

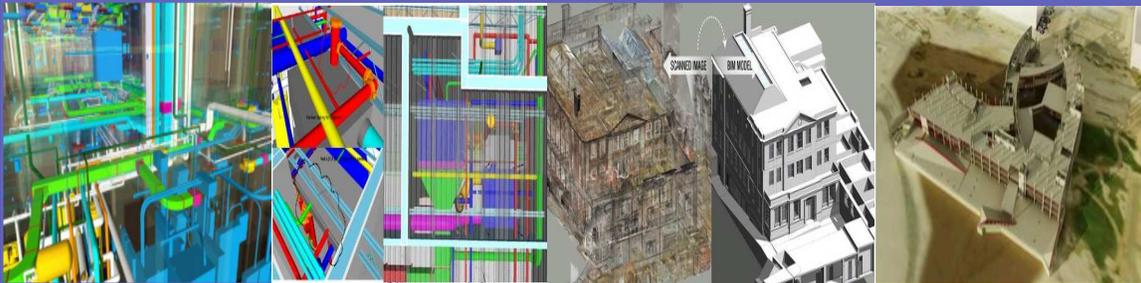
BIM/CAD Services For AEC Industry

BIM Services

BIM CO-ORDINATION
SHOP DRAWING
POINT CLOUD
4D, 5D,6D BIM SERVICES

CAD Services

AS BUILT DRAWING
DIGITAL CONVERSION



D&D team is passionate to BIM services and committed to following goals for the customers:

- Maximize client value by adopting the latest technologies and innovations.
- Improve project efficiency by our best internationally tested workflow to provide high quality services.
- Save time by using team effort with skilled team members.
- Reduce client costs up to 25 % to 40% by harnessing a highly experienced work force.

INDEX

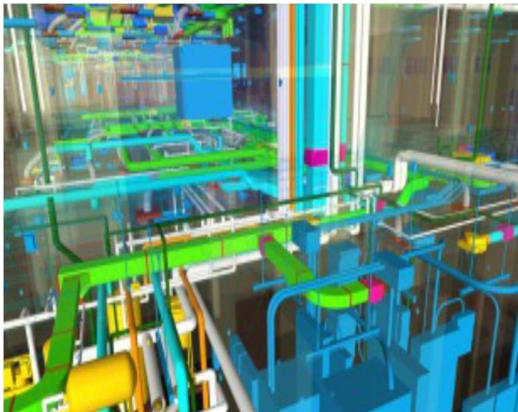
- Introduction
- Services we do
- Process we follow
- Quality control
- Why DESIGN AND DRAWING SOLUTION
- Project Snaps
- Contact us

Introduction

Revolutionizing the AEC Industry

Proper planning and coordination are the keys to the successful Execution of projects in any industry. Advancements in 3D Technology and the advent of Building Information Modeling (BIM) have revolutionized the Architectural, Engineering and Construction (AEC) industry.

Building Information Modeling (BIM) involves the creation and use of a coordinated 3D model by linking it to intelligent databases for a building project. This technology enables seamless collaboration between Architects, Engineers, Contractors and, sub-Contractors enabling quick decision making, accurate construction documents, and better construction and facilities management. Stakeholders can now create and examine virtual representations of the architecture model and other utilities of their projects.



Benefits of BIM - Encapsulated



COORDINATION: Streamlining communication with 3D visualization among all stakeholders to enable quick decisions during design and pre-construction phase.

EFFICIENCY: Eliminating RFIs (requests for information), work stoppages, and reworks by checking the accuracy and completeness of drawings before commencement of constructions on-site/off-site.

QUALITY: Improving quality by producing accurate Shop Drawings directly from the 3D BIM model which could also be used for pre-fabrication.

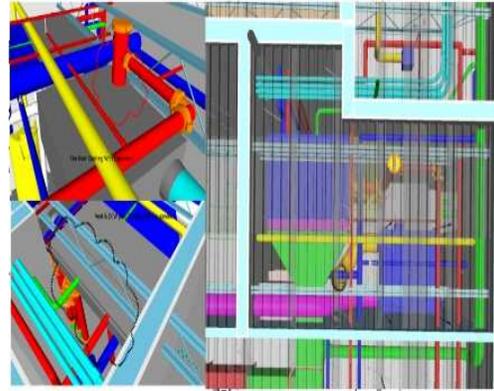
COST SAVINGS: Preconstruction and prefabrication reviews mean better use of manpower, improved quality of constructions, and reduced rework and wastage, all of which translate into lower costs.

