

B.M.4: RR Spike in Power Pole West Side of Il. 89, ±30' N. of the N. Entrance to the First House South of Crow Creek, MB# 245 Elev. 630.167

B.M.5: RR Spike in 46" Pin Oak ±115' S. of Guardrail End on the W. Side of Il. 89, (First Large Tree S. of Crow Creek Near West E.O.P.) Elev. 626.636

Existing Structure:
Str. No. 062-0031. Built as SBI Rt. 89, Sec. 125VB-125V-C Sta. 301+00 Marshall County in 1930. Superstructure originally consisted of eleven R.C. Deck Girder spans and one Steel Plate Girder span supported on R.C. Piers and Spill-Thru Abutments. 641.6' Bk. to Bk. Abutments and 24'-0" clear width. The Superstructure was replaced in 1971 SBI Rt. 89, Sec. 125VBR, Sta. 295+98.76, Marshall County. The existing superstructure has eleven W-beam spans and one steel plate girder span all with 7 1/2" deck slab 640'-10" Bk. to Bk. Abutment Caps and 32'-6" O. to O. Deck. Portions of the substructure were removed and reconstructed to accommodate the new superstructure.

Traffic will be detoured during construction.

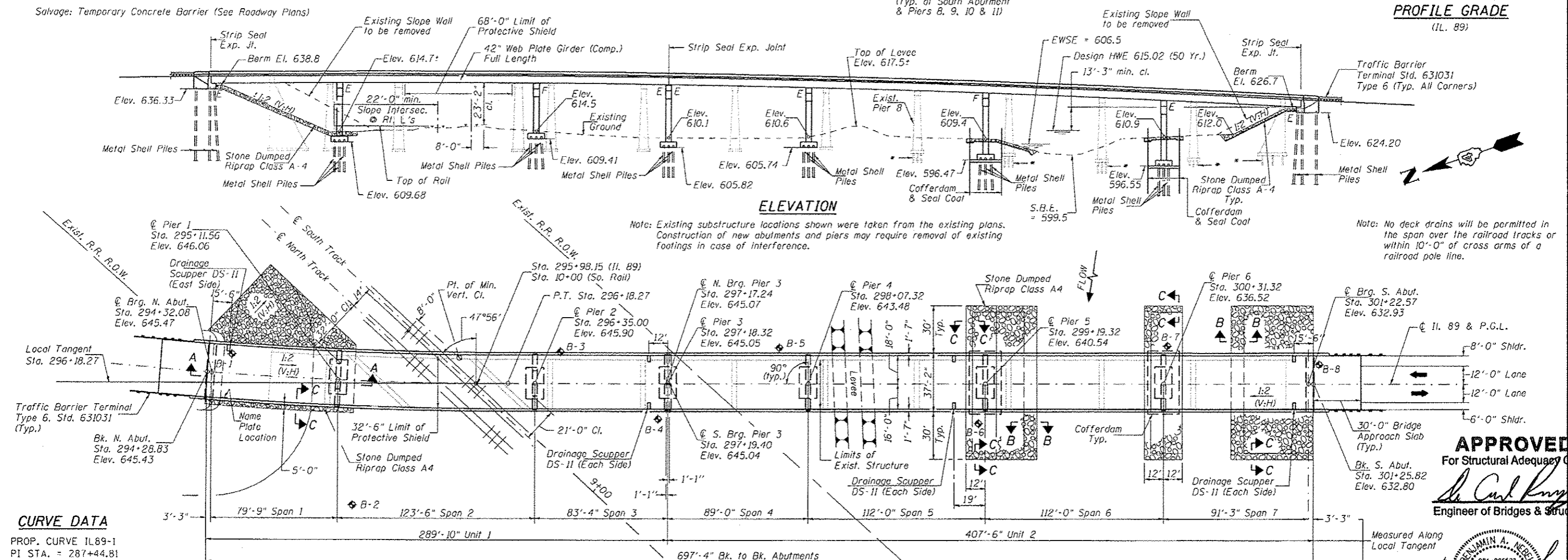
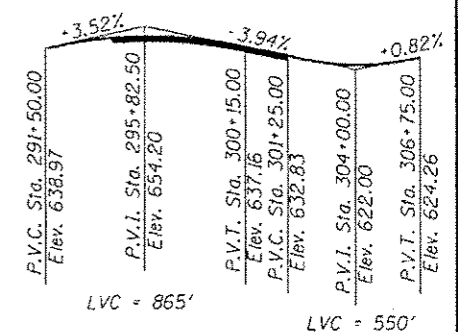
Salvage: Temporary Concrete Barrier (See Roadway Plans)

