



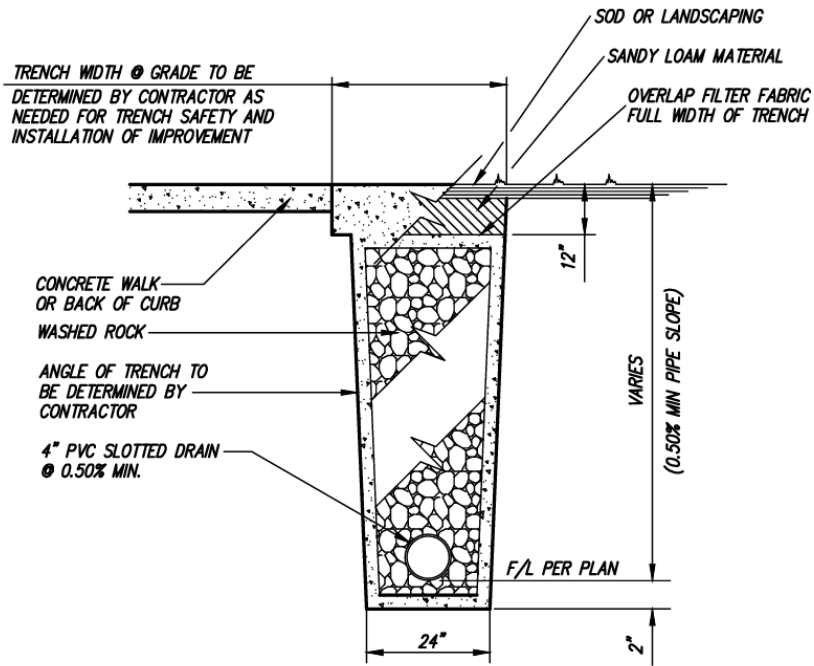
LOD 300 Mechanical & Plumbing BIM Modeling & Coordination for Educational Facility

(MEP BIM Modeling, Shop Drawing Development & BIM & VDC Coordination Services)

CASE STUDY



TECHTURE



Client : MEP Contractor

Team Size : 3 No.s (BIM Engineer & BIM Coordinator)

Disciplines : Mechanical (HVAC) & Plumbing

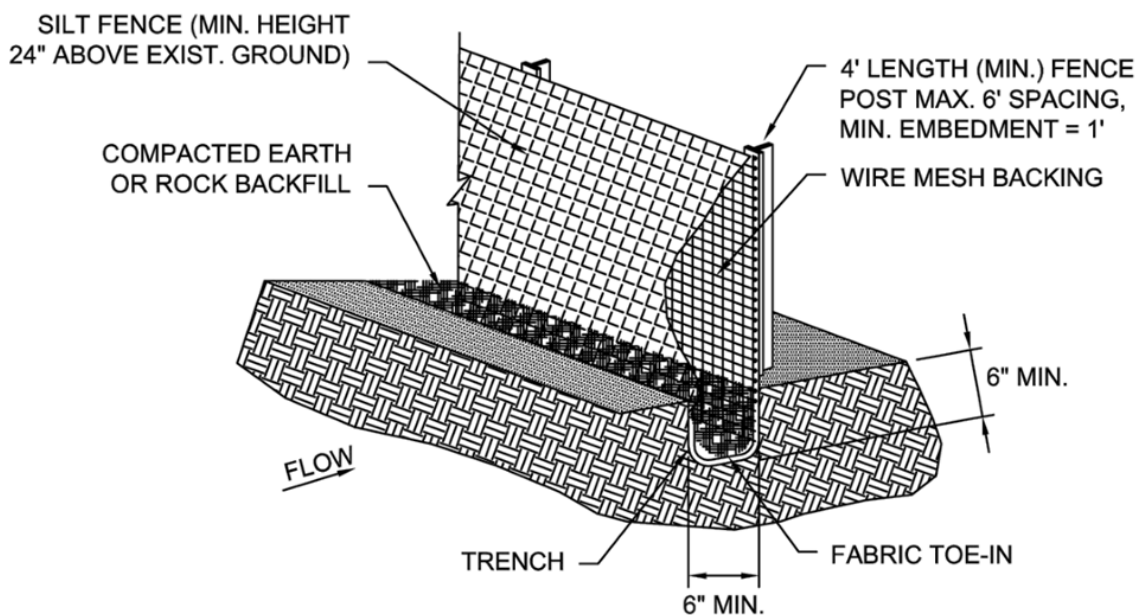
Duration : 2 Month

Scale : 77,060 Sq. Ft.

