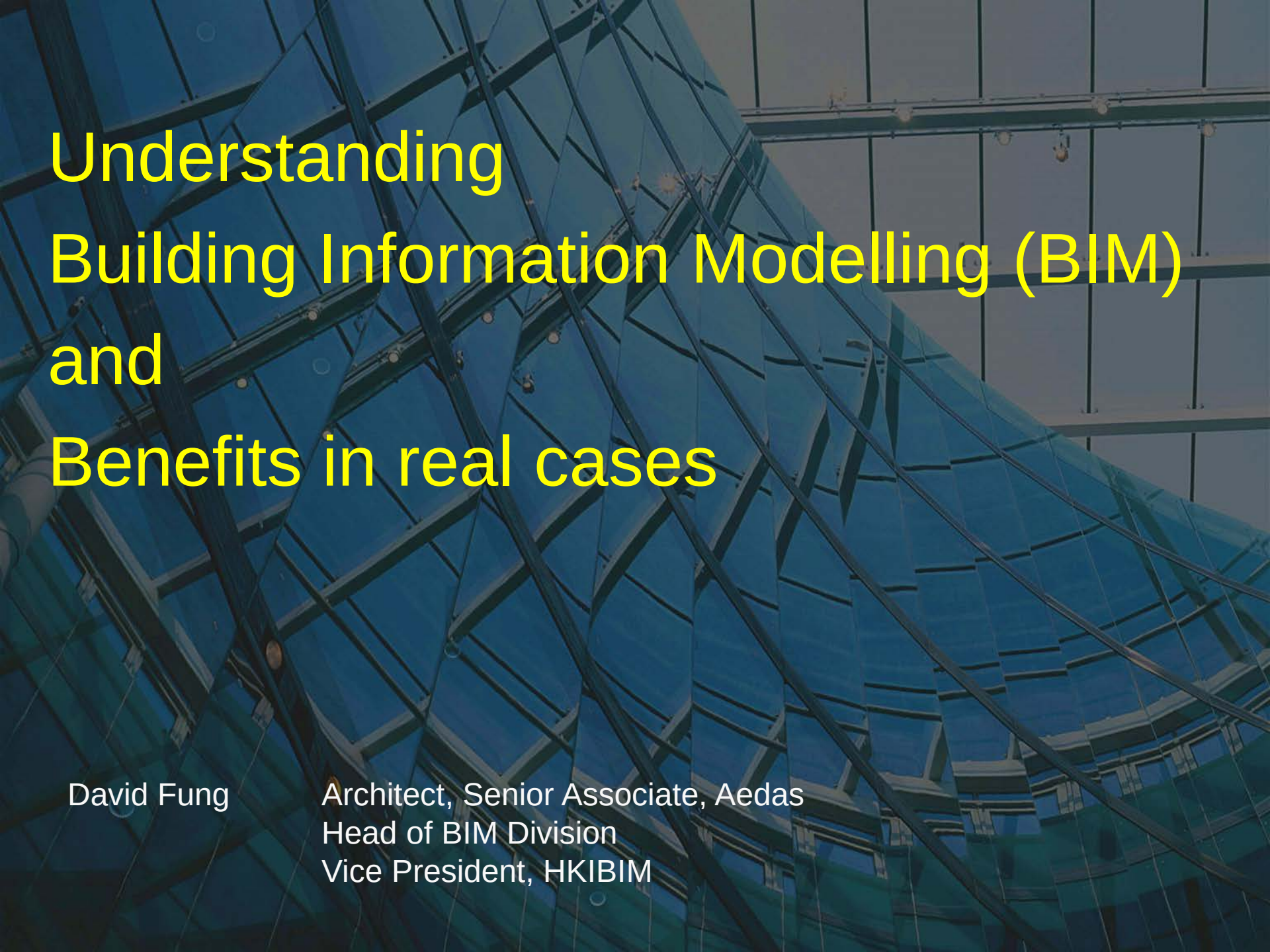




Understanding Building Information Modelling (BIM) and Benefits in real cases

David Fung

Architect, Senior Associate, Aedas
Head of BIM Division
Vice President, HKIBIM

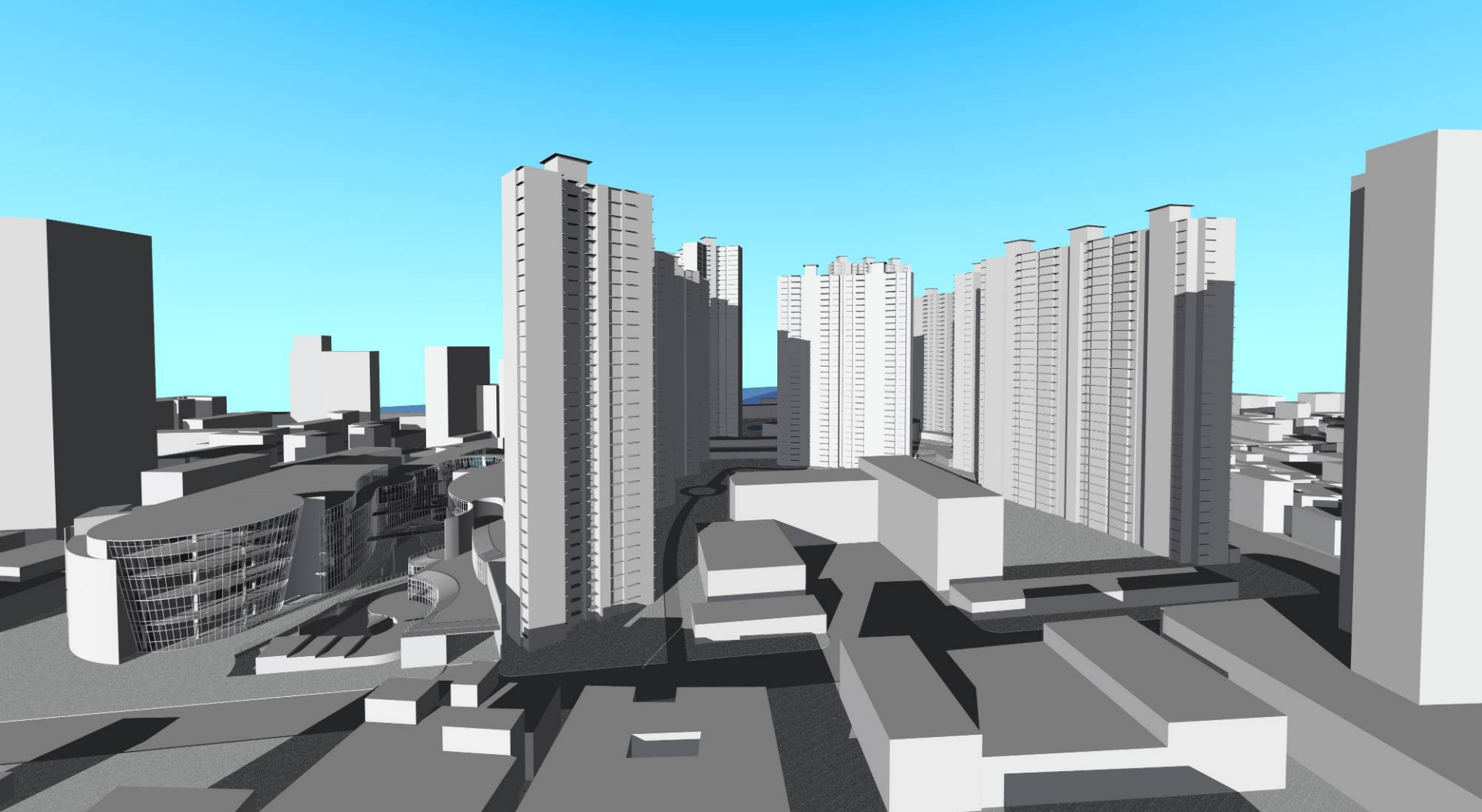
Use of Building Information Modeling (BIM)

BIMの活用

1. **Design visualization** 設計の可視化
2. **Drawing Productions** 図面製作
3. **Services Co-ordination and Clash detection with other disciplines** 多部門との連携と干渉チェック
4. **Quantity taking and preparation of Tender Document** 数量拾い及び入札書類の作成
5. **Automated Statutory Submission** 確認申請図書作成の自動化
6. **Scientific analysis of different environmental aspects** 様々な環境解析
7. **Supply Chain Integration with the manufacturing and production** サプライヤとの連携
8. **Complex Geometry** 複雑な形状を実現可能

Use of Building Information Modeling (BIM)

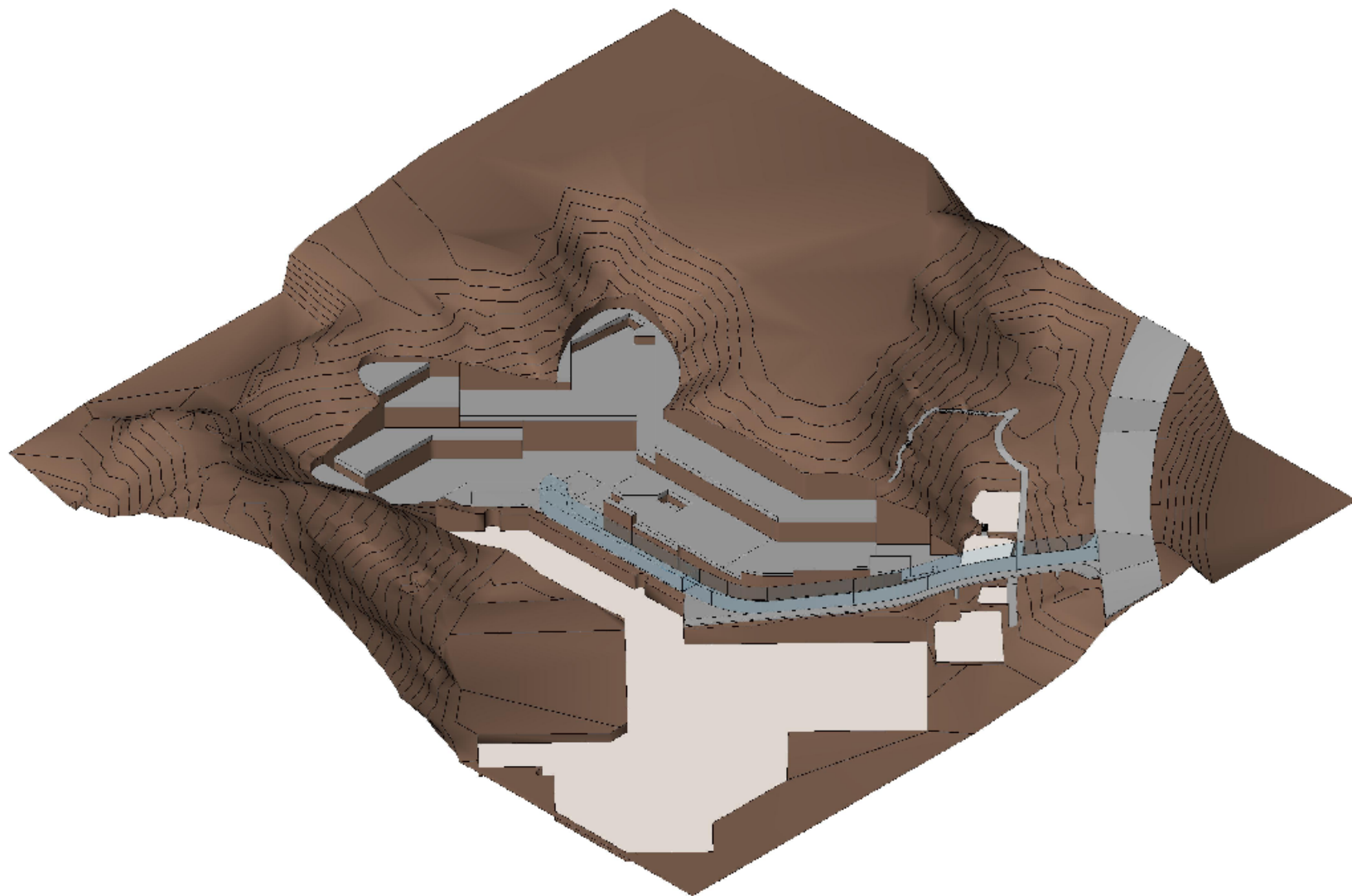
1. **Design visualization** 設計の可視化
2. Drawing Productions
3. Services Co-ordination and Clash detection with other disciplines
4. Quantity taking and preparation of Tender Document
5. Automated Statutory Submission
6. Scientific analysis of different environmental aspects
7. Supply Chain Integration with the manufacturing and production
8. Complex Geometry



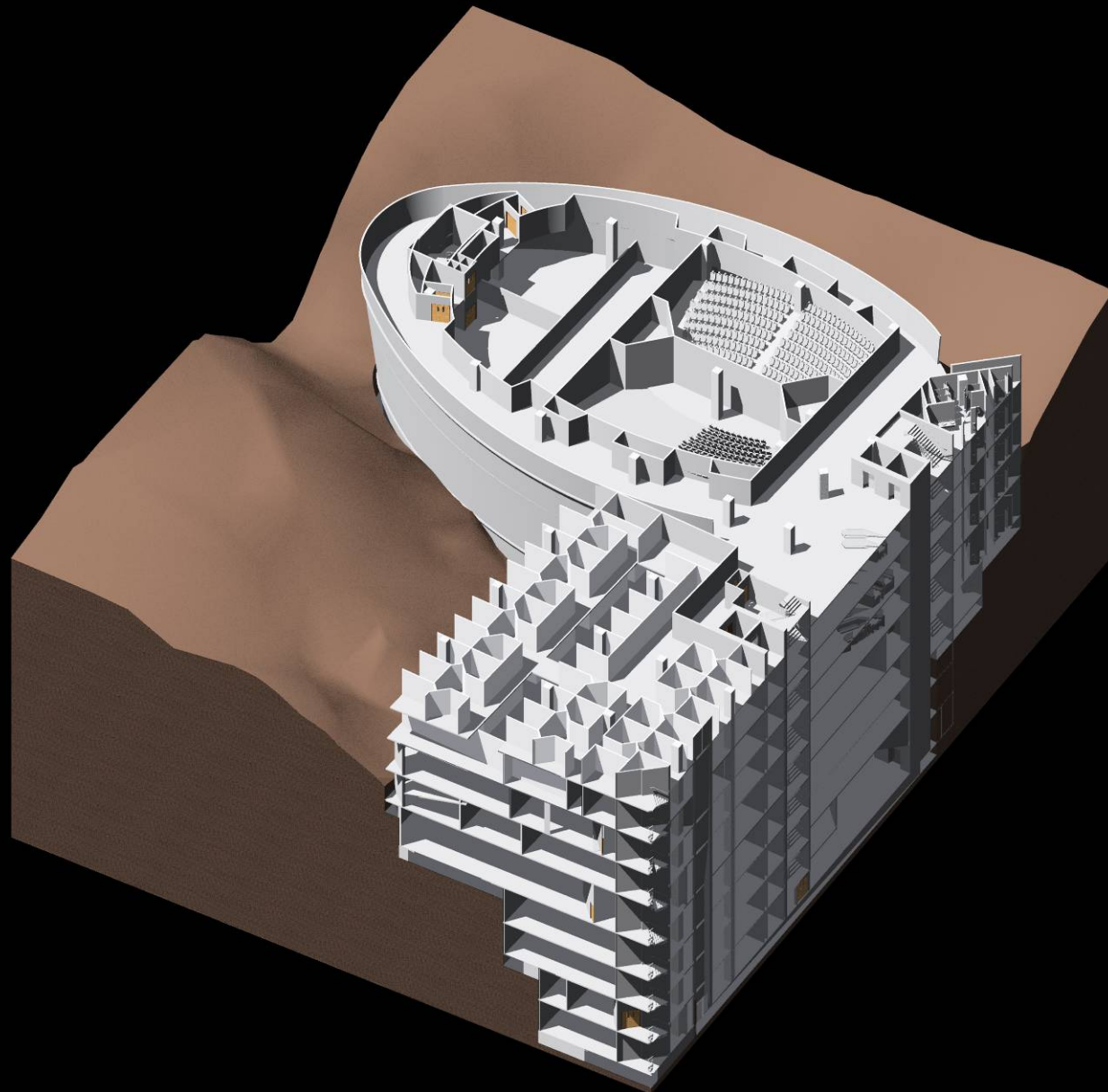
BUILDING IN CONTEXT

BUILDING IN GOOGLE EARTH





TOPOGRAPHY HANDLING



BUILDING IN SITE CONTEXT

VISUALIZATION & DRAWING PRODUCTION



VISUALIZATION & DRAWING PRODUCTION

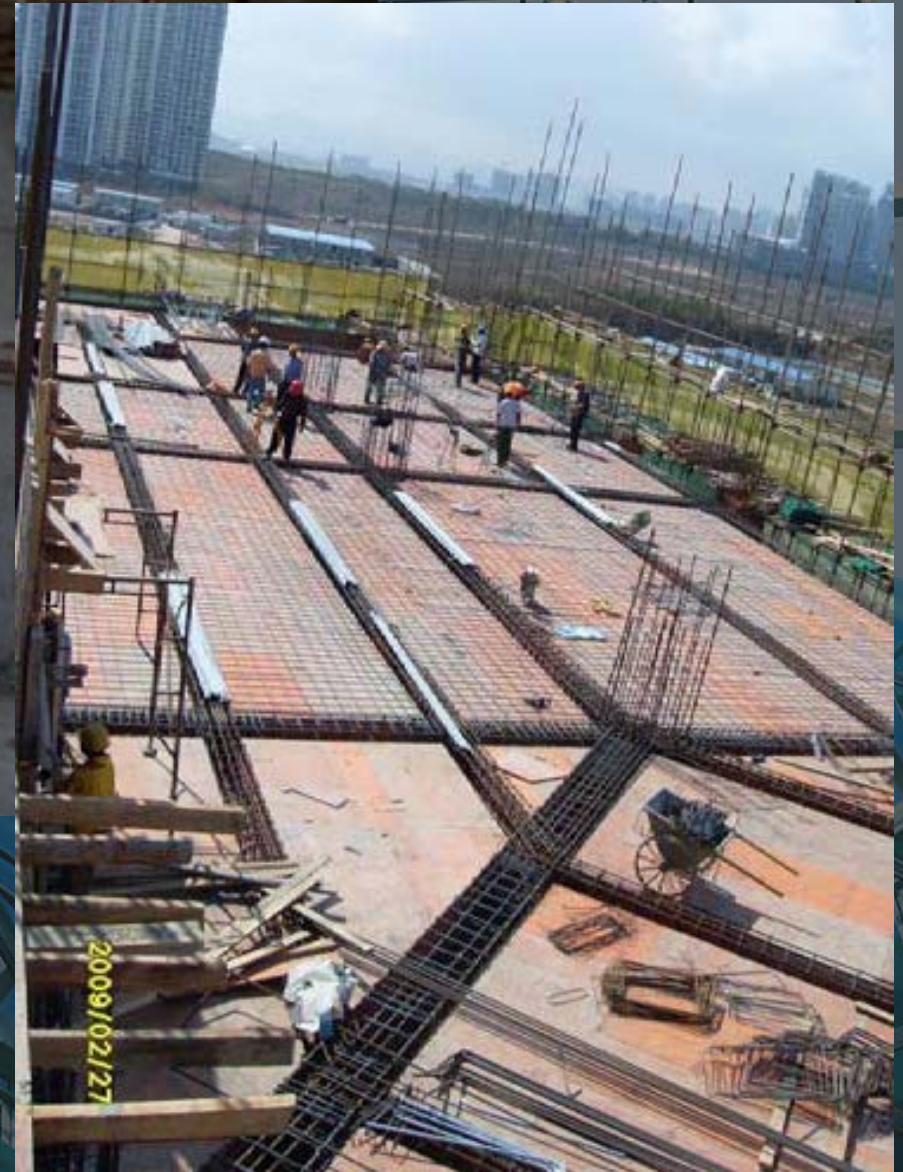


VISUALIZATION & PRODUCTION





PERSPECTIVE



VISUALIZATION & PRODUCTION



VISUALIZATION & PRODUCTION



VISUALIZATION & PRODUCTION



VISUALIZATION & PRODUCTION

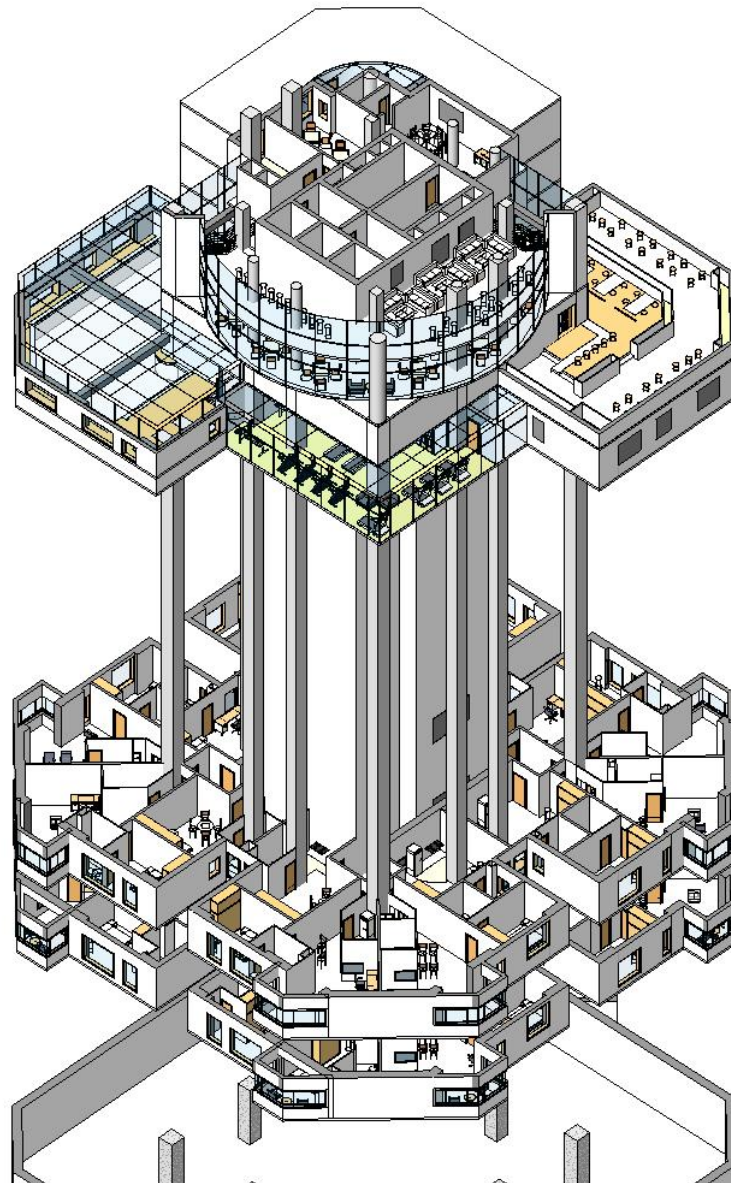




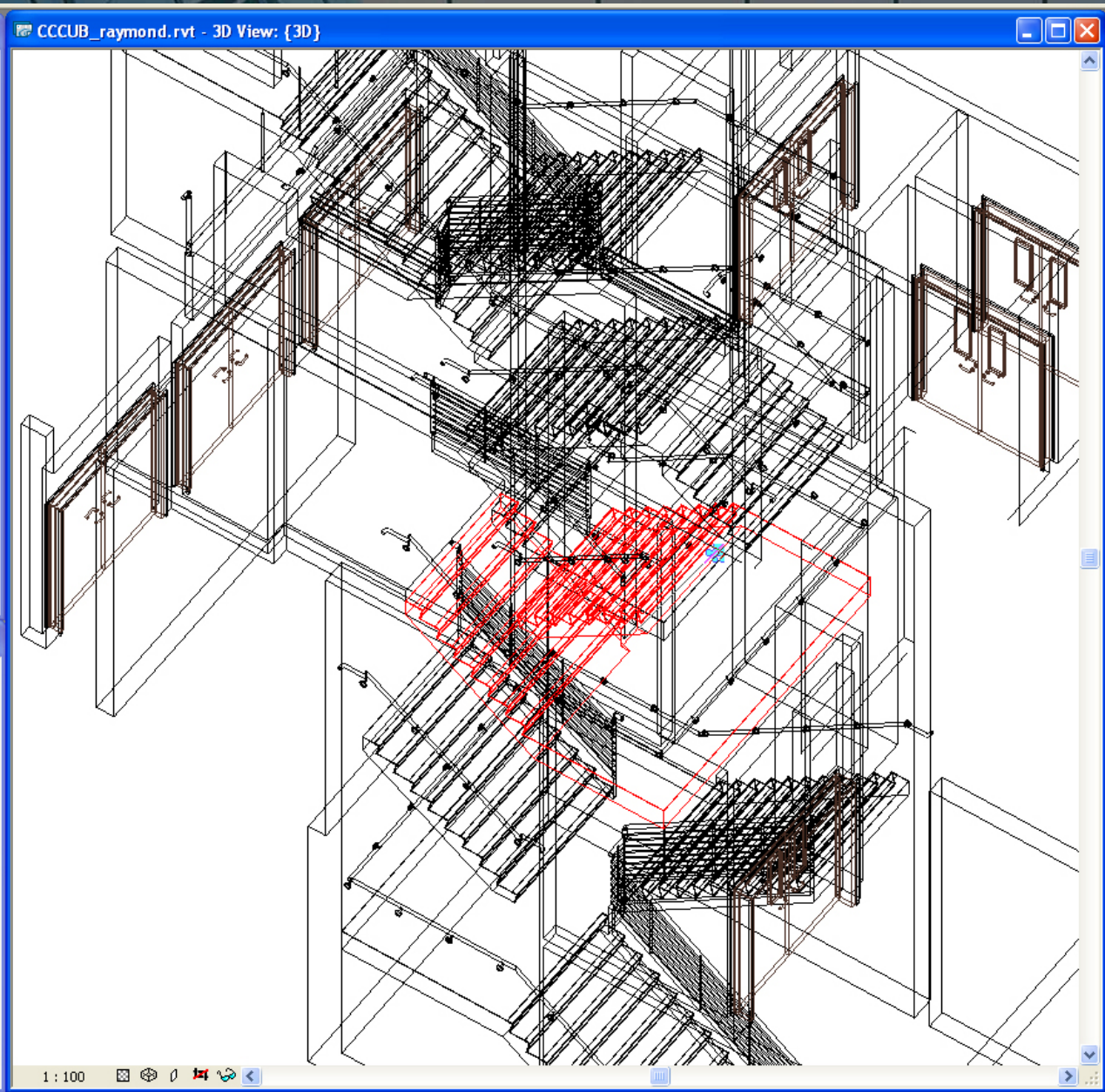
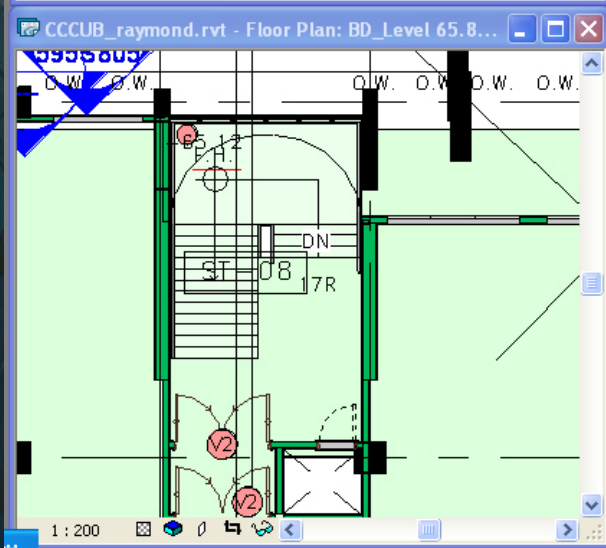
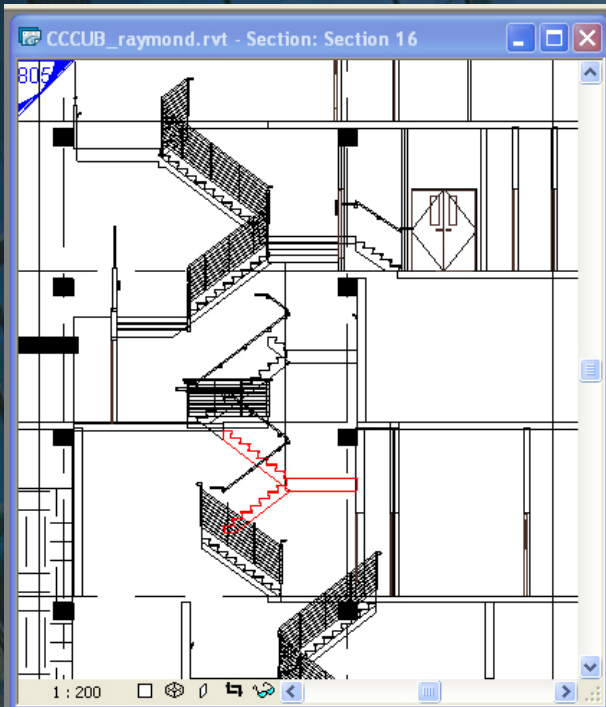
VISUALIZATION



