



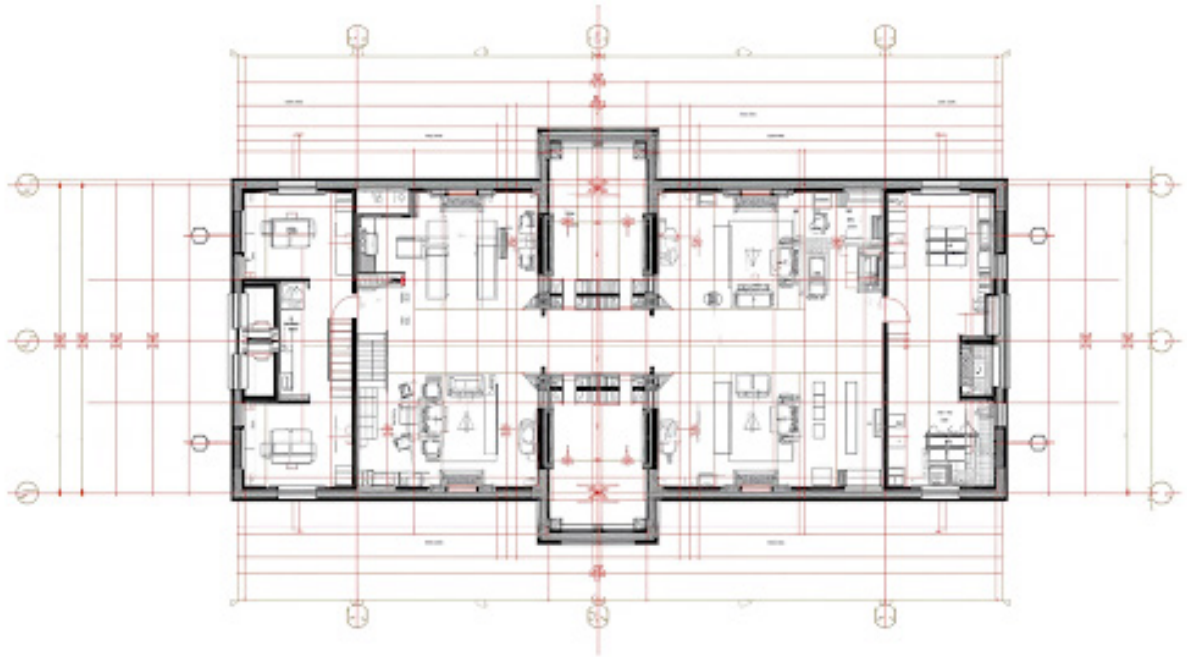
BIM Management, Coordination & Shop Drawing Development for Institutional Project

(MEPF & Underground Utilities BIM Modeling, Clash Detection, and BIM & VDC Coordination Services)

