

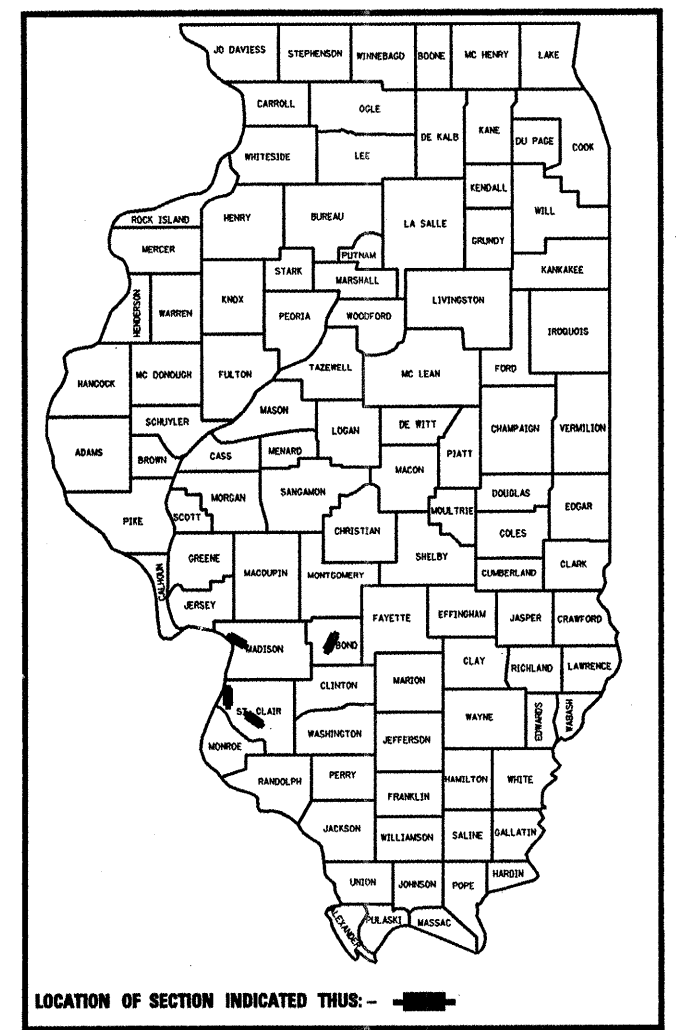
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PROPOSED**  
**HIGHWAY PLANS**  
**VARIOUS ROUTES**  
**SECTION DIST 8 BRIDGE REHAB 2009-1**  
**BOND, MADISON, AND ST. CLAIR COUNTIES**  
**PERMANENT PROTECTIVE SHIELDING**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Var.	*	Various	8	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 76B90	

\* Dist 8 Bridge Rehab 2009-1

FOR INDEX OF SHEETS, SEE SHEET NO. 2

D-98-065-08



SN 060-0120  
 ILL 111 over Bloomer Ave.  
 & Rodgers Ave.  
 Lat: 38° 54' 42.51"  
 Long: -90° 08' 11.29"  
 Rodgers Ave ADT = 2,350  
 ILL 111 ADT = 29,700  
 Net Length = 375.0 ft.

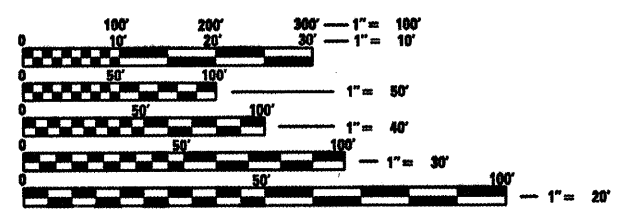
C-98-075-08

SN 003-0015  
 US 40/FAS 779 over I-70 EB/WB  
 Lat: 38° 49' 54.91"  
 Long: -89° 32' 44.28"  
 I-70 ADT = 22,700  
 US 40 ADT = 1,150  
 Net Length = 244.0 ft.

SN 082-0166  
 ILL 111 over I-64 EB/WB  
 Lat: 38° 37' 15.83"  
 Long: -90° 05' 34.66"  
 ILL 111 ADT = 18,600  
 I-64 EB/WB ADT = 65,100  
 Net Length = 266.0 ft.

SN 082-0051 & -0052  
 ILL 15 EB/WB over ILL 13  
 Lat: 38° 29' 26.36"  
 Long: -89° 57' 34.96"  
 ILL 15 ADT = 15,000  
 ILL 13 ADT = 2,650  
 Net Length = 808.0 ft.

GROSS LENGTH = 1,693 FT. (0.321 MILES)  
 NET LENGTH = 1,693 FT. (0.321 MILES)

