

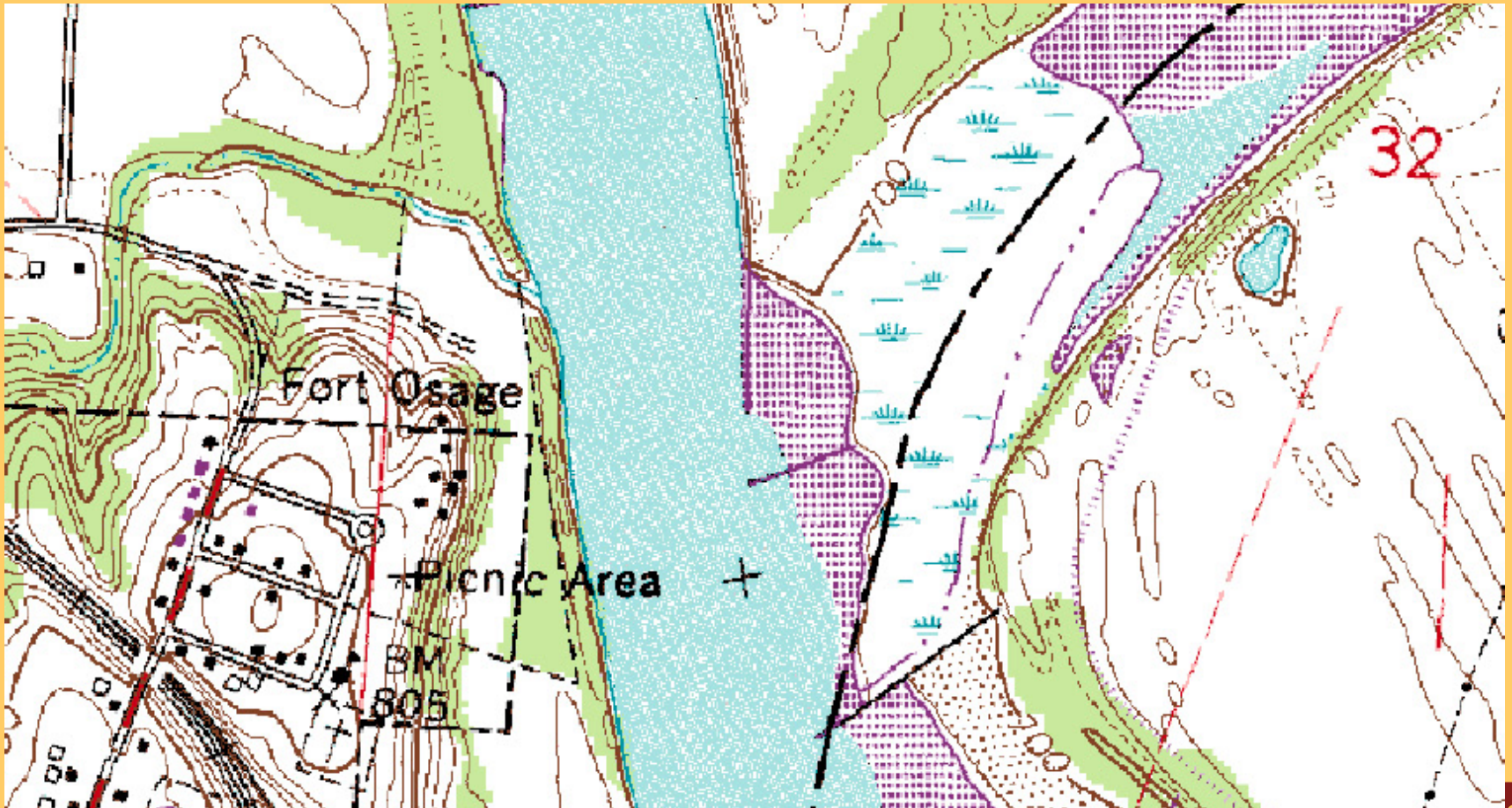
# Fort Osage Education Center



April 18, 2008



# Where is Ft. Osage?



About 20 miles east of Kansas City



# What is Fort Osage?

- Originally built in 1808 under the direction of William Clark.



" . . . a high commanding position, more than 70 feet above high-water mark, and overlooking the river . . . ." Clark

- Served as one of the first US outposts in the Louisiana Purchase.
- Closed in 1827 with commencement of construction of Fort Leavenworth.



