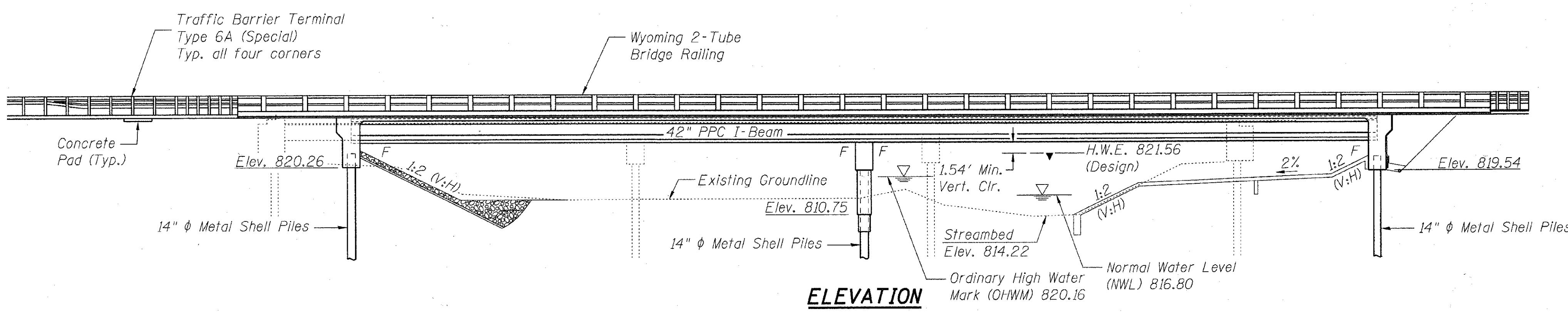
Benchmark: Chiseled square at northwest corner of Union Road bridge over south branch Kishwaukee River. Elev. 826.79

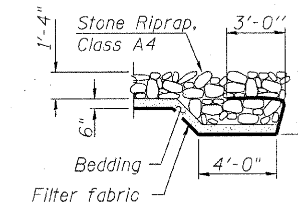
Existing Structure: S.N. 056-0035 was built in 1963 as C.H. Route 14 - Sec. 3B. 33'-8" out to out width with 2'-10" raised curbs and steel railings. 140'-6" back-to-back of abutments. The existing superstructure is composed of nine 27" PPC deck beams, with outside modified deck beams, and a bituminous overlay. The substructure consists of reinforced concrete wall piers and open abutments with precast concrete piles. The existing structure is to be removed and replaced with proposed structure. Traffic to be detoured during construction.

Existing Name Plate to be salvaged. See Roadway General Notes.

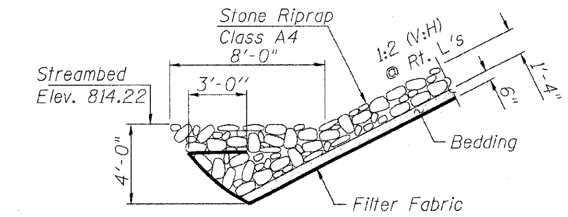
MCHENRY COUNTY
DIVISION OF TRANSPORTATION



