

Construction BIM Services For MECHANICAL & PLUMBING SYSTEM

Value Engineering



3D Modelling
LOD 400



BIM Co-ordination



Penetration ,
Sleeve Drawing



Shop Drawing



Spool ,Hanger & Insert Drawing



As Built Model
&
Drawing (LOD – 500)



CAD Shop Drawing &
As built Drawing



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About us

DESIGN AND DRAWING SOLUTION offers construction documents for Mechanical & Plumbing systems. Our Mechanical & Plumbing team is having good knowledge of USA, Canada MEP engineering designs & construction document process & codes and guidelines.

| Mechanical – ASHRAE, SMACNA

| Plumbing – IPC, ASPE

We are familiar with USA, Canada standard practice and requirement of Mechanical & Plumbing construction document for all type of buildings, i.e. from Interior Fit outs, single family apartment, high rise apartment, commercial office buildings, hotels, restaurant, hospitals, School, College including infrastructure construction like Airport, metro stations etc.

We are providing our services worldwide and specially in USA, Canada with M & P Contractors, general contractors .

Using our BIM and 2D CAD outsourcing services, our clients have numerous advantages i.e. including time and cost savings which are realized during the design phase and more importantly, during the installation and build stages of construction projects. We are certified Autodesk users and started in Mumbai, India from early 2018



6+
Years' Experience

300+
Completed Projects

150+
Customer world wide

Building Types includes

- Interior Fit out for Commercial / Residential
- Bungalows /Residential Apartments
- High Rise Residential building
- Commercial IT / Banks
- Hotels
- Institutional Buildings like school, Libraries, Auditoriums
- Hospital
- Entertainment Zones, Malls and Multiplexe
- Data Centre
- Industrial ware house

Construction BIM Services

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- As Built Model & Drawing (LOD 500)

CAD Services

- Shop Drawing
- As Built

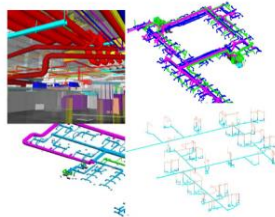
Value Engineering



We do the value engineering for any project to produce construction document with internal engineering Team. We analyze the construction document with project specification and cross check all the Mechanical services drawing data like pipe size, duct size, cable & conduit size and all the routine which enables the Optimize the design with the cost is called a value engineering.

- Proposed re-route with shortest distance for piping and ducting to reduce the material cost.
- Reduced the no of fitting and bends in the co-ordination.
- Optimization the design through constructability review.
- Reduce the duct size if require as per the specification and code.

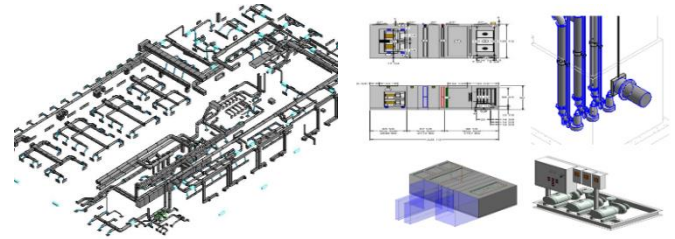
3D Modelling LOD 400



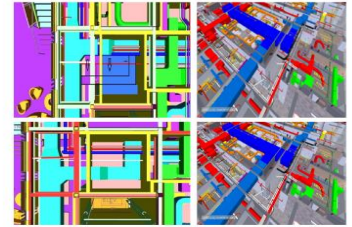
We are specialize in the virtual construction of 3D models @ LOD 400 of Mechanical systems i.e. ducting, piping with fitting including all valves & accessories with all associated equipment's and fixtures. We produce 3D Models based on contract drawings, technical specifications, and manufacturer details to client standards.

Equipment Modeling

From the manufacturer's 2D drawings and inline with Mechanical schedules, we create a 3D model of all the M&P equipment such as PUMPS, AHU, RTU, CU, FCU, VAV, pumps, chiller fans, DG, panels, etc.