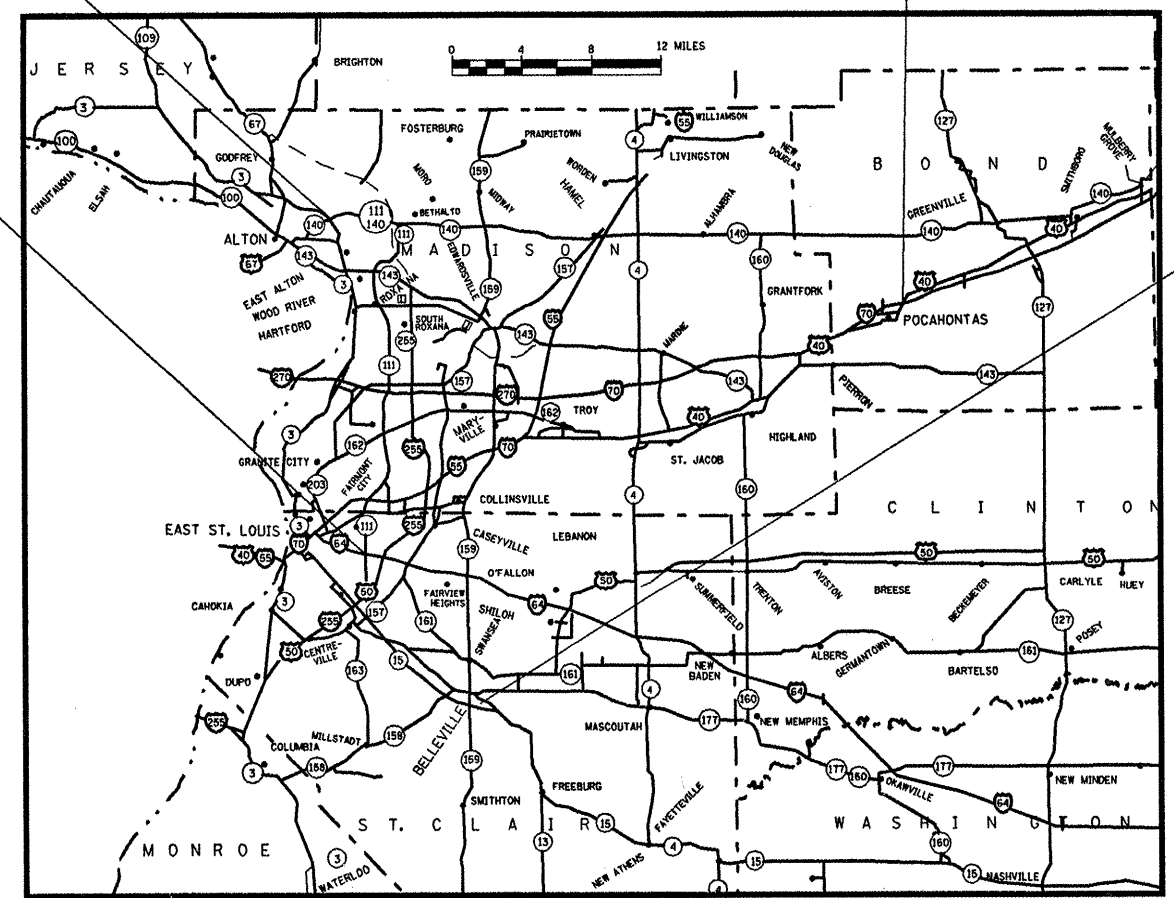


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179  
 PROJECT MANAGER: CHERYL KEPLAR (618) 346-3186

CONTRACT NO. 76B90



STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED May 15, 2008  
Michelle Chalmers  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

June 27, 2008  
Eric E. Harn  
 INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

June 27, 2008  
Christine M. Reed  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

# SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE - SFTY2A - 100% STATE				
CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	SN 060-0120 ILL 111 over Bloomer & Rodgers Ave. Madison Co.	SN 003-0015 US 40 over I-70 EB/WB Bond Co.	SN 082-0166 ILL 111 over I-64 EB/WB St. Clair Co.	SN 082-0051 & 082-0052 ILL 15 EB/WB over ILL 13 St. Clair Co.
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	4		2	2	
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	0.33	0.33	0.34	
70100815	TRAFFIC CONTROL AND PROTECTION, STANDARD 701446	L SUM	1	0.33	0.33	0.34	
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1				1
50157301	PROTECTIVE SHIELD (PERMANENT)	SQ YD	2250	855	581	434	380

## INDEX OF SHEETS

1. COVER SHEET
2. INDEX OF SHEETS, SUMMARY OF QUANTITIES, GENERAL NOTES, STANDARDS
3. LOCATION MAPS
4. SN 060-0120 (ILL 111 OVER BLOOMER AVE. & RODGERS AVE.)
5. SN 003-0015 (US 40 OVER I-70 EB/WB)
6. SN 082-0166 (ILL 111 OVER I-64 EB/WB)
7. SN 082-0051 & SN 082-0052 (ILL 15 EB/WB OVER ILL 13)
8. PROTECTIVE SHIELDING DETAILS

## GENERAL NOTES

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 for the work.

Field welding of construction accessories will not be permitted to beams or girders.

All lanes on the structures shall be kept open to traffic.

The protective shielding plywood shall be cut to miss all crossframes or diaphragms that interfere. All gaps between plywood and crossframes or diaphragms shall be less than 1/2".

Utility Interferences are not anticipated on this contract. Should this prove to be otherwise during any time of the construction, no additional cost shall be added to the contract resulting from the occurrence. The Joint Utility Locating Information for Excavators (J.U.L.I.E.) System number is (800) 892-0123.

Protective shielding shall extend to the outer edges of the shoulders, but sections may extend further as shown on the plans due to bridge skew. A two-week notice shall be given to the Resident Engineer prior to all lane closures.

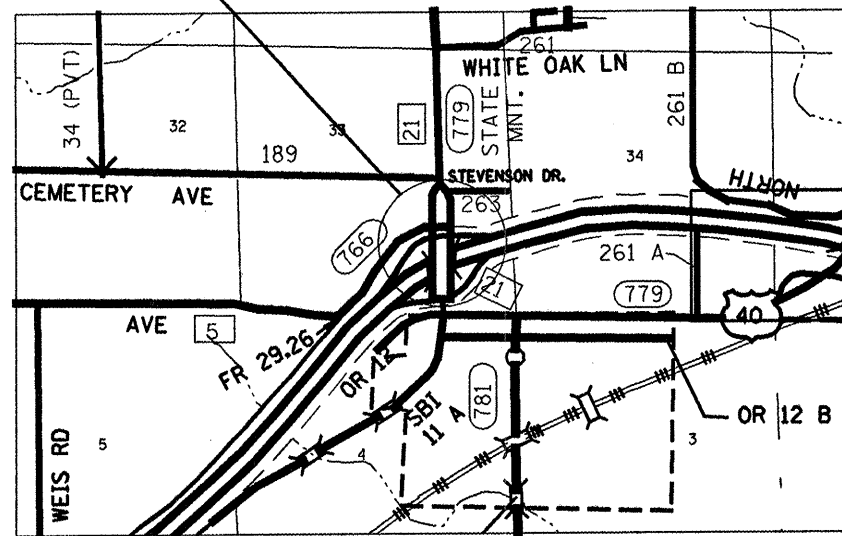
## STANDARDS

701400-02  
701406-04  
701411-04  
701446  
701501-04  
701901

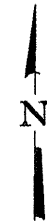
\* Dist 8 Bridge Rehab 2009-1

FILE NAME =	USER NAME = #USER#	DESIGNED - BJW	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS, SUMMARY OF QUANTITIES, GENERAL NOTES, STANDARDS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - BJW	REVISED -			VAR.			VARIOUS	8	2
	PLOT SCALE = #SCALE#	CHECKED - JAU	REVISED -								
	PLOT DATE = #DATE#	DATE - 01/16/08	REVISED -								
					SCALE:	SHEET NO. 2 OF 8 SHEETS		STA.	TO STA.		
					FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT				
					<b>CONTRACT NO. 76890</b>						

