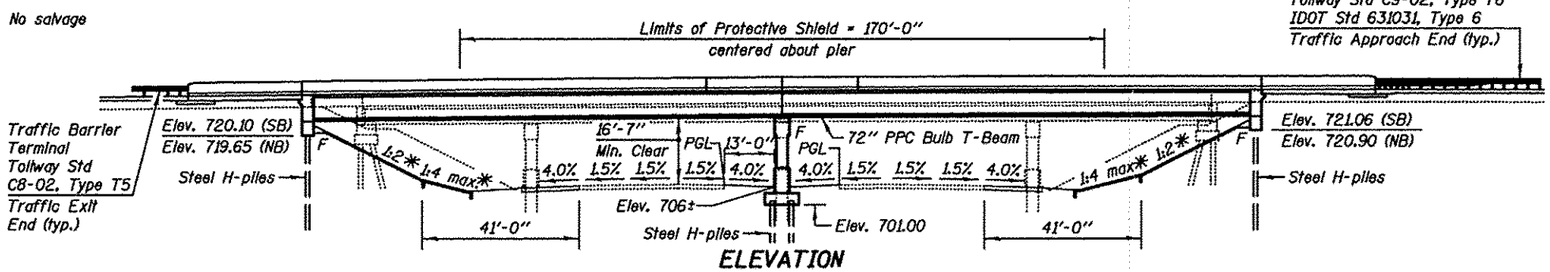
Bench Mark: BM #224 4059+52. 34 ft LT DuPage County Survey Disc at north end of the west bridge wall.
IL Route 59 over Interstate Route 88. Elev. 731.43

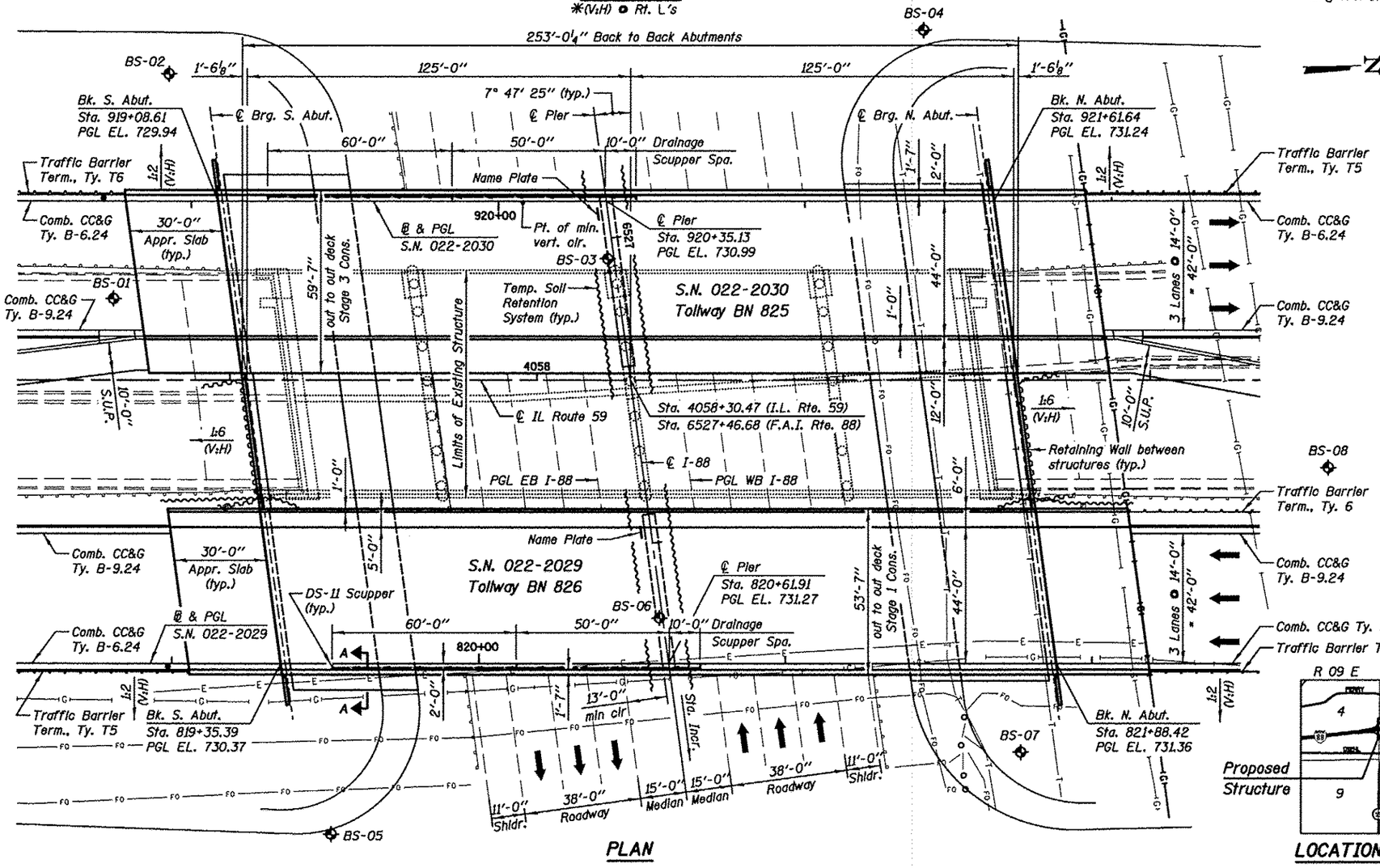
Existing Structure: SN 022-9900 (Tollway BN 825) built in 1957 at Sta. 7167+66.30 by the Illinois State Toll Highway Commission as Bridge No. E1-14. Widened to the west in 1980 as F.A. Route 108 Section E-1-14 BY-R(80) by the Illinois Department of Transportation. Structure consists of four span PPC I-beams (10-48", 2-42") on stub abutment supported on concrete piles and drilled shaft piers. 226'-11" back-to-back abutments. 73'-11" out-to-out deck. Structure to be removed and replaced using stage construction.

