MEP PORTFOLIO

By Mohamed Dhansir

Er.Mohamed Dhansir

MEP Design & Drafting Portfolio

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Educational qualification

B.E., Mechanical Engineering May 2020
K.S.K College of Engineering And Technology, Darasuram, Tamilnadu

About me :

- Father's Name : Bakrudeen Ali M
- Date of Birth : 30-04-1999
- Sex : Male
- Nationality : Indian
- Marital Status : Unmarried
- Language : English,Tamil

Experience 01 :

Company : Eye design solutions, Kumbakonam
Job description : Junior Design Cum Draftsman
Duration : Jan 2021 - Till now

Job responsibilites :

- To carry out the design/drafting of Mechanical-Electrical-Plumbing-Fire Fighting service using latest Revit MEP & Auto Cad and MEP works for Residential, Commercial, Industrial and Application.
- Loading with MEP Engineering to gather information and requirements applicable for MEP Design.
- Preparing Revit BIM Model & Checking for clash detection with other service.
- Prepares final drawing by studying MEP sketches and supporting documents developing layout.
- Preparing 3D Model and visualization.
- Preparing of layout accounting to local and international standards.
- Able to read/check drawing pick up quality from drawings.
- Create and modify drawing for all existing and new project under general supervision.
- Create detailing MEP Design drawing using Auto Cad and Revit program.
- Able to perform draft SLD and basic calculation .Preparing presentation drawing in Auto Cad.
- Preparing of fabrication drawing and developing the plan room layout and sectional detail.
- Problem solved by manual and software. Receiving Emergency work and Finishing in time
- To prepare all tender document and BOQ with priced and unpriced.

Software Known :

CHAP HOURLY ANALYSIS PROGRAM
AUTOCAD
AUTODESK REVIT MEP
McQuay International McQuay Books >>Application Guides >>Bulletin
DIALux
Elite Software FIRE Fire Sprinkler Hydraulic Calculations Version 6.0.237
Office

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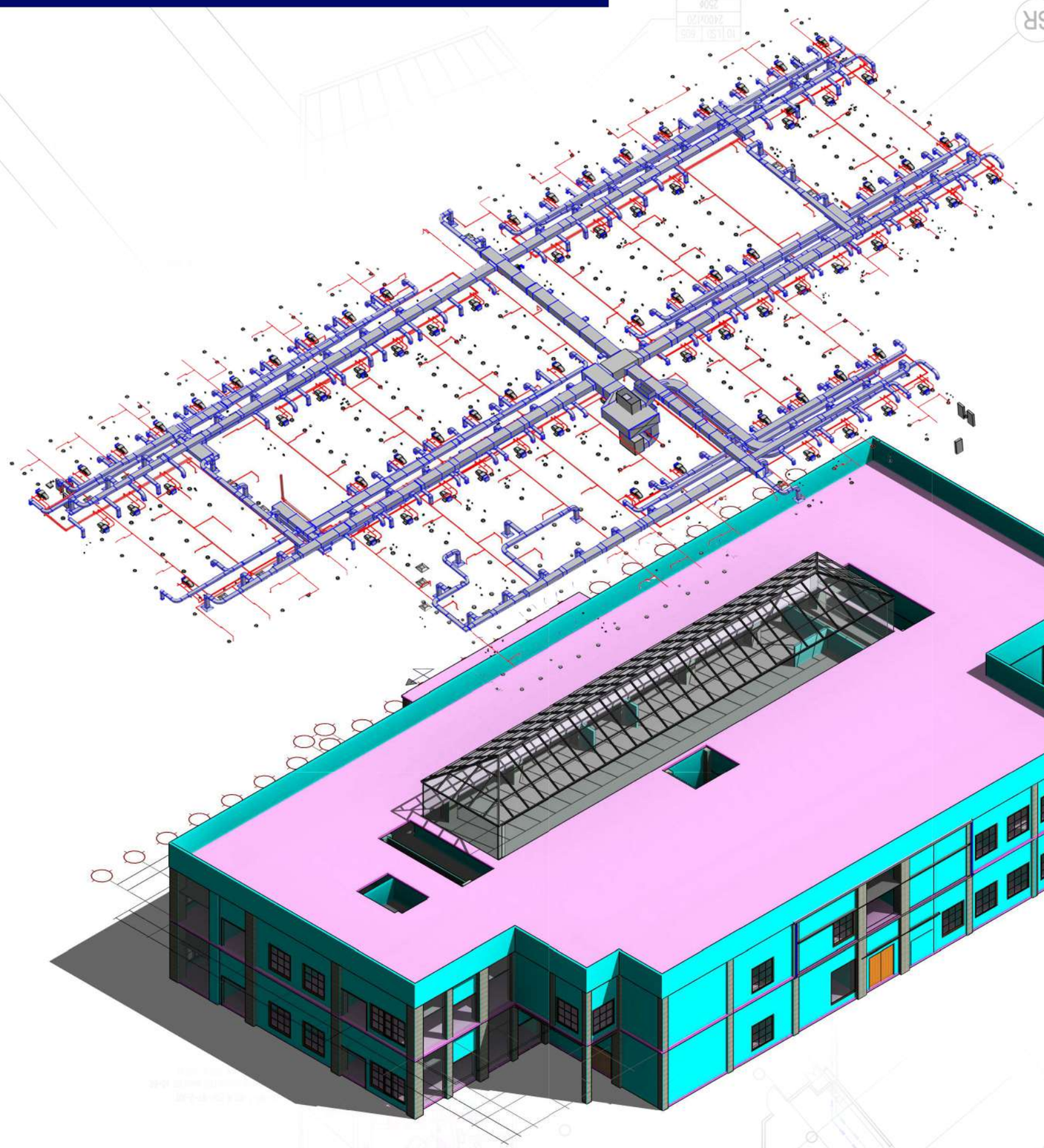
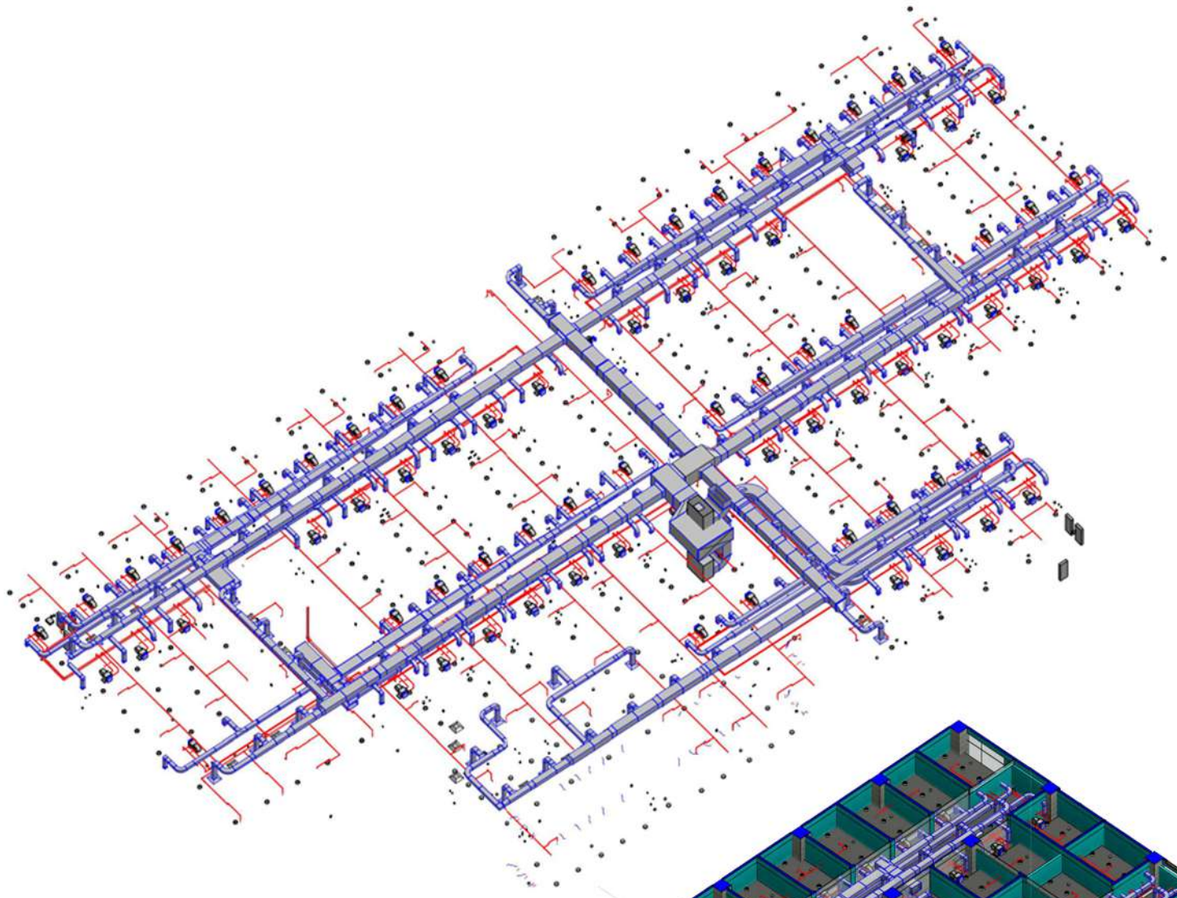
Revit MEP - Overall building 3D model

