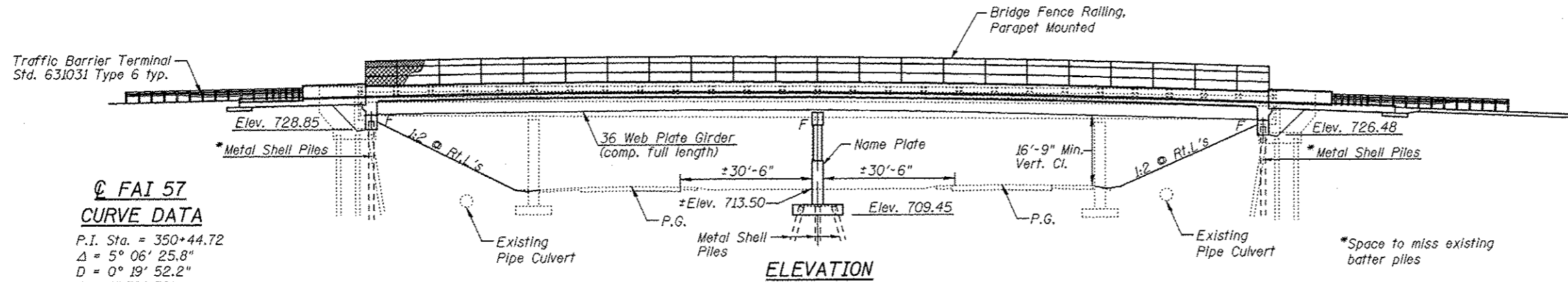
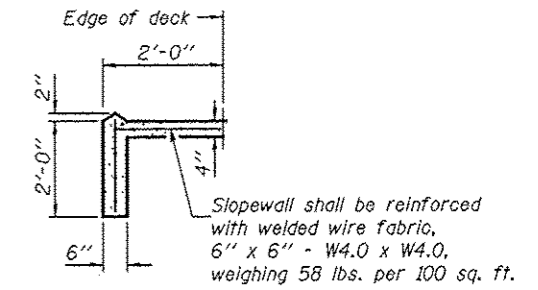


Bench Mark: B.M. 4653-2 Chiseled square on the northeast wingwall of S.N. 010-0176: Elevation 734.22.

Existing Structure: S.N. 010-0176 built in 1963 as F.A.I. Route 57 Section (10-32HB-2)BY at Station 25+17.74. The existing structure is a four-span continuous steel girder structure on pile bent abutments and hammer head piers on spread footings. The structure length is 220'-4" bk-to-bk of abutments and 29'-8" out-to-out of deck. The existing structure is to be replaced. Traffic to be maintained utilizing stage construction.

No Salvage

**APPROVED**  
For Structural Adequacy Only  
*Carl Blodorf*  
Engineer of Bridges & Structures



SECTION A-A

STATION 350+34.96  
BUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.I. RTE. 57 SEC. (10-32HB-2)BY  
LOADING HL-93  
STRUCTURE NO. 010-0291

NAME PLATE  
See Std. 515001

LOADING HL-93

Allow 50 psf. for future wearing surface.

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications  
5th Edition with 2010 Interims

