

Failure Case Study of Construction at a Solid Waste Site  
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#### ABSTRACT

A bus terminal, consisting of several buildings, was constructed on a closed solid waste landfill site in Tennessee. Even though the Geotechnical consultant advised the owner of the bus terminal to find an alternate site, the owner had no alternate site.

After the construction was completed, the buildings were used as was envisioned until the settlements of the foundations caused the walls to crack and methane gas from the solid waste came through the floor cracks. For health reasons of the employees and the passengers, the buildings were evacuated and remediation was carried out to retrofit the foundations. But the cost of remediation was a lot more than the construction cost. After the remediation was over, the owner sued all the subcontractors to recover the cost of remediation. Pretrial depositions were taken; and, finally, the case was settled out of court before it went before a judge.

In this paper, the probable causes of failure and shortcomings of the construction phase are analyzed. From an educational point of view, this case study may help the students to understand the concepts in foundation engineering, or at least may lead to a good discussion on the topic. The geotechnical information related to the design phase is also discussed.