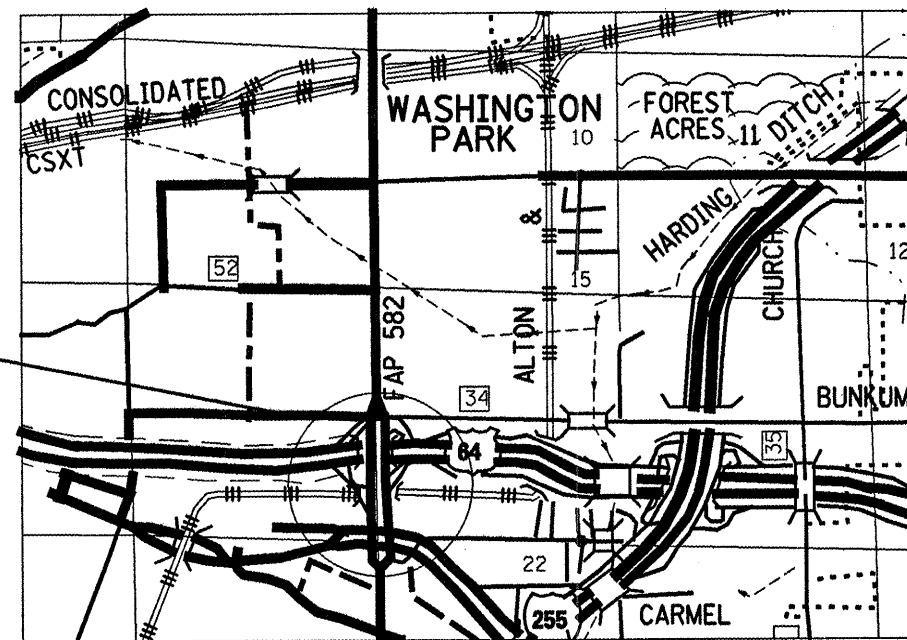
SN 003-0015  
 US 40/FAS 779 over I-70 EB/WB  
 Lat: 38° 49' 54.91"  
 Long: -89° 32' 44.28"  
 I-70 ADT = 22,700  
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 Net Length = 244.0 ft.



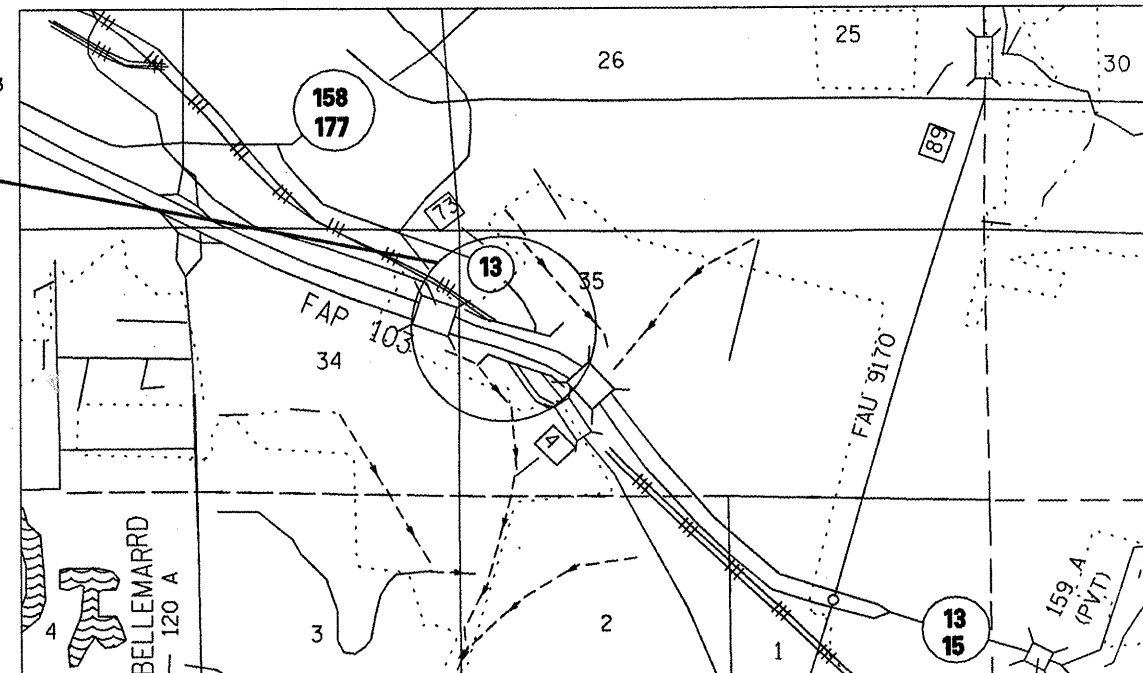
SN 060-0120  
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 & Rodgers Ave.  
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 ILL 111 over I-64 EB/WB  
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SN 082-0051 & -0052  
 ILL 15 EB/WB over ILL 13  
 Lat: 38° 29' 26.36"  
 Long: -89° 57' 34.96"  
 ILL 15 ADT = 15,000  
 ILL 13 ADT = 2,650  
 Net Length = 808.0 ft.



LOCATION MAPS  
 NOT TO SCALE

\* Dist 8 Bridge Rehab 2009-1

FILE NAME =	USER NAME = #USER#	DESIGNED - BJW	REVISED -
#FILE#		DRAWN - BJW	REVISED -
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	PLOT DATE = #DATE#	DATE - 01/16/08	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