FAÇADE PANEL DESIGN



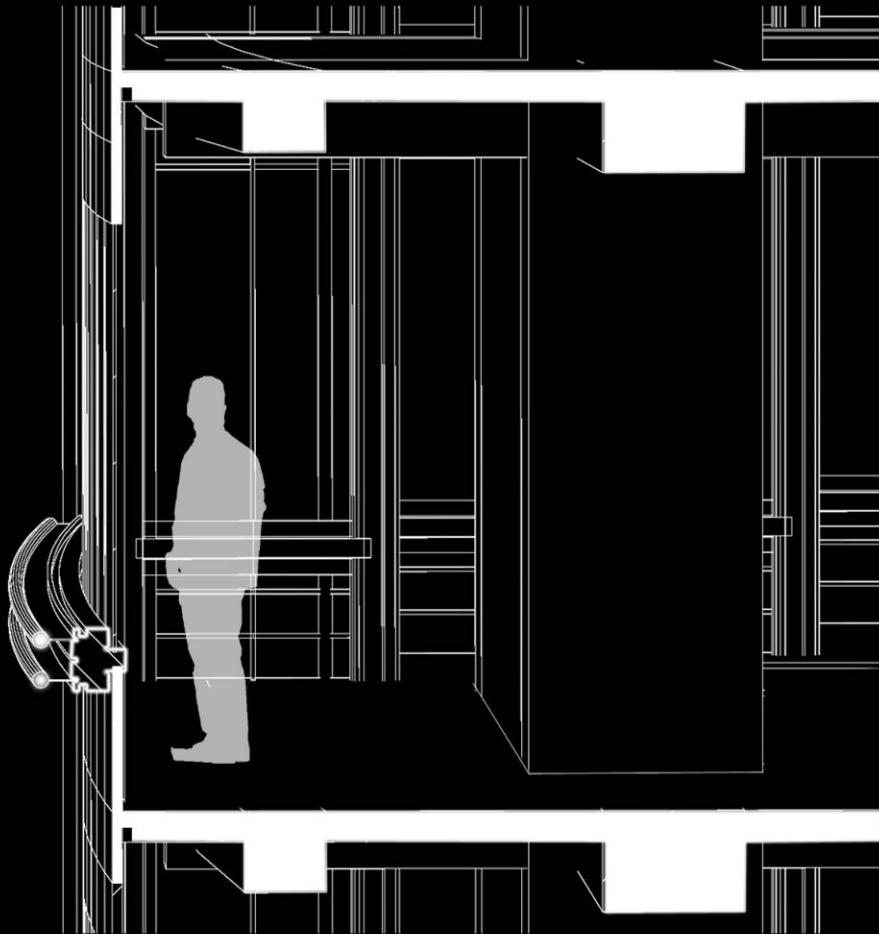
VERTICAL CO-ORDINATION



VERTICAL CO-ORDINATION



FAÇADE DESIGN and CO-ORDINATION

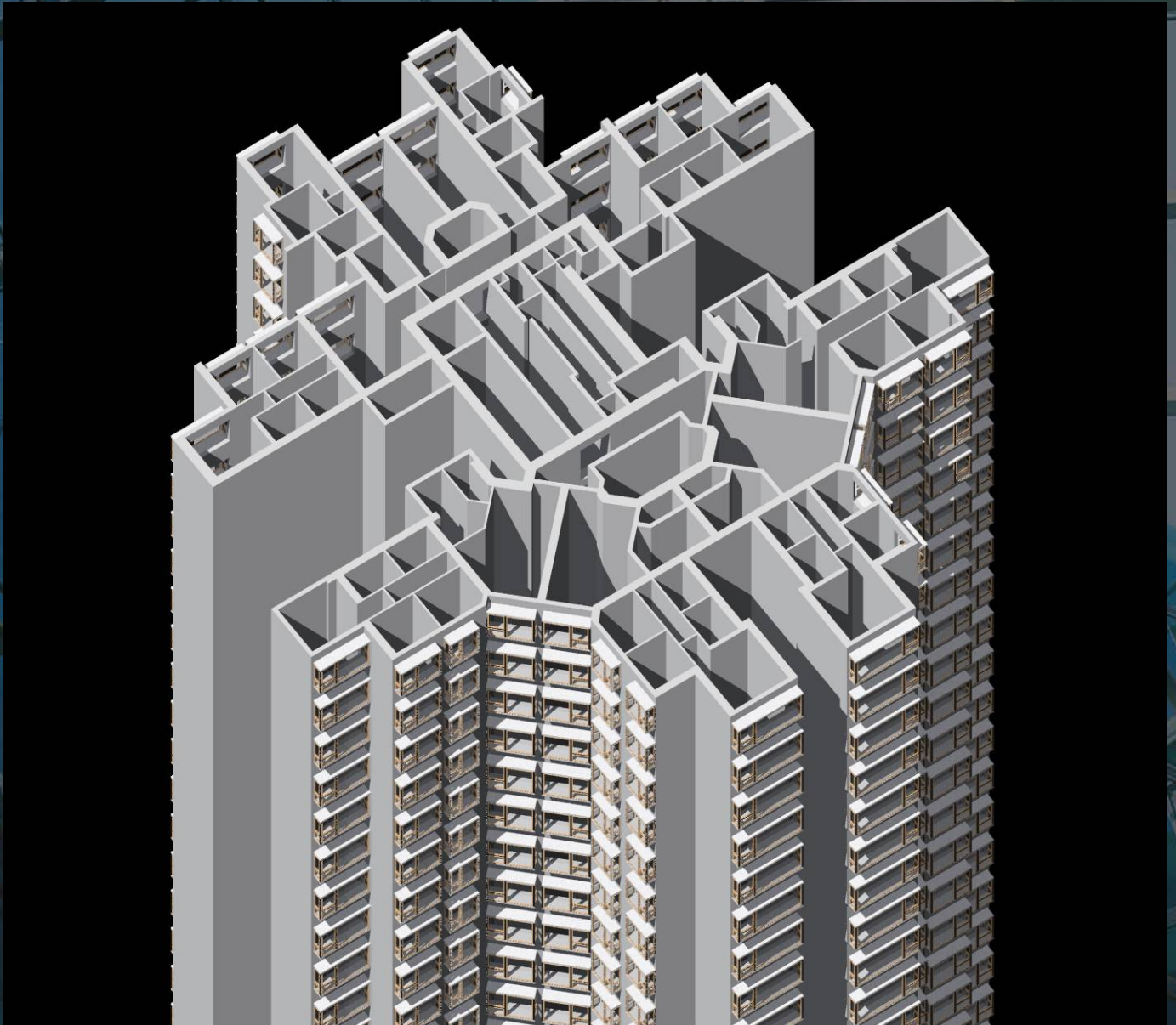


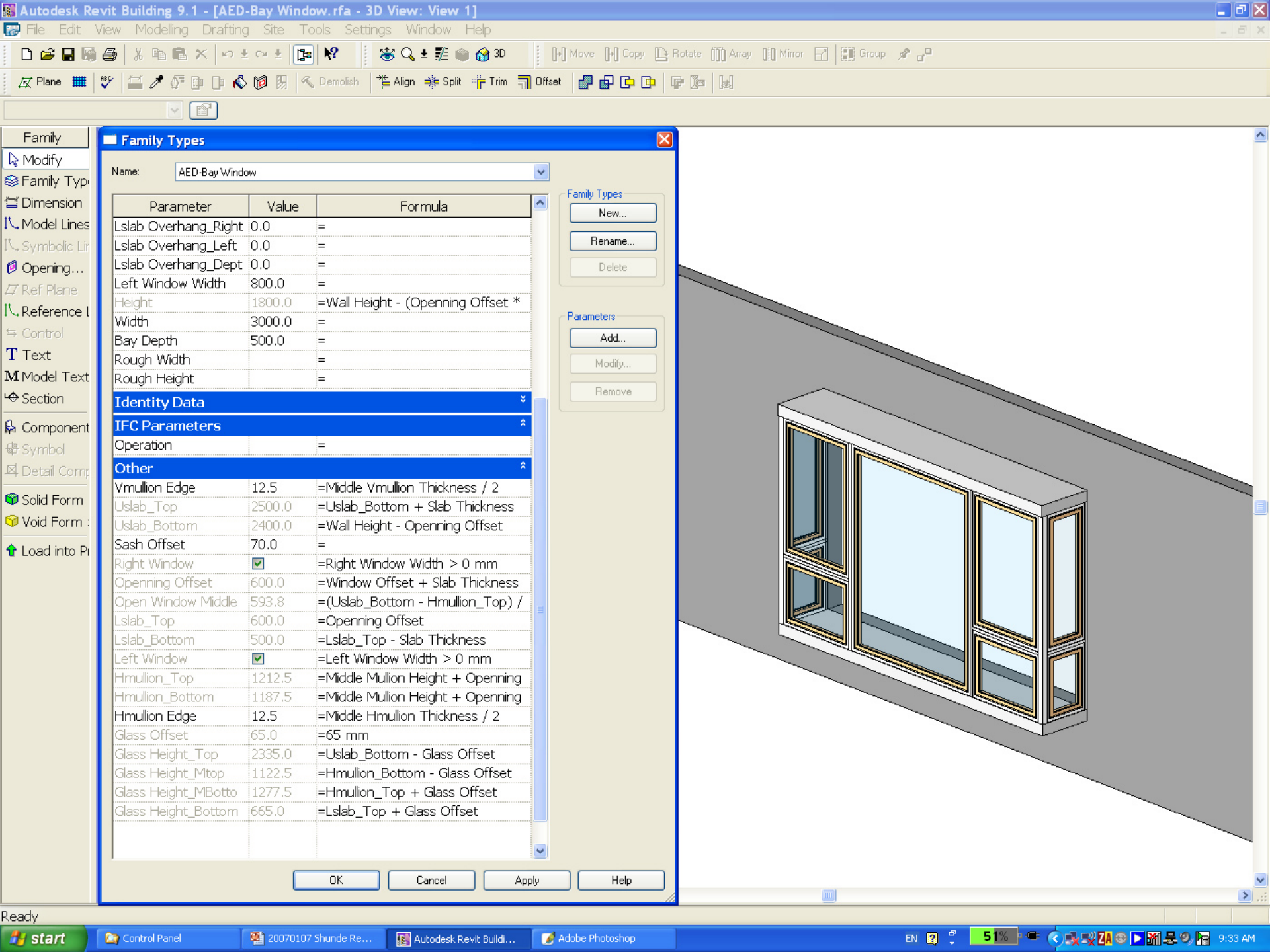
FAÇADE DESIGN and CO-ORDINATION

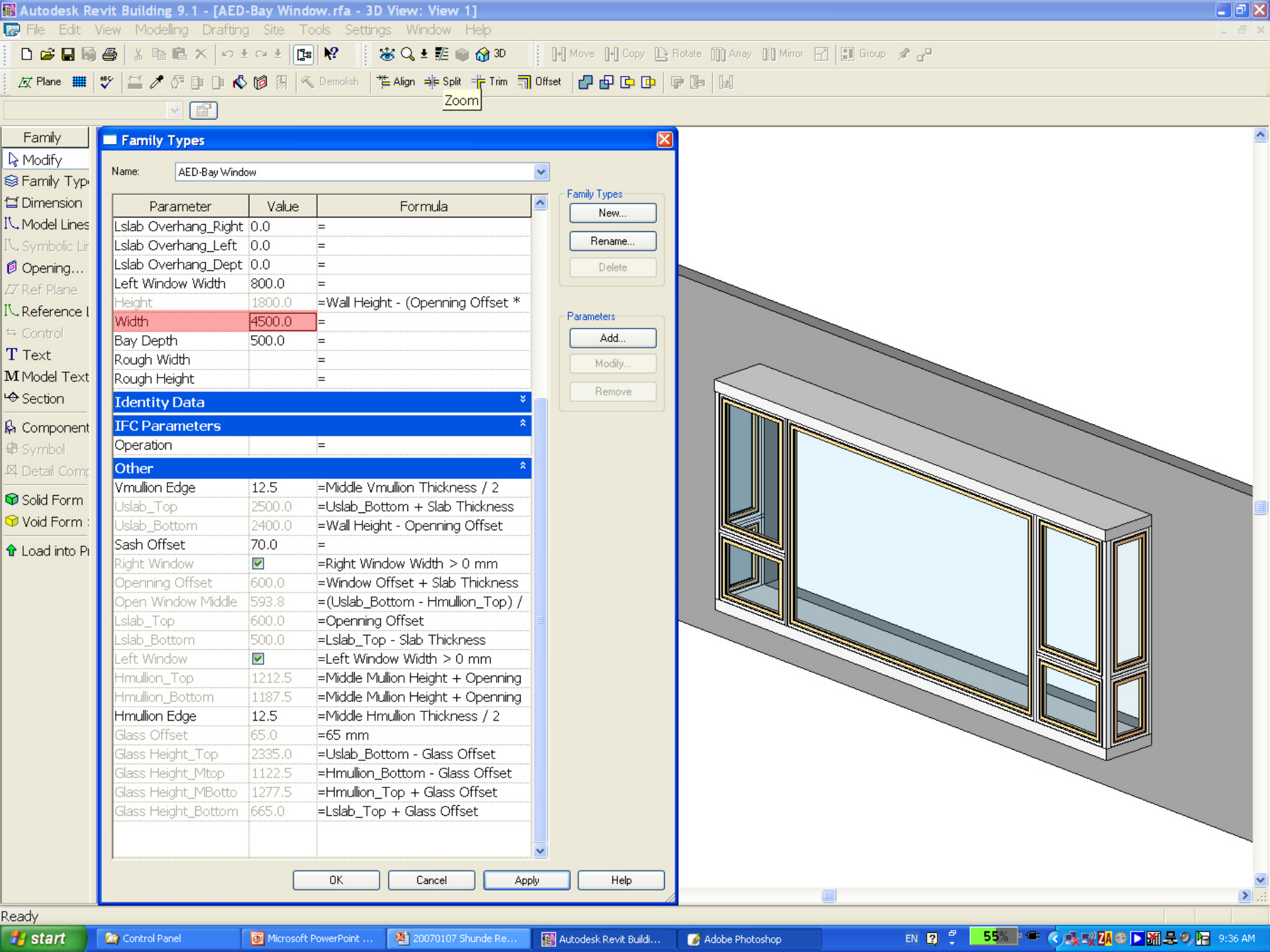


REPETITIONS vs VARIATIONS

PARAMETRIC MODELLING







Family Types

Name: AED-Bay Window

Parameter	Value	Formula
Lslab Overhang_Right	0.0	=
Lslab Overhang_Left	0.0	=
Lslab Overhang_Dept	0.0	=
Left Window Width	800.0	=
Height	1800.0	=Wall Height - (Opening Offset *
Width	4500.0	=
Bay Depth	500.0	=
Rough Width		=
Rough Height		=

Identity Data

IFC Parameters

Operation =

Other

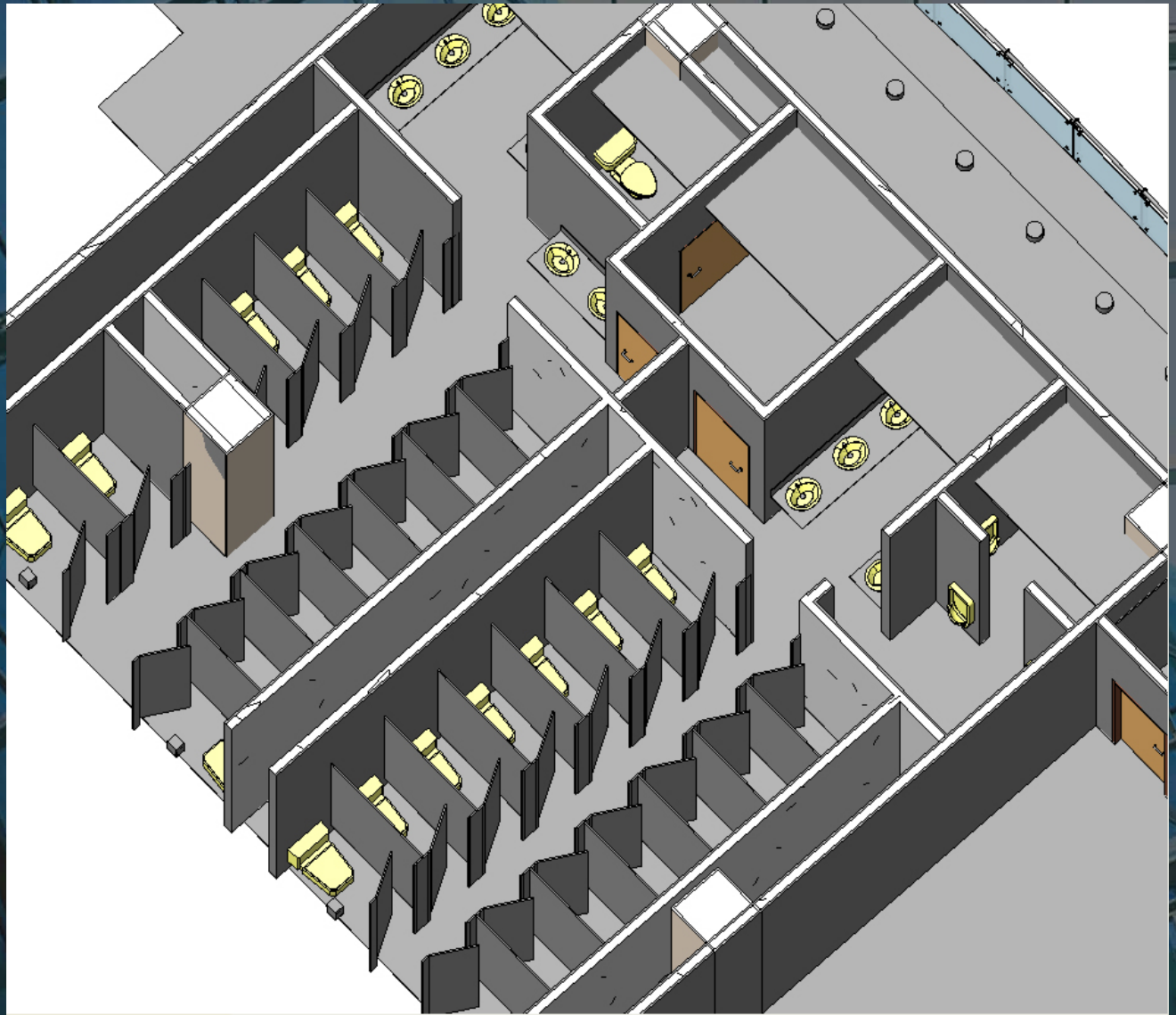
Vmullion Edge	12.5	=Middle Vmullion Thickness / 2
Uslab_Top	2500.0	=Uslab_Bottom + Slab Thickness
Uslab_Bottom	2400.0	=Wall Height - Opening Offset
Sash Offset	70.0	=
Right Window	☒	=Right Window Width > 0 mm
Opening Offset	600.0	=Window Offset + Slab Thickness
Open Window Middle	593.8	=(Uslab_Bottom - Hmullion_Top) /
Lslab_Top	600.0	=Opening Offset
Lslab_Bottom	500.0	=Lslab_Top - Slab Thickness
Left Window	☒	=Left Window Width > 0 mm
Hmullion_Top	1212.5	=Middle Mullion Height + Opening
Hmullion_Bottom	1187.5	=Middle Mullion Height + Opening
Hmullion Edge	12.5	=Middle Hmullion Thickness / 2
Glass Offset	65.0	=65 mm
Glass Height_Top	2335.0	=Uslab_Bottom - Glass Offset
Glass Height_Mtop	1122.5	=Hmullion_Bottom - Glass Offset
Glass Height_MBotto	1277.5	=Hmullion_Top + Glass Offset
Glass Height_Bottom	665.0	=Lslab_Top + Glass Offset

OK

Cancel

Apply

Help



CREATIVE TOOLS

Use of Building Information Modeling (BIM)

1. Design visualization

2. Drawing Productions 図面製作

3. Services Co-ordination and Clash detection with other disciplines

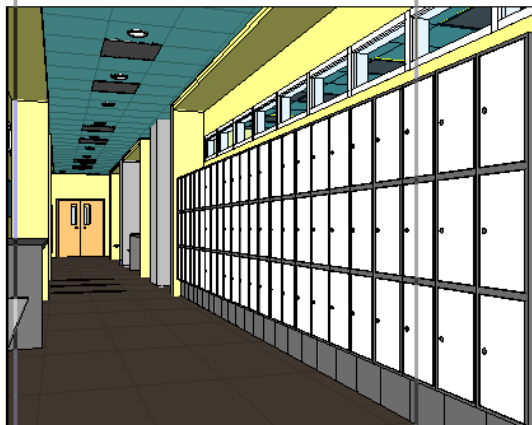
4. Quantity taking and preparation of Tender Document

5. Automated Statutory Submission

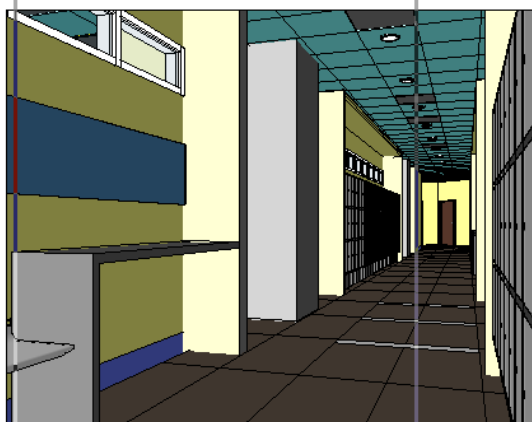
6. Scientific analysis of different environmental aspects

7. Supply Chain Integration with the manufacturing and production

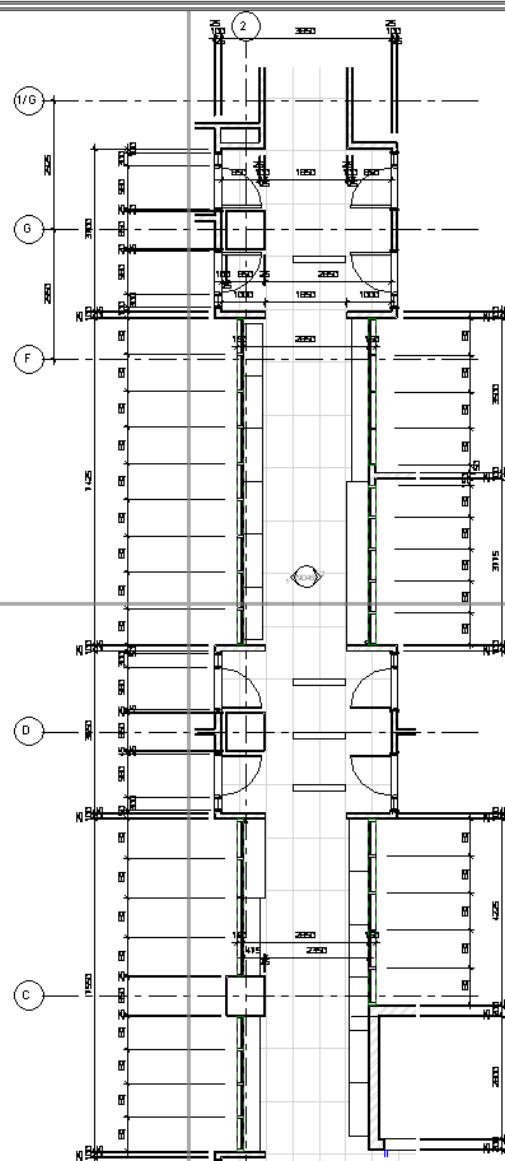
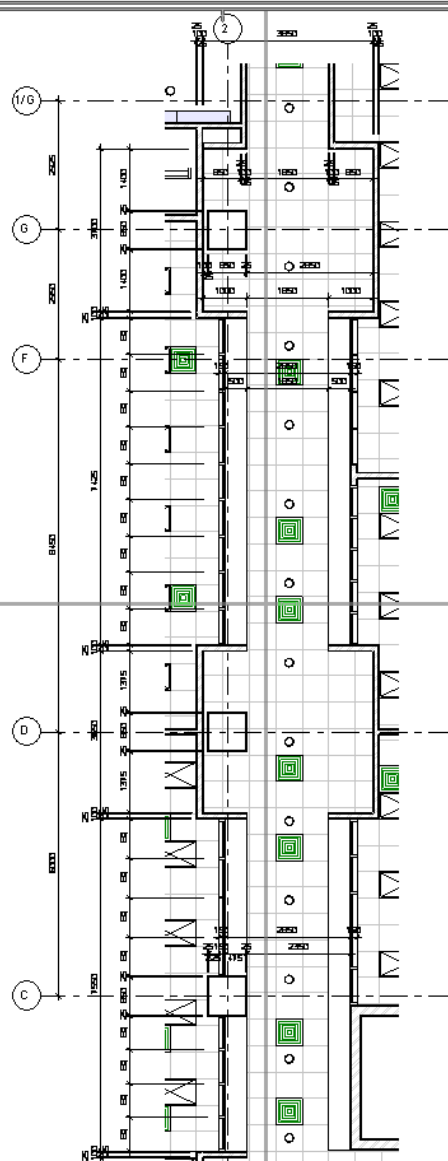
8. Complex Geometry

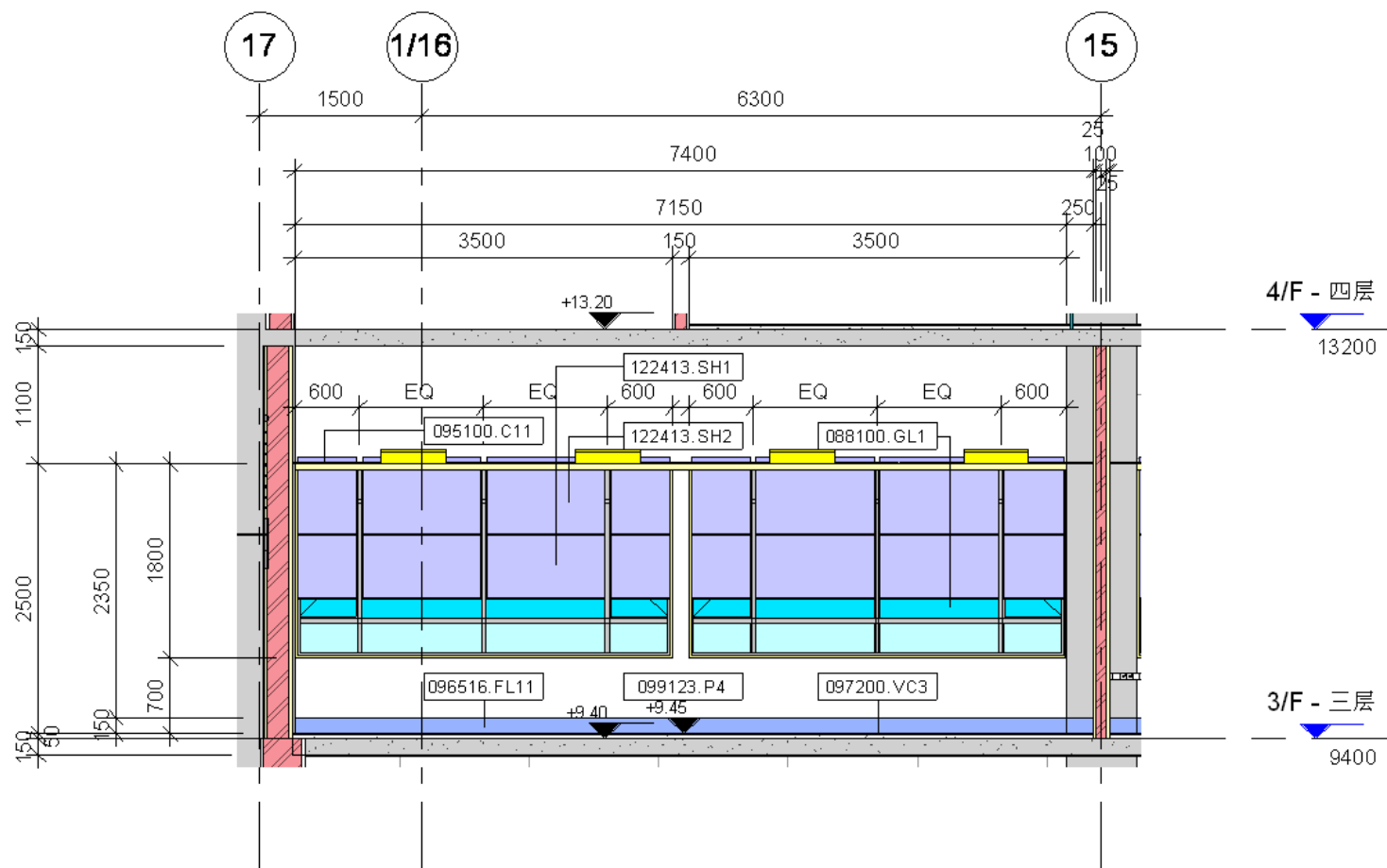


4 走廊立体示意图(低楼三至四层)2



3 走廊立体示意图(低楼三至四层)1

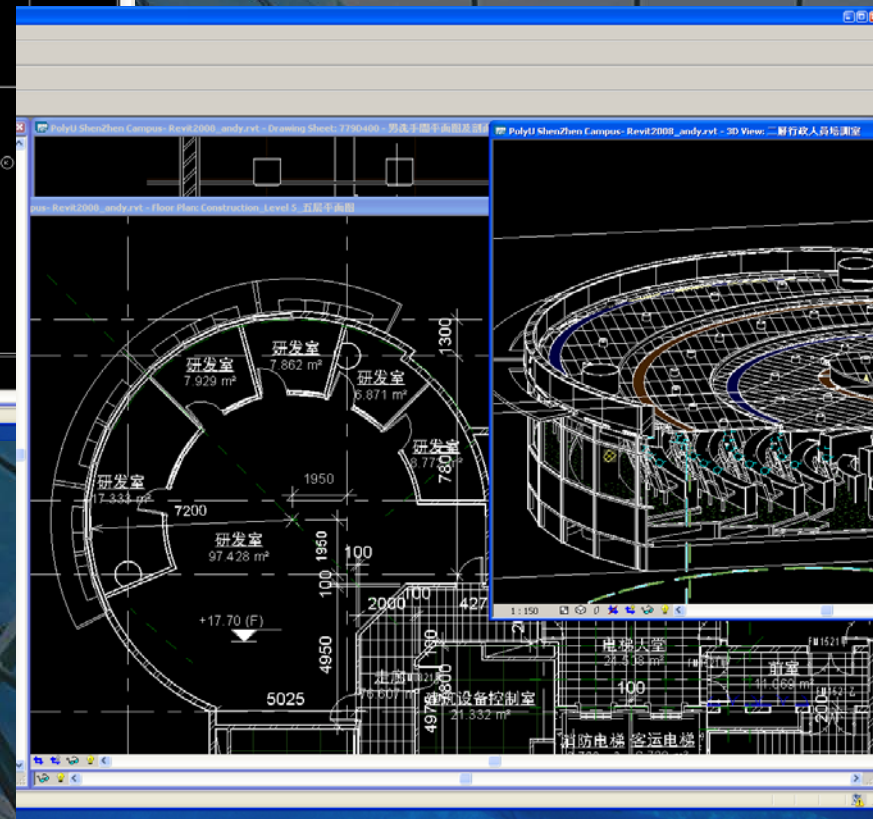
[illegible]



