

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DESIGN STRESSES  
FIELD UNITS

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications  
with 2008, 2009 Interims

LOADING HL-93  
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.037g  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.100g  
Soil Site Class = B

Bench Mark: Cross cut on top of sidewalk situated east of the police squad car parking lot. Cross is 27.5' NW of water manhole and 50.6' west of fire hydrant. Elev. 665.37

Existing Structure: S.N. 022-6650, Original Construction date 1974. The bridge consists of a 2 span precast, prestressed concrete deck beam structure supported on a reinforced concrete solid wall pier on a spread footing and open abutments on wood or steel friction piles. The existing structure length is 95'-0" back to back of abutments and the width is 36'-6". Existing structure to be removed and replaced. Traffic to be detoured during construction.

Salvage: None

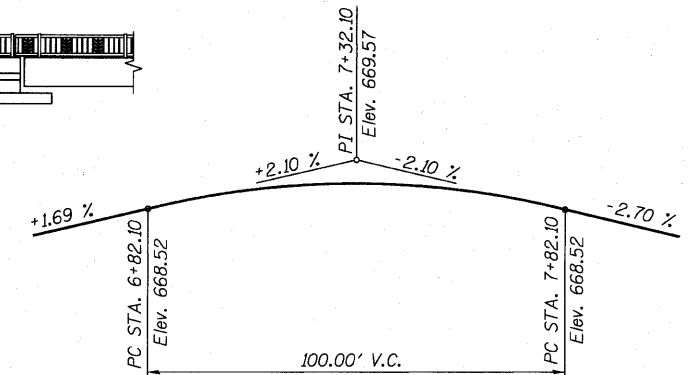
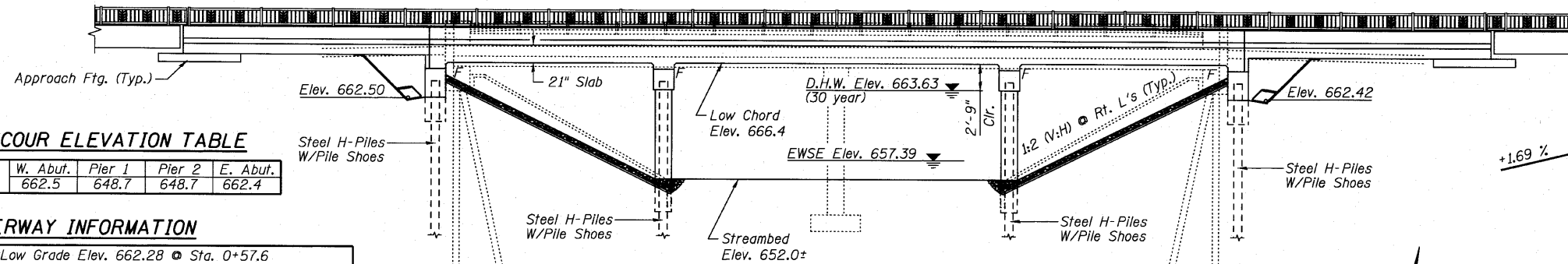
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	662.5	648.7	648.7	662.4

