSSES

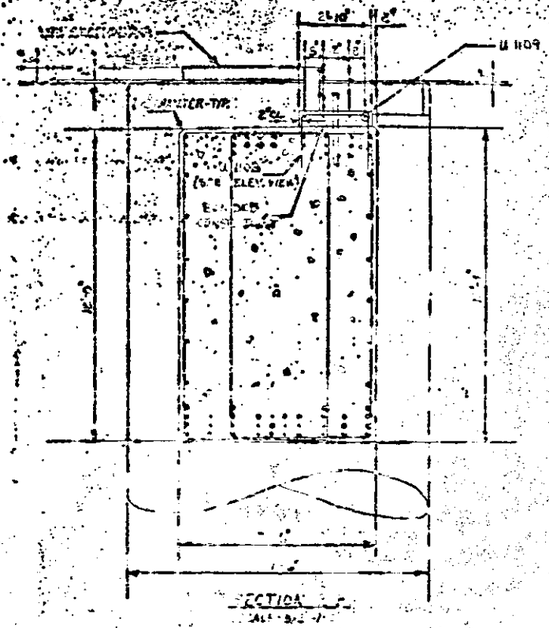
DRAWN	MRM	DRAWING NO.	110 A
TRACED	M RM		
CHECK		SHEET 1 OF 1	SCALE AS NOTED
APPROVED		TOLERANCE	DATE 3-7-75



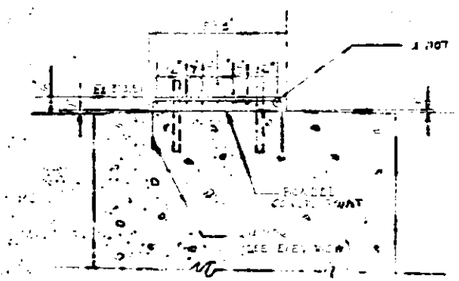
TOP PLAN
SCALE: 3/16" = 1'-0"



ELEVATION
SCALE: 3/16" = 1'-0"



SECTION
SCALE: 3/8" = 1'-0"



SECTION 2-A
SCALE: 3/8" = 1'-0"

NOTE:
1. VERTICAL REBARS IN THE CAMBRIA ABOVE EL. 348.00 (V VIII S E VIII) WILL BE SHORTENED, IF NECESSARY, TO MAINTAIN PROPER CLEARANCE FROM TOP OF PIER.

2. REBAR TIES BETWEEN EL. 348.00 AND EL. 369.18 (S/101) WILL BE SPACED SLIGHTLY CLOSER TOGETHER THAN REQUIRED.

(REFER TO SHT. 20A OF CONTRACT DRAWINGS, AND AL JOHNSON LEAFLET R-7/6 FOR REBARS NOT DEFICTED HERE.)

NOTES:
ALL BAR DIMENSIONS ARE OUT TO OUT.

BAR	NO	SIZE	LENGTH	SHAPE	A	B	C
U 105	16	#5	7'-11"		1'-6"	4'-11"	1'-6"
U 107	16	#5	8'-0"		1'-6"	5'-0"	1'-6"
U 108	36	#5	5'-6"		2'-0"	2'-0"	2'-0"
U 109	36	#5	9'-2"		2'-0"	5'-2"	2'-0"

NOTE:
SEE SHT. 20A OF CONTRACT DWGS. FOR LAYOUT OF ANCHOR BOLTS.

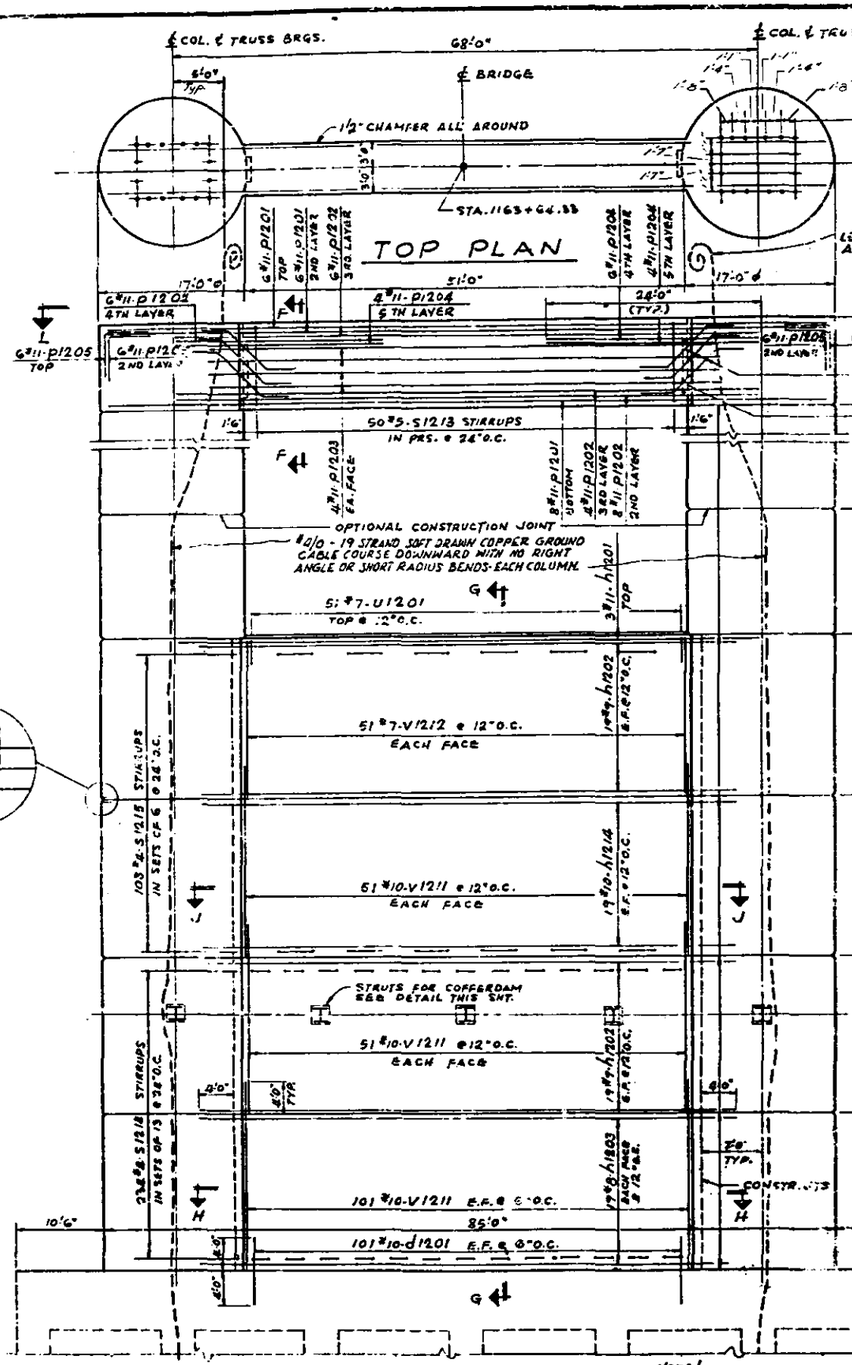
F.A.I. 57 SEC. (102)5-C
ALEXANDER COUNTY

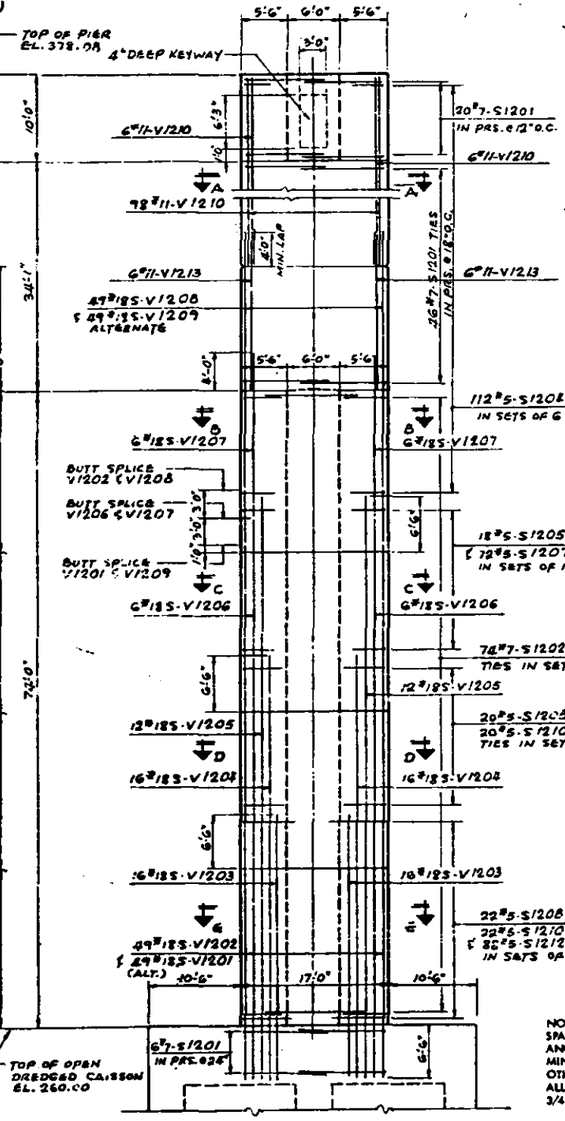
PIER II
BEARING DATA

DATE: 6-20-75
I-57 BRIDGE AT CAIRO
E-57-9(10)

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-11 B	ALEXANDER (HORIZONTAL) ILLINOIS (VERTICAL)	54	25
S.N. DES. NO. 0 F.A. DES. NO. 0		ILLINOIS MISSOURI	PROJECT I-57-9( )0	

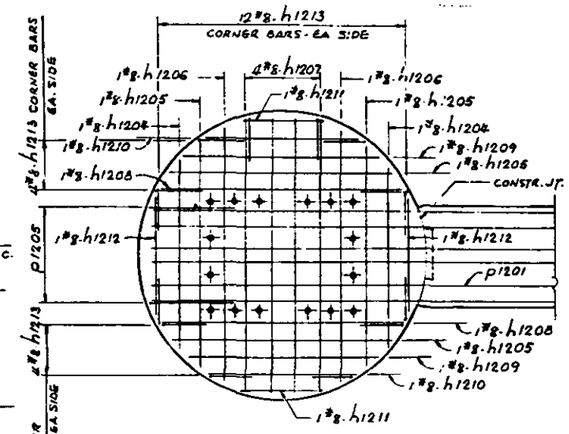
NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'-0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS. SEE SPECIAL PROVISIONS FOR REQUIREMENTS OF CONCRETE FOR COLUMNS AND BUTT SPLICES OF REINFORCEMENT.
SEE SHT. 26 FOR SECTIONS A-A THRU J-J
SEE SHT. 29 FOR BAR LIST
FULL LENGTH BARS MAY BE USED IN LIEU OF BUTT WELDED SPLICED BARS.





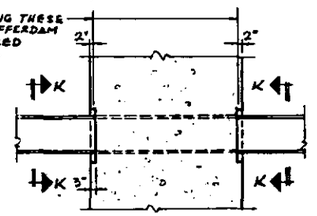
END VIEW
TWO COLUMNS THUS
SCALE: 1/8"=1'0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

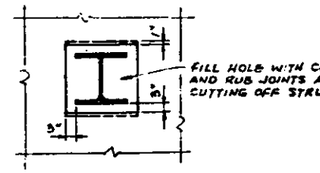


PLAN "L"
SHOWING ADDIT. REINF. AT COL'S
2 COL'S THUS
SCALE: 1/4"=1'0"

CUT STRUT ALONG THESE LINES AFTER COFFERDAM HAS BEEN BRACED AGAINST PIER.



STRUT DETAIL



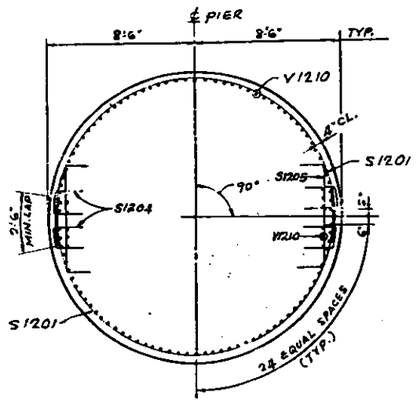
SECTION "K-K"

NOTE!
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.

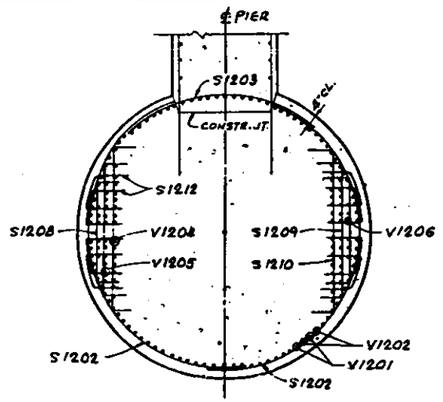
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

PIER 12
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

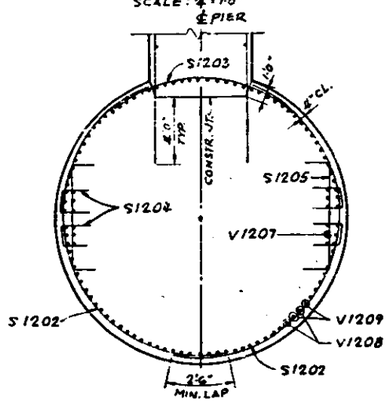
Rev Anchor Bolt location. 5-17-71 S.F.M.



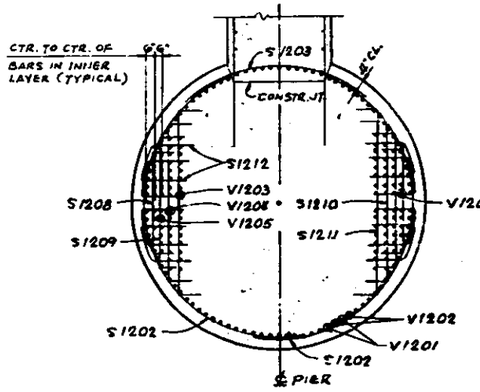
SECTION "A-A"
SCALE: 1/4"=1'-0"



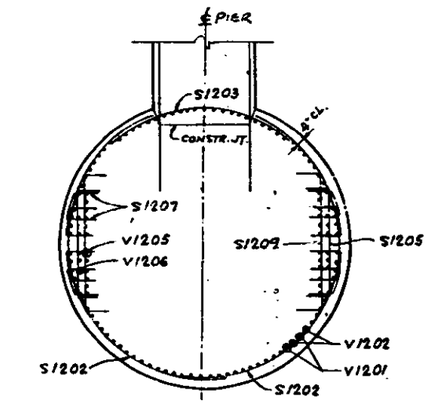
SECTION "D-D"
SCALE: 1/4"=1'-0"



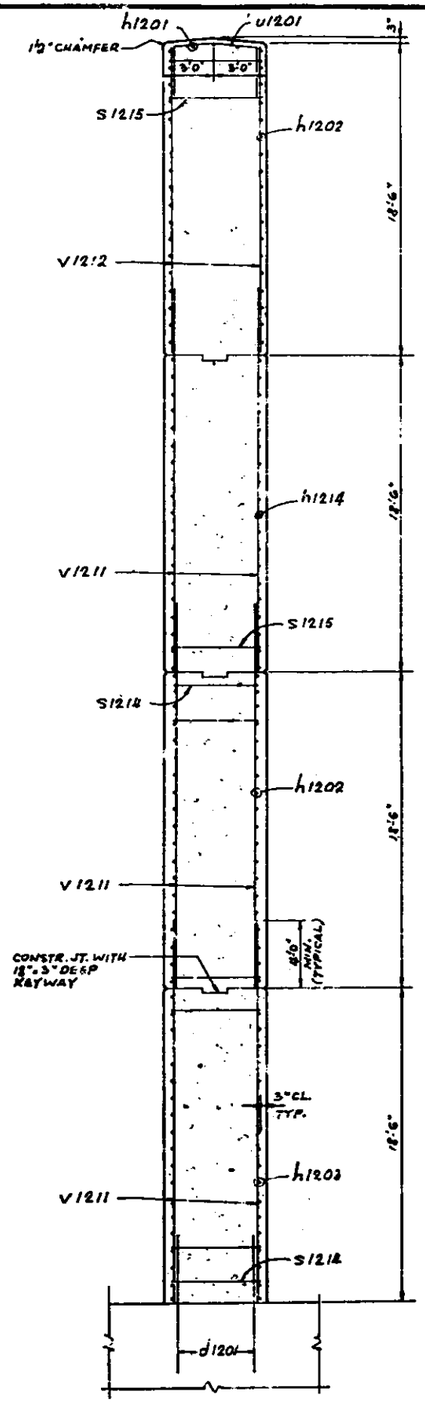
SECTION "B-B"
SCALE: 1/4"=1'-0"



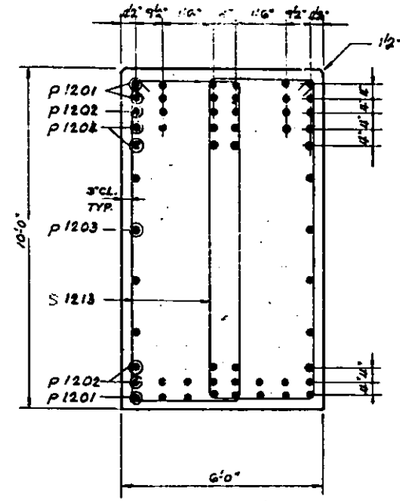
SECTION "E-E"
SCALE: 1/4"=1'-0"



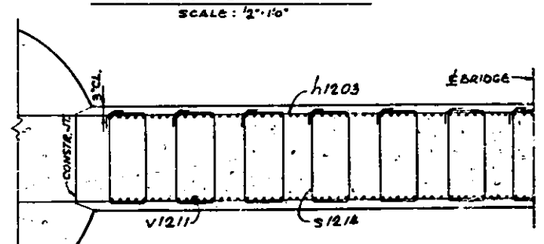
SECTION "C-C"
SCALE: 1/4"=1'-0"



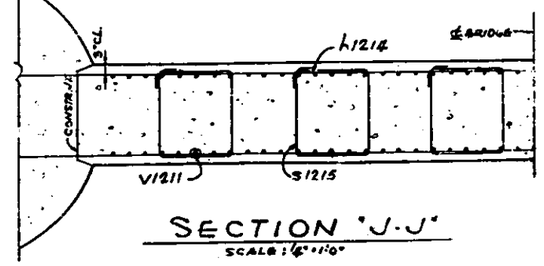
SECTION "G-G"
SCALE: 1/4"=1'-0"



SECTION "F-F"
SCALE: 1/2"=1'-0"



SECTION "H-H"
SCALE: 1/4"=1'-0"



SECTION "J-J"
SCALE: 1/4"=1'-0"

F.A.I. 57	108-18-11	6	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	TOTAL SHEETS 54	SHEET NO. 25
F.A.P. RTE. NO. 0 S.P.R. RTE. NO. 0				PROJECT I-57-9( )0	

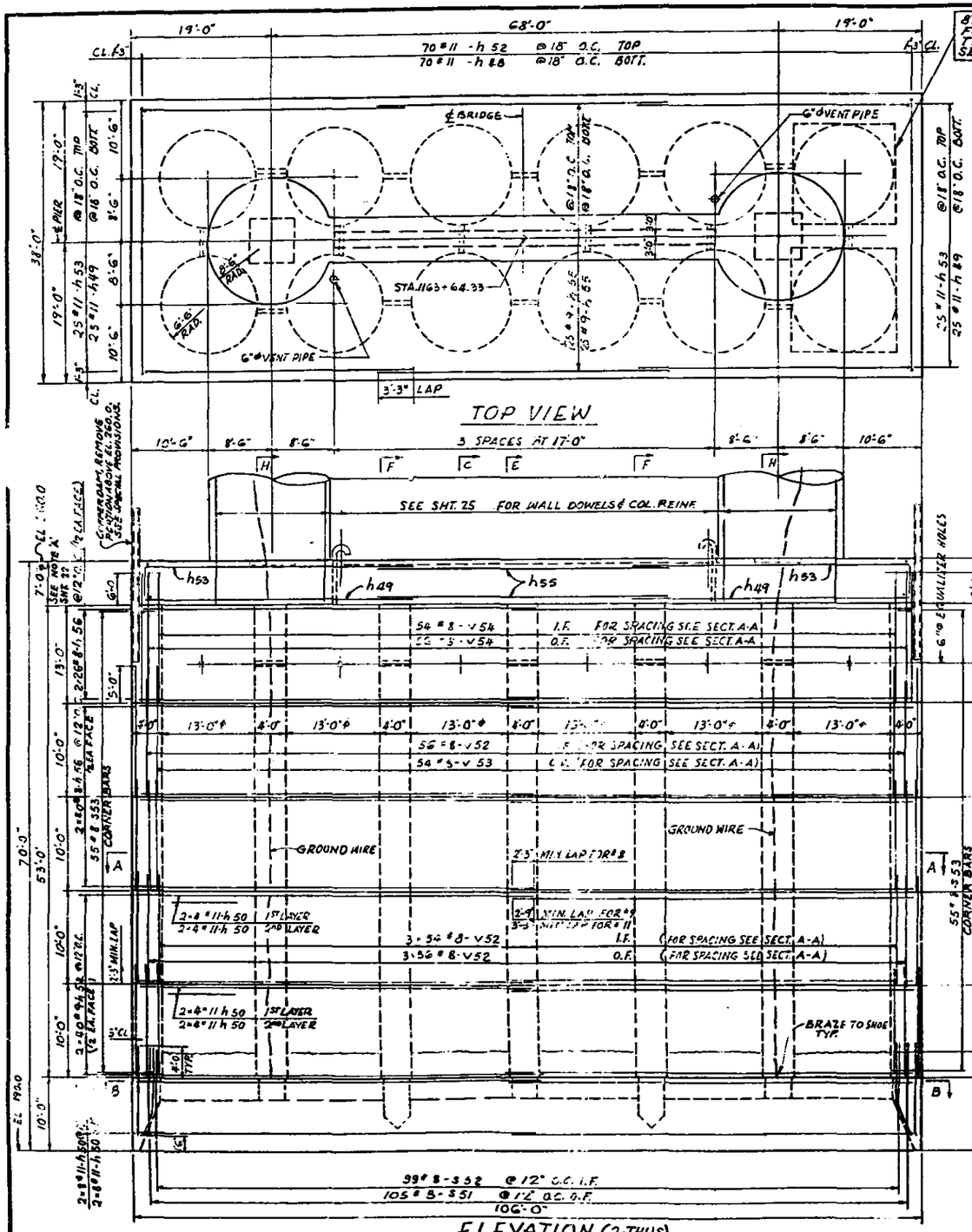
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
100 N. WABASH AVE. CHICAGO, ILLINOIS

PIER 12
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+73.25

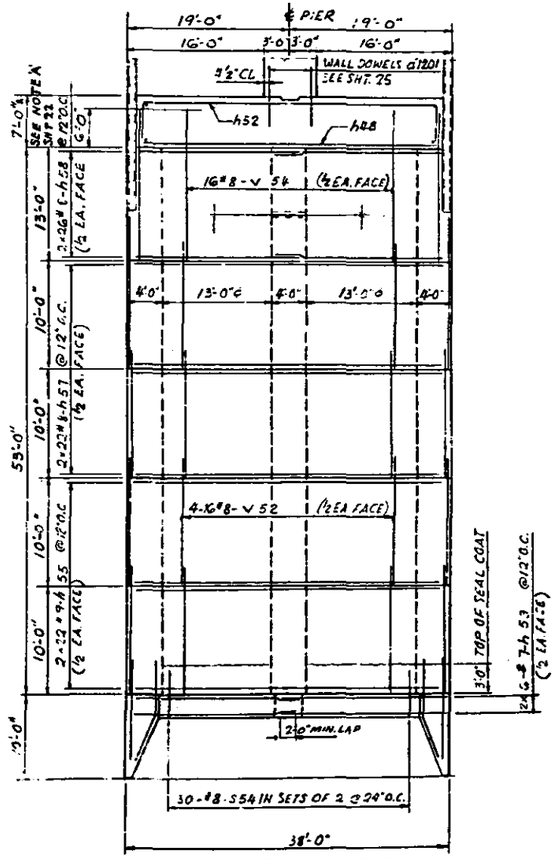
ROUTE NO	SECTION	COUNTY		SHEET NO	TOTAL SHEETS
F.A.I. 57	102-18-1S	ALEXANDER, ILLINOIS / MISSISSIPPI, MISSOURI		54	57
STATE PROJECT NO. 4 / STATE JOB NO. 5		ILLINOIS / MISSOURI	PROJECT I-57-9(10)		

8" DEPRESSION FOR WELL COVER TYPICAL EACH WELL SEE SHT. 30

NOTE: MAXIMUM PRESSURES AT BOTTOM OF OPEN-DREDGED CAISSON SIMILAR TO PRESSURES TABULATED FOR PIER 13 ON SHEET 33. THE CONTRACTOR MAY SUBMIT TO THE ENGINEER FOR APPROVAL HIS OWN DESIGNS FOR THE CAISSONS, MAKING SUCH CHANGES IN SIZE AND ARRANGEMENTS OF DREDGING WELLS AND CUTTING EDGES AS ARE MORE SUITABLE TO HIS PLANT, EQUIPMENT AND METHOD OF CONSTRUCTION. SEE SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.



NOTE: MAXIMUM PRESSURES AT BOTTOM OF OPEN-DREDGED CAISSON SIMILAR TO PRESSURES TABULATED FOR PIER 13 ON SHEET 33. THE CONTRACTOR MAY SUBMIT TO THE ENGINEER FOR APPROVAL HIS OWN DESIGNS FOR THE CAISSONS, MAKING SUCH CHANGES IN SIZE AND ARRANGEMENTS OF DREDGING WELLS AND CUTTING EDGES AS ARE MORE SUITABLE TO HIS PLANT, EQUIPMENT AND METHOD OF CONSTRUCTION. SEE SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.



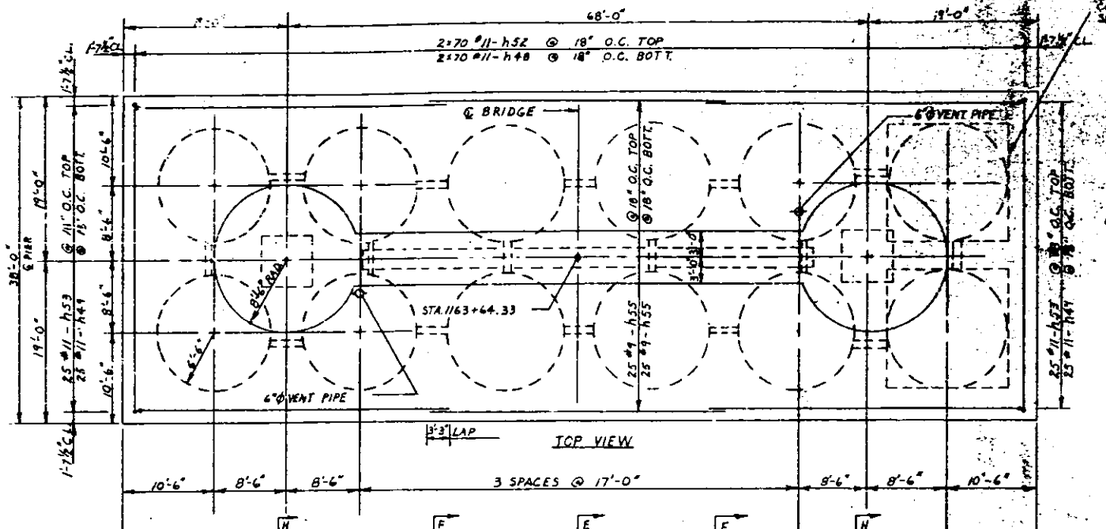
FOR SECTIONS: A-A, B-B, C-C & D-D SEE SHEET 28
FOR SECTION H-H AND BAR LIST SEE SHEET 29
FOR SHOE DETAILS SEE SHEET 30
I.F. INNER FACE.
O.F. OUTER FACE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

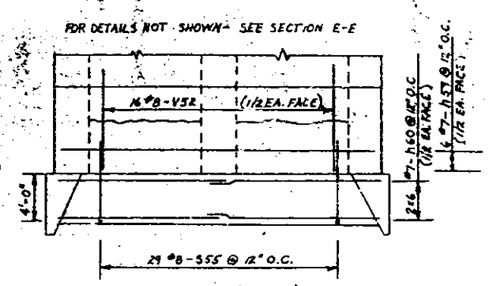
PIER 12
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)S
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1181 + 75.25

ROUTE NO.	SECTION (02-18-1)	COUNTY	TOTAL SHTS.	SHT. NO.
FAI 57	6	ALEXANDER, ILLINOIS / MISSISSIPPI, MISSOURI	54	27B
U.S. REG. NO. 1		ILLINOIS	PROJECT I-57-9(10)	
S.P.R. REG. NO. 5		MISSOURI		

8" DEPRESSION FOR WELL COVER, TYPICAL EACH WELL. SEE SHT. 30



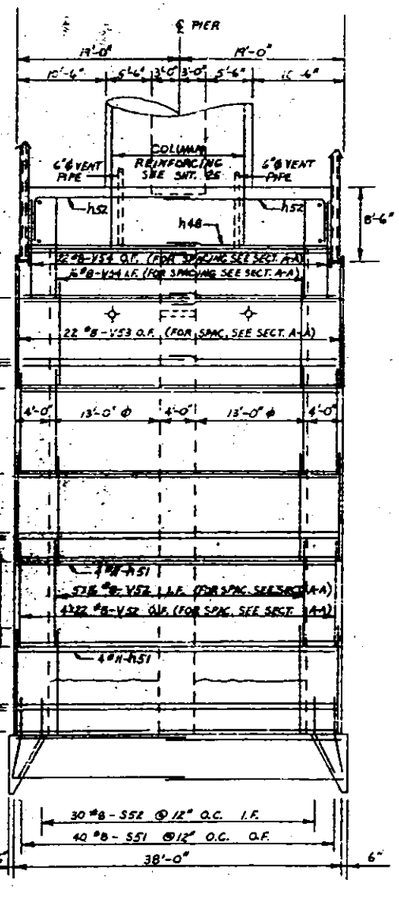
FOR DETAILS NOT SHOWN SEE SECTION E-E

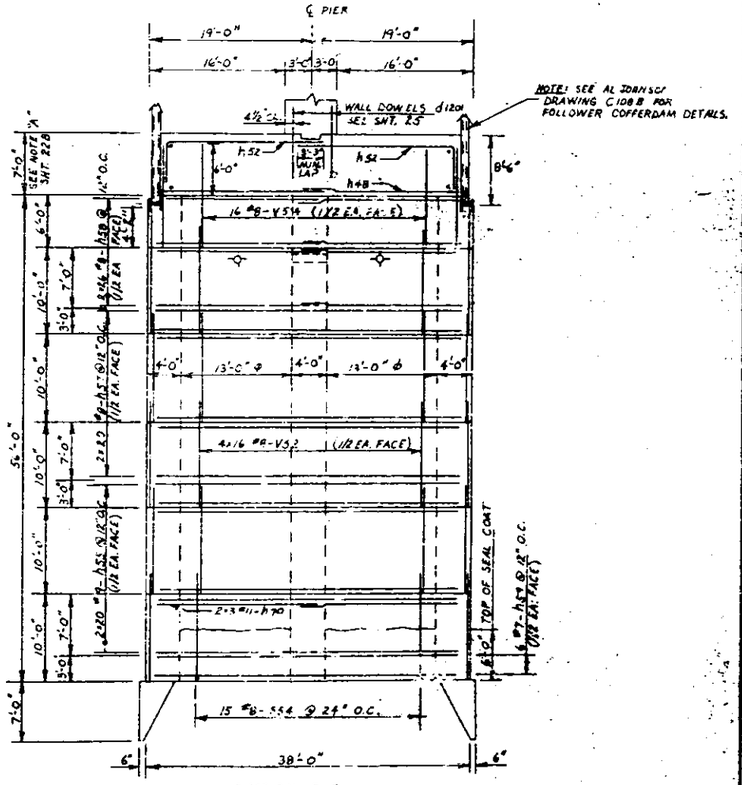


SECTION F-F (2 THUS)
SCALE: 1/8" = 1'-0"

NOTE:
6"ϕ VENT PIPE TO BE STANDARD WEIGHT WROUGHT IRON PIPE (ASTM A72) AND SHALL EXTEND THROUGH WELL COVERS.

NOTE: MAXIMUM PRESSURES AT BOTTOM OF OPEN DREDGED CAISSON SIMILAR TO PRESSURES TABULATED FOR PIER 13 ON SHEET 33. THE CONTRACTOR MAY SUBMIT TO THE ENGINEER FOR APPROVAL HIS OWN DESIGNS FOR THE CAISSONS, MAKING SUCH CHANGES IN SIZE AND ARRANGEMENTS OF DREDGING WELLS AND CUTTING EDGES AS ARE MORE SUITABLE TO HIS EQUIPMENT, PLANT, AND METHOD OF CONSTRUCTION. SEE SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.





