

Benchmark: DuPage County Benchmark #L132001 atop Northwest wingwall Elev. 659.83. (DuPage County Datum)  
 Existing Structure: S.N. 022-3028. Built in 1969 as 79th Street Bridge is a 3-span PPC Deck Beam superstructure with closed abutments and solid walled piers. Bk. to Bk. abutments is 106'-6" and 46'-0" out to out deck. The contractor shall remove the superstructure and replace it with a reinforced concrete deck on continuous steel wide flange beams. Proposed out to out deck is 56'-7". The substructure will be partially removed and widened in-kind. The construction will be staged for the substructure widening and North sidewalk construction. Traffic will be detoured during superstructure replacement.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 1
1545		DUPAGE	97	22	39 - SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		CONTRACT NO. 83961
00-00115-00-BR					

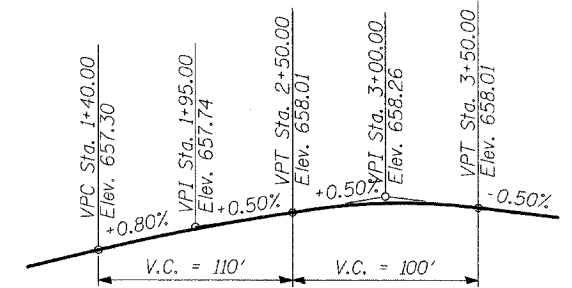
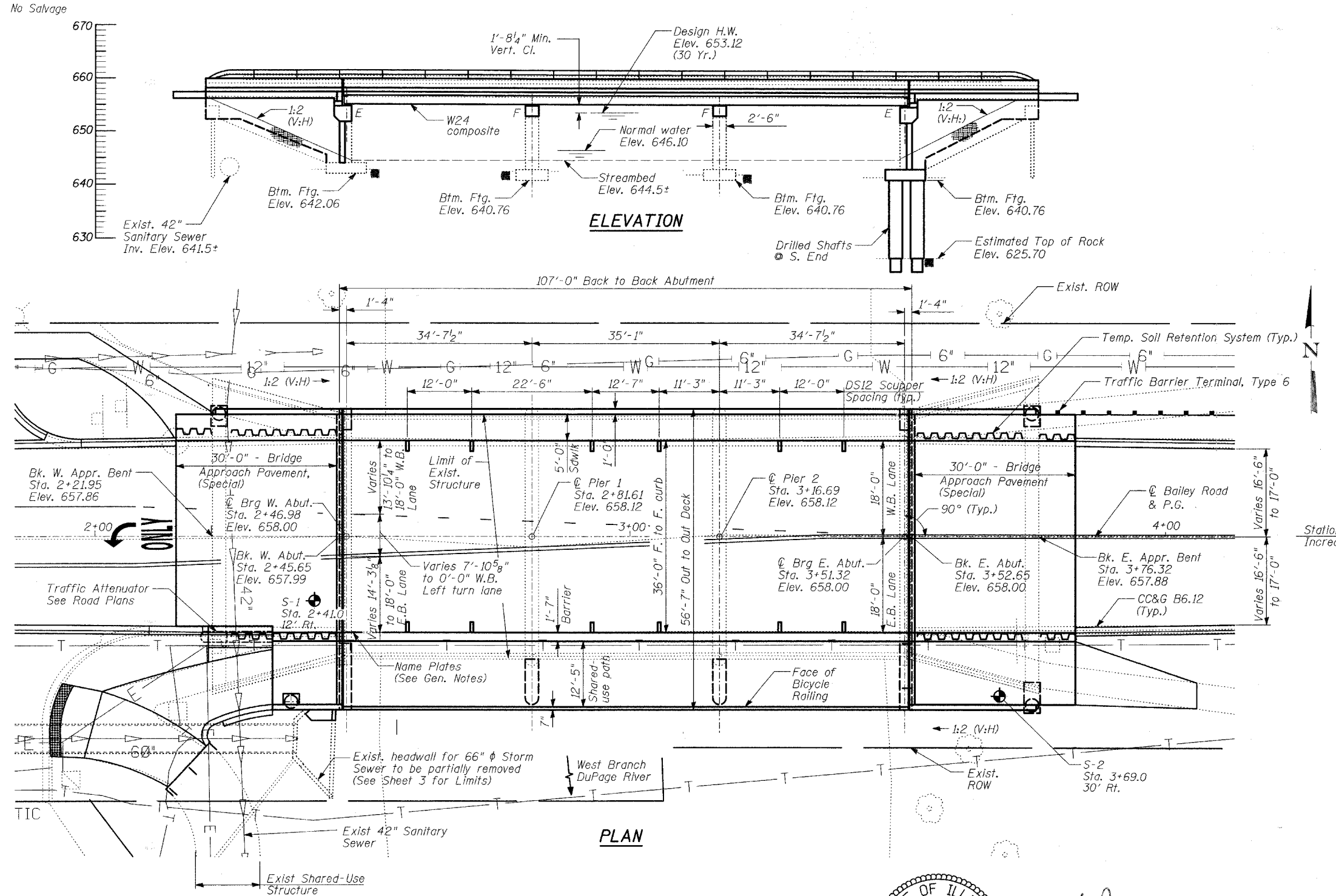
**LOADING HS20-44**  
 Allow 50#/sq. ft. for future wearing surface

