

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**DESIGN SPECIFICATIONS**  
2002 A.A.S.H.T.O. Specifications & Supplements

**DESIGN STRESSES**

Precast Units  
f<sub>y</sub> = 60,000 psi  
f'c = 5,000 psi (Precast)

Field Units  
f<sub>y</sub> = 60,000 psi (Reinforcement)  
f<sub>y</sub> = 50,000 psi (AASHTO M270 Gr. 50)

**HIGHWAY CLASSIFICATION**

F.A.P. Rte. 742 - IL. Rte. 2  
Functional Class: Other Principal Arterial  
ADT: 8,950 (2005) ; 10,350 (2025)  
DHW: 1035 (2025)  
Design Speed:  
50 m.p.h. (Sta. 614+90 to 643+30)  
Posted Speed:  
50 m.p.h. (Sta. 614+90 to 643+30)

**TOTAL BILL OF MATERIALS**

| DESCRIPTION                           | QUANTITY | UNITS |
|---------------------------------------|----------|-------|
| Concrete Structures                   | Cu. Yd.  | 43.2  |
| Reinforcement Bars                    | Pound    | 6350  |
| Pipe Underdrains for Structures, 4"   | Foot     | 253   |
| Concrete Gutter, Type A (Modified)    | Foot     | 260   |
| Furnishing Soldier Piles (HP Section) | Foot     | 1629  |
| Geocomposite Wall Drain               | Sq. Yd.  | 189   |
| Driving Soldier Piles                 | Foot     | 1222  |
| Retaining Wall (Special)              | Sq. Ft.  | 2,245 |
| Breaker Run Crushed Stone             | Ton      | 363   |

**SHOULDER CROSS SLOPE**

| STATION   | CROSS SLOPE |
|-----------|-------------|
| 634+70.00 | 2.90%       |
| 635+00.00 | 4.00%       |
| 635+50.00 | 2.00%       |
| 637+00.00 | 2.00%       |

Shoulder cross slope should smoothly transition between stations shown above.

**GENERAL NOTES**

All exposed corners 90° or sharper shall be filleted with a 3/4" dressed and beveled strip.

The bars in the walls may be spliced as follows:

|                       |     |     |     |     |     |
|-----------------------|-----|-----|-----|-----|-----|
| Bar Size Number       | 4   | 5   | 6   | 7   | 8   |
| Minimum Splice Length | 20" | 26" | 31" | 43" | 54" |

Reinforcement Bars shall conform to the requirements of ASTM A706 Gr 60.

All construction joints shall be bonded.

Reinforcement bars designated (E) shall be epoxy coated.

Final exposed height of Retaining Wall is a maximum of 4'-0". However, portions of the exposed height during construction may exceed this height but shall be less than 7'-0". Fill must be added to both sides of wall in order to continue construction of wall and place additional panels.

Steel Pile shall be painted with an Inorganic zinc rich primer/acrylic/acrylic paint system for shop and field painting except for portions below bottom of precast panels. See special provisions for Cleaning and Painting New Metal Structures.

Dewatering is the responsibility of the contractor.

Backfill of wall behind precast panels must be completed before placement of cast-in-place concrete face.

**GENERAL NOTES**  
**IL. RTE. 2**  
**RETAINING WALL B**  
**STA. 634+70.00 TO STA. 637+05.00**

|          |     |
|----------|-----|
| DESIGNED | CTH |
| CHECKED  | DSG |
| DRAWN    | EBS |
| CHECKED  | DFM |

| SHEET NO. 2 | F.A.P. RTE. | SECTION               | COUNTY             | TOTAL SHEETS     | SHEET NO. |
|-------------|-------------|-----------------------|--------------------|------------------|-----------|
| 12 SHEETS   | 742         | 37 R-3                | OGLE               | 345              | 162       |
|             |             | SN 071-7002           | CONTRACT NO. 84788 |                  |           |
|             |             | FED. ROAD DIST. NO. 7 | ILLINOIS           | FED. AID PROJECT |           |