FOR SECTIONS A-A, B-B, C-C, AND D-D SEE SHEET 28B.
FOR SECTION H-H AND BAR LIST SEE SHEET 28B.
FOR SHOE DETAILS SEE SHEET 30.
I.F. INNER FACE
O.F. OUTER FACE

APPROVED
For State Planning and Materials Only
NOV 14 1972

REVISION C	GENERAL REVISIONS	11-4-72
REVISION B	REVISED DIST. BLOCK REV.	9-8-72
REVISION A	GENERAL REVISIONS	8-13-72

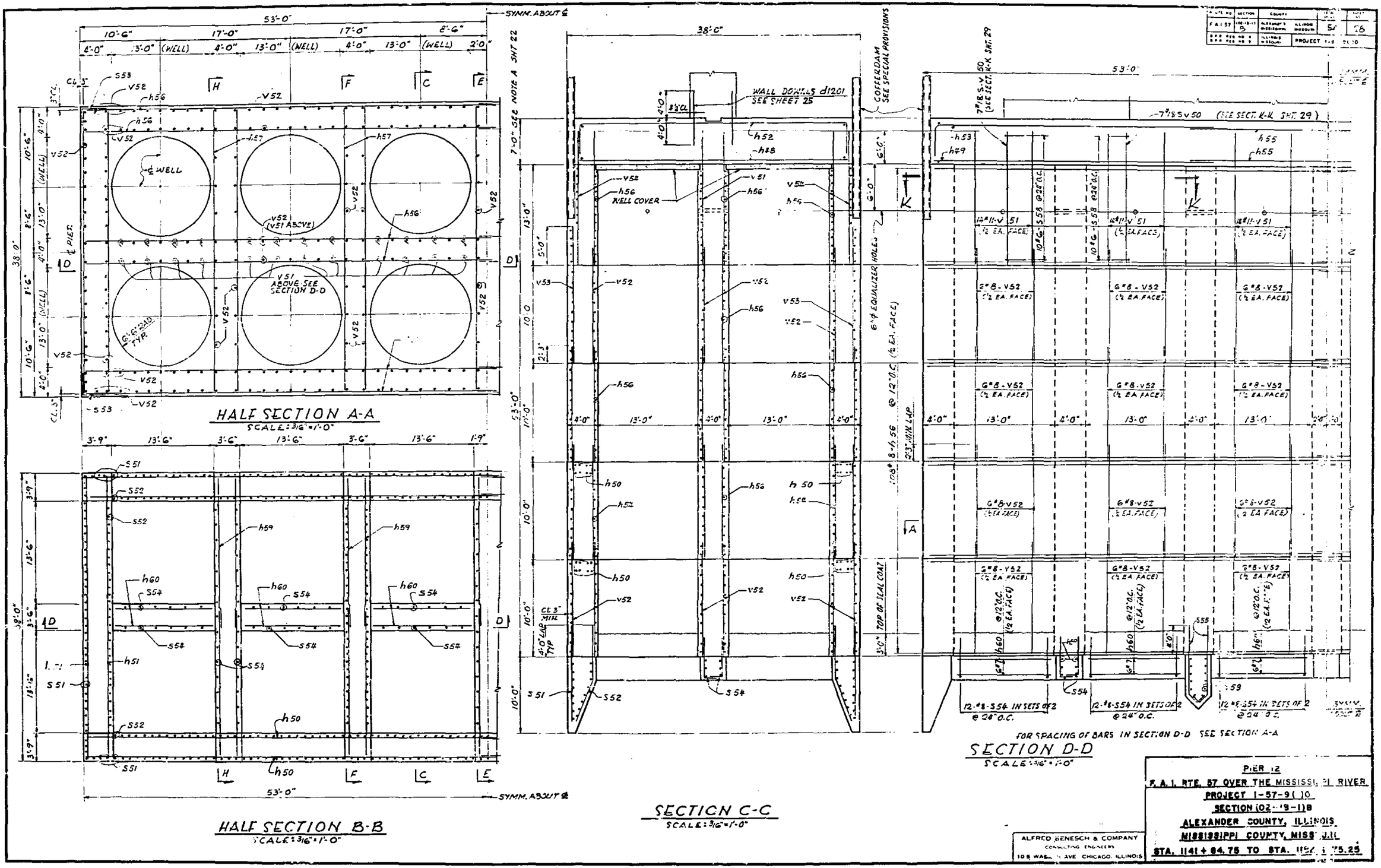
AL JOHNSON CONSTRUCTION CO.
General Contractors
MINNEAPOLIS, MINNESOTA

I-57 BRIDGE AT
I-57-9(10)

PIER 12

CAISSON REINFORCING

DRAWN RDK		10-11-72
CHECKED		SHEET R104
APPROVED		

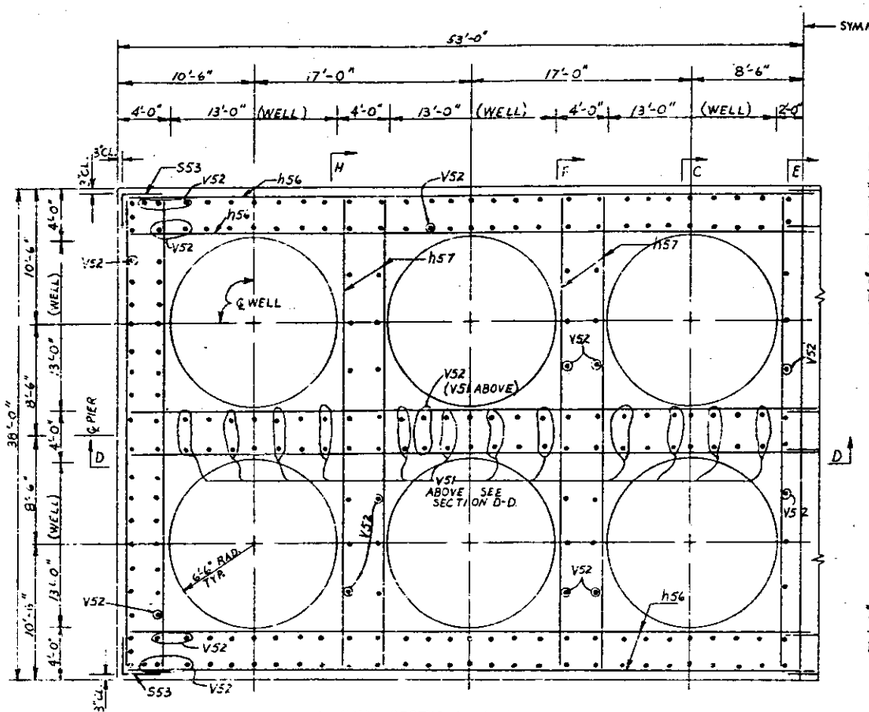


ROUTE NO.	SECTION	COUNTY		SHEET NO.
F.A.I. 57	5	ILLINOIS / MISSOURI		28
STATE ROUTE NO.	STATE SECTION NO.	ILLINOIS / MISSOURI	PROJECT I-57-9(10)	

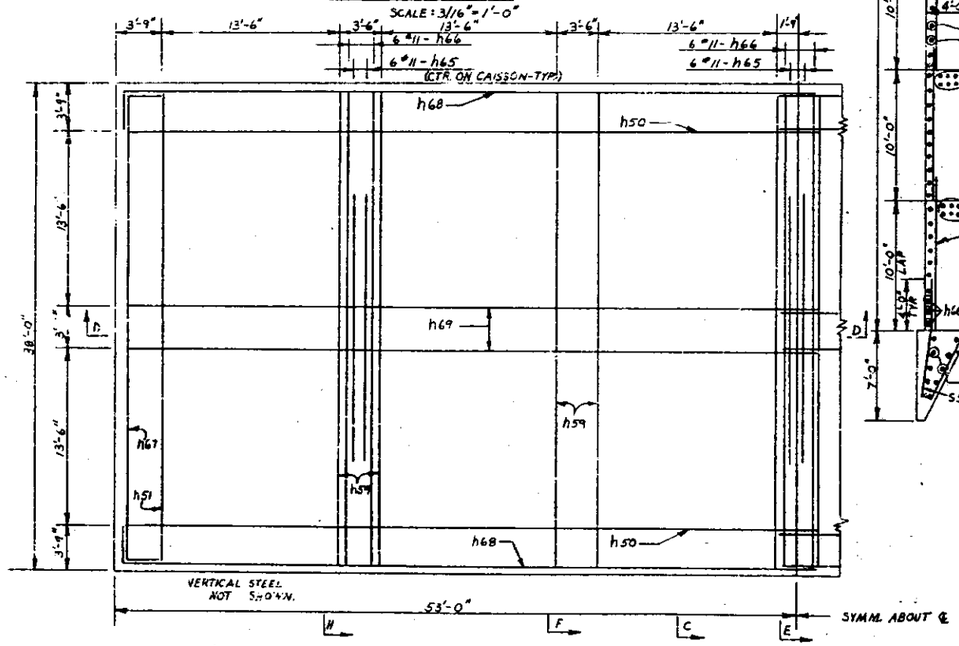
PIER 12
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-)9-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1142 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

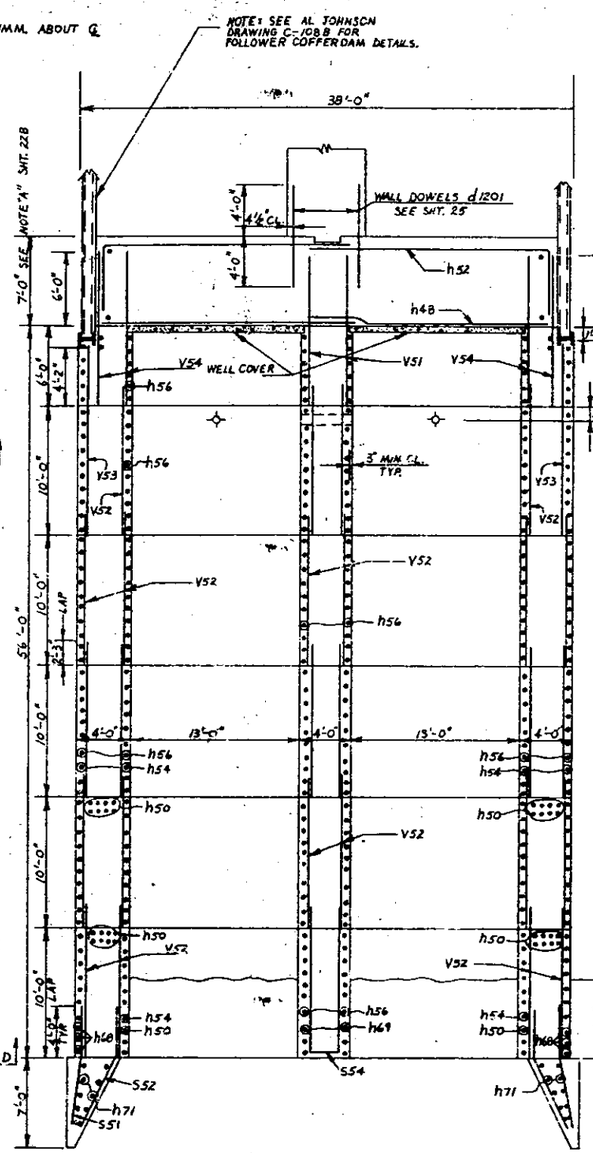
ROUTE NO.	SECTION (CP-2A-1)	COUNTY	TOTAL SHTS.	SHT. NO.
FAI 57	B	ALEXANDER, ILLINOIS; MISSISSIPPI, MISSOURI	54	22B
B.P.R. REG. NO. 4		ILLINOIS		
B.P.R. REG. NO. 5		MISSOURI	PROJECT I-57-9(3)0	



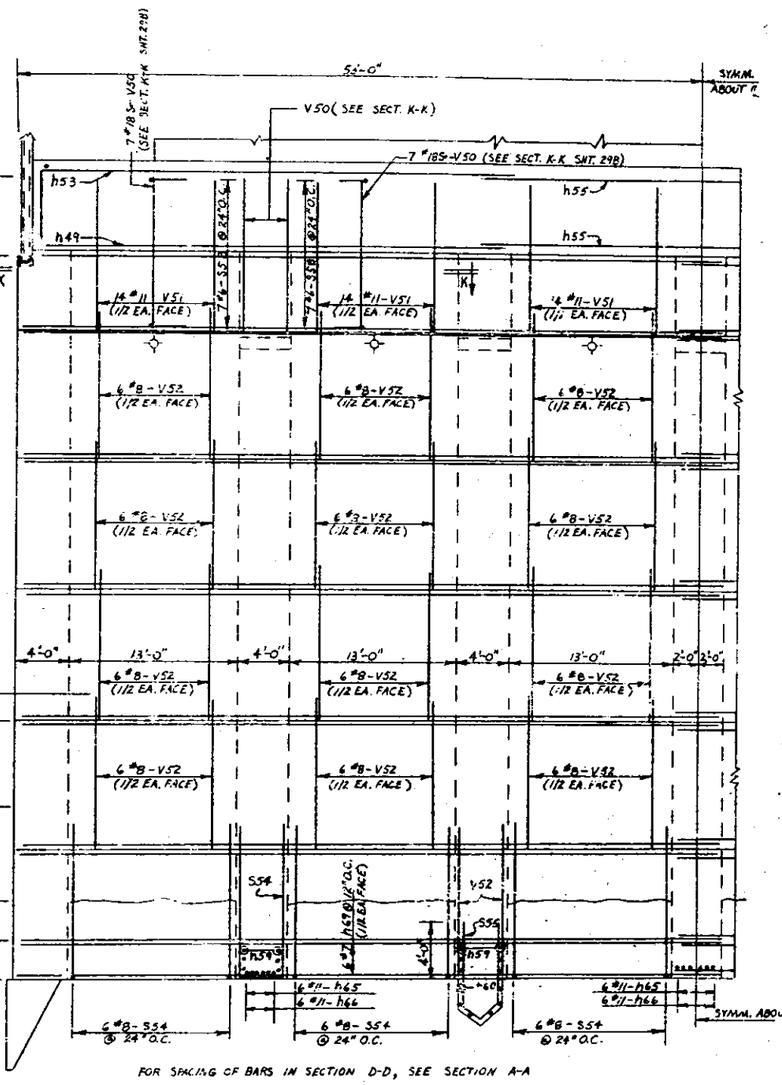
HALF SECTION A-A
SCALE: 3/16"=1'-0"



HALF SECTION B-B
SCALE: 3/16"=1'-0"



SECTION C-C
SCALE: 3/16"=1'-0"



FOR SPACING OF BARS IN SECTION D-D, SEE SECTION A-A

SECTION D-D
SCALE: 3/16"=1'-0"

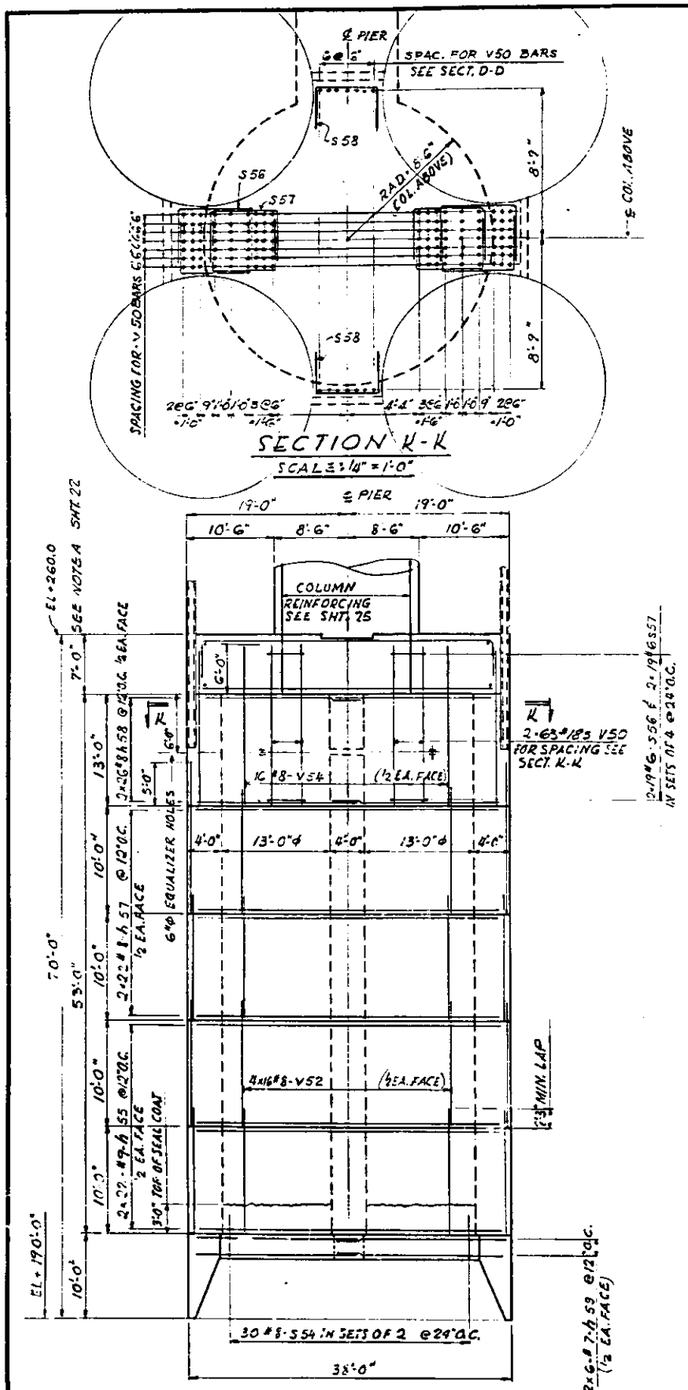
REVISION C	GENERAL REVISIONS	10-4-72
REVISION B	REVISED DIST. BLOCK REMK.	9-8-72
REVISION A	GENERAL REVISIONS	8-28-72

APPROVED
For Main Dimensions and Materials Only
NOV 14 1972
Engineer of Design & Traffic Structures

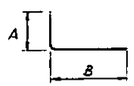
AL JOHNSON CONSTRUCTION CO.
General Contractors
MINNEAPOLIS, MINNESOTA

I-57 BRIDGE AT
I-57-9(3)0
PIER 12
CAISSON REINFORCING

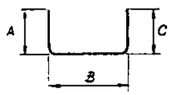
DRAWN	RDK	DATE	10-13-72
CHECKED		DRAWING NO.	R10
APPROVED		SHEET	22



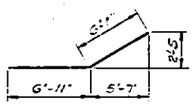
BILL OF MATERIALS FOR OPEN DREDGED CAISSON



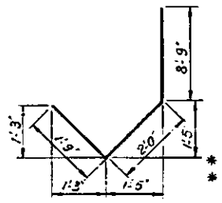
BAR	A	B
h53	6'-0"	32'-3"
S53	3'-0"	3'-0"
S54	1'-11"	5'-7"



BAR	A	B	C
h52	6'-0"	35'-6"	6'-0"
S56	2'-6"	4'-0"	2'-6"
S57	2'-6"	3'-9"	2'-6"
S58	1'-6½"	3'-2"	1'-6½"



BAR S52



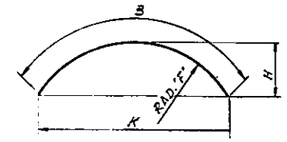
BAR S55

BAR	No	SIZE	LENGTH	SHAPE
h48	70	#11	35'-6"	—
h49	50	#11	36'-3"	—
h50	128	#11	52'-6"	—
h51	28	#11	37'-6"	—
h52	70	#11	47'-6"	⌐
h53	50	#11	42'-3"	⌐
h54	160	#9	52'-3"	—
h55	350	#9	37'-6"	—
h56	480	#8	54'-0"	—
h57	300	#8	37'6"	—
h58	364	#8	20'-0"	—
h59	84	#7	19'-9"	—
h60	36	#7	12'-6"	—
h61	384	#7	13'-3"	—
h62	168	#6	13'-3"	—
h63	768	#7	6'-3"	—
h64	336	#6	6'-3"	—
S51	258	#8	12'-6"	—
S52	256	#8	13'-0"	✓
S53	220	#8	6'-0"	⌐
S54	162	#8	7'-6"	⌐
S55	116	#8	12'-6"	✓
S56	76	#6	9'-0"	⌐
S57	76	#6	8'-9"	⌐
S58	40	#6	6'-3"	⌐
V50	280	#18S •	13'-0"	—
V51	84	#11 •	19'-0"	—
V52	1,496	#8	12'-3"	—
V53	152	#8	15'-0"	—
V54	376	#8	19'-0"	—
CLASS X CONCRETE			CU.YDS.	6186.1
REINFORCEMENT BARS			LBS.	508,650
SEAL COAT CONCRETE			CU.YDS.	1,284.9

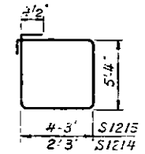
✱ QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY. COST TO BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON, PIER 12

NOTE!
BARS MARKED THUS #11 • TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM 615, GRADE 60
ALL BAR DIMENSIONS ARE OUT TO OUT.

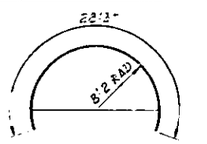
BILL OF MATERIALS FOR PIER



BAR	B	'F'	H	K
S1202	24'0"	8'2"	7'5"	16'3"
S1203	11'0"	8'2"	1'9½"	10'2"



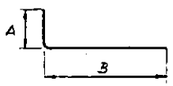
BARS S1214 & S1215



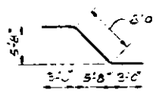
BAR S1201

BAR	A	B	C
S1205	2'0	6'3"	2'0
S1203	1'6"	6'5"	1'6"
S1209	1'6"	8'5"	1'6"
S1210	1'6"	10'5"	1'6"
S1211	1'6"	11'0"	1'6"
U1201	3'0½"	5'5"	3'0½"

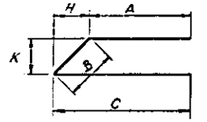
BAR S1213



BAR	A	B
h1213	2'9"	2'9"
P1205	5'0"	5'0"



BAR P1206



BAR	A	B	C	H	K
S1204	1'6"	1'5"	1'6"	3"	1'3"
S1207	1'7"	1'10"	1'7"	4"	1'9½"
S1212	2'2"	2'4"	2'6"	5"	2'3½"

BAR	No	SIZE	LENGTH	SHAPE
d1201	202	#13	8'0"	—
h1201	3	#11	68'0"	—
h1202	16	#9	62'0"	—
h1203	38	#8	62'0"	—
h1204	4	#8	11'0"	—
h1205	8	#8	13'9"	—
h1206	4	#8	14'9"	—
h1207	8	#8	15'9"	—
h1208	4	#8	14'3"	—
h1209	4	#8	11'6"	—
h1210	4	#8	9'0"	—
h1211	4	#8	5'0"	—
h1212	4	#8	7'0"	—
h1213	80	#8	3'6"	⌐
h1214	38	#10	62'0"	—
P1201	20	#11	84'0"	—
P1202	18	#11	68'0"	—
P1203	3	#11	62'0"	—
P1204	20	#11	24'0"	—
P1205	24	#11	10'0"	⌐
P1206	24	#11	14'0"	⌐
S1201	124	#7	28'3"	⌒
S1202	123	#7	24'0"	⌒
S1203	74	#7	11'0"	⌒
S1204	224	#5	4'3"	⌐
S1205	128	#5	10'3"	⌐
S1207	144	#5	5'0"	⌐
S1208	84	#5	9'3"	⌐
S1209	120	#5	11'3"	⌐
S1210	84	#5	13'0"	⌐
S1211	44	#5	14'6"	⌐
S1212	536	#5	7'0"	⌐
S1213	50	#5	26'9"	⌐
S1214	234	#4	15'11"	⌐
S1215	108	#4	19'11"	⌐

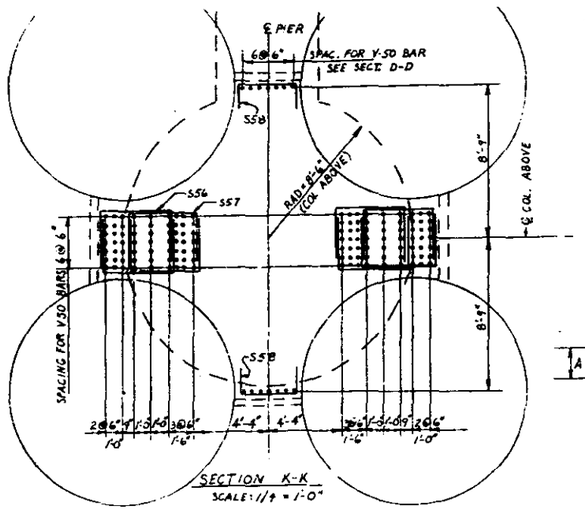
BAR	No	SIZE	LENGTH	SHAPE
U1201	51	#7	11'6	—
V1201	98	#18S •	63'9	—
V1202	98	#18S •	69'0	—
V1203	64	#18S •	31'6	—
V1204	64	#18S •	50'9	—
V1205	48	#18S •	68'6"	—
V1206	24	#18S •	66'0"	—
V1207	24	#18S •	18'6"	—
V1208	98	#18S •	32'-6"	—
V1209	98	#18S •	38'6"	—
V1210	220	#11 •	26'9"	—
V1213	24	#11 •	21'0"	—
V1211	206	#10	22'6"	—
V1212	102	#7	18'3"	—
CLASS X CONCRETE			CU.YD.	2946.
REINFORCEMENT BARS			LBS.	591,12

NOTE!
BARS MARKED THUS #18S • ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM 615, GRADE 60
ALL BAR DIMENSIONS ARE OUT TO OUT.

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	NO.
F.A.I. 57	(02-18-1)B	ALEXANDER ILLINOIS	MISSOURI	54	7
STP. SEC. NO.		ILLINOIS DIVISION		PROJECT I-57-5(10	

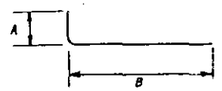
PIER 12
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

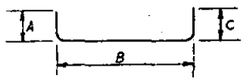


SECTION K-K
SCALE: 1/4" = 1'-0"

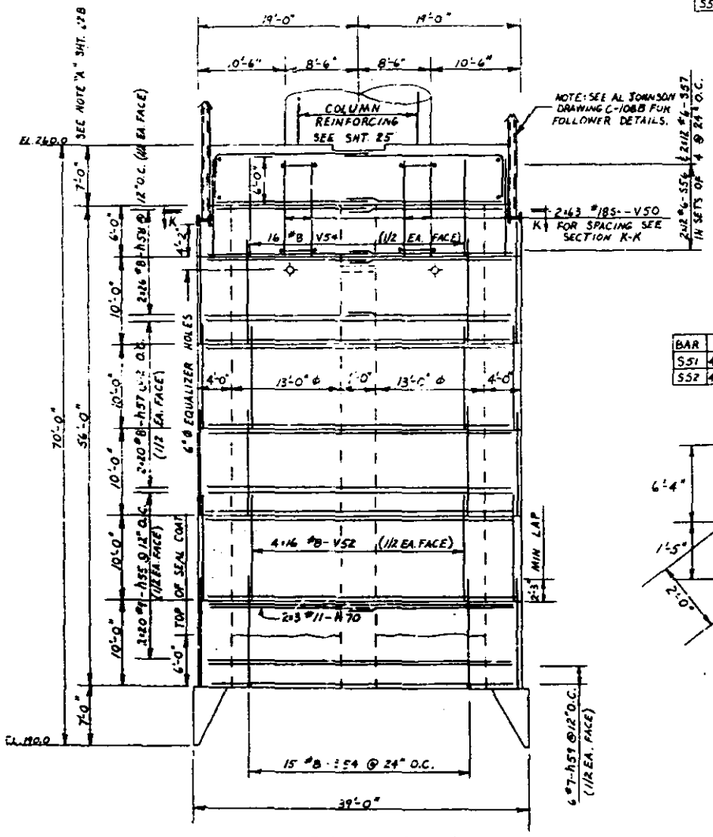
BILL OF MATERIAL FOR OPEN DREDGED CAISSON



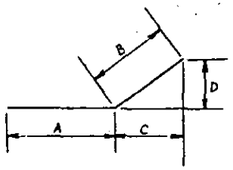
BAR	A	B
h53	5'-0"	35'-6"
h68	3'-3"	54'-5"
h52	5'-0"	19'-3"
S53	3'-0"	3'-0"



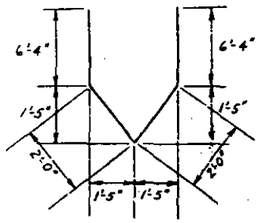
BAR	A	B	C
h67	3'-3"	37'-6"	3'-3"
S54	1'-0"	3'-4"	1'-0"
S56	2'-6"	4'-0"	2'-6"
S57	2'-6"	3'-9"	2'-6"
S58	1'-6½"	3'-4"	1'-6½"



SECTION H-H (2 THUS)
SCALE: 1/8" = 1'-0"



BAR	A	B	C	D
S51	4'-0"	5'-8"	5'-7"	6"
S52	4'-0"	6'-6"	5'-8"	3'-2"



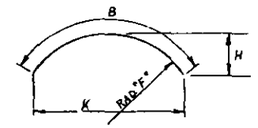
BAR S-55

BAR	NO	SIZE	LENGTH	SHAPE
h48	140	#11	19'-3"	
h49	50	#11	35'-6"	
h50	76	#11	55'-0"	
h51	22	#11	37'-6"	
h52	140	#11	24'-3"	
h53	50	#11	40'-6"	
h54	160	#9	54'-3"	
h55	330	#9	37'-6"	
h56	476	#8	54'-0"	
h57	280	#8	37'-6"	
h58	364	#8	20'-0"	
h59	30	#7	37'-6"	
h61	384	#7	18'-3"	
h62	168	#6	13'-3"	
h63	168	#7	6'-3"	
h64	336	#6	6'-3"	
h60	24	#7	20'-3"	
h65	18	#11	21'-0"	
h66	18	#11	37'-6"	
h67	6	#11	44'-0"	
h68	12	#11	57'-8"	
h69	12	#7	54'-6"	
h70	30	#11	19'-9"	
h71	80	#11	28'-10"	
h72	40	#11	20'-9"	
S51	292	#8	9'-8"	
S52	260	#8	10'-6"	
S53	222	#8	6'-0"	
S54	81	#8	27'-4"	
S55	58	#8	16'-8"	
S56	48	#6	9'-0"	
S57	48	#6	8'-9"	
S58	28	#6	6'-5"	
V50	280	#18S	12'-0"	
V51	84	#11	12'-0"	
V52	1820	#8	12'-3"	
V53	156	#8	14'-2"	
V54	376	#8	12'-0"	
CLASS X CONCRETE		CU YD	6292.0	
REINFORCEMENT BARS		LBS.	483,370	
SEAL COAT CONCRETE		CU YD	916.2	

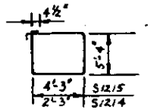
* QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY. COST TO BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON PIER 12.

NOTE:
BARS MARKED THUS #11• TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM A15, GRADE 60. ALL BAR DIMENSIONS ARE OUT TO OUT.

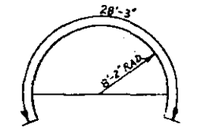
BILL OF MATERIALS FOR PIER



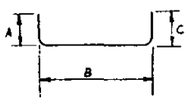
BAR	B	F	H	K
S1202	24'-0"	8'-2"	7'-5"	16'-3"
S1203	11'-0"	8'-2"	1'-9½"	10'-2"



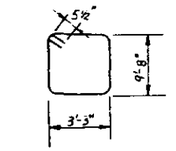
BARS S1214 & S1215



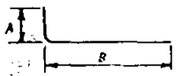
BAR S1201



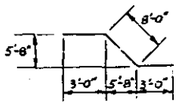
BAR	A	B	C
S1205	2'-0"	6'-3"	2'-0"
S1208	1'-6"	6'-3"	1'-6"
S1209	1'-6"	8'-3"	1'-6"
S1210	1'-6"	10'-0"	1'-6"
S1211	1'-6"	11'-6"	1'-6"
V1201	3'-0½"	5'-5"	3'-0½"

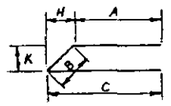


BAR S1213



BAR	A	B
h1213	2'-9"	2'-9"
P1205	5'-0"	5'-0"





BAR	A	B	C	H	K
S1204	1'-6"	1'-3"	1'-6"	3"	1'-3"
S1207	1'-7"	1'-10"	1'-7"	4"	1'-9½"
S1212	2'-2"	2'-4"	2'-6"	5"	2'-3½"

BAR	NO	SIZE	LENGTH	SHAPE
d1201	202	#10	8'-0"	
h1201	3	#11	68'-0"	
h1202	76	#9	62'-0"	
h1203	38	#8	62'-0"	
h1204	4	#8	11'-0"	
h1205	8	#8	13'-0"	
h1206	4	#8	14'-9"	
h1207	8	#9	15'-9"	
h1208	4	#3	4'-3"	
h1209	4	#8	11'-6"	
h1210	4	#8	9'-0"	
h1211	4	#8	5'-0"	
h1212	4	#8	7'-0"	
h1213	80	#9	5'-6"	
h1214	38	#10	62'-0"	
V1211	406	#10	22'-6"	
P1201	20	#11	84'-0"	
P1202	18	#11	68'-0"	
P1203	8	#11	62'-0"	
P1204	20	#11	24'-0"	
P1205	24	#11	10'-0"	
P1206	24	#11	16'-0"	
S1201	144	#7	28'-3"	
S1202	148	#7	24'-0"	
S1203	74	#7	11'-0"	
S1204	224	#5	4'-3"	
S1205	148	#5	10'-3"	
S1207	144	#5	5'-0"	
S1208	84	#5	9'-3"	
S1209	120	#5	11'-3"	
S1210	84	#5	13'-0"	
S1211	44	#5	14'-6"	
S1212	334	#5	7'-0"	
S1213	50	#5	24'-9"	

BAR	NO	SIZE	LENGTH	SHAPE
S1214	234	#4	15'-11"	
S1215	102	#4	19'-11"	
V1201	51	#7	11'-6"	
V1201	98	#18S•	63'-0"	
V1202	98	#18S•	69'-0"	
V1203	64	#18S•	51'-6"	
V1204	64	#18S•	50'-0"	
V1205	48	#18S•	68'-6"	
V1206	24	#18S•	66'-0"	
V1207	24	#18S•	18'-6"	
V1208	98	#18S•	32'-6"	
V1209	98	#18S•	38'-6"	
V1210	220	#11•	26'-9"	
V1213	24	#11•	21'-0"	
V1212	102	#7	18'-3"	
CLASS X CONCRETE		CU YDS.	2946.1	
REINFORCEMENT BARS		LBS.	598,140	

NOTE:
BARS MARKED THUS #18S• ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM A15, GRADE 60. ALL BAR DIMENSIONS ARE OUT TO OUT.

ROUTE NO.	SECTION	COUNTY	TOTAL SHTS	THIS SHT.
F.A.I. 57	(02-7B-1) B	ALEXANDER, ILLINOIS MISSISSIPPI, MISSOURI	54	28
B.P.R. REG. NO. 4		ILLINOIS	PROJECT I-57-9(3)U	
B.P.R. REG. NO. 5		MISSOURI		

APPROVED
For Mass Dimensions and Materials Only
NOV 14 1972
Engineer of Bridge & Traffic Structures

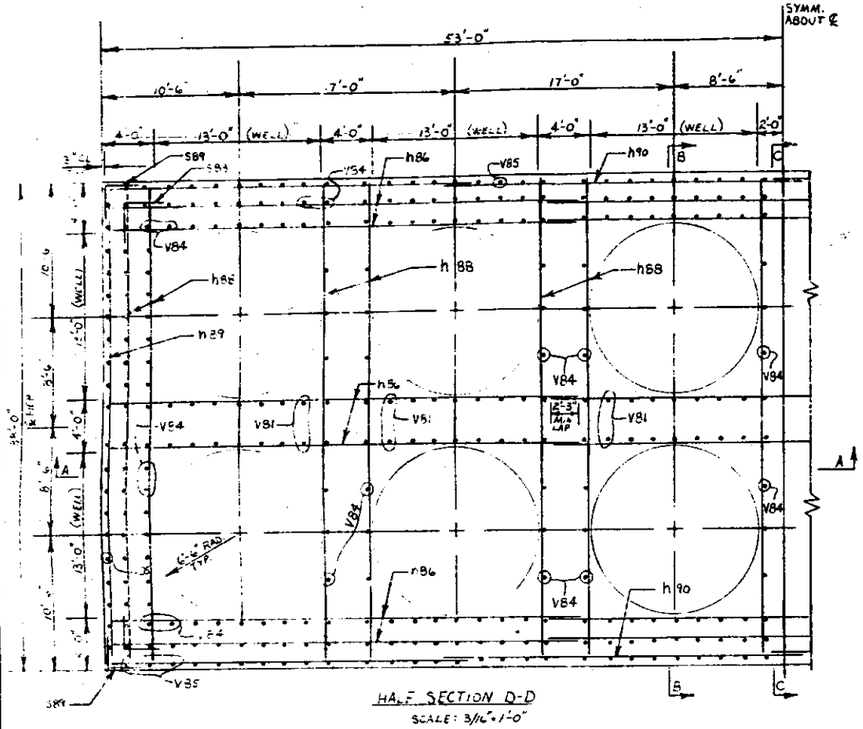
REVISION C	GENERAL REVISIONS	10-4-72
REVISION B	REVISED DIST. BLOCK RE.NF.	9-8-72
REVISION A	GENERAL REVISIONS	8-13-72

AL JOHNSON CONSTRUCTION CO.
General Contractors
MINNEAPOLIS, MINNESOTA

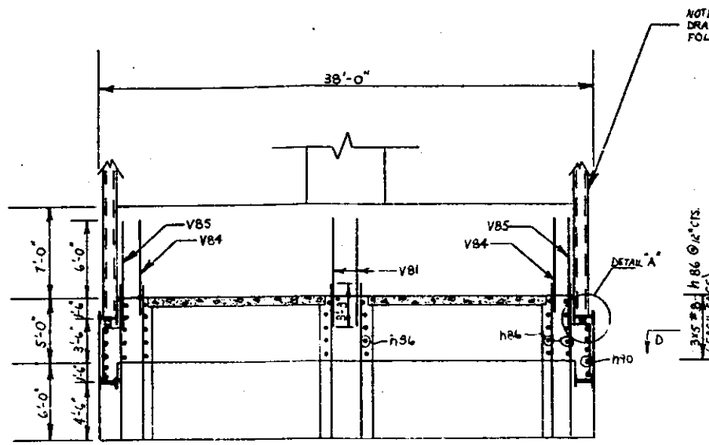
I-57 BRIDGE AT
I-57-9 3
PIER 12
CAISSON REINFORCING

DRAWN RDK
CHECKED
APPROVED
DATE 10-13-72
APPROVED NO. R106
SHT. NO.

