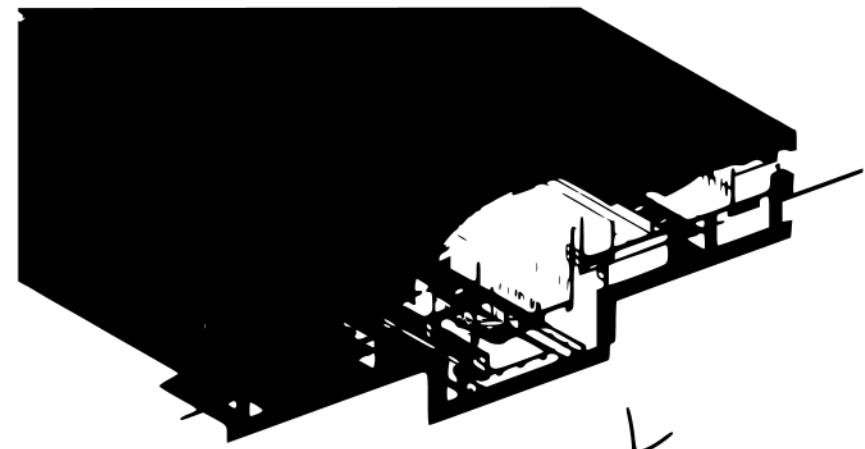
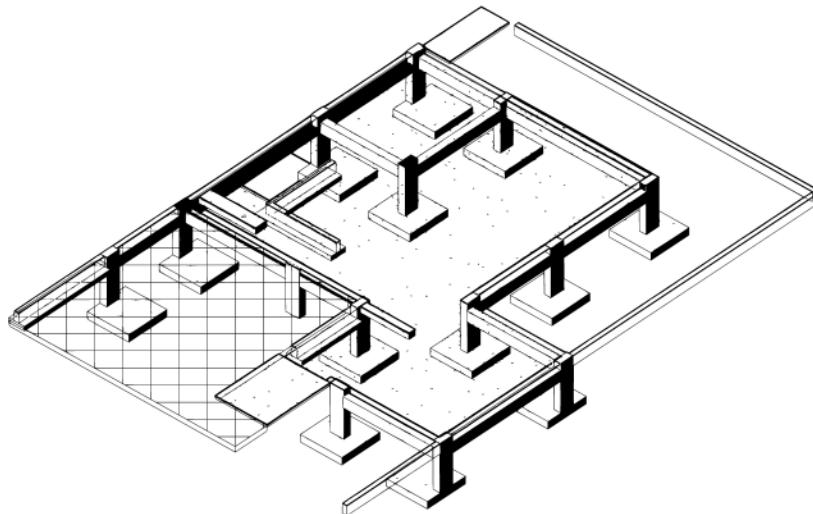
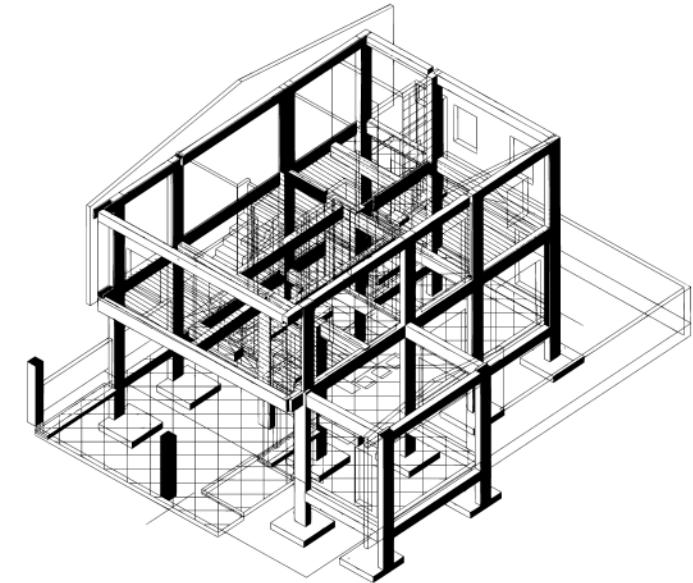
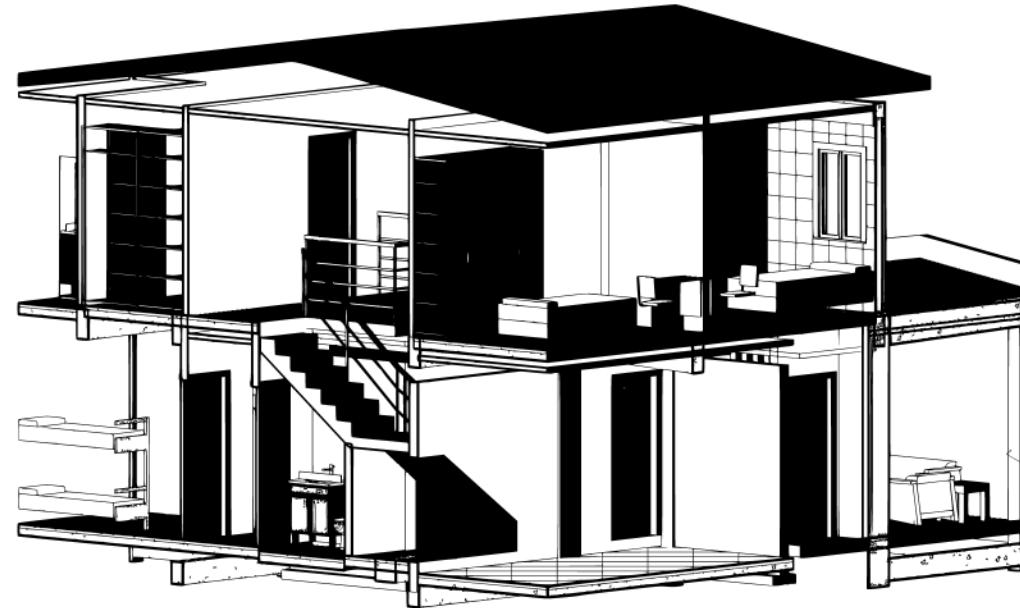


Infrastructure,
Residential, Industrial
Educational

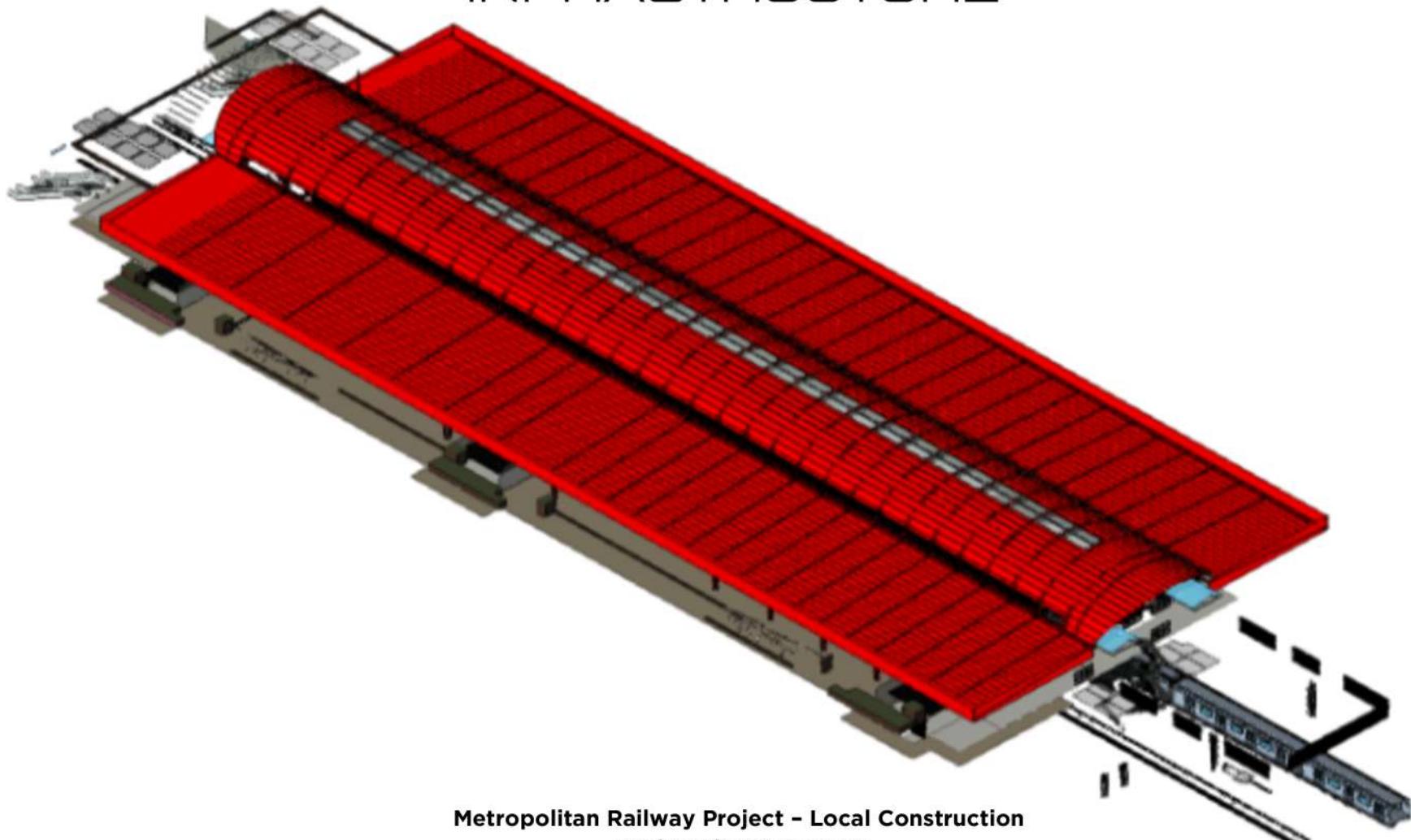
BIM, VDC, Design,
Modeling, Drafting

Mary Sandro
Highlight 20-25

PORTFOLIO

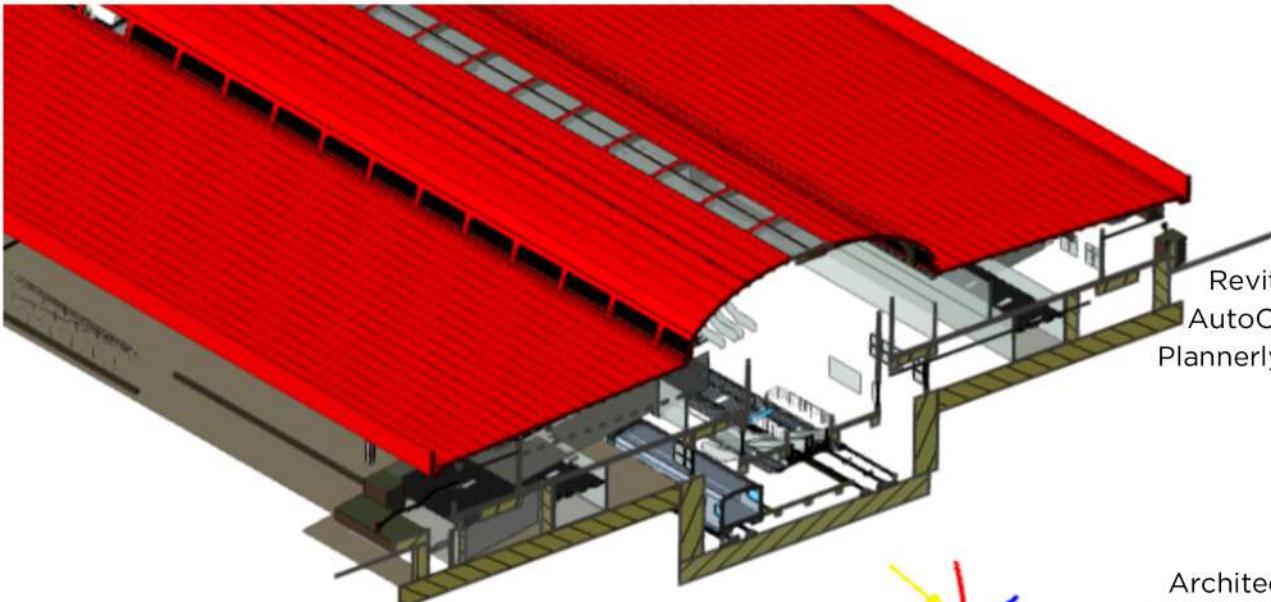


INFRASTRUCTURE



**Metropolitan Railway Project – Local Construction
Engineering Company**

Worked as a BIM Modeler on the **Metropolitan Railway Project**, a major 22-km elevated railway project located in Quezon City to San Jose del Monte, Bulacan, Philippines. Supported multidisciplinary coordination, clash detection, and construction documentation to ensure design.

