

The logo consists of the letters 'NCID' in a bold, white, sans-serif font. The letters are stylized with thick strokes and sharp angles, giving it a modern, architectural feel. The 'N' and 'C' are connected, as are the 'I' and 'D'.

NCID

A thin, white vertical line is positioned to the left of the text, separating the logo from the tagline.

A DVANCED
C ONSTRUCTION
I NFORMATION
D EVELOPMENT


| BIM SCOPE OF WORKS MATRIX

Presented by

David Fung

1.0 Early Planning stage

1.1 Topography

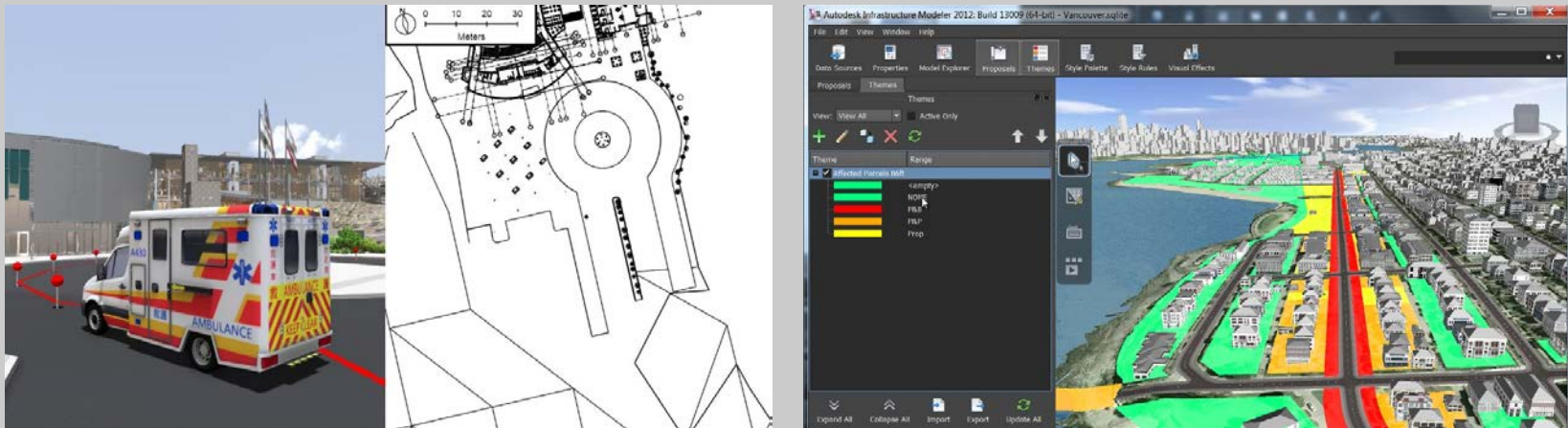
Information required	Contour and coordinates for project area
Submission purpose	For sunshade study, landscape study, excavation and back fill, even sub-structure analysis
Example	
	

■ 1.0 Early Planning stage

1.2 Traffic analysis

Information required	Road map
Submission purpose	To locate the main and secondary entrance of the building

