

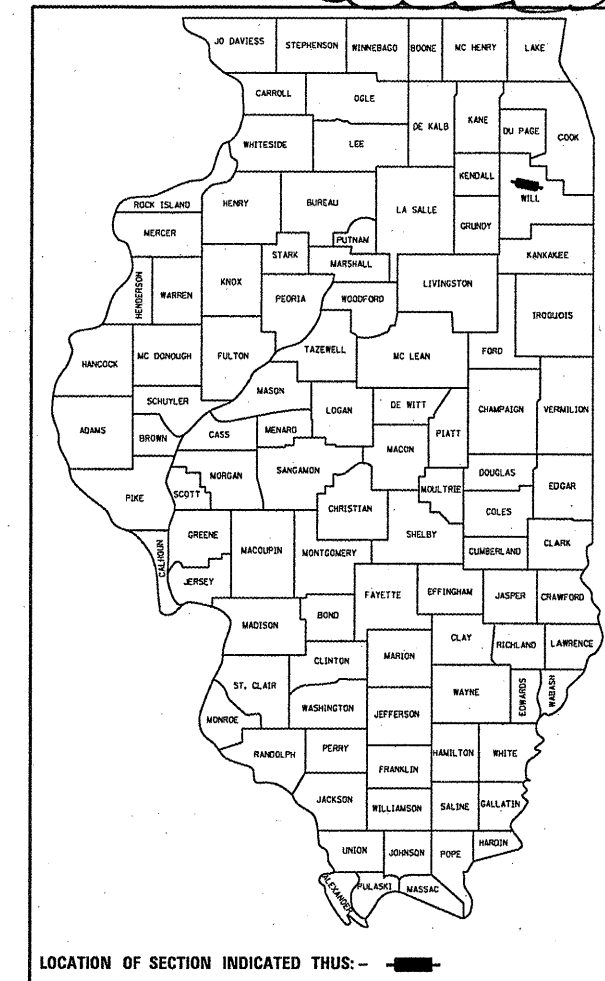
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**PROPOSED  
 HIGHWAY PLANS**

FAP ROUTE 112: IL 53 (RUBY STREET)  
 OVER DES PLAINES RIVER  
 SECTION: M-BDR-1  
 BRIDGE REPAIR  
 WILL COUNTY  
 C-91-115-04

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
112	M-BDR-1	WILL	66	1
		ILLINOIS	CONTRACT NO. 62714	

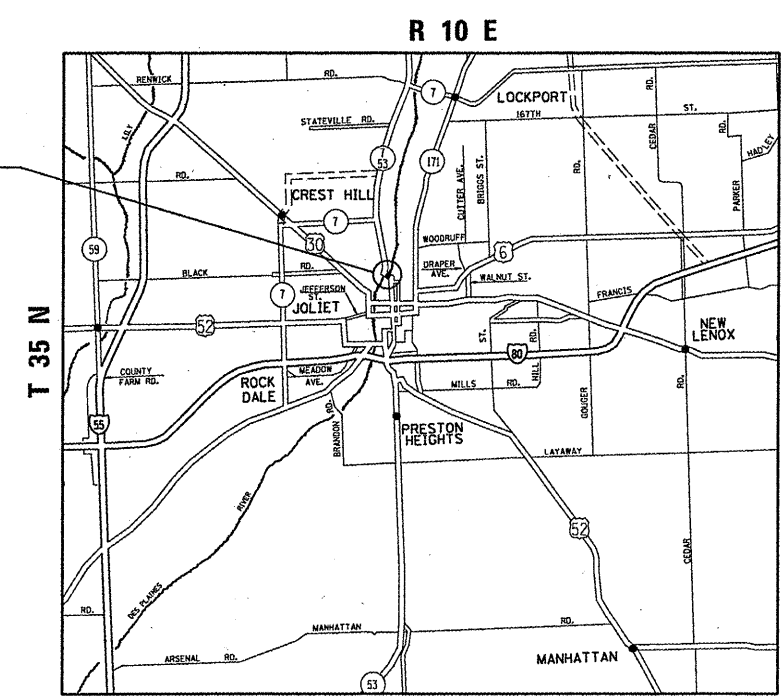
\* 66 + 1 = 67  
 D-91-115-04 \* 67 + 3 = 70