**DESIGN SPECIFICATIONS**  
 AASHTO 2002 Standard Specifications for Highway Bridges, 17th Edition

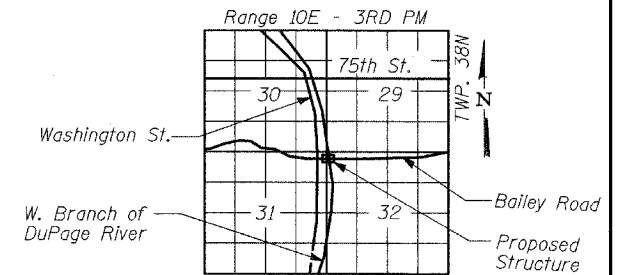
**SEISMIC DATA**  
 Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.04  
 Site Coefficient (S) = 1.0

**DESIGN STRESSES**  
**FIELD UNITS (New Construction)**  
 $f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $F_y = 50,000$  psi (M270 Grade 50W) Structural Steel

**FIELD UNITS (Existing Construction)**  
 $f'_c = 3,500$  psi (Piers)  
 $f'_c = 2,500$  psi (Abutments)  
 $f_y = 40,000$  psi (Reinforcement)



**PROFILE GRADE**  
 (along centerline roadway)



**LOCATION SKETCH**

**WATERWAY INFORMATION**

Drainage Area = 114.70 sq. mi. Low Grade Elev. 656.65 @ Sta. 5+00

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	10	3510	755	755	652.15	0.11	0.10	652.26	652.25
Base	30	4703	850	850	653.12	0.17	0.16	653.29	653.28
Overtopping	100	5600	914	914	653.77	0.22	0.21	653.99	653.98
Max. Calc.	500	7500	995	995	654.60	0.68	0.66	655.28	655.26

TYLINTERNATIONAL

DESIGNED	- SP
CHECKED	- PF
DRAWN	- SP
CHECKED	- PF



Signed *S. Pantazis*  
 Spiros Pantazis, S.E. Il. Lic. No. 081-006448 Expires 11-30-2008. For drawings 1 thru 39  
 Date July 12, 2007

I certify that 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 of Highway Bridges".

**GENERAL PLAN & ELEVATION**

BAILEY ROAD OVER THE  
 WEST BRANCH OF THE DUPAGE RIVER  
 FAU 1545  
 SECTION 00-00115-00-BR STA. 2+99.15  
 DUPAGE COUNTY  
 S.N. 022-3028