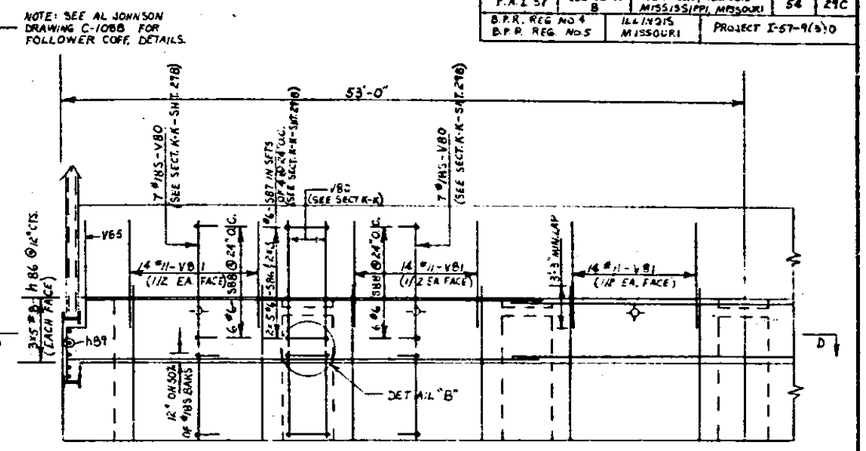
ROUTE NO.	SECTION	COUNTY	TOTAL SHTS.	THIS SHT.
F.A.I. 57	(102-1B-1) B	ALEXANDER, ILLINOIS MISSISSIPPI, MISSOURI	58	29C
B.P.R. REG. NO. 4		ILLINOIS	PROJECT I-57-9(3)0	
B.P.R. REG. NO. 5		MISSOURI		



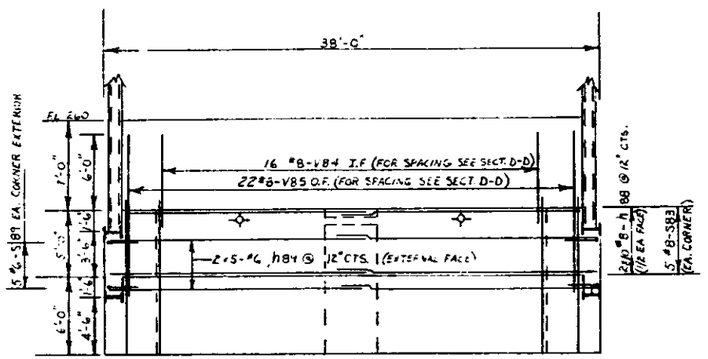
HALF SECTION D-D
SCALE: 3/16"=1'-0"



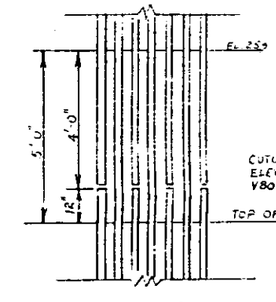
SECTION B-B
SCALE: 3/16"=1'-0"



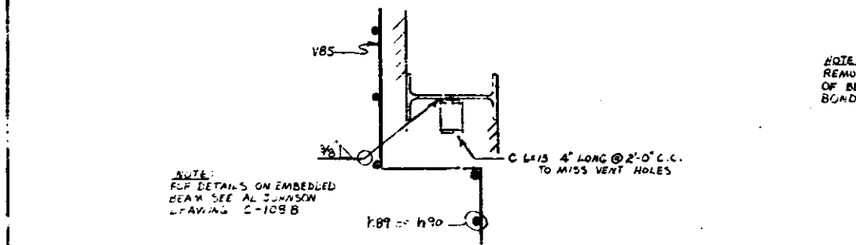
HALF SECTION A-A
SCALE: 3/16"=1'-0"



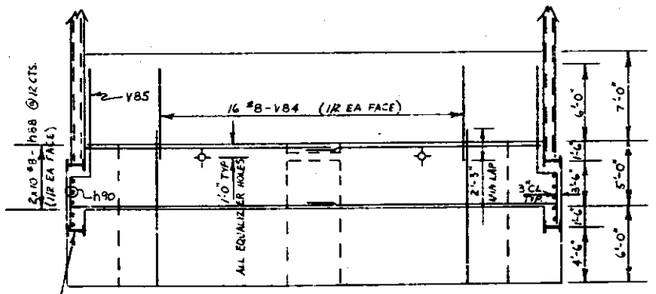
END VIEW (2 THUS)
SCALE: 3/16"=1'-0"



DETAIL "B"
SCALE: 1/2"=1'-0"



HALF ELEVATION (4 THUS)
SCALE: 3/16"=1'-0"



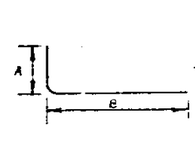
SECTION C-C (5 THUS)
SCALE: 3/16"=1'-0"

NOTE:
REMOVE PORTIONS OF BEAM NO LONGER BONDED TO CONCRETE.

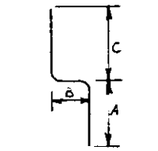
NOTE:
FOR DETAILS ON EMBEDDED BEAM SEE AL JOHNSON DRAWING C-1088

DETAIL "A"
SCALE: 1"=1'-0"

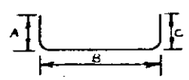
NOTE:
6" ℄ VENT PIPE TO BE STANDARD WEIGHT WROUGHT IRON PIPE.



BAR	A	B
S83	3'-0"	3'-0"
S89	2'-6"	2'-6"



BAR	A	B	C
V85	4'-0"	1'-6"	8'-3"



BAR	A	B	C
S86	2'-6"	4'-0"	2'-6"
S87	2'-6"	3'-9"	2'-6"
S88	1'-6½"	3'-4"	1'-6½"

BAR	NO	SIZE	LENGTH	SHAPE
h86	30	#8	36'-9"	—
h88	140	#8	20'-0"	—
h89	20	#6	19'-6"	—
h90	40	#6	28'-0"	—
V80	140	#18S*	10'-0"	—
V81	84	#11*	8'-8"	—
V84	220	#8	7'-3"	—
V85	156	#8	13'-9"	—
S83	20	#8	6'-0"	⌊
S86	40	#6	9'-0"	⌊
S87	40	#6	5'-9"	⌊
S88	24	#6	6'-6"	⌊
S89	20	#6	5'-0"	⌊
REINFORCEMENT BARS			LBS.	53,030

NOTE!
BARS MARKED THUS #11* & #18S* TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM 615, GRADE 60. ALL BAR DIMENSIONS ARE OUT TO OUT.

APPROVED
For Main Dimensions and Materials Only
AUG 13 1973
Engineer of Bridges & Public Structures

AL JOHNSON CONSTRUCTION CO.
General Contractors
MINNEAPOLIS, MINNESOTA

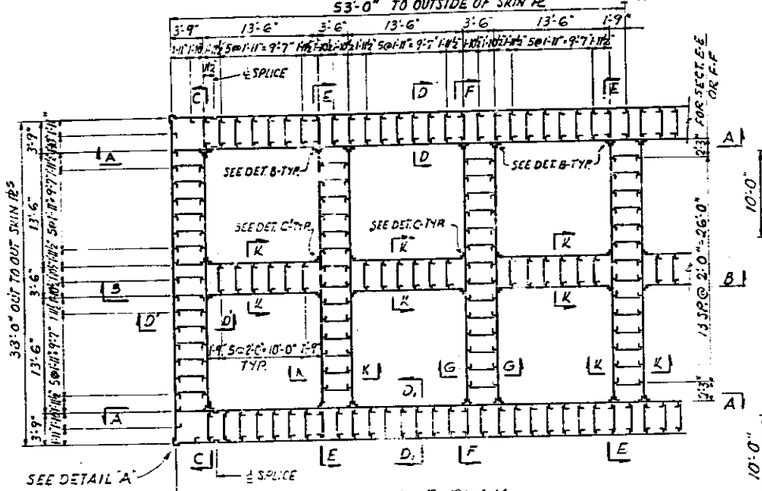
I-57 BRIDGE AT [illegible]RO
I-57-9(3)0
PIER 12
CAISSON REINFORCING
ADDITIONAL 5' LIFT

DRAWN RDK
CHECKED JC
APPROVED [illegible]
DATE 8-2-73
DRAWING NO. R 115
SHEET 1 OF 1

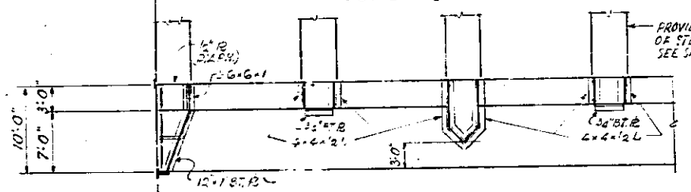
REVISION A	GENERAL REVISIONS	8-10-73

RECEIVED
STATE OF ILL.
BRIDGE ENGINEER

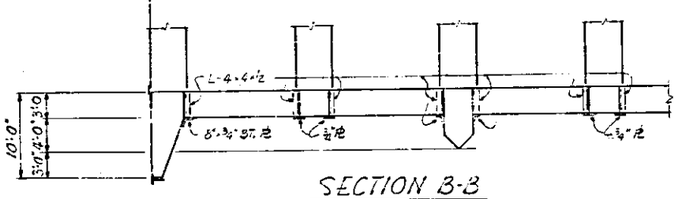
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	102-1B-1,3 B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	34	30
D.P.R. REG. NO. 4 D.P.R. REG. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9( )10	



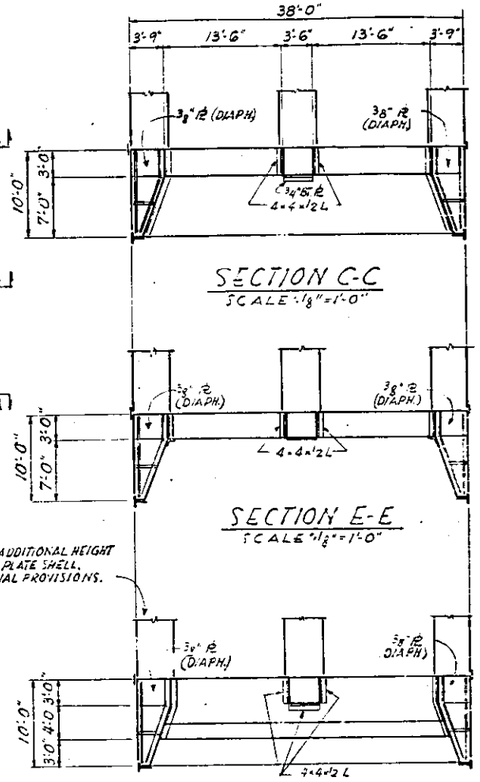
HALF PLAN
SCALE: 1/8" = 1'-0"

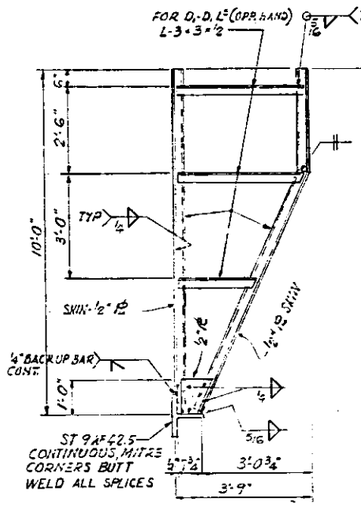


SECTION A-A
SCALE: 1/8" = 1'-0"

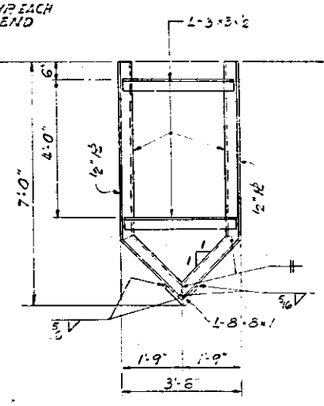


SECTION B-B
SCALE: 1/8" = 1'-0"

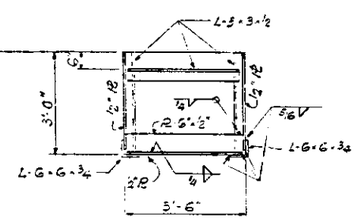




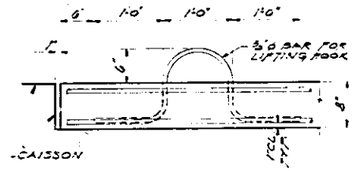
SECTION D-D
SECTION D,-D,
SCALE: 1/2" = 1'-0"



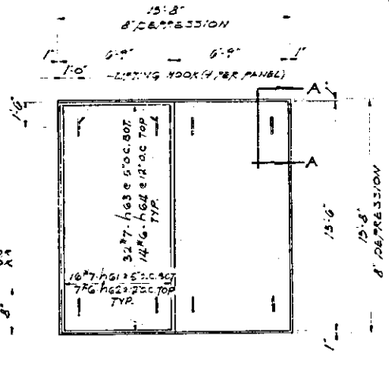
SECTION G-G
SCALE: 1/2" = 1'-0"



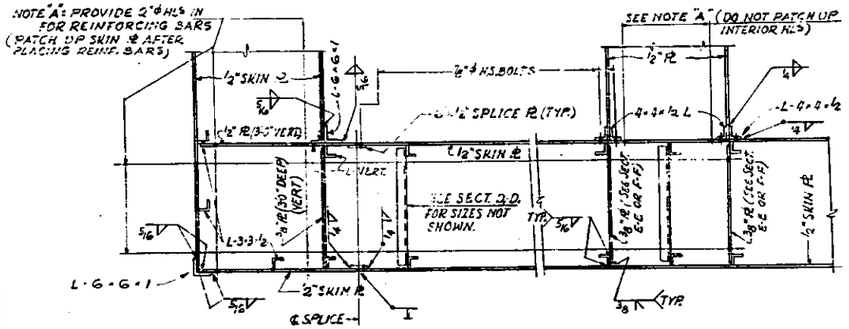
SECTION K-K
SCALE: 1/2" = 1'-0"



SECTION A-A
SCALE 1/2" = 1'-0"

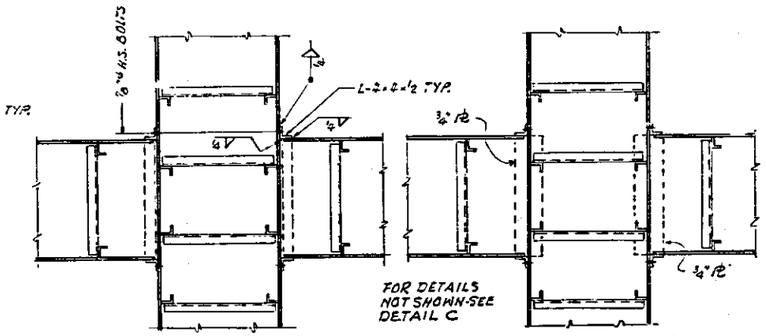


PRECAST WELL COVERS
(2 PANELS REQ'D PER WELL)
SCALE: ¼" = 1'-0"



DETAIL A
SCALE: 1/2" = 1'-0"

DETAIL B
SCALE: 1/2" = 1'-0"



DETAIL C
SCALE: 1/2" = 1'-0"

DETAIL C'
SCALE: 1/2" = 1'-0"

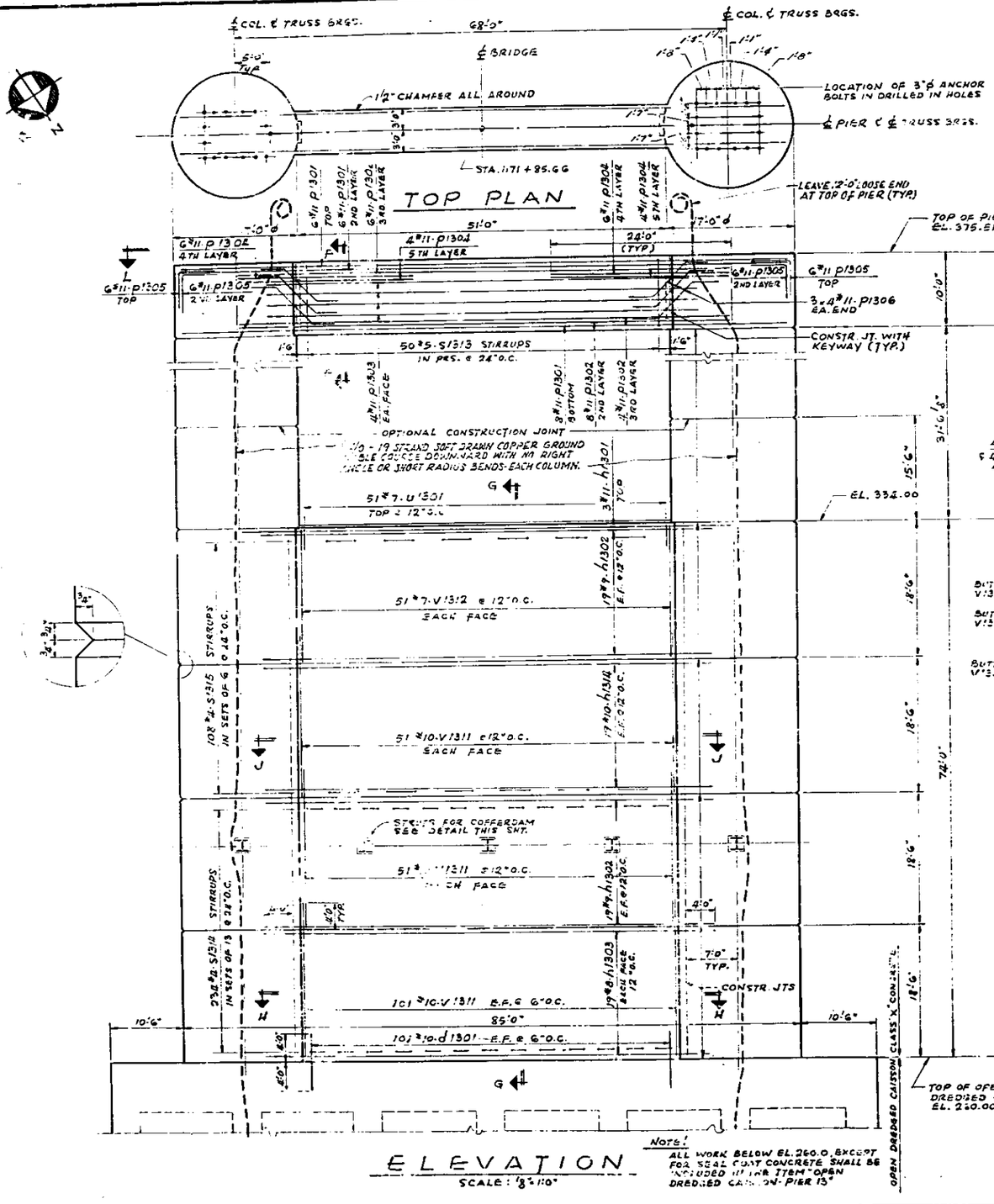
NOTES
THE DETAILS OF THE CAISSON CUTTING EDGE SHOWN ON THE SHEET REPRESENT THE MINIMUM AMOUNT OF STRUCTURAL STEEL REQUIRED IF THE CAISSON IS CONSTRUCTED BY THE FLOTATION METHOD. IF THE SAND ISLAND METHOD IS USED THE CONTRACTOR MUST SUBMIT DETAILED DRAWINGS OF THE PROPOSED CUTTING EDGE. SEE SPECIAL PROVISIONS.
STRUCTURAL STEEL SHALL BE A.S.T.M. A36. PAINTING WILL NOT BE REQUIRED. ESTIMATED WEIGHT PER SHOE = 270,700 LBS. STRUCTURAL STEEL WILL NOT BE PAID FOR SEPARATELY BUT THE COST THEREOF SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON PIER 12 AND OPEN DREDGED CAISSON PIER 13.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

SHOE DETAILS, PIER 12 & 13
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F A I 57	(02-18-1) 5	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI		54	31
S P R S RTE NO 4 S P R S RTE NO 5		ILLINOIS MISSOURI	PROJECT I-57-9(10)		

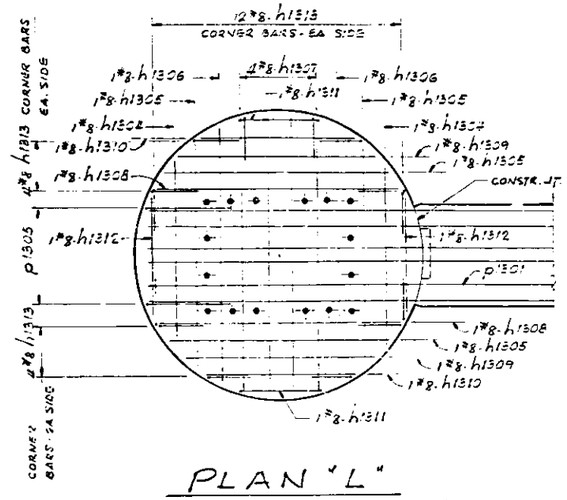
NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS. SEE SPECIAL PROVISIONS FOR REQUIREMENTS OF CONCRETE FOR COLUMNS AND BUTT SPLICES OF REINFORCEMENT.
SEE SHT. 32 FOR SECTIONS A-A THRU J-J
SEE SHT. 35 FOR BAR LIST
FULL LENGTH BARS MAY BE USED IN LIEU OF BUTT WELDED SPLICED BARS



ELEVATION
SCALE: ⅛"=1'0"

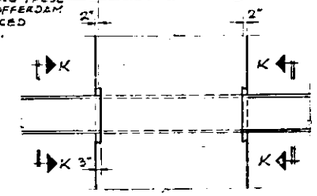
NOTE!
ALL WORK BELOW EL. 260.0, EXCEPT FOR SEAL COAT CONCRETE SHALL BE INCLUDED IN THE ITEM "OPEN DREDGED CAISSON-PIER 13"

END VIEW
TWO COLUMNS THUS
SCALE: ⅛"=1'0"

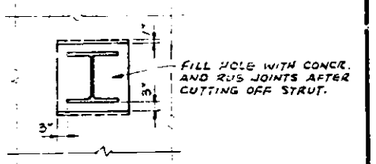


PLAN "L"
SHOWING ADDIT. REINF. AT COL'S.
2 COL'S THUS
SCALE: ¼"=1'0"

CUT STRUT ALONG THESE LINES AFTER COFFERDAM HAS BEEN BRACED AGAINST PIER.



STRUT DETAIL



SECTION "K-K"

NOTE!
STRUTS TO BE AT LOCATIONS DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD ¾" CHAMFERS EXCEPT AS NOTED.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

PIER 13
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

Rev Anchor Bolt location 3-17-71 S.F.M.

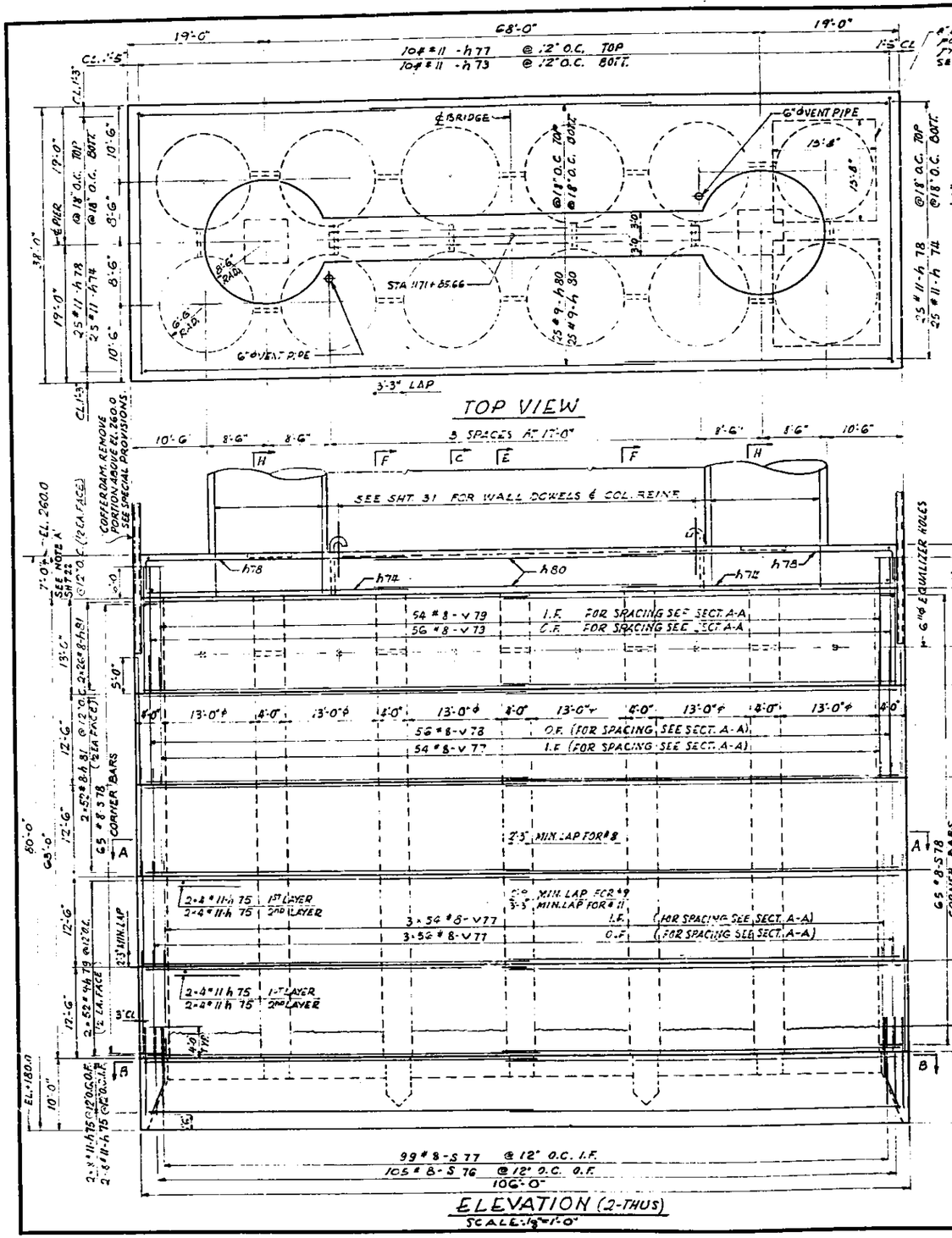
FED. NO.	SECTION	COUNTY	SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) E	ALEXANDER MISSOURI	54	33
STATE REG. NO.		ILLINOIS MISSOURI	PROJECT I-57-3(10)	

MAXIMUM PRESSURES AT BOTTOM OF OPEN-DREDGED CAISSON (KIPS PER SQ. FT.)

AASHO GROUP	I	II	III	IV	V	VI	VII	VIII	IX
ACTUAL PRESSURE	14.6	25.4	19.5	17.1	29.6	21.7	26.7	21.7	29.9
ALLOW. PRESSURE	20	25	25	25	28	28	26.6	28	30

ASSUMPTIONS:
1. BUOYANCY BASED ON WATER ELEVATION 281.
2. ICE LOAD BASED ON 8" THICKNESS PERPENDICULAR TO PIER AND 12 IN. THICKNESS PARALLEL TO PIER AT ELEVATION 310.
3. EARTHQUAKE LOAD = 6% OF DEAD LOAD.

THE CONTRACTOR MAY SUBMIT TO THE ENGINEER FOR APPROVAL HIS OWN DESIGNS FOR THE CAISSONS, MAKING SUCH CHANGES IN SIZE AND ARRANGEMENTS OF DREDGING WELLS AND CUTTING EDGES AS ARE MORE SUITABLE TO HIS PLANT, EQUIPMENT AND METHODS OF CONSTRUCTION. SEE SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.

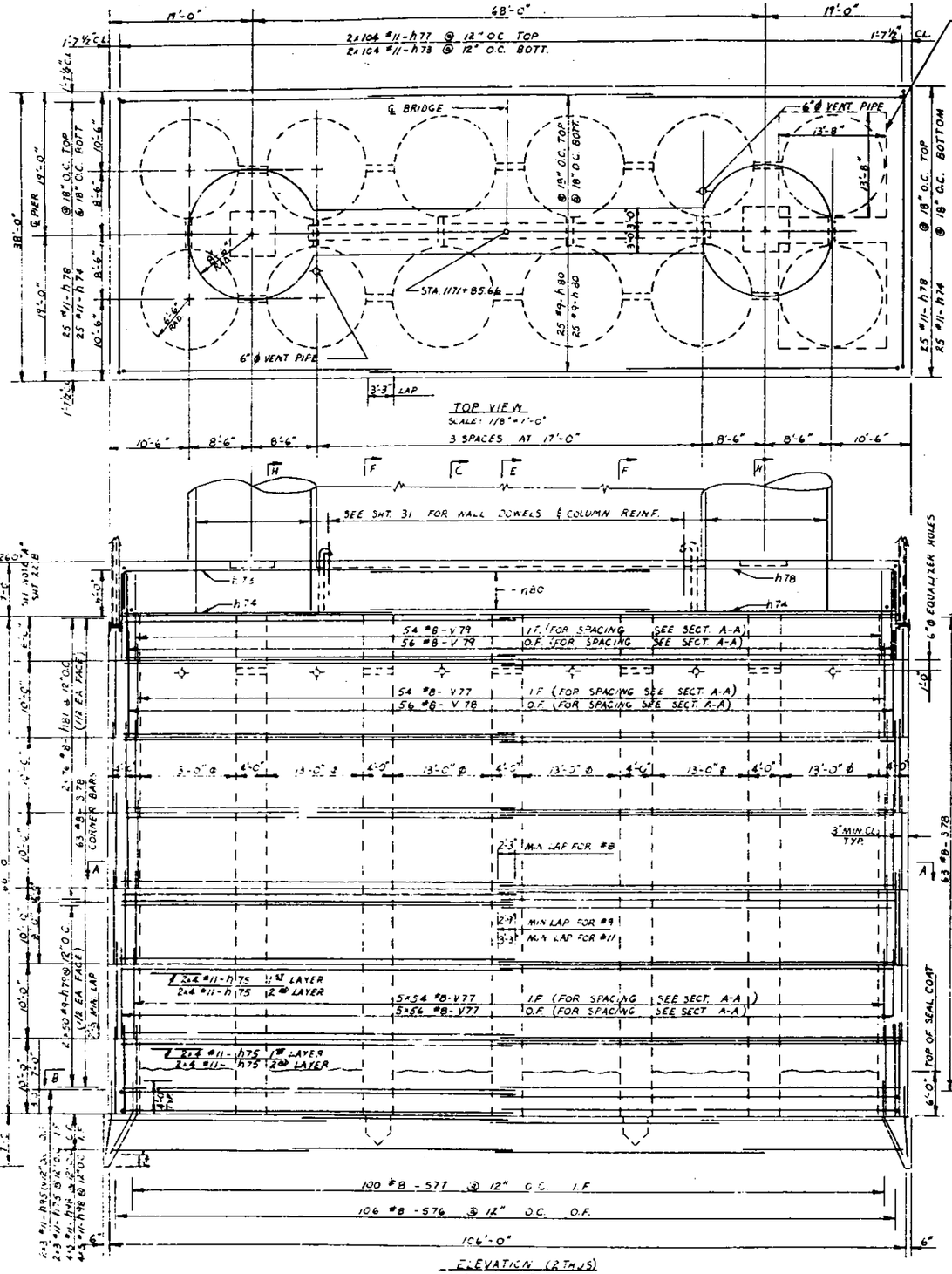


FOR SECTIONS: A-A, B-B, C-C & D-D SEE SHEET 34
FOR SECTION: H-H AND BAR LIST SEE SHEET 35
FOR SHOE DETAILS SEE SHEET 30
I.F. INNER FACE
O.F. OUTER FACE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 13
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-3(10)
SECTION (02-18-1)E
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 118' + 75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
FAI. 57	(02-18-7)	ALEXANDER, ILL. MISSISSIPPI, MO.	56	33A
E&R REG. NO. 4	B	ILLINOIS		
R.R. REG. NO. 5		MISSOURI	PROJECT I-57-4(3)0	



FOR SECTIONS A-A, B-B, C-C, & D-D SEE SHT 34 A.
FOR SECTION H-H AND BAR LIST SEE SHT 35 H.
FOR SLOPE DETAIL SEE SHT 30

I.F. INNER FACE
O.F. OUTER FACE

APPROVED
For Main Dimensions and Materials Only
MAR 5 1973
Engineer of Bridge & Traffic Structures

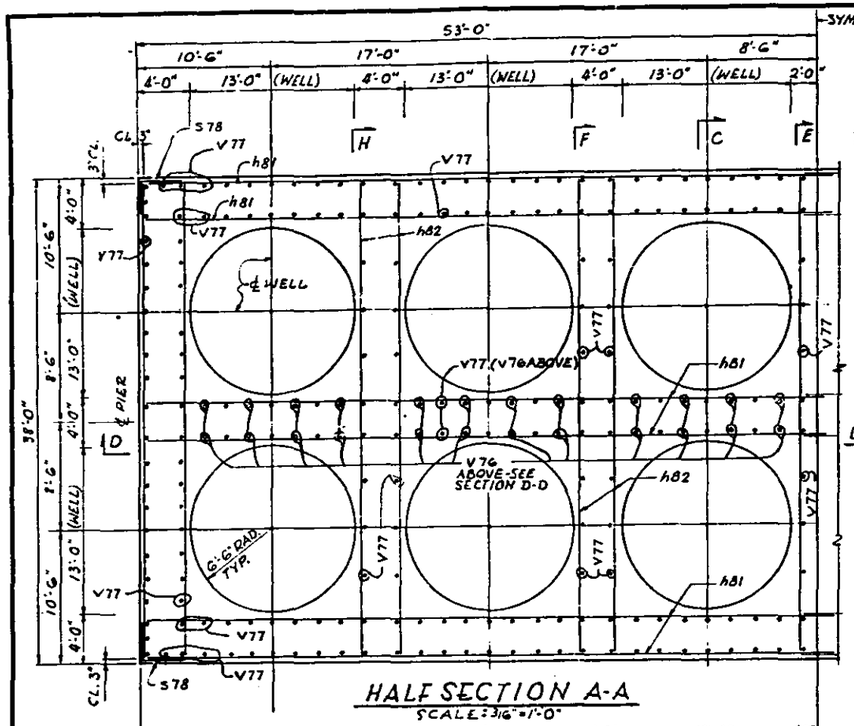
REVISION A	REVISED DIST. BLOCK REINF.	1-19-73

AL JOHNSON CONSTRUCTION CO.
General Contractors
MINNEAPOLIS, MINNESOTA

I-57 BRIDGE AT
I-57-4(3)0
PIER 13
CAISSON REINFORCING

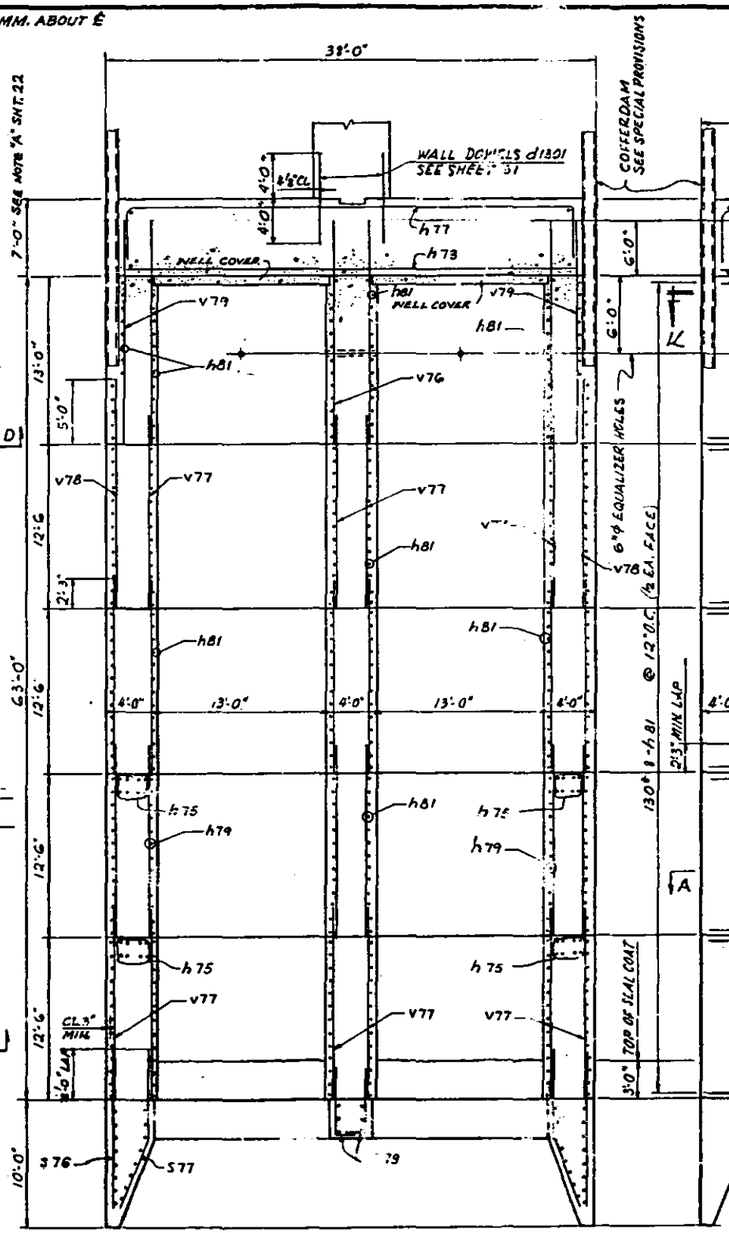
RECEIVED
MAR 5 1973
BRIDGE ENGINEER

DRAWN RDK	DATE 1-8-73	
CHECKED	DRAWING NO. R 1052	
APPROVED	SHEET OF	

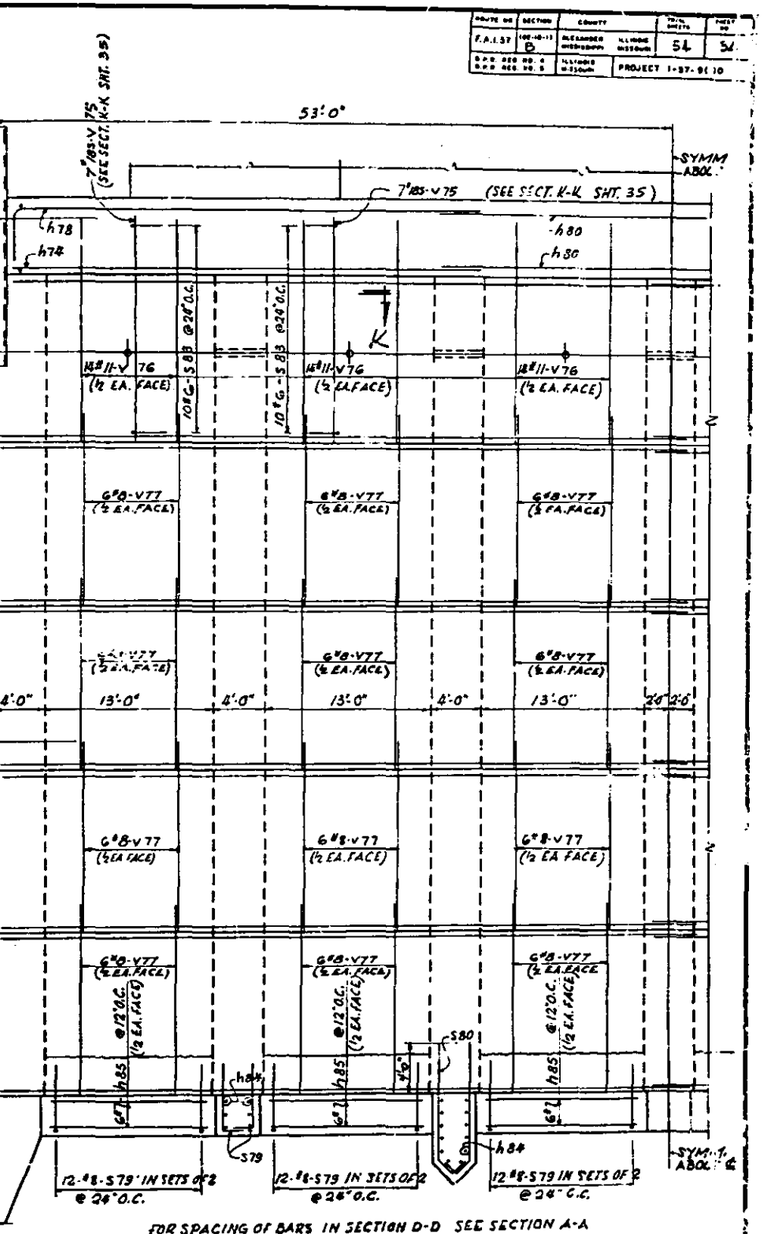


HALF SECTION A-A
SCALE: 3/16" = 1'-0"

HALF SECTION B-B
SCALE: 3/16" = 1'-0"



SECTION C-C
SCALE: 3/16" = 1'-0"



FOR SPACING OF BARS IN SECTION D-D SEE SECTION A-A

SECTION D-D
SCALE: 3/16" = 1'-0"

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	100-10-11 D	ALEXANDER MISSISSIPPI	54	54
		MISSOURI		
		PROJECT I-57-9( )10		

PIER 13
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1188+75.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHTS	SHT NO.
FAI 57	02-18-1 B	ALEXANDER, ILLINOIS MISSISSIPPI, MISSOURI	54	34-A
BPR REG. NO. 4		ILLINOIS	PROJECT I-57-9(3)0	
BPR REG. NO. 5		MISSOURI		

HALF SECTION A-A
SCALE: 3/16"= 1'-0"

HALF SECTION B-B
SCALE: 3/16"= 1'-0"

SECTION C-C
SCALE: 3/16"= 1'-0"

SECTION D-D
SCALE: 3/16"= 1'-0"

FOR SPACING OF BARS IN SECTION D-D, SEE SECTION A-A.

