

BENCHMARK: Scribed cross on the southwest edge of the existing bridge wingwall, Elev. 678.81.

EXISTING STRUCTURE: The original bridge, SN 022-3037, was built in 1966. There are no records of any repairs done to the structure and the original plans are not available. The structure is a four simple span precast prestressed concrete (P.P.C.) deck beam bridge with asphalt overlay. The substructure is skewed approximately 20 degrees. The existing abutments are 9 to 10 feet in height from the existing ground with tapered wing walls. The three piers bents consists of 10- 20" diameter concrete filled steel piles with a cast-in-place concrete cap. The structure has an overall length of 121'-0" face to face abutments and a width of 46'-0" out to out deck. The existing structure shall be removed in its entirety.

The bridge will be closed to traffic during construction.

No salvage.

WATERWAY INFORMATION

Drainage Area = 84.0 Sq. MI		Existing Low Grade Elev. 676.73' @ Sta. 19+31								
		Proposed Low Grade Elev. 679.00' @ Sta. 17+67								
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	2,248	1135.59	1190.74	672.91	673.91	0.03	0.03	672.94	672.94
	30	2,992	1267.25	1327.25	673.91	674.37	0.02	0.02	673.93	673.94
	50	3,308	1330.55	1394.19	674.37	674.87	0.02	0.02	674.39	674.39
Base	100	3,803	1404.67	1461.11	674.87	675.87	0.02	0.02	674.89	674.89
Max. Calc.	500	5,155	1433.29	1602.13	675.87	675.87	0.03	0.02	675.90	675.89
Overtopping	>500									

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications
5th Edition with 2011 Interim Revisions

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_{01}) = .014g
Design Spectral Acceleration at 0.2 sec. (S_{05}) = .27g
Soil Site Class = D

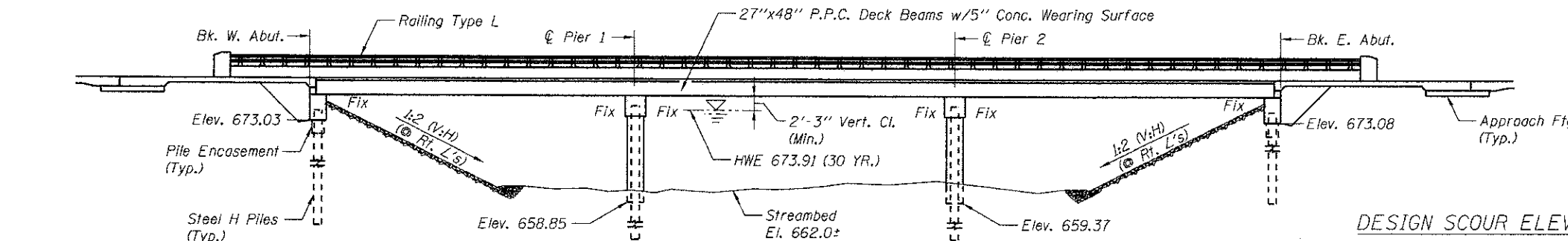
DESIGN STRESSES

PRECAST PRESTRESSED UNITS:

f'_c = 6000 psi
 f'_{ci} = 5,000 psi
 f_{pu} = 270,000 psi (1/2" low lax strands)
 f_{pbt} = 201,960 psi (1/2" low lax strands)

