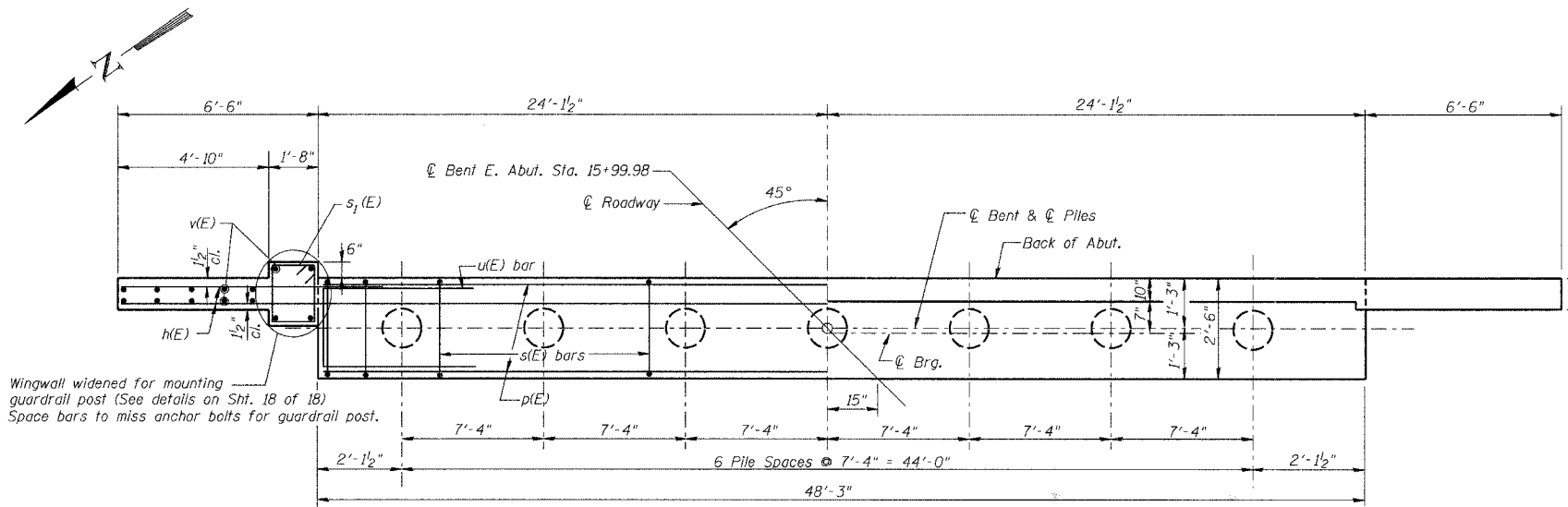


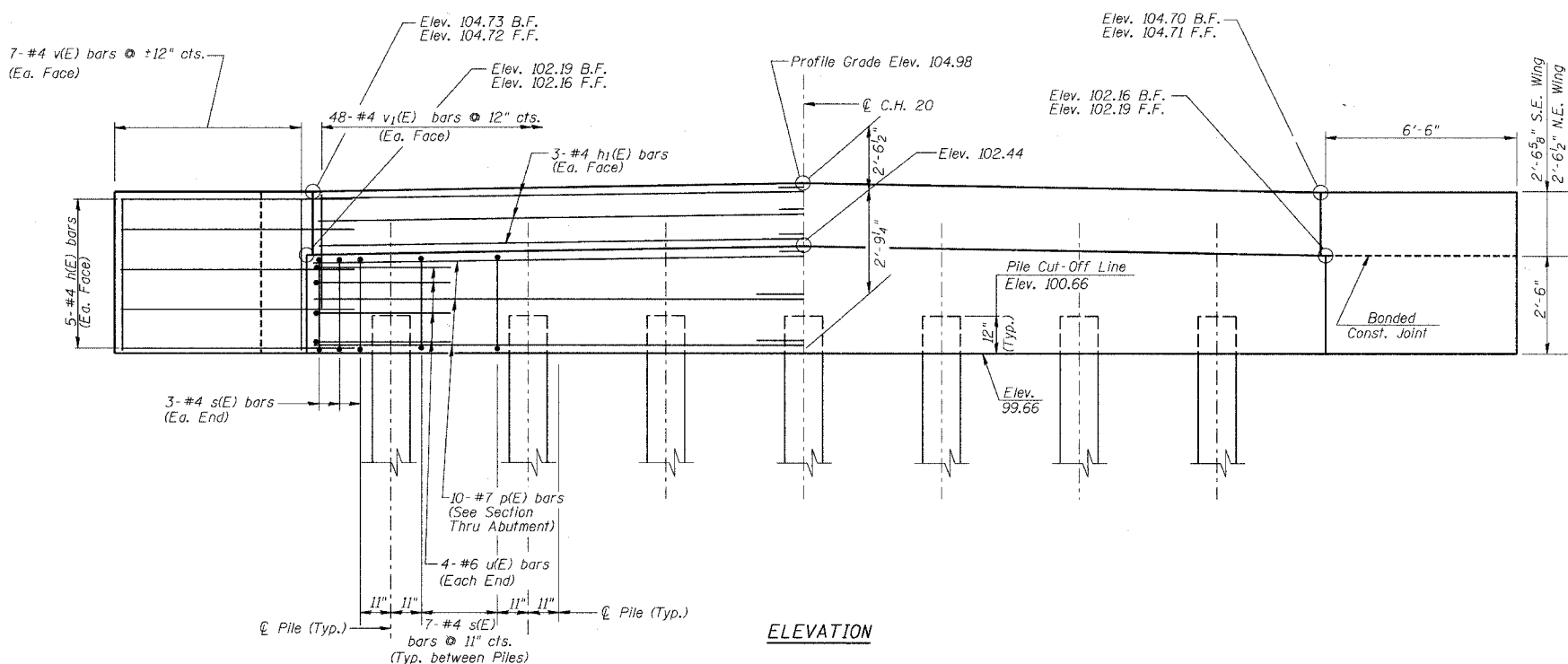
|                     |                |                    |              |           |
|---------------------|----------------|--------------------|--------------|-----------|
| ROUTE NO.           | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
| C.H. 20             | 05-00195-00-BR | MACON              | 18           | 17        |
| FED. ROAD DIST. NO. | ILLINOIS       | PROJECT BRS-549101 |              |           |

CONTRACT NO. 95492



**PILE DATA**  
 Type & Size: Metal Shell Piles - 12 in. dia. x 0.250 in. walls  
 Nominal Required Bearing: 198 Kips  
 Allowable Resistance Available: 66 Kips  
 Est. Length: 27'-0"  
 No. Required: 7

