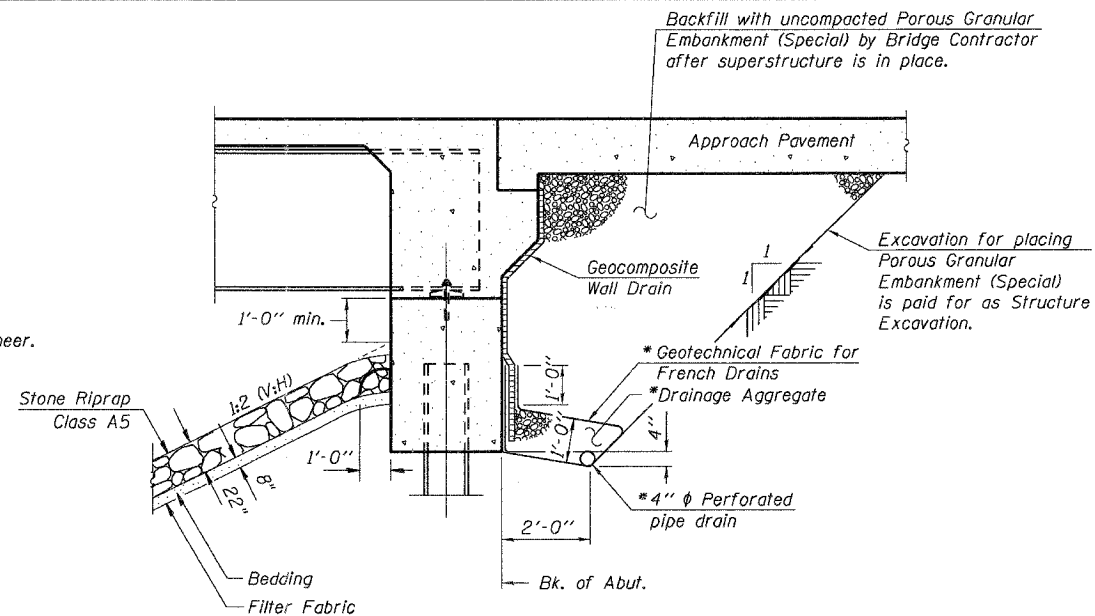


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 42	2BR	WASHINGTON	33	16
FED. ROAD DIST. NO. 8		ILLINOIS PROJECT		
Sheet 2 of 16		CONTRACT #76389		

**GENERAL NOTES**

- Fasteners shall be high strength bolts. Bolts  $\frac{3}{4}$ "  $\phi$ , open holes  $\frac{5}{16}$ "  $\phi$ , unless otherwise noted.
- Calculated weight of Structural Steel = 91,130 pounds.
- Field welding of construction accessories will not be permitted to beams or girders.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams.
- Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- The contractor shall drive two HP12x53 test piles in permanent locations, one at each abutment as directed by the Engineer before ordering the remainder of piles.
- In addition to all other requirements of Section 512 of the Standard Specifications, splices for steel H-piles shall develop the full capacity of the steel's cross sectional area of the pile for tension, shear and bending forces. One approved method of achieving this requirement is full penetration butt welding of the entire cross section. Other types of splices meeting the full capacity requirement may be allowed subject to the approval of the Engineer. Any proposal by the Contractor to use an alternate splice method must include adequate documentation demonstrating that the full tension, shear and bending capacities will be met. Appropriate welder qualifications will be required for the positions and processes used in splicing all piles. Nondestructive testing of completed welds will be limited to visual inspection.
- All construction joints shall be bonded.
- Excavation behind existing closed abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I removal.
- The inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be gray, Munsell No 5B 7/1. See special provision for Cleaning and Painting New Metal Structures.