Example

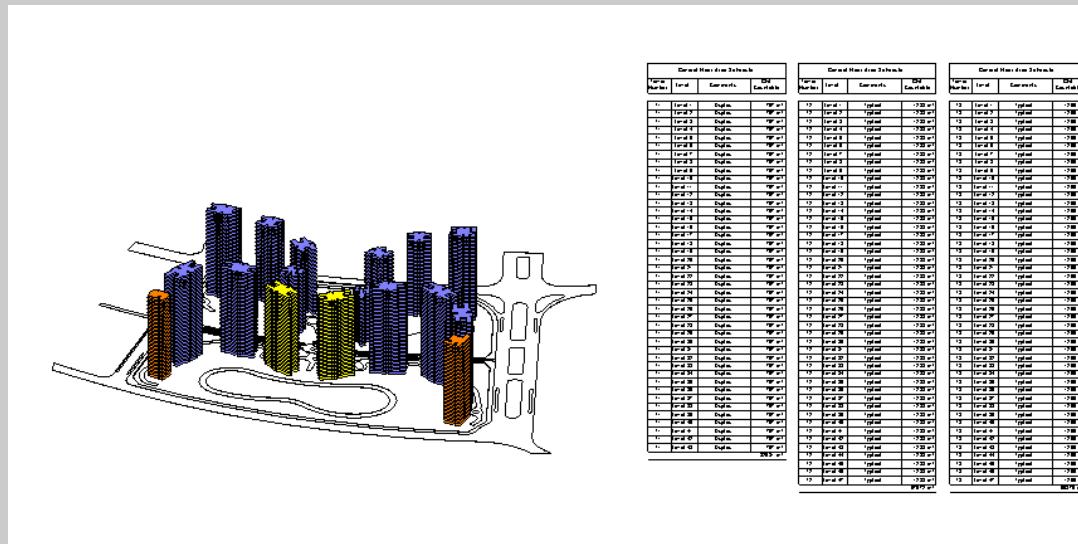


1.0 Early Planning stage

1.3 Build mass model to generate the preliminary area schedule

Information required	Master plan and floor plans
Submission purpose	Preliminary area schedule could be use as early financial analysis

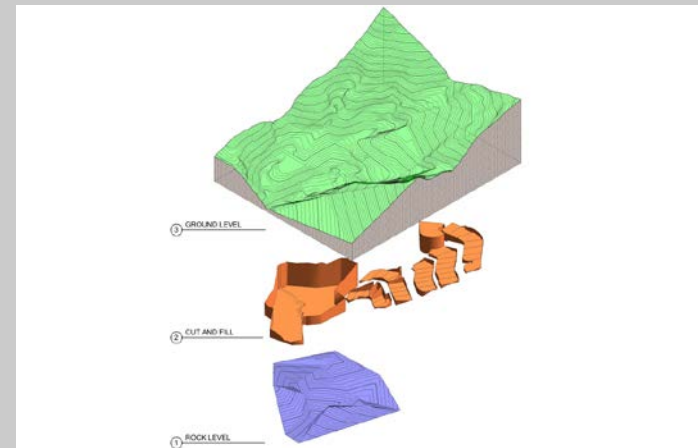
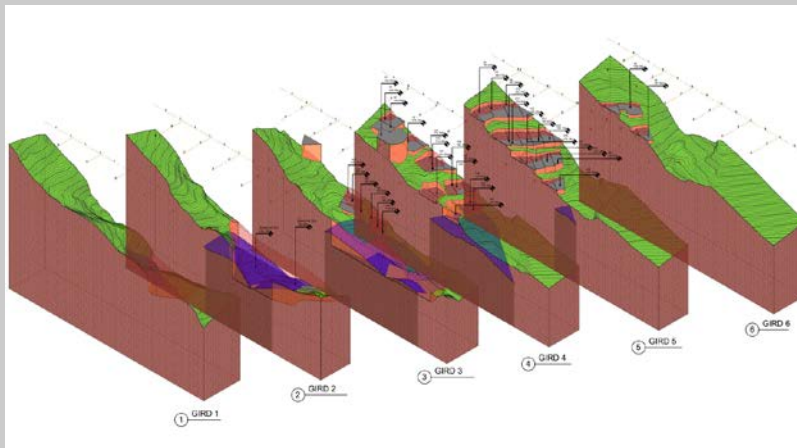
Example



■ 2.0 Design stage

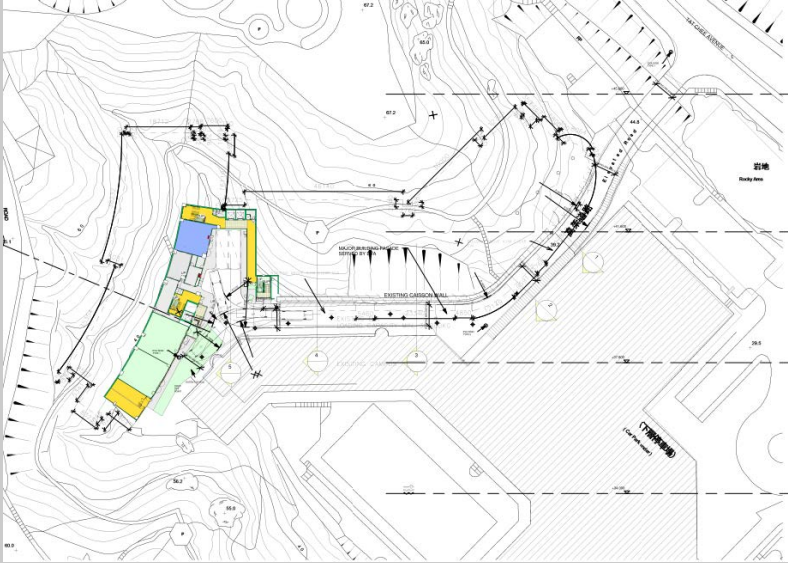
2.1 Excavation analysis

Information required	Site topography, master plan and building plans, levels
Submission purpose	Excavation analysis could be used as design checking, which could help to revise the design to make sure the excavation keeps at minimum level
Example	