DESIGN STRESSES

FIELD UNITS

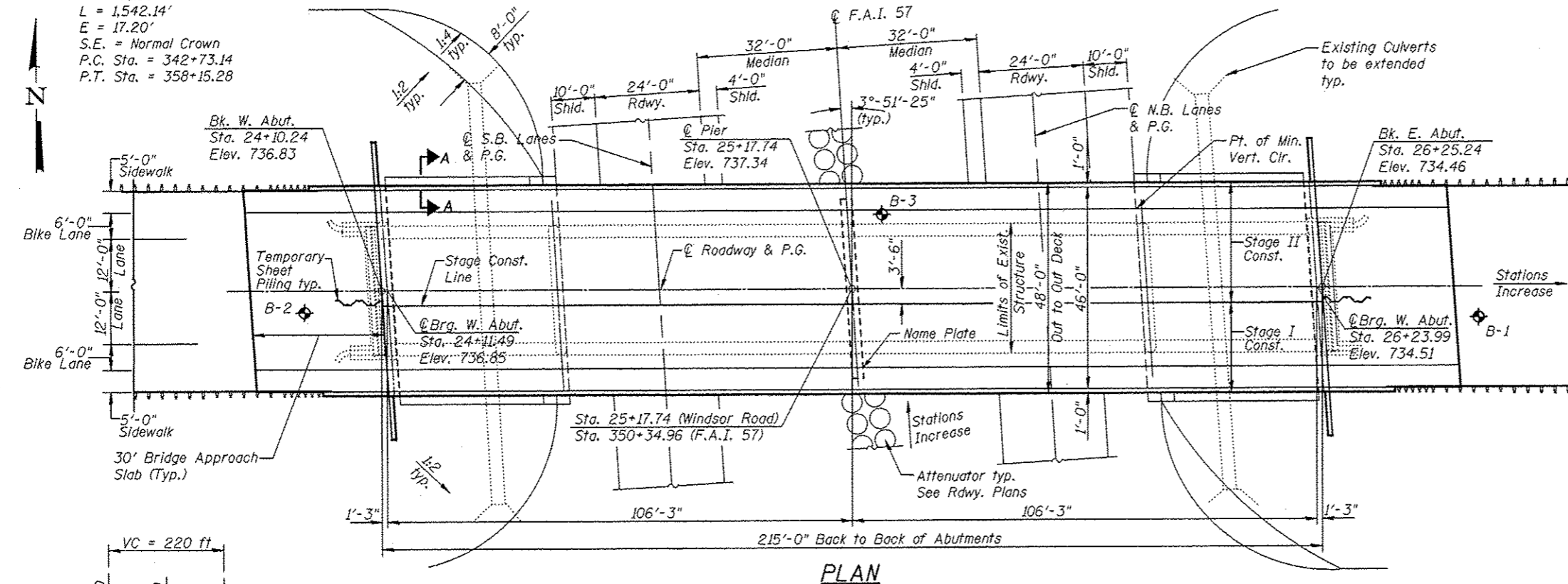
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 50,000$  psi (M270 Grade 50)  
 $f_y = 36,000$  psi (M270 Grade 36)

SEISMIC DATA

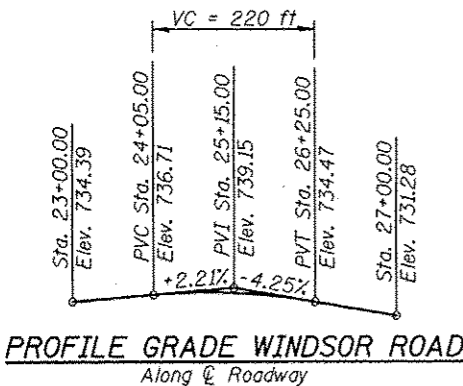
Seismic Performance Zone (SPZ)=1  
Design Spectral Acceleration at 1.0 sec. (SD1)=0.138g  
Design Spectral Acceleration at 0.2 sec. (SD3)=0.242g  
Soil Site Class=D