FOR INDEX OF SHEETS, SEE SHEET NO. 2

THIS IMPROVEMENT IS LOCATED IN  
 THE CITY OF JOLIET

LOCATION:  
 IL 53 (RUBY ST.) OVER  
 DES PLAINES RIVER  
 SN 099-9901



JOLIET TOWNSHIP



TRAFFIC DATA:  
 2009 ADT: 10,000  
 SPEED LIMIT: 30 MPH

NET LENGTH OF IMPROVEMENT = 395 LINEAL FT  
 GROSS LENGTH OF IMPROVEMENT = 395 LINEAL FT

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

PROJECT ENGINEER: ROBERT BORO (847)705-4178  
 PROJECT MANAGER: ISSAM RAYYAN

CONTRACT NO. : 62714

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED JULY 8 20 11  
*Diana M. O'Keefe*  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Aug 19 20 11  
*Scott E. Stitt, P.E.*  
 acting ENGINEER OF DESIGN AND ENVIRONMENT

Aug 19 20 11  
*Christine M. Reed*  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
 OF THE STATE OF ILLINOIS

Rev. 9-13-11

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
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2	INDEX OF SHEETS AND STANDARDS
3	GENERAL NOTES
4	GENERAL PAINT NOTES
5	SUMMARY OF QUANTITIES
6-7	DETOUR ROUTE
8-9	SUBSTRUCTURE REPAIR (GROUT BAGS)
<b>9A.</b>	<b>RUBY ST. OVER DES PLAINES RIVER</b>
10-38A	BRIDGE PLAN SHEETS - BRIDGE PAINTING
39	MACHINERY WALL DETAILS
40-41	STEEL GRID DECK DETAILS
42	ELECTRIC INCINERATING TOILET DETAIL
43-44	ELECTRIC FURNACE AND AIR CONDITIONING UNIT
45	BRIDGE HOUSE INTERIOR WALL PAINTING
46	BRIDGE EXTERIOR WALL REPAIR
47	GEAR REDUCER SERVICE
48-57	BEARINGS GREASE GROOVE CLEANING
<b>57A.-57B.</b>	<b>RUBY ST. OVER DES PLAINES RIVER</b>
58-60	BEARING RETROFIT (PINION)
61	SUMP PUMPS REPLACEMENT
62-64	HANDRAIL REPAIRS
65	TIMBER SIDEWALK REMOVAL AND REPLACEMENT
66	ARTERIAL ROAD INFORMATION SIGN

LIST OF STATE STANDARDS

<u>STANDARD NO.</u>	<u>DESCRIPTION</u>
701301-04	LANE CLOSURE, 2L 2W, SHORT TIME OPERATIONS
701606-07	URBAN LANE CLOSURE MULTILANE 2W WITH MOUNTABLE MEDIAN
701801-04	LANE CLOSURE, MULTILANE, 1W OR 2W, CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS

THIS PROJECT REQUIRES AN US ARMY CORPS OF ENGINEERS 404 PERMIT. THE PERMIT ISSUED TO THE DEPARTMENT DOES NOT COVER THE IN STREAM WORK BY THE CONTRACTOR. THEREFORE AFTER AWARD, THE CONTRACTOR WILL NEED TO SUBMIT THE WORK PLAN TO THE CORPS. THE CORPS WILL NOT BE PROVIDING AN APPROVAL UNLESS STATED OTHERWISE IN THE PERMIT AND IN STREAM WORK CAN COMMENCE AT THE CONTRACTOR'S DISCRETION. GUIDELINES ON ACCEPTABLE IN STREAM WORK TECHNIQUES CAN BE FOUND ON THE CORPS WEBSITE: [HTTP:WWW.LRC.USACE.ARMY.MIL/](http://www.lrc.usace.army.mil/)

**2** Rev. 9-13-11

FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS &amp; STATE STANDARDS SN 099-9901</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw-work\p1s\dot\midyja\d0148931\Design\fign	DRAWN -	REVISED -	112			M-BDR-1	WILL	66	2	
PLOT SCALE = 1/83.1218" / 1in.	CHECKED -	REVISED -	CONTRACT NO. 62714							
PLOT DATE = 7/12/2011	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
					SCALE:	SHEET NO. OF SHEETS STA. TO STA.				

