

FOR INDEX OF SHEETS, SEE SHEET NO. 3

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PROPOSED  
HIGHWAY PLANS**

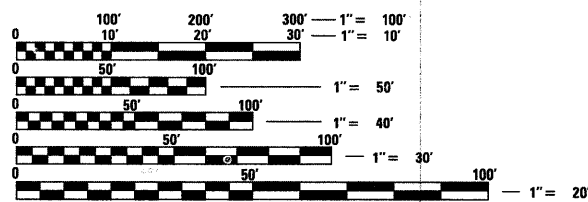
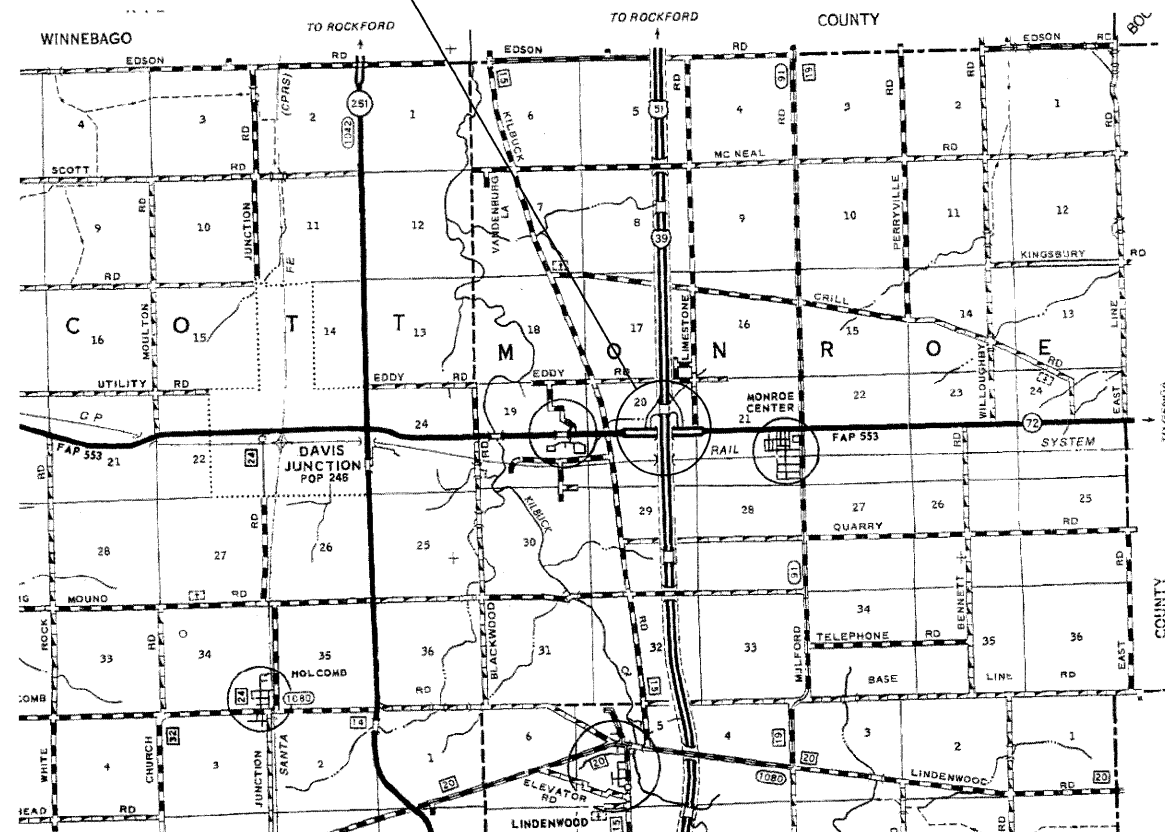
FAI ROUTE 39 (I-39)  
SECTION D2 BRIDGE PAINTING 2008-2  
OGLE COUNTY  
C-92-028-08

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39		Ogle	18	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 64D90		

D-92-023-08



Project Location  
Structure numbers 071-0046 & 071-0047



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

DISTRICT 2 BRIDGE MAINTENANCE ENGINEER Mahmoud Etemadi 815/284-5393  
DISTRICT 2 BRIDGE PAINT TECHNICIAN Dan Link 815/284-5416

CONTRACT NO. 64D90

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 1-25 2008  
George F. Ryan  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 21, 2008  
Eric E. Harsh  
ENGINEER OF DESIGN AND ENVIRONMENT

March 21, 2008  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

# SUMMARY OF QUANTITIES

SFTY-2A  
100% STATE

paycode	description	units	quantity
50600600	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1
50600700	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1
50606401	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO.1	L SUM	1
50606402	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO.2	L SUM	1
67100100	MOBILIZATION	L SUM	1
70100200	TRAFFIC CONTROL AND PROTECTION, STANDARD 701331	EACH	3
* 70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	2900
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	910
70400100	TEMPORARY CONCRETE BARRIER	FOOT	600
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	775
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1660
78300100	PAVEMENT MARKING REMOVAL	SQ FT	485
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1
X5067502	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 2	L SUM	1
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2

\*SPECIALTY ITEM

\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
G:\BR\CADD plans\Ogle County\07100460047.dgn		DRAWN -	REVISED -						39	*	OGLE	18	2
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -		CONTRACT NO. 64D90								
PLOT DATE = Tue Jan 29 09:22:52 2008		DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	

# GENERAL NOTES

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 2A shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1. Class 2A shall be used on front slopes and ditch bottoms. Class 4 shall be used behind Type A gutter, on all backslopes and areas behind the backslope, and beyond the toe of front slope on fill sections without ditches. This work will be included in the contract unit price per LUMP SUM for CLEANING AND PAINTING STEEL BRIDGE NO. 1.

Fertilizer shall be applied to all disturbed areas and incorporated into the seeded prior to seeding or placement of sod at the rate specified in Sections 250 and 252 of the Standard Specifications. This work shall be included in the cost of CLEANING AND PAINTING STEEL BRIDGE NO. 1.

Mulch Method II shall be applied over all seeded areas. This shall be included in the cost of the CLEANING AND PAINTING STEEL BRIDGE NO. 1.

These structures will retain the same number 071-0046 and 071-0047

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning - SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1 -OZ/E/U. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6.

The SSPC-QP1 and SSPC-QP2 Painting Contractor Certifications will not be required for this bridge.

A MINIMUM OF 2 AIR MONITORS WILL BE REQUIRED PER BRIDGE TO MONITOR ABRASIVE BLASTING OPERATIONS. SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".

# STANDARDS

- 701006-02 Off-Road Operations, 2L, 2W, 4.5 m (15') to 600 mm (24 9/32 ) From Pavement Edge
- 701301-02 Lane Closure, 2L, 2W, Short Time Operations
- 701331-02 Lane Closure, 2L, 2W, With Run-Around, for Speeds > 45 MPH
- 701901 Traffic Control Devices
- 720011 Metal Posts for Signs, Markers and Delineators
- 728001 Telescoping Steel Sign Support
- 729001 Applications of Types A and B Metal Posts (For Signs & Markers)
- 704001-04 Temporary Concrete Barrier

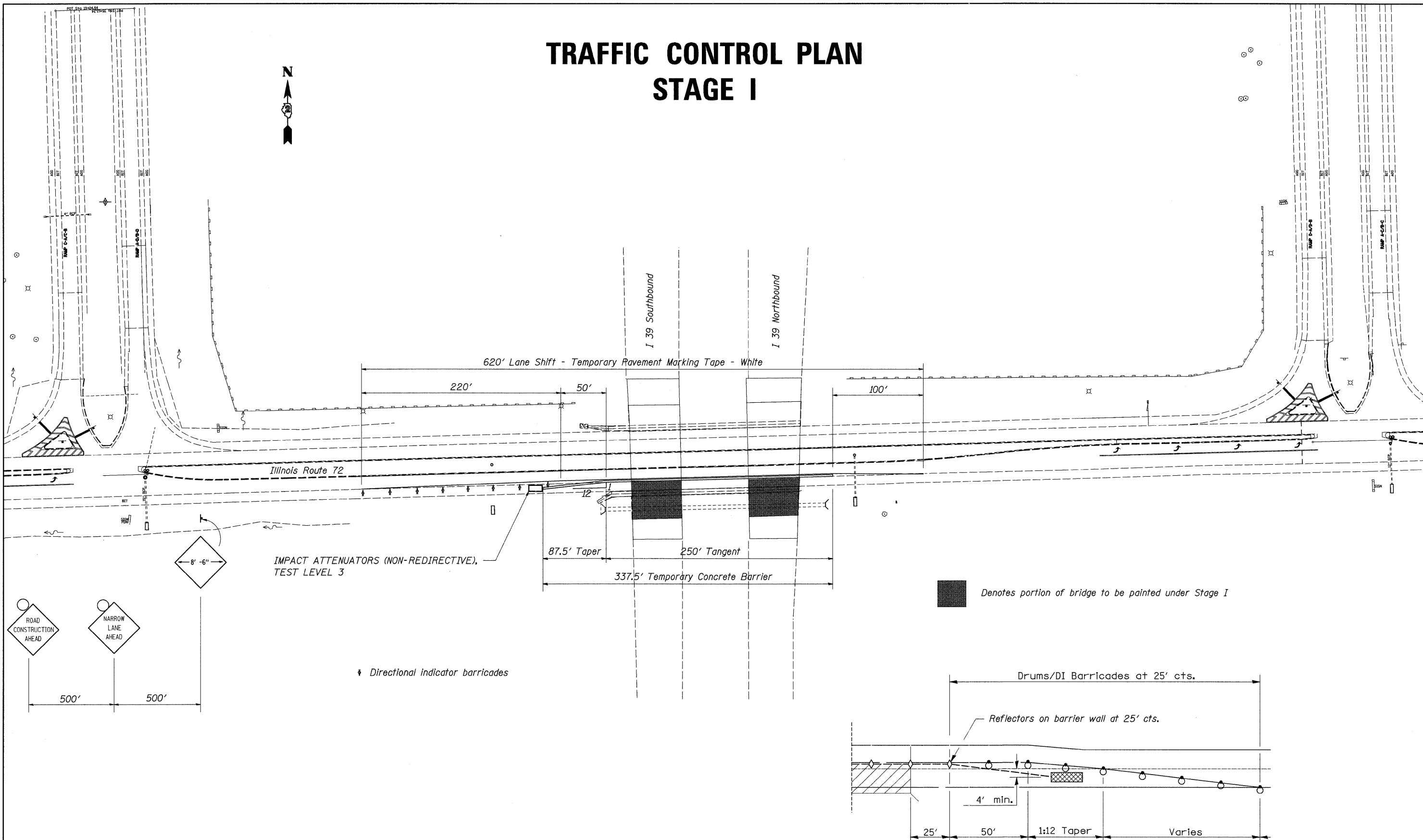
# INDEX OF SHEETS

1. Cover Sheet
2. Summary of Quantities
3. General Notes, Standards, Index of Sheets
4. Traffic Control Plan Stage I
5. Traffic Control Plan Stage II
6. Traffic Control Plan Stage III
7. Traffic Control Plan Stage I Cross Section
8. Traffic Control Plan Stage II Cross Section
9. Sign Details
10. - 18. Existing Bridge Plans

\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = llnkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES, INDEX OF SHEETS, STANDARDS</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
G:\BR\CADD plans\Ogle County\07100460047.dgn		DRAWN -	REVISED -			39	*	OGLE	18	3	
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -			CONTRACT NO. 64090					
PLOT DATE = Tue Jan 29 09:22:52 2008		DATE -	REVISED -			SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.

# TRAFFIC CONTROL PLAN STAGE I



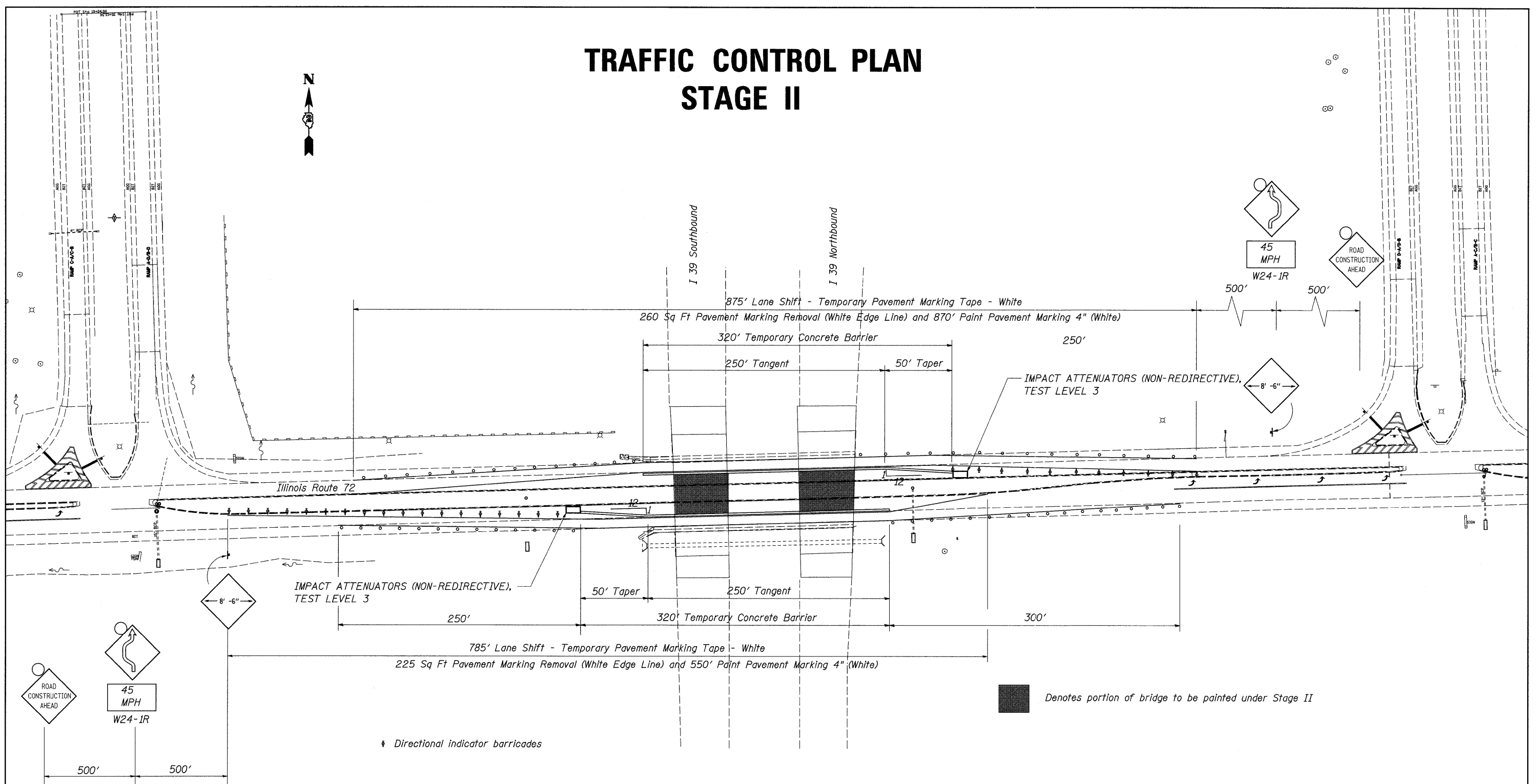
## BARRIER WALL DETAIL

\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL PLAN</b>				F.A.I. RTE. 39	SECTION .	COUNTY OGLE	TOTAL SHEETS 18	SHEET NO. 4
D:\BR\CADD plans\Ogle County\0710046004.dgn		DRAWN -	REVISED -		SCALE:      SHEET NO.      OF      SHEETS      STA.      TO STA.				CONTRACT NO. 64D90				
		CHECKED -	REVISED -										
		DATE -	REVISED -										