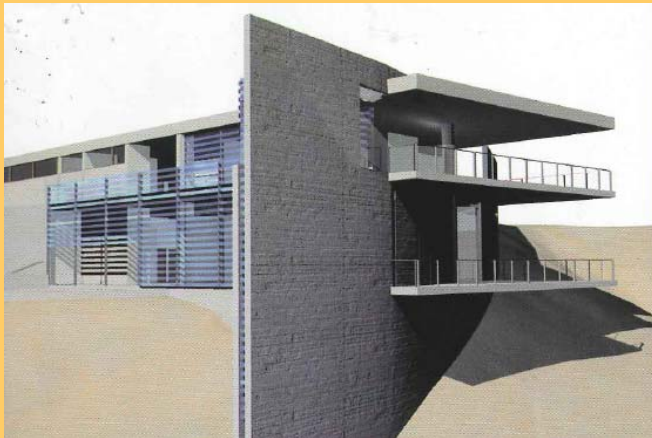
# What is Fort Osage?

- The reconstructed Fort Osage recreates 1812 through living history.



# The Fort Osage Education Center

- 2001, Jackson County Parks Commission set out to build a visitors center. . .



- . . .cantilevered over the existing bluff.



# Not Fort Osage







Trees cleared to return bluff to natural setting . . .