LOCATION MAPS

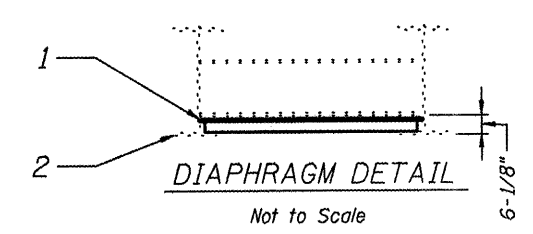
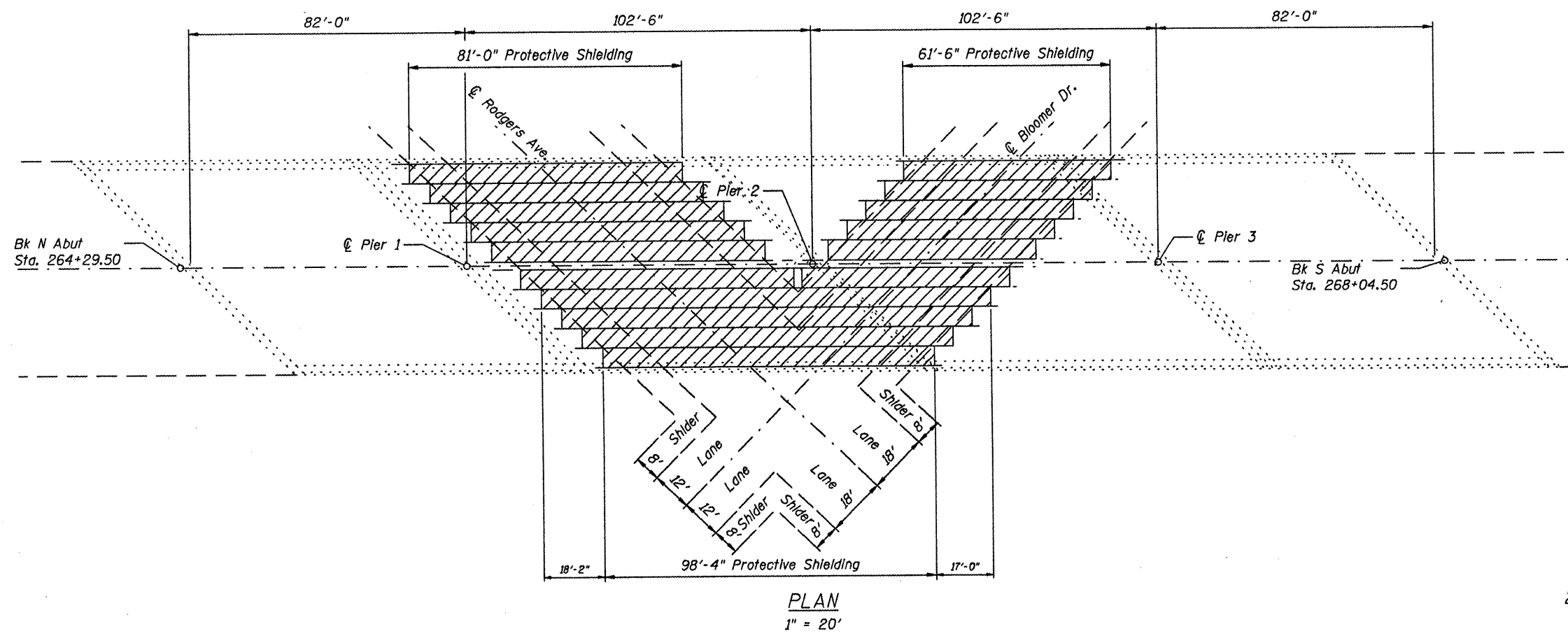
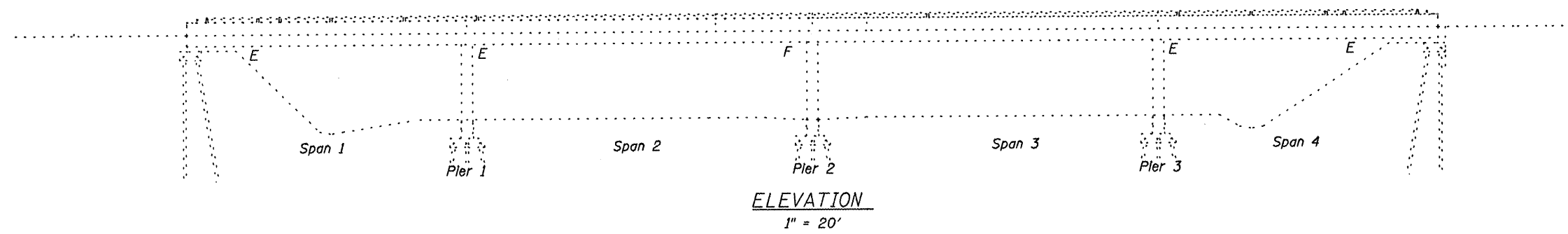
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Var.	o	Various	8	3
CONTRACT NO. 70890				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

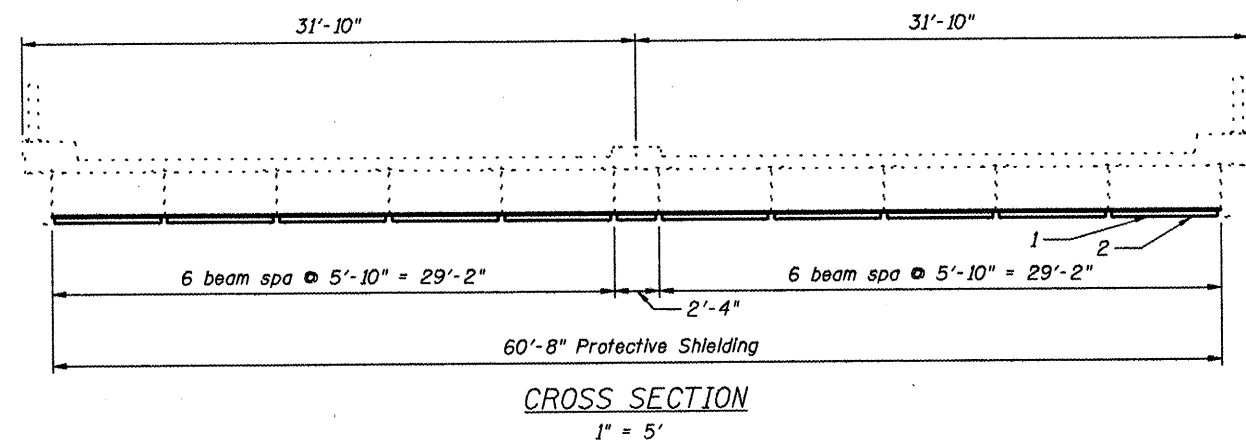
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ILL 111	#	Various	8	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

\* Dist 8 Bridge Rehab 2009-1  
Contract # 76B90



- LEGEND**
- 1. PROTECTIVE SHIELDING (PERMANENT)
  - 2. EXISTING W33X220



ILLINOIS DEPARTMENT OF TRANSPORTATION  
STRUCTURE DETAILS  
SN 060-0120  
ILL 111 OVER BLOOMER AVE.  
DIST 8 BRIDGE REHAB 2009-01  
BOND, MADISON AND ST. CLAIR COUNTIES

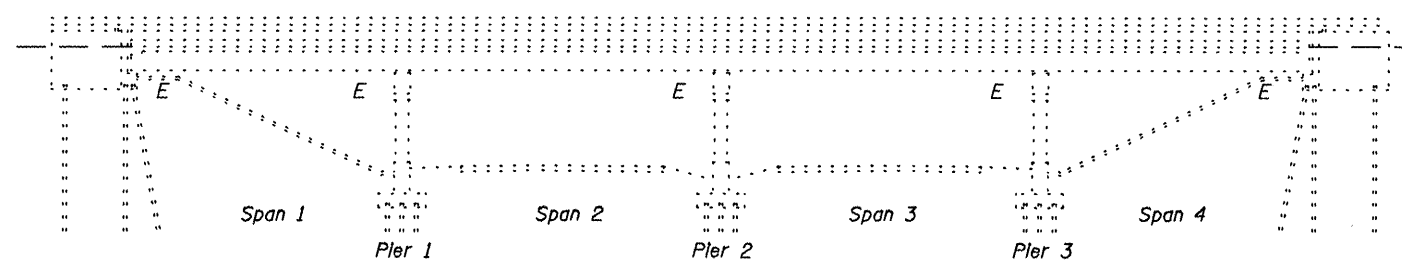
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CHECKED	JAU	ENGINEER OF BRIDGE DESIGN
DRAWN	BJW	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	JAU	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

