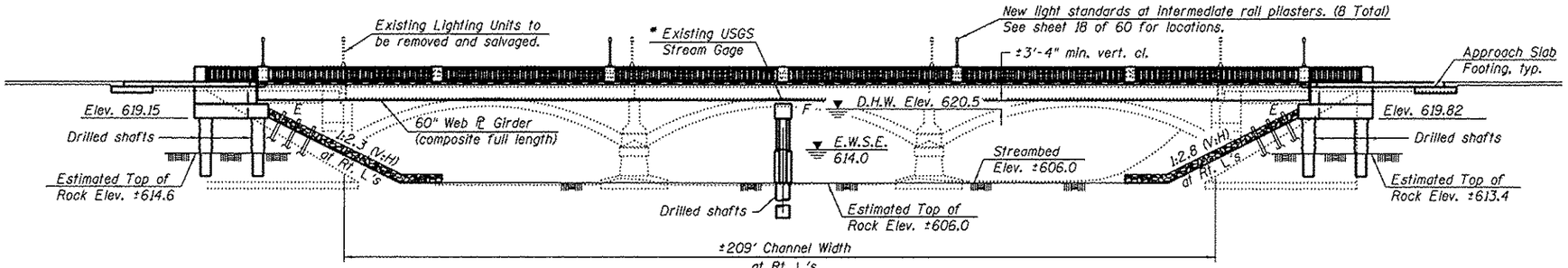
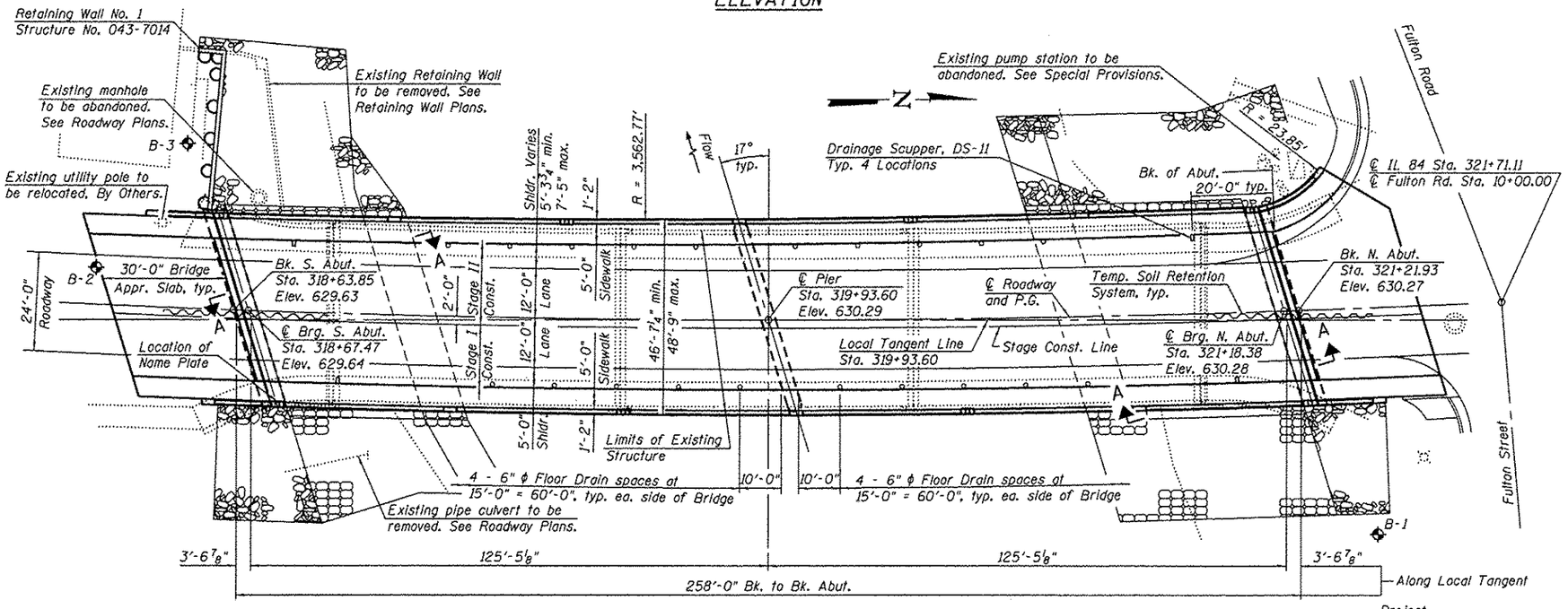
Benchmark: Brass disk on S.E. wingwall of S.N. 043-0028. Sta. 318+60.35, 29.08' Rt., Elev. 634.33