2 行政人员培训室立面图(高楼三层)6
 1:50

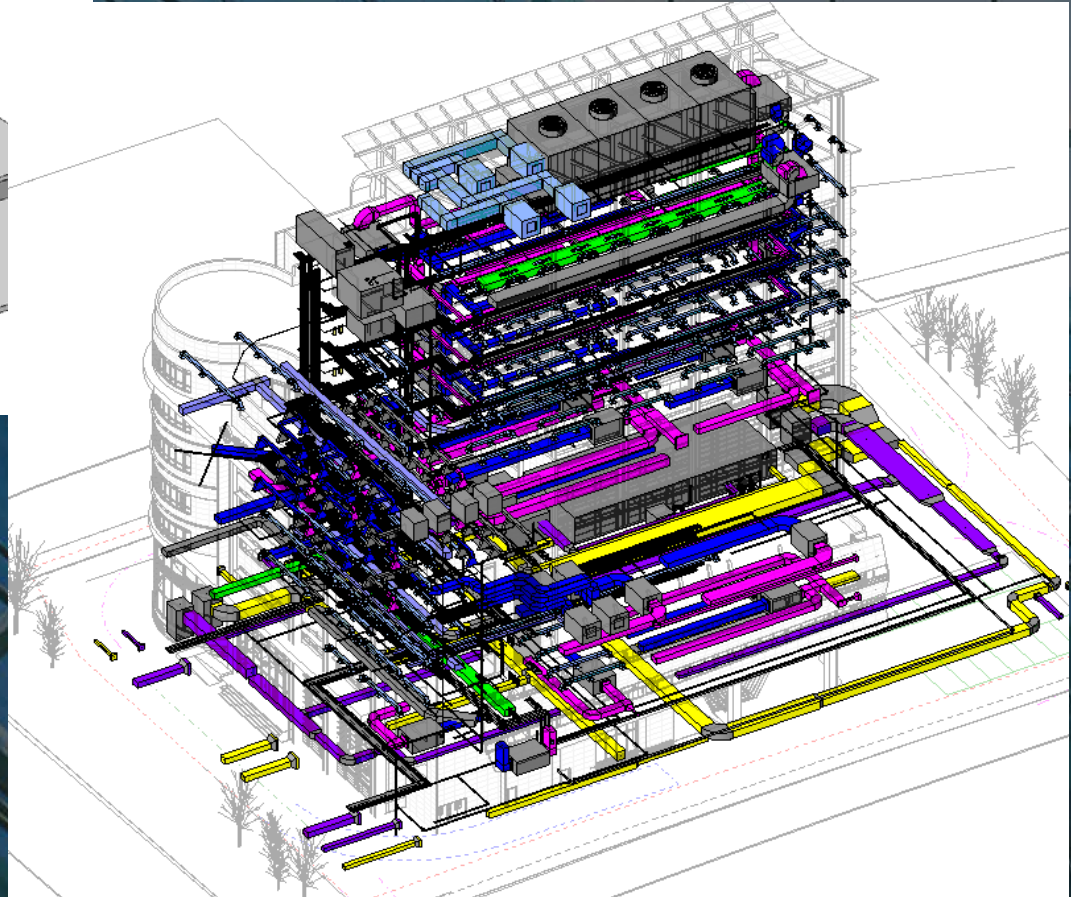
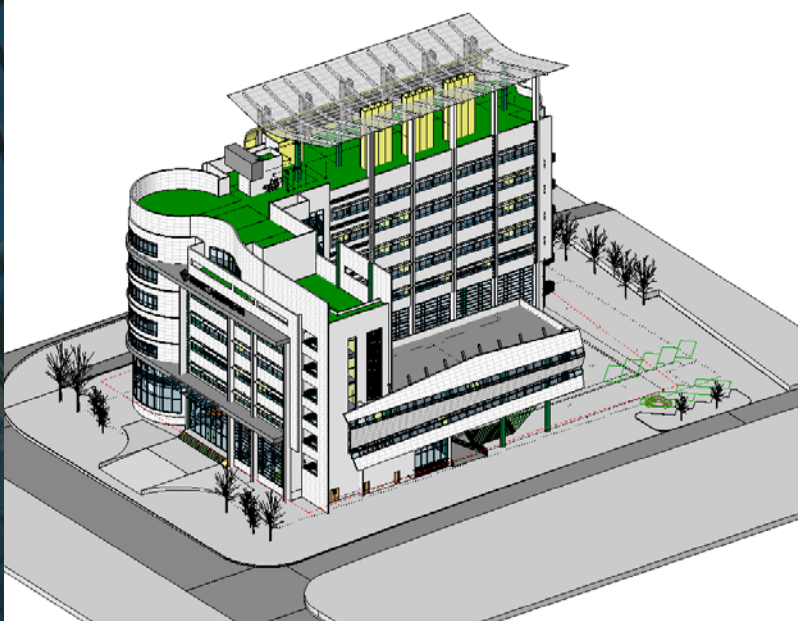
Use of Building Information Modeling (BIM)

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多部門との連携と干渉チェック
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6. Scientific analysis of different environmental aspects
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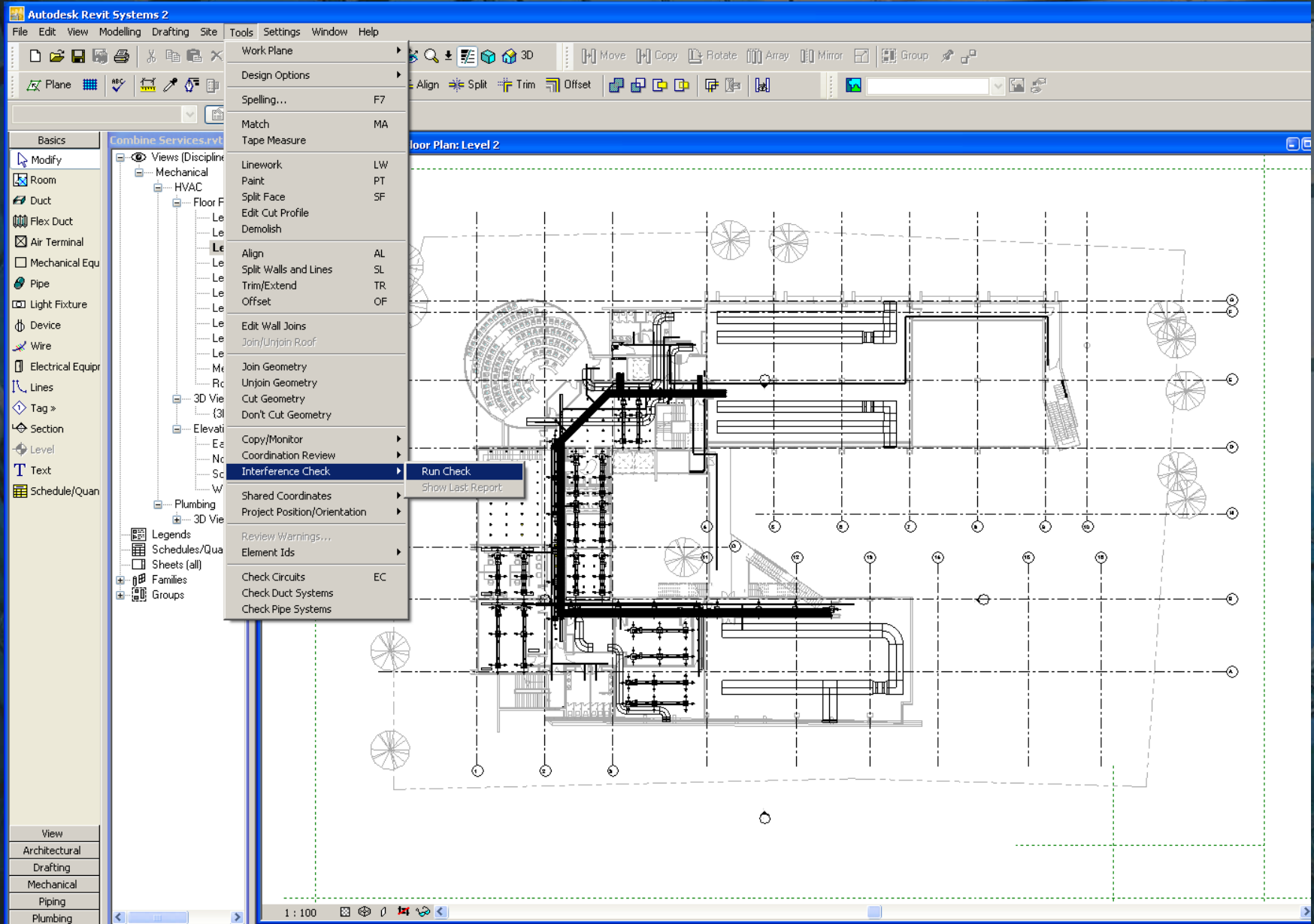
CO-ORDINATION / COLLABORATION

Work Flow – Establish BIM Models





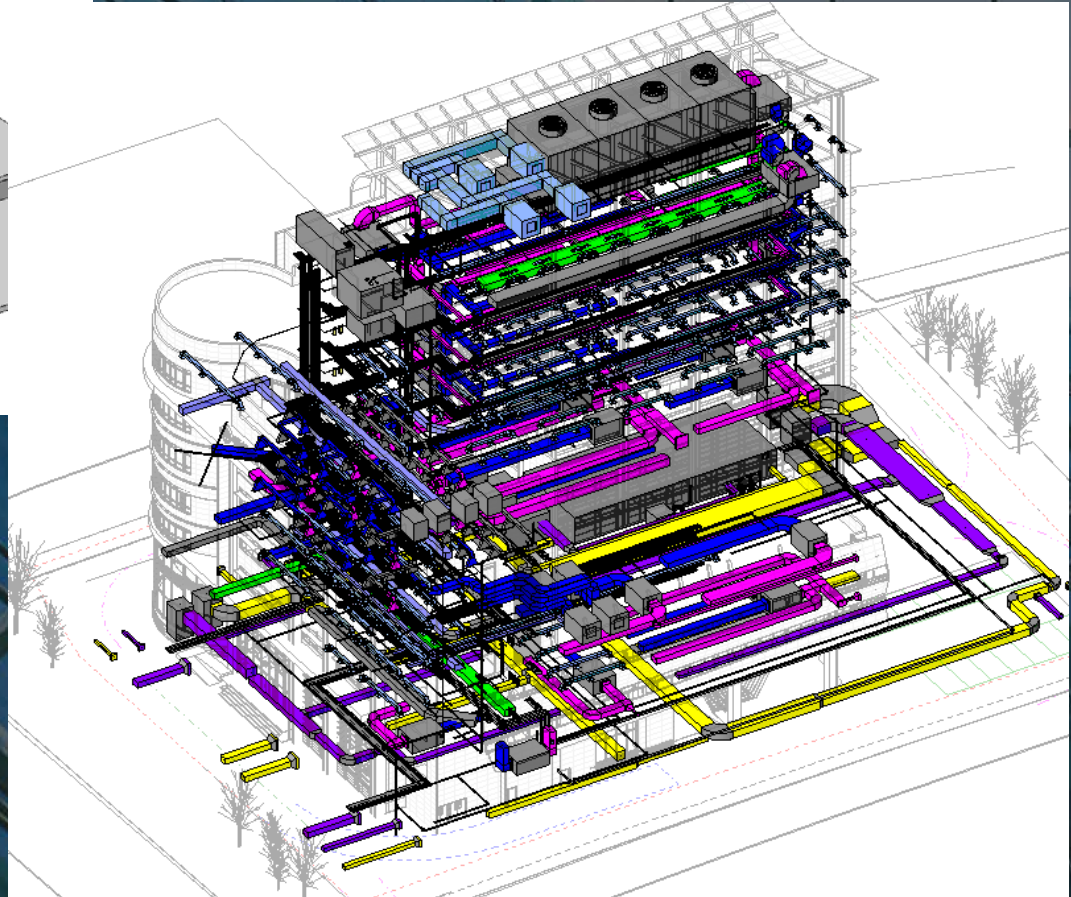
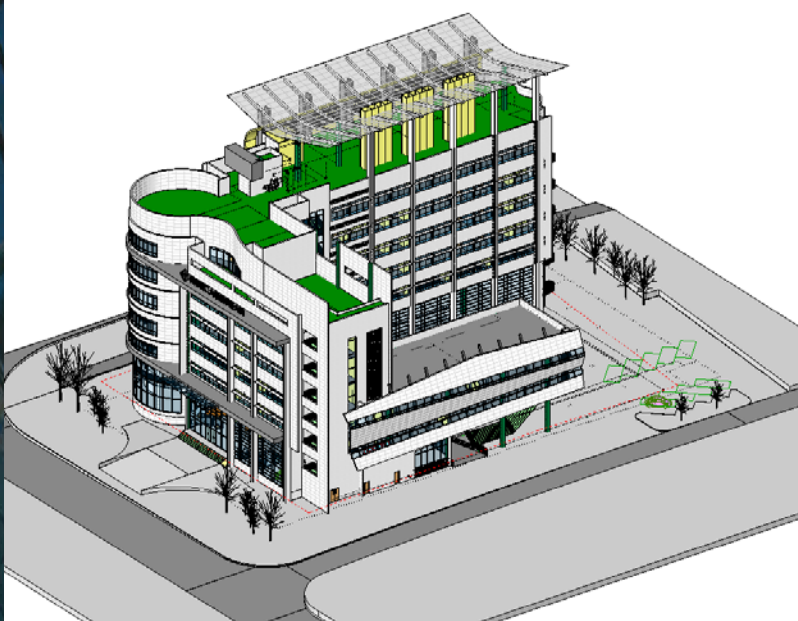
Work Flow – Clashes Report

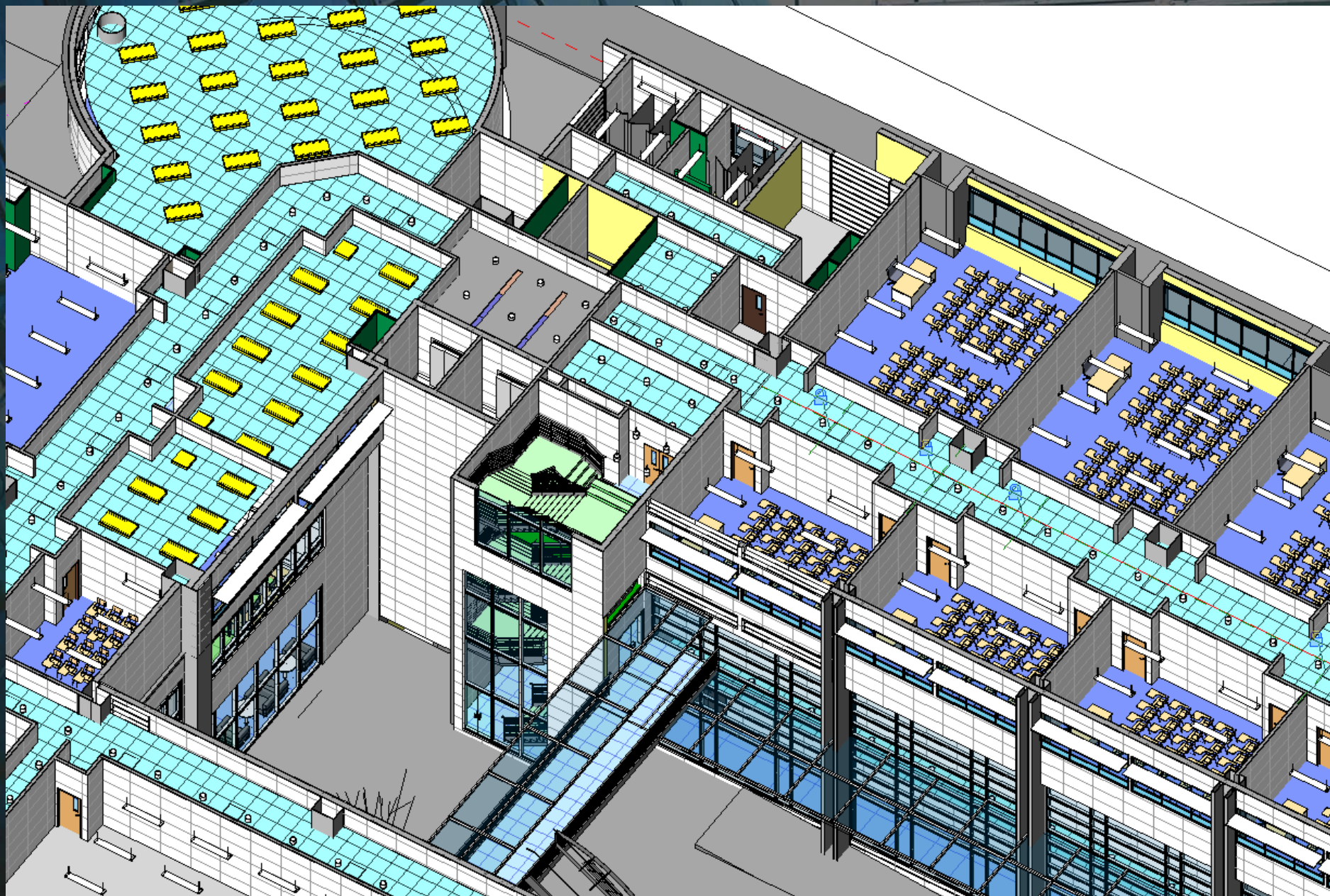


Run Interference Check on the current project, a selection, or a linked project.

CO-ORDINATION / COLLABORATION

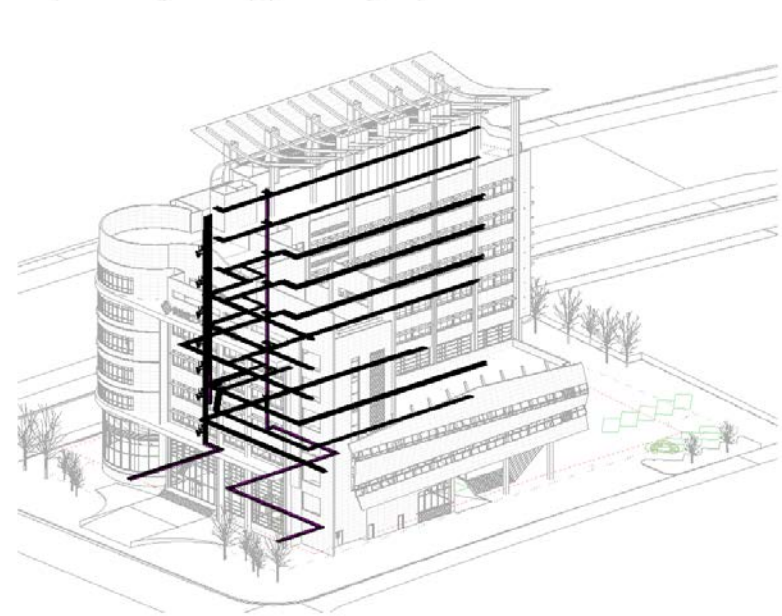
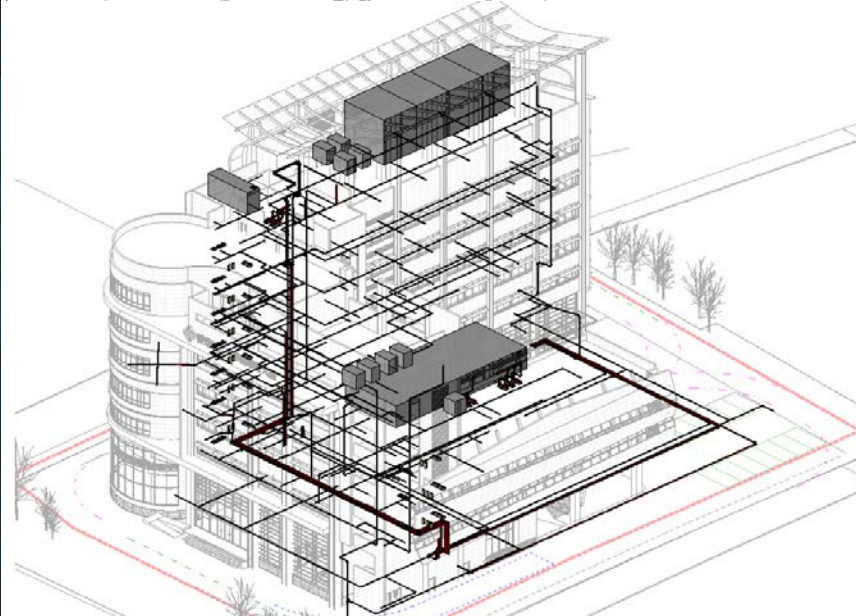
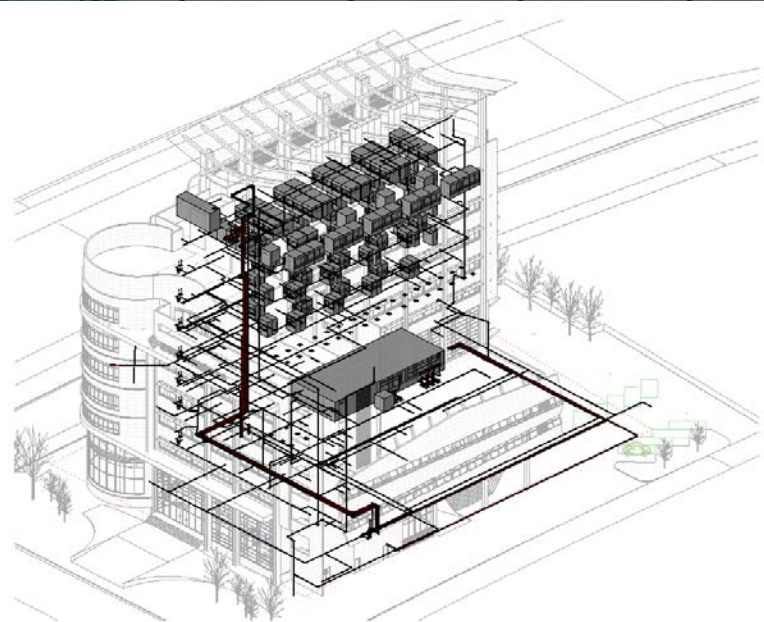
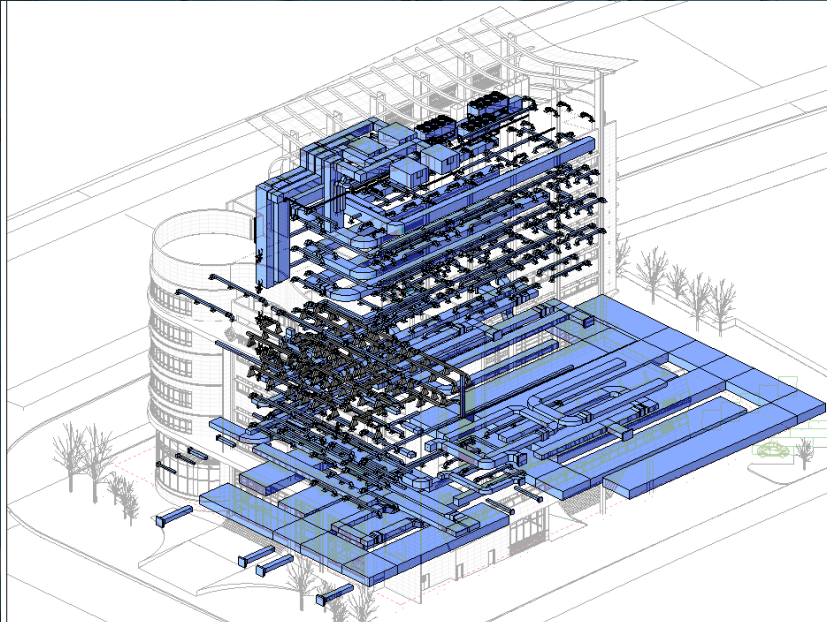
Work Flow – Establish BIM Models





HVAC Installation

Fire Services Installation



P/D Installation

Electricity Installation

Work Flow – Clashes Report

The screenshot displays the Autodesk Revit Systems 2 software interface. The main window shows a 3D model of a mechanical system, specifically a fan coil unit, with various pipes and ducts. A dialog box titled "Interference Report" is open in the foreground, showing a list of interference messages. The dialog box has a "Group by:" dropdown set to "Category 1, Category 2". The list of messages is as follows:

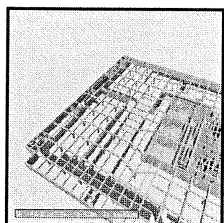
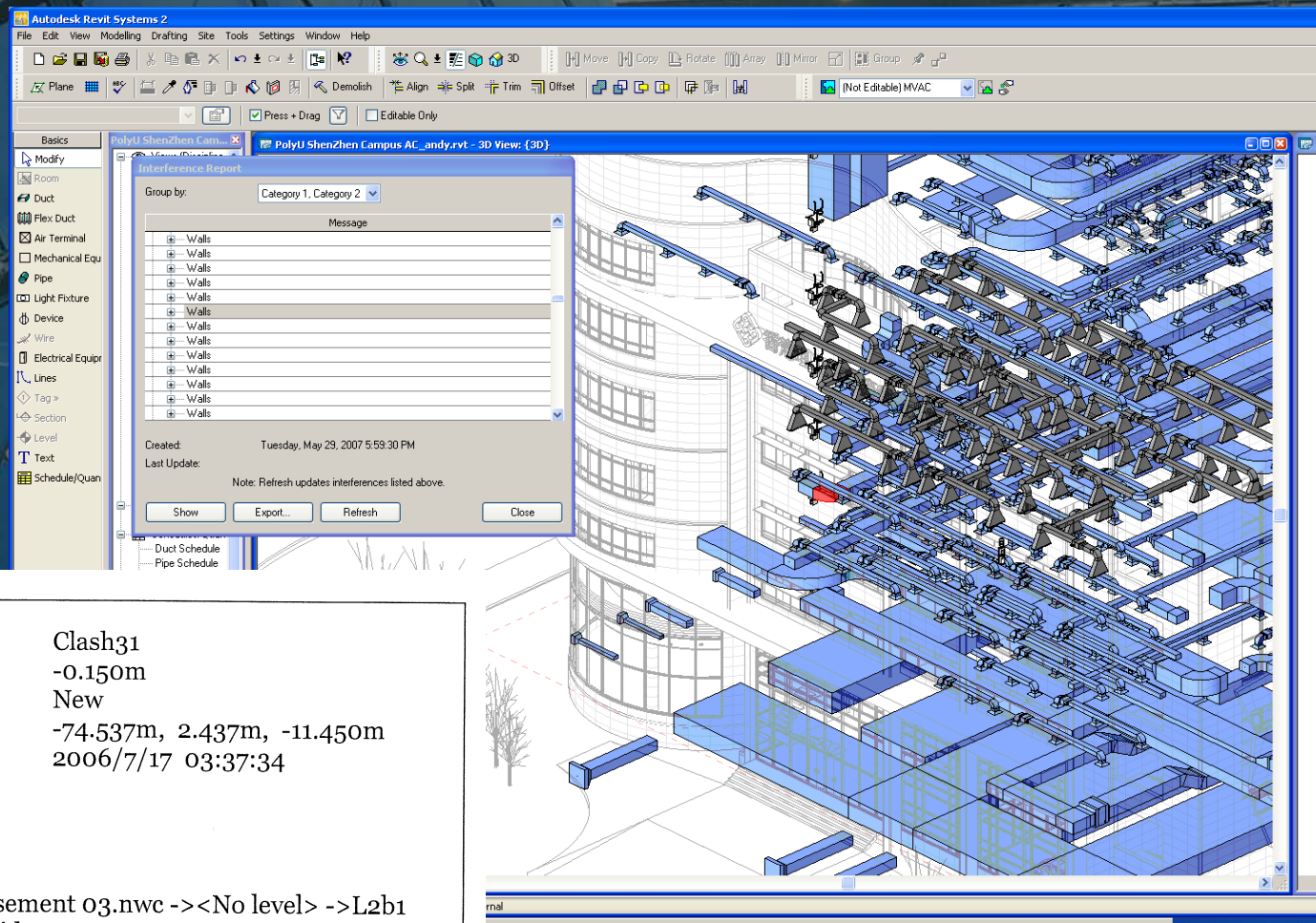
Message
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes
Pipes

Below the list, the "Created:" date is "Tuesday, May 29, 2007 6:13:54 PM" and the "Last Update:" is blank. A note states: "Note: Refresh updates interferences listed above." The dialog box has buttons for "Show", "Export...", "Refresh", and "Close".

