



Aedas

Aedas

Building Information Modelling in Aedas

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Senior Associate, Head of BIM Division



Use of Building Information Modeling (BIM)

- 1 Visualization
- 2 Drawing Production
- 3 Co-ordination/ Collaboration
- 4 Quantity Taking & BQ
- 5 Statutory submission
- 6 Analysis
- 7 Supply Chain Integration

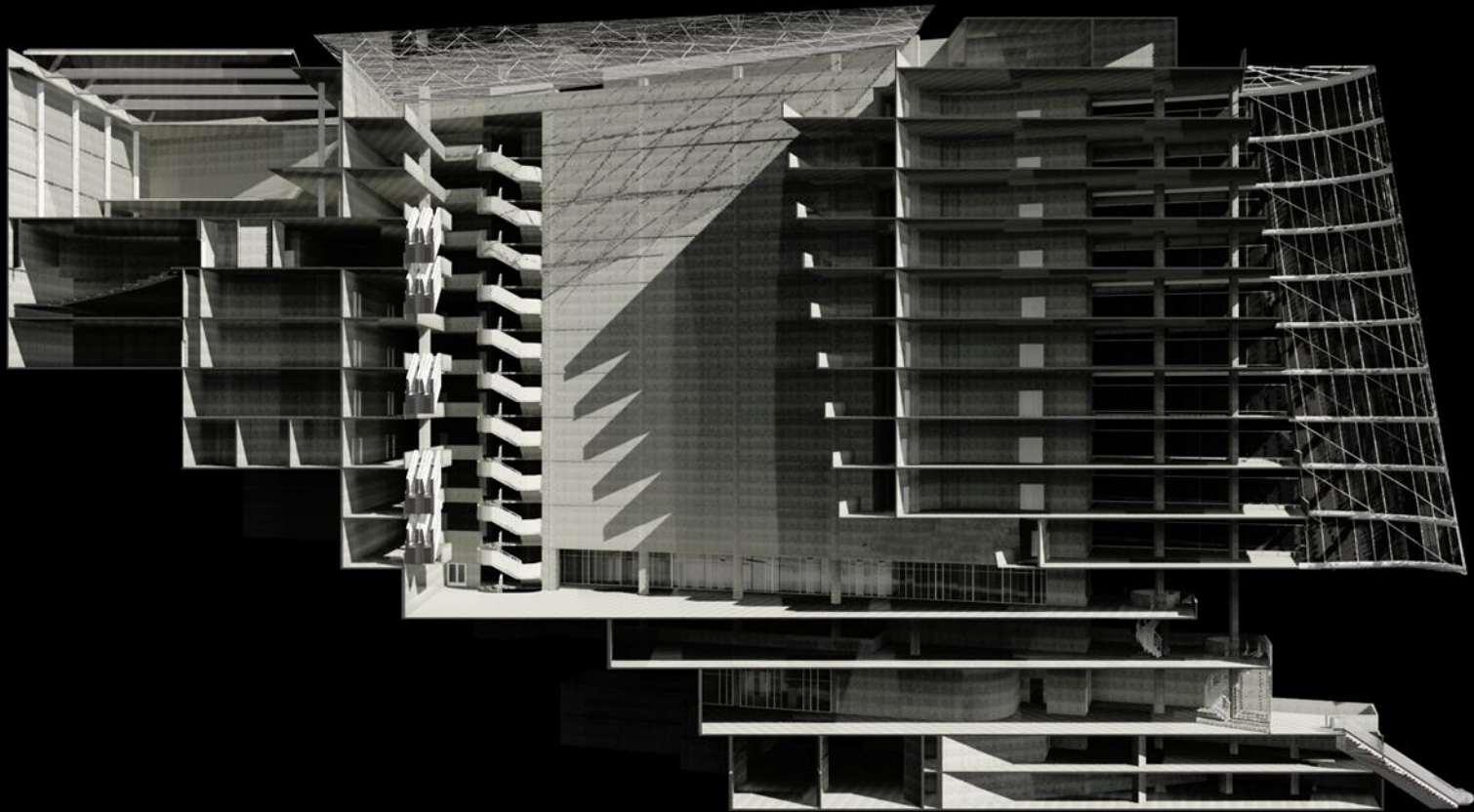
.....







CUT AWAY SECTIONS



CUT AWAY PESPECTIVE



DESIGN IN PERSPECTIVE



Aedas





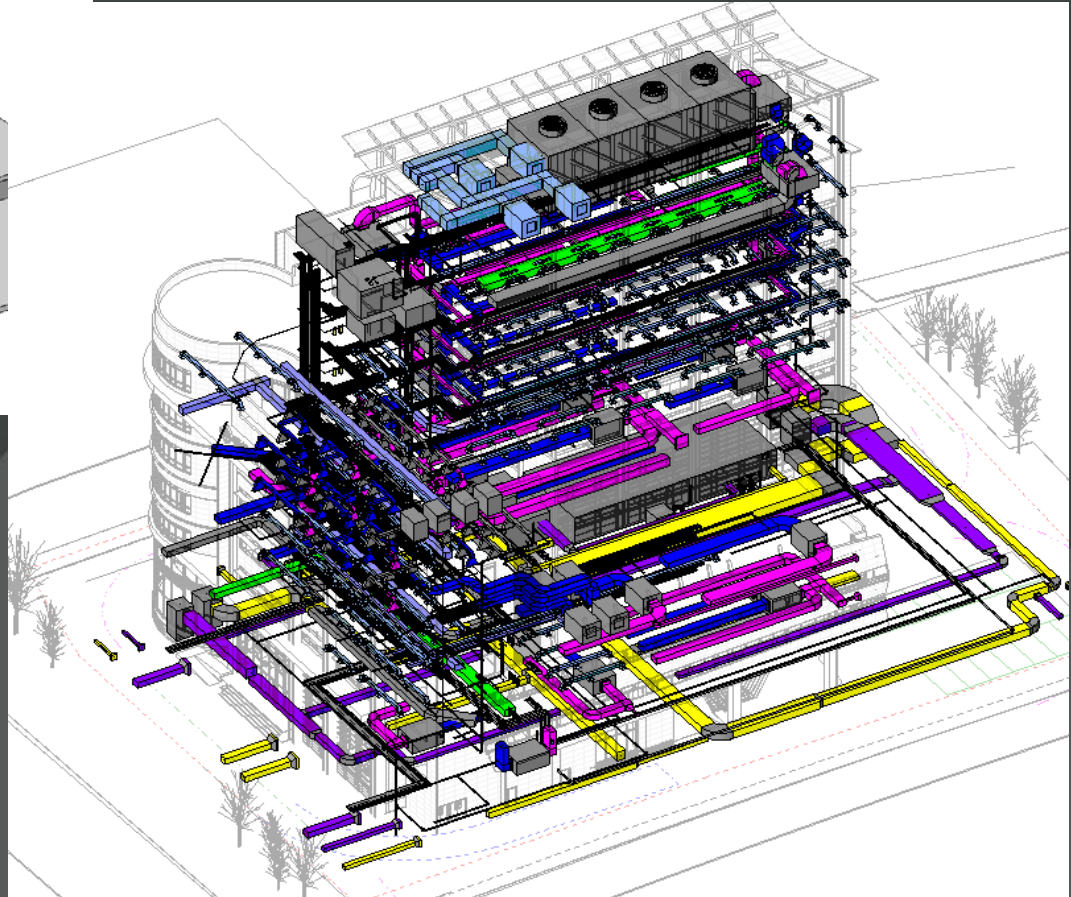
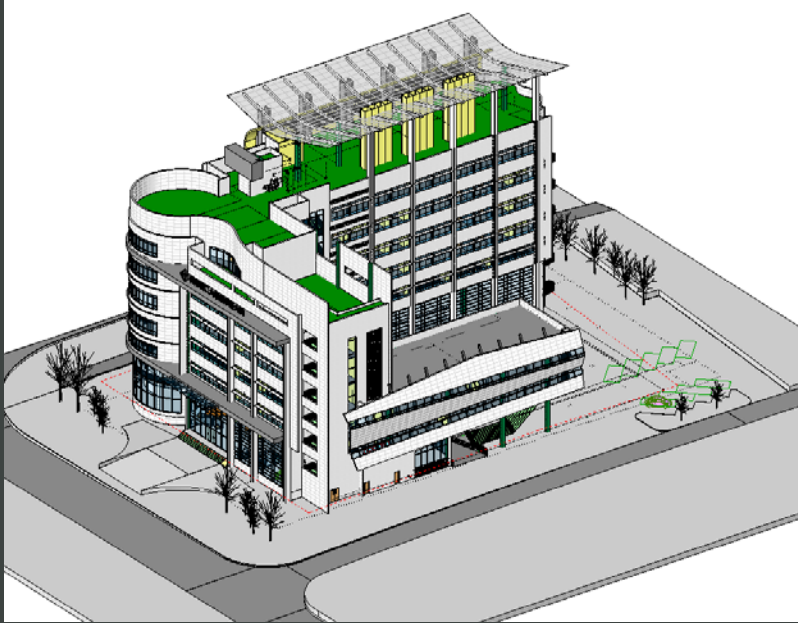
VISUALIZATION



CO-ORDINATION / COLLABORATION

Work Flow – Establish BIM Models

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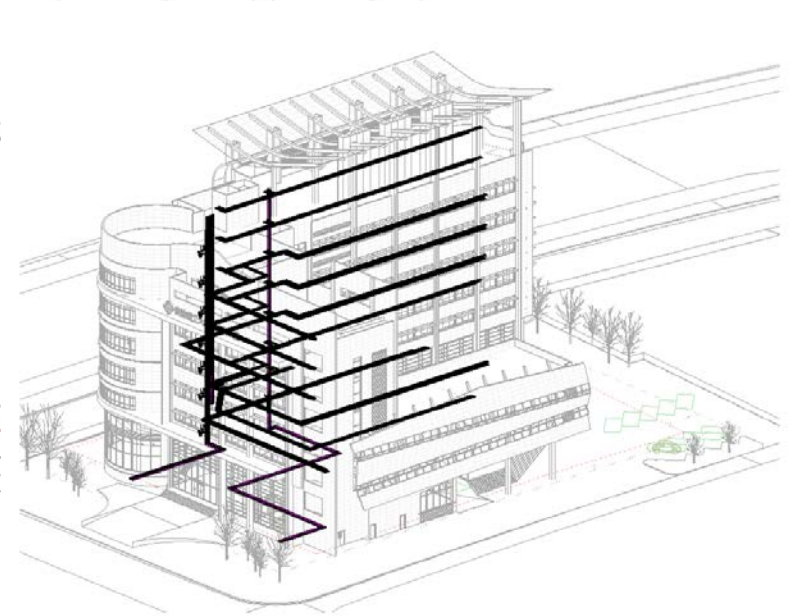
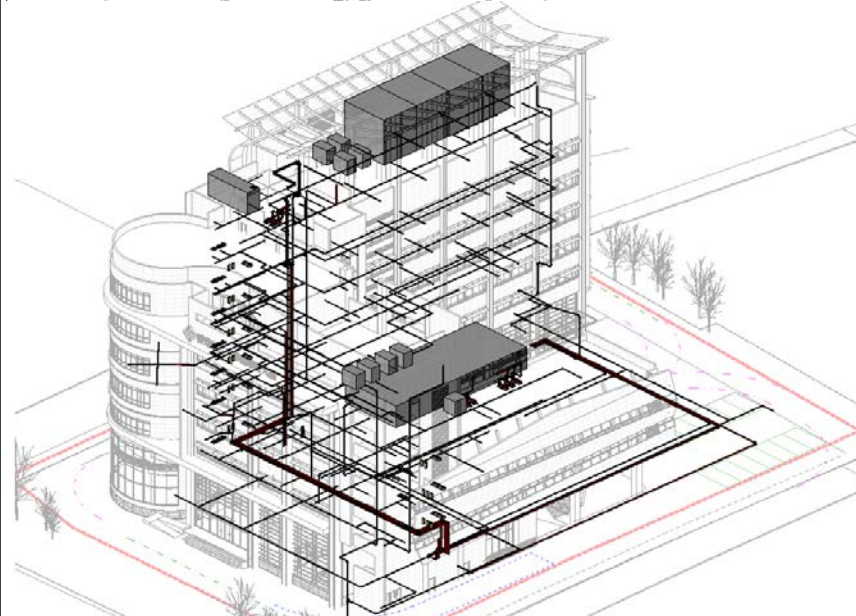
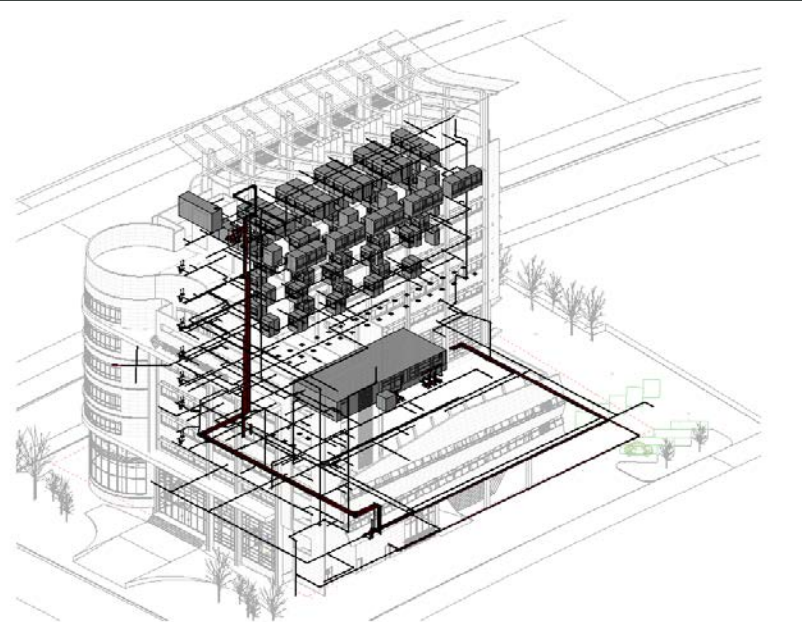
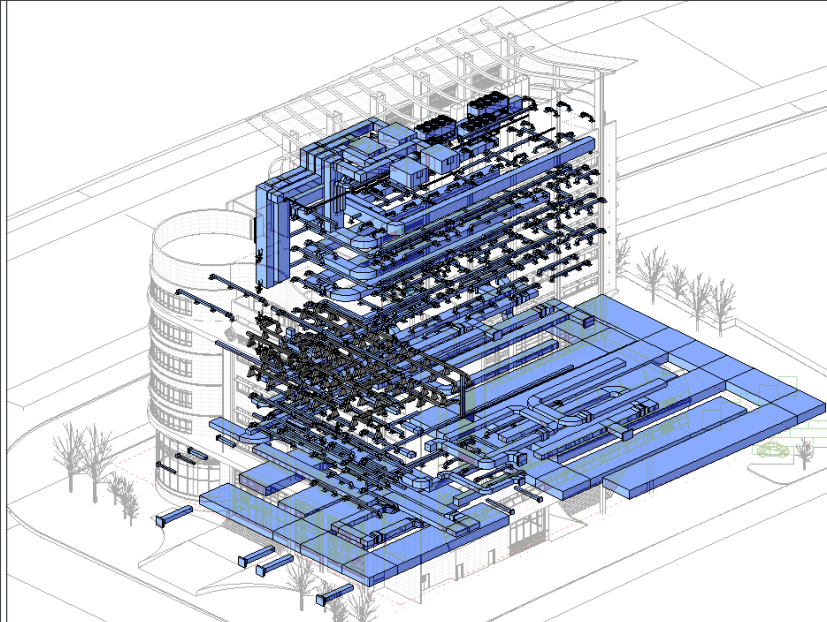