**FAI 57  
CURVE DATA**

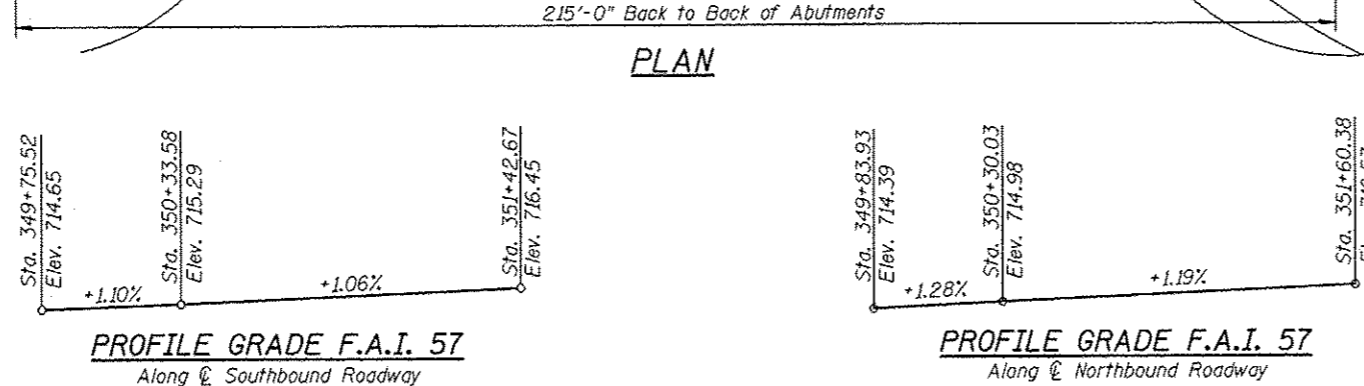
P.I. Sta. = 350+44.72  
 $\Delta = 5^\circ 06' 25.8''$   
 $D = 0^\circ 19' 52.2''$   
 $R = 17,300.78'$   
 $T = 771.58'$   
 $L = 1,542.14'$   
 $E = 17.20'$   
S.E. = Normal Crown  
P.C. Sta. = 342+73.14  
P.T. Sta. = 358+15.28



PLAN

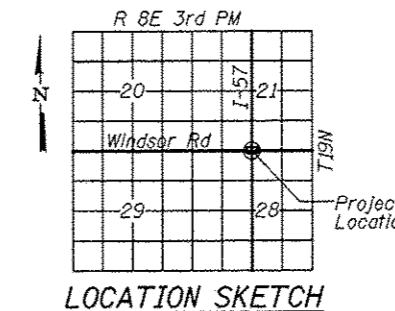


PROFILE GRADE WINDSOR ROAD  
Along  $\bar{C}$  Roadway

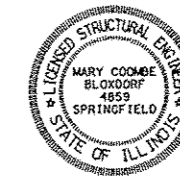


PROFILE GRADE F.A.I. 57  
Along  $\bar{C}$  Southbound Roadway

PROFILE GRADE F.A.I. 57  
Along  $\bar{C}$  Northbound Roadway



GENERAL PLAN  
WINDSOR ROAD OVER I-57  
F.A.I. 57 - SEC. (10-32HB-2)BY  
CHAMPAIGN COUNTY  
STATION 350+34.96  
STRUCTURE NO. 010-0291



*Mary Coombe Bloxdorf*  
ILLINOIS STRUCTURAL NO. 4859  
EXPIRES 11/30/12  
DATE: 08/13/12

FILE NAME: 10-32HB-2-10-0291-01.dwg  
DATE: 8/13/2012  
PROJECT NO: 010-0291

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

|                                  |                   |           |
|----------------------------------|-------------------|-----------|
| USER NAME = _MML_                | DESIGNED - GJB    | REVISED - |
| PLOT SCALE = 0.2,000000 1' / IN. | CHECKED - RKM     | REVISED - |
| PLOT DATE = 8/13/2012            | DRAWN - CFC       | REVISED - |
|                                  | CHECKED - RKM/MCB | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 27 SHEETS

| F.A.I. RTE.               | SECTION       | COUNTY    | TOTAL SHEETS | SHEET NO.          |
|---------------------------|---------------|-----------|--------------|--------------------|
| 57                        | (10-32HB-2)BY | CHAMPAIGN | 81           | 39                 |
|                           |               |           |              | CONTRACT NO. 70109 |
| ILLINOIS FED. AID PROJECT |               |           |              |                    |