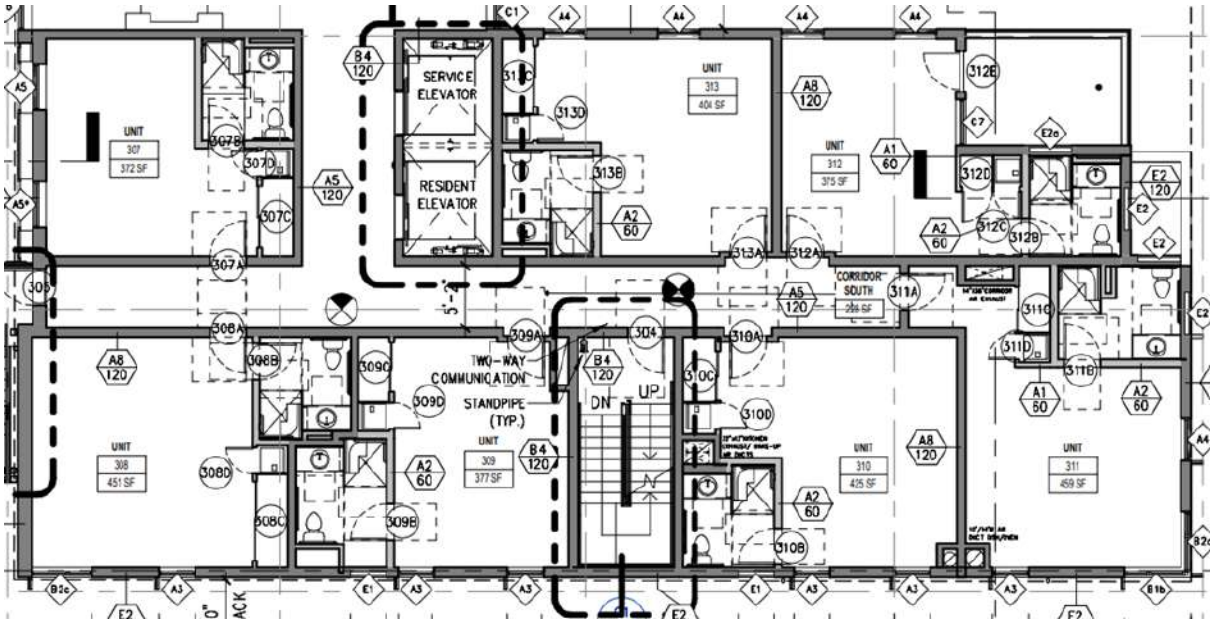
LOD 350 Structural & MEP BIM Modeling for a Multi-Family Residential Project

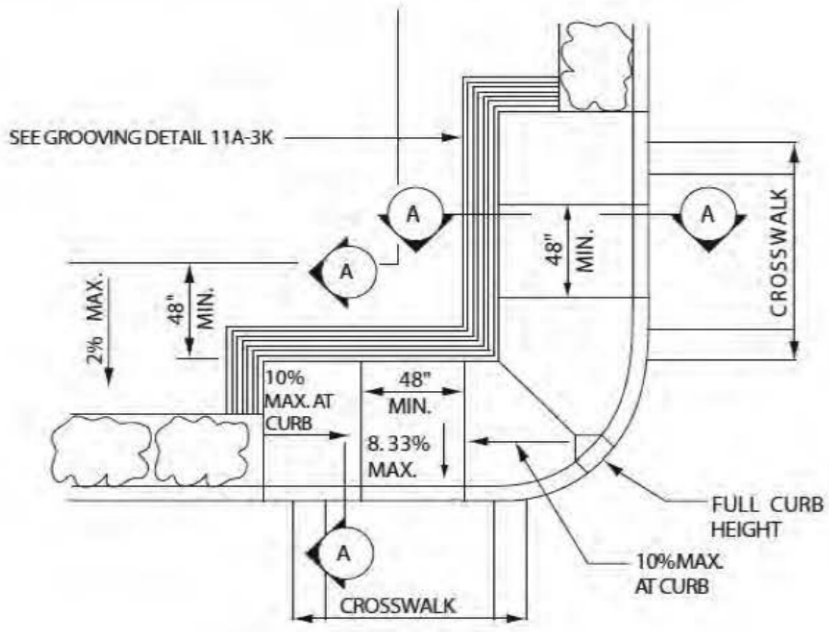
(Structural & MEPF 3D Modeling, Clash Detection, BIM & VDC Coordination Services)