HVAC Installation

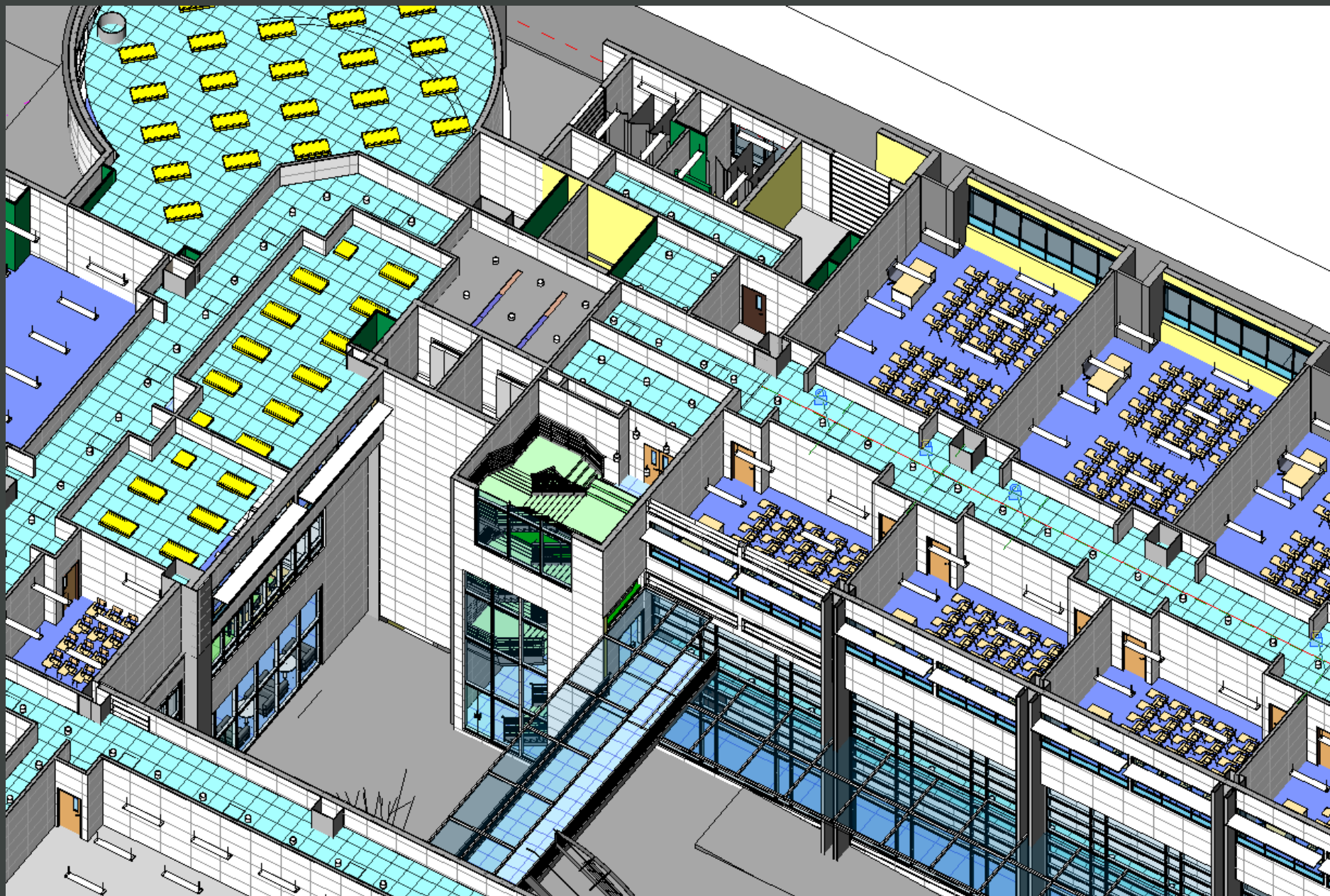
Fire Services Installation

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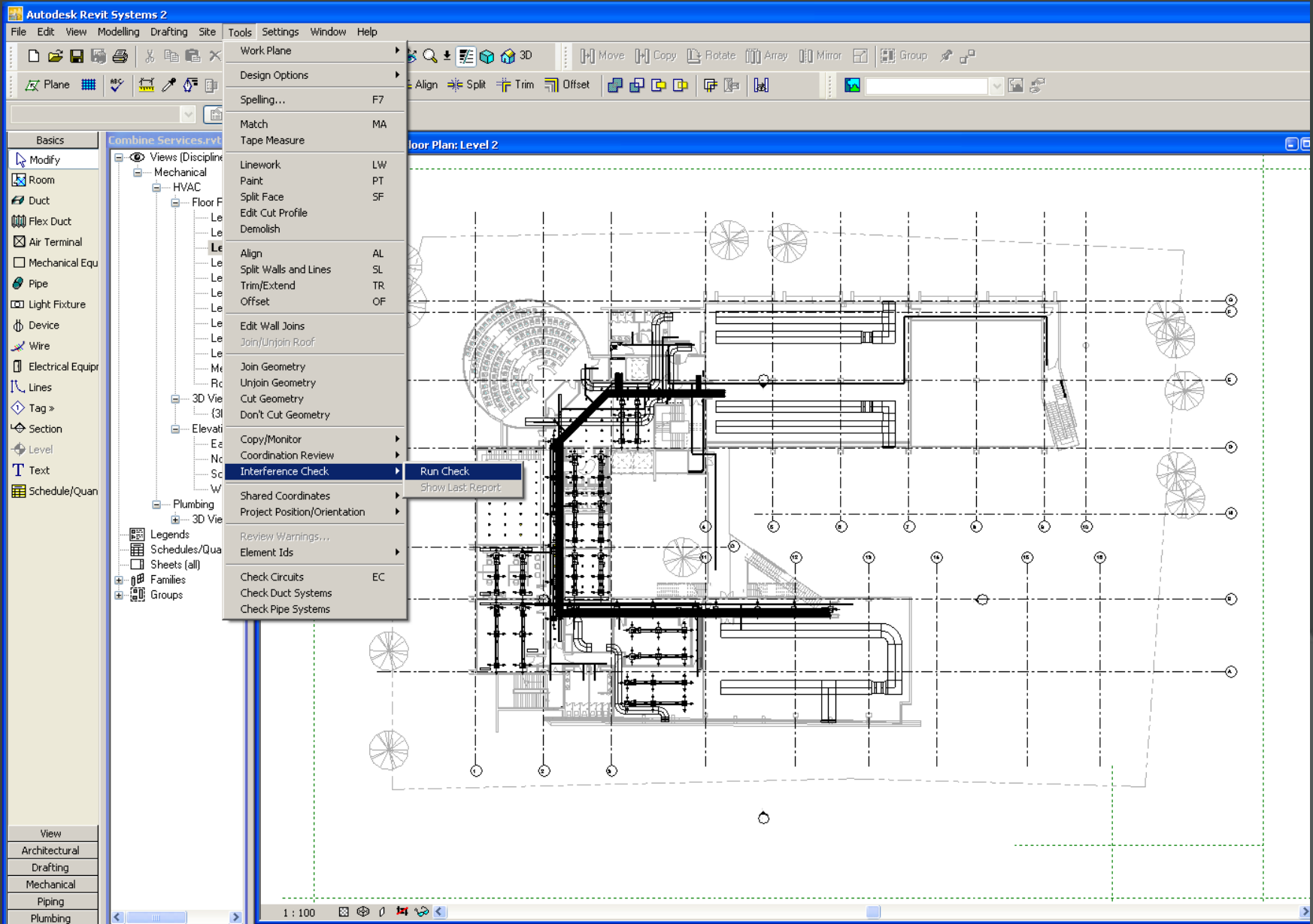
P/D Installation

Electricity Installation



Work Flow – Clashes Report

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

Work Flow – Clashes Report

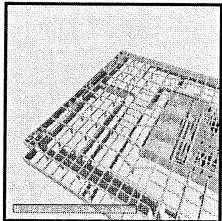
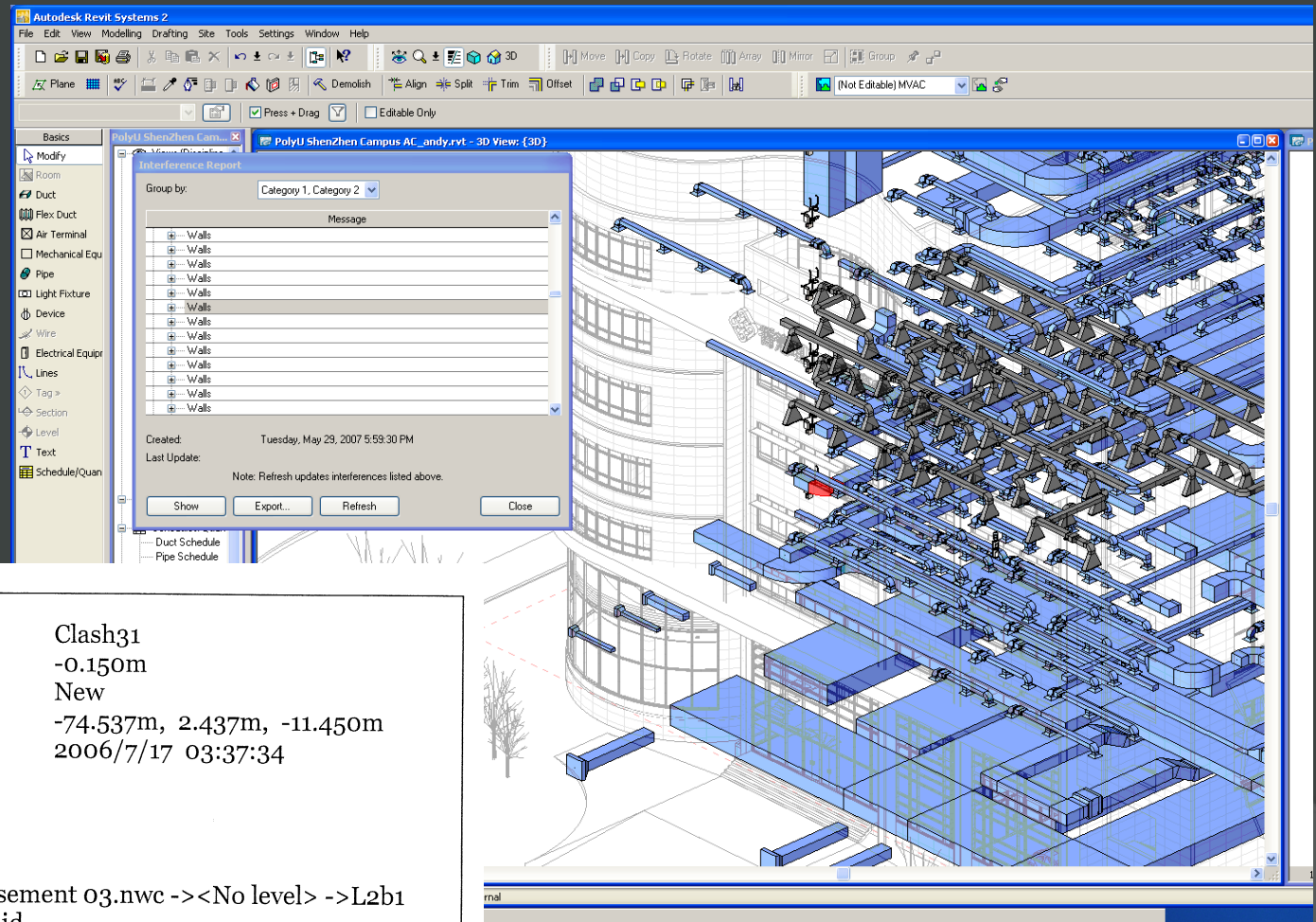
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The screenshot displays the Autodesk Revit Systems 2 interface. The main window shows a 3D view of a building's mechanical system, specifically a fan coil unit (M_Fan Coil Unit) with a horizontal basic concealed plenum (M_02). The model is rendered in blue and white, showing various pipes, ducts, and structural elements. A red line highlights a specific pipe in the model.

An "Interference Report" dialog box is open in the foreground. It has a "Group by:" dropdown set to "Category 1, Category 2". The "Message" list contains 12 entries, all labeled "Pipes". The "Created:" field shows "Tuesday, May 29, 2007 6:13:54 PM". The "Last Update:" field is empty. A note below the fields states: "Note: Refresh updates interferences listed above." The dialog box has four buttons: "Show", "Export...", "Refresh", and "Close".

The left sidebar shows the "Basics" tab selected. The "Modify" panel is active, showing options for Room, Duct, Flex Duct, Air Terminal, Mechanical Equ, Pipe, Light Fixture, Device, Wire, Electrical Equip, Lines, Tag, Section, Level, Text, and Schedule/Quantities. The "View" panel shows options for Architectural, Drafting, Mechanical, Piping, and Plumbing. The "Schedule/Quantities" panel shows options for Duct Schedule, Pipe Schedule, Room Schedule, and Wall Schedule. The "Families" panel shows options for Air Terminals, Annotation Symbols, Ceilings, Basic Ceiling, Generic, and Plaster.

The status bar at the bottom indicates the current view is "3D View: {3D}" and the scale is "1:150". The page number is "Page 4", and the section is "Sec 1". The current location is "4/4" at "Ln 2", "Col 2". The status bar also shows "REC", "TRK", "EXT", "OVR", and "English (U.S.)".



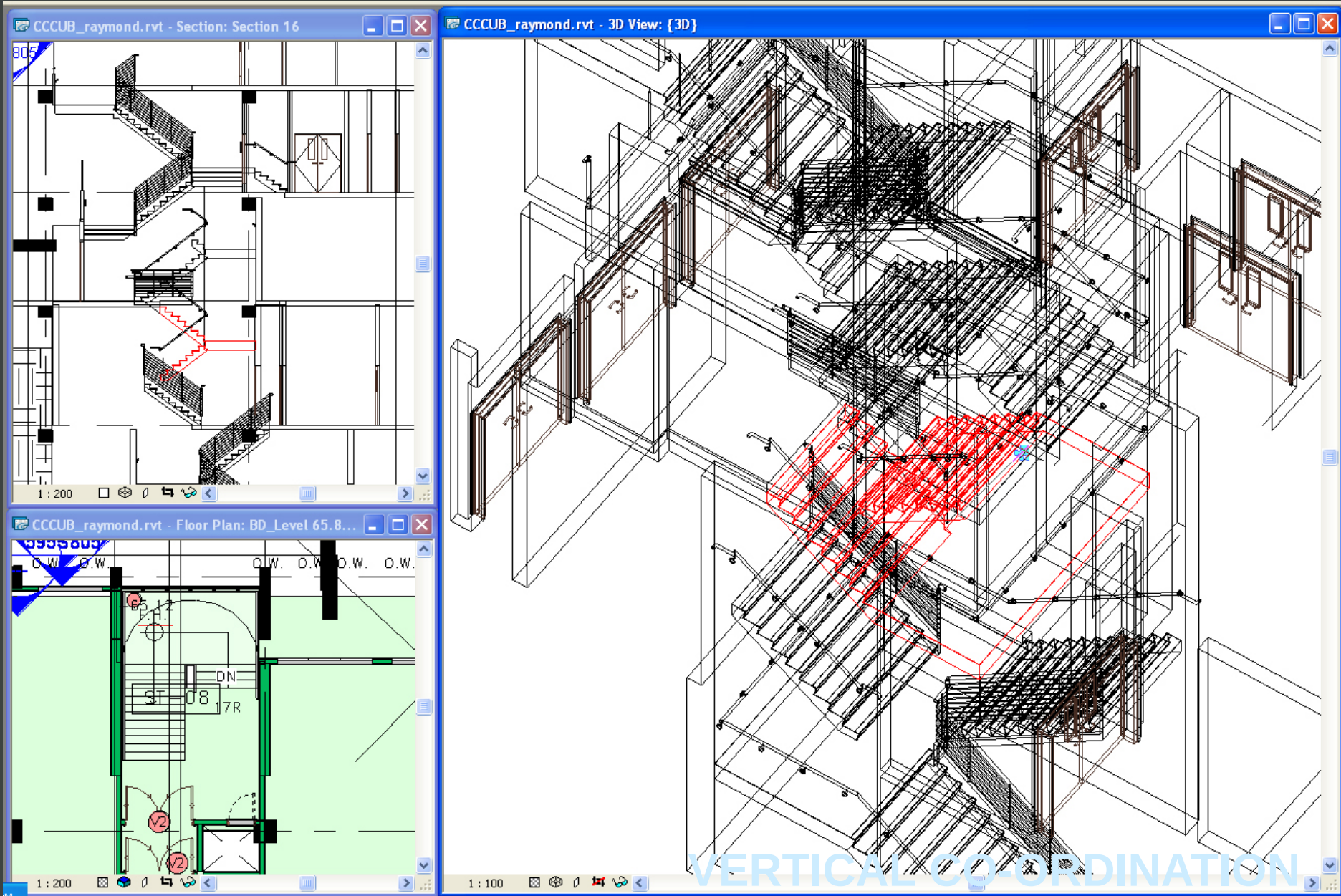
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Clash Point -74.537m, 2.437m, -11.450m
Date Created 2006/7/17 03:37:34
Approved By