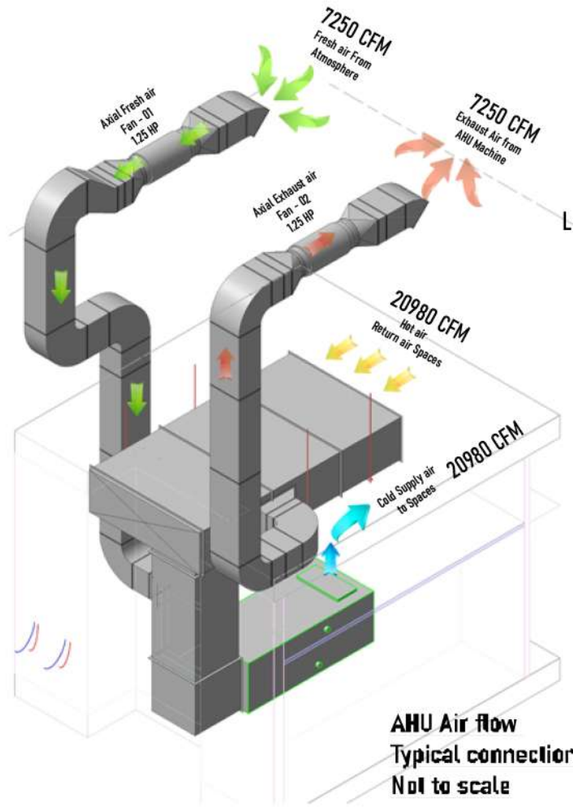


MEP 3D model
Office building

Architectural model
Office building

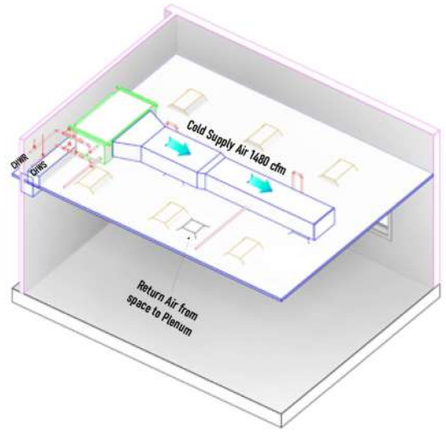
Revit MEP - Overall building HVAC details



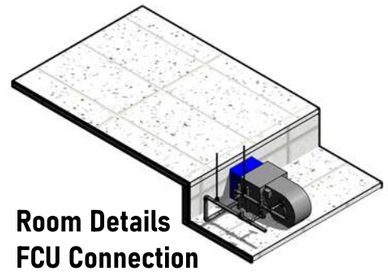


AHU Air flow
Typical connection details
Not to scale

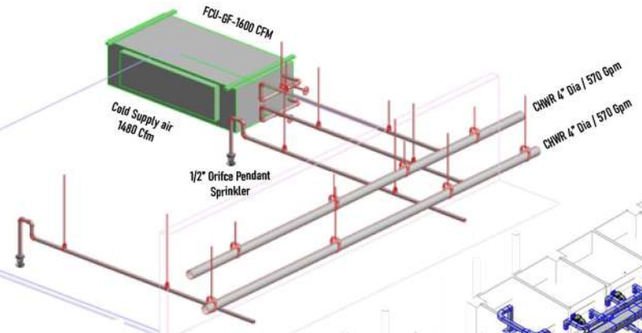
Lore



FCU Air flow
Typical connection details
Not to scale



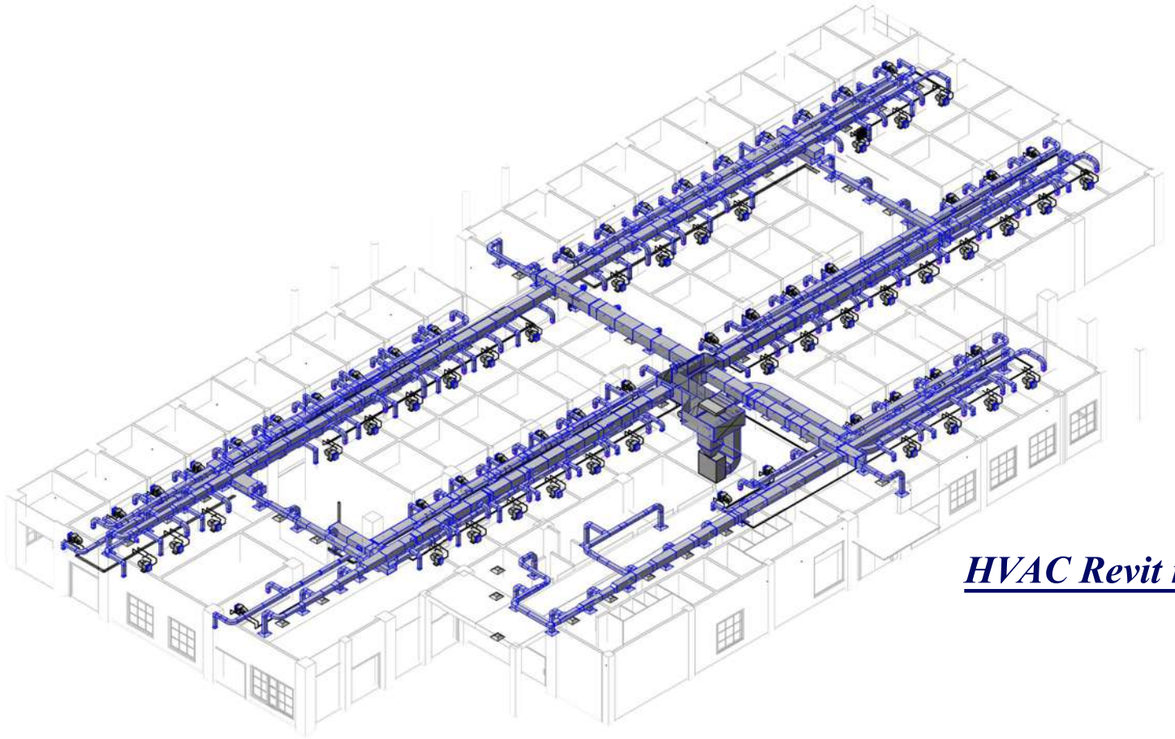
Room Details
FCU Connection



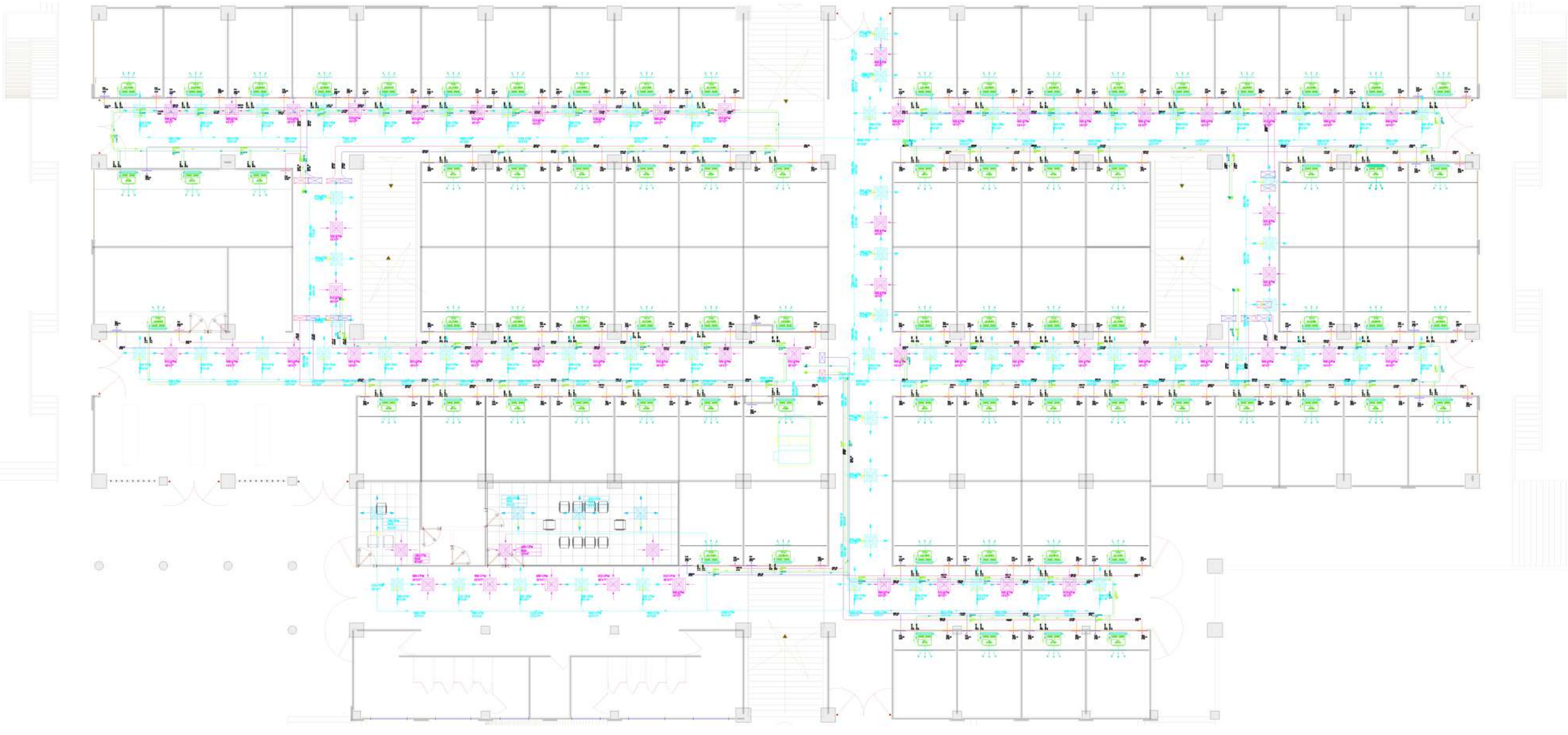
FCU
Typical connection details
Not to scale