**PLAN**

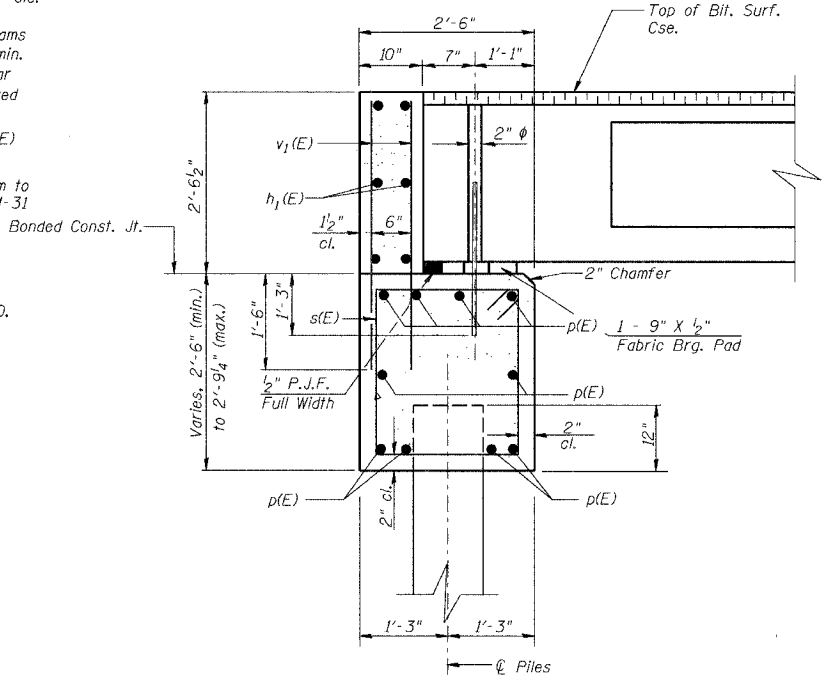


**ELEVATION**

- NOTES**
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
  - 1" dia. x 2'-6" dowel rods in 1 1/2" dia. holes drilled in cap (4 each beam). Dowel rods to be grouted after beams are in place and allowed to cure (min. 24 hrs.) prior to grouting the shear keys. The grout shall be an approved non-shrink grout.
  - Reinforcement bars designated (E) shall be Epoxy coated.
  - Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M-322, Grade 60
  - Space reinforcement in cap to miss dowel rods.
  - The Steel H-Piles shall be according to AASHTO M270, Grade 50.
  - The Test Pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the Pile Data information.

**DESIGN STRESSES**

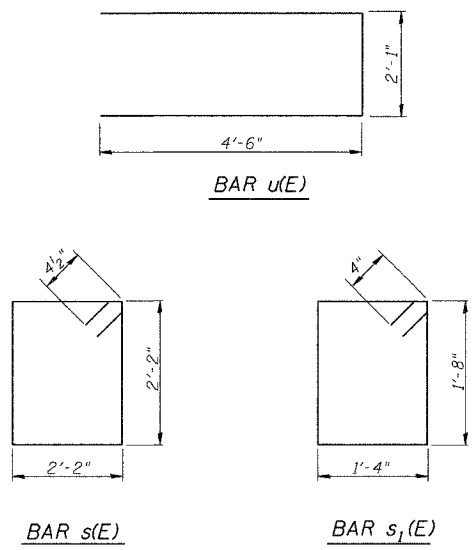
$f'_c = 3,500 \text{ psi}$   
 $f_y = 60,000 \text{ psi}$



**SECTION THRU ABUT.**  
(At Rt. Angles)

**BILL OF MATERIAL EAST ABUTMENT**

| Bar                              | No. | Size | Length  | Shape |
|----------------------------------|-----|------|---------|-------|
| h(E)                             | 20  | #4   | 8'-0"   | —     |
| h1(E)                            | 12  | #4   | 25'-2"  | —     |
| p(E)                             | 20  | #7   | 26'-5"  | —     |
| s(E)                             | 48  | #4   | 9'-5"   | □     |
| s1(E)                            | 5   | #4   | 6'-8"   | □     |
| u(E)                             | 8   | #6   | 11'-1"  | —     |
| v(E)                             | 28  | #4   | 4'-8"   | —     |
| v1(E)                            | 96  | #4   | 3'-11"  | —     |
| Concrete Structures              |     |      | Cu. Yd. | 18.25 |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 2,190 |
| Furnishing Metal Shell Piles 12" |     |      | Foot    | 189   |
| Driving and Filling Shells       |     |      | Foot    | 189   |



**BAR SPLICES**

| Bar | Size | Min. Length |
|-----|------|-------------|
| h1  | #4   | 2'-5"       |
| p   | #7   | 4'-10"      |

**EAST ABUTMENT**

|              |   |  |                         |
|--------------|---|--|-------------------------|
| Date         | Designed MJP  | <b>C.H. 20 OVER DRAINAGE DITCH</b><br>SECTION 05-00195-00-BR<br>MACON COUNTY<br>STA. 15+66.99<br>PROP. STR. NO. 058-3377 | Sheet No.               |
| Revisions    | Drawn MJP   |  | <b>5</b>                |
|              | Checked KWB   |  | of 6                    |
|              | Approved KWB  |  | URS Job No.<br>36431466 |
| Prepared by: | <b>URS</b> 345 East Ash Avenue<br>Decatur, IL 62526 |  |                         |