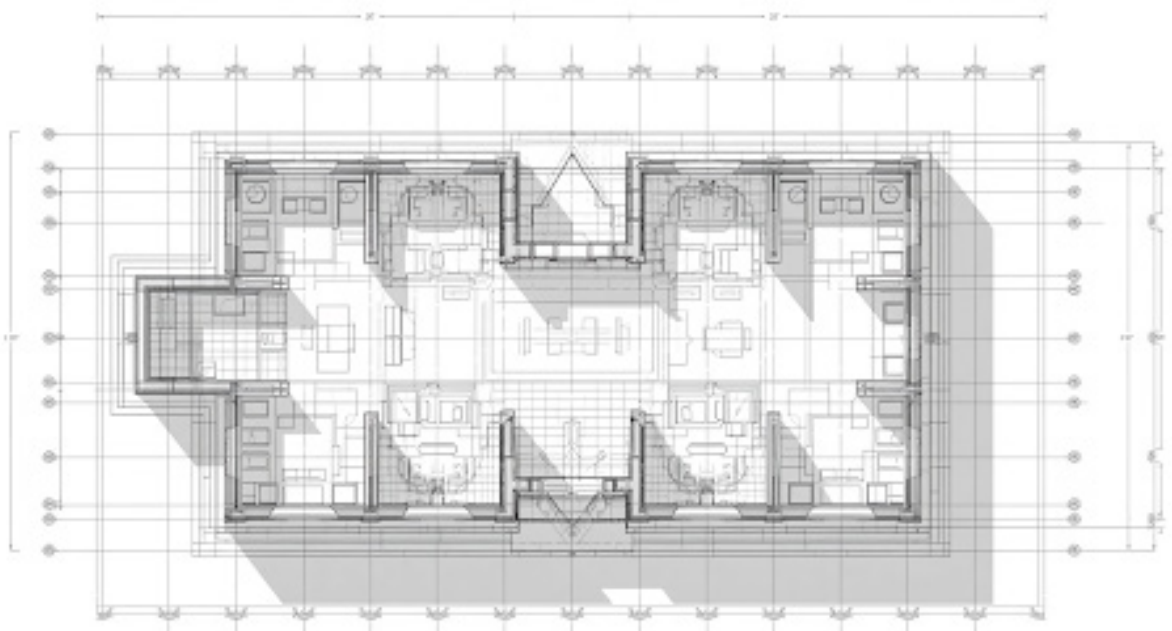
CASE STUDY



TECHTURE



Client : Institutional Organization	Team Size : 5 No.s (BIM Engineer & BIM Coordinator)
Disciplines : MEPF & Underground Utilities	Duration : 2 Month
Type : Institutional	Software : Autodesk Revit, Navisworks & Autodesk Construction Cloud (ACC)
Location : Arizona, USA	



Project Overview

Techture provided BIM Lead and full coordination services for a religious institutional facility, covering LOD 350 MEPF modeling, underground site utility coordination, and clash detection. Using ACC as the Common Data Environment and Navisworks for clash detection, a 7-week coordination window advanced design from 70% CD to a clash-free 100% CD LOD 350 model, with approximately 50–60 coordinated reference shop drawings delivered across all trades.

Scope and Deliverables

- Developed and managed the BEP, BIM schedule, file naming conventions, and project coordinates, with weekly coordination meetings and milestone tracking.
- Ran 7 weeks of virtual design coordination meetings, advancing MEPF design from 70% to 100% CD at LOD 350, with clash assignments and follow-up tracking.
- Developed LOD 350 MEPF models for HVAC, mechanical pipe, plumbing, fire suppression, and electrical integrated against client-provided architectural and structural base models.
- Developed LOD 350 underground site utility models covering topography, dry/wet utilities, site lighting, and tree root balls, with clash detection run against all trades.
- Extracted approximately 50–60 coordinated reference shop drawings across all MEPF and underground utility disciplines.

Challenges

- Advancing drawings from 70% to 100% CD within a fixed 7-week window with tight clash turnaround across all trades.
- Coordinating underground utilities (tree root balls, zone of influence) against MEPF trades where conflicts are harder to catch and costly to fix on site.
- Running parallel Design-Assist subcontractor and design team coordination tracks within the same BIM environment.
- Maintaining model accuracy while integrating third-party architectural, civil, and structural drawings of varying completeness.



Techture Approach

- ❏ Delivered a full BEP before modeling began, covering file naming, folder structure, software versions, and project coordinates reviewed and approved by the client.
- ❏ Used ACC as the single platform for document storage, drawing collaboration, and file sharing across all stakeholders.
- ❏ Ran Navisworks clash detection across all trades, with each issue numbered, screenshotted, and located by room or gridline and reported in structured PDF constructability reports.
- ❏ Resolved all clashes through coordination meetings, updated the model per confirmed RFI resolutions, and obtained sign-off before clearing issues for field coordination.

Benefits

- ❏ Delivered a fully clash-resolved LOD 350 model at 100% CD, giving the construction team a field-ready model before site work began.
- ❏ Underground utility conflicts resolved in the model before excavation, reducing costly on-site surprises.
- ❏ 50–60 coordinated shop drawings extracted directly from the clash-resolved model, giving all trades clear construction references.
- ❏ A single BIM Lead overseeing BEP, schedule, and clash resolution kept all stakeholders aligned throughout the project.