

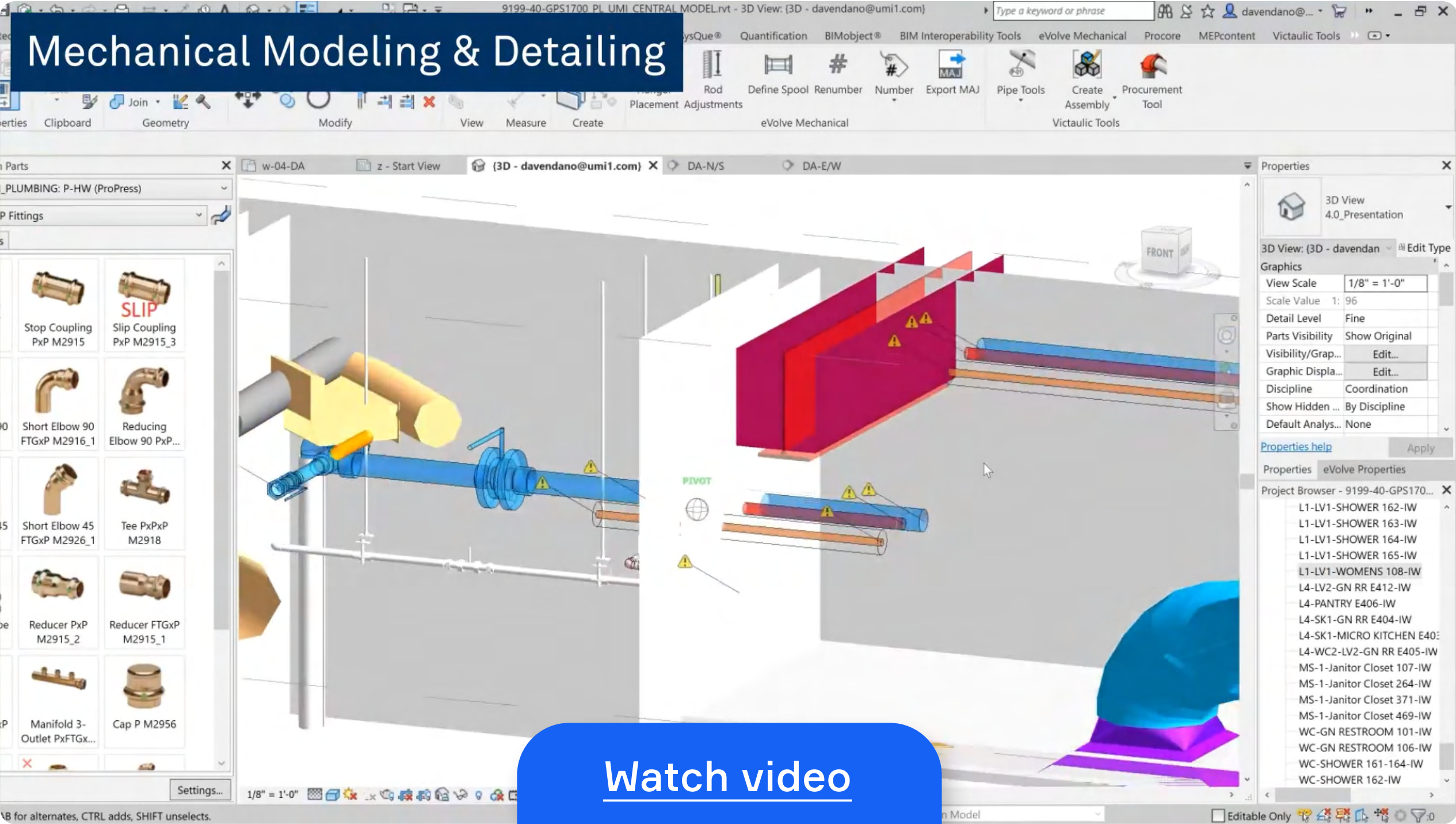


MECHANICAL

Statement of Qualifications (SOQ)



WHAT BROTHERHOOD MEANS TO US



Regional Superintendent

"I appreciate VEC's customer-focused approach. Their team does a great job representing our interests in BIM meetings, doing so in a professional manner. Having them as a trade partner on complex projects makes my job easier."



