

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(14-1)	CHAMPAIGN	22	1

# 1-19-07 Letting, Item 019 DEPARTMENT OF TRANSPORTATION

*"As Built Plans"*

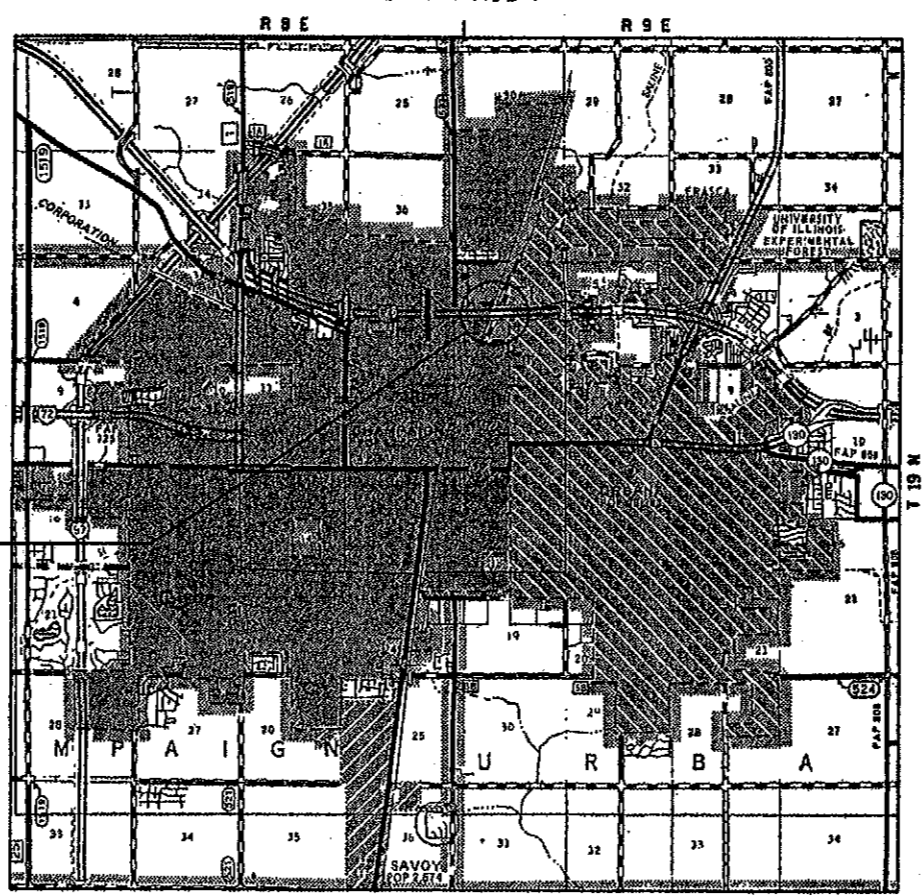
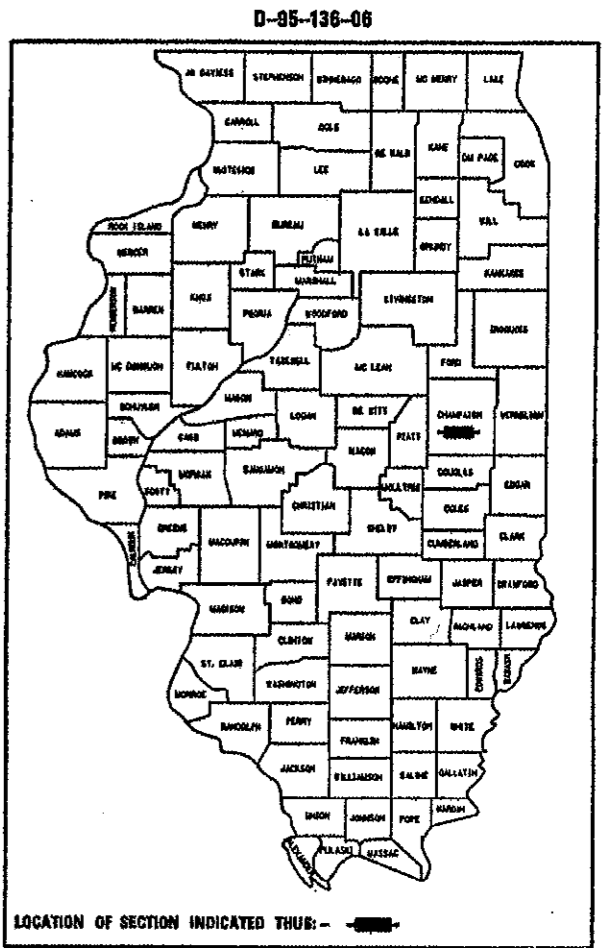
## PROPOSED HIGHWAY PLANS

F.A.I. ROUTE 74  
SECTION (14-1)  
CHAMPAIGN COUNTY

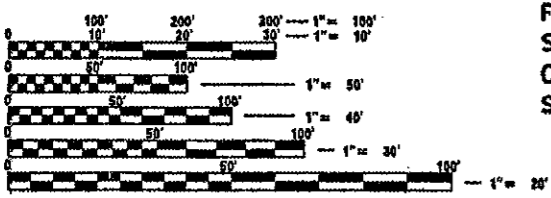
C-95-136-06  
BRIDGE DECK PROTECTIVE SHIELD

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

*Resident Engineer - Brent Mauw*  
*Start Date - 3-19-2007*  
*Construction Complete - 4-12-2007*  
*Final Acceptance - 5-30-2007*



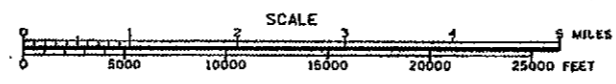
**DESIGN DESIGNATION**  
N/A



STRUCTURE NO. 010-0021  
SECTION BEGINS STA. 1216+67.75  
F.A.I. ROUTE 74  
SECTION (14-1)  
CHAMPAIGN COUNTY  
SECTION ENDS STA. 1219+91.55

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



TOTAL LENGTH OF SECTION & PROJECT = 323.8 FEET = 0.061 MILES  
NET LENGTH OF SECTION & PROJECT = 323.8 FEET = 0.061 MILES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED *Oct 16, 2006*

*Eric E. Hamm*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER

*Milton R. Seay, P.E.*  
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

*Milton R. Seay, P.E.*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS**

CONTRACT NO. 70622

F.A.I. ROUTE 74 SECTION (14-1) CHAMPAIGN COUNTY

PROJECT ENGINEER: DAN FEINBERG SQUAD LEADER: JIM WATERS

F.A.I. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(14-11)	CHAMPAIGN	22	2

## INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	COVER SHEET
2	INDEX OF SHEETS/HIGHWAY STANDARDS
3	GENERAL NOTES
4	SUMMARY OF QUANTITIES
5	EXISTING GENERAL PLAN AND ELEVATION
6	SUPERSTRUCTURE DETAILS
7	DETAIL SHOWING BEAM WIDTHS
8	PERMANENT PROTECTIVE SHIELD DETAILS
9-22	OLD PLANS FOR INFORMATION ONLY

## HIGHWAY STANDARDS

<u>STANDARD NO.</u>	<u>DESCRIPTION</u>
000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT

PLOT DATE : 9/22/2006  
 FILE NAME : s:\p\06\09\0021\06\09\0021.dwg  
 PLOT SCALE : 1/8"=1'-0"  
 USER NAME : phillip

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**INDEX OF SHEETS &  
 HIGHWAY STANDARDS**  
 F.A.I. ROUTE 74 SECTION (14-11)  
 CHAMPAIGN COUNTY  
 S.N. 010-0021

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(14-11)	CHAMPAIGN	22	3

## GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE 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 A CHANGE IN SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

**G. N. -100**

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

**G. N. -107.12**

THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE LOCAL RAILROAD CONTACT IS:

Mr. Hardy Taylor  
1907 Marion Ave.  
Mattoon, IL 61938  
(217) 238-2433

SPECIAL ATTENTION IS CALLED TO ARTICLE 107.12 REGARDING RAILROAD FLAGGERS. THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE RAILROAD FLAGGER CONTACT IS:

Mr. Tom Tucker  
2800 Livernois Rd.  
Troy, MI 48083  
(248) 740-6227

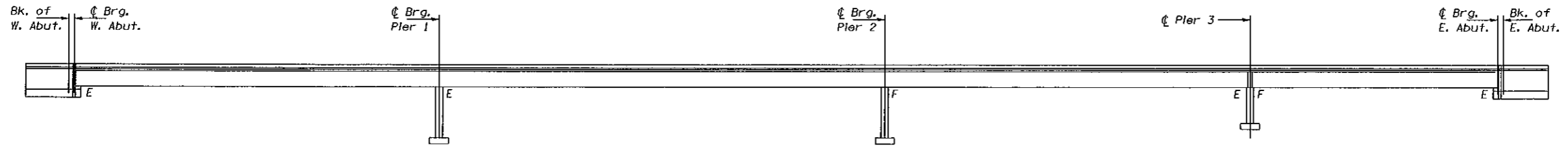
ILLINOIS DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

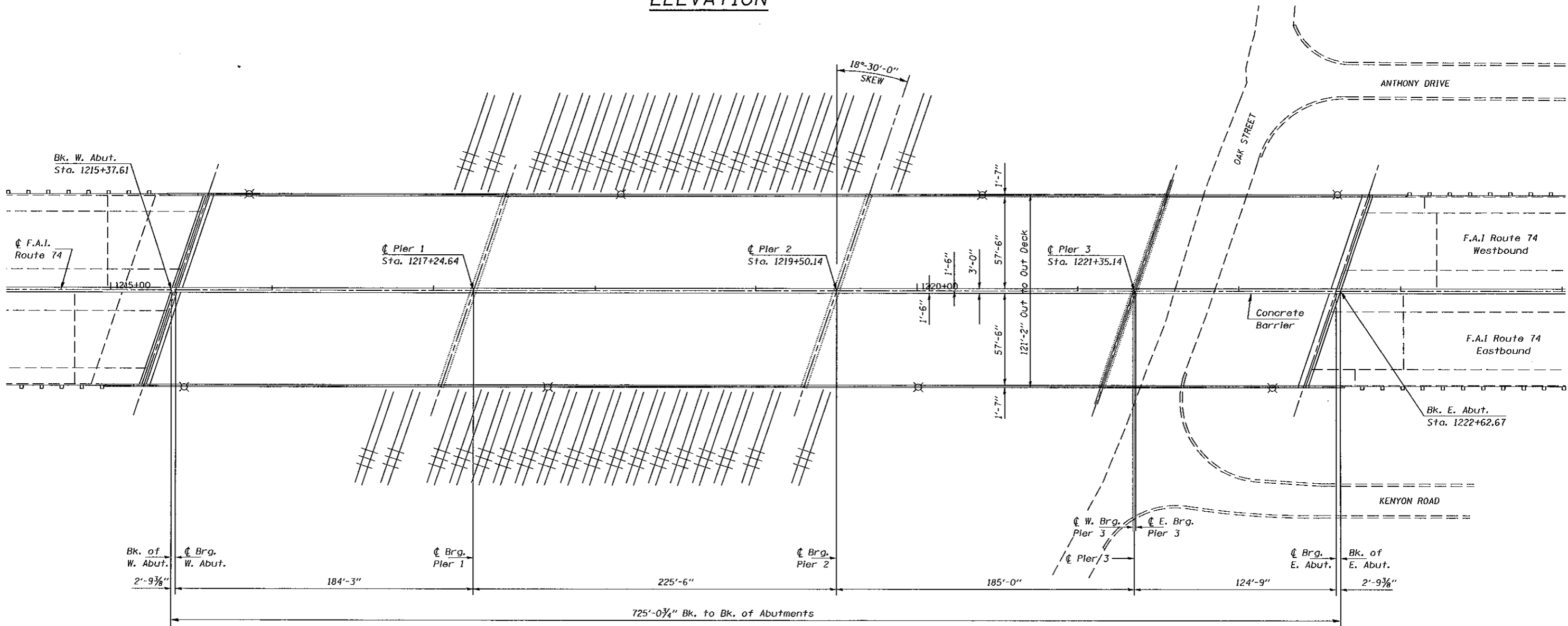
F.A.I. ROUTE 74  
SECTION (14-11)  
CHAMPAIGN COUNTY  
S.N. 010-0021



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(14-11)	CHAMPAIGN	22	5
STA. 1215+37.61 TO STA. 1222+62.67				



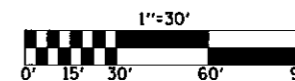
ELEVATION



PLAN

SN 010-0021

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**EXISTING GENERAL PLAN  
 AND ELEVATION**  
 F.A.I. ROUTE 74  
 SECTION (14-11)  
 CHAMPAIGN COUNTY

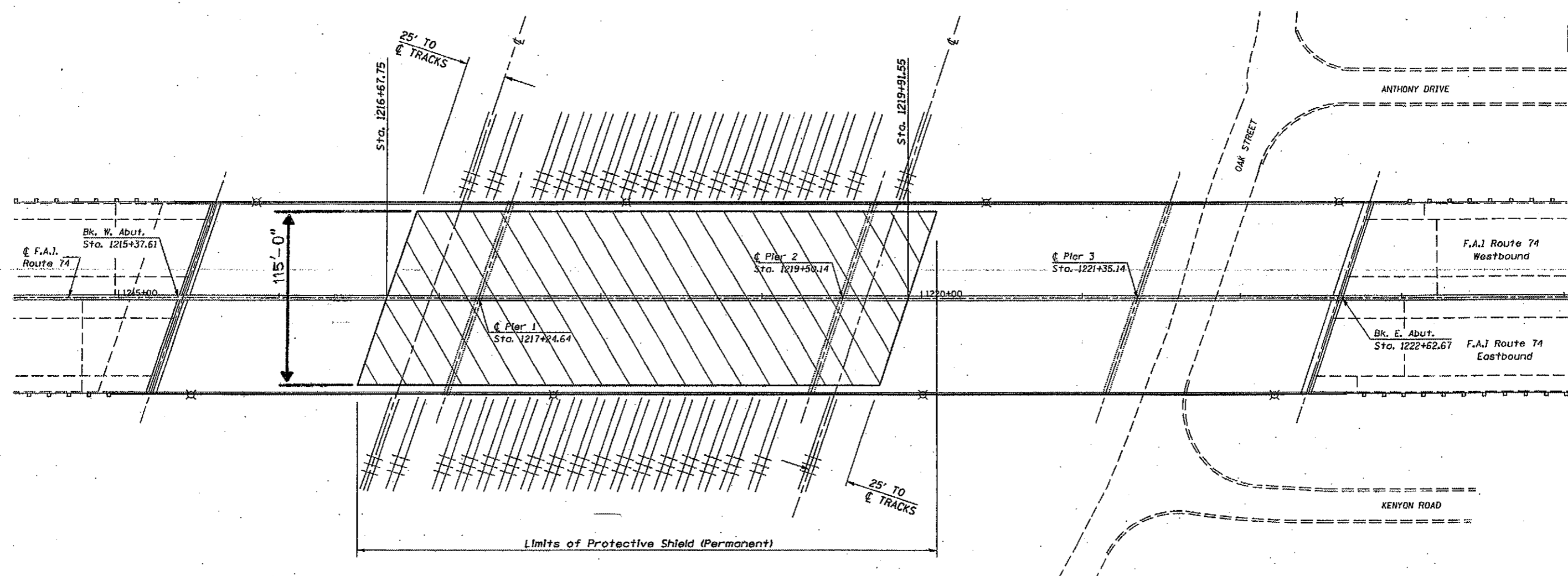


SCALE: 1" = 30'  
 DATE: 09/14/06

DRAWN BY: JRP  
 CHECKED BY:

PLOT DATE: 10/20/2006  
 PLOT SCALE: 1/8" = 1'-0"  
 USER NAME: phillips

CONTRACT NO. 70622				
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(14-1)	CHAMPAIGN	22	6
STA. 1215+37.61			TO STA. 1222+62.67	



**GENERAL NOTE**

Plan dimensions and details relative to the 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 or a change in scope of work. However, the Contractor will be paid for the quantity actually furnished at the contract unit price bid for the work.

**BILL OF MATERIAL**

Item	Unit	Total
Protective Shield (Permanent)	Sq. Yd.	4,137.0

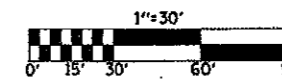
SN 010-0021

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SUPERSTRUCTURE DETAILS**

F.A.I. ROUTE 74  
SECTION (14-1)  
CHAMPAIGN COUNTY

SCALE: NA  
DATE: 09/18/06

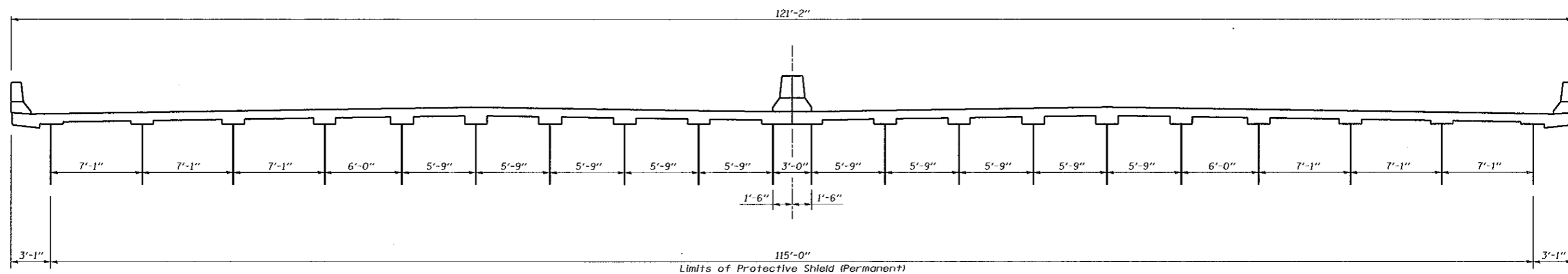
DRAWN BY: JRP  
CHECKED BY:



PLOT DATE: 10/20/2006  
 FILE NAME: C:\p14\14-1\14-1.dwg  
 USER: JRP  
 PLOTTER: HP DesignJet 500

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	114-111	CHAMPAIGN	22	7

## DETAIL SHOWING BEAM WIDTHS



SN 010-0021

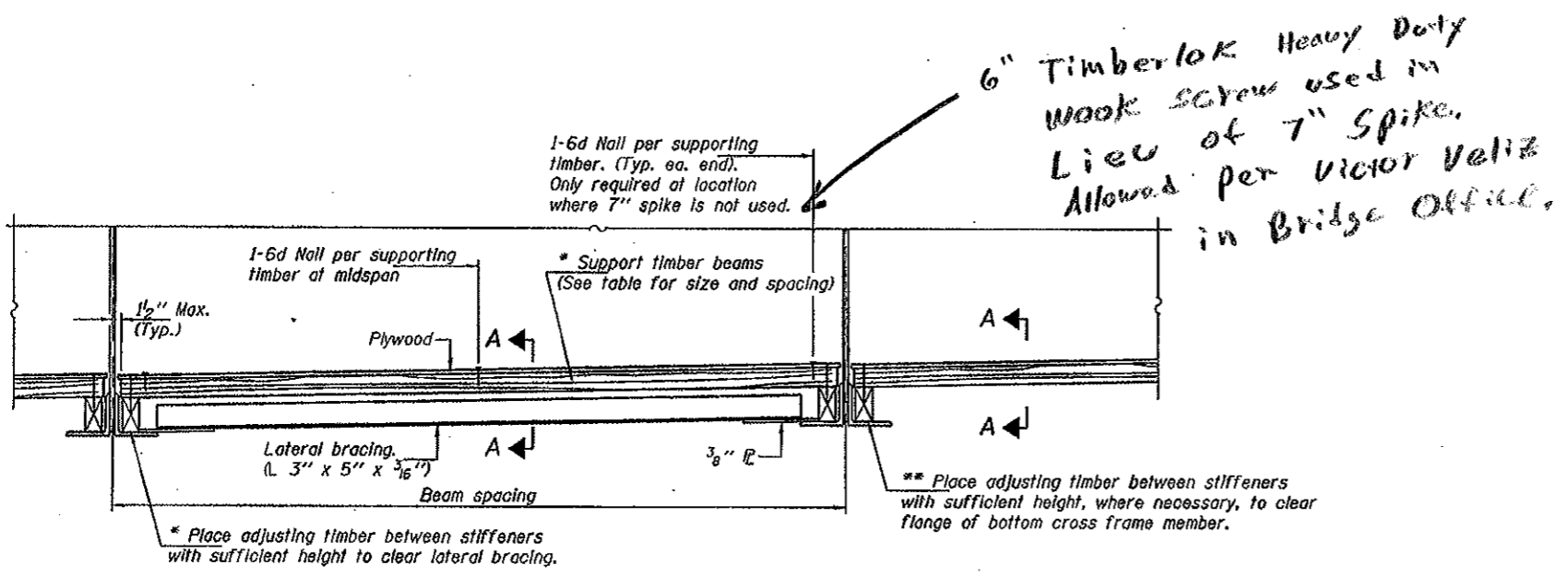
ILLINOIS DEPARTMENT OF TRANSPORTATION  
DETAIL SHOWING BEAM WIDTHS  
 F.A.I. ROUTE 74  
 SECTION (14-1)I  
 CHAMPAIGN COUNTY

SCALE: NO SCALE  
 DATE: 09/14/06

DRAWN BY: JRP  
 CHECKED BY:

PLOT DATE: 10/20/06  
 FILE NAME: c:\pwworkspace\113606 (c) 70622\landgr  
 PLOT SCALE: 1/8"=1'-0"  
 USER NAME: philipm

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Notes: See special provision for Permanent Protective Shield System. Timber sizes shown are nominal sizes. Rough sawn timber of the dimensions shown will also be considered acceptable. For the support timber, the minimum Fb and Fv values shown are the tabulated design values given in the National Design Specification for Wood Construction for No. 2 Spruce-Pine-Fir without adjustment factors applied. Better grades or other species with equal or higher allowable stresses will also be considered acceptable. The adjusting timber may be of any species or grade. The support timber spacings shown have been determined using allowable stresses with all adjustment factors necessary for the anticipated service conditions. All timber shall be treated. Plywood shall be 5/8" Exterior type plywood. Plywood shall be placed such that the face of grain is perpendicular to the support timbers. When less than a full sheet (4' width) of plywood is used, the width of the strip used shall not be less than 2'. Transverse plywood joints shall be supported by timbers, except as shown. When 4" x 6" support timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical. Design load = 200 psf.