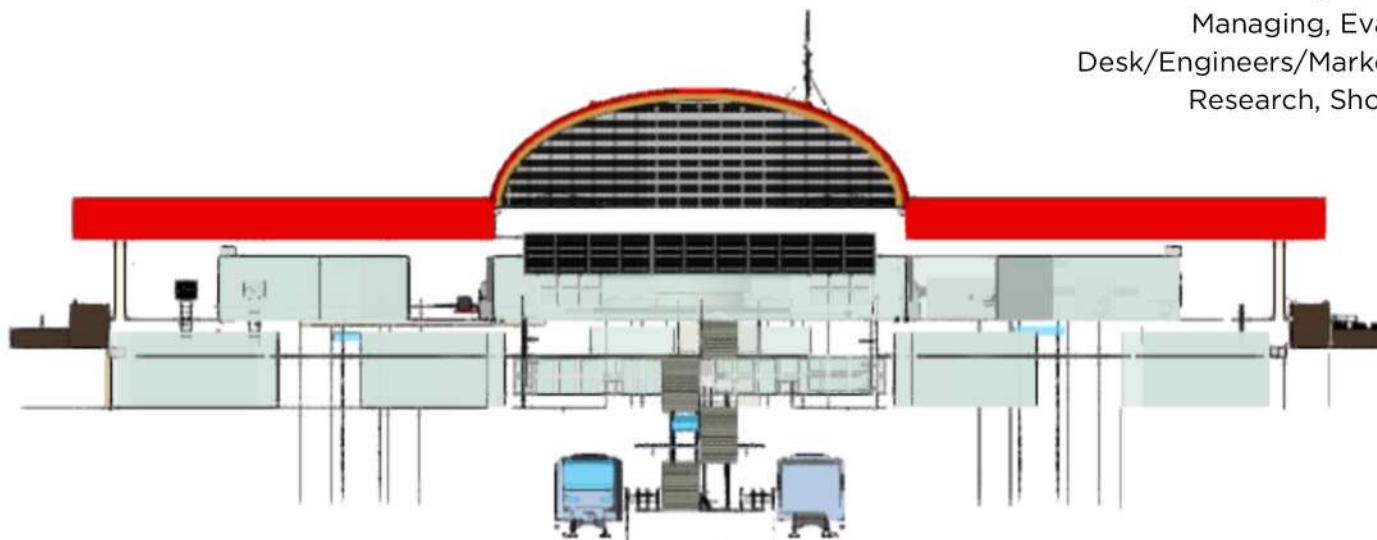


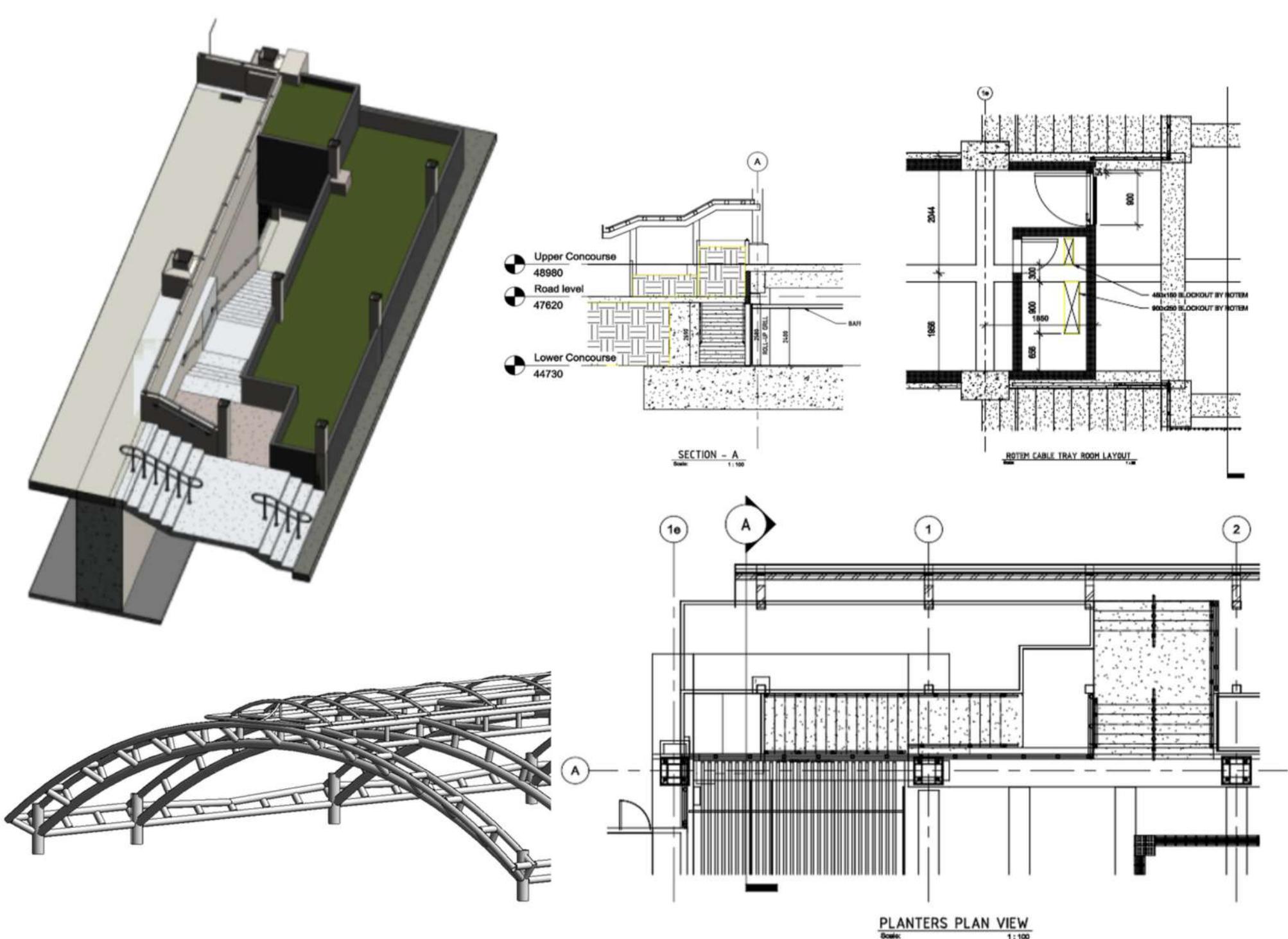
Tools

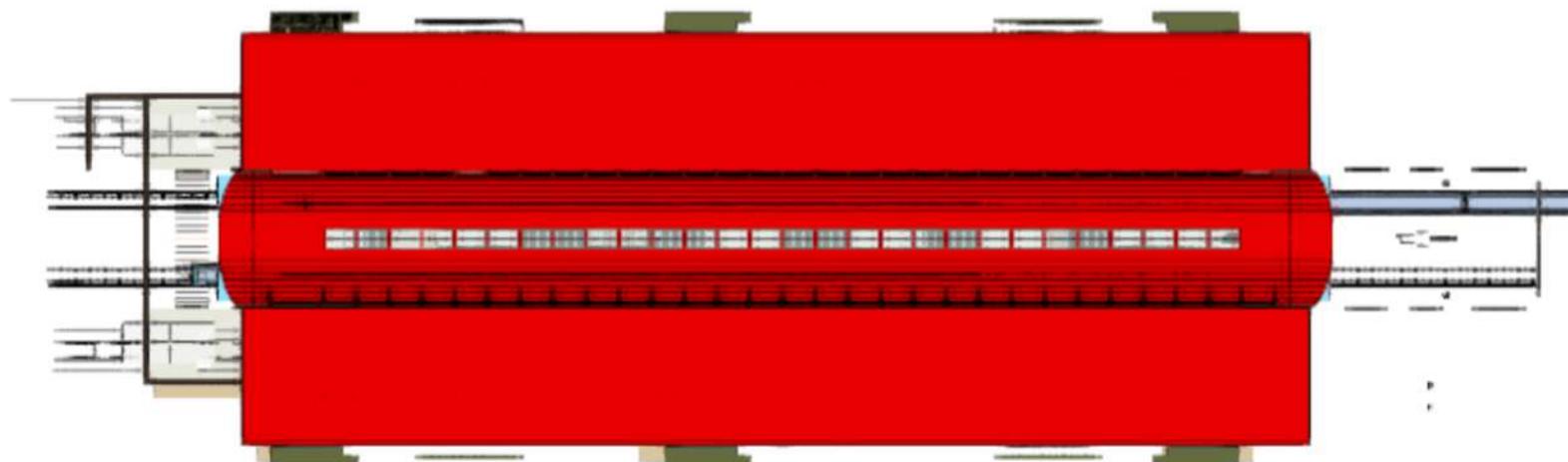
Revit, BIM 360, CDE, Navisworks Manage, AutoCAD, Unity Reflect, Construction Cloud, Plannerly, Formit, Hypar, Insight Energy Analysis, Office 365

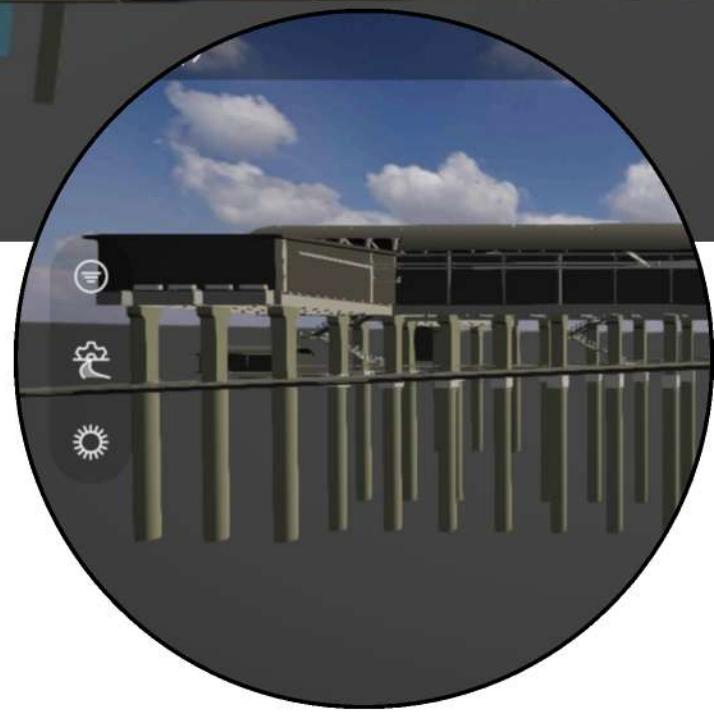
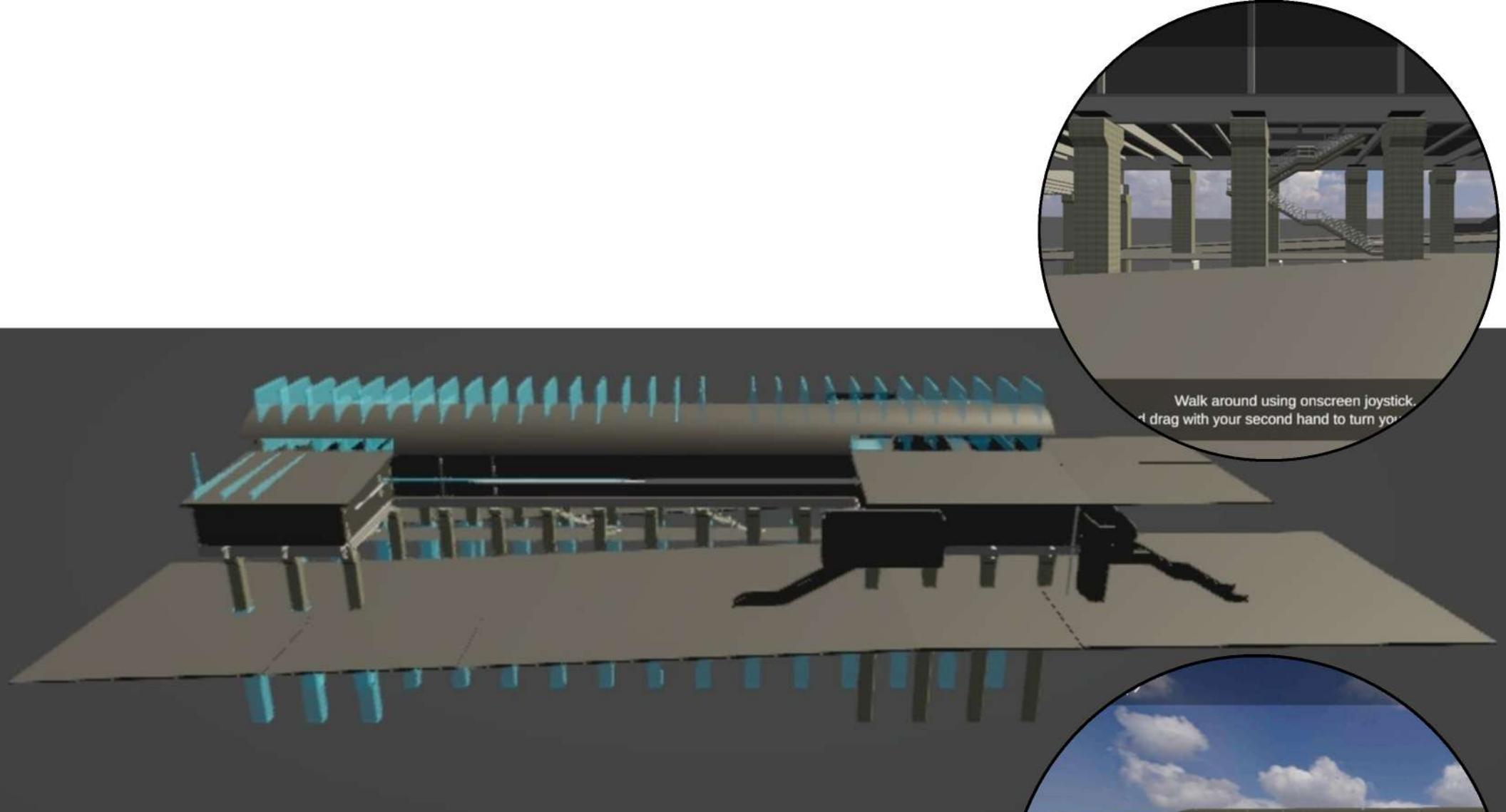
Assig