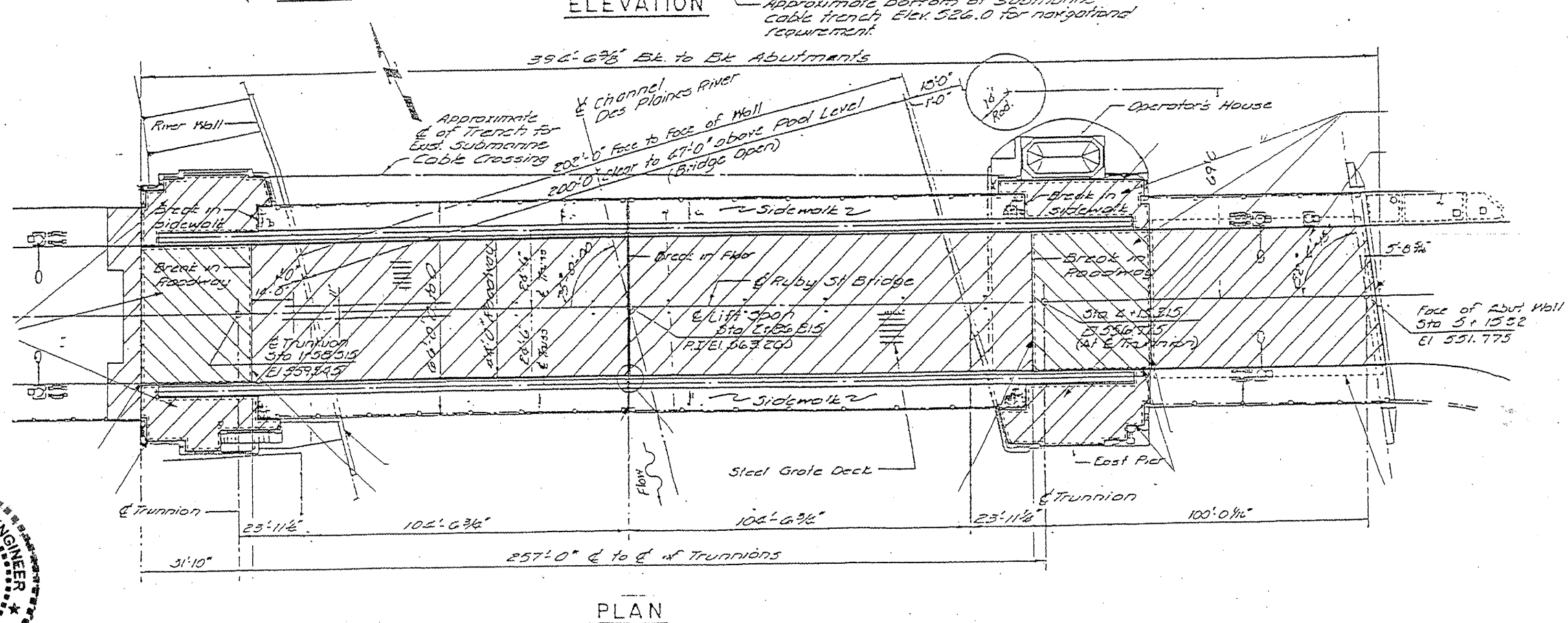
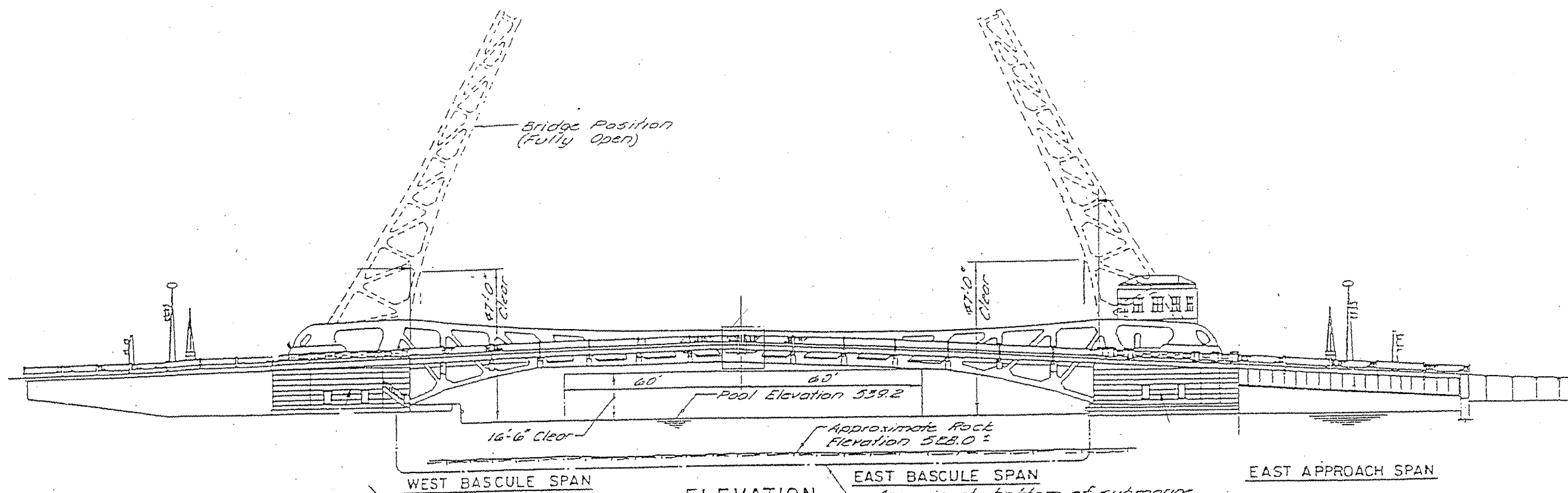
**2**

