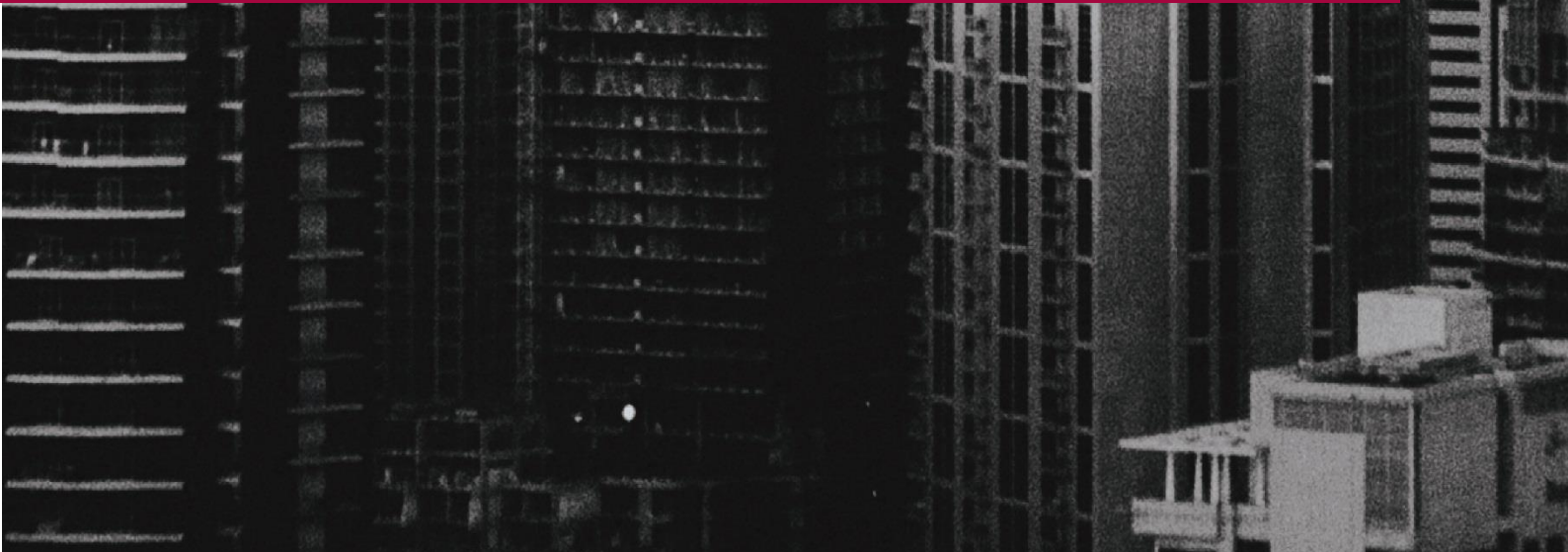
EGY.HOUSE FOR ENGINEERING CONSULTANCY AND PROJECT MANAGEMENT -DAR MASR-

PROJECT PORTFOLIO

DAR MASR

Villa 202, Vodafone square,
fifth district
6th October City /CAIRO,
Postcode: 12573

EGY. HOUSE FOR ENGINEERING
CONSULTANCY AND PROJECT MANAGEMENT
-DAR MASR-



About us

Overview

With an in-house team of highly skilled, experienced, and dedicated BIM specialists, Dar Masr is one of the best BIM companies that specializes in providing 3D BIM modelling services ,Dar Masr BIM clash detection services will provide data for 3D construction models task specification, cost estimation, energy load calculations, and evaluations of heating and cooling systems.
Mission

Mission

Dar Masr is an Engineering Consultant Company that targets engineering project management and MEP design and BIM services with the target of an integrated, sustainable and smart future.

Vision

Dar Masr aspires to be in a leading global market position through an ambitious strategy by planning, designing, optimizing any building .

Board Members

Prof. Waleed El Qammash

- Ex. Vice Dean for post graduate studies at Suez Canal University.
- Engineering Consultant at the Egyptian Engineering Syndicate.
- Associate profession at the James Cook University, Australia.
- Associate professor at The British University in Cairo.

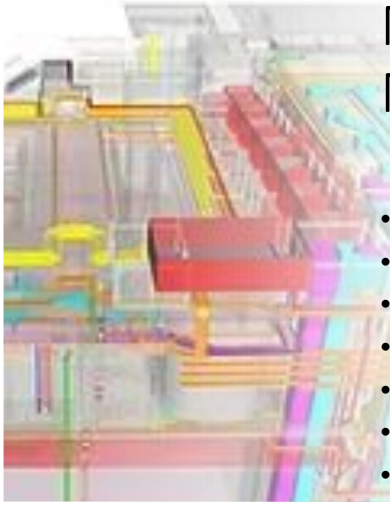
Prof. Tamer Nabil Mahmoud

- Dean of Egyptian Chinese College for Applied Technology and Associate Professor of Mechanical Engineering, Suez Canal University.
- Vice-president of Ismailia Engineering Syndicate (by elections), 2013 till now
- Scientific consultant of Suez Canal University, 2016 till now.

Eng. Khaled El Sayed Ghareeb

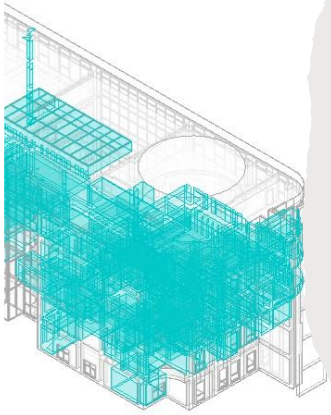
- Mechanical Engineer with more than 30+ years of engineering consultancy experience for many the Suez Canal Authority projects, Suez Canal University Projects and MEP BIM projects in Saudi Arabia.

Our Services



MEP BIM MODELING

- MEP BIM Modeling
- MEP BIM Coordination
- Clash Detection.
- MEP Shop Drawing.
- MEP CAD Drafting.
- Revit Family Creation.
- As Built Modeling.



Mechanical

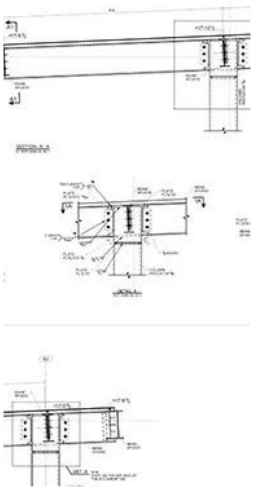
- Mechanical Drafting Services.
- Engineering Analysis Services.
- Cooling Load Calculation.
- Fire Fighting Systems Design.
- Electrical and Light Current Systems Design.
- Plumbing Systems Design
- Energy Analysis Simulation.

BIM

- BIM Modeling.
- BIM Coordination.
- BIM Clash Detection.
- 4D BIM Services.
- Quantity Takeoff.
- COBie.
- 6D BIM Services.
- Facility Management

Architectural

- **Architectural BIM Services.**
- **Architectural CAD Drafting.**
- **Construction Documentation**
- **3D Rendering Services.**
- **3D Floor Plan.**
- **Revit Family Creation.**
- **CAD Services.**
- **As Built Documentation.**

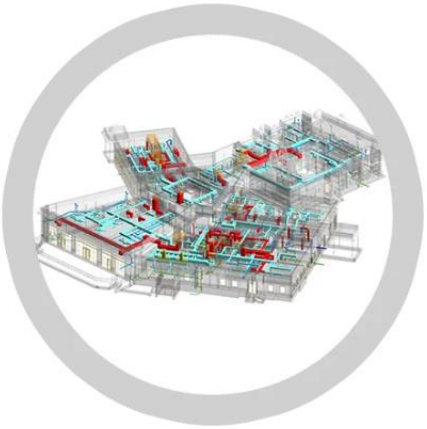


Structural

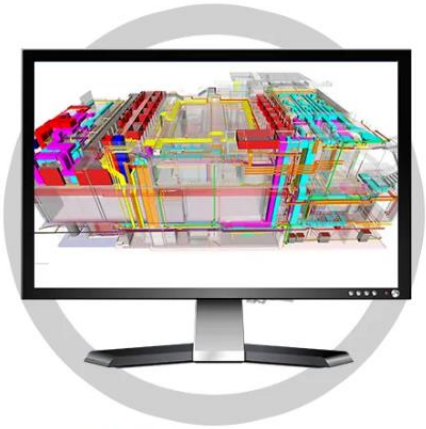
- **Structural CAD Drafting.**
- **Structural Shop Drawings.**
- **Structural B IM Modeling.**
- **As Built Drawings.**

MEP BIM Modelling

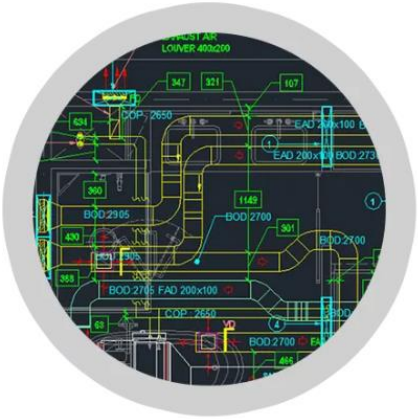
- In accordance with the BIM execution plan, Dar Masr specialises in producing comprehensive MEP BIM models of the necessary LOD and offering end-to-end MEP BIM services.
- We have assisted some of the most well-known construction businesses in the world in streamlining their preconstruction process.
- The model complies with all relevant building codes related to plumbing, electrical, and HVAC systems.
- Furthermore, MEP Shop Drawings that are taken from our BIM models are accurate, detailed, and work well when installing MEP components on location. They enhance the overall effectiveness and calibre of the event!
- Additionally, we offer premium ME BIM Coordination and Clash Detection Services that may be utilised to identify and address any issues throughout the TSEI decision phase. It's our effective



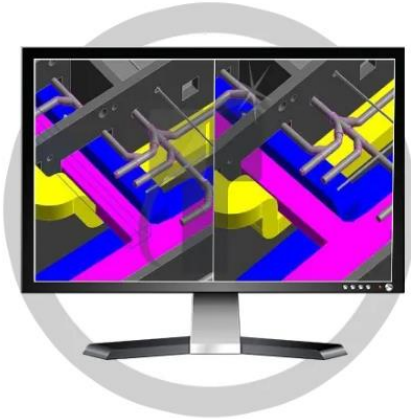
MEP BIM Modeling Services



MEP BIM Coordination Services



MEP Shop Drawing Services

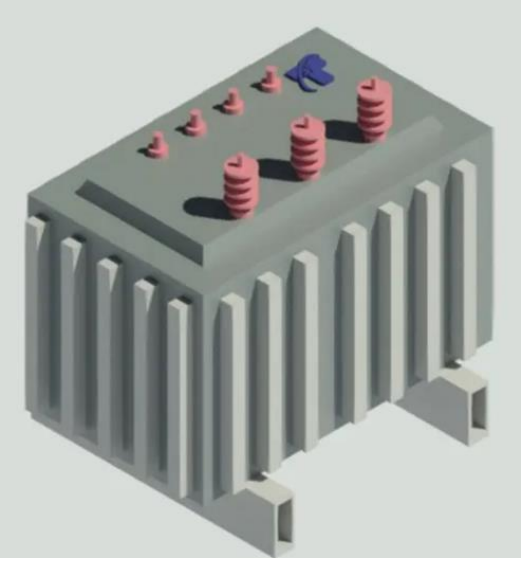


MEP Clash Detection Services

BIM Services

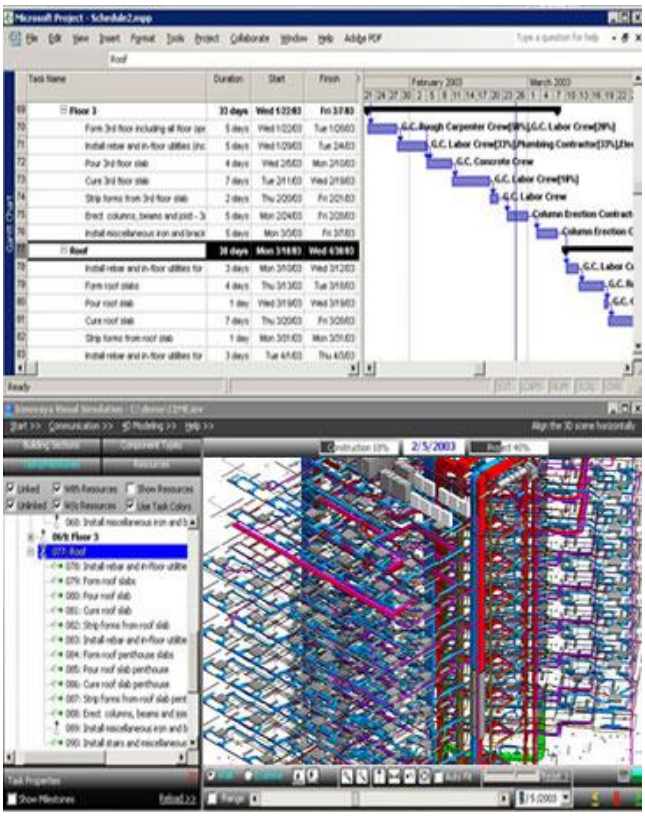
1. Family Creation

- Dar Masr is a BIM Company providing customized and ready to use BIM Object Creation Services globally.
- We work for manufacturers, product designers and BIM Companies who have an ongoing requirement of Architectural, Structural and MEP components.
- We create standardized and parametric. Revit families from 2D CAD Drawings, PDFs with accurate dimensions and specifications.
- Our extensive experience in the field of Revit Family Creation adds to our experience of handling BIM projects for more than a decade.
- Our Revit experts help us design customized and ready-to-use BIM elements that can be added into virtual design and construction models.
- With a proven track record of working with renowned constructions and design companies, we have gained a reputation of being a reliable partner for all Revit Family Services.
- We create system, in-place, and loadable Revit families for architectural, structural, mechanical (HVAC), electrical, plumbing and firefighting components that can be used directly in a BIM project or as a library.
- Our Revit specialists create custom parametric or generic families for architects, engineers, builders, fabricators, product manufacturers, etc. that aids in designing, planning and cost estimation for projects.