# TOPOGRAPHIC MAP



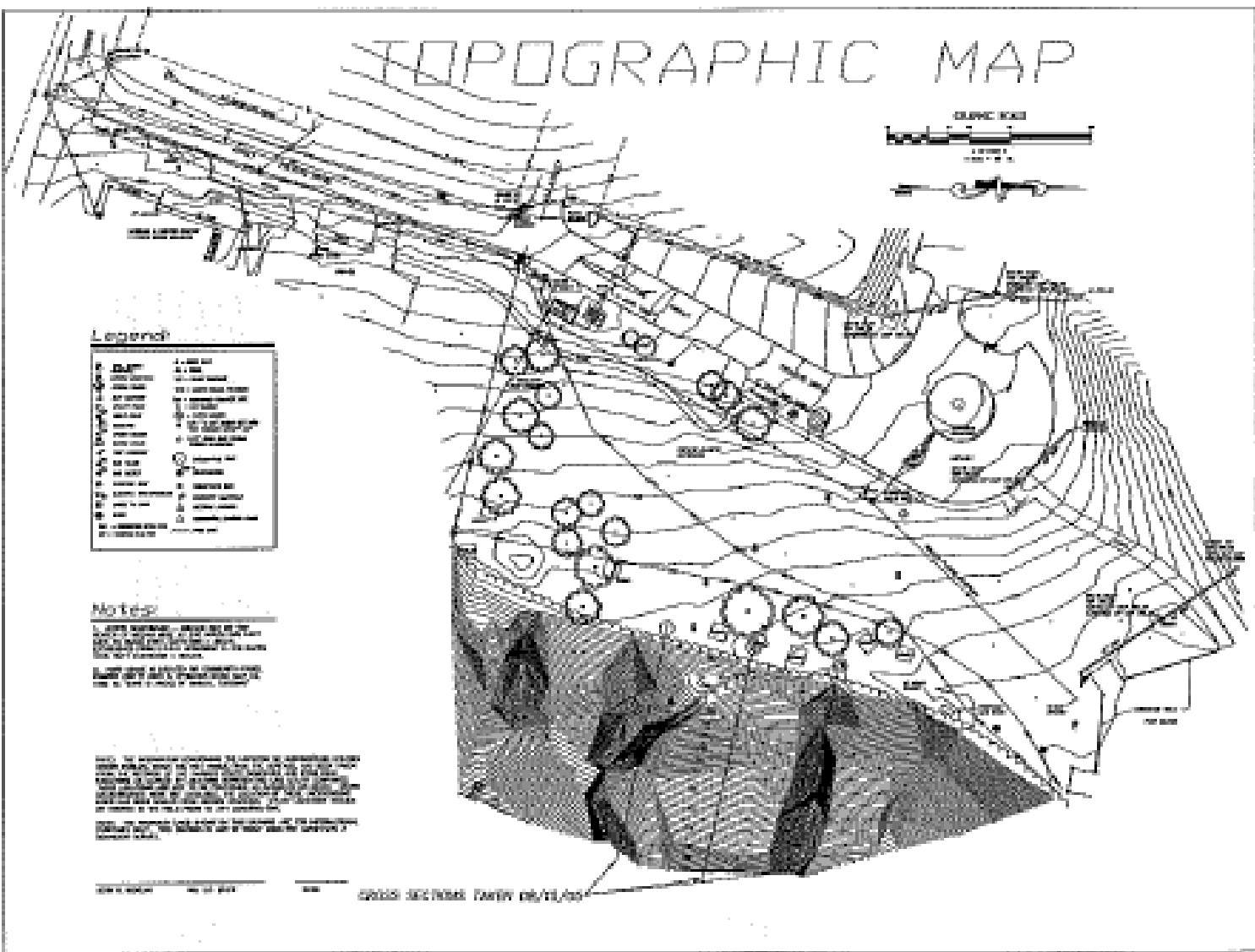
**Legend**

<b>Spot Elevation</b>	1. 1000	11. 1000
<b>Spot Elevation</b>	2. 2000	12. 1000
<b>Spot Elevation</b>	3. 3000	13. 1000
<b>Spot Elevation</b>	4. 4000	14. 1000
<b>Spot Elevation</b>	5. 5000	15. 1000
<b>Spot Elevation</b>	6. 6000	16. 1000
<b>Spot Elevation</b>	7. 7000	17. 1000
<b>Spot Elevation</b>	8. 8000	18. 1000
<b>Spot Elevation</b>	9. 9000	19. 1000
<b>Spot Elevation</b>	10. 10000	20. 1000

**Notes:**  
 1. This map was prepared by the U.S. Army Corps of Engineers, Hydrographic Survey Division, and is based