

Benchmarks: BM #1 Chiseled "□" on top of Southeast wingwall of bridge S.N. 006-0104, Station 29+90/17' LT., Elevation = 770.49.
 BM #2 Top of ROW marker on Northwest quadrant of bridge S.N. 006-0104, Station 28+84/51' RT., Elevation = 763.57.

Existing Structure: Structure No. 006-0104, originally built in 1927 as Section 101-B. The original construction consisted of a reinforced concrete T-grider superstructure supported by reinforced concrete closed abutments. In 1980 under Section 101BR the superstructure was replaced with precast prestressed concrete deck beams. The back-to-back of abutments dimension measures 53'-3" and the out-to-out dimension measures 33'-0". One lane of traffic will be maintained utilizing stage construction.

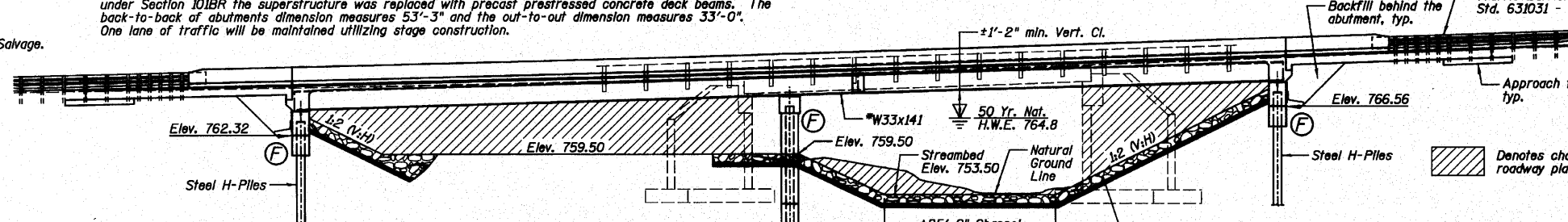
No Salvage.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

WATERWAY INFORMATION

Drainage Area = 23.89 Sq. Mi.		Existing Low Grade Elev. 767.34 @ Sta. 26+50.00 Proposed Low Grade Elev. 767.43 @ Sta. 25+85.00					
Flood	Freq. Yr.	C.F.S.	Q	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft. Exst. Prop.	Headwater El. Exst. Prop.
10	2060	400	580	763.50	0.49	0.11	763.99 763.61
Design	50	3290	470	740	764.83	1.04	0.25 765.87 765.08
Base	100	3830	490	800	765.33	1.30	0.31 766.63 765.64
Overtopping							
Max. Calc.	500	5160	550	860	766.42	1.46	0.48 767.88 766.90

10 Yr. Velocity = 5.2 ft/sec. (Existing)
 10 Yr. Velocity = 3.6 ft/sec. (Proposed)



ELEVATION

*Composite in positive moment region only.

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications, 4th Edition (2008 and 2009 Interim Revisions)

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (AASHTO M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.07 g
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.12 g
 Soil Site Class = C

SCOUR INFORMATION

Design Scour Elevation	North Abutment	Pier	South Abutment
	762.32	749.50	766.56

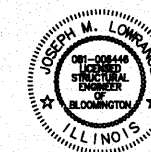
INDEX OF SHEETS

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B9	SUPERSTRUCTURE DECK
B10	SUPERSTRUCTURE DETAILS
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STONE RIPRAP LOCATION

Location	Station	Offset
A	28+59	20' LT.
B	28+59	44' LT.
C	28+90	44' LT.
D	29+30	34' LT.
E	29+04	49' LT.
F	29+04	88' LT.
G	30+14	38' LT.
H	30+24	38' LT.
I	30+24	20' LT.
J	30+24	20' RT.
K	30+24	40' RT.
L	30+19	40' RT.
M	30+19	80' RT.
N	29+80	80' RT.
O	29+80	40' RT.
P	29+30	40' RT.
Q	28+90	49' RT.
R	28+59	49' RT.
S	28+59	20' RT.

Note: Stations and offsets for the Stone Riprap, Class A4 are from the roadway centerline.

