Project

Our approach helps client reduce costs and complete pre-construction planning in record time

Zero

costly claims during construction

$400,000

saved by employing Lean principles

Summary

- The Virginia Department of Transportation (VDOT) had to perform a significant geotechnical investigation before constructing new lanes for the I-95 and I-495 freeways — in record time.
- Our team used out-of-the-box thinking, Lean principles, and an intimate knowledge of the department's prescriptive boring process to keep the project on schedule and lower costs.
- We also identified geotechnical risks early to reduce project delays and help the client to avoid costly claims during

construction.

Client challenge

The Washington, D.C., area regularly ranks among the top U.S. cities for rush hour traffic gridlock. Add the cost of wasted time and fuel and delayed emergency response times, and one begins to see the seriousness of the problem. VDOT planned to address these issues by constructing new high-occupancy vehicle and toll lanes for the I-95 and I-495 freeways to the tune of hundreds of millions of dollars, which also included the cost to replace or refurbish aging infrastructure along 44 miles of highway.

Before beginning construction, VDOT needed a partner to perform significant preliminary geotechnical investigation. In addition, VDOT's multiyear court battle with a local municipality that contested the I-95 project left only 13 weeks for the project's preliminary design, a nearly impossible feat. VDOT's public-private partner knew it needed out-of-the-box thinking to meet the strict timeline and reached out to Haley & Aldrich for help.

Our approach

Using our intimate knowledge of VDOT's prescriptive boring process, we assessed the requirements and then developed a go-forward plan to keep both highway projects on track. Since contractors would be fined if they fell behind schedule, we knew success meant getting things right the first time. Using Lean principles, we shortened a multistep review cycle by preplanning our borings in cooperation with VDOT before performing the work. This allowed us to complete an extraordinary number of borings in record time, which lowered our costs and resulted in trickle-down savings of $400,000 for the client.

We also pre-planned boring fallbacks for sites that proved inaccessible, which allowed progress to continue unabated. Because borings were drilled along high-profile main arteries to the district, strong logistics planning was of the utmost importance in maintaining traffic flows and keeping our client out of the news.

Value delivered

- Identified geotechnical risks early to reduce project delays and help the client to avoid costly claims during construction
- Employed Lean principles to execute a safe, timely field program that provided on-time deliverables and saved the client $400,000
- Kept the client out of the news on this high-profile project through careful logistics planning
- Helped VDOT's public-private partner avoid costly delays and fines due to our knowledge of VDOT practices and innovative, pre-planned boring strategies

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