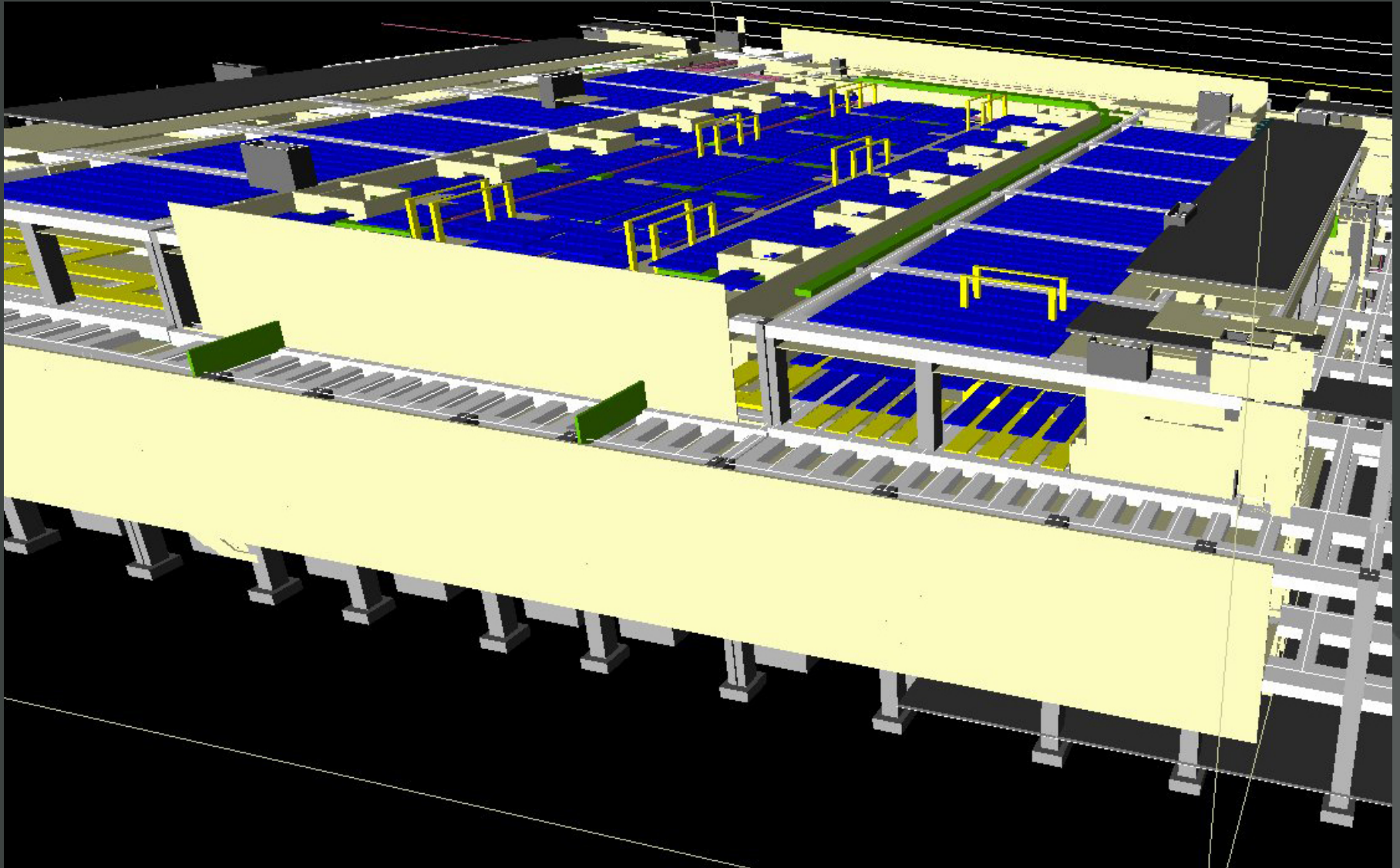
Item 1

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

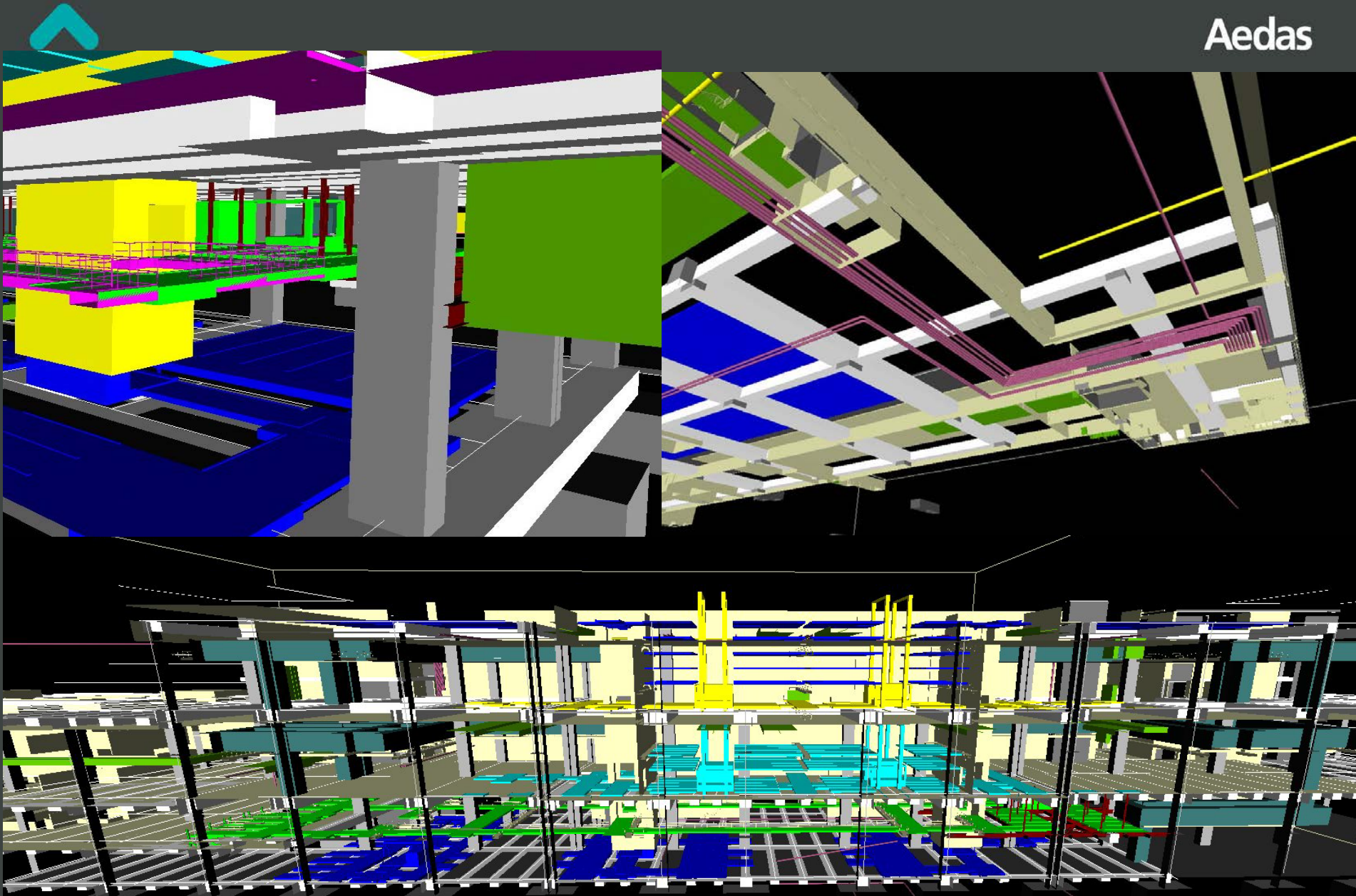
Item 2

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





DISCIPLINES COLLABORATION



DISCIPLINES COLLABORATION

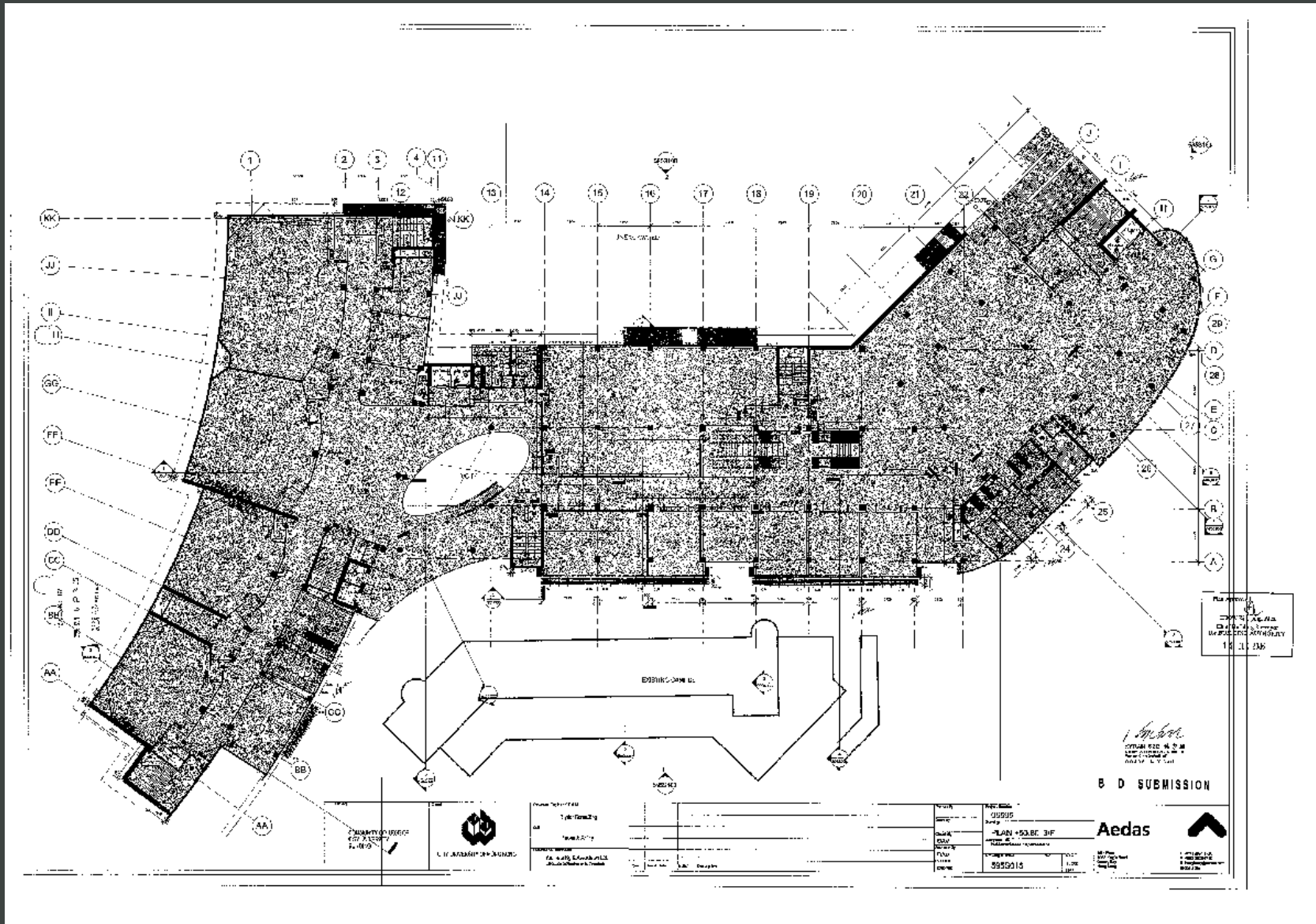


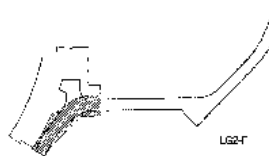
Wall Schedule							
Family	Family and Type	Length	Width	Count	Area	Volume	Aedas
Basic Wall: AED-Concrete - 50mm + Render One sides							
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.548 m2	0.027 m3	
Basic Wall	Basic Wall: AED-Concrete - 50mm + Render One sides	200	50	1	0.548 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

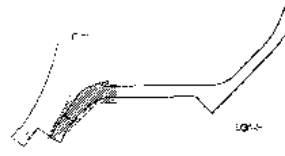


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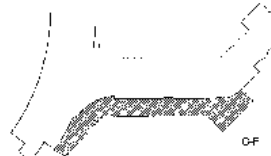




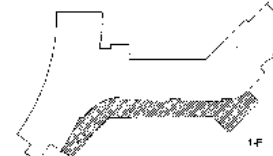
① EVA of Level 34.00_LG2/F
1:1000



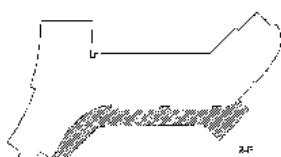
② EVA of Level 37.80, LG1/F
1:1000



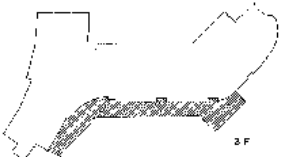
3 - EVA of Level 41.60_GIF
1:1000



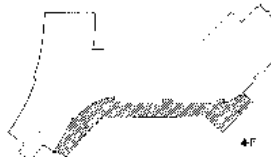
④ EVA of Level 45.60... 1/F
1:1000



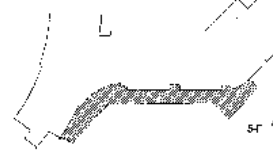
⑤ EVA of Level 49.80 2rF
1:1300



⑥ EVA of Level 53.80_3/F
1:1000

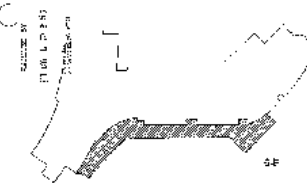


7 EVA of Level 5B.2D_4/F
1:1000



⑧ EVA of Level 62.00 5/F

B D SUBMISSION



9) EVA of Level 65.80_6/F
1:1000

*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 HENGCHEN FIRE OF SUCH LENGTH OVER THE TOTAL LENGTH OF ALL THE PERIMETER WALLS OF THE BUILDING

[illegible]

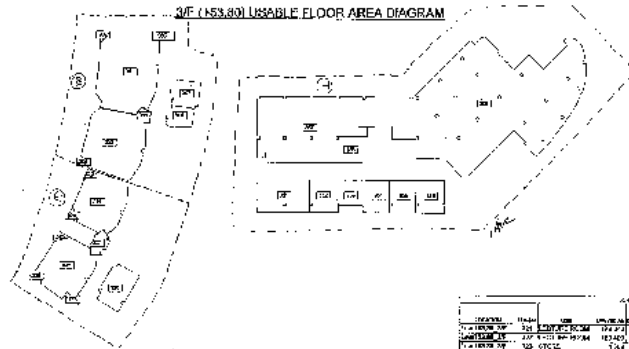
姓名	性别	出生年月	民族	籍贯	文化程度	政治面貌	工作单位	职务	备注
王德胜	男	1945.12.15	汉族	山东烟台	高中	中共党员	烟台市公安局	科长	
李国强	男	1952.08.22	汉族	河南郑州	大学	中共党员	河南省公安厅	处长	
张为民	男	1958.03.10	汉族	湖北武汉	大学	中共党员	武汉市公安局	副局长	
赵子龙	男	1965.07.05	汉族	四川成都	大学	中共党员	四川省公安厅	处长	
陈永年	男	1970.11.18	汉族	广东广州	大学	中共党员	广东省公安厅	处长	
周大伟	男	1975.05.01	汉族	浙江杭州	大学	中共党员	浙江省公安厅	处长	
吴小华	男	1980.09.12	汉族	江苏南京	大学	中共党员	江苏省公安厅	处长	
孙建明	男	1985.02.28	汉族	安徽合肥	大学	中共党员	安徽省公安厅	处长	
郑为民	男	1990.06.15	汉族	福建福州	大学	中共党员	福建省公安厅	处长	
王德胜	男	1945.12.15	汉族	山东烟台	高中	中共党员	烟台市公安局	科长	

PES. 01/01/92									
10/01	20.370	f	204.560	=	1.500/07/91	*	21.140	v	20/01
11/01	20.870	f	204.560	=	1.500/07/91	*	21.140	v	20/01
12/01	21.140	f	204.560	=	1.500/07/91	*	21.140	v	20/01
13/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
14/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
15/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
16/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
17/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
18/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
19/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
20/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
21/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
22/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
23/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
24/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
25/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
26/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
27/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
28/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
29/01	21.140	f	214.520	=	1.500/07/91	*	21.140	v	20/01
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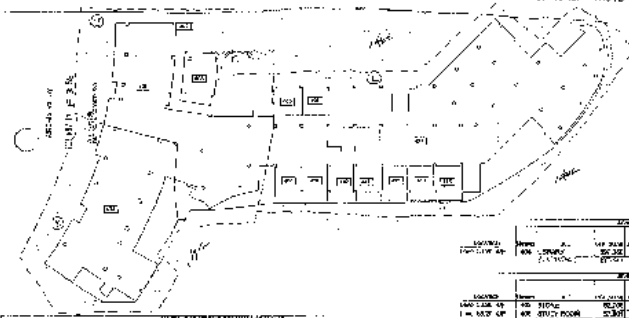
The Applicant
 Chief Building Surveyor
 for the Local Authority

[illegible]

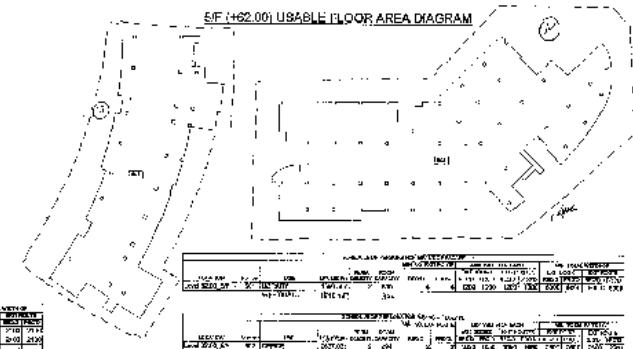
3/F (153.80) USABLE FLOOR AREA DIAGRAM

[illegible][illegible]

4/F (+58.20) USABLE FLOOR AREA DIAGRAM

[illegible][illegible]

5/F (+62.00) USABLE FLOOR AREA DIAGRAM

[illegible]

6/F (+85.80) USABLE FLOOR AREA DIAGRAM



B D SUBMISSION

[illegible][illegible]