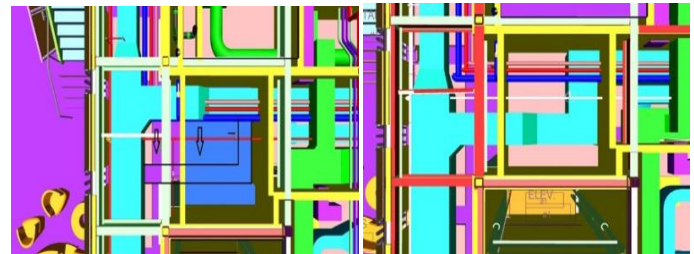
BIM Co-ordination



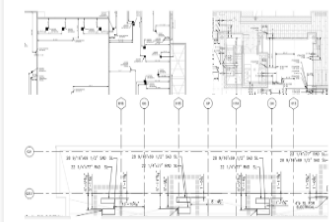
We generate a coordinated BIM model after resolving the clashes among all disciplines – Architectural, Structural, Concrete & Mechanical.

Clashes are resolved through video conference discussion regarding the 3D clash snapshot and multiple fix options such as rerouting utilities, changing elevations, and resizing.

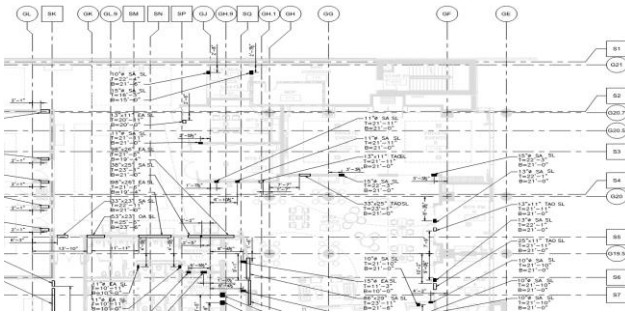
Value engineering is also utilized to improve system efficiency, reduce costs, and provide for more efficient construction and maintenance.



Penetration , Sleeve Drawing

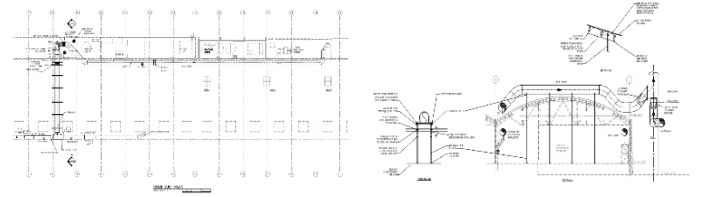


Penetration, Sleeve Drawings are required before a contractor can start pouring concrete on the site. Penetration Drawings are created from the coordinated BIM model after alignment with the architectural grids. Our experienced team keeps the necessary clearances for the penetration as per the contract documents and Specification.



As Built Model & Drawing (LOD – 500)

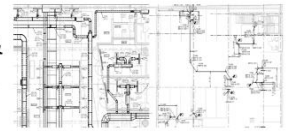
Based on the site mark-ups, we create as built 3D model & Drawing and prepare the as built set for project hand over and record.



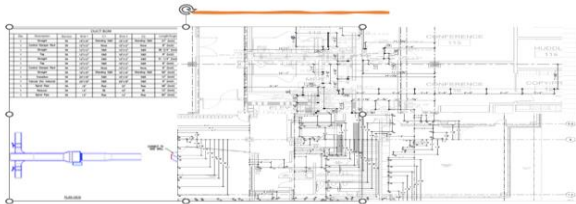
Shop Drawing

We produce Shop drawing after Co-ordination with utilizing coordinated BIM model or co-ordinated CAD drawings which are detailed enough for workshop fabrication and incorporated with sleeves and penetrations. We provide the dimensions, BOD, COP & BOP, annotations inline with client standard & requirement as per standard practice.

CAD Shop Drawing & As built Drawing



Spool ,Hanger & Insert Drawing



D & D produce the Spool drawings, Hanger & insert drawing with proper co-ordination of model and placing the hangers in line with specification. Hanger drawings shows the actual location of hangers with proper dimension from wall or grid. Insert are position of hangers insert points and D & D produce the proper insert drawing coordinating with actual hanger location in the model.