2. 4D: Construction Scheduling Services

- Dar Masr addresses the requirements of architects, engineers, contractors, and builders to proficiently plan and gain control across the various activities of the construction process by creating construction scheduling with the help of 4D BIM Services.
- We create precise construction simulation and phasing videos by integrating project management tools like Primavera with BIM tools such as Autodesk Revit and Navisworks.
- This enables in optimizing the entire supply chain and logistics and allocating optimal resource allocation while mitigating risks.
- We produce precise sequencing models and phasing charts that aids in tracking the resources and communicates the progress of the activity to the site engineers and consultants.
- We work in close coordination with our clients and help them achieve their BIM implementation goals.
- Our Construction scheduling services empower general contractors and construction companies to adopt lean construction schedule in order to reduce waste.



4D BIM Simulation Video

4D BIM simulation allows architects and engineers to visualize a construction project's scheduling and detect potential problems before construction. Construction managers can improve project planning, coordination, and team communication with it.

Project Timeline Simulation

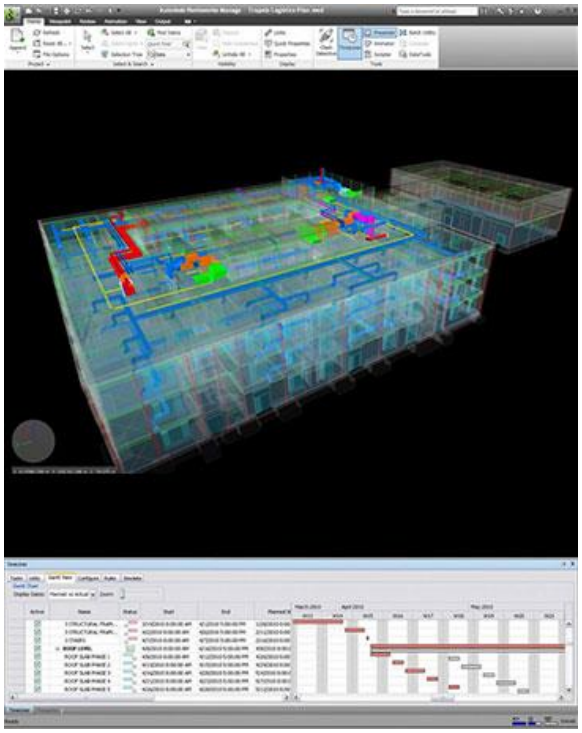
Project managers can visualize project schedules, track progress, and identify potential delays in a clear and concise manner. It helps project managers to stay on top of deadlines, allocate resources, and projects completion and delivery on time.

Equipment Routing Animation

It enables logistics and supply chain managers to visualize the transportation of construction equipment and materials to the site. It helps to optimize routes, reduce transportation costs, and improve delivery times.

3. 5D: Cost Estimation and Quantity Take-off

- When working with a Revit BIM Model, Dar Masr's group of highly qualified and experienced engineers and estimators excels in producing Quantity Take-offs.
- To generate a reliable cost estimate for the construction process, these intelligent 5D BIM models improve cooperation between the project teams and stakeholders.
- By analysing quantities and calculating prices using 5D BIM Services, we work with architects, engineers, big construction companies, and contractors to help them win projects and tenders.
- They can now display a list of material amounts in addition to a virtual model and see how it affects building expenses.
- The connection of the fifth dimension, or cost, to the virtual model is known as 5D BIM. The automatically generated material amounts are used to determine the cost estimate.



Accurate Quantity Take Offs

Generating precise Quantity Take Offs (QTO), Bill of Quantities (BOQs), and Bill of Materials (BOMs).

Precise Bid Estimates

Accurate cost estimates for general contractors to win bids & increase their profit.

Real-Time Cost Adjustments

When the design is altered, the construction costs & materials are updated instantly & in real time.

Value Engineering

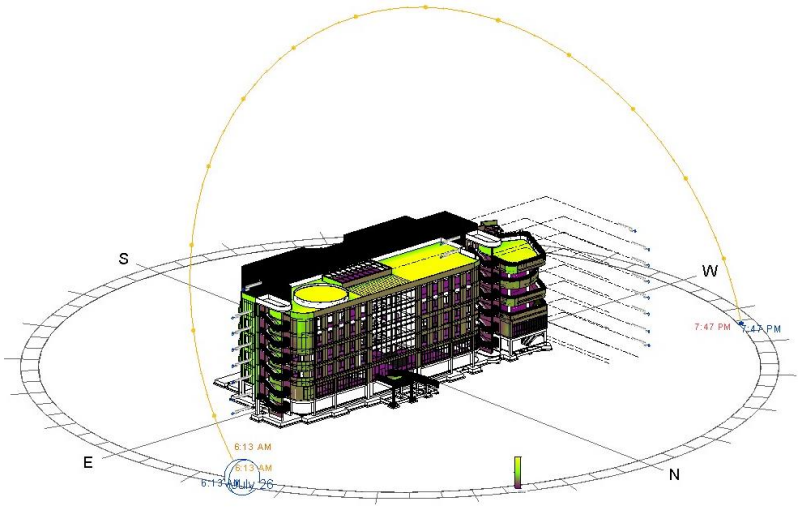
5D cost model in BIM can be used for value engineering for deciding materials and services at the lowest cost.

4. COBie Modelling Services

- A data exchange standard called Construction Operations Building Information Exchange, or COBie Services, is used in construction projects to collect data about the tools and materials that will be used during the project's lifecycle.
- During the course of 7D BIM projects, the facilities manager keeps this digital data for use in operation and maintenance.
- To put it simply, COBie is a spreadsheet that, once a building is finished, maintains digital data about its materials and equipment.
- It was created to enhance the owners-operators' constructing process at first, and it could be utilised with other spreadsheet programmes like Google Docs, Excel, etc.
- Together, construction experts can create this record, which is updated as building progresses and can be used afterwards.

5. 6D BIM Services

- Dar Masr provides intelligent and integrated BIM solutions to help contractors, owners and project stakeholders in creating sustainable buildings.
- Our team of highly qualified engineers and architects develops BIM Model that stimulates the capabilities of achieving sustainability goals for energy-efficient buildings.
- Our BIM Engineers and Architects create a virtual building model wherein the owners, stakeholders and the facility managers acquire



relevant information from the building model to get building design manageable.

- We use sustainable materials during the design process to get energy-efficient buildings that improve environmental impact on lifestyle and health of the occupants.

6. BIM Facility Management

- Our services in BIM Facility Management consist of delivering information models that can be used directly for managing and maintaining the asset by building managers and owners.
- Our BIM specialists develop data-rich virtual models of the building that facilitates the tracking and extraction of various asset-related data such as specifications, operation manuals, component status, warranty data, etc.
- This helps in pulling out the specifications of a certain part and makes the replacement relatively quicker and easier.
- Facility Management can be defined the process of utilizing BIM models for managing an asset and is gaining traction in the construction industry.
- All the parameters that are associated with the components of a building are integrated with the data-rich geometrical models. This data is utilized during the entire life-cycle of the asset.
- We have delivered Facility Management Services for commercial, residential, industrial, institutional and educational facilities.
- Customer satisfaction and project quality deliverables are the core of all our services and we constantly strive to add value to the projects by understanding our client's requirements precisely and delivering up to client's satisfaction.

Case Projects

1. 3D Revit Modelling and shop drawing of ITI Branches

Project Synopsis

1. Revit Modelling LOD 400
2. Zero Clash Shop Drawings
3. CAD to BIM

Project Objective

Dar Masr was required to develop 3D Revit Model LOD 350. Our scope included 2D zero clash shop drawings for 2D documentation sheets from the 3D model.

Project Summary

This Project is an expansion of ITI branches owned by the ministry of communications and information technology in many governments .

Disciplines

1. HVAC (VRV and DX air handling unit system)
2. Fire Fighting systems (Water based, Clean agent systems).
3. Electrical systems (Power and Lighting systems)
4. Light current systems (cctv system, sound system, ip telephone and ip data network, access control systems, matv system).
5. Plumbing systems (Water Supply and Sanitary Drainage)
6. Structural systems (Flat slab system).
7. Architectural and interior shop drawings.

Type Of Building: Educational and Business building.

Project budget: 400,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2024

Project Deliverables

1. Design review report and re-design for many disciplines and calculation sheets.
2. Architectural and structural Revit Model (.rvt file)
3. MEP Revit Model (.rvt file)
4. All The mentioned disciplines Shop Drawings (DWG/PDF format).
5. Master Format BOQ.
6. 4D simulation for project management.
7. 5D simulation for project cost control.
8. Execution supervision workflow control with all project management perspectives.

Validating authority

OMRAN for engineering consultation (DR. AHMED AWWAD).

The ministry of communication and information technology headquarters engineering administration.

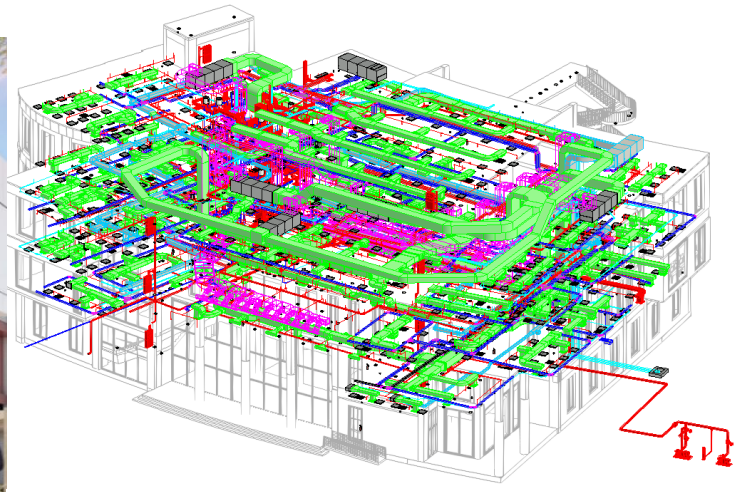
Validation cycle

The submission to validation journey starts with the submission of our shop drawings earlier than the due and then accelerating the validation for the sake of the fast track BIM implementation through technical offline and online meetings with the validation authority to discuss the approval issues and get it done as soon as possible **(The attached document shows one day validation).**

Challenges

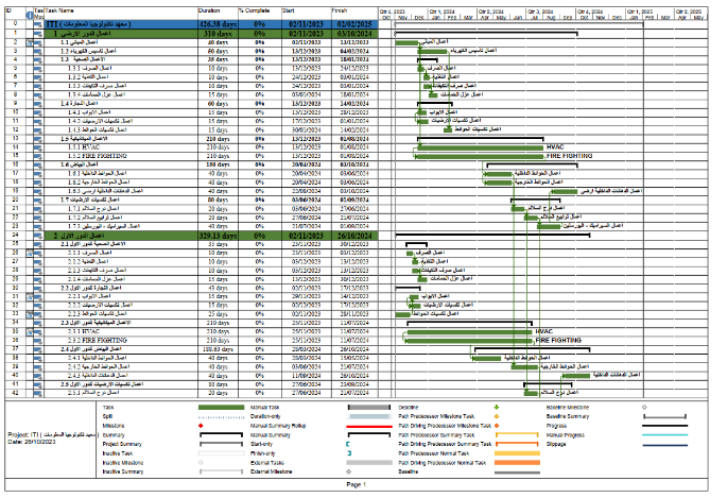
This project has a previously designed structural system for another building type that doesn't have much MEP systems and it was required to have the same structure and ceiling heights for every floor and accommodate all MEP trades (ducts, cable tray, cable truck, FF pipes, drainage pipes, water supply pipes all in a very narrow ceiling void with zero clash and fast track working methodology as the projects has no execution progress for more than 8 months from its launching date.

2-EXTERIOR PRESPECTIVE



1-BIM MODEL

4-CONSTRUCTION SUPERVION WORKS



3-PROJECT TIMELINE

AUTODESK® NAVISWORKS®

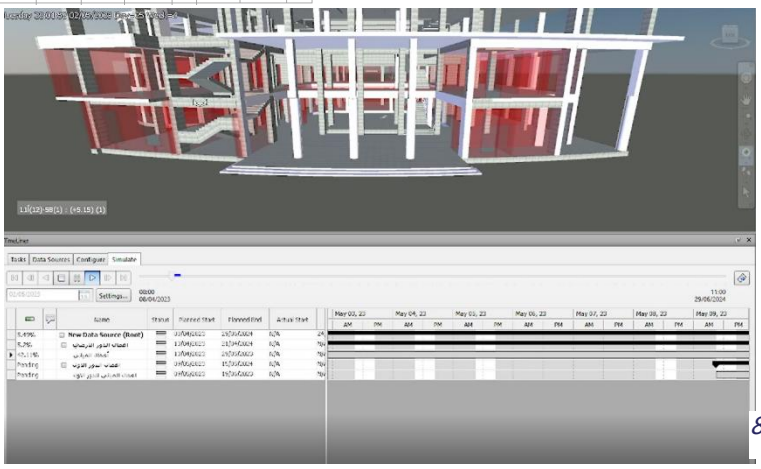
Clash Report

	Tolerance	Clashes	New	Active	Reviewed	Approved	Resolved	Type	Status
WS VS ALL GF	0.003m	118	0	0	0	6	112	Hard	OK