L. M. W. & A. M.
 Baker & Co. Surveyors
 for BUILDING & C. SOCIETY
 70 D.C. 2015

DOI: 10.1002/for
 URL: http://dx.doi.org/10.1002/for
 JUL 2009



STATE UNIVERSITY OF NEW YORK

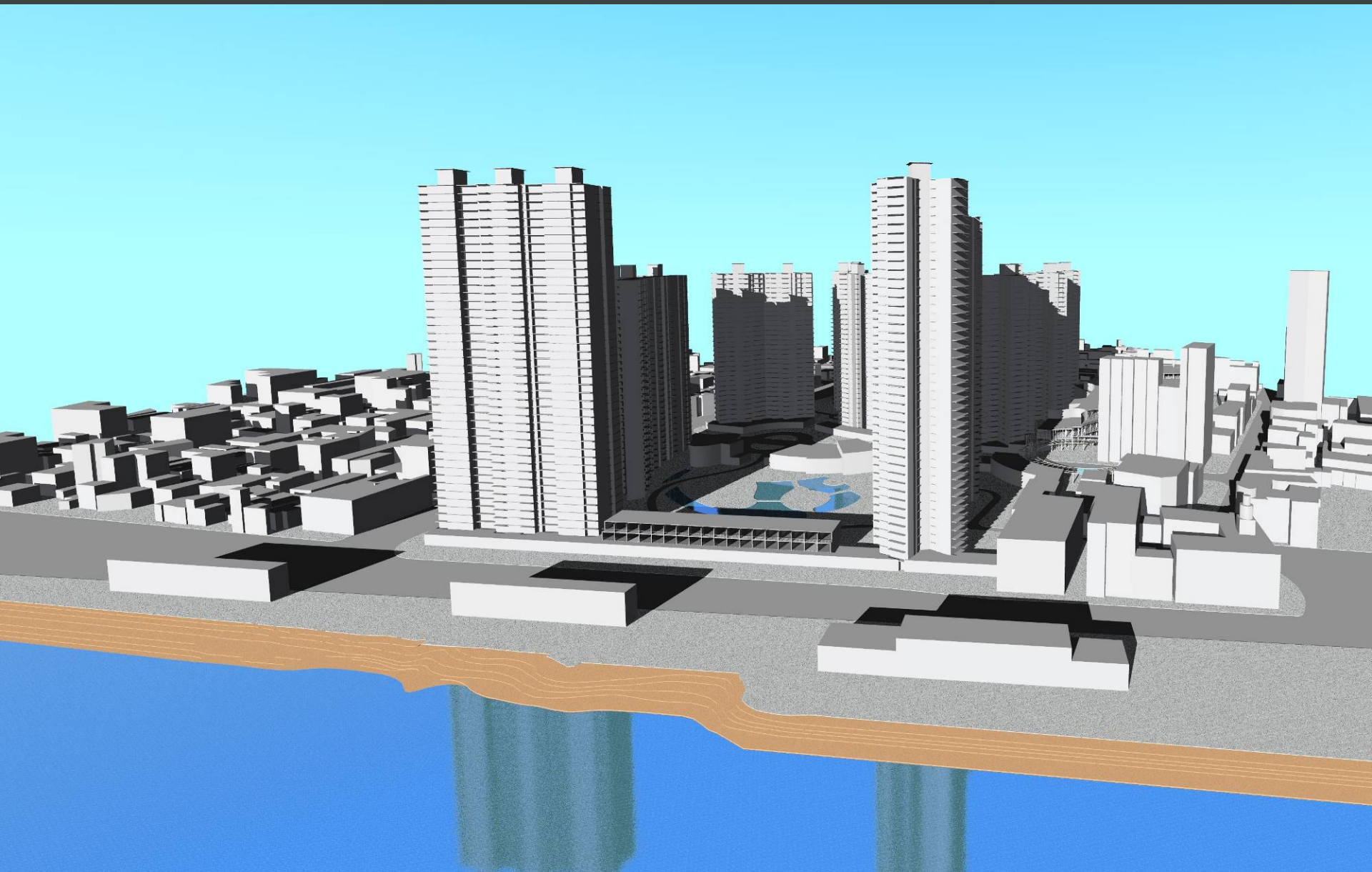
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Aedas



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BUILDING IN GOOGLE EARTH

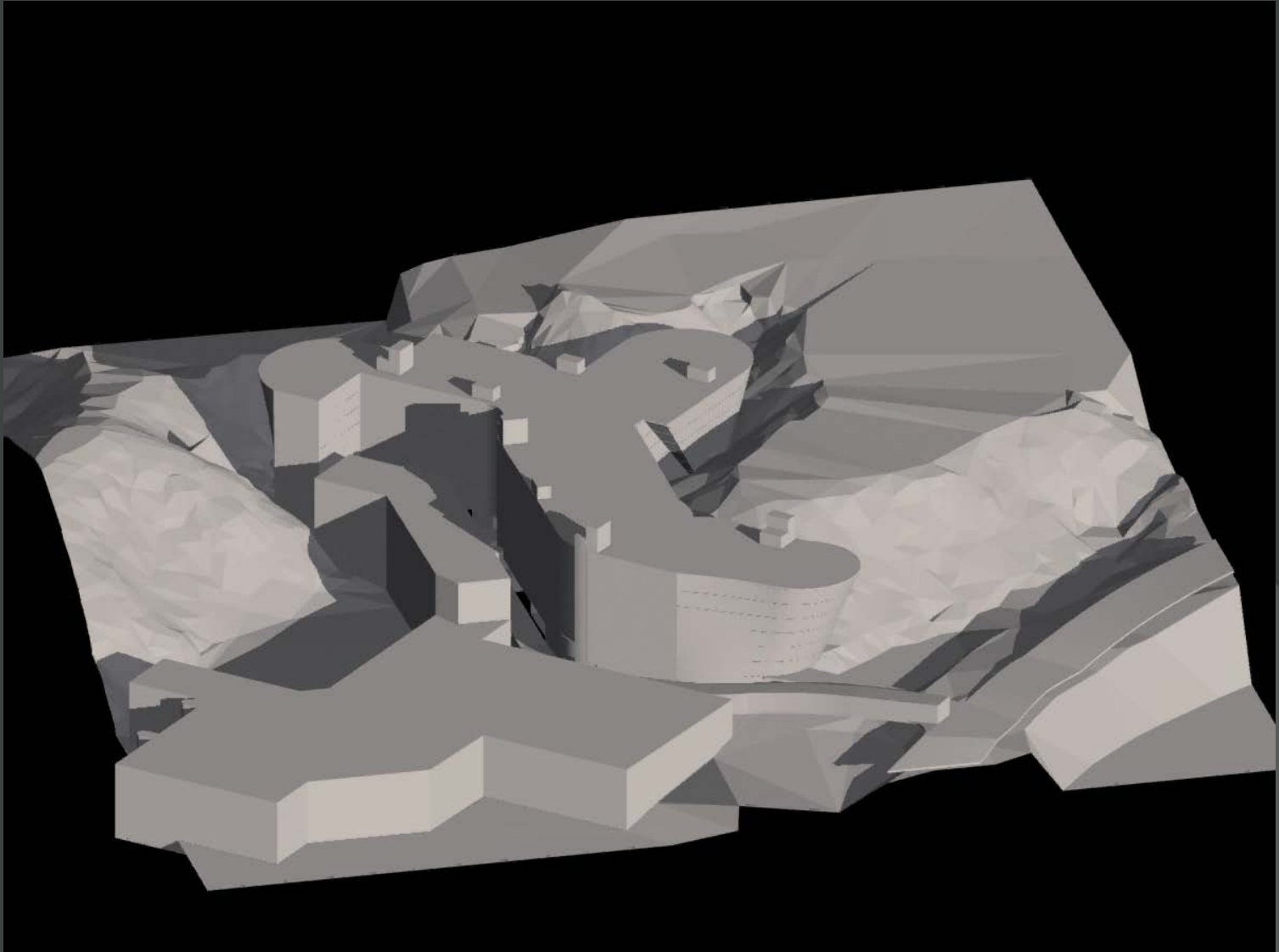
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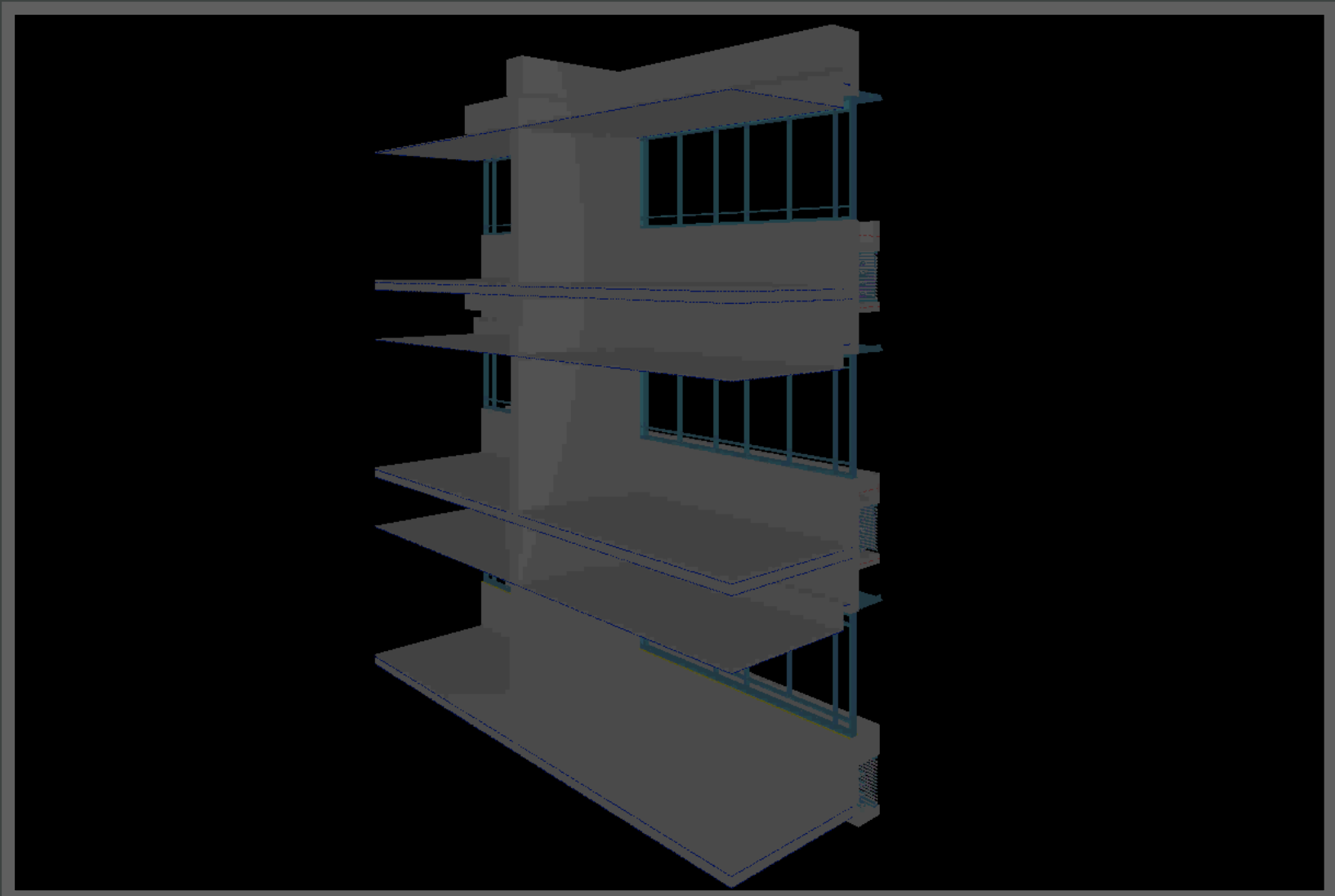


SCIENTIFIC ANALYSIS

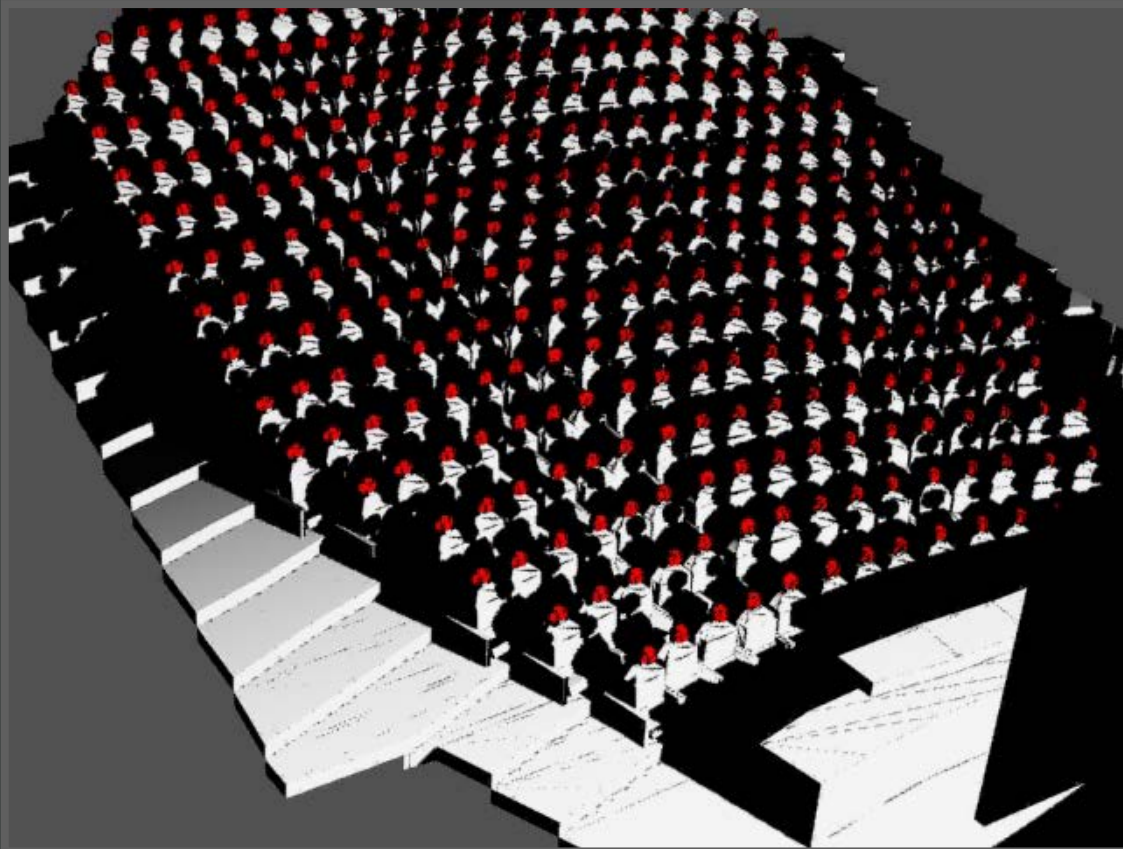
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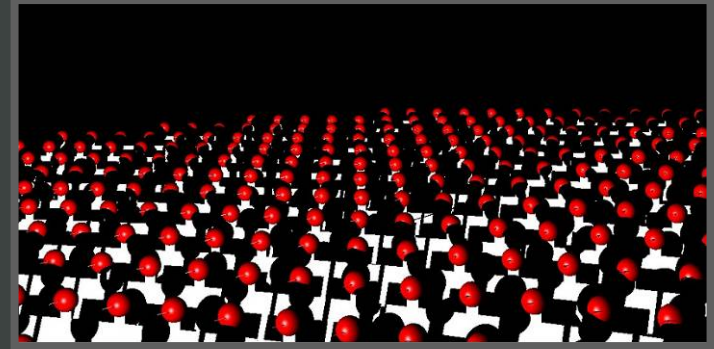
SUN STUDY



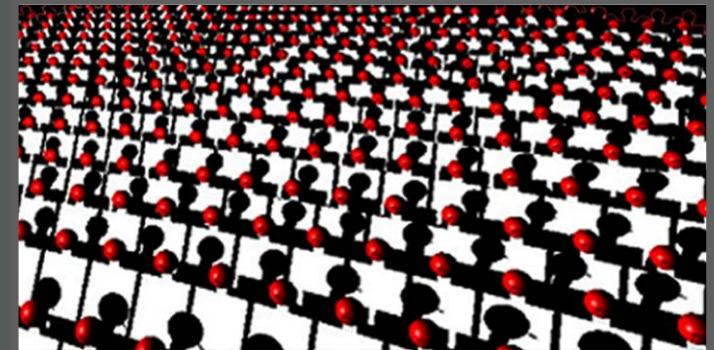
FAÇADE SOLAR STUDY
21/12/2006 7:00am – 6:00pm