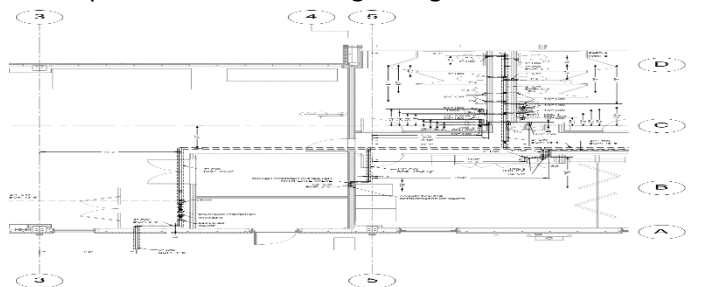
Shop Drawing:- Our cad team produce the shop drawing from CAD design drawing to incorporate the details of all fitting, accessories, details including as follows. Drawings shall be indicative of actual equipment purchased and shall show all offsets, transitions, fittings, dampers, valves, hanger locations.

Co-ordination:- Co-ordination with architectural, structural along with other services to fix the **BOP, BOD** with proper dimension and annotation.

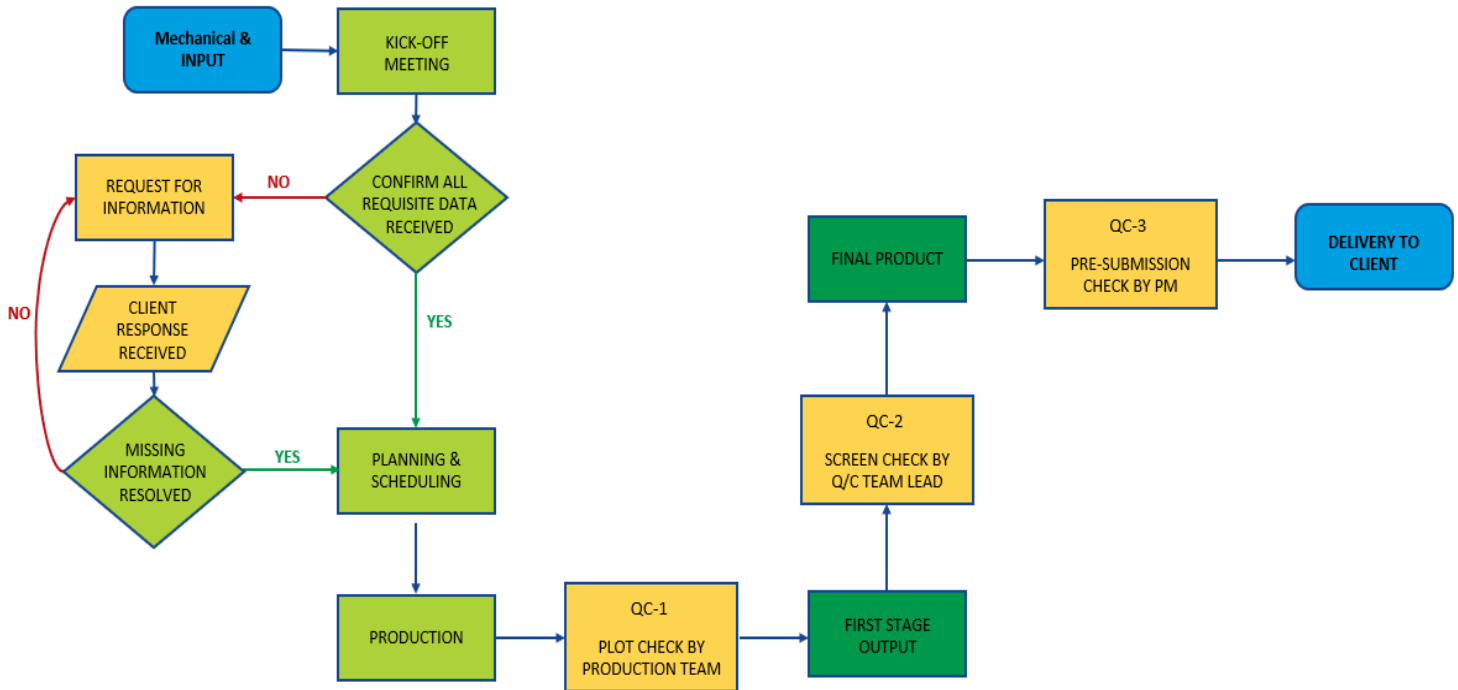
Dimension and Annotation:- Providing proper dimensions and annotation inline with client standard or as per general standard shop drawing .