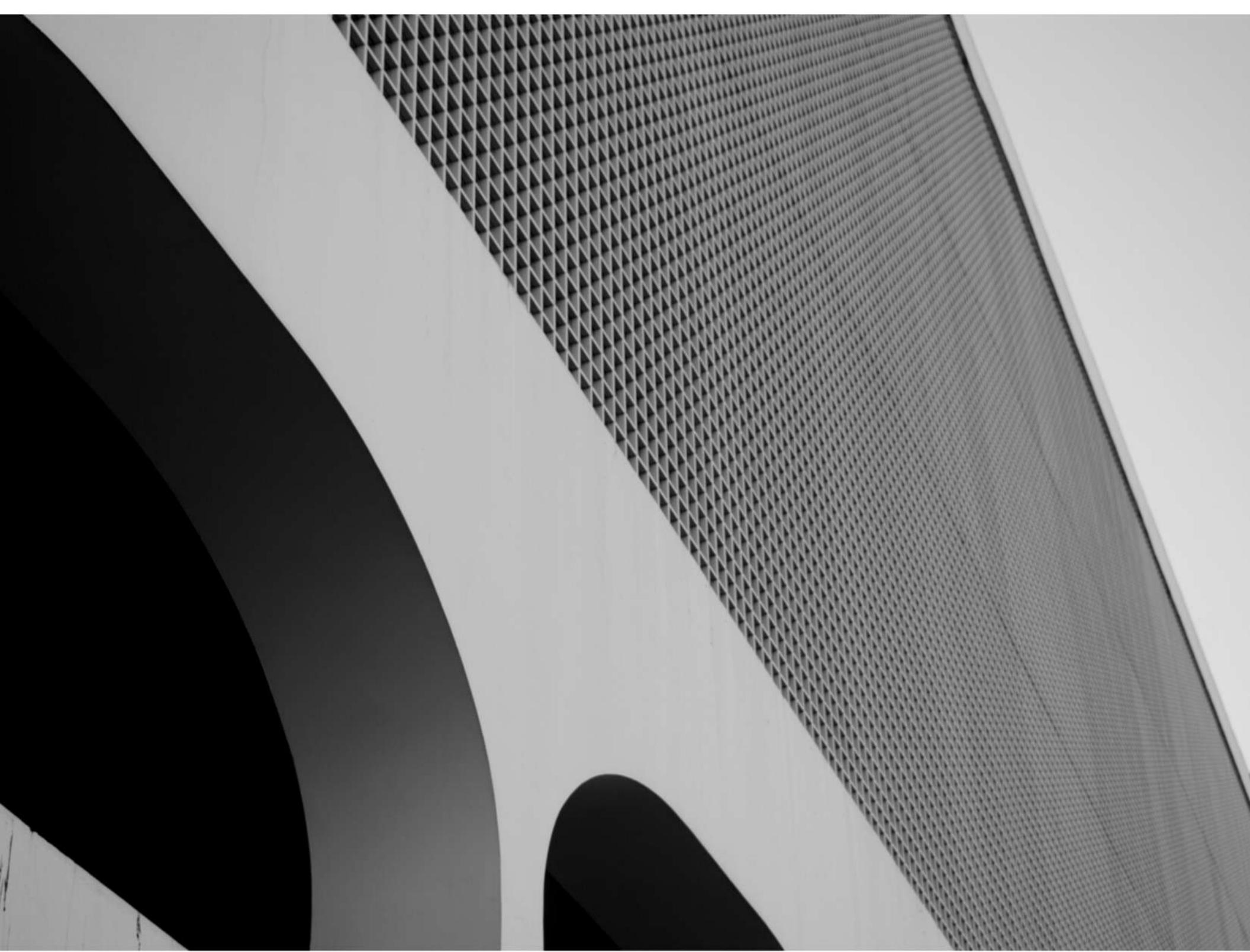
Architectural, Structural, Basic MEPF, Modeling, Authoring Team Lead, Coordination, Shop Drawings & Fabrication Details, Project Coordination & Standards Management, Technical Drafting & Documentation, Quantity Takeoff, Admin and Managing, Evaluation, Support IT Desk/Engineers/Marketing/Planners/Consultants, Research, Shop Drawing, Reports



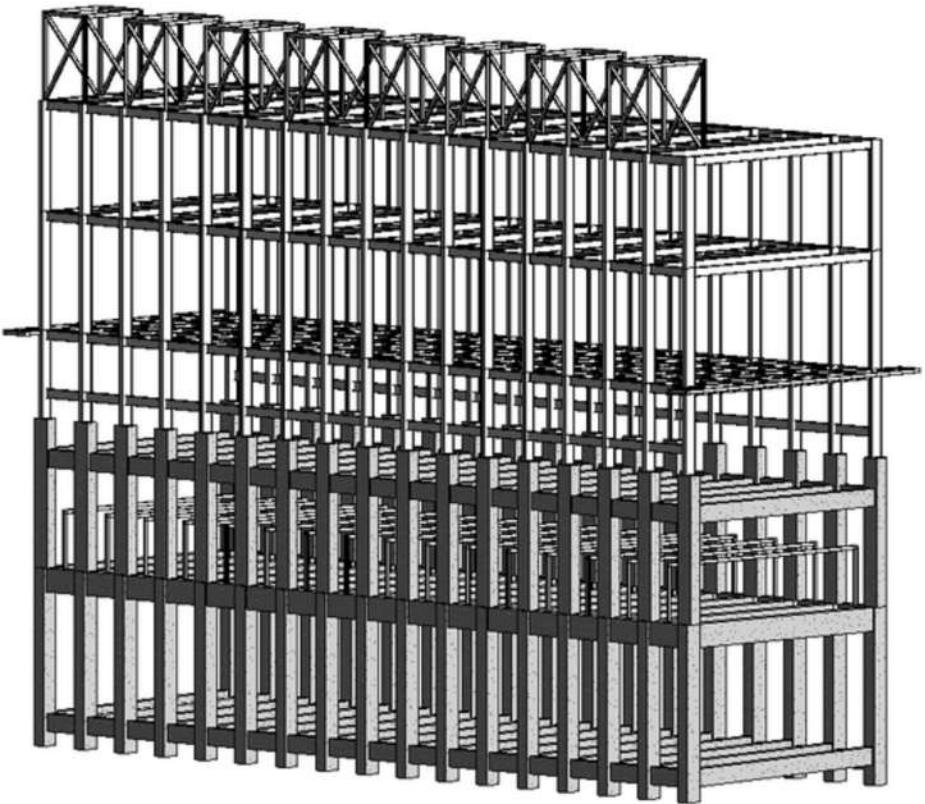
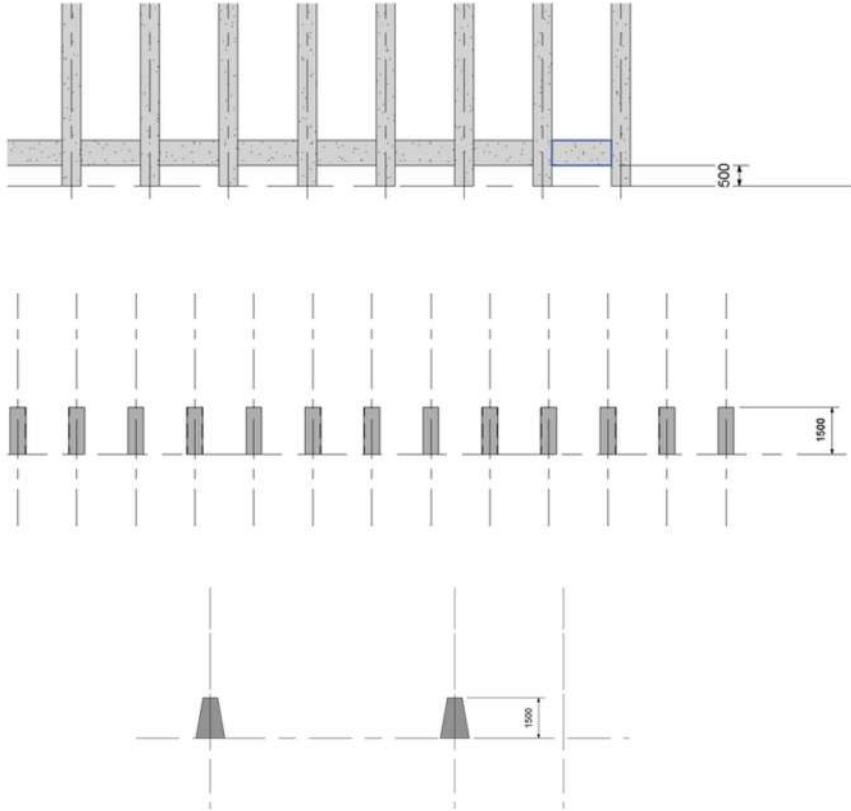






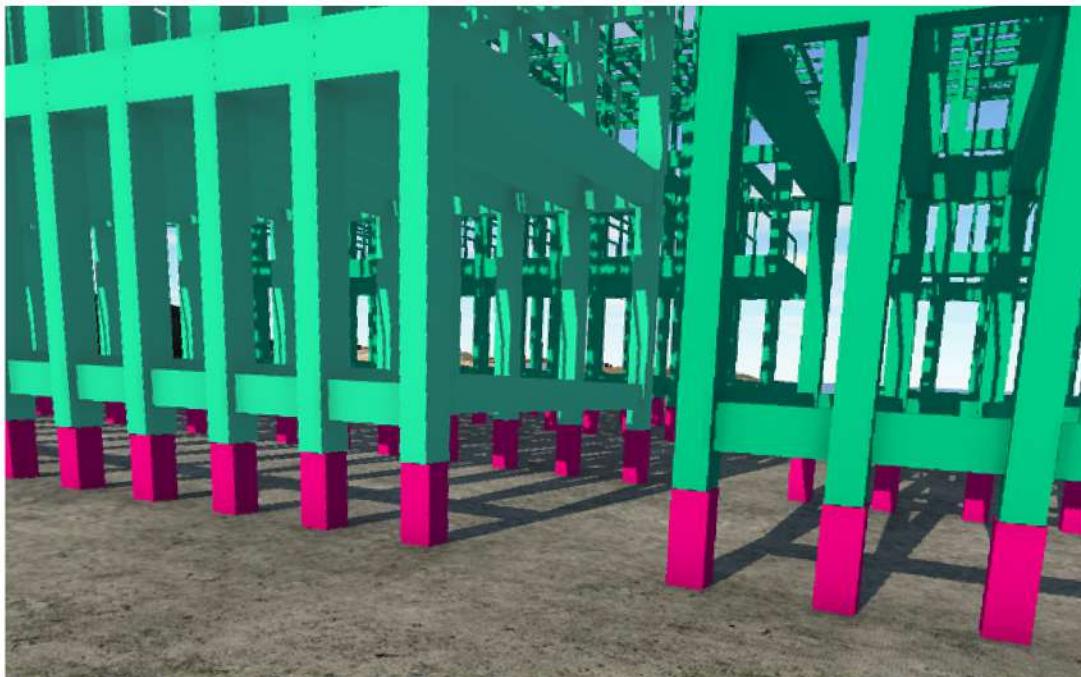


INFRASTRUCTURE



Energy Infrastructure Project - Local Construction Engineering Company

Worked as a BIM Modeler on the **Energy Infrastructure Project**, a designed and simulated structural modules for large scale project including simulation videos of the modules being transport to the ships located in Batangas City, Philippines. Focuses on developing discipline-specific building information model and providing support to Design Section during the bidding stage and integrate design processes for manufacture and assembly.

