

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

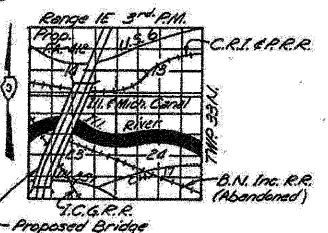
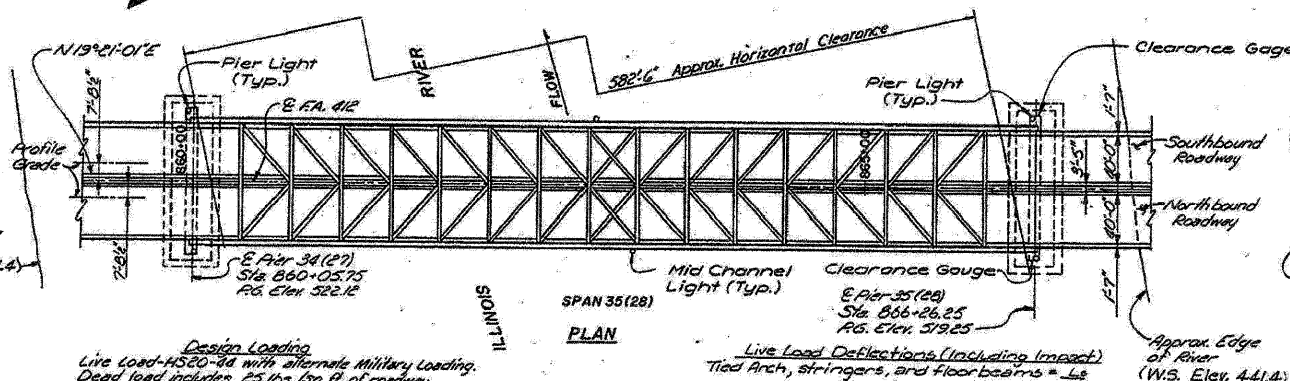
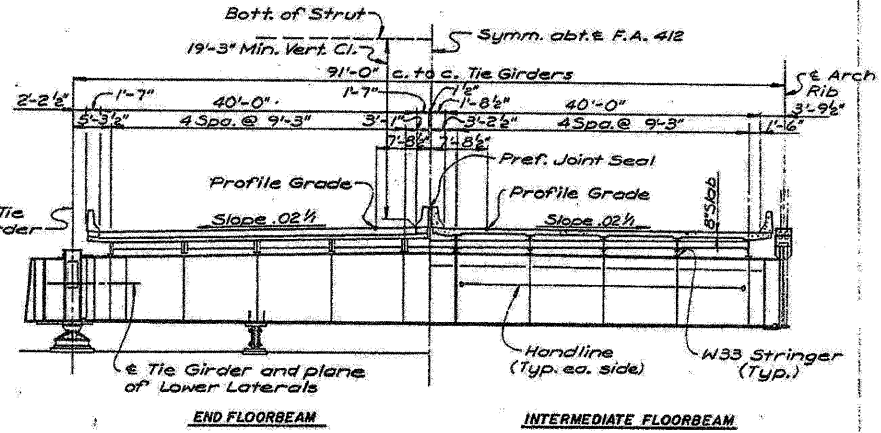
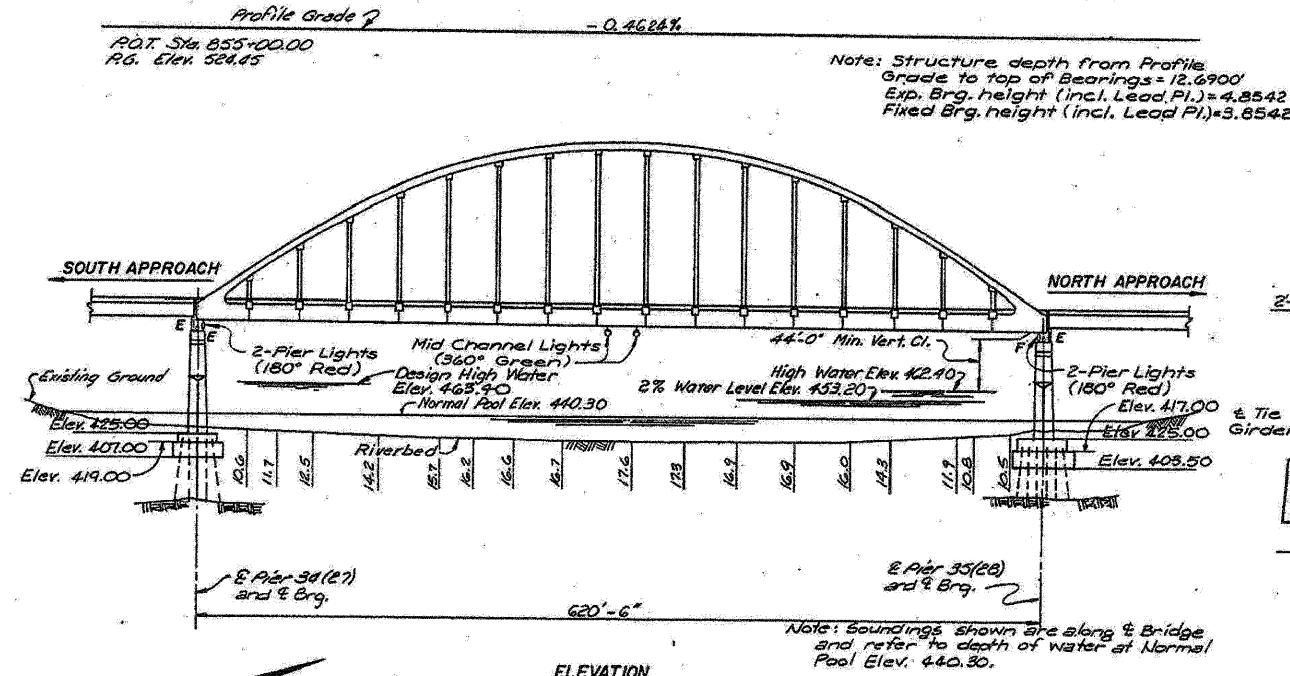
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 412	50-4B (F&E)	LASALLE	26	3
FED. ROAD DIST. NO. ILLINOIS PROJECT EBF-412-4(G)				