Hvac 3d

AutoCAD & Revit MEP - HVAC sld & 3d model

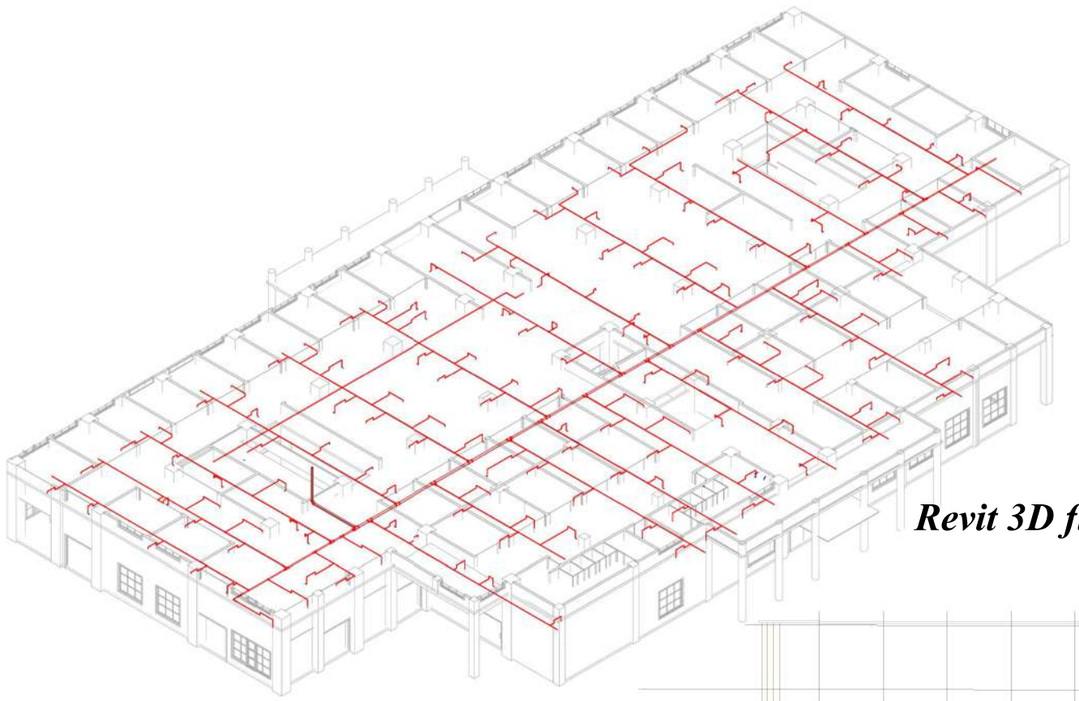


HVAC Revit model

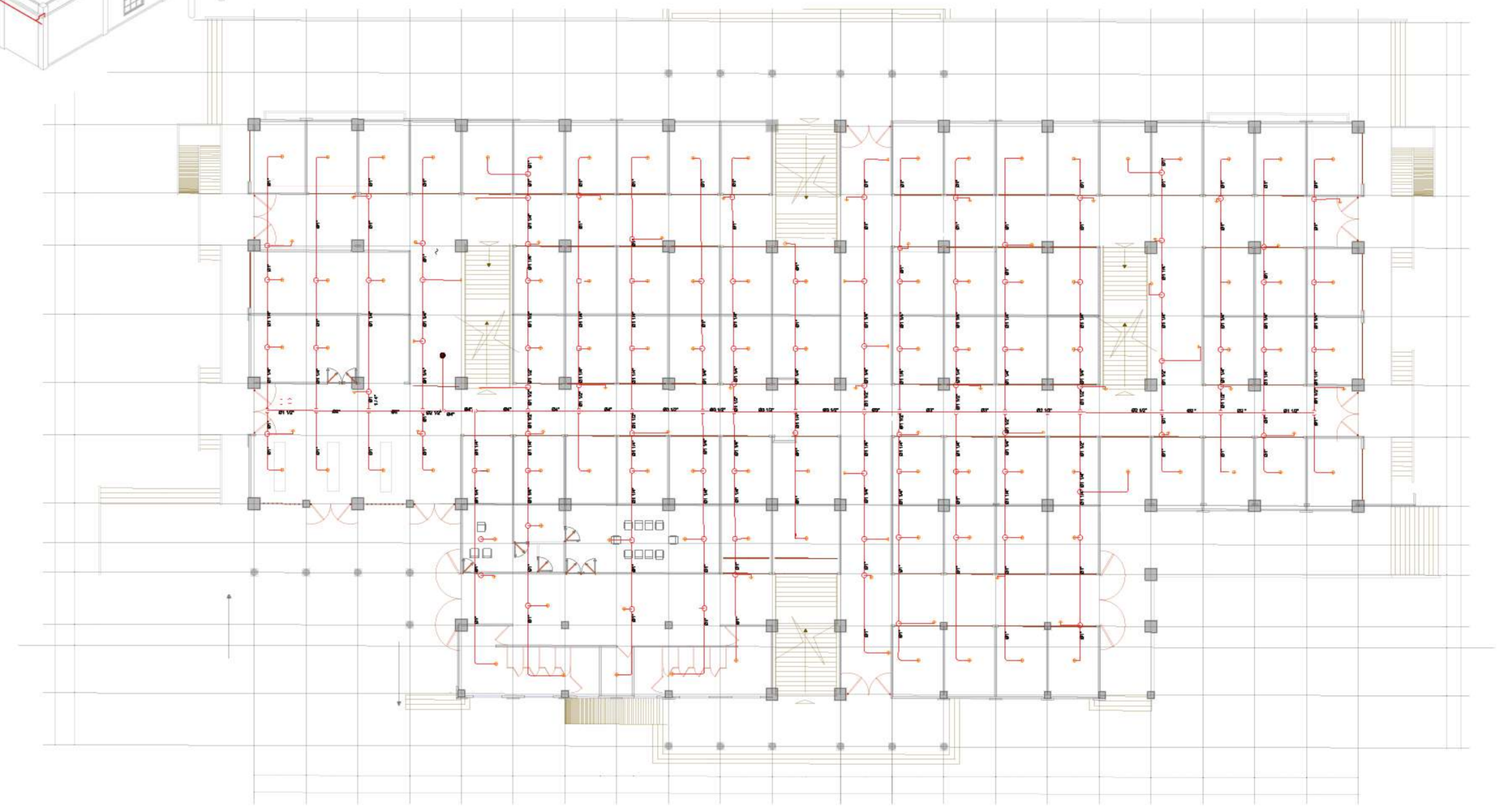


HVAC single line Drawing

AutoCAD & Revit MEP - Fire fighting SLD / 3d model

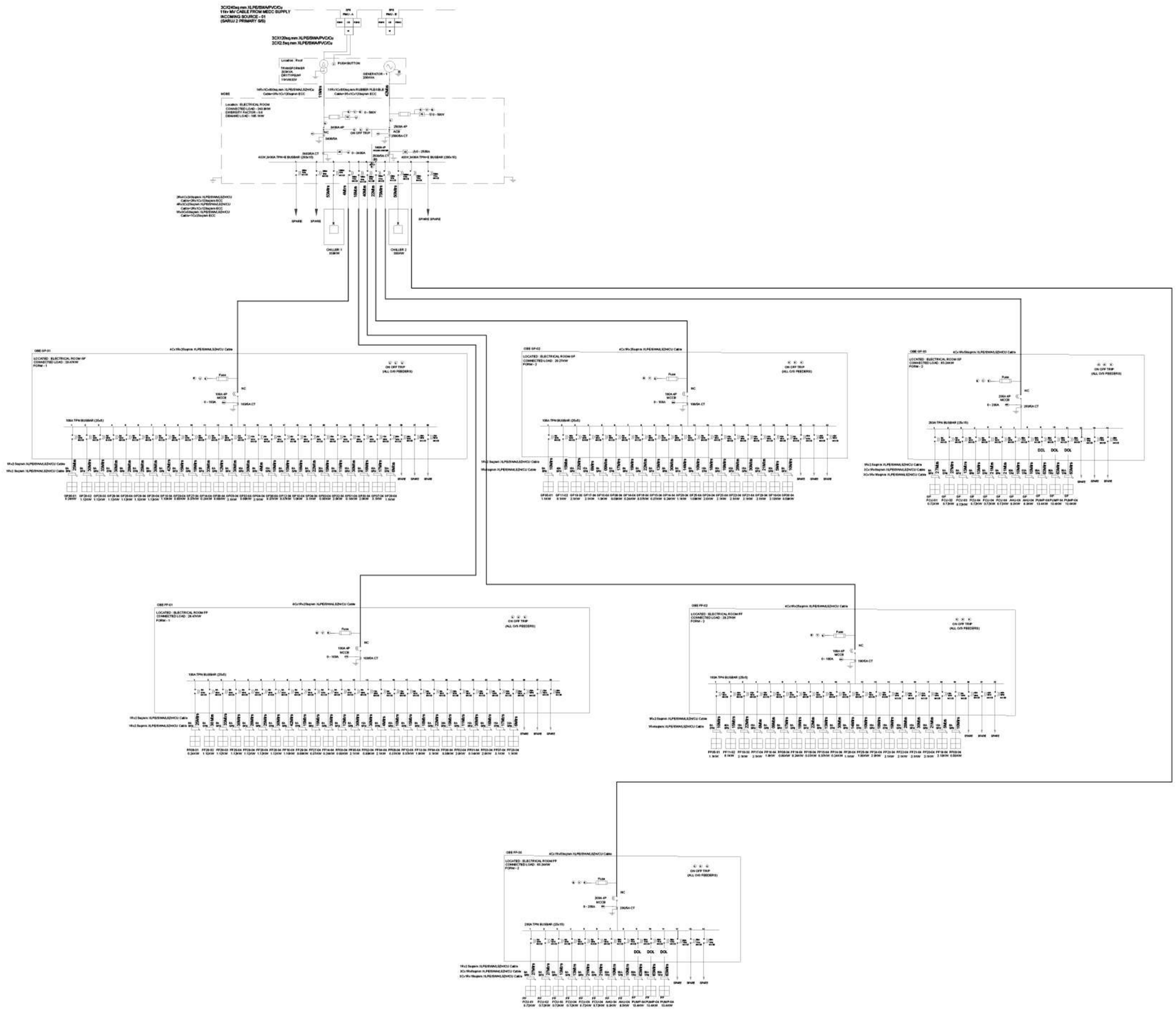