PLOT SCALE = 50.0000' / IN.  
PLOT DATE = Tue Jan 29 09:22:53 2008

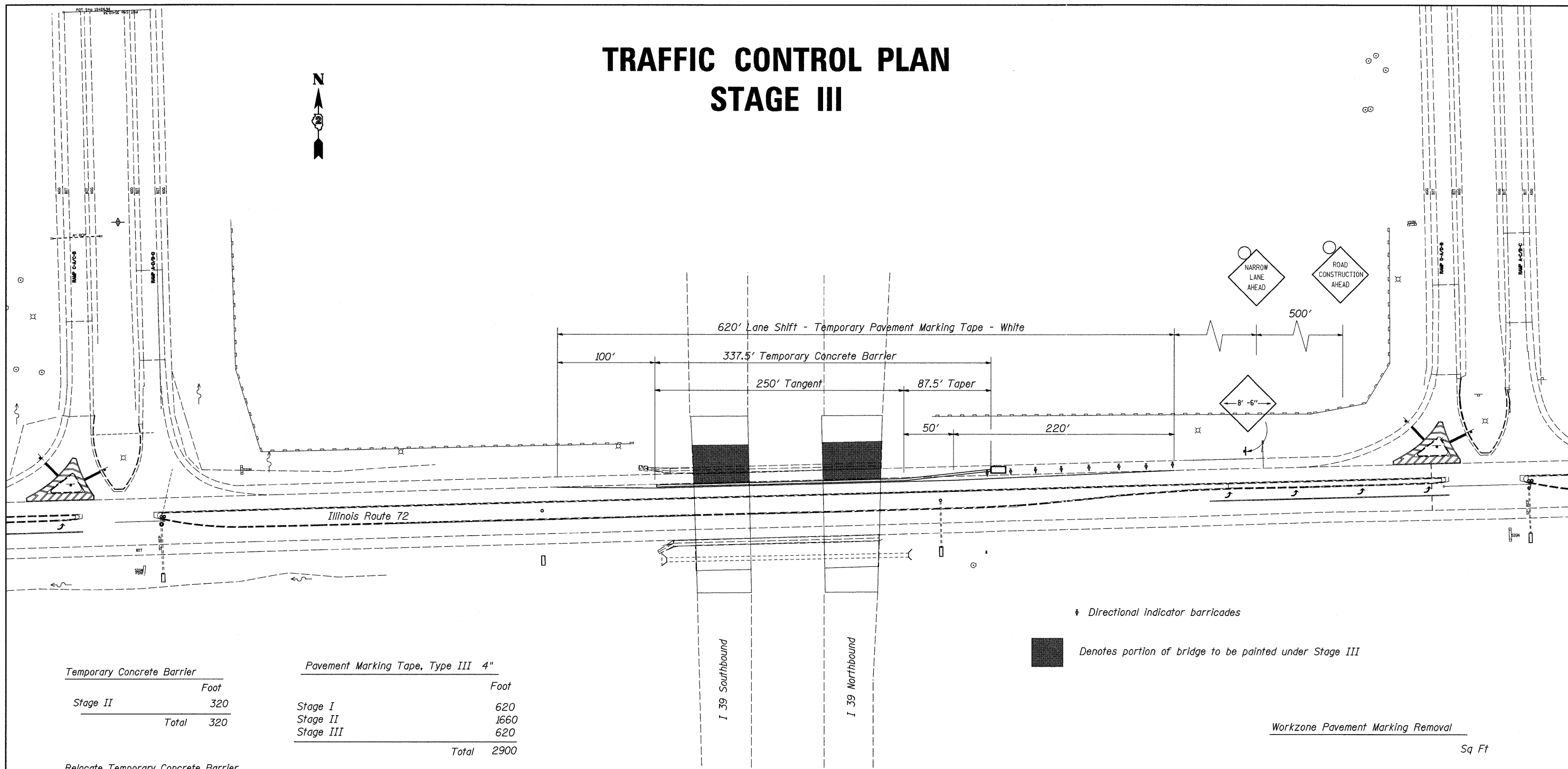
# TRAFFIC CONTROL PLAN STAGE II



\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = linkj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL PLAN</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = Tue Jan 29 09:22:53 2008		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO.	OF	SHEETS	STA. TO STA.	

# TRAFFIC CONTROL PLAN STAGE III



† Directional indicator barricades

■ Denotes portion of bridge to be painted under Stage III

Temporary Concrete Barrier	
	Foot
Stage II	320
<b>Total</b>	<b>320</b>

Pavement Marking Tape, Type III 4"	
	Foot
Stage I	620
Stage II	1660
Stage III	620
<b>Total</b>	<b>2900</b>

Relocate Temporary Concrete Barrier	
	Foot
Tapers	140
Temporary Storage	320
<b>Total</b>	<b>460</b>

Pavement Marking Removal	
	Sq Ft
Stage II	
Eastbound	260
Westbound	225
<b>Total</b>	<b>485</b>

Workzone Pavement Marking Removal	
	Sq Ft
Stage I	175
Stage II	560
Stage III	175
<b>Total</b>	<b>910</b>

Paint Pavement Marking - Line 4"	
	Foot
Post Project	
Eastbound	785
Westbound	875
<b>Total</b>	<b>1660</b>

Temporary Impact Attenuators	
	Each
Stage II	2
<b>Total</b>	<b>2</b>

Relocate Temporary Impact Attenuators	
	Each
Stage I or III	2
<b>Total</b>	<b>2</b>

\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -
D:\BRV\CADD plans\Ogle County\07100460047.dgn		DRAWN -	REVISED -
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PLOT DATE = Tue Jan 29 09:22:53 2008		DATE -	REVISED -

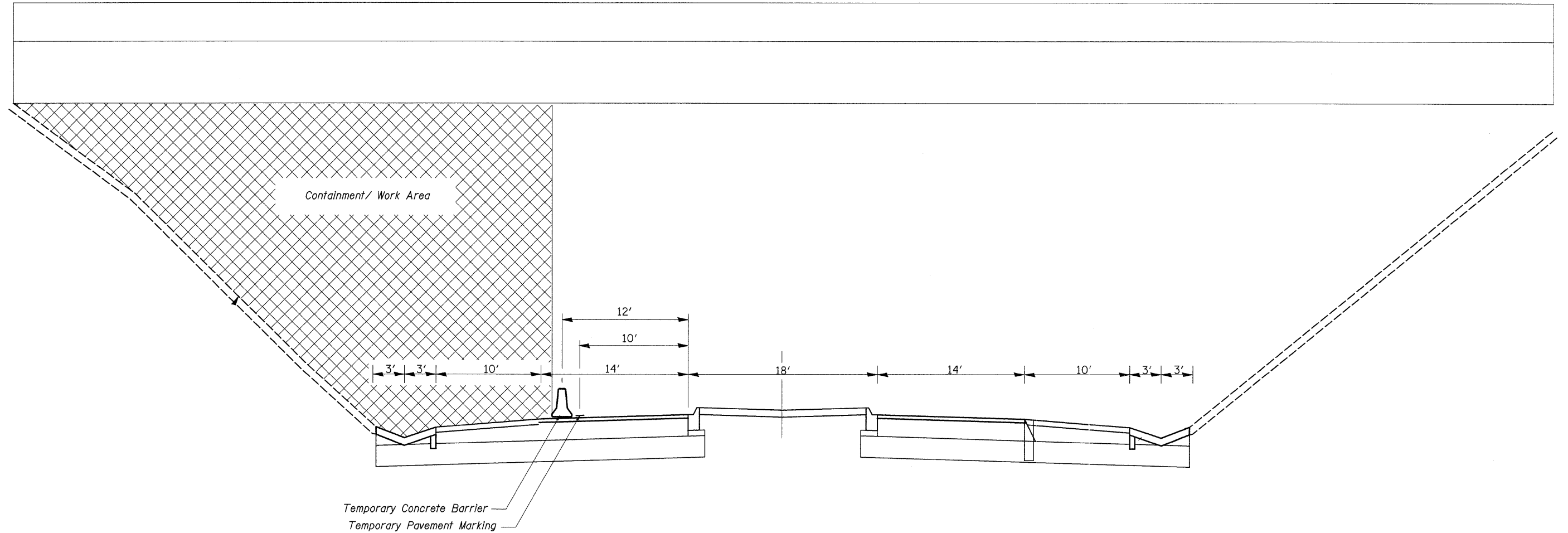
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL PLAN**

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

F.A.I. RTE. 39	SECTION	COUNTY OGLE	TOTAL SHEETS 18	SHEET NO. 6
CONTRACT NO. 64D90		ILLINOIS FED. AID PROJECT		

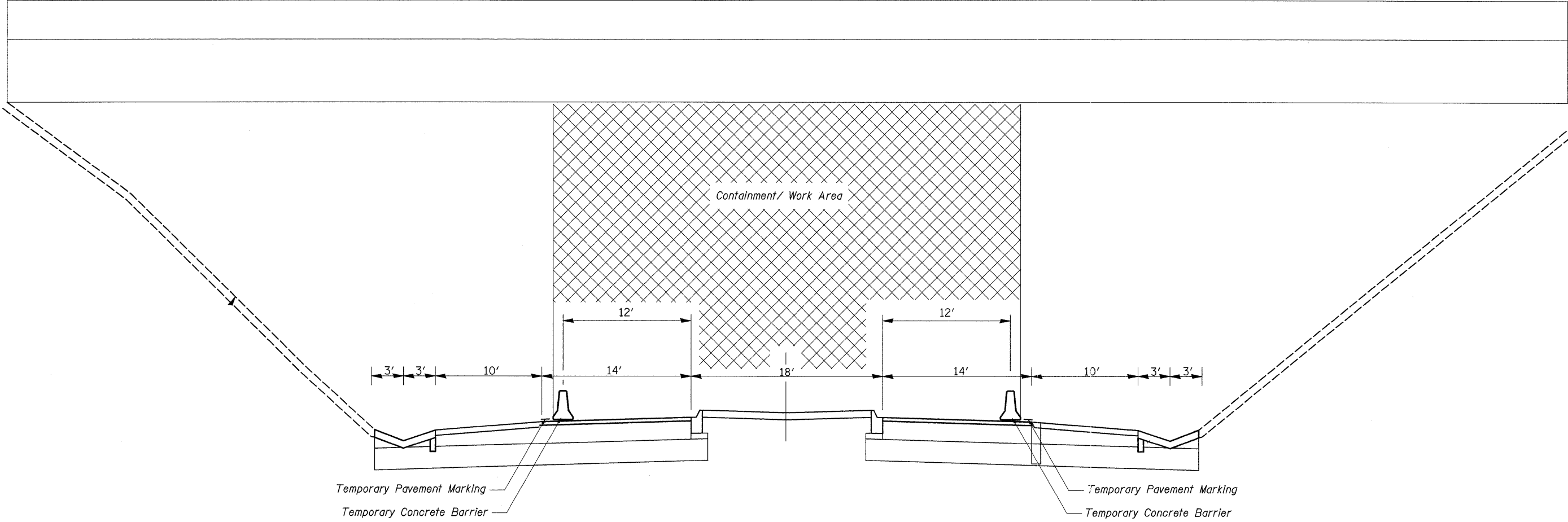
# TRAFFIC CONTROL PLAN



\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL PLAN</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = Tue Jan 29 09:22:54 2008		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO.	OF	SHEETS	STA. TO STA.	

# TRAFFIC CONTROL PLAN



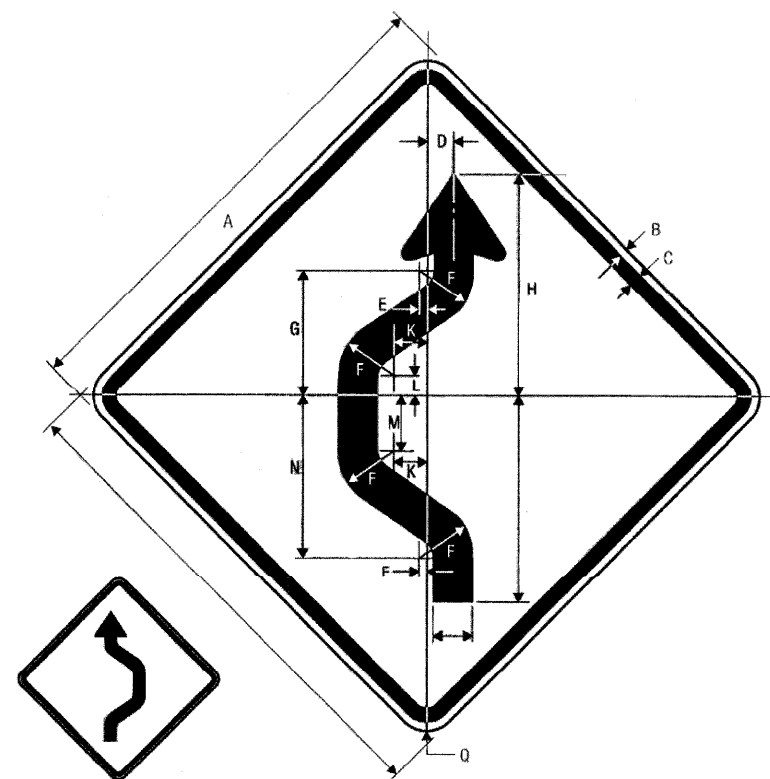
Cross Section showing Stage II

\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL PLAN</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\BR\CADD plans\Ogle County\07100460047.dgn		DRAWN -	REVISED -			39	•	OGLE	18	8	
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PLOT DATE = Tue Jan 29 09:22:54 2008		DATE -	REVISED -			SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.



03/28/05



W24-1R  
DOUBLE REVERSE CURVE (1 LANE)

W24-1L  
DOUBLE REVERSE CURVE (1 LANE)

\*See page 6-2 for symbol design.

