

Bench Mark: Chiseled square located on top of wall on SE corner of bridge, Elev. 697.38.

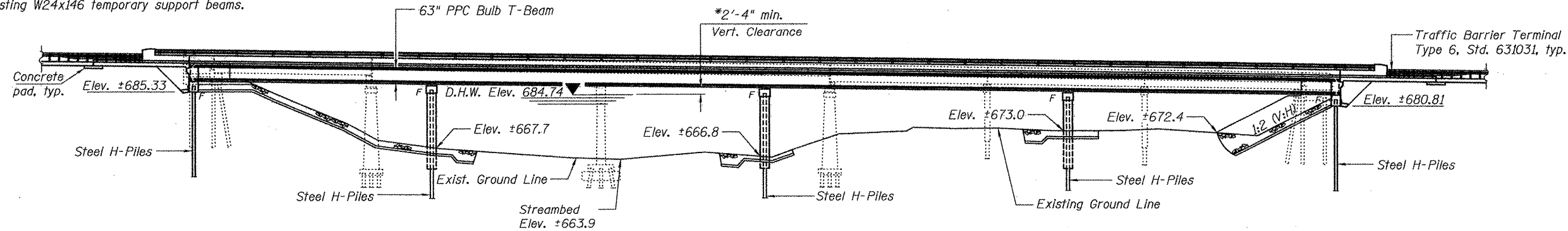
Existing Structure: S.N. 010-0055 was built in 1932 as S.B.I. Rt. 47 Section 137 B & C as a five span 150-foot truss and four PPC I-Beam spans. In 1978 the bridge was reconstructed with a new superstructure, abutments, the widening of Piers #1 and #3, removal and reconstruction of Piers #4 and #5, and the construction of new Pier #2. In 2008 temporary support beams were installed under six beams as part of contract 70720. The substructure consists of stub abutments and solid wall piers founded on concrete piles. The Bk. to Bk. dimension measures 361'-9" while the 0.-0. width measures 34'-0". The structure is to be replaced using stage construction.

Salvage existing W24x146 temporary support beams.

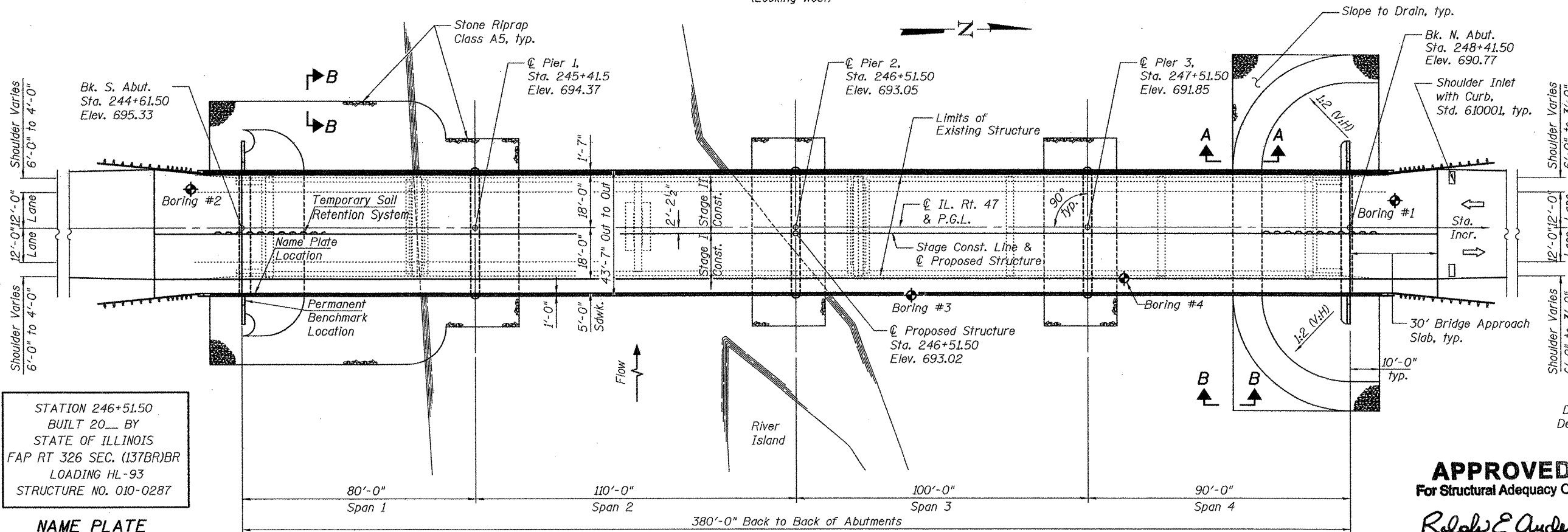
DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | S. Abut. | Pier 1 | Pier 2 | Pier 3 | N. Abut. |
|------------------------------|----------|--------|--------|--------|----------|
| | 685.5 | 653.0 | 653.0 | 653.0 | 681.0 |