Software : Autodesk Revit & Navisworks

Type : Educational

Location : Texas, USA



Project Overview

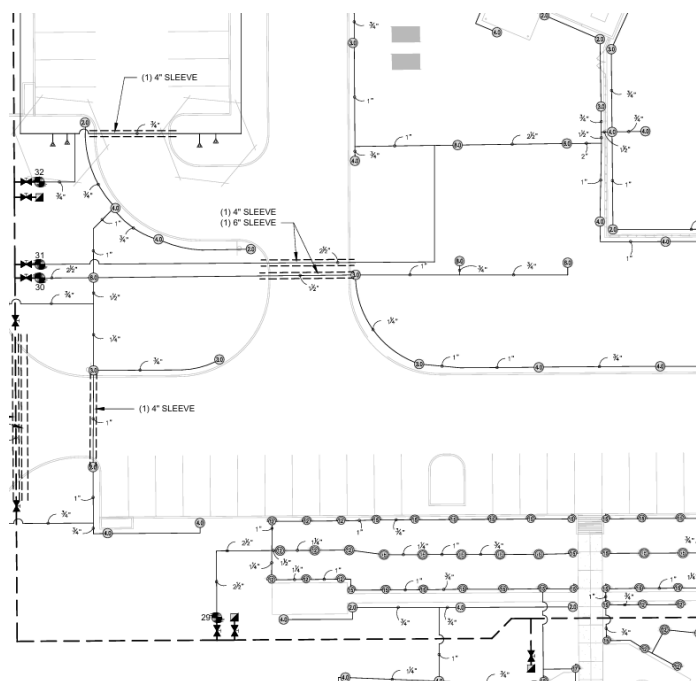
Techture delivered LOD 300 Mechanical (HVAC) & Plumbing BIM modeling and coordination for a 77,060 Sq. Ft. educational facility. The scope involved developing coordinated models based on BID set drawings and architectural references. Using Autodesk Revit and Navisworks, the team ensured constructability validation through clash detection workflows. The project enabled accurate design visualization and streamlined shop drawing extraction.

Scope & Deliverables

- 📦 Develop LOD 300 Mechanical (HVAC) & Plumbing BIM models from approved BID drawings.
- 📦 Model systems including HVAC, water supply, gas lines, waste, vent & storm networks.
- 📦 Perform clash detection with Architecture & Structure models using Navisworks.
- 📦 Generate constructability reports with issue tagging, viewpoints & screenshots.
- 📦 Extract 25–30 shop drawings from coordinated Mechanical & Plumbing models.

Challenges

- 📦 Coordinating HVAC and plumbing within space-constrained educational layouts.
- 📦 Managing design clarity from BID-level inputs with limited detailing.
- 📦 Ensuring accurate issue tracking for constructability and coordination workflows.



Techture Approach

- ▣ Built discipline-specific BIM models aligned with architectural base references.
- ▣ Conducted clash detection with structured issue identification and tracking system.
- ▣ Delivered visual walkthroughs with viewpoint-based constructability reports.
- ▣ Extracted shop drawings from validated and coordinated BIM models.

Benefits

- ▣ Improved coordination through early clash detection and resolution workflows.
- ▣ Enhanced design clarity with detailed constructability reports and visual insights.
- ▣ Enabled efficient execution via accurate shop drawing deliverables.
- ▣ Reduced rework through coordinated Mechanical & Plumbing BIM models.

