

Existing Structure: Structure No. 082-0167 (E.B.) and 082-0168 (W.B.), built in 1968 as Section 82-3VB and widened in 1980 as Section 82-3VBY. The dual superstructures consist of continuous three span composite rolled beam bridges with 7 1/2" concrete slabs and 1 1/2" bituminous overlay. The dual substructures consist of concrete stub abutments supported by concrete piles and multiple column piers supported by timber piles. The back-to-back of abutment dimension measures 259'-2 3/8" (E.B.) and 249'-4 3/4" (W.B.) and the out-to-out of deck measures 71'-4" to 79'-0 1/4" (E.B.) and 71'-2" (remainder varies) (W.B.). The span lengths (C bearing to C bearing) are 89'-3 3/8", 86'-10 7/8" and 77'-3 3/8" (E.B.) and 85'-11 1/4", 84'-4 1/2" and 85'-11 1/4" (W.B.). The skew angles are 27°10'0" left forward (E.B.) and 22°18'0" left forward (W.B.). Two lanes of traffic will be maintained on each bridge utilizing stage construction.

SEE SHEET A2 FOR INDEX TO SHEETS

**LOADING HS20-44**

Original and 1980 Construction  
Allow 25#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**

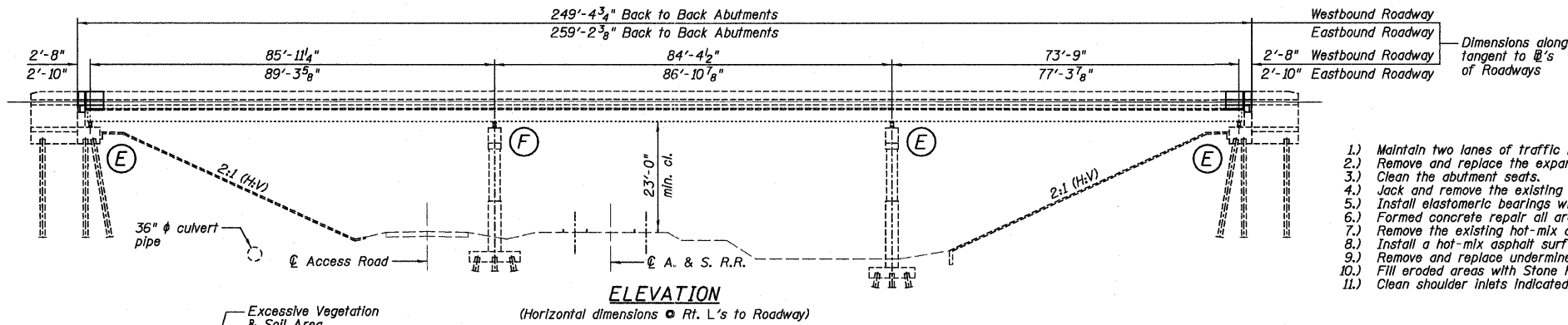
1980 Construction  
1977 AASHTO and 1978 Interim Specifications

**DESIGN STRESSES**

Original Construction  
f<sub>c</sub> = 1,400 psi (Super & Sub)  
f<sub>s</sub> = 20,000 psi (Reinforcement)  
f<sub>s</sub> = 20,000 psi (Structural Steel)  
v<sub>c</sub> = 75 psi (Footings)  
n = 10

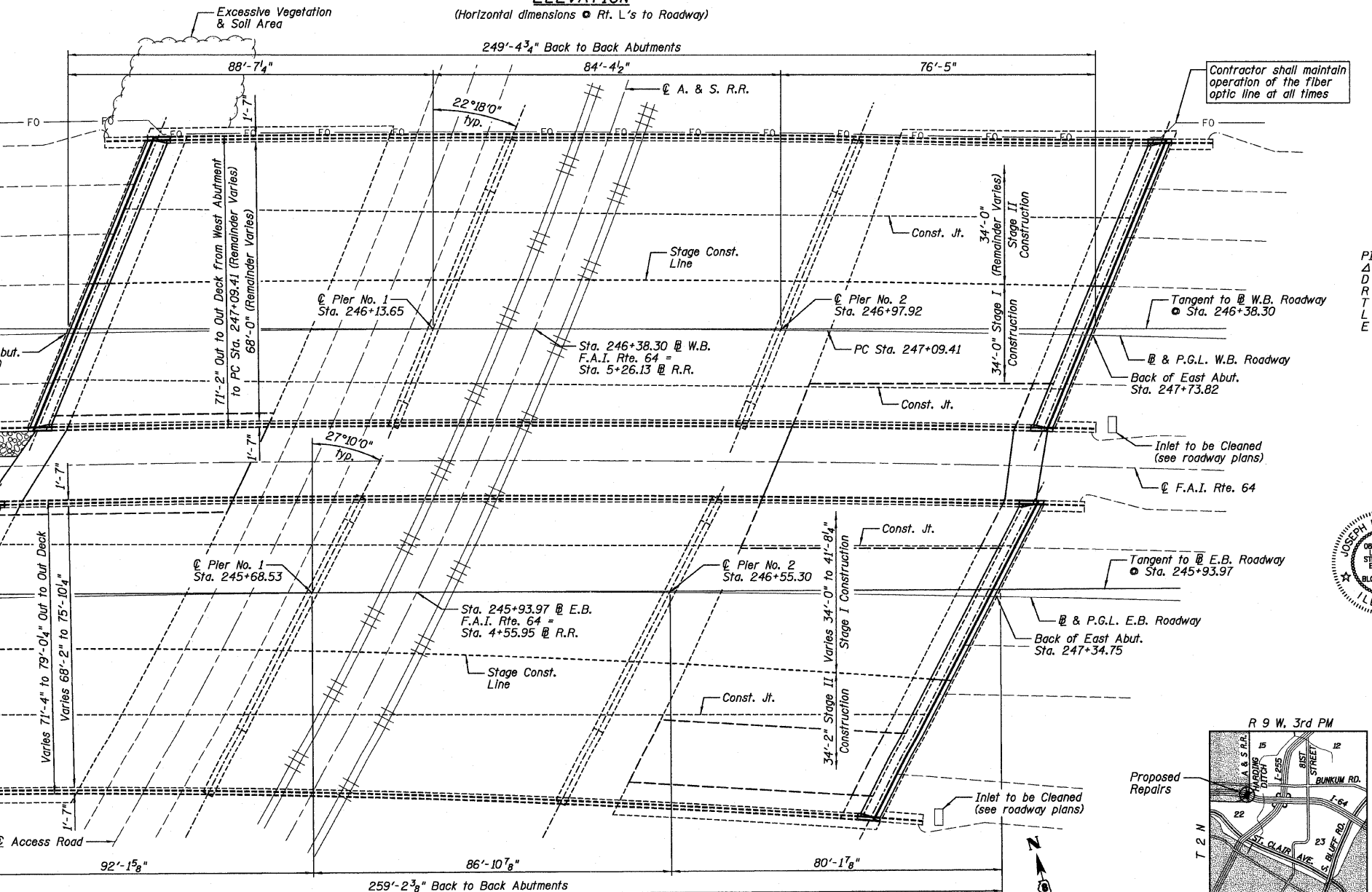
1980 Construction  
f<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (Reinforcement)  
f<sub>y</sub> = 36,000 psi (Structural Steel M183)  
f<sub>y</sub> = 50,000 psi (Structural Steel M223)  
n = 8.3

