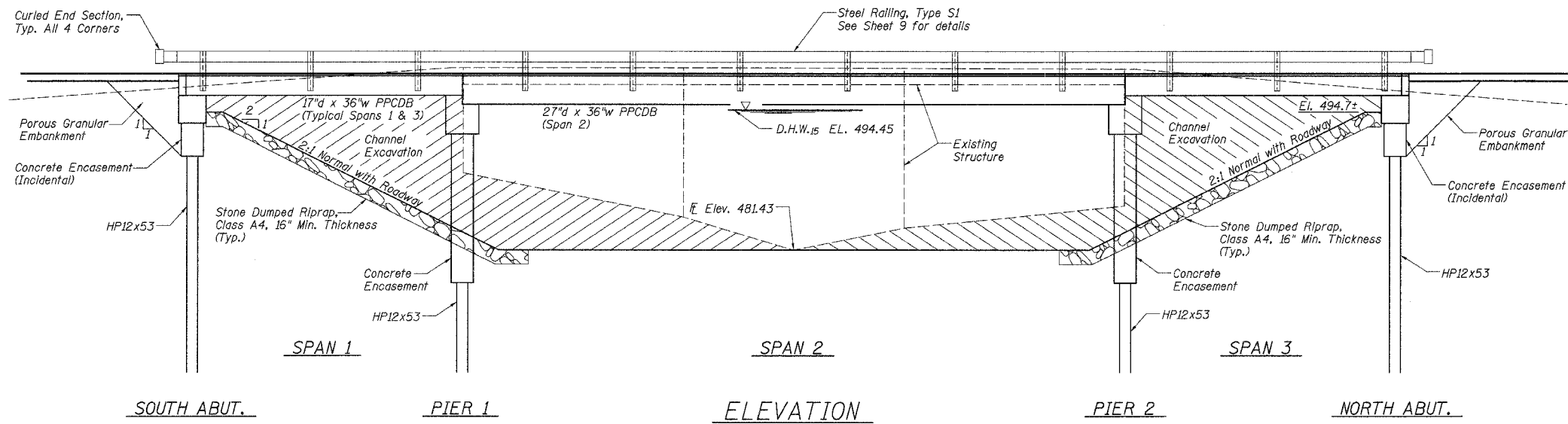


T.B.M. 1 - RR Spike in Power Pole,  
22' Rt., Sta. 10+30 - Elev. 504.17

T.B.M. 2 - RR Spike in Power Pole,  
23' Rt., Sta. 29+23 - Elev. 515.44

Existing Structure: Three span bridge with  
precast concrete deck slabs on closed  
timber abutments and pile bent timber piers.  
60' L x 19' W

|                       |                |          |                     |           |
|-----------------------|----------------|----------|---------------------|-----------|
| ROUTE                 | SECTION        | COUNTY   | TOTAL SHEETS        | SHEET NO. |
| CH 5                  | 03-00121-00-BR | MARION   | 11                  | 6         |
| FED. ROAD DIST. NO. 7 |                | ILLINOIS | FEDERAL AID PROJECT |           |
| CONTRACT NO. 95401    |                |          |                     |           |

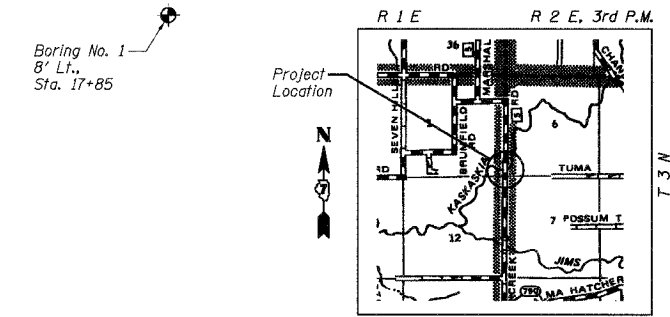
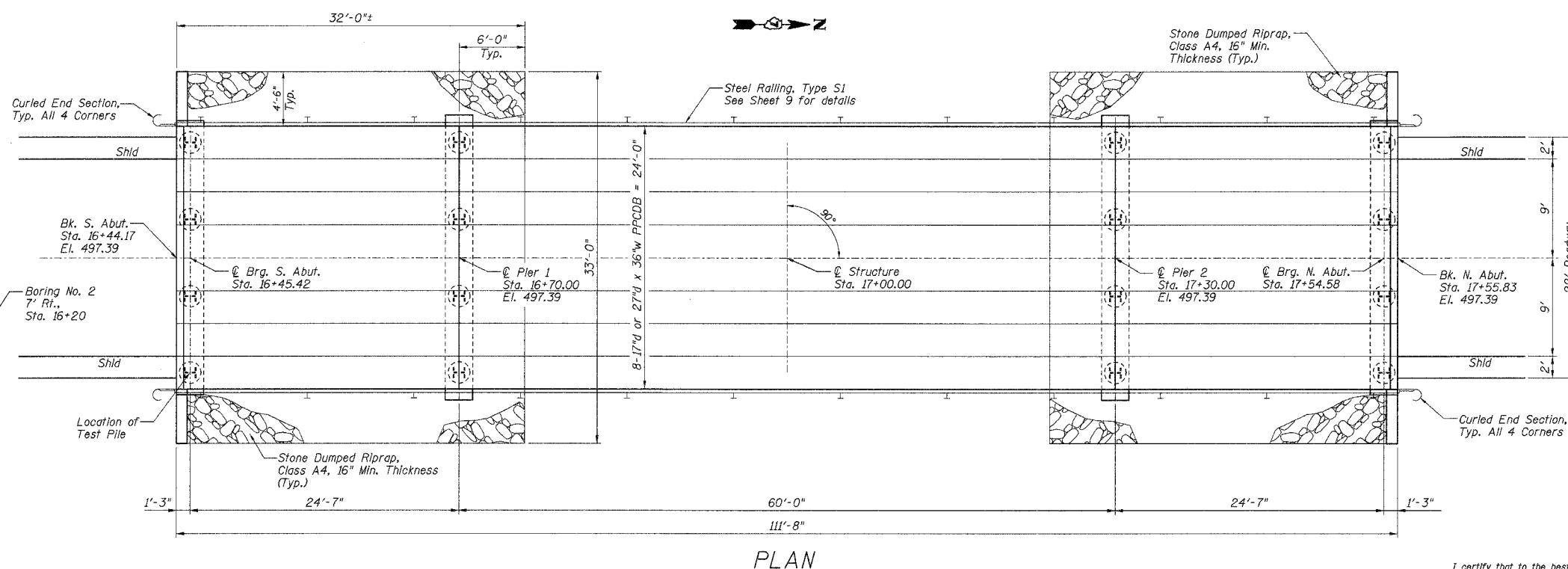