Revit 3D fire fighting model

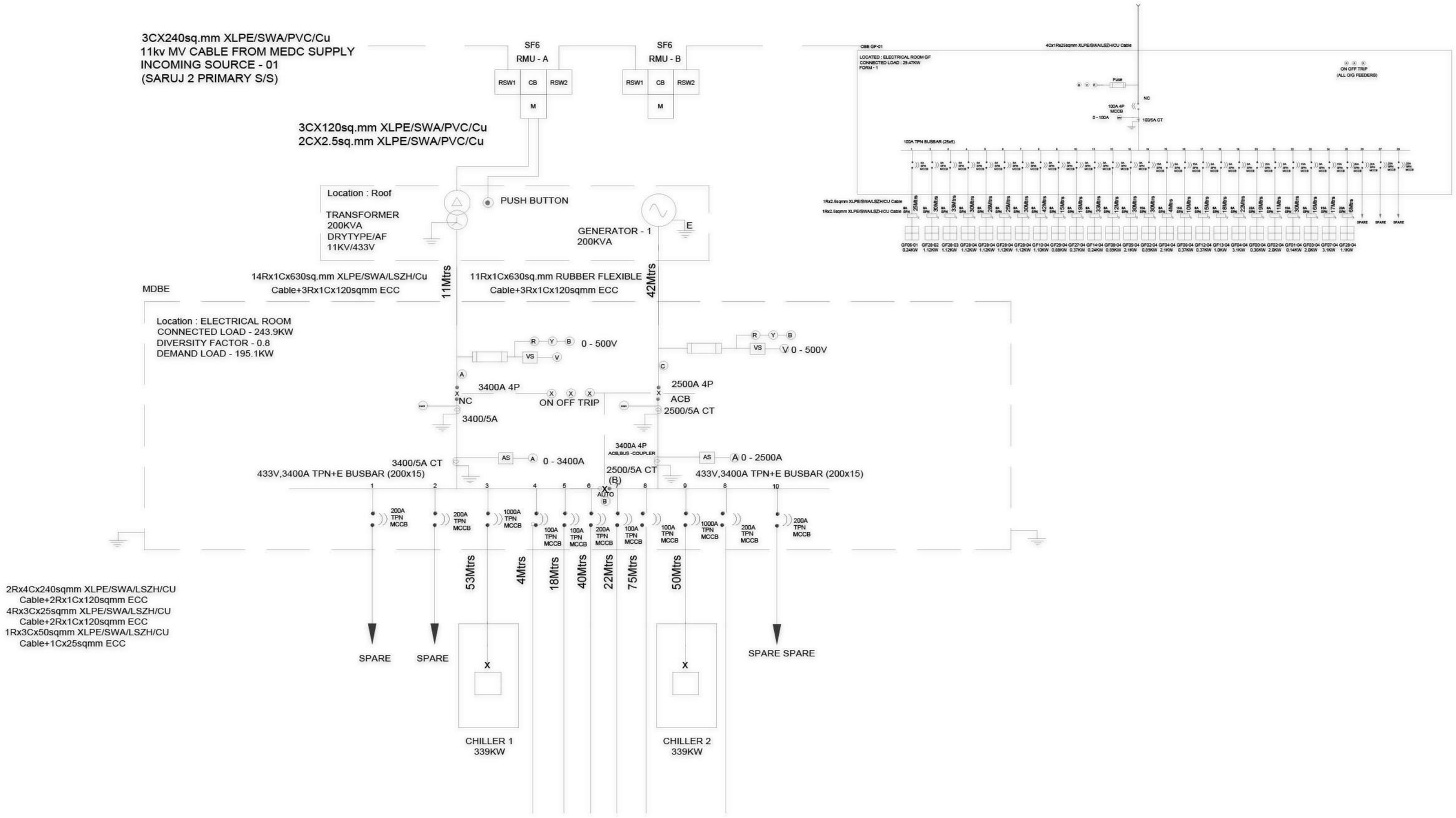


AutoCAD 2D fire fighting model

AutoCAD - Overall building electrical load schedule



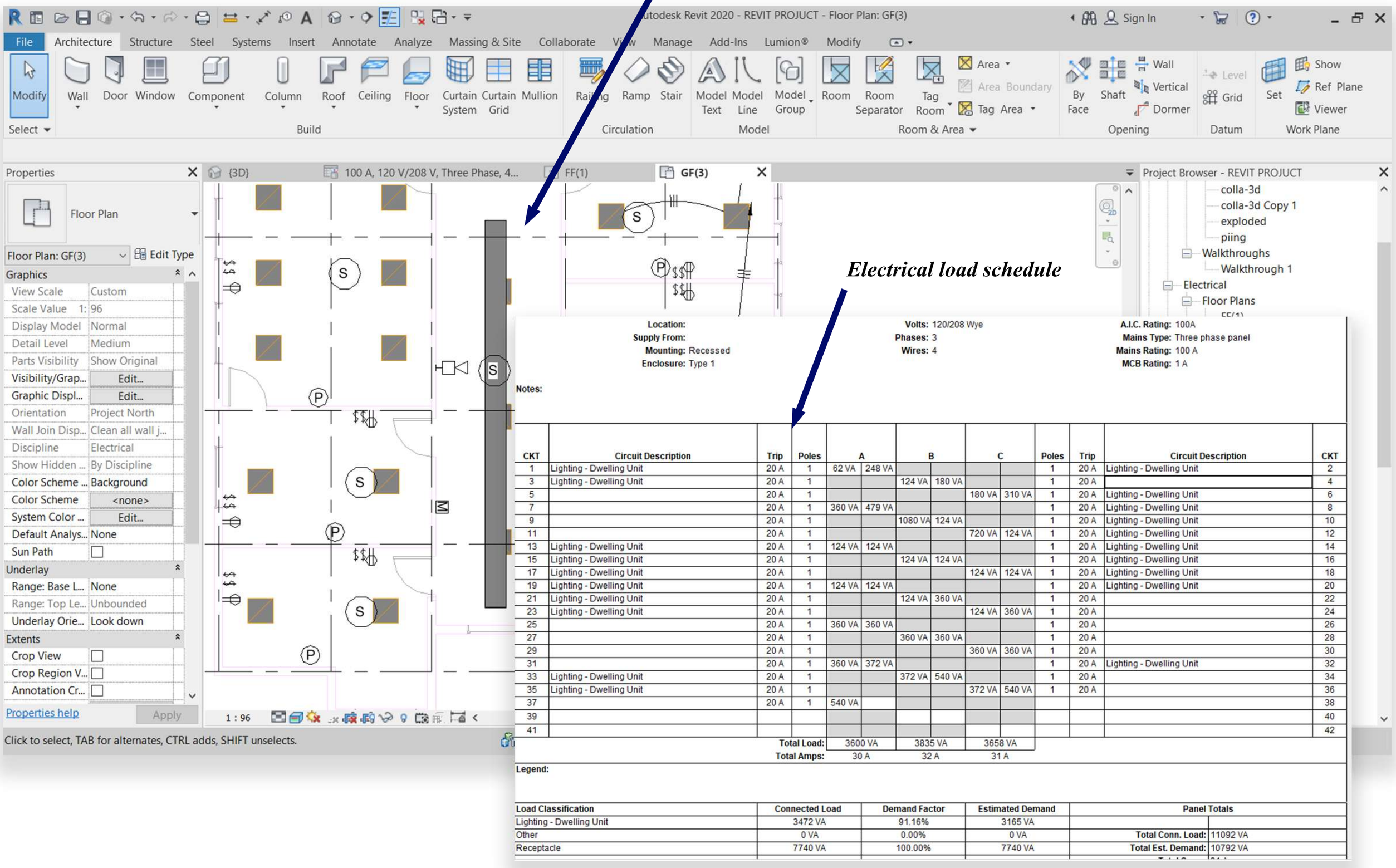
AutoCAD - Electrical load schedule & Panel Schedule



