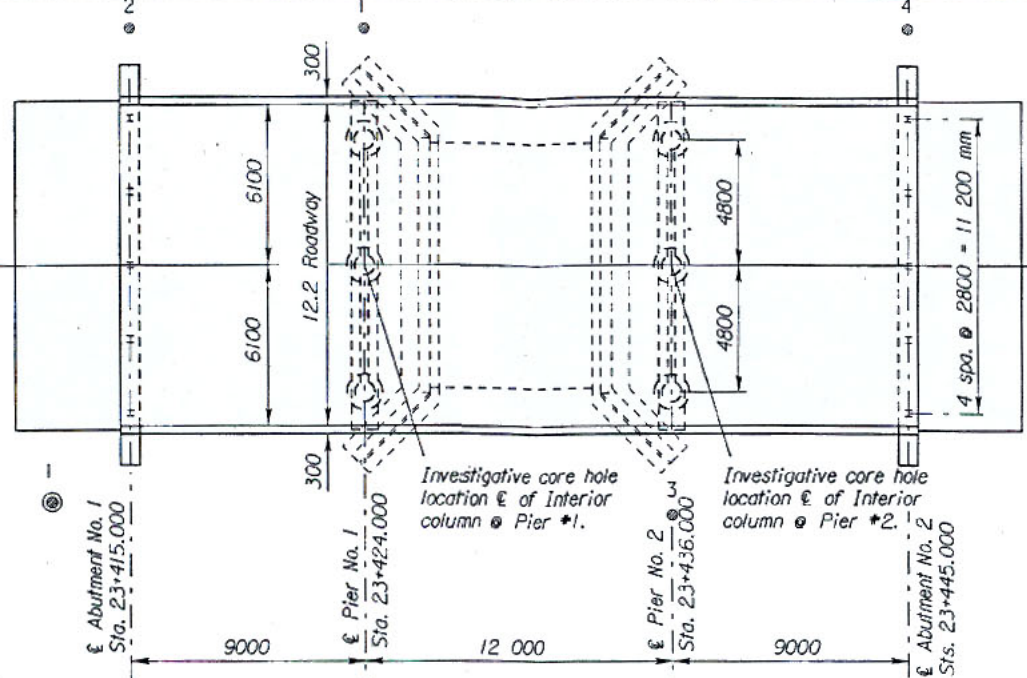
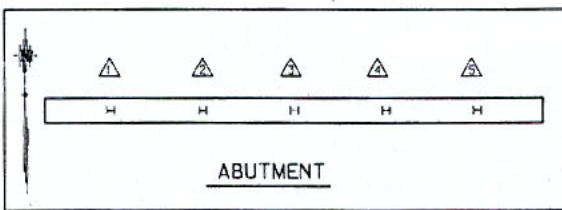


HAMMER	
Make & Model	Gravity
Weight Hammer	1361 kg
Weight Follow Block	403.7 kg
Average Stroke	2.743 m

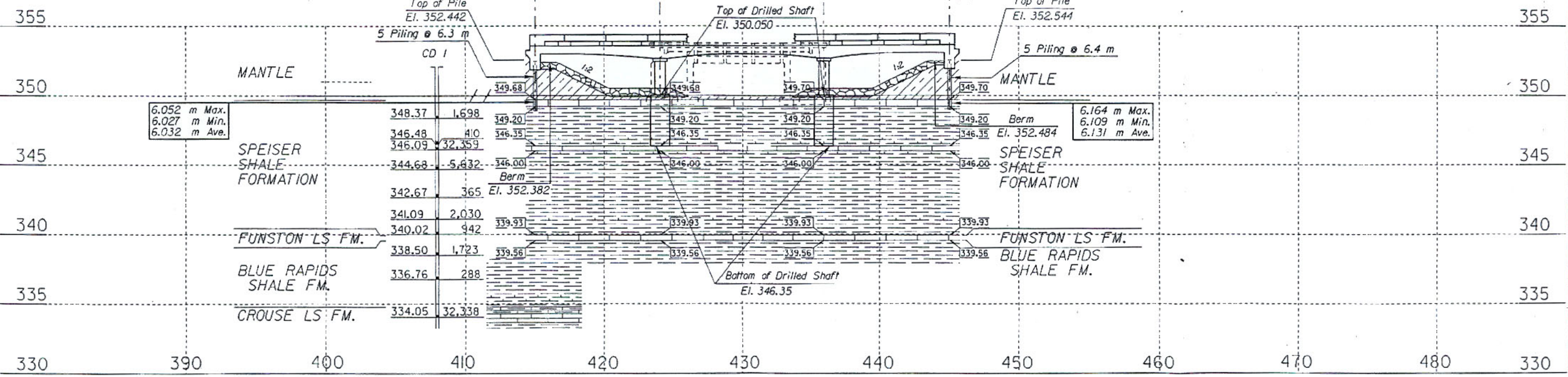
LOG OF PILE DRIVING			
Footings	Pile No.	Pile Tip Elevation	Refusal KN
Abutment 1	1	346.390	568
	2	346.415	591
	3	346.415	568
	4	346.415	631
	5	346.415	568
Abutment 2	1	346.405	568
	2	346.380	591
	3	346.415	568
	4	346.430	631
	5	346.435	568