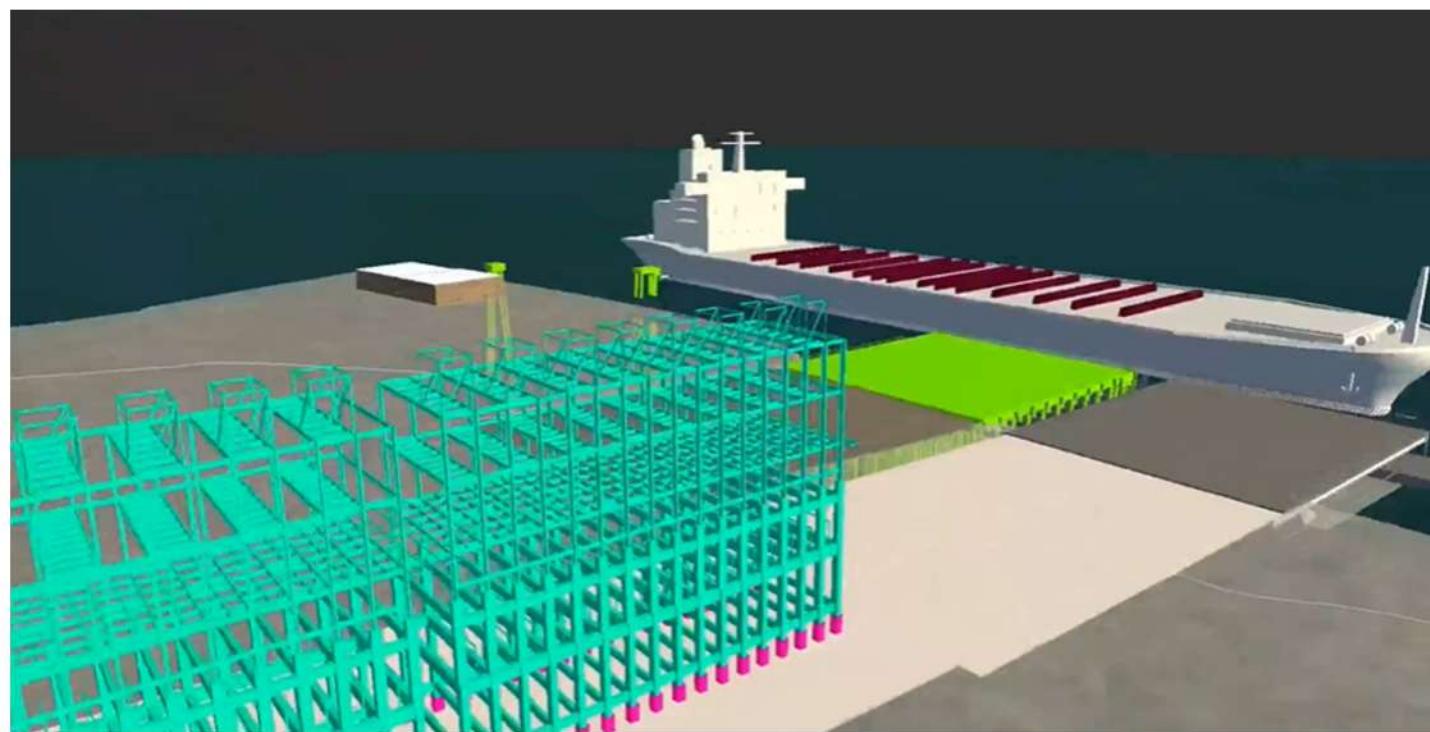


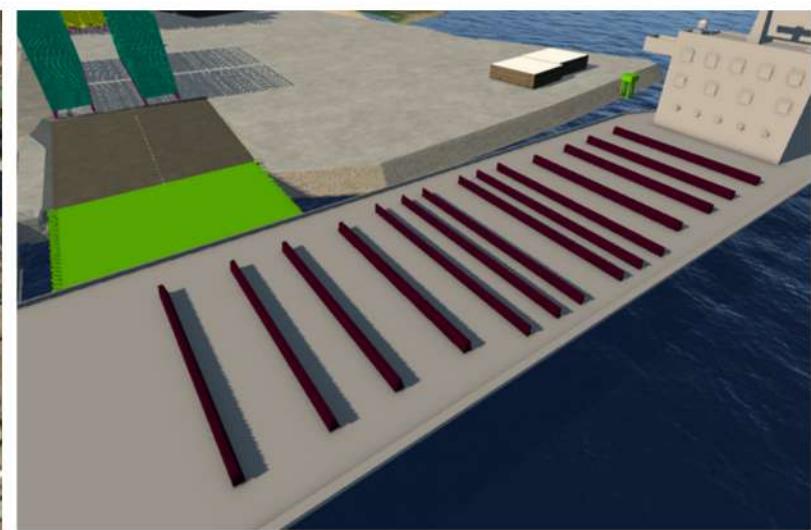
Tools

Revit, BIM 360, CDE, Navisworks Manage, AutoCAD, Unity Reflect, Construction Cloud, Plannerly, Formit, Office 365

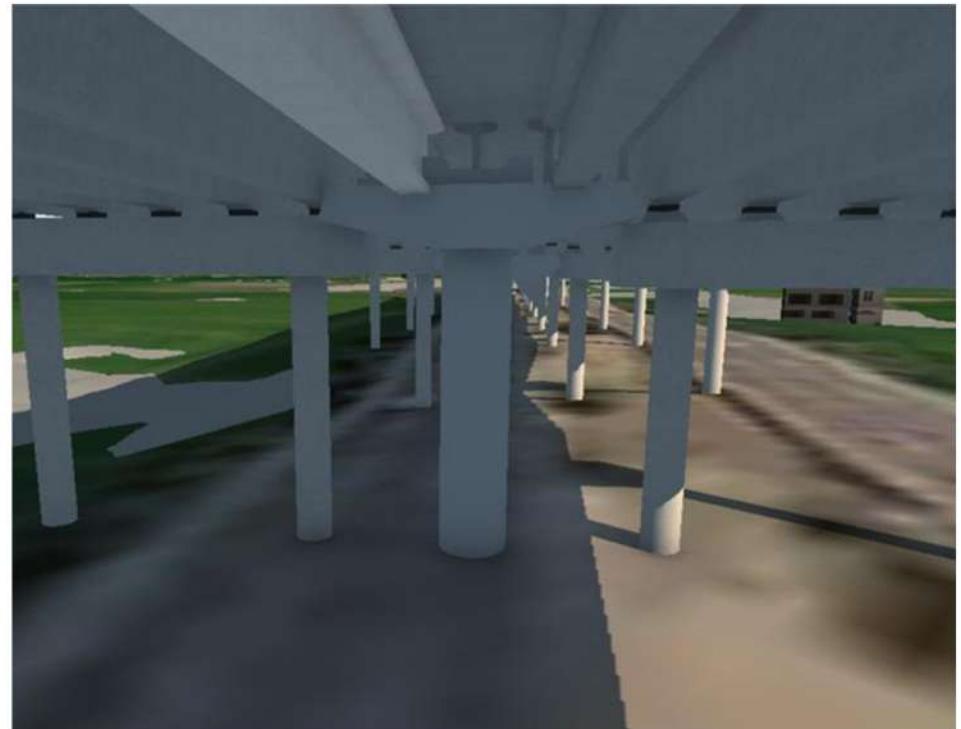
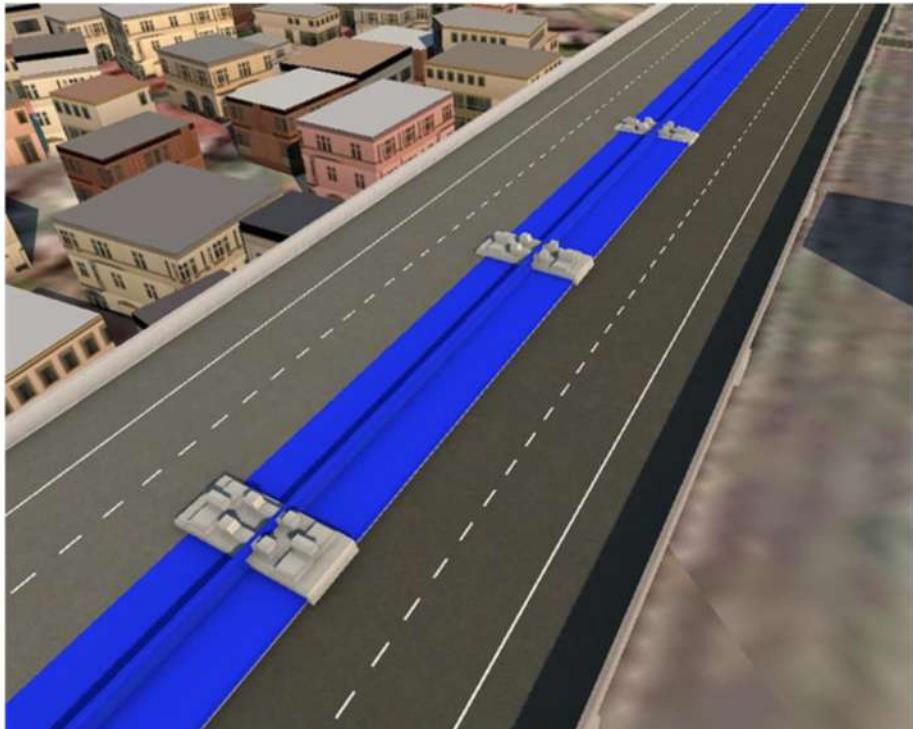
Assignment

Architectural, Structural, Basic MEPF, Modeling, Drafting, Sheeting, Design Authoring Team Lead, BIM Quality Assurance (QA/QC), Estimating & Quantity Takeoff, Collaboration, Coordination, & Management, Admin and Managing, Evaluation, Support IT Desk/Engineers, Research, Support Designers/Architects/Engineers/Consultants and BIM Team, Shop Drawing, Reports