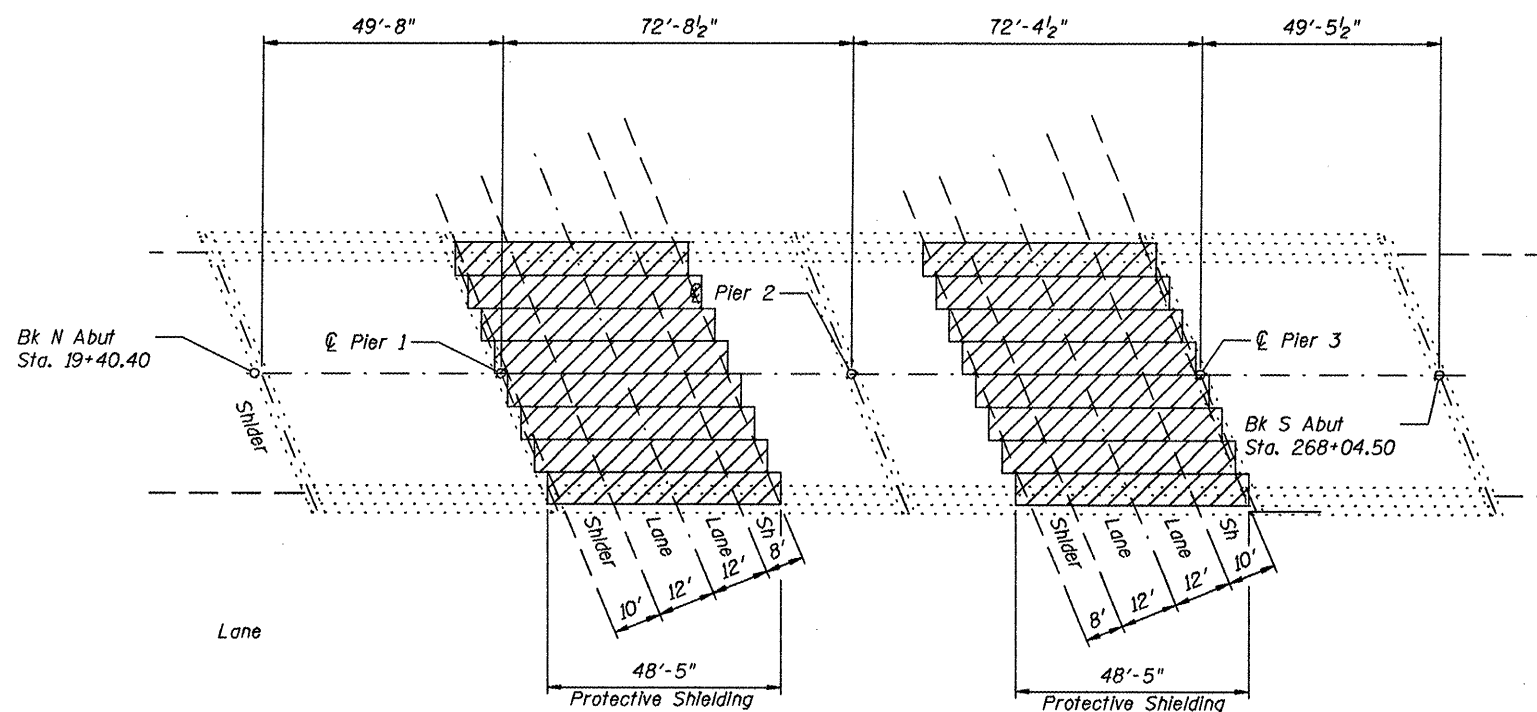
ROUTE NO.	SECTION	COUNTY	SPAN	SHEET	SHEET NO.
US 40 FAS 779	*	Various	8	5	2

5 SHEETS

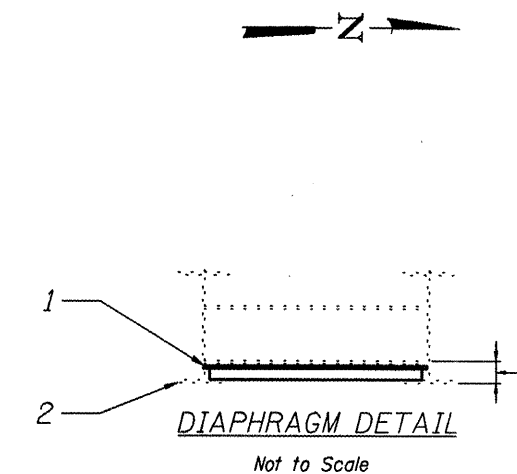
\* Dist 8 Bridge Rehab 2009-1  
Contract # 76B90



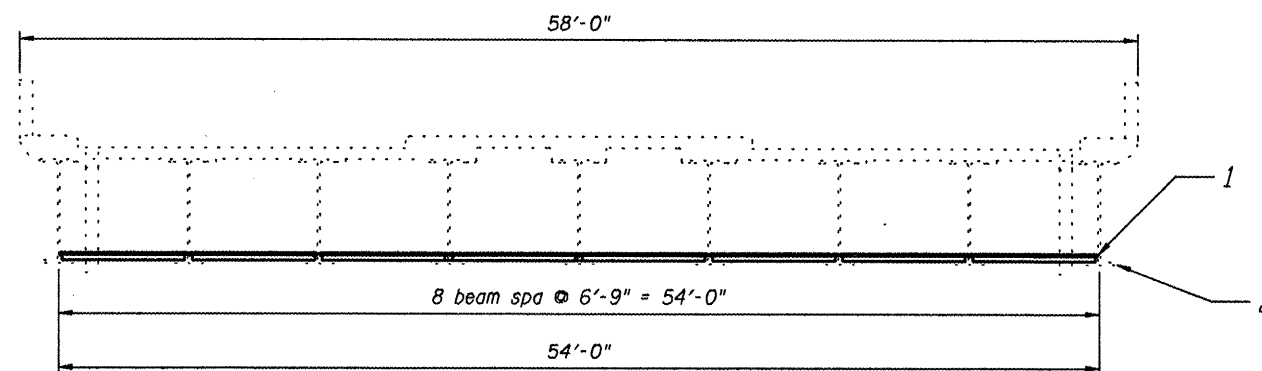
**ELEVATION**  
1" = 20'



