Bench Mark: East Rim of Sanitary Manhole Sta. 85+04.52, 23.88' Lt., Elev. = 623.68

Existing structure S.N. 058-6003 was originally constructed in 1909. It was reconstructed in 1965 when the original superstructure was replaced with PPC deck beams. The PPC deck beams have since been overlayed with bituminous concrete. Structure consists of reinforced concrete closed abutments with concrete wingwalls. The abutments appear to be gravity type and it is not known if they are supported by piles. Structure length is 49 feet and the width is 24 feet. The distance face to face abutment breastwalls is 44 feet, measured at the bottom of Lake Decatur. A 30" dia. ductile iron sanitary sewer pipe spans the existing opening on the North side of the existing structure. The sanitary sewer pipe is supported by a pair of W21x44 steel beams which are supported on the north wingwalls of the existing structure. The existing structure is to be removed and replaced. The existing roadway will be closed during construction.

No salvage.

WATERWAY INFORMATION

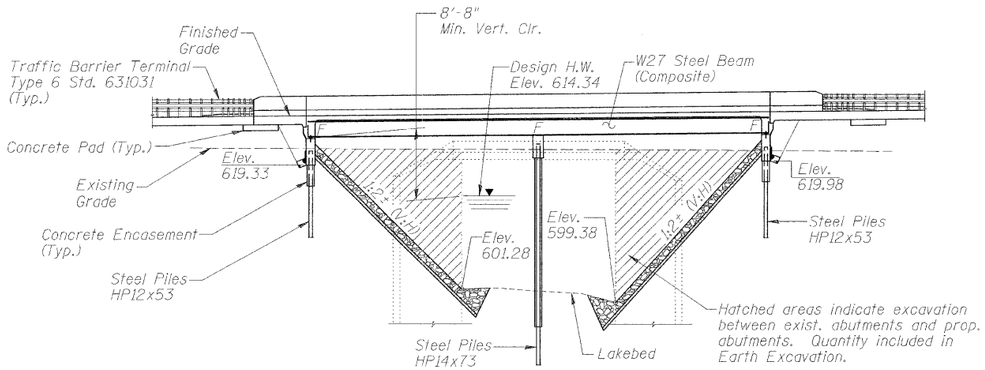
Drainage Area = 16.7 Sq. Mi. Existing Low Grade Elev. 621.33 @ Sta. 91+00.00
Proposed Low Grade Elev. 623.25 @ Sta. 86+50.00

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	2730	500	918	614.33	0.47	0.14	614.80	614.47
Design	30	3690	495	915	614.34	0.89	0.26	615.23	614.60
Base	100	4860	488	910	614.34	1.61	0.45	615.95	614.79
Overtopping									
Max. Calc.	500	6640	494	901	614.36	3.37	0.85	617.73	615.21

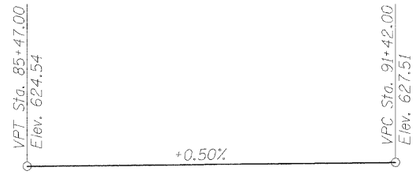
30 Yr. Velocity = 7.46 fps (Existing) and 4.03 fps (Proposed)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier	E. Abut.
	619.33	594.1	619.98



ELEVATION
(Looking North - Downstream)



PROFILE GRADE AT STRUCTURE
(Along ℄ Roadway)

