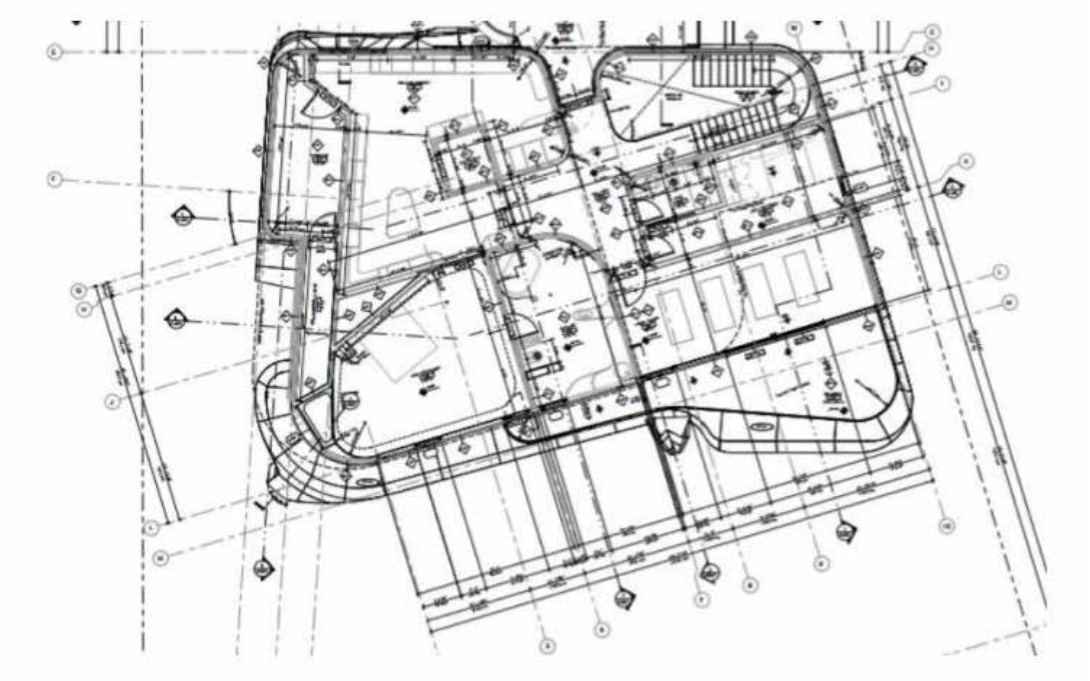
Modern Residential Unit

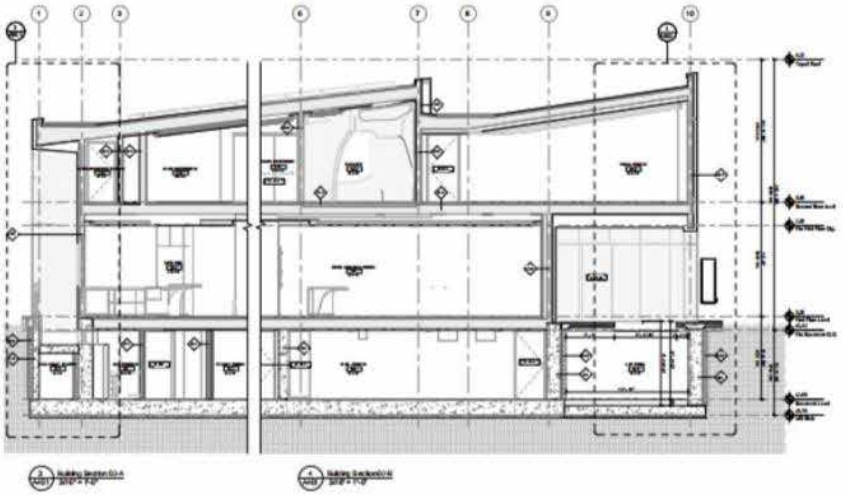
(ASI Modeling, BIM & VDC Coordination Services)

CASE STUDY

TECHTURE



Client	: Architect	**Team Size**	: 2 Nos. (Architect & ASI BIM Coordinator)
Disciplines	: Architecture, Strcuture and Landscape	**Duration**	: 1 Month
Scale	: 14,000 Sq. Ft.	**Software**	: Autodesk Revit,Rhino, Sketchup, Autodesk Naviswork & Lumion
Type	: Residential	**Location**	: New York, USA



Project Overview

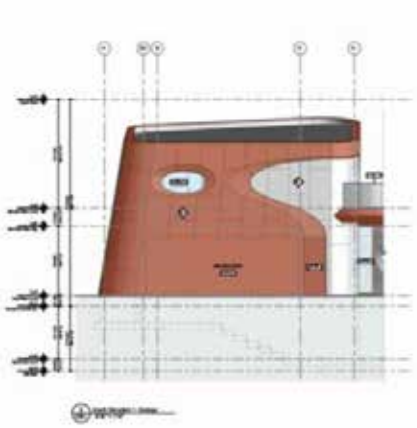
This project involved BIM and VDC coordination services for a 14,000 sq. ft. single-family residential development in New York, USA. Techture supported the architect by delivering LOD 300 ASI modeling for architecture, structure, and landscape disciplines. The concept-stage model was received in Rhino and partially in SketchUp, which was custom-built in Revit and further developed from Design Development (DD) to CD stage.

