

SECTION THRU PRECAST BOX

**GENERAL NOTES**

Reinforcement bars designated (E) shall be epoxy coated.  
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

STA. 2+30.00  
BUILT 2011 BY  
STATE OF ILLINOIS  
F.A.S. RTE. 919 SECTION 8B-3  
LOADING HL-93  
STR. NO. 039-2031

**NAME PLATE**  
See Std. 515001

**TOTAL BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	24	#8	25'-1"	
a1(E)	28	#8	23'-3"	
b(E)	2	#4	35'-5"	
b1(E)	28	#5	34'-6"	
b2(E)	96	#5	7'-1"	
b3(E)	20	#5	6'-10"	
d(E)	48	#4	5'-4"	
h(E)	112	#4	3'-2"	
h1(E)	76	#6	3'-1"	
h2(E)	4	#8	22'-9"	
h3(E)	28	#4	7'-9"	
s(E)	23	#5	5'-1"	
s1(E)	23	#5	5'-3"	
v(E)	48	#4	5'-4"	
v1(E)	16	#4	7'-10"	
v2(E)	8	#4	6'-3"	
x(E)	132	#4	4'-10"	
x1(E)	12	#4	32'-9"	
z(E)	36	#4	7'-8"	
Stone Riprap, Class A5		Sq. Yd.	125	
Filter Fabric		Sq. Yd.	125	
Reinforcement Bars, Epoxy Coated		Pounds	7,810	
Concrete Box Culverts		Cu. Yd.	41.1	
Precast Concrete Box Culverts 10'x4'		Foot	70	
Name Plates		Each	1	