Revit MEP - Electrical load schedule & Panel layout

Electrical fixtures floor plan

Electrical load schedule



Location:
Supply From:
Mounting: Recessed
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 100A
Mains Type: Three phase panel
Mains Rating: 100 A
MCB Rating: 1 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting - Dwelling Unit	20 A	1	62 VA	248 VA					1	20 A	Lighting - Dwelling Unit	2
3	Lighting - Dwelling Unit	20 A	1			124 VA	180 VA			1	20 A		4
5		20 A	1					180 VA	310 VA	1	20 A	Lighting - Dwelling Unit	6
7		20 A	1	360 VA	479 VA					1	20 A	Lighting - Dwelling Unit	8
9		20 A	1			1080 VA	124 VA			1	20 A	Lighting - Dwelling Unit	10
11		20 A	1					720 VA	124 VA	1	20 A	Lighting - Dwelling Unit	12
13	Lighting - Dwelling Unit	20 A	1	124 VA	124 VA					1	20 A	Lighting - Dwelling Unit	14
15	Lighting - Dwelling Unit	20 A	1			124 VA	124 VA			1	20 A	Lighting - Dwelling Unit	16
17	Lighting - Dwelling Unit	20 A	1					124 VA	124 VA	1	20 A	Lighting - Dwelling Unit	18
19	Lighting - Dwelling Unit	20 A	1	124 VA	124 VA					1	20 A	Lighting - Dwelling Unit	20
21	Lighting - Dwelling Unit	20 A	1			124 VA	360 VA			1	20 A		22
23	Lighting - Dwelling Unit	20 A	1					124 VA	360 VA	1	20 A		24
25		20 A	1	360 VA	360 VA					1	20 A		26
27		20 A	1			360 VA	360 VA			1	20 A		28
29		20 A	1					360 VA	360 VA	1	20 A		30
31		20 A	1	360 VA	372 VA					1	20 A	Lighting - Dwelling Unit	32
33	Lighting - Dwelling Unit	20 A	1			372 VA	540 VA			1	20 A		34
35	Lighting - Dwelling Unit	20 A	1					372 VA	540 VA	1	20 A		36
37		20 A	1	540 VA									38
39													40
41													42
		Total Load:		3600 VA		3835 VA		3658 VA					
		Total Amps:		30 A		32 A		31 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	3472 VA	91.16%	3165 VA		
Other	0 VA	0.00%	0 VA	**Total Conn. Load:**	11092 VA
Receptacle	7740 VA	100.00%	7740 VA	**Total Est. Demand:**	10792 VA

Hap - Hourly Analysis Program - Heat load calculation E20 format

HAP49 - [Untitled]

Project Edit View Reports Wizards Help

Untitled
- Weather
- Spaces
- Systems
- Plants
- Buildings
- Project Libraries
  - Schedules
  - Walls
  - Roofs
  - Windows
  - Doors
  - Shades
  - Chillers
  - Cooling Towers
  - Boilers
  - Electric Rates
  - Fuel Rates

<New default Space>

CONFIRANCE

Space Settings

Space Properties - [CONFIRANCE]

General | Internals | Walls, Windows, Doors | Roofs, Skylights | Infiltration | Floors | Partitions

Name: CONFIRANCE

Floor Area: 357.0 ft²

Avg Ceiling Height: 9.0 ft

Building Weight: 70.0 lb/ft²

Light

OA Ventilation Requirements

Space Usage: OFFICE: Office space

OA Requirement 1: 5.0 CFM/pers

OA Requirement 2: 0.06 CFM/ft²

Space usage defaults: ASHRAE Std 62.1-200
Defaults can be changed via View/Preference

OK

Heat load result

Air System Sizing Summary for SAD

Project Name: Untitled
Prepared by: SARAN

10/20/2021
04:31PM

Air System Information

Air System Name	SAD	Number of zones	1
Equipment Class	CW AHU	Floor Area	357.0 ft²
Air System Type	VAV	Location	Chennai, India

Sizing Calculation Information

Calculation Months	Jan to Dec	Zone CFM Sizing	Peak zone sensible load
Sizing Data	Calculated	Space CFM Sizing	Individual peak space loads

Central Cooling Coil Sizing Data

Total coil load	3.8	Tons	Load occurs at	Aug 1600
Total coil load	45.8	MBH	OA DB / WB	100.6 / 76.9 °F
Sensible coil load	39.7	MBH	Entering DB / WB	78.1 / 63.7 °F
Coil CFM at Aug 1600	1591	CFM	Leaving DB / WB	55.0 / 53.7 °F
Max block CFM at Aug 1900	1698	CFM	Coil ADP	52.4 °F
Sum of peak zone CFM	1698	CFM	Bypass Factor	0.100
Sensible heat ratio	0.865		Resulting RH	46 %
ft²/Ton	93.5		Design supply temp.	55.0 °F
BTU/(hr-ft²)	128.4		Zone T-stat Check	1 of 1 OK
Water flow @ 10.0 °F rise	9.17	gpm	Max zone temperature deviation	0.0 °F

Preheat Coil Sizing Data

No heating coil loads occurred during this calculation.

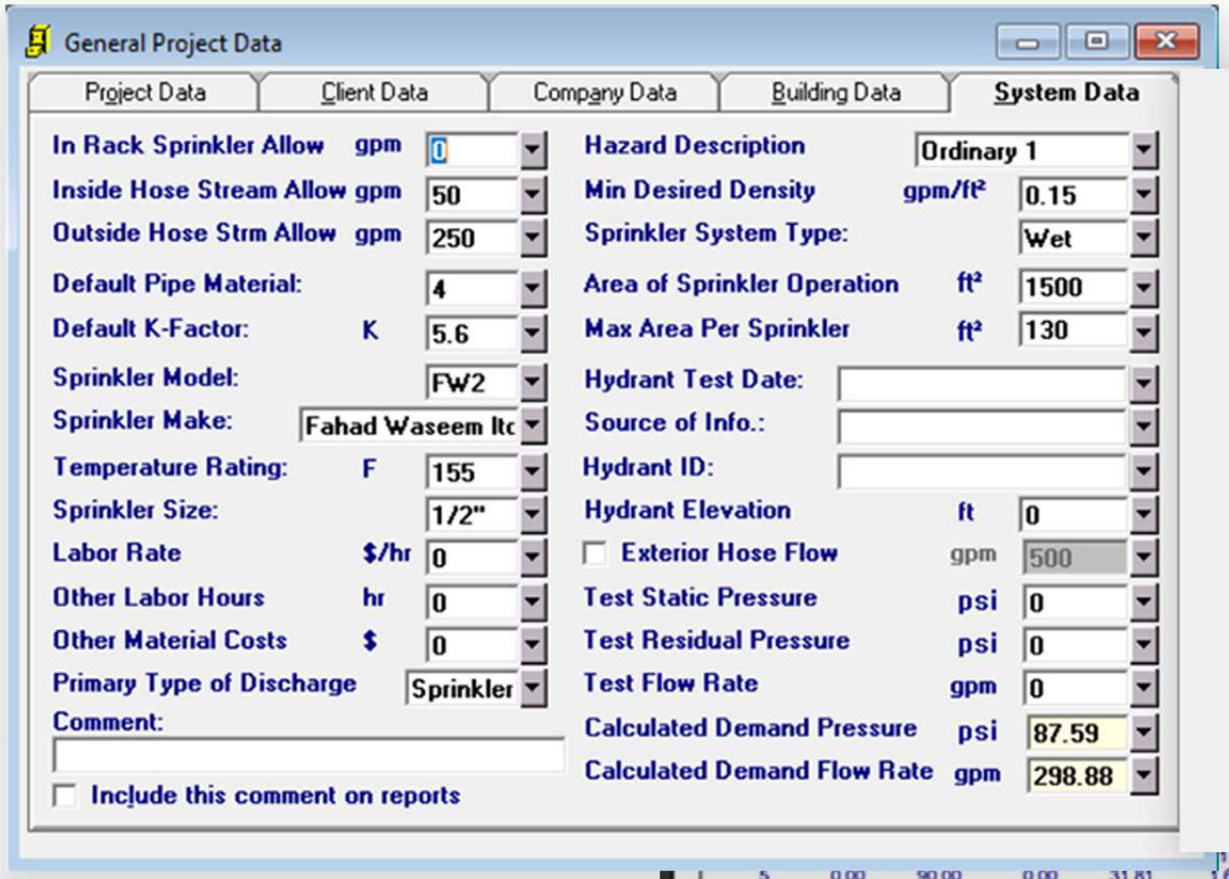
Supply Fan Sizing Data

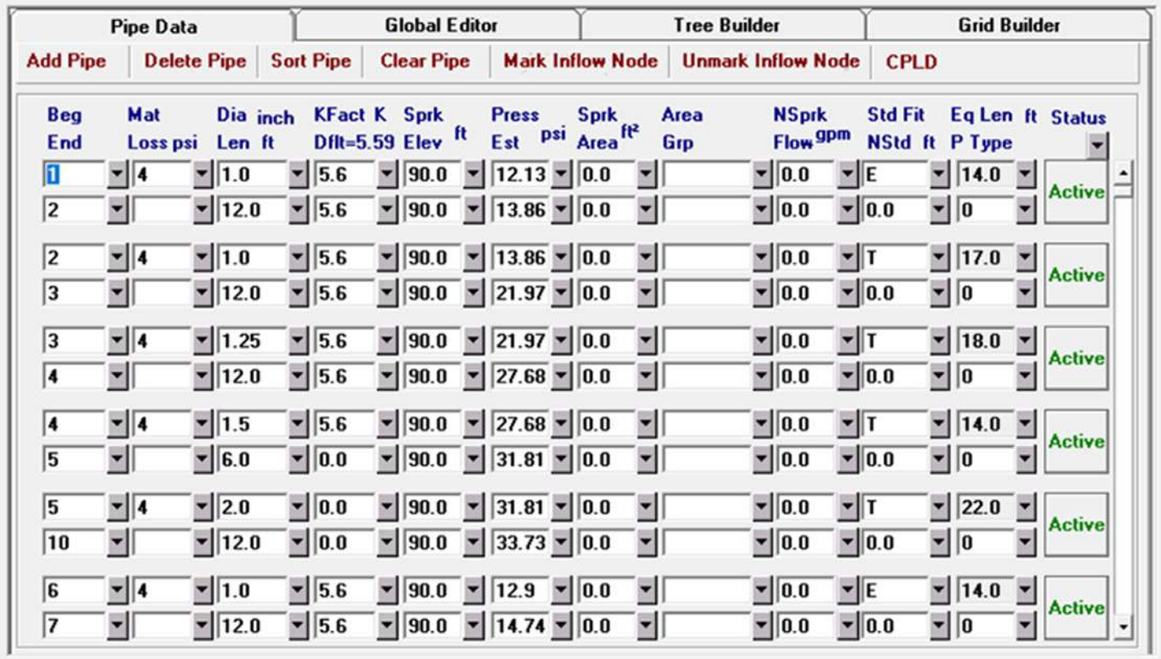
Actual max CFM at Aug 1900	1698	CFM	Fan motor BHP	0.00 BHP
Standard CFM	1694	CFM	Fan motor kW	0.00 kW
Actual max CFM/ft²	4.76	CFM/ft²	Fan static	0.00 in wg