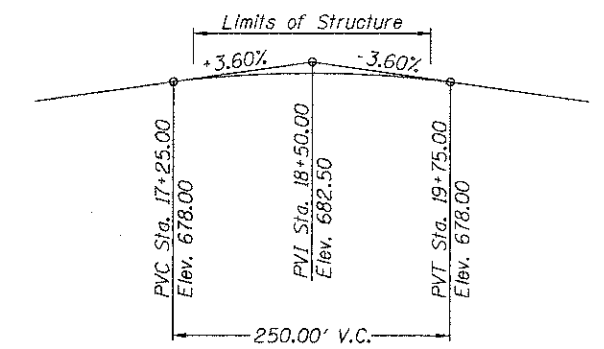
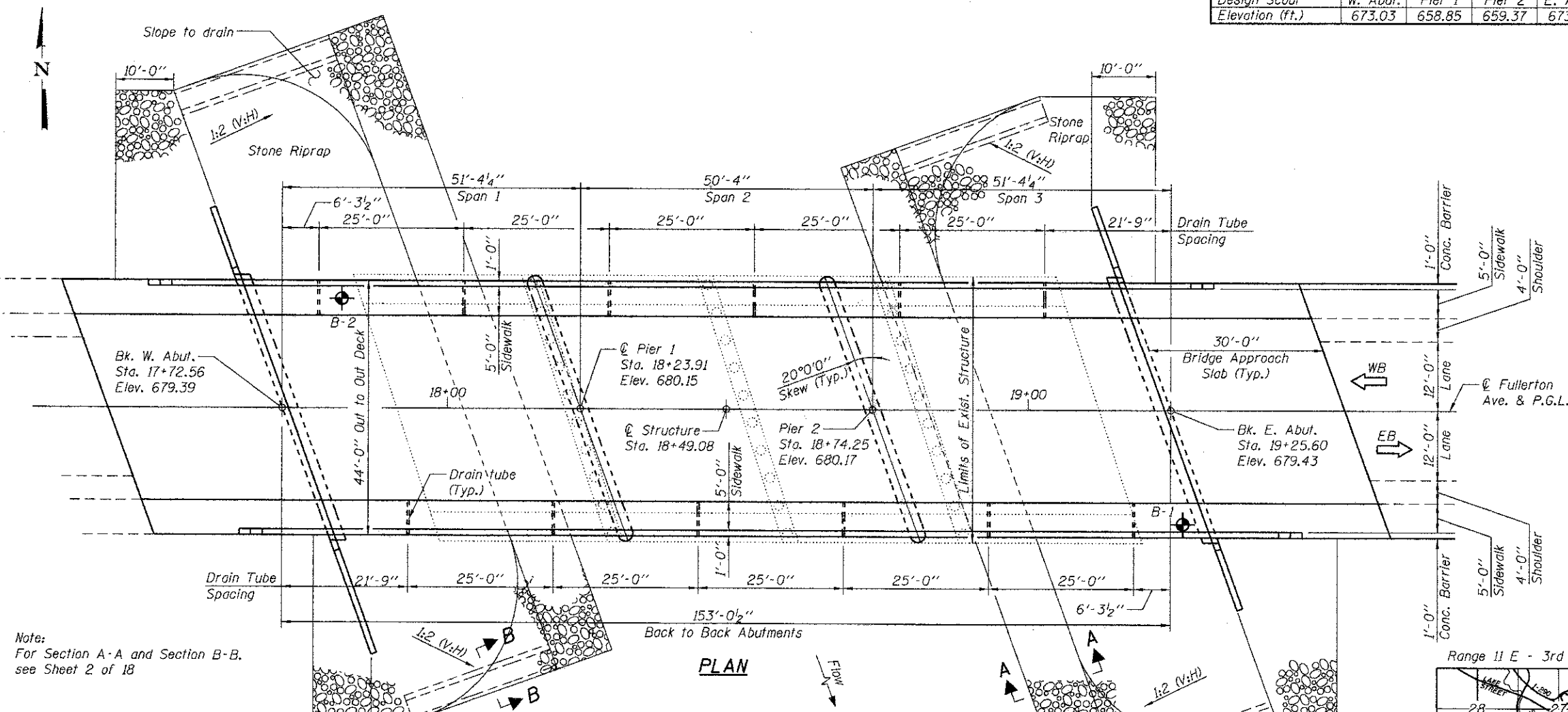
FIELD UNITS:

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



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	673.03	658.85	659.37	673.08



PROFILE GRADE

(along Fullerton Avenue)

Note: For Section A-A and Section B-B, see Sheet 2 of 18

LEGEND

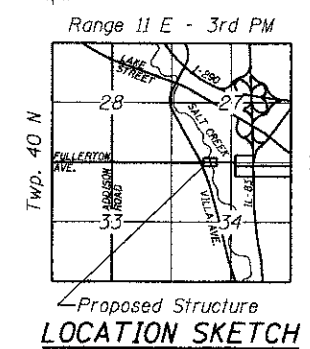
Soil Boring



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 A.A.S.H.T.O. L.R.F.D. Bridge Design Specifications.

Expires: 11/30/14

Signed: [Signature] Dated: 12-15-12



GENERAL PLAN AND ELEVATION
FULLERTON AVENUE OVER SALT CREEK
SECTION 08-01120-00-BR
DUPAGE COUNTY
STRUCTURE NO. 022-3041