**BAYS WITH LATERAL BRACING**

\* Each adjusting timber section should be attached to the support timber beams at at least 2 locations using 7" spikes.

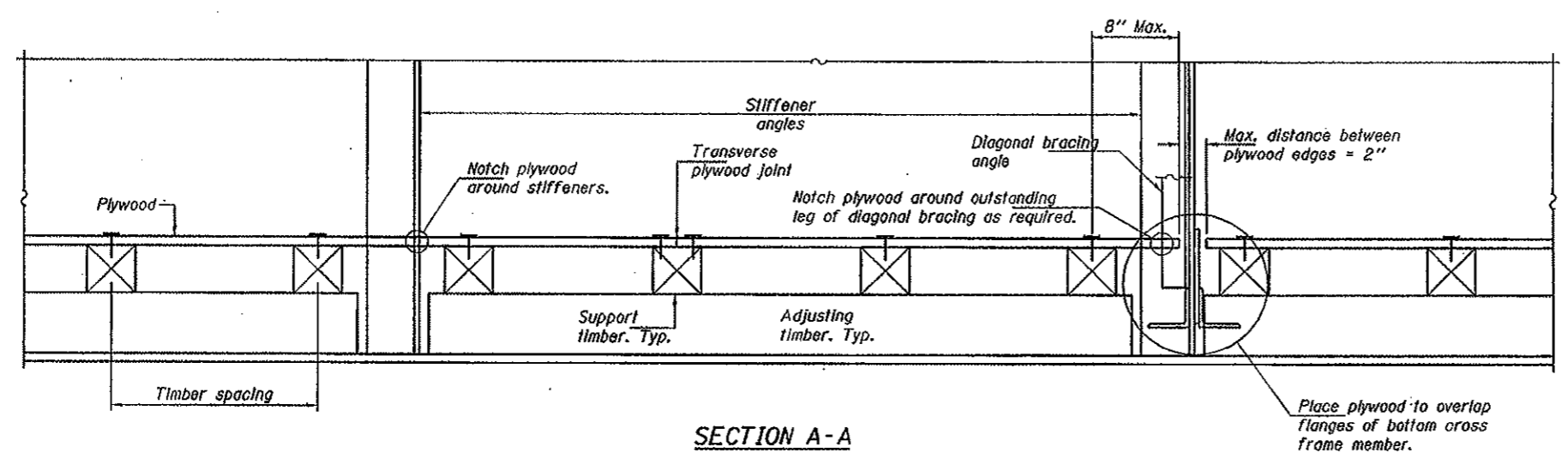
**BAYS WITHOUT LATERAL BRACING**

\*\* Adjusting timber should be placed tight against top of bottom flange. It may be necessary to trim the adjusting timber in order to avoid interference with gusset plates, rivet heads, etc.

↑ See Note above

**SUPPORT TIMBER SPACING**

Beam Spacing (ft.)	Timber Sizes (In.)		
	4" x 4" with min. Fb=775 psi Fv=135 psi	4" x 6" with min. Fb=775 psi Fv=135 psi	6" x 6" with min. Fb=575 psi Fv=125 psi
	Maximum Timber Spacing (In.)		
4.5	16	16	16
4.75	16	16	16
5.0	16	16	16
5.25	16	16	16
5.5	16	16	16
5.75	16	16	16
6.0	16	16	16
6.25	12	16	16
6.5	12	16	16
6.75	12	16	16
7.0	8	16	16
7.25	8	16	16
7.5	8	16	16
7.75	8	16	16
8.0	8	12	16
8.25	8	12	16
8.5	6	12	12
8.75	6	12	12
9.0	6	8	12



**SECTION A-A**

All support timbers are 4" x 4"

**BILL OF MATERIAL**

Item	Unit	Total
Protective Shield (Permanent)	Sq. Yd.	4137

SN 010-0021

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**PERMANENT PROTECTIVE SHIELD**  
FAI ROUTE 74 SECTION (14-11)  
CHAMPAIGN COUNTY

SCALE: NO SCALE  
DATE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_



**FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION**

Sheet No. 16  
of 55 Sheets

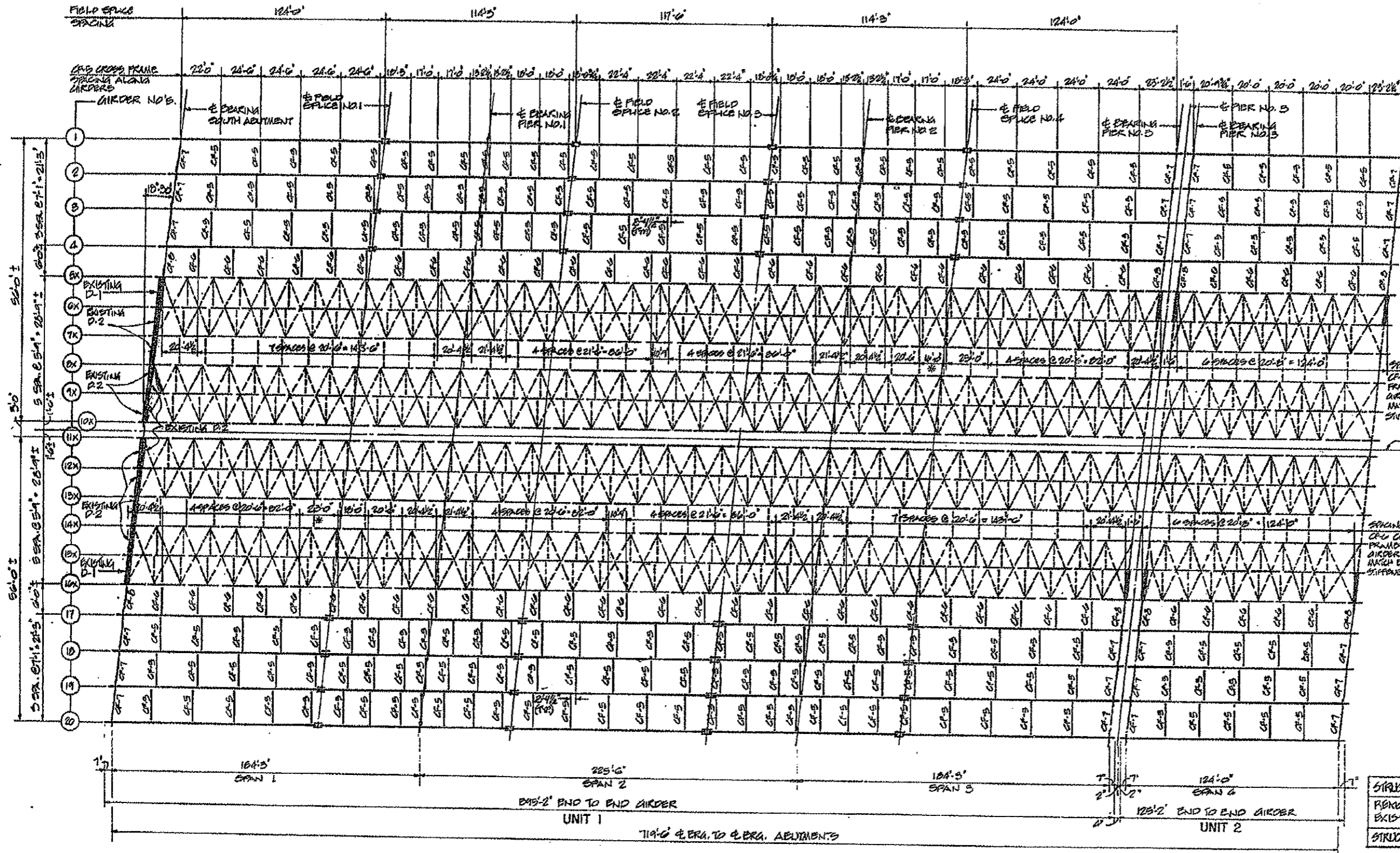
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	114-VB	CHAMPAIGN	140	161

F.A.I. RYE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(14-11)	CHAMPAIGN	22	9

CONTRACT NO. 70622

\* LINES AND 2 TAKE UP TO EXISTING GIRDER AT THIS LOCATION FOR CONNECTION TO CF-6 (SEE SHEET NO. 21)



SPACING OF CF-6 CROSS FRAMES ALONG GIRDER 6X TO MATCH EXISTING SUPPORT SPACING

SPACING OF CF-6 CROSS FRAMES ALONG GIRDER 10X TO MATCH EXISTING SUPPORT SPACING

NOTE: CONTRACTOR SHALL VERIFY SIZE AND SPACING OF EXISTING STIFFENERS PRIOR TO FABRICATION OF GIRDERS 9 AND 17

**LEGEND**

- CF-# = CROSS FRAME NUMBER
- STRUCTURAL STEEL TO BE REMOVED AND REPLACED AS STRUCTURAL STEEL REPAIR.
- REMOVE AND RELOCATE EXISTING DIAPHRAGMS

STRUCTURAL STEEL REPAIR	ROUND	2150
REMOVE AND RELOCATE EXISTING DIAPHRAGMS	EACH	6
STRUCTURAL STEEL REMOVAL	ROUND	155,000*

\* SEE SHEET 23

**FRAMING PLAN**

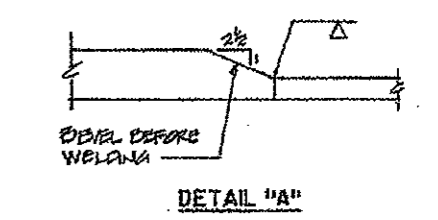
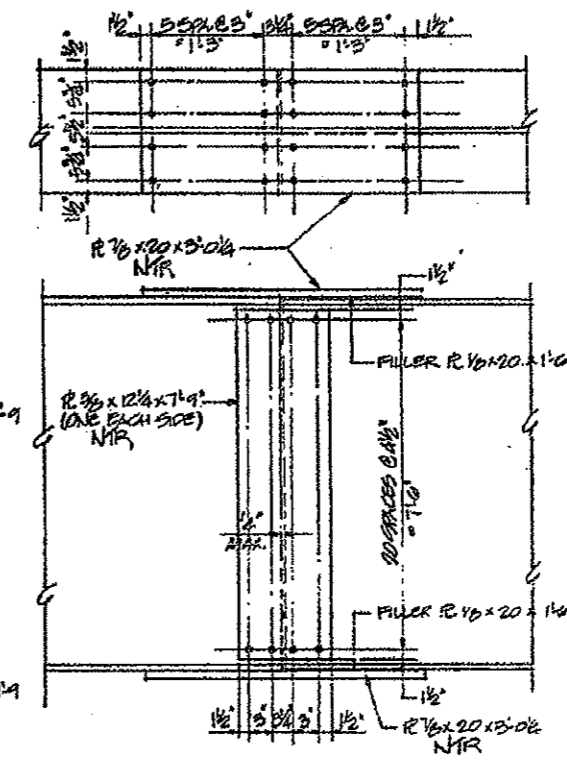
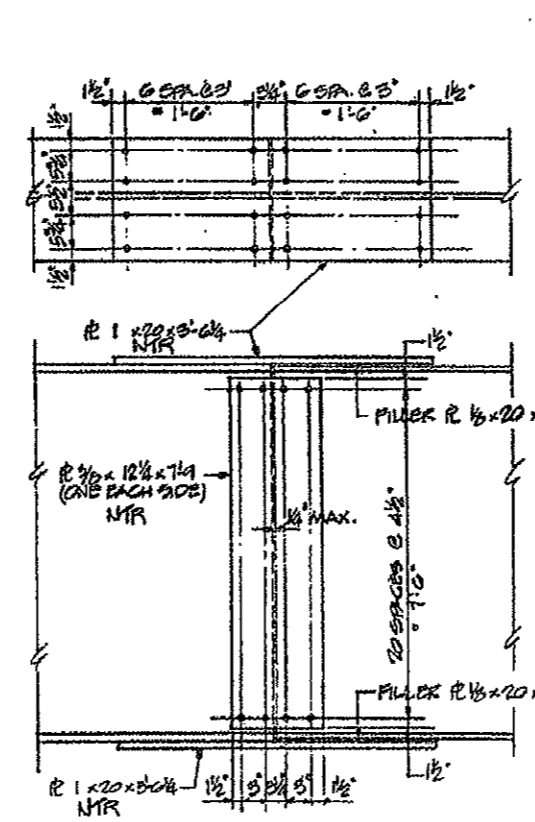
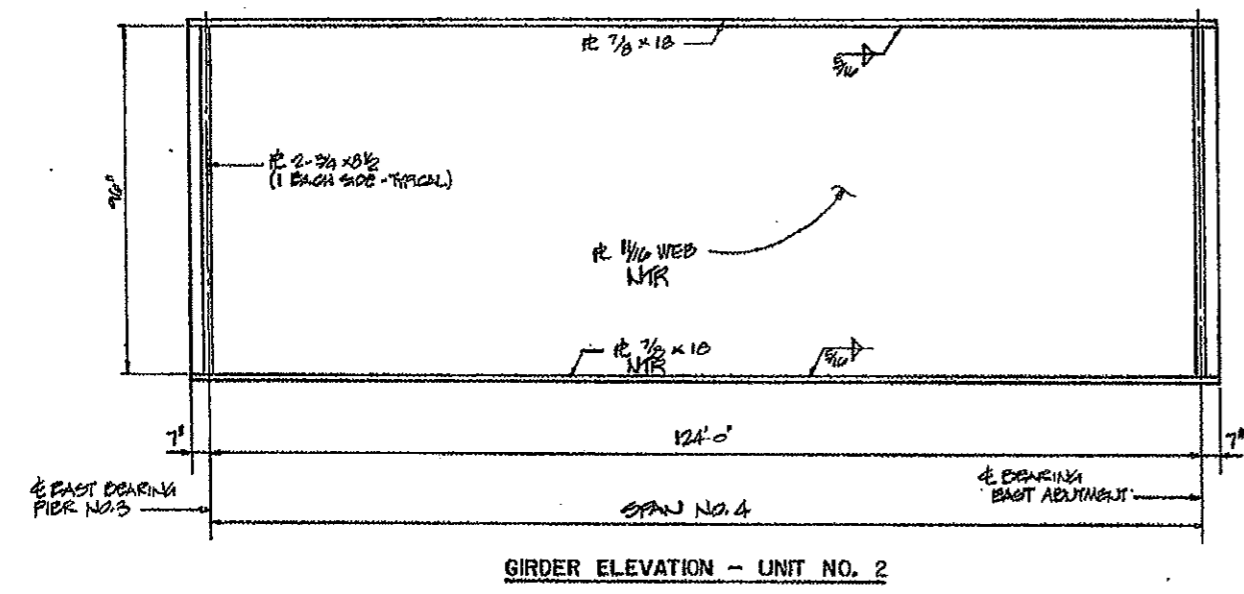
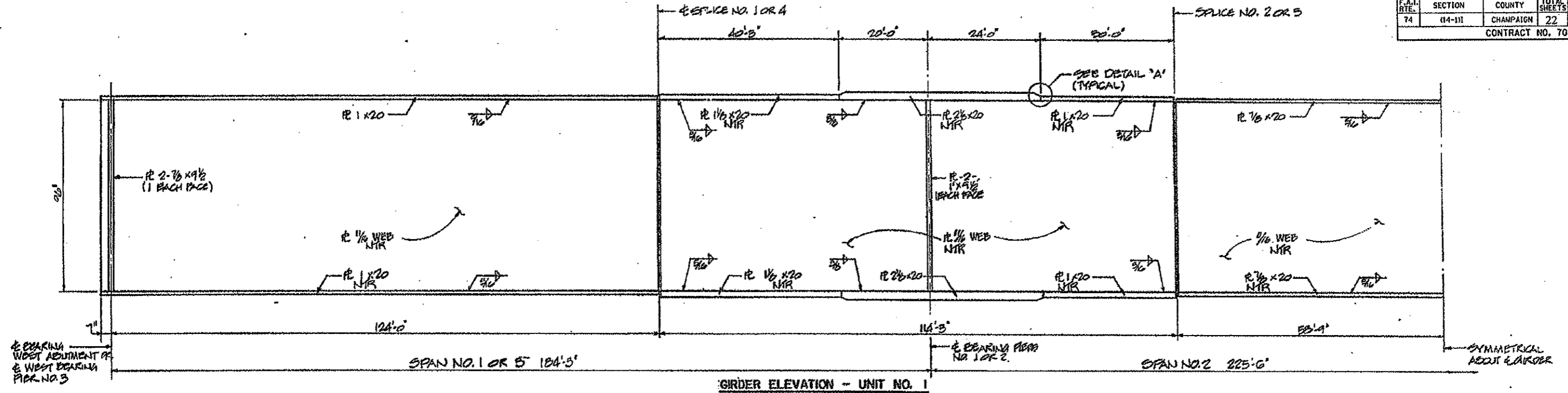
WORK THIS SHEET WITH SHEETS NO. 19 THRU 23

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DESIGNED BY
NO.	DATE	NO.	DATE	BY
F.A.I. 74		S.N. D10-0021		SEC. (14-VB)BF
STA. 1218+00.14		CHAMPAIGN COUNTY		3400-5
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS				SHEET NO.

**FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION**

Sheet No. 19  
of 28 Sheets

STATE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(14-VI) BR	CHAMPAIGN	140	102
CONTRACT NO. 70622				



NOTE: ALL STRUCTURAL STEEL FABRICATORS PERFORMING WORK ON THE MAIN LOAD CARRYING COMPONENTS OF STEEL STRUCTURES SHALL BE CERTIFIED UNDER CATEGORY III (AISC) OF THE QUALITY CERTIFICATION PROGRAM.

SPLICE NO. 1 OR 4  
(SPLICE NO. 4 SHOWN  
SPLICE NO. 1 SIMILAR)

SPLICE NO. 2 OR 3  
(SPLICE NO. 3 SHOWN  
SPLICE NO. 2 SIMILAR)

ALL TOP AND BOTTOM  
SPLICE FLANGE PLATES  
ARE IDENTICAL.  
NOTE: DIMS SHALL BE 1/8".

REVISIONS		STRUCTURAL STEEL DETAILS	
NO.	DATE	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	REVISION BY DATE
1		FAI 74	JUN 2/88
2		S.R. 010-0321	CHECKED BY: JES 3/11
3		SEC. 14-VI-58A	DATE ISSUED:
4		STA. 1219+00.14	PROJECT NO. 3400-5
5		CHAMPAIGN COUNTY	SHEET NO.
6		HOMER L. CHASTAIN & ASSOCIATES, CONSULTING ENGINEERS.	

**FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION**

Sheet No. 20  
of 35 Sheets

PROJECT NO.	SECTION	TOTAL SHEETS	SHEET NO.
FA 74	(11-198) BR	100	103

**UNIT 1**

**INTERIOR GIRDER MOMENT TABLE**

	D.4 Sp. 1	Pier	D.5 Sp. 2
IS (in)	144,781	255,326	192,807
IC (in)	---	---	---
IS (in)	2955	5094	2717
SC (in)	---	---	---
I (in)	---	---	---
Q (K/I)	1.115	1.115	1.115
MR (K)	2490.9	5229.4	1648.6
SR (K/I)	0.225	0.225	0.225
MR (K)	111.4	1049.0	310.8
MR (K)	1822.7	2601.2	1780.5
MR (IMP) (K)	320.1	201.8	251.2
MR (M.E. 1) (K)	2220.0	2101.7	2249.8
MR (K)	2490.9	1449.2	722.1
MR (K)	---	---	---
MR (comp) (K.S.I.)	10.0	11.9	8.2
MR (comp) (K.S.I.)	2.0	2.5	1.7
MR (L.P.) (K.S.I.)	14.6	12.2	14.8
MR (overload) (K.S.I.)	26.5	26.5	24.7
MR (Total) (K.S.I.)	34.5	34.5	32.1
VR (K)	71.4	---	24.7

**UNIT 2**

**INTERIOR GIRDER MOMENT TABLE**

	D.5 Sp. 1
IS (in)	124,575
IC (in)	---
IS (in)	2519
SC (in)	---
I (in)	---
Q (K/I)	1.074
MR (K)	2064.2
SR (K/I)	0.225
MR (K)	402.1
MR (K)	1287.4
MR (IMP) (K)	251.5
MR (M.E. 1) (K)	2516.8
MR (K)	2514.8
MR (K)	---
MR (comp) (K.S.I.)	9.7
MR (comp) (K.S.I.)	2.0
MR (L.P.) (K.S.I.)	11.8
MR (overload) (K.S.I.)	23.6
MR (Total) (K.S.I.)	30.7
VR (K)	58.7

IS AND IS ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING FS (TOTAL AND OVERLOAD).

IC AND IC ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE CONCRETE SECTION USED IN COMPUTING FS (TOTAL AND OVERLOAD).

VR IS THE MAXIMUM V + IMPACT SHEAR RANGE IN SPAN.

Z IS THE PLASTIC SECTION MODULUS USED TO DETERMINE THE FULLY PLASTIC MOMENTS IN THE NON-COMPLETE AREAS.

MR (APPLIED MOMENT) = 1.3 [MR + MR + SR (M.E. + 1)]

MU IS THE FULL PLASTIC MOMENT CAPACITY FOR COMPACT, BRACED SECTION.

FS (OVERLOAD) IS THE SUM OF THE STRESSES DUE TO MR + MR + SR (M.E. + 1).

FS (TOTAL) IS THE SUM OF THE STRESSES DUE TO 1.3 [MR + MR + SR (M.E. + 1)].

**UNIT 1**

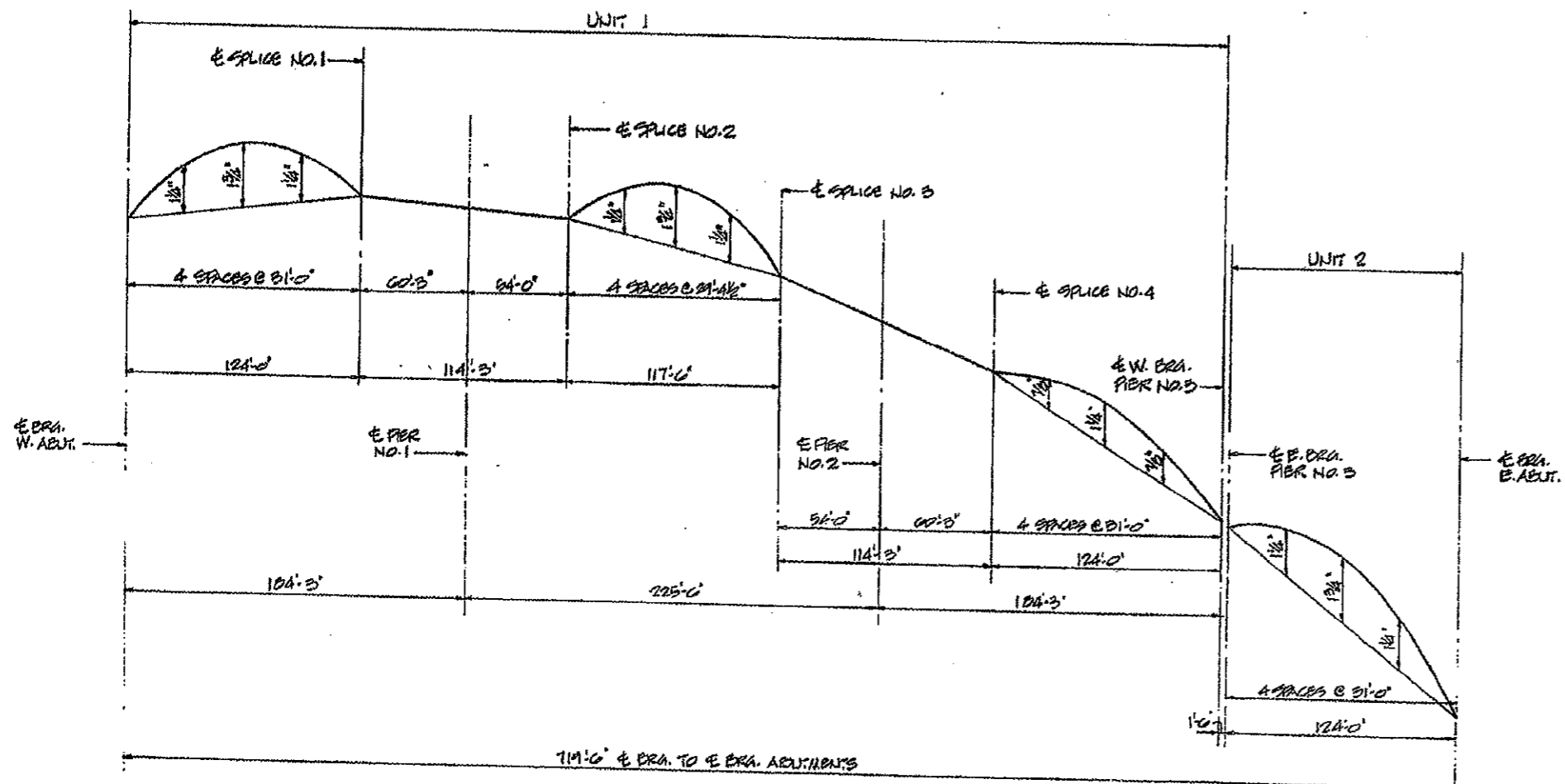
**INTERIOR GIRDER REACTION TABLE**

	Abut./P. 3	Pier 1, Pier 2
RR (K)	63.7	207.6
RL (K)	82.1	128.8
IMP (K)	9.1	18.6
R (Total) (K)	154.9	455.0

**UNIT 2**

**INTERIOR GIRDER REACTION TABLE**

	Pier 3/E. Abut.
RR (K)	82.5
RL (K)	48.4
IMP (K)	9.6
R (Total) (K)	139.2



**TOP OF WEB ELEVATIONS - UNIT 1 (FOR FABRICATION ONLY)**

LOCATION	GIRDER	A-1	A-2	A-3	A-4	A-7	A-8	A-9	A-20
E. BRG. W. ABUT.		770.23	770.51	770.47	770.57	770.41	770.21	770.15	770.11
E. SPACE NO. 1		770.61	770.75	770.51	770.40	770.14	770.03	770.71	770.55
E. BRG. PIER NO. 1		770.50	770.65	770.71	770.60	770.41	770.20	770.00	770.23
E. SPACE NO. 2		770.39	770.53	770.60	770.50	770.20	770.11	770.00	770.22
E. SPACE NO. 3		770.61	770.83	770.87	770.10	770.28	770.19	770.01	770.46
E. BRG. PIER NO. 2		770.03	770.10	770.10	770.54	770.10	770.01	770.51	770.47
E. SPACE NO. 4		770.44	770.62	770.71	770.81	770.21	770.13	770.04	770.42
E. W. BRG. PIER NO. 3		770.51	770.70	770.80	770.02	770.16	770.31	770.21	770.16

**TOP OF WEB ELEVATIONS - UNIT 2 (FOR FABRICATION ONLY)**

LOCATION	GIRDER	A-1	A-2	A-3	A-4	A-7	A-8	A-9	A-20
E. BRG. PIER NO. 3		770.80	770.61	770.85	770.00	770.43	770.20	770.20	770.17
E. BRG. E. ABUT.		770.93	770.14	770.31	770.47	770.02	770.16	770.21	770.20

WORK THIS SHEET WITH SHEETS 10, 11, 21, 22 AND 23

**STRUCTURAL STEEL DETAILS**

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DATE
1	F.A.I. 74	11-2-74
2	S.N. 010-002	SEC. (11-VB) 23
3	STA. 1219+00.14	CHAMPAIGN CO. ILL.
4	HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	
5	PROJECT NO.	3400-5
6	SHEET NO.	103

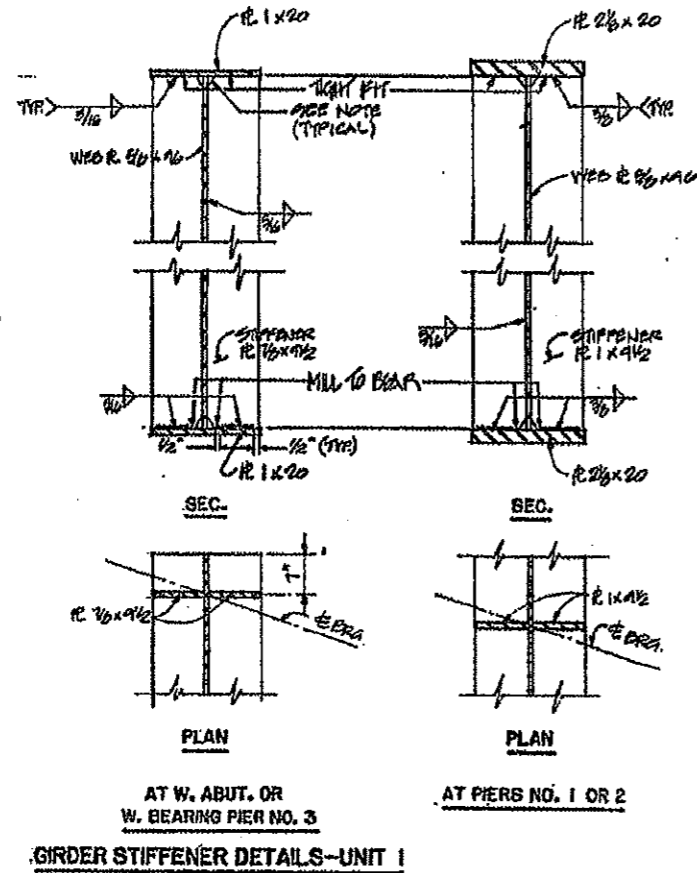
**FOR INFORMATION ONLY  
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Sheet No. 21  
of 25 Sheets

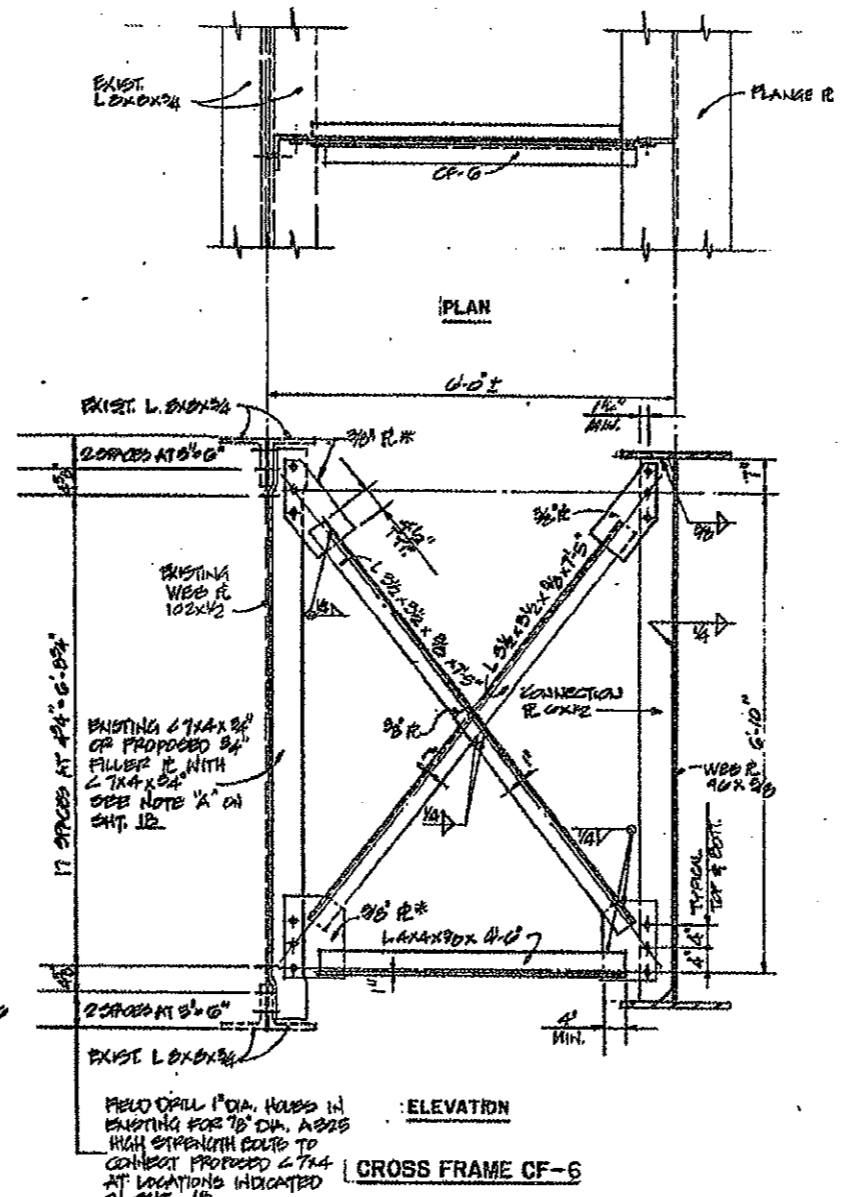
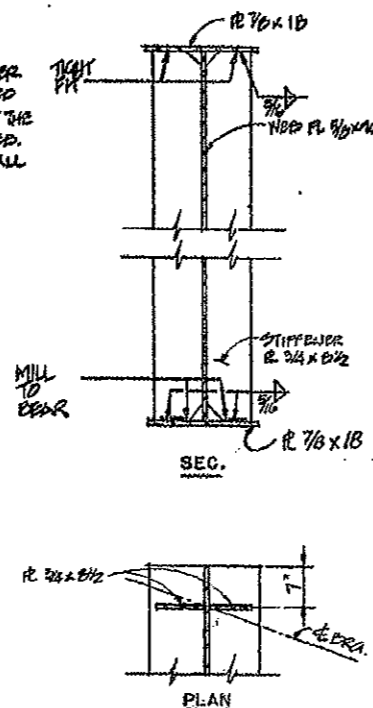
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAL 74	(14-VB) BR	CHAMPAIGN	140	104
CONTRACT NO. 70622				

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(14-1)	CHAMPAIGN	22	12
CONTRACT NO. 70622				

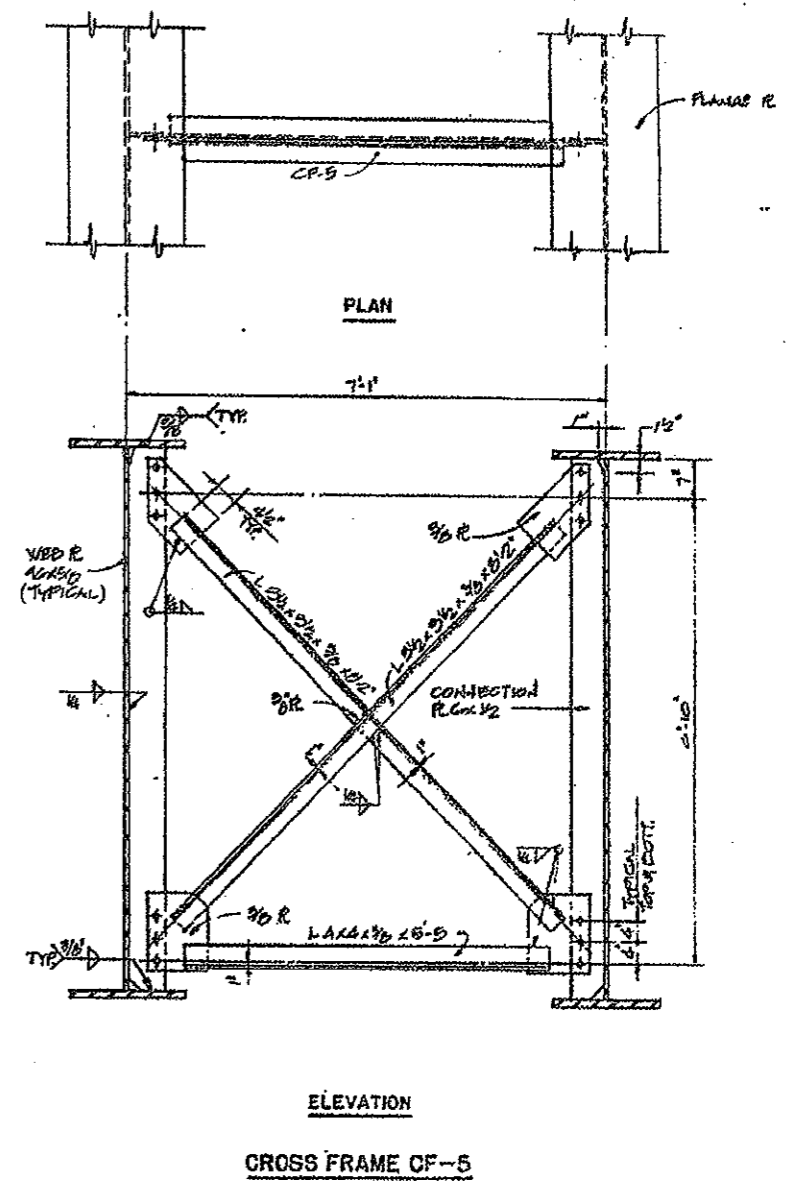


NOTE: THE TOP AND BOTTOM OF STIFFENER PLATES AT BEARINGS SHALL BE CLIPPED 1" HORIZONTALLY AND 2 1/2" VERTICALLY AT THE JUNCTION OF THE FLANGES AND THE WEB. INTERMEDIATE STIFFENER PLATES SHALL BE CLIPPED IN A LIKE MANNER AT THE JUNCTION OF COMPRESSION FLANGES AND THE WEB.



FIELD DRILL 1" DIA. HOLES IN EXISTING FOR 7/8" DIA. ASBES HIGH STRENGTH BOLTS TO CONNECT PROPOSED C 7x4 AT LOCATIONS INDICATED ON SHEET 12. COST OF FIELD DRILLING HOLES SHALL BE INCIDENTAL TO STRUCTURAL STEEL.

\* 1/2" x 1 1/2" SLOTTED HOLES IN GUSSET PLATES AT GIRDERS 6X AND 10X. ONE 3/16" THICK STRUCTURAL PLATE WASHER SHALL BE PROVIDED OVER ALL SLOTTED HOLES.



NOTE: ALL BOLTS FOR CROSS FRAME CONNECTIONS SHALL BE 7/8" H.S. HOLES FOR BOLTS SHALL BE 1 1/16" Ø. EXCEPT AS NOTED.

HARDENED WASHERS SHALL BE REQUIRED OVER ALL HOLES, EXCEPT AS NOTED.