Radiating Light Method



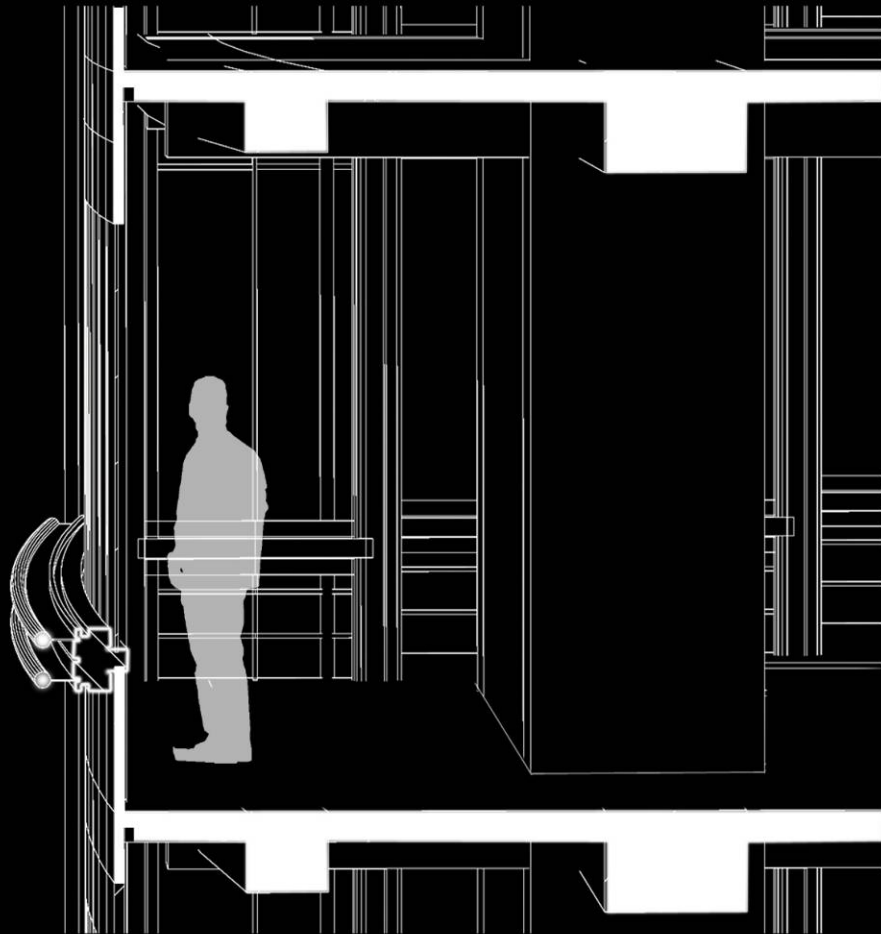
Unsatisfactory sightlines



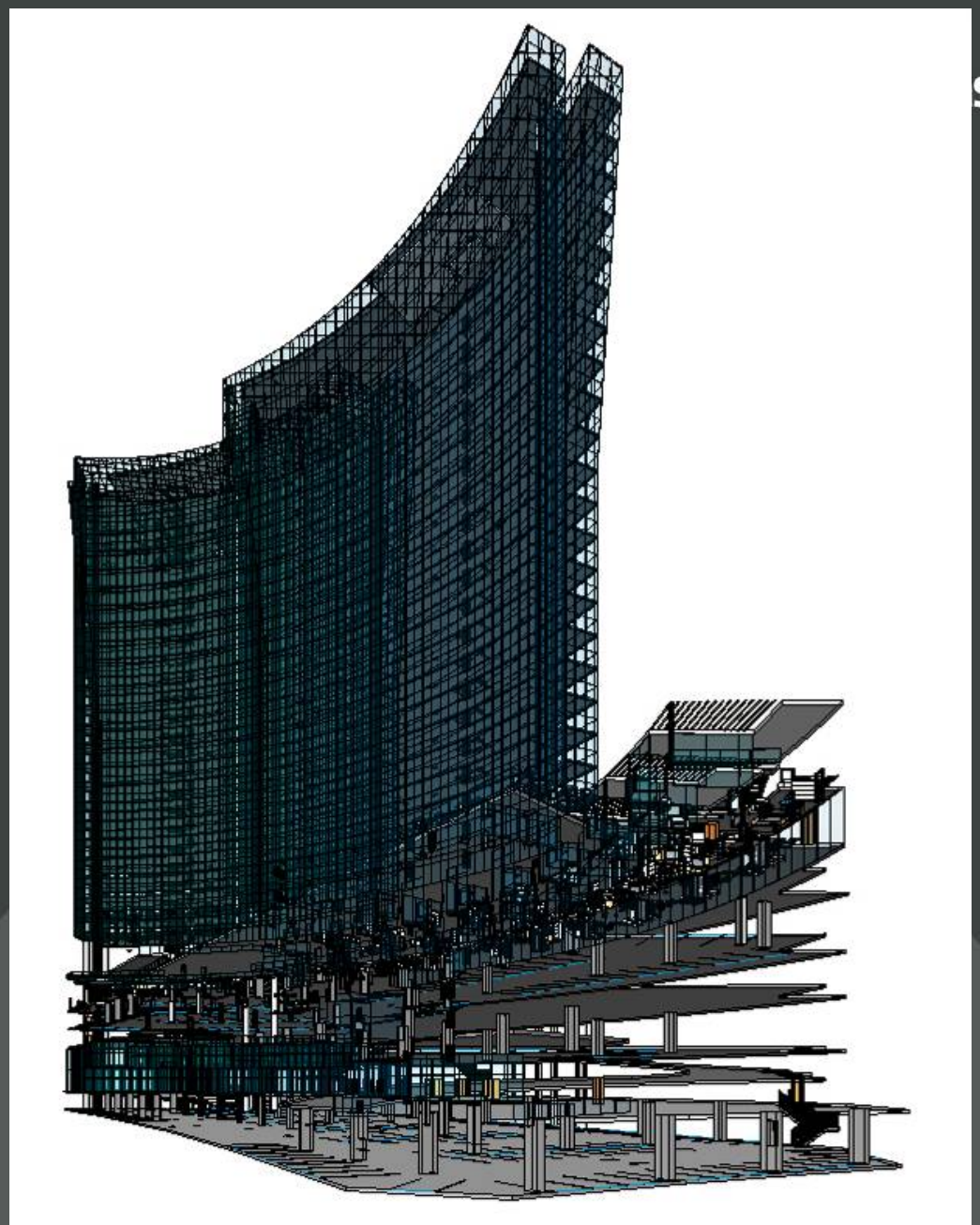
Satisfactory sightlines



FAÇADE DESIGN and CO-ORDINATION

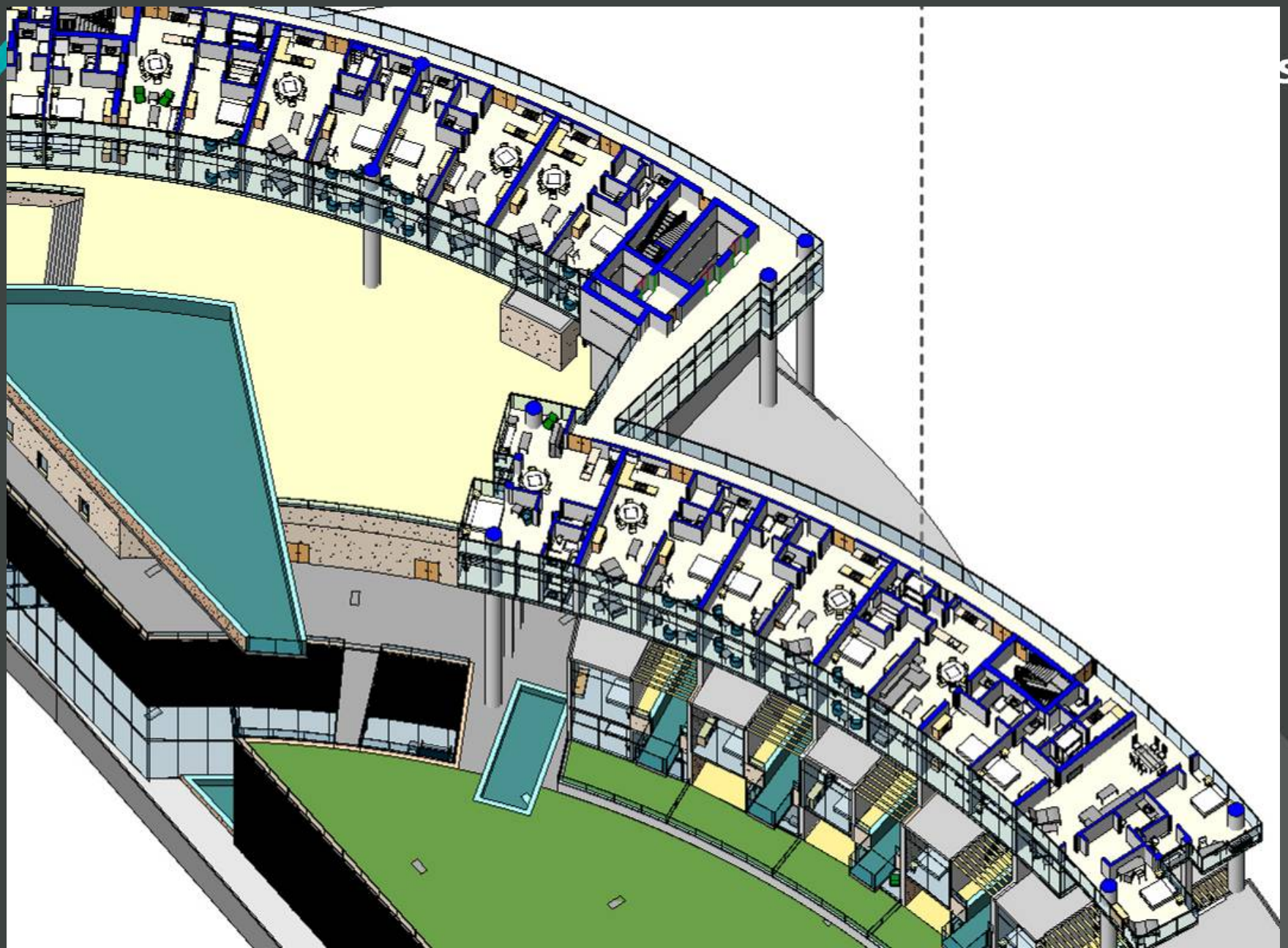


FAÇADE DESIGN and CO-ORDINATION



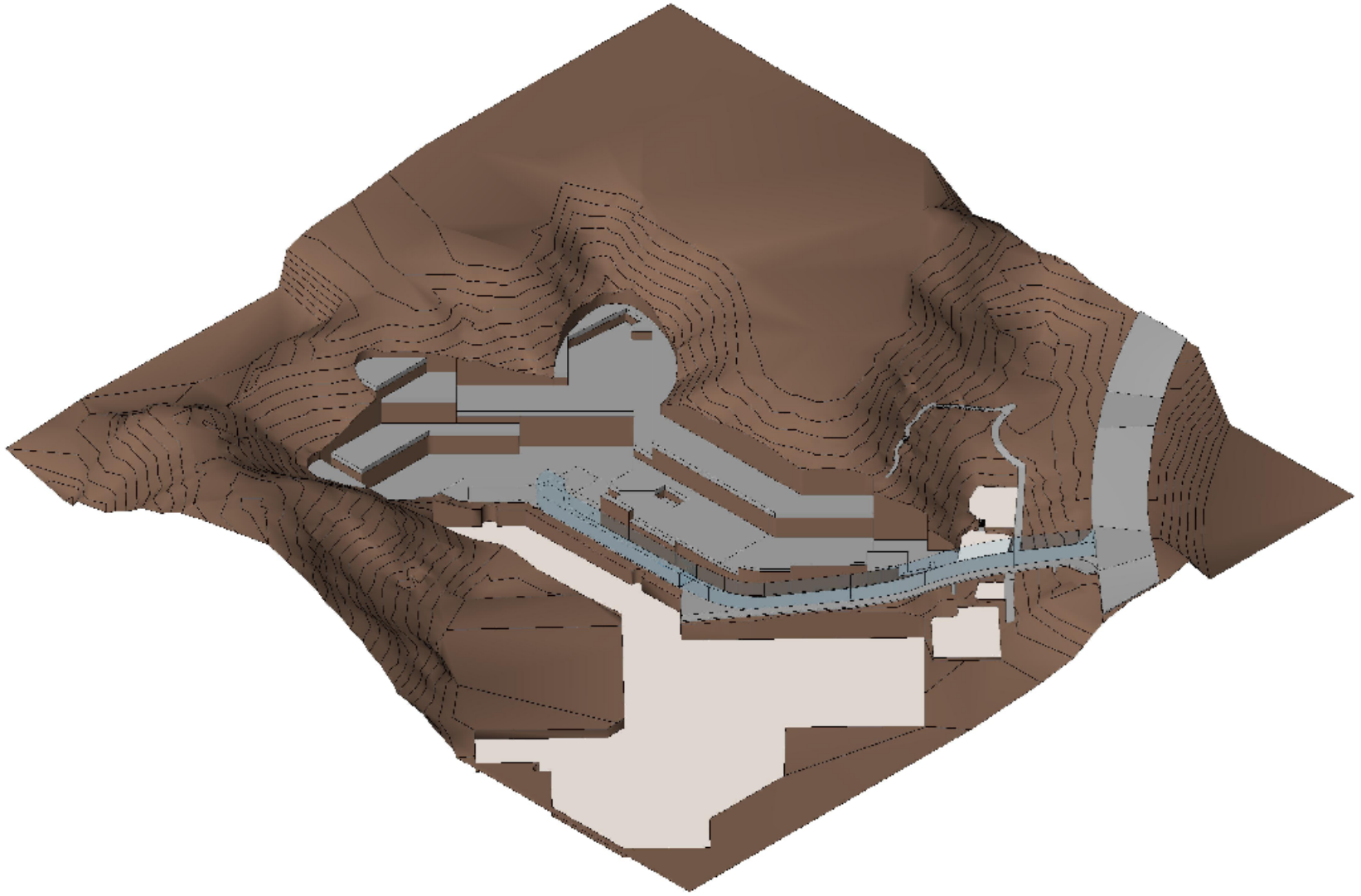
中東酒店項目

HORIZONTAL REPETITION / MODULARIZATION



中東酒店項目

MODULAR DESIGN

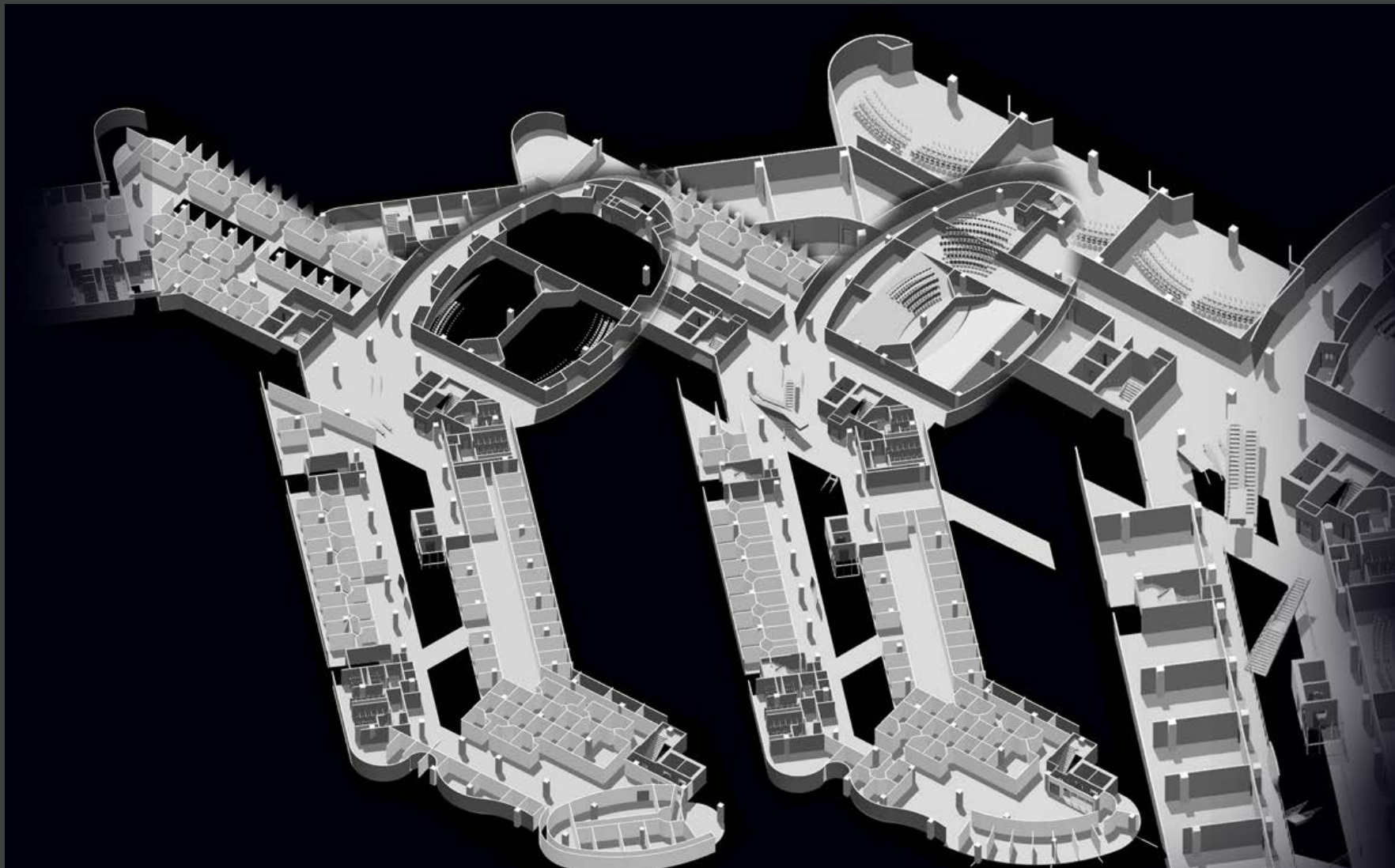


TYPOGRAPHY HANDLING

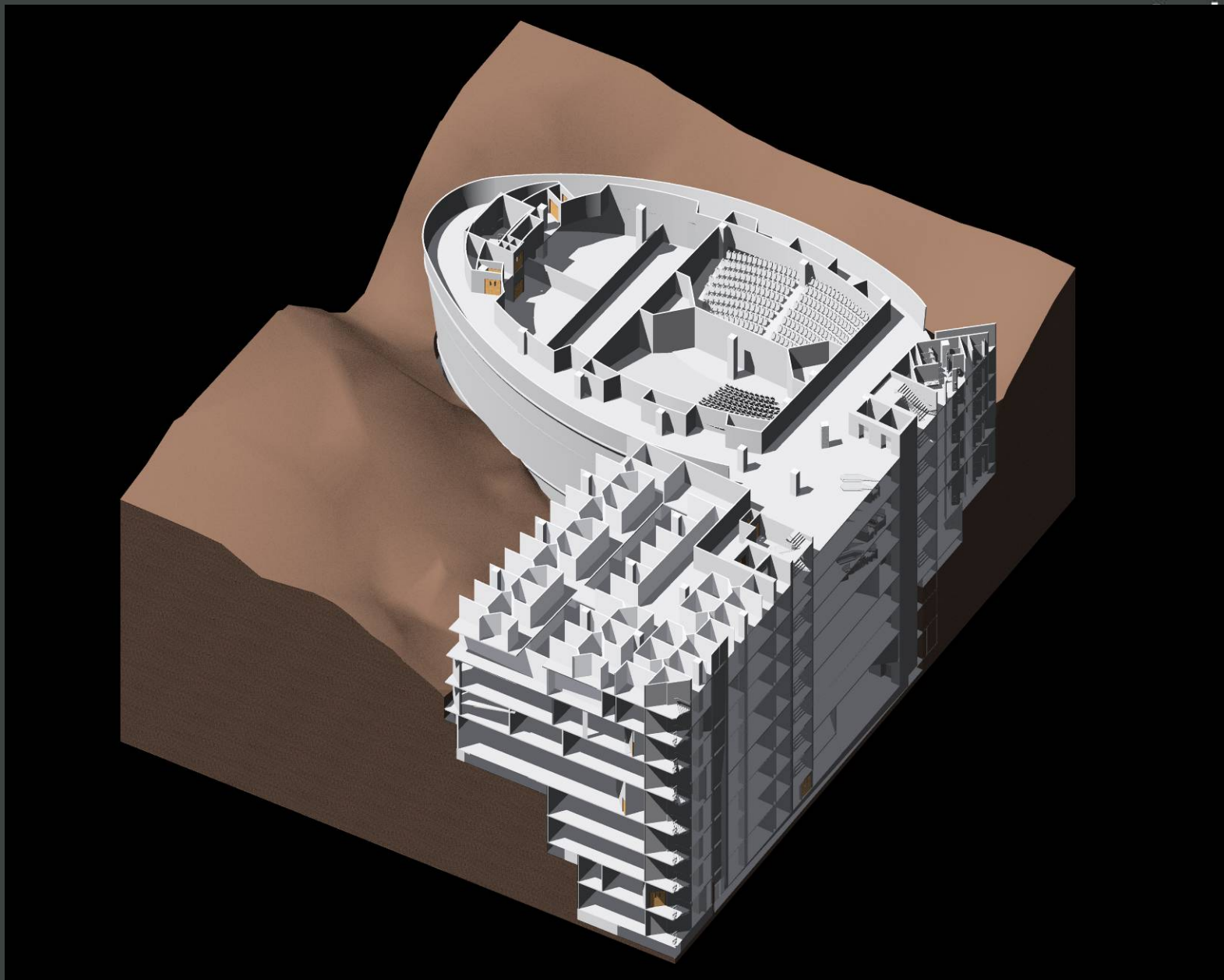


DIFFERENT DESIGN APPROACH

Aedas



香港城市大學教學大樓項目



香港城市大學教學大樓項目

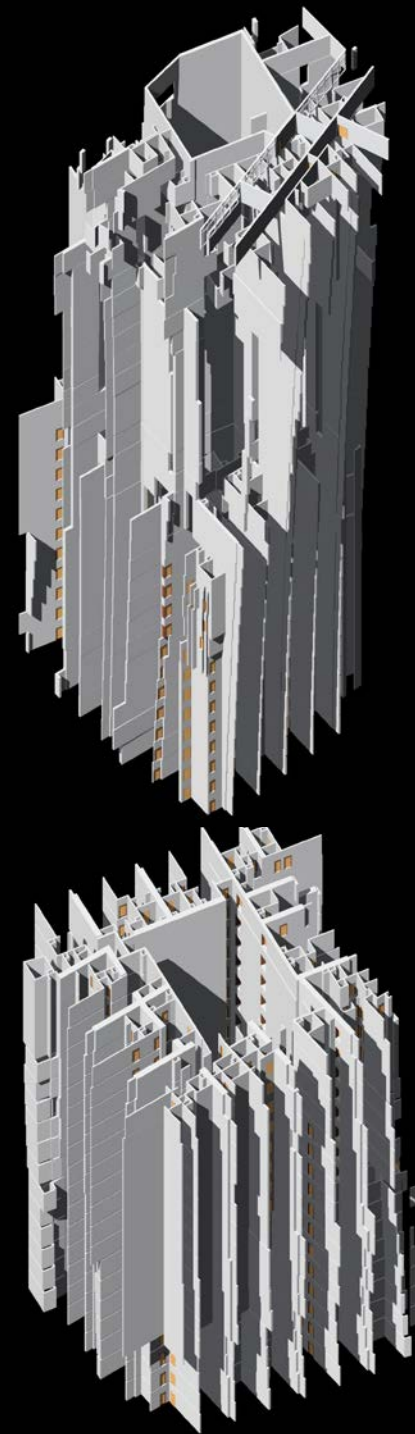
BUILDING IN SITE CONTEXT



Program: Residential, Site Area: 3,746 sqm
Floor Area: 659,659 sqm | Building Height: 345 m