The background 3D model shows a complex network of pipes and ducts, with a red line indicating a specific interference point. The interface includes a standard Revit ribbon with tabs for File, Edit, View, Modeling, Drafting, Site, Tools, Settings, Window, and Help. The left sidebar shows the "Basics" tab with options for Modify, Room, Duct, Flex Duct, Air Terminal, Mechanical Equ, Pipe, Light Fixture, Device, Wire, Electrical Equip, Lines, Tag, Section, Level, Text, and Schedule/Quantities. The bottom status bar shows the current view as "3D View: {3D}" and the scale as "1:150".

Page 4 Sec 1 4/4 At 3.1cm Ln 2 Col 2 REC TRK EXT OVR English (U.S.)

Work Flow – Clashes Report



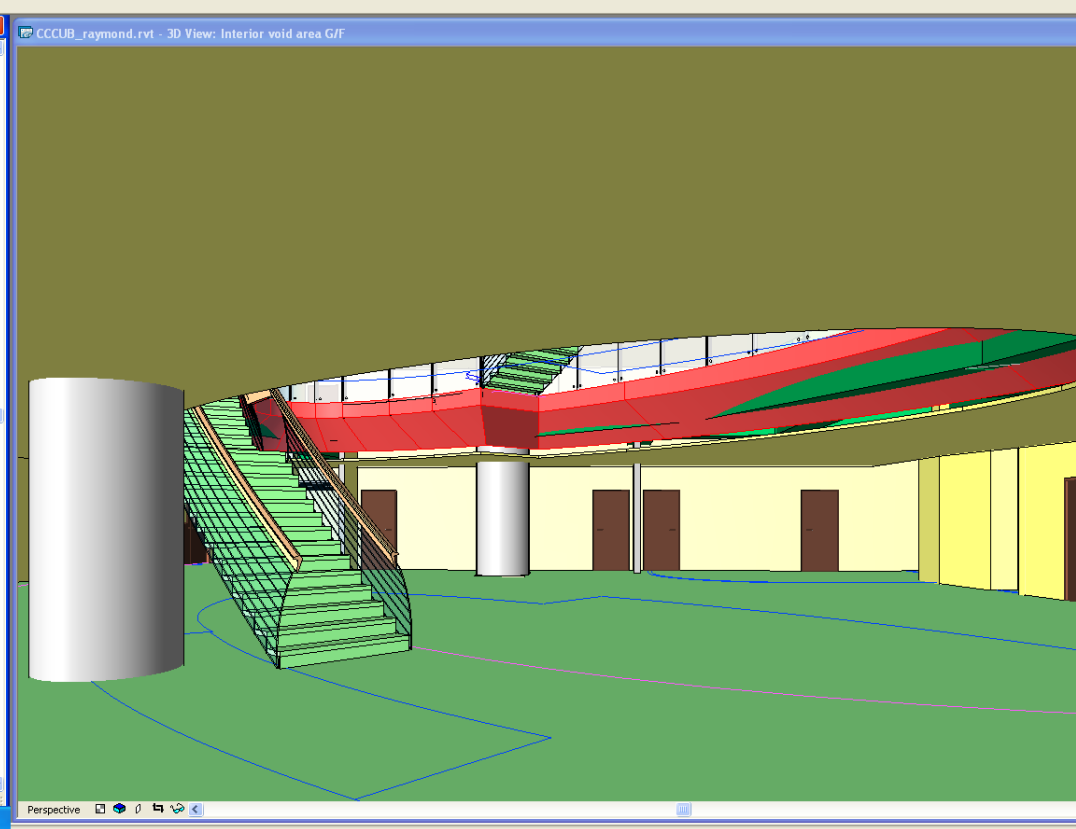
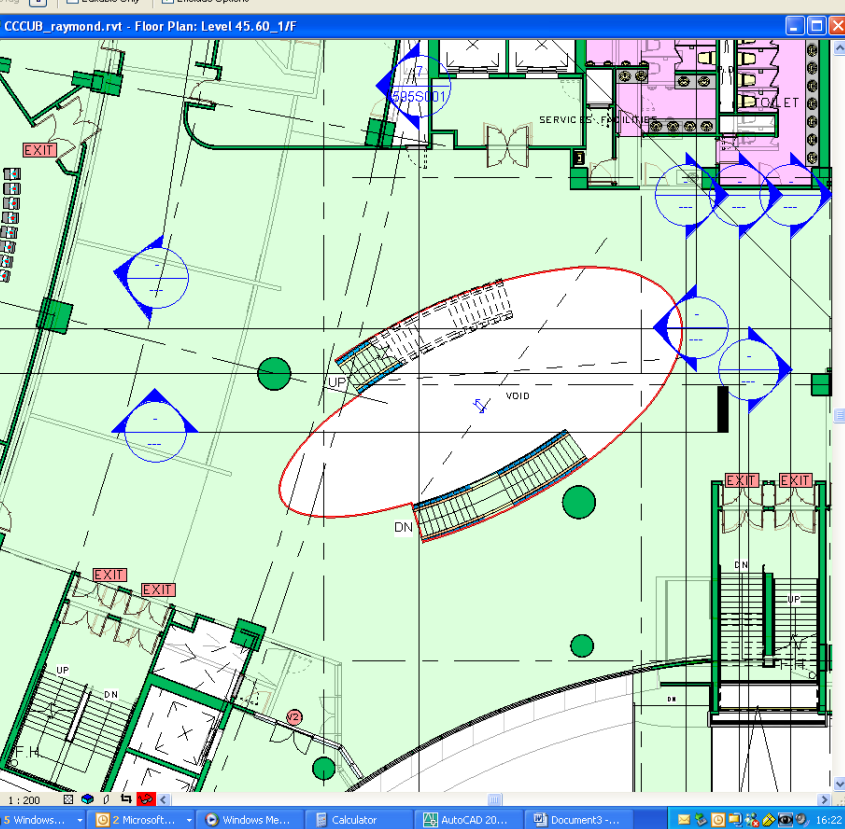
Name Clash31
Distance -0.150m
Status New
Clash Point -74.537m, 2.437m, -11.450m
Date Created 2006/7/17 03:37:34
Approved By

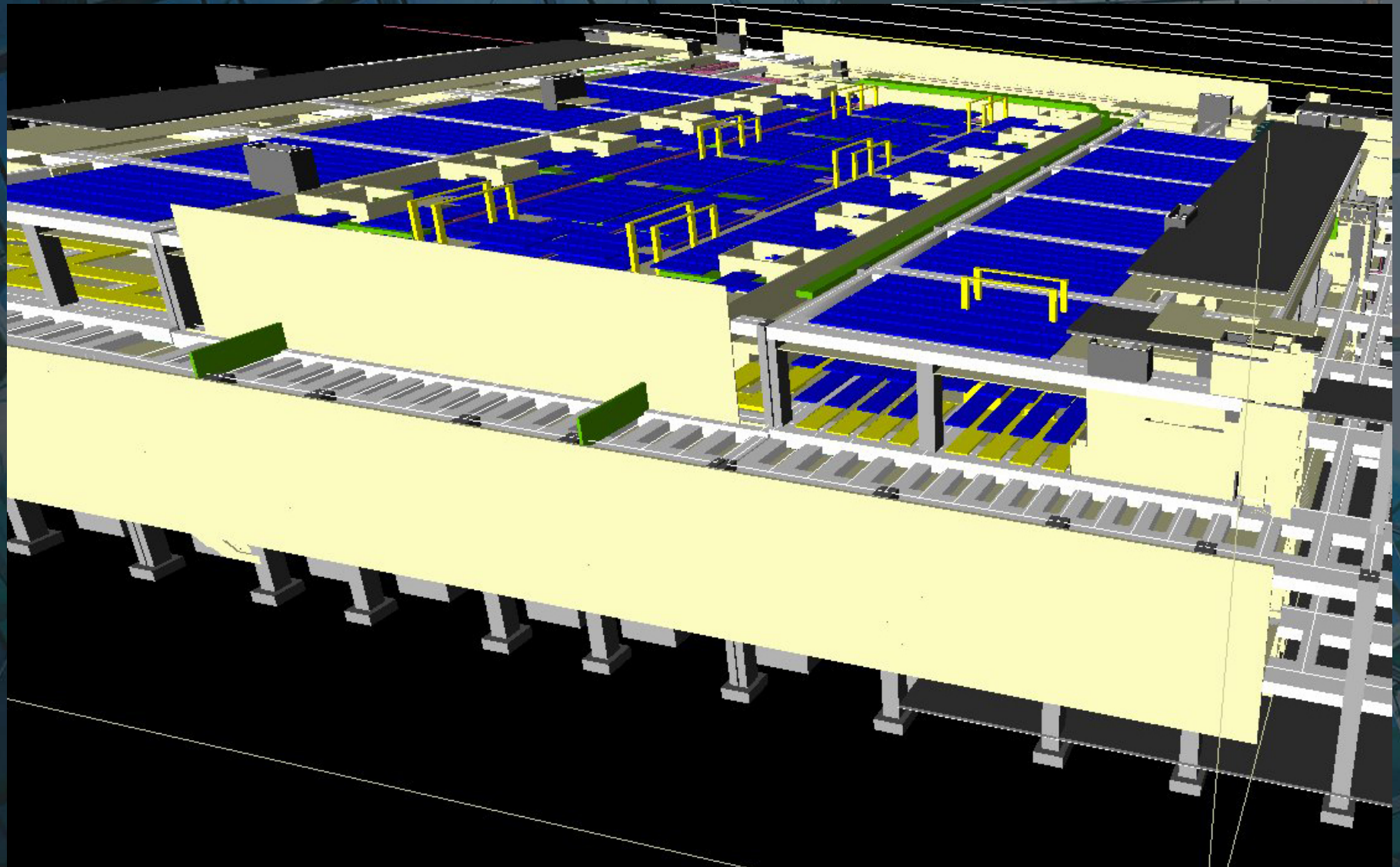
Item 1

Path File ->File ->Basement 03.nwc -><No level> ->L2b1
 500 x 700 ->L2b1 500 x 700 ->Solid

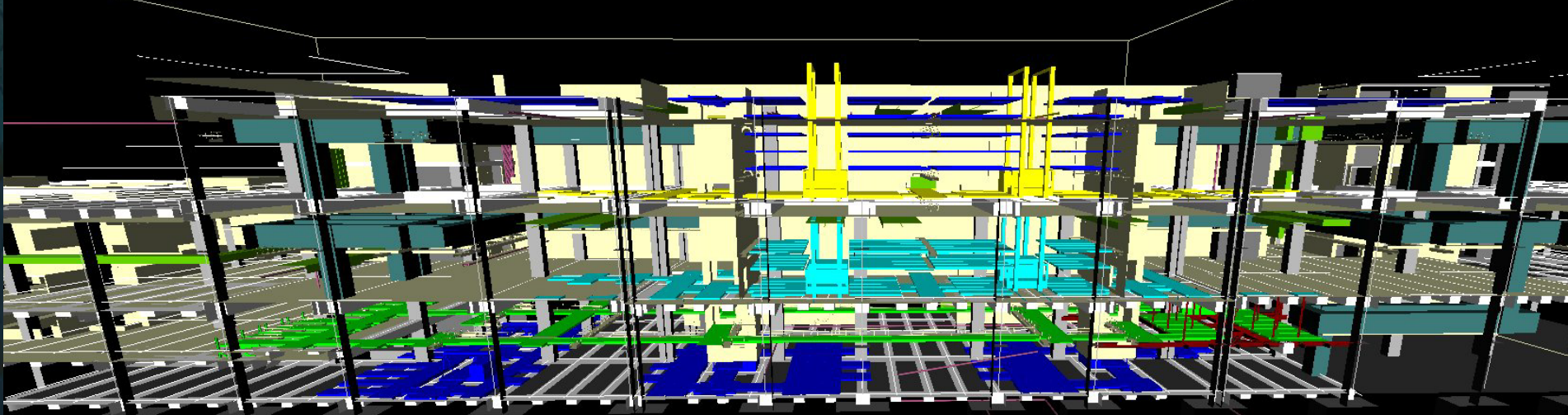
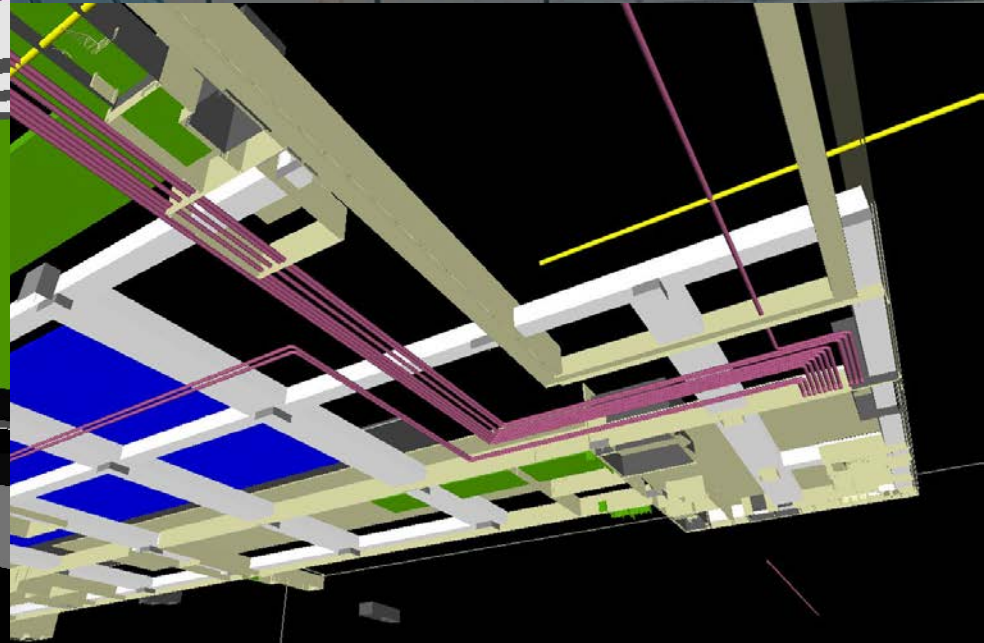
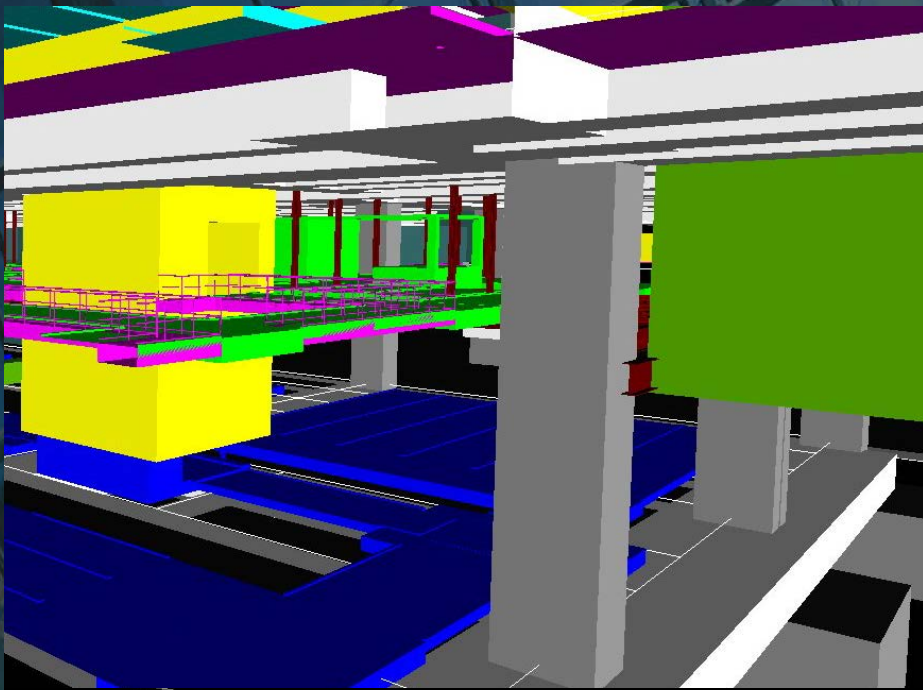
Item 2

Entity Handle 2AD6
Path File ->File ->B3HVAC_Duct.nwd ->H-Ductwork-G ->Duct





DISCIPLINES COLLABORATION



DISCIPLINES COLLABORATION

Use of Building Information Modeling (BIM)

1. Design visualization
2. Drawing Productions
3. Services Co-ordination and Clash detection with other disciplines
- 4. Quantity taking and preparation of Tender Document** 数量拾い及び
入札書類の作成
5. Automated Statutory Submission
6. Scientific analysis of different environmental aspects
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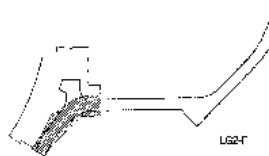
Wall Schedule							
Family	Family and Type	Length	Width	Count	Area	Volume	
Basic Wall: AED-Concrete - 50mm + Render One sides							
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.548 m2	0.027 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.548 m2	0.027 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.548 m2	0.027 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.548 m2	0.027 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.548 m2	0.027 m3	
0.548 m2: 5		1000		5	2.738 m2	0.137 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.578 m2	0.029 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.578 m2	0.029 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.578 m2	0.029 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.578 m2	0.029 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.578 m2	0.029 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.578 m2	0.029 m3	
0.578 m2: 6		1200		6	3.465 m2	0.173 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.608 m2	0.030 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.608 m2	0.030 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.608 m2	0.030 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.608 m2	0.030 m3	
0.608 m2: 4		800		4	2.430 m2	0.122 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.638 m2	0.032 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.638 m2	0.032 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.638 m2	0.032 m3	
0.638 m2: 3		600		3	1.913 m2	0.096 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	250	50	1	0.730 m2	0.037 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	250	50	1	0.730 m2	0.037 m3	
0.730 m2: 2		500		2	1.460 m2	0.073 m3	

DISCIPLINES COLLABORATION

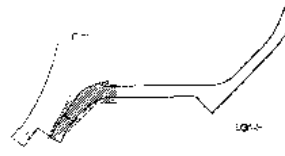
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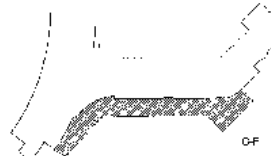
STATUTORY SUBMISSION



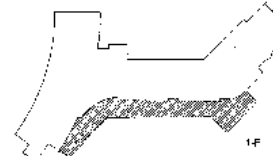
① EVA of Level 34.00_LG2/F
1:1000



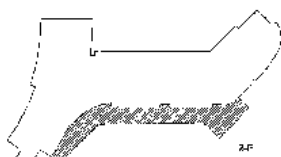
② EVA of Level 37.80, LG1/F
1:1000



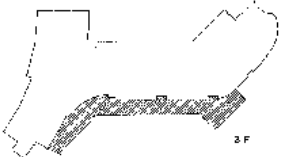
3 - EVA of Level 41.60_GIF
1:1000



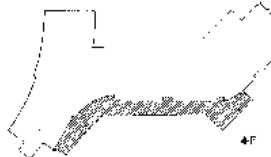
④ EVA of Level 45.60...1/F
1:1000



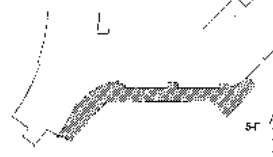
⑤ EVA of Level 49.80 2/F
1:1300



⑥ EVA of Level 53.80_3/F
1:1000

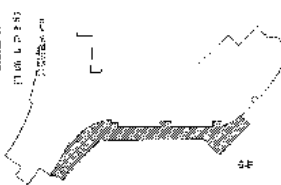


7 EVA of Level 5B.2D_4/F
1:1000



⑧ EVA of Level 62.00 5/F

B D SUBMISSION



9) EVA of Level 65.80_6/F

*Hatch area represents the total length of the building facade served by the EVA

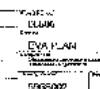
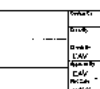
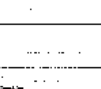
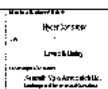
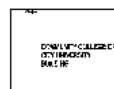
CALCULATION OF TOTAL LENGTH OF BUILDING FACADE TO BE SERVED BY EVA AND HENGCHIAI
OF SUCH LENGTH OVER THE TOTAL LENGTH OF ALL THE PERIMETER WALLS OF THE BUILDING

[illegible]

Sl. No.	Name of the Candidate	Roll No.	Grade	Subject	Score	Remarks
1	...	...	...	...	...	...
2	...	...	...	...	...	...
3	...	...	...	...	...	...
4	...	...	...	...	...	...
5	...	...	...	...	...	...
6	...	...	...	...	...	...
7	...	...	...	...	...	...
8	...	...	...	...	...	...
9	...	...	...	...	...	...
10	...	...	...	...	...	...
11	...	...	...	...	...	...
12	...	...	...	...	...	...
13	...	...	...	...	...	...
14	...	...	...	...	...	...
15	...	...	...	...	...	...
16	...	...	...	...	...	...
17	...	...	...	...	...	...
18	...	...	...	...	...	...
19	...	...	...	...	...	...
20	...	...	...	...	...	...
21	...	...	...	...	...	...
22	...	...	...	...	...	...
23	...	...	...	...	...	...
24	...	...	...	...	...	...
25	...	...	...	...	...	...
26	...	...	...	...	...	...
27	...	...	...	...	...	...
28	...	...	...	...	...	...
29	...	...	...	...	...	...
30	...	...	...	...	...	...
31	...	...	...	...	...	...
32	...	...	...	...	...	...
33	...	...	...	...	...	...
34	...	...	...	...	...	...
35	...	...	...	...	...	...
36	...	...	...	...	...	...
37	...	...	...	...	...	...
38	...	...	...	...	...	...
39	...	...	...	...	...	...
40	...	...	...	...	...	...
41	...	...	...	...	...	...
42	...	...	...	...	...	...
43	...	...	...	...	...	...
44	...	...	...	...	...	...
45	...	...	...	...	...	...
46	...	...	...	...	...	...
47	...	...	...	...	...	...
48	...	...	...	...	...	...
49	...	...	...	...	...	...
50	...	...	...	...	...	...
51	...	...	...	...	...	...
52	...	...	...	...	...	...
53	...	...	...	...	...	...
54	...	...	...	...	...	...
55	...	...	...	...	...	...
56	...	...	...	...	...	...
57	...	...	...	...	...	...
58	...	...	...	...	...	...
59	...	...	...	...	...	...
60	...	...	...	...	...	...
61	...	...	...	...	...	...
62	...	...	...	...	...	...
63	...	...	...	...	...	...
64	...	...	...	...	...	...
65	...	...	...	...	...	...
66	...	...	...	...	...	...
67	...	...	...	...	...	...
68	...	...	...	...	...	...
69	...	...	...	...	...	...
70	...	...	...	...	...	...
71	...	...	...	...	...	...
72	...	...	...	...	...	...
73	...	...	...	...	...	...
74	...	...	...	...	...	...
75	...	...	...	...	...	...
76	...	...	...	...	...	...
77	...	...	...	...	...	...
78	...	...	...	...	...	...
79	...	...	...	...	...	...

[illegible]

7000 Aggravated
 CTDPP/Knappe, Alac
 Chief Building Supervisor
 for ALL U.S. AIRCRAFT
 1 / 10000



STATUTORY SUBMISSION

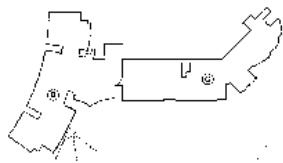
LG/F (+37.80) COMPARTMENT CALCULATION



3/F (+53.80) COMPARTMENT CALCULATION



G/F (+41.80) COMPARTMENT CALCULATION



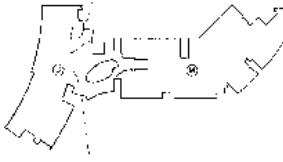
4/F (+53.20) COMPARTMENT CALCULATION



1/F (+45.80) COMPARTMENT CALCULATION



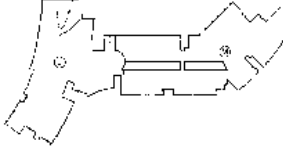
5/F (+52.00) COMPARTMENT CALCULATION



2/F (+49.80) COMPARTMENT CALCULATION



6/F (+55.50) COMPARTMENT CALCULATION



COMPARTMENT OF FLOOR				
FLOOR	AREA	PERIMETER	NO. OF PERSONS	NO. OF PERSONS
LG/F	146.40	146.40	43	146.40
1/F	146.40	146.40	43	146.40
2/F	146.40	146.40	43	146.40
3/F	146.40	146.40	43	146.40
4/F	146.40	146.40	43	146.40
5/F	146.40	146.40	43	146.40
6/F	146.40	146.40	43	146.40
7/F	146.40	146.40	43	146.40
8/F	146.40	146.40	43	146.40
9/F	146.40	146.40	43	146.40
10/F	146.40	146.40	43	146.40
11/F	146.40	146.40	43	146.40
12/F	146.40	146.40	43	146.40
13/F	146.40	146.40	43	146.40
14/F	146.40	146.40	43	146.40
15/F	146.40	146.40	43	146.40
16/F	146.40	146.40	43	146.40
17/F	146.40	146.40	43	146.40
18/F	146.40	146.40	43	146.40
19/F	146.40	146.40	43	146.40
20/F	146.40	146.40	43	146.40
21/F	146.40	146.40	43	146.40
22/F	146.40	146.40	43	146.40
23/F	146.40	146.40	43	146.40
24/F	146.40	146.40	43	146.40
25/F	146.40	146.40	43	146.40
26/F	146.40	146.40	43	146.40
27/F	146.40	146.40	43	146.40
28/F	146.40	146.40	43	146.40
29/F	146.40	146.40	43	146.40
30/F	146.40	146.40	43	146.40
31/F	146.40	146.40	43	146.40
32/F	146.40	146.40	43	146.40
33/F	146.40	146.40	43	146.40
34/F	146.40	146.40	43	146.40
35/F	146.40	146.40	43	146.40
36/F	146.40	146.40	43	146.40
37/F	146.40	146.40	43	146.40
38/F	146.40	146.40	43	146.40
39/F	146.40	146.40	43	146.40
40/F	146.40	146.40	43	146.40
41/F	146.40	146.40	43	146.40
42/F	146.40	146.40	43	146.40
43/F	146.40	146.40	43	146.40
44/F	146.40	146.40	43	146.40
45/F	146.40	146.40	43	146.40
46/F	146.40	146.40	43	146.40
47/F	146.40	146.40	43	146.40
48/F	146.40	146.40	43	146.40
49/F	146.40	146.40	43	146.40
50/F	146.40	146.40	43	146.40
51/F	146.40	146.40	43	146.40
52/F	146.40	146.40	43	146.40
53/F	146.40	146.40	43	146.40
54/F	146.40	146.40	43	146.40
55/F	146.40	146.40	43	146.40
56/F	146.40	146.40	43	146.40
57/F	146.40	146.40	43	146.40
58/F	146.40	146.40	43	146.40
59/F	146.40	146.40	43	146.40
60/F	146.40	146.40	43	146.40
61/F	146.40	146.40	43	146.40
62/F	146.40	146.40	43	146.40
63/F	146.40	146.40	43	146.40
64/F	146.40	146.40	43	146.40
65/F	146.40	146.40	43	146.40
66/F	146.40	146.40	43	146.40
67/F	146.40	146.40	43	146.40
68/F	146.40	146.40	43	146.40
69/F	146.40	146.40	43	146.40
70/F	146.40	146.40	43	146.40
71/F	146.40	146.40	43	146.40
72/F	146.40	146.40	43	146.40
73/F	146.40	146.40	43	146.40
74/F	146.40	146.40	43	146.40
75/F	146.40	146.40	43	146.40
76/F	146.40	146.40	43	146.40
77/F	146.40	146.40	43	146.40
78/F	146.40	146.40	43	146.40
79/F	146.40	146.40	43	146.40
80/F	146.40	146.40	43	146.40
81/F	146.40	146.40	43	146.40
82/F	146.40	146.40	43	146.40
83/F	146.40	146.40	43	146.40
84/F	146.40	146.40	43	146.40
85/F	146.40	146.40	43	146.40
86/F	146.40	146.40	43	146.40
87/F	146.40	146.40	43	146.40
88/F	146.40	146.40	43	146.40
89/F	146.40	146.40	43	146.40
90/F	146.40	146.40	43	146.40
91/F	146.40	146.40	43	146.40
92/F	146.40	146.40	43	146.40
93/F	146.40	146.40	43	146.40
94/F	146.40	146.40	43	146.40
95/F	146.40	146.40	43	146.40
96/F	146.40	146.40	43	146.40
97/F	146.40	146.40	43	146.40
98/F	146.40	146.40	43	146.40
99/F	146.40	146.40	43	146.40
100/F	146.40	146.40	43	146.40