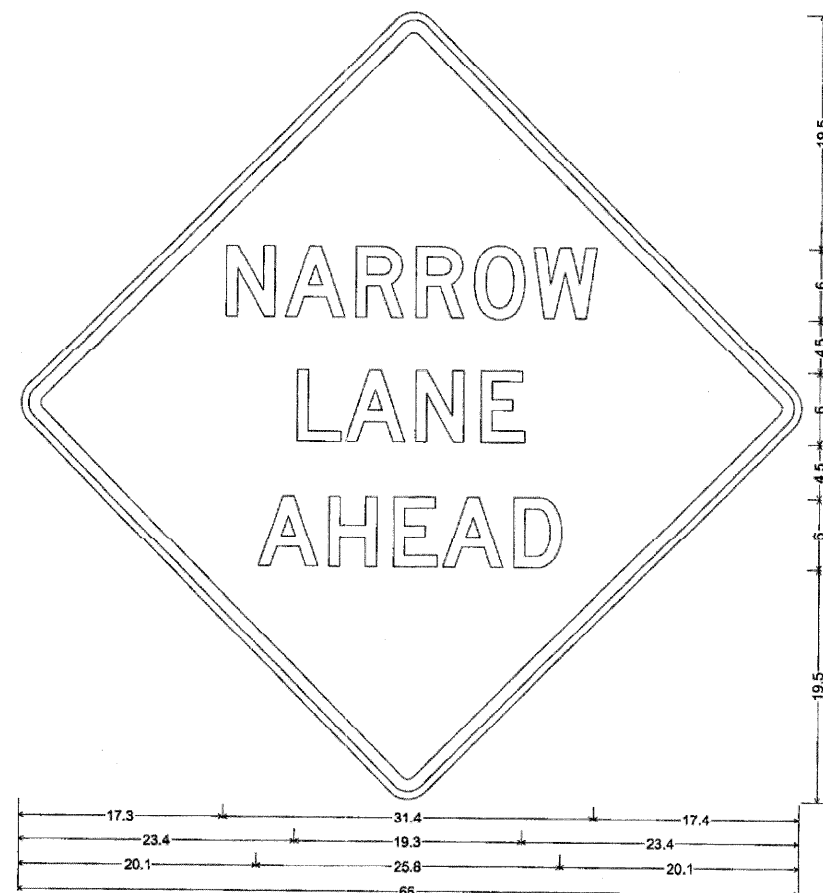
A	B	C	D	E	F	G	H	J	K	L	M
30	.5	.75	1.601	.280	3.082	7.405	13.570	12.569	2.361	1.481	3.522
36	.625	.875	1.921	.336	3.698	8.886	16.284	15.082	2.833	1.777	4.226
48	.75	1.25	2.561	.448	4.931	11.848	21.712	20.110	3.777	2.369	5.635

C

N	P	Q
9.487	2.401	1.875
11.384	2.881	2.25
15.179	3.841	3

TTC SIGN COLORS:  
SYMBOL — BLACK  
BACKGROUND—ORANGE (RETROREFLECTIVE)

2-166



48.0" across sides 2.3" Radius, 1.0" Border, 0.6" indent, Black on Orange;  
"NARROW" D 2K; "LANE" D 2K; "AHEAD" D 2K;

Table of letter and object lefts.

N	A	R	R	O	A
17.3	22.3	28.3	33.4	38.4	43.4

L	A	N	E
23.4	27.4	33.4	39.0

A	H	E	A	D
20.1	26.1	31.6	35.9	41.9

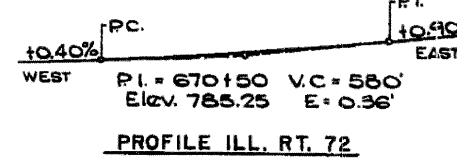
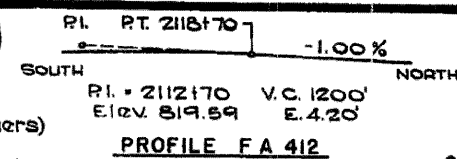
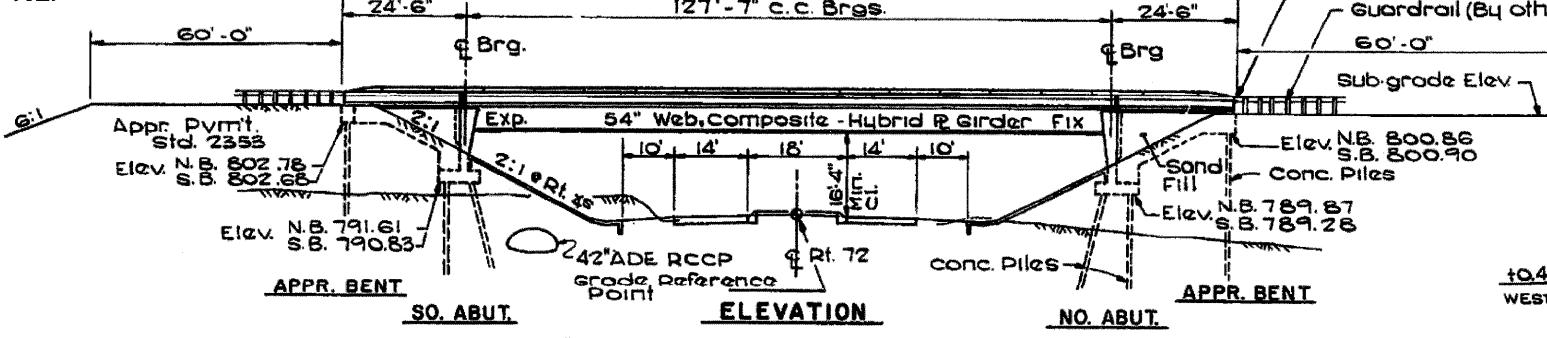
\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = lmkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SIGN DETAILS</b>	F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\CADD plans\Ogle County\07100460047.dgn		DRAWN -	REVISED -			39	.	OGLE	18	9
PLOT SCALE = 58.0000' / IN.		CHECKED -	REVISED -			CONTRACT NO. 64D90				
PLOT DATE = Tue Jan 29 09:22:54 2005		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
SCALE: SHEET NO. OF SHEETS STA. TO STA.										

# FOR INFORMATION ONLY

Bench Mark: USC & GS tablet  
in hdl. 168 Rt. 2124+31  
Elev. 785.32

EXISTING STRUCTURE  
None



**GENERAL NOTES**

All reinforcement bars shall be lapped 24 dia. unless otherwise shown. Fasteners shall be high strength bolts. Bolts 7/8": open holes 1 5/16", unless otherwise noted.

Calculated weight of structural steel = 537,650 lbs.

The basic lead silico chromate paint system shall be used for shop and field painting of structural steel.

Anchor bolts shall be set before bolting crossframes over supports.

Slope wall shall be reinforced with welded wire fabric 6"x6" mesh weighing 53 lbs. per 100 sq. ft.

The contractor shall drive one concrete test pile in a permanent location at each abutment as directed by the Engineer before ordering the remainder of piles.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of abutments.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X concrete, except the aggregates shall conform to the requirements of Mandrail Concrete.

Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimmed the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness Zone 2 are the bottom flanges and web plates and splice plates.

For boring data see Special Provisions.

All reinforcement bars in the deck slab shall conform to the requirements of AASHTO M 31 or M 53 Grade 60.

**DESIGN STRESSES**

fc = 1400 psi Except as follows:

fc = 1000 psi Conc. in contact w/earth

fs = 20,000 psi AASHTO M183 Struct. st.

fs = 27,000 psi AASHTO M222 Flanges

fs = 20,000 psi Reinforcement (3/8")

vc = 75 psi allowable shear in flg.

n = 10

Allowable Live Load Deflection L/1200 (Composite)

**DESIGN LOADING HS 20-44**

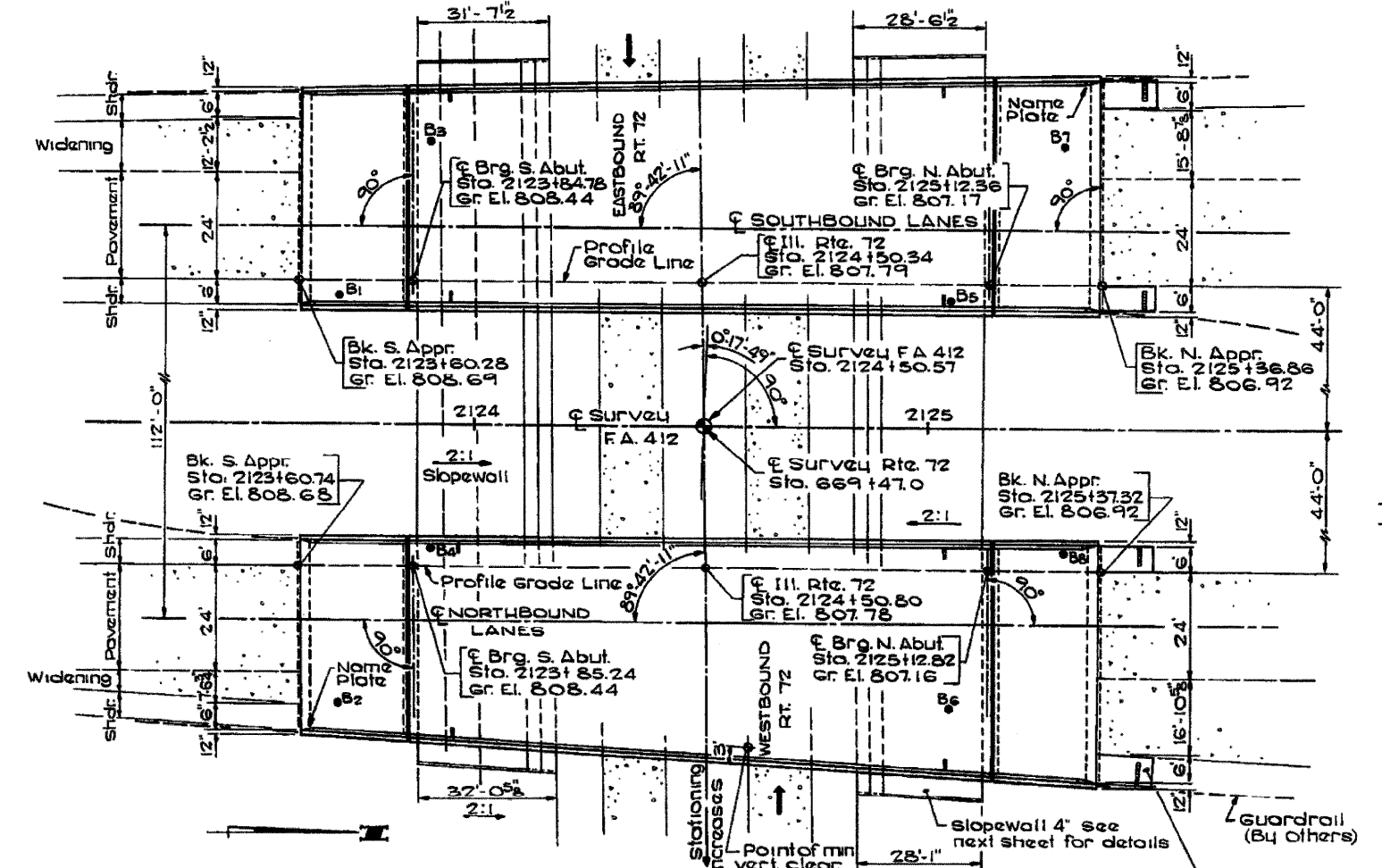
Allowance for 25 p.s.f. future wearing surface

Structure designed in accordance with AASHTO specifications dated 1973.

**DECK SLAB LOAD FACTOR DESIGN**  
fc = 3500 psi  
fy = 60,000 psi  
n = 8.5

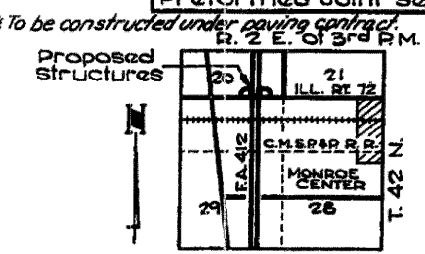
**BILL OF MATERIAL - 2 STRUCTURES**

ITEM	UNIT	SUB.	SUPER.	TOTAL
* Bituminous Conc. Surf. Course, Mixture D, Cl. I	TONS		153	153
* Protective Coat	Sq.Yds.		262	262
Class X Concrete	Cu.Yds.	427.3	637.0	1064.3
Structural Steel	L.Sum			
Aluminum Railing	Lin.Ft.		694	694
Concrete Piles	Lin.Ft.	3857		3857
Test Piles - concrete	EQ.	4		4
Reinforcement Bars	Lbs.	48620	153040	201660
* Waterproofing Membrane System	Sq.Yds.		1862	1862
Drainage Scuppers	EQ.		8	8
Name Plates	EQ.		2	2
Slope Wall 4"	Sq.Yds.	1513		1513
Stud Shear Connectors	EQ.		4494	4494
Sand Backfill	Cu.Yds.	619		619
Preformed Joint Sealer 2 1/2"	Lin.Ft.		107	107
Preformed Joint Sealer 4"	Lin.Ft.		98	98



STATION 2124+50.57  
BUILT 197 BY  
STATE OF ILLINOIS  
FA RT. 412 SEC. 141-3HB  
FA PROJ. EBF-EBFG-412-5(8)  
LOADING HS 20