on data furnished by the U.S. Army Corps of Engineers, Hydrographic Survey Division, and is based on data furnished by the U.S. Army Corps of Engineers, Hydrographic Survey Division.

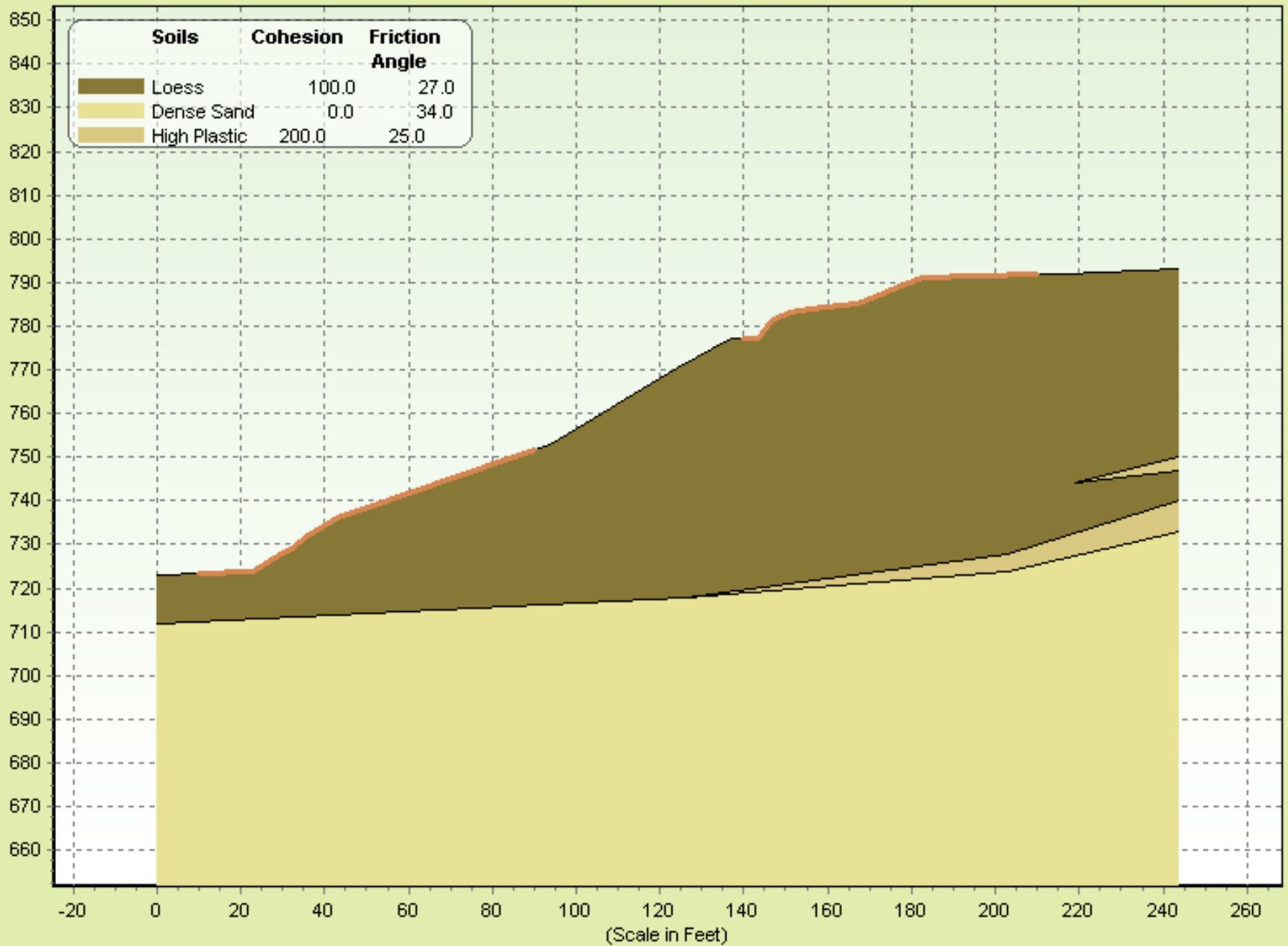
**Scale:** The horizontal distance on this map is equivalent to the actual distance on the ground. The vertical distance on this map is equivalent to the actual distance on the ground. The horizontal distance on this map is equivalent to the actual distance on the ground. The vertical distance on this map is equivalent to the actual distance on the ground.