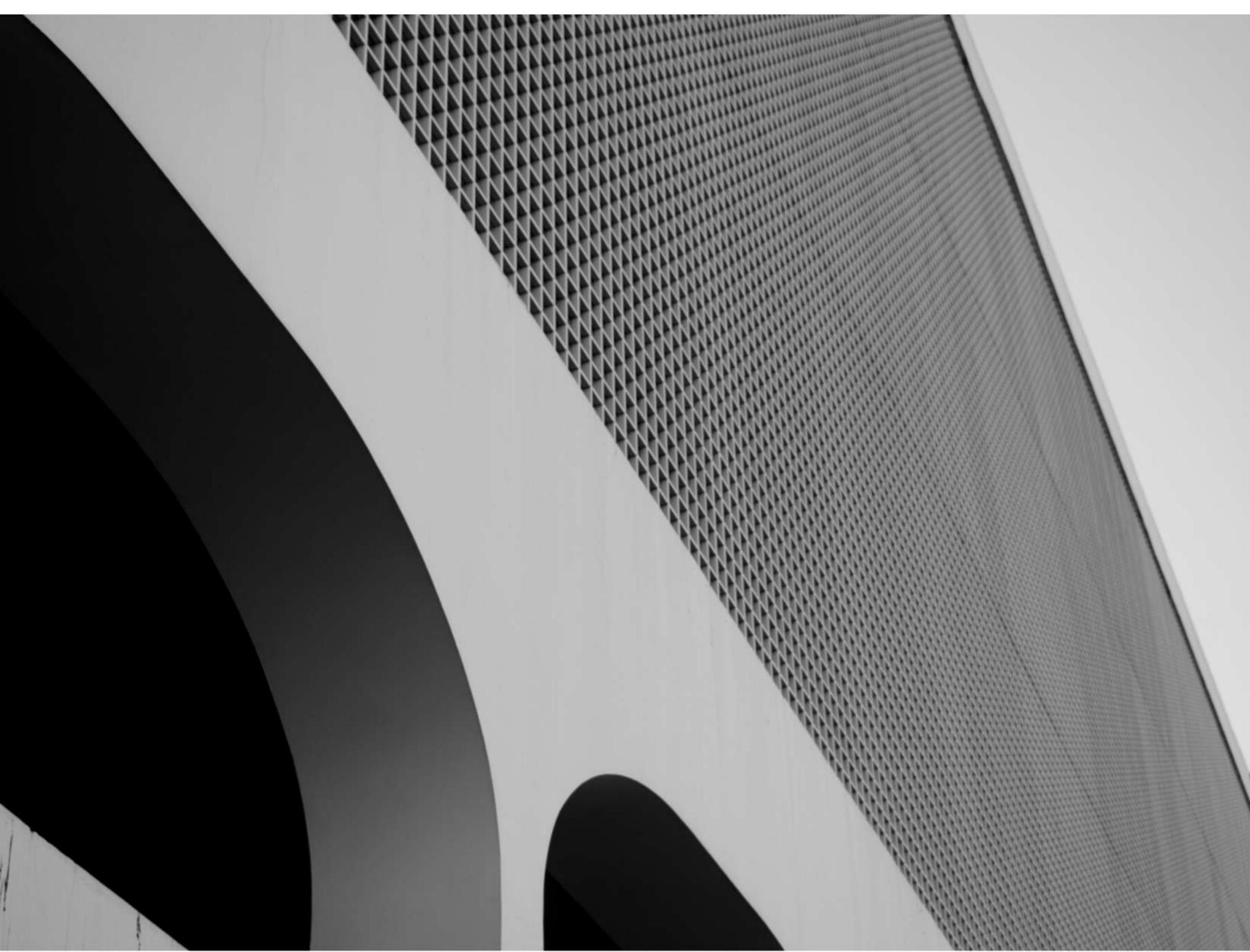


INFRASTRUCTURE



Central Infrastructure Development Project - Local Construction Engineering Company

Worked as a BIM Modeler on the **Central Infrastructure Development Project**, a major revitalization and infrastructure development project was developed and located in Candaba Pampanga, Philippines. Developing disciplines specific building information model and provide support to the Design section during the bidding stage.

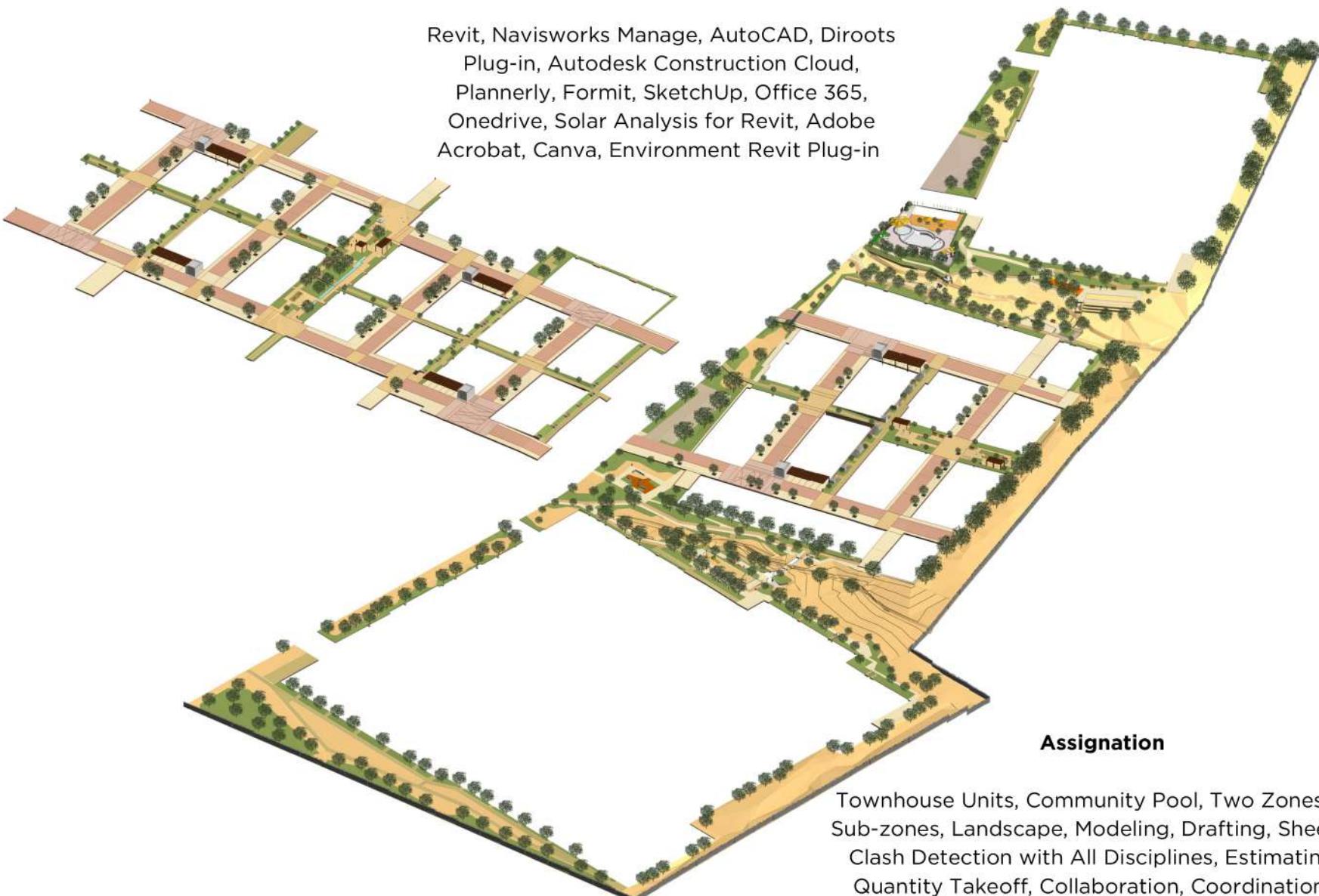


RESIDENTIAL



Urban Residential Regeneration Initiative Project - International Architectural and Design Consultant Firm

Worked as a BIM Designer on the **Urban Residential Regeneration Initiative Project**, a neighborhood residential project located in Kingdom of Saudi Arabia, Al Ahsa Oasis. Contributed to the integration of landscape elements within the BIM models, ensuring seamless coordination between all disciplines.



Tools

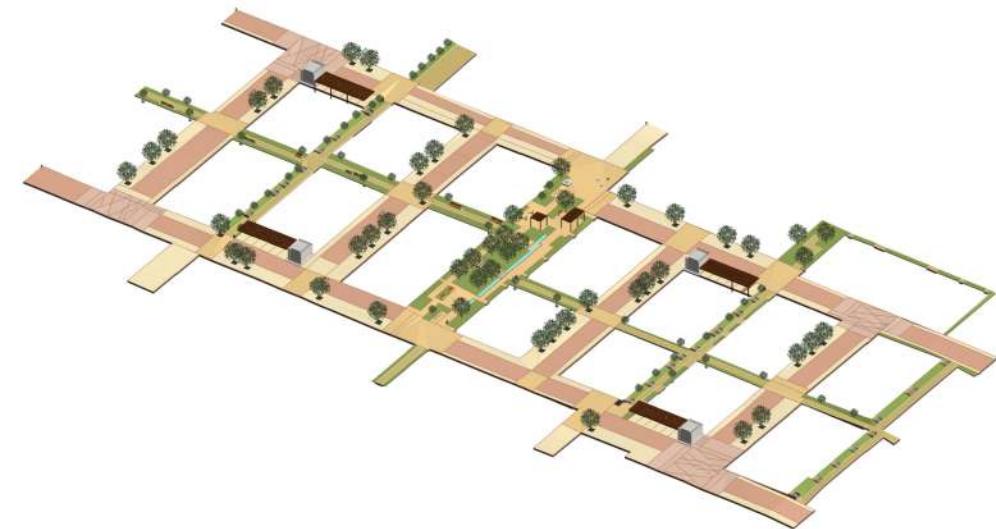
Revit, Navisworks Manage, AutoCAD, Diroots
Plug-in, Autodesk Construction Cloud,
Plannerly, Formit, SketchUp, Office 365,
Onedrive, Solar Analysis for Revit, Adobe
Acrobat, Canva, Environment Revit Plug-in

Assignment

Townhouse Units, Community Pool, Two Zones and Sub-zones, Landscape, Modeling, Drafting, Sheetng, Clash Detection with All Disciplines, Estimating & Quantity Takeoff, Collaboration, Coordination, & Management, BIM Quality Assurance (QA/QC), Reports, Publishing and Packaging, Family Creation, Support Landscape Designers/Architects /Engineers/Consultants and BIM Team.



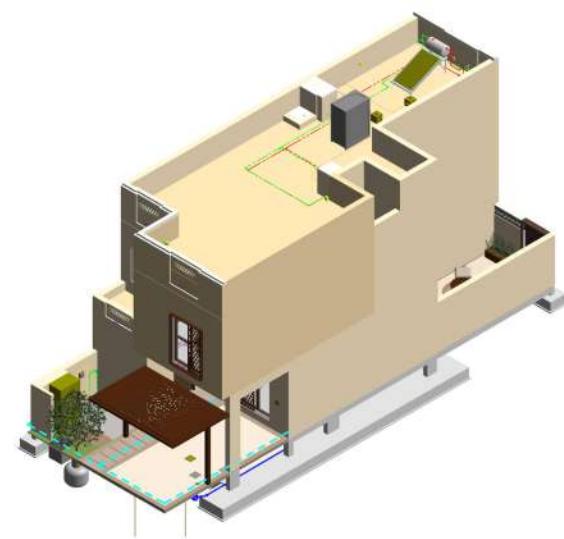
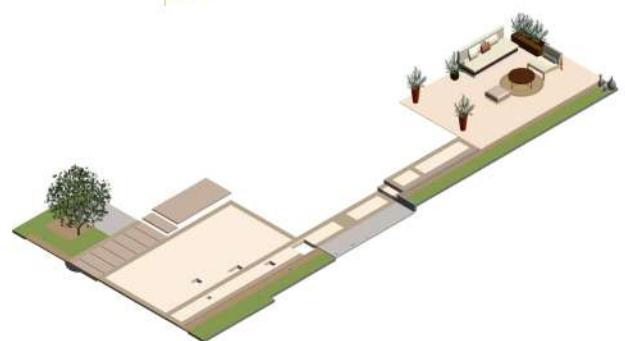
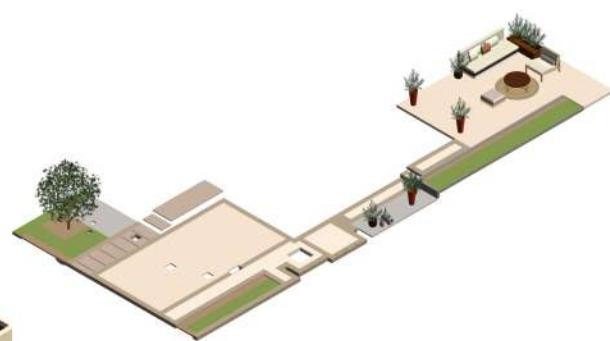
Zones and Sub-zones



