

SMARTBIM

WHAT IS BIM?

WHAT IS BUILDING INFORMATION MODELING?

Building Information Modeling (BIM) is based upon modeling a building project in an integrated 3D tool to a high level of detail and accuracy. This concept has changed the way industry professionals worldwide think about how technology can be applied to building design, construction, and management.

WHAT IS A BIM PROJECT?

The BIM project is composed of 3D objects (doors, windows, etc.) and 3D assemblies (walls, floors, etc.). No longer does the designer draw plans, elevations and sections. In a BIM project or model, the designer models the project in 3D and the plans, elevations and sections are simply different views of the model that are automatically generated. A change to any part or view of the model results in all of the views and schedules being automatically updated.

WHAT ARE BIM OBJECTS AND ASSEMBLIES?

BIM is object/assembly-oriented software. This means that building elements are not drawn into the model; they are placed as an object or assembly into the model. The BIM objects and assemblies are both graphical representations of products (doors, windows, lighting fixtures) and containers for data (specific product information that is attached or linked). Because the objects and assemblies have data associated with them, the BIM model can automatically generate schedules and even the specifications from the information contained in the objects and assemblies.

WHO IS AFFECTED BY BIM?

Building Product Manufacturers (BPMs)

- BPMs need to provide BIM objects and assemblies to the designers that are accurate graphically and data rich
- This puts their product directly into the design
- Selection tools allow the designers to quickly and accurately determine the best products for the application. If a product is not represented as a BIM object or assembly, it may be overlooked or substituted

Architects, Engineers, Contractors

- Errors and omissions are drastically reduced. The BIM project virtually eliminates conflicts, errors and omissions resulting in less construction problems and lower construction costs
- Data for analysis programs is accurately generated from the BIM project
- IPD (Integrated Project Delivery) where contractors, designers, owners and BPM's work on the BIM project together are resulting in dramatically lower construction costs
- Automated quantity take off and costing is less expensive and more accurate than traditional hand counting and costing

Owners

- BIM projects allow the owner to better visualize and virtually move through their projects during the design phase when changes are least expensive
- BIM results in better designed and constructed projects at lower prices
- BIM projects provide the drawings and data required for facilities management, maintenance, operations and asset management