△ REVISED SHEET 6-1-15

FILE NAME : D:\78217\sh-culvert.dgn 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.248.3400 www.jllr.com 184.00078 <b>JLR</b> ILLINOIS PROFESSIONAL DESIGN FIRM L3 / P / S P CORPORATION	USER NAME : PLOT SCALE : PLOT DATE : 1/28/2015	DESIGNED - D.W.T. CHECKED - T.J.A. DRAWN - D.A.B. CHECKED - M.D.C.	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL DETAILS</b> <b>STRUCTURE NO. 039-2031</b> SHEET NO. 2 OF 4 SHEETS	F.A.S. 919 SECTION 8B-3 COUNTY JACKSON TOTAL SHEETS 69 SHEET NO. 27 CONTRACT NO. 78217 ILLINOIS FED. AID PROJECT
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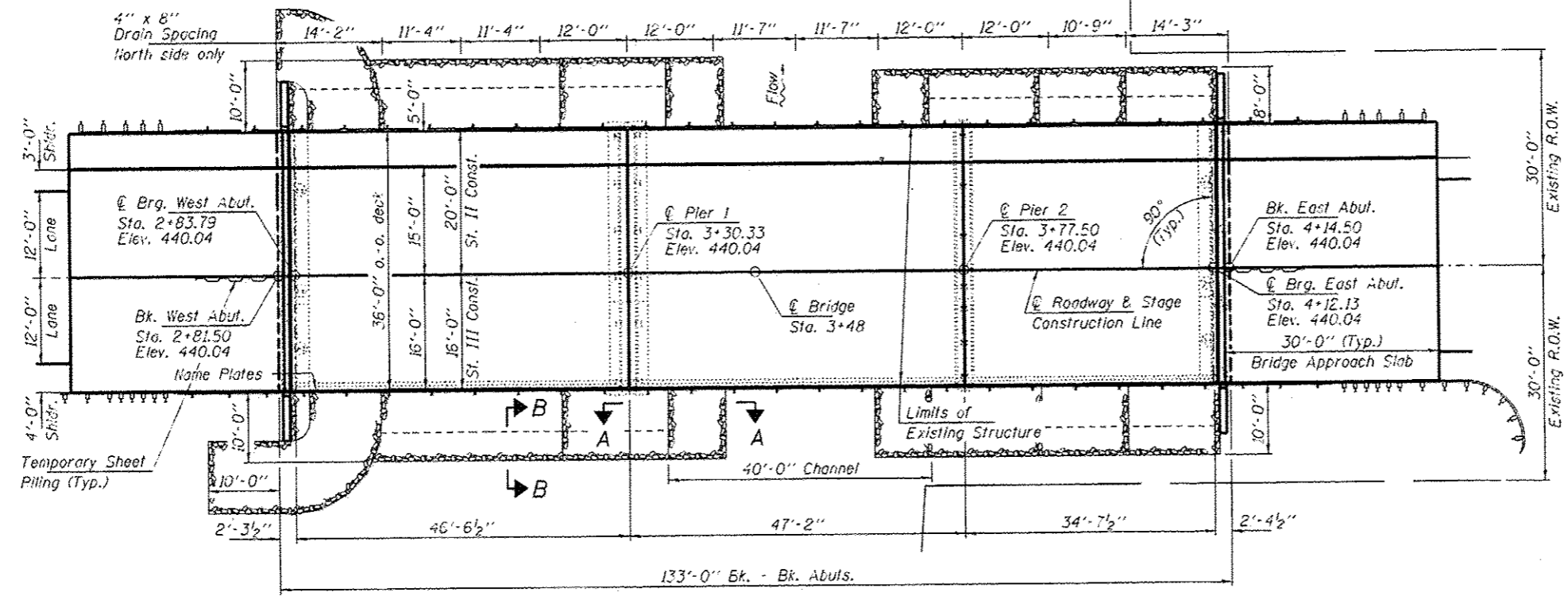
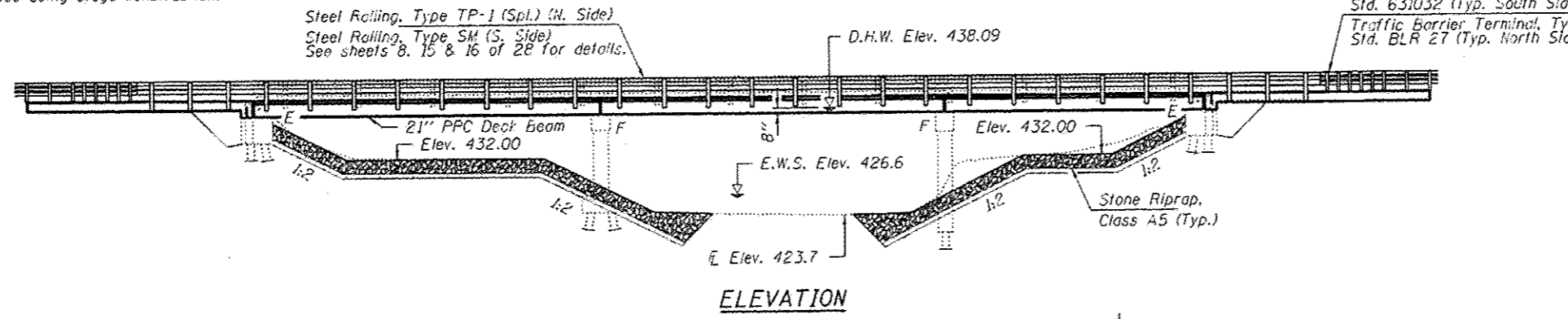
BENCHMARK: Chiseled "□" on east end of flared end section of 36" RCCP under Makanda Rd. 31' R.L., Sta. 2+19, Elev. 434.83

EXISTING STRUCTURE: S.N. 039-0055, Built in 1985 as FAS 919, Section 8B-1. Three span ppc deck beam bridge with concrete curb and sidewalk on pile bent abutments and pile supported piers. 133'-0" bk. bk. abuts.; 36'-0" o.-o. deck.

Superstructure to be replaced using stage construction.

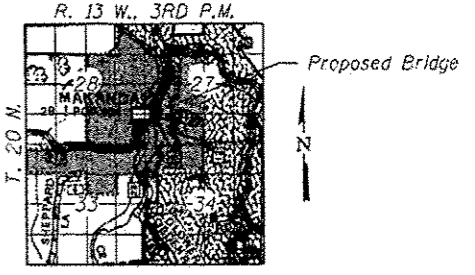
No Salvage

Traffic Barrier Terminal, Type 6A (Mod.) (East End)  
Traffic Barrier Terminal, Type 6A (Special) (West End)  
Std. 631032 (Typ. South Side) &  
Traffic Barrier Terminal, Type 5A  
Std. BLR 27 (Typ. North Side)