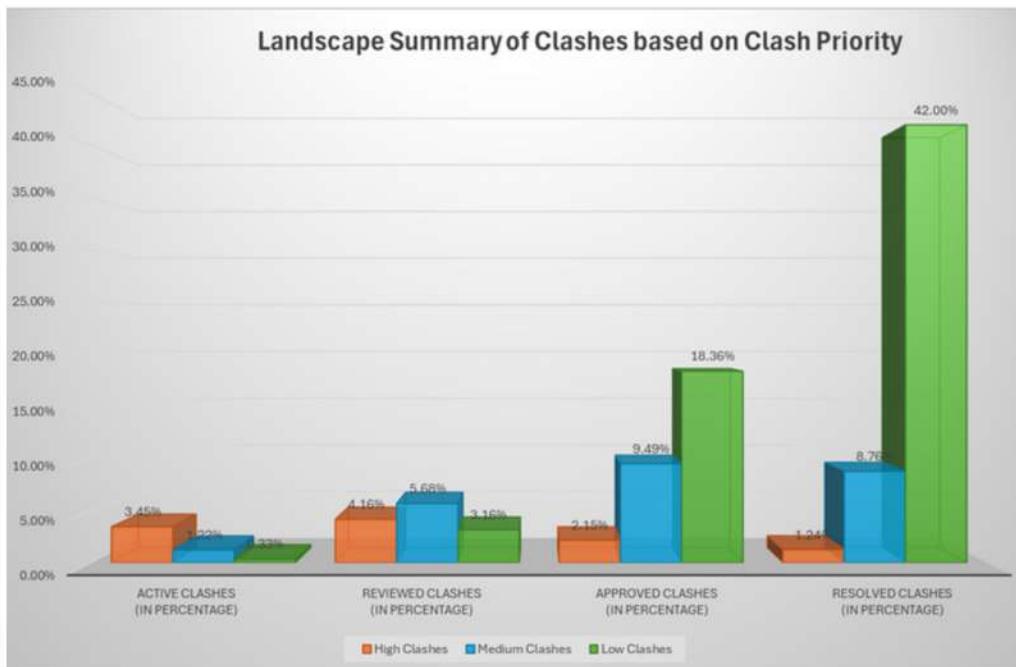




Townhouse Units



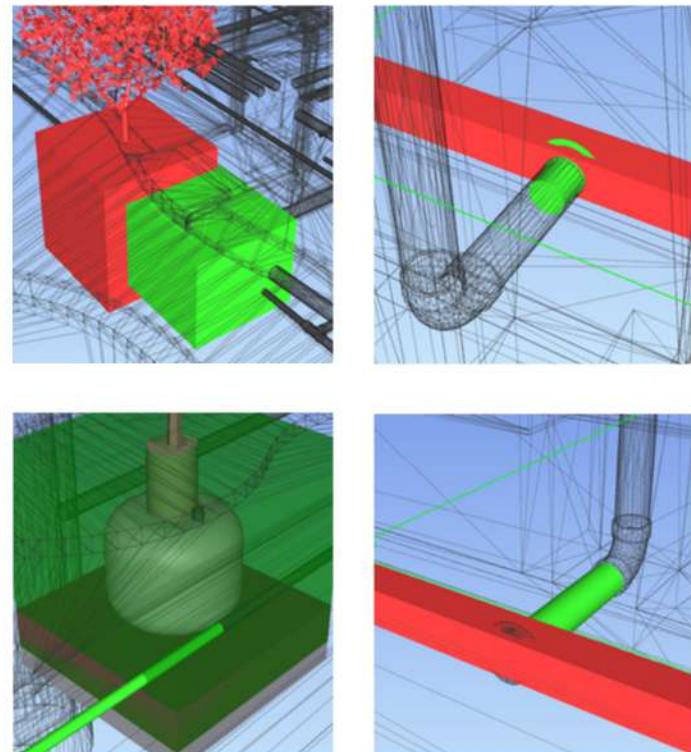
Name	Total Clash	New	Active	Reviewed	Approved	Resolved
Landscape Clash Test	224	0	12	28	67	117



Priority	Active Clashes (in percentage)	Reviewed Clashes (in percentage)	Approved Clashes (in percentage)	Resolved Clashes (in percentage)
High Clashes	3.45%	4.16%	2.15%	1.24%
Medium Clashes	1.22%	5.68%	9.49%	8.76%
Low Clashes	0.33%	3.16%	18.36%	42.00%

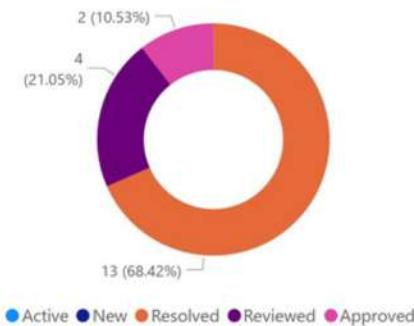
Model Coordination/ Clash Detection

During the clash detection process between the landscape design and other disciplines (architecture, structural, mechanical, electrical, plumbing, and civil engineering), several conflicts were identified.

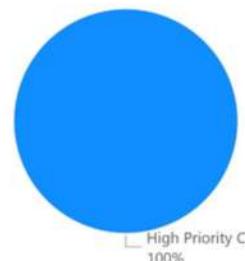


Model Health Report

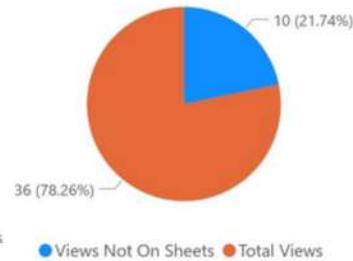
Clash Result



Clashes in Percentage



IEWS IN MODEL



Warnings



Detail Groups



Purgable Elements



Worksets



File Size (in MB)

39.29

In-Place Families

0

Total Sheets

7

Total Elements in Model

14K

Linked Re
+

Imported SKP

0

Imported CAD

51

Linked CAD

1

Linked Re -

8

Model QA/QC and Quantity Takeoff

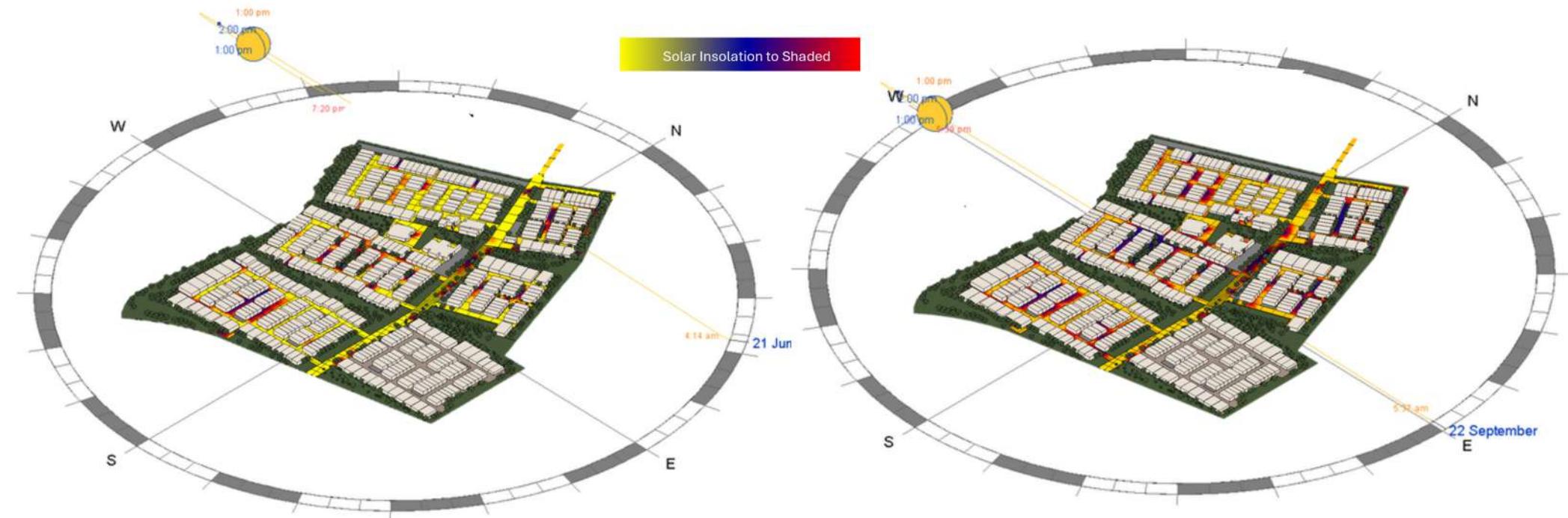
S/N	Requirements Description	Compliance Status
E	Project Browser	
1	Confirm that all utilized views are on drawing sheets and that unnecessary working views have been removed. Verify that dependent views are not included on drawing sheets. Ensure views required by other disciplines are clearly prefixed with the corresponding discipline code.	YES
2		YES
3		YES
4	Validate that schedules are appropriately named, with duplicates removed.	YES
5	Check that the model file contains '3D Navis Export,' '3D IFC Export,' and 'AC' views.	YES
6	Confirm that view templates are applied appropriately.	YES
F	Drawing Sheets	
1	Ensure the approved title block is used.	YES
2	Check that match lines are consistent inter- and intra-discipline and are not overridden in views or object styles.	YES
3	Verify that a key plan is included in each sheet and the relevant area is hatched.	YES
4	Confirm that title block revisions and titles are completed according to the Client's Requirements (EIR).	YES
G	Miscellaneous	
1	Ensure all annotations are parametric unless otherwise agreed with the BIM Manager.	YES
2	Confirm that the use of "dummy" annotations is discussed in weekly team meetings and approved by the BIM Manager.	YES
3	Validate that generic text is not used except for notes or agreed areas.	YES
4	Check that the maximum file size is 300MB.	YES
5	Verify that room upper limits are correct.	YES
6	Ensure that any groups are named descriptively, including level, content, sizes, etc.	YES
H	Families	
1	Confirm that all families are in the metric system.	YES
2	Verify that any additional parameters required in families are shared and approved by the discipline BIM Lead.	YES
3	Ensure there are no current families in the module.	YES

S/N	Requirements Description	Compliance Status
12	Ensure copings are modeled correctly as shown in detail.	YES
13	Confirm that all details align with the model.	YES
14	Validate that materials are correctly applied to model elements.	YES
15	Check that curtain wall mullions and transoms are the correct size and shape.	N/A
16	Confirm that the slab edge coordination file is managed and maintained appropriately.	N/A
17	Check for clashes between MEP services and ceilings.	N/A
18	Ensure drainage pipe drop locations are incorporated into schematic design plans.	N/A
19	Validate that view templates are applied consistently to view types.	YES
20	Confirm that filter naming is clear and not duplicated.	YES
21	Ensure wall constraints are correctly applied, and offsets are accurate.	YES
22	Verify that walls are not incorrectly attached to roofs/slabs above.	N/A
23	Check that sill heights are associated with the correct levels.	N/A
24	Ensure key plans are not CAD-based.	YES
25	Validate that ceiling lines are continuous rather than broken elements.	N/A
26	Confirm that there are no duplicate parameters that may cause confusion.	YES
27	Ensure floors are modeled specific to their relevant room/area/ceilings to avoid unintended changes.	YES
28	Validate that generic models are avoided.	YES
29	Ensure all equipment is created in the appropriate Revit family.	YES
30	Check that MEP equipment sizes comply with design specifications.	YES
31	Verify that flow rates are indicated in Revit parameters for ductwork and chilled water piping.	N/A
32	Confirm MEP services are located in designated coordination areas.	YES
33	Ensure MEP services are coordinated with other MEP services and BIM models.	YES
34	Validate that shared parameters and coordinates adhere to project standards.	YES
35	Check that elevations follow project datum files.	YES
36	Ensure sheet setups are consistent with architectural or project standards.	YES

Floor Schedule and Quantities

Code	Workset	Area	Perimeter	Elevation at Top	Elevation at Bottom
VER	LA02 - General Planting	47 m ²	73192.11	120	20
VER	LA02 - General Planting	56 m ²	49709.69	120	20
RHAL	LA02 - General Planting	28 m ²	88646.13	120	20
RHAL	LA02 - General Planting	14 m ²	40457.2	120	20
RHAL	LA02 - General Planting	8 m ²	24037.66	120	20
RHAL	LA02 - General Planting	1 m ²	4635.55	120	20
J-01	LA01 - Hardscape Floors	31 m ²	59494.91	150	50
J-01	LA01 - Hardscape Floors	16 m ²	16519.5	150	50
J-01	LA01 - Hardscape Floors	5 m ²	8840.17	150	50
J-01	LA01 - Hardscape Floors	2 m ²	5242.01	150	50
J-01	LA01 - Hardscape Floors	29 m ²	27971.6	150	50
J-01	LA01 - Hardscape Floors	49 m ²	83419.66	150	50
J-01	LA01 - Hardscape Floors	81 m ²	103476.26	150	50
J-01	LA01 - Hardscape Floors	49 m ²	82603.22	150	50
J-01	LA01 - Hardscape Floors	9 m ²	14072.26	150	50
J-01	LA01 - Hardscape Floors	5 m ²	27316.5	150	50
J-01	LA01 - Hardscape Floors	79 m ²	124141	150	50
J-01	LA01 - Hardscape Floors	1 m ²	13567.31	<varies>	<varies>
J-01	LA01 - Hardscape Floors	1 m ²	13480.29	<varies>	<varies>
J-01	LA01 - Hardscape Floors	1 m ²	13393.26	<varies>	<varies>
J-01	LA01 - Hardscape Floors	1 m ²	13306.24	<varies>	<varies>
J-01	LA01 - Hardscape Floors	1 m ²	13219.21	<varies>	<varies>
J-01	LA01 - Hardscape Floors	1 m ²	13132.19	<varies>	<varies>
J-01	LA01 - Hardscape Floors	1 m ²	13045.16	<varies>	<varies>
J-01	LA01 - Hardscape Floors	2 m ²	43427.15	<varies>	<varies>
Z UNI	LA02 - General Planting	18 m ²	32666.59	120	20
Z UNI	LA02 - General Planting	2 m ²	10635.48	120	20
A-02	LA01 - Hardscape Floors	11 m ²	40711.33	150	75
A-02	LA01 - Hardscape Floors	108 m ²	239974.29	150	75
TCH-01	LA01 - Hardscape Floors	0 m ²	2600	150	70
TCH-01	LA01 - Hardscape Floors	1 m ²	4000	150	70
TCH-01	LA01 - Hardscape Floors	1 m ²	3980	150	90
TCH-01	LA01 - Hardscape Floors	2 m ²	8953.54	150	70
TCH-01	LA01 - Hardscape Floors	0 m ²	2797.92	150	70
J FRU	LA02 - General Planting	15 m ²	46086.14	120	20
J FRU	LA02 - General Planting	6 m ²	13103.85	120	20
J FRU	LA02 - General Planting	28 m ²	67978.7	120	20
N PIP	LA02 - General Planting	6 m ²	20640	120	-180
L-01	LA01 - Hardscape Floors	118 m ²	107931.32	120	70
R EXO	LA02 - General Planting	2 m ²	15198.89	120	20
R EXO	LA02 - General Planting	44 m ²	167139.75	<varies>	<varies>