Image	Clash Name	Status	Distance	Grid Location	Description	Clash Point	Item 1 ID	Item 1 Name	Item 1 Type	Item 2 ID	Item 2 Name	Item 2 Type
	Clash1	Approved	-0.024	47-ط : (zero)	Hard	x:34.706, y:18.076, z:-0.100	Element ID: 4128817	PVC-C	Solid	Element ID: 460493	Concrete, Cast-in-Place gray	Solid
	Clash158	Approved	-0.019	47-ط : (7.35+)	Hard	x:34.742, y:18.078, z:9.590	Element ID: 4214861	PVC-C	Solid	Element ID: 501945	Concrete, Cast-in-Place gray	Solid
	Clash157	Approved	-0.016	47-ط : (3.80+)	Hard	x:34.730, y:18.081, z:4.990	Element ID: 4217063	PVC-C	Solid	Element ID: 420465	Concrete, Cast-in-Place gray	Solid
	Clash164	Approved	-0.013	49-ح : (3.80+)	Hard	x:32.379, y:21.125, z:4.028	Element ID: 4165611	PVC-C	Solid	Element ID: 1365367	EAD	Solid
	Clash35	Approved	-0.005	46-ص : (3.80+)	Hard	x:36.109, y:19.597, z:4.102	Element ID: 4134594	PVC-C	Solid	Element ID: 4164805	PIPE HANGER	Solid
	Clash190	Approved	-0.004	52-ط : (3.80+)	Hard	x:27.559, y:17.431, z:4.335	Element ID: 4233230	PVC-C	Solid	Element ID: 3881245	FF PIPE	Solid

5-CLASH DETECTION REPORT

6-ENTERTAINMENT INTERIOR DESIGN SHOT



8-4D SIMULATION VIDEO

دار مصر للإستشارات والتصميمات الهندسية وإدارة المشروعات
Dar Masr Consulting , Engineering Design & Project management
Commercial Reg :240501
Tax Reg : 704-627-779

Approval Response استلام اللوحات التنفيذية

Building Name / اسم المبنى: فاصل (ج) مقر اضافي لمعهد تكنولوجيا المعلومات	اسم المشروع/ Name: عملية استكمال مبني ادارة الجامعة
نوع الأعمال /	اسم المقاول/ Contractor: المقاولون العرب
Mech ميكانيكا / Elec كهرباء / Finishing تشطيبات / Civil اعمال مدنية	
عدد النسخ/ No of copies: 1	تاريخ التقديم/ Date: 2023 / 4 / 9
Specs مواصفات فنية / Other / أخرى	work shop رسومات تشغيل / As Built Dwg
نوع المستند Type of document	
1:3	رقم المستند Doc. No: Shop Drawing Power For Ground Floor , First Floor and For Second Floor
اسم المستند Doc. Name	
الاسم/ Name: / التوقيع/ Signature:	مدير المشروع Project Manger
الاسم/ Name: / التوقيع/ Signature:	مدير المكتب الفني Tech. Office

Review Result نتيجة المراجعة

Evaluation / التقييم

D	C	B	A
مرفوض Reject	يعاد التقديم Resubmit	معتمد بشروط Approved as noted	معتمد Approved

تاريخ الاستلام/ Receiving date: / /

المستلم (المقاول) Contractor:

الملاحظات / Notes:

إدارة المشروع/ Project Management

الاسم/ Name: / التوقيع/ Signature: / التاريخ/ Date:	مدير المشروع Project Manager	الاسم/ Name: / التوقيع/ Signature: / التاريخ/ Date:	الإستشاري Consultant

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Dar Masr Consulting , Engineering Design & Project management
Commercial Reg :240501
Tax Reg : 704-627-779

Approval Response اعتماد اللوحات التنفيذية

Project name / اسم المبنى: عملية استكمال مبني ادارة الجامعة
Date / التاريخ: ٢٠٢٣ / ٤ / ٩
Contractor / المقاولون العرب :اسم المقاول

☐ Civil (CI)	☒ Electrical (EI)	☐ Mechanical (ME)	☐ Architectural (ARCH)
☐ Conveying (CON)	☐ Light Current (LC)	☐ Inform.Tech (IT)	☐ Survey (SUR)

Type of Drawing

☐ Design Drawing	☒ Shop Drawing	☐ As Built

Submitted for :

☐ Information	☒ Approval	☐ Review& Comment	☐ As Requested

Attachments (4 DWG.A1)

Shop Drawing Power for GF,FF,SF And Power Details

Ser.	Building	Location	Drawing Name	Drawing No.	Sheet No.	Rev.	copies
	فاصل (ج) مقر اضافي لمعهد تكنولوجيا المعلومات	GF,FF,SF	Shop Drawing Power for GF,FF,SF And Power Details	ITISCU-ELEC-SD-GF-A (power)	1	0	1
				ITISCU-ELEC-SD-FF-A (power)	1	0	1
				ITISCU-ELEC-SD-SF-A (power)	1	0	1
				ITISCU-ELEC-SD-A (P.D)	1	0	1

A- Approved ☐ B- Approved As Noted ☒ C-Rejected and Resubmit ☐

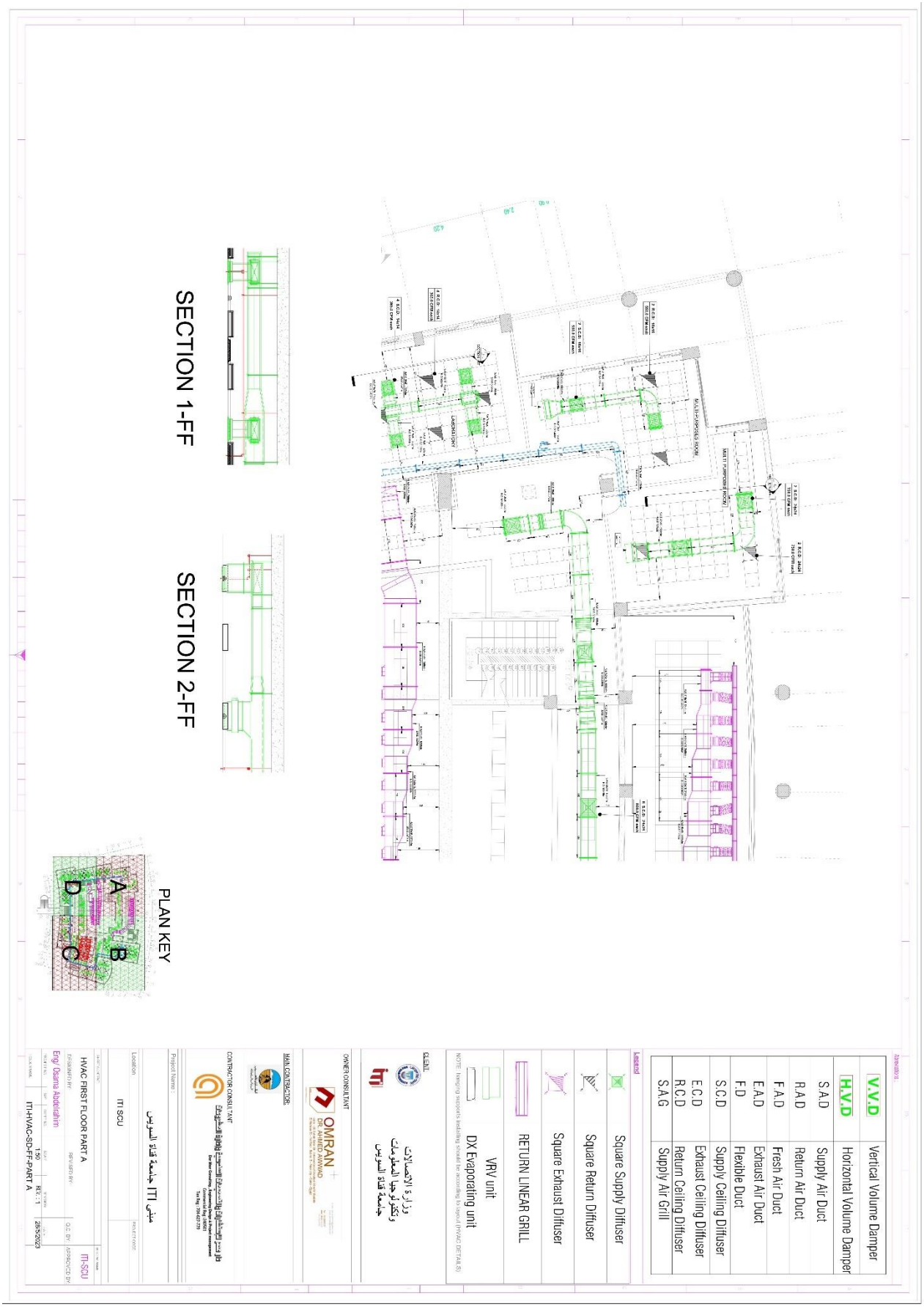
Comments By Consultant:

الاسم/ التوقيع/ التاريخ/ Consultant الاستشاري/	مدير المشروع/ Project Manger	الاسم/ التوقيع/ التاريخ/

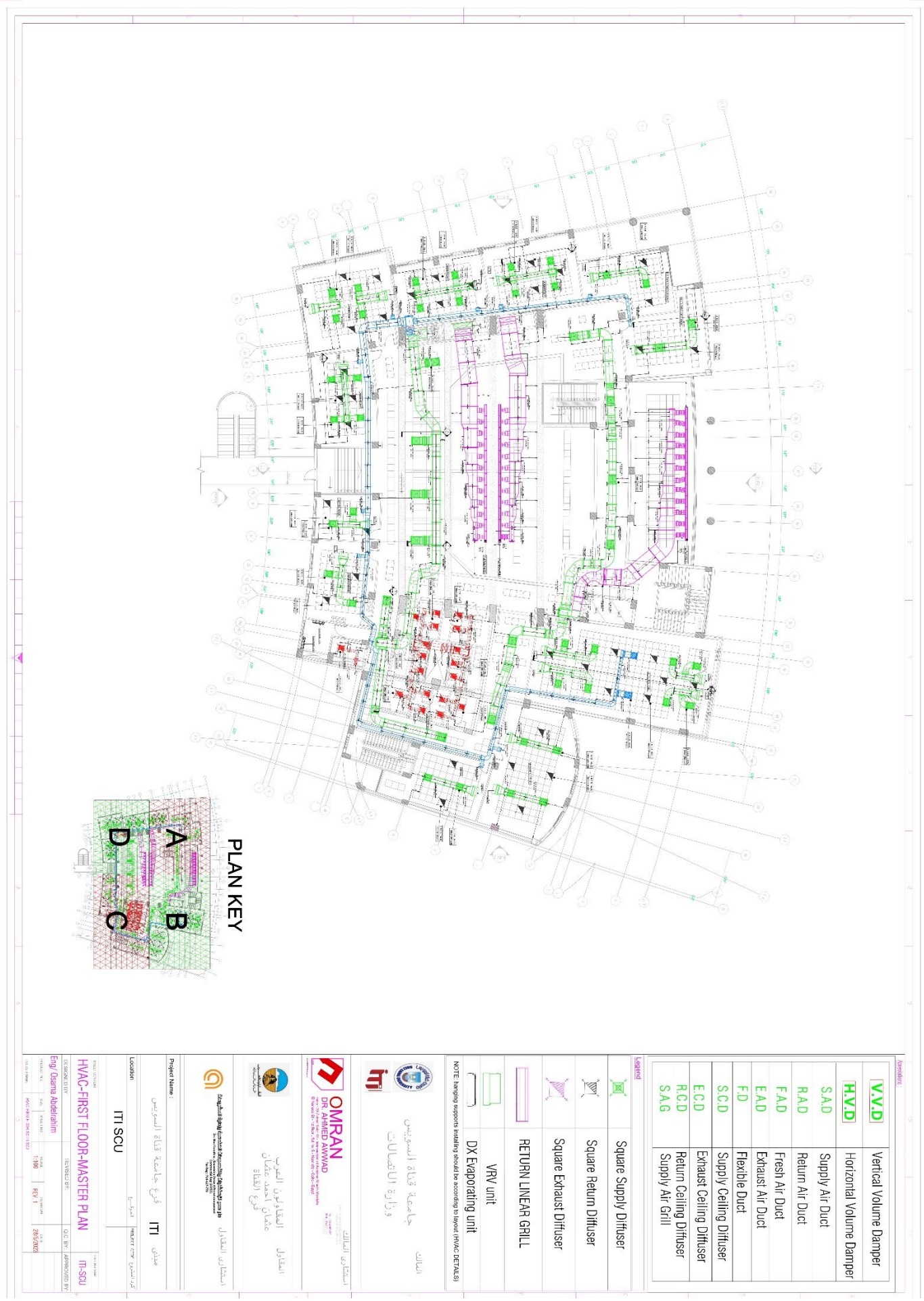
Commercial Reg :240501
Tax Reg : 704-627-779
Dar Masr Consulting , Engineering Design & Project management