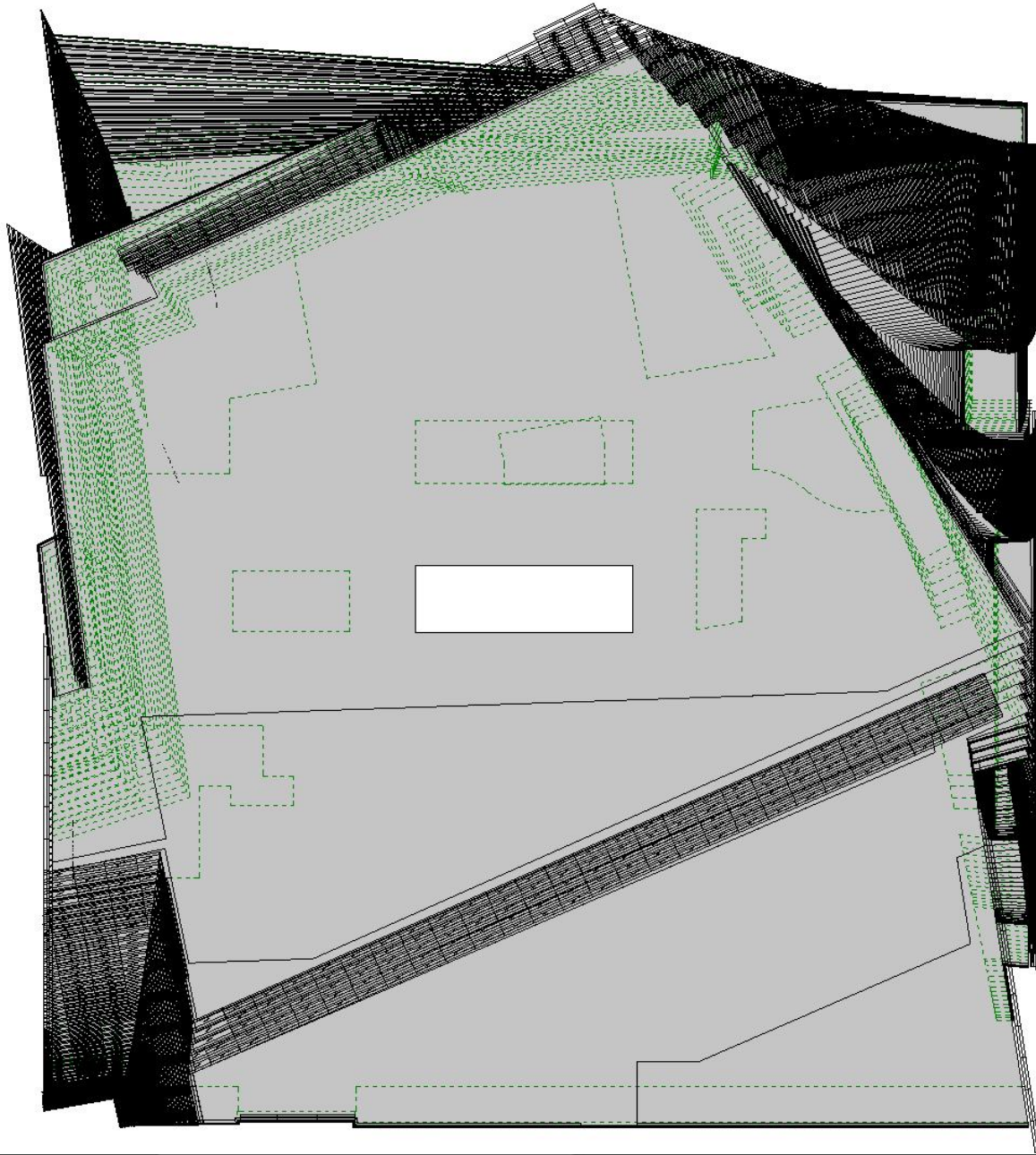


Dubai **Ocean Heights One**



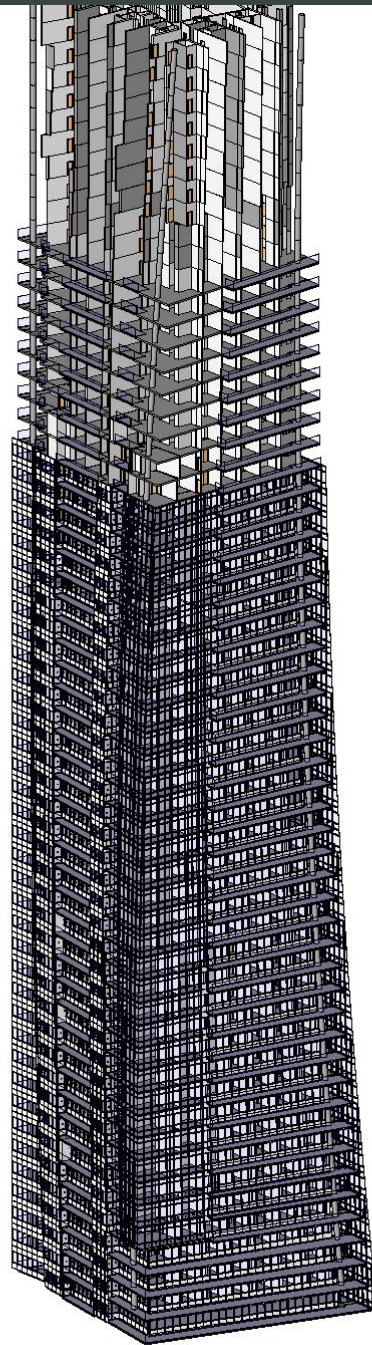
中東住宅項目

COMPLEX GEOMETRY

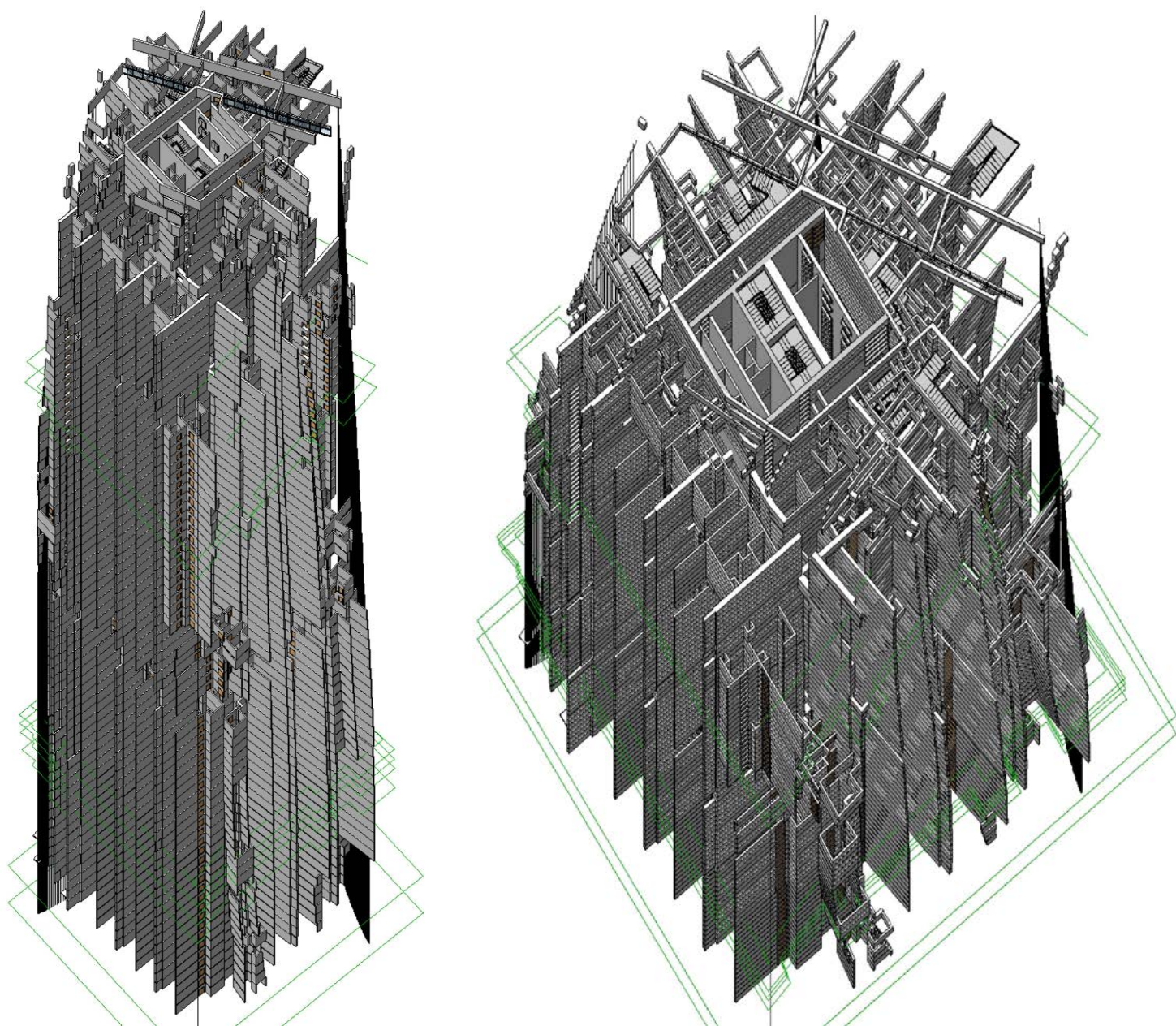




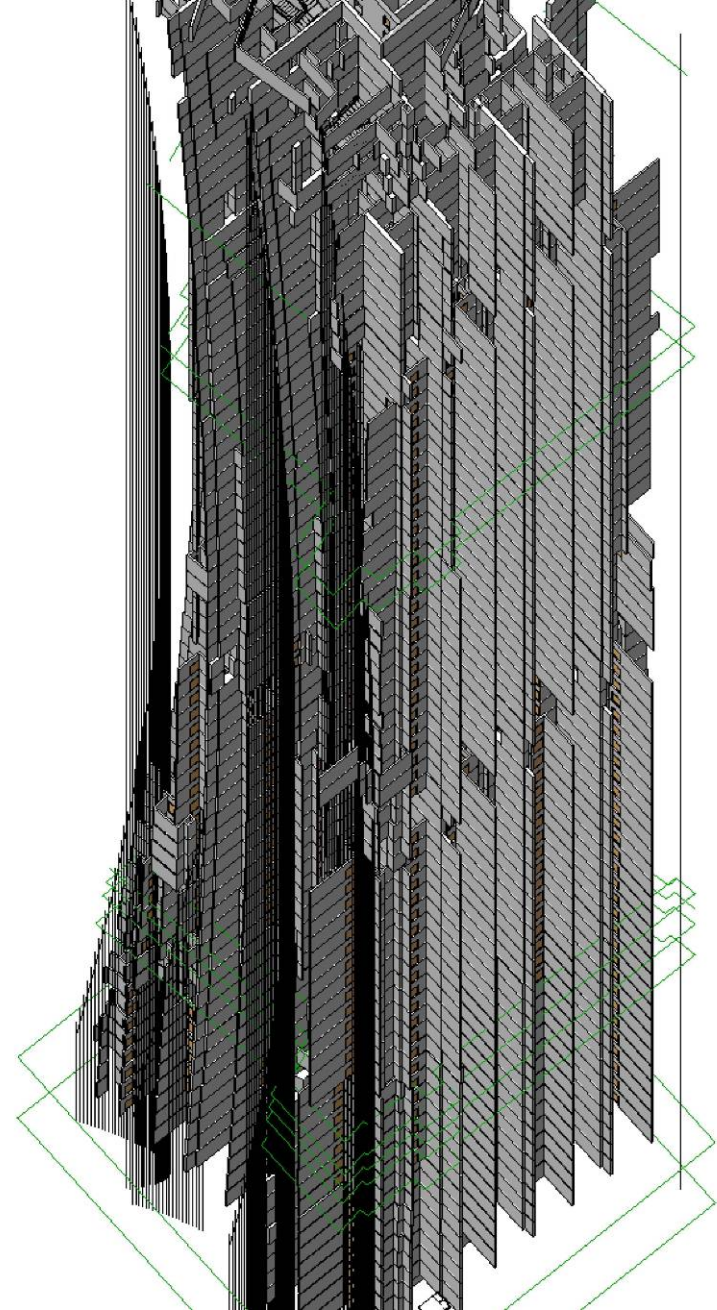
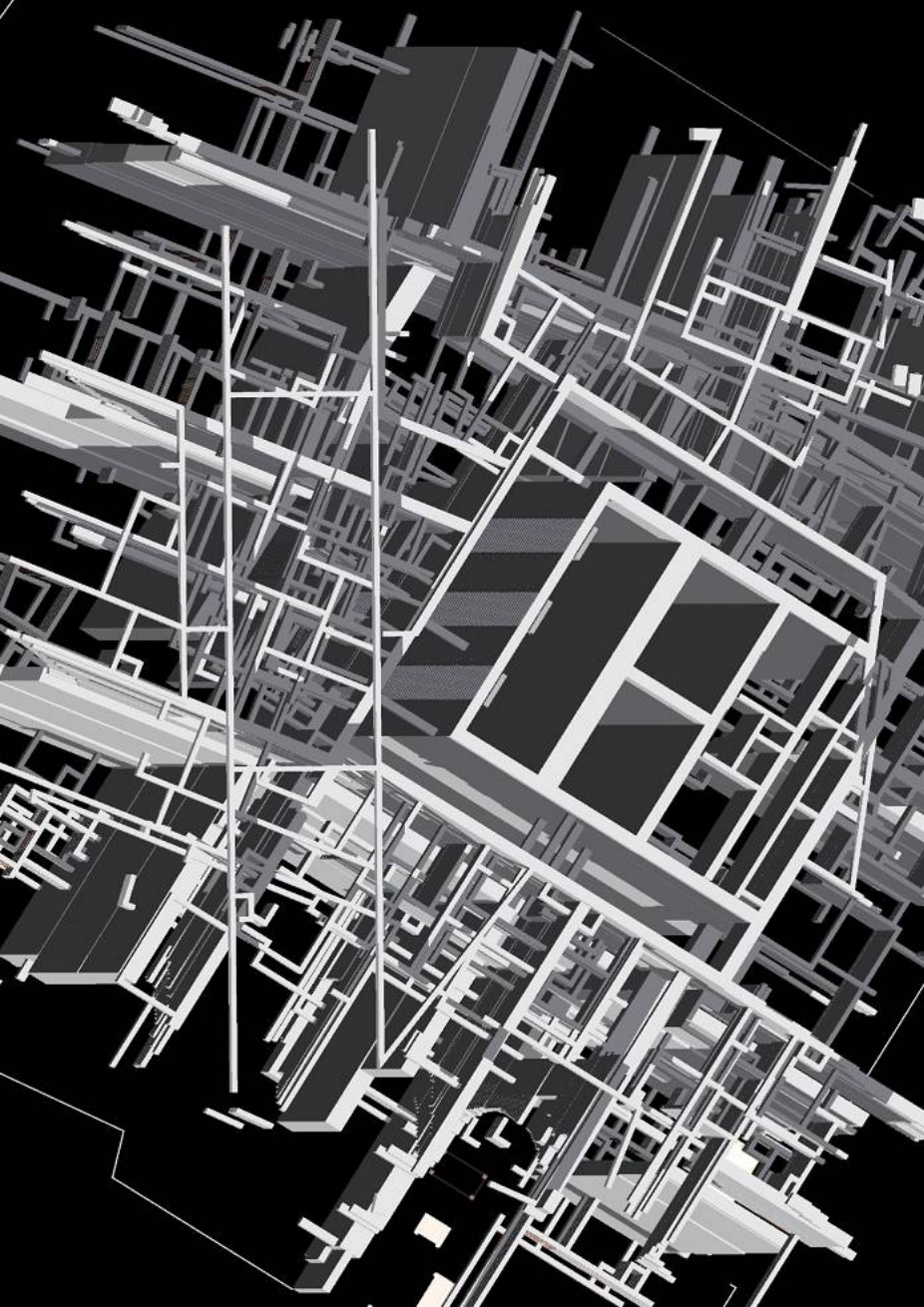




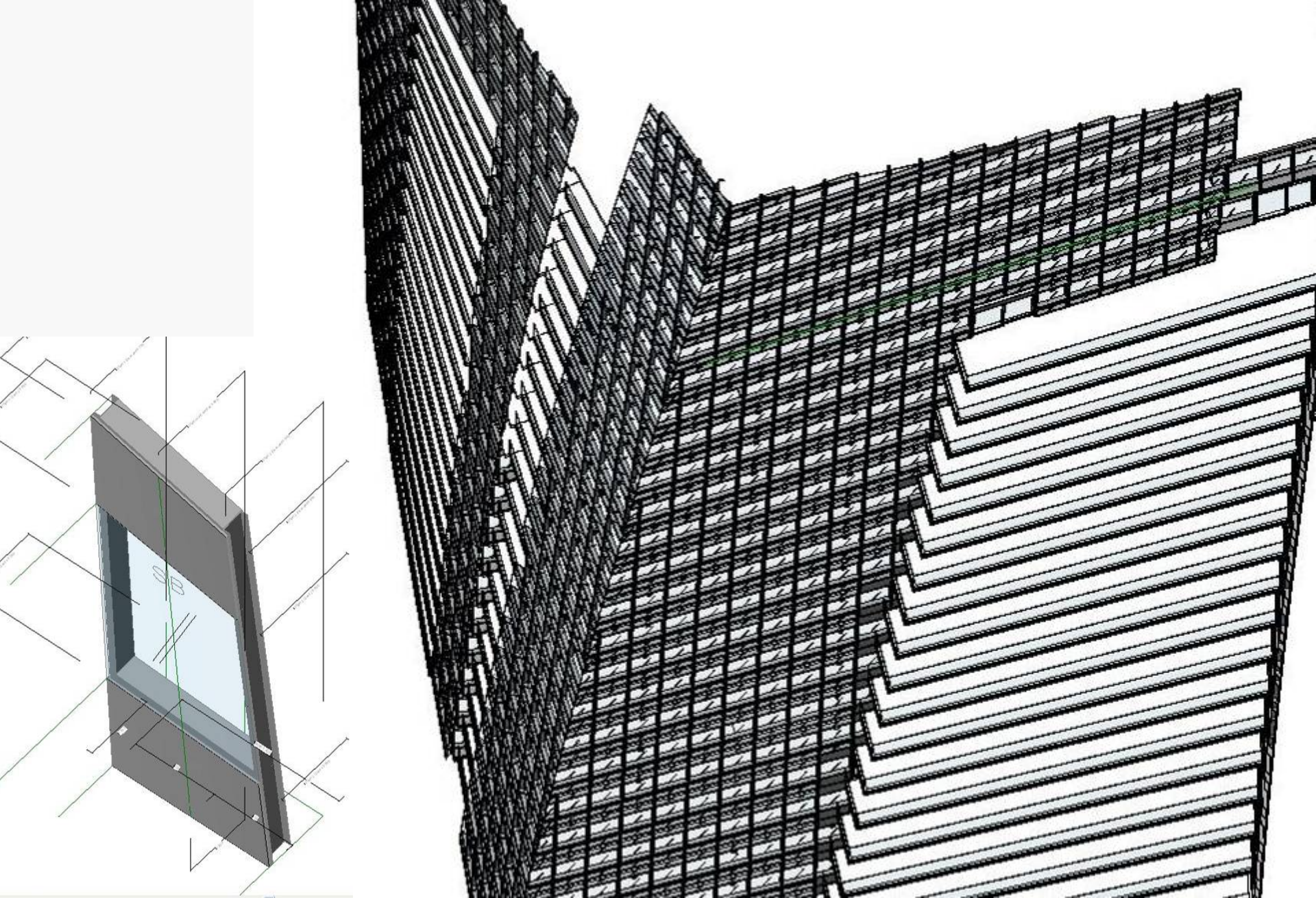




VERTICAL CO-ORDINATION



INTERNAL vs EXTERNAL



COMPLICATED CURTAIN WALL

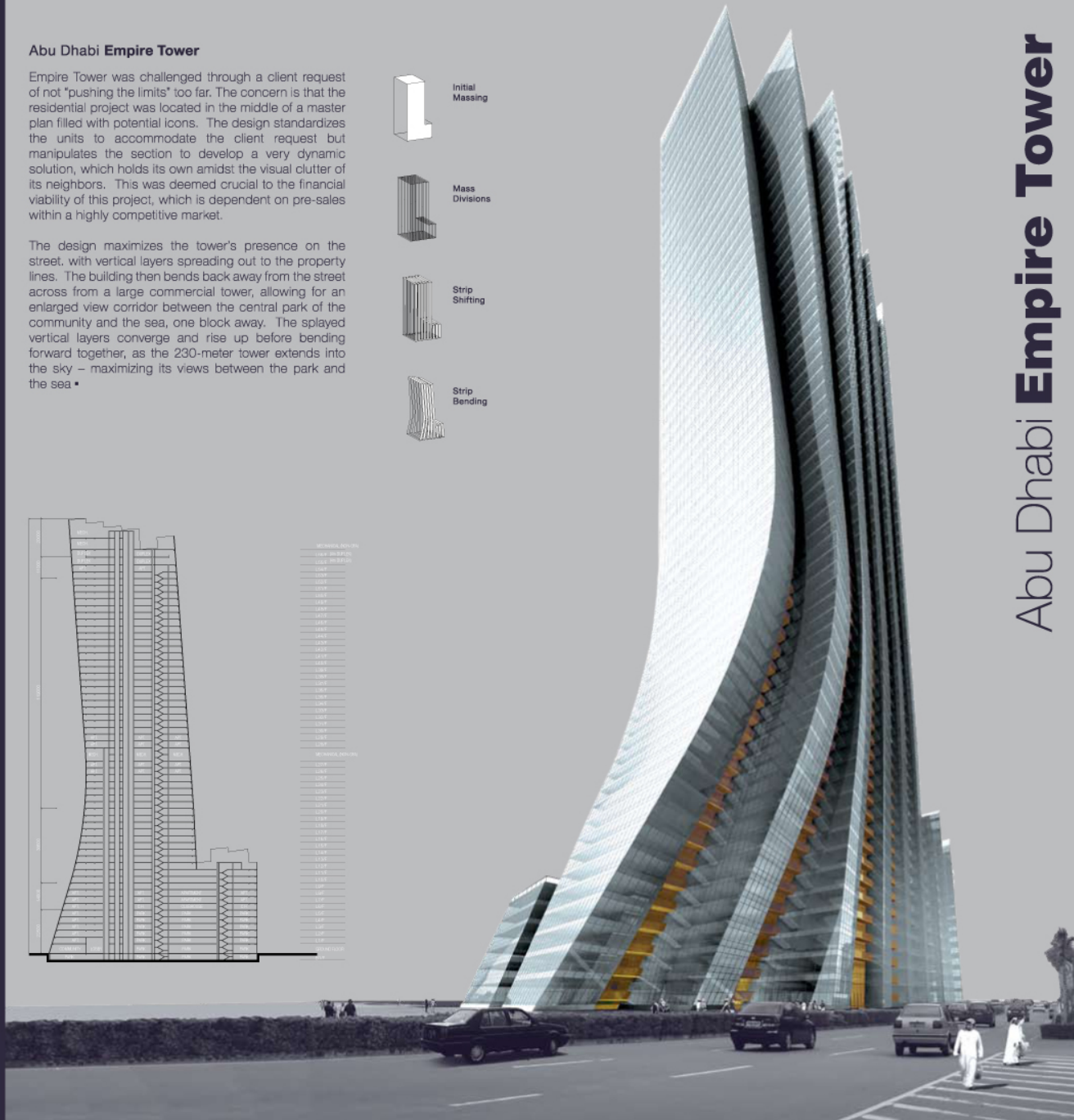
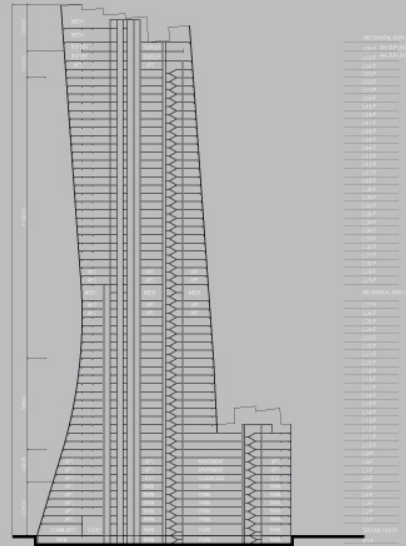


Program: Residential, Site Area 7,007 sqm
Floor Area 90,206 sqm, Building Height 225 m

Abu Dhabi Empire Tower

Empire Tower was challenged through a client request of not "pushing the limits" too far. The concern is that the residential project was located in the middle of a master plan filled with potential icons. The design standardizes the units to accommodate the client request but manipulates the section to develop a very dynamic solution, which holds its own amidst the visual clutter of its neighbors. This was deemed crucial to the financial viability of this project, which is dependent on pre-sales within a highly competitive market.