**NAME PLATE**  
Standard 2113



**GENERAL PLAN AND ELEVATION**  
FA RTE. 412 SECTION 141-3HB  
OVER ILL. RTE. 72  
OGLE COUNTY  
STATION 2124+50.57

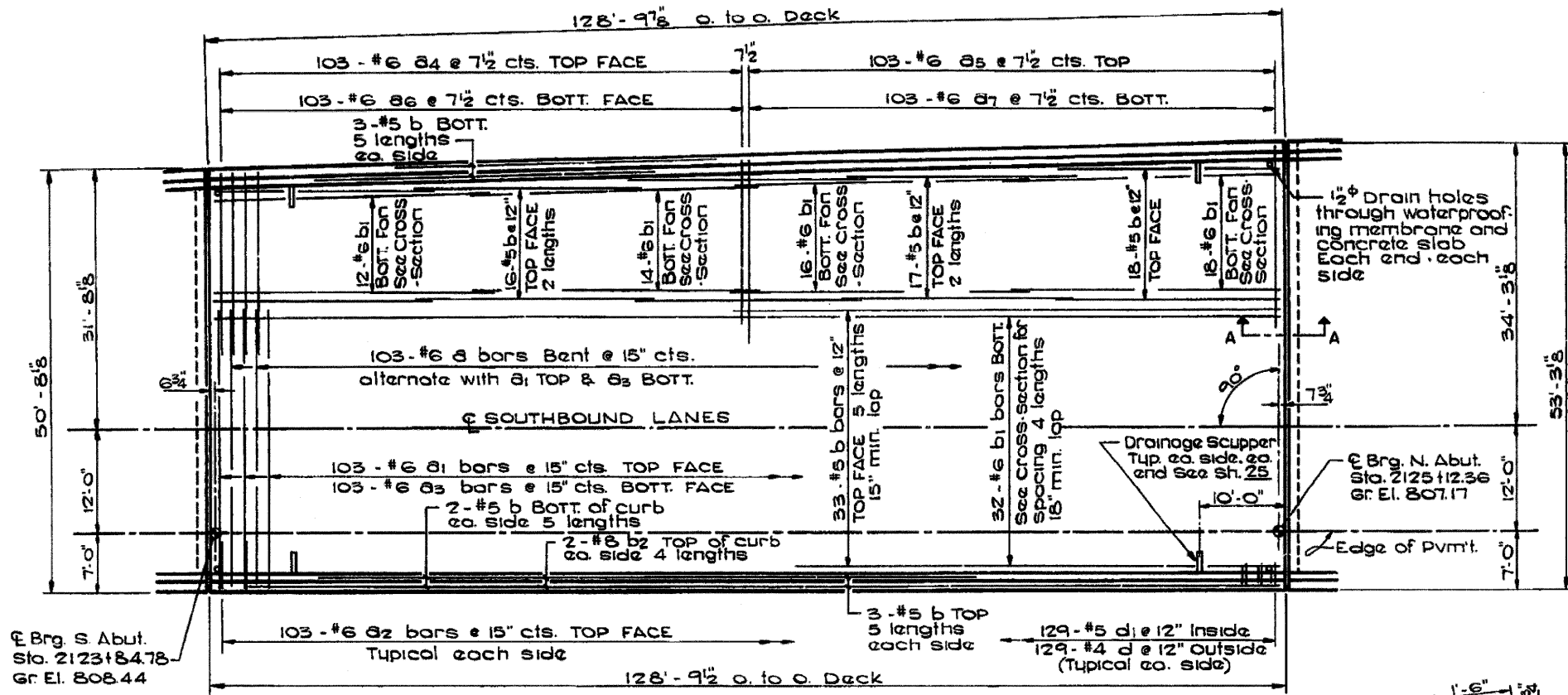
DESIGNED BY B. THOMPSON AUG 1973	DRAWN BY R. BROAD OCT SEPT 1973	REVISED BY D.E. HOFFMAN OCT SEPT 1973
PREPARED BY <b>WILLET, HOFFMANN &amp; ASSOCIATES INC.</b> CONSULTING ENGINEERS DIXON, ILLINOIS		Revised 11/6/75 Revised 4/23/76

*Donald E. Hoffman*  
Oct. 3, 1973

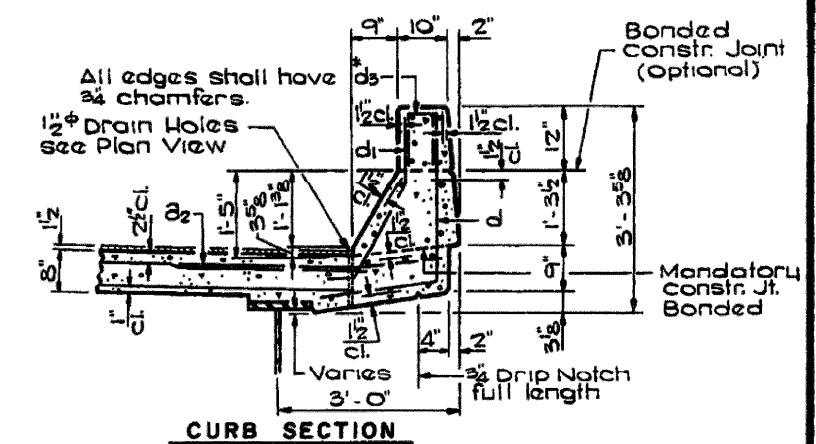
# FOR INFORMATION ONLY

F.A. RTE. NO.	SECTION 141-3A, V6, U6, U8-1	TOTAL SHEETS	NO.
COUNTY	OGLE		
ILLINOIS PROJECT			

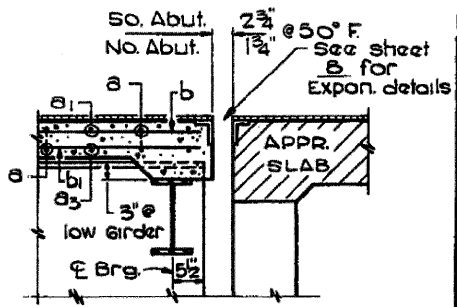
**NOTE**  
For placement of d<sub>5</sub> and "e" bars see sheet 6



**PLAN - SOUTHBOUND DECK**



**CURB SECTION**



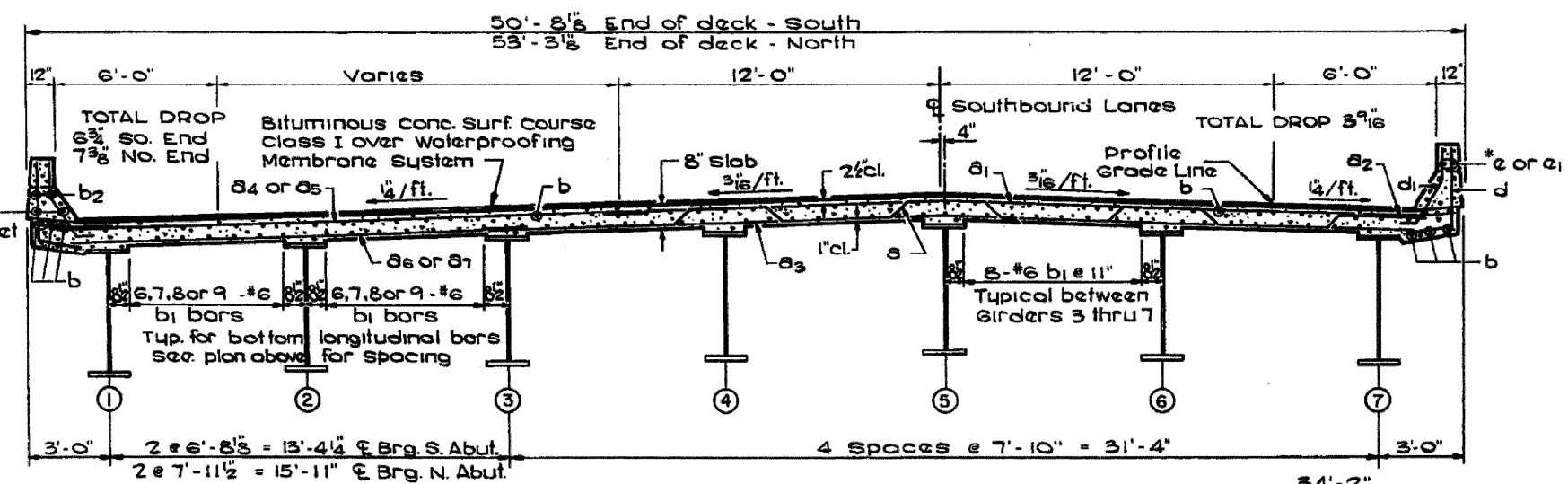
**SECTION A-A**

**BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
a	#6	35'-4"	~
a1	#6	29'-8"	~
a2	#6	4'-0"	~
a3	#6	33'-7"	~
a4	#6	21'-3"	~
a5	#6	22'-4"	~
a6	#6	17'-3"	~
a7	#6	18'-6"	~
b	#5	26'-9"	~
b1	#6	33'-3"	~
b2	#8	33'-9"	~
d	#4	4'-7"	J
d1	#5	3'-7"	J

Class X Concrete cu. yd. 191.5  
Reinforcement Bars Lbs. 50,520

\* Parapet reinforcement and class X concrete are billed on sheet 6



**CROSS SECTION Looking North**

**SUPERSTRUCTURE DETAILS (SOUTHBOUND STRUCTURE)**  
FA RTE. 412 SECTION 141-3HB  
OVER ILL. RTE. 72  
OGLE COUNTY  
STATION 2124 +50.57

\* D2 BRIDGE PAINTING 2008-2

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0:\BR\CADD plans\Ogle County\07100460047.dgn		DRAWN -	REVISED -
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

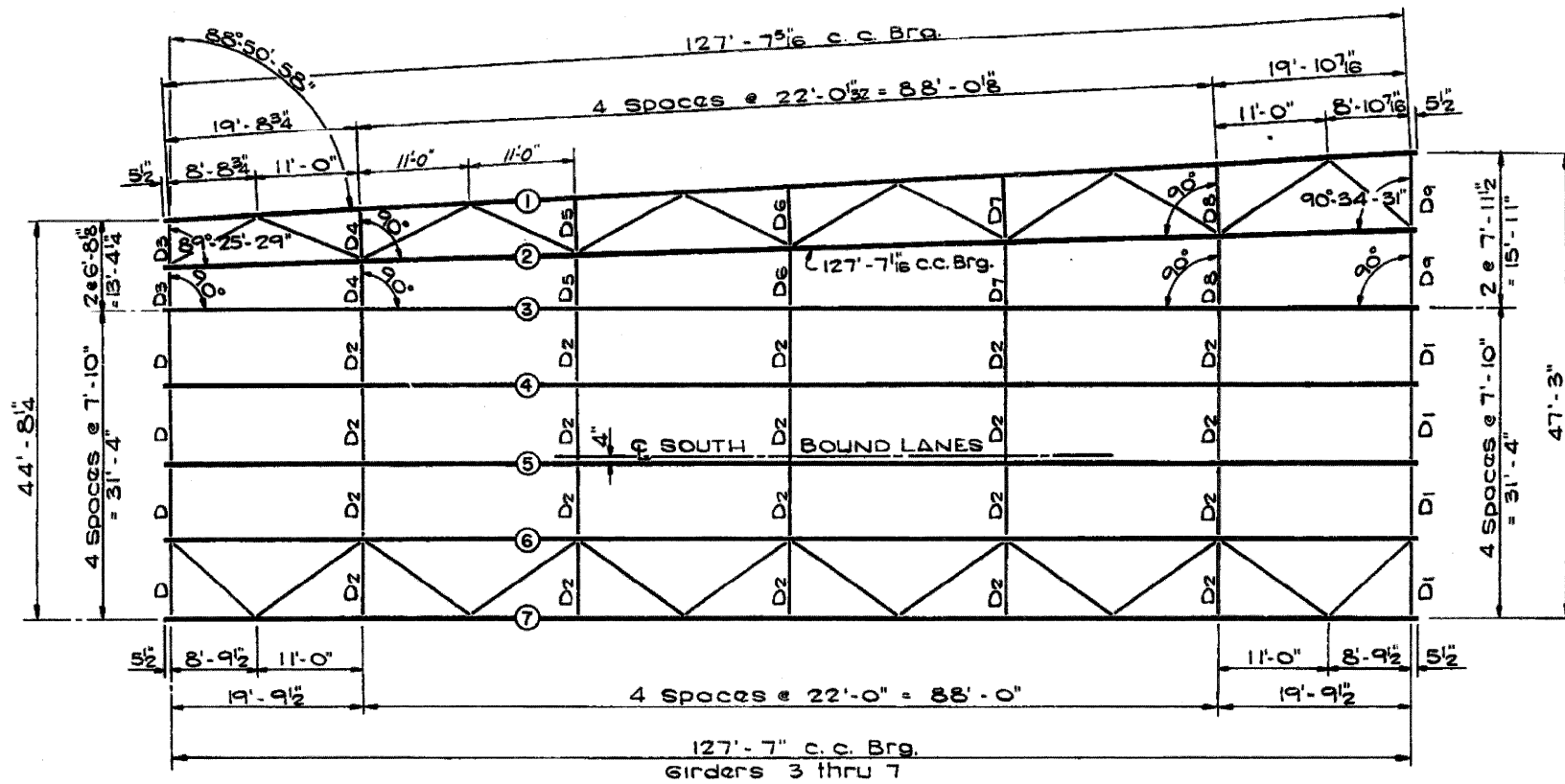
EXISTING BRIDGE PLANS

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

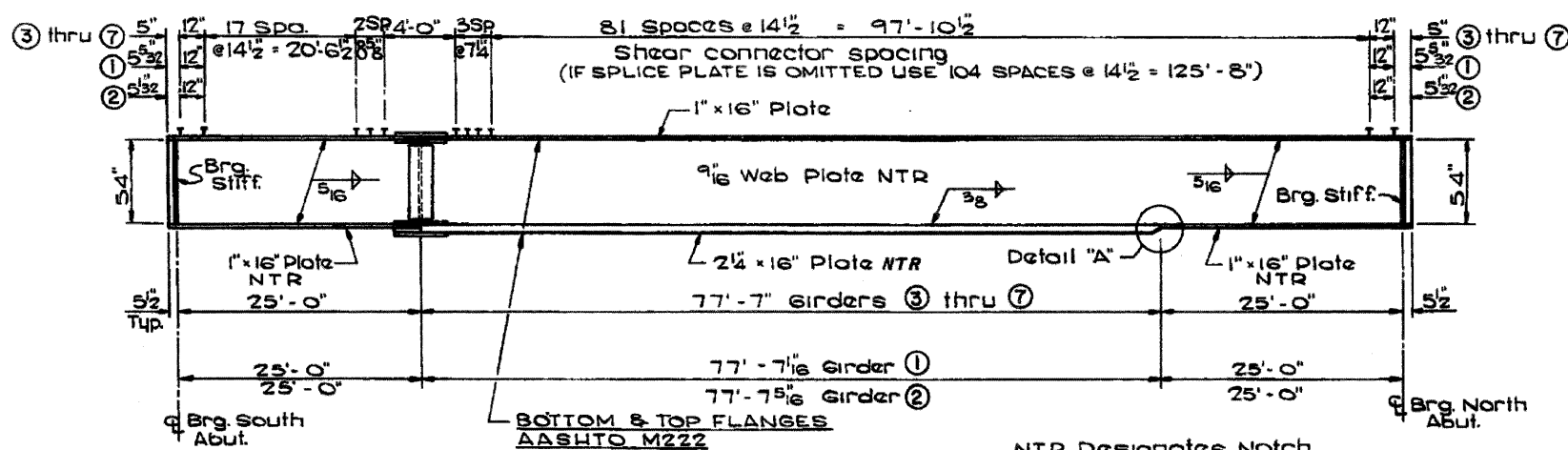
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	.	OGLE	18	11
CONTRACT NO. 64D90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

# FOR INFORMATION ONLY

FA RTE. NO.	SECTION 141-3 A, VB, UB, UB-1	TOTAL SHEETS
COUNTY	OGLE	18
ILLINOIS PROJECT		12



**FRAMING PLAN**

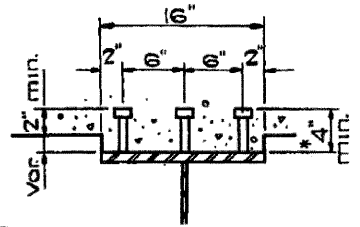


**GIRDER ELEVATION**

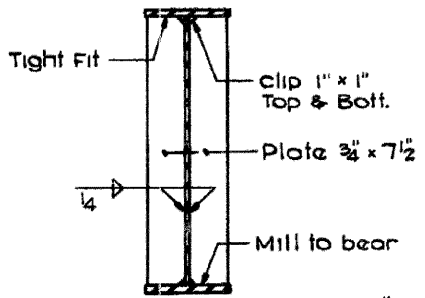
**\*\* ELEVATION TOP OF WEB PLATE**

GIRDER	¢ BRG. SO. ABUT.	¢ BRG. NO. ABUT.
1	807.136	805.807
2	807.275	805.973
3	807.415	806.139
4	807.555	806.279
5	807.666	806.390
6	807.544	806.260
7	807.401	806.125