7-SAMPLE OF SHOP DRAWING SUBMISSION AND APPROVAL LETTERS

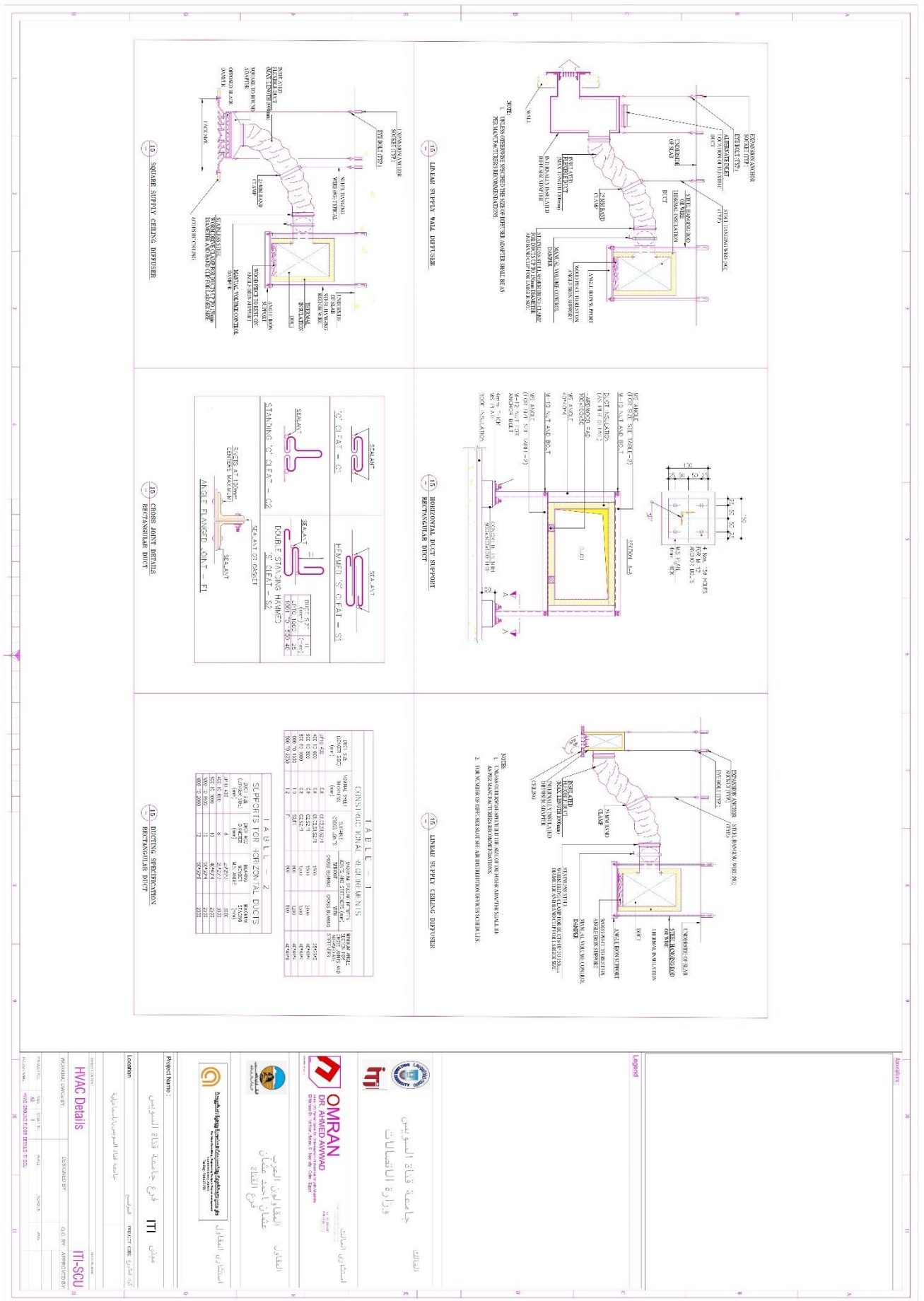
9-Sample of approved shop drawing firefighting



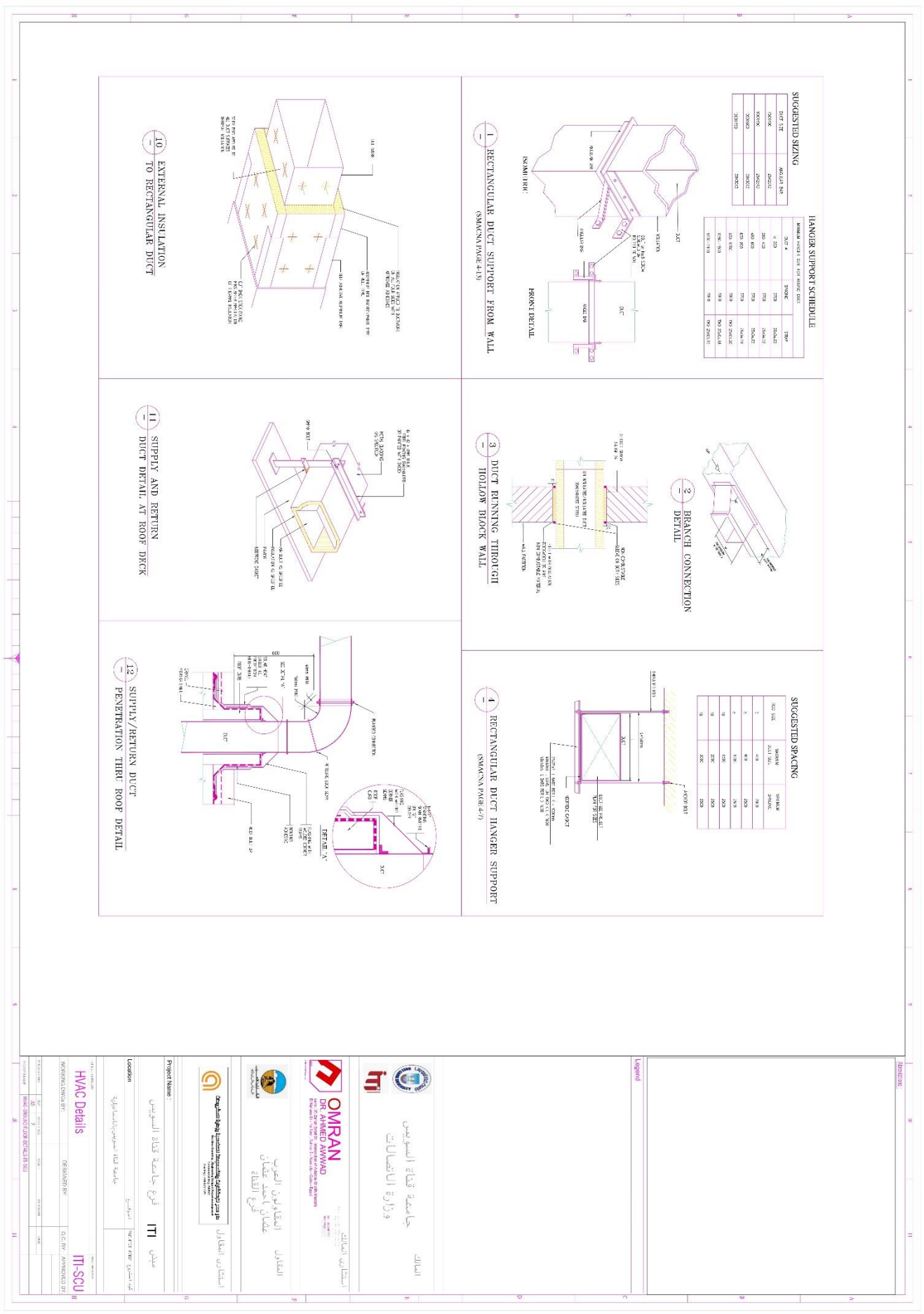
10-Sample of HVAC shop drawing of a part of the full floor



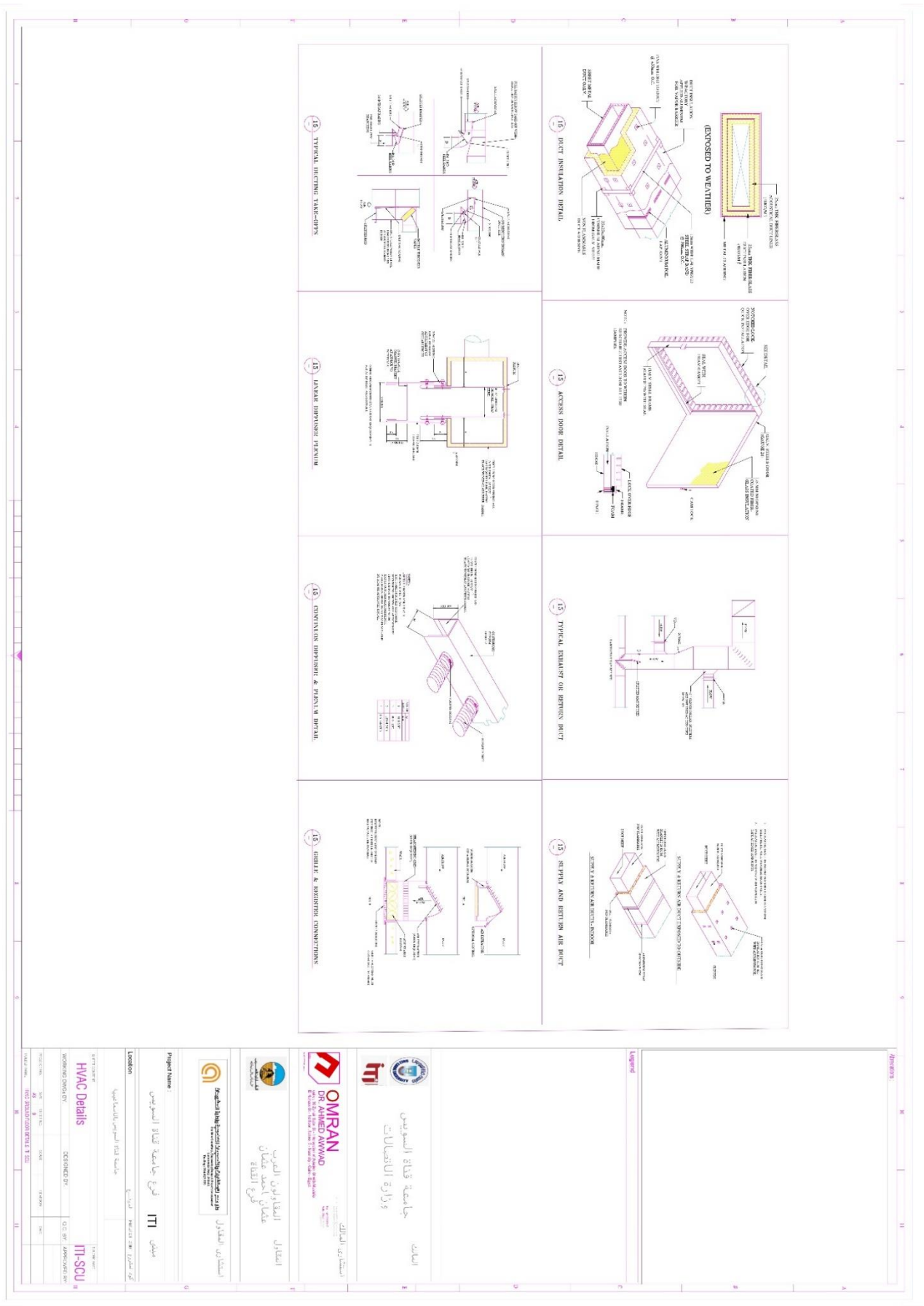
11-Sample of HVAC master plan shop drawing



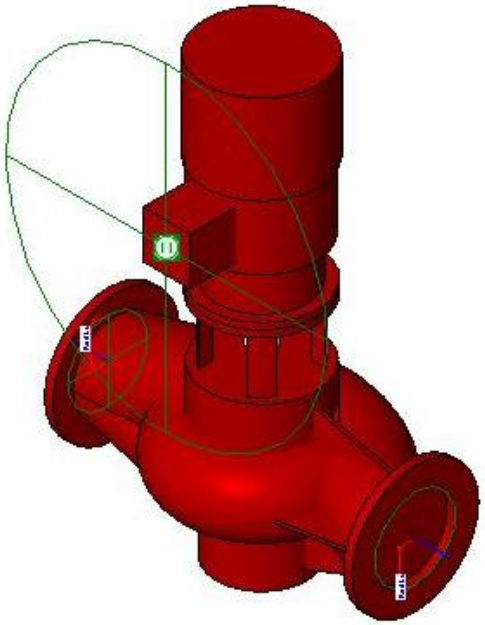
12-Sample of HVAC details drawings A



13-Sample of HVAC details drawings B



14-Sample of HVAC details C



Parameter	Value	Formula	Lock
Constraints			
Default Elevation	0' 0"	=	☐
Volute Cover Radius	0' 8 33/256"	= ((Discharge Section Width / 2) - Discharge End Pipe Radius) * 1	☑
Volute Cover Height	0' 11 159/256"	=	☑
Sweep Pipe Radius	0' 5 15/32"	= Discharge End Pipe Radius * 0.875	☑
Sweep Path Radius	0' 7 199/256"	= Discharge Section Offset - Sweep Pipe Radius	☑
Suction Support End Offset	0' 7 19/128"	= Suction End Pipe Radius * 1.1	☑
Suction Support Depth	0' 0 1/2"	= 0' 0 1/2"	☑
Suction Support Center Offset	0' 4 11/128"	= if(Suction Size < 0' 5", Suction Support End Offset, Suction Su	☑
Suction Pipe at Center Offset	0' 6 7/128"	= Pump Center to Bottom / 2.25	☑
Suction End Pipe Radius	6 1/2"	= Suction Connection Radius + 0' 0 1/2"	☑
Suction Blend End Radius	0' 6 53/128"	= Casing Bottom Radius * 0.95	☑
Shaft Area Offset	0' 6 225/256"	= if(Motor Flange Radius > Volute Cover Radius, Volute Cover Ra	☑
Right Symbol Outside Radius	1' 2 97/256"	= Discharge Pipe Path Radius + Discharge End Pipe Radius	☑
Pump Symbol Radius	1' 2 81/256"	= if(Motor Power = 500 hp, Overall Length / 2, Overall Width / 2)	☑
Pipe Symbolic Line Offset	1' 0 243/256"	= if(Motor Outside Radius > Discharge Pipe Path End Offset, sqrt	☑
Overall Width Left Offset	1' 2 97/256"	= if(Motor Outside Radius > (Discharge Section Width - Discharg	☑
Overall Width Right Offset	1' 2 1/4"	= if(Control Box Outside Offset > Discharge Section Offset, Cont	☑
Motor Shaft Radius	0' 0 13/16"	= Motor Shaft Diameter / 2	☑
Motor Shaft Diameter	0' 1 5/8"	=	☑
Motor Outside Radius	0' 8 1/2"	= Motor Outside Diameter / 2	☑
Motor Outside Diameter	1' 5"	=	☑
Motor Inside Radius	0' 8 19/256"	= Motor Inside Diameter / 2	☑
Motor Inside Diameter	1' 4 19/128"	= Motor Outside Diameter * 0.95	☑
Motor Height	2' 6 49/256"	=	☑
Motor Front Secton Radius	0' 6 3/4"	= Motor Front Secton Diameter / 2	☑
Motor Front Secton Diameter	1' 1 1/2"	=	☑
Motor Front Section Offset	0' 6 5/128"	= Motor Height / 5	☑
Motor Flange Radius	8 1/4"	= Motor Flange Diameter / 2	☑
Motor Flange Height	0' 0 251/256"	= Motor Front Section Offset / 6.16	☑
Motor Flange Diameter	16 1/2"	=	☑
Motor Center Section Height	0' 9 221/256"	= (Motor Front Section Offset - Motor Flange Height) * 1.95	☑
Discharge Pipe Path Radius	0' 8 33/256"	= Volute Cover Radius	☑

15-Sample of Fire pump LOD400 Revit family

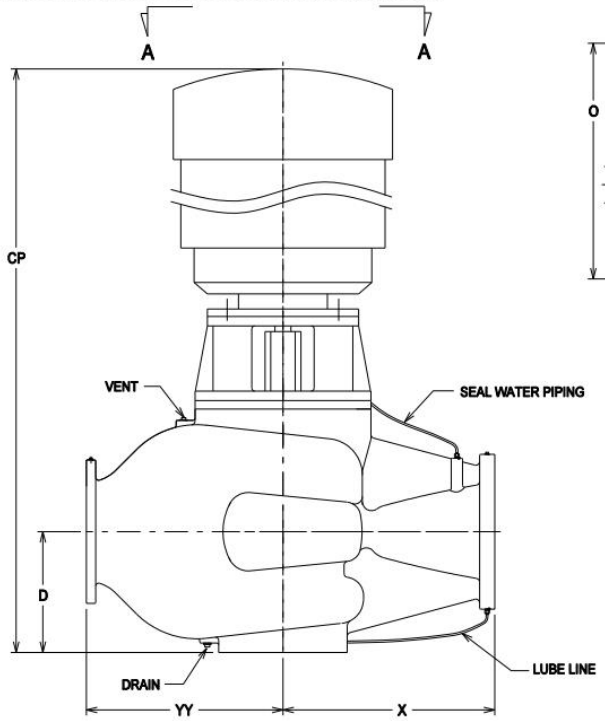
Peerless
Toccoa, Georgia
U.S.A.