No salvage



ELEVATION

*(V:H) ● Rt. L's



PLAN

LOCATION SKETCH

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, 5th Edition, with 2010 Interim Revisions

Illinois State Toll Highway Authority Structure Design Manual, March 2012

LOADING HL 93

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

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (AASHTO M270 Gr. 50)

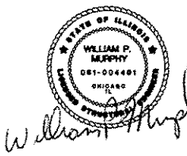
PRECAST PRESTRESSED UNITS

f'_c = 7,000 psi
f'_{ci} = 5,200 psi
f_{pu} = 270,000 psi ($\frac{1}{2}$"ϕ low lax strands)
f_{pbt} = 201,960 psi ($\frac{1}{2}$"ϕ low lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.086g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.158g
Soil Site Class = D

APPROVED
For Structural Adequacy Only
D. Carl Peterson, PE
Engineer of Bridges & Structures



William P. Murphy

Expires 11-30-2014

Date: 11/08/2012

for drawings SA-01 thru SA-63

STATION 4058+30.47
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 338 SEC. (112 & 113) WRS-5
LOADING HL-93
STRUCTURE NO. 022-2029

STATION 4058+30.47
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 338 SEC. (112 & 113) WRS-5
LOADING HL-93
STRUCTURE NO. 022-2030

NAME PLATES

See Std. 515001

LEGEND

◆ Soil Borings

F.F. Front Face
B.F. Back Face
NIC Not In Contract
S.U.P. Shared Use Path

Notes:

S.N. 022-2029 and S.N. 022-2030 are part of a Diverging Diamond Interchange (DDI).

GENERAL PLAN AND ELEVATION

ILLINOIS ROUTE 59 OVER I-88
F.A.P. RTE. 338 SEC. (112 & 113) WRS-5
DUPAGE COUNTY
STATION 4058+30.47
S.N. 022-2029 (SB) TOLLWAY B.N. 826
S.N. 022-2030 (NB) TOLLWAY B.N. 825

KNIGHT
Engineers & Architects

SCALE - NONE	DESIGNED - WPM	REVISED	
DATE - 10/15/2012	CHECKED - TB	REVISED	
	DRAWN - TB	REVISED	
	CHECKED - WPM	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
S.N. 022-2029 (SB) TOLLWAY B.N. 826
S.N. 022-2030 (NB) TOLLWAY B.N. 825
SHEET NO. SA-01 OF 63 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-5	DUPAGE	963	585
		CONTRACT NO. 60131		
		ILLINOIS FED. AID PROJECT		