Total Capacity of COQUE				
Location	Use	Area	Factor	Total Capacity
LG/F	Office	275.442	9	31
G/F	Shop	54.208	3	19
G/F	Office	412.213	9	41
3/F	Restaurant	178.557	1	177
3/F	Kitchen	481.136	4.5	107
5/F	Office	212.144	9	294
6/F	Office	2031.235	9	226
6/F	Restaurant	178.557	1	177
6/F	Kitchen	166.561	4.5	42
6/F	Exhibition hall	704.274	2	353
Total number of students				6000
Total				874

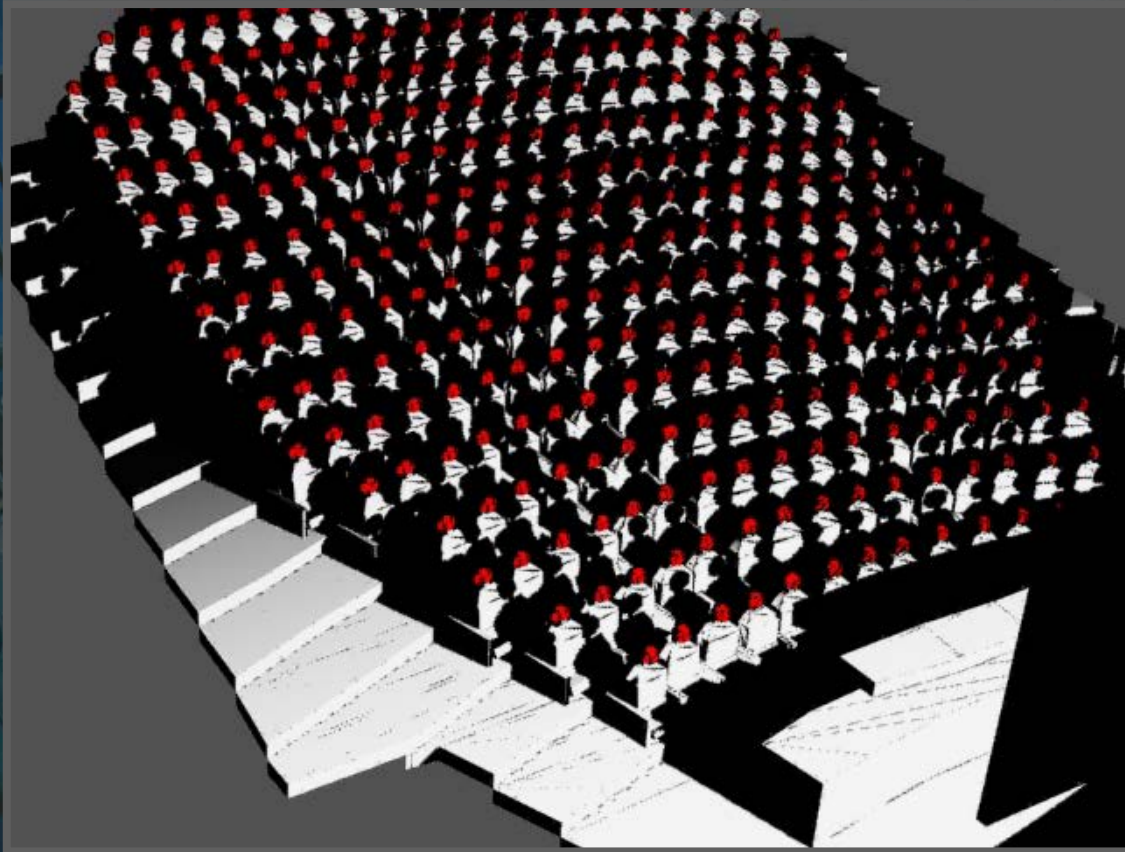
SCHEDULE 1: MINIMUM NUMBER & WIDTH OF EXIT ROUTES FOR EACH FLOOR

MIN. WIDTH OF EACH ROUTE			MIN. TOTAL WIDTH OF ROUTE			
LOCATION	FLOOR	ROUTE	EXIT ROUTE		EXIT ROUTE	
			REAR	FRONT	REAR	FRONT
LOC 101.00	1	1	1.00	1.00	1.00	1.00
LOC 102.00	1	1	1.00	1.00	1.00	1.00
LOC 103.00	1	1	1.00	1.00	1.00	1.00
LOC 104.00	1	1	1.00	1.00	1.00	1.00
LOC 105.00	1	1	1.00	1.00	1.00	1.00
LOC 106.00	1	1	1.00	1.00	1.00	1.00
LOC 107.00	1	1	1.00	1.00	1.00	1.00
LOC 108.00	1	1	1.00	1.00	1.00	1.00
LOC 109.00	1	1	1.00	1.00	1.00	1.00
LOC 110.00	1	1	1.00	1.00	1.00	1.00
LOC 111.00	1	1	1.00	1.00	1.00	1.00
LOC 112.00	1	1	1.00	1.00	1.00	1.00
LOC 113.00	1	1	1.00	1.00	1.00	1.00
LOC 114.00	1	1	1.00	1.00	1.00	1.00
LOC 115.00	1	1	1.00	1.00	1.00	1.00
LOC 116.00	1	1	1.00	1.00	1.00	1.00
LOC 117.00	1	1	1.00	1.00	1.00	1.00
LOC 118.00	1	1	1.00	1.00	1.00	1.00
LOC 119.00	1	1	1.00	1.00	1.00	1.00
LOC 120.00	1	1	1.00	1.00	1.00	1.00
LOC 121.00	1	1	1.00	1.00	1.00	1.00
LOC 122.00	1	1	1.00	1.00	1.00	1.00
LOC 123.00	1	1	1.00	1.00	1.00	1.00
LOC 124.00	1	1	1.00	1.00	1.00	1.00
LOC 125.00	1	1	1.00	1.00	1.00	1.00
LOC 126.00	1	1	1.00	1.00	1.00	1.00
LOC 127.00	1	1	1.00	1.00	1.00	1.00
LOC 128.00	1	1	1.00	1.00	1.00	1.00
LOC 129.00	1	1	1.00	1.00	1.00	1.00
LOC 130.00	1	1	1.00	1.00	1.00	1.00
LOC 131.00	1	1	1.00	1.00	1.00	1.00
LOC 132.00	1	1	1.00	1.00	1.00	1.00
LOC 133.00	1	1	1.00	1.00	1.00	1.00
LOC 134.00	1	1	1.00	1.00	1.00	1.00
LOC 135.00	1	1	1.00	1.00	1.00	1.00
LOC 136.00	1	1	1.00	1.00	1.00	1.00
LOC 137.00	1	1	1.00	1.00	1.00	1.00
LOC 138.00	1	1	1.00	1.00	1.00	1.00
LOC 139.00	1	1	1.00	1.00	1.00	1.00
LOC 140.00	1	1	1.00	1.00	1.00	1.00
LOC 141.00	1	1	1.00	1.00	1.00	1.00
LOC 142.00	1	1	1.00	1.00	1.00	1.00
LOC 143.00	1	1	1.00	1.00	1.00	1.00
LOC 144.00	1	1	1.00	1.00	1.00	1.00
LOC 145.00	1	1	1.00	1.00	1.00	1.00
LOC 146.00	1	1	1.00	1.00	1.00	1.00
LOC 147.00	1	1	1.00	1.00	1.00	1.00
LOC 148.00	1	1	1.00	1.00	1.00	1.00
LOC 149.00	1	1	1.00	1.00	1.00	1.00
LOC 150.00	1	1	1.00	1.00	1.00	1.00
LOC 151.00	1	1	1.00	1.00	1.00	1.00
LOC 152.00	1	1	1.00	1.00	1.00	1.00
LOC 153.00	1	1	1.00	1.00	1.00	1.00
LOC 154.00	1	1	1.00	1.00	1.00	1.00
LOC 155.00	1	1	1.00	1.00	1.00	1.00
LOC 156.00	1	1	1.00	1.00	1.00	1.00
LOC 157.00	1	1	1.00	1.00	1.00	1.00
LOC 158.00	1	1	1.00	1.00	1.00	1.00
LOC 159.00	1	1	1.00	1.00	1.00	1.00
LOC 160.00	1	1	1.00	1.00	1.00	1.00
LOC 161.00	1	1	1.00	1.00	1.00	1.00
LOC 162.00	1	1	1.00	1.00	1.00	1.00
LOC 163.00	1	1	1.00	1.00	1.00	1.00
LOC 164.00	1	1	1.00	1.00	1.00	1.00
LOC 165.00	1	1	1.00	1.00	1.00	1.00
LOC 166.00	1	1	1.00	1.00	1.00	1.00
LOC 167.00	1	1	1.00	1.00	1.00	1.00
LOC 168.00	1	1	1.00	1.00	1.00	1.00
LOC 169.00	1	1	1.00	1.00	1.00	1.00
LOC 170.00	1	1	1.00	1.00	1.00	1.00
LOC 171.00	1	1	1.00	1.00	1.00	1.00
LOC 172.00	1	1	1.00	1.00	1.00	1.00
LOC 173.00	1	1	1.00	1.00	1.00	1.00
LOC 174.00	1	1	1.00	1.00	1.00	1.00
LOC 175.00	1	1	1.00	1.00	1.00	1.00
LOC 176.00	1	1	1.00	1.00	1.00	1.00
LOC 177.00	1	1	1.00	1.00	1.00	1.00
LOC 178.00	1	1	1.00	1.00	1.00	1.00
LOC 179.00	1	1	1.00	1.00	1.00	1.00
LOC 180.00	1	1	1.00	1.00	1.00	1.00
LOC 181.00	1	1	1.00	1.00	1.00	1.00
LOC 182.00	1	1	1.00	1.00	1.00	1.00
LOC 183.00	1	1	1.00	1.00	1.00	1.00
LOC 184.00	1	1	1.00	1.00	1.00	1.00
LOC 185.00	1	1	1.00	1.00	1.00	1.00
LOC 186.00	1	1	1.00	1.00	1.00	1.00
LOC 187.00	1	1	1.00	1.00	1.00	1.00
LOC 188.00	1	1	1.00	1.00	1.00	1.00
LOC 189.00	1	1	1.00	1.00	1.00	1.00
LOC 190.00	1	1	1.00	1.00	1.00	1.00
LOC 191.00	1	1	1.00	1.00	1.00	1.00
LOC 192.00	1	1	1.00	1.00	1.00	1.00
LOC 193.00	1	1	1.00	1.00	1.00	1.00
LOC 194.00	1	1	1.00	1.00	1.00	1.00
LOC 195.00	1	1	1.00	1.00	1.00	1.00
LOC 196.00	1	1	1.00	1.00	1.00	1.00
LOC 197.00	1	1	1.00	1.00	1.00	1.00
LOC 198.00	1	1	1.00	1.00	1.00	1.00
LOC 199.00	1	1	1.00	1.00	1.00	1.00
LOC 200.00	1	1	1.00	1.00	1.00	1.00

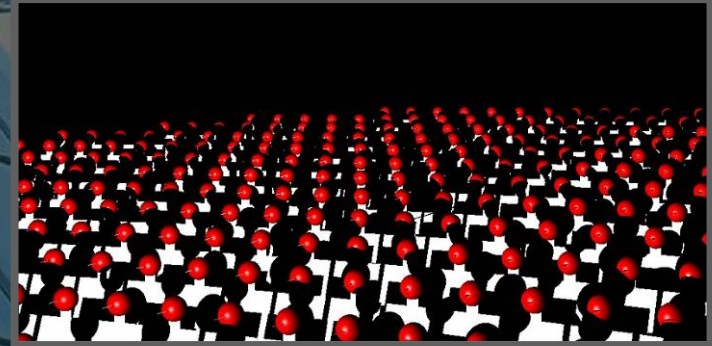


Use of Building Information Modeling (BIM)

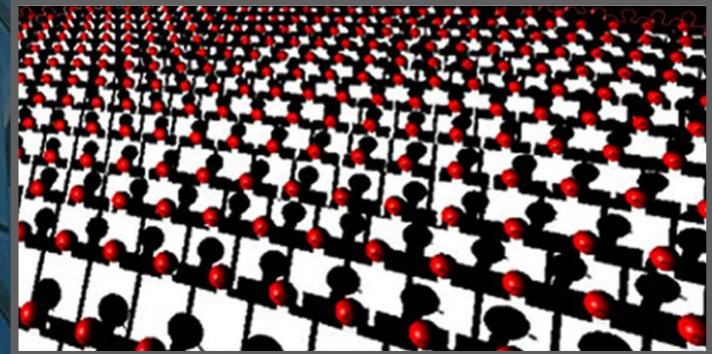
1. Design visualization
2. Drawing Productions
3. Services Co-ordination and Clash detection with other disciplines
4. Quantity taking and preparation of Tender Document
5. Automated Statutory Submission
6. **Scientific analysis of different environmental aspects** 様々な環境解析
7. Supply Chain Integration with the manufacturing and production
8. Complex Geometry



