

Benchmark:  
Cut square on Northwest Wingwall (West Bridge)  
Elev. = 639.93

Existing Structure:  
No. 045-6009 built in 1949 under Sec. 14B-CS, S.A.R. 24 Ext. (Kane County Sec. 118-B M.F.T.) and widened in 1976. The Superstructure consists of 4-continuous reinforced concrete T-Beam spans measuring 302'-8 7/8" back to back of abutments and 65'-11" out to out deck supported by three reinforced concrete piers and two reinforced concrete closed abutments founded on rock.

Salvage:  
Reuse existing substructures.

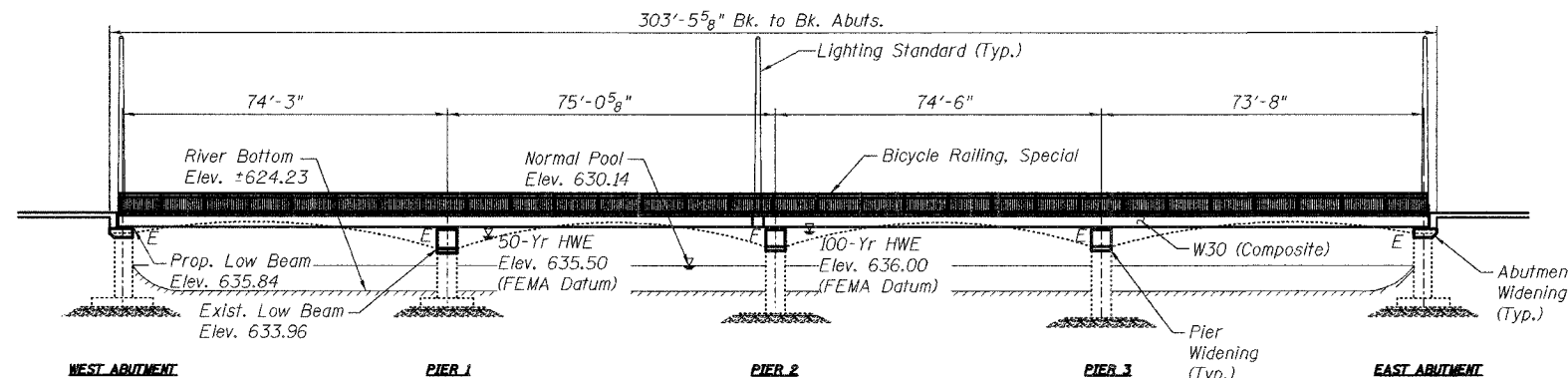
Staging:  
One lane of traffic in each direction to be maintained during construction utilizing staged construction.

**LEGEND:**  

 12" Cast Iron Watermain (Abandoned)  
 8" Gas Main (To be Abandoned by NICOR Prior to Construction)  
 (10)-5" PVC Electrical Conduits (Abandoned)

ROUTE NO.	SECTION	COUNTY	DISTRICT	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	42
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
1			CONTRACT #83867	

