Bench Mark: Cross cut on concrete surface of curb island at SW corner of intersection of US 20 and McLean Boulevard, located 4.9' W/SW of the traffic signal pole and 5.0' north of the south curb. Elevation = 829.90 (NAVD 88)

Existing Structures: S.N. 045-0002 (WB) and 045-0003 (EB) built in 1960 as FA Route 6 Section 8R-HB-2 at Sta. 98+40.4. Both structures were widened in 1987. S.N. 045-0003 will be widened further in prior contract for MOT purposes. Each structure consists of concrete deck on three-span continuous steel beams. The structures have overall lengths of 150'-1" and widths of 42'-11" (WB) and 55'-8" (EB). The spans are supported by concrete piers on spread footings and concrete stub abutments on piles.

Staging: Traffic to be maintained using staged construction.

Salvage: The two beam lines from the SN 045-0003 temporary widening, and the beam lines from the 1987 widening (one on SN 045-0002, one on SN 045-0003) shall be salvaged. The four stainless steel pins at the hinges of the 1987 widening beam lines shall also be salvaged.

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 5th Edition (2010)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec (Sd1) = 0.084
Design Spectral Acceleration at 0.2 sec (Sds) = 0.144
Soil Site Class = D

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN STRESSES

FIELD UNITS

f'c = 3.5 ksi
fy = 60 ksi (Reinforcement)
fy = 50 ksi (Structural Steel)
AASHTO M270 Grade 50

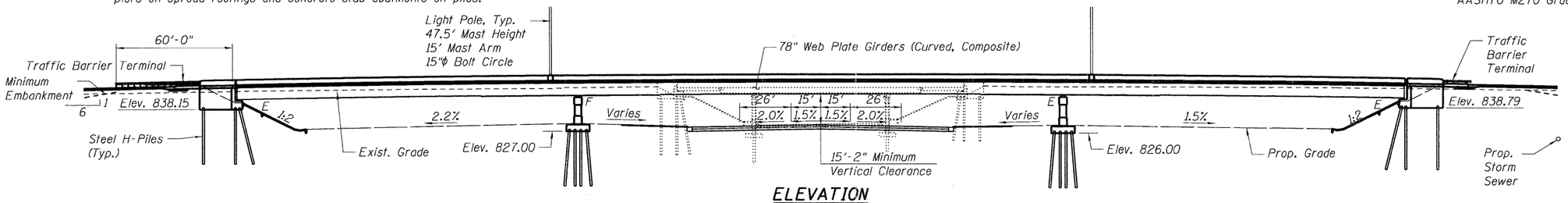
CURVE DATA

US 20

Δ = 20°04'26" (LT)
D = 00°53'20"
T = 1,141.01'
L = 2,258.64'
E = 100.20'
R = 6,446.67'
S.E. = 2.6%
P.C. = Sta. 94+16.23
P.T. = Sta. 116+74.87
P.I. = Sta. 105+57.25

