Thesis Project Portfolio

A Tool to Track U.S. Infrastructure Maintenance

(Technical Report)

The Ambitious Expectations Contributing to the Monstrous F-35 Budget

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science

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Bachelor of Science, School of Engineering

Iskander Umarkhodjaev

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Sociotechnical Synthesis

The Ambitious Expectations Contributing to the Monstrous F-35 Budget research paper is an STS analysis of the development of the F-35, also known as the Joint Strike Fighter. The paper uses the Social Construction of Technology framework to explain the role of the public, Congressional committees, the Lockheed Martin Corporation, and the Department of Defense in the excess delays and budgetary overruns of the project. This analysis is done in order to discover patterns that result in budgetary waste.

The technical report *A Tool to Track U.S. Infrastructure Maintenance* is a proposal for an application civil engineers and government agencies can use to bookkeep public construction projects. It details the application's overarching technical design, expectations, limitations, contents, anticipated results, and potential future development. Such a tool would allow more appropriate allocation of funds for current and long-term maintenance. Furthermore, a centralized location for such data will streamline communications between agencies.

Both the analysis of the F-35 project and the development of an infrastructure tracking application are directly related to government spending. By analyzing the F-35 project I hope to find persistent practices that result in spending waste and by implementing the infrastructure tool, I hope to provide a means to mitigate spending waste.