PROJECT MANAGEMENT: Detailed Material BOQ and Shop Drawings with 3D visualization provide an enhanced and clear perspective toward “The Big Picture” and aid in the review, scheduling, and monitoring of each project

Services We do

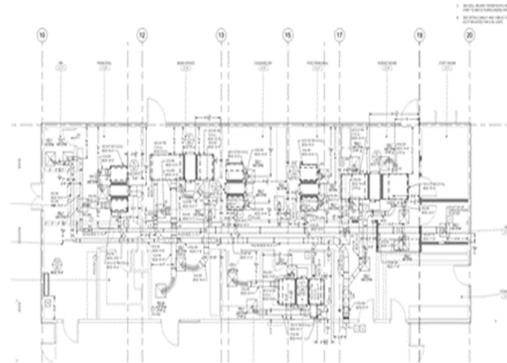
BIM Co-ordination

We generate a coordinated BIM model after resolving the clashes among all the trades (Architecture, Structure, Concrete, Mechanical, Electrical, Plumbing, Fire Protection, etc.). Clashes are resolved through WebEx meetings / sharing 3D clash snapshot. with multiple options like re-routing utilities, changing elevation and re-sizing. Value Engineering is also offered to improve system efficiency, reduce costs and easier construction and maintenance.



Shop Drawing

Shop drawings are created based on project standards and are useful to contractors, fabricators, suppliers and manufacturers during construction. BIM is highly useful for construction of any irregular or complex structures. We generate accurate sleeves, penetration and hanger locations from the BIM model before start of construction. These drawings are generated directly from coordinated BIM models and are detailed enough for workshop fabrication and/or on-site construction. Advanced BIM tools help in revisions management as well.



Point Cloud Services

DESIGN AND DRAWING SOLUTION offer scan point cloud BIM services to create 3D model from scan document. It helps for creation, of visualization, animation, rendering and quality inspection. This services is required by most of AEC professionals like architect and structural to have the co-ordination.

Supporting Software Applications (Revit & Autodesk Recap 360 Pro) for Point Cloud help to visualize and navigate the point cloud files properly. Moreover, by using these software platforms, files can be compressed and dimensions can be easily obtained for BIM model.



Laser scan is implemented on elements like exterior & interior walls, doors, windows, ceiling, curtain walls, floor, roof, major furniture & fixtures, structural column, wall, beam & slab, bracing, trusses, floor & roof framing, duct, pipes, cable tray, light fixture, electrical outlet and other equipment.

expertise team explore the detailed information about an element in its physical space and allow precise and accurate modeling for coordination and quantity take-off

4D BIM Services

Project construction schedule/sequencing is linked to the BIM model. A real time simulation of the construction sequence is shown in Navisworks Time Line or as an animation video format. During the entire duration of the project, the Planned vs. Actual construction schedule is compared and presented. When the project plan is established in visual simulation, users can visually associate model objects and scheduled tasks. Users can click on a building object in the 4D visual environment and can view its associated task highlighted in the Gantt chart or vice versa



4D BIM adds an extra dimension of information to a project information model in the form of scheduling data. This data is added to components, which will build in detail

as the project progresses. This information can be used to obtain accurate Our expertise team explore the detailed information about an element in its physical space and allow precise and accurate modeling for coordination and quantity take-off

5D BIM SERVICES

Our BIM managers add a 5th dimension to 3D as-built models and 4D BIM scheduling plans of the building designs and help contractors as well as engineers plan the budgets. Our 5D BIM services include calculating quantity takeoffs and material estimation by accounting for every building product used and its costs for purchase, fabrication, assembly, and installation.

DESIGN AND DRAWING SOLUTION have the best BIM teams that evaluate the project schedules and project material quantities with the help of BIM models .

