

Office Building

Washington, D.C

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Construction Management

Fínal Report Dr. John Messner Apríl 7, 2009

Executive Summary

This new office building is the third and final structure of a three phase project that will help with the continued revitalization of the local area. The 10-story building provides efficient and productive work spaces, state-of-the-art technology, one main lobby, two secondary lobbies, three paver terraces (located on the second, third, and fourth levels), and includes three levels of parking. With well-located core services, the office building has the flexibility to meet the needs of small, medium, and large space users. This LEED Silver certified building offers tenants direct access to MACR Train Service, Virginia Railway Express trains, and Amtrak, as well as Metrobus systems and Washington's Metrorail. Existing low-scale surroundings also offer tenants high visibility, access to natural light and air, and spectacular views of Washington, DC.

Balfour Beatty Construction (BBC), being one of the most experienced firms in the country, was hired by the owner to complete the project within the budget and on schedule. The delivery method used in this project was Design-Bid-Build where the contracts with the subcontractors were lump sum. Balfour Beatty Construction is working under a Guaranteed Maximum Price (GMP) type of contract that was presented to the owner. They are the ones who hold all of the contracts with the subcontractors. Therefore, Balfour Beatty Construction is in charge of managing the entire project from start to finish.

This document is intended to familiarize the audience with the project and analyze the current status of the project. This technical assignment analyzes the Office Building on eight levels. This analysis covers the project schedule, building systems, project cost in D4Cost 2002 and R.S. Means, the project's site plan, local conditions, client information, project delivery systems, and current staffing plan.



Figure #1: View of the Office Building from M Street Ramp



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The proposal topics below identify the areas used to research and analyze the Office Building project in Washington, DC. For each area of analysis, the problem will be defined, along with the proposal, goal, and methodology intended for addressing the issue. Then, the analysis itself will be conducted, taking into consideration of how these impacts will affect the project, followed by a conclusion for the analysis. The following is a preview of each analysis conducted in this report:

Analysis #1: M Street Ramp Re-design – Steel Vs. Concrete Structure (Struct. & Mech. Breadth)

This analysis will focus on re-designing the structural system above the M Street Ramp, by converting the steel structure to a complete CIP concrete structure. A cost, constructability, and schedule analysis will be completed to determine the effects this change will have on the project.

Analysis #2: Utilizing a Matrix Schedule

A matrix schedule will be utilized on the cast in place concrete structure to explore the positive and negative impacts of this method on the project. The idea behind this study is to allow for easier tracking of production, based on standardized work zones and task durations along with obtaining shorter structural duration.

Analysis #3: Implementing Whole Building Design Guide (Critical Industry Research Issue)

Identify why the owner chose to pursue a LEED design after the initial planning process and what techniques or methods that could have been or can be implemented to the overall project to produce a more sustainable office building.