NOTE: WORK THIS SHEET WITH SHEET NO. 12, 19, 20, 22, AND 25

REVISIONS				
NO.	DATE	BY	REASON	APPROVED
1				
2				
3				
4				
5				
6				
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10				

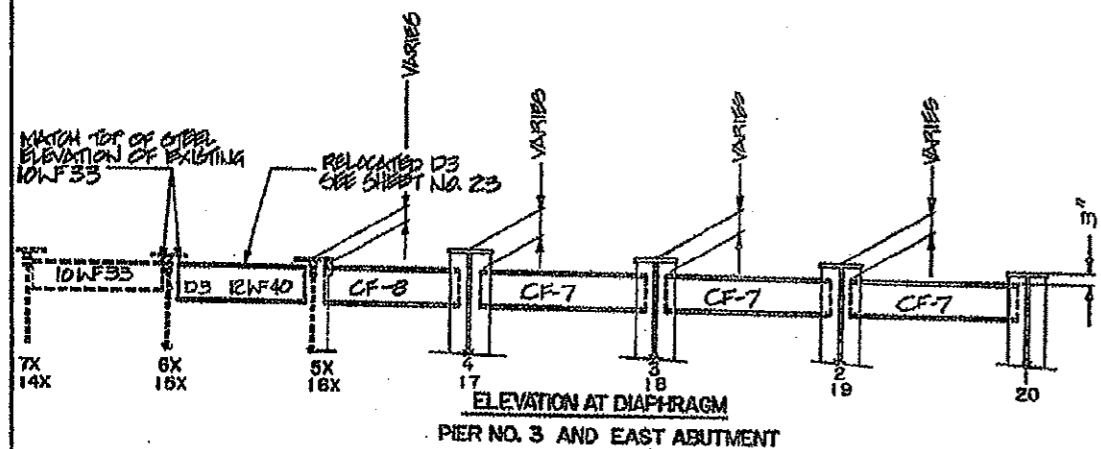
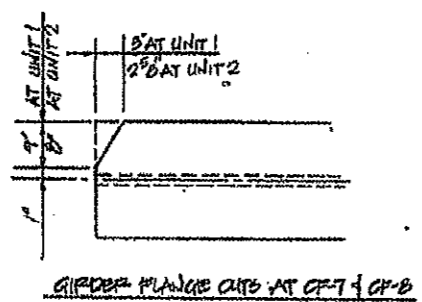
  

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			DESIGNED BY: DATE J.L.H. 7/68
F.A.I. 74	S.N. 010-0021	SEC. (14-VB) BR	CHECKED BY: DATE J.K.L. 8/68
STA. 1219+00.14	CHAMPAIGN COUNTY	PROJECT NO. 3400-5	APPROVED BY: DATE H.L.C. 8/68
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS			

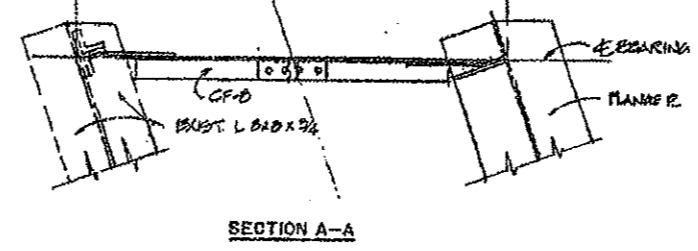
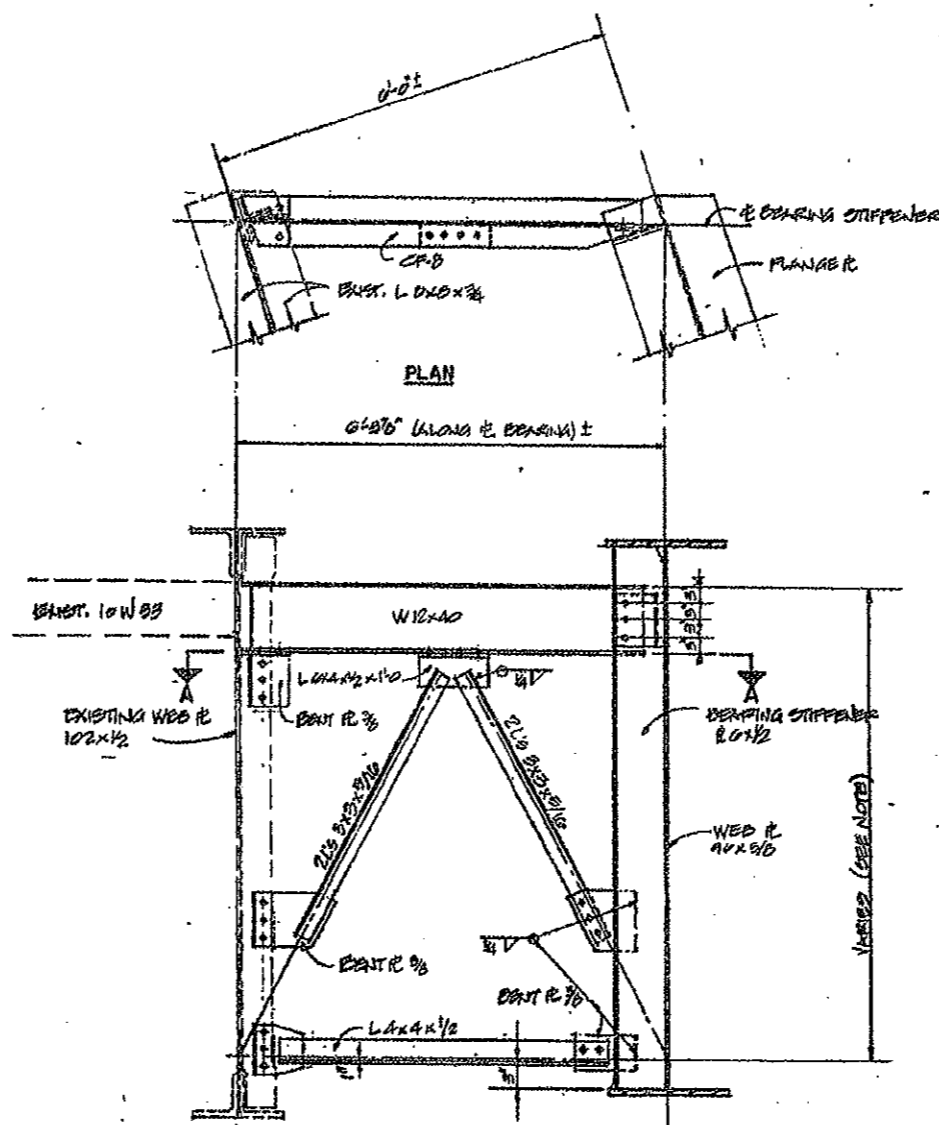
**FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION**

Sheet No. 22  
of 29 Sheets

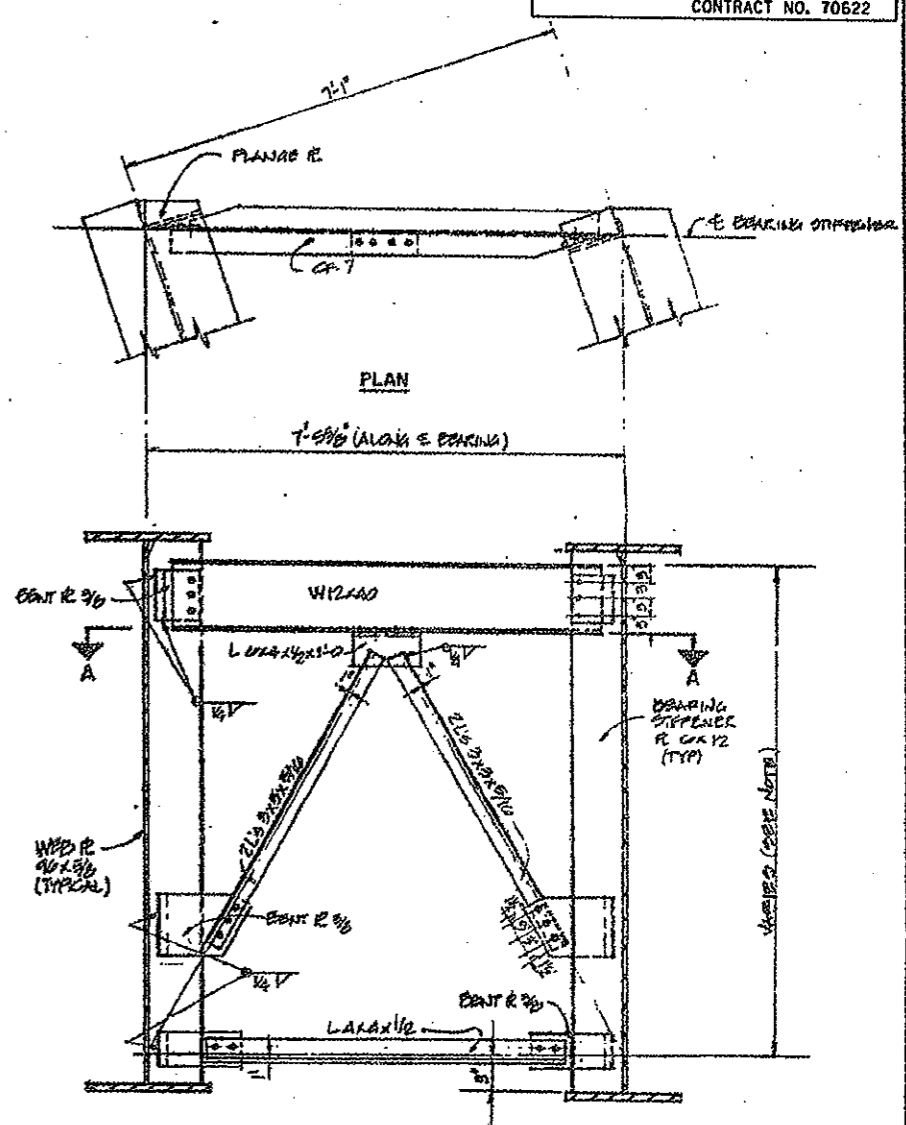
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAL 74	(14-VI) BR	CHAMPAIGN	22	13
CONTRACT NO. 70622				



**NOTE:**  
 AT PIER NO. 3 AND EAST ABUTMENT - STRAIGHT LINE ELEVATIONS OF TOP OF STEEL OF NEW AND RELOCATED MEMBERS FROM TOP OF STEEL OF EXISTING ADJACENT 10WF33 AT GIRDERS 5X AND 16X TO 3" CLEARANCE AS SHOWN AT NEW EXTERIOR GIRDERS 1 AND 20.  
 AT WEST ABUTMENT - SET ALL NEW W12X40 MEMBERS LEVEL AT THE SAME ELEVATION AS ADJACENT EXISTING 10WF33 AT GIRDERS 5X AND 16X.



**CROSS FRAME CF-8**  
 NOTE: SEC. A-A FOR CROSS FRAME C-7 SIMILAR



**CROSS FRAME CF-7**

NOTE: WORK THIS SHEET WITH SHEET NO. 18, 19, 20, 21, AND 22

REVISIONS				
NO.	DATE	DESCRIPTION	BY	CHECKED
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			DESIGNED BY SCH 2/83
F.A.I. 74	S.N. 010-0021	SEC. (14-VI) BR	CHECKED BY SC 3/83
STA. 1219+00.14	CHAMPAIGN COUNTY	PROJECT NO.	3400-3
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS			SHEET NO.

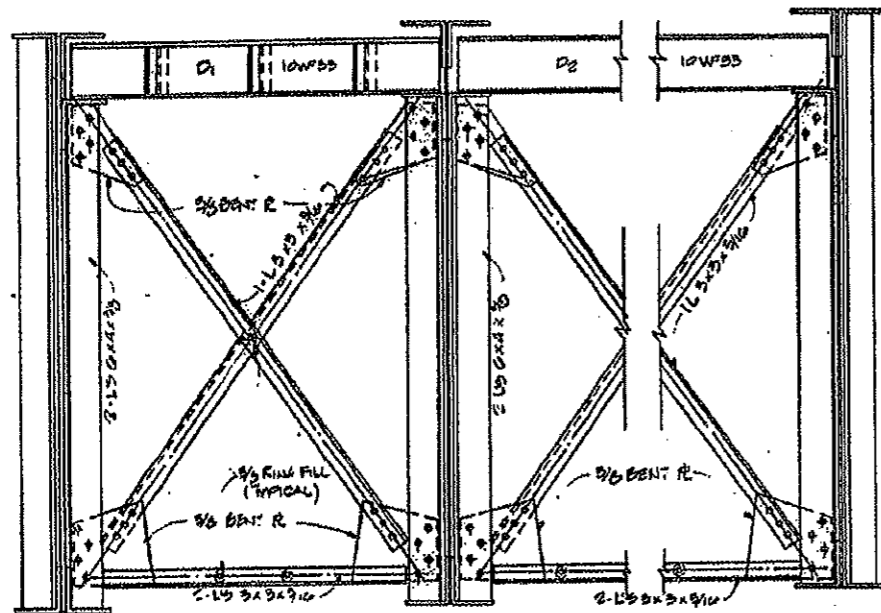
Sheet No. 22  
of 25 Sheets

PROJECT NO.	SECTION	DATE	TOTAL SHEETS	SHEET NO.
FAL 74	14-III	BR	140	14
DESIGNED BY: [ ]				
CHECKED BY: [ ]				

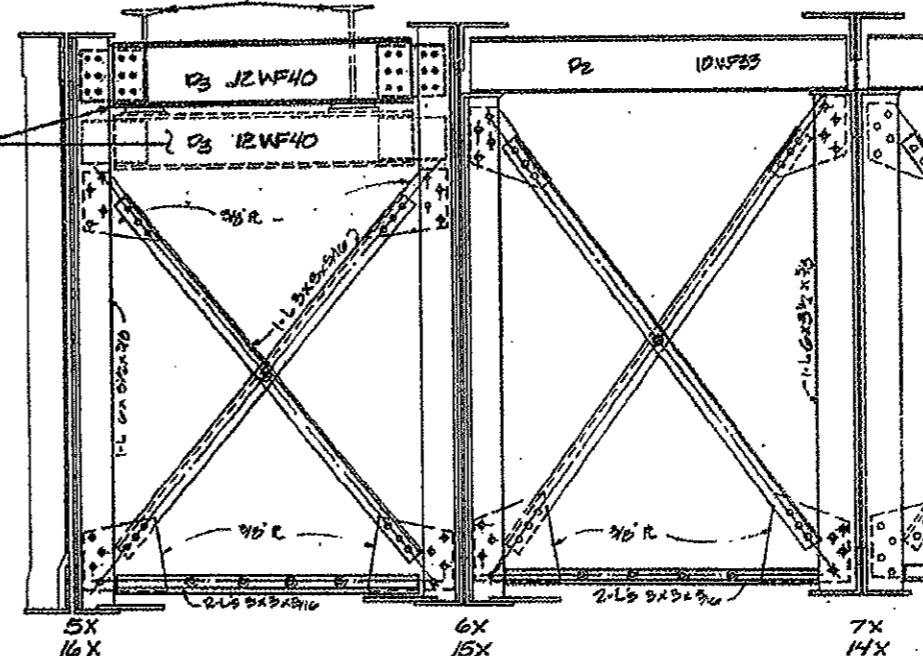
**FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION**

NOTE: SEE SHEET NO. 20 FOR FINNER  
PLATE EXPANSION DEVICE PEDestal HOLDS.

REMOVE EXISTING  
18 I 54.7 FULL LENGTH  
BOTH SIDES.



**EXISTING CROSS FRAME CF-3**  
(AT ABUTMENTS)



**EXISTING CROSS FRAME CF-4**      **EXISTING CROSS FRAME CF-3**

(AT PIER 3 AND EAST ABUTMENT)

**STRUCTURAL STEEL REPAIR:  
STRUCTURAL STEEL TO BE REMOVED  
AND REPLACED WITH NEW SECTIONS:**

1. ALL EXISTING DIAPHRAGMS (D-1 AND D-2) (10 WF 33) BETWEEN EXISTING GIRDERS.
2. LATERAL BRACE AND GUSSET PLATE, BETWEEN GIRDERS 8X AND 9X.
3. BOTTOM HORIZONTAL ANGLES PARALLEL WITH ABUTMENT BACKWALL, BETWEEN GIRDERS 8X AND 9X, AND 9X AND 10X. SEE SHEET 18.

- REMOVE AND RELOCATE EXISTING DIAPHRAGMS  
AT PIER NO. 3 AND AT EAST ABUTMENT:
- (3X12 WF 40) BETWEEN GIRDERS 5X AND 6X,  
AND BETWEEN GIRDERS 15X AND 16X.

NOTE: THIS SHEET IS FOR REFERENCE FOR  
STRUCTURAL STEEL REPAIR, STRUCTURAL STEEL REMOVAL,  
AND REMOVAL AND RELOCATION OF EXISTING DIAPHRAGMS.

NOTE: WORK THIS SHEET WITH SHEETS 16 THRU 22

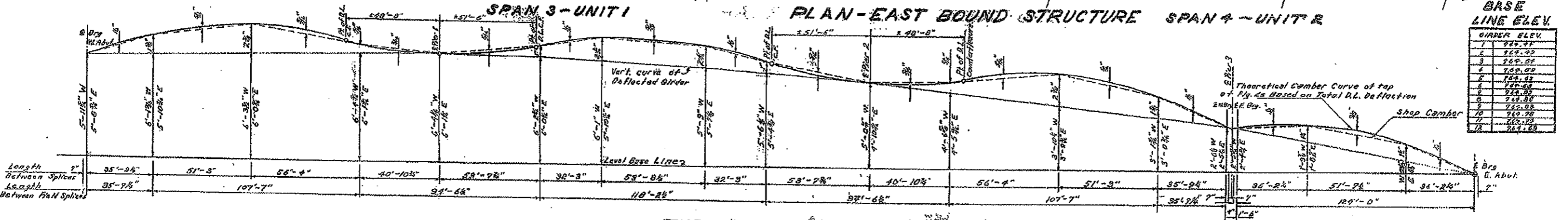
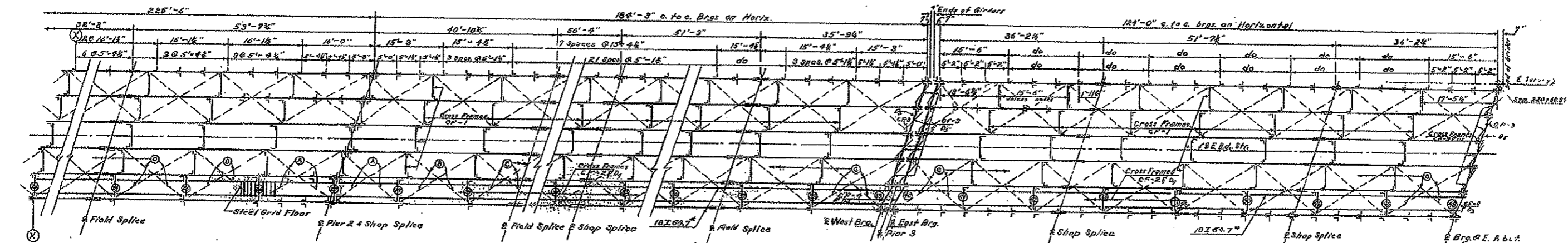
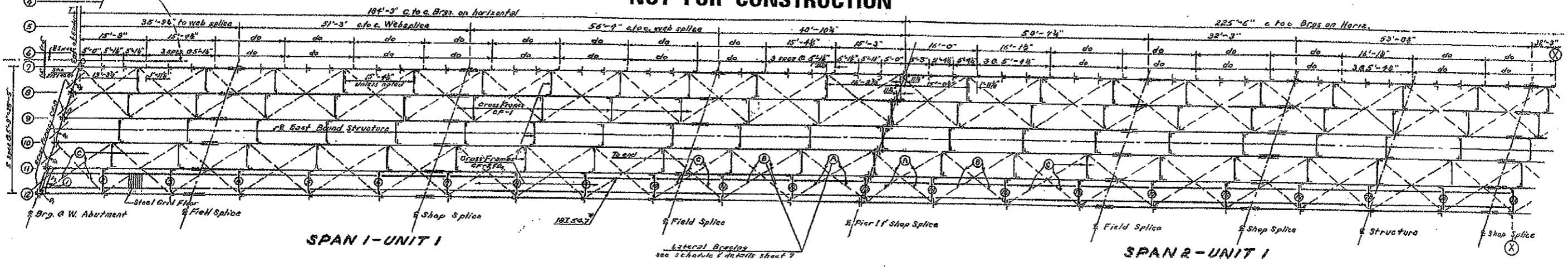
REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DESIGNED BY: [ ]
1		F.A.I. 74	S.N. 010-0021	SEC. 14-III
2		STA. 1219+00.14	CHAMPAIGN COUNTY	3400-5
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS				3-11

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

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PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 39	114-VF	CHAMPAIGN	20	8
1/2 SHEETS				

Note: Framing Plan for West Bound Structure is identical to East Bound Structure except for Cross Frames R2 and R3 & R7 assembly which are to be placed between Girders 1 & 2



GIRDER ELEV.	BASE LINE ELEV.
1	222.37
2	222.32
3	222.27
4	222.22
5	222.17
6	222.12
7	222.07
8	222.02
9	221.97
10	221.92
11	221.87
12	221.82