Outdoor Ventilation Air Data

Design airflow CFM	121	CFM	CFM/person	7.78 CFM/person
CFM/ft²	0.34	CFM/ft²		

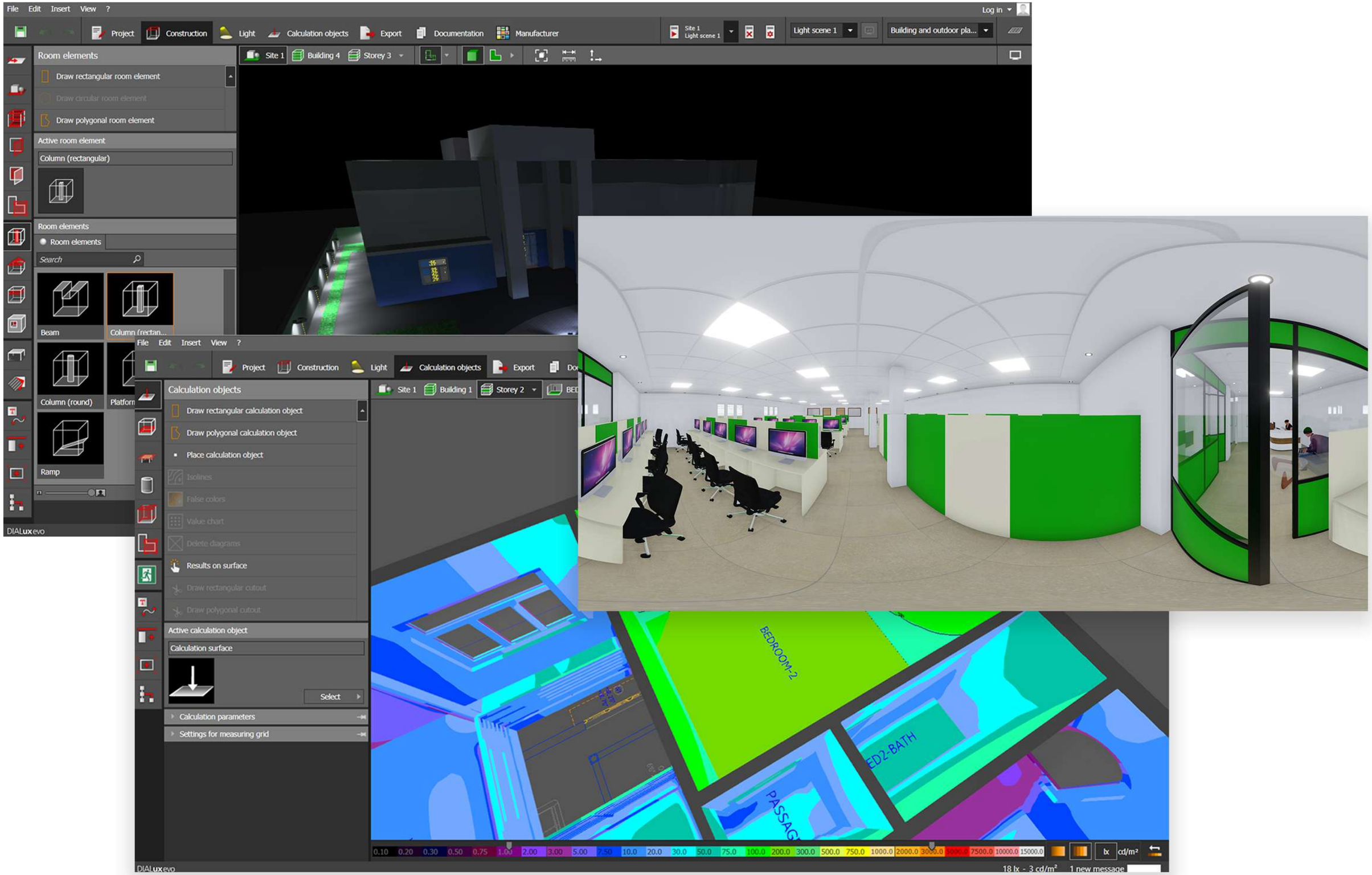
ELite fire - Hydraulic calculation as per NFPA standard



