

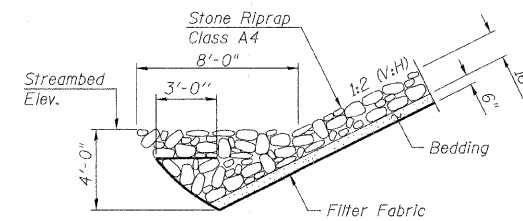
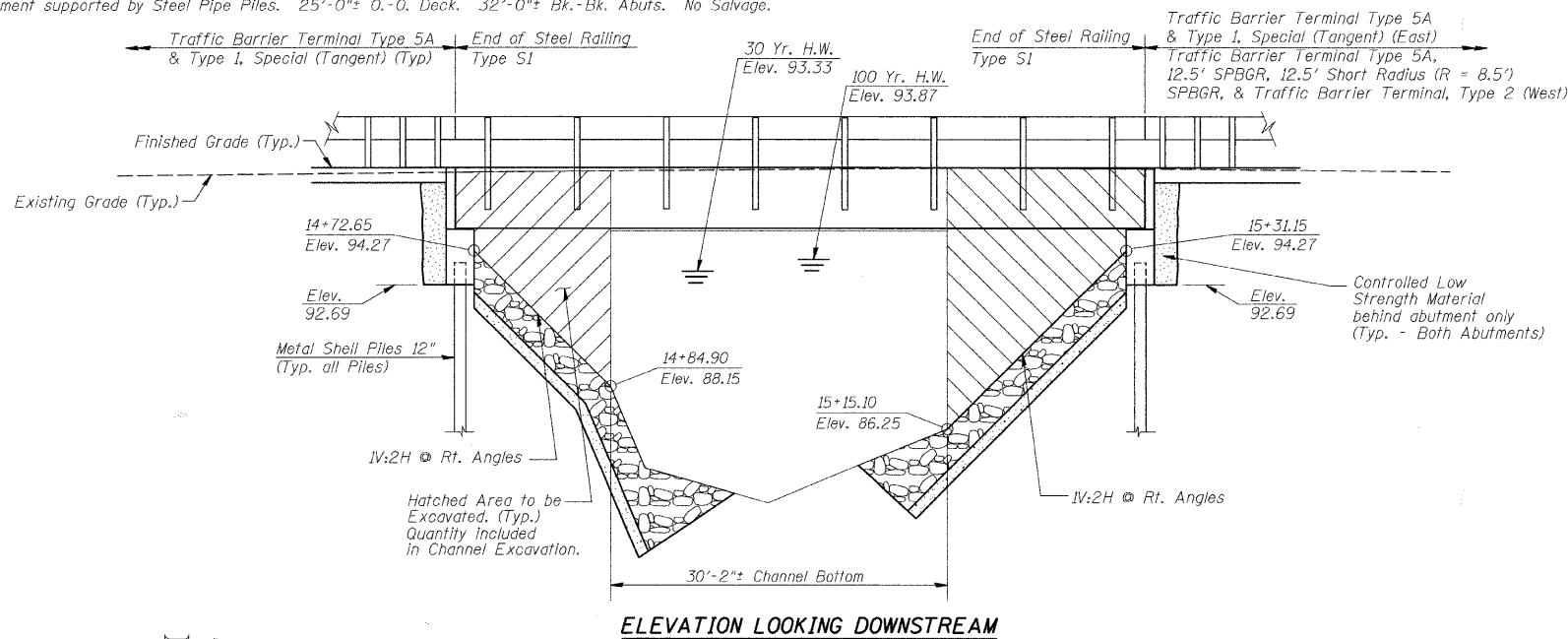
**BENCHMARK:**

"M" In Mueller on Fire Hydrant Sta. 17+86.78, 19.2' Lt.  
Elevation = 100.00

**EXISTING STRUCTURE (SN 058-3168):**

Single Span Concrete Deck on WF Beam Superstructure on Closed Timber Abutments with Timber Wingwalls. Superstructure also supported with a Steel Beam Pier adjacent to South Abutment supported by Steel Pipe Piles. 25'-0"± 0.-0. Deck. 32'-0"± Bk.-Bk. Abutms. No Salvage.

|                     |                |                                |                    |           |
|---------------------|----------------|--------------------------------|--------------------|-----------|
| ROUTE NO.           | SECTION        | COUNTY                         | TOTAL SHEETS       | SHEET NO. |
| T.R. 256            | 06-III16-00-BR | MACON                          | 14                 | 10        |
| FED. ROAD DIST. NO. |                | ILLINOIS PROJECT: BROS-115(63) | CONTRACT NO. 95530 |           |