URBAN  
100% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE			
CODE NO	ITEM	UNIT		0014			
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO.1	L SUM	1	1			
Z0007112	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	1			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4			
67100100	MOBILIZATION	L SUM	1	1			
X0325204	TIMBER SIDEWALK REMOVAL AND REPLACEMENT	L SUM	1	1			
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1			
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SO FT	3	3			
Z0015550	DEBRIS REMOVAL	CU YD	40	40			
Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	48	48			
Z0068508	STEEL GRID DECK REPAIRS	L SUM	1	1			
Z0076700	TRUNNION BEARING GREASE GROOVE CLEANING	L SUM	1	1			
Z0033750	MACHINERY BED BEARING GREASE GROOVE CLEANING	L SUM	1	1			
Z0027725	GEAR REDUCER SERVICE	L SUM	1	1			
Z0007750	BRIDGE TENDER HOUSE REHABILITATION	L SUM	1	1			
Z0029603	HANDRAIL REPAIRS	L SUM	1	1			
X0327286	SUBSTRUCTURE REPAIR (GROUT BAGS)	L SUM	1	1			
Z0069900	SUMP PUMPS REPLACEMENT	L SUM	1	1			
Z0003801	BEARING RETROFIT	L SUM	1	1			
Z0073500	TEMPORARY SUPPORT SYSTEM	L SUM	1	1			

2

Rev. 9-13-11



*David Carl Puzey* 9/12/11  
Expires 11/30/12

FILE NAME =	USER NAME = midyjo	DESIGNED -	RTD	REVISED -	
		DRAWN -		REVISED -	
		CHECKED -		REVISED -	
		DATE -		REVISED -	

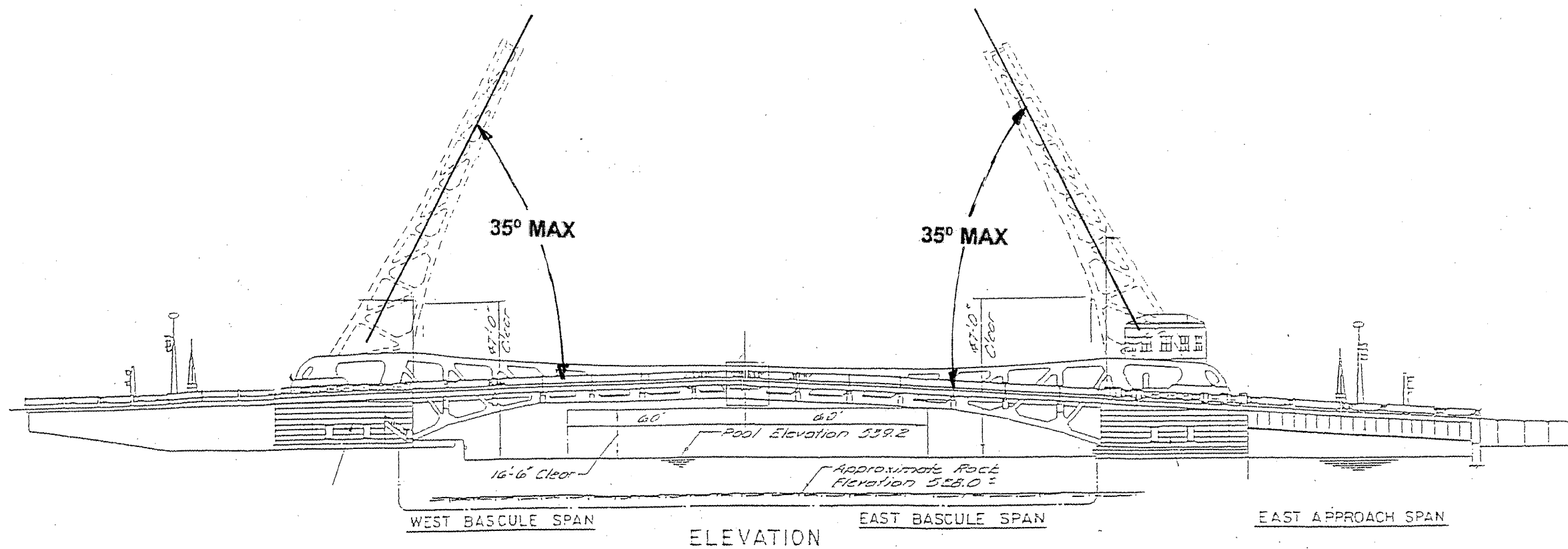
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

RUBY STREET OVER DES PLAINES RIVER  
SN 099-9901

SCALE: SHEET NO. 1 OF 30 SHEETS STA. TO STA.

