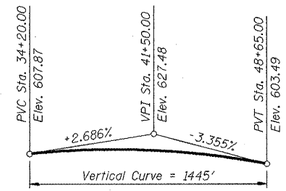
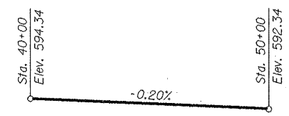
Benchmarks:
1.) BM TA16 Chiseled "□" on Northwest corner of concrete median, where I-55 N.B. and South Sixth St. split, 2.55 miles North of North end to lake bridges, Sta. 29+74.15/15.92' LT., Elev. 599.05.
2.) BM TA17 Chiseled "□" in Southwest wingwall of hubguard of South Sixth St. bridge S.N. 084-0028, Sta. 40+00.06/16.68' RT., Elev. 616.53.

Existing Structure: Structure No. 084-0028, built in 1963 as Section 84-3HB-6. The superstructure consists of a continuous three span non-composite welded plate girder bridge with a 7" concrete slab. The substructure consists of concrete pile bent abutments supported by steel piles and concrete multiple column piers supported by timber piles. The back-to-back of abutments dimension measures 280'-3" and the out-to-out of deck dimension measures 36'-0". The span lengths are 82'-9", 113'-9" and 76'-1" (℄ bearing to ℄ bearing) with a 58°42'45" right forward skew. The existing beams, piers and a portion of the abuments will be reincorporated into the new structure. One lane of traffic will be maintained utilizing stage construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



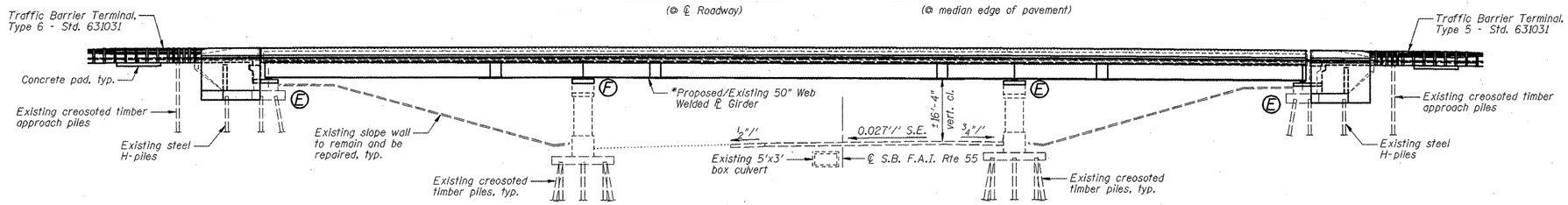
PROFILE GRADE
BL 55 (NB) / 6th St.
(@ ℄ Roadway)



PROFILE GRADE (EXIST. PLANS)
SOUTH BOUND F.A.I. RT. 55
(@ median edge of pavement)

SCOPE OF WORK

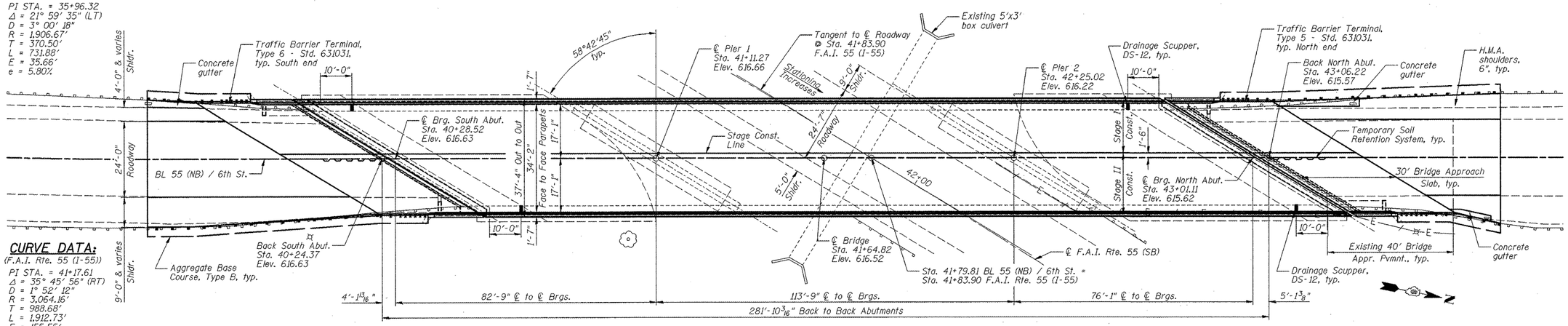
1.) Remove and replace the existing reinforced concrete deck utilizing stage construction.
2.) Remove and replace the existing concrete approach pavement.
3.) Remove and replace exterior girders, all cross frames in exterior bays and all end diaphragms.
4.) Raise the remaining existing structural steel 3" in order to meet the vertical clearance requirement.
5.) Remove and replace the existing expansion bearings at the Abutments and Pier #2 with elastomeric bearings.
6.) Remove and replace the existing fixed bearings at Pier #1.
7.) Install stud shear connectors in the positive moment region in order to make the existing welded plate girders composite with the cast-in-place reinforced concrete deck.
8.) Remove and replace the existing abutment backwall and a portion of the wingwalls as shown.
9.) Place additional concrete on the abutment and pier caps in order to meet the proposed grade change.
10.) Remove and replace damaged/undermined sections of Slopewall.
11.) Repair abutments, piers and slopewall as required.
12.) Clean and paint existing structural steel under on separate contract.