Radiating Light Method



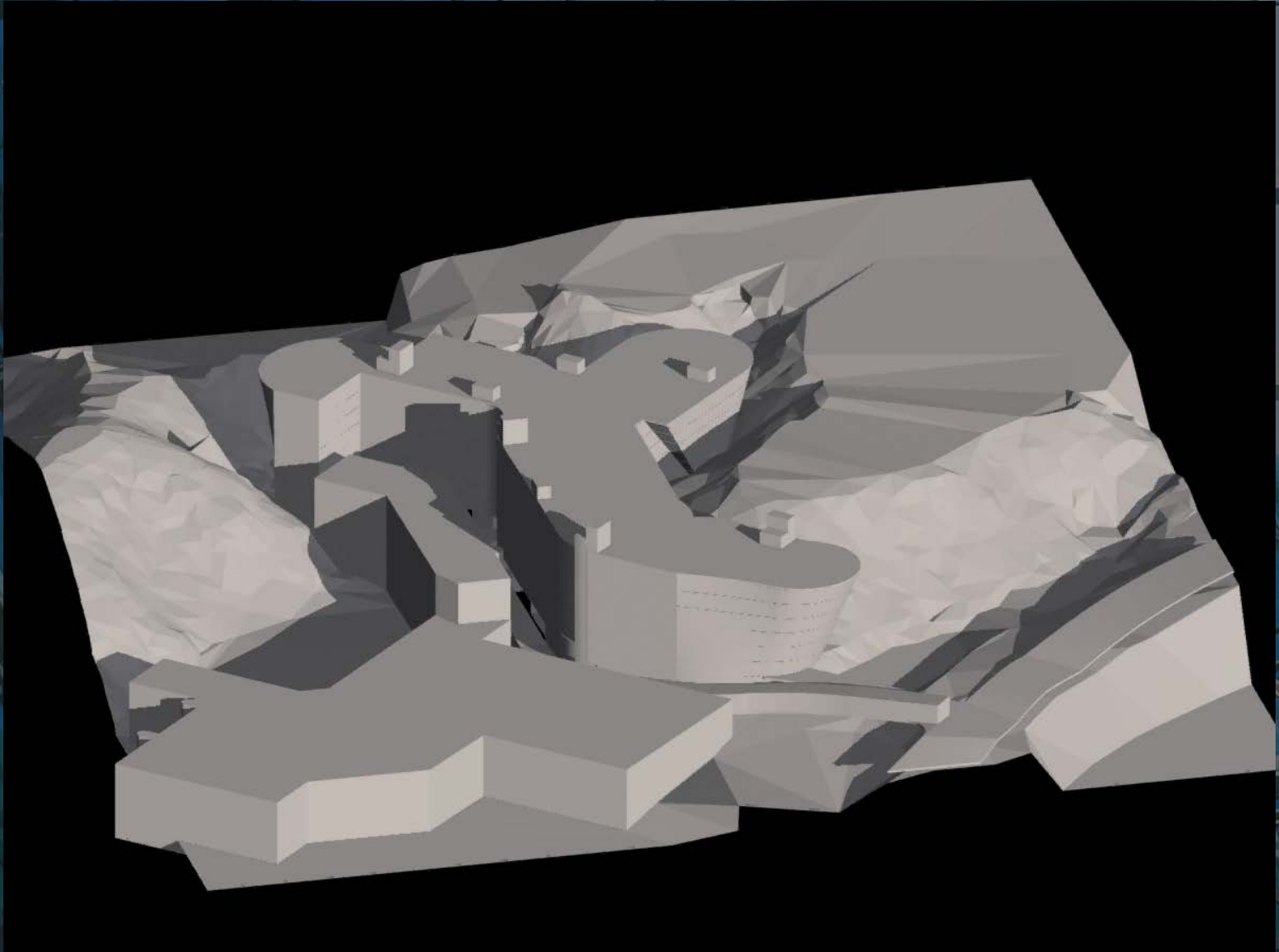
Unsatisfactory sightlines



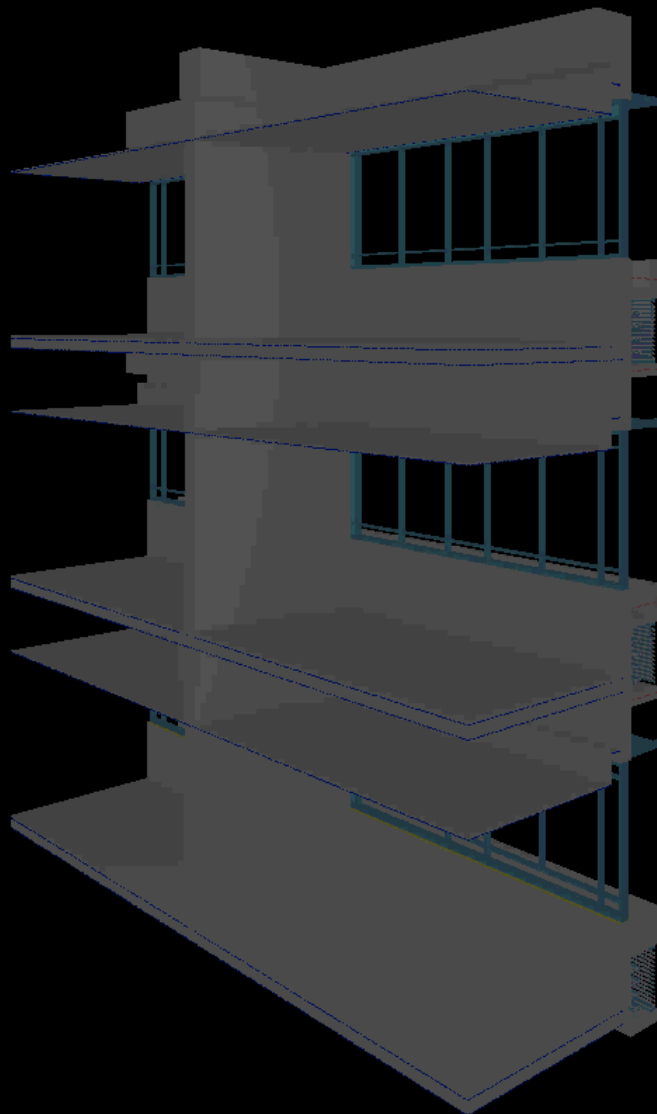
Satisfactory sightlines

SIGHTLINE STUDIES

ANALYSIS



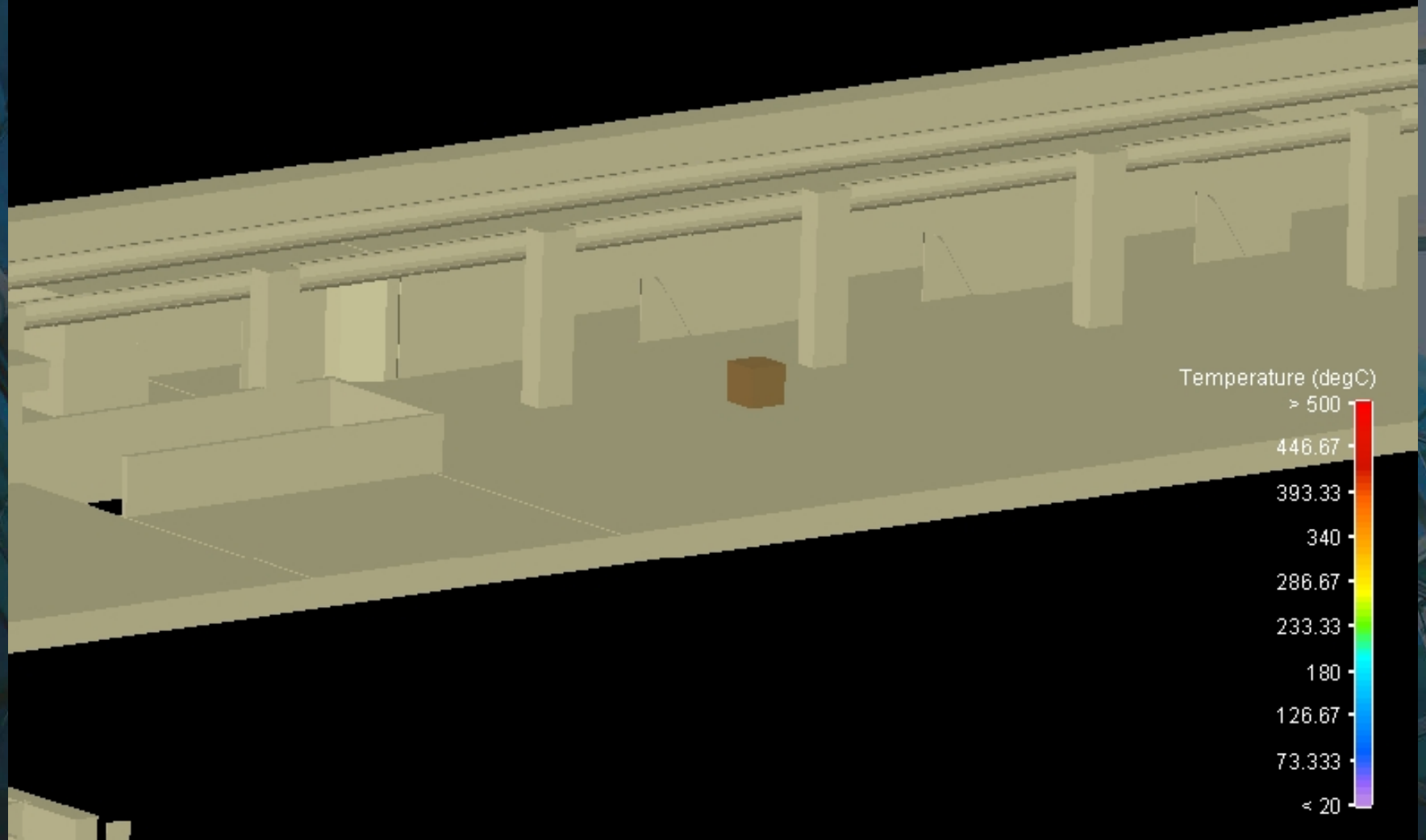
SUN STUDY



FAÇADE SOLAR STUDY
21/12/2006 7:00am – 6:00pm

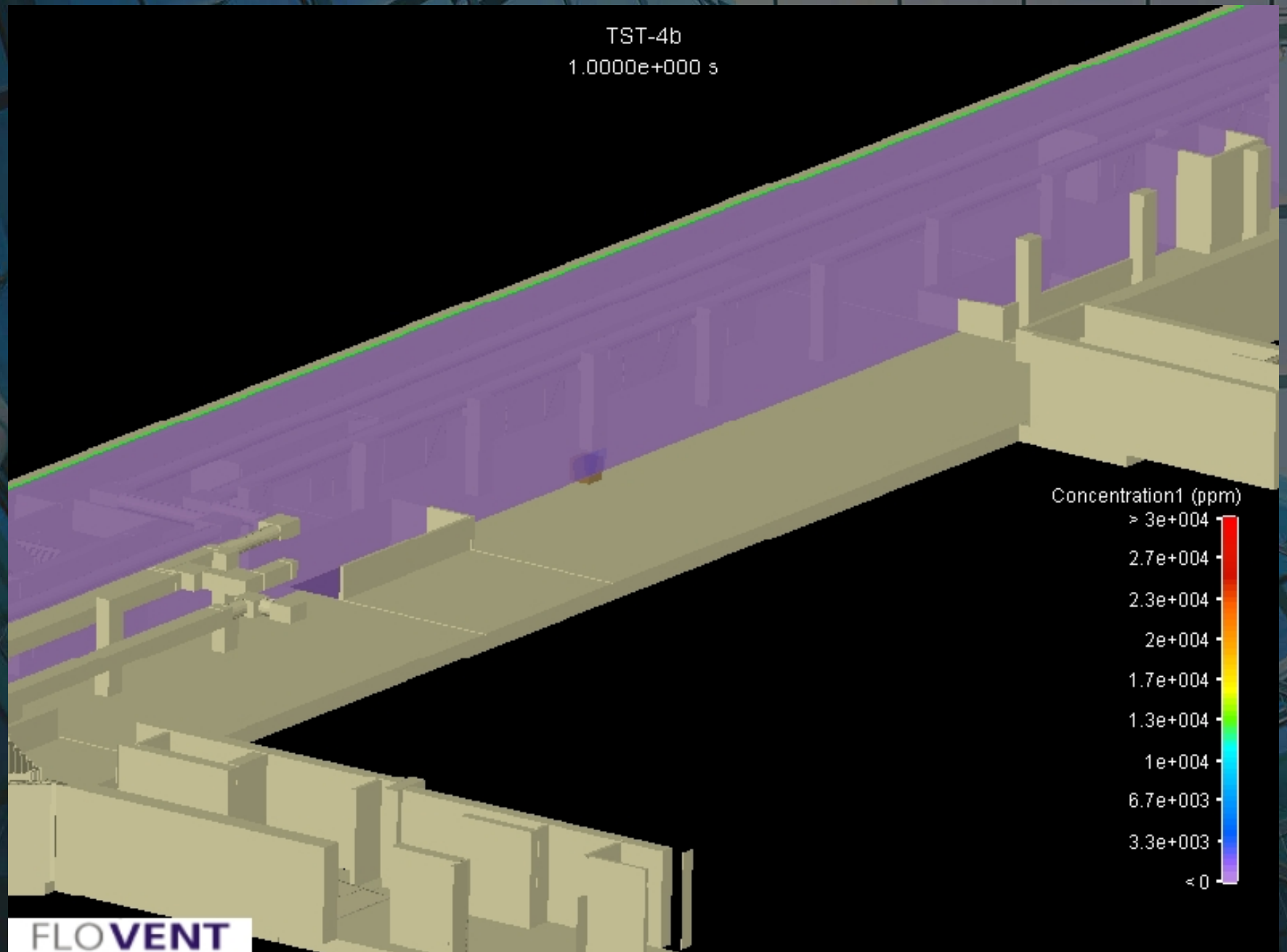
ANALYSIS

TST-4c
1.0000e+000 s

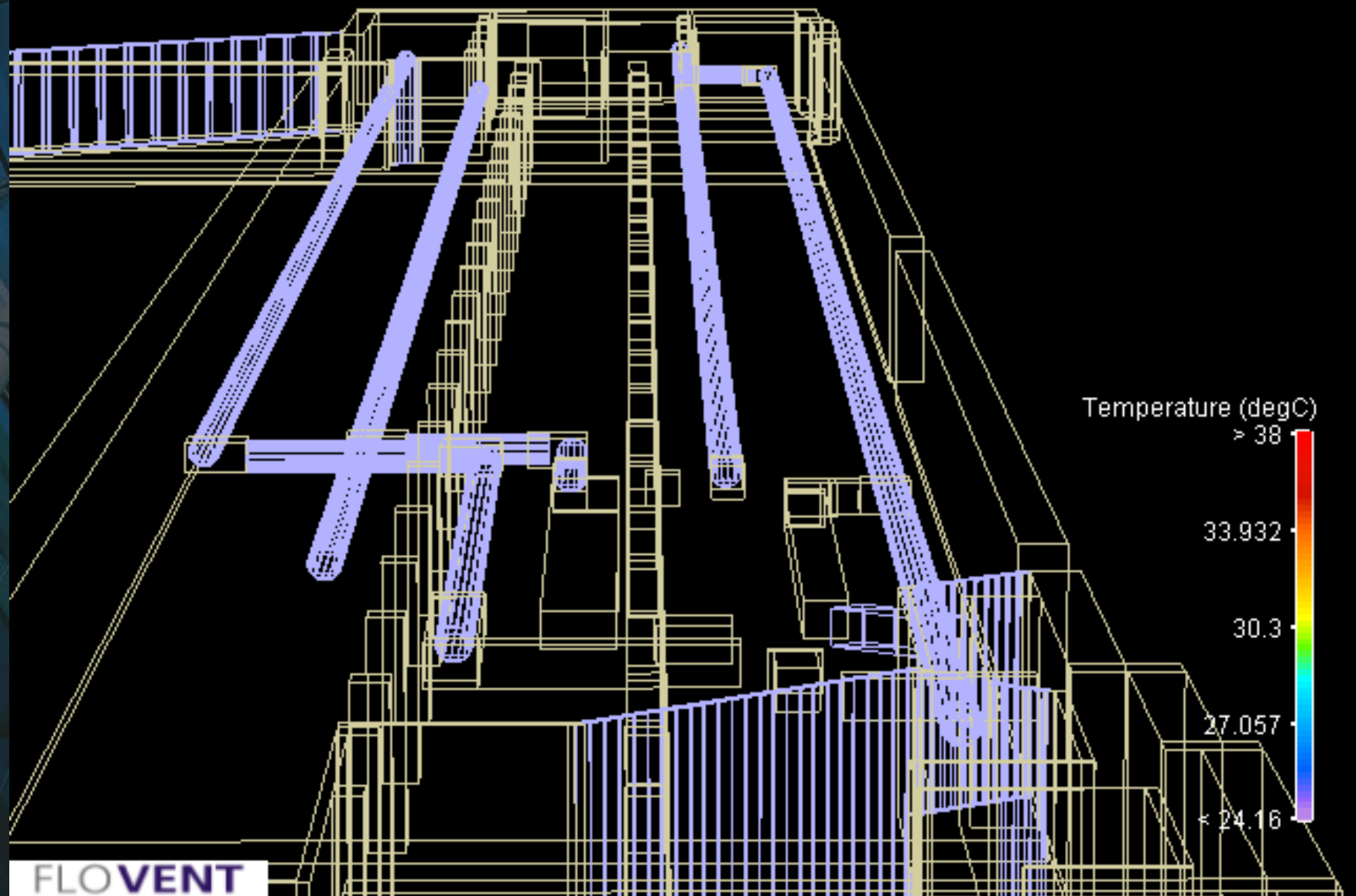


ANALYSIS

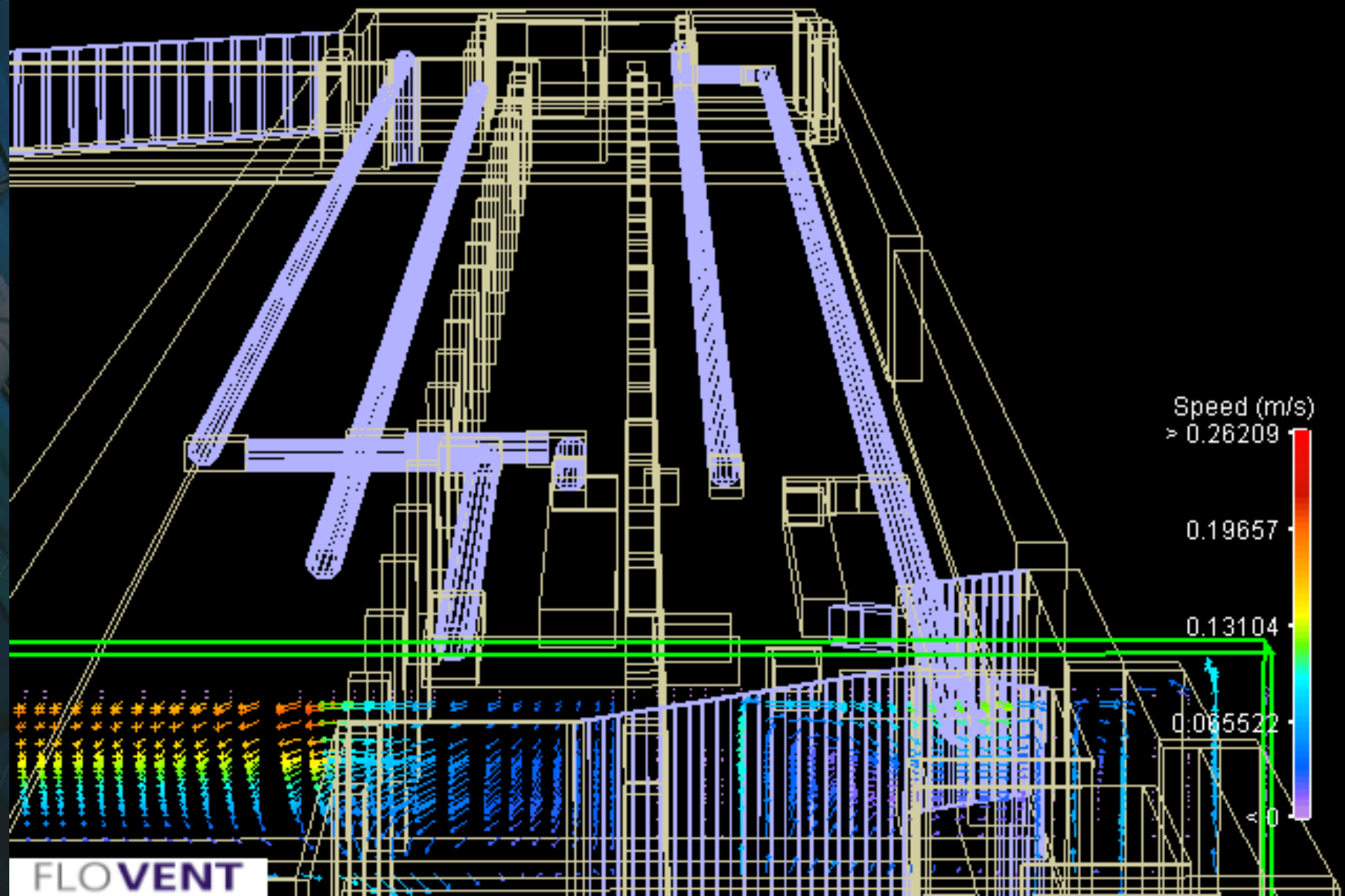
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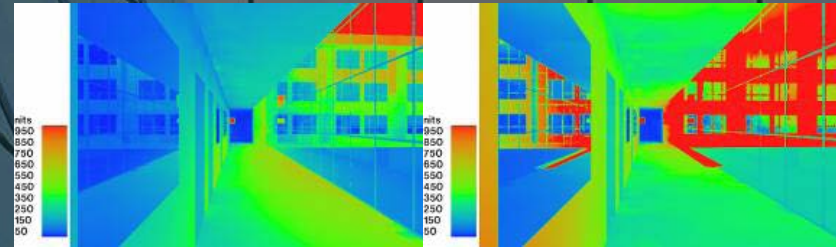
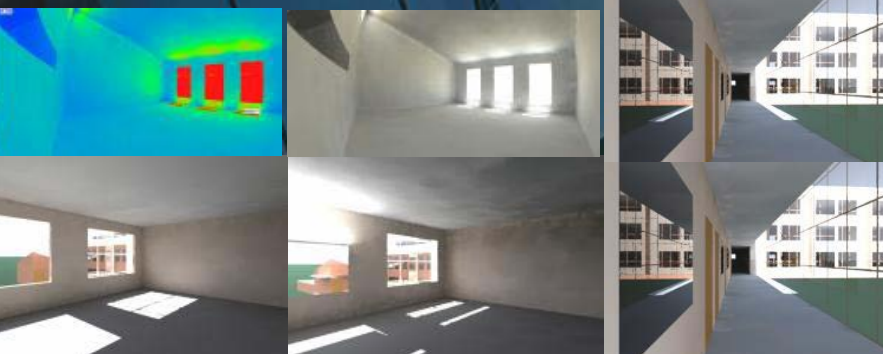
ANALYSIS



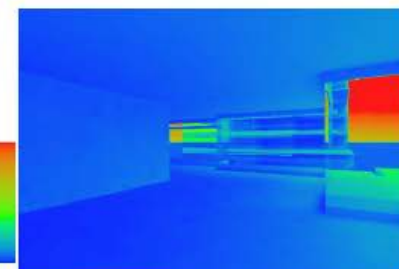
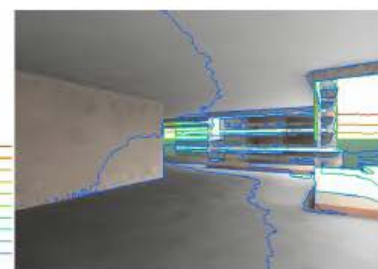
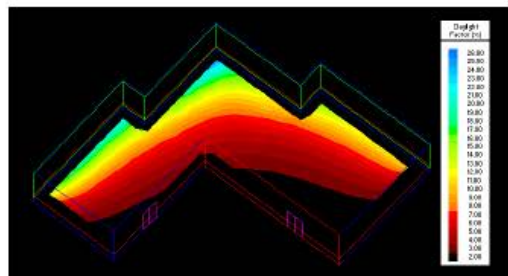
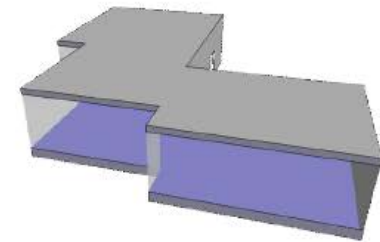
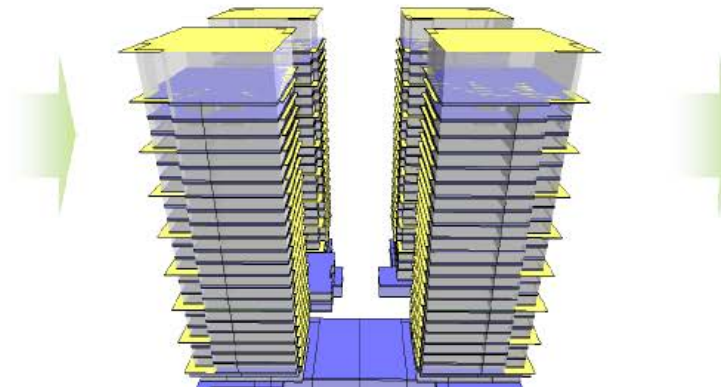
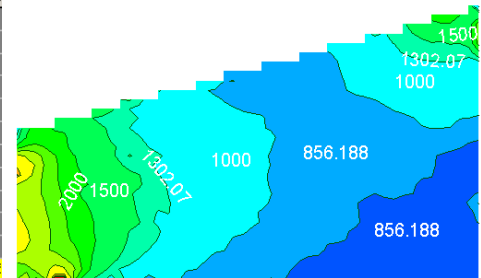
ANALYSIS

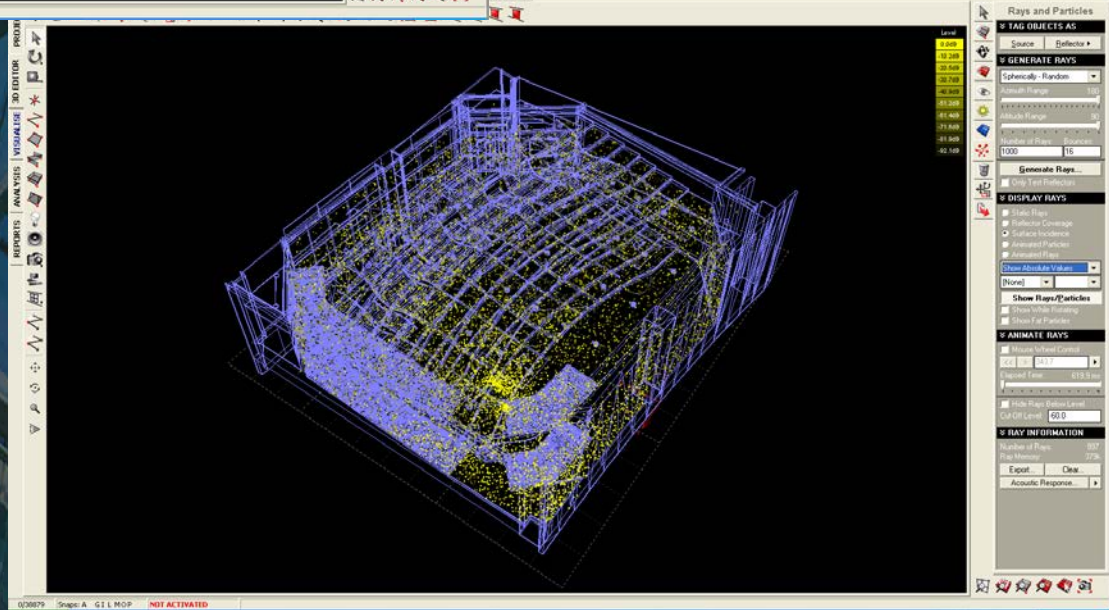
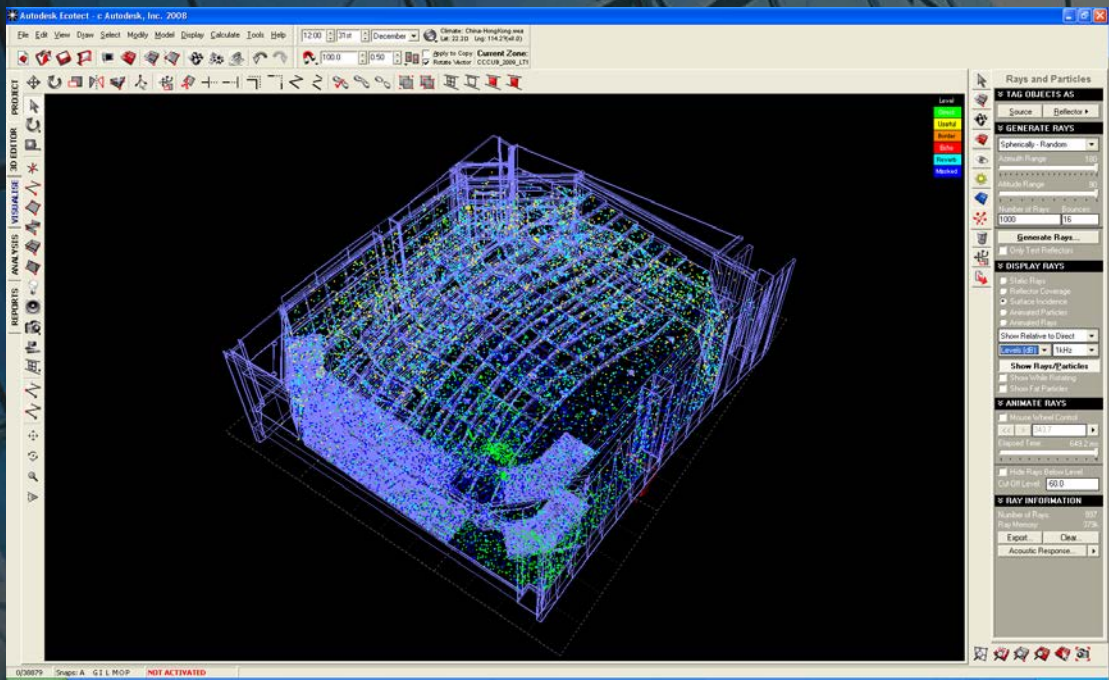


Sustainable Design



Month	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	
Jan									100.0	99.7	100.0	100.0	100.0	84.6	38.8	5.2									
Feb								100.0	100.0	100.0	100.0	100.0	100.0	98.7	73.9	32.7	3.0								
Mar							100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	91.5	60.4	25.7								
Apr					0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	84.0	51.3	0.0							
May					0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	92.9	0.0	0.0	0.0						
Jun			0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.5	0.0	0.0	0.0	0.0					
Jul				0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.3	0.0	0.0	0.0	0.0	0.0				
Aug					0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	90.2	64.8	0.0	0.0						
Sep						0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	92.2	64.0	30.8	0.0							
Oct							100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.0	63.7	26.7									
Nov								100.0	100.0	100.0	100.0	100.0	100.0	77.0	31.7	1.8									
Dec									100.0	95.1	93.6	100.0	93.0	67.6	22.2										71.82



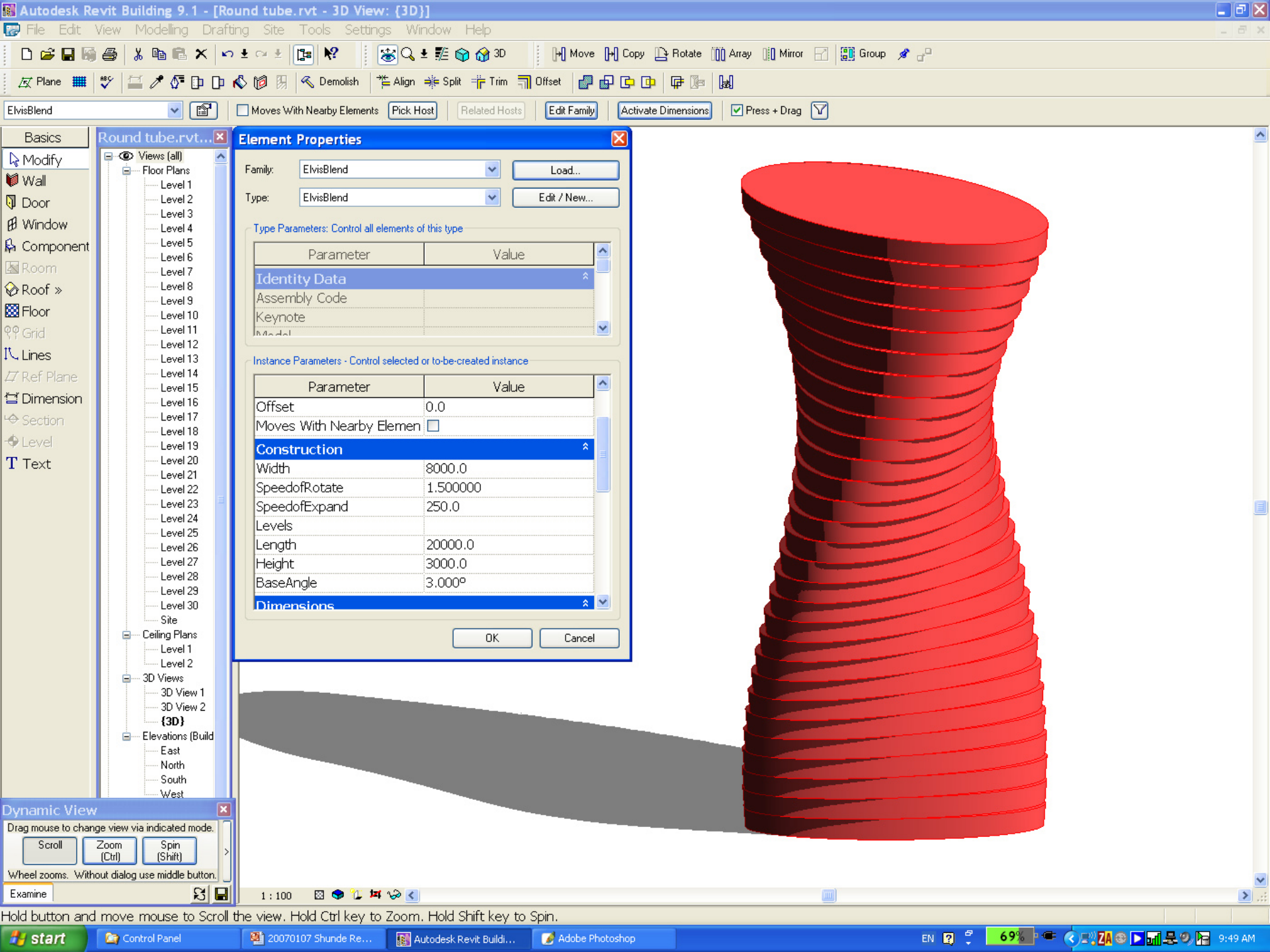
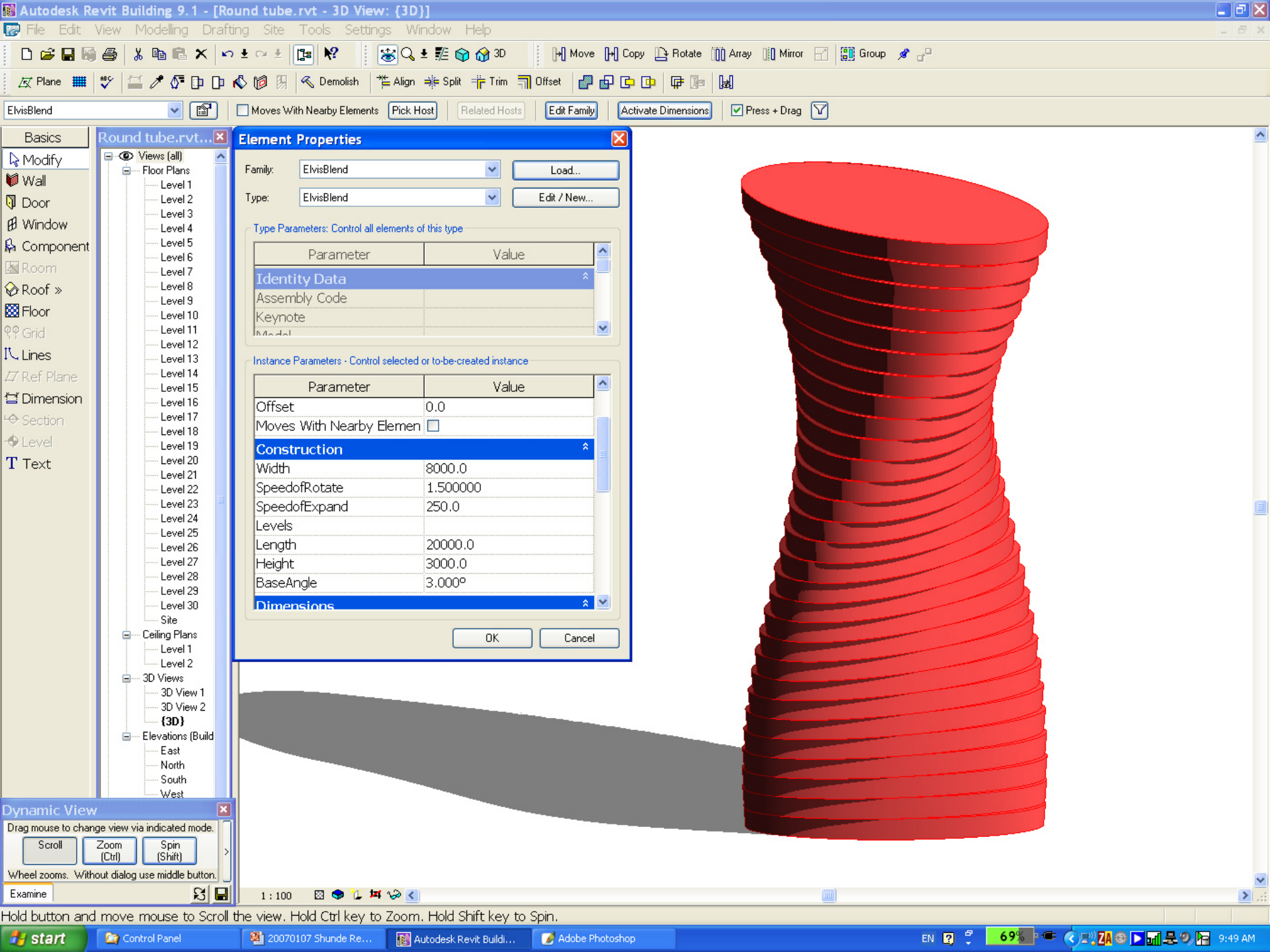


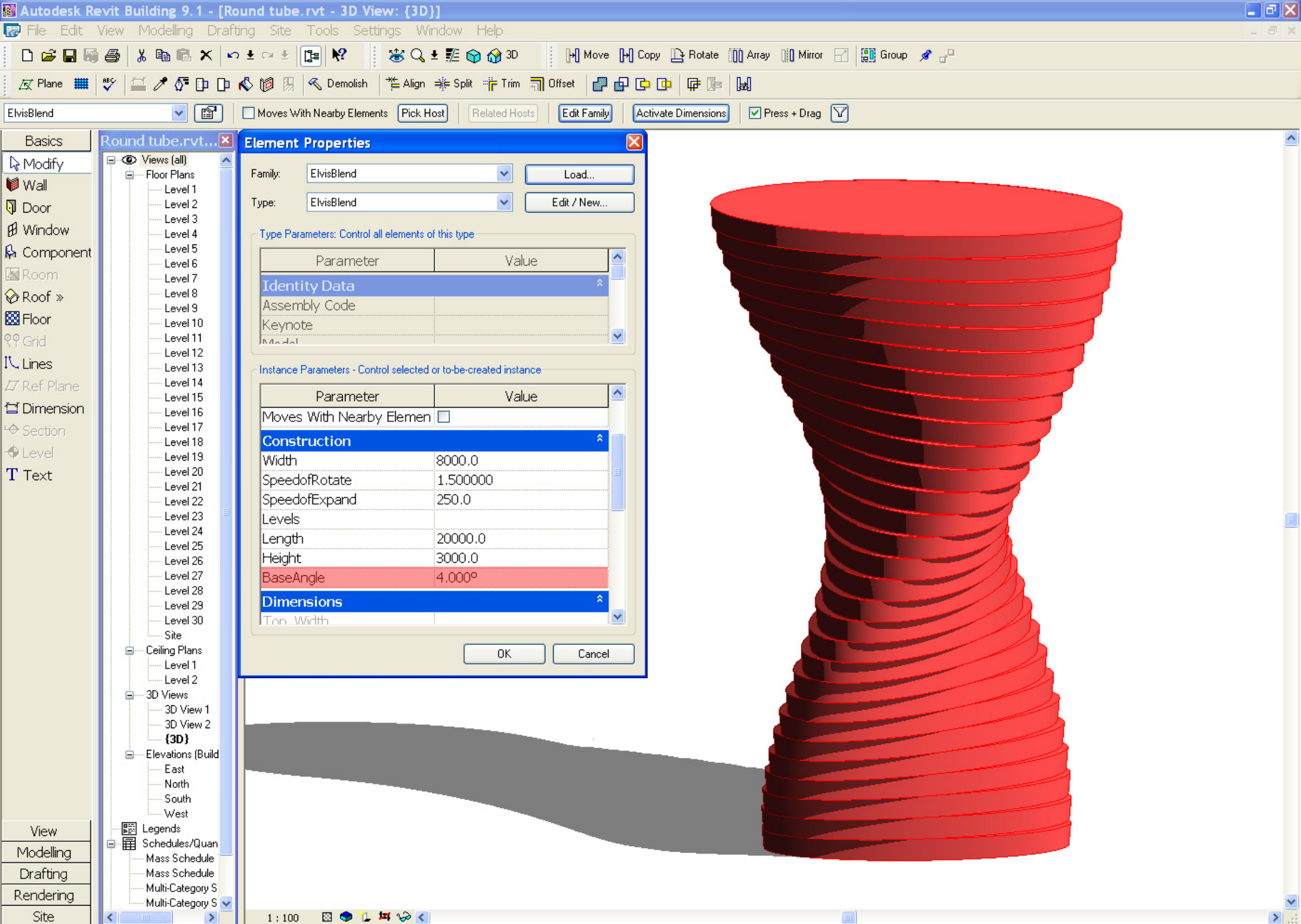
Use of Building Information Modeling (BIM)

1. Design visualization
2. Drawing Productions
3. Services Co-ordination and Clash detection with other disciplines
4. Quantity taking and preparation of Tender Document
5. Automated Statutory Submission
6. Scientific analysis of different environmental aspects
7. **Supply Chain Integration with the manufacturing and production**
サプライヤとの連携
8. Complex Geometry

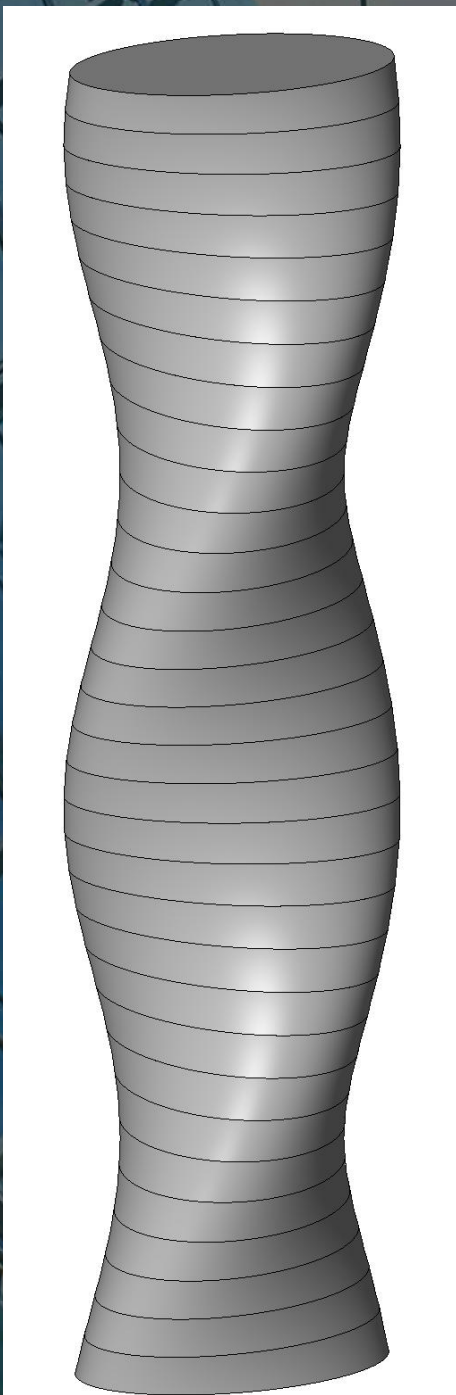
Use of Building Information Modeling (BIM)

1. Design visualization
2. Drawing Productions
3. Services Co-ordination and Clash detection with other disciplines
4. Quantity taking and preparation of Tender Document
5. Automated Statutory Submission
6. Scientific analysis of different environmental aspects
7. Supply Chain Integration with the manufacturing and production
8. **Complex Geometry** 複雑な形状を実現可能





Click to select, TAB for alternates, CTRL adds, SHIFT unselects.





absoluteworld BUILDING 2

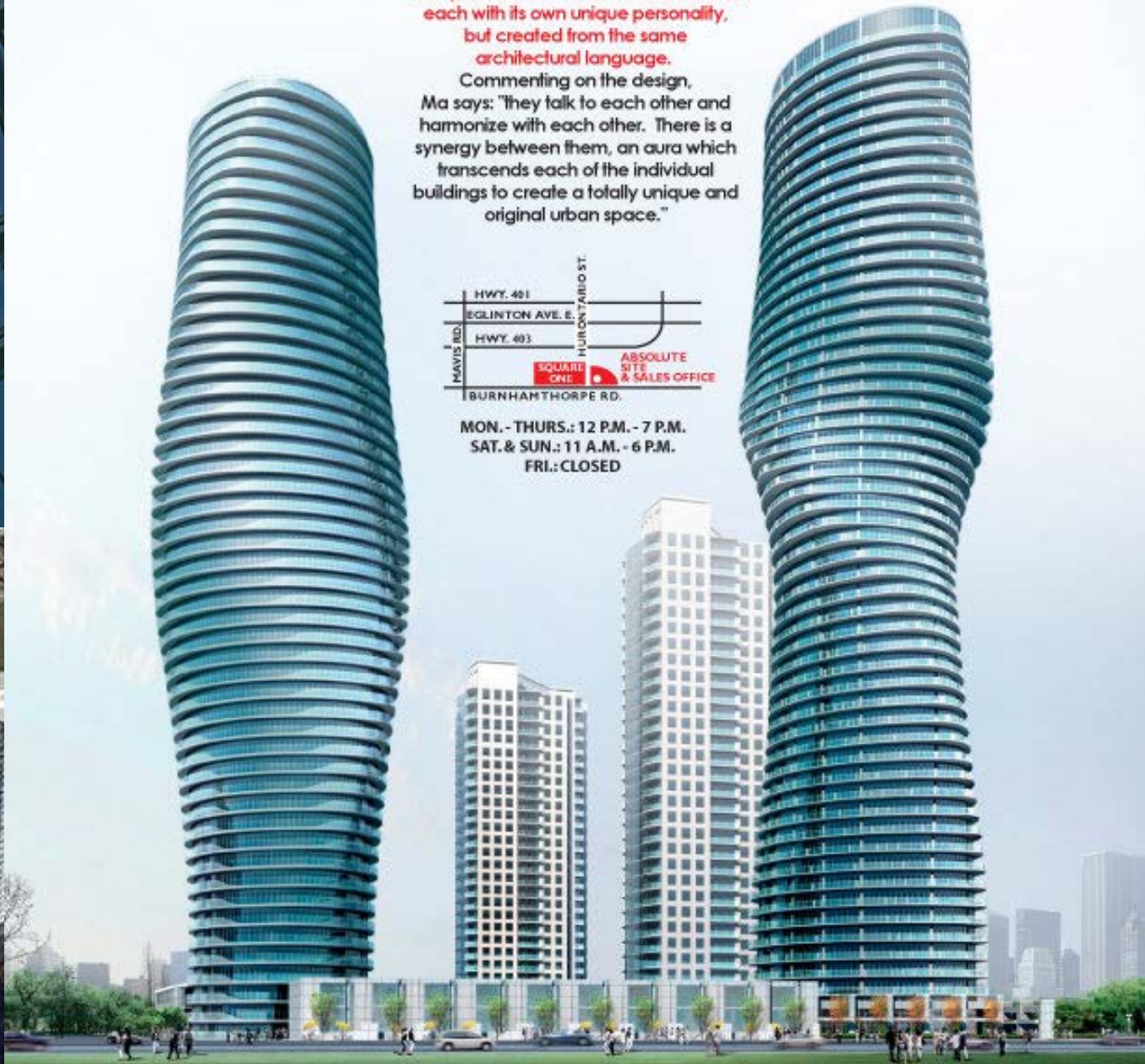
AbsoluteWorld's two buildings, as envisioned by their creator, Yansong Ma. The buildings were designed to complement and enhance each other, each with its own unique personality, but created from the same architectural language.