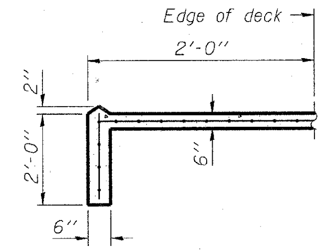
ELEVATION



SECTION A-A



SECTION B-B

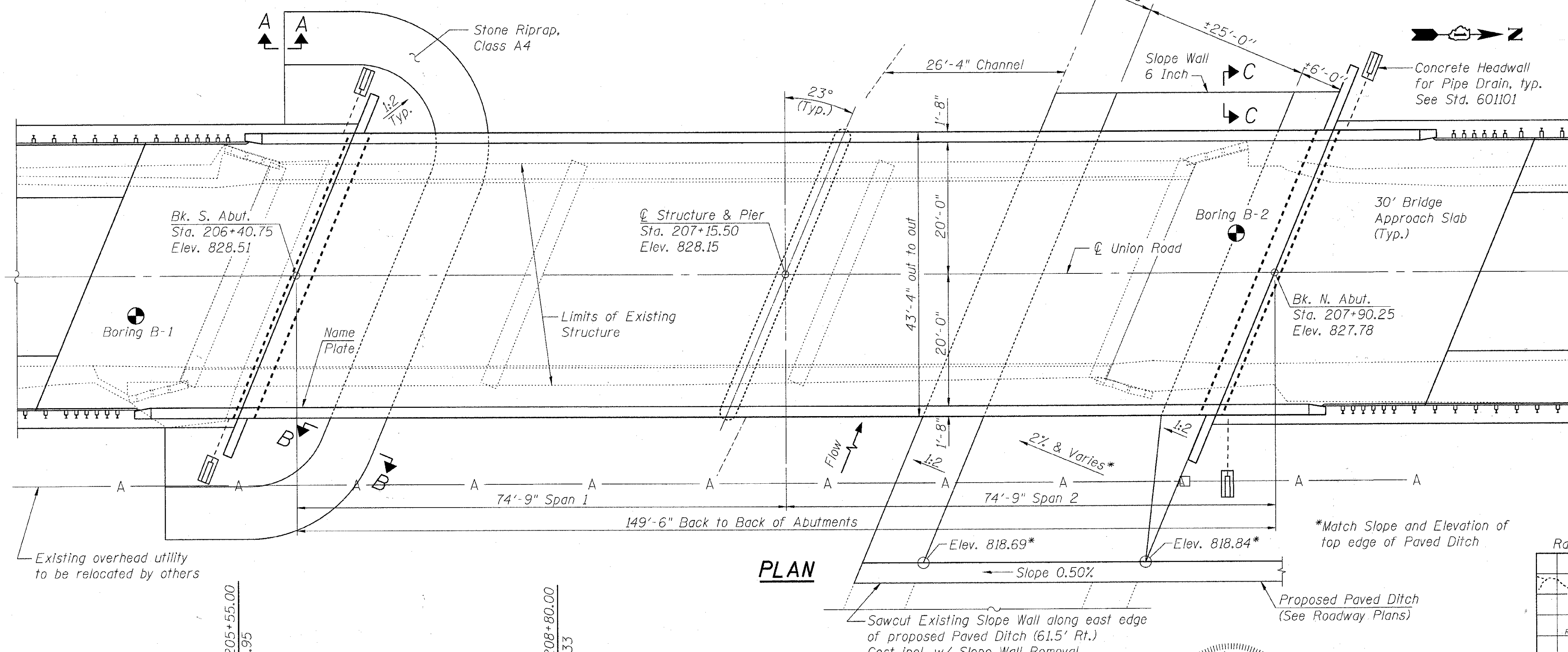


SECTION C-C

S. BRANCH KISHWAUKEE RIVER
BUILT 20__ BY
McHENRY COUNTY
SEC. 06-00320-02-BR
F.A.S. RT. 34 STA. 207+15.50
STR. NO. 056-3178 LOADING HL-93

NAME PLATE

See Std. 515001



PLAN

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	Pier	N. Abut.
	820.26	810.75	819.54

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi

fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 7,000 psi

f'ci = 6,000 psi

fpu = 270,000 psi (1/2" dia. low lax strands)

fpbt = 201,960 psi (1/2" dia. low lax strands)

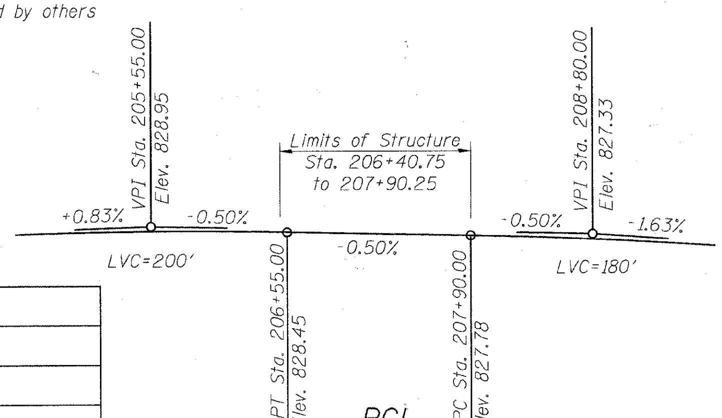
SEISMIC DATA

LRFD Seismic Performance Zone (LRFD SPZ) = 1

Design Spectral Acceleration @ 1.0 sec. (SD1) = 0.15g

Design Spectral Acceleration @ 2.0 sec. (SDS) = 0.05g

Soil Site Class - D



PGL

(along ℄ roadway)

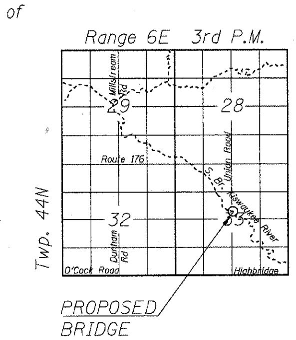
DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

BRANDON L. BUZZELL 081-006358 LICENSED STRUCTURAL ENGINEER OF ILLINOIS

DATE: 1/03/2011

LICENSE EXPIRES 11/30/12

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 the requirements of the current AASHTO LRFD Bridge Design Specifications.



LOCATION SKETCH

GENERAL PLAN

UNION ROAD OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

FAS 34 - SEC. 06-00320-02-BR

McHENRY COUNTY

STATION 207+15.50

STRUCTURE NO. 056-3178

SHEET NO. 1 / 23 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0034	06-00320-02-BR	MCHENRY	65	26
			CONTRACT NO. 63536		
	JOB NO. C-91-140-11	ILLINOIS FED. AID PROJECT BRS-0034(107)			