Field Units  
f<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (Reinforcement)  
f<sub>y</sub> = 36,000 psi (Structural Steel)



**SCOPE OF WORK**

- 1.) Maintain two lanes of traffic in each direction according to Stage Construction cross sections.
- 2.) Remove and replace the expansion joints with Preformed Joint Strip Seal.
- 3.) Clean the abutment seats.
- 4.) Jack and remove the existing bearings at the abutments.
- 5.) Install elastomeric bearings with steel extensions at the abutments.
- 6.) Formed concrete repair all areas indicated on the plans.
- 7.) Remove the existing hot-mix asphalt overlay.
- 8.) Install a hot-mix asphalt surface course with a waterproofing membrane to the deck.
- 9.) Remove and replace undermined sections of the slope wall indicated on the plans.
- 10.) Fill eroded areas with Stone Riprap, Class A3 as indicated on the plans.
- 11.) Clean shoulder inlets indicated on the plans.

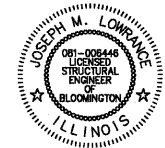


**CURVE DATA:**  
(E.B. F.A.I. 64)  
PI STA. = 240+74.86  
Δ = 16° 58' 14"  
D = 1° 00' 20"  
R = 5697.58'  
T = 850.01'  
L = 1687.58'  
S.E. RUN = 0.028%  
P.C. STA = 232+24.84  
P.T. STA = 249+12.42

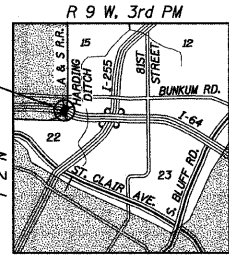
**CURVE DATA:**  
(W.B. F.A.I. 64)  
PI STA. = 240+84.40  
Δ = 16° 58' 14"  
D = 0° 59' 40"  
R = 5761.58'  
T = 859.56'  
L = 1706.53'  
S.E. RUN = 0.028%  
P.C. STA = 232+24.84  
P.T. STA = 249+31.38

**CURVE DATA:**  
(Curve No. 12)  
PI STA. = 247+09.41, 68' LT.  
Δ = 01° 04' 39"  
D = 0° 14' 04"  
R = 24432.20'  
T = 229.72'  
L = 459.43'  
E = 1.08'

**CURVE DATA:**  
(Curve No. 10)  
PI STA. = 244+07.33, 68' RT.  
Δ = 06° 05' 21"  
D = 02° 01' 46"  
R = 2823.40'  
T = 150.17'  
L = 300.06'  
E = 3.99'



JOSEPH M. LOWRANCE  
ILLINOIS STRUCTURAL ENGINEER  
NO. 081-006446  
Exp. Date 11/30/12



**GENERAL PLAN AND ELEVATION  
INTERSTATE 64 OVER  
ALTON & SOUTHERN RAILROAD  
F.A.I. ROUTE 64 - SEC 82-(3,4)RS  
ST. CLAIR COUNTY  
STATION 245+93.97 (E.B.)  
STATION 246+38.30 (W.B.)  
STRUCTURE NO. 082-0167 (E.B.)  
STRUCTURE NO. 082-0168 (W.B.)**

**Farnsworth GROUP, INC.**  
2709 McGraw Drive  
Bloomington, Illinois 61704  
309/963-8435, 309/963-1571 fax

DESIGNED - JCZ  
CHECKED - JML  
DRAWN - DJM/JWK  
CHECKED - MSW

REVISED  
REVISED  
REVISED  
REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SHEET NO. A1 OF 21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(3,4)RS	ST. CLAIR	167	101
				CONTRACT NO. 76415