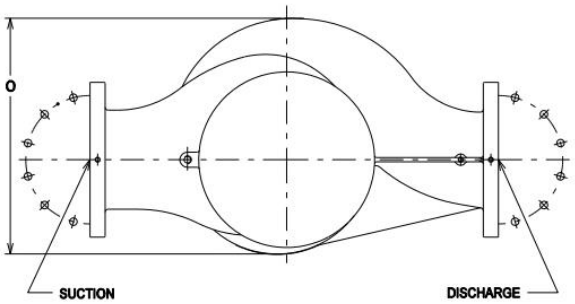
VIL VERTICAL INLINE PUMPS
OUTLINE DIMENSIONS, TYPE DS, 1800 RPM

SECTION	3.0
PAGE	5.4
DATE:	MAR 1, 2009

NOTE: ALL DATA SUBJECT TO CHANGE. CONTACT FACTORY FOR CERTIFIED DATA.

NOTE: 1/4" NPT SUCTION & DISCHARGE GAUGE TAP CONNECTIONS





VIEW "A-A"

MOTOR FRAME SELECTIONS - 3PH / 60 CYCLE	
HORSEPOWER	1800
75	365VP
100	404VP
125	405VP
150	444VP
200	445VP
250	445VP
300	449VP
350	449VP
400	449VP
450	449VP
500	5008VPH

ALL DIMENSIONS ARE IN INCHES

* REFER TO WORKING PRESSURE VS. TEMPERATURE CHART FOR TEMPERATURE EFFECTS

MODEL	DISCHARGE SIZE	SUCTION SIZE	DISCHARGE FLANGE DRILLING	SUCTION FLANGE DRILLING	* WORKING PRESSURE PSI	MOTOR FRAMES	CP (MAX.)	D	O	X	YY
V12B13A-DS Cast Iron Casing	12	12	125#	125#	175	365VP	72 1/2	13 5/8	27 5/8	23	23
						404VP-405VP	72 1/2				
						444VP-445VP	77 1/4				
						449VP	83 13/16				
V12B13A-DS W/ Optional Ductile Iron Casing			250#	250#	325	365VP	72 1/2	13 5/8	27 5/8	23	23
						404VP-405VP	72 1/2				
						444VP-445VP	77 1/4				
						449VP	83 13/16				
V12A17A-DS Cast Iron Casing	12	12	125#	125#	175	444VP-445VP	94 1/4	16	31 3/8	28	26
						449VP	101				
						5008VPH	104 15/16				
V12A17A-DS W/ Optional Ductile Iron Casing			250#	250#	325	444VP-445VP	94 1/4	16	31 3/8	28	26
						449VP	101				
						5008VPH	104 15/16				
V14A15A-DS Cast Iron Casing	14	14	125#	125#	175	444VP-445VP	94 1/4	16	32 1/2	27	27
						449VP	101				
						5008VPH	104 15/16				
V14A15A-DS W/ Optional Ductile Iron Casing			250#	250#	325	444VP-445VP	94 1/4	16	32 1/2	27	27
						449VP	101				
						5008VPH	104 15/16				

A05-96969-2

16-Fire pump data sheet for the mentioned LOD400 family

2. The pediatric Hospital Suez Canal University Hospitals

Project Synopsis

1. Revit Modelling LOD 400
2. Zero Clash Shop Drawings
3. CAD to BIM

Project Objective

Dar Masr was required to develop 3D Revit Model LOD 400. Our scope included 2D zero clash shop drawings for 2D documentation sheets from the 3D model.

Project Summary

The children hospital is one of Suez Canal University hospitals and it's located very near to the SCU specialized hospital to serve the Suez Canal region.

Disciplines

1. HVAC (chilled water and DX air handling unit system)
2. Fire Fighting systems (Water based, Clean agent systems).
3. Electrical systems (Power and Lighting systems)
4. Light current systems (nurse calling and fire alarm system).
5. Plumbing systems (Water Supply and Sanitary Drainage)
6. Structural systems (Flat slab system).
7. Architectural and interior shop drawings.

Type Of Building: Medical.

Project budget: 1400,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2024

Project Deliverables

1. Architectural and structural Revit Model (.rvt file)
2. MEP Revit Model (.rvt file)
3. All The mentioned disciplines Shop Drawings (DWG/PDF format).

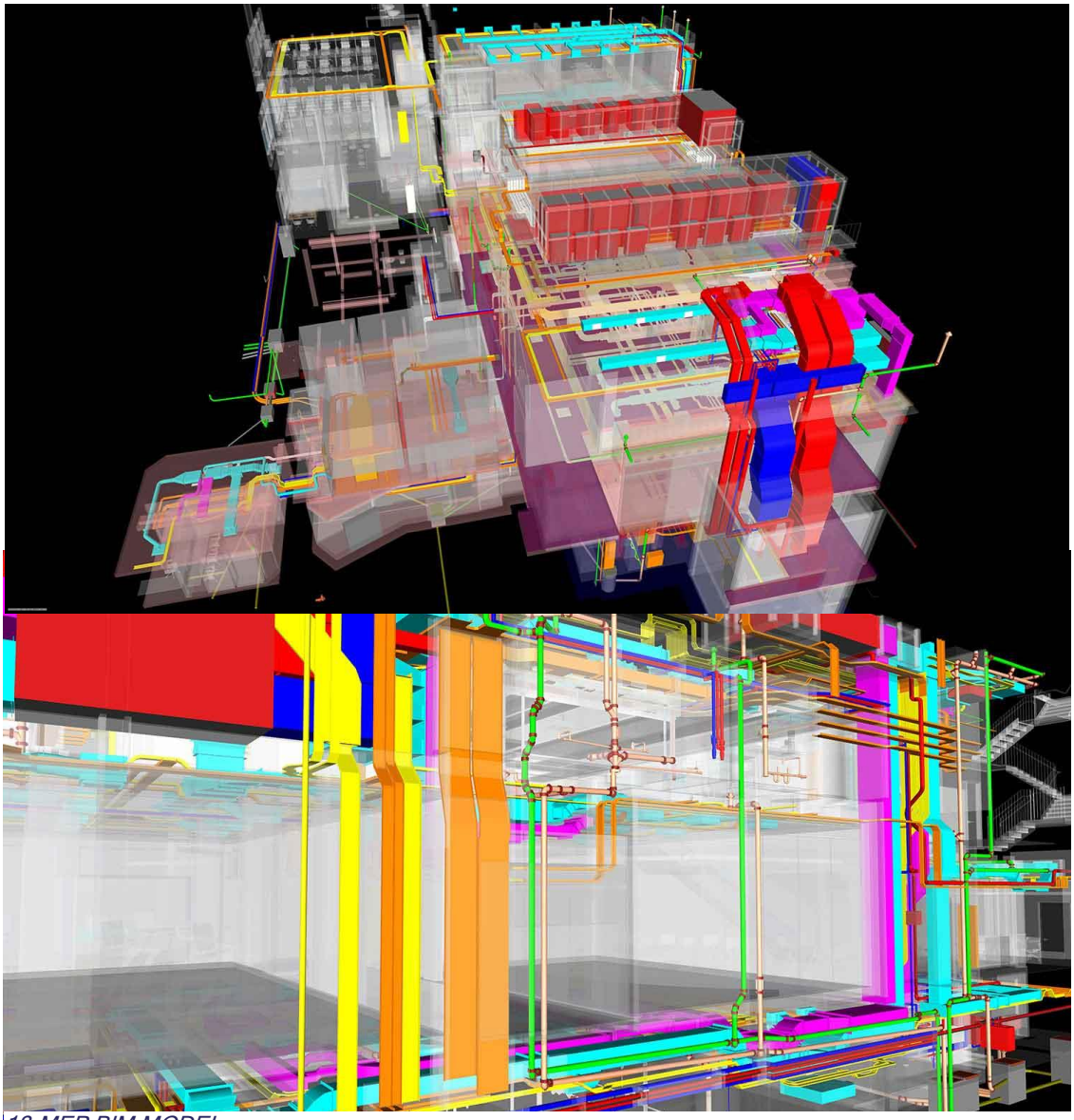
Validating authority

Suez Canal University centre for public services, commercial, engineering, agricultural and environmental consultation.

Validation cycle

The average submission to approval period is six working days within which technical meetings are held with the validating authority to accelerate the approval.

17-EXTERIOR DESIGN SHOT



18-MEP BIM MODEL

3. Education Faculty In El Arish University

Project Synopsis

1. Revit Modelling LOD 400
2. Zero Clash Shop Drawings
3. CAD to BIM

Project Objective

The project scope included the expansion of the education faculty in El Arish university and the objective was to design the structural system and all the MEP trades with shop drawings to achieve the required architectural concept.

Project Summary

This Project is one of the expansion of the faculties in the Suez Canal Region Educational revolution.

Disciplines

1. HVAC (air handling unit system)
2. Fire Fighting systems (Water based).
3. Electrical systems (Power and Lighting systems)
4. Plumbing systems (Water Supply and Sanitary Drainage)
5. Structural and architecture shop drawings.

Type Of Building: Educational building.

Project budget: 150,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2022

Project Deliverables

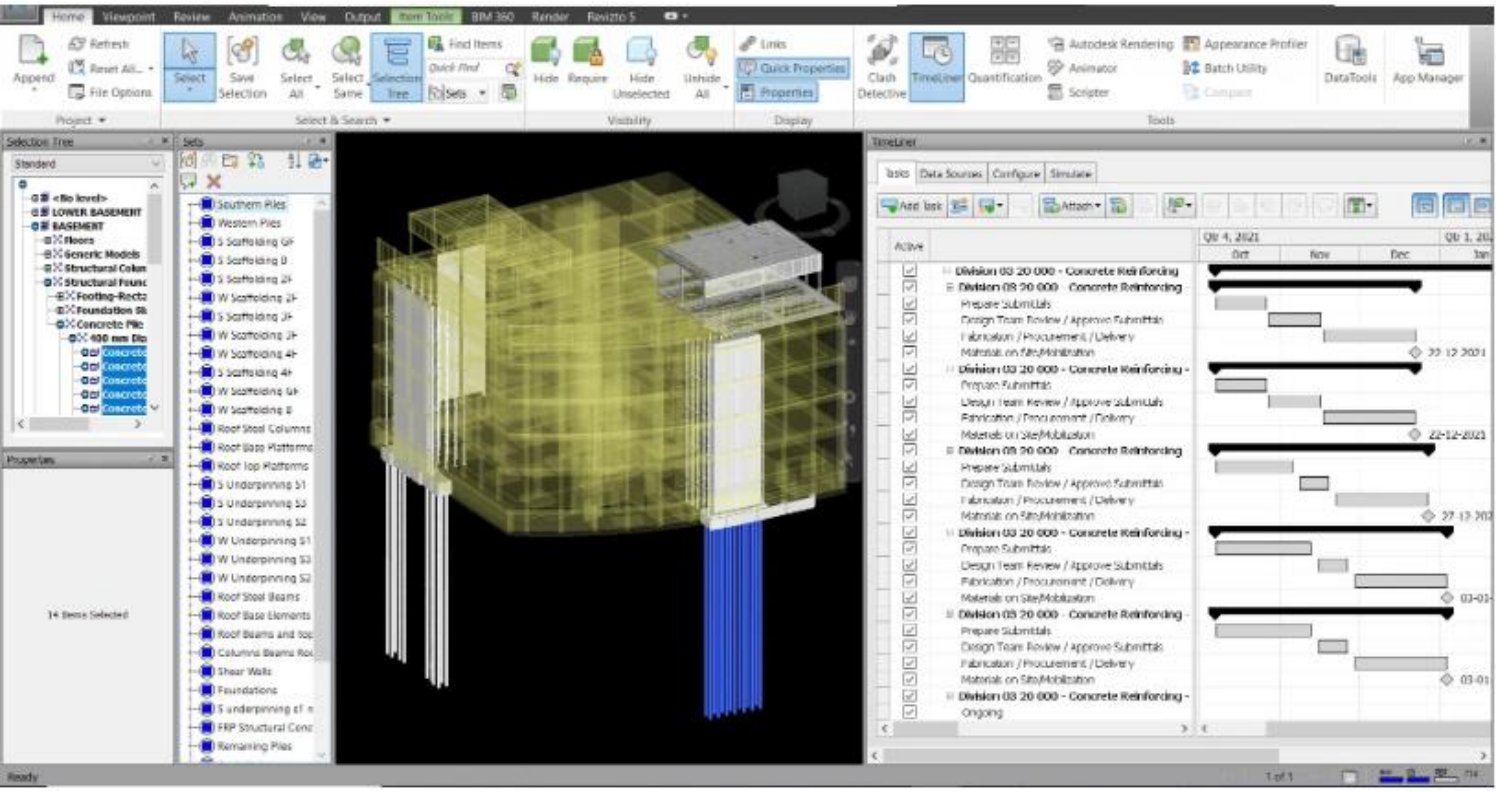
1. Architectural and structural Revit Model (.rvt file)
2. MEP Revit model (.rvt file)
3. All The mentioned disciplines Shop Drawings (DWG/PDF format).