TOP OF RAIL ELEVATIONS - BNSF RR
(North Track)

Sta. 12+17	Elev. 616.57
Sta. 11+68	Elev. 616.46
Sta. 11+19	Elev. 616.39
Sta. 10+68	Elev. 616.34
Sta. 10+41	Elev. 616.28
Sta. 9+95	Elev. 616.34
Sta. 9+41	Elev. 616.34
Sta. 8+92	Elev. 616.40
Sta. 8+42	Elev. 616.50
Sta. 7+90	Elev. 616.69

TOP OF RAIL ELEVATIONS - BNSF RR
(South Track)

Sta. 12+17	Elev. 617.68
Sta. 11+68	Elev. 617.60
Sta. 11+19	Elev. 617.57
Sta. 10+68	Elev. 617.52
Sta. 10+25	Elev. 617.50
Sta. 9+80	Elev. 617.38
Sta. 9+40	Elev. 617.36
Sta. 8+86	Elev. 617.43
Sta. 8+40	Elev. 617.45
Sta. 7+90	Elev. 617.63



CURVE DATA

PROP. CURVE IL89-1
PI STA. = 287+44.81
Δ = 39° 29' 30" (LT)
D = 2° 10' 00"
R = 2,644.42'
T = 949.23'
L = 1,822.69'
E = 165.20'
e = 4.2%
P.C. STA. = 277+95.58
P.T. STA. = 296+18.27
T.R. = 40.00'
S.E. = 110.00'
S.E. Removed Sta. 295+82 to Sta. 297+32

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Pier 5	Pier 6	S. Abut.
	596.5	596.5	624.2

WATERWAY INFORMATION

Exist. Low Grade Elev. = 623.49 @ Sta. 305+50
Prop. Low Grade Elev. = 623.52 @ Sta. 305+50

Flood		Design		Base		Max. Calc.	
Freq. Yr.	C.F.S.	Q	Opening Sq. Ft.	Not. H.W.E.	Head - Ft.	Headwater E.I.	
10	1,950	816	888	612.08	0.37 0.22	612.45 612.30	
50	7,780	1,382	1,489	615.02	0.28 0.15	615.30 615.17	
100	9,010	1,603	1,744	616.17	0.25 0.13	616.42 616.40	
500	12,000	3,621	3,985	618.66	0.20 0.16	618.86 618.82	

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.106g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.169g
Soil Site Class = D

LOADING HL-93

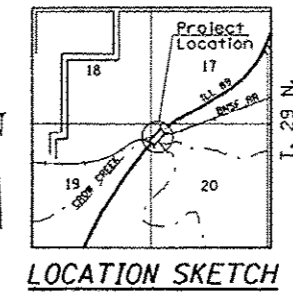
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

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

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)



GENERAL PLAN
ILL RTE 89 OVER
BNSF RR AND CROW CREEK
F.A.P. RTE 698 SEC. (125VBR)BR
MARSHALL COUNTY
STATION 295+98.15
S.N. 062-0086

APPROVED
For Structural Adequacy Only
Carl Krueger
Engineer of Bridges & Structures

Benjamin A. Nereb
Professional Engineer
No. 062-0086
Illinois
Lic Exp. 11/30/2014

Hutchison Engineering, Inc.
Jacksonville, Peoria, & Shorewood, Illinois

USER NAME = Jdean	DESIGNED = JOH	REVISED =
PLOT SCALE = NONE	CHECKED = BAN	REVISED =
PLOT DATE = 7/24/2013	DRAWN = TAC	REVISED =
	CHECKED = JOH/BAN	REVISED =

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 062-0086
SHEET NO. 1 OF 62 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	(125VBR)BR	MARSHALL	148	26
			CONTRACT NO. 68580	
ILLINOIS FED. AID PROJECT				