Existing Structure: S.N. 043-0028 was originally built in 1934 as S.B.I. Route 80, Section 103-D. The original structure was a three-span spandrel arch with a reinforced concrete deck supported by closed concrete abutments and solid wall piers founded on spread footings keyed into rock. In 1983 the structure was rehabilitated as F.A. Route 18, Section 103-D-BR. The rehabilitation consisted of replacement of the existing superstructure with precast, prestressed concrete deck beams with a bituminous wearing surface and superimposed concrete sidewalks and decorative bridge rails. The spandrel arches were left in place for aesthetics. In 1990, the bituminous wearing surface was replaced with a 5" reinforced concrete overlay. The existing structure is 213'-1" bk. to bk. of abutments, 43'-10" out to out of deck. The structure is to be removed and replaced utilizing stage construction.

Salvage: Existing Lighting Units to be salvaged.



ELEVATION



PLAN

WATERWAY INFORMATION

Drainage Area = 246 sq. mi. Prop. Low Grade Elev. 629.45 at Sta. **1428+56

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	9410	1515	2157	618.1	0.2	0	618.3	618.1
Design	50	13700	1881	2647	620.5	0.3	0	620.8	620.5
Base	100	15710	2025	2836	621.4	0.3	0	621.7	621.4
Max. Calc.	500	20600	2301	3201	623.1	0.4	0	623.5	623.1

** Sta. 1428+56 = Sta. 317+64.48

DESIGN SCOUR ELEVATION TABLE

		S. Abut.	Pier	N. Abut.
Design Scour Elevation (ft)	q100	619.15	606.0	619.82
	q500	619.15	606.0	619.82

APPROVED
For Structural Adequacy Only
D. Carl Peyer, P.E.
Engineer of Bridges & Structures

Note: See sheet 4 of 60 for Section A-A.

LEGEND
Soil Boring Location

INDEX OF SHEETS

LOADING HL-93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications
5th Edition with 2010 Interims

DESIGN STRESSES

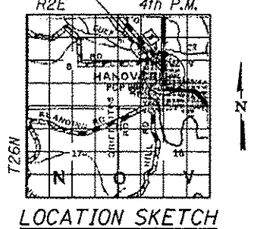
FIELD UNITS

f'c = 3,500 psi
f'c = 3,500 psi (Drilled Shafts)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.052g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.079g
Soil Site Class = B

Project Location



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 84 OVER APPLE RIVER
F.A.P. ROUTE 308 - SEC. 103BR-4
JO DAVIESS COUNTY
STATION 319+93.60
STRUCTURE NO. 043-0080

Design firm no. 184001036 — whks engineers • planners • land surveyors

USER NAME = #OPERATOR#	DESIGNED - BRD	REVISED
FILE NAME = 8430828-64E08.dgn	CHECKED - SDS	REVISED
PLOT SCALE = 2.00000 '/ in.	DRAWN - DLH	REVISED
PLOT DATE = 9/26/2013	CHECKED - BRD	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 60 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-4	JoDAVIESS	159	51
		CONTRACT NO. 64E08		
		ILLINOIS FED. AID PROJECT		