Validating authority

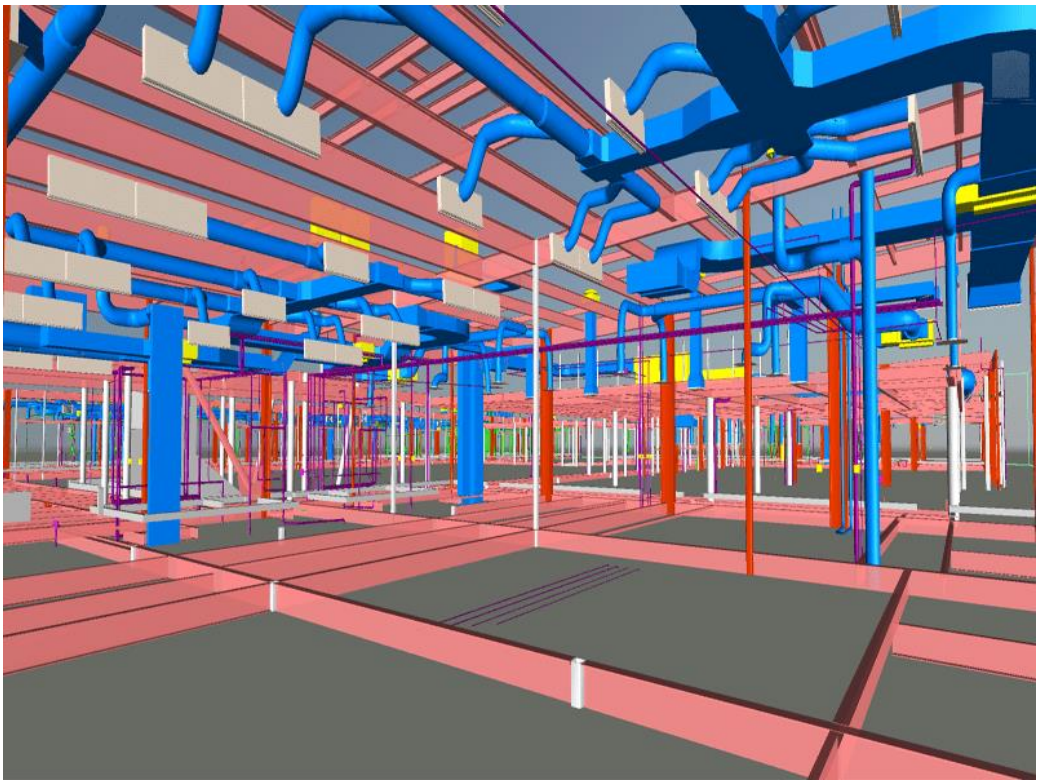
Suez Canal University centre for public services, commercial, engineering, agricultural and environmental consultation.

Validation cycle

The average submission to approval period is fifteen working days.



19-4D Navisworks simulation setup



20-BIM MODEL

4. The Educational Pharmaceutical factory Suez Canal University.

Project Synopsis

1. Revit Modelling LOD 400
2. Zero Clash Shop Drawings

Project Objective

The Project Objective includes MEP systems design and shop drawing with zero clash 3D model and specifying the specified specs for the medical equipment along with architectural and structural shop drawings.

Project Summary

The Project aims at the practical application of all the science studies in the pharmacy faculty by the in hand experience and to produce some Pharma products to be sold in the region.

Disciplines

1. HVAC (DX air handling unit system)
2. Fire Fighting systems (Water based, Clean agent systems).
3. Electrical systems (Power and Lighting systems)
4. Light current systems (fire alarm system)
5. Plumbing systems (Water Supply and Sanitary Drainage)

Type Of Building: Pharmaceutical

Project budget: 150,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2021

Project Deliverables

1. MEP Revit Model (.rvt file)
2. All The mentioned disciplines Shop Drawings (DWG/PDF format).
3. Architectural and structural Revit Model (.rvt file)
4. Calculation sheet for the special MEP Param systems.
5. 4D simulation with live project monitoring dashboard.

Challenges

The project execution period was within the inflation crisis in Egypt and the dollar price has been changed several times during the project construction stage making it a big challenge to continue the fast track construction rate with the old dollar prices till compensation take the slow governmental procedures.

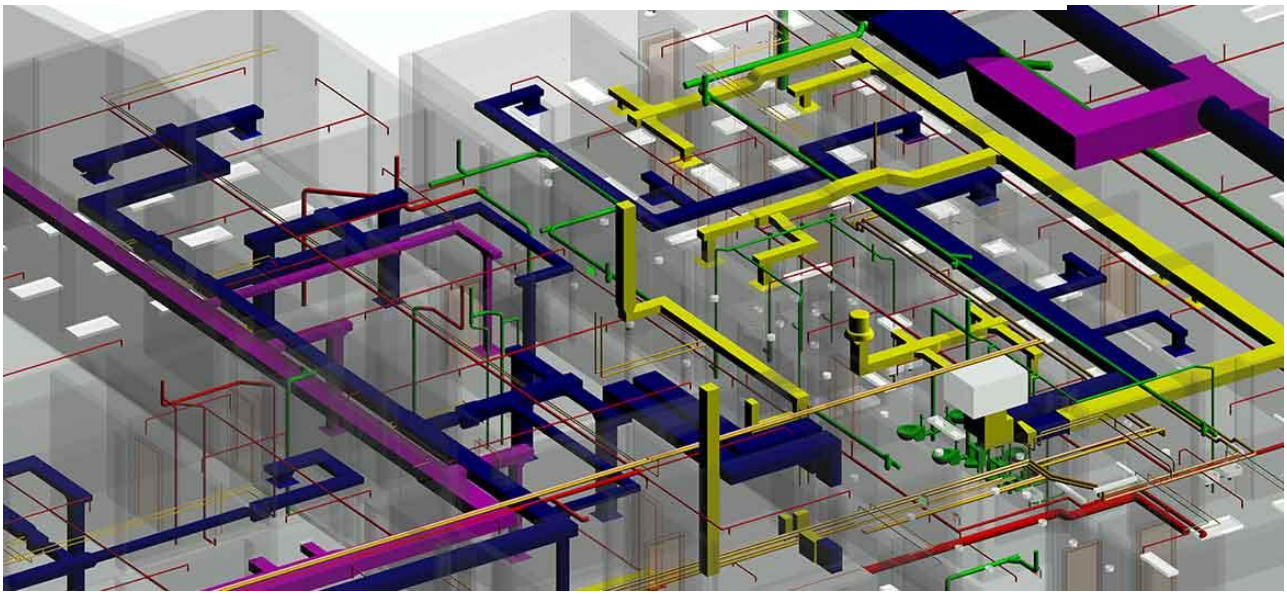
Validating authority

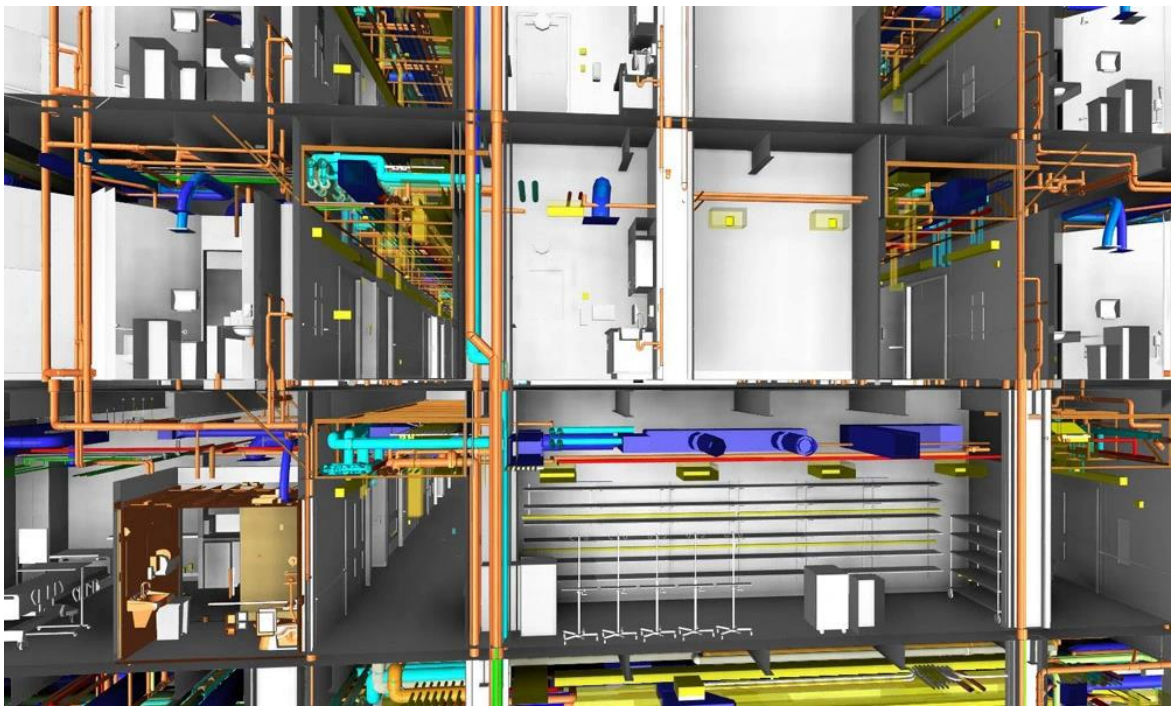
HOWEEDY for engineering designs and project management.

Validation cycle

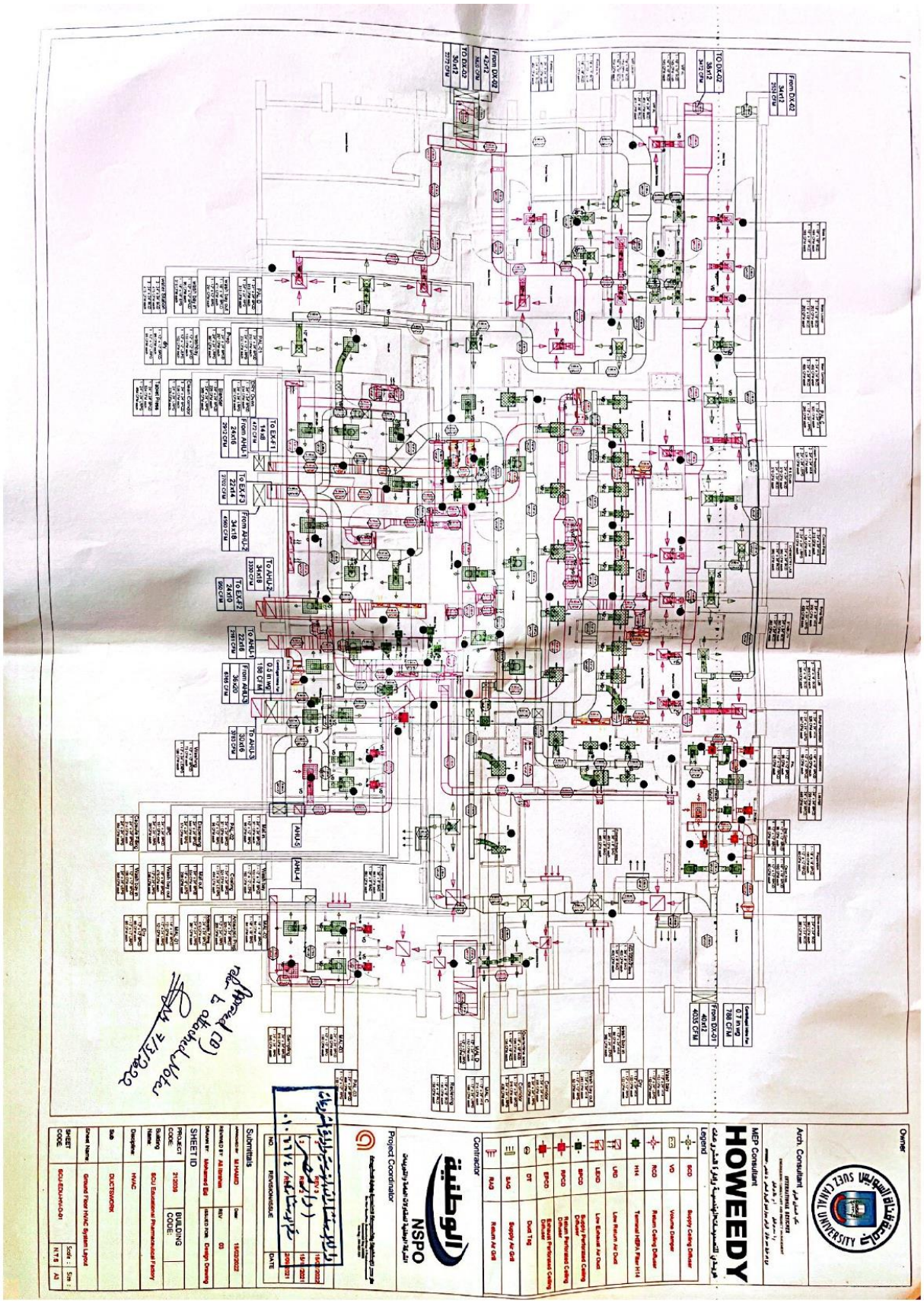
The average submission to approval period is ten working days.

