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The piles to be dynamically monitored, according to the special provision Dynamic Pile Monitoring, shall be the test piles specified at each of the four substructure units on 042-0026 and the single test pile specified at 042-0027. The scheduling of the test pile driving shall be coordinated with the researcher. See special provisions for contact information. The test pile shall be driven with a Diesel Hammer at a reduced fuel setting and to a minimal penetration/bearing in rock all as determined by the researcher. The fuel setting shall then be increased and driving restarted until additional penetration/bearing is developed. Finally the fuel setting will be increased again and the pile driven an additional 5 to 10 blows until refusal is developed. There will be no waiting period or retapping beyond that stated above.

**GENERAL NOTES**

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The contractor shall drive test piles to 110% of the nominal required boring specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

The embankment configuration shown on Sheet No. 1 shall be the minimum that must be placed and compacted prior to construction of the abutments.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

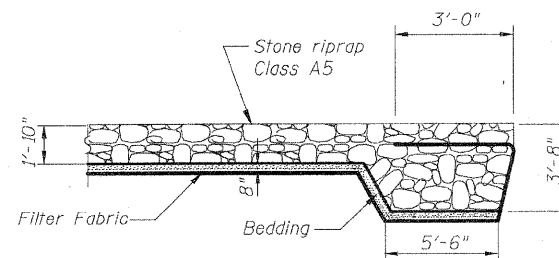
All construction joints shall be bonded.

Reinforcement bars designated (E) shall be epoxy coated.

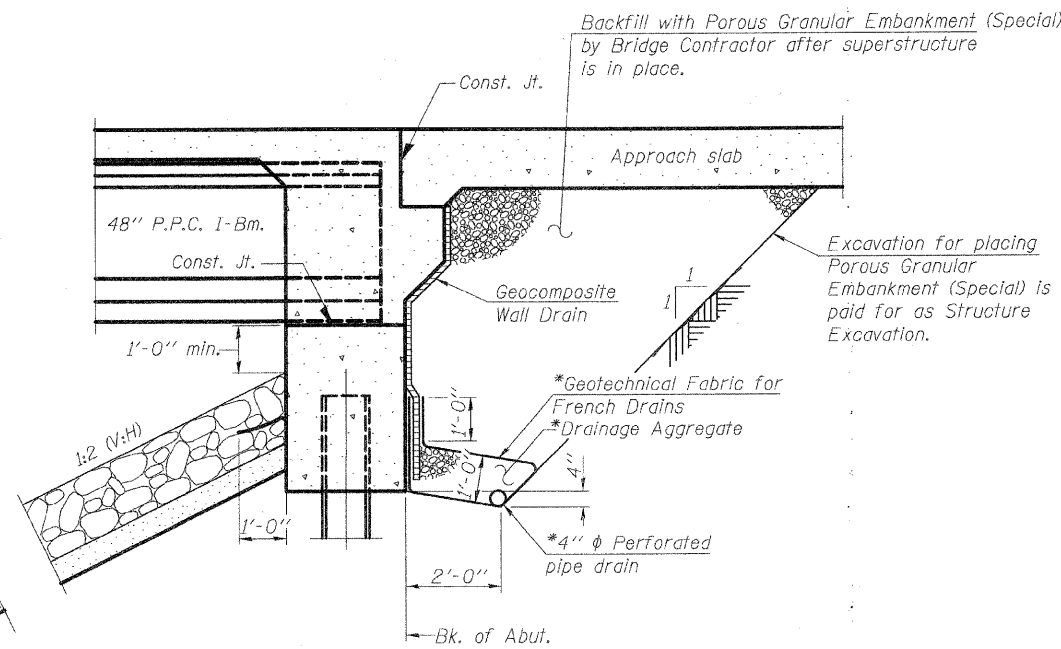
See roadway plans for staging, temporary concrete barrier location and billing.

In lieu of the hammer selection criteria and use of the FHWA Modified Gates formula specified in Section 512 of the Standard Specifications, the Contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.

Slipforming of the parapets is not allowed.