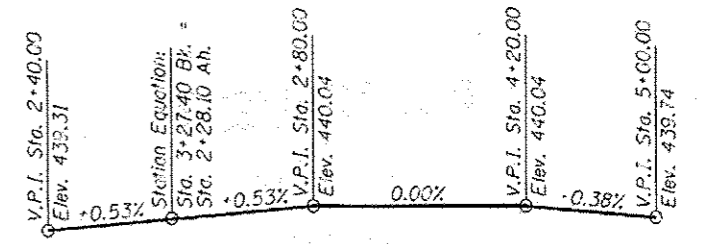


INDEX OF STRUCTURE SHEETS

- General Plan & Elevation
- General Details
- Stage Construction Details
- Temporary Concrete Barrier for Stage Construction
- Top of Slab Elevations
- Superstructure
- Superstructure Details
- 21"x48" PPC Deck Beam - Spans 1 & 2
- 21"x48" PPC Deck Beam Details - Spans 1 & 2
- 21"x48" PPC Deck Beam - Span 3
- 21"x48" PPC Deck Beam Details - Span 3
- Steel Railing, Type SM
- Steel Railing, Type TP-1
- Preformed Joint Strip Seal
- Approach Slab Details
- West Abutment Removal Details
- West Abutment
- East Abutment Removal Details
- East Abutment
- Pier 1
- Pier 2
- Bar Splicer Details
- 27-28. Borings



LOCATION SKETCH



PROFILE GRADE

DESIGN SPECIFICATIONS (NEW CONST.)

2012 AASHTO LRFD Bridge Design Specifications, with 2013 Interims.  
1995 Seismic Retrofitting Manual for Highway Bridges FHWA-RD-94/052

LOADING HL-93 (NEW CONST.)

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)  
f'c = 5,000 psi  
fy = 60,000 psi (Reinf.)  
PRECAST PRESTRESSED UNITS  
f'c = 6,000 psi  
f'ci = 5,000 psi  
fpu = 270,000 psi (1/2" low lax. strands)  
fpbt = 201,960 psi (1/2" low lax. strands)

FIELD UNITS (EXISTING)

f'c = 3,500 psi  
fy = 60,000 psi

SEISMIC DATA

Seismic Performance Category (SPC) = B  
Horizontal Bedrock Acceleration Coefficient (A): 0.139g  
Site Coefficient (S): 1.5

W. Abut.	Pier 1	Pier 2	E. Abut.
434.1	424.4	421.4	434.1

WATERWAY INFORMATION

Drainage Area = 17.9 Sq. Mi.		Existing Low Grade Elev. 438.0 @ Sta. 6+00 Proposed Low Grade Elev. 438.0 @ Sta. 6+00									
Flood	Bridge	Relief Culvert	Total	Freq. Yr.	O C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater EL.	
						Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design Cr. Insp.	Bridge					890	890				
	Relief Culvert	10				0	80	437.89	0.48	0.36	438.37 438.25
	Total					3600	970				
Base	Bridge					890	890	438.09	0.75	0.56	438.84 438.65
	Relief Culvert	20				0	80				
	Total					4510	970				
Base	Bridge					890	890	439.95	0.49	0.46	440.48 440.45
	Relief Culvert	100				0	80				
	Total					6820	970				

APPROVED

For Structural Adequacy Only

*O. Carl Purgen JFS*  
Engineer of Bridges & Structures



Michael D. Conry 1/20/2015  
ILLINOIS STRUCTURAL NO. 081-5984 Expires 11-30-2016

REVISER SHEET 6-1-15

GENERAL PLAN & ELEVATION  
F.A.S. 919 / MAKANDA ROAD  
OVER DRURY CREEK  
SECTION 8B-2  
JACKSON COUNTY  
STATION 3+48.00  
STRUCTURE NO. 039-0055

FILE NAME = 110150-ahc-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN STRUCTURE NO. 039-0055	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.548.3400 www.blrinc.com	PLOT SCALE =	CHECKED - T.J.A.	REVISED -		919	BB-2	JACKSON	69	30	
184 605029 ILLINOIS PROFESSIONAL DESIGN FIRM L.P. / P.C. CORPORATION	PLOT DATE = 1/20/2015	DRAWN - D.A.B.	REVISED -		SHEET NO. 1 OF 28 SHEETS		CONTRACT NO. 78217		ILLINOIS FED. AID PROJECT	
		CHECKED - M.D.C.	REVISED -							