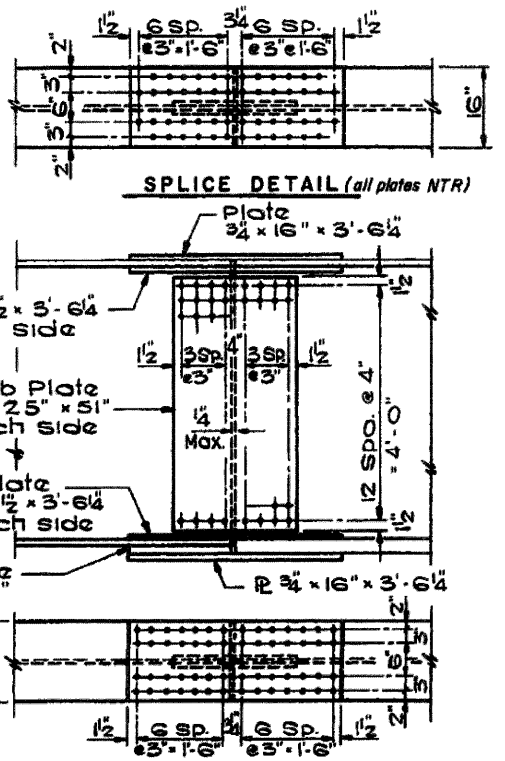
\*\* For Fabricators use only



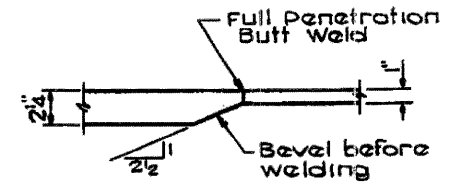
\* Height of studs to be determined in field to provide a minimum 2" embedment above bottom face of slab.  
**SHEAR CONNECTORS**  
 321 studs per girder  
 3/4" CR 1020 STL granular or solid flux filled headed studs automatically end welded.



**BEARING STIFFENERS**



**GIRDER DETAILS (SOUTHBOUND STRUCTURE)**  
 FA RTE. 412 SECTION 141-3HB  
 OVER ILL. RTE. 72  
 OGLE COUNTY  
 STATION 2124+50.57

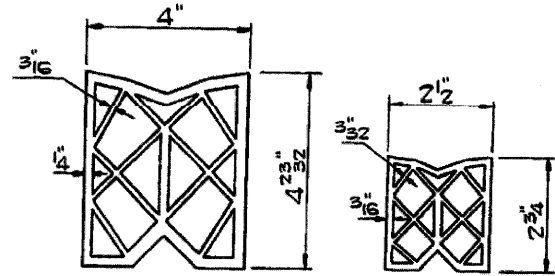


**DETAIL A**

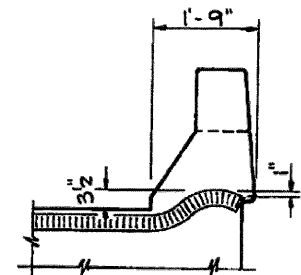
BRIDGE SHEET 7 OF 26  
 D2 BRIDGE PAINTING 2008-2

# FOR INFORMATION ONLY

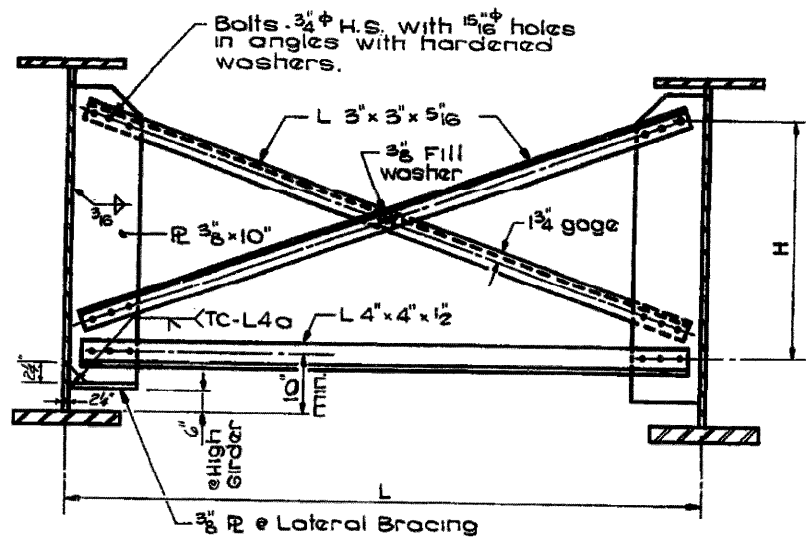
F.A.L. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	141-3HB-1	OGLE	18	13



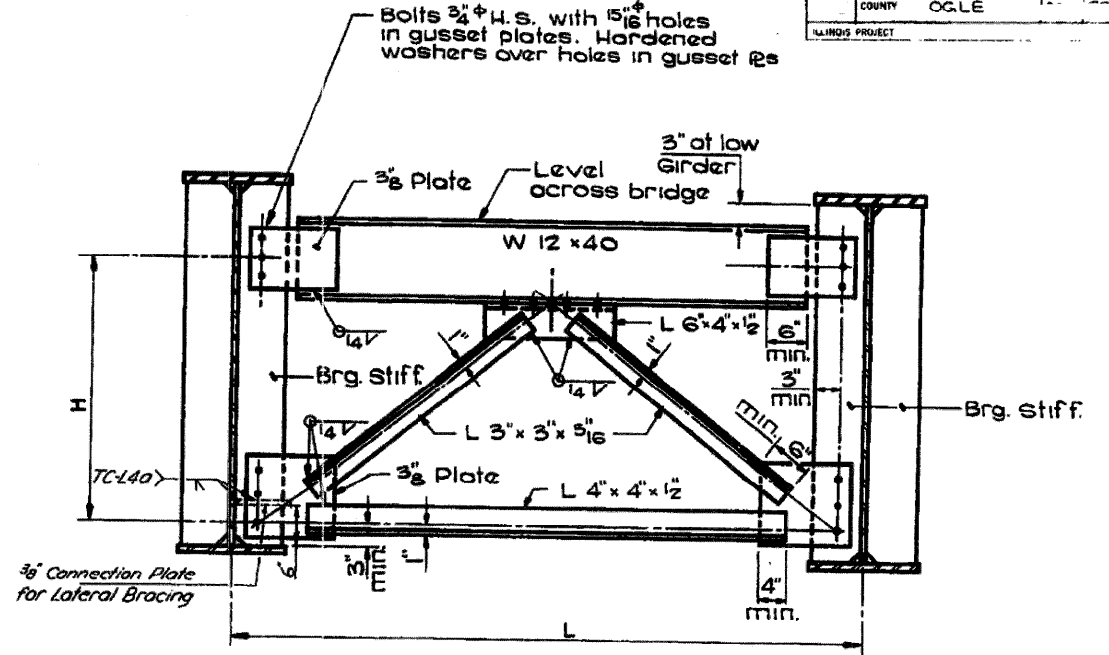
**PREFORMED JOINT SEALER**



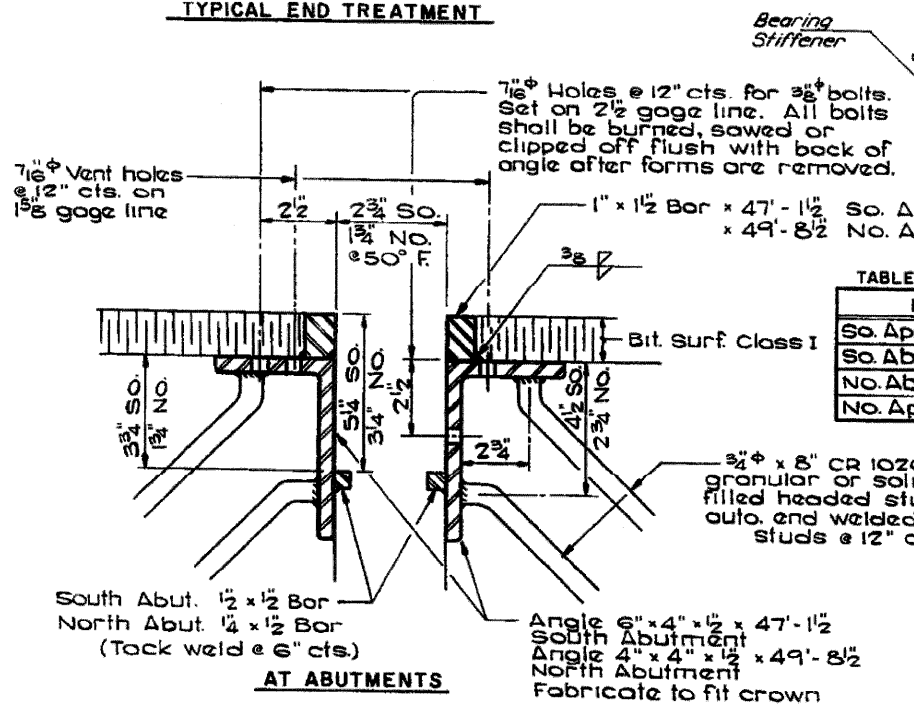
**TYPICAL END TREATMENT**



**INTERMEDIATE CROSS-FRAMES**  
D2 D4 D5 D6 D7 & D8

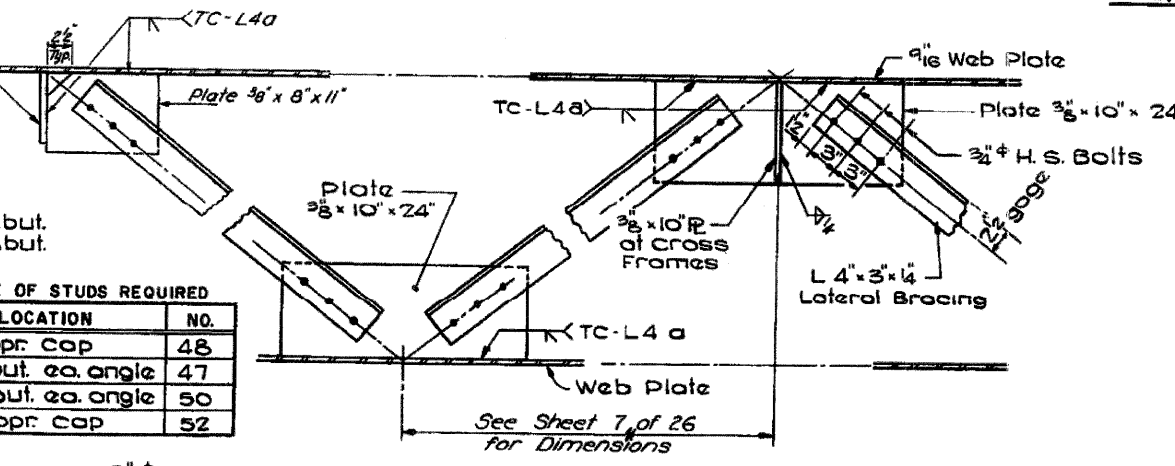


**END CROSS-FRAMES**  
D1 D3 & D9



**AT ABUTMENTS**

**ARMOR ANGLE DETAILS**



**LATERAL BRACING**

**TABLE OF STUDS REQUIRED**

LOCATION	NO.
So. Appr. Cap	48
So. Abut. ea. angle	47
No. Abut. ea. angle	50
No. Appr. Cap	52

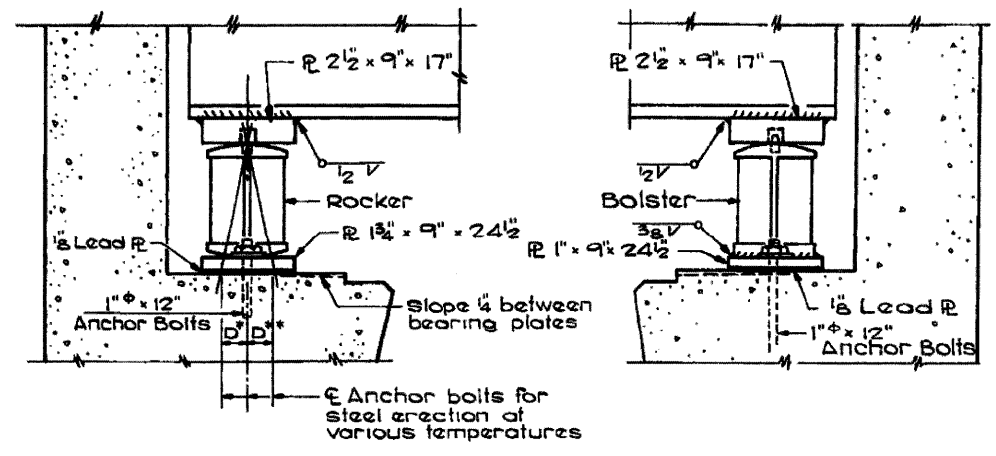
**CROSS FRAME DIMENSIONS**

MARK	LENGTH L	HEIGHT H	NO. REQ'D.
D	7'-10"	2'-11 1/2"	4
D1	7'-10"	2'-11"	4
D2	7'-10"	3'-1 1/2"	20
D3	6'-8 1/2"	2'-11 1/2"	2
D4	6'-10 1/2"	3'-1 1/2"	2
D5	7'-1 1/8"	3'-1 1/2"	2
D6	7'-3 3/8"	3'-1 1/2"	2
D7	7'-6 7/8"	3'-1 1/2"	2
D8	7'-9 3/8"	3'-1 1/2"	2
D9	7'-11 1/2"	2'-11"	2

**CROSS FRAMES AND EXPANSION JOINT DETAILS (SOUTHBOUND STRUCTURE)**  
FA RTE. 412 SECTION 141-3HB OVER ILL. RTE. 72  
**OGLE COUNTY**  
STATION 2124 +50.57