As a full-spectrum BIM services provider, our 5D BIM cost estimation services extracts BOMs, generates RFIs, construction documentation for tenders and bids to help general contractors win the bids efficiently. Our

Sr. No	Description	Unit	Total
1	CI PIPING		
	50mm	rmt	2
	70mm	rmt	158
	100mm	rmt	10604
	125mm	rmt	293
	150mm	rmt	1754
	200mm	rmt	732
	250mm	rmt	149
	300mm	rmt	2113
2	CI Pipe Fitting		
	Cl_Trap		
	100mm	nos	94
	150mm	nos	7
3	FloorGully Round		
	75mm	nos	328
	100mm	nos	537
	150mm	nos	2
4	Floor Dran		
	500mm	nos	112
5	FloorGully Square		

6D BIM SERVICES

6D building information modeling helps to analyze the energy consumption of a building and come out with energy estimates at initial design stages. Accounting for various life stages of a structure, 6D BIM ensures accurate prediction of energy consumption requirements.

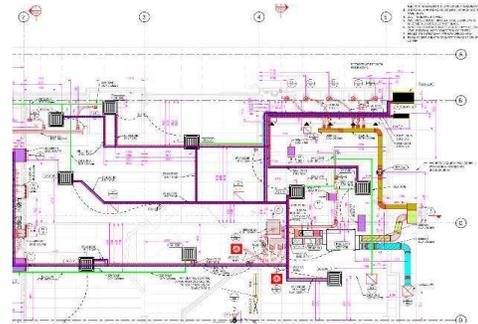
6D BIM technology takes the industry a step beyond the conventional approach that just focuses on the upfront costs associated with a project. This approach helps in getting an idea of the entire cost of an asset and how the money should be spent on achieving sustainability and cost-efficiency.

This essentially involves information about a component's manufacturer, installation date, and maintenance schedule, configuration details for best performance, energy requirement and decommissioning information

CAD Services

As built Drawing

We produce as built drawing based on the actual mark-ups from site team /project team
We have our trained mechanical team to perform these drawings for project turnover process.



Digital conversion

We specialize in conversion of legacy paper drawings into accurate CAD drawings as per client's CAD Standards or as per the prevalent International standard. We are well equipped to efficiently handle almost all CAD platforms.