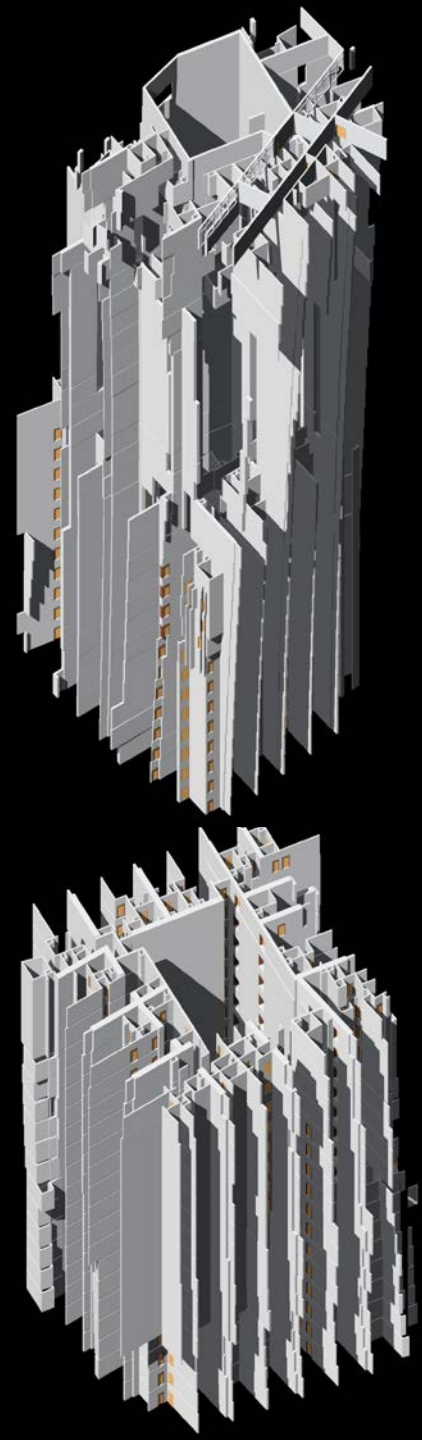
Commenting on the design, Ma says: "They talk to each other and harmonize with each other. There is a synergy between them, an aura which transcends each of the individual buildings to create a totally unique and original urban space."

absoluteworld BUILDING 1

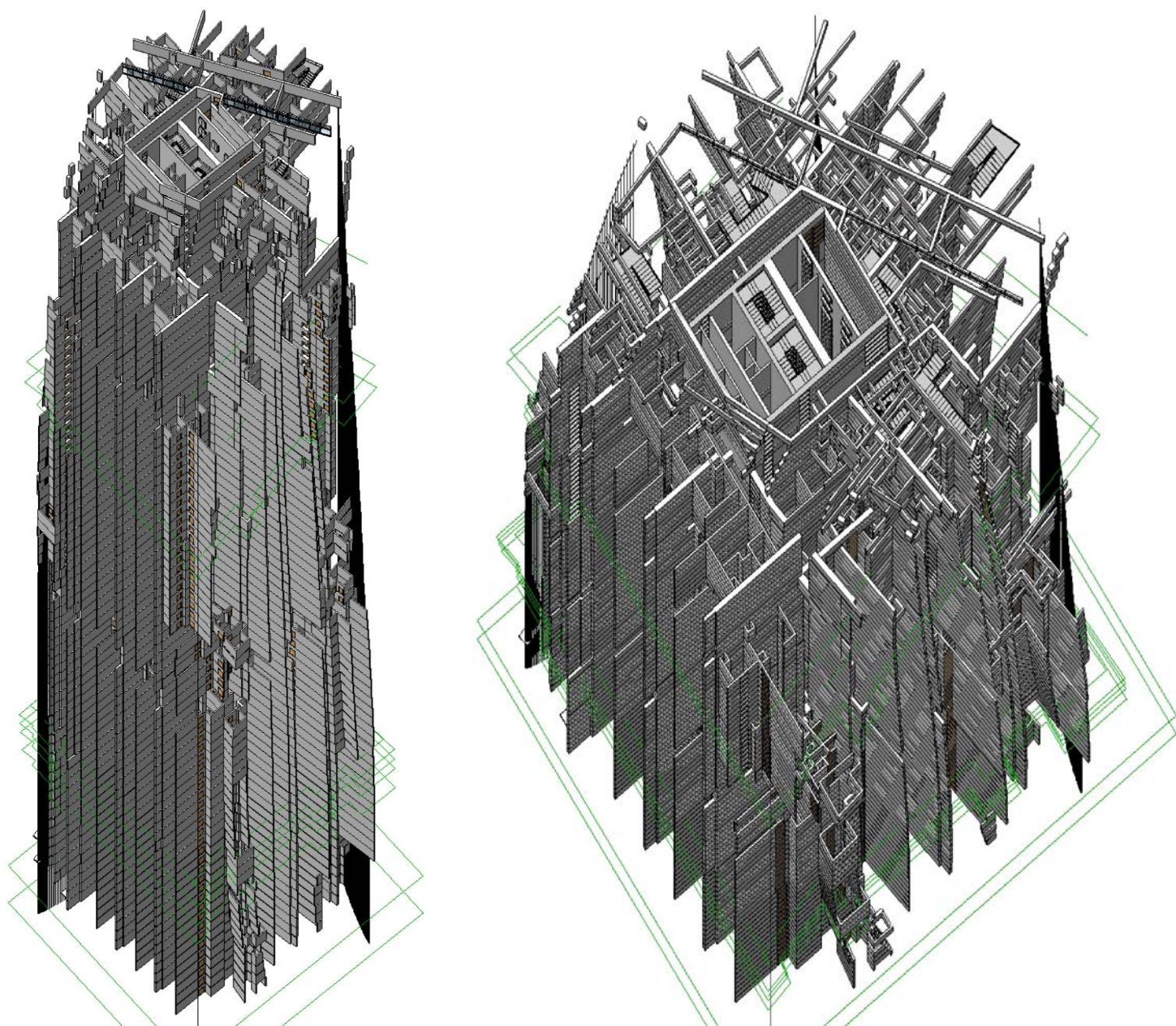


MON. - THURS.: 12 P.M. - 7 P.M.
SAT. & SUN.: 11 A.M. - 6 P.M.
FRI.: CLOSED

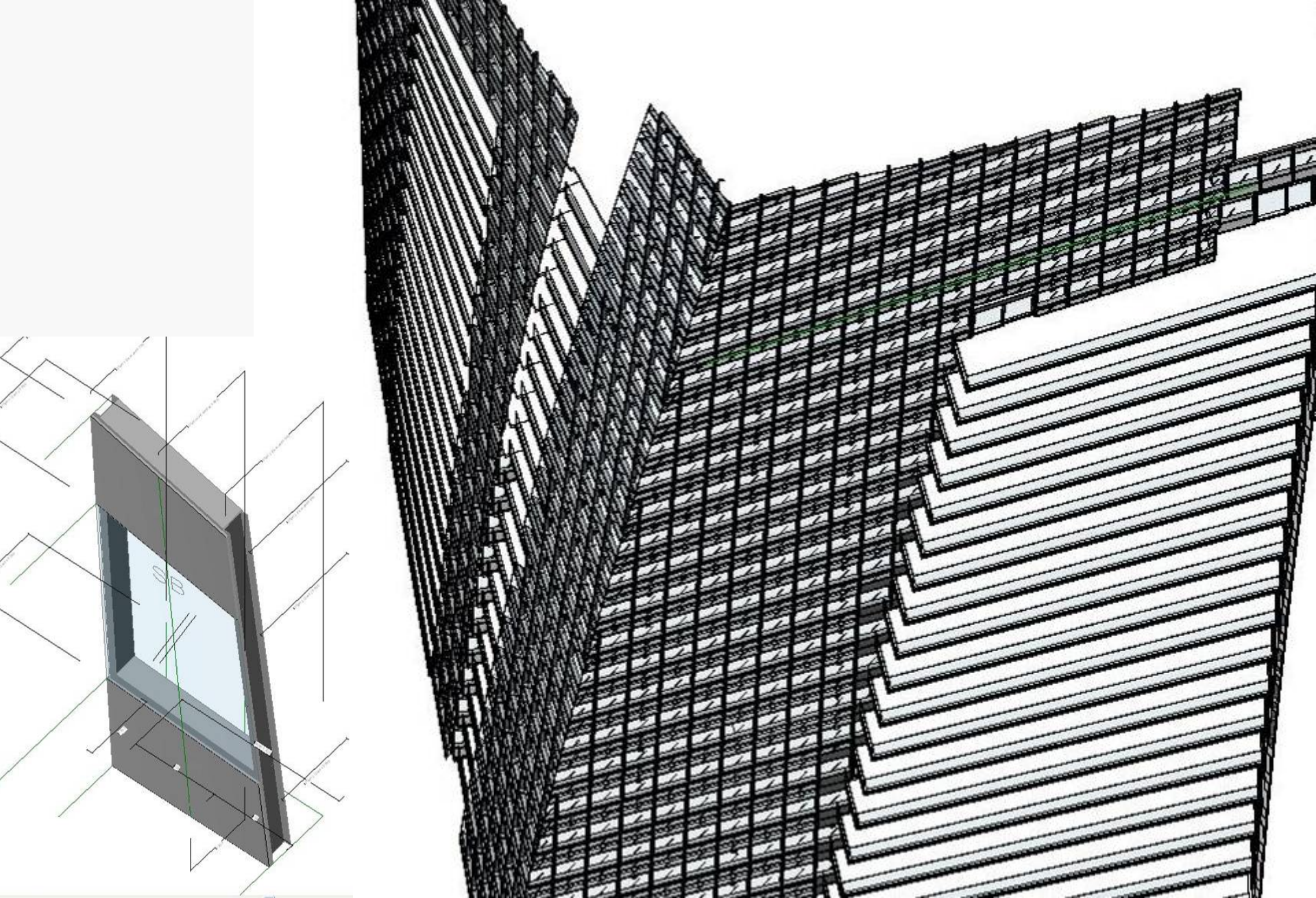




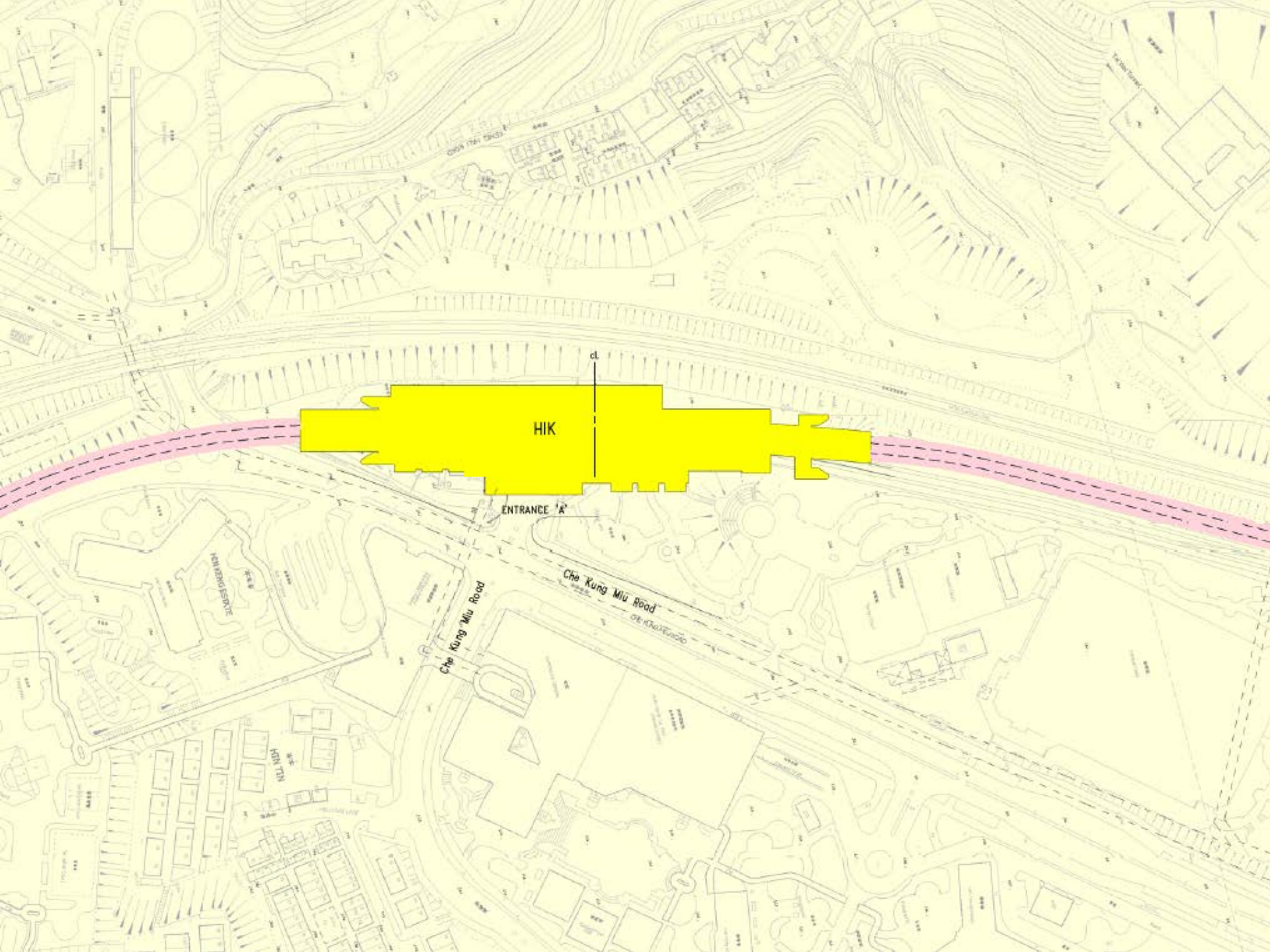
COMPLEX GEOMETRY



VERTICAL CO-ORDINATION



COMPLICATED CURTAIN WALL



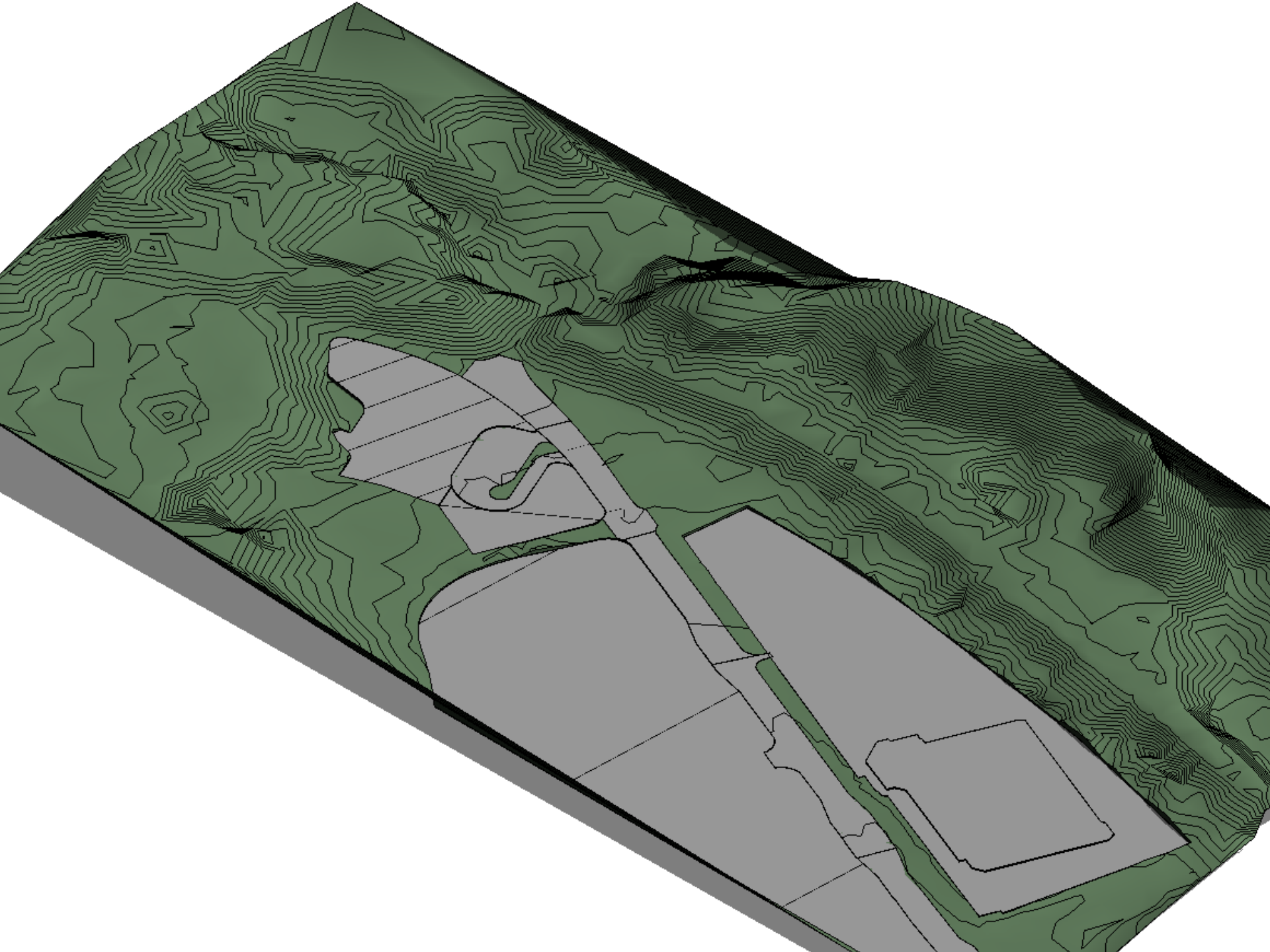
HIK

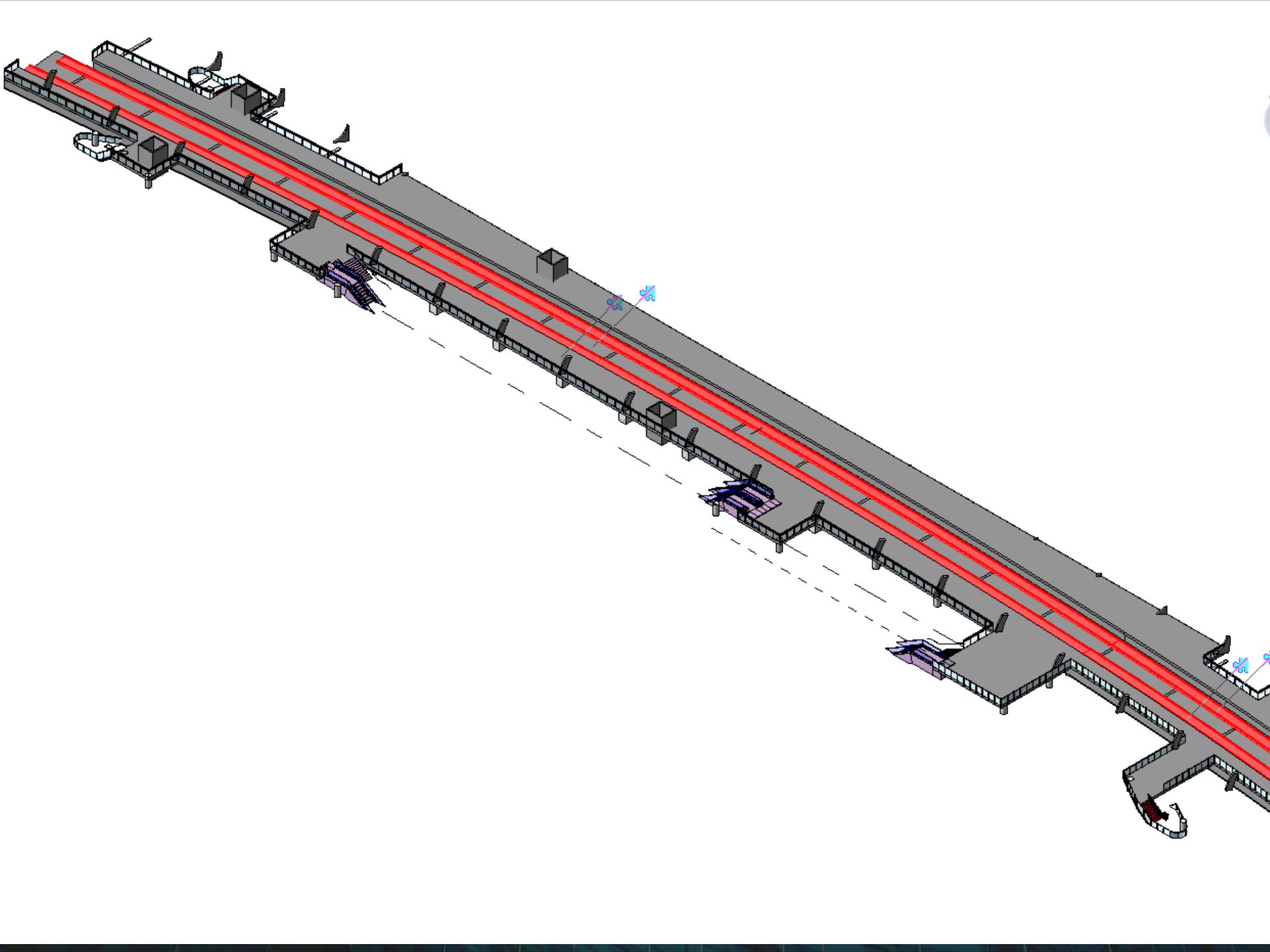
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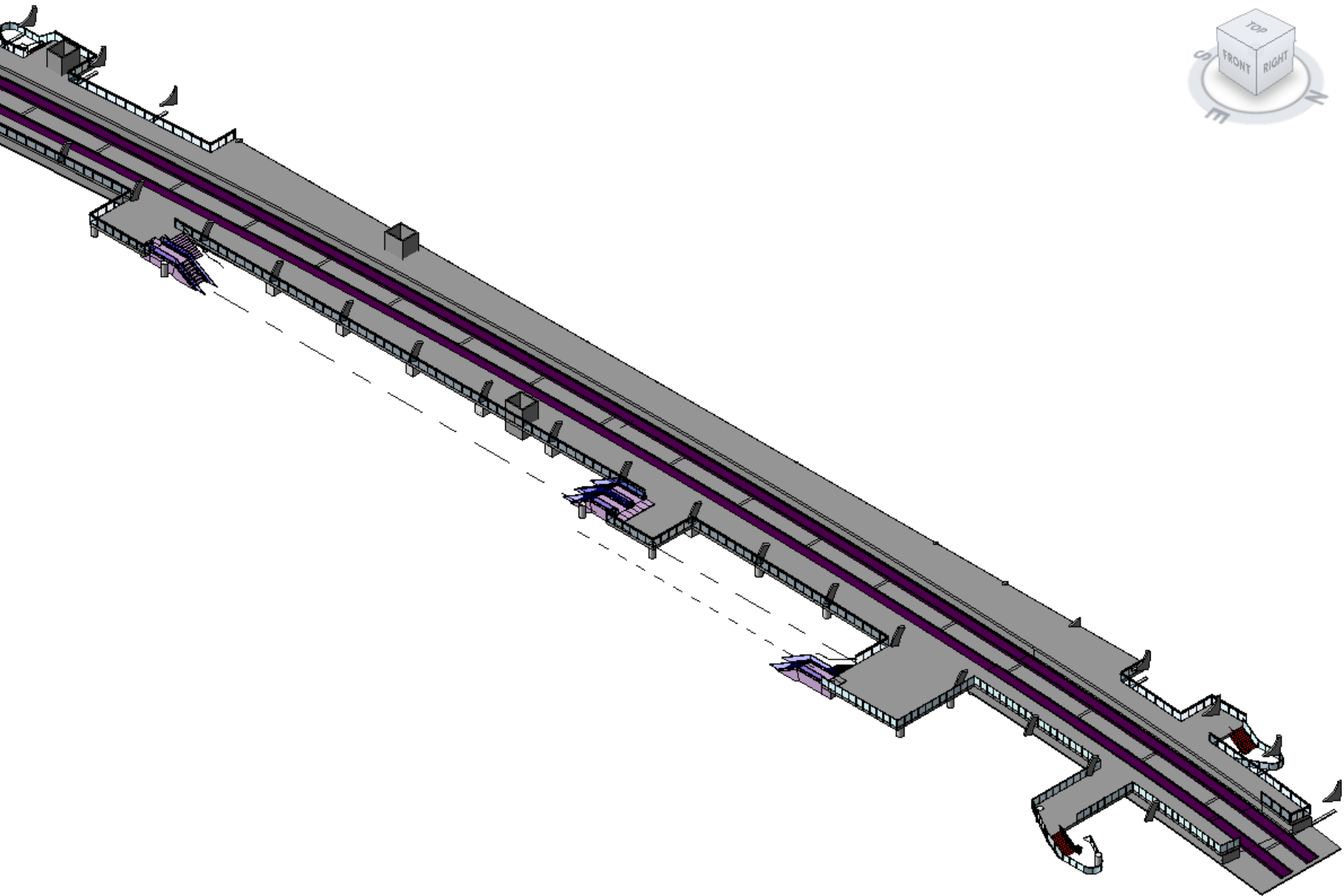
ENTRANCE A