COMPUTED *V. M. Roman*  
CHECKED *M. J. R. [Signature]*  
DRAWN *B. K. [Signature]*  
CHECKED *M. J. R. [Signature]*

EXAMINED *V. M. Roman*  
DATE OF EXAMINATION *Sept. 23, 1947*  
PASSED *[Signature]*  
APPROVED *R. L. [Signature]*

W denotes West bound structure - Girders 1 thru 6  
E denotes East bound structure - Girders 7 thru 12

Deflection due to steel - 70%  
Deflection due to concrete - 60%

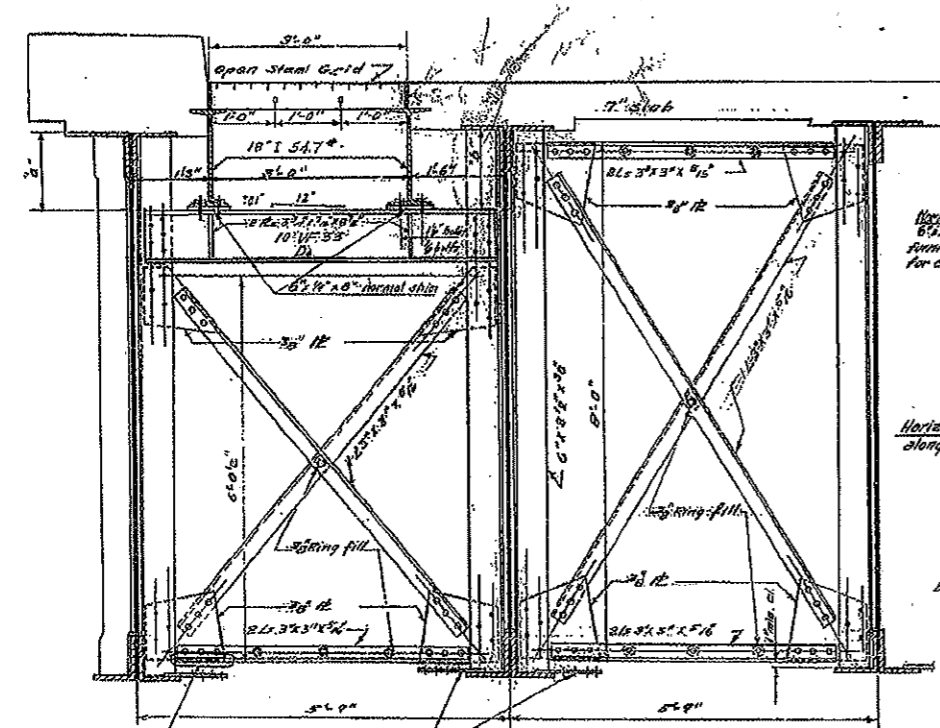
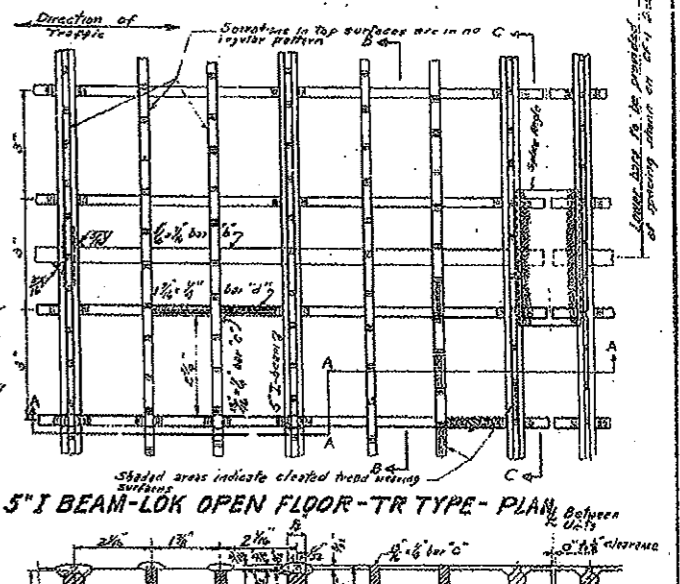
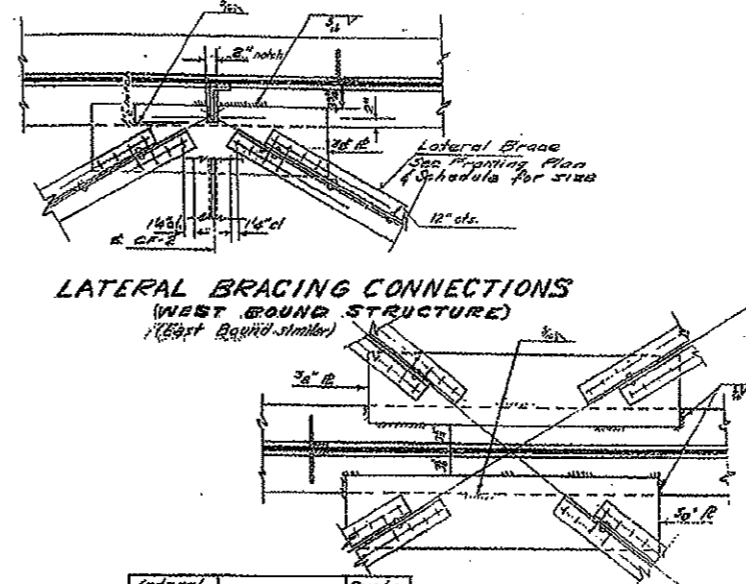
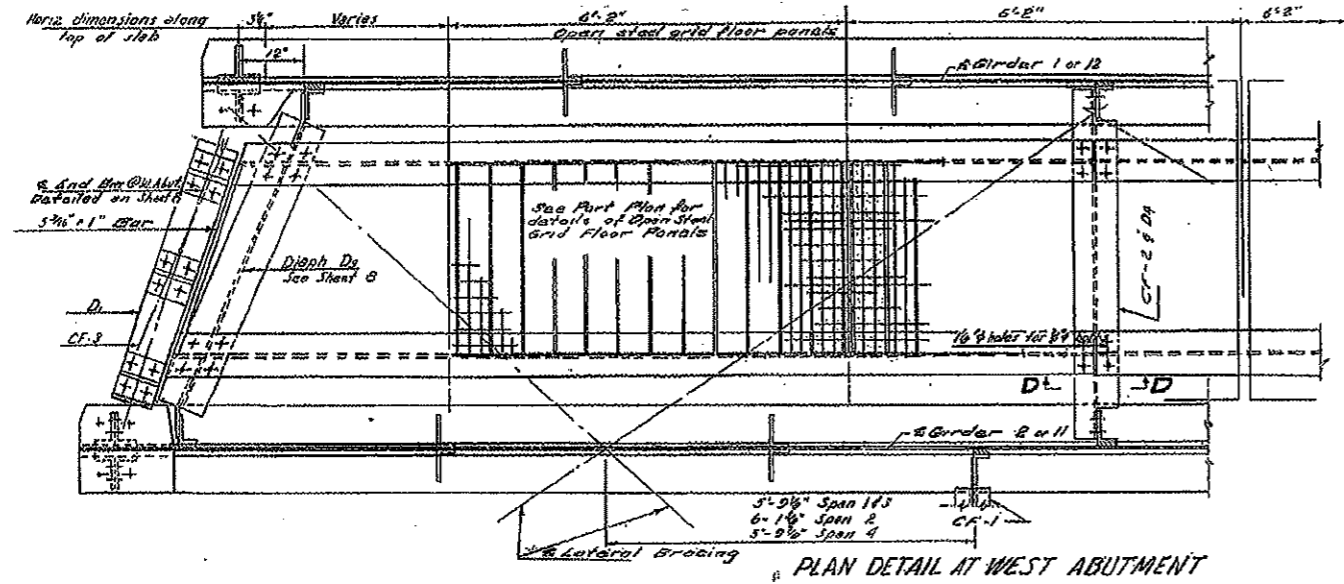
FRAMING PLAN  
I.C.R.R. OVERHEAD  
FA RT. 30 SEC. 14-VB-VF  
CHAMPAIGN COUNTY  
STA. 219+00.55





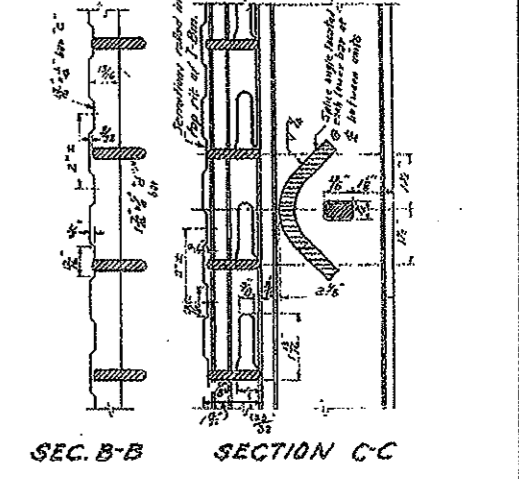
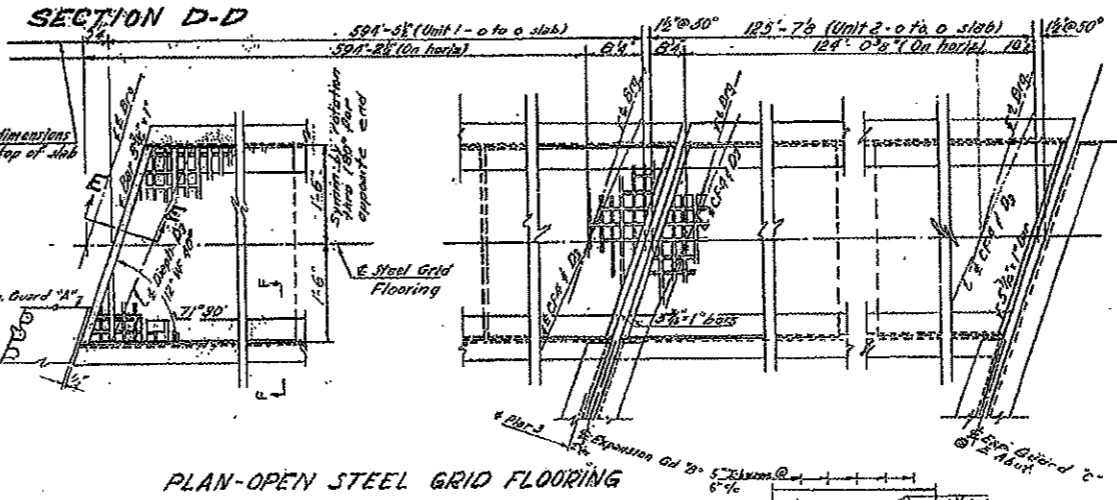
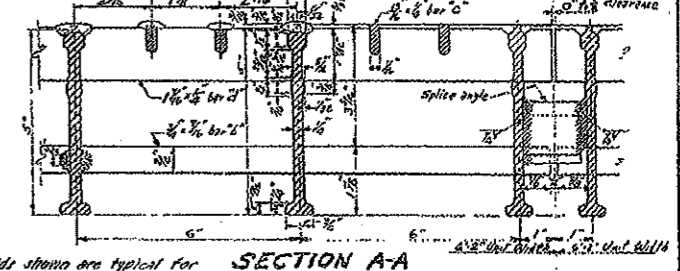
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DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS



**SCHEDULE FOR LATERAL BRACING MEMBERS**  
Positions shown on Framing Plan

Lateral Bracing Members	Quantity	Size
A	4	2L 3L5 x 3 1/2 x 1/2
B	3	1 x 2L 3 1/2 x 3 1/2 x 1/2
C	2	2L 3 1/2 x 3 1/2 x 1/2



Clip 01 base of studs where steel plate hangers interfere  
CF-2 3/4" Gusset Plates for Lateral Bracing  
CF-1

PLAN-OPEN STEEL GRID FLOORING

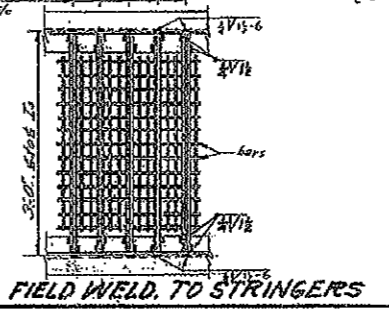
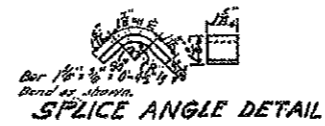
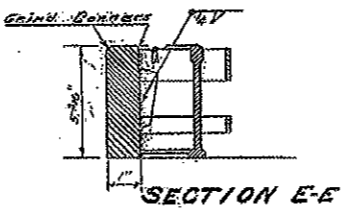
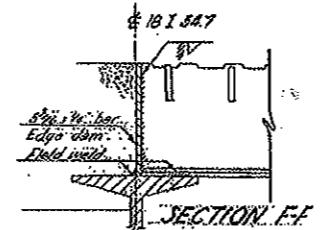
STEEL GRID FLOORING  
LATERAL BRACING

I. C. R.R. OVERHEAD  
F.A. RT. 39 SEC. 14-VB-VF  
CHAMPAIGN COUNTY  
Sta. 219+00.55

DESIGNED: J. V. Nelson  
CHECKED: M. G. Oster  
DRAWN: J. V. Nelson  
CHECKED: M. G. Oster

EXAMINED: J. W. McQuinn  
PASSED: J. W. McQuinn  
APPROVED: B. L. ...

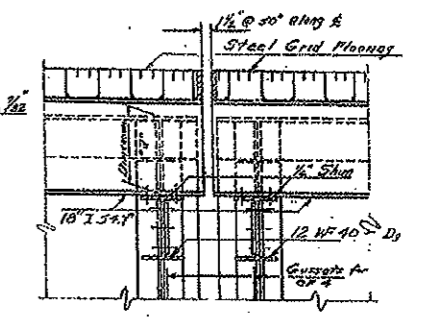
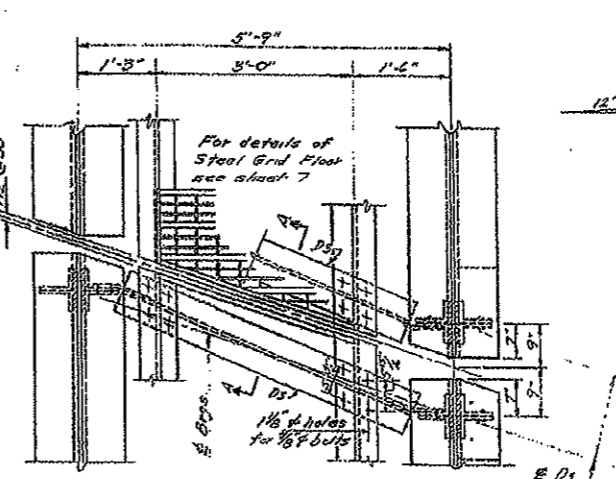
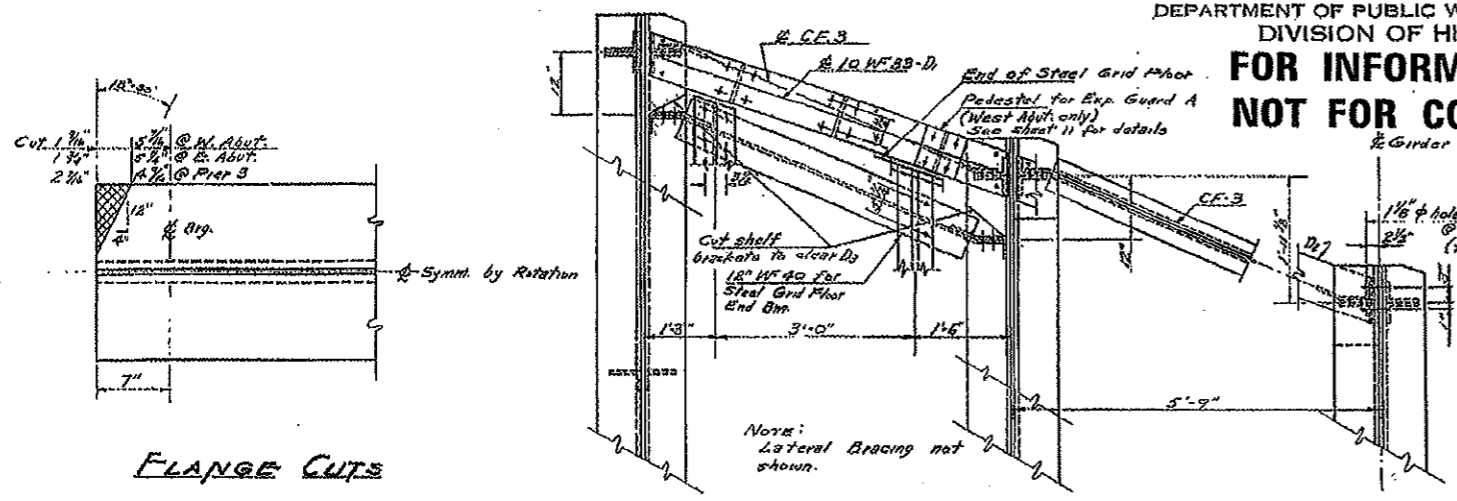
Sept. 23 1951



DATE	BY	REVISION	NO.	DESCRIPTION
11-10-39	V.B.		1	CHAMPAIGN
11-10-39	V.P.		2	

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

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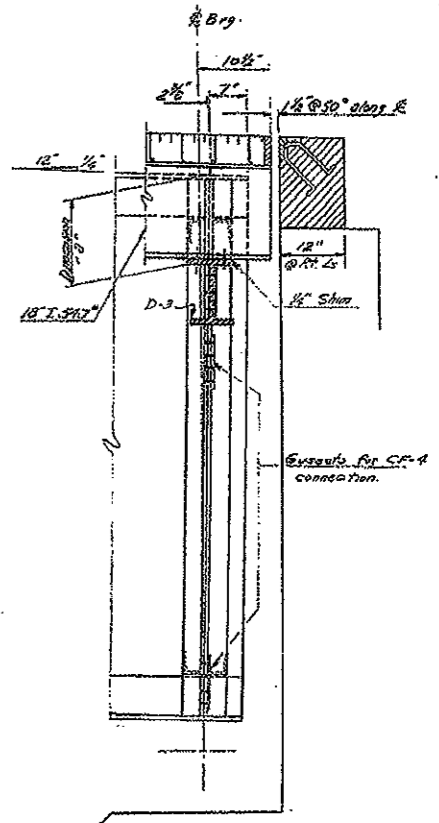
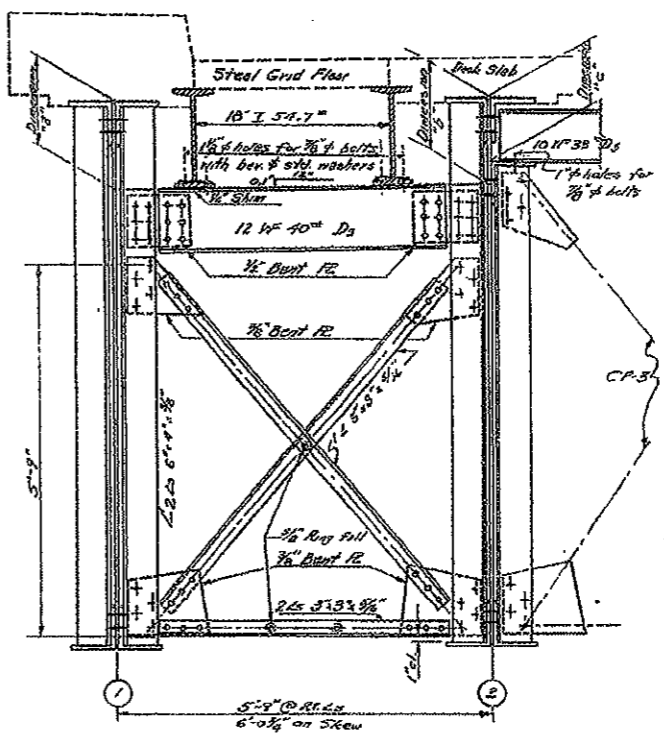
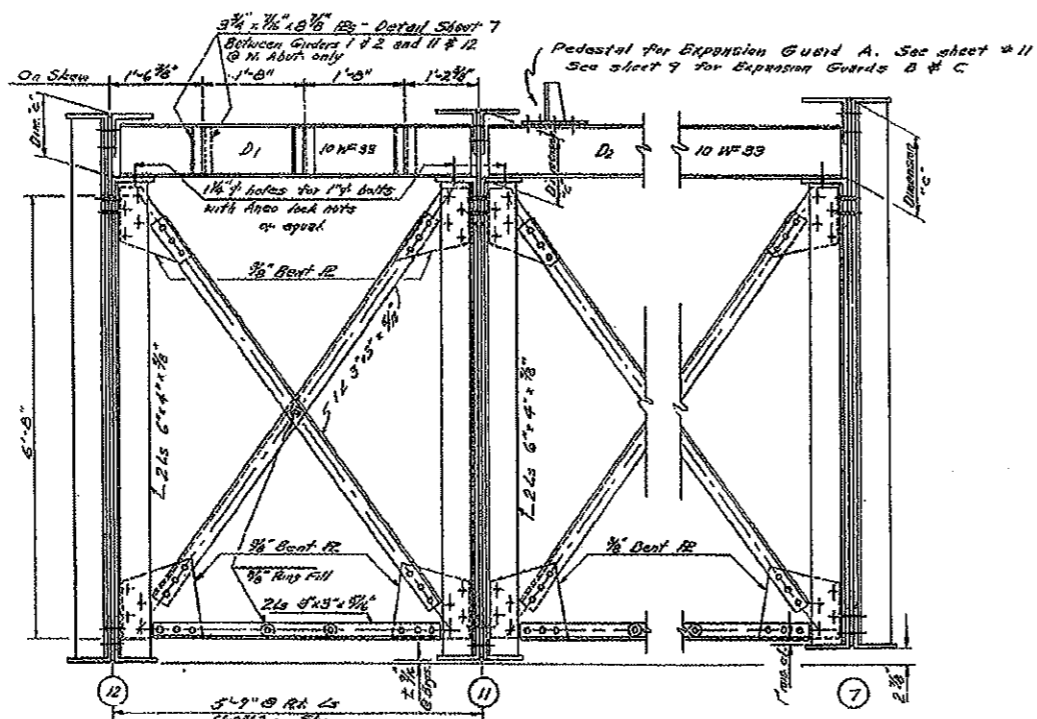
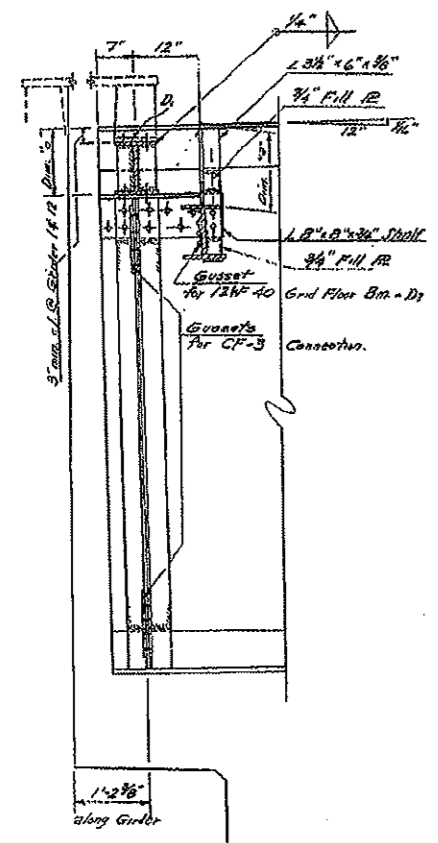


FLANGE CUTS

PLAN VIEW END OF GIRDERS @ W. ABUT.