F.A.P. RTE. 112	SECTION M-BDR-1	COUNTY WILL	TOTAL SHEETS 66	SHEET NO. 9A
			CONTRACT NO. 62714	
ILLINOIS FED. AID PROJECT				

Sheet added 09/12/2011 VHV



**NOTES FOR BRIDGE PAINTING**

*The maximum raised bridge position for the bridge while it is wrapped for containment during blasting and painting operations is 35°. High speed winds are not permitted when the bridge is raised and covered for blasting and painting which could affect the safety of personnel and the structural integrity of the bridge itself.*

*During any blasting or painting operations when the bridge is contained by tarpaulins or other coverings, the bridge must be closed to the down (0°) position if wind speeds are forecasted by NOAA or other official source to be gusting above 45 mph. Closure to the 0° position shall be accomplished at least one (1) hour before the storm is projected to affect the Joliet area.*

*Blasting and painting can only be accomplished on one leaf at a time. Under no circumstances can the trunnion bearing cap or main pinion shaft removal and replacement (as shown on other sheets in this contract) be performed on the same leaf at the same time as blasting and painting. Each operation must be done separately of the other, and on opposite leaves of the bridge.*

*During blasting and painting, the bridge leaf that is being blasted or painted must be operational.*

FILE NAME #	USER NAME # midjje	DESIGNED -	REVISED -
PLT SCALE = 1/8" = 1'-0"	CHECKED -	REVISED -	DATE

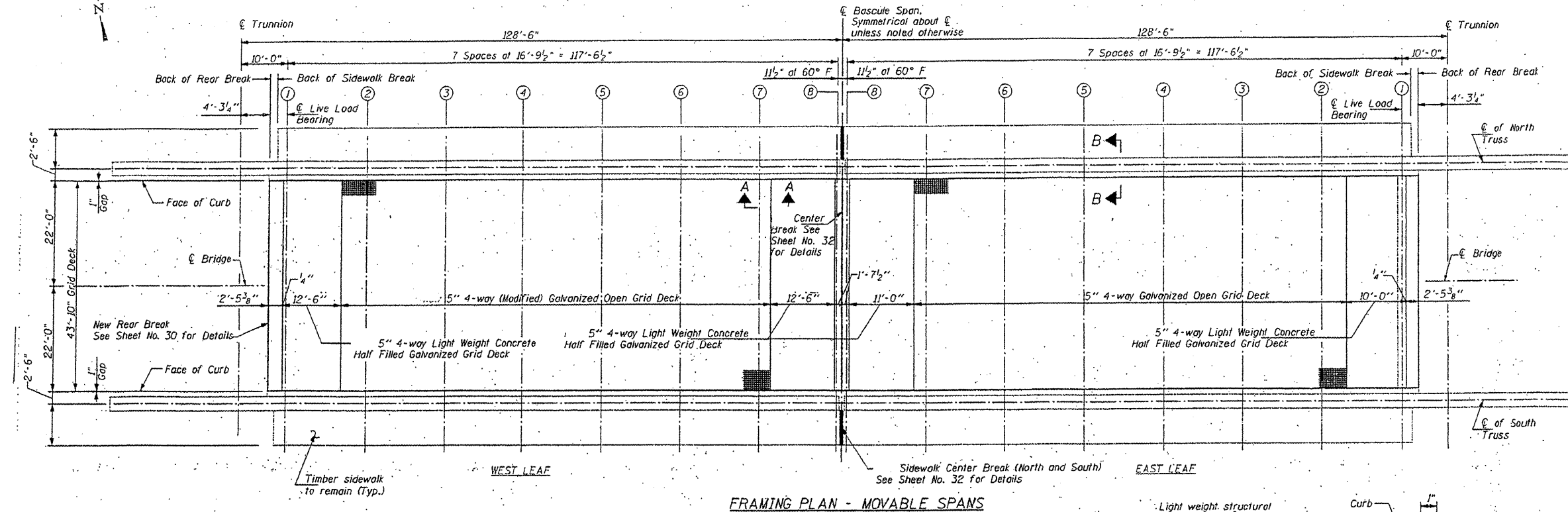
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

RUBY STREET OVER DES PLAINES RIVER	
SN 099-8901	
SCALE:	SHEET NO. OF 30 SHEETS STA. TO STA.