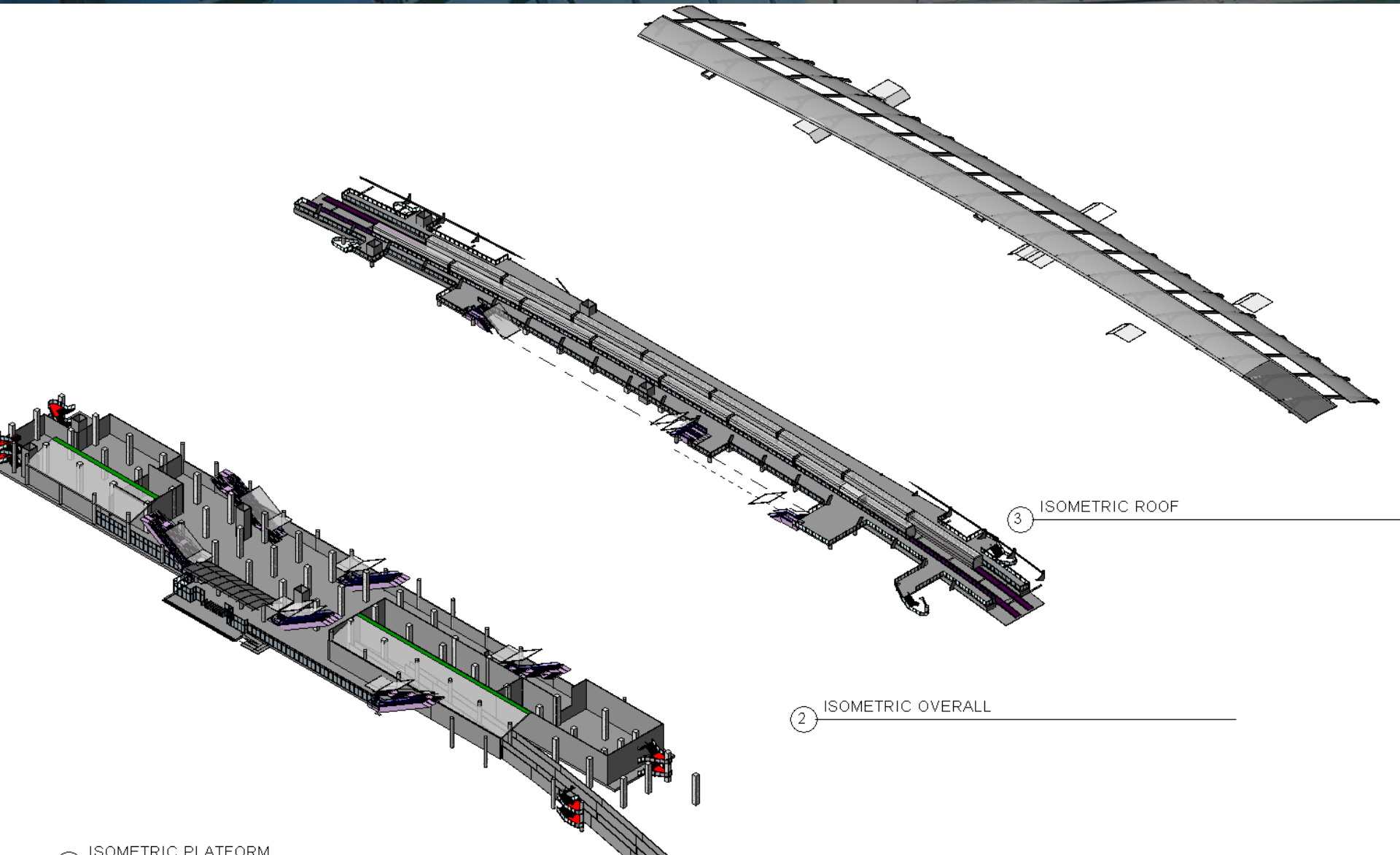
Che Kung Miu Road

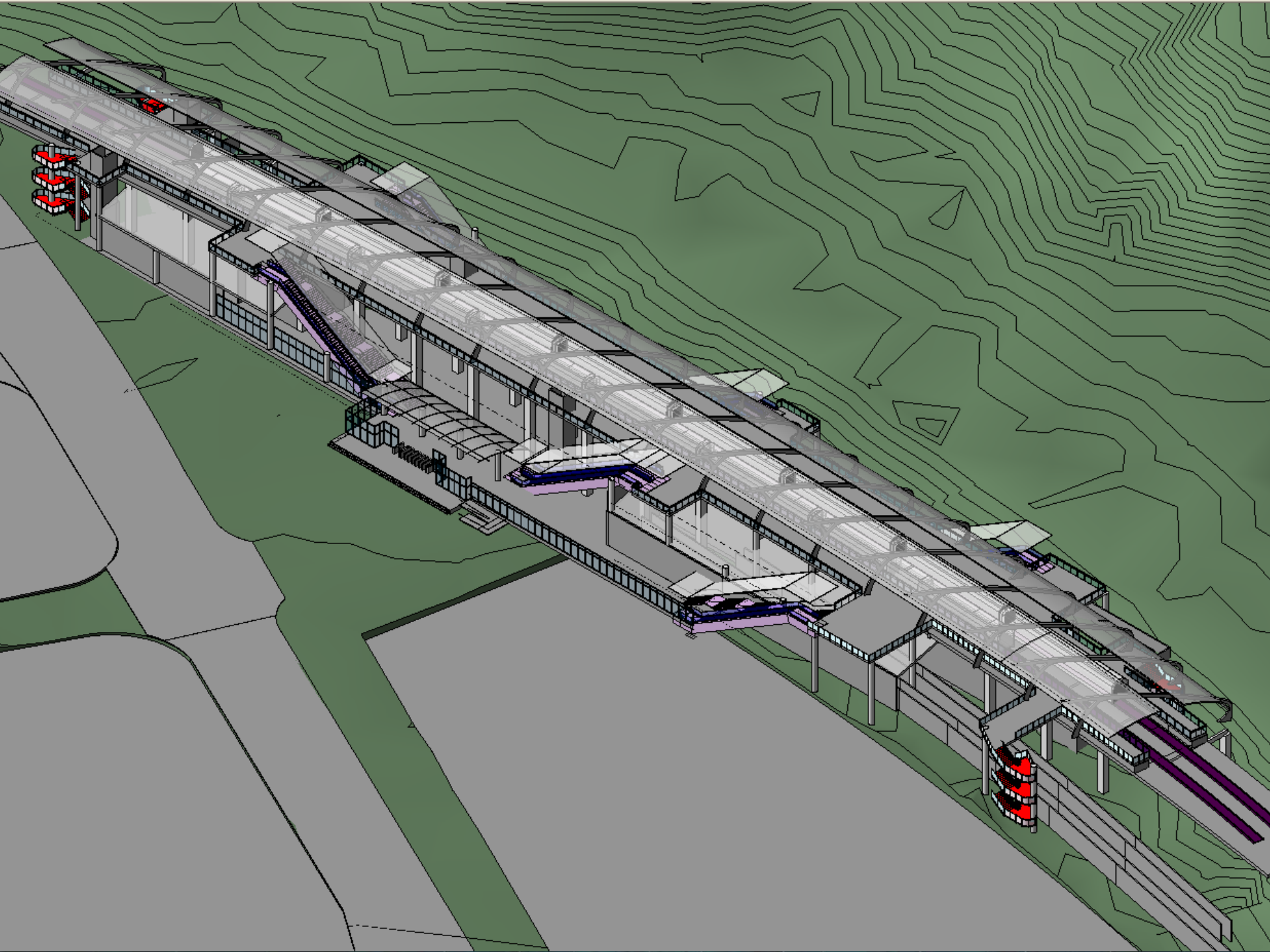
Che Kung Miu Road
(or Che Kung Miu Road)

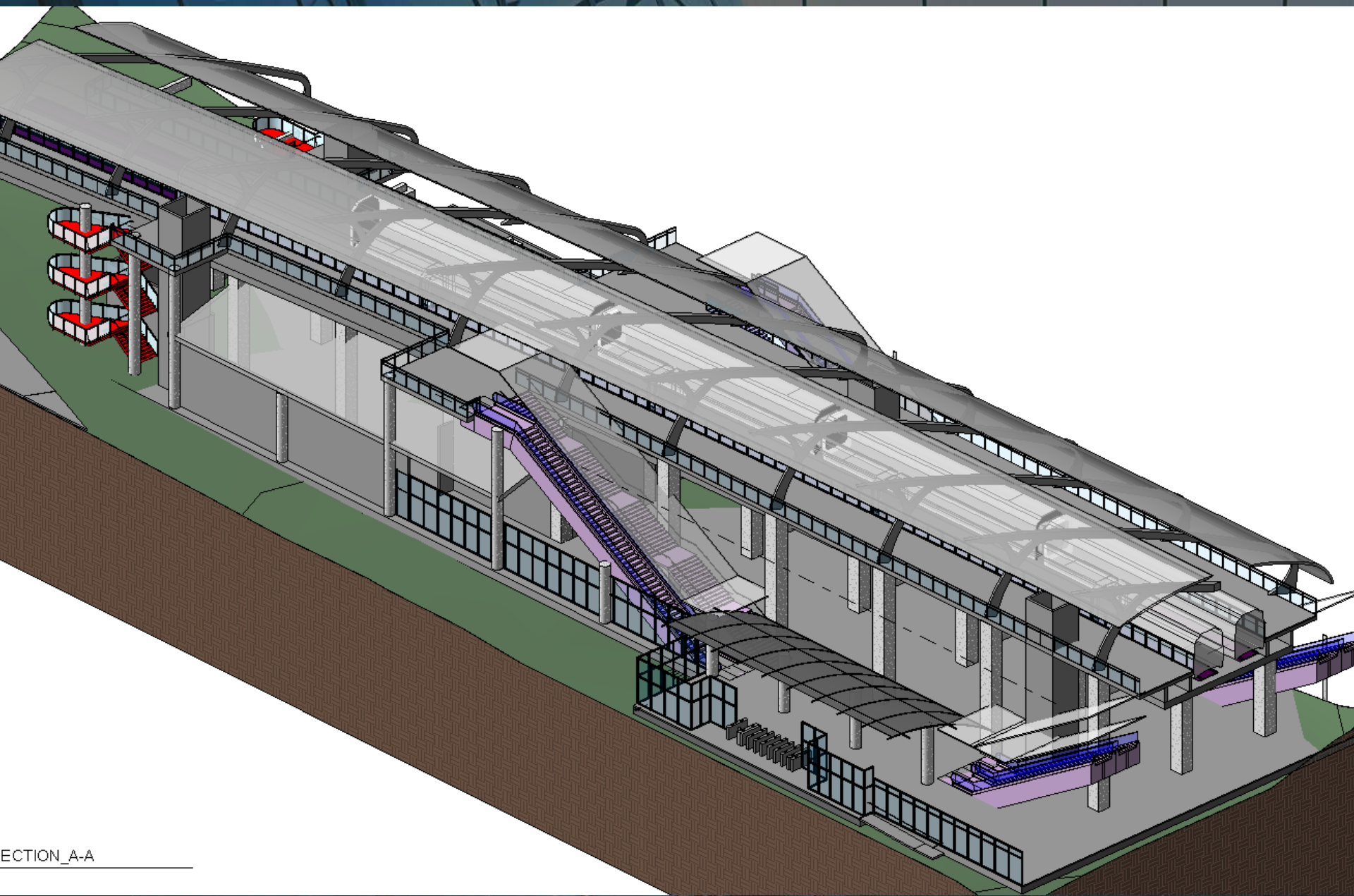




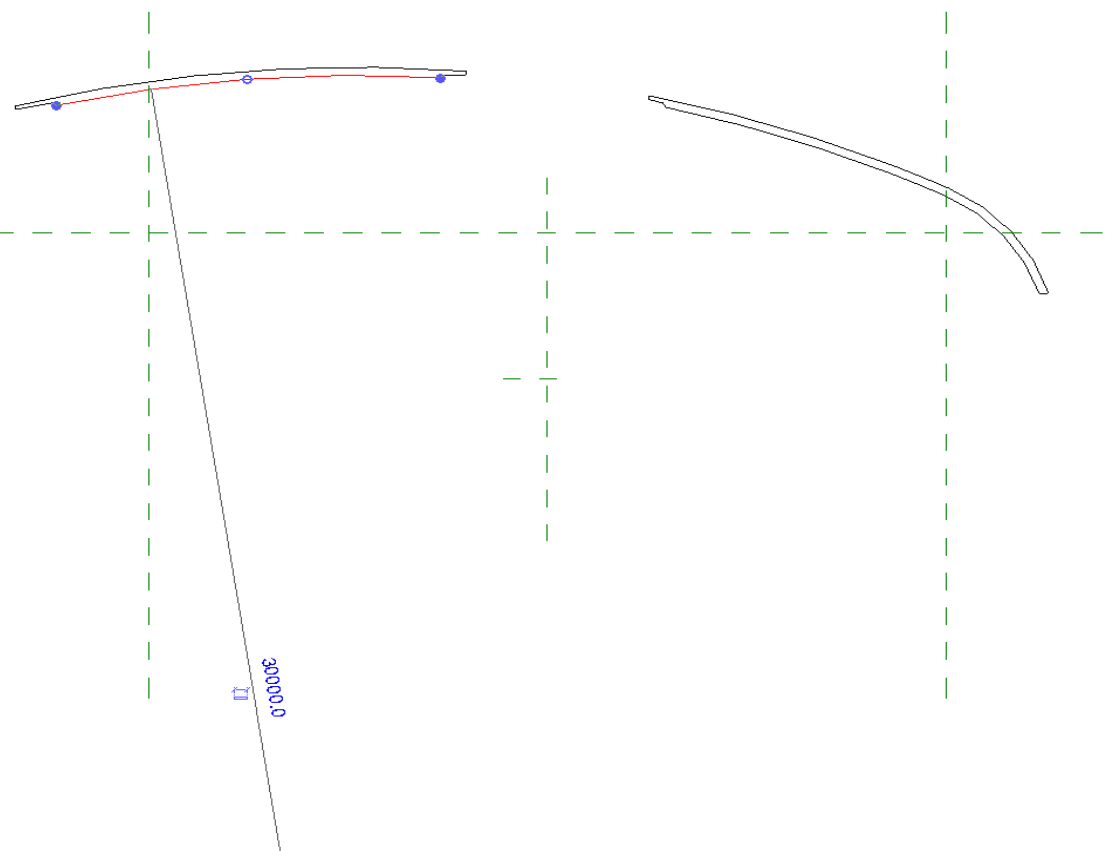
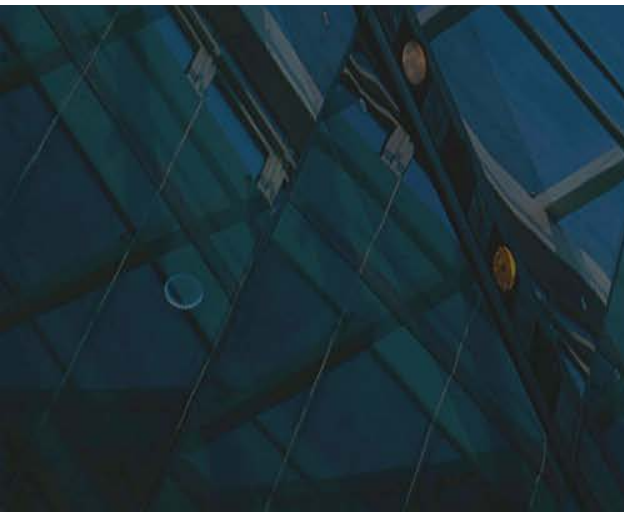
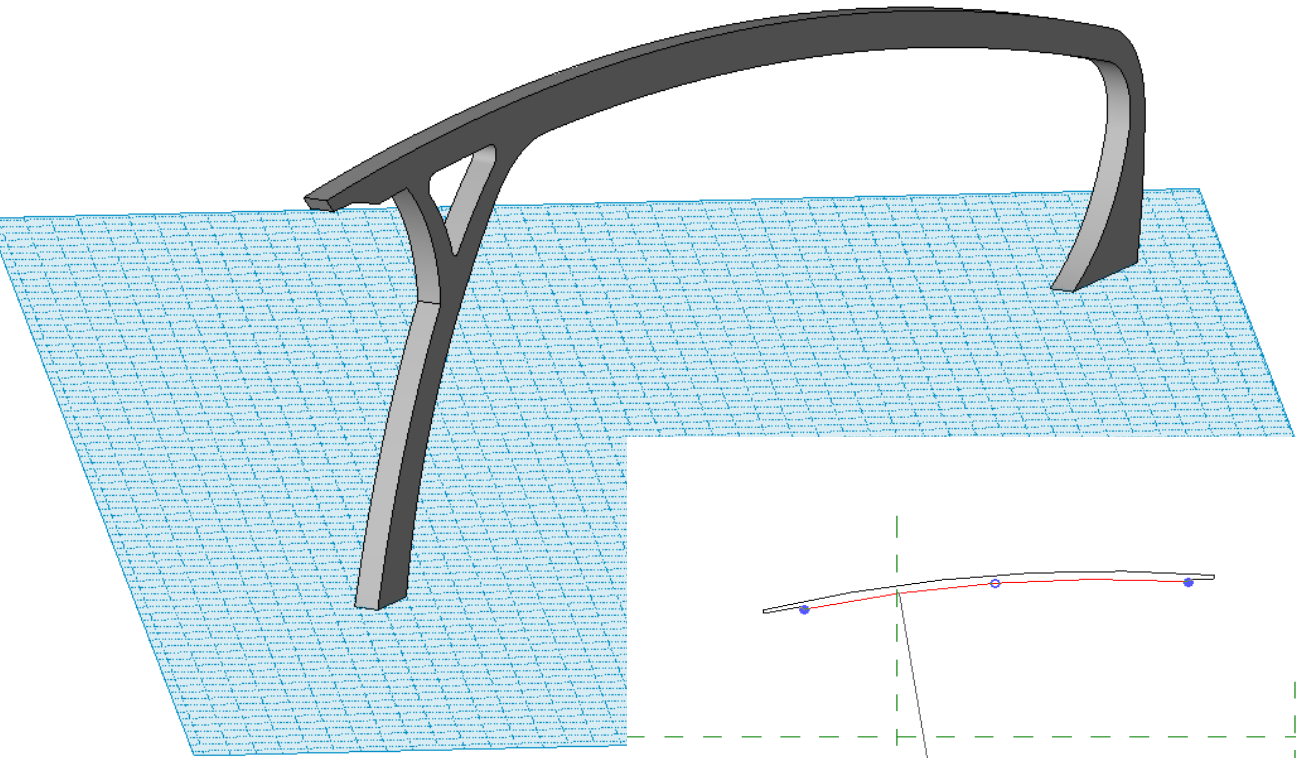


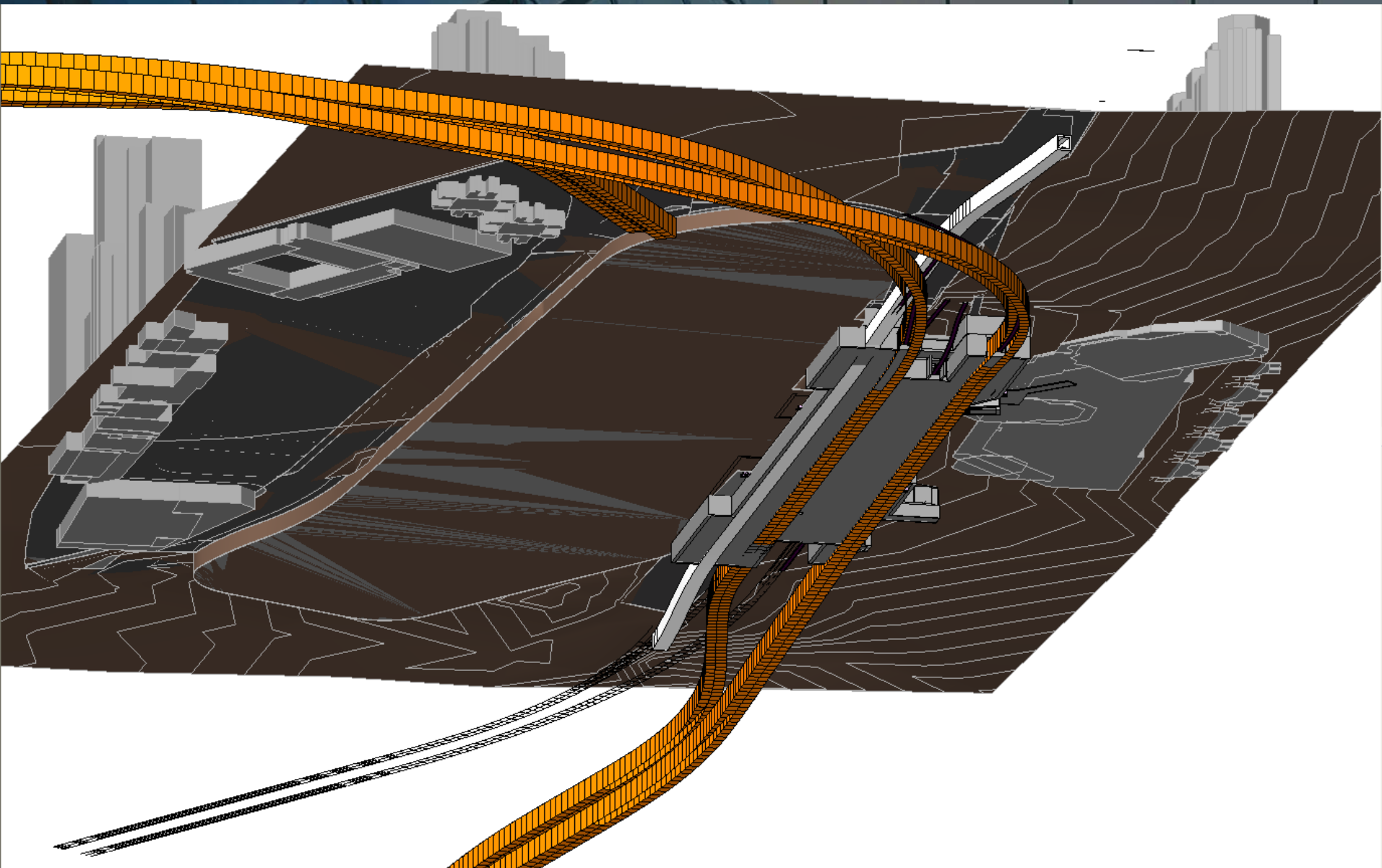


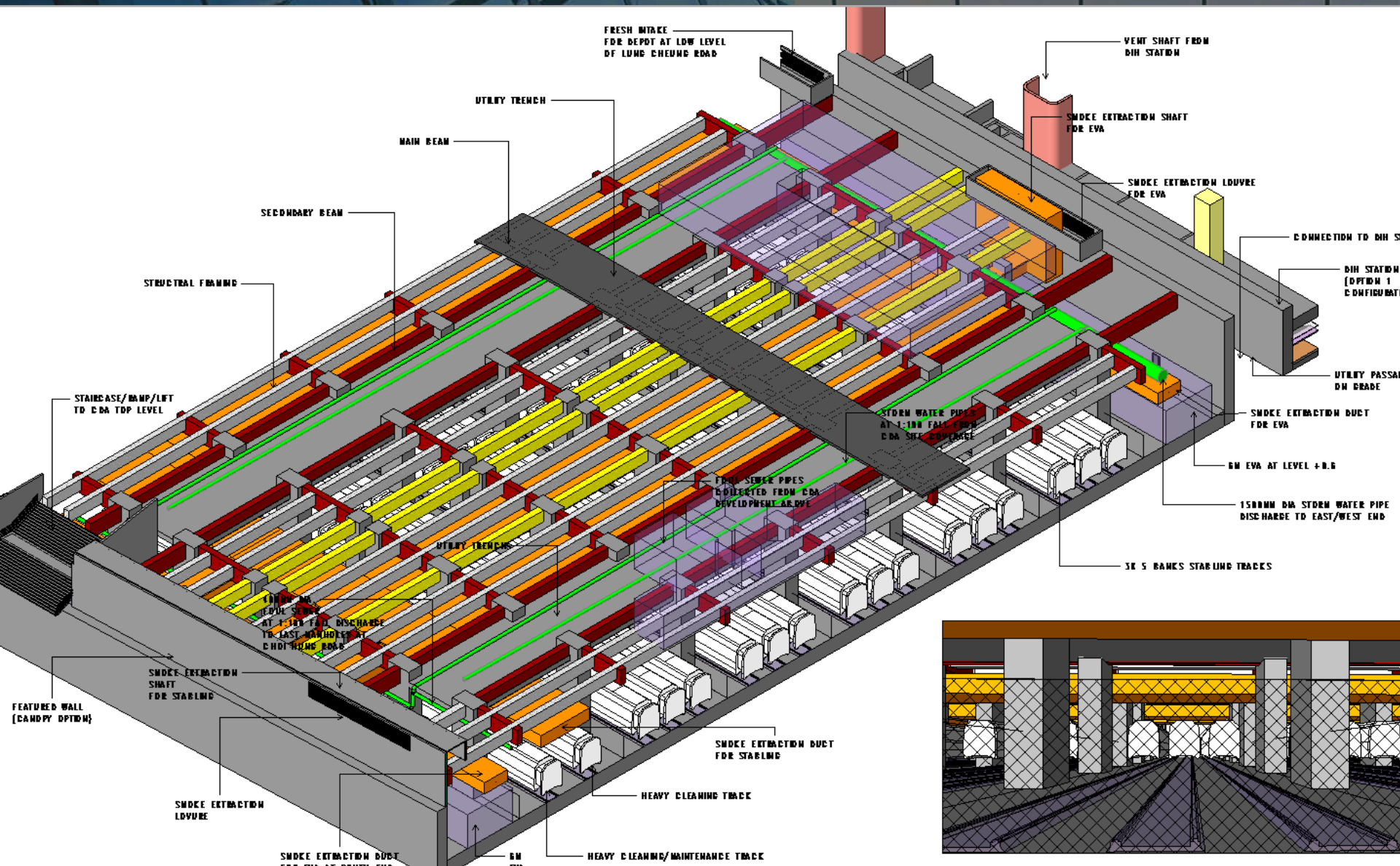


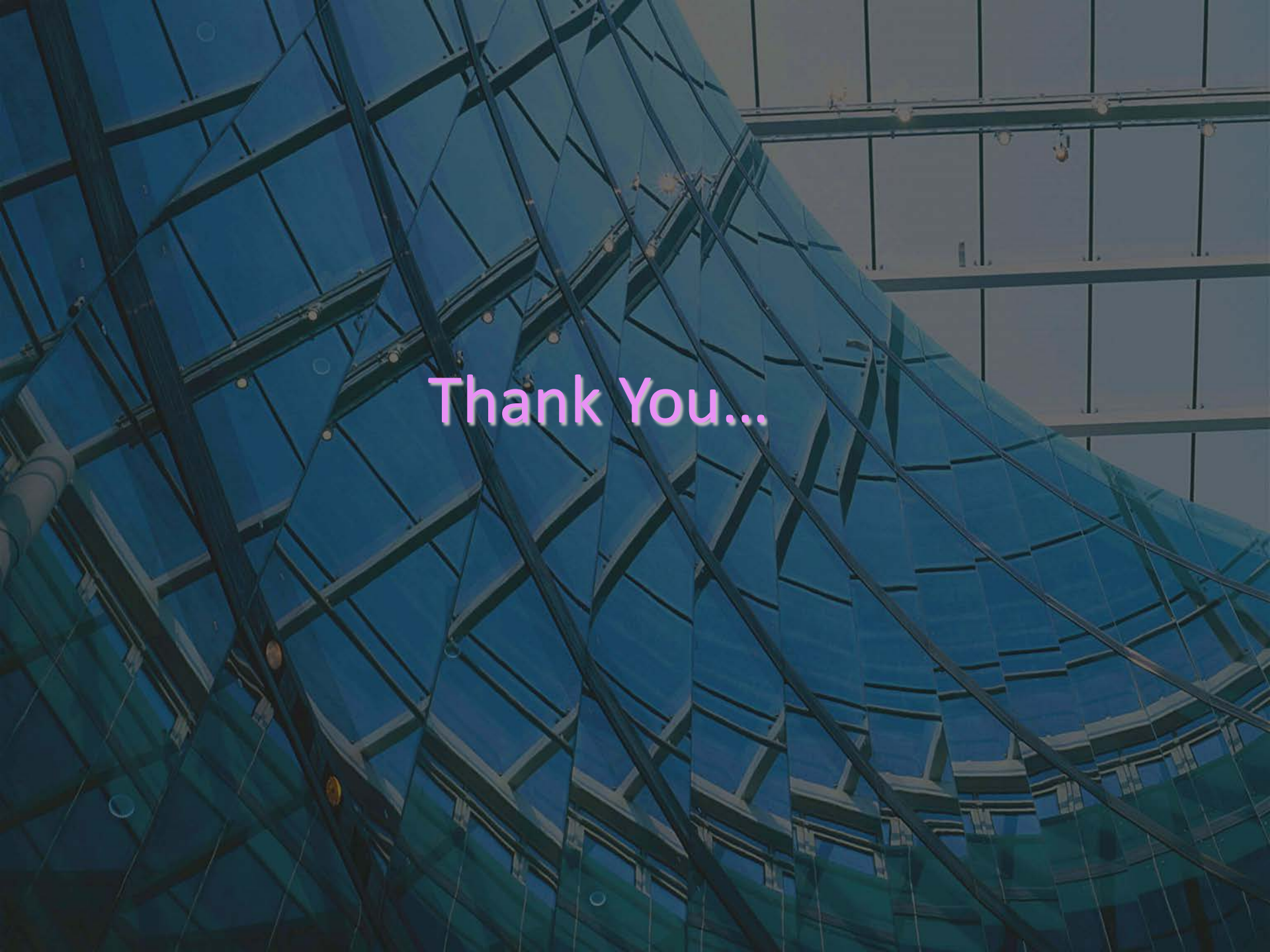


SECTION_A-A









Thank You...