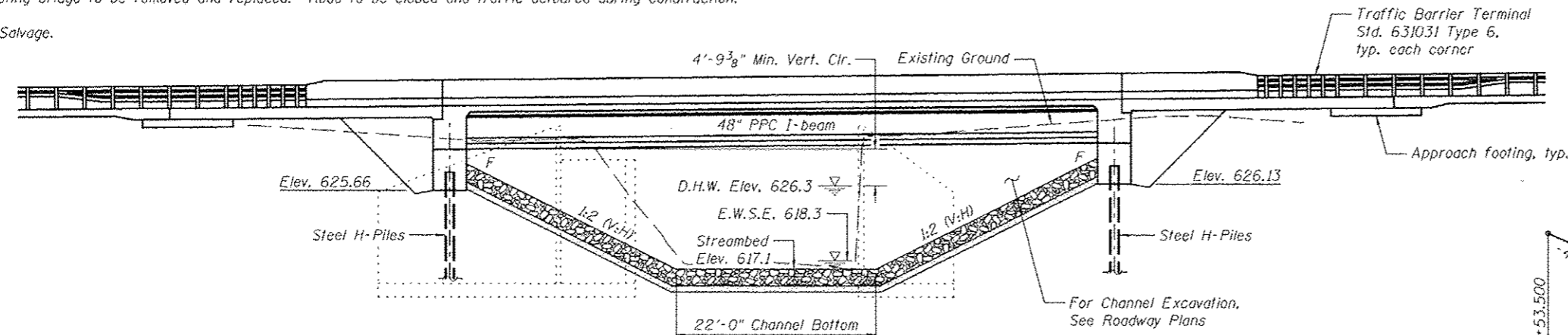


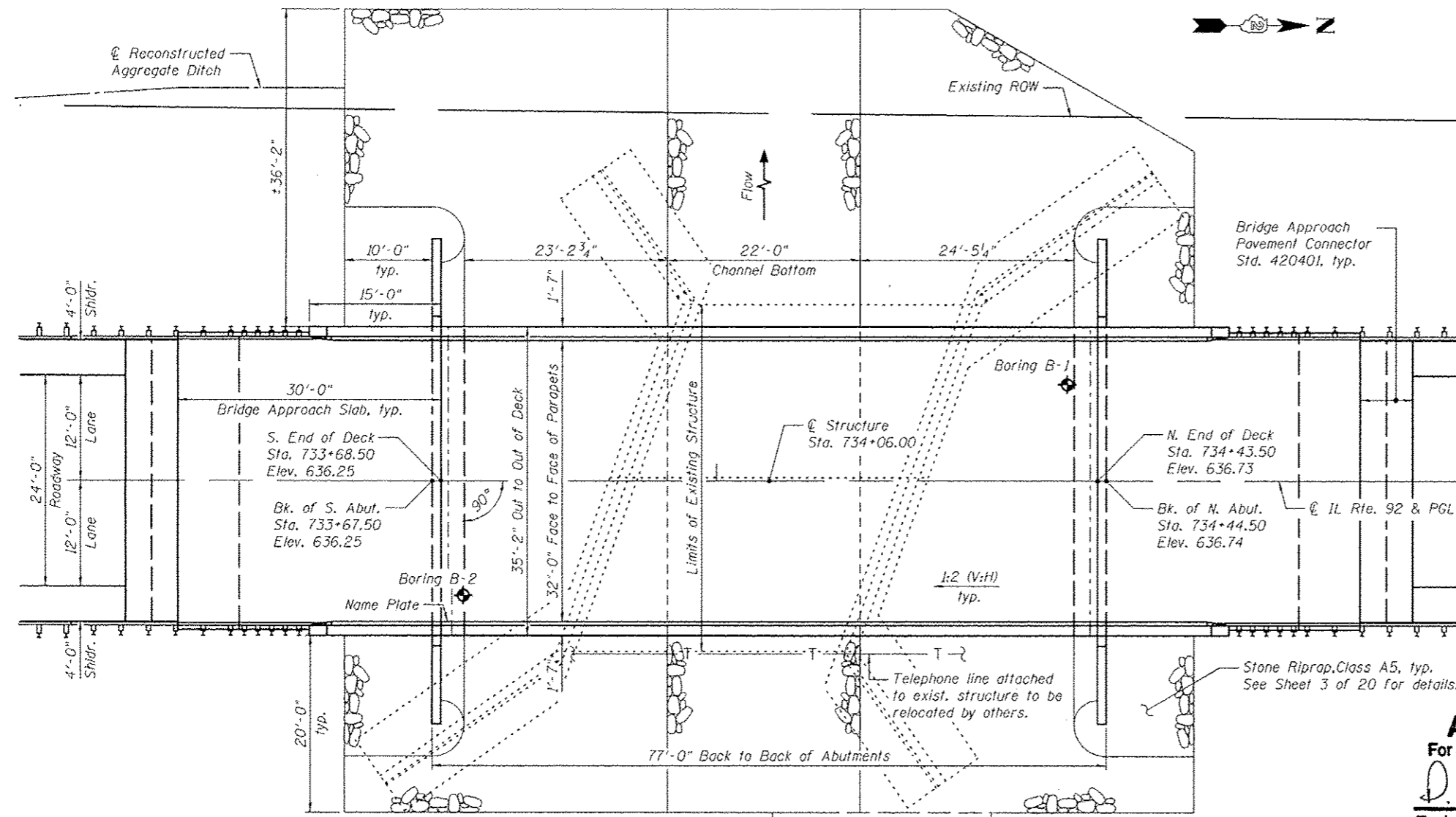
Bench Mark: Chiseled Square on the NW wingwall of the existing bridge, S.N. 081-0072 Elev: 633.12