As built Drawing:- Our cad team draft the CAD drawing from redline mar-ups and Our As-built/Redline Markup Service is ideal for creating your as-builts drawings or design modifications in AutoCAD.

Markups: RED ink for drawing changes



Execution Process



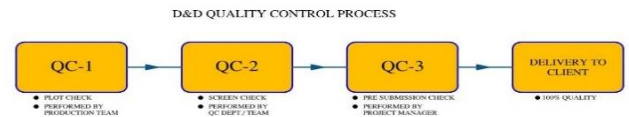
We use to implement our standard BIM/CAD execution process to deliver each and every project .

Stage 1: - We do kickoff meeting with our client for better understanding of the project to start.

Stage2: - We do project review, planning and prepare project specification checklist and delivery schedule and share with client.

Stage3: - We allocate our dedicated Team lead with team member inline with the services to start the production activities as per delivery schedule.

Final Stage: - We follow QC process in the execution process before delivered to the client. With the above process, we deliver the high-quality product to client.



Quality Check – 1

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

Quality Check – 2

Team performs a more detailed comparison with specific checklist and project checklist the deliverables and main objective check the following Clashes (Old/New), Elevation, Routing, Fittings, etc. Construction point of view.

Quality Check – 3

The Project manager conducts the pre- shipment check before sending them to client. With the above process, we deliver the high-quality product to client.

Core Team

Irshad Ali Shaikh **CEO – Co-Founder**

Mr. Irshad Ali is the co-owner & founder of DESIGN AND DRAWING SOLUTION. He is having more than 15 years of experience in Building services in construction Industry throughout AEC project execution process from Pre-construction, construction processes like MEP engineering consulting, Designing, installation and handover process of the project.

He has completed BE in Mechanical Engineering from Pune University with Post Graduation in Project Management (PGPPM) from NICMAR Pune, India. In his small journey, he has successfully delivered the more than hundred BIM/CAD project for his satisfied client with the best quality and unique team effort.

He has experienced in all kinds of projects i.e., starting from Residential township, Commercial IT buildings and parks, Malls, High rise building, Hotel, Hospital & Institutional building. Including building Infrastructure projects like metro, airports, globally i.e. USA, Australia, New Zealand & India.

Karishma Bibi **Sales Head**

She is the co-owner of DESIGN AND DRAWING SOLUTION and well experienced in offshore sales development initiatives. She is having a good knowledge of result-oriented sales development processes and customer retention. She is leading the complete sales team for B2B sales within the company and managing and monitoring the effectiveness of the entire sales cycle. She has implemented her interior design expertise to improve the technical expertise for client communication for offshore sales which helps her build a long-term relationship with new and existing clientele.

Rupam Mondal **Production Manager**

He holds a Mechanical Engineering diploma from WBSCTE, India and having more than 7 years' experience in Building construction Industry for MEP engineering, Drafting , of 3D , 4D , 5D & 6D BIM service .


He is having expertise in MEP engineering calculation , with all Autodesk BIM/CAD tools like Revit , Fabrication, AutoCAD MEP ,Navis works and AutoCAD and has complete knowledge of engineering and drafting services for all stages (Pre/post) of construction process .

He is working in DESIGNING AND DRAWING SOLUTION since from starting period of the company . With a short period of time , He has gained the managing process of the company , client communication, project management process and assisting with innovative (R & D) solution of new process , tools for new requirement of clients.

Project References

Mechanical & Plumbing					
					
Hilton	Bakers college	MCC SQ	Dick's House of Sport		
Nashville	Royal Oak	Warren	Tulsa		
Tennessee	Michigan	Michigan	Oklahoma		
Hotel	College	Plant room	Wearhouse		
					
500 E Main Street	MARTINSBURG VA MEDICAL CENTER	Munzing	Concourse D Expansion		
Durham	Martinsburg	Clover	Pelham		
North Carolina	West Virginia	South Carolina	Alabama		
Apartment building	Healthcare Facility	Warehouse	Airport		

Contact US

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