CASE STUDY

TECHTURE



Client	: Owner	**Team Size**	: 3 No.s (BIM Engineer & BIM Coordinator)
Disciplines	: Structural & MEPF	**Duration**	: 1 Month
Scale	: 36,000 Sq. Ft.	**Software**	: Autodesk Revit & Autodesk Construction Cloud
Type	: Residential	**Location**	: California, USA



Project Overview

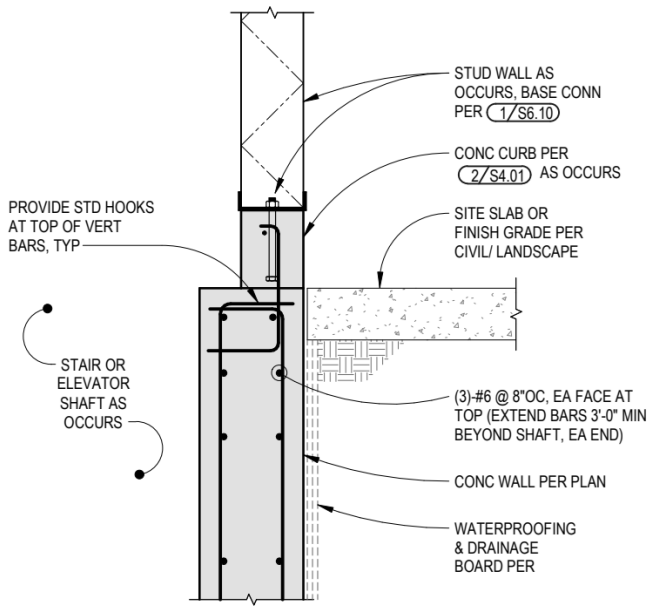
Techture delivered LOD 350 Structural & MEP BIM modeling for a 36,000 Sq. Ft. multi-family residential project using Autodesk Revit and Autodesk Construction Cloud (ACC). The scope involved developing coordinated models based on 90% CD sets, integrating structural (concrete & wood) and MEP systems. The models were aligned with the client's architectural reference and hosted on ACC for collaboration. The outcome supported design validation, coordination visibility, and issue tracking.

Scope & Deliverables

- Develop LOD 350 structural models (concrete & wood framing systems) from CD sets.
- Model MEP systems including plumbing, HVAC, and electrical with manufacturer-based families.
- Incorporate conduits, sub-feeds, panels, and equipment layouts as per design drawings.
- Identify and mark MEP penetrations within structural elements.
- Host and manage models on Autodesk Construction Cloud for coordination and i ssue tracking.

Challenges

- Coordinating multi-discipline systems within limited residential spaces.
- Ensuring accuracy with 90% CD-level design inputs.
- Managing clash visibility without resolution scope.



Techture Approach

- Developed discipline-specific models aligned with client-provided CD sets and architectural reference.
- Integrated manufacturer-specific families to enhance model accuracy.
- Used ACC to log clashes/issues and streamline coordination workflows.
- Maintained proactive communication for RFIs and input clarifications.

Benefits

- Improved coordination through centralized ACC-based model environment.
- Enhanced model accuracy with manufacturer-specific BIM components.
- Early identification of clashes and penetration requirements.
- Streamlined collaboration across structural and MEP disciplines.