**PLAN**  
1" = 20'



**DIAPHRAGM DETAIL**  
Not to Scale



**CROSS SECTION**  
1" = 5'

- LEGEND**
- 1. PROTECTIVE SHIELDING (PERMANENT)
  - 2. EXISTING W36X135

ILLINOIS DEPARTMENT OF TRANSPORTATION  
STRUCTURE DETAILS  
SN 003-0015  
US 40/FAS 779 OVER I-70 EB/WB  
DIST 8 BRIDGE REHAB 2009-01  
BOND, MADISON AND ST. CLAIR COUNTIES

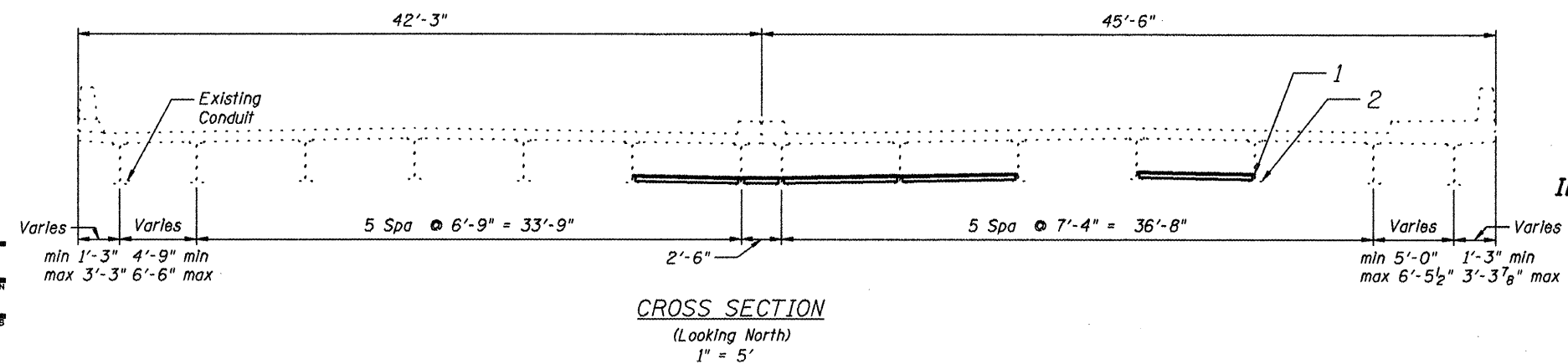
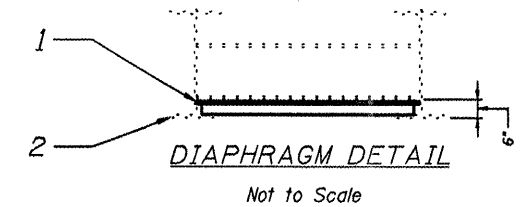
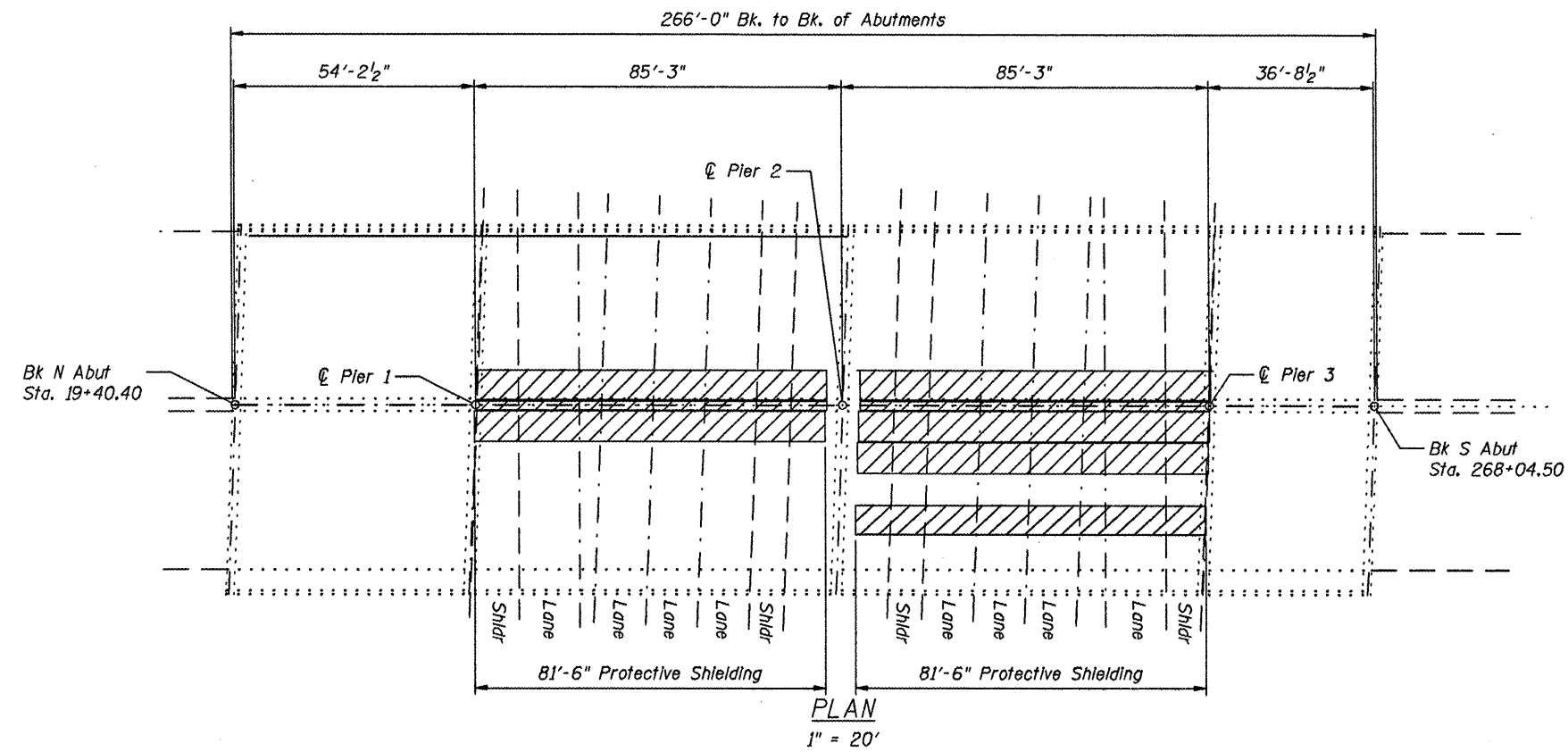
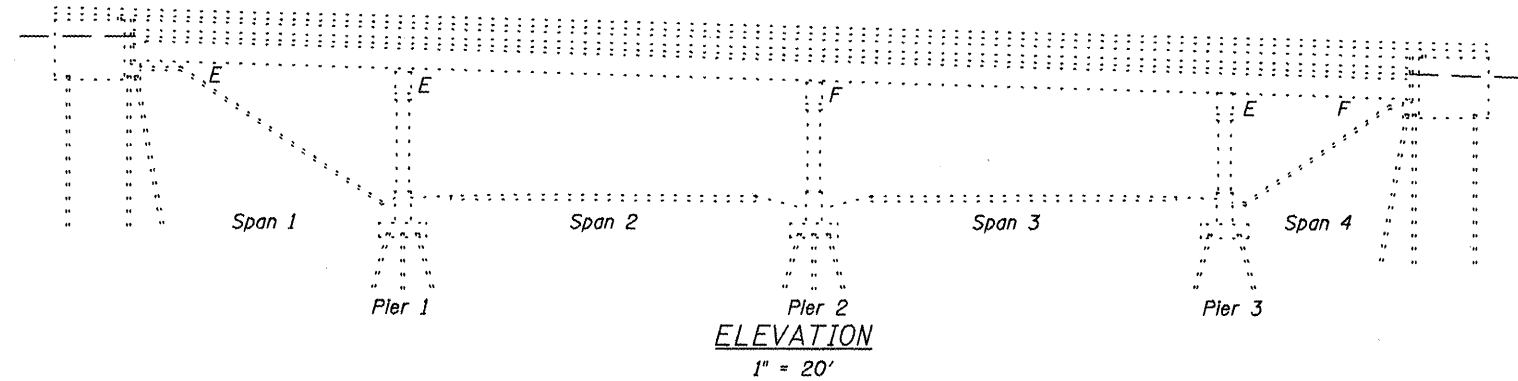
DESIGNED	BJW
CHECKED	JAU
DRAWN	BJW
CHECKED	JAU