APPROVED
For Main Dimensions and Materials Only
MAR 5 1973

REVISION A	REVISED DIST. BLOCK REINF.	1-19-73

AL JOHNSON CONSTRUCTION Co. General Contractors

I-57 BRIDGE AT ...O

I-57-9(3)0

PIER 13

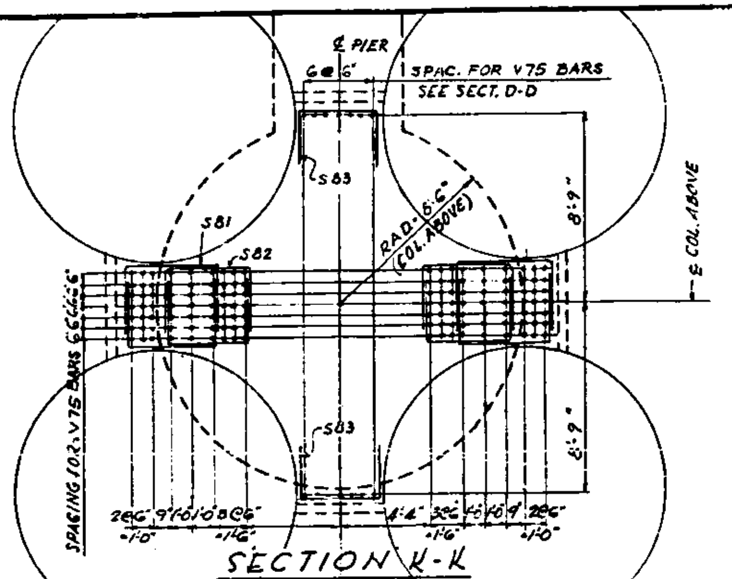
CAISSON REINFORCING

DRAWN RDK DATE 1-11-73

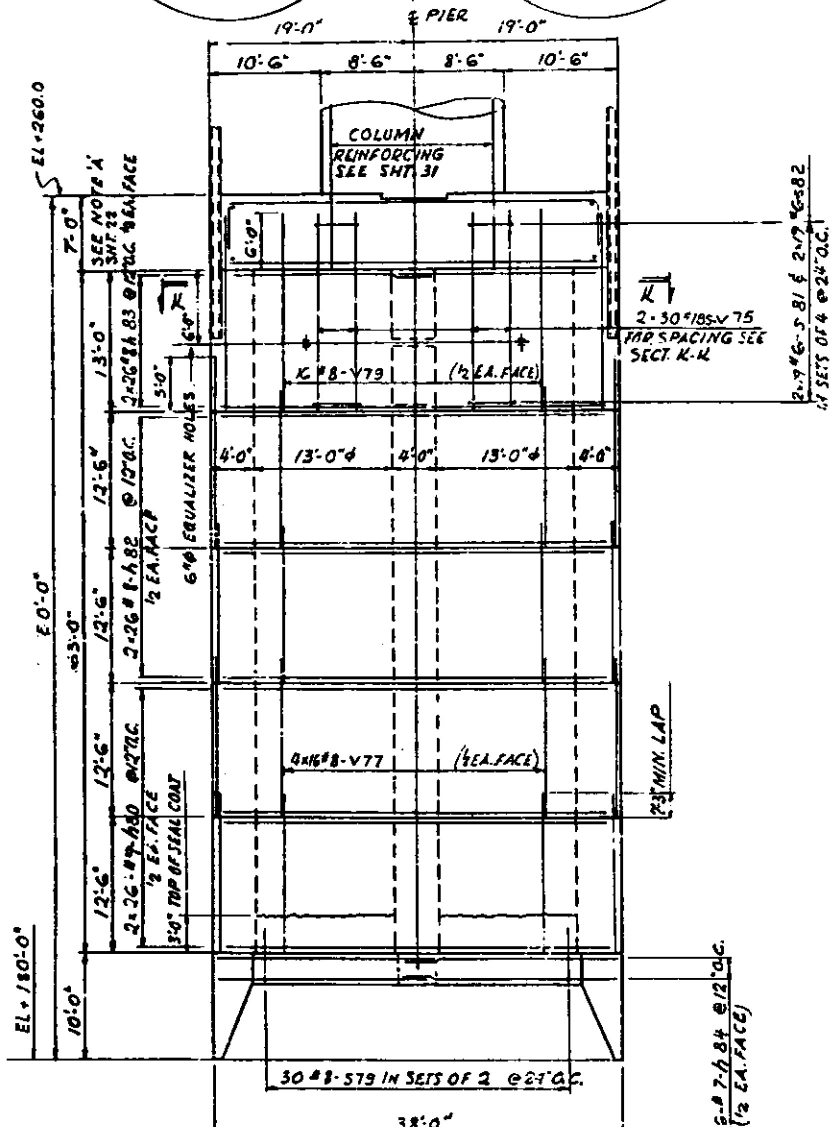
CHECKED DRAWING NO. R 108

APPROVED SHEET OF

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	35
FED. REG. NO. 4 / FED. REG. NO. 6		ILLINOIS MISSOURI	PROJECT I-57-9( )0		

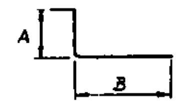


SECTION K-K
SCALE: 1/4" = 1'-0"

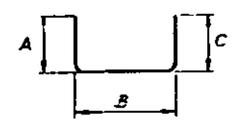


SECTION H-H (2-THUS)
SCALE: 1/8" = 1'-0"

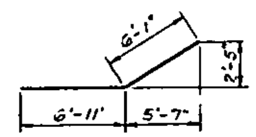
BILL OF MATERIALS FOR OPEN DREDGED CAISSON



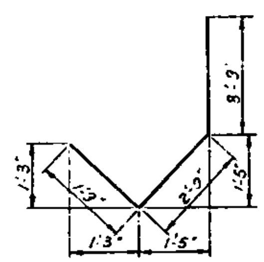
BAR	A	B
h 78	6'-0"	36'-3"
S 78	3'-0"	3'-0"
S 79	1'-11"	5'-7"



BAR	A	B	C
h 77	6'-0"	35'-6"	6'-0"
S 81	2'-6"	4'-0"	2'-6"
S 82	2'-6"	3'-9"	2'-6"
S 83	1'-6½"	3'-2"	1'-6½"



BAR S77



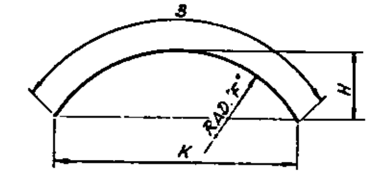
BAR S80

BAR	Nº	SIZE	LENGTH	SHAPE
h 73	170	#11	35'-6"	straight
h 74	50	#11	36'-3"	straight
h 75	128	#11	52'-6"	straight
h 76	48	#11	37'-6"	straight
h 77	70	#11	47'-6"	U
h 78	50	#11	42'-3"	L
h 79	208	#9	58'-3"	straight
h 80	390	#9	37'-6"	straight
h 81	572	#8	54'-0"	straight
h 82	340	#8	37'-6"	straight
h 83	364	#8	20'-0"	straight
h 84	8[illegible]	#7	19'-9"	straight
h 85	36	#7	12'-6"	straight
h 61	384	#7	13'-3"	straight
h 62	168	#6	13'-3"	straight
h 63	768	#7	6'-3"	straight
h 64	336	#6	6'-3"	straight
S 76	288	#8	12'-6"	straight
S 77	256	#8	13'-0"	bent
S 78	260	#8	6'-0"	L
S 79	162	#8	7'-6"	L
S 80	116	#8	12'-6"	hook
S 81	76	#6	9'-0"	U
S 82	76	#6	8'-9"	U
S 83	40	#6	6'-3"	U
V 75	280	#18S•	13'-0"	straight
V 76	84	#11•	19'-0"	straight
V 77	1,492	#8	14'-9"	straight
V 78	156	#8	17'-6"	straight
V 79	376	#8	13'-0"	straight
✱ CLASS X CONCRETE			CU.YDS.	7090.0
✱ REINFORCEMENT BARS			LBS.	551,550
SEAL COAT CONCRETE			CU.YDS	1284.?

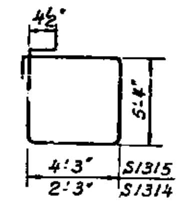
✱ QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY. COST TO BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON, PIER 13

NOTE!
BARS MARKED THUS #11• TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM 615, GRADE 60
ALL BAR DIMENSIONS ARE OUT TO OUT.

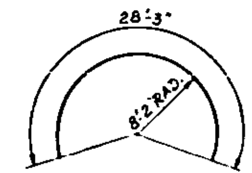
BILL OF MATERIALS FOR PIER



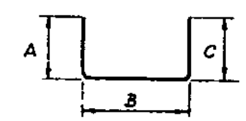
BAR	B	F	H	K
S1302	24'-0"	8'-2"	7'-5"	16'-3"
S1303	11'-0"	8'-2"	1'-9½"	10'-2"

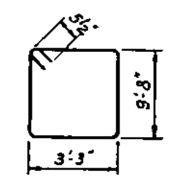


BARS S1314 & S1315



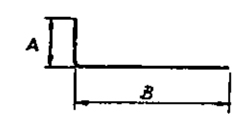
BAR S1301



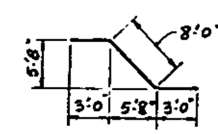


BAR S1313

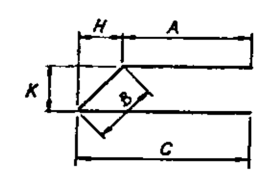
BAR	A	B	C
S1305	2'-0"	6'-3"	2'-0"
S1308	1'-6"	6'-3"	1'-6"
S1309	1'-6"	8'-3"	1'-6"
S1310	1'-6"	10'-0"	1'-6"
S1311	1'-6"	11'-6"	1'-6"
U1301	3'-0½"	5'-5"	3'-0½"



BAR	A	B
h1313	2'-9"	2'-9"
P1305	5'-0"	5'-0"



BAR P1306



BAR	A	B	C	H.	K
S1304	1'-6"	1'-3"	1'-6"	3"	1'-3"
S1307	1'-7"	1'-10"	1'-7"	4"	1'-9½"
S1312	2'-2"	2'-4"	2'-6"	5	2'-3½"

BAR	Nº	SIZE	LENGTH	SHAPE
d 1301	202	#10	8'-0"	straight
h1301	3	#11	68'-0"	straight
h1302	76	#9	62'-0"	straight
h1303	38	#8	62'-0"	straight
h1304	4	#8	11'-0"	straight
h1305	8	#8	13'-0"	straight
h1306	4	#8	14'-9"	straight
h1307	8	#8	15'-9"	straight
h1308	4	#8	14'-3"	straight
h1309	4	#8	11'-6"	straight
h1310	4	#8	9'-0"	straight
h1311	4	#8	5'-0"	straight
h1312	4	#8	7'-0"	straight
h1313	80	#8	5'-6"	Z
h1314	38	#10	62'-0	straight
P1301	20	#11	84'-0"	straight
P1302	18	#11	68'-0"	straight
P1303	8	#11	62'-0"	straight
P1304	20	#11	24'-0"	straight
P1305	24	#11	10'-0"	L
P1306	24	#11	14'-0"	bent
S1301	132	#7	28'-3"	arc
S1302	128	#7	24'-0"	arc
S1303	74	#7	11'-0"	arc
S1304	224	#5	4'-3"	bent
S1305	148	#5	10'-3"	U
S1307	144	#5	5'-0"	bent
S1308	84	#5	9'-3"	U
S1309	120	#5	11'-3"	U
S1310	84	#5	13'-0"	U
S1311	44	#5	14'-6"	U
S1312	336	#5	7'-0"	bent
S1313	50	#5	26'-9"	□
S1314	234	#4	15'-11"	□
S1315	108	#4	19'-11"	□

BAR	Nº	SIZE	LENGTH	SHAPE
U1301	51	#7	11'-6"	L
V1301	98	#18S•	63'-0"	straight
V1302	98	#18S•	63'-0"	straight
V1303	64	#18S•	31'-6"	straight
V1304	64	#18S•	50'-0"	straight
V1305	48	#18S•	68'-6"	straight
V1306	24	#18S•	66'-0"	straight
V1307	24	#18S•	18'-6"	straight
V1308	98	#18S•	37'-9"	straight
V1309	98	#18S•	31'-0"	straight
V1310	220	#11•	25'-9"	straight
V1313	24	#11•	19'-6"	straight
V1311	406	#10	22'-6"	straight
V1312	102	#7	18'-3"	straight
CLASS X CONCRETE			CU.YDS	2904.9
REINFORCEMENT BARS			LBS	585,?10

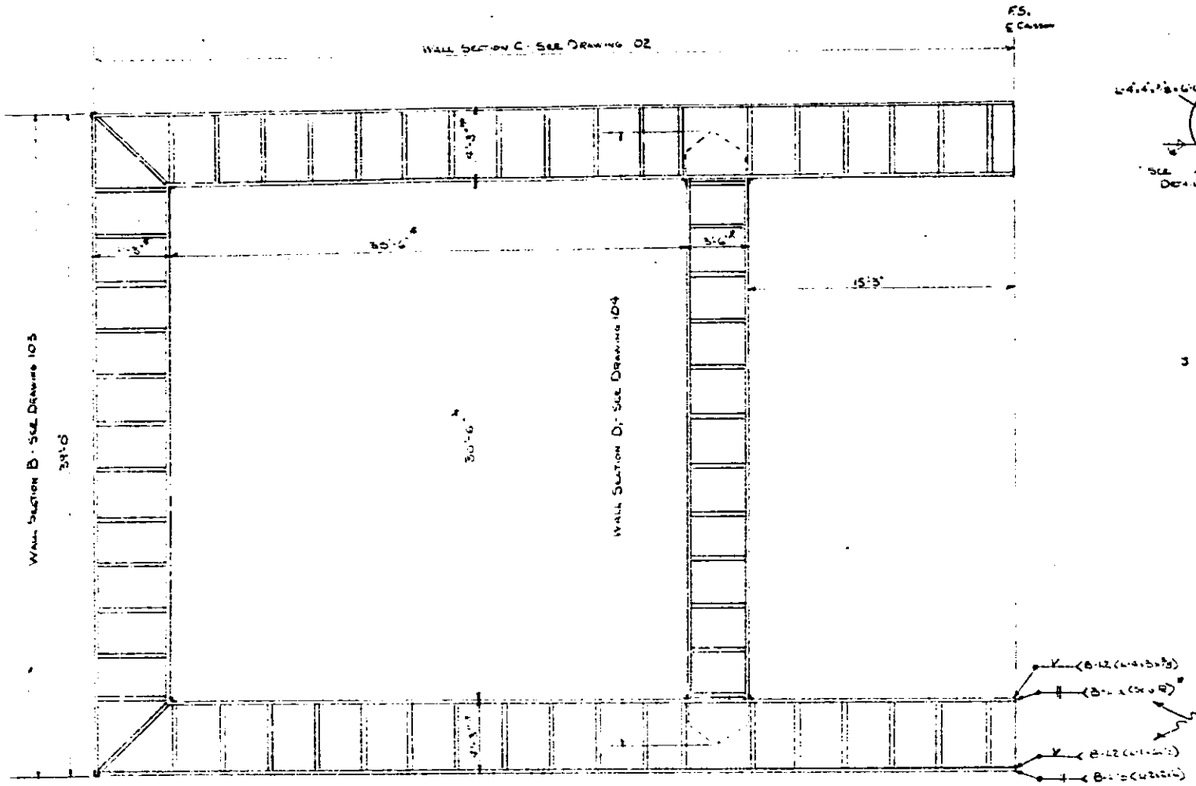
NOTE!
BARS MARKED THUS #18S• ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM 615, GRADE 60.
ALL BAR DIMENSIONS ARE OUT T. ...

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

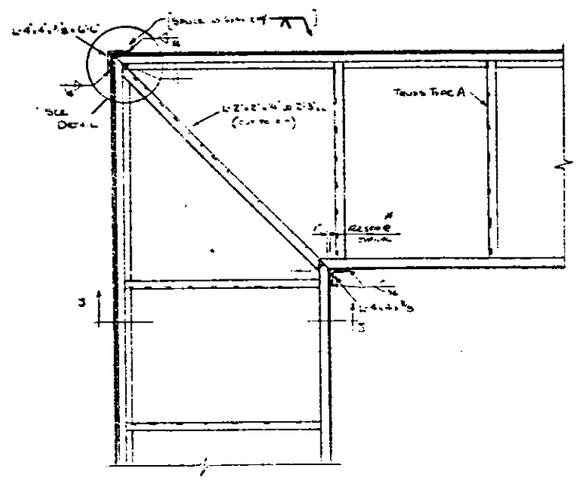
PIER 13
F.A.I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.?

BILL OF MATERIALS					
ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

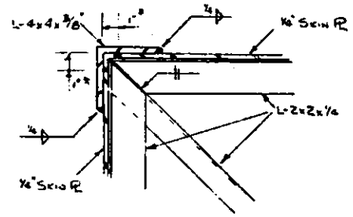
Sheet No. 35 A
54 Sheets



Wall Section A - See Drawing 02



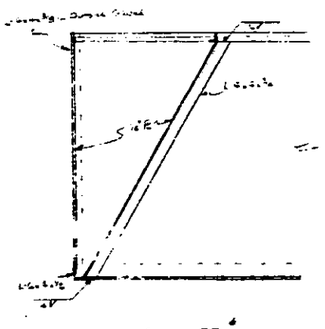
Typical Corner Detail



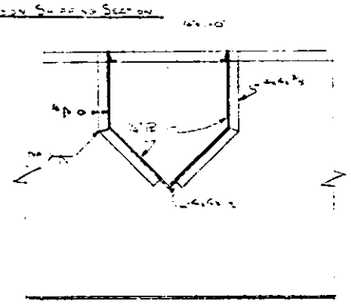
Detail - Corner Angle
Full Caisson Typical
Inside Lip Crossbeam Similar

General Notes for Sheets 101 to 110

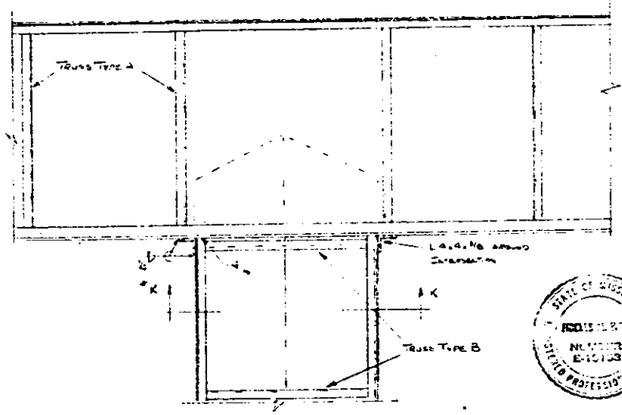
1. Notes apply to all Caissons
2. All material to be A-36
3. Horiz Rebar to be placed in position during fabrication
4. Unless Size of Fillet Welds is shown as ½" no Fillet Weld to be less than 5/16" in size
5. All Field Splice Welds to be Full Penetration Butt Welds



Section JJ
Truss not shown



Section KK
Truss not shown



Crossbeam Connection Detail

Ref: AISC Drawing C-102

NO.	REVISION	BY	DATE
A	As Noted	MRM	2-24-77

NEW JOHNSONVILLE
TENNESSEE
37134

Project No. I-57-9-3(9) Section (12+18-1)B

Caisson Shoes for Cairo Bridge

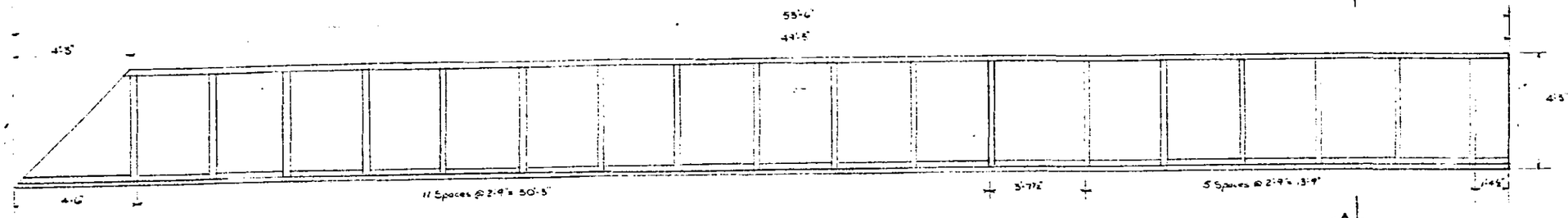
Piers 12 & 13

General View

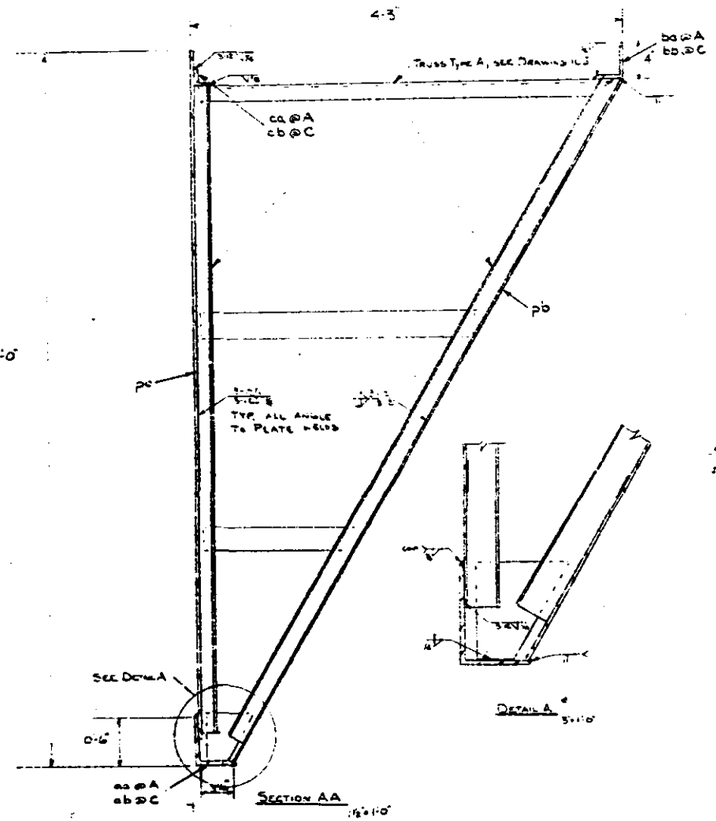
ENGR. MRM	DRAWING NO.	101 A	
DRAWN MRM	SHEET 1 OF 1	SCALE As Noted	
CHECK	TOLERANCE	DATE 2-24-77	
APPROVED			

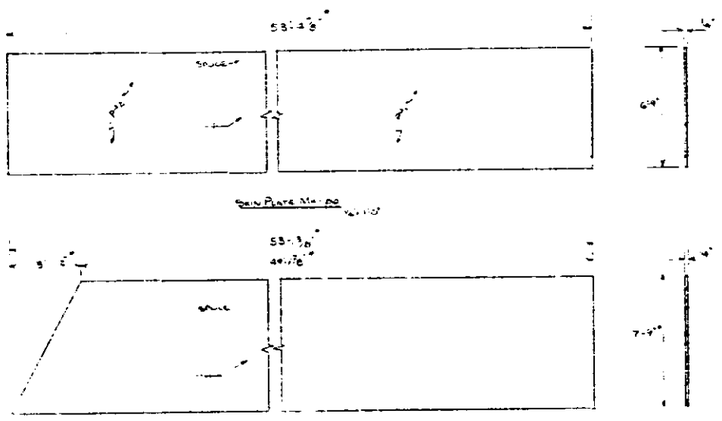
BILL OF MATERIALS					
ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

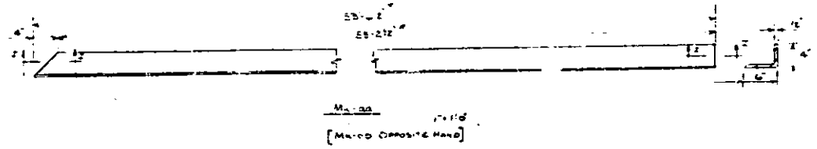
Sheet No. 35 B
54 Sheets

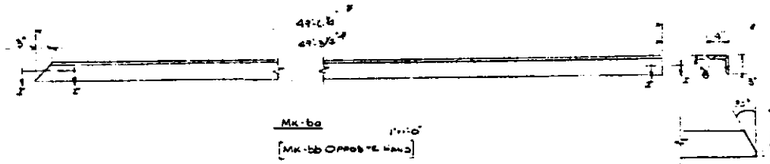


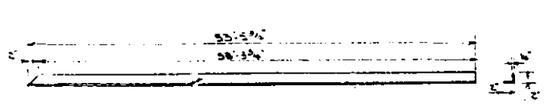
PLAN VIEW - WALL SECTION A
[WALL SECTION C OPPOSITE HAND]











STATE OF MISSOURI
ROLLIE M. WOLF
NUMBER E-15133
REGISTERED PROFESSIONAL ENGINEER

RONALD FOCHUK
E-13224
ILLINOIS

I HEREBY CERTIFY THAT THIS DRAWING WAS PREPARED BY ME AND THAT I AM A REGISTERED STRUCTURAL ENGINEER OF THE STATE OF MISSOURI

NO.	REVISION	DRAWN	DATE
A	As noted *	mdw	4-27-72

NEW JOHNSONVILLE
TENNESSEE
37134

CAISSON SHOES FOR CAIRO BRIDGE
PROJECT No. I-57-1(3)6 SECTION No. (62-15-1)B

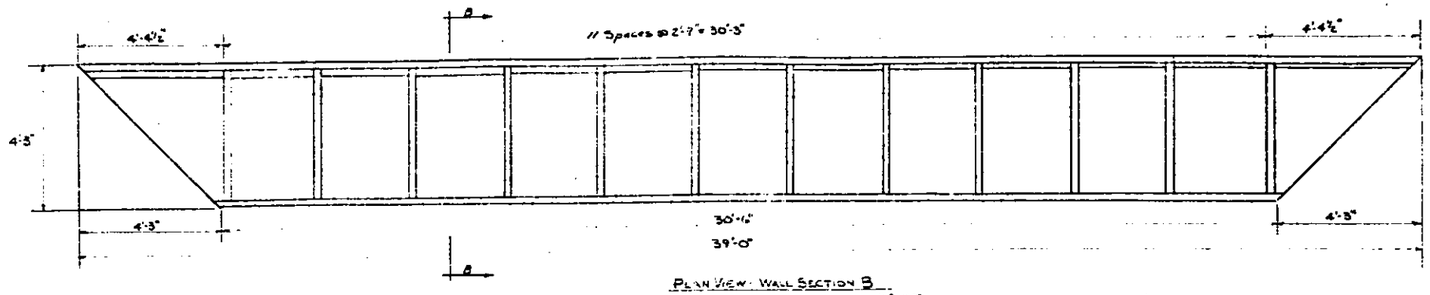
PIERS 12 & 13

WALL SECTIONS A & C

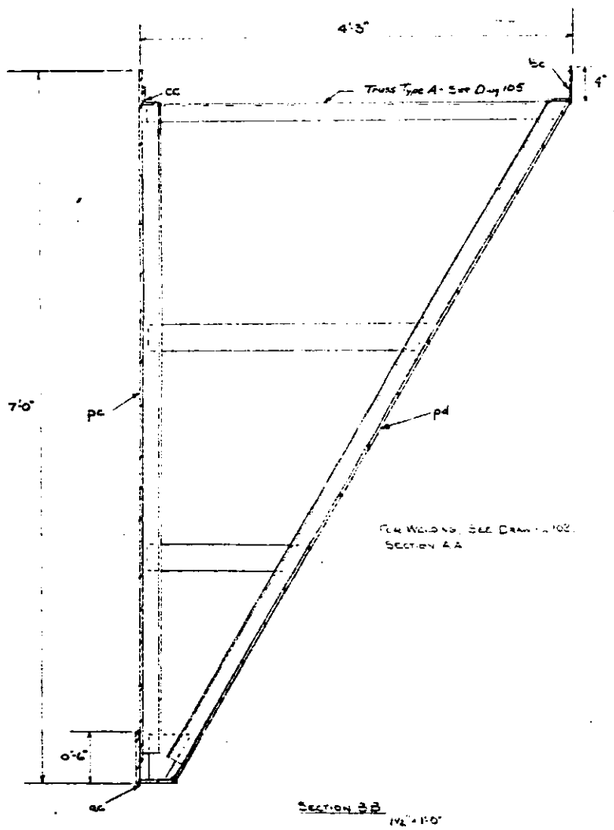
DWG'D. MRM	DRAWING NO. 102 A		
DRAWN MRM			
CHECK	SHEET 1 OF 1	SCALE As Noted	
APPROVED	TOLERANCE	DATE 2-25-72	

BILL OF MATERIALS					
ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

Sheet No. 3 of 5
5 Sheets

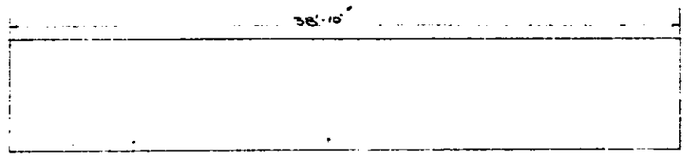


PLAN VIEW - WALL SECTION B
½" = 1'-0"

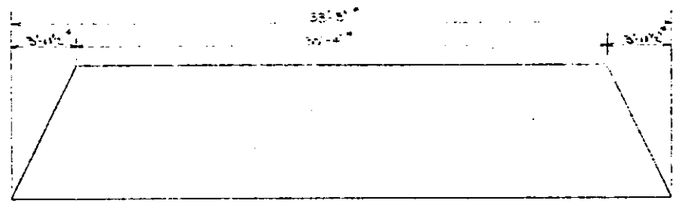


FOR WELDING SEE DRAWING 102
SECTION A-A

SECTION BB
½" = 1'-0"



SKIN PLATE MK-PA
½" = 1'-0"



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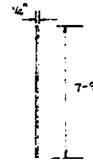
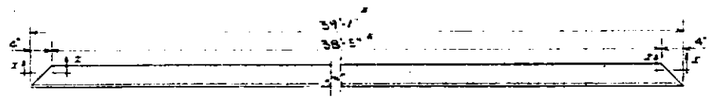
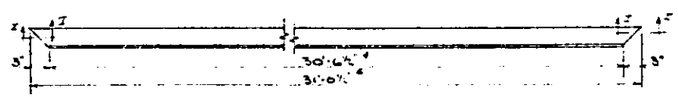


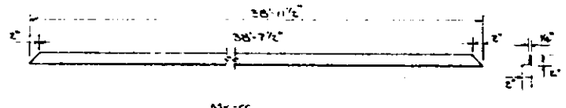


½" = 1'-0"



½" = 1'-0"

FOR SECTION II - SEE DRAWING 102



½" = 1'-0"

I HEREBY CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF TENNESSEE

NO.	REVISION	DRAWN	DATE
A	AS NOTED	MEM	12-21-72

VANGUARD TECHNICAL SERVICES

NEW JOHNSONVILLE
TENNESSEE
37134

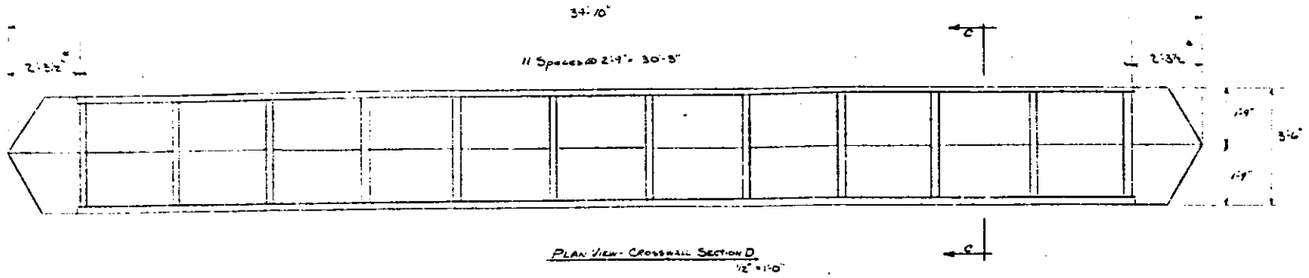
CAISSON SHOES FOR OPEN ENDING
PROJECT NO. I-ST-9(13)0 SECTION NO. (02-18-1)B

PICKS 12 & 13
WALL SECTION B

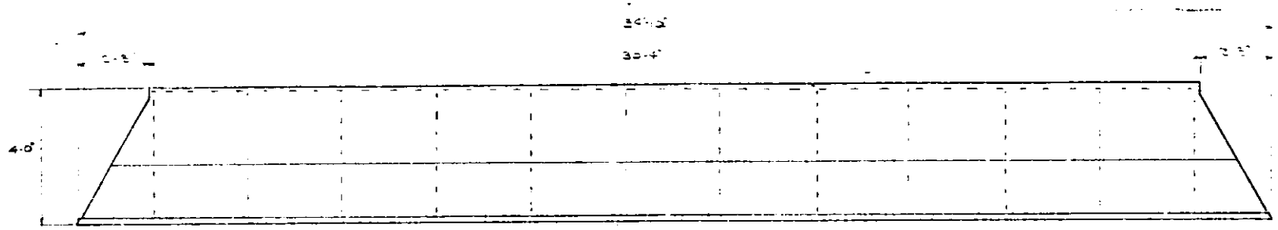
ENGR. MEM	DRAWING NO.	103 A	
DRAWN MEM	SHEET 1 OF 1	SCALE As Noted	
CHECK	TOLERANCE	DATE 2-25-72	
APPROVED			

BILL OF MATERIALS					
ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

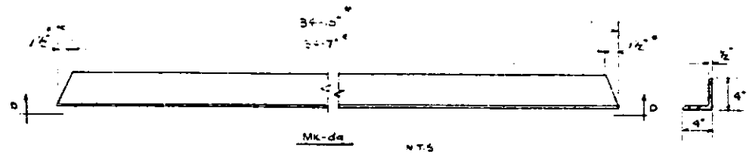
Sheet No. 33)
33 Sheets



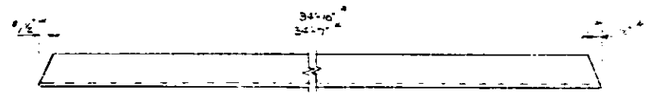
PLAN VIEW - CROSSWALL SECTION D
1/2" = 1'-0"



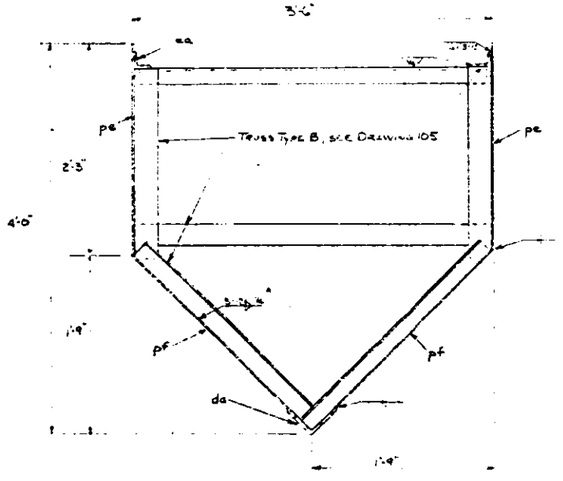
ELEVATION
1/2" = 1'-0"



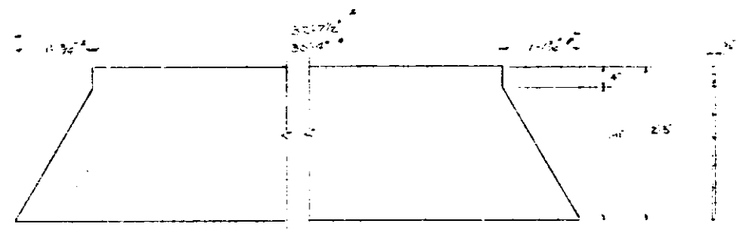
Mk-da
N.T.S.