**BIG CREEK**  
BUILT 200\_, BY MACON COUNTY  
PROJECT NO. BROS-115(63)  
SECTION 06-III16-00-BR  
T.R. 256 STA. 15+01.90  
STR. NO. 058-3389 LOADING HS-20  
FORT DANIEL BRIDGE

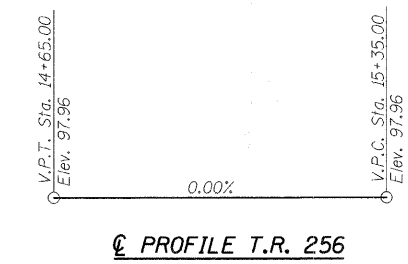
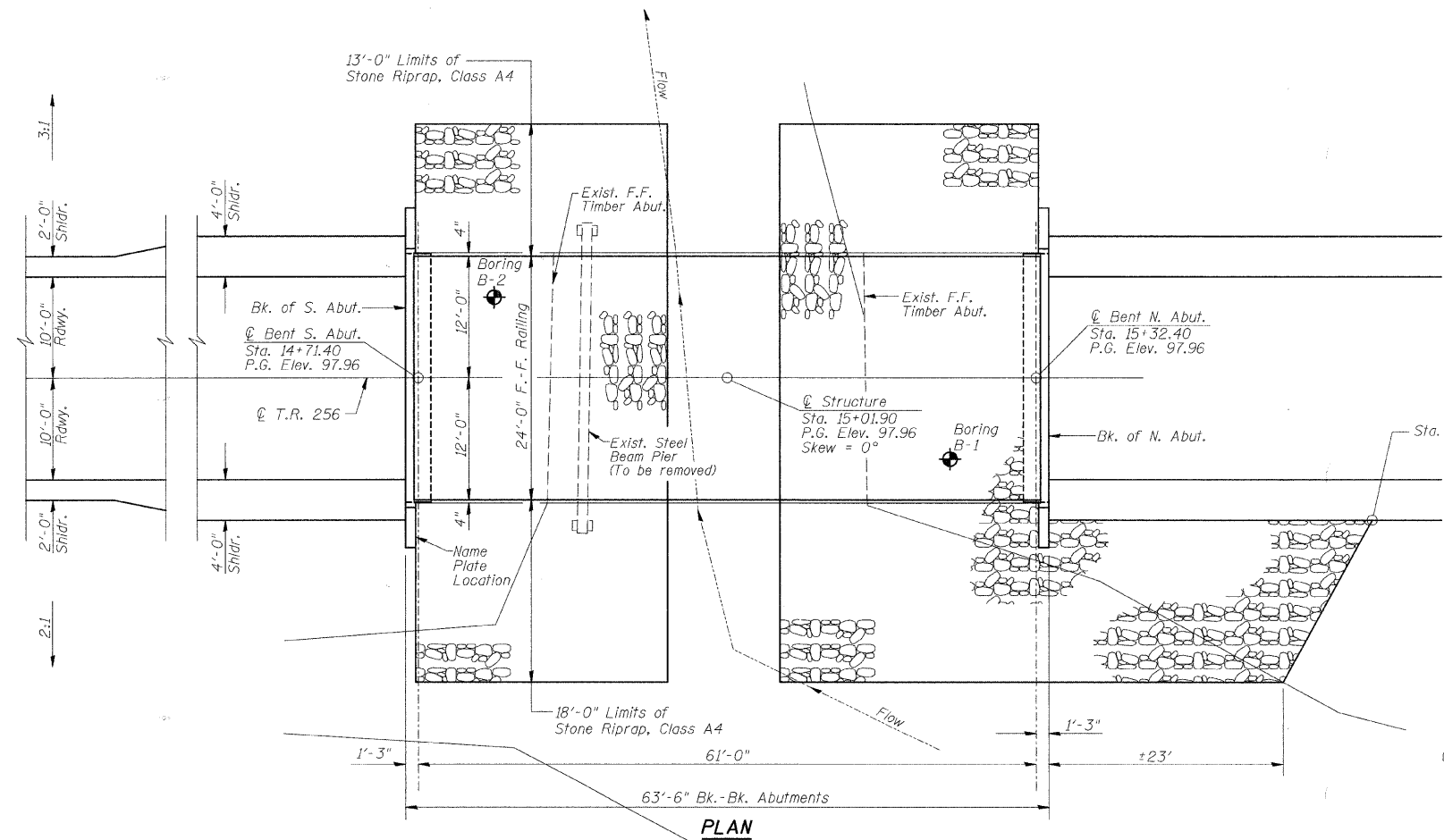
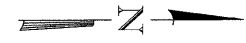
**NAME PLATE**  
(See Std. 515001)

**GENERAL NOTES**

Layout of Riprap Slopes may be varied in the field to suit ground conditions as directed by the Engineer.  
See Proposal for Boring Data.  
Reinforcement Bars shall conform to the requirements of ASTM A 706 (IL MOD), Grade 60.  
The Contractor shall drive one Metal Shell Test Pile in a permanent location at the North Abutment as directed by the Engineer before ordering the remainder of piles.  
Excavation required for abutment construction shall be included in the cost of Concrete Structures. No additional compensation will be provided for Structure Excavation.