**WATERWAY INFORMATION**

Flood	Freq. Yr.	Low Grade Elev.		High Level Bridge at Sta. 863+16.00	
		Opening Sq. Ft.	No.	Head - Ft.	Headwater Elev.
Design	50	88,000	10,500	463.4	463.4
Base	100	92,800	17,100	464.9	464.9
Overlapping					
Max. Cols.	500				

\* Gross waterway opening (Includes Piers)



**Bridge Grounding Note:**  
Ground cables have been installed in the up-stream column of Pier 34(27) and the down-stream column of Pier 35(28) by others. Include in this Contract fastening of ground cables to Tied Arch Span steel with compression lugs bolted and brazed to steel members.



**DESIGNED** - C. Hieczorek  
**CHECKED** - G. J. Roufo  
**DRAWN** - D.T. Smithpeters  
**CHECKED** - C. Hieczorek

**Design Loading**  
Live load - HS20-44 with alternate Military Loading.  
Dead load includes 25 lbs./sq. ft. of roadway for future wearing surface.  
Earthquake in accordance with Article 1.2.20 of AASHTO Spec. for Zone 1.

**Design Stresses**  
Load Factor Design - Stringers and Floorbeams.  
 $f_y = 39,000$  psi - M183 & 50,000 psi - M222 & M223 (Grade 50) Structural Steel.  
Working Stress Design - Tied Arches (including Hangers).  
 $f_s = 20,000$  psi - M183 & 27,000 psi - M222 & M223 (Grade 50).  
Bridge Girand ( $f_s$ ) = 65,000 pounds per sq. in. (based on  $F.S. = 3.0$ ).

**Live Load Deflections (Including Impact)**  
Tied Arch, stringers, and floorbeams =  $\frac{L_s}{1000}$   
Cantilever Arm of Stringers =  $\frac{L_s}{200}$   
 $L_s$  is the distance between center of supports.  
 $L_s$  is the length of cantilever arm.

**Pier Numbering**  
Pier 34 and 36 for Structural Steel Approaches  
Pier (27) and (28) for Post-Tensioned Concrete Approaches

NOTE: DO NOT SCALE THIS DRAWING. FOLLOW DIMENSIONS.

PREPARED BY:  
SVERDRUP & PARCEL AND ASSOCIATES, Inc.  
ENGINEERS ARCHITECTS PLANNERS  
ST. LOUIS, MISSOURI

**TIED ARCH SPAN**  
GENERAL PLAN AND ELEVATION  
**FA-412 OVER ILLINOIS RIVER**  
SECTION 50-4B (F&E) PROJECT EBF-412-4(G)  
STA. 863+16.00 (FA-412) LASALLE CO.

SHEET NO. 1 OF 24

DESIGNED	VH
CHECKED	HMA
DRAWN	VH
CHECKED	HMA

FOR INFORMATION ONLY

**benesch**  
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EXISTING TIED ARCH GENERAL PLAN AND ELEVATION  
ABRAHAM LINCOLN MEMORIAL BRIDGE OVER  
THE ILLINOIS RIVER (PUBLIC WATERS)

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S3	39	[(50-4B)BR]	LASALLE	12	9
CONTRACT NO. 66A34					
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

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