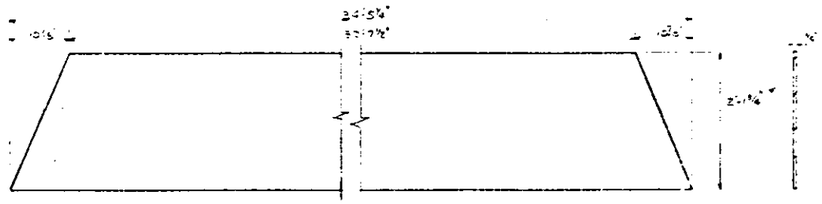
SECTION DD
N.T.S.



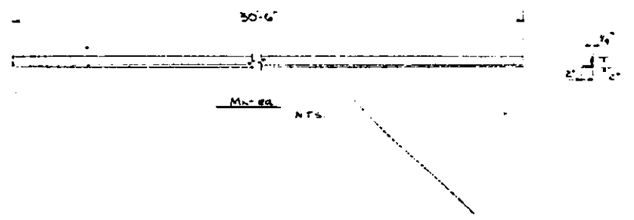
SECTION CC
1/2" = 1'-0"



SKID PLATE Mk-pe
1/4" = 1'-0"



SKID PLATE Mk-pf
1/4" = 1'-0"



Mk-aa
N.T.S.

I HEREBY CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A REGISTERED STRUCTURAL ENGINEER UNDER THE LAWS OF THE STATE OF TENNESSEE.

NO.	REVISION	DRAWN	DATE
A	AS NOTED	MRM	4-27-72

NEW JOHNSONVILLE
TENNESSEE
37134

CAISSON SHOE FOR CROSS BRIDGE
PROJECT No. I-ST-9-(8)0 SECTION No. (12-18-1)B

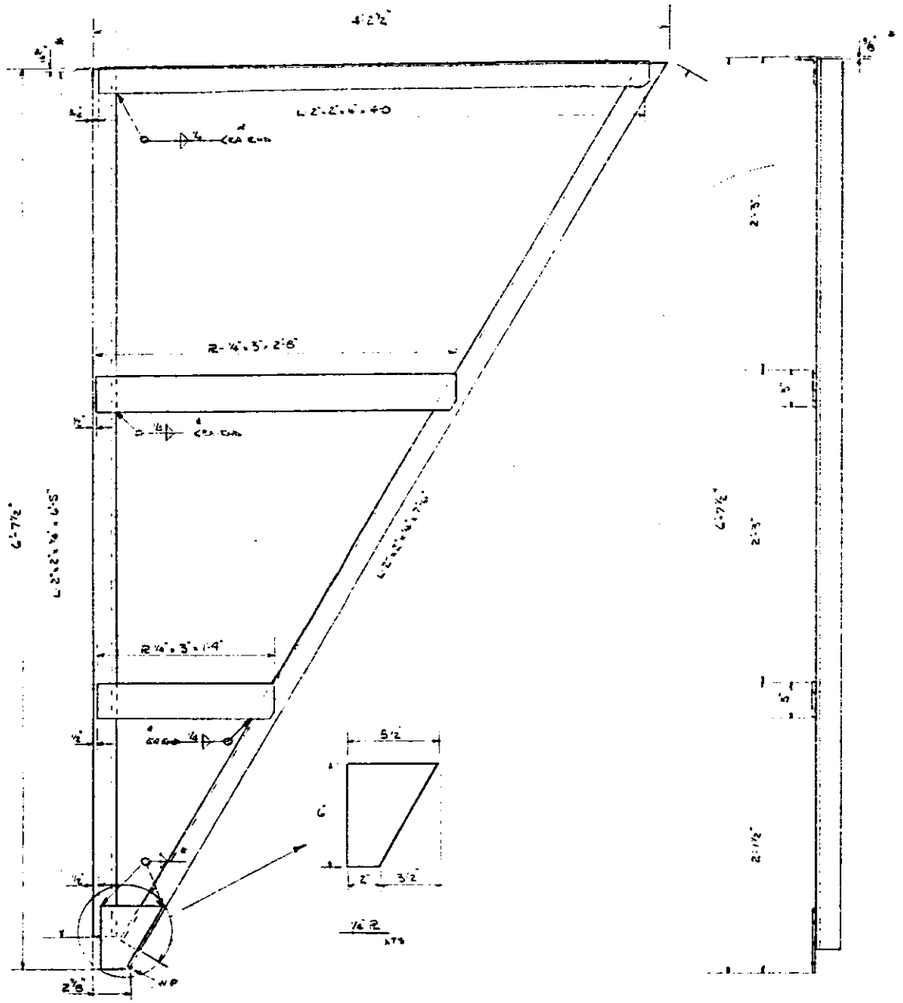
PIERS 2&13

CROSSWALL SECTION D

CHK'D. MRM	DRAWING NO.	104 A	
DRAWN MRM	SHEET 1 OF 1	SCALE AS NOTED	
CHECK	TOLERANCE	DATE 2-25-72	
APPROVED			

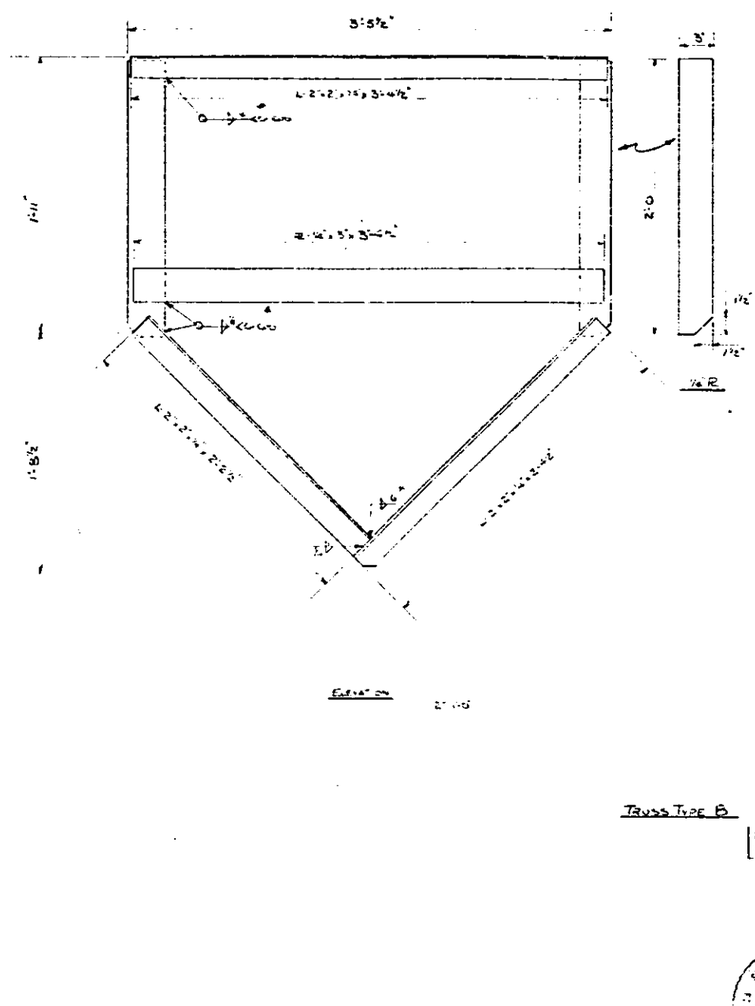
BILL OF MATERIALS					
ASSY. NO.	PART NO.	QUANT.	NAME	SIZE	MATERIAL

Sheet No. 8 of 8 Sheets.

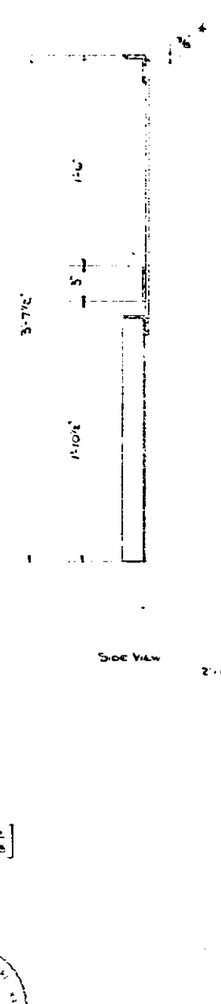


Elevation 2"=1'-0"

Side View 2"=1'-0"



Elevation 2"=1'-0"



Side View 2"=1'-0"

TRUSS TYPE A

[96 RODS - P2
76 RODS - P3
64 RODS - P11]

TRUSS TYPE B

[24 RODS - P12
24 RODS - P13]

Show Note 1 Weld All To Adj Connect Pcs

I HEREBY CERTIFY THAT THIS DRAWING WAS PREPARED BY ME AND THAT I AM A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF TENNESSEE

NO.	REVISION	DRAWN	DATE
A	As Noted ✱	MEA	2-26-72

NEW JOHNSONVILLE
TENNESSEE
37134

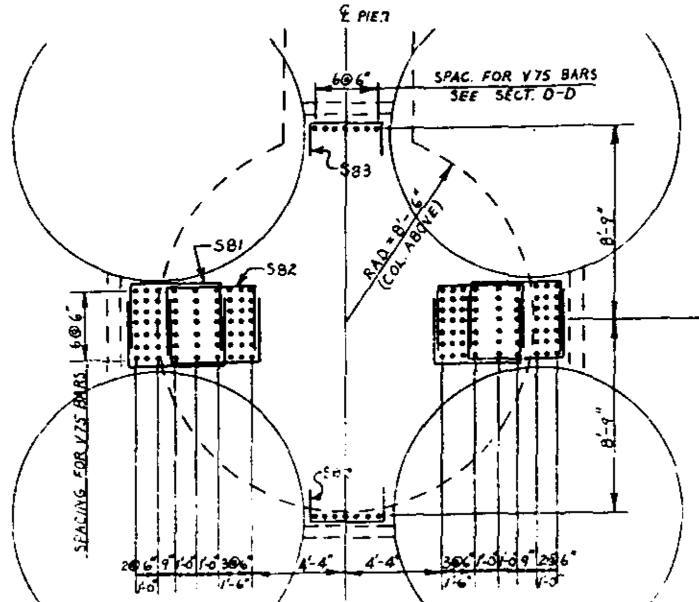
CAISSON SHOES FOR CAMP SERVICE
PROJECT No. I-87-9(15)0 SECTION (02-10-1)B

PIERS 12 & 13

TRUSSES

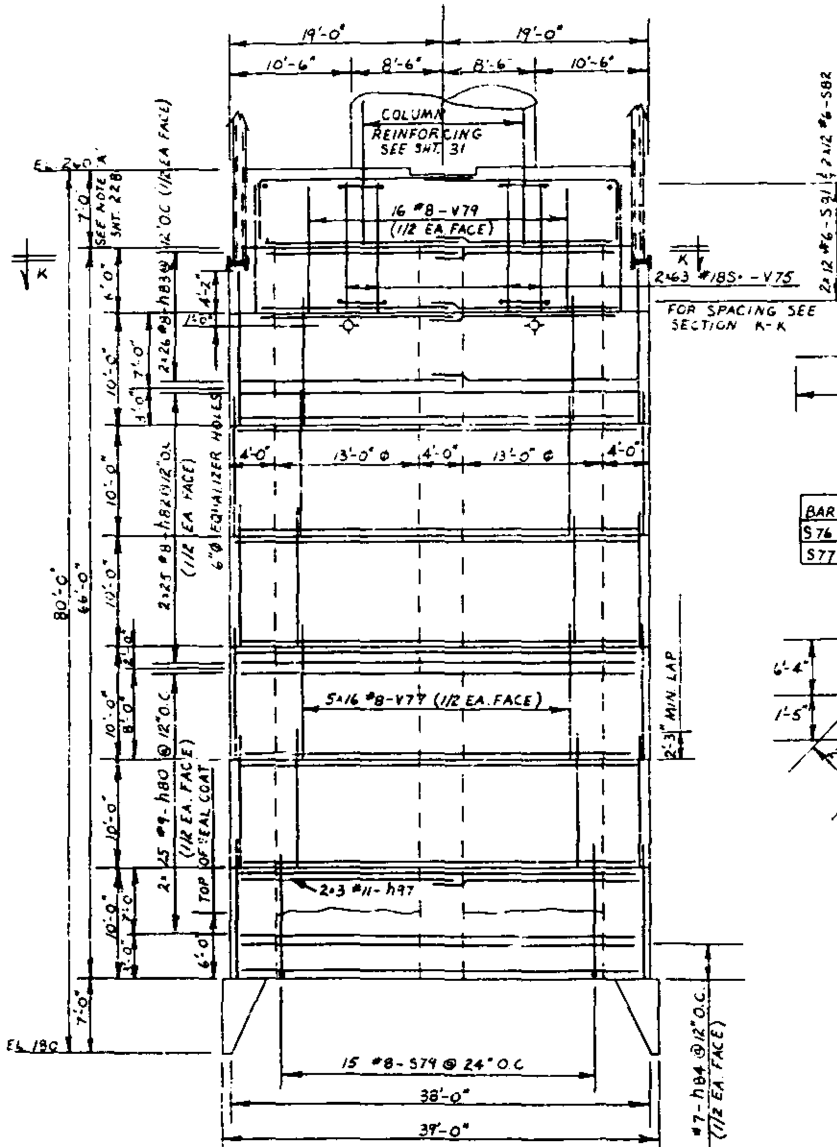
ENG'R. MSM	DRAWING NO. 105 A		
DRAWN MSM	SHEET 1 OF 1	SCALE As Noted	
CHECK	TOLERANCE	DATE 2-26-72	
APPROVED			

ROUTE NO.	SECTION	COUNTY	TOTAL SHTS	SHT. NO.
F.A.I. 57	(02-1B-1) B	ALEXANDER, ILLINOIS MISSISSIPPI, MISSOURI	54	35H
B.P.R. REG. NO. 4 B.P.R. REG. NO. 5		ILLINOIS MISSOURI	PROJECT I-57-1(3)0	



SECTION K-K

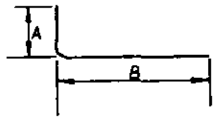
SCALE: 1/4" = 1'-0"



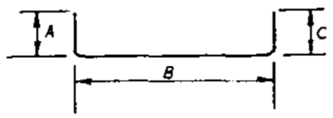
SECTION H-H (2 THUS)

SCALE: 1/8" = 1'-0"

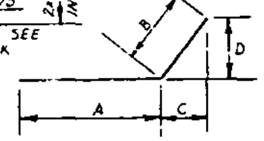
BILL OF MATERIAL FOR OPEN DREDGED CAISSON



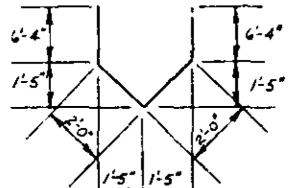
BAR	A	B
h78	5'-0"	35'-6"
h95	3'-3"	54'-5"
h77	5'-0"	19'-3"
S78	3'-0"	3'-0"



BAR	A	B	C
h94	3'-3"	37'-6"	3'-3"
S79	12'-0"	3'-4"	12'-0"
S81	2'-6"	4'-0"	2'-6"
S82	2'-6"	3'-9"	2'-6"
S83	1'-6½"	3'-4"	1'-6½"



BAR	A	B	C	D
S76	4'-0"	5'-3"	5'-7"	6"
S77	4'-0"	6'-6"	5'-8"	3'-2"



BAR S80

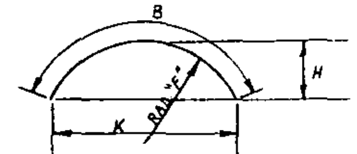
BAR	NO.	SIZE	LENGTH	SHAPE
h73	208	#11	19'-3"	
h74	50	#11	35'-6"	
h75	76	#11	55'-0"	
h76	22	#11	37'-6"	
h77	208	#11	24'-3"	
h78	50	#11	40'-6"	
h98	80	#11	28'-10"	
h99	40	#11	20'-9"	
h79	200	#9	54'-3"	
h80	400	#9	37'-6"	
h81	556	#8	54'-0"	
h82	350	#8	37'-6"	
h83	364	#8	20'-0"	
h84	30	#7	37'-6"	
h61	384	#7	13'-3"	
h62	168	#6	13'-3"	
h63	768	#7	6'-3"	
h64	336	#6	6'-3"	
h91	24	#7	20'-3"	
h92	18	#11	21'-0"	
h93	18	#11	37'-6"	
h94	6	#11	44'-0"	
h95	12	#11	57'-8"	
h96	12	#7	54'-6"	
h97	30	#11	19'-9"	
S76	292	#8	9'-8"	
S77	260	#8	10'-6"	
S78	252	#8	6'-0"	
S79	81	#8	27'-4"	
S80	58	#8	16'-8"	
S81	48	#6	9'-0"	
S82	48	#6	8'-9"	
S83	28	#6	1'-5"	
V75	280	#18S•	12'-0"	
V76	84	#11•	12'-0"	
V77	2232	#8	12'-3"	
V78	156	#8	14'-2"	
V79	376	#8	12'-0"	
# CLASS X CONCRETE			CU. YD.	7063
# REINFORCEMENT BARS			LBS.	550,119
SEAL COAT CONCRETE			CU. YD.	916.2

QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSE ONLY. COST TO BE INCLUDED IN THE LUMP SUM PRICE FOR OPEN DREDGED CAISSON, PIER 13.

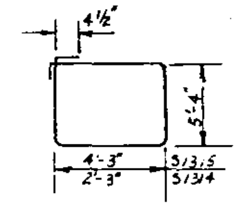
NOTE:

BARS MARKED THUS #11• TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM 615, GRADE 60. ALL BAR DIMENSIONS ARE OUT TO OUT.

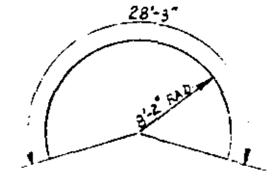
BILL OF MATERIALS FOR PIER



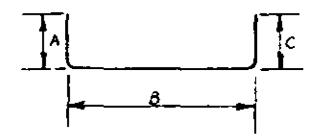
BAR	B	F	H	K
S1302	24'-0"	8'-2"	7'-5"	16'-3"
S1303	11'-0"	8'-2"	1'-9½"	10'-2"



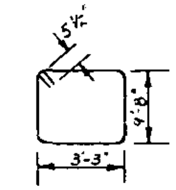
BARS S1314 & S1315



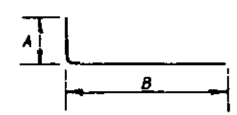
BAR S1301



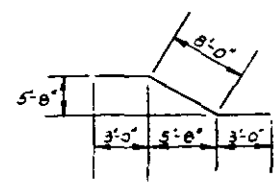
BAR	A	B	C
S1305	2'-0"	6'-3"	2'-0"
S1308	1'-6"	6'-3"	1'-6"
S1309	1'-6"	8'-3"	1'-6"
S1310	1'-6"	10'-0"	1'-6"
S1311	1'-6"	11'-6"	1'-6"
U1301	3'-0½"	5'-5"	3'-0½"



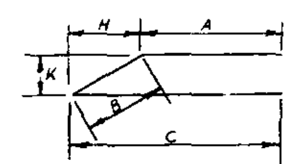
BAR S1313



BAR	A	B
h1313	2'-9"	2'-9"
P1305	5'-0"	5'-0"



BAR P1306



BAR	A	B	C	H	K
S1304	1'-6"	1'-3"	1'-6"	3"	1'-3"
S1307	1'-7"	1'-10"	1'-7"	4"	1'-9½"
S1312	2'-2"	2'-4"	2'-6"	5"	2'-3½"

BAR	NO.	SIZE	LENGTH	SHAPE
d1301	202	#10	8'-0"	
h1301	3	#11	68'-0"	
h1302	76	#9	62'-0"	
h1303	38	#8	62'-0"	
h1304	4	#8	11'-0"	
h1305	8	#8	13'-0"	
h1306	4	#8	14'-9"	
h1307	8	#8	15'-9"	
h1308	4	#8	14'-3"	
h1309	4	#8	11'-6"	
h1310	4	#8	7'-0"	
h1311	4	#8	5'-0"	
h1312	4	#8	7'-0"	
h1313	80	#8	5'-6"	
h1314	32	#10	62'-0"	
P1301	20	#11	64'-0"	
P1302	12	#11	63'-0"	
P1303	8	#11	62'-0"	
P1304	20	#11	24'-0"	
P1305	24	#11	10'-0"	
P1306	24	#11	14'-0"	
S1301	132	#7	28'-3"	
S1302	148	#7	24'-0"	
S1303	74	#7	11'-0"	
S1304	224	#5	4'-3"	
S1305	148	#5	10'-3"	
S1307	184	#5	5'-0"	
S1308	84	#5	9'-3"	
S1309	120	#5	11'-3"	
S1310	84	#5	13'-0"	
S1311	44	#5	14'-6"	
S1312	336	#5	7'-0"	
S1313	50	#5	26'-9"	

BAR	NO.	SIZE	LENGTH	SHAPE
S1314	234	#4	15'-11"	
S1315	108	#4	19'-11"	
U1301	51	#7	11'-6"	
V1301	98	#18S•	63'-0"	
V1302	98	#18S•	69'-0"	
V1303	64	#18S•	31'-6"	
V1304	64	#18S•	50'-0"	
V1305	48	#18S•	68'-6"	
V1306	24	#18S•	66'-0"	
V1307	24	#18S•	19'-6"	
V1309	98	#18S•	37'-0"	
V1309	72	#18S•	31'-0"	
V1310	220	#11•	25'-9"	
V1313	24	#11•	19'-6"	
V1311	406	#10	22'-6"	
V1312	102	#7	18'-3"	
CLASS X CONCRETE			CU. YD.	2902.9
REINFORCEMENT BARS			LBS.	585,080

NOTE:

BARS MARKED 18S• ETC. TO BE HIGH STRENGTH STEEL BARS CONFORMING TO ASTM 615, GRADE 60. ALL BAR DIMENSIONS ARE OUT TO OUT.

APPROVED
For Main Dimensions and Materials Only
MAR 5 1973
Engineer of Bridge & Traffic Structures

REVISION A	REVISED DIST. BLOCK REINF.	1-19-73

AL JOHNSON CONSTRUCTION CO.
General Cont.

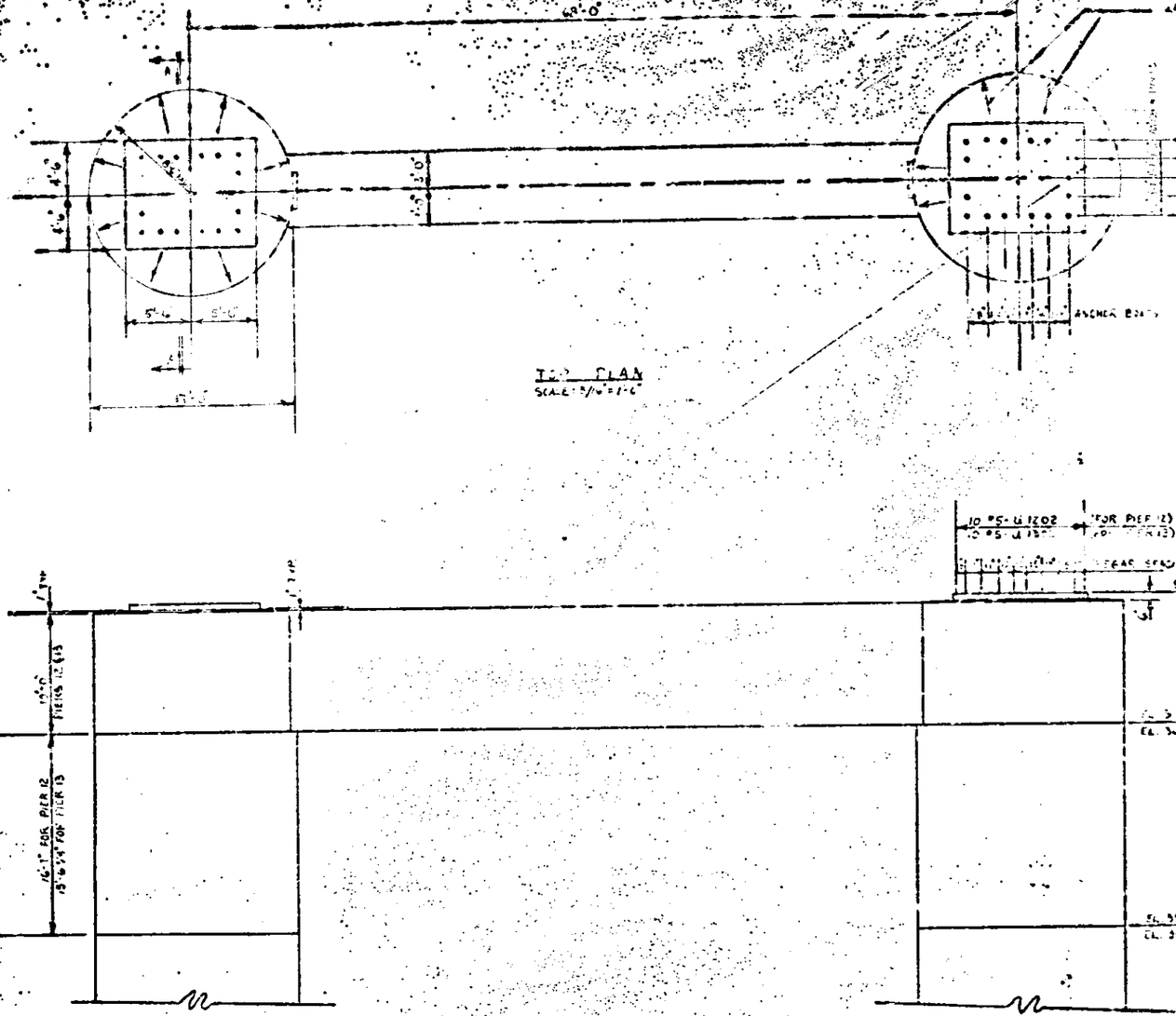
I-57 BRIDGE AT CAIRO

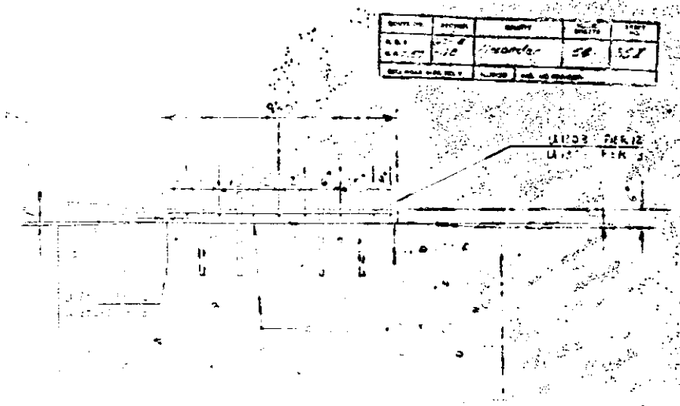
I-57-1(3)0

PIER 13

CAISSON REINFORCING

DRAWN RDK   DATE 1-17-73
CHECKED   DRAWING NO. R109
APPROVED   SHEET OF





ELEVATION
SCALE: 3/16"=1'-0"

NOTE | PIER 12

1. VERTICAL REBARS IN THE COLUMNS (V1202) ABOVE EL. 361.00 WILL BE SHORTENED, IF NECESSARY, TO MAINTAIN PROPER CLEARANCE FROM TOP OF PIER.

2. REBAR TIES BETWEEN EL. 361.00 AND EL. 367.58 (S1201, S1204, & S1205) WILL BE SPACED SLIGHTLY CLOSER TOGETHER THAN REQUIRED.

(REFER TO SHT. 25 OF THE CONTRACT DRAWINGS FOR REINFORCING STEEL NOT DEPICTED HERE.)

NOTE | PIER 13

1. VERTICAL REBARS IN THE COLUMNS (V1301) ABOVE EL. 369.50 WILL BE SHORTENED, IF NECESSARY, TO MAINTAIN PROPER CLEARANCE FROM TOP OF PIER.

2. REBAR TIES BETWEEN EL. 369.50 AND EL. 375.01 (S1301, S1304, & S1305) WILL BE SPACED SLIGHTLY CLOSER TOGETHER THAN REQUIRED.

(REFER TO SHT. 31 OF THE CONTRACT DRAWINGS FOR REINFORCING STEEL NOT DEPICTED HERE.)

NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.

	BAR	NO	SIZE	SHAPE	A	B	C
PIER 12	V1202	20	#5				
	V1205	18	#5				
PIER 13	V1302	20	#5				
	V1305	18	#5				

A B C

F.A.I. 57 SEC... ...07
ALEXANDER COUNTY

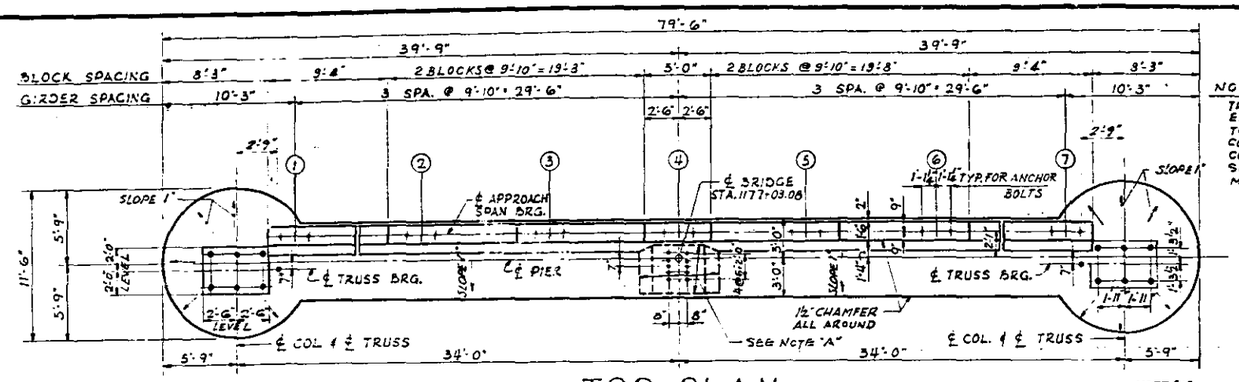
PLANS FOR
PROPOSED ...

DATE 3-21-16
I-57 BRIDGE AT CAIRO

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(02-18-1) B	ALEXANDER ILLINOIS MISSISSIPPI MISSOURI	51	36
STATE RED. NO.		ILLINOIS MISSOURI	PROJECT I-57-9(10)	
F.A.P. RED. NO.				

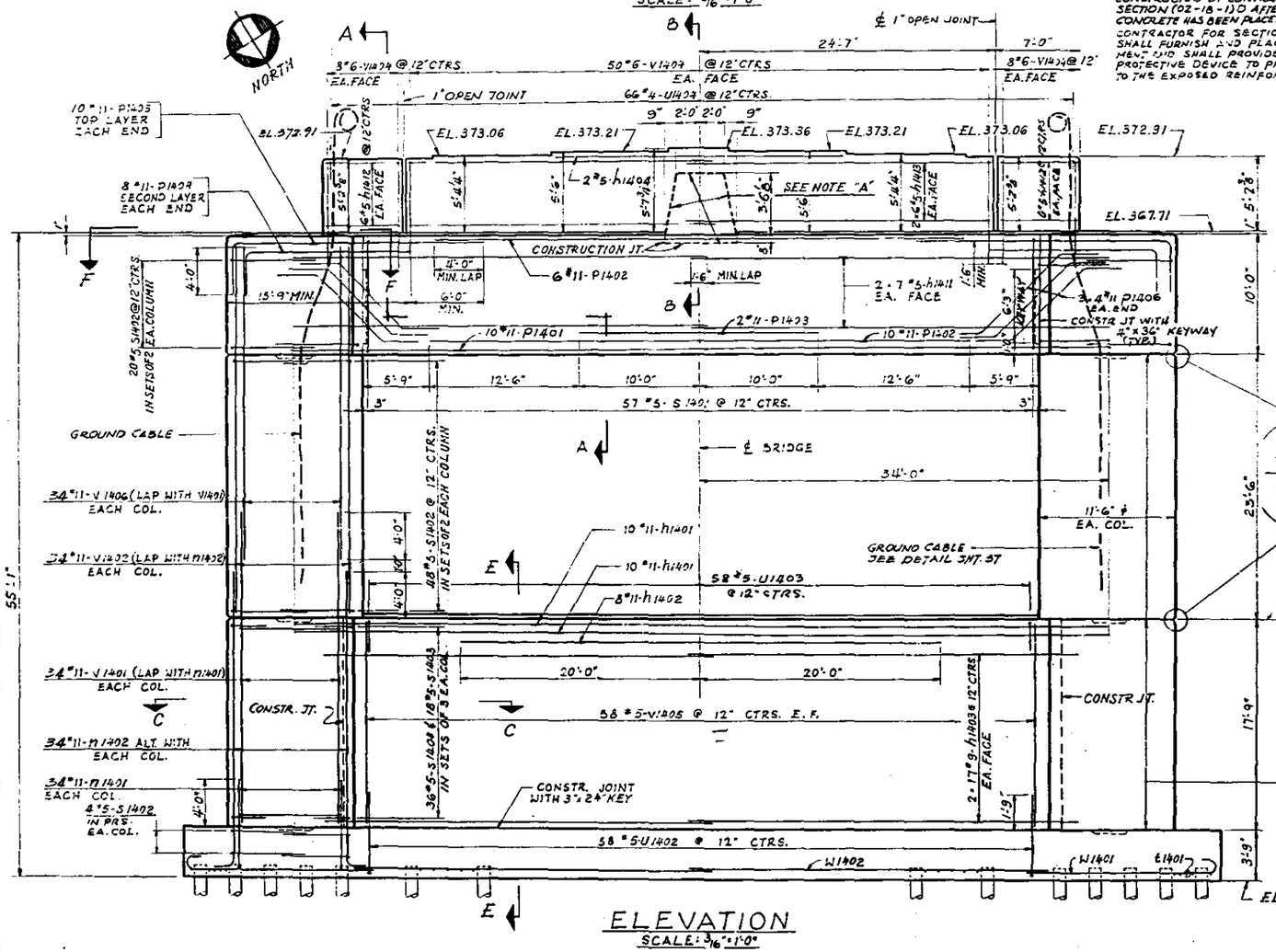
TOP PLAN

SCALE: 3/16" = 1'-0"



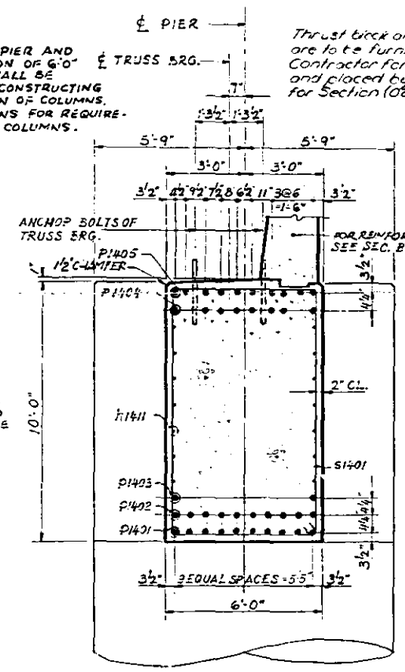
NOTE!
THE TOP BEAM OF THE PIER AND EACH VERTICAL SECTION OF 6'-0" THICK CENTER WALL SHALL BE CONSTRUCTED BEFORE CONSTRUCTING CORRESPONDING SECTION OF COLUMNS. SEE SPECIAL PROVISIONS FOR REQUIREMENT OF CONCRETE FOR COLUMNS.