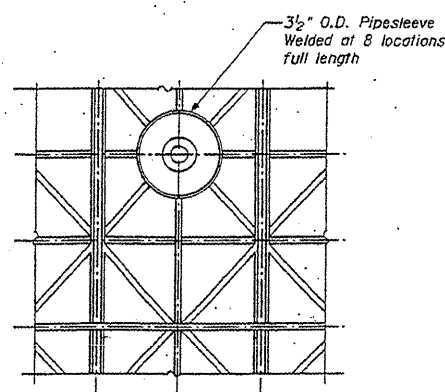
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
112	M-BOP-1	WILL	66	10
				CONTRACT NO. 62714

ILLINOIS FED. AID PROJECT  
**▲ SHEET REPLACED 09/12/2014 VHV**

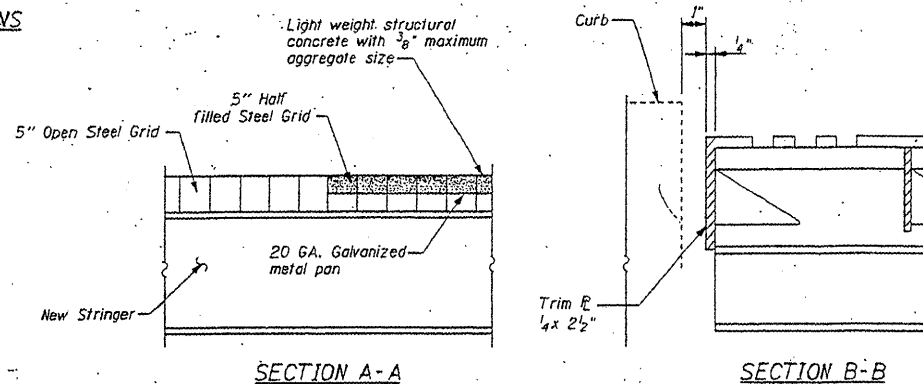
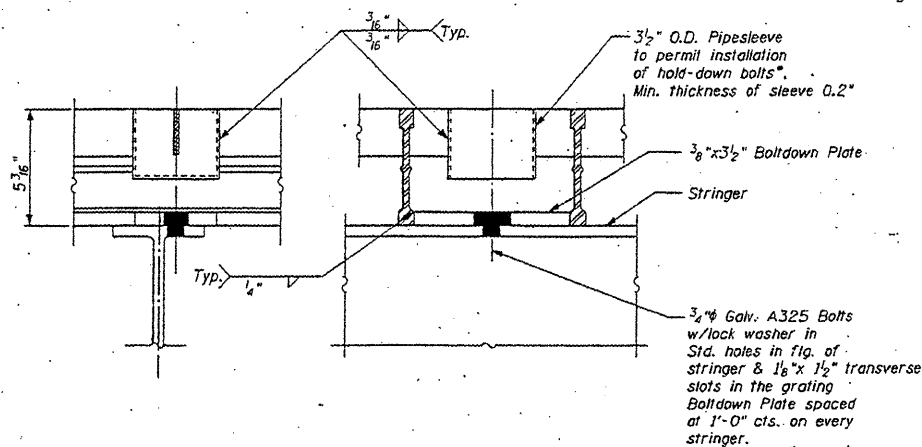
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN - MOVABLE SPANS



