

Project Cost and Time Challenges – Sounds Familiar?

General Electrical had two very specific objectives that needed to be met for the “fit-out” of its 15,000 square foot corporate office fit in Bogotá, Colombia. The first objective was to deliver the project under a very limited budget that seemed unlikely at first. The second objective was to meet an occupancy target date that was at least half of the construction time that other projects of similar magnitude represent.

To meet these objectives, there were management techniques that were recommended and immediately applied, such as Design-Build type of delivery method and a Lump Sum type of contract. Both of these techniques reduced the time spent during the planning stages and kept the cost under relative control. However, even with the correct application of these methods, there were still added contingencies that needed to be reduced or eliminated to be within our clients Cost and Time objectives.

To further reduce these contingencies or have an opportunity to fully eliminate them, an additional technique was applied. PIZA Consulting successfully implemented the use of Building Information Modeling (BIM) to help improve efficiency in the project and help mitigate incremental costs and time risks.

Applying BIM technology

PIZA integrated an expert management team which specializes in the use of the BIM technology composed of Certified Construction Managers and Autodesk Revit Certified Designers.

A thorough process was implemented which consisted of coordinating information, modeling, evaluating and solving issues during the Planning phase. The BIM Management Team kept close communication with the Project Manager and Design team, held weekly meetings and conducted periodic 3-D model walkthroughs of the project. The BIM team supported the management efforts for the Project by documenting decisions, changes, and the tracking data.

Results

BIM identified over 120 design errors and omissions that otherwise would have affected construction. Through the use of BIM we reduced the number of change orders to a minimum and supported the PM team in making strategic decisions before the commencement of construction.

The application of BIM technology helped the project avoid a 1 month delay and achieve a cost avoidance of ~\$80K USD or 8% of the construction cost. The project finished on record time thanks to the pre-construction BIM visualization of items that would have become obstacles in achieving the project’s goals.

For more information, please contact:

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- **MAGNITUDE**
15,000 SQFT
\$1M USD
- **COST AVOIDANCE**
\$80K USD/ 8% of the construction cost
- **Project Delivery**
6 weeks
- **BIM Management Services**
Sr. Project Manager: Damian Pizá, CCM
Sr. BIM Specialist: Ruben Nava, BIM Certified
- **CLIENT FEEDBACK (TBD)**