ELEVATION

CURVE DATA:
(BL 55 (NB) / 6th St.)
PI STA. = 35+96.32
Δ = 21° 59' 35" (LT)
D = 3° 00' 18"
R = 1,906.67'
T = 370.50'
L = 731.88'
E = 35.66'
e = 5.80%

CURVE DATA:
(F.A.I. Rte. 55 (I-55))
PI STA. = 41+17.61
Δ = 36° 45' 56" (RT)
D = 1° 52' 12"
R = 3,064.16'
T = 988.68'
L = 1,912.73'
E = 155.55'
e = 2.70%



PLAN

EXISTING DESIGN STRESSES
fc = 1,400 psi
fs = 20,000 psi (Reinforcement)
fs = 18,000 psi (Structural Steel)
n = 10

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi (Cast-in-Place)
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel - M270 Grade 36)
fy = 50,000 psi (Structural Steel - M270 Grade 50)

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.048
Site Coefficient (S) = 2.0

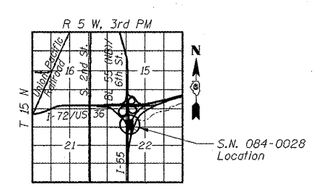
INDEX TO SHEETS

SHEET NO.	TITLE
B1	GENERAL PLAN AND ELEVATION
B2	BILL OF MATERIAL, GENERAL NOTES AND MISCELLANEOUS DETAILS
B3	STAGE CONSTRUCTION
B4	TOP OF SLAB ELEVATION LOCATIONS
B5-B7	TOP OF SLAB ELEVATIONS
B8	SUPERSTRUCTURE CROSS SECTION
B9-B13	STRUCTURAL STEEL
B14	EXISTING/PROPOSED GIRDER FIXED BEARING DETAILS
B15	EXISTING GIRDER TYPE I BEARING DETAILS
B16	PROPOSED GIRDER TYPE I BEARING DETAILS
B17	EXISTING GIRDER TYPE II BEARING DETAILS
B18	PROPOSED GIRDER TYPE II BEARING DETAILS
B19	SUBSTRUCTURE SEAT ELEVATIONS

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

JOSEPH M. LOWRANCE
081-006446
LICENSED STRUCTURAL ENGINEER OF BLOOMINGTON
ILLINOIS

Joseph M. Lowrance Date 12/16/08
JOSEPH M. LOWRANCE
ILLINOIS STRUCTURAL ENGINEER
NO. 081-006446
Exp. Date 11/30/10



LOCATION SKETCH

NOTE:
* Composite in positive moment region only.

GENERAL PLAN AND ELEVATION
BUSINESS 55 / 6th STREET OVER
S.B. F.A.I ROUTE 55
SECTION (84-3HB-6)BR
SANGAMON COUNTY
STATION 41+64.82
STRUCTURE NO. 084-0028

DESIGNED	JML
CHECKED	MSW
DRAWN	DJM
CHECKED	MGO/MSW
DATE	12/16/08

SHEET NO. B1	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	(84-3HB-6)BR-F	SANGAMON	21	3
19 SHEETS		SN 084-0028	CONTRACT NO. 72C50		
	FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT		

FARNSWORTH GROUP, INC.
CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-8181