### BILL OF MATERIALS (BRIDGE ONLY)

| ITEM  | UNIT  | SUB  | SUPER | TOTAL |
|---|-------|------|-------|-------|
| CHANNEL EXCAVATION                                  | CU YD | 760  | -     | 760   |
| POROUS GRANULAR EMBANKMENT                          | TON   | 26   | -     | 26    |
| STONE DUMPED RIPRAP, CLASS A4                       | TON   | 220  | -     | 220   |
| REMOVAL OF EXISTING STRUCTURES                      | EACH  | -    | -     | 1     |
| CONCRETE STRUCTURES                                 | CU YD | 33.0 | -     | 33.0  |
| PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH) | SQ FT | -    | 1200  | 1200  |
| PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH) | SQ FT | -    | 1440  | 1440  |
| REINFORCEMENT BARS                                  | POUND | 4280 | -     | 4280  |
| STEEL RAILING, TYPE S1                              | FOOT  | -    | 224   | 224   |
| FURNISHING STEEL PILES HP 12x53                     | FOOT  | 525  | -     | 525   |
| DRIVING STEEL PILES                                 | FOOT  | 525  | -     | 525   |
| TEST PILE STEEL HP 12x53                            | EACH  | 1    | -     | 1     |
| CONCRETE ENCASEMENT                                 | CU YD | 14.0 | -     | 14.0  |
| NAME PLATES   | EACH  | 1    | -     | 1     |

### GENERAL NOTES

- See Section 502 of the Standard Specifications for Structural Excavation.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.
- Reinforcement Bars shall conform to AASHTO M-31, M-42, or M-53, Grade 60 requirements.
- See Specifications for Soil Borings.
- Do not scale these drawings.
- The Contractor shall drive one (1) Steel HP12x53 Test Pile in a permanent location at the South Abutment as directed by the Engineer before ordering the remainder of the piles.



LOCATION SKETCH

EAST FORK KASKASKIA RIVER  
BUILT 200 BY  
MARION COUNTY  
PROJECT NO. BROS-121(38)  
SEC. 03-00121-00-BR  
LOADING HS-20  
STRUCTURE NO. 061-3296

NAME PLATE  
(See State Standard 515001 for details)

I certify that to the best of my information, knowledge, and belief, this bridge is structurally adequate for the design loading shown on plans. The design is an economical one for the structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



GARY L. HAHN  
CENTRALIA, ILLINOIS  
ILLINOIS LICENSED STRUCTURAL  
ENGINEER NO. 81-4853  
EXPIRES NOV. 30, 2006

GENERAL PLAN AND ELEVATION  
PROPOSED BRIDGE CARRYING CH 5  
OVER EAST FORK KASKASKIA RIVER  
SECTION 03-00121-00-BR  
MARION COUNTY, ILLINOIS

Sheet  
6  
of 11  
Job No. 51103

### WATERWAY DATA

| Drainage Area = 71.85 Sq. Mi. Low Grade Elev. 491.88 @ Sta. 13+00 |       |        |         |         |         |            |           |           |           |
|---|-------|--------|---------|---------|---------|------------|-----------|-----------|-----------|
| Flood Yr.   | Freq. | Q      | Opening | Sq. Ft. | Natural | Head - Ft. | Headwater | Headwater | Headwater |
|   |       | C.F.S. | Exist.  | Prop.   | H.W.E.  | Exist.     | Prop.     | Exist.    | Prop.     |
| Design  | 15    | 4950   | 596     | 773     | 494.45  | 0.12       | 0.17      | 494.57    | 494.62    |
| Base  | 100   | 7653   | 684     | 850     | 495.92  | 0.08       | 0.13      | 496.00    | 496.05    |
| Max. Calc.  | 500   | 9801   | 715     | 850     | 496.92  | 0.04       | 0.10      | 496.96    | 497.02    |

### DESIGN STRESSES

FIELD UNITS  
f'c = 3,500 psi  
fy = 60,000 psi

### PRECAST PRESTRESSED UNITS

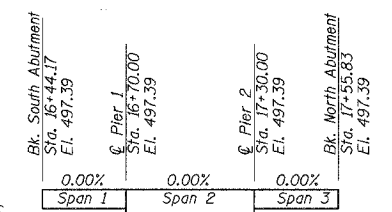
f'c = 5,000 psi  
f'ci = 4,000 psi  
f's = 270,000 psi (1/2" strands)  
f'si = 189,000 psi (1/2" strands)

### DESIGN SPECIFICATIONS

AASHTO - 2002 17th Edition

### LOADING HS 20-44

Allow 25#/sq. ft. for future wearing surface.



### GRADE ON STRUCTURE

03/10/2004