PLAN - PIER 3  
(Girders 1 & 2)  
(Girders 11 & 12 Similar)

SECTION A-A

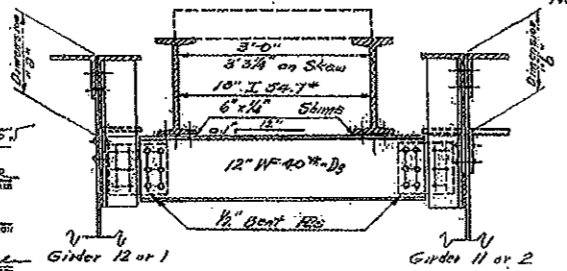


CROSS FRAME CF-3  
Looking West at West Abutment  
Other CF-3 Similar or Restored  
NOTE: D3 similar to D2 without pedestal holes.

CROSS FRAME CF-4

GIRDER #1 @ E. ABUT.

West Abut.  
Girder 1



END BEAM FOR STEEL GRID FLOOR - D3

NOTE: For dimensions "a", "b" & "c" see sheet no. 9

DESIGNED	V. B. R.	EXAMINED	V. M. F.
CHECKED	M. G. R.	PASSED	
DRAWN	V. B. S. L. R.	APPROVED	R. B. C.
CHECKED	M. G. R.		

Sept. 23, 1951

END FRAMING DETAILS  
I.C. R.R. OVERHEAD  
F.A. RT. 39 SEC. 14-VB-VF  
CHAMPAIGN COUNTY  
STATION 219+00.35



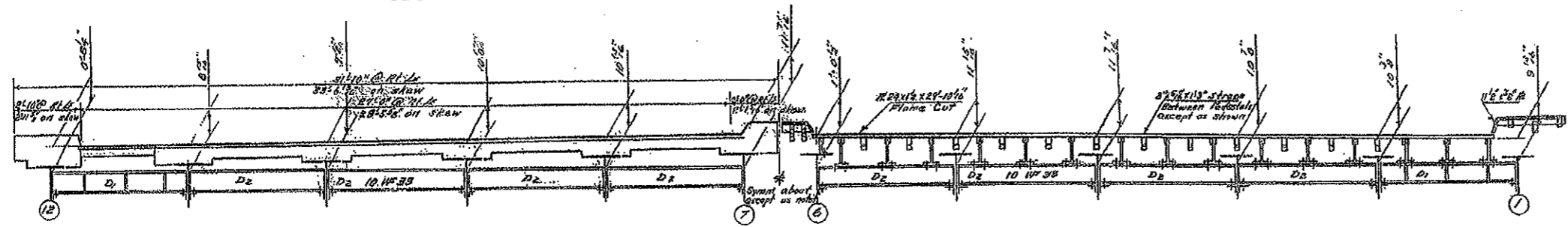
F.A.R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T4	(14-III)	CHAMPAIGN	22	20
CONTRACT NO. T0622				

**FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION**

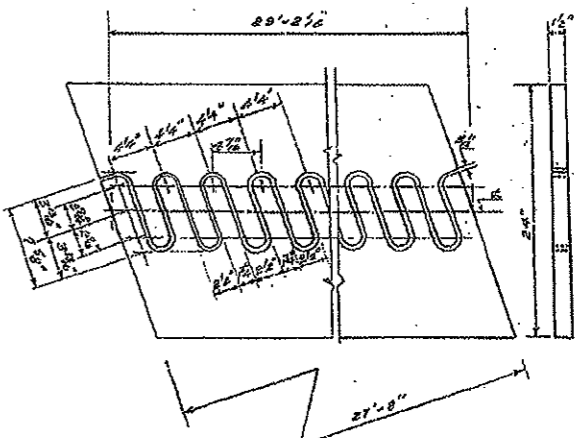
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

DATE	BY	REVISION	NO.	DESCRIPTION
12-1-39	J.C.P.R.	14-VB	20	1st
		14-VF	16	1st

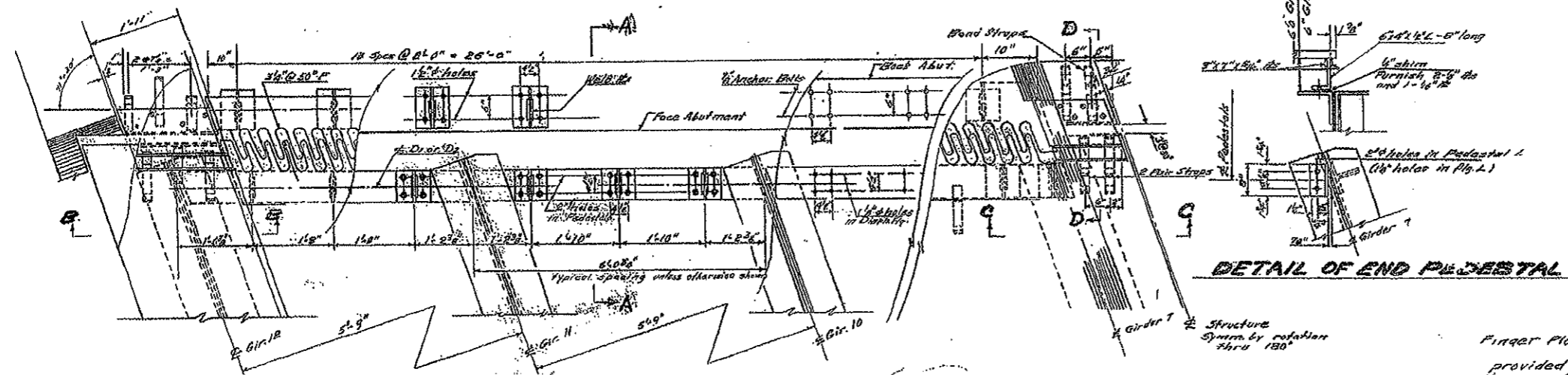
SHEET NO. 11  
16 SHEETS



**HALF ELEVATION OF ROADWAY**  
**HALF ELEVATION OF STEEL FABRICATION**  
**ELEVATION-EXPANSION GUARD-A**  
**WEST ABUTMENT**



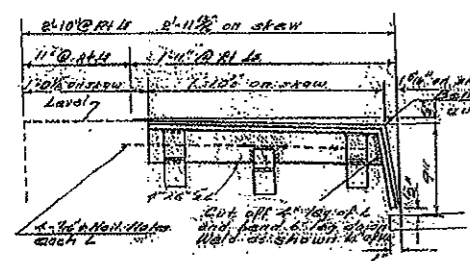
**DETAIL OF FLAME CUT PLATE**  
Match mark after cutting



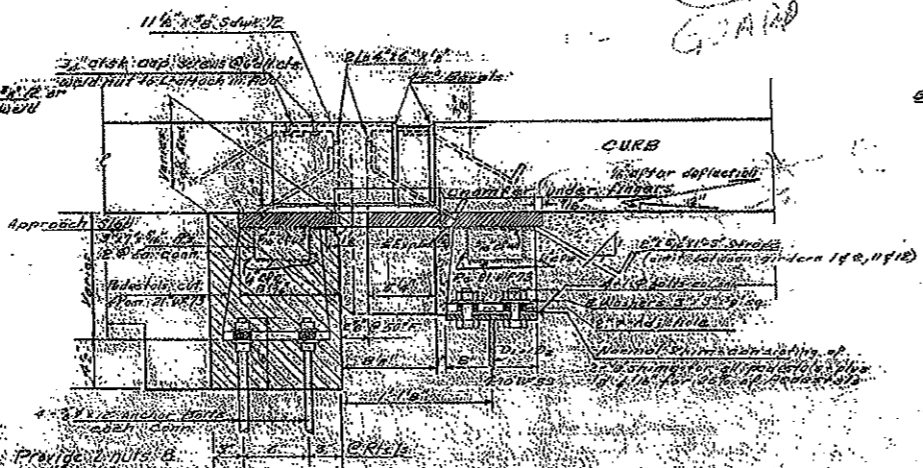
**PLAN-EXPANSION GUARD A**

**NOTES**

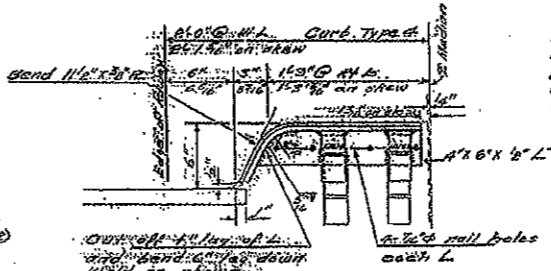
Finger Plates shall be 1" thick provided by Art 85, A(1) of the Std. Specs. The roadway expansion B shall be fabricated and erected to fit the surfaces of the roadway and sidewalks. All welds shall be 5/16" unless otherwise noted. Roadway expansion guards shall be assembled in the shop in proper position and shall be left assembled for shop inspection before painting. Painting shall be done in accordance with Std. Specs. 57, A(2) Expansion Guards, Bolts & Nuts will be paid for at the unit price bid for Structural Steel. The wt. of Expansion Guard A complete for bridge included in the Bill of Material on sheet No. 1 as Structural Steel is 11,300 lbs. Paint surfaces that are inaccessible after erection with two shop coats of red lead paint. Copper bearing steel (ASTM designation A-7 with 0.2% copper added) shall be used in the finger plates, 4" x 6" x 1/2" L's, 5" x 7" x 1/2" L's and the 1 1/2" x 3/8" sidewalk plates.



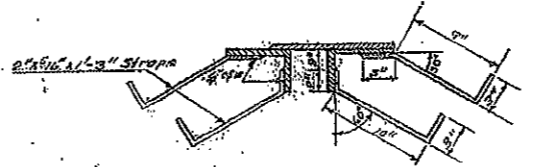
**SEC. B-B**



**SEC. A-A**



**SEC. C-C**



**SEC. D-D**

DESIGNED: J. C. P. R.  
CHECKED: M. G. O'CONNOR  
DRAWN: J. C. P. R.  
CHECKED: M. G. O'CONNOR

EXAMINED: J. C. P. R.  
PASSED: J. C. P. R.  
APPROVED: J. C. P. R.

SEP 23 1939

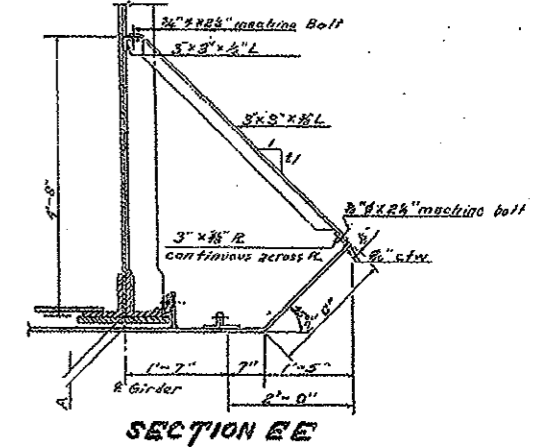
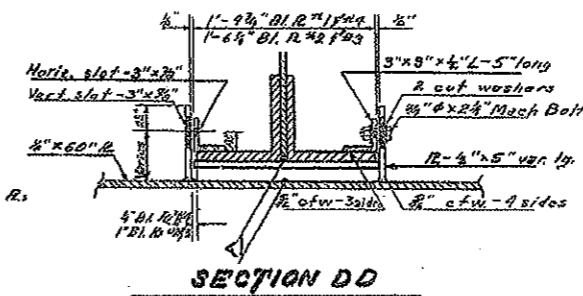
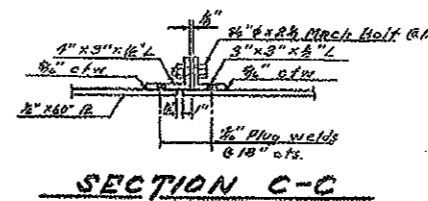
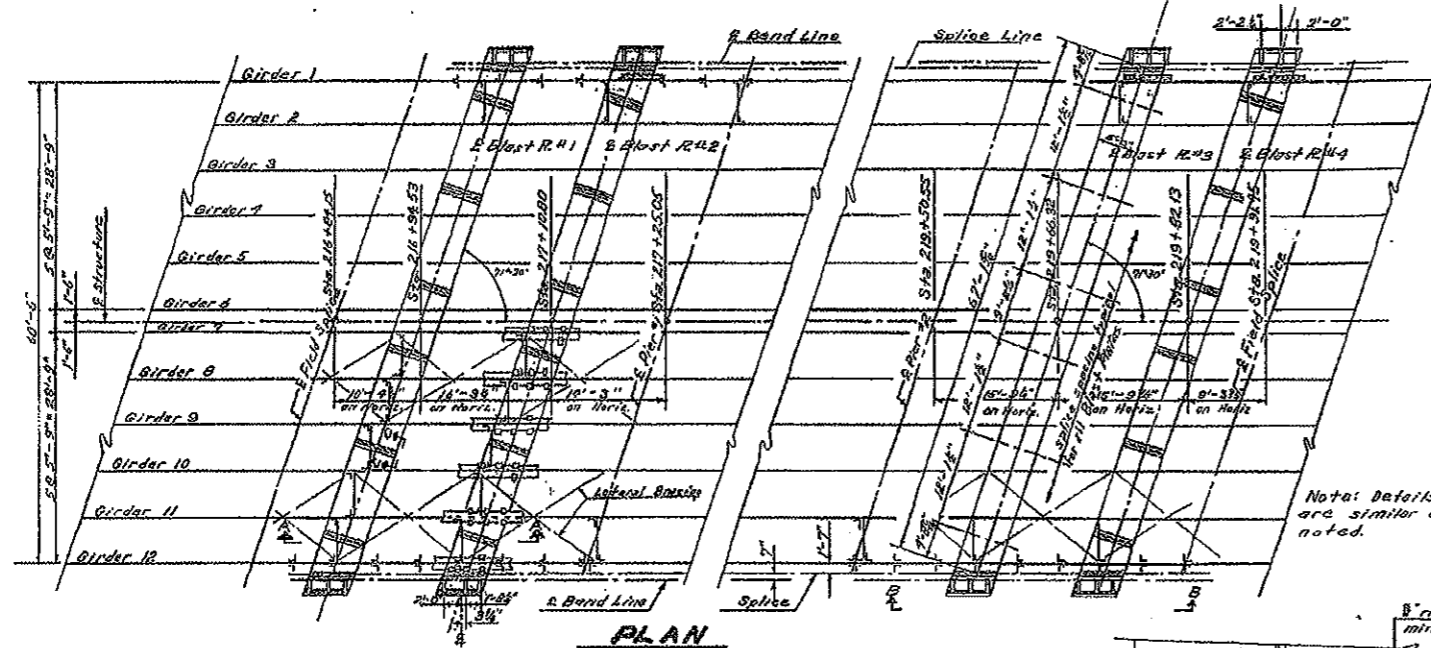
**EXPANSION GUARD A**  
**(WEST ABUTMENT)**  
**J.C.P.R. OVERHEAD**  
**F.A.R.T. 39 SEC. 14VB-VF**  
**CHAMPAIGN COUNTY**  
**STA. 219+00.55**

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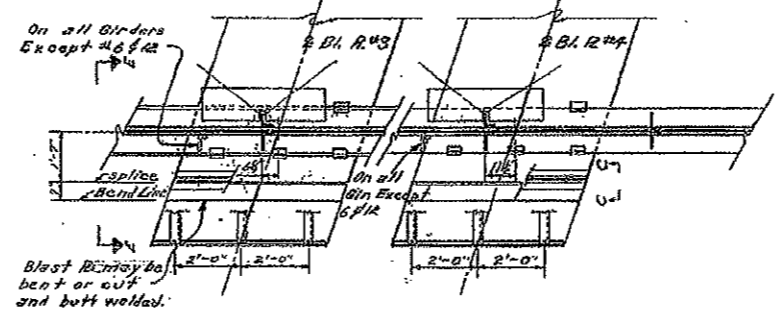
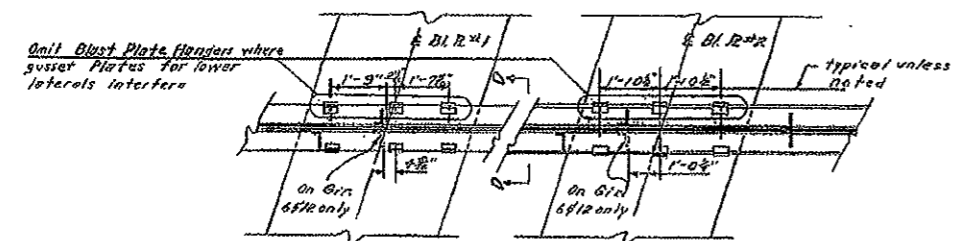
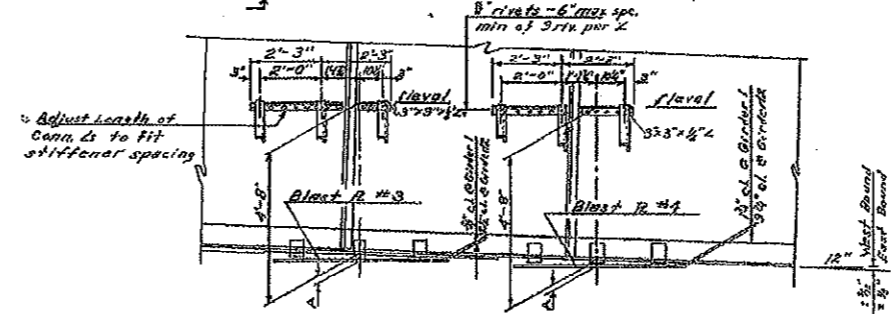
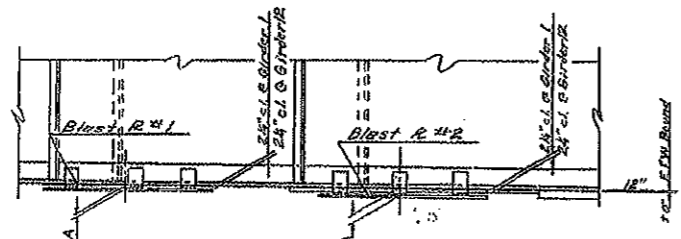
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14-11	14-VF	CHAMPAIGN	20	15
14-11	14-VF	CHAMPAIGN	10	15

SHEET NO. 12  
OF SHEETS 16



Notes: Details for all R's are similar unless noted.