DESIGN SPECIFICATIONS

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

LOADING HL 93

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

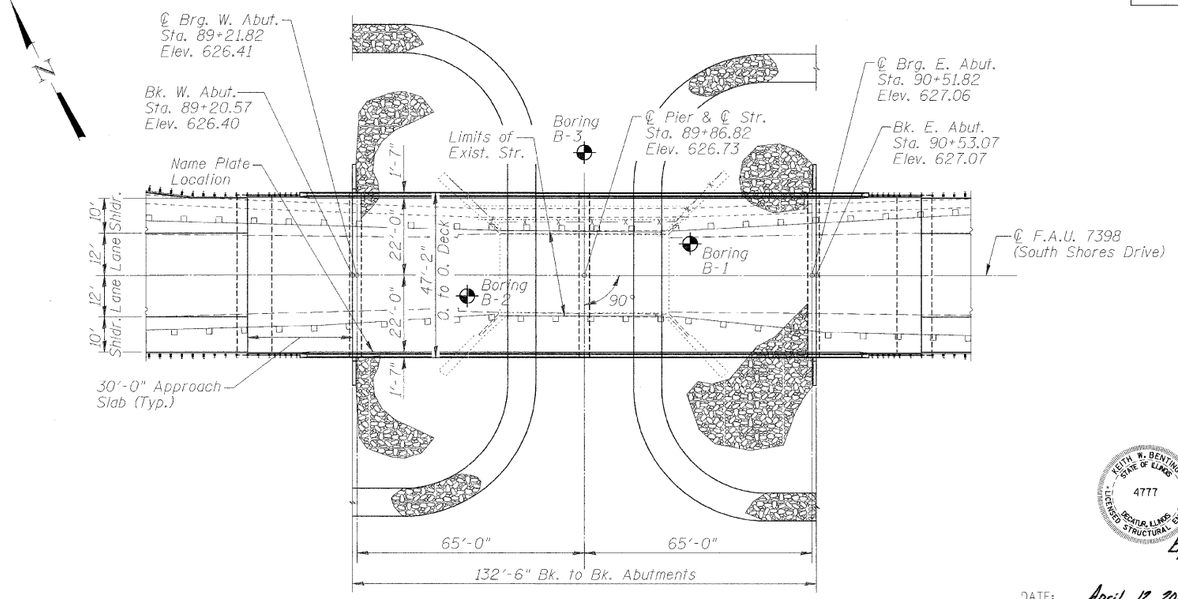
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (Structural Steel AASHTO M270 Grade 50W)

SEISMIC DATA

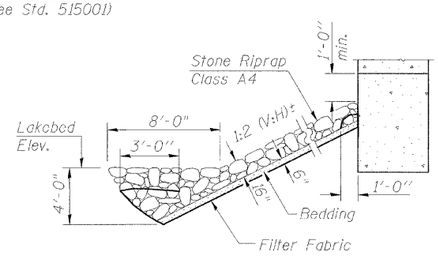
Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.155g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.285g
Soil Site Class = D



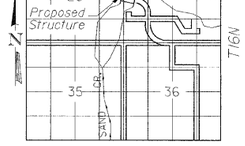
PLAN

SAND CREEK ARM - LAKE DECATUR
BUILT 2012 BY
CITY OF DECATUR
SECTION 09-00905-00-BR
STA. 89+86.82
STR. NO. 058-6026 LOADING HL-93

NAME PLATE
(See Std. 515001)



STONE RIPRAP ANCHOR DETAIL



LOCATION SKETCH

KEITH W. BENTING
STATE OF ILLINOIS
4777
LICENSED STRUCTURAL ENGINEER
Exp. 11/30/2012

DATE: April 12, 2012
Keith W. Benting
KEITH W. BENTING
ILL. STRUCTURAL NO. 4777

"I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH REQUIREMENTS OF THE CURRENT 'AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES'."

GENERAL PLAN & ELEVATION
FAU 7398 (SOUTH SHORES DRIVE) OVER
SAND CREEK ARM OF LAKE DECATUR
SECTION 09-00905-00-BR
MACON COUNTY
STATION 89+86.82
STRUCTURE NO. 058-6026

URS
345 EAST ASH AVENUE, SUITE B
DECATUR, ILLINOIS 62526
PH. 217-875-4800

FILE NAME =	USER NAME = Brian K. Nicholson	DESIGNED - MJP	REVISED -
		CHECKED - KWB	REVISED -
	PLOT SCALE =	DRAWN - BKN	REVISED -
	PLOT DATE =	CHECKED - KWB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 058-6026
SHEET NO. 1 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7398	09-00905-00-BR	MACON	63	31
		CONTRACT NO. 95687		
	ILLINOIS FED. AID PROJECT			