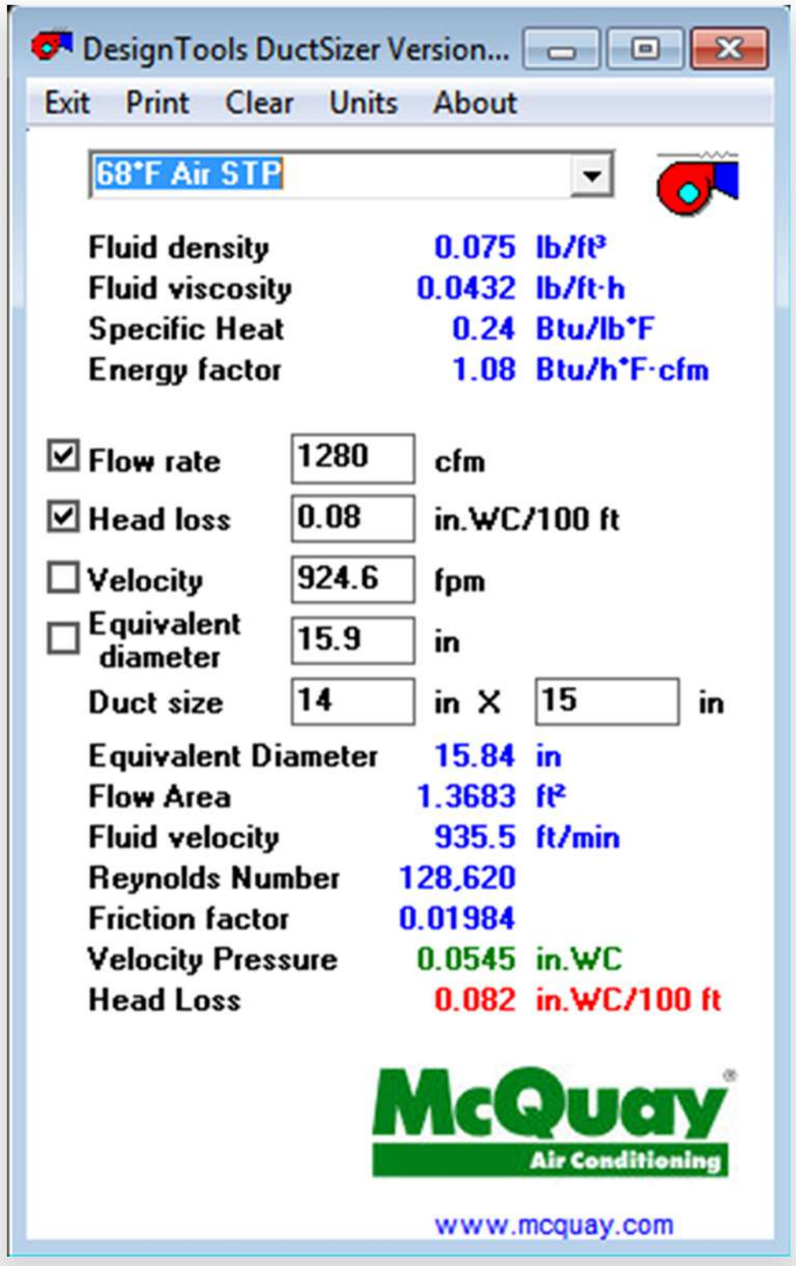


5	0.00	90.00	0.00	31.81	1.610	96.06	T	8.00	0.000	
	SCHED 40 WET STEEL				120	15.14	0	14.00	4.126	
6	5.60	90.00	20.11	12.90	1.00	0.00	0.13155	12.00	1.842	
7	5.60	90.00	21.50	14.74	1.049	20.11	E	2.00	0.000	
	SCHED 40 WET STEEL				120	7.47	0	14.00	1.842	
7	5.60	90.00	21.50	14.74	1.00	0.00	0.50500	12.00	8.585	
8	5.60	90.00	27.05	23.33	1.049	41.61	T	5.00	0.000	
	SCHED 40 WET STEEL				120	15.45	0	17.00	8.585	
8	5.60	90.00	27.05	23.33	1.25	0.00	0.33541	12.00	6.037	
9	5.60	90.00	30.35	29.36	1.380	68.66	T	6.00	0.000	
	SCHED 40 WET STEEL				120	14.73	0	18.00	6.037	
5	0.00	90.00	0.00	31.81	2.00	0.00	0.08728	12.00	1.920	
10	0.00	90.00	0.00	33.73	2.067	96.06	T	10.00	0.000	
	SCHED 40 WET STEEL				120	9.18	0	22.00	1.920	
9	5.60	90.00	30.35	29.36	1.50	0.00	0.31160	6.00	4.362	
10	0.00	90.00	0.00	33.73	1.610	99.00	T	8.00	0.000	
	SCHED 40 WET STEEL				120	15.60	0	14.00	4.362	
11	5.60	90.00	21.12	14.22	1.00	0.00	0.14399	12.00	2.016	
12	5.60	90.00	22.57	16.24	1.049	21.12	E	2.00	0.000	
	SCHED 40 WET STEEL				120	7.84	0	14.00	2.016	
12	5.60	90.00	22.57	16.24	1.00	0.00	0.55253	12.00	9.393	
13	5.60	90.00	28.35	25.63	1.049	43.69	T	5.00	0.000	
	SCHED 40 WET STEEL				120	16.22	0	17.00	9.393	
13	5.60	90.00	28.35	25.63	1.25	0.00	0.36658	12.00	6.598	
14	5.60	90.00	31.79	32.23	1.380	72.04	T	6.00	0.000	
	SCHED 40 WET STEEL				120	15.45	0	18.00	6.598	
10	0.00	90.00	0.00	33.73	2.50	0.00	0.13620	12.00	3.269	
15	0.00	90.00	0.00	37.00	2.469	195.06	T	12.00	0.000	
	SCHED 40 WET STEEL				120	13.07	0	24.00	3.269	

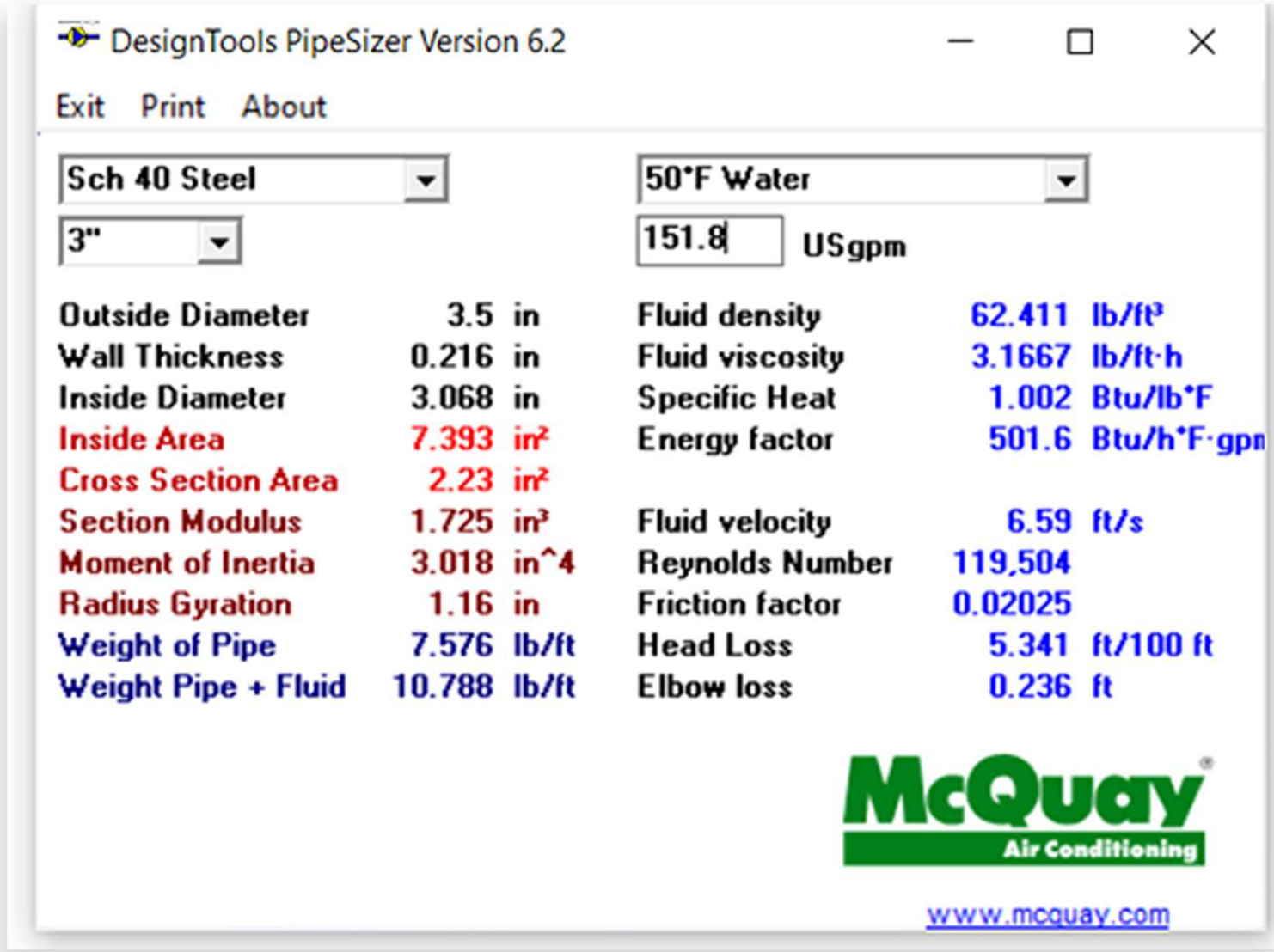
Dialux Evo - Indoor & Outdoor Lighting design