McLean Boulevard

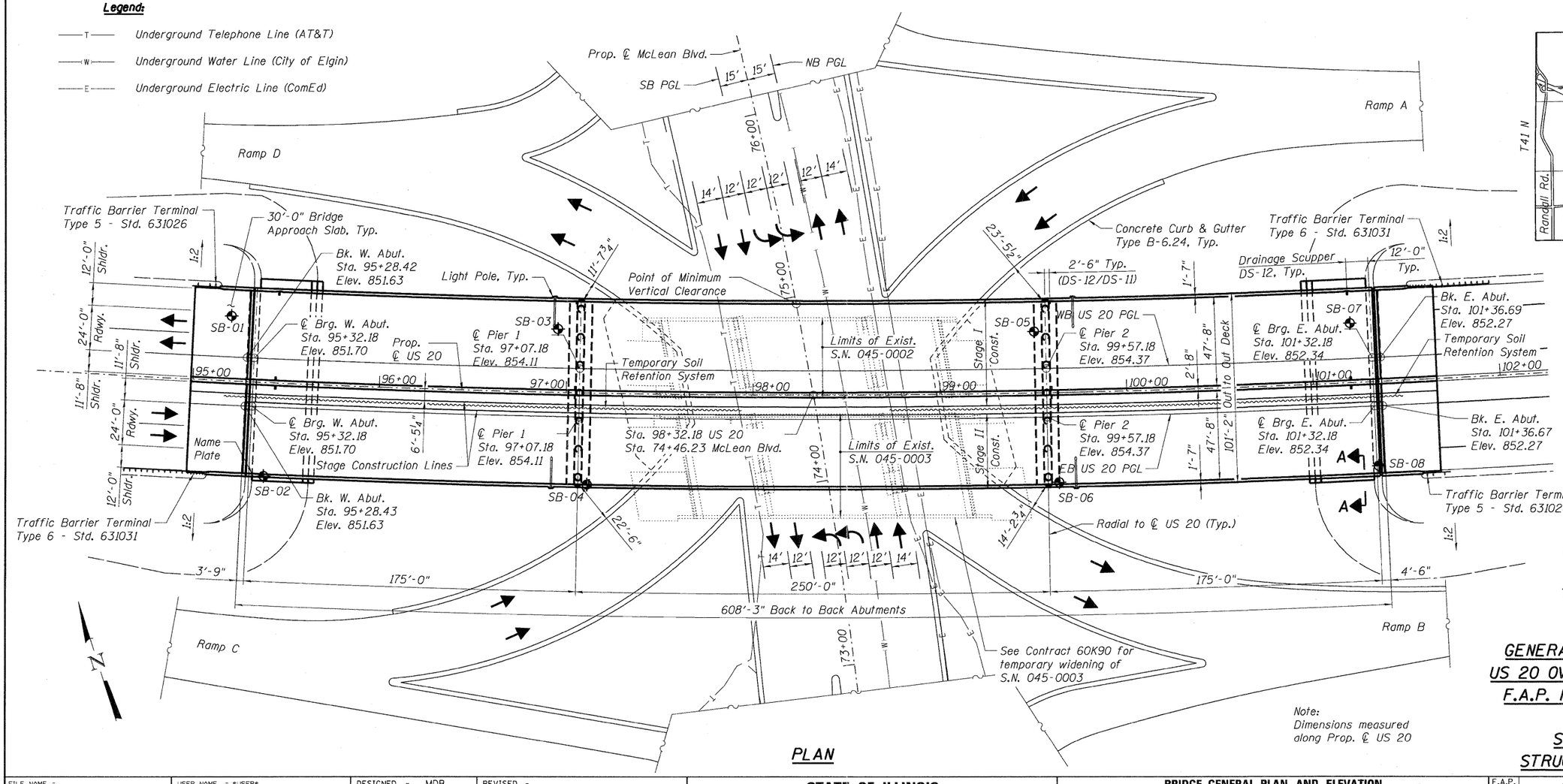
Δ = 16°16'29" (LT)
D = 01°54'35"
T = 428.96'
L = 852.15'
E = 30.51'
R = 3,000.00'
S.E. = n/a
P.C. = Sta. 68+34.21
P.T. = Sta. 76+86.36
P.I. = Sta. 72+63.17



ELEVATION

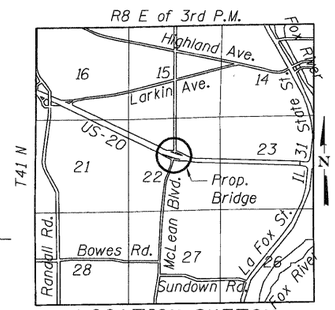
Legend:

—T— Underground Telephone Line (AT&T)
—W— Underground Water Line (City of Elgin)
—E— Underground Electric Line (ComEd)



Note: Dimensions measured along Prop. ℄ US 20

PLAN



LOCATION SKETCH

STATE OF ILLINOIS
MICHAEL D. PAPPAS
CHICAGO
LICENSED STRUCTURAL ENGINEER
DATE 12/7/2011
EXP. 11/30/2012

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN & ELEVATION
US 20 OVER MCLEAN BOULEVARD
F.A.P. RTE. 345 - SEC. 8R-R
KANE COUNTY
STATION 98+32.18
STRUCTURE NO. 045-0077

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - MDB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 20 OVER MCLEAN BOULEVARD	BRIDGE GENERAL PLAN AND ELEVATION	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MDB	REVISED -			345	8R-R	KANE	794	473
	PLOT SCALE = $SCALE$	CHECKED - PK	REVISED -			SN 045-0077		CONTRACT NO. 60H45		
TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	PLOT DATE = $DATE$	DATE - 12/16/11	REVISED -		SCALE: / SHEET NO. S-1 OF S-62 / STATION 98+32.18	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

..\DIMASTER-ALIGNMNT.DGN, ..\DIGBH45-DESIGN.DGN, ..\DIMASTER-TOPOE.DGN, ..\DIMASTER-ROWBGN.DGN, ..\B450077-60H45-002-OPE.DGN, ..\ALLSNUM-60H45-001-BORDER.DGN, ..\B450077
12-07-2011, 11:38:08 $WIZERKA$ ..\VS-2044\NV\VALL JD-FINNS.DT-2202-23379-2BN\STRUCT\GAD-60H45\B450077\SHEET\B450077-60H45-002-OPE.SHT.DGN