**NOTES**

Blast Plates shall be 1/2" thick and shall conform to ASTM Std. Specification A-7 for structural steel except that 0.2% copper shall be added.

All connection plates, angles, bolts & nuts shall be paid for at the unit price bid for structural steel. The wt. of Blast Plates and accessories which are included in the Bill of Material on Sheet # 4 as structural steel is 37,040 lbs.

All bolts, washers and nuts shall be galvanized.  
Painting shall be the same as for structural steel.  
Blast Plates shall be level.

**CONNECTIONS @ ALL GIRDERS EXCEPT GIRDERS 1 & 12**

**CONNECTIONS @ GIRDER #12**  
Dimensions typical unless noted

**BLAST PLATES**

DESIGNED: *[Signature]*  
CHECKED: *[Signature]*  
DRAWN: *[Signature]*  
CHECKED: *[Signature]*

EXAMINED: *[Signature]*  
APPROVED: *[Signature]*

BLAST PLATE	1	2	3	4	5	6	7	8	9	10	11	12
1	2 1/2"	2 1/2"	3 1/2"	4 1/2"	5 1/2"	5 1/2"	6 1/2"	7 1/2"	8 1/2"	9 1/2"	10 1/2"	11 1/2"
2	2 1/2"	2 1/2"	3 1/2"	4 1/2"	5 1/2"	5 1/2"	6 1/2"	7 1/2"	8 1/2"	9 1/2"	10 1/2"	11 1/2"
3	2 1/2"	2 1/2"	3 1/2"	4 1/2"	5 1/2"	5 1/2"	6 1/2"	7 1/2"	8 1/2"	9 1/2"	10 1/2"	11 1/2"
4	2 1/2"	2 1/2"	3 1/2"	4 1/2"	5 1/2"	5 1/2"	6 1/2"	7 1/2"	8 1/2"	9 1/2"	10 1/2"	11 1/2"

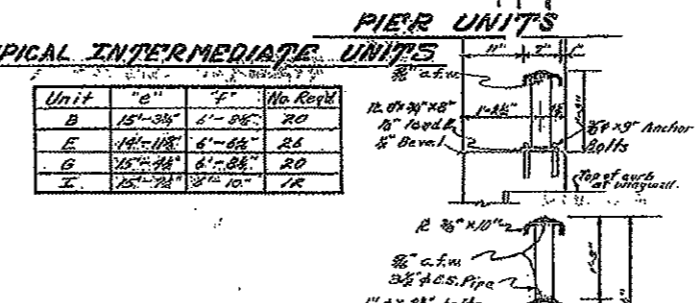
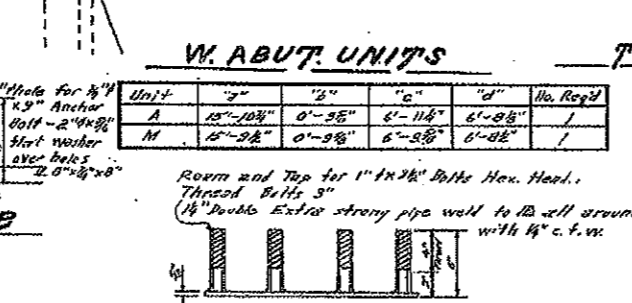
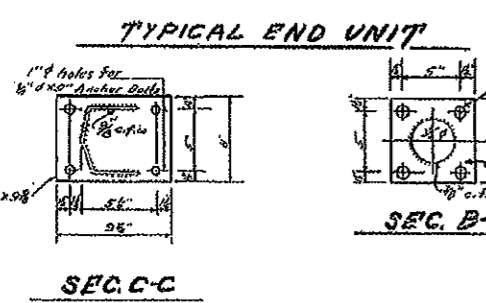
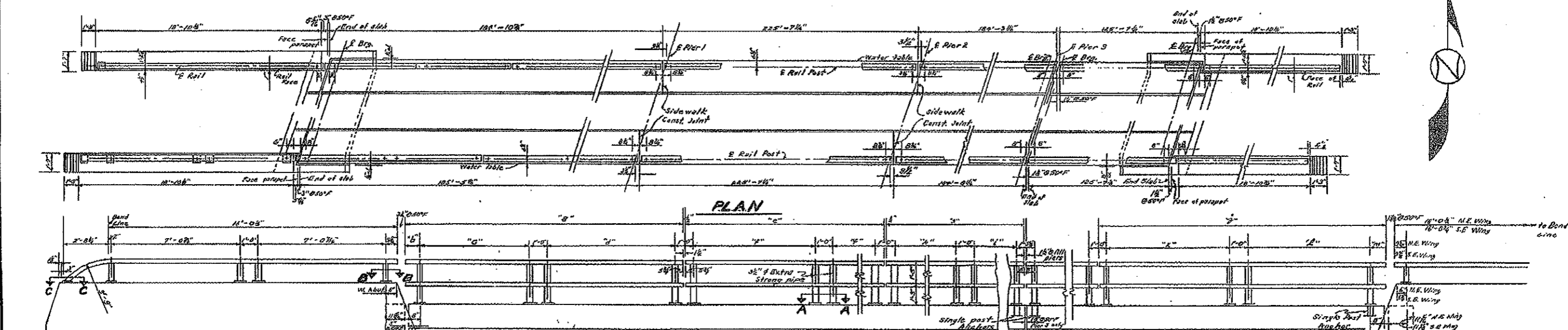
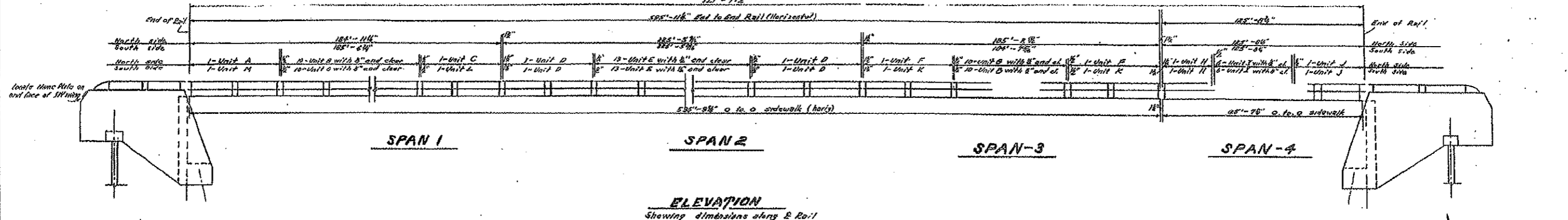
DIMENSIONS "A"  
Dimensions "A" are 4' Interspace of 4 Blast R's and 2 Girders

**I.C.R.R. OVERHEAD  
FA RT. 39 SEC. 14-VF  
CHAMPAIGN COUNTY  
STA. 218+00.55**

**FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION**

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

PIER NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14-VB 14-VF	CHAMPAIGN		20 16	18 16
SHEET NO. 13 16 SHEETS				



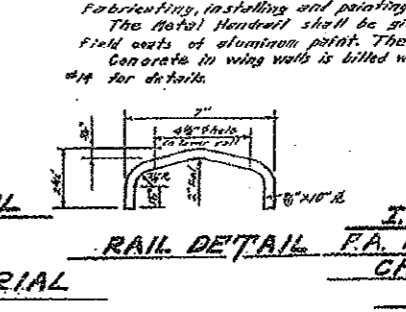
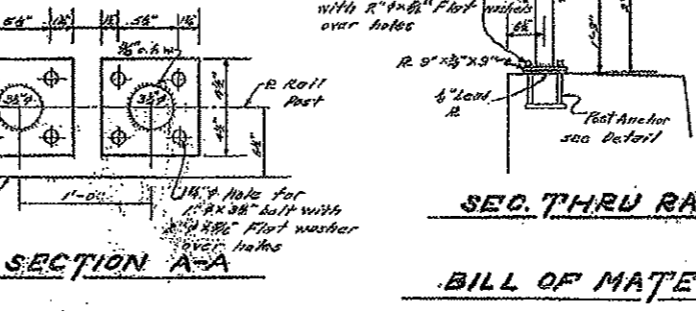
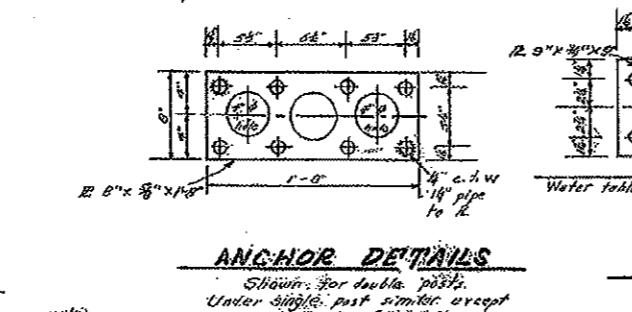
**PIER UNITS**

Unit	"a"	"b"	"c"	No. Reqd.
C	15'-6"	6'-8"	6'-8"	1
D	15'-10"	6'-6"	6'-5 1/2"	1
F	15'-6 1/2"	6'-8"	6'-7 1/2"	2
H	15'-9 1/2"	6'-10"	6'-10"	2
K	15'-6 1/2"	6'-8 1/2"	6'-8 1/2"	2
L	15'-6 1/2"	6'-8"	6'-8"	1

**E. ABUT. UNITS**

Unit	"a"	"b"	"c"	"d"	No. Reqd.
J	15'-10 1/2"	6'-10"	6'-9 1/2"	9 1/2"	2

DESIGNED: *H.M. Chen*  
CHECKED: *J.R. ...*  
DRAWN: *H.M. Chen*  
STUDY: *STUDY*  
EXAMINED: *V.M. ...*  
APPROVED: *R.L. ...*



**NOTES**

wing walls  
The Contract Unit Price for Metal Handrail shall include furnishing, fabricating, installing and painting all pipes, plates, anchors and head plates. The Metal Handrail shall be given one shop coat of red lead paint and two field coats of aluminum paint. The Rail Post anchors shall not be painted. Concrete in wing walls is filled with Abutment as Handrail Concrete. See sheet #14 for details.

**HANDRAIL**  
I.C.R.R. OVERHEAD  
F.A. RT. 39 SEC. 14-VB-VF  
CHAMPAIGN COUNTY  
STA. 210+00.55

ABV	ABOVE	D	DEGREE OF CURVE	INST	INSTALLATION	RR	RAILROAD	T	TANGENT DISTANCE
A/C	ACCESS CONTROL	DC	DEPRESSED CURVE	IDS	INTERSECTION DESIGN STUDY	RRS	RAILROAD SPIKE	T. R.	TANGENT RUNOUT DISTANCE
AC	ACRE	DET	DETECTOR	INV	INVERT	RPS	REFERENCE POINT STAKE	TEL	TELEPHONE
ADJ	ADJUST	DIA	DIAMETER	IP	IRON PIPE	REF	REFLECTIVE	TB	TELEPHONE BOX
AS	AERIAL SURVEYS	DIST	DISTRICT	IR	IRON ROD	RCCP	REINFORCED CONCRETE	TP	TELEPHONE POLE
AGG	AGGREGATE	DOM	DOMESTIC	JT	JOINT	REINF	REINFORCEMENT	TEMP	TEMPORARY
AH	AHEAD	DBL	DOUBLE	kg	KILOGRAM	REM	REMOVAL	TBM	TEMPORARY BENCH MARK
APT	APARTMENT	DSEL	DOWNSTREAM ELEVATION	km	KILOMETER	RC	REMOVE CROWN	TD	TILE DRAIN
ASPH	ASPHALT	DSFL	DOWNSTREAM FLOWLINE	LS	LANDSCAPING	REP	REPLACEMENT	TBE	TO BE EXTENDED
AUX	AUXILIARY	DR	DRAINAGE OR DRIVE	LN	LANE	REST	RESTAURANT	TBR	TO BE REMOVED
AGS	AUXILIARY GAS VALVE (SERVICE)	DI	DRAINAGE INLET OR DROP INLET	LT	LEFT	RESURF	RESURFACING	TBS	TO BE SAVED
AVE	AVENUE	DRV	DRIVEWAY	LP	LIGHT POLE	RET	RETAINING	TWP	TOWNSHIP
AX	AXIS OF ROTATION	DCT	DUCT	LGT	LIGHTING	RT	RIGHT	TR	TOWNSHIP ROAD
BK	BACK	EA	EACH	LF	LINEAL FEET OR LINEAR FEET	ROW	RIGHT-OF-WAY	TS	TRAFFIC SIGNAL
B-B	BACK TO BACK	EB	EASTBOUND	L	LITER OR CURVE LENGTH	RD	ROAD	TSCB	TRAFFIC SIGNAL CONTROL BOX
BKPL	BACKPLATE	EOP	EDGE OF PAVEMENT	LC	LONG CHORD	RDWY	ROADWAY	TSC	TRAFFIC SYSTEMS CENTER
B	BARN	E-CL	EDGE TO CENTERLINE	LNG	LONGITUDINAL	RTE	ROUTE	TRVS	TRANSVERSE
BARR	BARRICADE	E-E	EDGE TO EDGE	L SUM	LUMP SUM	SAN	SANITARY	TRVL	TRAVEL
BGN	BEGIN	EL	ELEVATION	MACH	MACHINE	SANS	SANITARY SEWER	TRN	TURN
BM	BENCHMARK	ENTR	ENTRANCE	MB	MAIL BOX	SEC	SECTION	TY	TYPE
BIND	BINDER	EXC	EXCAVATION	MH	MANHOLE	SEED	SEEDING	T-A	TYPE A
BIT	BITUMINOUS	EX	EXISTING	MATL	MATERIAL	SHAP	SHAPING	TYP	TYPICAL
BTM	BOTTOM	EXPWAY	EXPRESSWAY	MED	MEDIAN	S	SHED	UNDGND	UNDERGROUND
BLVD	BOULEVARD	E	EXTERNAL DISTANCE OF HORIZONTAL CURVE	m	METER	SH	SHEET	USGS	U. S. GEOLOGICAL SURVEY
BRK	BRICK	E	OFFSET DISTANCE TO VERTICAL CURVE	METH	METHOD	SHLD	SHOULDER	USEL	UPSTREAM ELEVATION
BBOX	BUFFALO BOX	F-F	FACE TO FACE	M	MID-ORDINATE	SW	SIDEWALK OR SOUTHWEST	USFL	UPSTREAM FLOWLINE
BLDG	BUILDING	FA	FEDERAL AID	mm	MILLIMETER	SIG	SIGNAL	UTIL	UTILITY
CIP	CAST IRON PIPE	FAI	FEDERAL AID INTERSTATE	mm DIA	MILLIMETER DIAMETER	SOD	SODDING	VBOX	VALVE BOX
CB	CATCH BASIN	FAP	FEDERAL AID PRIMARY	MIX	MIXTURE	SM	SOLID MEDIAN	VV	VALVE VAULT
C-C	CENTER TO CENTER	FAS	FEDERAL AID SECONDARY	MBH	MOBILE HOME	SB	SOUTHBOUND	VLT	VAULT
CL	CENTERLINE OR CLEARANCE	FAUS	FEDERAL AID URBAN SECONDARY	MOD	MODIFIED	SE	SOUTHEAST	VEH	VEHICLE
CL-E	CENTERLINE TO EDGE	FP	FENCE POST	MFT	MOTOR FUEL TAX	SPL	SPECIAL	VP	VENT PIPE
CL-F	CENTERLINE TO FACE	FE	FIELD ENTRANCE	N & BC	NAIL & BOTTLE CAP	SD	SPECIAL DITCH	VERT	VERTICAL
CTS	CENTERS	FH	FIRE HYDRANT	N & C	NAIL & CAP	SO FT	SQUARE FEET	VC	VERTICAL CURVE
CERT	CERTIFIED	FL	FLOW LINE	N & W	NAIL & WASHER	m <sup>2</sup>	SQUARE METER	VPC	VERTICAL POINT OF CURVATURE
CHSLD	CHISELED	FB	FOOT BRIDGE	NOAA	NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION	mm <sup>2</sup>	SQUARE MILLIMETER	VPI	VERTICAL POINT OF INTERSECTION
CS	CITY STREET	FDN	FOUNDATION	NC	NORMAL CROWN	SO YD	SQUARE YARD	VPT	VERTICAL POINT OF TANGENCY
CP	CLAY PIPE	FR	FRAME	NB	NORTHBOUND	STB	STABILIZED	WM	WATER METER
CLSD	CLOSED	F&G	FRAME & GRATE	NE	NORTHEAST	STD	STANDARD	WV	WATER VALVE
CLID	CLOSED LID	FRWAY	FREEWAY	NW	NORTHWEST	SBI	STATE BOND ISSUE	WMAIN	WATER MAIN
CT	COAT OR COURT	GAL	GALLON	OLID	OPEN LID	SR	STATE ROUTE	WB	WESTBOUND
COMB	COMBINATION	GALV	GALVANIZED	PAT	PATTERN	STA	STATION	WILDFL	WILDFLOWERS
C	COMMERCIAL BUILDING	G	GARAGE	PVD	PAVED	SPBGR	STEEL PLATE BEAM GUARDRAIL	W	WITH
CE	COMMERCIAL ENTRANCE	GM	GAS METER	PVMT	PAVEMENT	SS	STORM SEWER	WO	WITHOUT
CONC	CONCRETE	GV	GAS VALVE	PM	PAVEMENT MARKING	STY	STORY		
CONST	CONSTRUCT	GRAN	GRANULAR	PED	PEDESTAL	ST	STREET		
CONTD	CONTINUED	GR	GRATE	PNT	POINT	STR	STRUCTURE		
CONT	CONTINUOUS	GRVL	GRAVEL	PC	POINT OF CURVATURE	e	SUPERELEVATION RATE		
COR	CORNER	GND	GROUND	PI	POINT OF INTERSECTION OF HORIZONTAL CURVE	S. E. RUN.	SUPERELEVATION RUNOFF LENGTH		
CORR	CORRUGATED	GUT	GUTTER	PRC	POINT OF REVERSE CURVE	SURF	SURFACE		
CMP	CORRUGATED METAL PIPE	GP	GUY POLE	PT	POINT OF TANGENCY	SMK	SURVEY MARKER		
CNTY	COUNTY	GW	GUY WIRE	POT	POINT ON TANGENT				
CH	COUNTY HIGHWAY	HH	HANDHOLE	POLYETH	POLYETHYLENE				
CSE	COURSE	HATCH	HATCHING	PCC	PORTLAND CEMENT CONCRETE				
XSECT	CROSS SECTION	HD	HEAD	PP	POWER POLE OR PRINCIPAL POINT				
m <sup>3</sup>	CUBIC METER	HDW	HEADWALL	PRM	PRIME				
mm <sup>3</sup>	CUBIC MILLIMETER	HDUTY	HEAVY DUTY	PE	PRIVATE ENTRANCE				
CU YD	CUBIC YARD	ha	HECTARE	PROF	PROFILE				
CULV	CULVERT	HWY	HIGHWAY	PGL	PROFILE GRADELINE				
C&G	CURB & GUTTER	HORIZ	HORIZONTAL	PROJ	PROJECT				
		HSE	HOUSE	P. C.	PROPERTY CORNER				
		IL	ILLINOIS	PL	PROPERTY LINE				
		IMP	IMPROVEMENT	PR	PROPOSED				
		IN DIA	INCH DIAMETER	R	RADIUS				
		INL	INLET						

DATE	REVISIONS
1-1-02	Updated abbreviations and symbols.
1-1-00	Revised abbreviations.