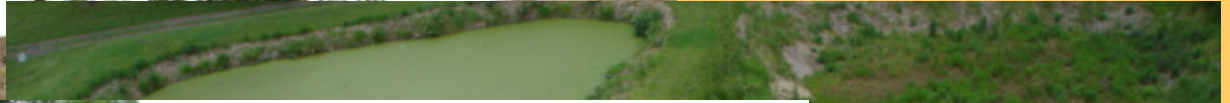
DATE OF SURVEY: 10/15/2010  
 CROSS SECTIONS: FAMILY 08/18/2010





# Problem: Fort Osage





# Building Details



LEED® Gold Rating with green roof, radiant heating and cooling, passive solar heating and natural ventilation.

2 Story Structure with the first floor partially below grade

Column loads of 500 kips

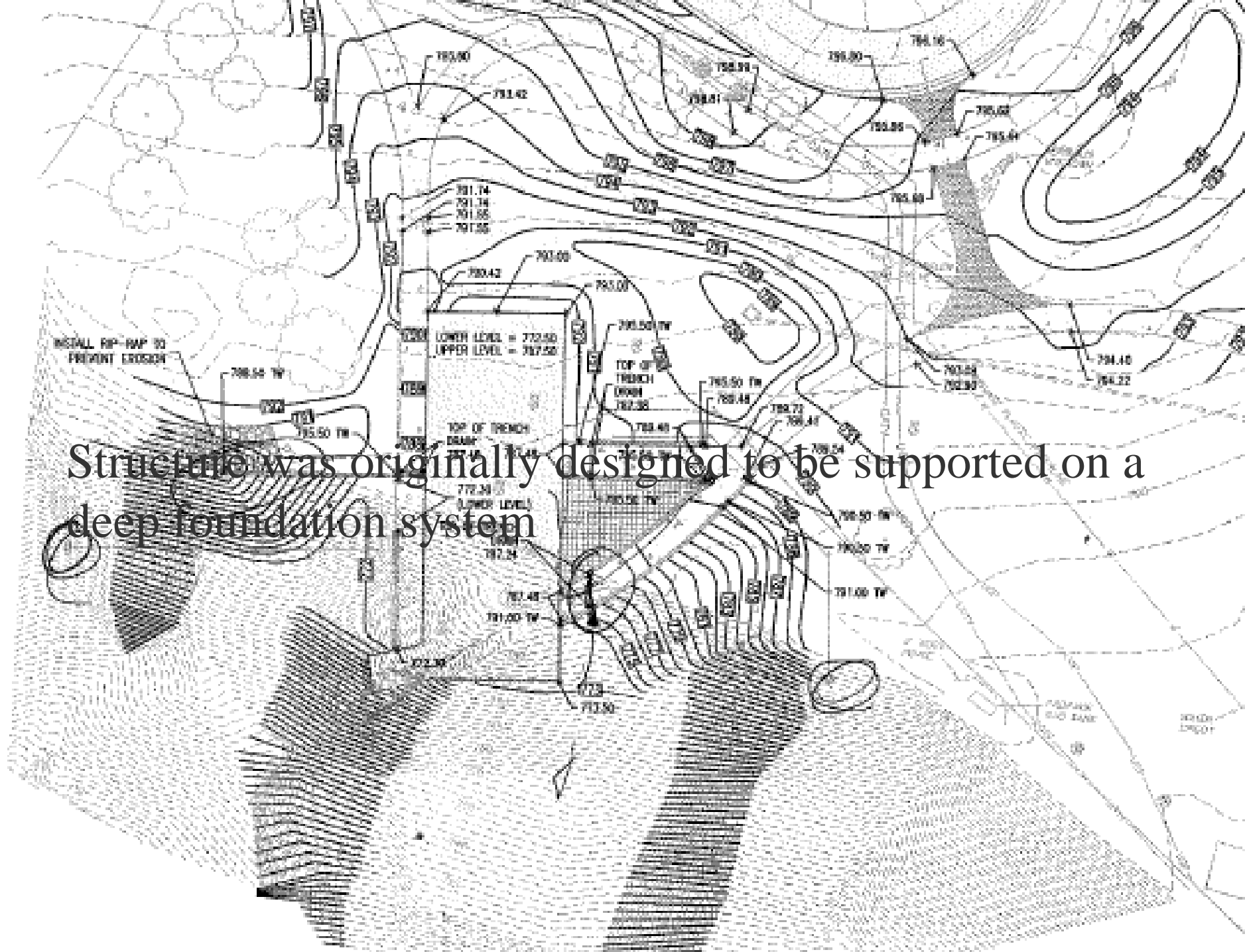
Wall loads of 17 kips per lineal foot

Terracon was not selected as the geotechnical consultant.



Not One of Our Jobs!





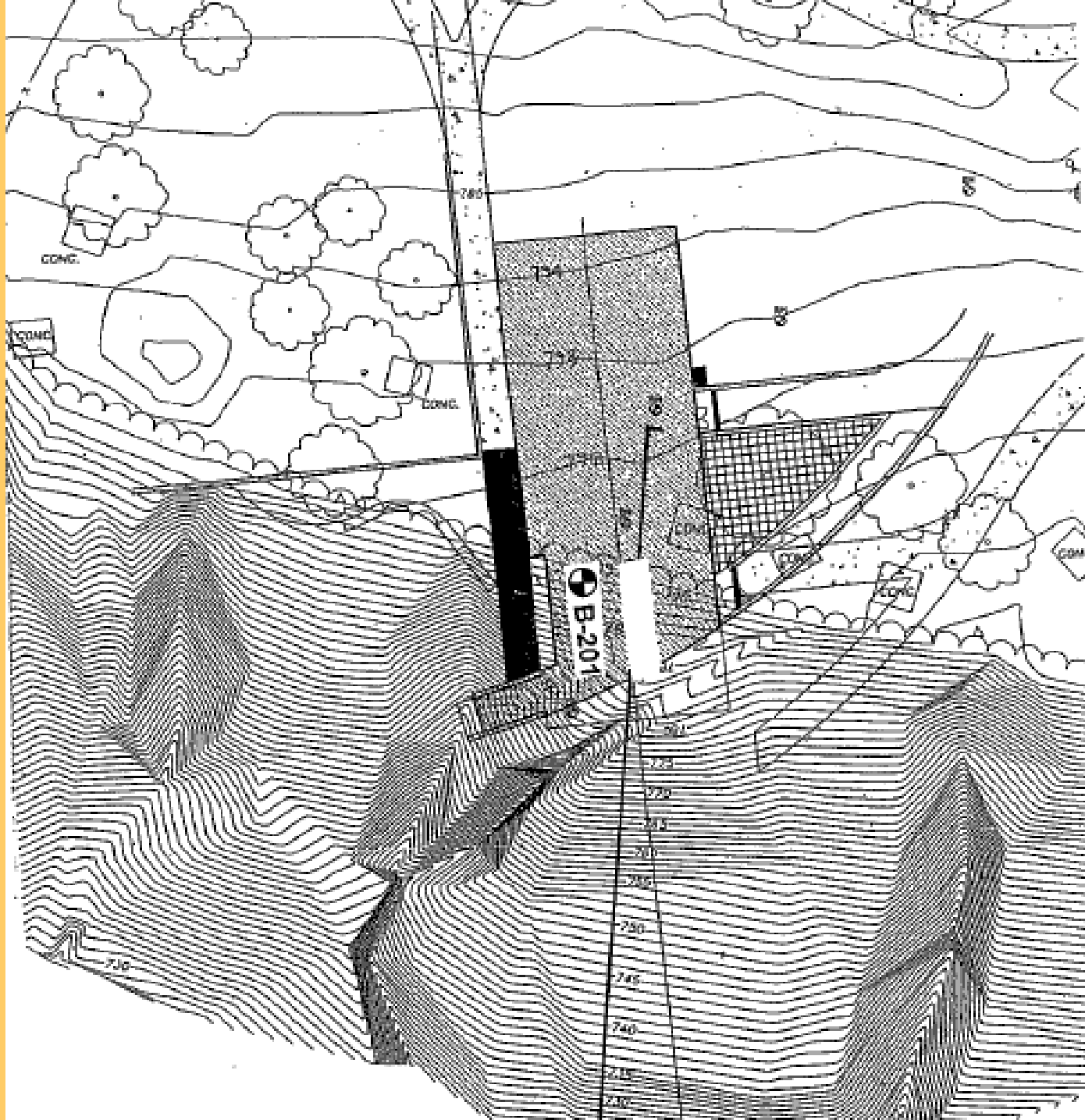
Structure was originally designed to be supported on a deep foundation system