Solar Shading Simulation



Pedestrian walkways, roads
Shaded Area - Summer Solstice – 1 pm
 $112216 = 77\%$

Pedestrian walkways, roads
Shaded Area - Equinox – 1 pm
 $11619.61 = 81\%$

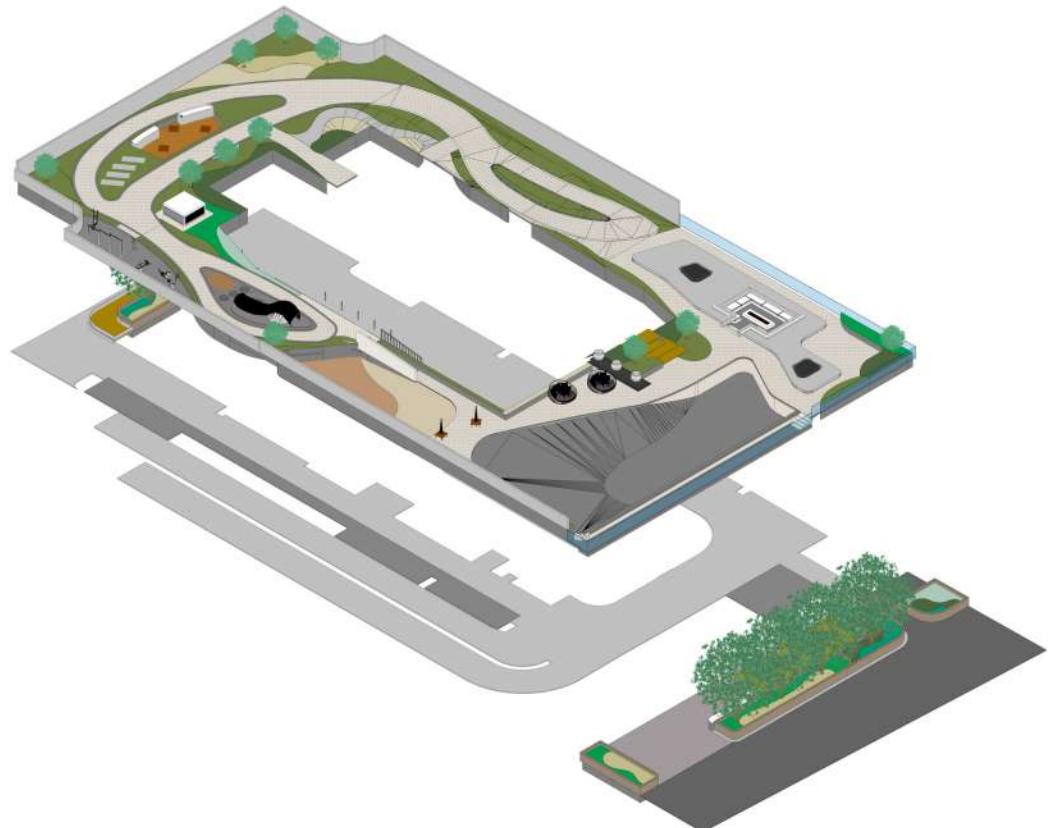




RESIDENTIAL

Residential Tower Project - International Architectural & Design Consultant Firm

Worked as a BIM Designer on the **Residential Tower Project**, a high-rise residential development project located in Maritime City, Dubai. Contributed to the integration of landscape elements within the BIM models, ensuring seamless coordination between all disciplines.

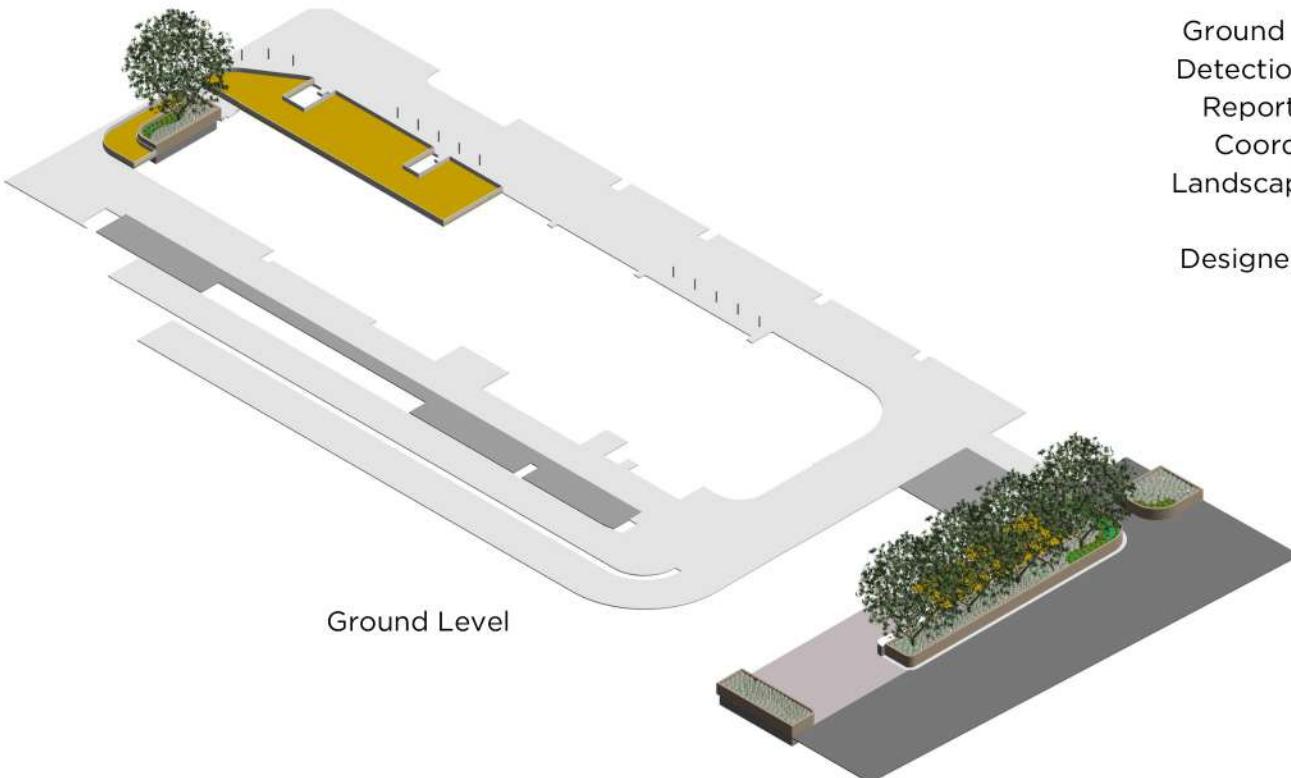




Amenities Level

Tools

Revit, Autodesk Construction Cloud, Navisworks Manage, AutoCAD, Autodesk Construction Cloud, SketchUp, Adobe Acrobat, Diroots Plugin, Onedrive, Office 365



Ground Level

Assignment

Ground Level, Amenities Level, Landscape, Clash Detection with All Disciplines, Modeling, Sheeting, Reports, Family Creation, Publishing, Drafting, Coordination, Collaboration, & Management, Landscape Architecture, Model Quality Assurance (QA/QC), Support Landscape Designers/Architects/Engineers/Consultants and BIM Team.



RESIDENTIAL

Urban Infill Residential Development Project - Australian client from a freelancing platform

Worked as a BIM / VDC Professional on the **Urban Infill Residential Development Project**, a multi-story residential/communal facility development located in Dulwich Hill 2203, NSW, Australia, in collaboration with BIM Consultant in Kenya. Contributed to the pre-construction phase by performing comprehensive 5D BIM Quantity Takeoff using Cubit Estimating



Description	Quantity	Unit	Rate	Markup	Total
Doors					
2340x1020x35mm Door	36 each				
Windows					
650x950mm Window	65 each				
1050x1850mm Window	10 each				
1200x1450mm Window	1 each				
1200x1850mm Window	2 each				
950x1250mm Window	1 each				
FF&E (Furniture, Fixtures & Equipment)					
Plan LO0					
Sanitary Fixtures					
BSN01 Bathroom Vanity – 900mm, gloss white, 1TH Shelf, ceramic	4 each				
BSN02 Wall Basin – Luna wall-faced suites	9 each				
TLT01 / TLT02 Toilet Suites – Luna wall-faced suites	5 each				
SHS01 Shower Screen – frameless 10mm glass, 900x900mm	3 each				
Kitchen & Laundry Fixtures					
SNK01-SNK04 Kitchen and Laundry Sinks	5 each				
FRG01 Refrigerator	3 each				
CTP01 / CTP02 Cooktops – Westinghouse/F&P induction	3 each				
Plan LO1					
Sanitary Fixtures					
BSN01 Bathroom Vanity – 900mm, gloss white, 1TH Shelf, ceramic	1 each				
BSN02 Wall Basin – Luna wall-faced suites	6 each				
TLT01 / TLT02 Toilet Suites – Luna wall-faced suites	2 each				
SHS01 Shower Screen – frameless 10mm glass, 900x900mm	2 each				
Kitchen & Laundry Fixtures					
SNK01-SNK04 Kitchen and Laundry Sinks	3 each				
FRG01 Refrigerator	3 each				
CTP01 / CTP02 Cooktops – Westinghouse/F&P induction	3 each				

Tools

Cubit, CDE, AutoCAD, Adobe Acrobat, Office 365, Project Management Tools, CRM Tools

Assignment

Model Requisition & Review, BIM Quality Assurance (QA/QC), Quantity Extraction, Project Management, Cost Data Integration, Geometric Verification, Collaboration, Coordination, Estimating & Quantity Takeoff, Support Designers/Architects/Engineers/Consultants.

Legend: Arch-Binder (1), page 5

Description	Result
■ A07 230 mm cavity brickwork (110 + cavity + 110), with internal furring channels + plasterboard lining, FRL 60/60/60.	
□ PNT01: Dulux White Duck (Matt)	
□ F06 Internal wall: plasterboard + furring both sides of 110 mm brick, FRL 60/60/60.	
□ PNT04: Dulux Natural White (Matt)	
□ G03 Party wall: cavity brickwork only (two 110 mm leaves with cavity, no plasterboard linings), FRL 60/60/60	
■ A06 230 mm cavity brickwork (110 mm face brick + cavity + 110 mm inner brick leaf), with internal plasterboard lining, FRL 60/60/60.	
□ I01 Internal stud partition: steel studs @ 600 mm centres, plasterboard both sides.	
□ F02 Internal wall: plasterboard + furring + plasterboard to 110 mm brick, FRL 60/60/60.	
□ I04 Internal stud shaft wall – twin stud or shaftliner core (25 mm shaftliner + 13 mm Fyrchek both sides). High fire rating FRL 60/60/60 or higher.	
□ I05 Internal stud partition – steel studs with multiple PB layers (e.g., double 13 mm Fyrchek each side) + acoustic insulation. Acoustic + fire-rated.	
□ I03 Shaft wall: twin stud or shaftliner system with 25 mm shaftliner core + PB lining.	
□ B03 Stud wall, plasterboard one side only (service wall)	
□ B01 64 mm steel stud wall, plasterboard both sides	
■ G01 Party wall: cavity brick with plasterboard linings both sides (with furring).	
□ F05 Internal wall: plasterboard lining one side of 110 mm brick, FRL 60/60/60.	
□ B02 92 mm stud wall, plasterboard both sides, acoustic insulation	
■ A10 230 mm cavity brick wall: 110 mm outer + cavity + 110 mm inner brick, with furring channels and plasterboard lining (acoustic-rated), FRL 60/60/60.	
□ A08 230 mm cavity brickwork (110 + cavity + 110), with internal furring + plasterboard + waterproofing + tile finish (wet areas), FRL 60/60/60.	
□ A11 230 mm cavity brick wall variant: 110 mm outer + cavity + 110 mm inner brick, with furring + moisture-resistant PB or PB + tiles in wet areas, FRL 60/60/60.	
□ I02 Internal stud partition: as I01, with acoustic insulation in stud cavity.	
■ G01 Party wall: cavity brick with furring + plasterboard both sides.	