The design maximizes the tower's presence on the street, with vertical layers spreading out to the property lines. The building then bends back away from the street across from a large commercial tower, allowing for an enlarged view corridor between the central park of the community and the sea, one block away. The splayed vertical layers converge and rise up before bending forward together, as the 230-meter tower extends into the sky – maximizing its views between the park and the sea •



Abu Dhabi Empire Tower

Aedas



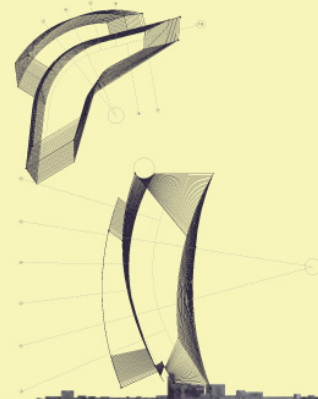
Abu Dhabi Dancing Towers

Located in the heart of Abu Dhabi, Dancing Towers was designed to appropriately fit its surrounding neighbors in scale.

The challenge was how to achieve this when the project was only 70,000 square meters and adjacent properties were relatively small, averaging 900 square-meter floor plates. Two slender towers as opposed to one singular tower was the first step, but the site itself was constrained, forcing a close proximity between the two buildings.

This site constraint is intensified in achieving a viable connective retail podium between the commercial and residential towers, drop-offs to the lobbies and access to supporting functions. The buildings were placed deliberately to maximize the uses down below.