NOTE "A"
CONSTRUCTED BY CONTRACTOR FOR SECTION (02-18-1)D AFTER DECK CONCRETE HAS BEEN PLACED.
CONTRACTOR FOR SECTION (02-18-1)B SHALL FURNISH AND PLACE REINFORCEMENT AND SHALL PROVIDE AN APPROVED PROTECTIVE DEVICE TO PREVENT DAMAGE TO THE EXPOSED REINFORCEMENT.



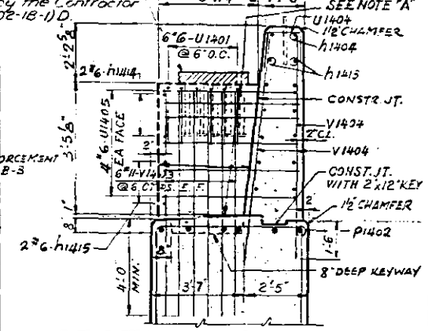
ELEVATION

SCALE: 3/16" = 1'-0"



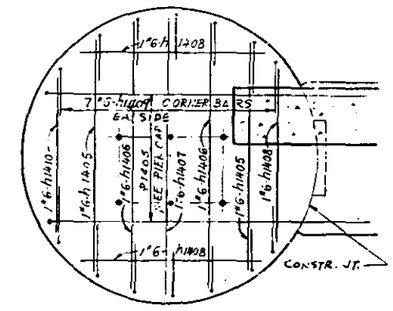
SECTION A-A

SCALE: 3/8" = 1'-0"



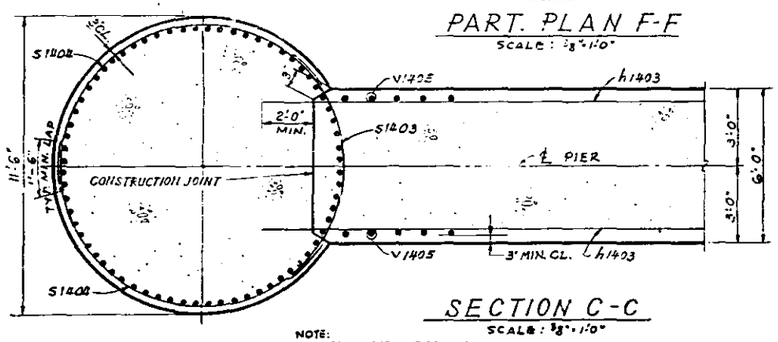
SECTION B-B

SCALE: 3/8" = 1'-0"



PART. PLAN F-F

SCALE: 3/8" = 1'-0"



SECTION C-C

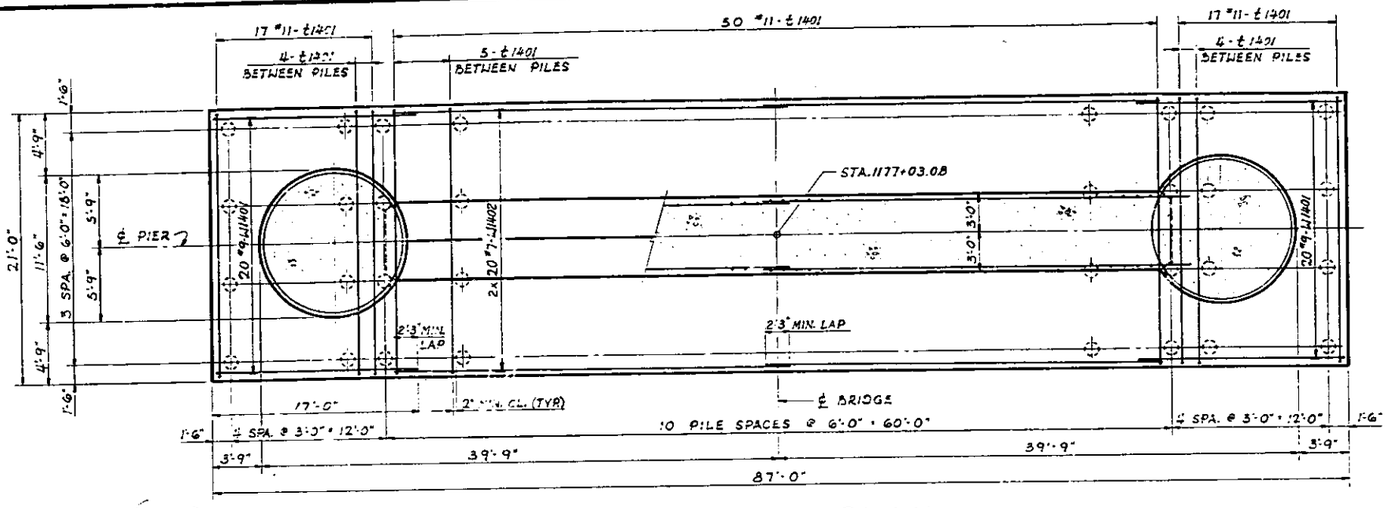
SCALE: 3/8" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

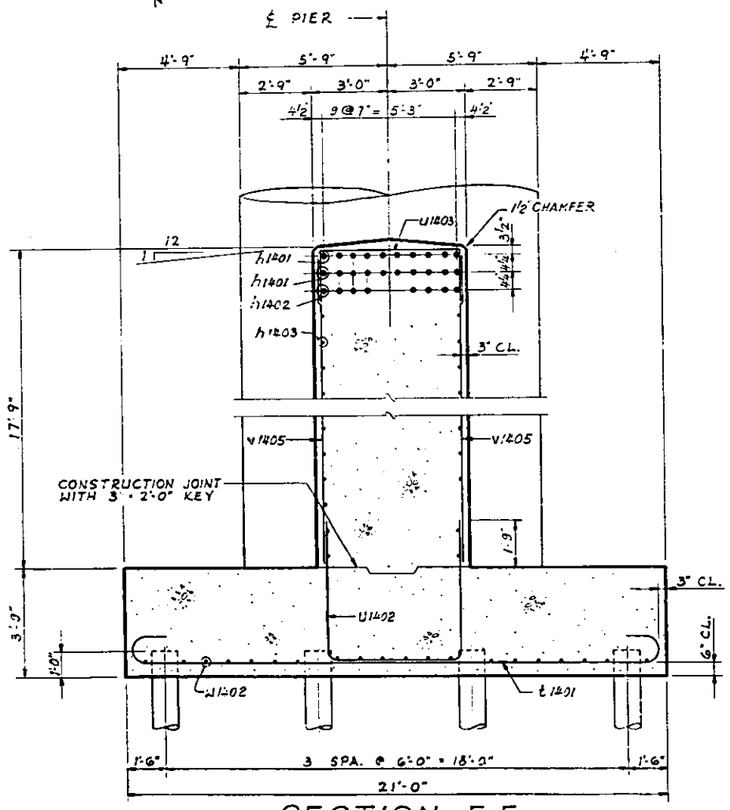
Rev. Anchor Bolt location 5-17-71 SFM



FOOTING PLAN

SCALE: 3/16" = 1'-0"

NORTH

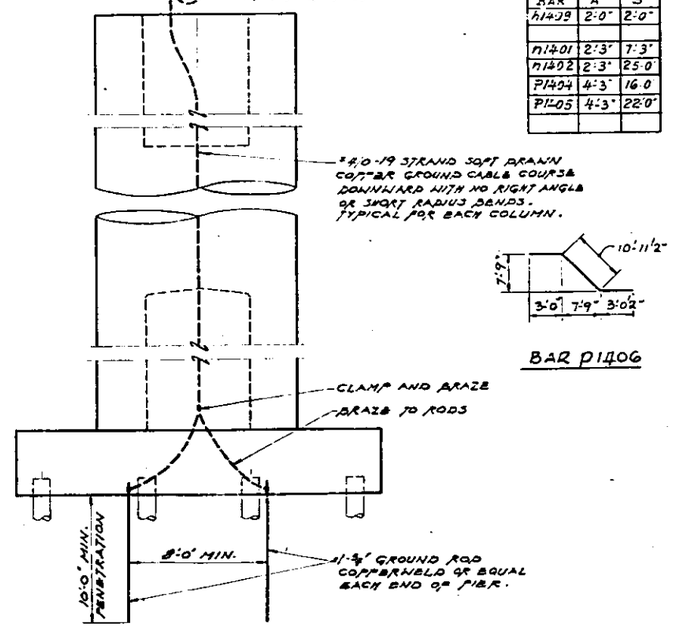


SECTION E E

SCALE: 3/8" = 1'-0"

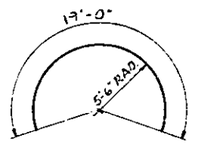
PILE DATA	
TYPE	CONCRETE
CAPACITY	50 TONS
EST. LENGTH	50 FT.*
NO. REQUIRED	76 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 275.
** INCLUDES ONE TEST PILE.

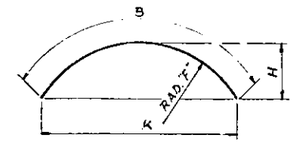


GROUNDING DETAIL

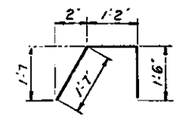
SCALE: ¼" = 1'-0"



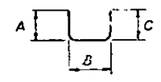
BAR S1402



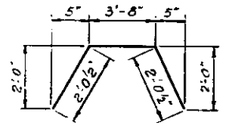
BAR	B	F	H	K
S1403	10'-0"	5'-6"	2'-2"	8'-9"
S1404	15'-0"	5'-6"	2'-5"	10'-9½"



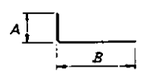
BAR U1404



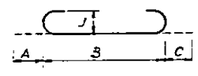
BAR	A	B	C
U1402	5'-0"	5'-6"	5'-0"
U1403	2'-0"	5'-6"	2'-0"
U1405	1'-6"	5'-3"	1'-6"



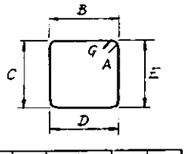
BAR U1401



BAR	A	B
h1439	2'-0"	2'-0"
h1401	2'-3"	7'-3"
h1402	2'-3"	25'-0"
P1404	4'-3"	16.0
P1405	4'-3"	22'-0"



BAR	A	B	C	J
t1401	1'-7"	20'-6"	1'-7"	1-2½
W1401	1'-3"	16'-3	—	11½



BAR	A	B	C	D	E	G
S1401	5½"	5'-8"	9'-8"	5'-8"	9'-8"	5½"

BAR P1406

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I 57	(02-18-1) B	ALEXANDER WITH MISSOURI ILLINOIS MISSOURI	54	37
S.P.R. REF. NO. A		ILLINOIS MISSOURI	PROJECT I-57-9(10	
S.P.R. REF. NO. B				

BILL OF MATERIAL

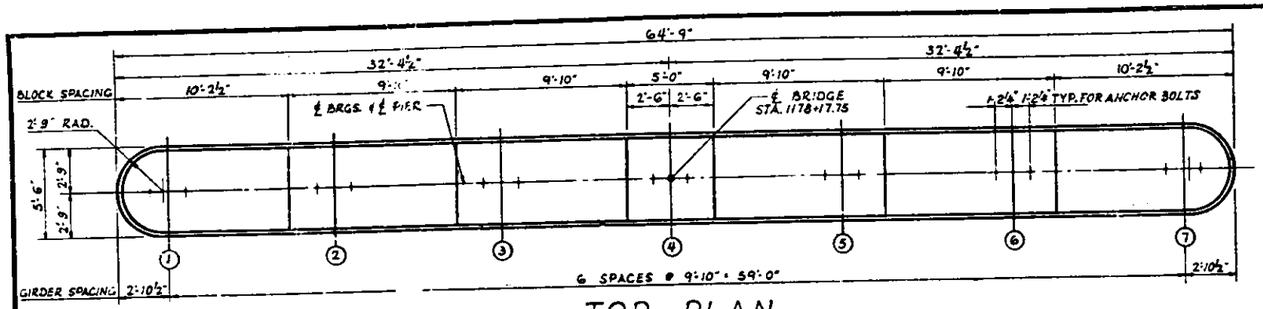
BAR	NO	SIZE	LENGTH	SHAPE
h1401	20	#11	58'-0"	
h1402	8	#11	40'-0"	
h1403	68	#9	33'-0"	
h1404	2	#5	24'-3"	
h1405	4	#6	9'-0"	
h1406	4	#6	10'-6"	
h1407	2	#6	11'-0"	
h1408	6	#6	7'-0"	
h1409	28	#6	4'-0"	
h1410	2	#6	6'-0"	
h1411	23	#5	34'-9"	
h1412	24	#5	6'-6"	
h1413	24	#5	25'-3"	
h1414	2	#6	3'-9"	
h1415	2	#6	4'-3"	
n1401	63	#11	9'-6"	
n1402	68	#11	27'-3"	
P1401	10	#11	68'-0"	
P1402	16	#11	45'-0"	
P1403	2	#11	20'-0"	
P1404	16	#11	20'-3"	
P1405	20	#11	26'-3"	
P1406	24	#11	17'-0"	
S1401	57	#5	31'-7"	
S1402	144	#5	19'-0"	
S1403	36	#5	10'-0"	
S1404	72	#5	15'-0"	
t1401	34	#11	23'-8"	
U1401	6	#6	7'-9"	
U1402	58	#5	15'-6"	
U1403	58	#5	9'-6"	
U1404	66	#4	8'-3"	
U1405	4	#6	8'-3"	
V1401	68	#11	26'-9"	
V1402	68	#11	33'-3"	
V1403	12	#11	7'-6"	
V1404	132	#6	7'-0"	
V1405	116	#5	17'-3"	
V1406	68	#11	28'-3"	
W1401	40	#9	18'-0"	
W1402	40	#7	30'-0"	
CLASS X CONCRETE		CU.YDS.	1024.5	
REINFORCEMENT BARS		LBS.	108,800	
CONCRETE PILES (50TON)		LIN. FT.	3750	
TEST PILE CONC. (50TON)		EACH	1	
PILE TEST LOADING (50TON)		EACH	2	
Structure Excavation		CU.YDS	452	

NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT.

PIER 14
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

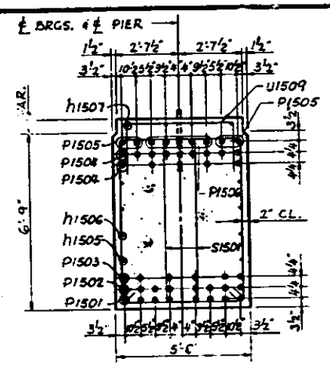
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 S. WABASH AVE. CHICAGO, ILLINOIS

FAS RTE	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I.57	902-(B)-1 B	ALEXANDER	ILLINOIS	54	38
S.P.R. SEC. NO. 1		MISSISSIPPI	MISSOURI		
S.P.R. SEC. NO. 2		ILLINOIS	MISSOURI	PROJECT I-57-9(10)	



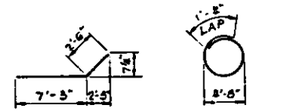
TOP PLAN

SCALE: 1/4" = 1'-0"



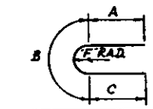
SECTION A-A

SCALE: 1/8" = 1'-0"

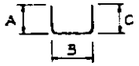


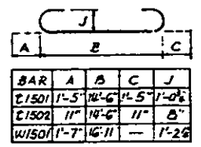
BAR P1507

BAR S1503



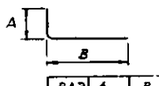
BAR	A	B	C	F
U1501	1'-6½	7'-11	1'-6½	2'-6½
U1502	1'-7	8'-1½	1'-2½	2'-7"



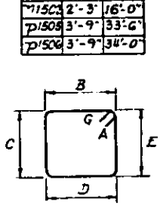


BAR	A	B	C	J
t1501	1'-5"	14'-6"	1'-5"	1'-0½
t1502	11"	14'-6"	11"	8"
W1501	1'-7"	16'-11	—	1'-2½

BAR	A	B	C
U1503	8'-6½	5'-2"	8'-6½
U1504	8'-6"	5'-2"	8'-4"
U1505	2'-10"	2'-2"	2'-10"
U1506	3'-5"	5'-2"	3'-5"
U1507	3'-11"	5'-2"	3'-11"
U1508	6'-3½	5'-2"	6'-3½
U1509	1'-7"	8'-10"	1'-7"



BAR	A	B
m1501	2'-3"	11'-0"
m1502	2'-3"	16'-0"
p1508	3'-9"	33'-6"
p1506	3'-9"	34'-0"

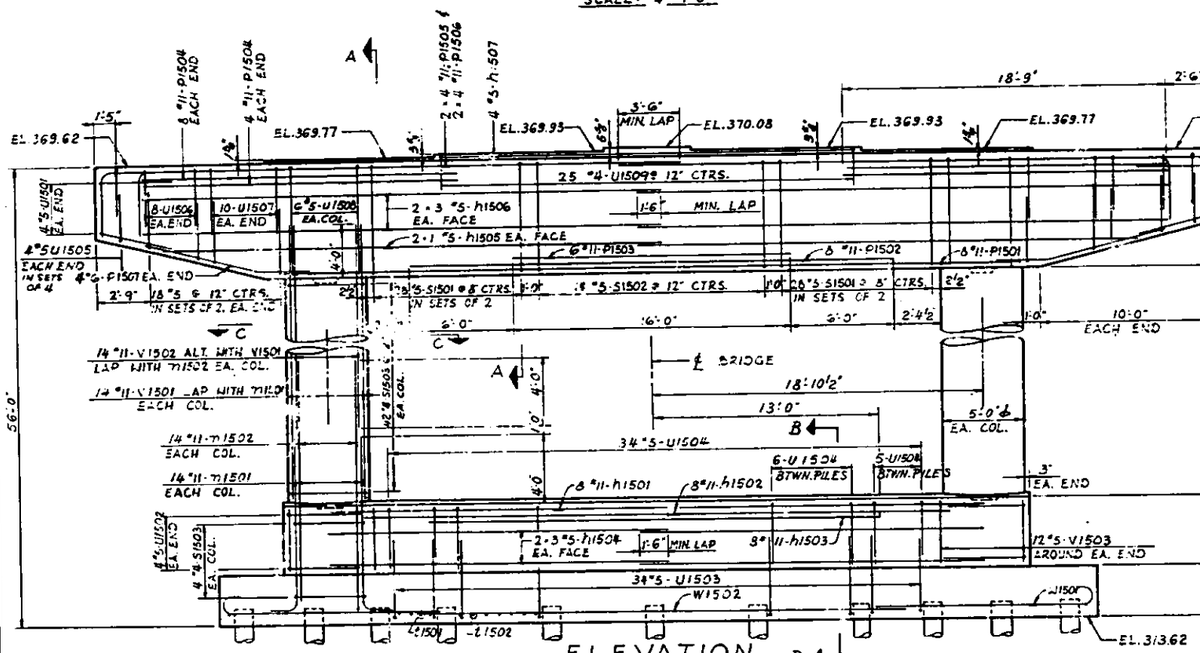


BAR	A	B	C	D	E	G
S1501	5½	3'-0½	6'-5	3'-0½	6'-5	5½
S1502	5½	5'-2	6'-5	5'-2	6'-5	5½

BILL OF MATERIAL

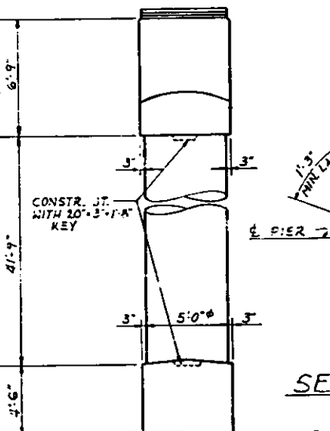
BAR	N9	SIZE	LENGTH	SHAPE
h1501	8	#11	38'-0"	—
h1502	8	#11	33'-0"	—
h1503	8	#11	26'-0"	—
h1508	12	#5	20'-0"	—
h1505	8	#5	27'-6"	—
h1506	12	#5	30'-6"	—
h1507	4	#5	28'-3"	—
m1501	28	#11	13'-3"	L
m1502	28	#11	18'-3"	L
p1501	8	#11	43'-0"	—
p1502	8	#11	28'-0"	—
p1503	6	#11	16'-0"	—
p1504	28	#11	18'-9"	—
p1505	8	#11	37'-3"	—
p1506	8	#11	37'-9"	—
p1507	8	#6	9'-9"	L
S1501	56	#5	19'-10"	⊡
S1502	14	#5	28'-1"	⊡
S1503	92	#4	16'-0"	○
t1501	26	#10	17'-4"	C
t1502	28	#8	16'-8"	C
U1501	8	#5	11'-0"	C
U1502	8	#5	11'-3"	C
U1503	34	#5	18'-3"	C
U1504	34	#5	13'-10"	C
U1505	8	#5	8'-3"	C
U1506	16	#5	12'-0"	C
U1507	20	#5	13'-0"	C
U1508	12	#5	17'-9"	C
U1509	25	#4	8'-0"	C
V1501	28	#11	45'-9"	—
V1502	28	#11	40'-9"	—
V1503	24	#5	4'-3"	—
W1501	28	#11	18'-6"	C
W1502	18	#9	22'-0"	—
CLASS X CONCRETE			CU.YDS.	268.6
REINFORCEMENT BARS			LBS.	43,390
CONCRETE PILES (35TON)			LIN. FT.	1,920
TEST PILE CON. (35TON)			EACH	1
PILE TEST LOADING (35TON)			EACH	1
Structure Excavation			CU.YDS.	170

NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT.



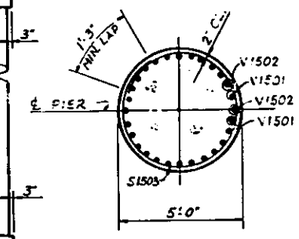
ELEVATION

SCALE: 1/4" = 1'-0"



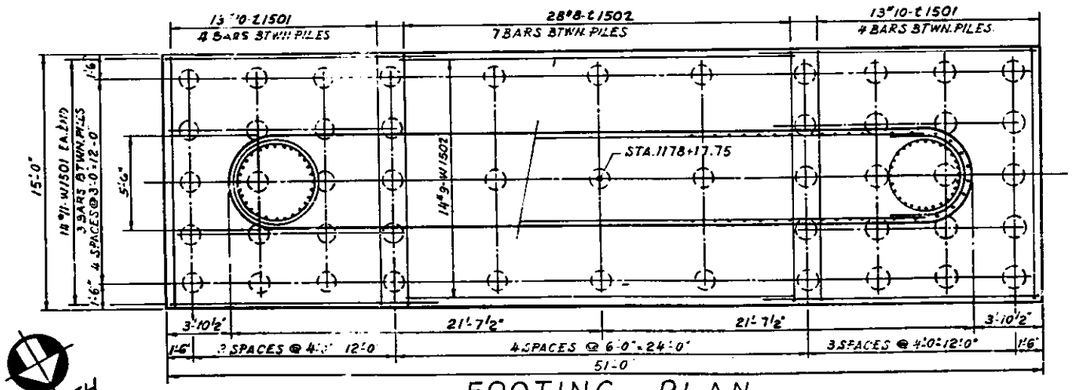
END ELEVATION

SCALE: 1/4" = 1'-0"



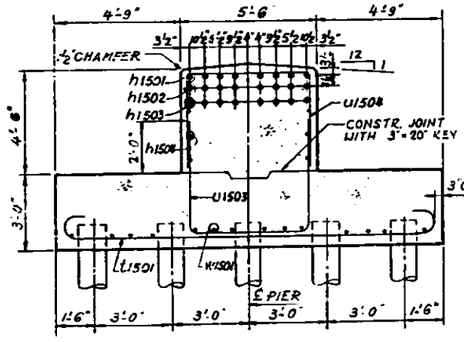
SECTION C-C

SCALE: 3/8" = 1'-0"



FOOTING PLAN

SCALE: 1/4" = 1'-0"



SECTION B-B

SCALE: 3/8" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	40 FT.*
NO. REQUIRED	49 **

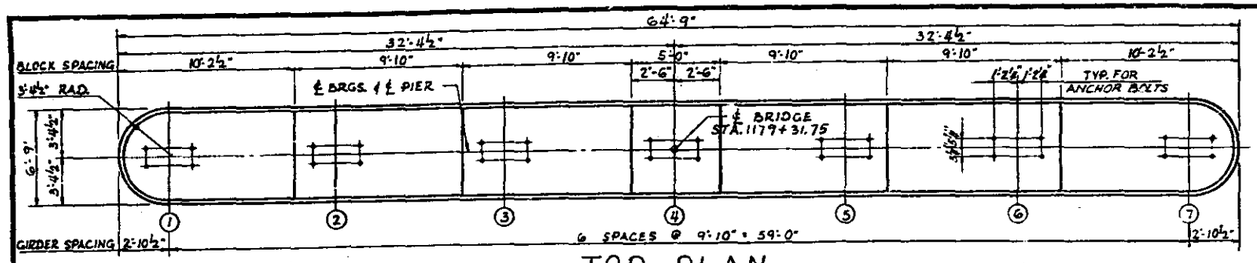
* TIP OF PILE NOT HIGHER THAN ELEVATION 280.
** INCLUDES ONE TEST PILE.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 WABASH AVE. CHICAGO, ILLINOIS

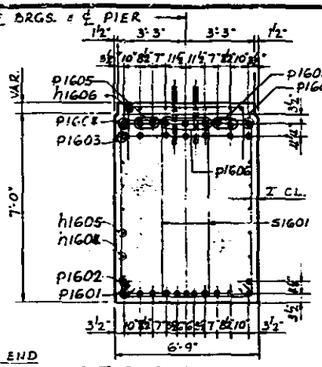
PIER 15
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	108-1-1 B	ALEXANDER MISSISSIPPI	54	39
STATE REG. NO. =		ILLINOIS MISSOURI	PROJECT I-57-9(10)	
F.A.P. REG. NO. =				

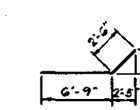
TOP PLAN
SCALE: 1/4" = 1'-0"



SECTION A-A
SCALE: 3/8" = 1'-0"

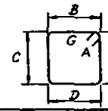


BAR P1607



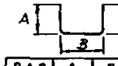
BAR	A	B
h1601	2'-1½	18'-1½
h1602	2'-1½	10'-7½
h1603	2'-1½	15'-7½
P1604	2'-0"	30'-9"
P1605	2'-0"	33'-6"
P1606	2'-0"	38'-0"

BAR S1602



BAR	A	B	C	D	E	G
S1601	5½	2'-3½	6'-8	2'-3½	6'-8	5½

BAR	A	B	C	J
t1601	1'-7	18'-6	1'-7	1'-24
U1601	11"	26'-7	—	8"



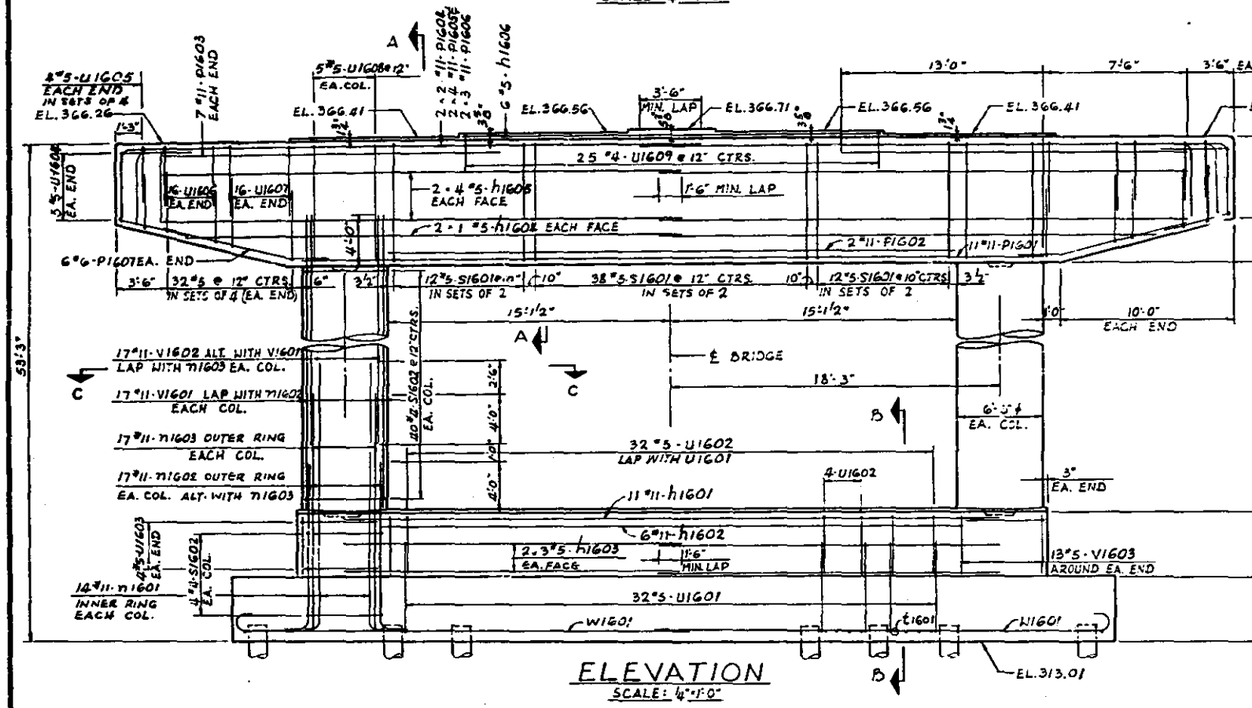
BAR	A	B	C
U1601	5'-3½	6'-5	5'-3½
U1602	3'-1"	6'-5	3'-1"
U1605	3'-0"	3'-0"	3'-0"
U1606	3'-7½	2'-3½	3'-7"
U1607	2'-1½	11'-3½	2'-1"
U1608	6'-6½	6'-5	6'-6½
U1609	1'-7"	6'-1"	1'-7"

BILL OF MATERIAL

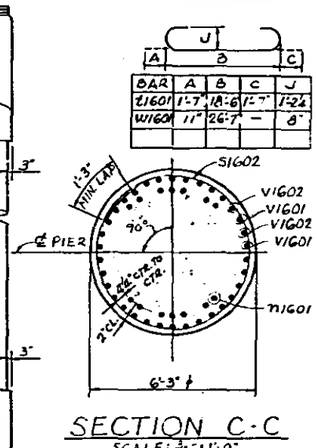
BAR	NO.	SIZE	LENGTH	SHAPE
h1601	11	#11	36'-6"	
h1602	6	#11	30'-6"	
h1603	12	#5	19'-0"	
h1604	4	#5	29'-0"	
h1605	16	#5	29'-9"	
h1606	6	#5	26'-3"	
P1601	28	#11	20'-3"	
P1602	34	#11	12'-9"	
P1603	38	#11	17'-9"	
P1601	11	#11	83'-0"	
P1602	2	#11	30'-3"	
P1603	14	#11	20'-6"	
P1604	4	#11	38'-9"	
P1605	8	#11	37'-6"	
P1606	6	#11	38'-0"	
P1607	12	#6	9'-3"	
S1601	62	#5	22'-10"	
S1602	88	#4	20'-0"	
t1601	50	#11	21'-8"	
U1601	32	#5	17'-0"	
U1602	32	#5	12'-7"	
U1603	8	#5	13'-3"	
U1604	10	#5	13'-0"	
U1605	8	#5	9'-0"	
U1606	32	#5	11'-6"	
U1607	32	#5	12'-3"	
U1608	10	#5	19'-6"	
U1609	25	#4	9'-3"	
V1601	34	#11	43'-3"	
V1602	34	#11	38'-3"	
V1603	26	#5	3'-0"	
W1601	36	#8	27'-6"	
CLASS X CONCRETE			CU.YDS.	365.4
REINFORCEMENT BARS			LBS.	49,050
CONCRETE PILES(35TON)			LIN. FT.	2,080
TEST PILE CONC.(35TON)			EACH	1
PILE TEST LOADING(35TON)			EACH	1
Structure Excavation			CU.YDS.	254

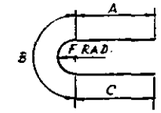
NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT

ELEVATION
SCALE: 1/4" = 1'-0"



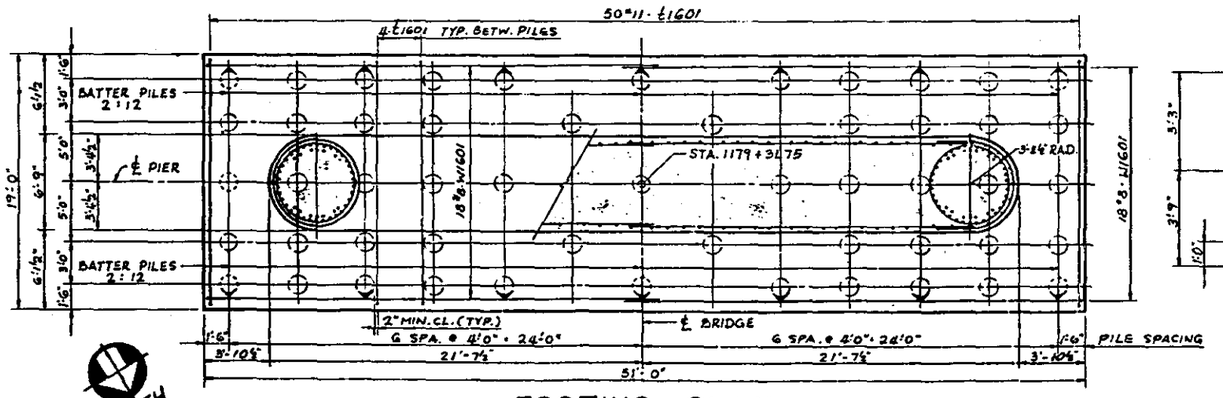
SECTION C-C
SCALE: 3/8" = 1'-0"



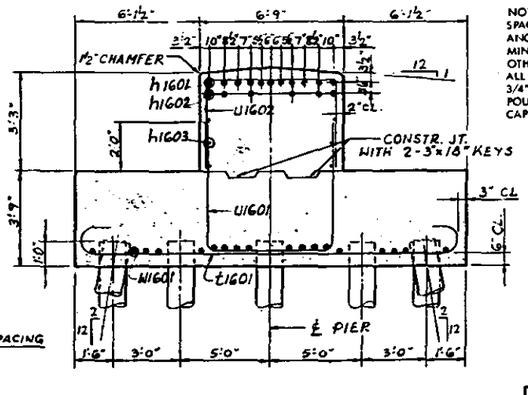


BAR	A	B	C	F
U1603	1'-7"	10'-1"	1'-7"	3'-2½
U1604	1'-6½	9'-11"	1'-6½	3'-1⅝

FOOTING PLAN
SCALE: 1/4" = 1'-0"



SECTION B-B
SCALE: 3/8" = 1'-0"



NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

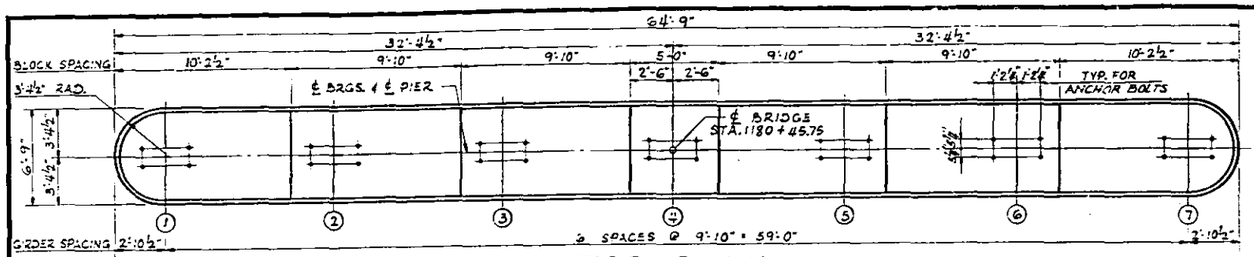
TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	40 FT.*
NO. REQUIRED	53 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 276.
** INCLUDES ONE TEST PILE.