Mcquay Ductsizer and Pipesizer

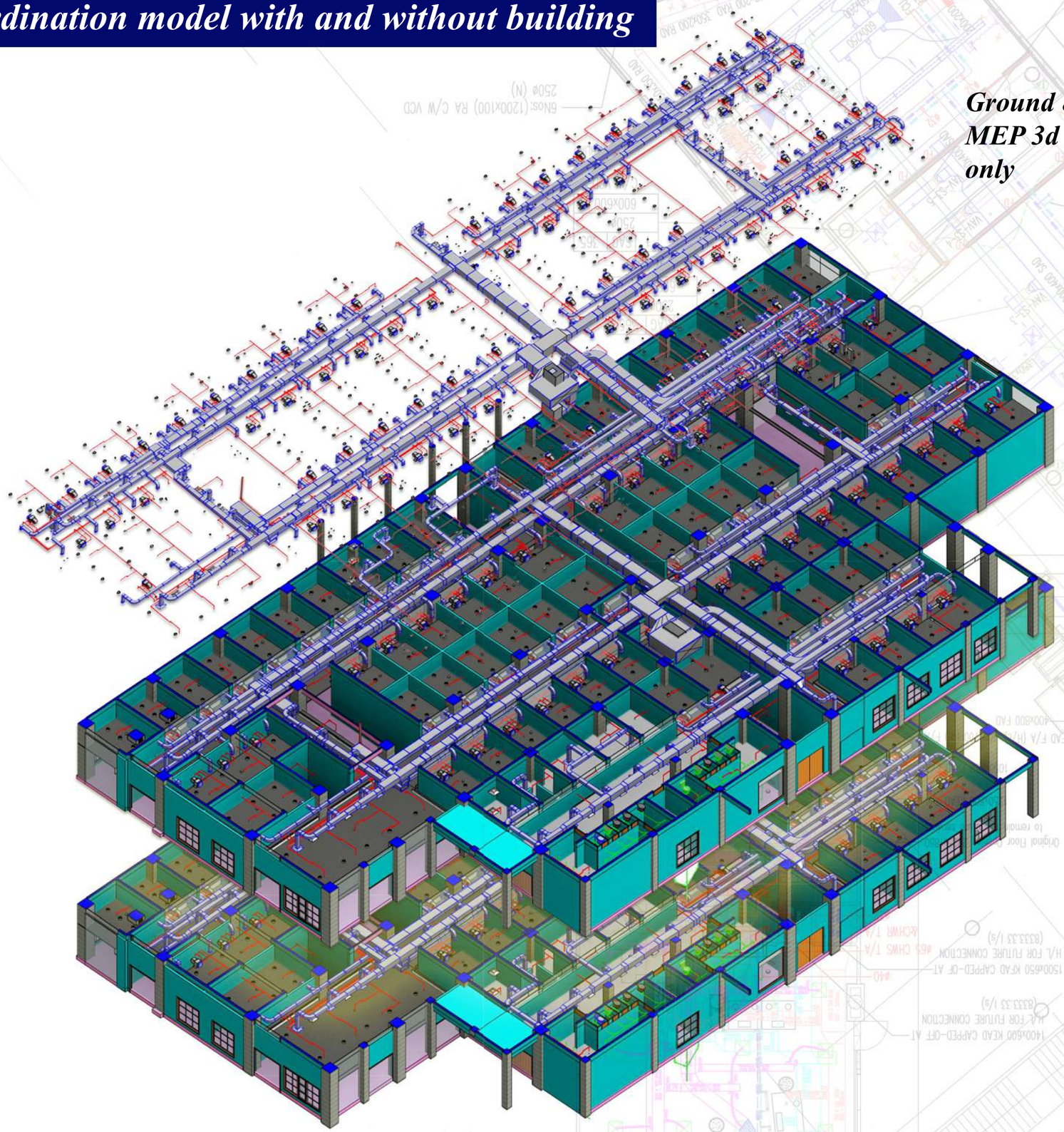


Mcquay Ductsizer



Mcquay Pipesizer

Revit MEP - Co-ordination model with and without building

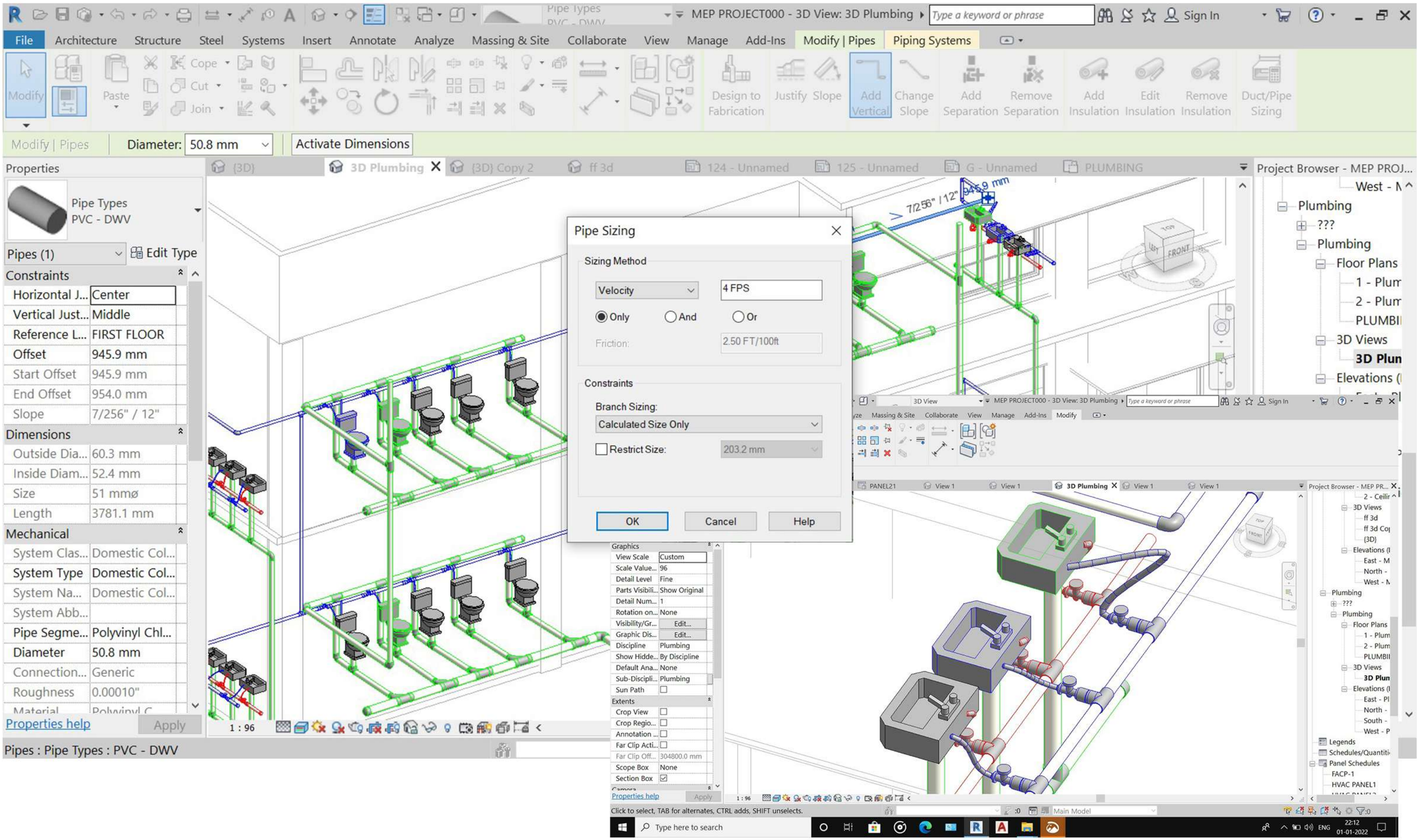


Ground & First floor MEP 3d model only

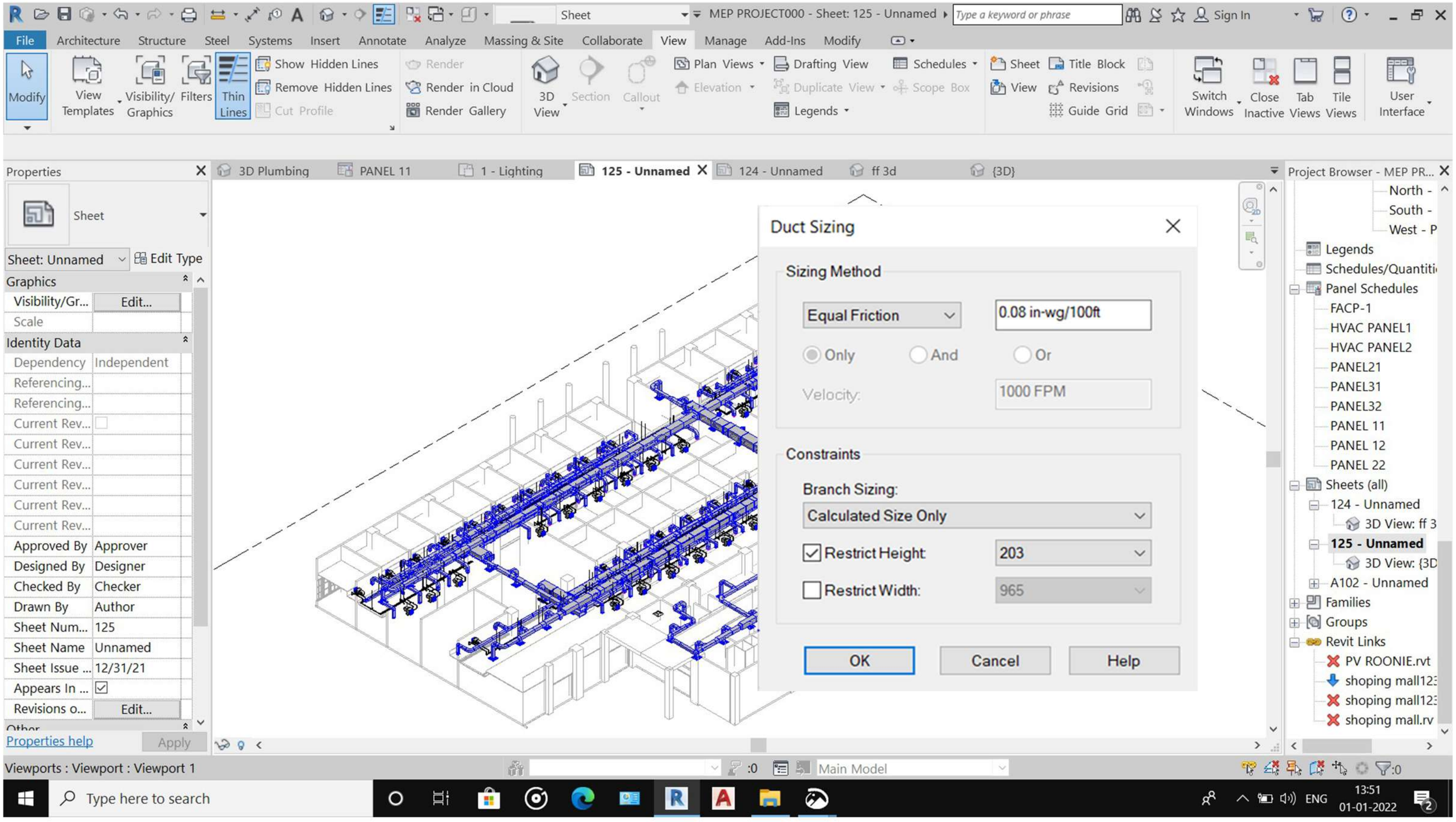
First floor with full Co-ordination

Ground floor with full Co-ordination

Revit MEP - Domestic Cold Water pipe sizing using velocity limitation



Revit MEP - Duct Sizing using Equal friction method



Revit MEP - Plumbing model

Plumbing Plan view

Lavoratory Connection detail

Revit MEP - Electrical BOQ

Cable Tray Fitting BOQ		
Family and Type	Count	Size
Channel Reducer: Standard	1	6"x6"-2"x2"
Channel Reducer: Standard	1	6"x6"-6"x4"
Channel Horizontal Tee: 12" Radius	1	24"x6"-6"x6"-6"x6"
Grand total: 3	3	

CABLE TRAY BOQ			
Family and Type	Length	Size	Count
Cable Tray with Fittings: Channel Cable Tray	14046	2"x2"	1
Cable Tray with Fittings: Channel Cable Tray	41783	6"x4"	1
Cable Tray with Fittings: Channel Cable Tray	4148	24"x6"	1
Grand total: 3	59977		3

ELECTRICAL FIXTURES BOQ	
Family and Type	Count
Duplex Receptacle: Standard	98
Grand total: 98	98

Lighting Device Schedule	
Count	Family and Type
198	Lighting Switches: Single Pole
198	

LIGHTING FIXTURES DETAILS		
Count	Family and Type	Type
159	Plain Recessed Lighting Fixture: 600 X 600 - 120 V	600 X 600 - 120 V
159		

Fire Alarm Device Schedule	
Count	Family and Type
17	M_Fire Alarm Horn - Wall Mounted: Standard
45	M_Fire Alarm Strobe Speaker - Ceiling Mounted: Standard
17	M_Manual Pull Station: Standard
56	M_Smoke Detector: Plain
135	

PANEL BOQ	
Family and Type	Count
Ethernet Switch: Standard	1
Lighting and Appliance Panelboard - 208V MLO: 100 A	2
Lighting and Appliance Panelboard - 208V MLO: 225 A	1
Grand total: 4	4