TYPICAL GRATING BOLTDOWN DETAIL



SECTION A-A

SECTION B-B

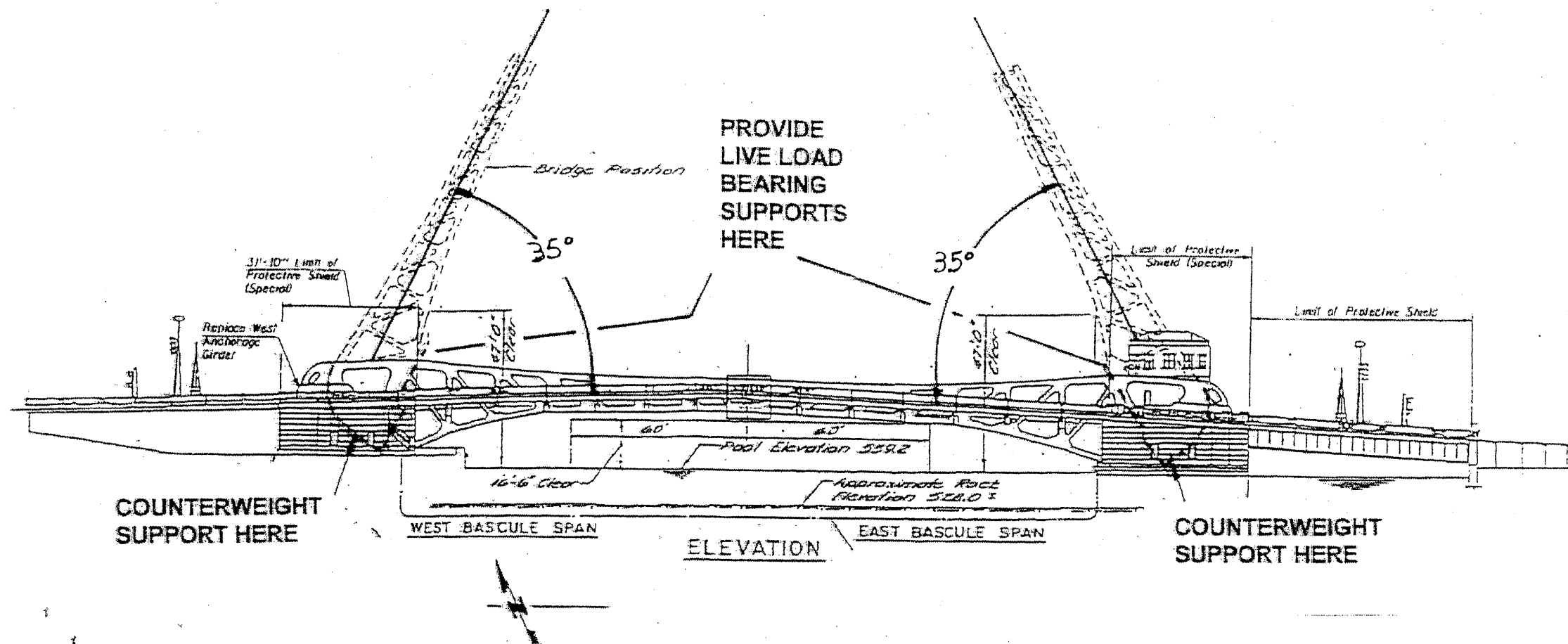
BILL OF MATERIALS

ITEM	UNIT	QUANTITY
STEEL GRID DECK REPAIRS	L SUM	1

MOVABLE PART  
ROADWAY GRATING PLAN & DETAILS  
RUBY STREET (F.A.P. 112) OVER  
DES PLAINES RIVER  
WILL COUNTY  
STRUCTURE NUMBER 099-9901

FILE NAME =	USER NAME = mdgjo	DESIGNED - <b>RDB</b>	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RUBY STREET OVER DES PLAINES RIVER STEEL GRID DECK REPAIR	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
WORKSPACE = mdgjo\09148931\0111504	PROJECT = ruby-street-over-des-plaines-river.dgn	DRAWN -	REVISED -			112	M-BDR-1	WILL	66	40
PLOT SCALE = 1/8" = 1'-0"	CHECKED -	REVISED -	REVISED -			SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.		CONTRACT NO. 62714		
PLOT DATE = 6/23/2011	DATE -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT				

REVISION 09/12/2011 VHV



**NOTES FOR LUBRICATION AND BEARING REPLACEMENT**

When trunnion bearing caps are removed for lubrication, or main pinion shafts are removed for main bearing replacements, the bridge shall be locked at a 35° position. See special provision Temporary Support System.

As soon as trunnion lubrication and main bearings and pinion shafts are aligned and installed, the bridge shall be tested for smooth operation, presence of any misalignment, abnormal heating of bearings, grinding or unusual acoustic emissions. Before the contractor makes the bridge leaf fully active again, its operational status shall be subject to the approval of the Engineer.

Work is to be completed on one leaf at a time and under no circumstance in the same leaf that is being blasted and painted.

FILE NAME =	USER NAME = mdyje	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RUBY STREET OVER DES PLAINES RIVER SN 099-8901	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
work\p1001\madyje\08148931\011159	whr-plan.dgn	DRAWN -	REVISED -			112	M-BDR-1	WILL	66	57A
PLOT SCALE = 1/8" = 1'-0"	CHECKED -	REVISED -	CONTRACT NO. 62714			ILLINOIS FED. AID PROJECT			ADDED 09/12/2011 VHV	
PLOT DATE = 6/23/2011	DATE -	REVISED -	SCALE:			SHEET NO. OF 30 SHEETS	STA. TO STA.			