■ 2.0 Design stage

2.2 Design options – Architectural / Structural

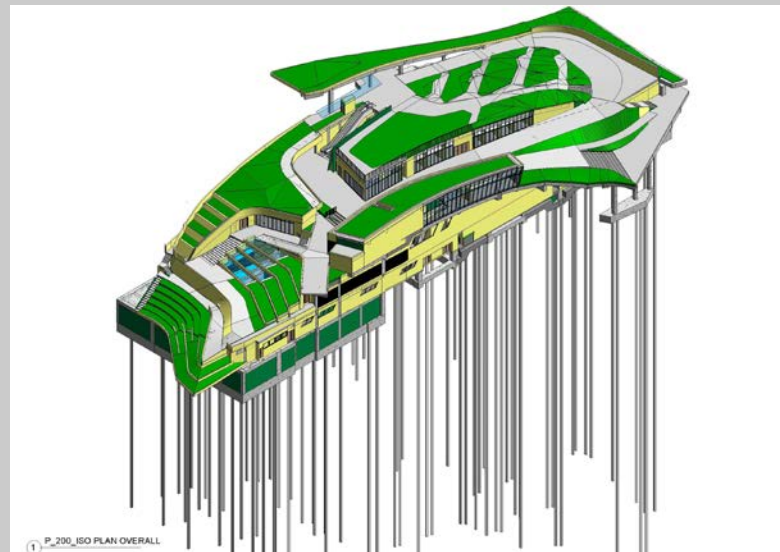
Information required	Masterplan, preliminary architectural and landscape design
Submission purpose	Analyze design options to achieve quality design for architecture, master planning and landscape
Example	
	

■ 2.0 Design stage

2.3 Architectural BIM model: room names, function, numbers and area

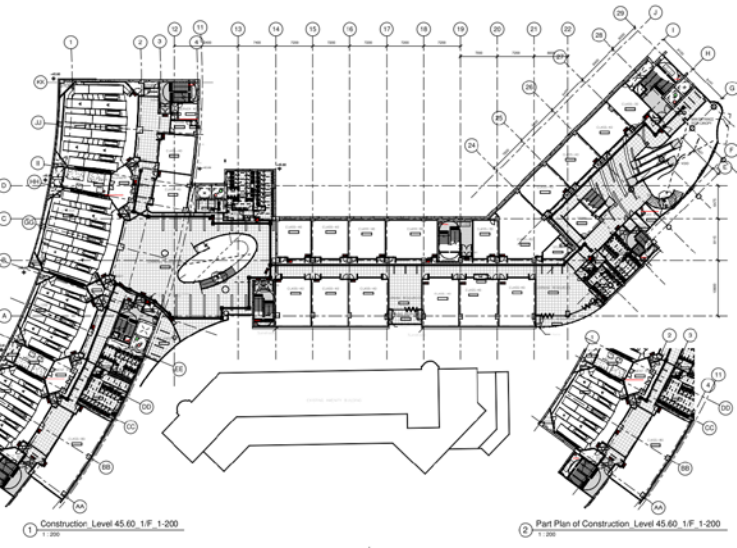
Information required	Masterplan and general arrangement plan, elevations and roof design
Submission purpose	For drawing production, material schedule and area schedule