**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**  
(Sheet 1 of 8)  
**STANDARD 00001-04**

Illinois Department of Transportation

PASSED January 1, 2002  
*Ryan D. Smith*  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2002  
*Michael L. Hine*  
ENGINEER OF DESIGN AND ENVIRONMENT

AS-1-1 CERTSST





**EROSION & SEDIMENT CONTROL ITEMS**

**EX**

**PR**

Cleaning & Grading Limits



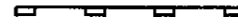
Dike



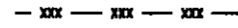
Erosion Control Fence



Perimeter Erosion Barrier



Temporary Fence



Ditch Check Temporary



Ditch Check Permanent



Inlet & Pipe Protection



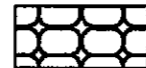
Sediment Basin



Erosion Control Blanket



Fabric Formed Concrete Revetment Mat



Turf Reinforcement Mat



Mulch Temporary



Mulch Method 1



Mulch Method 2 Stabilized



Mulch Method 3 Hydraulic

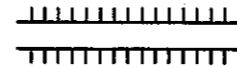


**EXISTING IMPROVEMENT ITEMS**

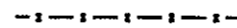
**EX**

**PR**

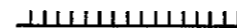
Noise Attn./Levee



Fence



Base of Levee



Mailbox



Pay Telephone



Advertising Sign



**LANDSCAPING ITEMS**

**EX**

**PR**

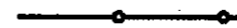
Contour Mounding Line



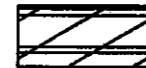
Shrubs



Mowline



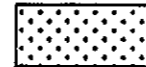
Perennial Plants



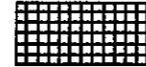
Seeding Class 2



Seeding Class 2A



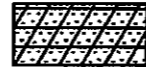
Seeding Class 3



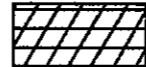
Seeding Class 4



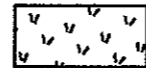
Seeding Class 4 & 5 Combined



Seeding Class 5



Seeding Class 7

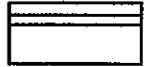


**EXISTING LANDSCAPING ITEMS (cont.)**

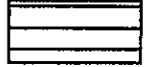
**EX**

**PR**

Seedlings Type 1



Seedlings Type 2



Sodding



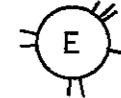
Mowstake w/Sign



Tree Trunk Protection



Evergreen Tree



Shade Tree



**LIGHTING**

**EX**

**PR**

Cable In Duct w/o Ground



Conduit w/Ground



Electrical Aerial Cable



Electrical Buried Cable



Controller



Underpass Luminaire



Power Pole



Pull Point



**STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS**

(Sheet 3 of 8)

**STANDARD 000001-04**

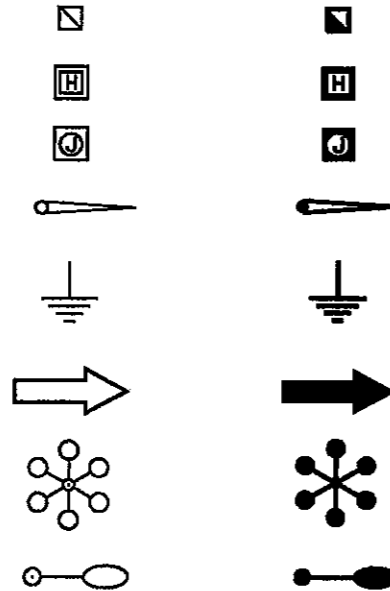
Illinois Department of Transportation  
 PASSED January 1, 2002  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2002  
 ENGINEER OF DESIGN AND ENVIRONMENT

**LIGHTING  
( cont. )**

- Handhole
- Heavy Duty Handhole
- Junction Box
- Light Unit Comb.
- Electrical Ground
- Traffic Flow Arrow
- High Mast Pole
- Light Unit-1

**EX**

**PR**

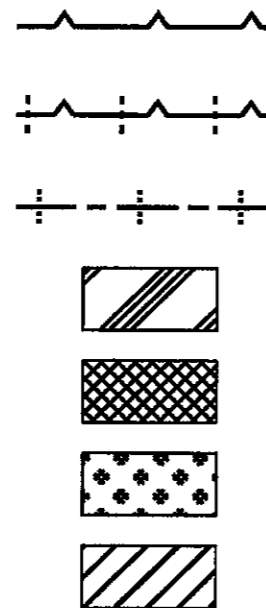


**PAVEMENT ( MISC. )**

- Keyed Long. Joint
- Keyed Long. Joint w/Tie Bars
- Sawed Long. Joint w/Tie Bars
- Bituminous Shoulder
- Bituminous Taper
- Stabilized Driveway
- Widening

**EX**

**PR**

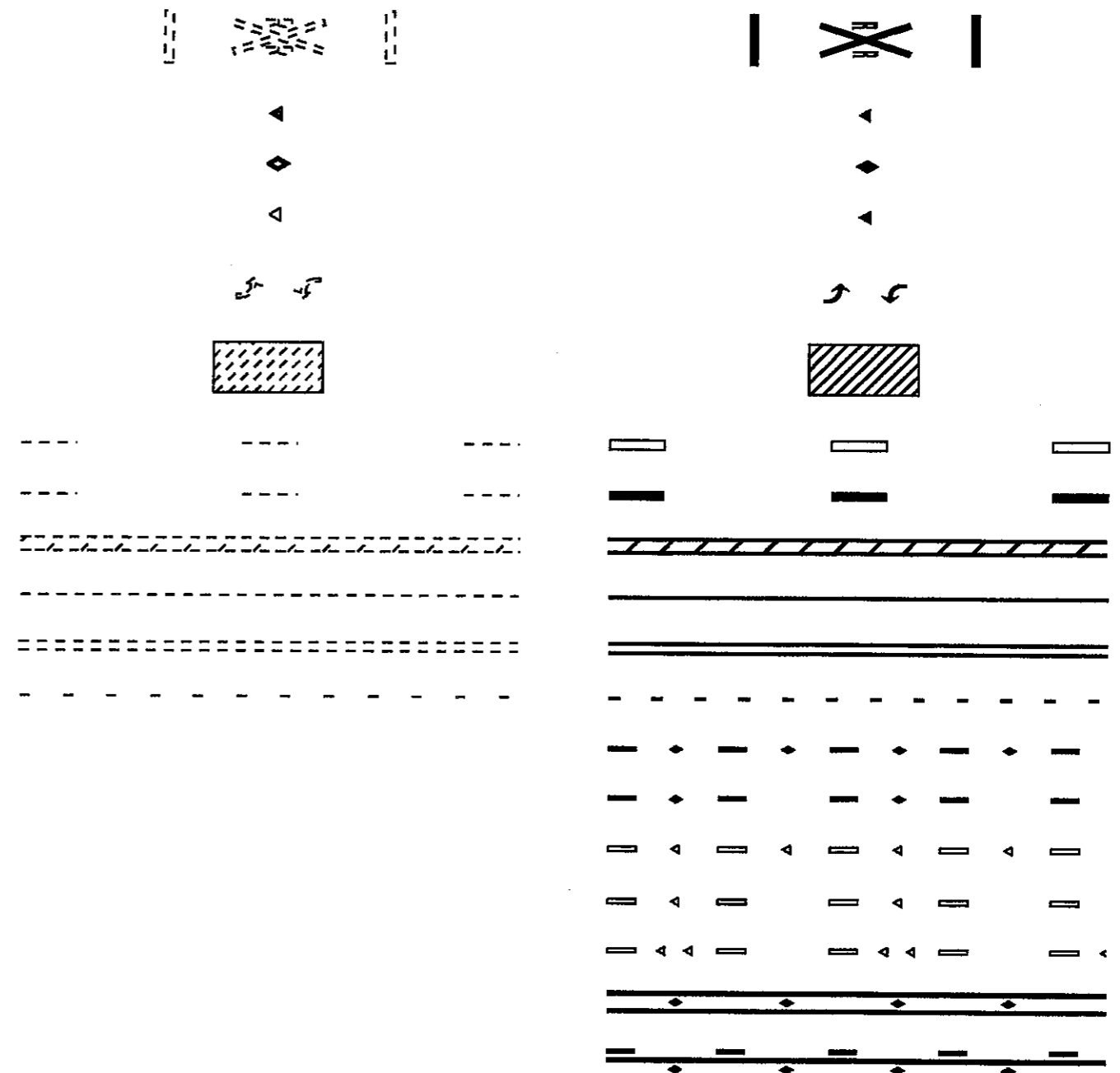


**PAVEMENT MARKINGS**

- RR Crossing
- Raised Marker Amber 1 Way
- Raised Marker Amber 2 Way
- Raised Marker Crystal 1 Way
- Two Way Turn Left
- Shoulder Diag. Pattern
- Skip-Dash White
- Skip-Dash Yellow
- Stop Line
- Solid Line
- Double Centerline
- Dotted Lines
- CL 2Ln 2Way  
RRPM 12.2 m (40') o.c.
- CL 2Ln 2Way  
RRPM 24.4 m (80') o.c.
- CL Multilane Div.  
RRPM 12.2 m (40') o.c.
- CL Multilane Div.  
RRPM 24.4 m (80') o.c.
- CL Multilane Div. Dbl.  
RRPM 24.4 m (80') o.c.
- CL Multilane Undiv.
- Two Way Turn Left Line

**EX**

**PR**



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APPROVED January 1, 2002

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**

(Sheet 4 of 8)

**STANDARD 000001-04**

**PAVEMENT MARKINGS  
( cont. )**

		<b>EX</b>		<b>PR</b>	
Urban Combination Left Only			ONLY		
Urban Combination Right Only			ONLY		
Urban Left Turn Arrow					
Urban Right Turn Arrow					
Urban Left Turn Only			ONLY		
Urban Right Turn Only			ONLY		
Urban Thru Only			ONLY		
Rural Combination Left Only			ONLY		
Rural Combination Right Only			ONLY		
Rural Left Turn Arrow					
Rural Right Turn Arrow					
Rural Left Turn Only			ONLY		
Rural Right Turn Only			ONLY		
Rural Thru Only			ONLY		

**RAILROAD ITEMS**

	<b>EX</b>	<b>PR</b>
Abandoned Railroad		
Railroad		
Railroad Point		
Control Box		
Crossing Gate		
Flashing Signal		
Railroad Cant. Mast Arm		
Crossbuck		

**REMOVAL ITEMS**

	<b>EX</b>	<b>PR</b>
Removal Tic		
Bituminous Removal		
Hatch Pattern		

**RIGHT OF WAY  
ITEMS**

	<b>EX</b>	<b>PR</b>
Future ROW Corner Monument		
ROW Marker		
ROW Line		
Easement		
Temporary Easement		

Illinois Department of Transportation

PASSED January 1, 2002

*Roger Danzell*  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2002

*Michael S. Vane*  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**  
(Sheet 5 of 8)

**STANDARD 000001-04**

**ROADWAY PLAN ITEMS**

	EX	PR
Edge of Pavement		
Bit Shoulders, Medians and C&G Line		
Aggregate Shoulder		
Sidewalks, Driveways		
Guardrail		
Guardrail Post		
Traffic Sign		
Corrugated Median		

**ROADWAY PROFILES**

	EX	PR
Profile Line		
P.I. Indicator		
Point Indicator		
Earthworks Balance Point		
Begin Point		
Vert. Curve Data	VPI = ELEV = L = E =	VPI = ELEV = L = E =

**SIGNING ITEMS**

	EX	PR
Barricade Type 1 or 2		
Barricade Type II		

**SIGNING ITEMS (cont.)**

	EX	PR
Barricade Type III		
Barricade With Edge Line		
Flashing Light Sign		
Panels I		
Panels II		
Sign Flag		
Direction of Traffic		
Detour M4-10L-(0)		
Detour M4-10R-(0)		
One Way Left R6-1L		
One Way Right R6-1R		
One Way Arrow Lrg. W1-6-(0)		
Two Way Arrow Large W1-7-(0)		
Reverse Left W1-4L		
Reverse Right W1-4R		
Two Way Traffic Sign W6-3		

**SIGNING ITEMS (cont.)**

	EX	PR
Detour Ahead W20-2		
Left Lane Closed Ahead		
Road Closed Ahead W20-R-(0)		
Road Closed Ahead W20-3-(0)		
Road Construction Ahead W20-1-(0)		
Single Lane Ahead		
Transition Left W4-2L		
Transition Right W4-2R		

Illinois Department of Transportation

PASSED January 1, 2002

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APPROVED January 1, 2002

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ISSUED 1-1-97

**STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS**

(Sheet 6 of 8)

**STANDARD 000001-04**

**SIGNING ITEMS**  
( cont. )

**EX**

**PR**

Left Turn Lane R3-I100L



Keep Left R4-7AL



Keep Left R4-7BL



Keep Right R4-7AR



Keep Right R4-7BR



Stop Here On Red R10-6-AL



Stop Here On Red R10-6-AR



No Left Turn R3-2



No Right Turn R3-1



Road Closed R11-2



Road Closed Thru Traffic R11-2



**TRAFFIC SHEET**  
**ITEMS**

**EX**

**PR**

Cable Number



Left Turn Green



Left Turn Yellow



Signal Backplate



Signal Section 200 mm (8")



Signal Section 300 mm (12")



Walk/Don't Walk Letters



Walk/Don't Walk Symbols



**TRAFFIC SIGNAL**  
**ITEMS**

**EX**

**PR**

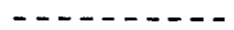
Galv. Steel Conduit



Underground Cable



Detector Loop Line



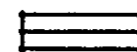
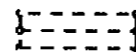
Detector Loop Large



Detector Loop Small



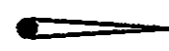
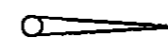
Detector Loop Quadrapole



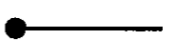
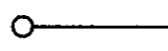
Detector Raceway



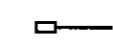
Aluminum Mast Arm



Steel Mast Arm



Veh. Detector Magnetic



**TRAFFIC SIGNAL**  
**ITEMS ( cont. )**

**EX**

**PR**

Conduit Splice



Controller



Gulfbbox Junction



Wood Pole



Temp. Signal Head



Handhole



Heavy Duty Handhole



Junction Box



Ped. Pushbutton Detector



Ped. Signal Head



Power Pole Service



Priority Veh. Detector



Signal Head



Signal Head w/Backplate



Signal Post

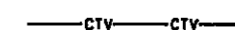


**UNDERGROUND**  
**UTILITY ITEMS**

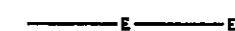
**EX**

**PR**

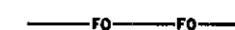
Cable TV



Electric Cable



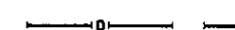
Fiber Optic



Gas Pipe



Oil Pipe



Pipe Underdrain



**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**  
(Sheet 7 of 8)

**STANDARD 000001-04**

Illinois Department of Transportation

PASSED January 1, 2002

APPROVED January 1, 2002

ISSUED 1-1-97

**UNDERGROUND  
UTILITY ITEMS  
( cont. )**

	<b>EX</b>	<b>PR</b>
Sanitary Sewer		
Storm Sewer		
Telephone Cable		
Water Pipe		

**UTILITIES ITEMS**

	<b>EX</b>	<b>PR</b>
Controller		
Double Handhole		
Fire Hydrant		
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Pole		
Manhole		
Power Pole		
Splice Box Above Ground		
Telephone Splice Box Above Ground		
Telephone Pole		
Traffic Signal		
Water Meter Valve Box		

**VEGETATION ITEMS**

	<b>EX</b>	<b>PR</b>
Deciduous Tree		
Bush		
Evergreen Tree		
Stump		
Vegetation Line		
Woods & Bush Line		

**WATER FEATURE  
ITEMS**

	<b>EX</b>	<b>PR</b>
Stream or Drainage Ditch		
Waters Edge		
Water Surface Indicator		
Water Point		
Disappearing Ditch		
Marsh		

Illinois Department of Transportation

PASSED January 1, 2002  
*Ryan Danks*  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2002  
*Michael Hill*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**  
 (Sheet 8 of 8)

**STANDARD 000001-04**

DECIMAL OF AN INCH AND OF A FOOT

A		B	A		B	A		B	A		B	A		B	A		B
1/64	0.0052	1/16	11/64	0.171875	2/16	11/32	0.3385	4/16	33/64	0.5052	6/16	43/64	0.671875	8/16	27/32	0.8385	10/16
	0.0104	1/8		0.1771	2/8		0.34375	4/8		0.5104	6/8		0.6771	8/8		0.84375	10/8
	0.015625	3/16		0.1823	23/16		0.3490	43/16		0.515625	63/16		0.6823	83/16		0.8490	103/16
	0.0208	1/4		0.1875	21/4		0.3542	41/4		0.5208	61/4		0.6875	81/4		0.8542	101/4
1/32	0.0260	5/16	13/64	0.1927	25/16	23/64	0.359375	45/16	17/32	0.5260	65/16	45/64	0.6927	85/16	55/64	0.859375	105/16
	0.03125	3/8		0.1979	23/8		0.3646	43/8		0.53125	63/8		0.6979	83/8		0.8646	103/8
	0.0365	7/16		0.203125	27/16		0.3698	47/16		0.5365	67/16		0.703125	87/16		0.8698	107/16
	0.0417	1/2		0.2083	21/2		0.3750	41/2		0.5417	61/2		0.7083	81/2		0.8750	101/2
3/64	0.046875	9/16	7/32	0.2135	29/16	25/64	0.3802	49/16	35/64	0.546875	69/16	23/32	0.7135	89/16	7/8	0.8802	109/16
	0.0521	5/8		0.21875	25/8		0.3854	45/8		0.5521	65/8		0.71875	85/8		0.8854	105/8
	0.0573	11/16		0.2240	211/16		0.390625	411/16		0.5573	611/16		0.7240	811/16		0.890625	1011/16
	0.0625	3/4		0.2292	23/4		0.3958	43/4		0.5625	63/4		0.7292	83/4		0.8958	103/4
5/64	0.0677	13/16	15/64	0.234375	213/16	13/32	0.4010	413/16	37/64	0.5677	613/16	47/64	0.734375	813/16	29/32	0.9010	1013/16
	0.0729	7/8		0.2396	27/8		0.40625	47/8		0.5729	67/8		0.7396	87/8		0.90625	107/8
	0.078125	15/16		0.2448	215/16		0.4115	415/16		0.578125	615/16		0.7448	815/16		0.9115	1015/16
	0.0833	1		0.2500	3		0.4167	5		0.5833	7		0.7500	9		0.9167	11
3/32	0.0885	1/6	17/64	0.2552	3/6	27/64	0.421875	5/6	19/32	0.5885	7/6	49/64	0.7552	9/6	59/64	0.921875	11/6
	0.09375	1/8		0.2604	3/8		0.4271	5/8		0.59375	7/8		0.7604	9/8		0.9271	11/8
	0.0990	13/16		0.265625	33/16		0.4323	53/16		0.5990	73/16		0.765625	93/16		0.9323	113/16
	0.1042	1/4		0.2708	31/4		0.4375	51/4		0.6042	71/4		0.7708	91/4		0.9375	111/4
7/64	0.109375	15/16	9/32	0.2760	35/16	29/64	0.4427	55/16	39/64	0.609375	75/16	25/32	0.7760	95/16	61/64	0.9427	115/16
	0.1146	13/8		0.28125	33/8		0.4479	53/8		0.6146	73/8		0.78125	93/8		0.9479	113/8
	0.1198	17/16		0.2865	37/16		0.453125	57/16		0.6198	77/16		0.7865	97/16		0.953125	117/16
	0.1250	1/2		0.2917	31/2		0.4583	51/2		0.6250	71/2		0.7917	91/2		0.9583	111/2
9/64	0.1302	19/16	19/64	0.296875	39/16	15/32	0.4635	59/16	41/64	0.6302	79/16	13/16	0.796875	99/16	31/32	0.9635	119/16
	0.1354	15/8		0.3021	35/8		0.46875	55/8		0.6354	75/8		0.8021	95/8		0.96875	115/8
	0.140625	11/16		0.3073	311/16		0.4740	511/16		0.640625	711/16		0.8073	911/16		0.9740	1111/16
	0.1458	13/4		0.3125	33/4		0.4792	53/4		0.6458	73/4		0.8125	93/4		0.9792	113/4
5/32	0.1510	13/16	21/64	0.3177	313/16	31/64	0.484375	513/16	21/32	0.6510	713/16	53/64	0.8177	913/16	63/64	0.984375	1113/16
	0.15625	17/8		0.3229	37/8		0.4896	57/8		0.65625	77/8		0.8229	97/8		0.9896	117/8
	0.1615	15/16		0.328125	315/16		0.4948	515/16		0.6615	715/16		0.828125	915/16		0.9948	1115/16
	0.1667	2		0.3333	4		0.5000	6		0.6667	8		0.8333	10		1.0000	12

A = Fractions of Inch or Foot

B = Inch Equivalents to Foot Fractions

Illinois Department of Transportation  
 PASSED January 1, 1997  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 1997  
 ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-97	New Standard.

DECIMAL OF AN INCH  
 AND OF A FOOT  
**STANDARD 001006**