**Drilled Shaft Note:**  
The footing elevations listed will place the shaft sockets on the top of a thin 0.3 m thick limestone bed within the Speiser Shale Formation. Be very careful not to overdrill. A 1.5 m deep test hole, no larger than 102 mm (4 inches) in diameter, should be made in the rock socket of each shaft as part of the acceptance of the founding elevation. This verification test should be done in the presence of the KDOT personnel in charge of the project.

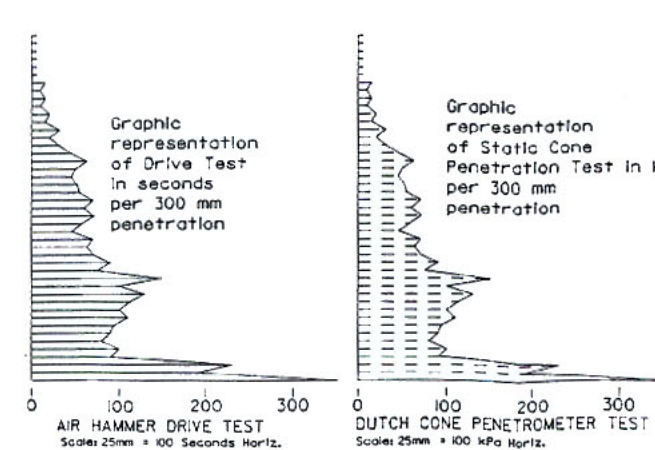
**Pre-Drilled Pile Holes:**  
Provide Pre-Drill pile holes for all piling at both abutments with an inside hole diameter of 400 mm. Pre-Drill to elevation 346.5 and then drive each pile into the Speiser Shale Formation. All pre-drilled piling shall be backfilled with a loose granular material. Pre-drilled holes shall be drilled to an accuracy that will permit the pile to be set in its true position and not tilted in such a manner as to drive the pile out of position.

**Piling:**  
When sufficient bearing and penetration into competent bedrock are achieved, driving should be stopped to avoid damaging the pile. Final pile tip elevations should be determined in the field based on observed blow counts.



STANDARD GEOLOGIC SYMBOLS			
	Clay		Caliche
	Silty Clay		Silty Clayey Shale
	Silt		Limy Shale
	Sand		Black or Fissile Shale
	Gravel		Sandy Shale
	Boulders		Gypsiferous Shale
	Weathered Shale		Limestone
	Sandstone		Cherty Limestone
	Shaly Sandstone		Shaly Limestone
	Siltstone		Sandy Limestone
	Gypsum		Weathered or Broken Limestone
	Coal		

SOUNDINGS	
	Coredrill
	Power auger
	Hand tools
	Air hammer
	Dutch cone penetrometer
	Water level



NOTE: Soundings shown on these plans are taken from notes obtained in the field and represent the best information available. Logs of these soundings are in the files of the Kansas Department of Transportation and are available at their offices at Topeka, Kansas for inspection by interested and qualified bidders.

3				
2				
1				
NO.	DATE	REVISIONS	BY	APP'D
KANSAS DEPARTMENT OF TRANSPORTATION BR. NO. 99-75-15.20(057) STA. 23+430.000 <b>ENGINEERING GEOLOGY</b> K-99 over Rock Creek Drainage PROJ. NO. 99-75 K-6421-01 POTTAWATOMIE CO.				
SHEET NO. OF	SCALE	APP'D	QUANTITIES	CADD
DESIGNED	DETAIL	QUAN. CK.	CADD	CK.

Plotted By: jank  
 Files: \\0700MH7\Projects\Working\642101\BrIDGE\ASBUILT\Geology\642101-057-12bb.dgn  
 Plot Date: 11-AUG-2004 14:58