Example



■ 2.0 Design stage

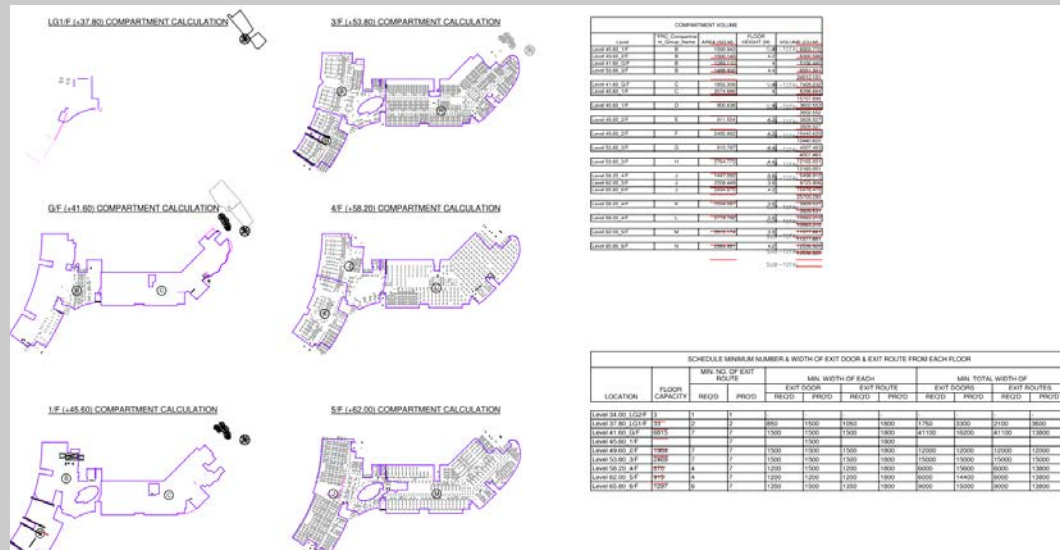
2.4 Architectural drawings: Masterplan, general arrangement plans, elevations and sections (up to 1:100)

Information required	Masterplan and floor plans, elevations and roof design
Submission purpose	For tender drawings and construction drawings
Example	
 <p>1 Construction, Level 45.60, 1/F, 1:200</p> <p>2 Part Plan of Construction, Level 45.60, 1/F, 1:200</p>	

2.0 Design stage

2.5 Area schedule

Information required	Masterplan, floor plan and levels
Submission purpose	Area schedule from BIM model could provide accurate area instantly, not over or a lot less than the limitation
Example	



■ 2.0 Design stage

2.6 Schedule of quantities

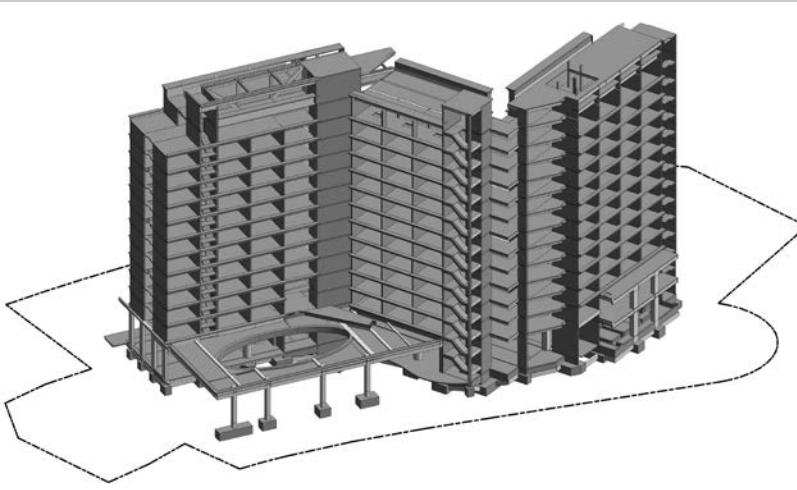
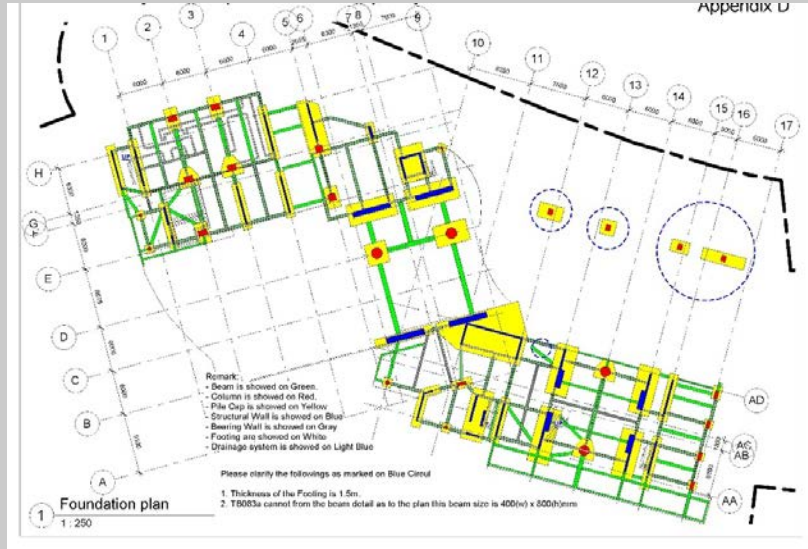
Information required	Architectural design and materials
Submission purpose	Schedule of windows, doors or louvres, help QS to start with preliminary quantity take-off