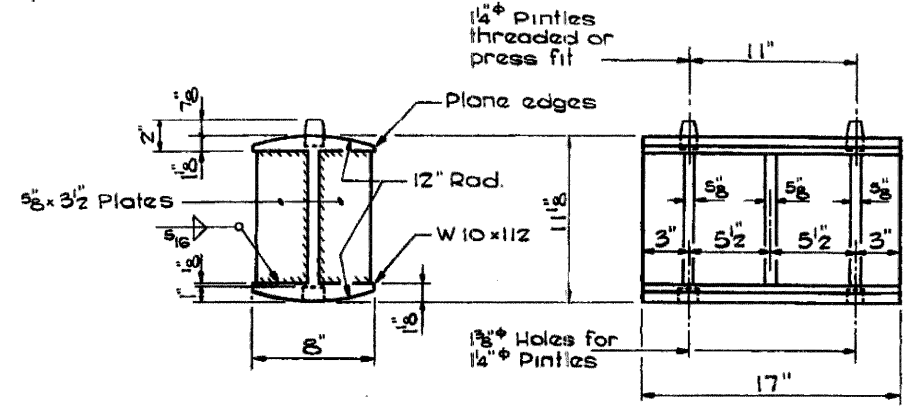
# FOR INFORMATION ONLY

F.A.I. SHEET NO.	SECTION 141-3A, VB, UB, US-1	TOTAL SHEETS	92
COUNTY	OGLE		
ILLINOIS PROJECT			

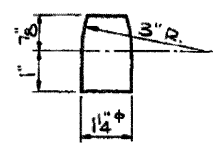


**SOUTH ABUTMENT**

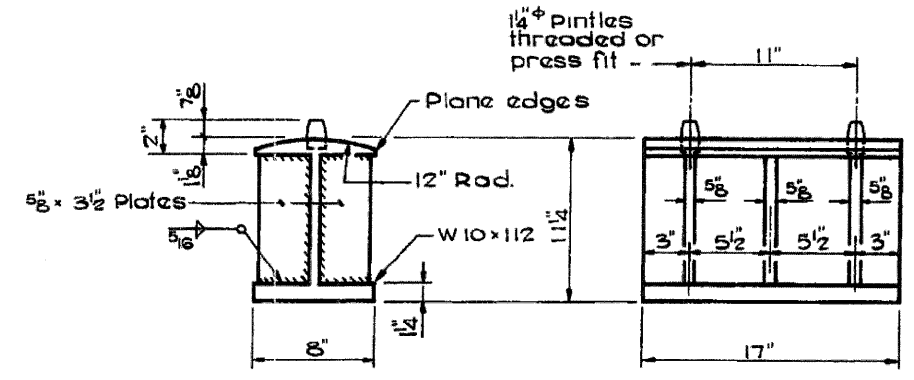
**NORTH ABUTMENT**



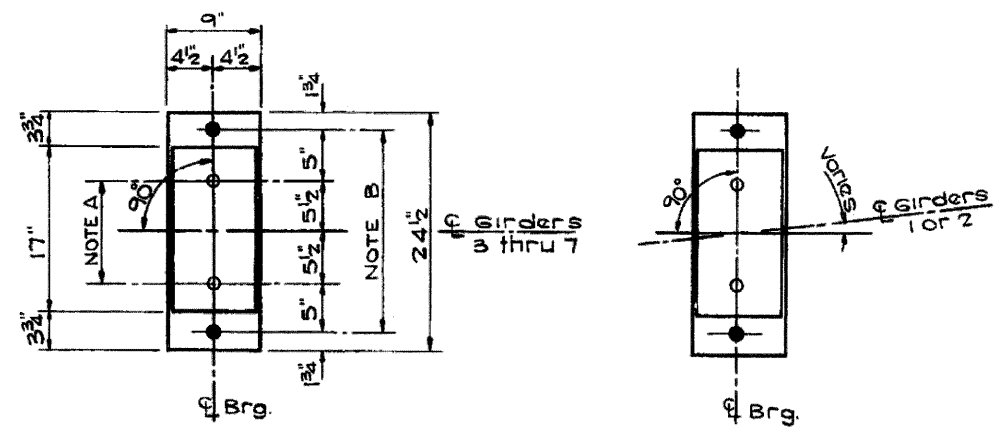
**ROCKER**



**PINTLE**



**BOLSTER**



**PLAN - ABUTMENTS**

**NOTE A**  
 1 3/8" Holes - 1" deep in top R for 1/4" Pintles. (Thread or press fit Pintles in bottom R. at South Abut. only.)

**NOTE B**  
 1 1/2" Holes for 1" Anchor Bolts - 2 1/2 x 2 1/2 x 5/16 R washers under nut.

**NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS**

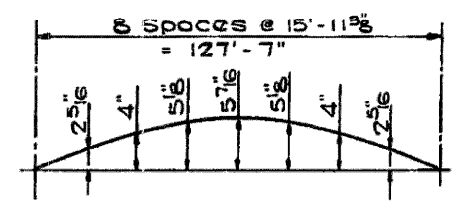
- a) D\* (Side of brg. away from fixed brg.)  
 $D^* = \frac{1}{8}$  per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
- D\*\* (Side of brg. toward fixed brg.)  
 $D^{**} = \frac{1}{8}$  per each 100' of expansion for every 15° rise above the normal temp. of 50° F.
- b) After beams have been erected and dimensions D\* & D\*\* determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

INTERIOR GIRDER MOMENT TABLE	
AT MID-SPAN *	
Is (in <sup>4</sup> )	43979
Ic (in <sup>4</sup> )	107122
Ss (in <sup>3</sup> )	1258.3
Sc (in <sup>3</sup> )	6745.7
D (K/1)	1.078
M <sub>Q</sub> ('K)	2228.8
fs <sub>Q</sub> (ksi)	21.25
s <sub>Q</sub> (K/1)	.456
Ms <sub>Q</sub> ('K)	931.8
M <sub>L</sub> ('K)	1429.2
Mimp ('K)	283.0
Total ('K)	2644
fs <sub>L</sub> +s <sub>Q</sub> (ksi)	4.71
fs Total (ksi)	25.96
VR (k)	56.9

INTERIOR GIRDER REACTION TABLE	
ABUTMENTS	
R <sub>Q</sub> (K)	94.6
R <sub>L</sub> (K)	57.4
Imp. (K)	11.4
R Total (K)	163.4

Is and Ss are the moment of inertia and section modulus of the steel section. Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs. VR is the maximum L + Impact range in span.

\* TOP FLANGE



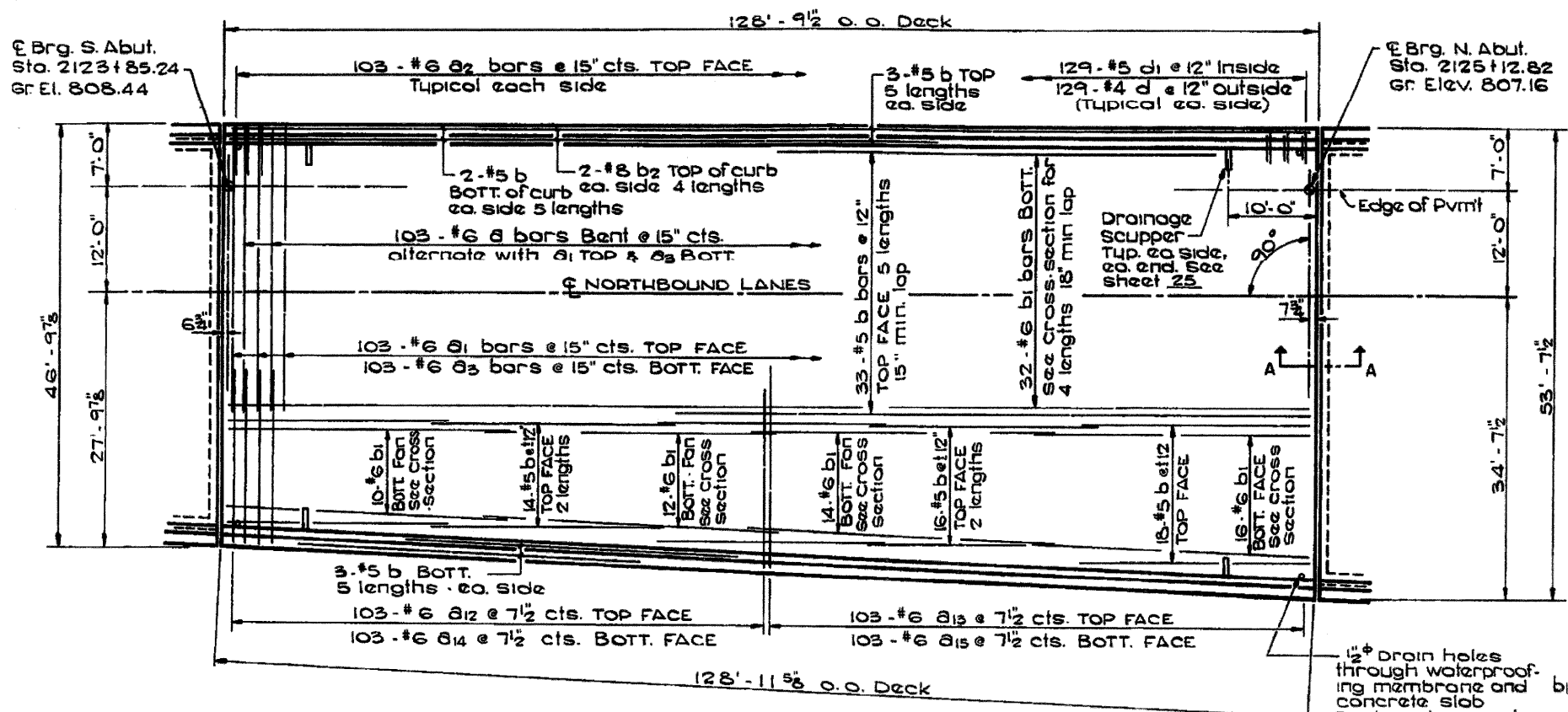
**CAMBER DIAGRAM**

**BEARING DETAILS**  
 (SOUTHBOUND STRUCTURE)  
 FA RTE. 412 SECTION 141-3HB  
 OVER ILL. RTE. 72  
 OGLE COUNTY  
 STATION 2124+50.57

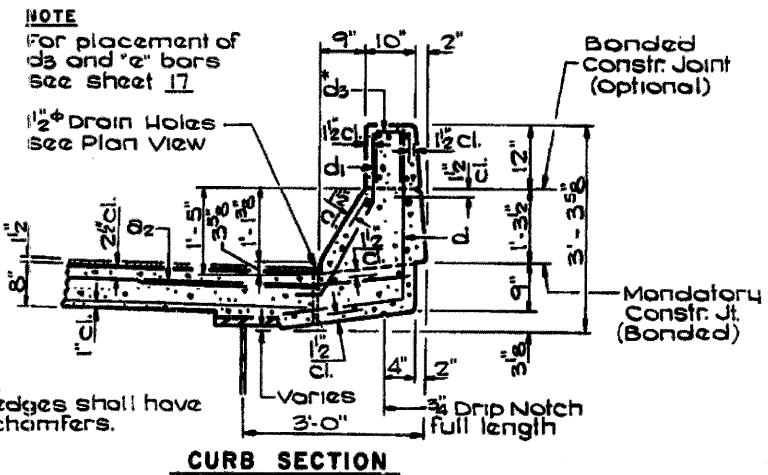
FILE NAME =	USER NAME = linkaj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>EXISTING BRIDGE PLANS</b>				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\CADD plans\Ogle County\07100460047.dgn		DRAWN -	REVISED -						39	.	OGLE	18	14
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -						CONTRACT NO. 64D90				
PLOT DATE = Tue Jan 29 09:22:58 2008		DATE -	REVISED -						SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

# FOR INFORMATION ONLY

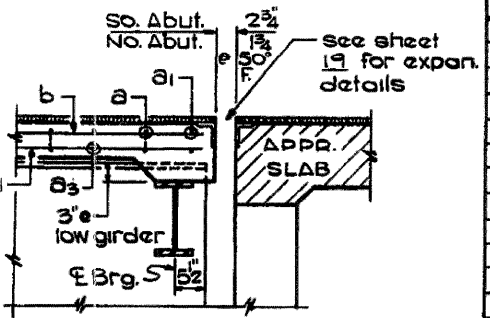
F.A.T. No.	SECTION 141-3A, VB, UB, UB-1	TOTAL SHEETS	NO
DATE	KUNTY OGLE		
ILLINOIS PROJECT			



**PLAN - NORTHBOUND DECK**



**CURB SECTION**

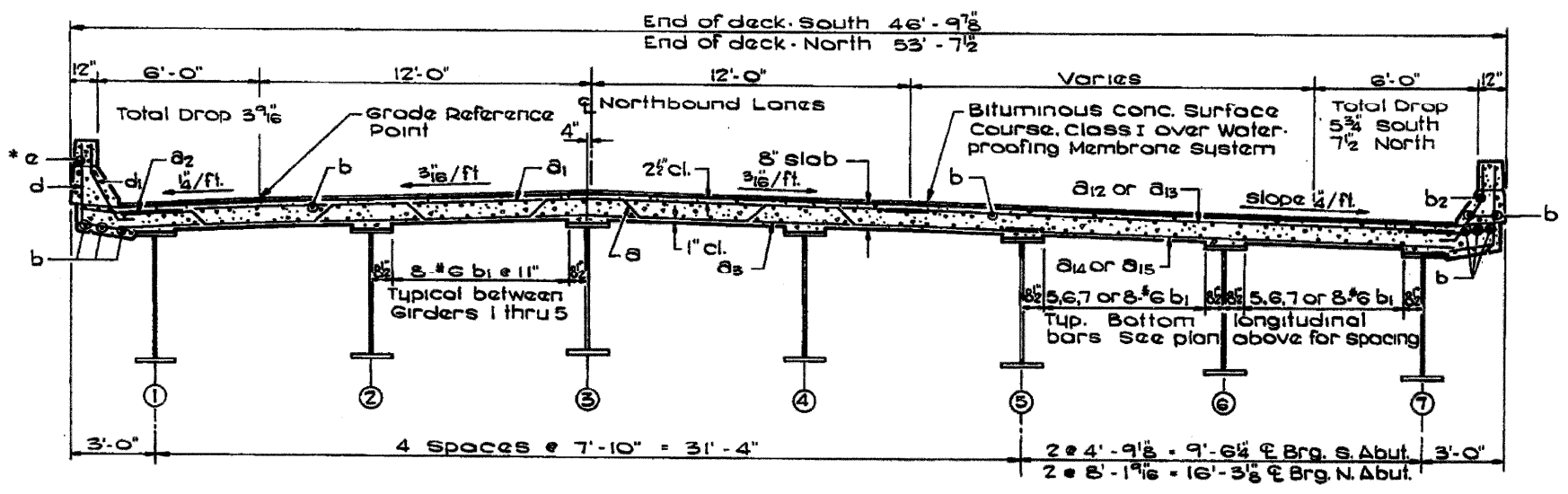


**SECTION A-A**

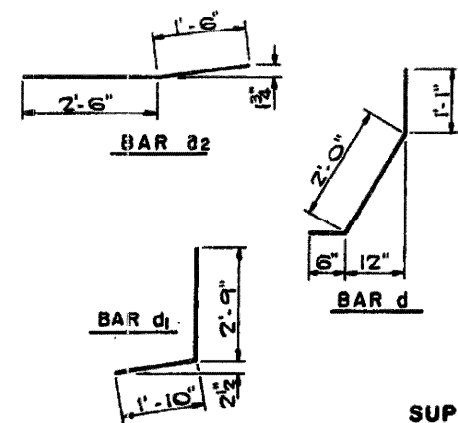
**BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
a	#6	35'-4"	
a1	#6	29'-8"	
a2	#6	4'-0"	
a3	#6	33'-7"	
a4	#6	18'-9"	
a5	#6	22'-2"	
a6	#6	14'-10"	
a7	#6	18'-3"	
b	#5	26'-9"	
b1	#6	33'-3"	
b2	#5	33'-9"	
d	#4	4'-7"	
d1	#5	3'-7"	

Class X Concrete Cu Yd. 185.9  
Reinforcement Bars Lbs. 49130



**CROSS SECTION Looking North**



\* Parapet reinforcement and class X concrete are billed on sheet 17.