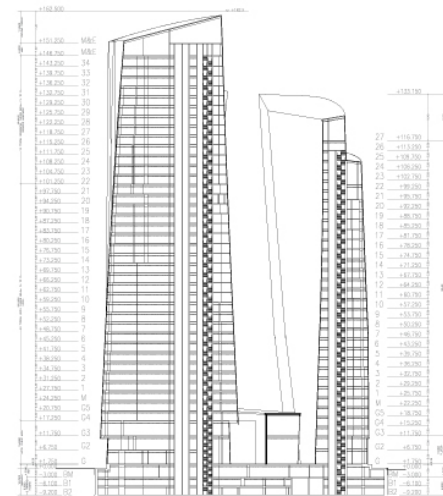
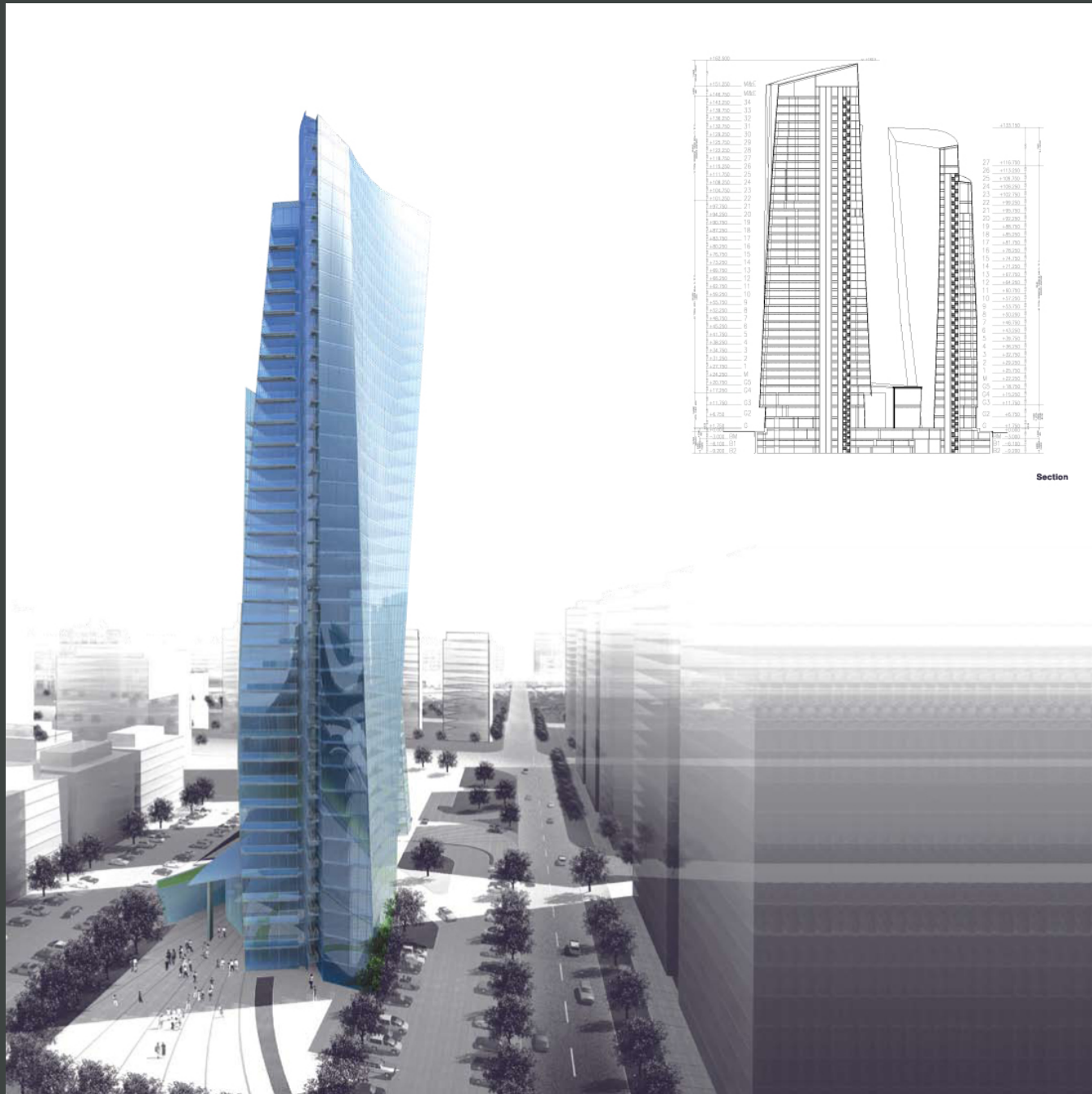
However, the two towers quickly lean, rotate, bend and warp to respond to each other, the adjacent sites and ultimately the view to the ocean at their horizon. These two figures fluidly respond to each other, dynamically engaged and flowing – and ultimately tied together in a passionate dance •



Program Mixed Use Site Area 4,160 sqm
Floor Area 44,235 sqm Building Height 160 m



Abu Dhabi Dancing Towers





Dubai Ocean Heights Two

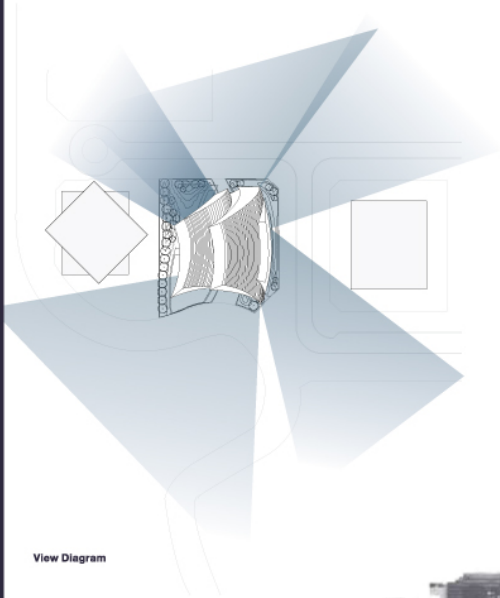
Ocean Heights Two is also located in Dubai Marina, UAE, along with its sister project, Ocean Heights One. At 460 meters in height and 105 floors, it will be the tallest tower in its vicinity. However, unlike its predecessor, the requirements for more modulated units up to the 60th floor, forced a different approach while intending to maintain the spirit of its sister.



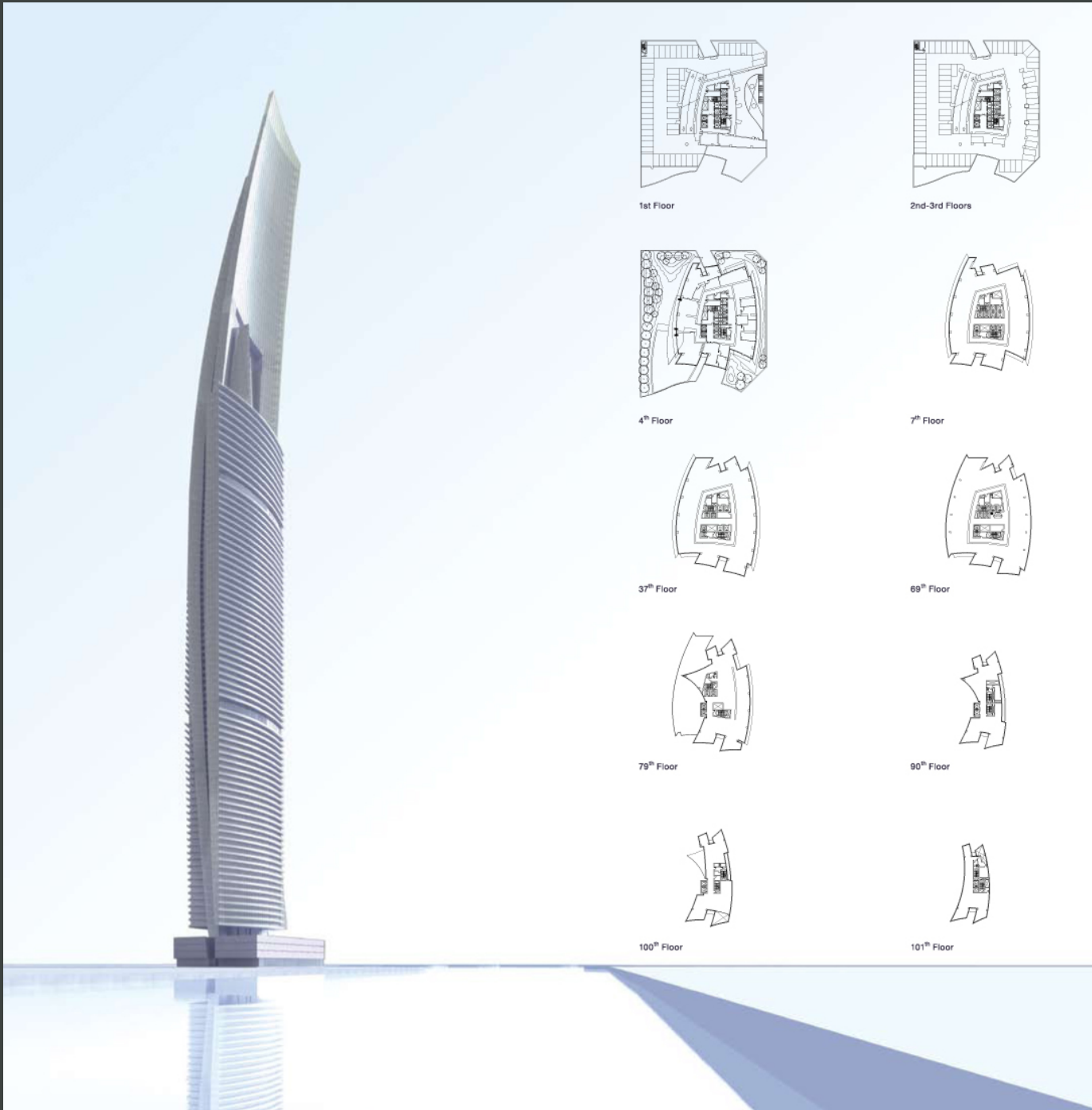
The first 60th floors of the tower are intended to be service apartments, which in order to be marketable, needed to have the majority of units standardized. The curved shape of the tower improves views past its densely located neighbors. The playfulness of this tower was concentrated into the two most visible faces, allowing units to bend up the tower in two blades. These blades were still modulated up to the 60th floor before the tight restrictions of unit area fluctuations become more relaxed. At this point, the modules drop off and the blades continue, tapering and bending into the sky ▪

Program Residential Site Area 3,463sqm
Floor Area 197,979 sqm Building Height 460 m

View Diagram

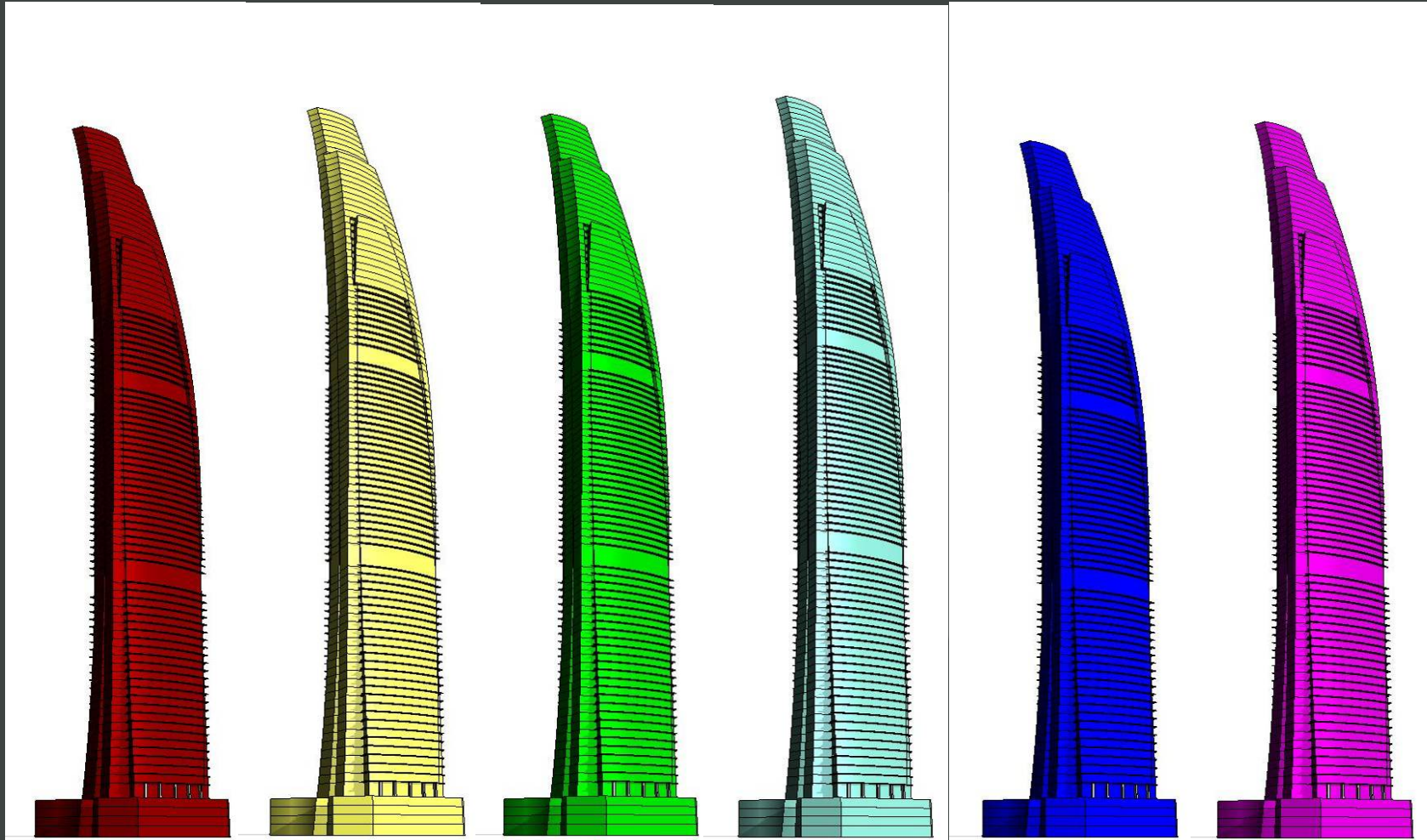


Dubai Ocean Heights Two



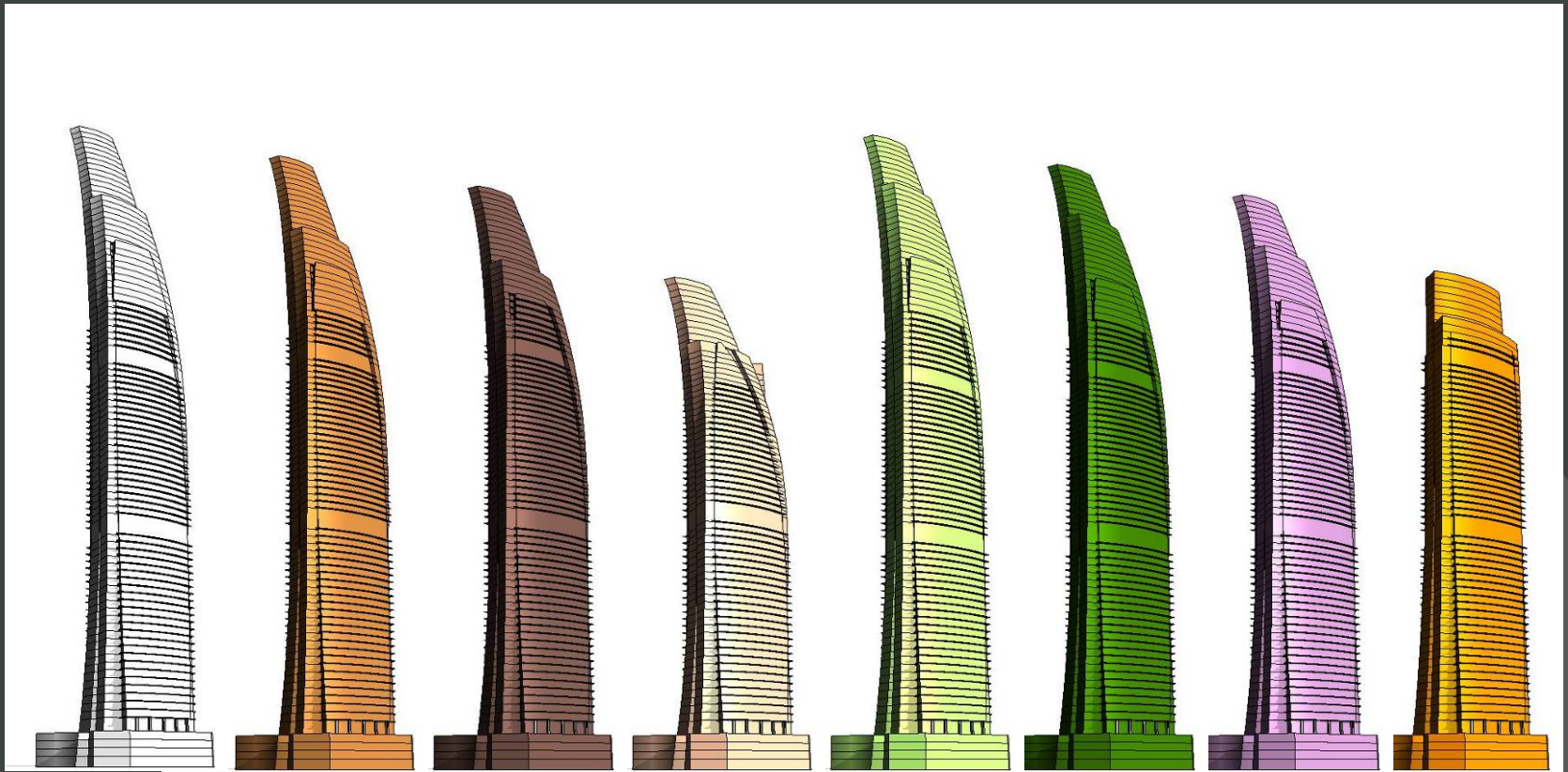


Ocean Heights II – Options





Ocean Heights II – Options





Thank You...