200	
DESIGNED	ENGINEER OF BRIDGE DESIGN
PASSED	ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
ILL III	*	Various	8	6	5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

\* Dist 8 Bridge Rehab 2009-01  
Contract # 76B90



- LEGEND  
1. PROTECTIVE SHIELDING (PERMANENT)  
2. EXISTING W36X135

ILLINOIS DEPARTMENT OF TRANSPORTATION  
STRUCTURE DETAILS  
SN 082-0166  
ILL III OVER I-64 EB/WB  
DIST 8 BRIDGE REHAB 2009-01  
BOND, MADISON AND ST. CLAIR COUNTIES

DESIGNED	BJW
CHECKED	JAU
DRAWN	BJW
CHECKED	JAU

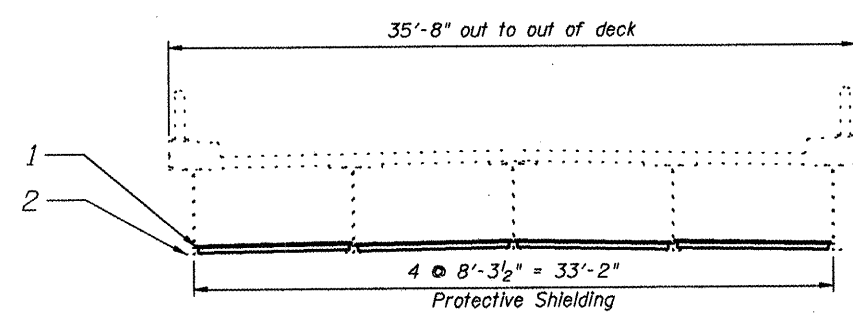
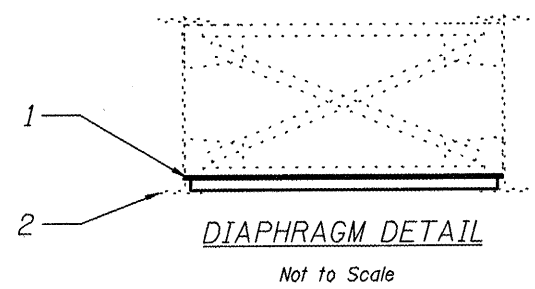
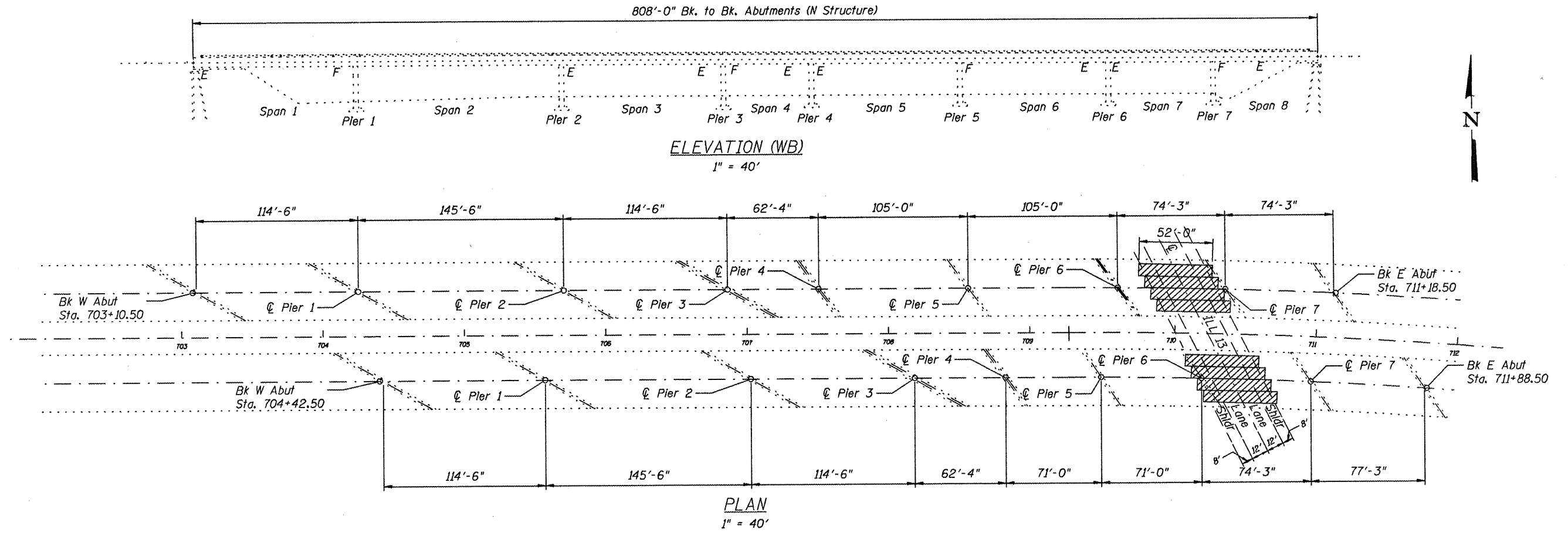
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ENGINEER	ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