**SUPERSTRUCTURE DETAILS**  
(NORTHBOUND STRUCTURE)  
FA RTE. 412 SECTION 141-3HB  
OVER ILL. RTE. 72  
OGLE COUNTY  
STATION 2124+50.57

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -
D:\BR\CADD plans\Ogle County\07100460047.dgn		DRAWN -	REVISED -
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = Tue Jan 29 09:22:59 2008		DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**EXISTING BRIDGE PLANS**

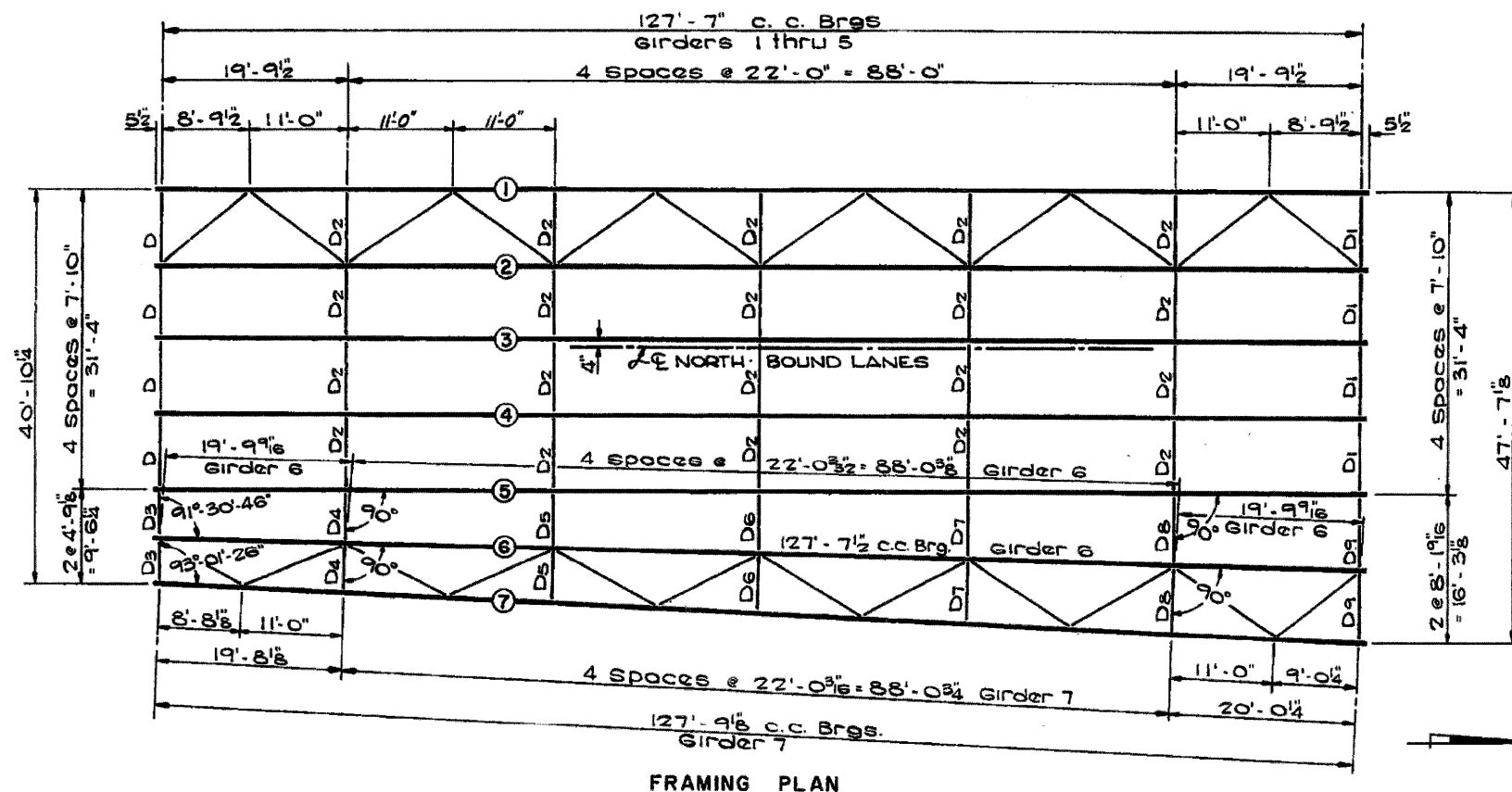
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	.	OGLE	18	15
CONTRACT NO. 64D90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

\* D2 BRIDGE PAINTING 2008

# FOR INFORMATION ONLY

FA RTE. NO.	SECTION 141-3A, VB, VB, NB-1	TOTAL SHEETS	NO.
COUNTY	OGLE		
ILLINOIS PROJ. # 11			

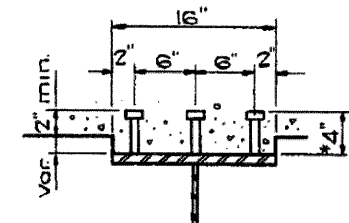


\*\* ELEVATION TOP OF WEB PLATE

GIRDER	℄ BRG. SO. ABUT.	℄ BRG. NO. ABUT.
1	807.397	806.121
2	807.540	806.264
3	807.662	806.386
4	807.551	806.275
5	807.411	806.135
6	807.311	805.965
7	807.212	805.796

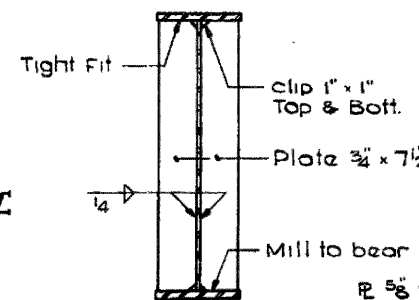
\*\* For Fabricators use only

\* Height of studs to be determined in field to provide a minimum 2" embedment above bottom face of slab.



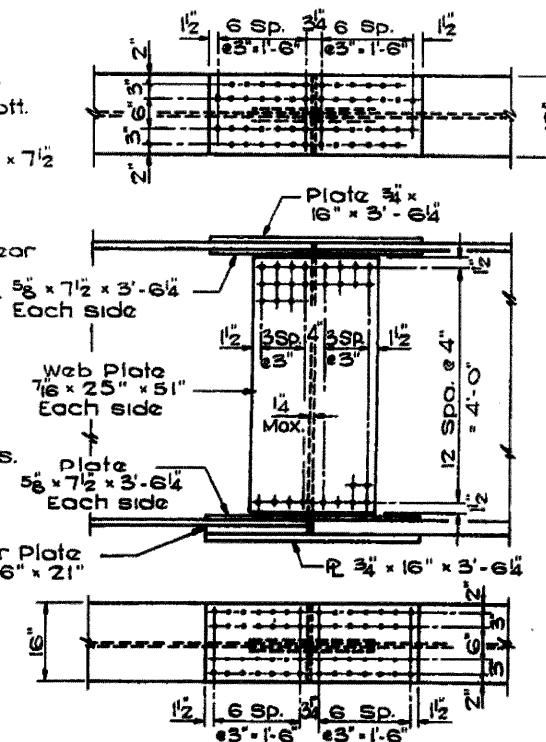
**SHEAR CONNECTORS**

321 Studs per girder  
3/4" CR 1020 STL granular or solid flux filled headed studs automatically end welded.



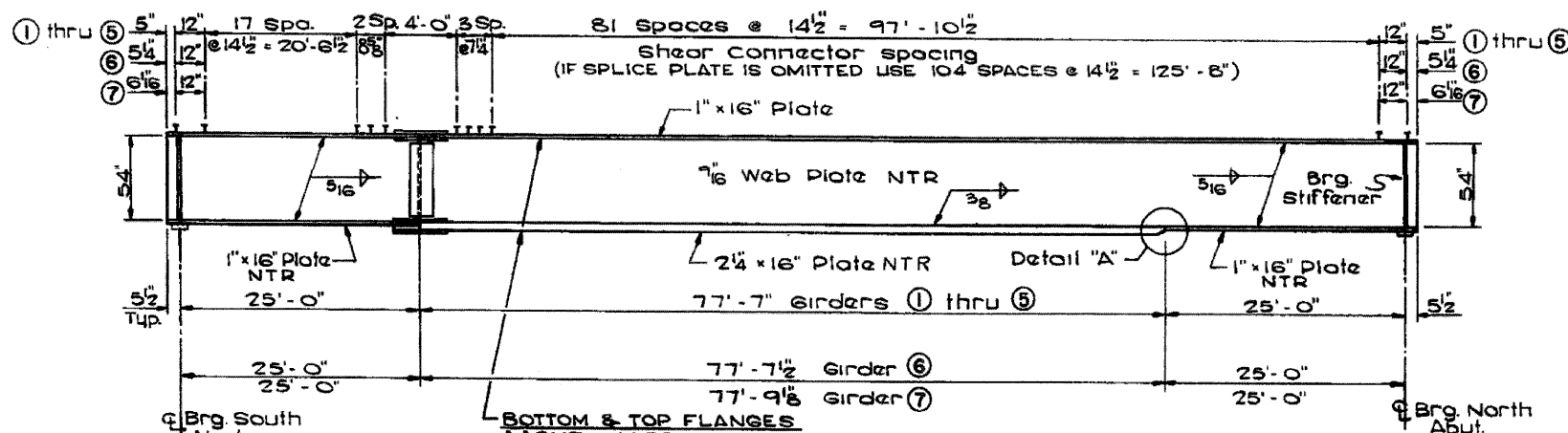
**BEARING STIFFENERS**

All bolts in splice 7/8" H.S.



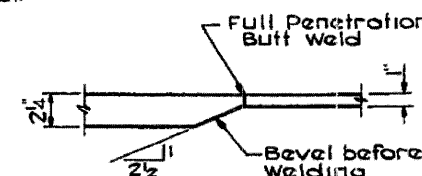
**SPLICE DETAIL (All plates NTR)**

**GIRDER DETAILS  
(NORTHBOUND STRUCTURE)**  
FA RTE. 412 SECTION 141-3HB  
OVER ILL. RTE. 72  
OGLE COUNTY  
STATION 2124+50.57



**GIRDER ELEVATION**

NTR Designates Notch Toughness Requirements



**DETAIL A**

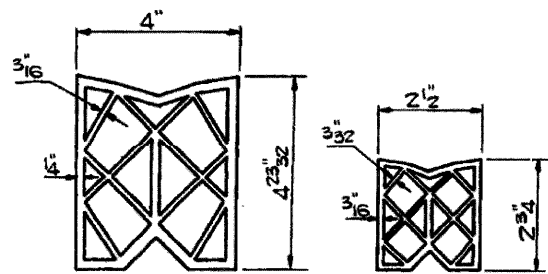
BRIDGE SHEET 18 OF 26  
\* D2 BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>EXISTING BRIDGE PLANS</b>				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
GA\BR\CADD plans\Ogle County\0712046004.dgn		DRAWN -	REVISED -						39		OGLE	18	16
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -						CONTRACT NO. 64D90				
PLOT DATE = Tue Jan 29 09:23:00 2008		DATE -	REVISED -						FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

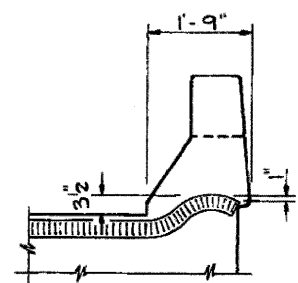


# FOR INFORMATION ONLY

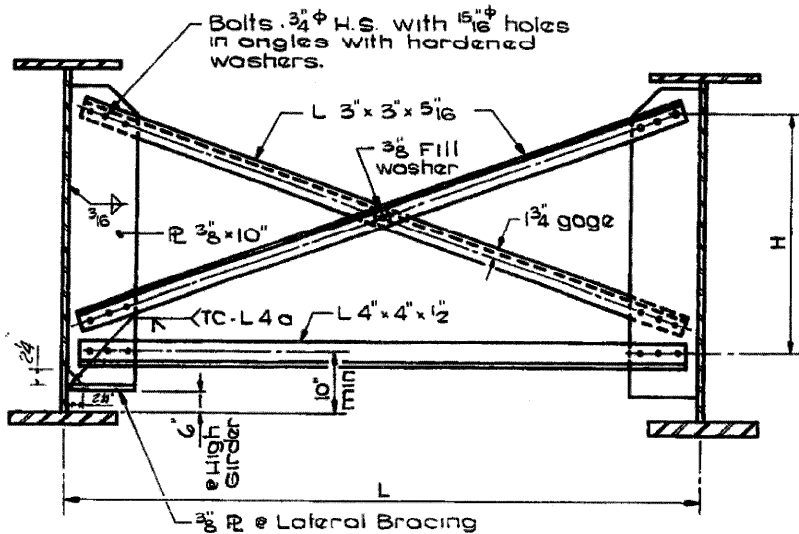
FA RTE. NO.	SECTION 141-3A, V5, LB, UB-1	TOTAL SHEETS	SHEET NO.
COUNTY	OGLE	18	17
ILLINOIS PROJECT			



