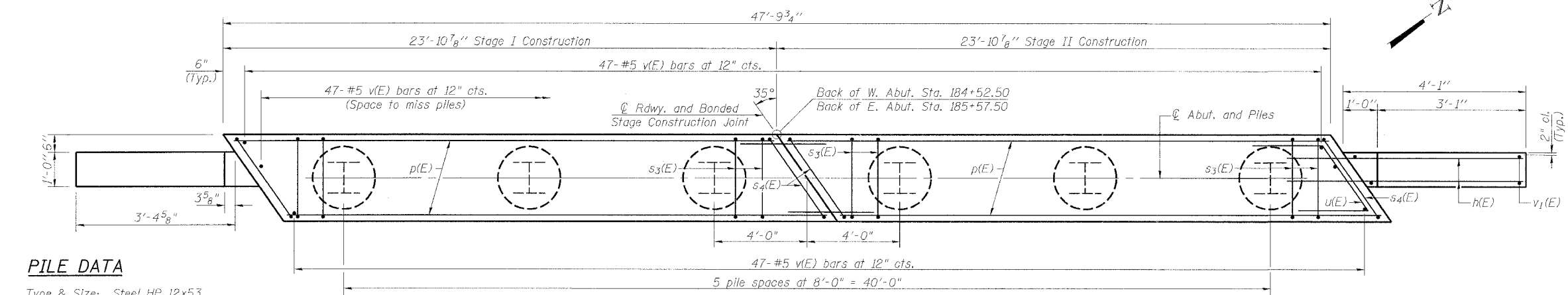


**ELEVATION**  
Looking perpendicular to West Abutment  
East Abutment similar but stages reversed

**BILL OF MATERIAL**  
2 Abutments

Bar	No.	Size	Length	Shape
h(E)	56	#5	6'-4"	—
p(E)	28	#7	23'-7"	—
s3(E)	80	#4	11'-5"	□
s4(E)	8	#4	12'-5"	□
u(E)	16	#6	7'-8"	∟
v(E)	282	#5	3'-3"	—
v1(E)	20	#5	8'-5"	—
Concrete Structures		Cu. Yd.	33.6	
Furnishing Steel		Foot	535	
Piles HP 12x53		Foot	535	
Driving Piles		Foot	535	
Test Pile Steel HP 12x53		Each	1	
Reinforcement Bars, Epoxy Coated		Pound	3720	
Structure Excavation		Cu. Yd.	176*	
Bar Splicers		Each	14	
Concrete Encasement		Cu. Yd.	4.2	

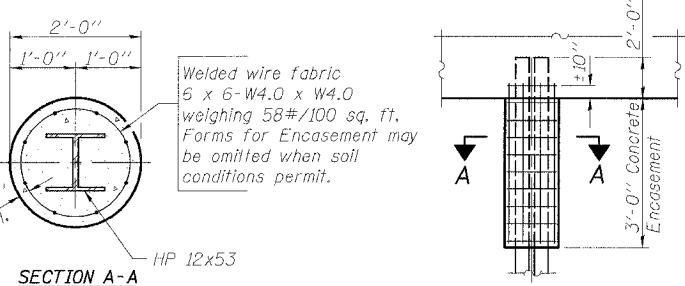
Reinforcement Bars designated (E) shall be epoxy coated.  
\*88 Cu. Yd. of Structure Excavation at each Abutment.



**PLAN**  
West Abutment shown  
East Abutment similar by rotation

**PILE DATA**

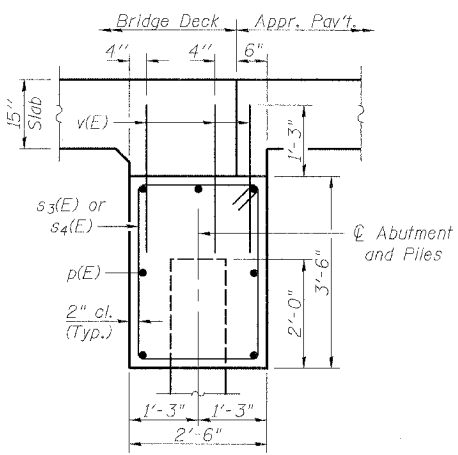
Type & Size: Steel HP 12x53  
Nominal Required Bearing: 222 kips  
Allowable Resistance Available: 74 kips  
Est. Length: 45' (East Abutment)  
53' (West Abutment)  
No. Req'd: 6 (East Abutment)  
5 (West Abutment) plus 1 Test Pile  
The Steel H-piles shall be according to AASHTO M270 Grade 50.  
The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.



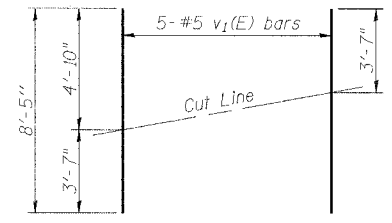
**SECTION A-A**  
**PILE ENCASEMENT DETAIL**

**NOTES**

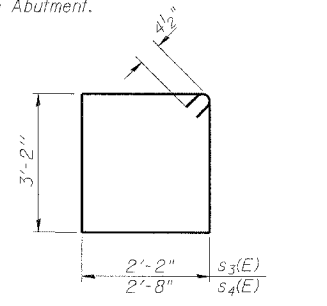
Pile locations may be adjusted in the field to avoid existing timber piles. If adjustments are necessary, maximum pile spacing shall be limited to 10 feet, and maximum spacing of s(E) bars shall be limited to 15 inches. Contractor shall notify the Engineer prior to making any such adjustments.  
All edges shall have standard 3/4" chamfers.  
See Sheet 10 of 15 for Bar Splicer Details.  
See Sheet 4 of 15 for Piling Layout.



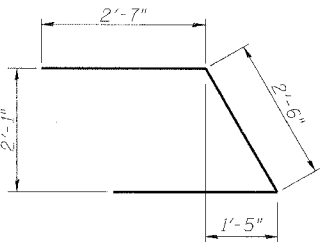
**SECTION THRU ABUTMENT**  
Dimensions at right  
angles to abutment



**FIELD CUTTING DIAGRAM**  
Order v1(E) full length. Cut as shown and use remainder of bars in opposite face.



**BARS s3(E) & s4(E)**



**BAR u(E)**

**rjngroup**  
Excellence through Ownership  
200 West Front Street  
Wheaton, IL 60187

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ABUTMENTS  
IL 17 OVER UNNAMED DRAINAGE DITCH  
FAP RTE 41 - SECTION 15BR  
LIVINGSTON COUNTY  
STATION 185+05  
STRUCTURE NO. 053-0182  
DATE: 10/20/2006  
DRAWN BY: BLB  
CHECKED BY: JMT