We specialize in conversion of all types of paper drawings, like –

Legacy Drawing Conversions

As Built Drawings

Fire Evacuation Maps

Floor Plan Layouts

Construction Drawing Set

Piping & Instrumentation Drawings

Site Plans

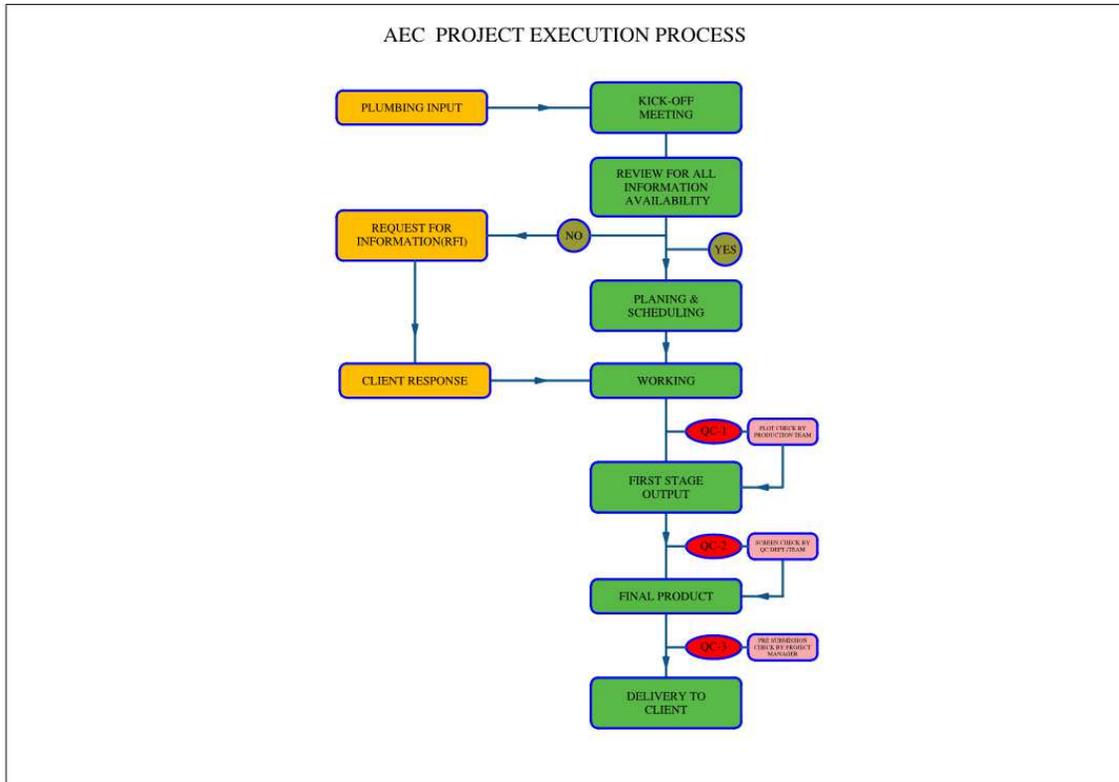
Survey Plans

Towers & Antenna Dishes

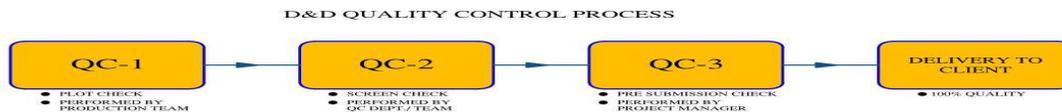
Weather Shelter Map

Process we follow

We have a standard BIM Execution Process, which has been prepared, based on our experience & expertise, which we follow for all the AEC projects, unless the project has other requirements. Below is a simple flow chart, which explains the process in detail



Quality control



The main objective of the quality control (QC) process is to detect errors and rectify it. Ensuring quality is a group effort and our dedicated team is led by a highly qualified and experienced Manager in MEP Coordination and Quality Control. The entire QC process is handled in three phases.

Quality Check– 1

The model check is done comparing it with the original contract documents through Team Member.

Elevation, Routing, Fittings, etc. Construction point of view,

Quality Check– 2

Team performs a more detailed comparison with specific checklist and main objective check the following Clashes (Old/New),

Quality Check – 3

The Project Manager conducts the pre-shipment check before sending them to the client.

Why Design and Drawing Solution

Communication

Our team is available to clients through a number of communication channels including:

3. **Email** for reports and interactions.
2. **Telephonic/WhatsApp** communication
4. **ZOOM Meeting** for online meetings, presentations and conversations.
5. **Dropbox** storage for FTP process.

Delivery in Time

Our skilled team of professionals can provide quick turnarounds on complex projects. D & D has successfully completed several large-scale commercial projects across multiple verticals including. Health Care, Airports, University Centers, Data Centers, Retail Centers, Convention Centers, Commercial, Industrial and Residential Projects

Skilled and Efficient Team Members

All team members are specialize in the latest BIM software's Revit Software Suite (Revit, Revit MEP, Revit Architecture and Revit Structure), NavisWorks, Autodesk Fabrication ,AutoCAD MEP .

Knowledge in US and World Standard BIM execution process.

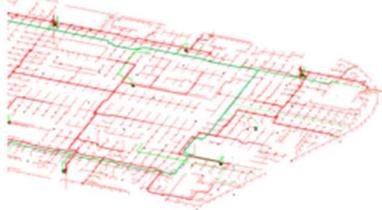
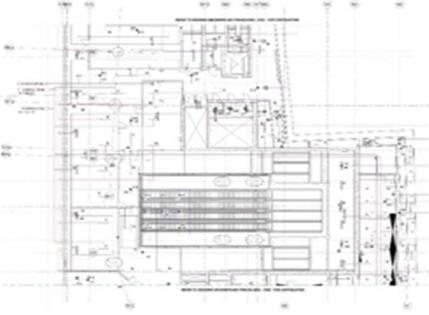
Our top management is having more than 10 years of experience in BIM execution US process and standards which leads the timely completion of complex projects.

Project Cost Optimization

D&D delivered a high quality product within a short timeline and provided coordination support. This allowed for a faster and more cost effective project completion.

Project Snaps

We have already delivered more than 100 BIM/CAD projects throughout the world basically in countries like USA , UK ,Australia and New Zealand & India. Below are latest project details of BIM/CAD services for MEP pre-construction process .

	
<p>DIAL Delhi, India</p>	<p>HIAL Hydrabad, India</p>
 <p style="text-align: center;">Sydney Metro Sydney, Australia</p>	

Contact Us

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