

The Power of BIM in Construction



The Revit Building Information Modeling platform represents a change in process for construction professionals. The concept is to enable the contractor to construct the building digitally before construction begins. This improves coordination minimizing potential problems during construction.

This document outlines the potential of Revit for construction and how you can best take advantage of this potential.

Summit BIM Consultants provides a full range of services to enable your construction team to best implement and utilize BIM with Revit.



3. INTERFERENCE CHECKING/CLASH DETECTION

By running interference checks before site work begins, RFI's can be reduced significantly.

4. IMPROVE THE RFI PROCESS

The contractor can see issues digitally and communicate with the design team through the model thus minimizing costly on-site delays.

5. QUANTITIES

BIM allows for easier estimating and quantity takeoff. Using BIM in conjunction with Autodesk Quantity Takeoff software can minimize time-consuming tasks on the estimating side, allowing participants to foresee what the ramifications of changes will be on the final budget.

6. SITE LOGISTICS AND SCHEDULING

Complex projects can be plagued by large numbers of participants in the process. The visualization aspect of BIM can be used to plan site logistics for sub-trades and to schedule trades more efficiently.

How Can BIM Benefit the Construction Team?

1. TIME TO MARKET

BIM enables timely delivery of projects by enabling a more coordinated process resulting in smoother delivery of the building.

2. CONSTRUCTABILITY

By building a digital model, the team can visualize the building before going to the field, pinpointing complex areas before costly problems arise during construction resulting in cost savings and greater efficiencies.

BIM Throughout a Building's Lifecycle

Only a well-managed BIM process will support your specific needs as well as those of all stakeholders. The team needs to understand at the beginning what the Contractor's requirements are, to ensure that 'the BIM' is structured to interact with those needs in a timely manner.

Getting the Most out of BIM

Summit BIM can oversee this process to ensure that you, as the contractor, gets the most value possible out of the BIM process. Please read the rest of this document to discover how we can become involved to make sure that the utilization of BIM produces the most rewards possible for your organization.

Execution

Experience has shown that to successfully implement BIM on a project, the project team must undertake detailed and comprehensive planning. This plan, typically called the BIM Project Execution Plan, needs to be developed to ensure that all parties are fully aware of the opportunities and responsibilities associated with the incorporation of BIM into the project workflow. The BIM Project Execution Plan defines the agreed uses of BIM on the project (e.g. constructability analysis, cost estimating, and clash coordination), along with a detailed design of the process for executing BIM throughout the project lifecycle. Once the plan is agreed, the team can monitor their progress against it.

Scope of the BIM Consultant, from a Contractor's perspective:

- Facilitate the extraction of data for quantity take-off purposes
- Help to determine the high value BIM uses on the project
- Work with Contractor and Sub-trades to design a BIM execution process which will define the BIM deliverables, the format of information exchanges, who needs to model what, to what level of detail, by when and for whom
- Provide modeling and software services & support to all parties, if required
- Run clash coordination meetings, utilizing Navisworks, with Consultants, Contractor & Sub-trades to resolve issues while they are digital

- Work with the Contractor to provide 4D visual time-lining utilizing Navisworks and the project model to maximize the sequencing, clarity and efficiency of the construction schedule
- Work with Contractor and Sub-trades, using Navisworks, to optimize site layout and determine opportunities for prefabrication and on-time delivery
- Provide support on-site & during meetings to manage the model
- Help to develop the infrastructure in the form of contracts, communication procedures, technology and quality control to support the implementation of the project design
- Provide software support, training and enabling of add-on analytical software solutions (e.g. QTO, Navisworks, Ecotect, Green Building, IES)
- Audit models to ensure standards and integrity are maintained so that the BIM can be utilized by the Owners' Facilities Management Team.

Why Summit BIM Consultants?

In order to make sure that you get the most out of the BIM process, you will need someone, internally or externally to guide you. We have a dedicated team of experts with a thorough in-depth understanding of the entire AEC Industry to help guide the process and support the software solutions preferred by your team.

As members of the construction team on a project, you want to deliver an excellent project on time and on budget. Building Information Modeling can help your team do this. By effectively becoming part of your team, Summit BIM Consulting will enable you to optimize the potential of BIM on your project.