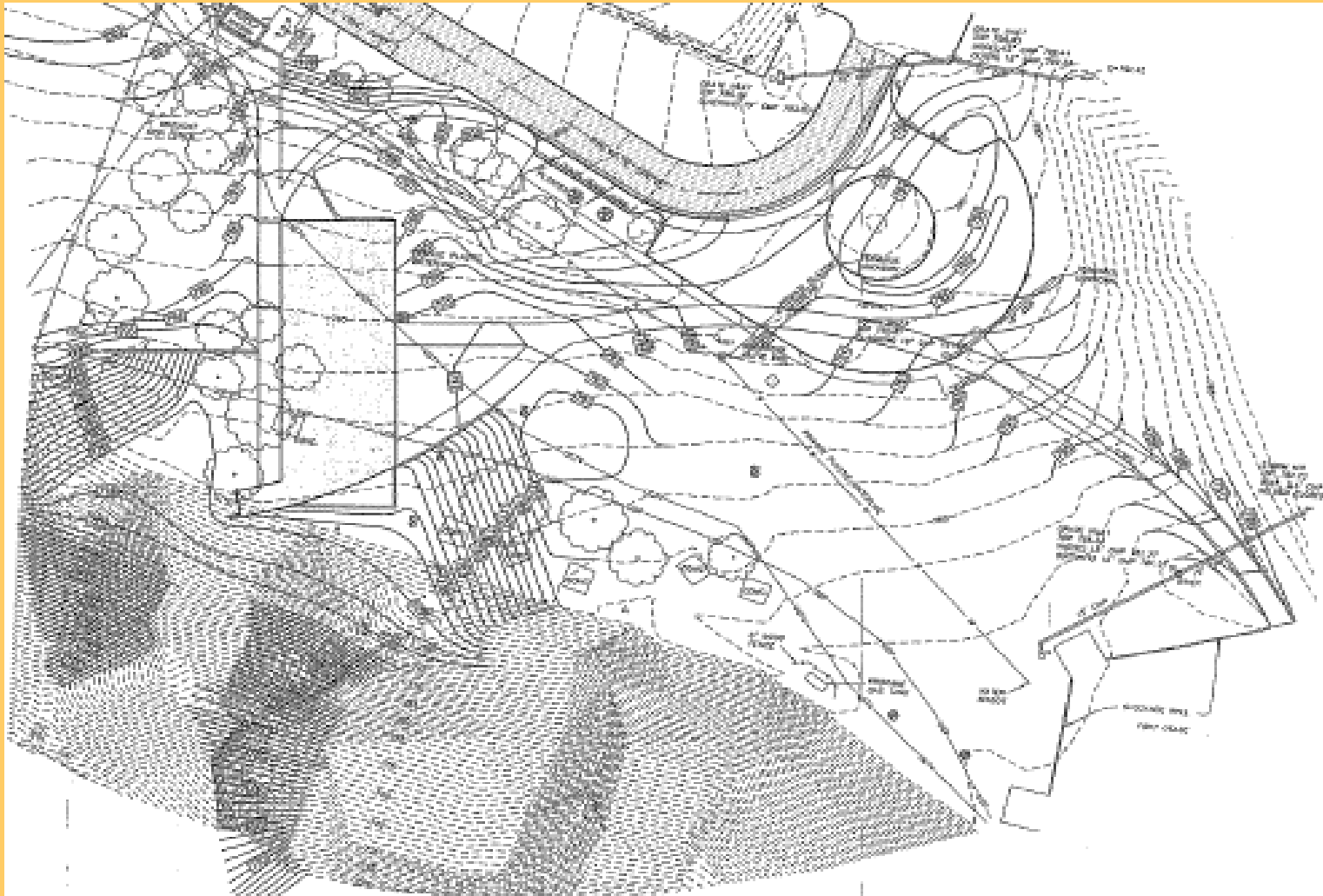
“Okay, okay, okay . . . everyone just calm down and we’ll try this thing one more time.”