UA Local 38
Business Agent

"The use of advanced technology has become a constant on all of our major projects.VEC has the experience and tools needed to push forward. We are excited about what the future holds. "



Project Manager

"My experiences with VEC over the past several years have been consistent; professional, competent, dependable, team-oriented, hardworking, meet deadlines, and responsive."

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COMPANY OVERVIEW

-  250+ Employees
-  500+ Projects; Nationwide territories
-  HQ in San Francisco; 6 offices worldwide
-  15+ Years of Experience

OUR SERVICES

Mechanical BIM & VDC

VDC Coordination Management

Electrical BIM & VDC

Onsite Quality Control

Civil Underground BIM & VDC

Concrete BIM & VDC

Enhanced Design

CORE MARKET SECTORS


Mission Critical


Healthcare & Life Science


Public Works


Commercial


Aviation

CERTIFICATIONS


Minority Business Enterprise


SF Local Business Enterprise


Disadvantaged Business Enterprise


Small Business Enterprise



Learn more >

LEADERSHIP TEAM



Shane Saltzgiver
Founder & CEO

- 23 years of AEC industry experience — 14 years as BIM/VDC consultant (Founder of VEC in 2011), 6 years as electrical subcontractor (St. Francis Electric), 3 years as general contractor (Pankow, Straub)
- BS Degree: Construction Management, Cal Poly San Luis Obispo
Minor Degree: CRP Real Property Development



Kharlo Barcenas
Vice President of Sales & Marketing

- 17 years of AEC industry experience — 3 years as BIM/VDC consultant (VEC), 14 years as GC (Turner, BCCI, STO Build Group)
- BS Degree: Civil Engineering, San Jose State University



Oleg Osadchy
Vice President of VDC Operations

- 13 years of AEC industry experience — 6 years as BIM/VDC consultant (VEC), 4 years as GC (James R. Thompson, Inc.), 3 years of field experience (Tufco Flooring LLC)
- BS Degree: Construction Management, Northern Kentucky University
Minor Degree: Business Administration



Ivana Gery
Vice President of Finance & Administration

- 13 years of AEC industry experience — 5 years in Financing (VEC), 8 years in Financing (St. Francis Electric)
- BS Degree: Masters of Business Administration, California State University of East Bay



Don Interdonato
Senior Director of Business Development

- 25 years of AEC industry experience — 9 years as BIM/VDC consultant (VEC, Microdesk), 11 years as MEP Engineering Consultant (WSP Group Lincolne Scott), 5 years as electrical subcontractor (Cupertino Electric Inc.)
- BS Degree: Business Administration, Centenary University



Kevin Williams
Director of VDC Coordination Management

- 14-years in the Construction Industry — <1 year as BIM/VDC consultant (VEC), 4 years as general contractor (McCarthy Building Company), 10 years as GC (MATT Construction)
- BS Degree: Construction Management, Cal Poly San Luis Obispo