TEMPORARY SUPPORT SYSTEM REACTIONS AT 35° POSITION  
(for counterweight)

Wind Direction	Wind Force at			
	80 mph (kips)	70 mph (kips)	60 mph (kips)	50 mph (kips)
Longitudinal	121	93	69	48
45° Diagonal	188	144	106	74

TEMPORARY SUPPORT SYSTEM REACTIONS AT 35° POSITION  
(for Live Load Bearings\*)

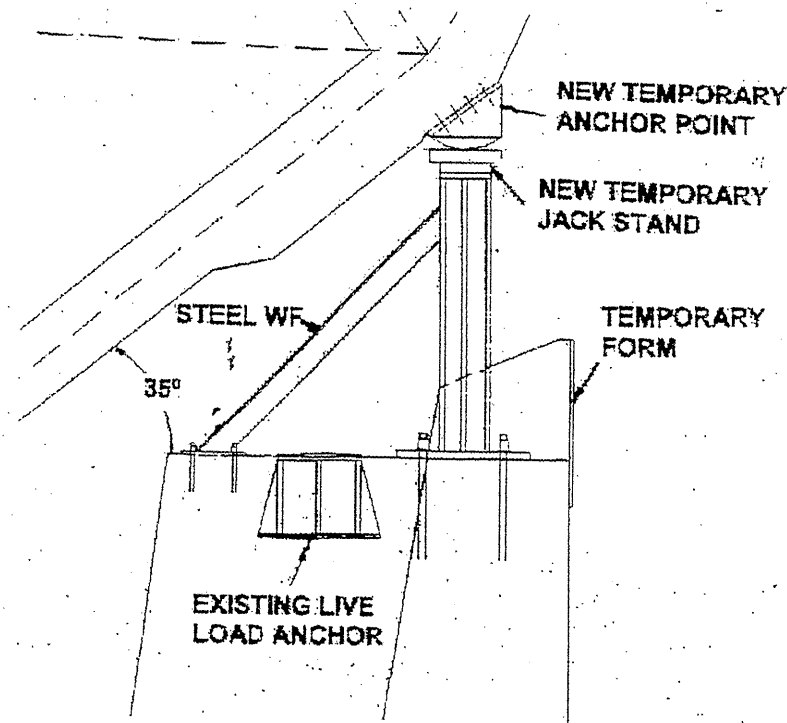
Wind Direction	Wind Force at			
	80 mph (kips)	70 mph (kips)	60 mph (kips)	50 mph (kips)
Longitudinal	216	160	117	82
45° Diagonal	323	247	181	126

\* These loads are shared by two live bearing supports.

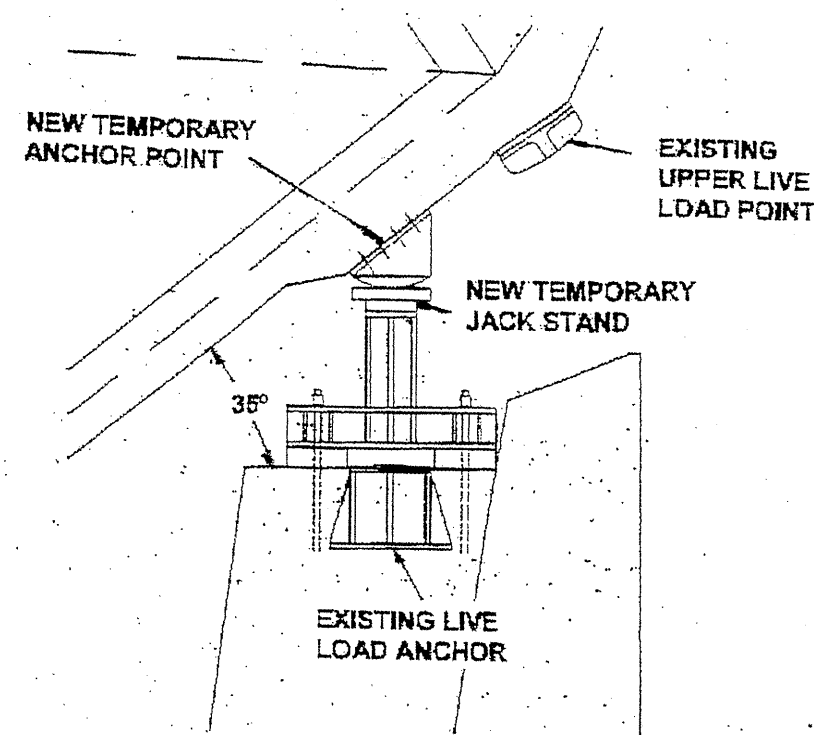
Two live load bearing supports design are recommended. Alternate No. 1 uses the existing upper live load bearing, with a temporary river wall support. Alternate No. 2 requires strengthening of the attachment point on the structural member to provide better load sharing since it is not in line with principal support points.

**BILL OF MATERIAS**

ITEM	UNIT	QUANTITY
TEMPORARY SUPPORT SYTEM	EACH	2.



LIVE LOAD BEARING SUPPORT  
ALTERNATE NO. 1



LIVE LOAD BEARING SUPPORT  
ALTERNATE NO. 2