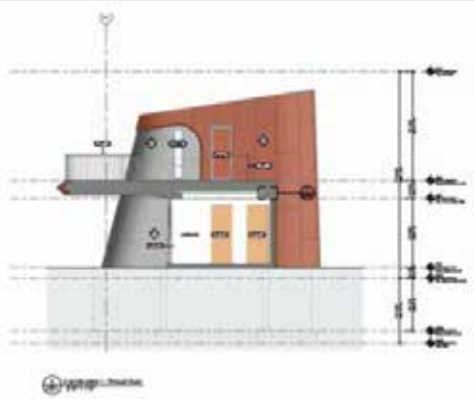
Scope & Deliverables

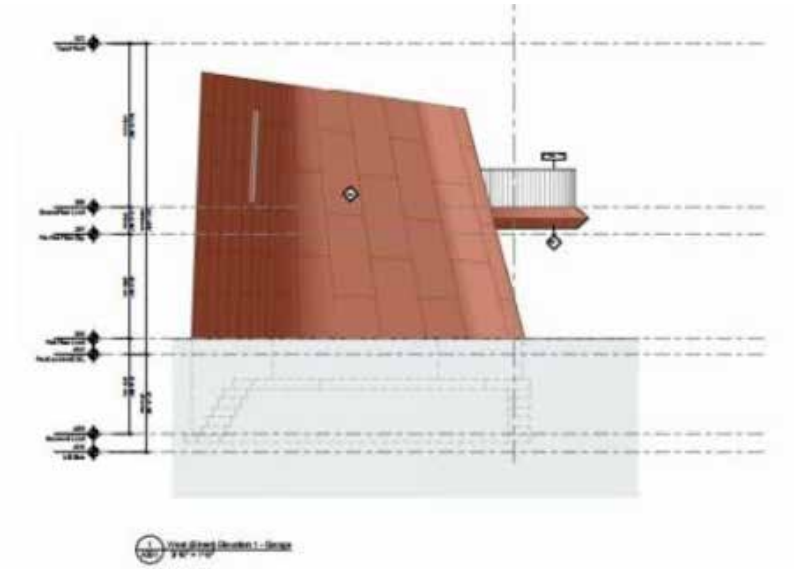
- Converted concept-stage Rhino and SketchUp models into a custom Revit model.
- Developed LOD 300 ASI BIM models for architecture, structure, and Interior disciplines.
- Conducted Interdisciplinary model coordination with the design team to ensure consistency and clash resolution.
- Generated a coordinated Construction Documentation (CD) drawing set.
- Created detailed 3D views to support design visualization.

Challenges

- Freeform Rhino geometries were not directly compatible with Revit's parametric system & models had missing design details, especially in early concept elements.
- The drawing template shared by the client had some missing key details like layers, annotations, and title blocks.
- Creating custom components without disrupting the modeling timeline.
- Identifying inconsistencies between the provided CAD plans and elevations, which lacked proper coordination.
- Information Delays: Waiting for required details from the client impacted workflow efficiency and extended project timelines







Techture Approach

- Our team reconstructed complex geometry using native Revit tools and cleaned up incompatible elements before integration into the Revit.
- The team analyzed sample sheets, referenced industry standards, and built a clear, reusable template - without delaying the schedule.
- Custom Revit families were developed concurrently with modeling activities. Each family was tailored for parametric flexibility and compliance with client standards, enabling consistent geometry and metadata across the project.
- Conducted 3D validation by overlaying CAD references in Revit to identify and correct alignment discrepancies.We also implemented BIM 360 for centralized model updates and real-time change tracking with issue tagging.
- Proactive Planning: Anticipated potential delays and structured work processes to minimize idle time while waiting for client inputs

Benefits

- This Enabled a smooth transition from concept to documentation (DD to CD) within a single Revit environment.
- This ensured a consistent and accurate CD set, minimizing errors and delays, which helped the client get faster approvals and smoother construction execution.
- This approach ensured faster modeling with adaptable components, maintained design consistency, and improved data accuracy for scheduling and documentation throughout the project.
- Minimized errors and rework by catching discrepancies early between 2D documentation and 3D models.
- Techture worked closely with the client to smoothly integrate design changes, ensuring coordination meetings stayed on track and the project was delivered on schedule.