*Estimated clearance over existing channel limits



ELEVATION
(Looking West)



PLAN

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

DESIGN STRESSES
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 7,000 psi
f'ci = 6,000 psi
f's = 270,000 psi (1/2" φ low lax. strands)
f'si = 201,960 psi (1/2" φ low lax. strands)

SEISMIC DATA

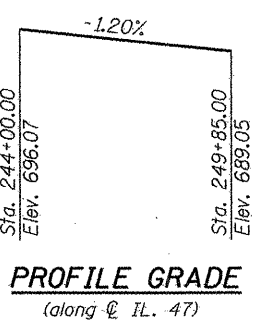
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.13g
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.22g
Soil Site Class = D

APPROVED
For Structural Adequacy Only

Ralph E. Anderson (T00)
Engineer of Bridges & Structures

STATION 246+51.50
BUILT 20__ BY
STATE OF ILLINOIS
FAP RT 326 SEC. (137BR)BR
LOADING HL-93
STRUCTURE NO. 010-0287

NAME PLATE
See Std. 515001

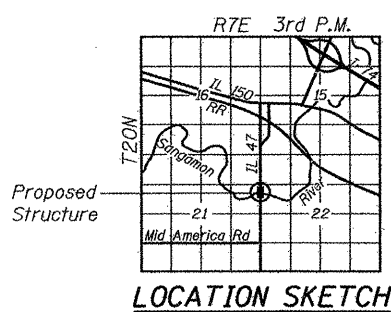


PROFILE GRADE
(along C.L. 47)

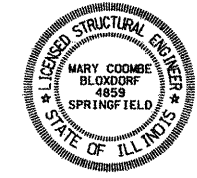
WATERWAY INFORMATION

Exist. Low Grade Elev. 686.9 ft. @ Sta. 251+25
Drainage Area = 365.6 sq. mi. Prop. Low Grade Elev. 687.8 ft. @ Sta. 251+85

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
|----------------|-----------|----------|-----------------|-------|-------------|------------|-------|---------------|-------|
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design | 10 | 9527 | 3217 | 3532 | 681.3 | 0.1 | 0.1 | 681.4 | 681.4 |
| Base | 100 | 18213 | 4740 | 5038 | 686.1 | 0.2 | 0.2 | 686.3 | 686.3 |
| Overtop Exist. | 143 | 19852 | 4965 | N/A | 686.9 | 0.2 | N/A | 687.1 | N/A |
| Overtop Prop. | 222 | 21534 | N/A | 5274 | 687.6 | N/A | 0.3 | N/A | 687.9 |
| Max. Calc. | 500 | 25306 | 5352 | 5348 | 689.1 | 0.4 | 0.4 | 689.5 | 689.5 |



LOCATION SKETCH



Mary Coombe Bloxdorf
Illinois Structural No. 4859
Expires 11/30/10
Date: 10/20/09

Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

PROJECT NO. 06027-3
SCALE:
DATE: 9/24/09
DESIGN BY:
CHECKED BY: TFG
MCR

GENERAL PLAN & ELEVATION
IL RT. 47 OVER SANGAMON RIVER
F.A.P. RT. 326 SECTION (137BR)BR
CHAMPAIGN COUNTY
STATION 246+51.50
STRUCTURE NO. 010-0287

| | | | | | |
|---|-------------|-----------|--------------------|--------------|-----------|
| SHEET NO. 1 36 SHEETS | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 326 | (137BR)BR | CHAMPAIGN | 75 | 21 |
| SN 010-0287 | | | CONTRACT NO. 70428 | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

FILE NAME = ... USER NAME = GFC