**TOTAL BILL OF MATERIAL**

| ITEM                                           | UNIT    | SUPER | SUB  | TOTAL |
|------------------------------------------------|---------|-------|------|-------|
| Removal of Existing Structures                 | Each    |       |      | 1     |
| P.P.C Deck Beams (27" Depth)                   | Sq. Ft. | 1484  |      | 1484  |
| Concrete Structures                            | Cu. Yd. |       | 18.6 | 18.6  |
| Reinforcement Bars, Epoxy Coated               | Pound   |       | 2320 | 2320  |
| Furnishing Metal Shell Piles 12"               | Foot    |       | 206  | 206   |
| Driving Piles                                  | Foot    |       | 206  | 206   |
| Test Pile Metal Shells                         | Each    |       | 1    | 1     |
| Channel Excavation                             | Cu. Yd. |       | 189  | 189   |
| Stone Riprap, Class A4                         | Sq. Yd. |       | 372  | 372   |
| Filter Fabric                                  | Sq. Yd. |       | 372  | 372   |
| Name Plates                                    | Each    |       | 1    | 1     |
| Steel Railing Type S1                          | Foot    | 124   |      | 124   |
| Portland Cement Mortar Fairing Course          | Foot    | 433   |      | 433   |
| Waterproofing Membrane System                  | Sq. Yd. | 165   |      | 165   |
| Hot Mix Asphalt Surface Course, Mixture C, N50 | Ton     | 19    |      | 19    |
| Controlled Low-Strength Material               | Cu. Yd. |       | 16.2 | 16.2  |

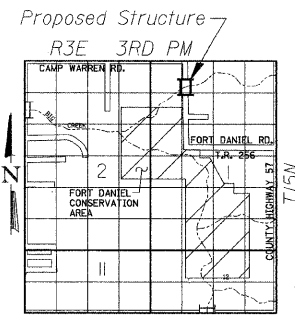


**DESIGN SPECIFICATIONS**

2002 AASHTO  
**LOADING HS20-44**  
Allowed 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

FIELD UNITS: f'c = 3,500 p.s.i.; f'y = 60,000 p.s.i.; n = 9  
PPC UNITS: f'ci = 4,000 p.s.i.; f'c = 5,000 p.s.i.; f's = 270,000 p.s.i.; f'si = 201,960 p.s.i.



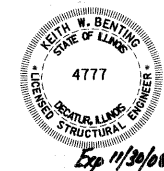
**WATERWAY INFORMATION**

Drainage Area = 6.8 Sq. Mi. Existing Low Grade Elev. 97.38 @ Sta. 12+50.00  
Proposed Low Grade Elev. 97.41 @ Sta. 12+85.00

| Flood       | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. Exist. | Prop. | Nat. H.W.E. Exist. | Prop. | Headwater E.I. Exist. | Prop. |
|-------------|-----------|----------|------------------------|-------|--------------------|-------|-----------------------|-------|
| Design      | 30        | 1499     | 271                    | 345   | 93.33              | 0.09  | 0.01                  | 93.42 |
| Base        | 100       | 2021     | 290                    | 376   | 93.87              | 0.18  | 0.01                  | 94.05 |
| Overtopping |           |          |                        |       |                    |       |                       |       |
| Max. Calc.  | 500       | 2707     | 314                    | 410   | 94.47              | 0.38  | 0.02                  | 94.85 |

Low Beam Elev. (Prop.) = 95.27

DATE: Nov. 5, 2007  
Keith W. Benting  
KEITH W. BENTING  
ILL. STRUCTURAL NO. 4777



"CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH REQUIREMENTS OF THE CURRENT 'AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES'."

**GENERAL PLAN AND ELEVATION**

|              |                                                     |                                                                                                               |                         |
|--------------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------|
| Date         | Designed MJP                                        | T.R. 256 OVER BIG CREEK<br>SECTION 06-III16-00-BR<br>MACON COUNTY<br>STA. 15+01.90<br>PROP. STR. NO. 058-3389 | Sheet No.               |
| Revisions    | Drawn BKN                                           |                                                                                                               | 1                       |
|              | Checked KWB                                         |                                                                                                               | of 5                    |
|              | Approved KWB                                        |                                                                                                               |                         |
| Prepared by: | <b>URS</b> 345 East Ash Avenue<br>Decatur, IL 62526 |                                                                                                               | URS Job No.<br>36431783 |