

**SOUTH ABUTMENT  
BILL OF MATERIAL**

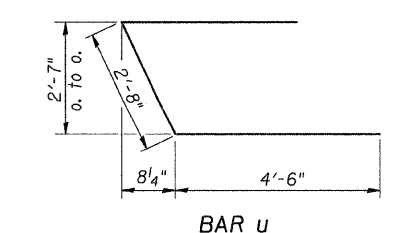
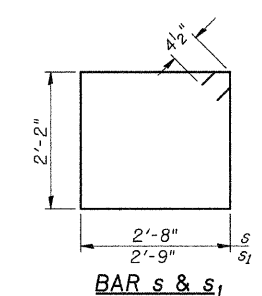
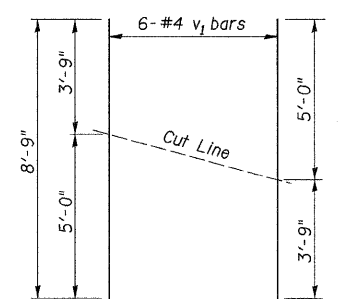
BAR NO.	SIZE	LENGTH	SHAPE
h	#4	35'-0"	—
h1	#4	6'-6"	—
p	#7	35'-0"	—
s	#4	10'-5"	□
s1	#4	10'-7"	□
u	#6	11'-8"	▽
v	#4	4'-6"	—
v1	#4	8'-9"	—
Concrete Structures		CU YD	15.5
Reinforcement Bars		POUND	1,630
Structure Excavation		CU YD	55
Name Plates		EACH	1
Furnishing Metal Shell Piles 14"		FOOT	260
Driving Piles		FOOT	260
Test Pile Metal Shells		EACH	1
Pile Shoes		EACH	5
Concrete Encasement		CU YD	1.6

① See Special Provisions

**DESIGN STRESSES**  
 $f'_c = 3,500$  p.s.i.  
 $f_y = 60,000$  p.s.i.

- NOTES**
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
  - Reinforcement bars shall conform to ASTM A706 Grade 60.

**PILE DATA**  
 Type & Size: Metal Shell-14" x 0.312" walls w/ pile shoes  
 Nominal Required Bearing: 405 kips  
 Allowable Resistance Available: 135 kips  
 Est. Length: 65'  
 No. Req'd: 5 (Includes 1 Test Pile)



**BAR CUTTING DIAGRAM**  
 \*Order v1 bars full length. Cut as shown and use remainder of bars in opposite face.

**SOUTH ABUTMENT DETAILS  
 TOWNSHIP ROAD 134A OVER  
 MAUVAISE TERRE CREEK  
 SECTION 06-06120-00-BR  
 MORGAN COUNTY  
 STATION 20+00.00**