22-EXTERIOR DESIGN PRESPECTIVE

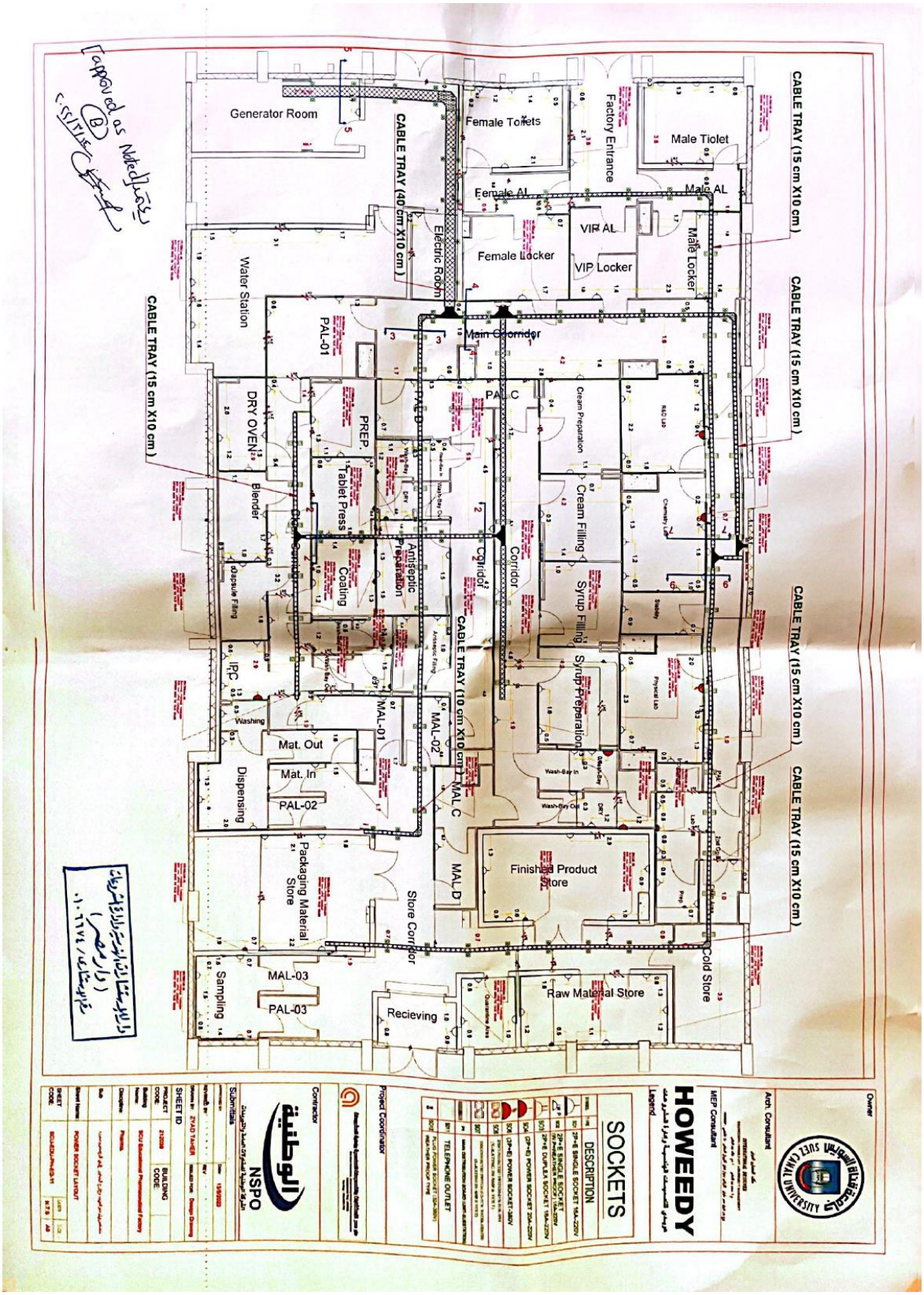




23-MEP BIM MODEL



24-Sample of approved HVAC shop drawing A



25-Sample of approved HVAC shop drawing B

5. The intensive care expansion in Suez Canal University hospital

Project Synopsis

1. Revit Modelling LOD400
2. Zero Clash Shop Drawings

Project Objective

Our scope included design and zero clash shop drawing for all the MEP, architectural and structural systems and extracting 2D documentation from the 3D Model.

Project Summary

The very special project in Suez Canal University was launched after the COVID-19 to increase the hospitability capacity.

Disciplines

1. HVAC (DX air handling unit system)
2. Fire Fighting systems (Water based and clean agent systems).
3. Electrical systems (Power and Lighting systems)
4. Light current systems (nurse calling and fire alarm systems).
5. Plumbing systems (Water Supply and Sanitary Drainage).
6. Architectural detailing and family creation.
7. Structural shop drawings

Type Of Building: Medical building.

Project budget: 100,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2021

Project Deliverables

1. MEP Revit Model (.rvt file)
2. Architectural and structural Revit Model (.rvt file)
3. All The mentioned disciplines Shop Drawings (DWG/PDF format).

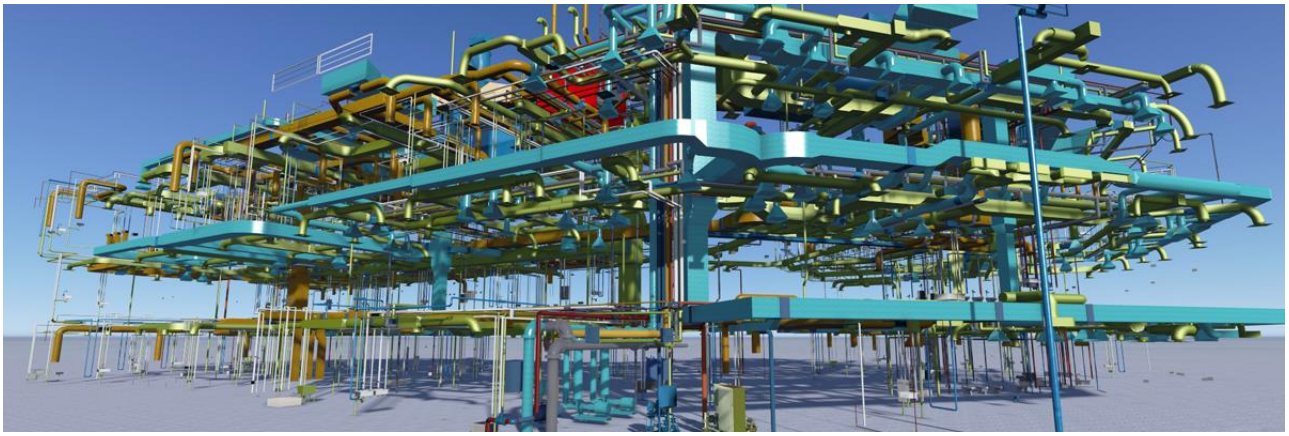
Validation authority

The international designer engineering consultant and project management.

Validation cycle

The average submission to approval period is nine working days within which online meetings are held with the validating authority the discuss all technical issues for the approval.

26-MINISTRY OF HEALTH DURING WORK INSPECTION



27-BIM MODEL

6. Qeha and Edfina Factory in El Sadat City

A project by Dr Waleed El Qammash one of the company founders

Project Objective

The 3D modelling for all the industrial processes in the plant including pipes, supports, heat exchangers and all other specific equipment.

Project Summary

The Project is located in El Sadat City and it includes many factories to fulfil local need.

Type Of Building: Industrial building.

Project budget (first stage): 1300,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2024

Validating authority

CEGMAN - Consulting Engineering Group

Validation cycle

The average submission to approval period is fourteen working days.

28-SITE WORK FOR EXECUTION SUPERVION

7. **Female Students accommodation buildings in El Arish University**

Project Synopsis

1. Revit Modelling LOD 400
2. Zero Clash Shop Drawings

Project Objective

Our scope included the design and producing zero clash shop drawings for the structural and all MEP systems including clash detection 3D modelling.

Project Summary

The new students accommodation is an expansion of the students accommodation city in El Arish university to facilitate and serve students all over the region.

Disciplines

1. HVAC (DX air handling unit system)
2. Fire Fighting systems (Water based).
3. Electrical systems (Power and Lighting systems)
4. Plumbing systems (Water Supply and Sanitary Drainage)
5. Structural systems (Flat slab system).
6. Architectural and interior shop drawings.

Type Of Building: Residential building.

Project budget: 100,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2021

Project Deliverables

1. Architectural and structural Revit Model (.rvt file)
2. MEP Revit model (.rvt file).
3. Clash detection reports
4. All The mentioned disciplines Shop Drawings (DWG/PDF format).
5. 4D simulation and project management services.

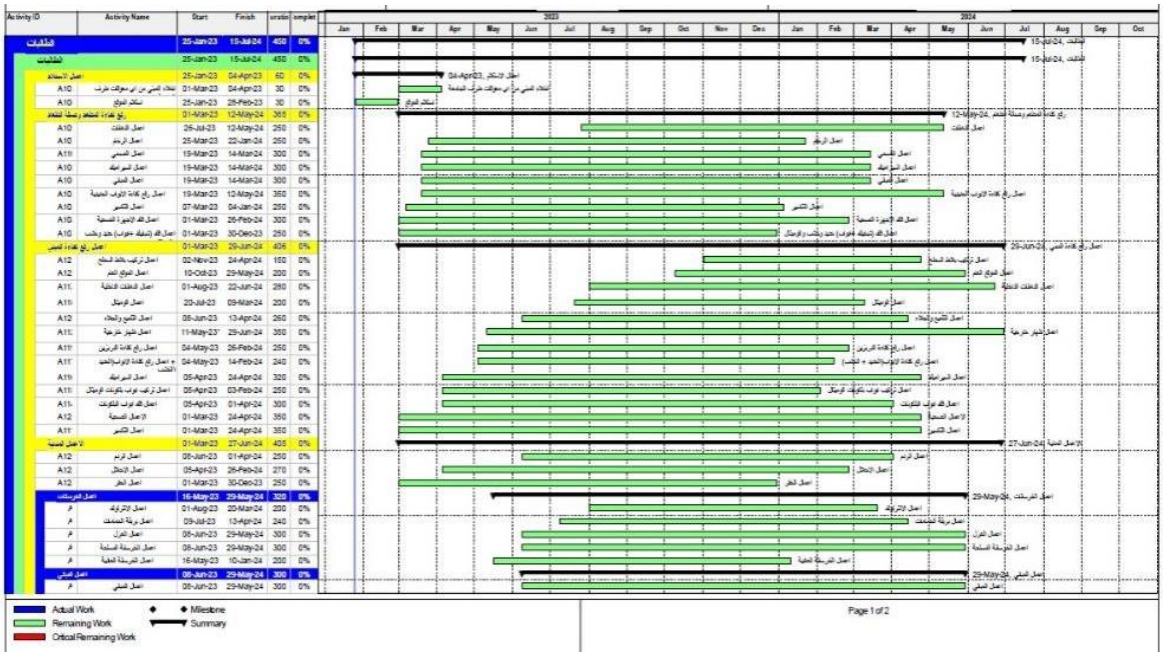
Validating authority

Suez Canal University centre for public services, commercial, engineering, agricultural and environmental consultation.

Validation cycle

The average submission to approval period is five working days

29-EXTERIOR SITE SHOT



30-PROJECT TIMELINE

8. The new building of the faculty of pharmacy at Suez Canal University

Project Synopsis

1. Revit Modelling LOD 350
2. Zero Clash Shop Drawings

Project Objective

Dar Masr was called for this project after many consideration issues and the execution stoppage. Dar Masr then used its BIM FAST TRACK methodology to push the project into execution by 3D modelling the sketches for some region

Project Summary

This project is an extension of the faculty of pharmacy at Suez Canal University.

Disciplines

1. HVAC (DX air handling unit system)
2. Fire Fighting systems (Water based).
3. Electrical systems (Power and Lighting systems)
4. Plumbing systems (Water Supply and Sanitary Drainage)
5. Structural systems (Flat slab system).
6. Architectural and interior shop drawings.

Type Of Building: Educational building.

Project budget: 100,000,000 EGP

BIM LOD: 350

Unit of measurement: mm (SI units)

Revit Version: Revit 2023

Project Deliverables

1. MEP Revit Model (.rvt file)
2. Architectural and structural Revit Model (.rvt file)
3. All The mentioned disciplines Shop Drawings (DWG/PDF format).

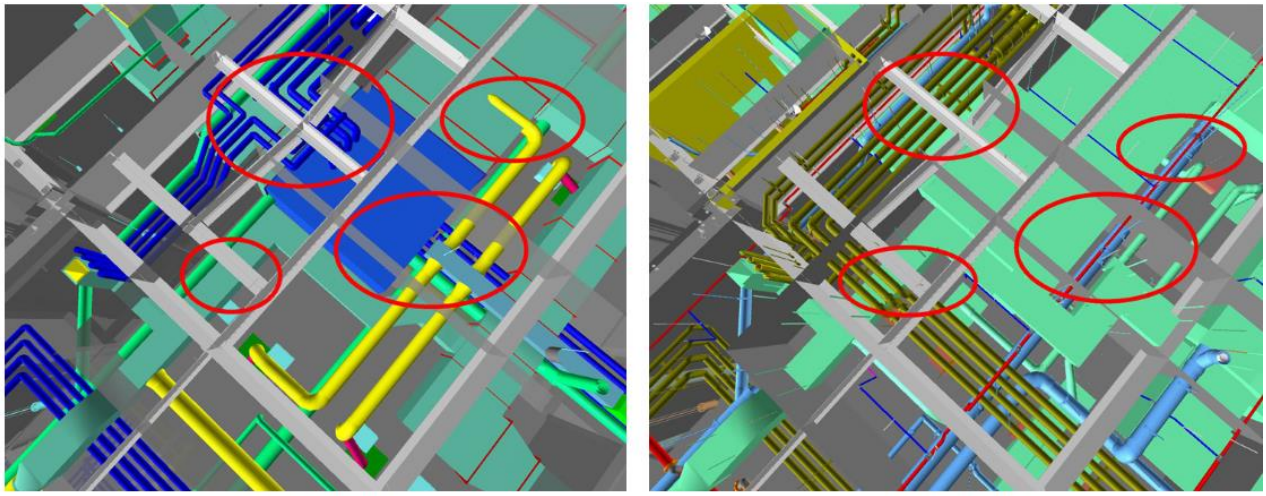
Validation authority

The international designer engineering consultant and project management.