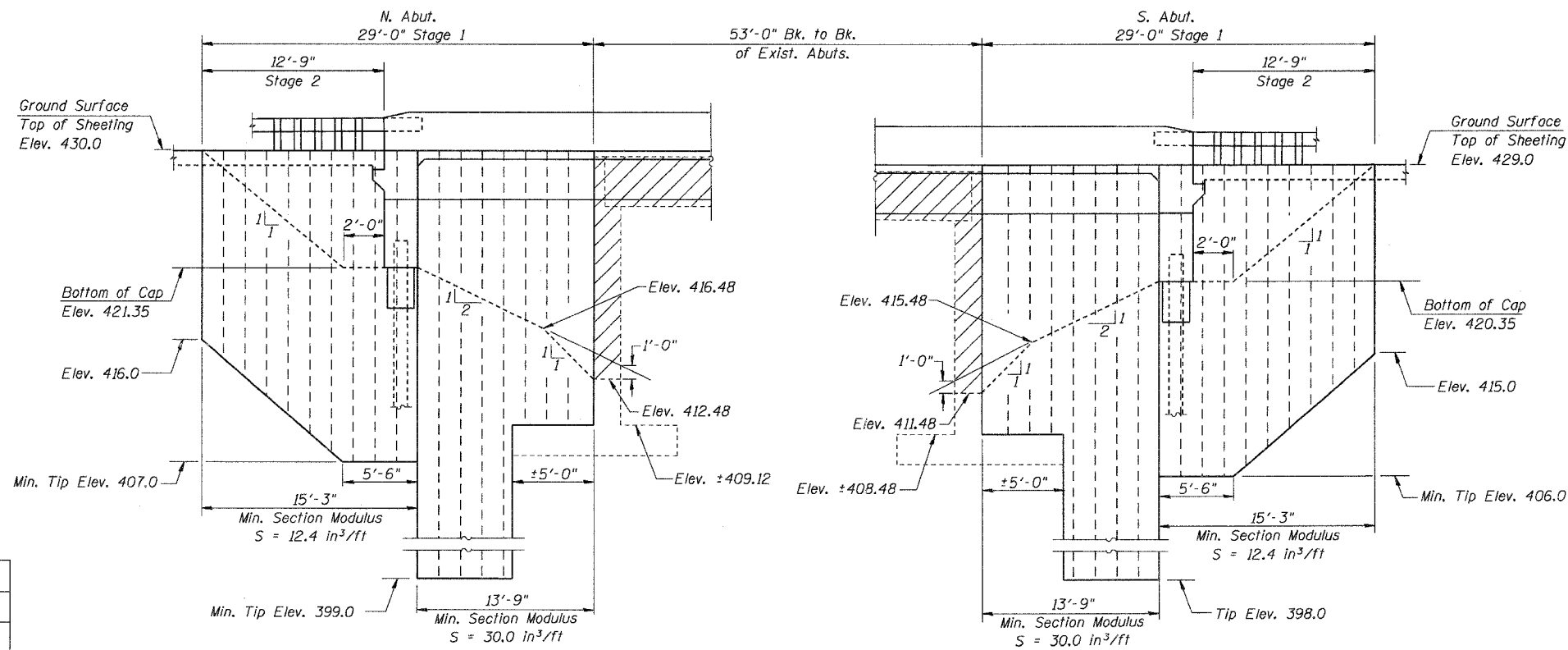
**SECTION THRU INTEGRAL ABUTMENT**  
(Horiz. dim. @ Rt. L's)

\* Included in the cost of Pipe Underdrains for Structures.

Note:  
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.	215		215
Stone Riprap, Class A5	Sq. Yd.	970		970
Filter Fabric	Sq. Yd.	970		970
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		230	230
Concrete Structures	Cu. Yd.		40.2	40.2
Concrete Superstructure	Cu. Yd.	132.4		132.4
Bridge Deck Grooving	Sq. Yd.	331		331
Protective Coat	Sq. Yd.	423		423
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	1350		1350
Reinforcement Bars, Epoxy Coated	Pound	25550	5940	31490
Furnishing Steel Piles HP12x53	Foot		335	335
Driving Steel Piles	Foot		335	335
Test Pile Steel HP12x53	Each		2	2
Temporary Sheet Piling	Sq. Ft.		1365	1365
Name Plates	Each		1	1
Bar Splicers	Each	360	14	374
Geocomposite Wall Drain	Sq. Yd.		83	83
Pipe Underdrains for Structures 4"	Foot		150	150



**TEMPORARY SHEET PILING DETAIL**  
(Looking East)

**Notes:**

Hatched area indicates limits of Removal of Existing Structures.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

Hard driving may be encountered during the sheet piling installation. The Contractor shall provide the appropriate driving equipment for the soil conditions indicated on the boring logs.

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

**GENERAL NOTES & TOTAL BILL OF MATERIAL**

IL ROUTE 127 OVER TRIBUTARY TO CROOKED CREEK  
F.A.P. ROUTE 42 SECTION 2BR  
WASHINGTON COUNTY  
STA. 487+25  
S.N. 095-0076

CUMMINS ENGINEERING CORPORATION	JOB #: 2158 FILE: 2158BILLMAT DATE: 5/30/06
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