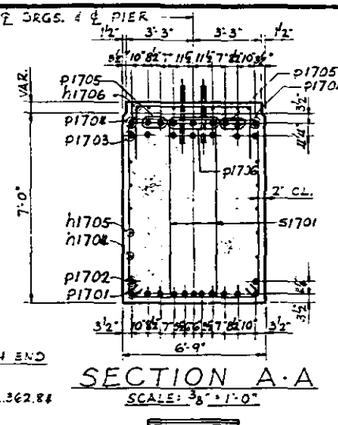
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 16
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	108-1-1 B	ALEXANDER ILLINOIS MISSOURI	54	40
D.P.R. DES NO. 6 D.P.R. DES NO. 8		ILLINOIS MISSOURI	PROJECT I-57-9(10)	

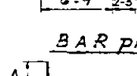


TOP PLAN
SCALE: 1/4" = 1'-0"



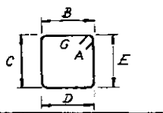
SECTION A-A
SCALE: 3/8" = 1'-0"

BAR P1707

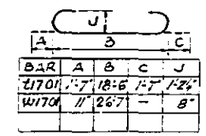


BAR	A	B
H1701	2'-1½	18'-1½
H1702	2'-1½	10'-7½
H1703	2'-1½	15'-7½
P1708	2'-0"	30'-9"
P1705	2'-0"	33'-6"
P1706	2'-0"	38'-0"

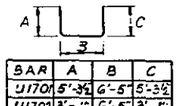
BAR S1702



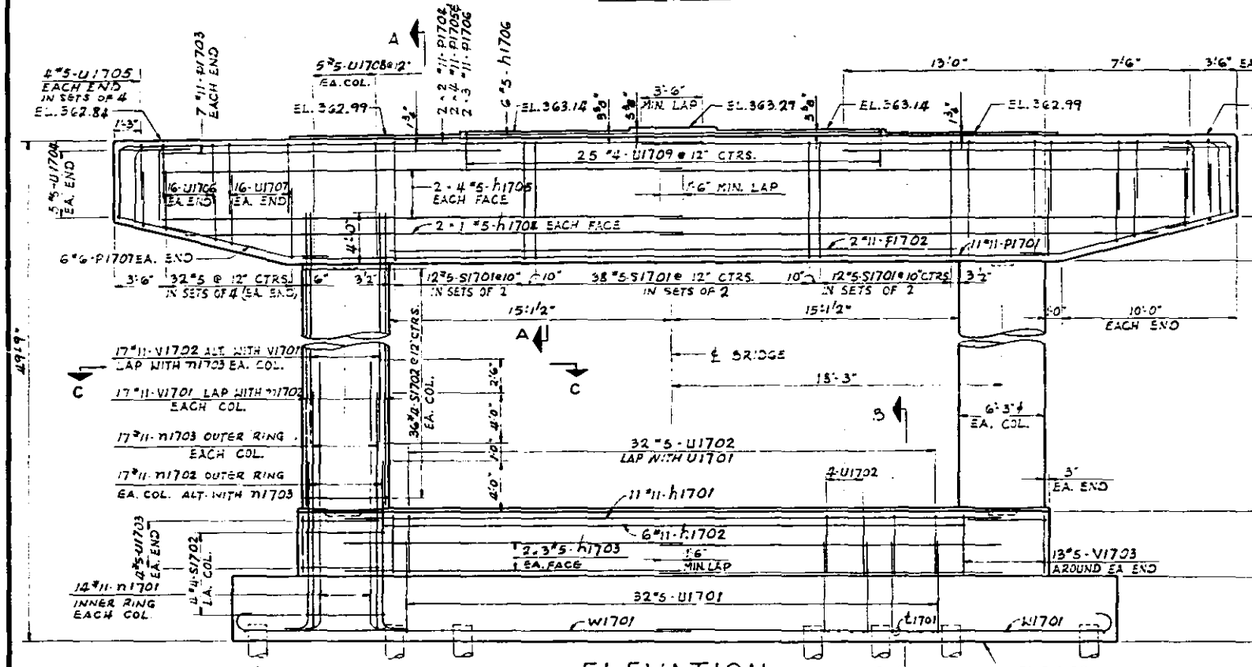
BAR	A	B	C	D	E	G
S1701	5½	12'-3½	6'-8	2'-3½	6'-8	5½



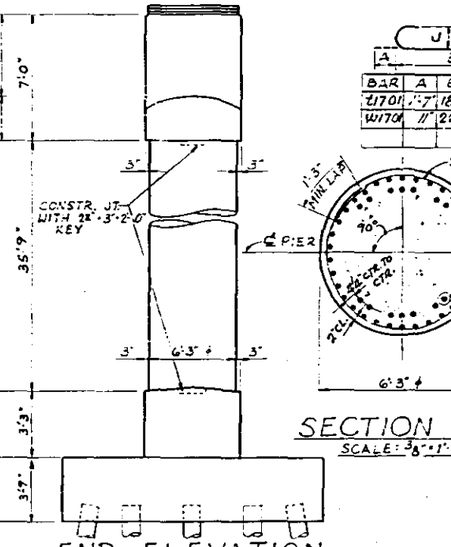
	A	B	C	J
U1701	1'-7"	18'-6	1'-7"	1'-2½"
W1701	11"	26'-7"	–	8"



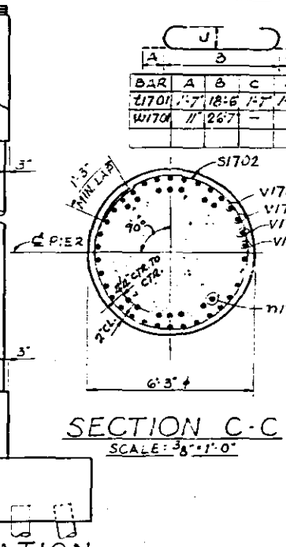
BAR	A	B	C
U1701	5'-3½	6'-5"	5'-3½
U1702	3'-0"	6'-5"	3'-1"
U1705	3'-0"	3'-0"	3'-0"
U1706	3'-7½	2'-3½	3'-7"
U1707	2'-1½	2'-3½	2'-1"
U1708	6'-6½	6'-5"	6'-6½
U1709	1'-7"	6'-1"	1'-7"



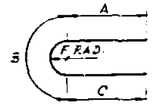
ELEVATION
SCALE: 1/4" = 1'-0"



END ELEVATION
SCALE: 1/4" = 1'-0"



SECTION C-C
SCALE: 3/8" = 1'-0"

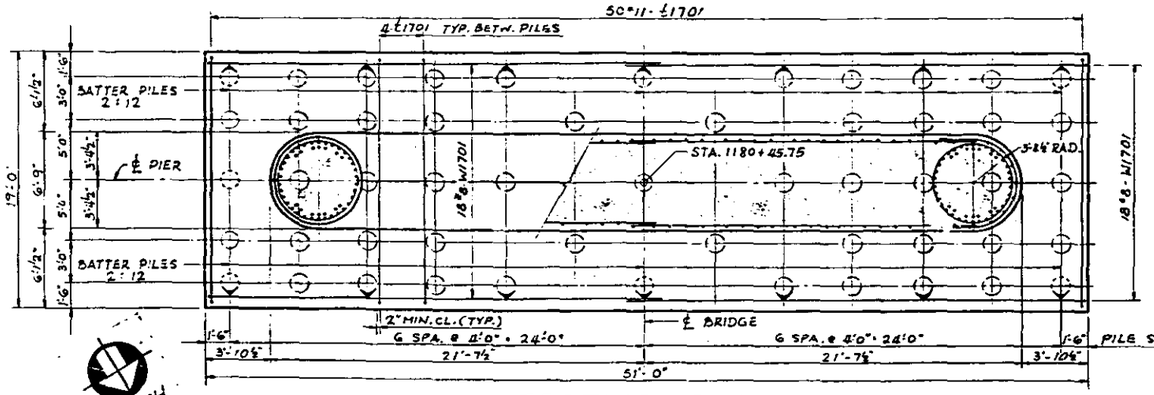


BAR	A	B	C	F
U1703	1'-7"	10'-1"	1'-7"	3'-2½
U1704	1'-2½	9'-1"	1'-6½	3'-1⅞

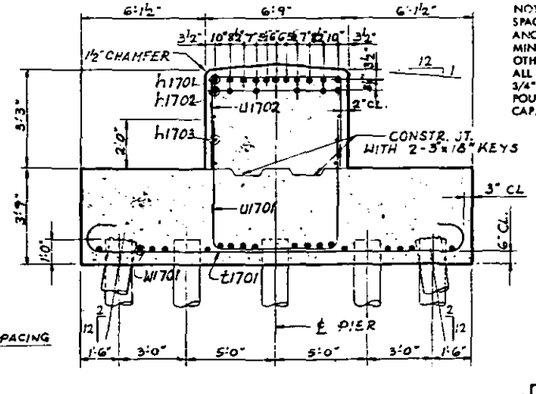
BILL OF MATERIAL

BAR	NO	SIZE	LENGTH	SHAPE
H1701	11	#11	36'-6"	
H1702	6	#11	30'-6"	
H1703	12	#5	19'-0"	
H1708	4	#5	29'-0"	
H1705	16	#5	29'-9"	
H1706	6	#5	28'-3"	
H1701	28	#11	20'-3"	
H1702	34	#11	12'-9"	
H1703	32	#11	17'-9"	
P1701	11	#11	83'-0"	
P1702	2	#11	30'-3"	
P1703	14	#11	20'-6"	
P1708	4	#11	38'-9"	
P1705	8	#11	37'-6"	
P1706	6	#11	38'-0"	
P1707	12	#6	9'-3"	
S1701	62	#5	22'-10"	
S1702	80	#4	20'-0"	
U1701	50	#11	2'-8"	
U1701	32	#5	17'-0"	
U1702	32	#5	12'-7"	
U1703	8	#5	13'-3"	
U1704	10	#5	13'-0"	
U1705	8	#5	9'-0"	
U1706	32	#5	11'-6"	
U1707	32	#5	12'-6"	
U1708	10	#5	19'-6"	
U1709	25	#4	9'-3"	
V1701	34	#11	39'-9"	
V1702	34	#11	34'-9"	
V1703	26	#5	3'-0"	
W1701	36	#8	17'-6"	
CLASS X CONCRETE			CU.YDS.	357.4
REINFORCEMENT BARS			LBS.	41,650
CONCRETE PILES (35 TON)			LIN. FT.	2,940
TEST PILE CONC. (35TON)			EACH	1
PILE TEST LOADING (35TON)			EACH	1
Structure Excavation			CU.YDS.	231.0

NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT.



FOOTING PLAN
SCALE: 1/4" = 1'-0"



SECTION B-B
SCALE: 3/8" = 1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

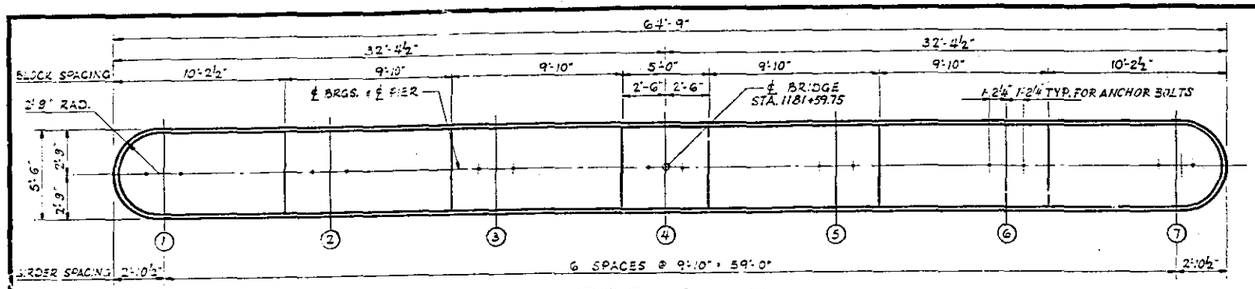
TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	45 FT.*
NO. REQUIRED	53 **

* TIP OF PILE NOT HIGHER THAN ELEVATION 275
** INCLUDES ONE TEST PILE.

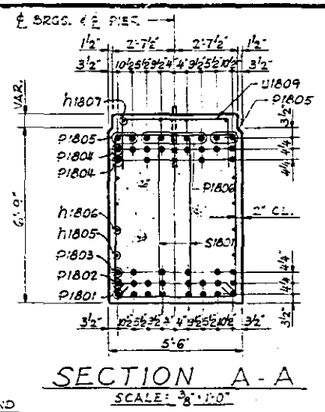
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 17
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9(10)
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

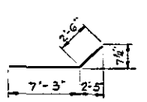
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	41
S.P.R. REF. NO. & S.P.R. REF. NO. 2		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



TOP PLAN
SCALE: ¼"=1'-0"

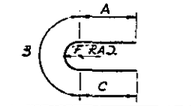


SECTION A-A
SCALE: ⅜"=1'-0"

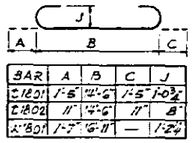


BAR P1807

BAR S1803

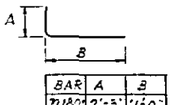


BAR	A	B	C	F
U1801	1'-6½	7'-11"	1'-6½	2'-6½
U1802	1'-7"	8'-1½	1'-6½	2'-7"

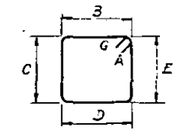


BAR	A	B	C	J
t1801	1'-5"	11'-6"	1'-5"	1'-0¾"
t1802	1''	4'-6"	1''	8"
K1801	1'-7"	6'-11"	—	1'-2½"

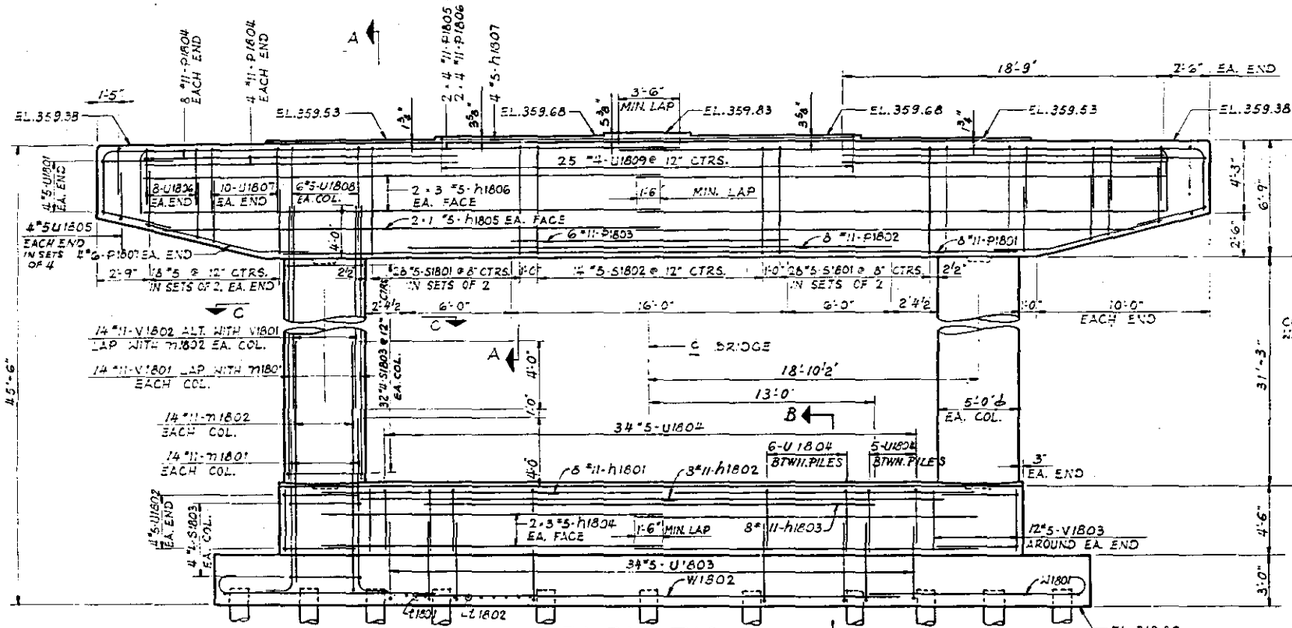
BAR	A	B	C
U1803	2'-2½	5'-2"	2'-6½
U1804	11'-4"	5'-2"	11'-4"
U1805	2'-10"	2'-7"	2'-10"
U1806	3'-5"	5'-2"	3'-5"
U1807	3'-11"	5'-2"	3'-11"
U1808	6'-3½	5'-2"	6'-3½
U1809	1'-7"	11'-10"	1'-7"



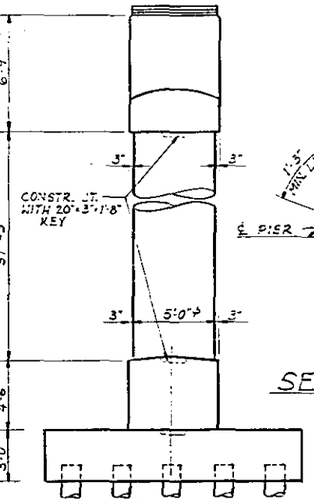
BAR	A	B
m1801	2'-3"	11'-0"
m1802	2'-3"	16'-0"
p1805	3'-9"	33'-6"
p1806	3'-9"	34'-0"



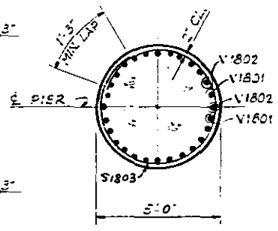
BAR	A	B	C	D	E	G
S1801	5½	3'-0½	6'-5"	3'-0½	5'-5"	5½
S1802	5½	5'-2"	6'-5"	5'-2"	6'-5"	5½



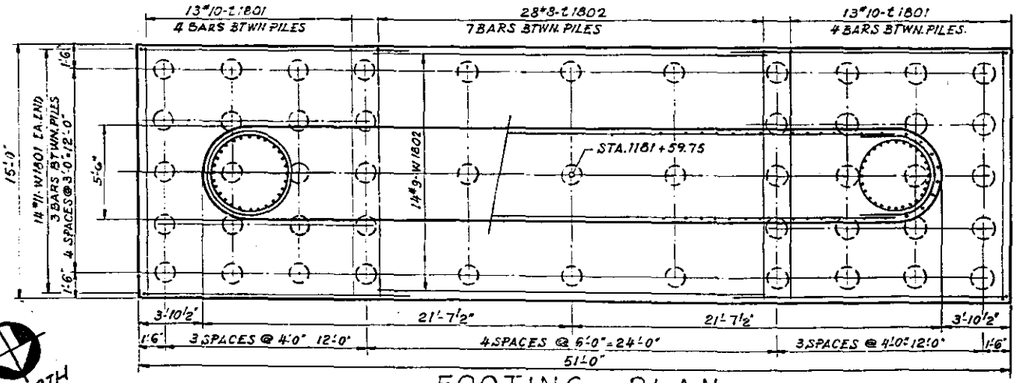
ELEVATION
SCALE: ¼"=1'-0"



END ELEVATION
SCALE: ¼"=1'-0"

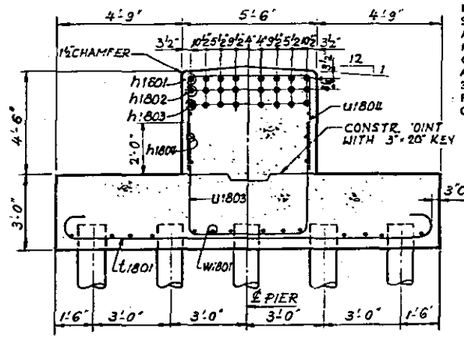


SECTION C-C
SCALE: ⅜"=1'-0"



FOOTING PLAN
SCALE: ¼"=1'-0"

NORTH



SECTION B-B
SCALE: ⅜"=1'-0"

NOTE:
SPACE REINFORCEMENT TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24 DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD ¾" CHAMFERS EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.

PILE DATA

TYPE	CONCRETE	
CAPACITY	35	TONS
EST. LENGTH	50	FT.*
NO. REQUIRED	49	**

* TIP OF PILE NOT HIGHER THAN ELEVATION 215'
** INCLUDES ONE TEST PILE

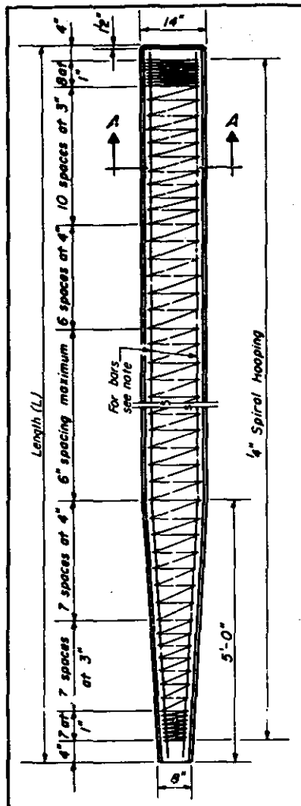
BILL OF MATERIAL

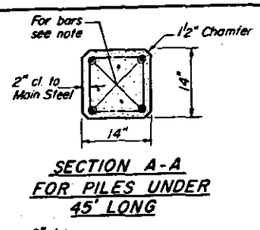
BAR	NO	SIZE	LENGTH	SHAPE
h1801	8	#11	36'-0"	—
h1802	8	#11	33'-0"	—
h1803	8	#11	26'-0"	—
h1804	12	#5	20'-0"	—
h1805	4	#5	27'-6"	—
h1806	12	#5	30'-6"	—
h1807	2	#5	24'-3"	—
m1801	28	#11	13'-3"	L
m1802	28	#11	18'-3"	L
p1801	8	#11	43'-0"	—
p1802	8	#11	28'-0"	—
p1803	6	#11	16'-0"	—
p1804	24	#11	18'-9"	—
p1805	8	#11	37'-3"	L
p1806	8	#11	37'-9"	L
p1807	6	#6	9'-9"	L
S1801	56	#5	19'-10"	[]
S1802	14	#5	21'-1"	[]
S1803	72	#4	16'-0"	O
t1801	26	#10	17'-4"	C
t1802	28	#8	16'-4"	C
U1801	8	#5	11'-0"	L
U1802	8	#5	11'-3"	L
U1803	34	#5	14'-3"	L
U1804	34	#5	13'-10"	L
U1805	5	#5	8'-3"	L
U1806	16	#5	12'-0"	L
U1807	20	#5	13'-0"	L
U1808	12	#5	17'-9"	L
U1809	25	#4	8'-0"	—
V1801	26	#11	35'-3"	—
V1802	28	#11	30'-3"	—
V1803	24	#5	21'-3"	—
W1801	28	#11	18'-6"	C
W1802	14	#9	22'-0"	—
CLASS X CONCRETE			CU.YDS.	253.5
REINFORCEMENT BARS			LBS.	40,260
CONCRETE PILES(35TON)			LIN. FT.	2,400
TEST PILE CONC.(35TON)			EACH	1
PILE TEST LOADING(35TON)			EACH	1
Structure Excavation			CU.YDS.	160.0

NOTE
ALL BAR DIMENSIONS ARE OUT TO OUT.

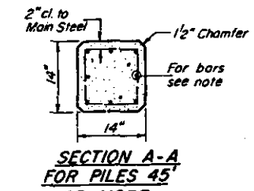
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 18
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )10
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25





SECTION A-A
FOR PILES UNDER 45' LONG



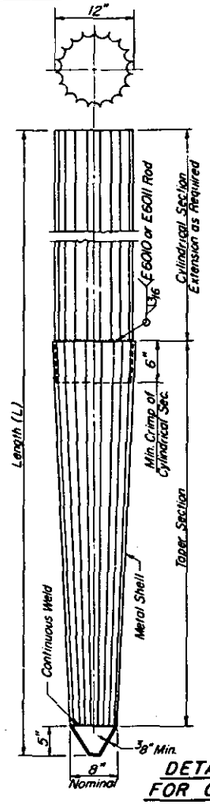
SECTION A-A
FOR PILES 45' OR MORE

TIP

Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

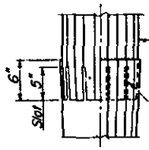
Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12 L from each end and at mid point of pile.

DETAIL OF PRECAST CONCRETE PILES



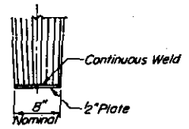
DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES

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



FIELD CRIMP DETAIL

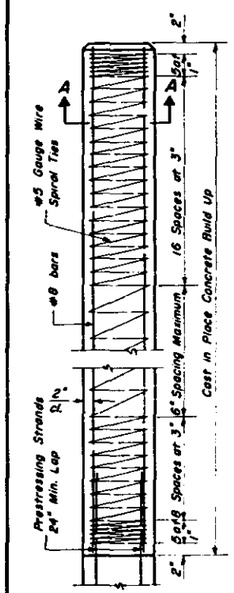
Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed.



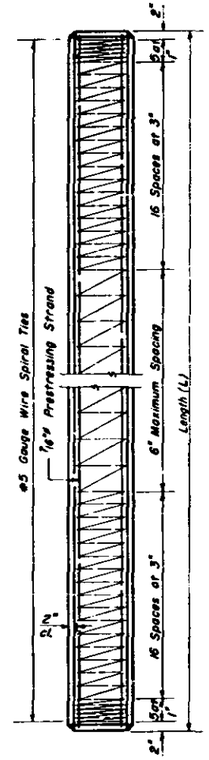
OPTIONAL FLAT END

ALLOWABLE TAPER SECTIONS
10' Length - Taper I" in 2'-6"
17' Length - Taper I" in 4'-0"
25' Length - Taper I" in 7'-0"
30' Length - Taper I" in 7'-0"

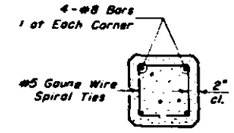
NOTE:
The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.



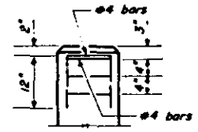
PILE BUILD UP



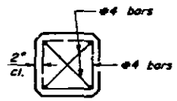
PILE PLAN



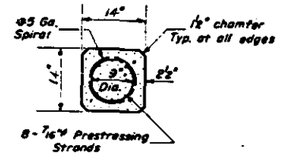
SECTION A-A



ELEVATION
(End Reinforcement)



PLAN
(End Reinforcement)



SECTION THRU PILE

DESIGN STRESSES
f'c' = 5,000 psi.
f'c' = 4,000 psi.
f's' = 268,000 psi. (31,000 lbs.)
f's' = 189,000 psi. (21,700 lbs.)

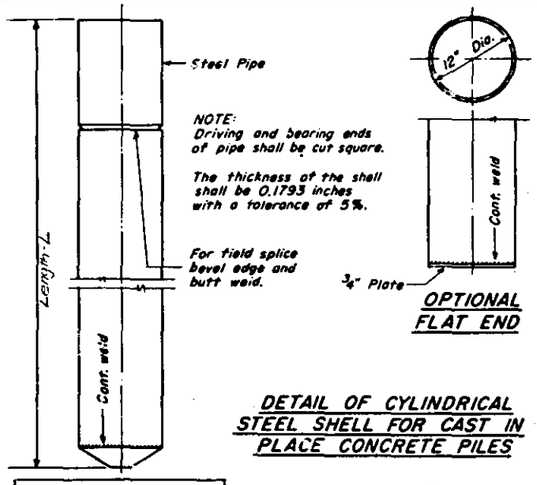
NOTES

Prestressing steel shall be non-galvanized extra high strength stress-relieved 7-wire strand. The nominal diameter shall be ⅜" and the minimum nominal cross-sectional area shall be 0.1155 square inch.

For Pile lengths up to 65', use two slings placed at a distance of 0.21 L * from each end. For Piles longer than 65', use three slings placed at a distance of 0.12 L * from each end and at mid-point of pile. * L = Over all length of pile to be handled.

PRECAST PRESTRESSED CONCRETE PILE

DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-1957	02-1B-1 B	Alexander	54	42
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT: F-57-3(10)		54 SHEETS



NOTE:
Driving end bearing ends of pipe shall be cut square.

The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.

For field splice bevel edge and butt weld.

OPTIONAL FLAT END

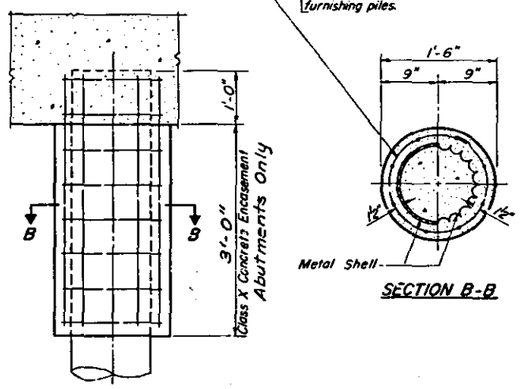
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED

X-3 11-21-67, 8-19-70

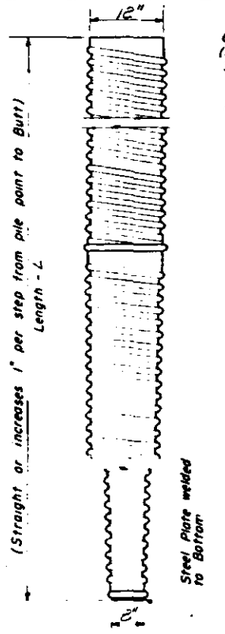
Forms for encasement may be omitted when soil conditions will permit.

Welded wire fabric 6"x 6" mesh #4 wires - Wt. 58 lbs/100 sq ft
The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.

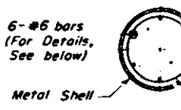


SECTION B-B

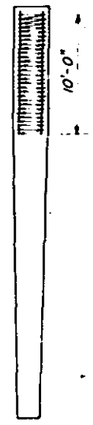
DETAIL OF ENCASEMENT FOR METAL SHELLS



Reinforcement is incidental to the cost of furnishing piles.



SECTION A-A

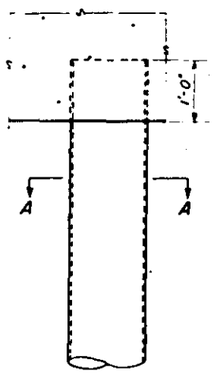


PILE REINFORCEMENT

At least 10% of the length of pile shall have a Butt diameter equal to or greater than 12"
Gauges are furnished to suit soil conditions (16 Gauge avg. min.)

BUTT

POINT
(Applies only to Step Taper type pile)



DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILE
FOR CAST IN PLACE CONCRETE PILES

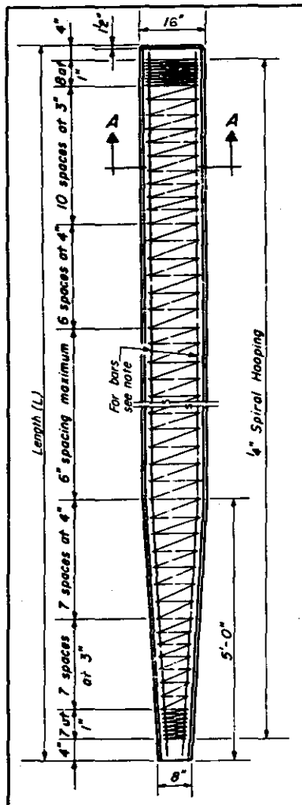
35 TON & 45 TON CONCRETE PILES
F.A.I. 57 OVER THE MISSISSIPPI RIVER
SECTION (02-1B-1) B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI

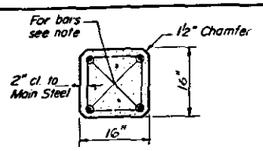
REVISED 12-7-70

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

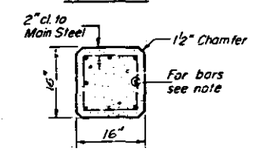
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	02B-1 E	Alexander	54	43

SHEET NO. -3
54 SHEETS





SECTION A-A
FOR PILES UNDER 45' LONG



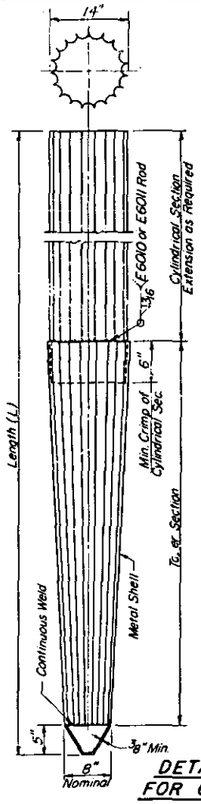
SECTION A-A
FOR PILES 45' OR MORE

TIP

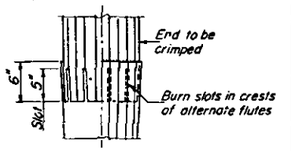
Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 45' use three slings placed at a distance of 0.12 L from each end and at mid point of pile.

DETAIL OF PRECAST CONCRETE PILES

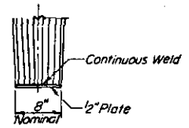


DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES



FIELD CRIMP DETAIL

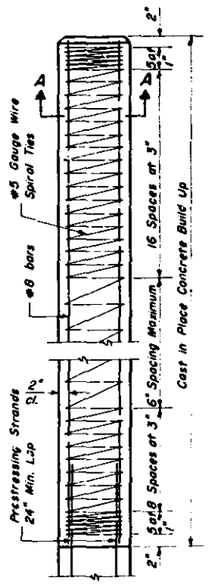
Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed.



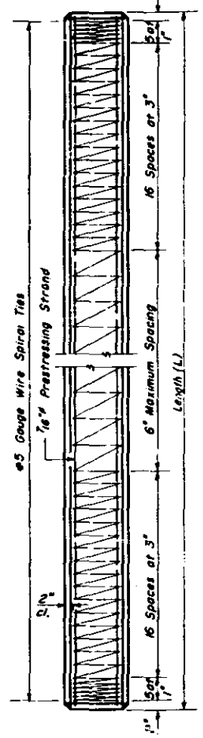
OPTIONAL FLAT END

ALLOWABLE TAPER SECTIONS
10' Length - Taper 1" in 2'-6"
17' Length - Taper 1" in 4'-0"
25' Length - Taper 1" in 7'-0"
30' Length - Taper 1" in 7'-0"

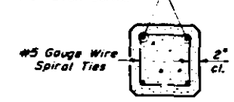
NOTE:
The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.



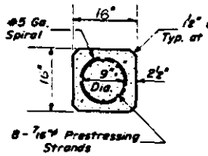
PILE BUILD UP



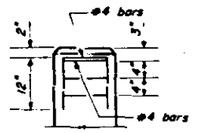
PILE PLAN



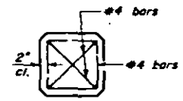
SECTION A-A



SECTION THRU PILE



ELEVATION
(End Reinforcement)



PLAN
(End Reinforcement)

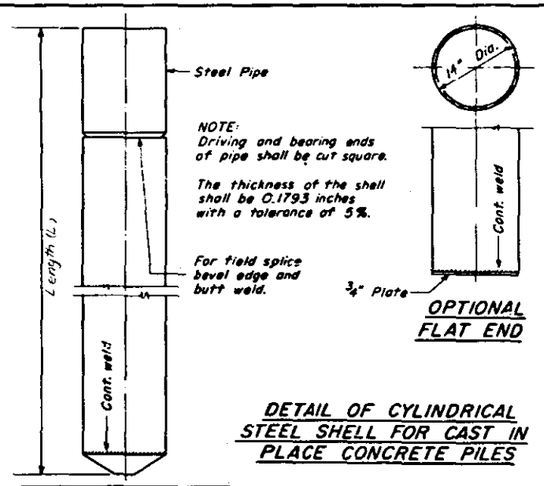
DESIGN STRESSES
f'c' = 5,000 psi.
f'ci = 4,000 psi.
fs' = 268,000 psi. (31,000 lbs.)
fs'i = 188,000 psi. (21,700 lbs.)

NOTES

Prestressing steel shall be non-galvanized extra high strength stress-relieved 7-wire strand. The nominal diameter shall be ½" and the minimum nominal cross-sectional area shall be 0.1155 square inch.

For Pile lengths up to 65', use two slings placed at a distance of 0.21 L = from each end. For Piles longer than 65', use three slings placed a[illegible] distance of 0.12 L = from each end and at mid-point of pile. = _ Over all length of pile to be handled.

PRECAST PRESTRESSED CONCRETE PILE



NOTE:
Driving and bearing ends of pipe shall be cut square.

The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.

For field splice bevel edge and butt weld.

