

Bench Mark: BM 107 - Chiseled square on south end of east abutment.  
Elev. 439.63 (NAVD 88)

Existing Structure: The Veterans Bridge, S.N. 082-6001, was built in 1951 and renamed the Martin Luther King Bridge in 1968. The 4010'-3 7/8" long structure consists of a three-span cantilevered through truss, seven steel approach spans of various configurations on the Missouri Approach, two simply supported deck truss spans, alternating four-span continuous beam spans and simple beam spans on the Illinois Approach. The structure width varies and currently carries one westbound lane and two eastbound lanes with a concrete median barrier. The deck on the suspended span and the adjacent three panels of each cantilever arm consists of a partially filled steel grid deck. The deck on the remainder of the structure is concrete, acting compositely in some locations. The piers have various concrete wall and steel bent or tower configurations founded on piles or footings on rock. Abutment A is supported by a spread footing; whereas, Abutment B is pile supported. The bridge underwent a major rehabilitation in 1987 in which the grid deck was replaced and the limits extended from L14-L14' to L17-L17'. Other rehabilitative efforts were made to the floorsystem, joints, and drainage system, in addition to painting the entire structure. Several other rehabilitation contracts have been performed including scour mitigation and changes to the lane configuration.

Traffic: Bridge to be closed to traffic to facilitate rehabilitation work.

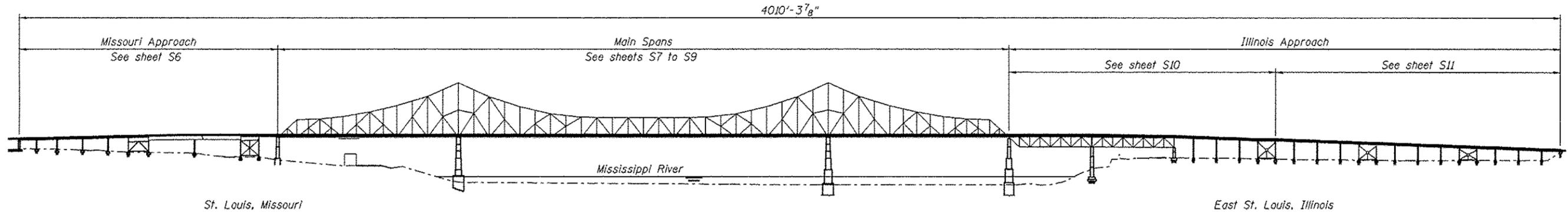
Salvage: No salvage

**LOADING HS20-44 (NEW CONSTRUCTION)**  
Allow 0#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**  
2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition and the AASHTO Manual for Bridge Evaluation, 2nd Edition, with 2011 and 2013 Interims

**DESIGN STRESSES (NEW CONSTRUCTION)**

**FIELD UNITS**  
f'c = 3,500 psi  
f'c = 4,000 psi (Lightweight Concrete)  
fy = 60,000 psi (Reinforcement)  
fy = 36,000 psi (M270 Grade 36 Structural Steel)  
fy = 50,000 psi (M270 Grade 50 Structural Steel)

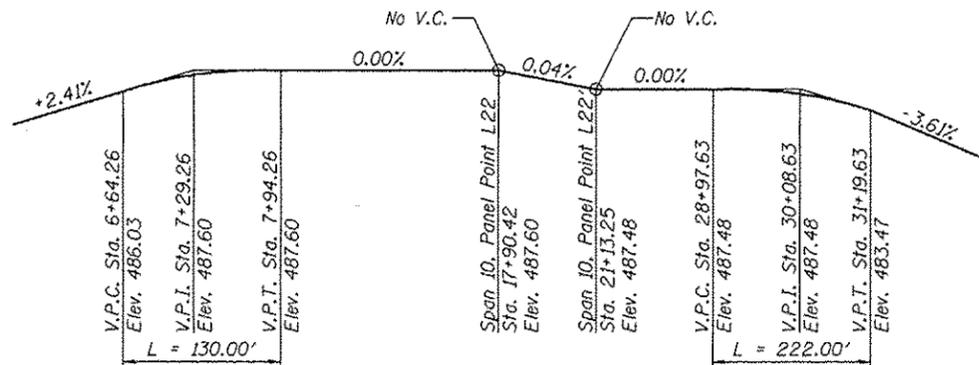


**ELEVATION - MARTIN LUTHER KING BRIDGE**  
(Looking North)

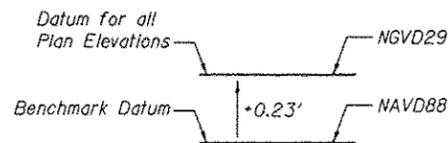
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OF  
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3/20/14  
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EXPIRES 11/30/2014

**APPROVED**  
For Structural Adequacy Only

*D. Carl Puryear JF*  
Engineer of Bridges & Structures



**PROFILE GRADE**  
(@ Bridge)



**ELEVATION REFERENCES**

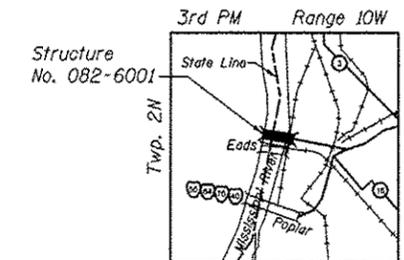
Note:  
All elevations refer to U.S.C.&G. Survey - 1929 General Adjustment (NGVD29). Reference is given to the North American Vertical Datum of 1988 (NAVD88) due to the benchmark being referenced to this datum.

**DESIGN STRESSES (1951 ORIGINAL)**

Design Traffic Lanes: Four - 10' Lanes, No shoulders  
Design Specifications: AASHTO 1944  
Loading: H20-44  
Reinforced Concrete:  
Deck Slab f'c = 1,000 psi, N=10  
Substructure f'c = 1,000 psi, N=10  
Structure Steel:  
Carbon (A7) fs = 18,000 psi  
Silicon fs = 24,000 psi

**DESIGN STRESSES (1987 REHABILITATION)**

Design Traffic Lanes: Four - 10' Lanes, No shoulders  
No allowance for future wearing surface  
Design Specifications: AASHTO 1983 and Manual for Maintenance Inspection for Bridges - 1983, Both with 1984, 1985 and 1986 Interims  
Loading: HS20-44  
Reinforced Concrete:  
Deck Slab f'c = 3,500 psi, N=9  
Lightweight Concrete f'c = 2,500 psi  
Substructure f'c = 1,400 psi, N=9  
Reinforcing Steel fy = 60,000 psi  
fs = 24,000 psi  
Structure Steel: fs = 20,000 psi, (M-183)  
fs = 27,000 psi, (M-223/Grade 50)  
High Strength (H.S.) Bolts 17,000 psi, (M-164) for Class A Contact Surfaces



**LOCATION MAP**

**GENERAL PLAN**  
**MARTIN LUTHER KING BRIDGE**  
**OVER MISSISSIPPI RIVER (PUBLIC WATER)**  
**F.A.P. ROUTE 799 - SEC. 1BR, DRS-2**  
**ST. CLAIR COUNTY**  
**STATION 20+00.00**  
**STRUCTURE NO. 082-6001**



USER NAME *	DESIGNED - MEL	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE *	DRAWN - AEC	REVISED
PLOT DATE = 03/28/2014	CHECKED - MEL	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN  
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER

SHEET NO. 51 OF 5138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	19
CONTRACT NO. 76B03				
ILLINOIS FED. AID PROJECT				