Rob Ohata
Senior Project Manager - Onsite Quality Control

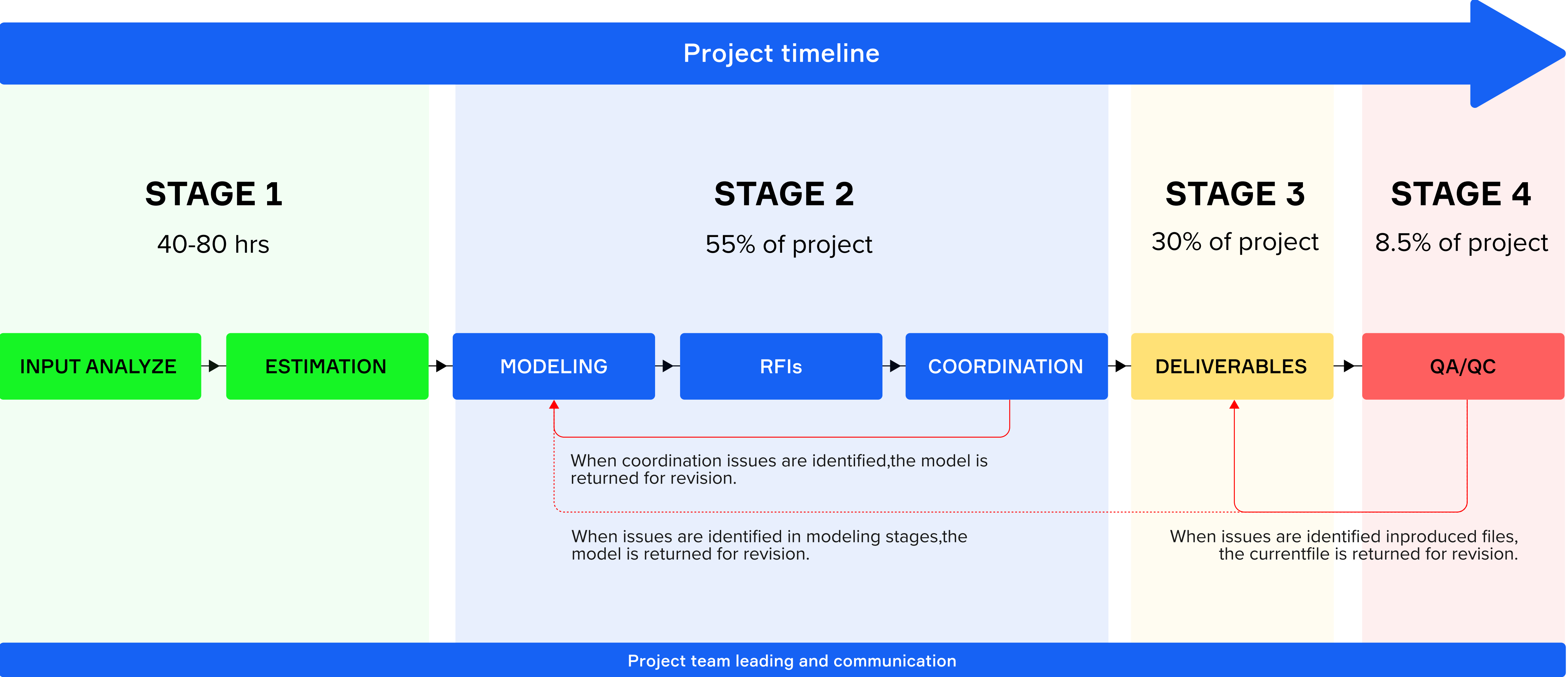
- 13 years of AEC industry experience — 5 years as BIM Coordinator & BIM/VDC consultant (VEC), 8 years of scanning survey technology experience (DPSI, Stantec, Sandis)
- BS Degree: Industrial Design, California State University of Long Beach