SHEET NO. SW-1  
SW-30 SHEETS



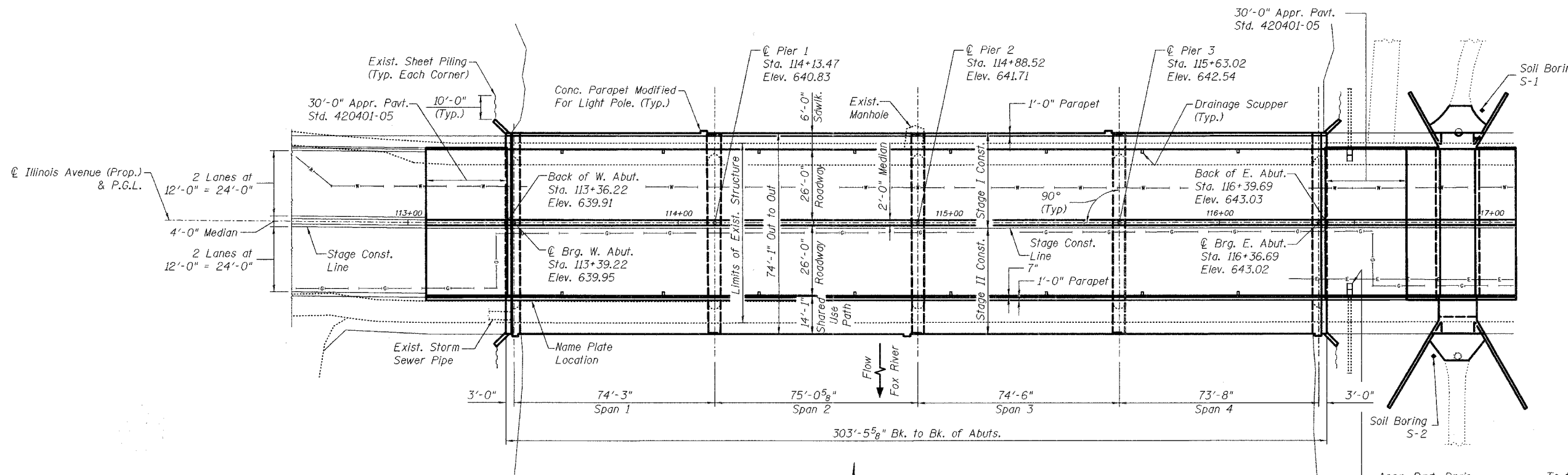
**ELEVATION**

**DESIGN SPECIFICATIONS**  
2002 AASHTO Standard Specifications - 17th Ed.

**LOADING HS20-44**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**  
FIELD UNITS  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 50,000 psi (M20 Gr. 50 Structural Steel)

**SEISMIC DATA**  
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 4Zg  
Site Coefficient (S) = 1.0



**PLAN**

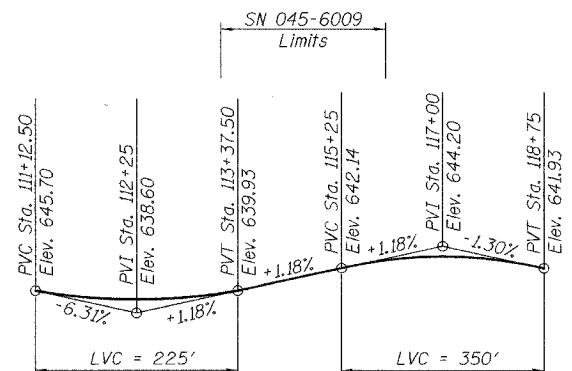


To the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

*Andrew E. Underwager* 8-3-06  
Andrew E. Underwager Date  
Licensed Structural Engineer  
License Expires November 30, 2006

FOX RIVER  
BUILT 2007 BY  
CITY OF AURORA  
SEC 03-00247-00-BR  
STATION 114+87.96  
STR. NO. 045-6009  
LOADING HS20

**NAME PLATE**  
See Std. 515001-02

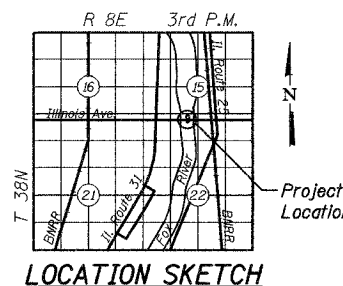


**PROFILE GRADE**  
(Along Illinois Av.)

**WATERWAY INFORMATION**

Drainage Area = 1,705 Sq. Mi. Low Grade Elev. 639.52 @ Sta. - 121+74.61

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	8,400	3,159.16	3,178.16	635.50	0	0	635.50	635.50
Base	100	9,180	3,285.84	3,318.92	636.00	0	0	636.00	636.00
Overtopping									
Max. Calc.	500								



DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

REVISIONS	
NAME	DATE

**CITY OF AURORA**  
GENERAL PLAN AND ELEVATION  
ILLINOIS AVENUE  
OVER THE FOX RIVER  
SECTION NO. 03-00247-00-BR  
KANE COUNTY  
STRUCTURE NO. 045-6009  
DATE 1-28-2006

COMPANY NAME, ACCOUNT NUMBER, PROJECT CONTACT, PROJECT NUMBER, SHEET NUMBER, DATE