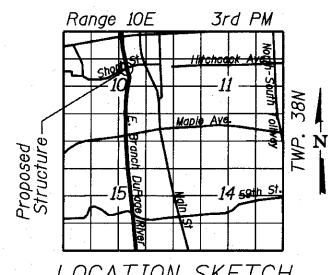
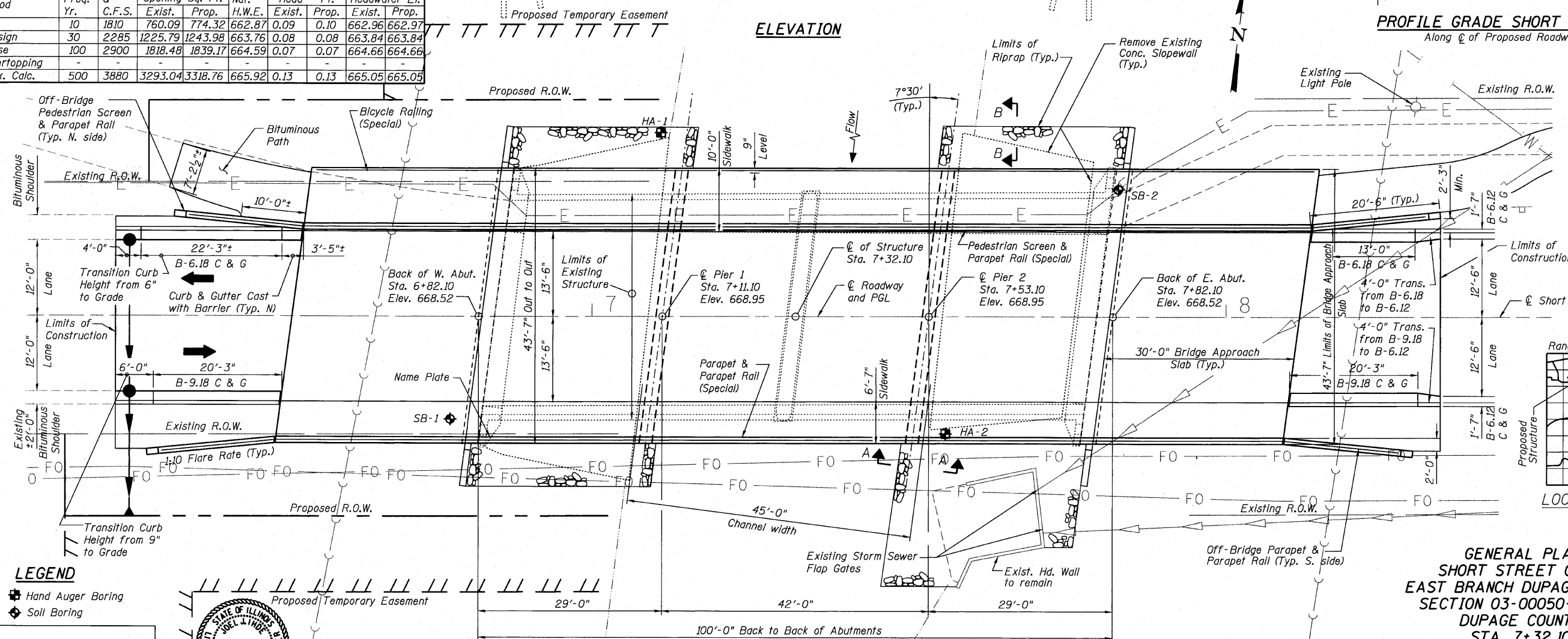
WATERWAY INFORMATION

Drainage Area = 57.8 mi<sup>2</sup> Low Grade Elev. 662.28 @ Sta. 0+57.6

Flood Yr.	Freq. C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
		Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
10	1810	760.09	774.32	662.87	0.09	0.10	662.96	
Design	30	2285	1225.79	1243.98	663.76	0.08	0.08	663.84
Base	100	2900	1818.48	1839.17	664.59	0.07	0.07	664.66
Overtopping	-	-	-	-	-	-	-	-
Max. Calc.	500	3880	3293.04	3318.76	665.92	0.13	0.13	665.05



ELEVATION



GENERAL PLAN  
SHORT STREET OVER  
EAST BRANCH DUPAGE RIVER  
SECTION 03-0050-00-BR  
DUPAGE COUNTY  
STA. 7+32.10  
STRUCTURE NUMBER 022-6649

LEGEND

- Hand Auger Boring
- Soil Boring

DESIGNED -	SRT
CHECKED -	JJI
DRAWN -	GM
CHECKED -	JJI



DATE SIGNED: 8-02-10  
EXP. DATE: 11-30-10

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 LRFD Bridge Design Specifications."

PLAN

**B** Bollinger, Lach & Associates, Inc.  
ITASCA, ILLINOIS

SHEET NO. 1	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18 SHEETS	-	03-0050-00-BR	DUPAGE	45	22
			CONTRACT NO. 63468		
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT	BRM-8003 (676)	