Example

WINDOW SCHEDULE			
Type Mark	Total Width	Total Height	Total Area
A	2250	2250	5.063 m ²
			5.063 m ²
B	1675	2250	3.769 m ²
B	2100	2250	4.725 m ²
			8.494 m ²
C	2025	2250	4.556 m ²
C	2625	2250	5.906 m ²
			10.463 m ²
D	2700	2250	6.075 m ²
D	1850	2250	4.163 m ²
			10.238 m ²
TOTAL			34.256 m ²



2.0 Design stage

2.7 Structural BIM model: piling, pile cap, substructure and superstructure

Information required	Structural design for piling, pile cap, ELS, demolition plan, substructure and superstructure
Submission purpose	For structural drawing production, export model for structural calculation
Example	 

■ 2.0 Design stage

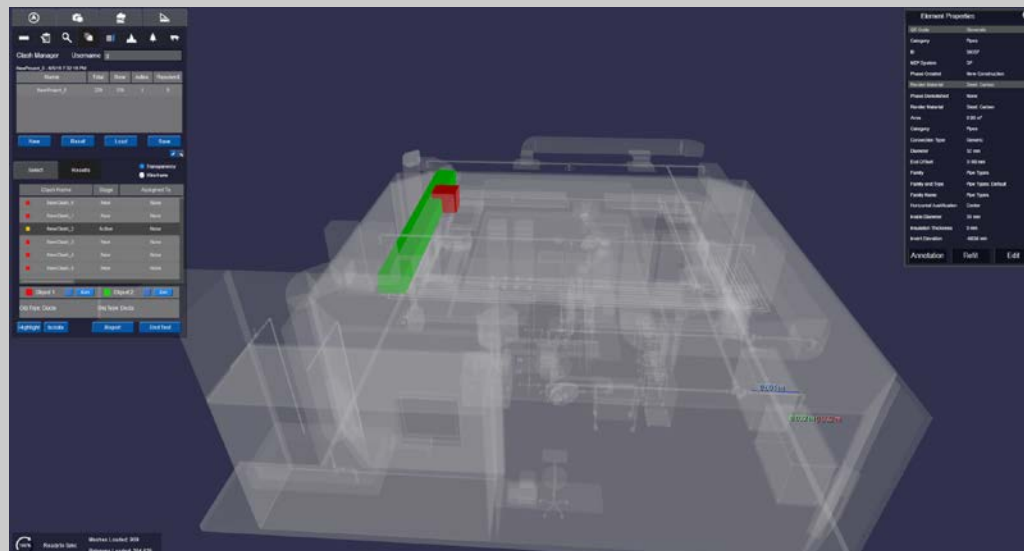
2.7 MEP BIM model: MVAC, P&D, FS and electrical design

Information required	MEP design for MVAC, P&D, FS and Electrical, dimension and level of ducting and pipework
Submission purpose	All MEP elements were model to make sure the design feasibility
Example	
	
	

■ 3.0 Detail design


3.1 Clash detection

Information required	Architectural, structural and MEP design
Submission purpose	Design coordination
Example	