Existing Structure: S.N. 081-0072, originally built in 1953, as F.A.S. Rt. 207 Section 103 at Station 727+10 as a single span reinforced concrete tee beam bridge with an overall length of 32'-1 1/2" back to back of abutments and a width of 36'-0" from face to face of curb. The bridge is built on a skew of 20 degrees left ahead. The closed abutments are restrained at the top and bottom and are supported on spread footings. Waterproofing membrane system placed on deck & bituminous overlay in 1975. Existing bridge to be removed and replaced. Road to be closed and traffic detoured during construction.

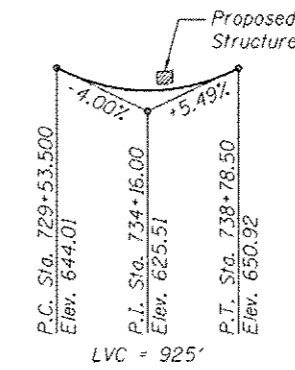
No Salvage.



ELEVATION



PLAN



PROFILE GRADE
(along centerline roadway)

LOADING HL-93

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

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 6th Edition with 2012 Interim Revisions

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax strands)
 $f_{si} = 201,960$ psi (1/2" ϕ low lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.061g
Design Spectral Acceleration at 0.2 sec. ($S_{D0.2}$) = 0.091g
Soil Site Class = C

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut. Elev.	N. Abut. Elev.
	625.66	626.13

WATERWAY INFORMATION

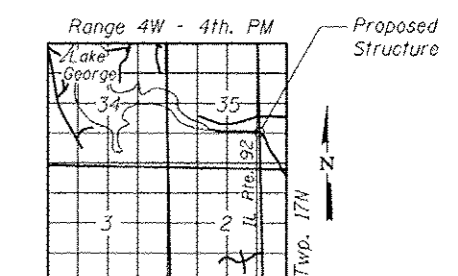
Drainage Area = 4.543 sq. mi. Exist. Low Grade Elev. 632.60 @ Sta. 733+50.00
Prop. Low Grade Elev. 635.20 @ Sta. 733+21.29

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	1360	170.4	298.6	625.0	2.5	0.6	627.5	625.6
Base	50	2230	205.9	371.7	626.3	5.5	1.3	631.8	627.5
Overtopping	100	2640	216.8	395.5	626.7	6.2	1.5	632.9	628.3
Max. Calc.	500	3630	-	457.9	627.7	-	2.3	-	630.0

10 year velocity through Exist. Bridge = 9.89 fps
10 year velocity through Prop. Bridge = 4.11 fps



Brian J. Malone
DATE: 6-18-2013
EXPIRES: 11-30-2014
SHEETS: 32-51



LOCATION SKETCH

APPROVED
For Structural Adequacy Only

D. Carl Puryear
Engineer of Bridges & Structures

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 92 OVER
BIG BRANCH CREEK
F.A.P. ROUTE 599 - SECTION 103 MFT-BR
ROCK ISLAND COUNTY
STATION 734+06.00
STRUCTURE NO. 081-0196

6/18/2013 1:06:22 PM 0810196_64018_001_CPEB.dwg



DESIGNED - BJM	REVISED -
CHECKED - BRT	REVISED -
DRAWN - JNH	REVISED -
CHECKED - BJM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 20 SHEETS

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
599	103MFT-BR	ROCK ISLAND	88	32

CONTRACT NO. 64D18
ILLINOIS FED. AID PROJECT