Validation cycle

The average submission to approval period is seven working days

32-SITE WORK SUPERVISION



31-CLASH VISUALIZATION WIITH SOLUTION

9. Male Students accommodation buildings in El Arish University

Project Synopsis

1. Revit Modelling LOD 400
2. Zero Clash Shop Drawings

Project Objective

Dar Masr was required to develop 3D Revit Model LOD 400 for all MEP, structural and architectural systems and extracting the 2D zero clash shop drawings for all the disciplines.

Project Summary

This Project is a new building in the student accommodation city in el Arish university.

Disciplines

1. HVAC (DX air handling unit system)
2. Fire Fighting systems (Water based).
3. Electrical systems (Power and Lighting systems)
4. Plumbing systems (Water Supply and Sanitary Drainage)
5. Structural systems (Flat slab system).
6. Architectural and interior shop drawings.

Type Of Building: Residential building.

Project budget: 300,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2021

Project Deliverables

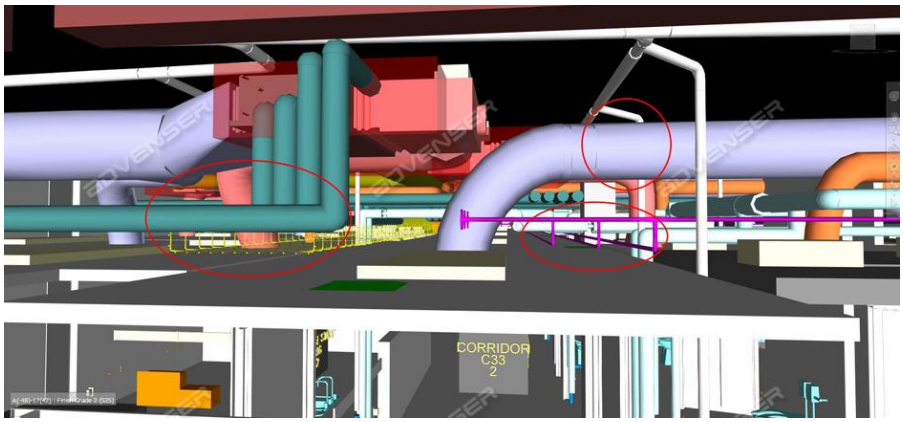
1. Architectural and structural Revit Model (.rvt file)
2. MEP Revit Model (.rvt file)
3. All The mentioned disciplines Shop Drawings (DWG/PDF format).
4. 4D and 5D Simulation videos and cost control with agile project management.

Validating authority

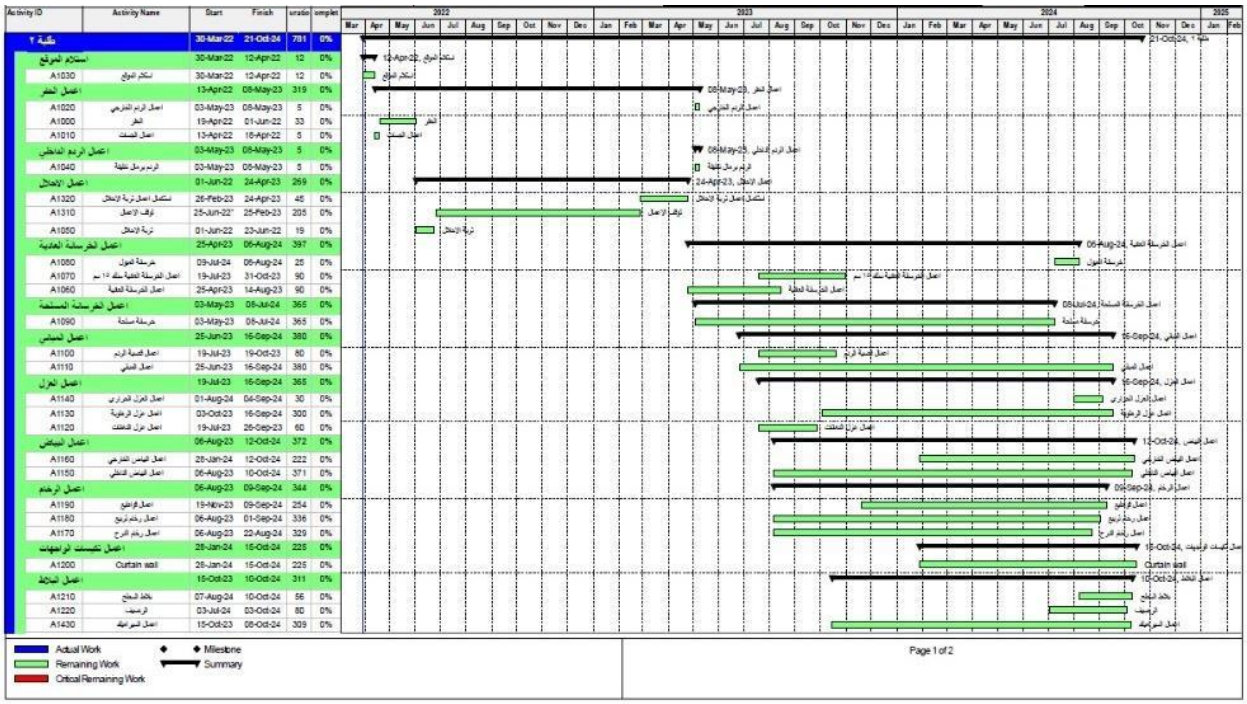
Suez Canal University centre for public services, commercial, engineering, agricultural and environmental consultation.

Validation cycle

The average submission to approval period is nine working days with technical discussion with the validating authority to accelerate the process.



33-ABOVE CEILING TRADES FROM BIM MODEL



34-PROJECT TIMELINE

10. Hi- Pharm pharmaceutical factory

Project Synopsis

1. Revit Modelling LOD400
2. Zero Clash Shop Drawings

Project Objective

Our scope included design and zero clash shop drawing for all the MEP special equipment for the pharma. Special industry with structural studies.

Project Summary

The very special project in Suez Canal University was launched after the COVID-19 to increase the hospitability capacity.

Disciplines

1. HVAC (DX air handling unit system)
2. Fire Fighting systems (Water based and clean agent systems).
3. Electrical systems (Power and Lighting systems)
4. Light current systems (nurse calling and fire alarm systems).
5. Plumbing systems (Water Supply and Sanitary Drainage).
6. Architectural detailing and family creation.
7. Structural shop drawings

Type Of Building: Pharmaceutical factory building.

Project budget: 60,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2021

Project Deliverables

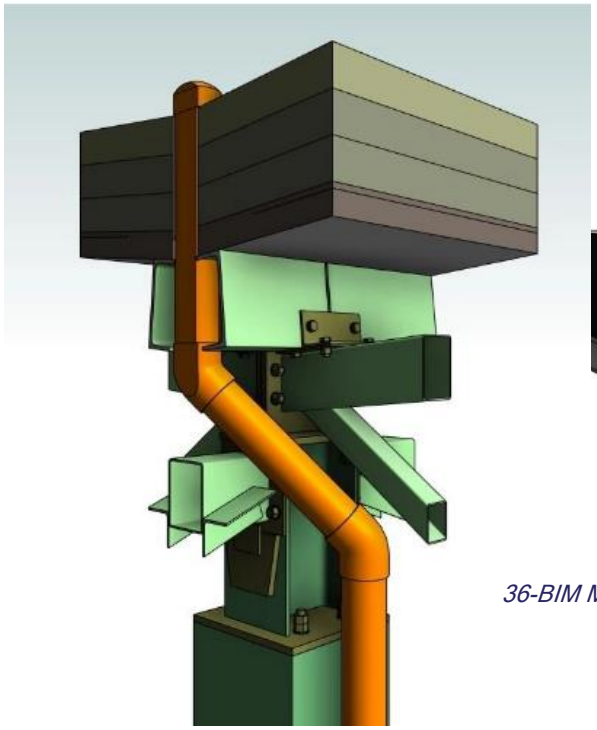
1. MEP Revit Model (.rvt file)
2. Architectural and structural Revit Model (.rvt file)
3. All The mentioned disciplines Shop Drawings (DWG/PDF format).
4. 4D and 5D along with agile project management workflow documentation.

Validating authority

The engineering administration in the factory.

Validation cycle

The average submission to approval period is ten working days



35-FAMILY CREATION EXAMPLE

36-BIM MODEL

11. Smart examination building Suez Canal University

Project Synopsis

1. Revit Modelling LOD 400
2. Zero Clash Shop Drawings

Project Objective

Our scope included design and zero clash shop drawing for all the MEP systems and extracting 2D documentation from the 3D Model.

Project Summary

The very special project in Suez Canal University was launched after the COVID-19 outbreak to be the centre of electronic exams in the university.

Disciplines

1. HVAC (DX air handling unit system)
2. Fire Fighting systems (Water based and clean agent systems).
3. Electrical systems (Power and Lighting systems)
4. Light current systems (cctv system, sound system, ip telephone and ip data network, access control systems, matv system).
5. Plumbing systems (Water Supply and Sanitary Drainage).
6. Structural systems (Flat slab system).
7. Architectural and interior shop drawings.

Type Of Building: Educational building.

Project budget: 400,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2022

Project Deliverables

1. MEP Revit Model (.rvt file)
2. Architectural and structural Revit Model (.rvt file)
3. All The mentioned disciplines Shop Drawings (DWG/PDF format).

Challenges

The main challenge in this project is the roof which cannot accommodate the required number of handing units and the long distance for the refrigerant pipes so an innovative solution was found to overcome this problem.

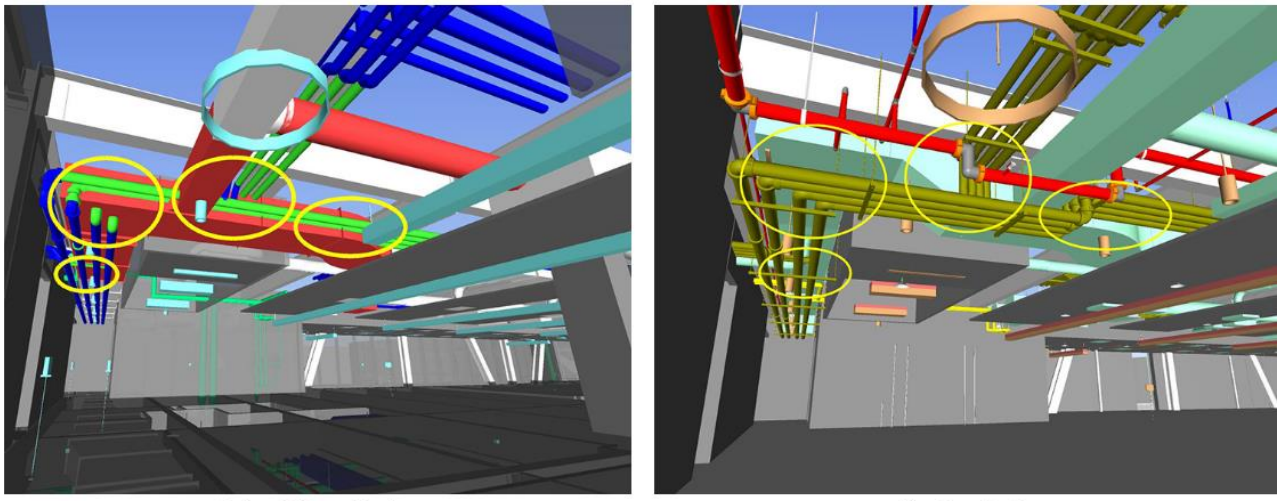
Validating authority

Suez Canal University centre for public services, commercial, engineering, agricultural and environmental consultation.

Validation cycle

The average submission to approval period is nine working days

37-EXTERIOR DESIGN PRESPECTIVE



Before MEP coordination | After Coordination

***38**-CLASH VISUALIZATION WITH SOLUTION*

12. Ismailia female students accommodation new building

Project Synopsis

3. Revit Modelling LOD400
4. Zero Clash Shop Drawings

Project Objective

Our scope included design and zero clash shop drawing for all the MEP special equipment for the pharma. Special industry with structural studies.

Project Summary

The new female students expansion in Ismailia is one of the regional Suez canal region educations expansion national projects owned by the ministry of higher education.

Disciplines

1. HVAC (DX air handling unit system)
2. Fire Fighting systems (Water based and clean agent systems).
3. Electrical systems (Power and Lighting systems)
4. Light current systems (nurse calling and fire alarm systems).
5. Plumbing systems (Water Supply and Sanitary Drainage).
6. Architectural detailing and family creation.
7. Structural shop drawings

Type Of Building: Residential building.

Project budget: 25,000,000 EGP

BIM LOD: 400

Unit of measurement: mm (SI units)

Revit Version: Revit 2021

Project Deliverables

1. MEP Revit Model (.rvt file)
2. Architectural and structural Revit Model (.rvt file)
3. All The mentioned disciplines Shop Drawings (DWG/PDF format).
4. 4D simulation video using Navisworks and execution supervision works.

Validating authority

The engineering administration in Suez Canal University.

Validation cycle

The average submission to approval period is nine working days