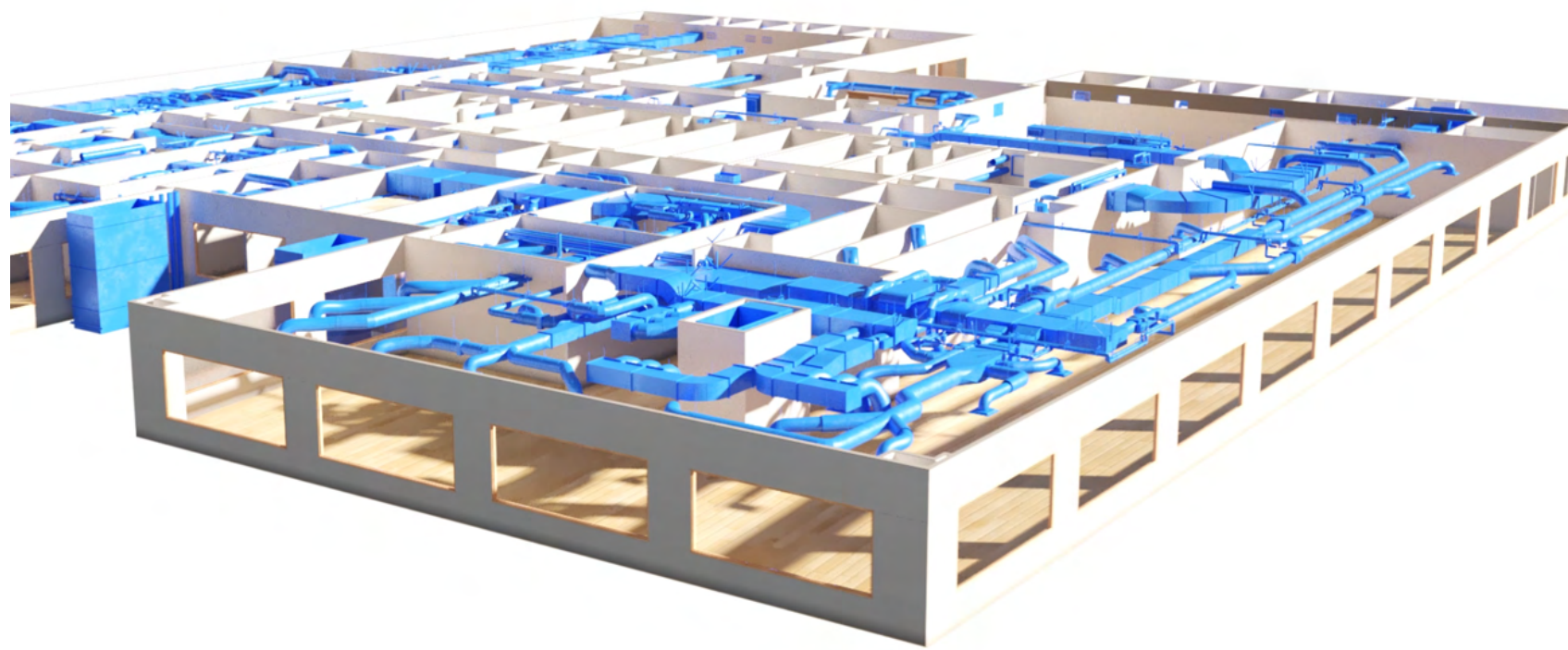
Jesus Chavez
Senior Project Manager of Civil Underground

- 5 years of AEC industry experience — 5 years as BIM/VDC consultant (VEC)
- BS Degree: Design and Visual Communications, General, ITT Technical Institute

PROJECT PROCESS



BIM ADVANTAGES - MECHANICAL CONTRACTORS

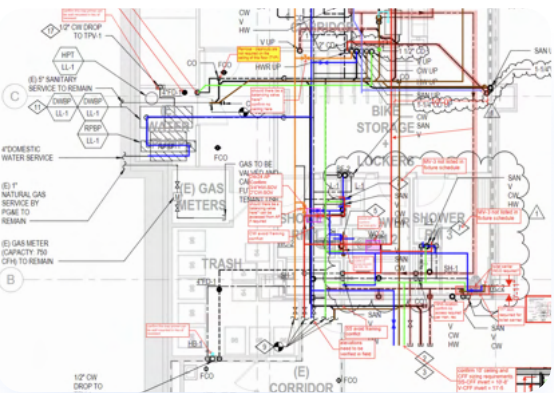


Mechanical contractors extensively utilize BIM models to conduct analysis, speed up the production of shop drawings, ensure special coordination, and evaluate constructability. Meanwhile, mech BIM services are becoming more and more popular in fabrication since they provide trades with multiple advantages. Such benefits involve material waste reduction, improved schedule performance, strengthened employee safety, and high-quality installed work.