OPTIONAL FLAT END

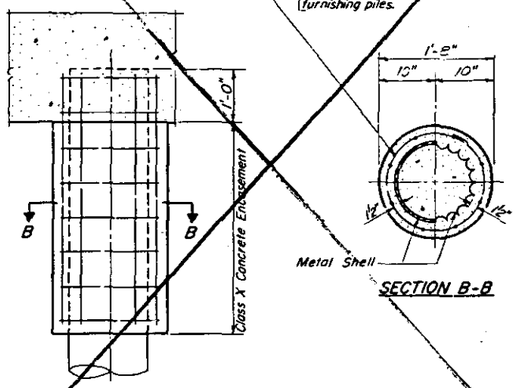
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED

X-3 11-21-67, 8-19-70

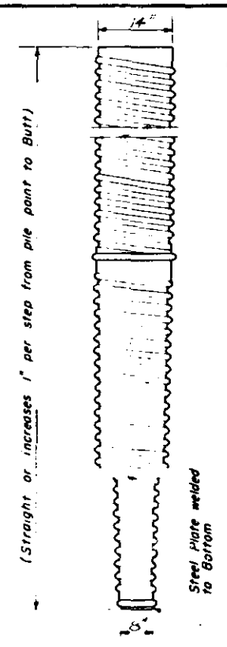
Forms for encasement may be omitted when soil conditions will permit.

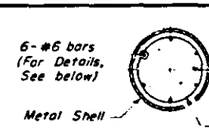
Welded wire fabric 6"x 6" mesh #4 wires - Wt. 58#/100 sq ft. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.



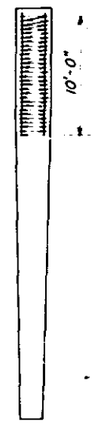
SECTION B-B

DETAIL OF ENCASEMENT FOR METAL SHELLS



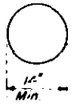


SECTION A-A

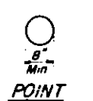


PILE REINFORCEMENT

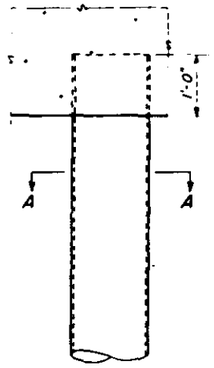
At least 10% of the length of pile shall have a Butt diameter equal to or greater than 12"
Gauges are furnished to suit soil conditions (16 Gauge avg. min.)



BUTT



POINT
(Applies only to Step Taper type pile)

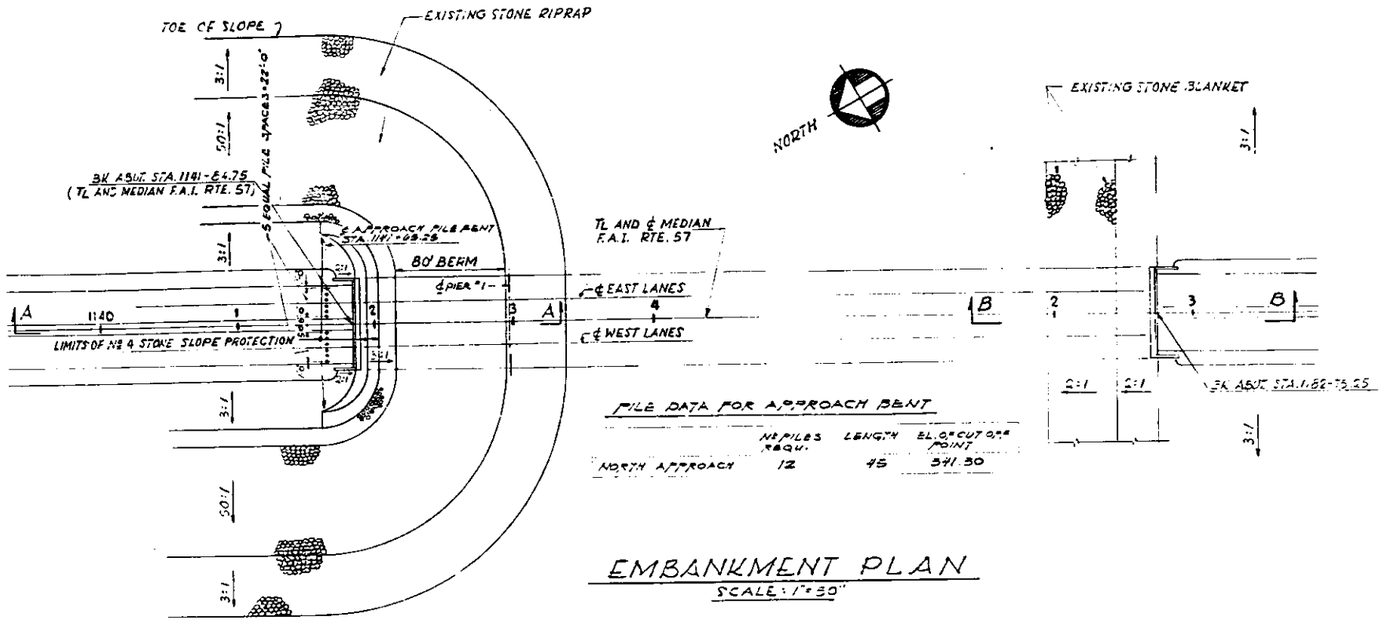


DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

50 TON CONCRETE PILES
F.A.I. 57 OVER THE MISSISSIPPI RIVER
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI

REVISED 12-7-70

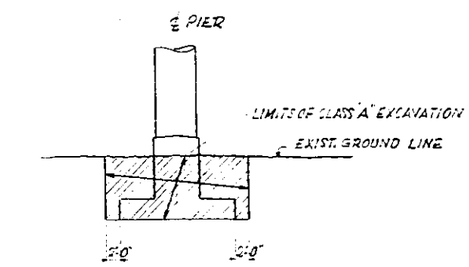
ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	102-1B-1) B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	44
APPR REG NO = APPR REG NO =		ILLINOIS MISSOURI		PROJECT I-57-9(10)	



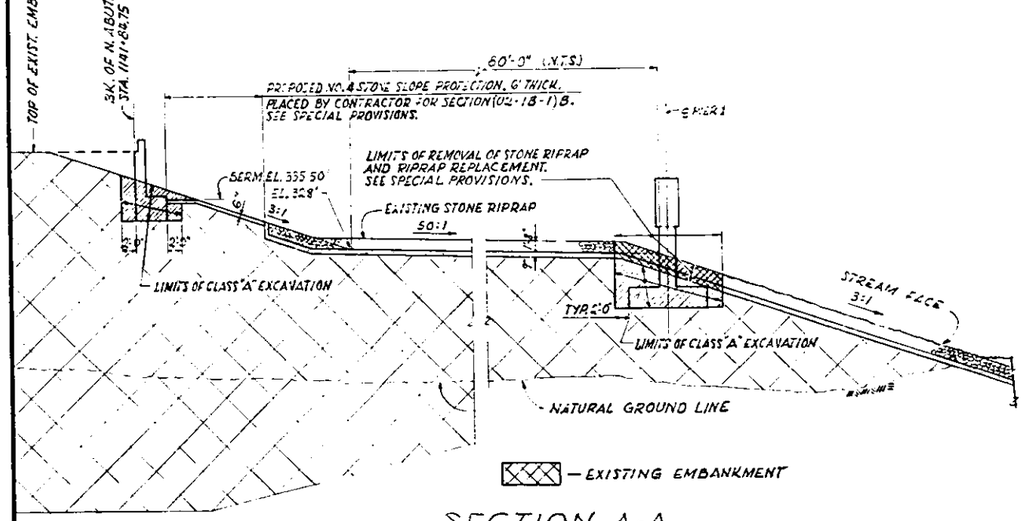
FILE DATA FOR APPROACH BENT

	NR PILES REQU.	LENGTH	EL OF CUT OFF POINT
NORTH APPROACH	12	45	341.30

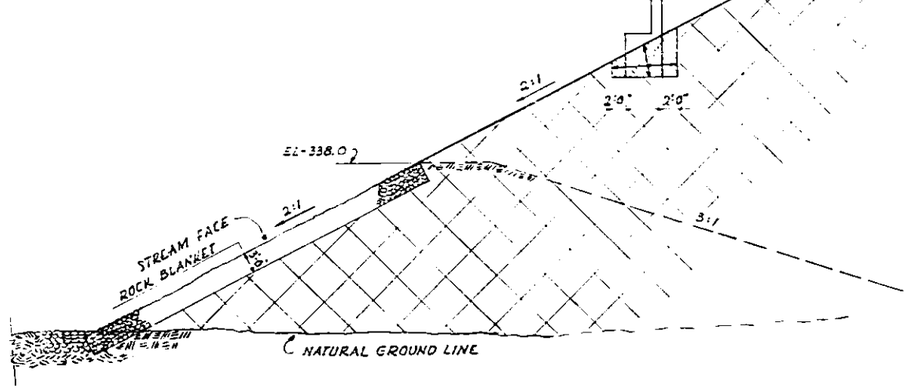
EMBANKMENT PLAN
SCALE: 1"=30'



PIERS WITHOUT COFFERDAM



SECTION A-A
SCALE: 1"=10'-0"



SECTION B-B
SCALE: 1"=10'-0"

EXCAVATION
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141+84.75 TO STA. 1182+75.25

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
108 WABASH AVE CHICAGO, ILLINOIS

SOIL TEST BORINGS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	(02-18-1) B	ALEXANDER (ILLINOIS DIVISION)	MISSISSIPPI (MISSOURI DIVISION)	54	45
APPR. PER. NO. 4 APPR. PER. NO. 5		ILLINOIS DIVISION		PROJECT I-57-9( )0	

BORING No.1
PIER #1

Boring No. 1
Station 1142 + 97.50
Offset
Ground Surface 306± 0
Surface Water El. —
Groundwater El. at Completion 298
After — Hours

Elevation	N	Qu t/s.f.	w (%)
	7	-	33
-5	5	-	24
	4	1.0	37
-10	3	0.6	46
	4	1.0	42
-15	5	1.0	41
	7	0.8	45
-20	8	0.8	36
Elev. 283.5	31	-	-
-25	20	-	-
Elev. 278.5	4	-	-
-30	3	-	-
	4	-	-
-35	17	-	-
	14	-	-
Elev. 266.0 -40	8	-	30
	20	-	19
Elev. 261.0 -45			

Gray Silty CLAY(CL) To Clayey SILT (ML)

Gray Fine to Coarse Grained SAND (SV)

Gray Fine Grained SAND (SP)

Gray Sandy CLAY (SC)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	29	-	-
	35	-	-
-50	37	-	-
	40	-	-
-55	42	-	-
	34	-	-
-60	19	-	-
	29	-	-
-65	28	-	-
	33	-	-
-70	33	-	-
	42	-	-
-75	38	-	-

Gray Fine Grained SAND (SP)

Elev. 245

Gray Sand and Gravel (SW-GW)

Elev. 230
End of Boring

BORING No.2
PIER #2

Boring No. 2
Station 1144 + 07.50
Offset
Ground Surface 309± 0
Surface Water El. —
Groundwater El. at Completion 298
After — Hours

Elevation	N	Qu t/s.f.	w (%)
	4	0.7	30
-5	4	0.8	37
	3	0.9	33
-10	3	-	30
	3	0.8	45
-15	2	0.4	37
	2	1.0	35
-20	3	1.1	43
	4	-	59
-25	9	-	36
Elev. 283	16	-	-
-30	13	-	-
	10	-	-
Elev. 274 -35	18	-	17
	22	-	19
Elev. 269 -40	23	-	-
	23	-	-

Gray Silty CLAY (CL) to Clayey SILT (ML)

Gray Fine Grained SAND (SP)

Gray Silty CLAY (CL)

Gray Fine Grained SAND (SP)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	24	-	-
	20	-	-
-50	18	-	-
	19	-	-
-55	10	-	-
	10	-	-
-60	12	-	-
	12	-	-
-65	14	-	-
	20	-	-
-70	21	-	-
	56	-	-
-75	62	-	-
	105	-	-
-80	122	-	-
	111	-	-
-85	62	-	-
	95	-	-
-90	87	-	-

Gray Fine Grained SAND (SP)

Elev. 247

Gray Sand and Gravel (SW-GW)

Gray Sand and Gravel (SW-GW

Elev. 232

Gray Fine to Coarse Grained SAND (SW)

Elev. 218
End of Boring

Type failure

BORING No.3
PIER #4

Boring No. 3
Station 1146 + 27.50
Offset
Ground Surface 310± 0
Surface Water El. —
Groundwater El. at Completion 297
After — Hours

Elevation	N	Qu t/s.f.	w (%)
	8	1.2	27
-5	2	1.5	29
	3	0.8	41
-10	3	0.9	35
	3	0.6	36
-15	3	0.6	50
	3	0.7	40
-20	3	0.8	29
Elev. 288	R	-	-
-25	5	-	-
	6	-	-
-30	7	-	-
	13	-	-
-35	15	-	-
	24	-	-
-40	24	-	-
	14	-	-

Gray Silty CLAY (CL) to Clayey SILT (ML)

Gray Fine Grained SAND (SP)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	14	-	-
	12	-	-
-50	32	-	-
	41	-	-
-55	52	-	-
	55	-	-
-60	43	-	-
	26	-	-
-65	39	-	-
	126	-	-
-70	87	-	-
	60	-	-
-75	76	-	-
	78	-	-
-80	99	-	-

Gray Fine Grained SAND (SP)

Elev. 245

Gray Sand and Gravel (SW-GW)

Elev. 235

Gray Fine Grained SAND (SP)

Elev. 229
End of Boring

BORING No.4
PIER #5

Boring No. 4
Station 1147 + 82.50
Offset
Ground Surface 312± 0
Surface Water El. —
Groundwater El. at Completion 295
After — Hours

Elevation	N	Qu t/s.f.	w (%)
	6	-	25
-5	4	1.2	32
	4	1.0	29
-10	5	1.3	33
	5	1.3	34
-15	6	0.8	26
	7	-	30
Elev. 292 -20	14	-	-
	9	-	-
-25	6	0.6	39
	6	0.6	38
-30	6	0.7	50
	11	-	38
-35	18	0.6	52
Elev. 275	21	-	-
-40	22	-	-
	28	-	-

Gray Silty CLAY (CL) to Clayey SILT (ML)

Gray Fine to Medium Grained Sand (SW)

Gray Silty CLAY (CL) To Clayey SILT (ML)

Gray Fine to Medium Grained SAND (SW)

(continued)
Gray Fine to Medium Grained SAND (SW)
Elev. 265

Elevation	N	Qu t/s.f.	w (%)
-45	33	-	-
	29	-	-
-50	27	-	-
	30	-	-
-55	30	-	-
	34	-	-
-60	35	-	-
	46	-	-
-65	48	-	-
	41	-	-
-70	35	-	-

Gray Sand and Gravel (SW-GW)

Elev. 260

Gray Fine to Coarse Grained SAND (SW)

Elev. 241
End of Boring

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

BORINGS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

SOIL TEST BORINGS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAI 57	(02-1B-1) B	ALEXANDER ILLINOIS / MISSISSIPPI MISSOURI	54	46
STP RES NO X / STP RES NO X		ILLINOIS / MISSOURI	PROJECT I-57-91 10	

BORING No. 5 PIER # 6

Boring No. 5
Station 1149 + 37.50
Offset
Surface Water El.
Groundwater El. at Completion
After Hours
Ground Surface 309 + 0

Elevation	N	Qu t/s.f.	w (%)
-5	4	1.4	22
	8	1.1	18
-10	6	1.7	14
	12	-	-
-15	15	-	-
	3	-	-
-25	14	-	-
	13	-	-
-30	15	-	-
	10	-	-
-35	9	-	-
	11	-	-
-40	9	-	-
	12	-	-
-45	10	-	-
	14	-	-

Brown Silty Sand to Sandy SILT (SH)

Elev. 302.5

Dark Brown to Dark Gray Clayey SILT (ML)

Elev. 300

Brown Fine Grained SAND (SP)

Elev. 297.5

Brown to Gray Coarse Grained SAND (SW)

Elev. 290

Brown Fine to Medium Grained SAND (SW) with occasional clay seams

Elev. 265
Brown Gravel (GP)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	22	-	-
	10	-	-
-50	16	-	-
	29	-	-
-55	33	-	-
	30	-	-
-60	21	-	-
	31	-	-
-65	30	-	-
	39	-	-
-70	62	-	-
	88	-	-
-75	66	-	-

Brown Gravel (GP) Elev. 265

Brown Fine to Medium Grained SAND (SW) with traces of gravel

Elev. 253

Brown Gravel (GP)

Elev. 248

Brown Coarse Grained SAND (SP)

Elev. 235
Brown GRAVEL (GP)
Elev. 233
End of Boring

BORING No. 6 PIER # 7

Boring No. 6
Station 1150 + 92.50
Offset
Surface Water El. 293
Groundwater El. at Completion
After Hours
Ground Surface 301 + 0

Elevation	N	Qu t/s.f.	w (%)
-5	7	-	-
	6	-	-
-10	1	-	35
	1	-	34
-15	7	0.5	61
	4	-	-
-20	6	-	-
	16	-	-
-25	19	-	-
	18	-	-
-30	20	-	-
	17	-	-
-35	16	-	-
	15	-	-
-40	21	-	-
	24	-	-
-45	25	-	-

Gray Silty CLAY (CL) to Clayey SILT (ML)

Elev. 286

Gray Fine to Coarse Grained SAND (SW)

Elev. 274

Gray Fine Grained SAND (SP)

Gray Fine to Coarse Grained SAND (SW)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	27	-	-
	32	-	-
-50	37	-	-
	43	-	-
-55	41	-	-
	34	-	-
-60	36	-	-
	44	-	-
-65	48	-	-
	45	-	-
-70	41	-	-
	39	-	-
-75	35	-	-
	37	-	-
-80	40	-	-
	40	-	-
-85	34	-	-
	42	-	-
-90			

Gray Fine Grained SAND (SP)

Elev. 239

(continued)

Elevation	N	Qu t/s.f.	w (%)
-90	37	-	-
	50	-	-
-95	69	-	-
	62	-	-
-100	71	-	-
	65	-	-
-105	69	-	-
	80	-	-
-110	64	-	-

Gray Fine to Coarse Grained SAND (SW)

Elev. 190
End of Boring

BORING No. 7 PIER # 8

Boring No. 7
Station 1152 + 47.50
Offset
Surface Water El.
Groundwater El. at Completion 293
After Hours
Ground Surface 286 + 0

Elevation	N	Qu t/s.f.	w (%)
-5	4	-	-
	4	-	-
-10	10	-	-
	13	-	-
-15	9	-	-
	13	-	-
-20	18	-	-
	23	-	-
-25	19	-	-
	15	-	-
-30	17	-	-
	21	-	-
-35	15	-	-
	16	-	-
-40	29	-	-
	46	-	-
-45	33	-	-

Black Clayey SILT (ML-OL)

Elev. 280

Gray Medium Grained SAND (SP)

Elev. 275

Gray Fine to Coarse Grained SAND (SW)

Gray Fine to Coarse Grained SAND (SW)

Elev. 204

Gray Fine Grained SAND (SP)

(continued)

Elevation	N	Qu t/s.f.	w (%)
-45	22	-	-
	22	-	-
-50	32	-	-
	23	-	-
-55	22	-	-
	51	-	-
-60	66	-	-
	46	-	-
-65	58	-	-
	51	-	-
-70	44	-	-
	56	-	-
-75	49	-	-
	42	-	-
-80	56	-	-
	69	-	-
-85	112	-	-
	53	-	-
-90			

Gray Fine to Coarse Grained SAND (SW) Elev. 236

Gray Sand and Gravel (SW-GW)

Elev. 221

(continued)

Elevation	N	Qu t/s.f.	w (%)
-90	38	-	-
	85	-	-
-95	37	-	21
	43	-	20
-100			

Gray Fine Grained SAND (SP) Elev. 191

Light Brown Sandy CLAY (SC)

Elev. 187.5
End of Boring

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

BORINGS
F. A. I. RTE. 57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

ROUTE NO.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
F.A.I.57	(02-1B-1) B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	47
SPR RES NO. & SPR RES. NO.		ILLINOIS MISSOURI	PROJECT I-57-9( )0		

SOIL TEST BORINGS

BORING No.8-PIER #9

Boring No. 8
Station 1159 + 47.50
Offset

Surface Water El. 292
Groundwater El. at Completion
After ___ Hours

Elevation	N	Qu t/s.f.	w (%)	Description
282 +				Ground Surface
				Gray Silty CLAY (CL) to Clayey SILT (ML)
-5	-	-	-	
	-	-	-	
	9	-	-	
277				Elev. 277
-10				Gray Fine to Coarse Grained SAND (SW)
	10	-	-	
	9	-	-	
-15				
	17	-	-	
	24	-	-	
-23				
	20	-	-	
	16	-	-	
257				Elev. 257
-25				Gray Sand and Gravel (SW-GW)
	19	-	-	
	23	-	-	
-30				
	32	-	-	
	24	-	-	
247				Elev. 247
-35				Gray Fine to Coarse Grained SAND (SW)
	29	-	-	
	28	-	-	
-40				
	36	-	-	
	30	-	-	
-45				

Elevation	N	Qu t/s.f.	w (%)	Description
282 +				Ground Surface (Continued)
-45	39	-	-	
	23	-	-	
-50				
	20	-	-	
	20	-	-	
217				Elev. 217
-55				Gray Fine to Coarse Grained SAND (SW)
	29	-	-	
	29	-	-	
-60				
	28	-	-	
	16	-	-	
-65				
	12		17	
	12	-	17	
-70				
	15	+	15	Light Brown to Light Gray Sandy CLAY (SC)
	14	+	20	
-75				
	31	-	18	
202				Elev. 202
-80				Light Grey Fine Grained SAND (SP)
	38	-	23	
	67	-	-	
-85				
	71	-	-	
	74	-	-	
-90				
	67	-	-	

Elevation	N	Qu t/s.f.	w (%)	Description
282 +				Ground Surface (Continued)
-90	50	-	-	
	45	-	-	Light Grey Fine Grained SAND (SP)
-95				
	41	-	-	
183.5	47	-	-	Elev. 183.5
-100				End of Boring

BORING No.9-PIER #10

Boring No. 9
Station 1156 + 32.50
Offset 10' Rt.

Surface Water El. 255
Groundwater El. at Completion
After ___ Hours

Elevation	N	Qu t/s.f.	w (%)	Description
254.0				Ground Surface
				Gray Fine to Coarse grained SAND (SW)
	7	-	-	
-5				
	13	-	-	
	13	-	-	
245				Elev. 245
-10				
	27	-	-	
	23	-	-	
-15				Gray Fine to Coarse grained SAND (SW) with gravel
	24	-	-	
	28	-	-	
-20				
	39	-	-	
	36	-	-	
-25				
	44	-	-	
	49	-	-	
-30				
	33	-	-	
222				Elev. 222
	36	-	-	Gray Clayey SAND (SC)
219				Elev. 219
-35				
	25	-	23	
	7	-	23	Pink Silty CLAY (CH)
-40				
	6	-	26	
	8	-	22	
-45				

Elevation	N	Qu t/s.f.	w (%)	Description
254.0				Ground Surface (Continued)
-45	5	-	27	Pink Silty CLAY (CH)
207				Elev. 207
	37	-	-	
-50				Light Gray Medium to Coarse grained SAND (SW)
	35	-	-	
	36	-	-	
197				Elev. 197
-55				
	37	-	-	
	39	-	-	
-60				Light Brown Fine to Coarse Grained SAND (SW)
	38	-	-	
	53	-	-	
189				Elev. 189
-65				
	75	-	-	
	101	-	-	Light Pink Clayey SAND (SC) with some gravel
183				Elev. 183
-70	166	-	-	End of Boring

BORING No.10-PIER #11

Boring No. 10
Station 1156 + 87.50
Offset

Surface Water El. 295
Groundwater El. at Completion
After ___ Hours

Elevation	N	Qu t/s.f.	w (%)	Description
268 +				Ground Surface
				Brown Fine to Medium Grained SAND (SW)
	16	-	-	
-5				
262	13	-	-	Elev. 262
	11	-	-	
-10				Fine to Coarse grained SAND (SW) with traces of gravel
	11	-	-	
	17	-	-	
-15				
	17	-	-	
247				Elev. 247
-20				
	22	-	-	
	24	-	-	
-25				
	27	-	-	
	34	-	-	Fine to Medium Grained SAND (SW) with traces of gravel
-30				
	30	-	-	
	31	-	-	
-35				
	43	-	-	
	52	-	-	
-40				
	54	-	-	
225				Elev. 225
	42	-	-	Brown Clayey SAND (SC)
-45				

Elevation	N	Qu t/s.f.	w (%)	Description
268 +				Ground Surface (Continued)
-45	87	-	-	
	96	-	-	Brown Clayey SAND (SC)
-50				
	113	-	-	
215				Elev. 215
	124	-	-	
-55				Light Brown Fine grained SAND (SP)
	100/6	-	-	
	107/6	-	-	
-60				
207	250/6	-	-	Elev. 207
				Light Gray Fine to Medium Grained SAND (SW)
	111/6	-	-	
204				Elev. 204
-65				Light Gray SILT (ML)
	100/6	-	21	
	110/6	-	24	
199				Elev. 199
-70				
	100/6	-	-	
	118/6	-	-	
-75				Light Brown Fine to Medium Grained SAND (SW)
	120/6	-	-	
	111/5	-	-	
-80				
	100/6	-	-	
	128/6	-	-	
-85				
	109/6	-	-	
	111/6	-	-	
-90				

Elevation	N	Qu t/s.f.	w (%)	Description
268 +				Ground Surface (Continued)
-50	100/6	-	-	
	100/6	-	-	
-95				Light Brown Fine to Medium Grained SAND (SW)
	100/6	-	-	
	111/5	-	-	
-100				
	100/6	-	-	
	100/6	-	-	
-105				
	100/6	-	-	
	100/6	-	-	
-110				
	100/6	-	-	
	100/6	-	-	
-115				
	100/6	-	-	
	100/6	-	-	
-120				Light Brown Fine to Medium Grained SAND (SW)
	100/6	-	-	
	100/6	-	-	
-125				
	100/6	-	-	
	110/6	-	-	
-130				
137	100/6	-	-	Elev. 137
				End of Boring

Note: 113 feet of 6 inch auger and 20 feet of 10 inch casing left in hole.

N = Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu = Unconfined Compressive Strength - t/sf

w = Water Content - percentage of oven dry weight - %

Type failure: B - Bulge Failure; S - Shear Failure; E - Estimated Value

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE CHICAGO, ILLINOIS

BORINGS
F.A.I.RTE.57 OVER THE MISSISSIPPI RIVER
PROJECT I-57-9( )0
SECTION (02-1B-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

SOIL TEST BORINGS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I. 57	(02-18-1) B	ALEXANDER, ILLINOIS	MISSISSIPPI, MISSOURI	54	48
APP. REG. NO. 4 APP. REG. NO. 5		ILLINOIS MISSOURI	PROJECT 1-57-9( )0		

BORING No. 11-PIER #12

Boring No. 11
Station 1163 + 64.33
Offset
Ground Surface 265 +

Surface Water El. 250
Groundwater El. at Completion ——
After —— Hours ——

Ground Surface 265 + (Continued)

Surface Water El. 298
Groundwater El. at Completion ——
After —— Hours ——

Ground Surface 265 + (Continued)

Elevation	N	Qu t/s.f.	w (%)	Description
0				
	12	-	-	Gray Fine to Coarse Grained SAND (SW)
-5	12	-	-	
	13	-	-	
-10	18	-	-	
	21	-	-	
-15	41	-	-	
	95	-	-	
-20	52	-	-	
	10	-	-	
-25	11	-	-	
	17	-	-	Gray Fine to Coarse Grained SAND (SW)
-30	20	-	-	
	21	-	-	
-35	41	-	-	
	80	-	-	Gray Fine to Medium Grained SAND (SW) with occasional Clay Seams
Elev. 225 -40				
	70	-	-	Gray Medium to Coarse Grained SAND (SW) with some Gravel
	42	-	-	
-45				
-45	41	-	-	
	33	-	-	
-50	35	-	-	Gray Medium to Coarse Grained SAND (SW) with some Gravel
	34	-	-	
-55	38	-	-	
	50	-	-	
Elev. 204.5 -60				
	71	-	-	
-65	115	-	-	
	159	-	-	
-70	207	-	-	
	100/.1'	-	-	Light Gray Fine to Coarse Grained SAND (SW)
-75	100/.1'	-	-	
	100/.1'	-	-	
-80	100/.1'	-	-	
Elev. 139				End of Boring
-85	100/.1'	-	-	
	100/.1'	-	-	
-90				
-50	100/.1'	-	-	Brown Sand and Gravel (SW-GW)
Elev. 174				
-95	100/.1'	-	-	
	100/.1'	-	-	
-100	100/.1'	-	-	
	100/.1'	-	-	
-105	100/.1'	-	-	
	100/.1'	-	-	
-110	100/.1'	-	-	
	100/.1'	-	-	
-115	100/.1'	-	-	
	100/.1'	-	-	
-120	100/.1'	-	-	
	100/.1'	-	-	
-125	100/.1'	-	-	

BORING No. 12-PIER #13

Boring No. 12
Station 1171 + 05.57
Offset
Ground Surface 269 +

Surface Water El. 291
Groundwater El. at Completion ——
After —— Hours ——

Ground Surface 259 + (Continued)

Surface Water El. 297
Groundwater El. at Completion ——
After —— Hours ——

Ground Surface 259 + (Continued)

Elevation	N	Qu t/s.f.	w (%)	Description
0				
	5	-	30	Dark Gray Silty CLAY (CL) to Clayey SILT (ML)
-5	12	-	36	
	13	-	39	
-10	12	-	37	
Elev. 257				
	14	-	-	Gray Fine Grained SAND (SP)
-15	23	-	-	
	26	-	-	
-20	26	-	-	
Elev. 246				
	28	-	-	
-25	34	-	-	
	36	-	-	
-30	38	-	-	
	39	-	-	
-35	42	-	-	
	45	-	-	
Elev. 229 -40				
	42	-	-	Gray Fine to Medium Grained SAND (SW)
	37	-	-	
-45				
-45	45	-	-	
	33	-	-	
-50	33	-	-	Gray Fine to Medium Grained SAND (SW)
	32	-	-	
-55	34	-	-	
	42	-	-	
-60	44	-	-	
	48	-	-	
-65	49	-	-	
Elev. 201				
	68	-	-	Light Pink & Light Brown Silty CLAY (CL) to Clayey-SILT (ML)
-70	19	-	28	
Elev. 197				
	25	-	21	Light Grey Medium to Coarse Grained SAND (SW) with several Clay seams
-75	44	-	-	
Elev. 193				
	43	-	-	Light Grey Fine to Coarse Grained SAND (SW)
Elev. 191				
-80	67	-	-	Light Gray Coarse Grained SAND (SW) with a trace of Gravel
Elev. 187				
	41	-	-	
-85	69	-	-	Light Gray Fine to Coarse Grained SAND (SW)
Elev. 138				End of Boring
-90	39	-	-	
-90	115	-	-	
	144	-	-	
-95	145	-	-	Light Gray Fine to Coarse Grained SAND (SW)
	185	-	-	
-100	100/.1'	-	-	
	100/.1'	-	-	
-105	100/.1'	-	-	Light Brown Fine to Medium Grained SAND (SW)
	100/.1'	-	-	
-110	100/.1'	-	-	
	100/.1'	-	-	
-115	100/.1'	-	-	
	100/.1'	-	-	
-120	100/.1'	-	-	
	100/.1'	-	-	
-125	100/.1'	-	-	
	100/.1'	-	-	
-130	100/.1'	-	-	

BORING No. 13-PIER #14

Boring No. 13
Station 1177 + 02.50
Offset
Ground Surface 318 +

Surface Water El. ——
Groundwater El. at Completion 288
After —— Hours

Ground Surface 318 + (Continued)

Elevation	N	Qu t/s.f.	w (%)	Description
0				
	13	1.3	30	Dark Brown to Gray Silty CLAY (CL) to Clayey SILT (ML)
-5	10	1.5	26	
	4	1.0	30	
-10	6	1.0	49	
	5	1.0	34	
-15	4	1.0	34	
	6	0.5	31	
-20	4	1.5	35	
Elev. 294				
	5	0.5	34	
-25	4	-	-	
	4	-	-	
-30	7	-	-	Brown Fine to Medium Grained SAND (SW)
	32	-	-	
-35	57	-	-	
	40	-	-	
-40	31	-	-	
	30	-	-	
-45				
-45	26	-	-	Brown Fine to Medium Grained SAND (SW)
Elev. 270				
	24	-	-	
-50	23	-	-	
	22	-	-	
-55	23	-	-	Grey Sand and Gravel (SW-GW)
	45	-	-	
-60	24	-	-	
	34	-	-	
-65	21	-	-	
Elev. 249.5				End of Boring
-70	46	-	-	

N = Standard Penetration Test — Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu = Unconfined Compressive Strength — t/sf

w = Water Content — percentage of oven dry weight — %

Type Failure:
B = Bulge Failure
S = Shear Failure
E = Estimated Value

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BORINGS
F.A.I RTE 57 OVER THE MISSISSIPPI RIVER
PROJECT 1-57-9( )0
SECTION (02-18-1)B
ALEXANDER COUNTY, ILLINOIS
MISSISSIPPI COUNTY, MISSOURI
STA. 1141 + 84.75 TO STA. 1182 + 75.25

SOIL TEST BORINGS

ROUTE NO	SECTION	COUNTY		TOTAL SHEETS	SHEET NO
F.A.I 57	102-1B-1 B	ALEXANDER MISSISSIPPI	ILLINOIS MISSOURI	54	49
F.A.P. REC. NO. 4 F.A.P. REC. NO. 5		ILLINOIS MISSOURI		PROJECT I-57-9( )10	

BORING No. 14
PIER #15

Boring No. 14
Station 1178 + 16.50
Offset
Ground Surface 318 ±

Surface Water El. —
Groundwater El. at Completion 298
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
	10	3.1	23
	7	2.4	25
	3	0.3	16
	2	0.7	22
	4	0.8	18
	2	0.7	19
	4	1.2	19
	4	0.4	20
	14	-	-
	10	-	-
	21	-	-
	30	-	-
	44	-	-
	16	-	-
	30	-	-
	30	-	-
	58	-	-

Dark Brown to Gray Silty CLAY (CL) to Clayey SILT (ML)

Brown Fine to Coarse Grained SAND (SW)

Elev. 296

Elev. 280.5

Gray Fine Grained SAND (SP)

(continued)

Elevation	N	Qu t/s.f.	w (%)
	36	-	-
	22	-	-
	23	-	-
	33	-	-
	23	-	-
	70	-	-
	39	-	-

Gray Fine Grained SAND (SP)

Elev. 270.5

Gray Sand and Gravel (SW-GW)

Elev. 257

End of Boring

BORING No. 15
PIER #17

Boring No. 15
Station 1180 + 46.50
Offset
Ground Surface 318 ± 0

Surface Water El. —
Groundwater El. at Completion 298
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
	15	4.5	25
	9	3.5	26
	5	1.5	17
	7	1.5	19
	2	1.5	22
	5	1.5	18
	12	-	16
	16	-	-
	15	-	-
	7	-	-
	14	-	-
	20	-	-
	22	-	-
	27	-	-
	30	-	-
	38	-	-

Dark Brown to Gray Silty CLAY (CL) to Clayey SILT (ML)

Elev. 300

Brown Fine Grained SAND (SP)

Elev. 288

Gray Fine to Medium Grained SAND (SW)

(continued)

Elevation	N	Qu t/s.f.	w (%)
	37	-	-
	40	-	-
	28	-	-
	30	-	-
	33	-	-
	32	-	-
	36	-	-
	47	-	-
	52	-	-
	52	-	-
	54	-	-

Gray Fine to Medium Grained SAND (SW)

Elev. 258

Gray Fine to Coarse Grained SAND (SW)

Elev. 247

End of Boring

BORING No. 16
PIER #18

Boring No. 16
Station 1181 + 58.50
Offset
Ground Surface 318 ± 0

Surface Water El. —
Groundwater El. at Completion 298
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
	14	1.6	27
	9	3.6	30
	8	1.3	37
	6	1.3	48
	6	1.2	36
	5	-	34
	3	1.1	36
	15	-	-
	9	-	-
	3	-	-
	8	-	-
	9	-	-
	12	-	-
	16	-	-
	22	-	-
	36	-	-
	37	-	-

Dark Brown to Gray Silty CLAY (CL) to Clayey SILT (ML)

Elev. 299

Gray Fine to Medium Grained SAND (SW)

Elev. 280

Gray Fine to Coarse Graded SAND (SW)

(Continued)

Elevation	N	Qu t/s.f.	w (%)
	25	-	-
	30	-	-
	32	-	-
	30	-	-
	23	-	-
	21	-	-
	17	-	-
	34	-	-
	40	-	-
	42	-	-
	36	-	-
	25	-	-
	22	-	-
	24	-	-
	30	-	-
	31	-	-
	34	-	-
	40	-	-

Gray Fine to Coarse Graded SAND (SW)

Elev. 258

Gray Sand and Gravel (SW-GW)

(Continued)

Elevation	N	Qu t/s.f.	w (%)
	69	-	-
	47	-	-
	40	-	-

Elev. 222

End of Boring

Gray Sand and Gravel (SW-GW)

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