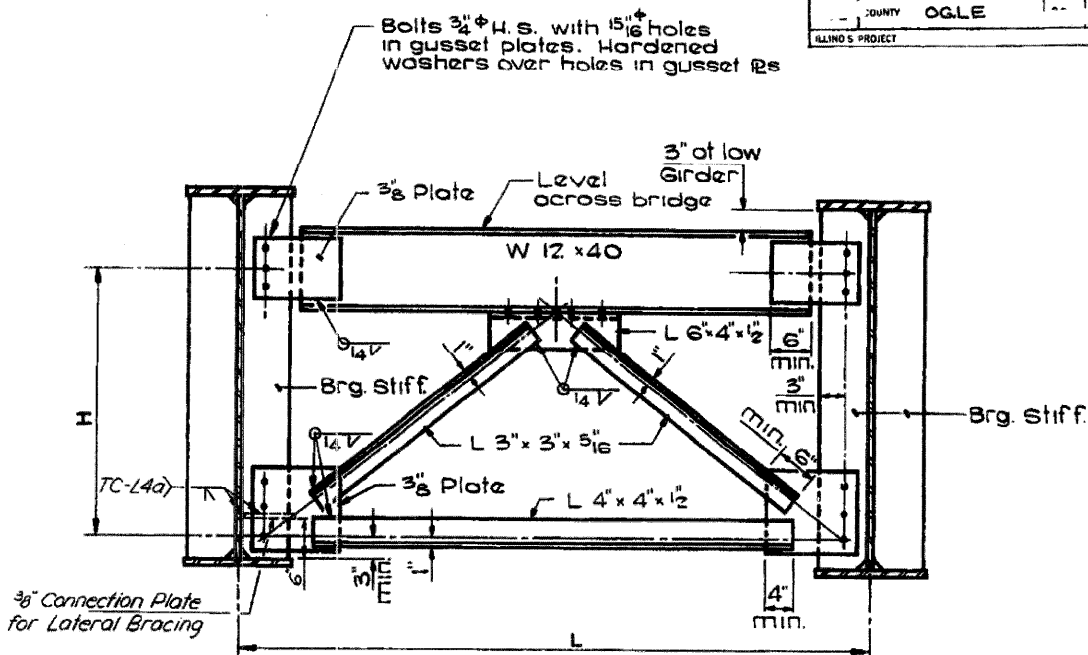
PREFORMED JOINT SEALER



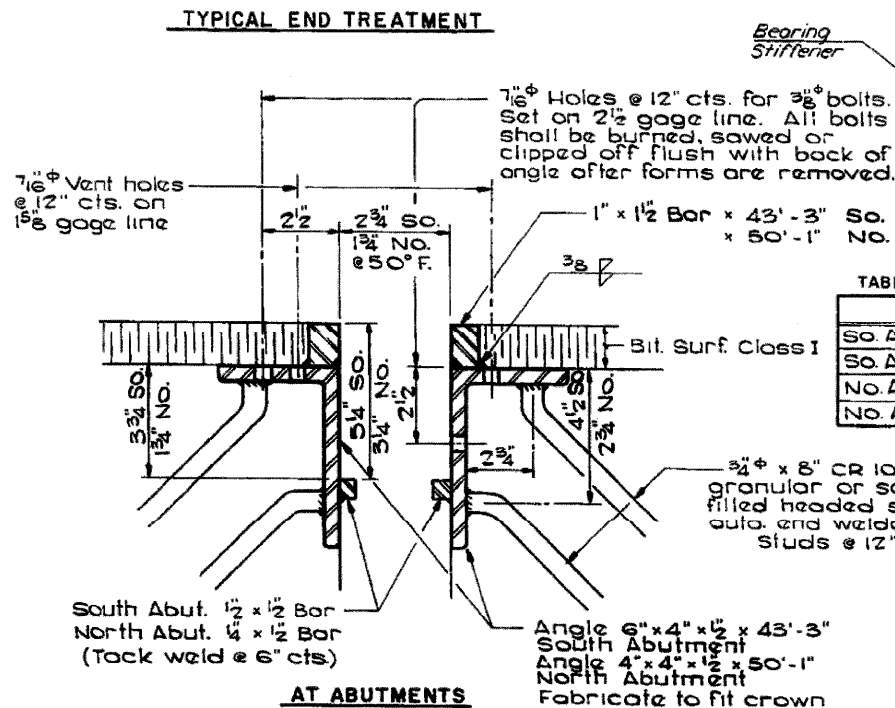
TYPICAL END TREATMENT



INTERMEDIATE CROSS-FRAMES  
D2 D4 D5 D6 D7 & D8



END CROSS-FRAMES  
D1 D3 & D9

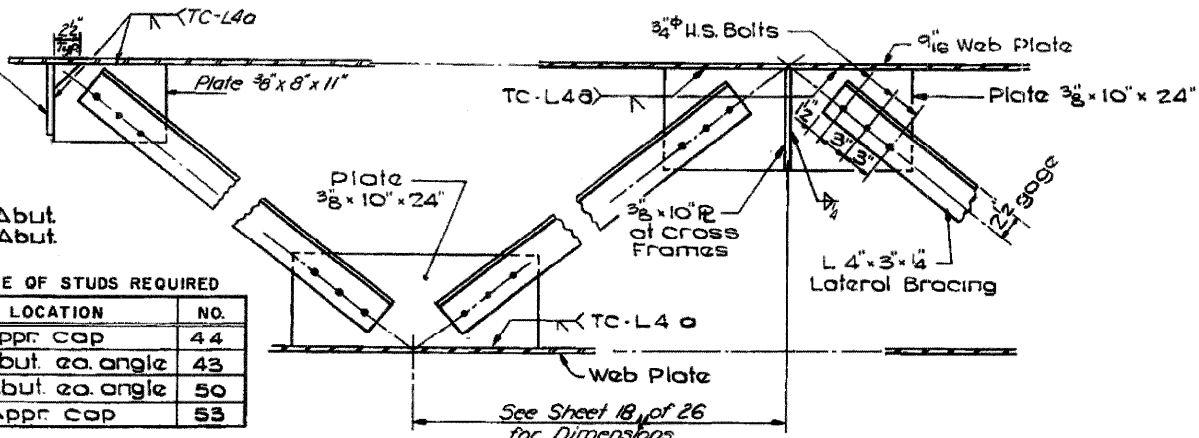


AT ABUTMENTS

ARMOR ANGLE DETAILS

TABLE OF STUDS REQUIRED

LOCATION	NO.
So. Appr. Cap	44
So. Abut. ea. angle	43
No. Abut. ea. angle	50
No. Appr. Cap	53



LATERAL BRACING

AT END OF APPROACH SLABS

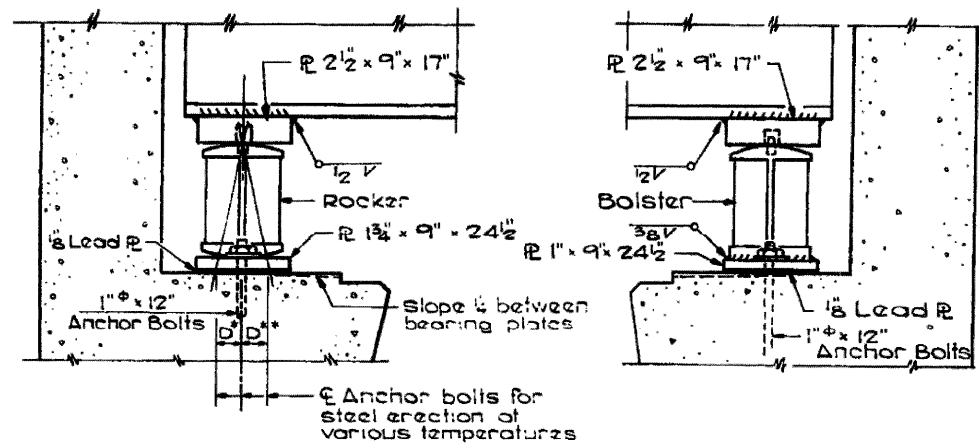
CROSS FRAME DIMENSIONS

MARK	LENGTH L	HEIGHT H	NO. REQ'D.
D	7'-10"	3'-0 1/2"	4
D1	7'-10"	2'-11"	4
D2	7'-10"	3'-1 1/2"	20
D3	4'-9 1/8"	3'-0 1/2"	2
D4	5'-3 5/8"	3'-1 1/2"	2
D5	5'-10 5/8"	3'-1 1/2"	2
D6	6'-5 5/8"	3'-1 1/2"	2
D7	7'-0 1/4"	3'-1 1/2"	2
D8	7'-7 1/4"	3'-1 1/2"	2
D9	8'-1 1/8"	2'-11"	2

CROSS FRAMES AND EXPANSION JOINT DETAILS (NORTHBOUND STRUCTURE)  
FA RTE. 412 SECTION 141-3HB OVER ILL. RTE. 72  
OGLE COUNTY  
STATION 2124+50.57

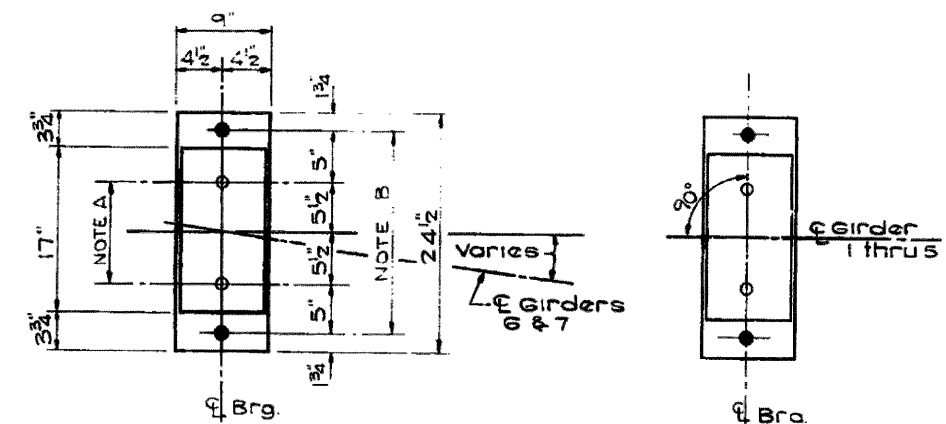
# FOR INFORMATION ONLY

F.A. RTE. NO.	SECTION 141-3A, VB, UB, UB-1	TOTAL SHEETS	SHEET NO.
COUNTY	OGLE	18	7
ILLINOIS PROJECT			



**SOUTH ABUTMENT**

**NORTH ABUTMENT**



**PLAN - ABUTMENTS**

**NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS**

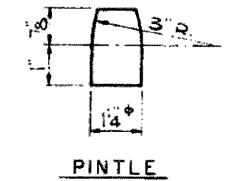
- a) D\* (Side of brg. away from fixed brg.)  
D\* = 1/8 per each 100' of expansion for every 15° fall below the normal temp. of 50° F
- D\*\* (Side of brg. toward fixed brg.)  
D\*\* = 1/8 per each 100' of expansion for every 15° rise above the normal temp. of 50° F
- b) After beams have been erected and dimensions D\* & D\*\* determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

INTERIOR GIRDER MOMENT TABLE	
	AT MID - SPAN *
Is (in <sup>4</sup> )	43979
Ic (in <sup>4</sup> )	107122
Ss (in <sup>3</sup> )	1258.3
Sc (in <sup>3</sup> )	6745.7
D (K/1)	1.078
M <sub>R</sub> (K)	2228.8
f <sub>s</sub> R (ksi)	21.25
S R (K/1)	.458
M <sub>s</sub> R (K)	931.8
M <sub>c</sub> (K)	1429.2
M <sub>imp</sub> (K)	283.0
Total (K)	2644
f <sub>s</sub> L + S R (ksi)	4.71
f <sub>s</sub> Total (ksi)	25.96
VR (K)	56.9

INTERIOR GIRDER REACTION TABLE	
	ABUTMENT
R <sub>R</sub> (K)	94.6
R <sub>L</sub> (K)	57.4
Imp (K)	11.4
R Total (K)	163.4

Is and Ss are the moment of inertia and section modulus of the steel section. Ic and Sc are the moment of inertia and section modulus of the composite section used in computing f<sub>s</sub> VR is the maximum L + Impact range in span.

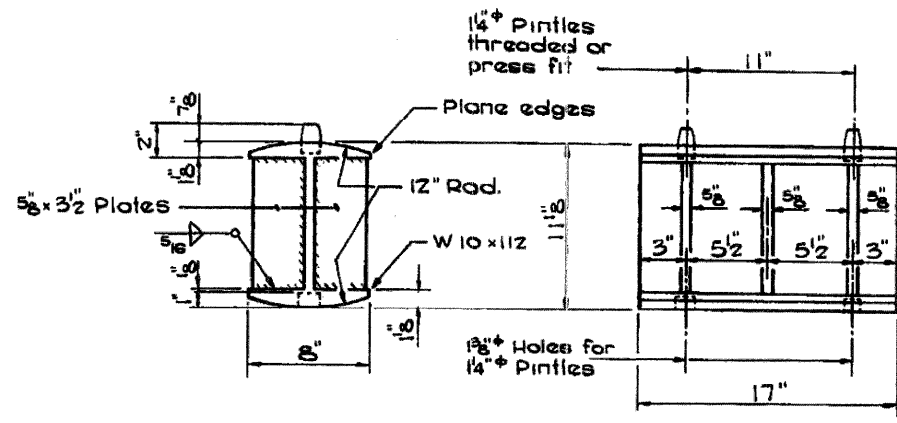
\* TOP FLANGE



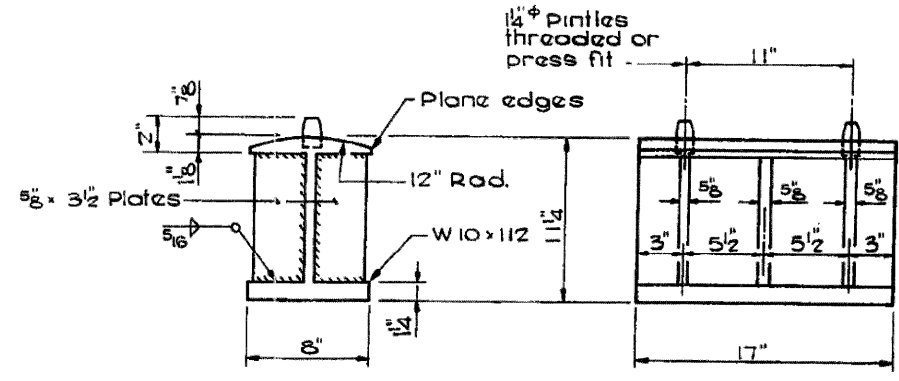
**PINTLE**

**NOTE A**  
1 3/8" Holes - 1" deep in top R for 1 1/4" Pintles. (Thread or press fit Pintles in bottom R. of South Abut. only.)

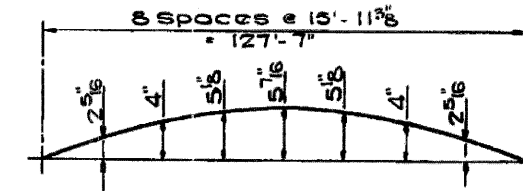
**NOTE B**  
1 1/2" Holes for 1" Anchor Bolts - 2 1/2 x 2 1/2 x 5/16 R washers under nut.



**ROCKER**



**BOLSTER**



**CAMBER DIAGRAM**

**BEARING DETAILS (NORTHBOUND STRUCTURE)**  
FA RTE. 412 SECTION 141-3HB  
OVER ILL. RTE. 72  
OGLE COUNTY  
STATION 2124+50.57

BRIDGE SHEET 20 OF 26  
\*D2-BRIDGE PAINTING 2008-2

FILE NAME =	USER NAME = lmkdj	DESIGNED -	REVISED -
D:\BR\CADD plans\Ogle County\0710046004.dgn		DRAWN -	REVISED -
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = Tue Jan 29 09:23:02 2008		DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	.	OGLE	18	18
CONTRACT NO. 64D90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				