

Project

Haley & Aldrich geotechnical experts help preserve historic buildings and save costs

$1 million+

saved through our innovative foundation approach

160+ years

age of some buildings at site

Summary

- The GSA needed foundation recommendations as part of project to transform the historic St. Elizabeths Hospital.
- We suggested a construction sequence to protect historic structures and an innovative design approach for new structures that would save millions.
- Thanks to our work, the GSA made Haley & Aldrich the official geotechnical engineer for future project phases.

Client challenge

The Department of Homeland Security (DHS) is in the midst of a large, multiyear project to transform the St. Elizabeths Hospital site into state-of-the-art headquarters, aiming to provide a more unified, secure campus in Washington, D.C. The site dates back to the Civil War and is a National Historic Landmark; preserving its historical integrity is critical. The GSA, which constructs, manages, and preserves government buildings, prepared a master plan to develop the St. Elizabeths campus into a high-security headquarters for federal agencies.

During the first phase of construction, GSA contractors built a new, technologically advanced Coast Guard facility on the historic campus. Employees in the older buildings on campus wanted the same perks and advances as the new facility. Adding these high-tech features while maintaining the structural integrity of the old buildings was especially challenging. Additionally, the site is underlain by a marine clay deposit, which is notorious for causing landslides.

GSA and project architect, Goody Clancy, needed foundation recommendations to help preserve and reuse existing structures along with constructing new buildings without impacting historical structures. They turned to Haley & Aldrich's geotechnical experts because of our in-depth experience, proven ability to see the big picture, and our creative problem-solving that is crucial to cost-effective solutions.

Our approach

The Haley & Aldrich team began by taking a holistic look at the hospital project to help GSA get ahead of potential problems, save costs, and create project efficiencies. We advised GSA on the best sequence for building construction — at what stage of construction and in what order — to most effectively protect historical structures and limit work redundancies on the new buildings. This not only saved GSA costs for this project, but it was new thinking for GSA that it could apply to future projects, even when our team would not be involved.

GSA needed to construct new structures that would share a slope with an existing historic powerhouse that has smokestacks and is built at the foot of a 60-foot high slope containing the landslide-prone marine clay. To preserve the smokestacks while also constructing the new structures, Haley & Aldrich recommended an innovative and cost-efficient design approach — build into the 60-foot upslope underlain by marine clay. It was a novel approach that the GSA hadn't previously considered, was the best way to prevent marine clay slides, and was the most cost efficient — saving GSA millions of dollars in comparison to a traditional approach.

> *"Success means asking the right questions and looking at the whole project. We know geotech, and we also know how to ensure everyone's interests are met."*
>
> David Schoenwolf, Haley & Aldrich

Because of Haley & Aldrich's holistic, forward-thinking approach that introduced innovative cost savings, GSA included Haley & Aldrich as the official geotechnical engineers for future phases of the hospital project.

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Value delivered

- Protected the integrity of Civil War-era structures
- Introduced GSA to a new, more cost-efficient way to construct new buildings while preserving historic structures
- Found significant, big-picture budget-saving opportunities, including eliminating work redundancies
- Identified an innovative foundation approach, saving GSA millions of dollars

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