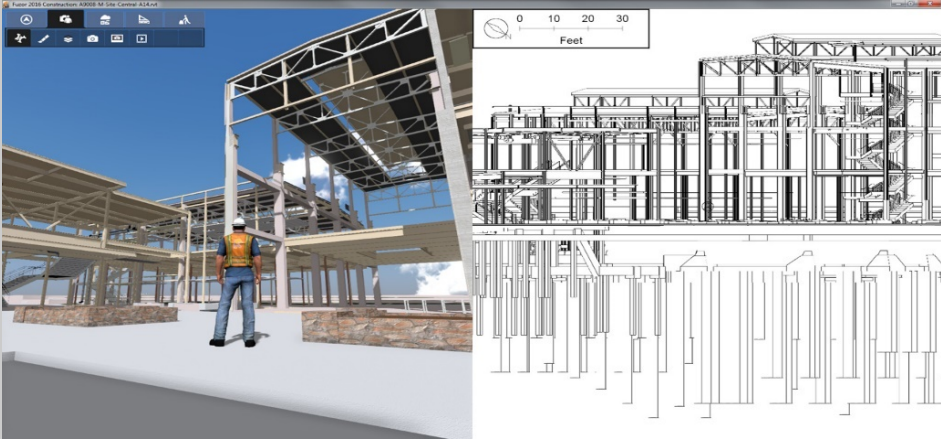
■ 3.0 Detail design

3.2 Spatial validation checks for headroom and working space

Information required	Architectural, structural and MEP design (all levels shall be clearly mentioned)
Submission purpose	For building and services design, building operations and maintenance activities checking
Example	

■ 4.0 Tender / Construction

4.1 4D animation for construction sequence

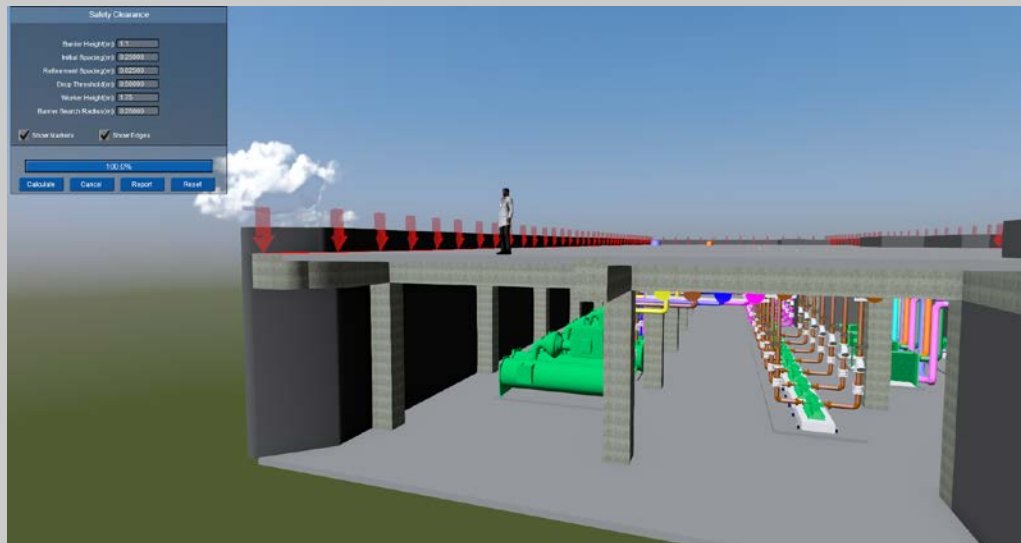
Information required	Architectural, structural and MEP design revisions; construction programme and method statement
Submission purpose	Construction sequence checking, clash between trades could be detected before commencement.
Example	
 <p>The screenshot shows a software interface for 4D construction simulation. On the left, there's a 'Construction Manager' panel with a tree view of tasks. The main area displays a 3D model of a building's steel frame with orange safety netting. A timeline at the bottom shows the sequence of construction activities. A worker figure is visible on the construction site.</p>	
 <p>This block contains two images. The left image is a 3D perspective view of a construction site, showing the steel framework of a building with a worker in an orange safety vest standing on a platform. The right image is a 2D architectural cross-section drawing of a building, showing the internal structure and floor levels. A scale bar at the top right of the drawing indicates 0, 10, 20, and 30 feet.</p>	

■ 4.0 Tender / Construction

4.2 Construction safety check


Information required	Construction equipment
Submission purpose	4D Construction simulation to highlight the construction sequence, while at the same time to visualize the temporary works during construction to ensure the site safety, delivery route, protective measures etc.