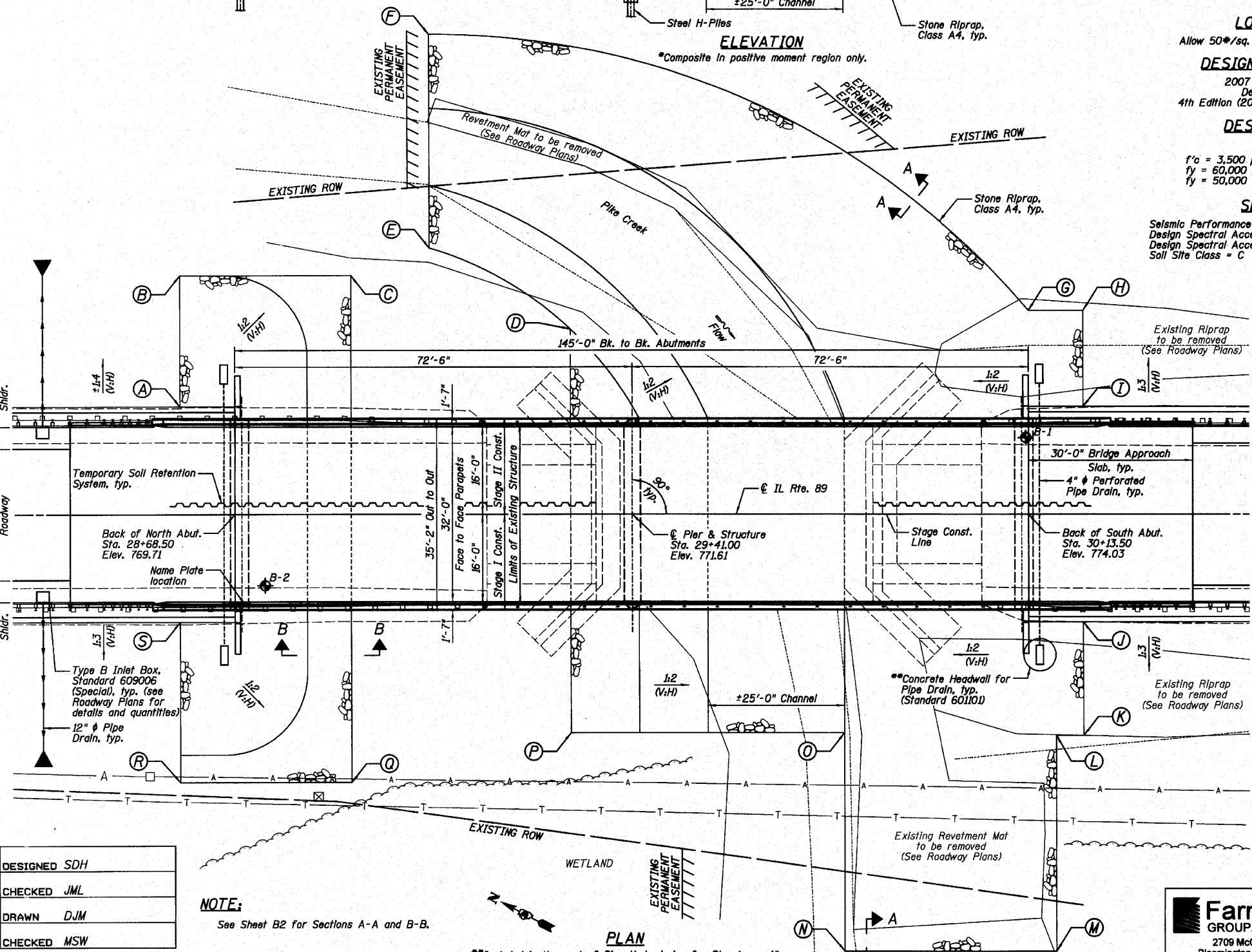
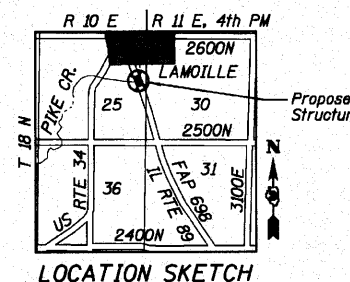


Joseph M. Lowrance
 ILLINOIS STRUCTURAL ENGINEER
 NO. 081-006446
 Exp. Date 11/30/10

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TOP)
 ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN AND ELEVATION
 IL ROUTE 89 OVER PIKE CREEK
 F.A.P. 698 - SECTION (101 BR)BR
 BUREAU COUNTY
 STATION 29+41.00
 STRUCTURE NO. 006-0181



NOTE: See Sheet B2 for Sections A-A and B-B.

Included in the cost of Pipe Underdrains for Structures 4

DESIGNED SDH
CHECKED JML
DRAWN DJM
CHECKED MSW

DATE 10/08/10

Farnsworth GROUP, INC.
 2709 McGraw Drive
 Bloomington, Illinois 61704
 309/683-8435, 309/683-1571 fax

SHEET NO. B1
 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	(101 BR)BR	BUREAU	47	15
CONTRACT NO. 66910				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				