**SECTION A-A**



**SECTION THRU INTEGRAL ABUTMENT**

(Horiz. dim. @ Rt. L's)

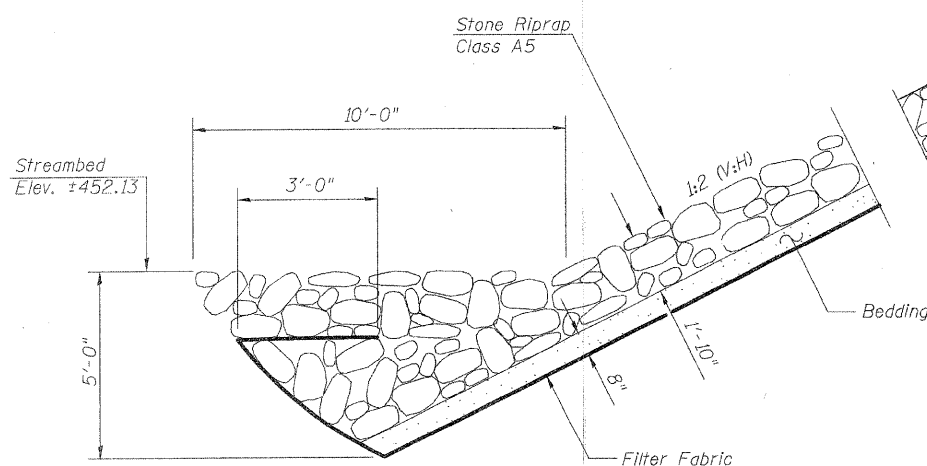
\*Included in the cost of "Porous Granular Embankment (Special)".

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	SN 042-0026		SN 042-0027		TOTAL
		SUPER	SUB	SUPER	SUB	
Porous Granular Embankment (Special)	Cu. Yd.		194		236	430
Protective Coat	Sq. Yd.	1190		1440		2630
Removal of Existing Structures No. 2	Each					1
Structure Excavation	Cu. Yd.		427		517	944
Bridge Deck Grooving	Sq. Yd.	960		1210		2170
Furnishing and Erecting PPC 1-Beams 48"	Foot	1340		1787		3127
Furnishing Steel Piles HP 14x89	Foot		595		900	1495
Furnishing Steel Piles HP 12x53	Foot		375		554	929
Driving Piles	Foot		970		1454	2424
Test Pile Steel HP 14x89	Each		2			2
Test Pile Steel HP 12x53	Each		2		1	3
Reinforcement Bars, Epoxy Coated	Pound	75,040	17,430	84,990	21,780	199,240
Name Plates	Each	1		1		2
Drainage Scuppers, DS-12	Each	6		6		12
Floor Drains	Each	22		22		44
Pile Shoes	Each		28		34	62
Concrete Structures	Cu. Yd.		226.5		278.5	505.0
Concrete Superstructure	Cu. Yd.	363.1		435.9		799.0
Bar Splicers	Each	80		100		180
Stone Riprap, Class A5	Sq. Yd.		1957		1957	3914
Filter Fabric	Sq. Yd.		1957		1957	3914
Underwater Structure Excavation Protection, Location 1	Each		1		1	2
Underwater Structure Excavation Protection, Location 2	Each		1		1	2
Geocomposite Wall Drain	Sq. Yd.		88.2		104.2	192.4
Concrete Encasement	Cu. Yd.		13.0		15.8	28.8

# See Special Provisions



**STONE RIPRAP ANCHOR DETAILS**

DESIGNED	M.E.B.-R.K.M.
CHECKED	M.E.B.-R.K.M.
DRAWN	P.W.S.
CHECKED	M.E.B.-R.K.M.

**GENERAL NOTES**  
**FAP-310 OVER PIASA CREEK**  
**SECTION 60-16-1, 42-1**  
**JERSEY COUNTY**  
**STATION 318+48.66**  
**STRUCTURE NO. 042-0026 (S.B.)**  
**042-0027 (N.B.)**

**HR**  
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