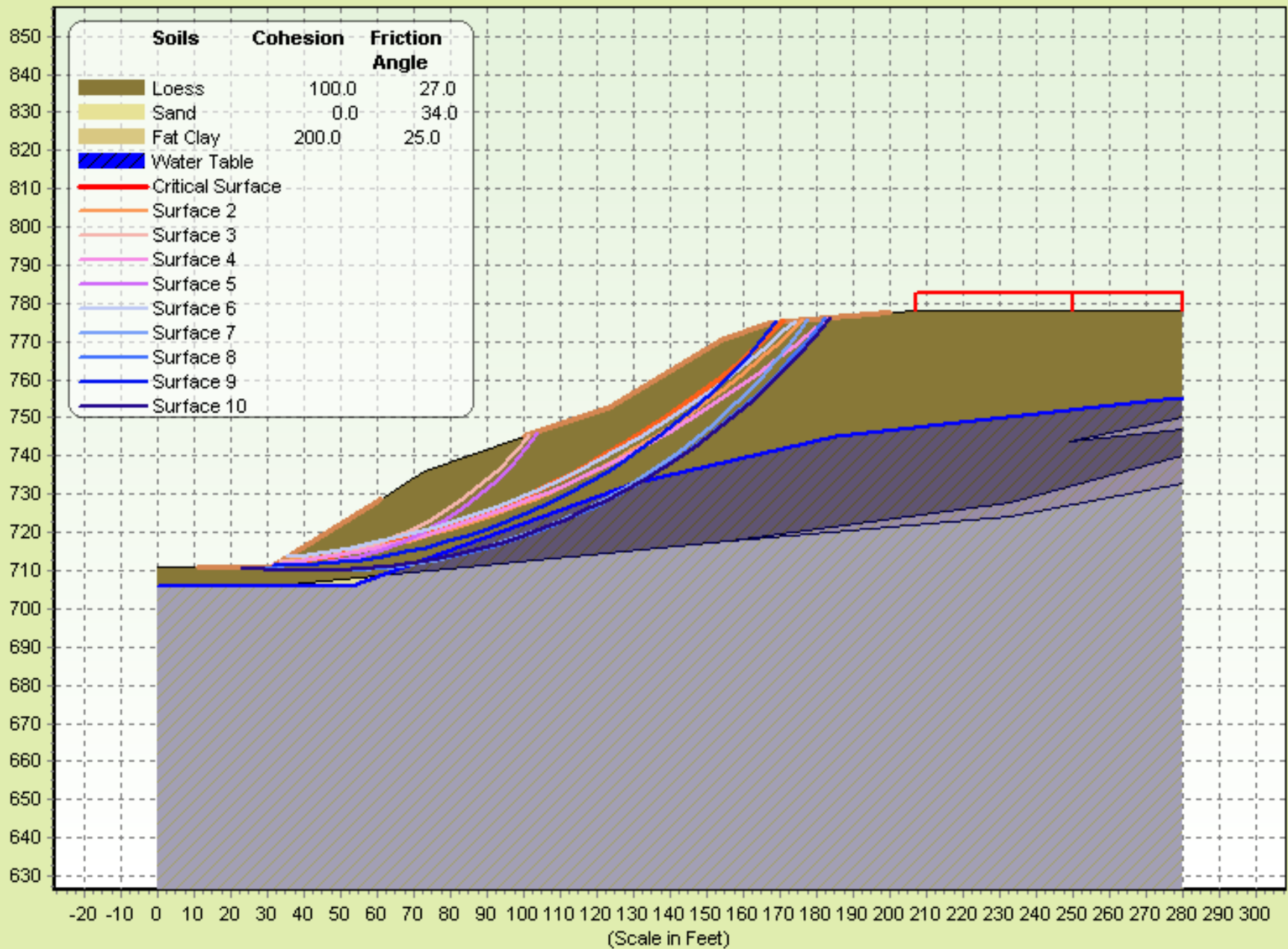


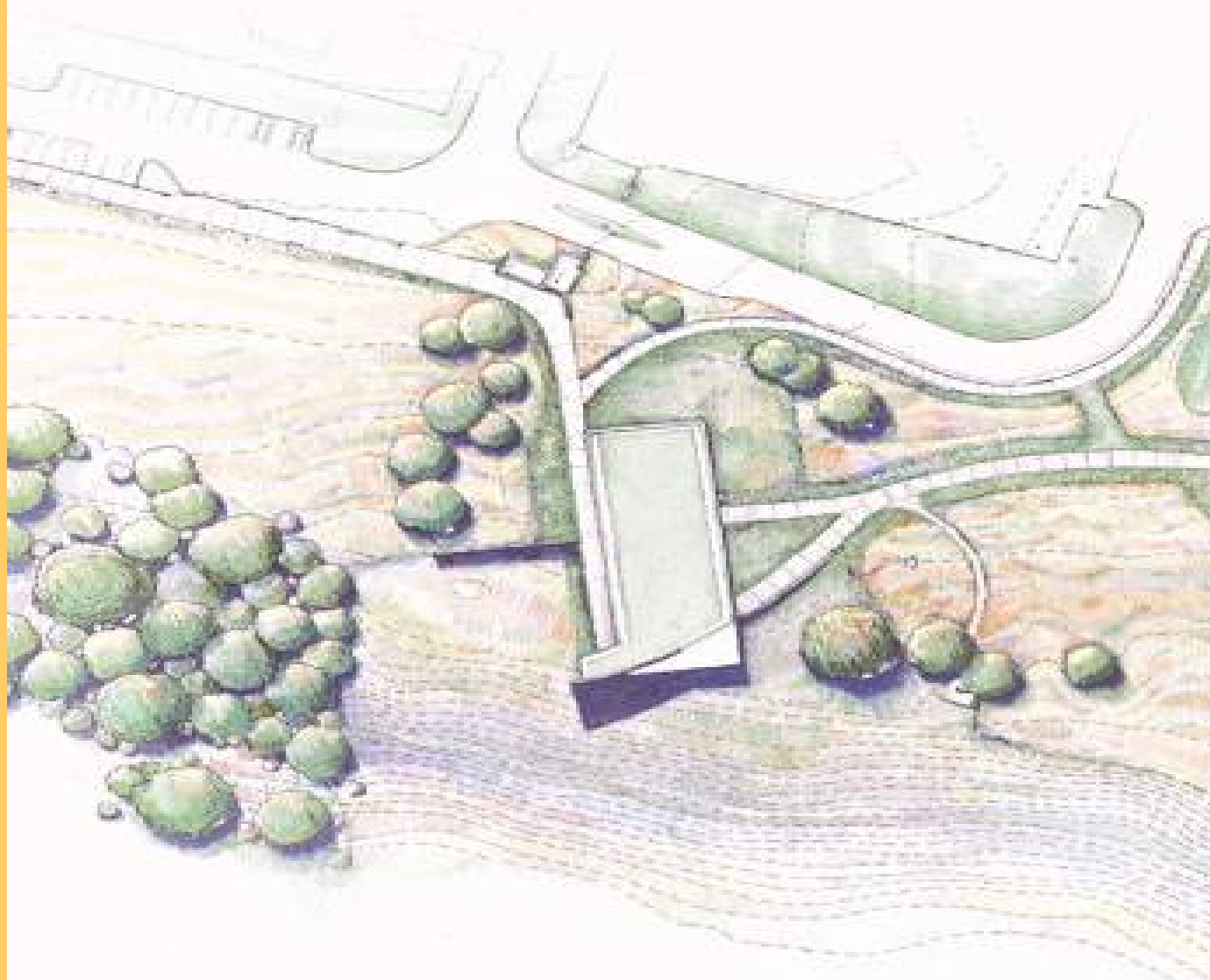


# Can we switch to a mat foundation?



Problem: Fort Osage - FS Min- Bishop = 1.411















# Team Work