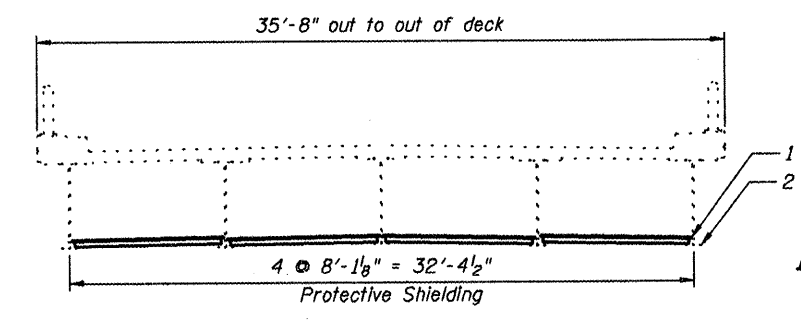
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ILL 15	*	Various	8	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

\* Dist 8 Bridge Rehab 2009-1  
Contract # 76B90

SHEET NO. 4  
5 SHEETS



**CROSS SECTION**  
1" = 5'



**CROSS SECTION**  
1" = 5'

**LEGEND**  
1. PROTECTIVE SHIELDING (PERMANENT)  
2. EXISTING GIRDER

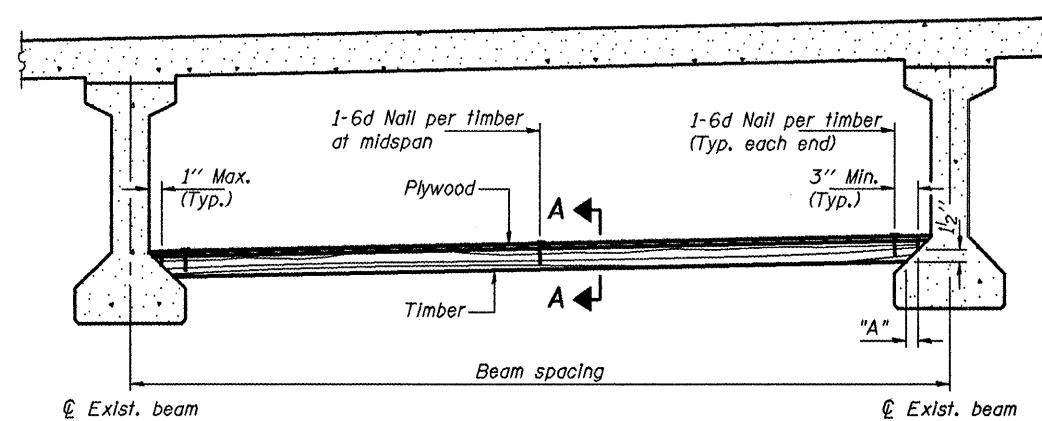
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CHECKED	JAU	ENGINEER OF BRIDGE DESIGN
DRAWN	BJW	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	JAU	

ILLINOIS DEPARTMENT OF TRANSPORTATION  
STRUCTURE DETAILS  
SN 082-0051 & 0052  
ILL 15 EB/WB OVER ILL 13  
DIST 8 BRIDGE REHAB 2009-01  
BOND, MADISON AND ST. CLAIR COUNTIES

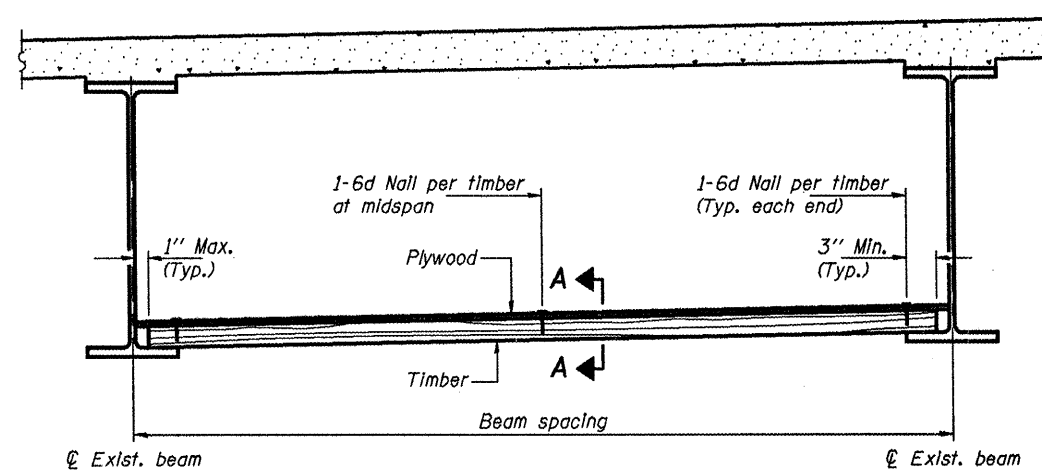
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
Various	"	Various	8	8	5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

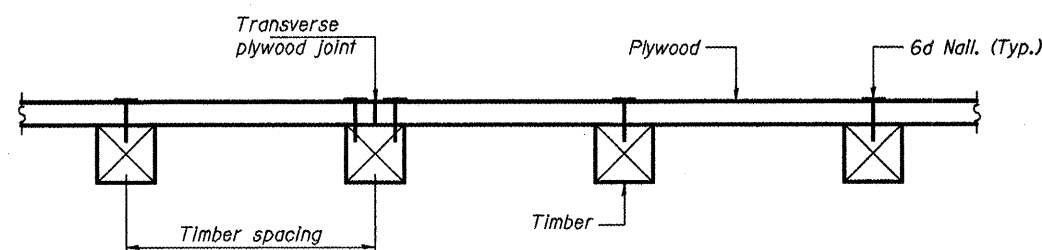
\* Dist 8 Bridge Rehab 2009-1  
Contract # 76B90



PPC I-BEAMS AND BULB-T's



STEEL BEAMS



SECTION A-A

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

PPC I-BEAMS AND BULB-T's

BEAM	"A"
36" I-Beam	1 1/2"
42" I-Beam	1 1/2"
48" I-Beam	1 1/2"
54" I-Beam	1 3/8"
63" Bulb-T	3 3/8"
72" Bulb-T	3 3/8"

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.  
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 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 grain is perpendicular to the timber supports. 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.  
When 4" x 6" timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical.  
Design load = 200 psf.

BILL OF MATERIAL

Item	Unit	Total
Protective Shield (Permanent)	Sq. Yd.	2,250

ILLINOIS DEPARTMENT OF TRANSPORTATION  
PROTECTIVE SHIELDING DETAILS  
VARIOUS ROUTES  
DIST 8 BRIDGE REHAB 2009-01  
BOND, MADISON AND ST. CLAIR COUNTIES