**Innovation Industrial Park Project - Architectural and Design
Consultant Firm**

Worked as a BIM Designer on the **Innovation Industrial Park Project**, a pioneering technology hub dedicated to innovation and industrial growth located in the boundaries of Shenzhen-Hongkong. Contributed to ensure accurate site development and integration with the overall master plan.

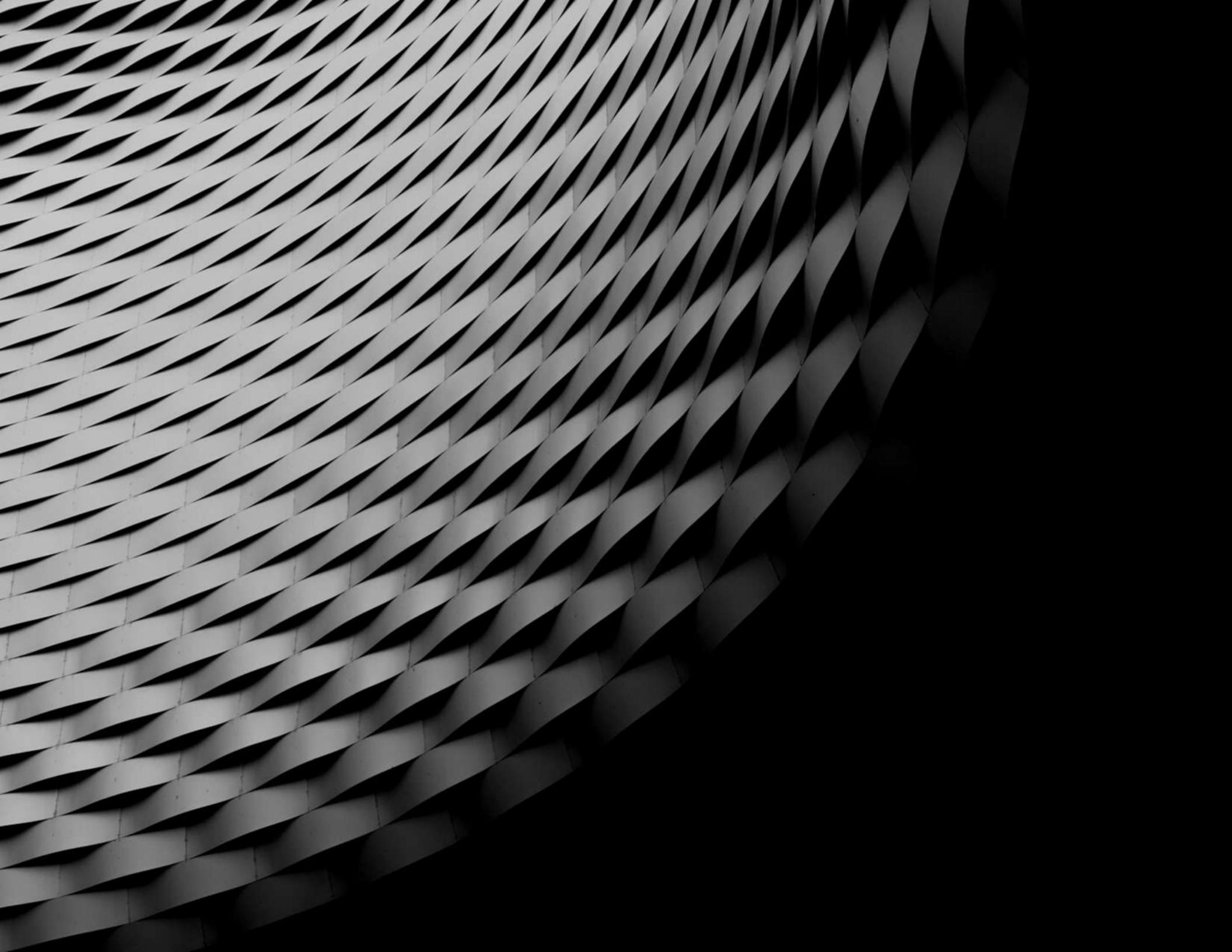
Tools

Revit, Navisworks Manage, AutoCAD, SketchUp, Adobe Acrobat, Office 365, Onedrive

Assignation

Area A, Landscape, Modeling, Reports, Coordination, Drafting, Sheetng, Support Landscape BIM Team, Family Creation





EDUCATIONAL



Design 10 Capstone Project - Technological Institute of the Philippines

Proposed as capstone proponent on the **Design 10 Capstone Project**, an Advancement of Basic Science and Technology through Interactive Museum and Fabrication Workshop located in Antipolo City, Philippines. Studied to address the lack of accessible, engaging platforms for science education and innovation in the community.

Tools

Revit, AutoCAD, Lumion, Photoshop, SketchUp,
Office 365

Assignation

Conceptual, Design, Planning, Modeling, Rendering,
Presentation, Editing, Research, Study

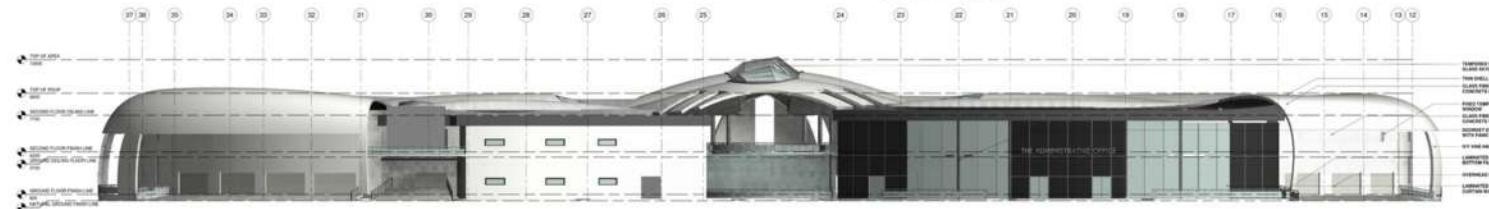


THE SCIENCE MUSEUM BUILDING



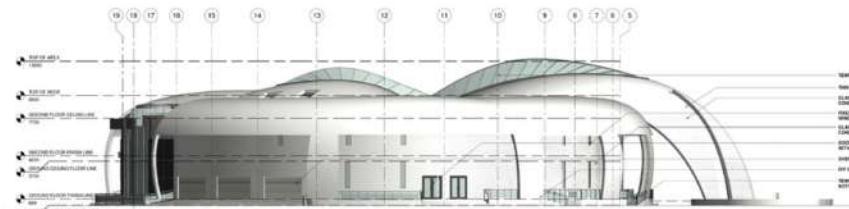
FRONT ELEVATION

1:300 MTS



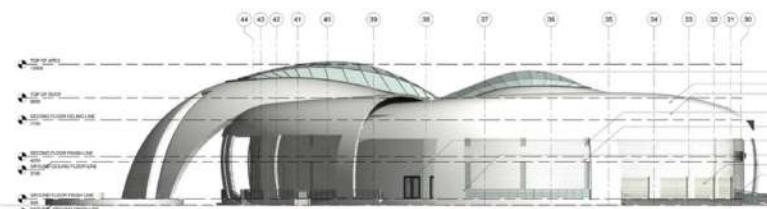
REAR ELEVATION

1:300 MTS



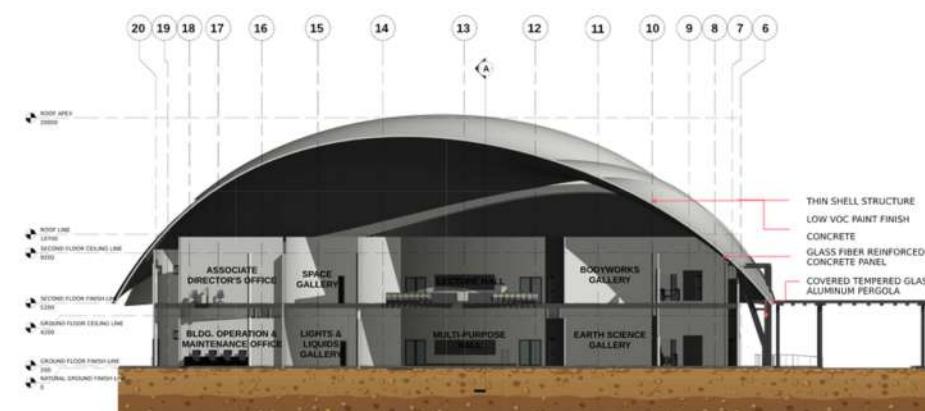
LEFT-SIDE ELEVATION

1:300 MTS

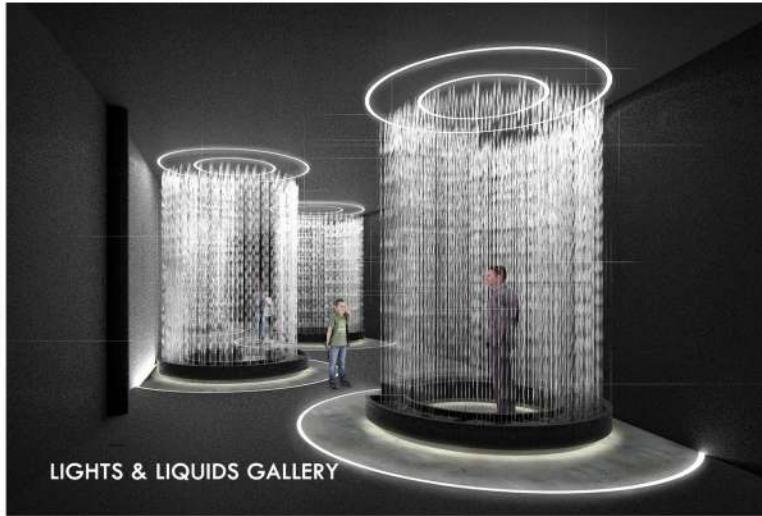


RIGHT-SIDE ELEVATION

1:300 MTS







LIGHTS & LIQUIDS GALLERY



EARTH SCIENCE GALLERY



MECHANICS & MATHEMATICS GALLERY



BODYWORKS GALLERY



VISION & PERCEPTION GALLERY

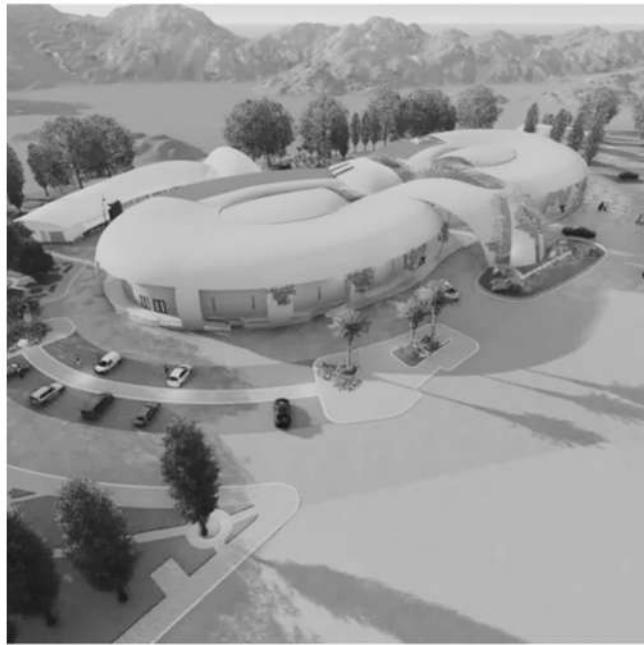


TECHNOLOGY GALLERY



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PORTFOLIO



**Mary Sandro
Highlight 20-25**

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