Example




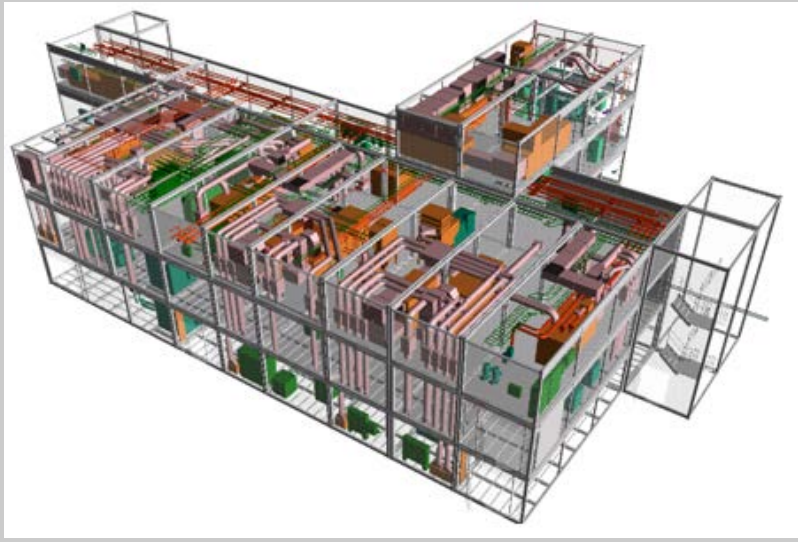
■ 4.0 Tender / Construction

4.3 Site management

Information required	Procurement schedule, lead time and site logistic planning, installation detail
Submission purpose	To utilize the 4D Construction Simulation techniques facilitate the site planning - material storage, delivery path, hoist management and installation logistics.
Example	
	

■ 5.0 Construction completed

5.1 As-built model

Information required	Contractor's architecture, structure, MEP and landscape design, and MEP equipment
Submission purpose	Related information to be stored in the model, extra information to future facility management purpose will be added
Example	
	

5.0 Construction completed

5.2 COBie

Information required

Material, O&M manual, warranty and maintenance information

Submission purpose

The information will be export and re-store into model in EcoDomus for facility management purpose

Example

The screenshot displays the Solibri Model Checker interface for a project named 'NBS Lakeside Restaurant'. The left pane shows the 'Model Tree' with a hierarchy of elements including Beam, Column, Curtain Wall, Door, Flow Terminal, Furniture, Member, Object, Opening, Plate, Railing, Roof, Slab, and Space. The central pane shows a 3D perspective view of the building model. The bottom pane displays the 'COBie' table, which is a structured data table for building information.

	A	B	C	D	E	F
	Name	Createdby	CreatedOn	Category	Floorname	Description
1	20BOH_01	28-09-2012 12:30:40	28-09-2012 12:30:40	OPEN KITCHEN	GROUND F...	OPEN KITCHEN
2	20BOH_02	28-09-2012 12:30:40	28-09-2012 12:30:40	OPEN CHIC	GROUND F...	OPEN CHIC
3	20BOH_03	28-09-2012 12:30:40	28-09-2012 12:30:40	WASHING AREA	GROUND F...	WASHING AREA
4	20BOH_04	28-09-2012 12:30:40	28-09-2012 12:30:40	CHILLER ROOM	GROUND F...	CHILLER ROOM
5	20BOH_05	28-09-2012 12:30:40	28-09-2012 12:30:40	OPEN HOLDING SPACE	GROUND F...	OPEN HOLDING SPACE
6	20BOH_06	28-09-2012 12:30:40	28-09-2012 12:30:40	WASTE ROOM	GROUND F...	WASTE ROOM
7	20BOH_07	28-09-2012 12:30:40	28-09-2012 12:30:40	JANITOR	GROUND F...	JANITOR
8	20BOH_08	28-09-2012 12:30:40	28-09-2012 12:30:40	POT WASHING	GROUND F...	POT WASHING
9	20BOH_09	28-09-2012 12:30:40	28-09-2012 12:30:40	STONE	GROUND F...	STONE
10	20BOH_10	28-09-2012 12:30:40	28-09-2012 12:30:40	PUBLIC HEALTHY WATER SERVICES	GROUND F...	PUBLIC HEALTHY WATER SERVICES
11	20BOH_11	28-09-2012 12:30:40	28-09-2012 12:30:40	PLANT / BATTERY	GROUND F...	PLANT / BATTERY
12	20BOH_12	28-09-2012 12:30:40	28-09-2012 12:30:40	STROOM	GROUND F...	STROOM
13	20BOH_13	28-09-2012 12:30:40	28-09-2012 12:30:40	MAIN DINING	GROUND F...	MAIN DINING
14	20BOH_14	28-09-2012 12:30:40	28-09-2012 12:30:40	ENTRY LOBBY	GROUND F...	ENTRY LOBBY

The bottom of the interface shows a 'Welcome to Solibri Model Checker' message and a 'Role: COBie' indicator.

! Thank you !