Designing, fabricating, installing, and managing HVAC and plumbing systems can be daunting tasks with conventional tools. Thus, incorporating BIM technology is an ideal solution. Besides the benefits mentioned earlier, a mechanical contractor employing BIM services can:

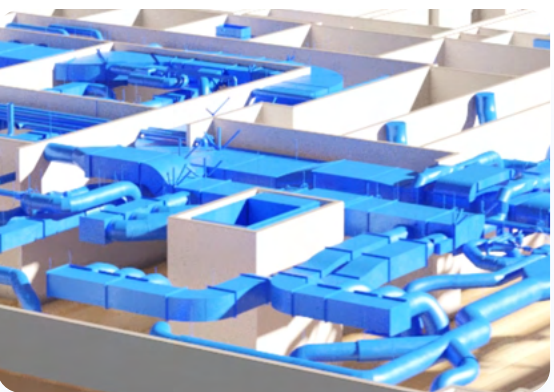
- Avoid challenges and errors during construction
- Increase labor productivity and profitability
- Improve the overall fabrication process
- Enhance collaboration on the project
- Boost cost performance

FEATURES - MECHANICAL BIM/VDC



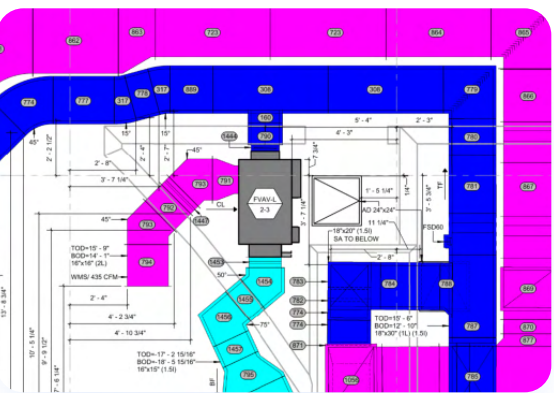
Constructability Review & Routing Optimization

As part of our constructability review services, we begin by analyzing markups and routing optimizations. These are the initial stages in developing buildable models and construction shop drawings. To accomplish this effectively, our experts examine existing drawings and specifications to identify potential issues and propose practical solutions. They may encompass access requirements, routing optimization, VE options, and general design clarifications.



3D Mechanical Modeling & Coordination

When collaborating with mechanical and plumbing companies, we go beyond tracing contract drawings or "converting them into 3D models" to create fully constructible ones. In the case of mechanical engineering, implementing BIM needs a modeling approach that entails reviewing and marking contract drawings, aligning on installation methods, and selecting appropriate materials before commencing the modeling process.



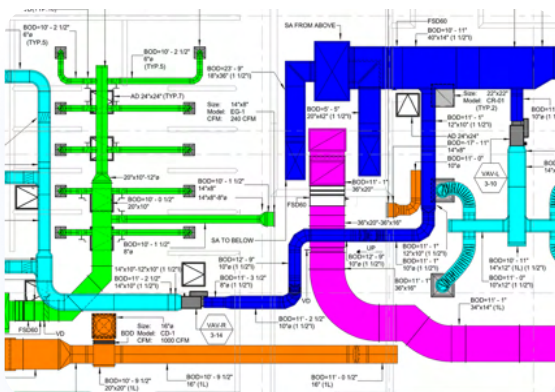
Installation Drawings

Our BIM services are focused on the field. Therefore, Install Maps, Layout Maps, Spools, MAJ's, and other drawings we create contain all the data critical to procure materials, prefabricate, deliver to the job site, install, and test. It proves we always keep the field in mind when taking each step during the project life cycle.



Prefabrication Planning

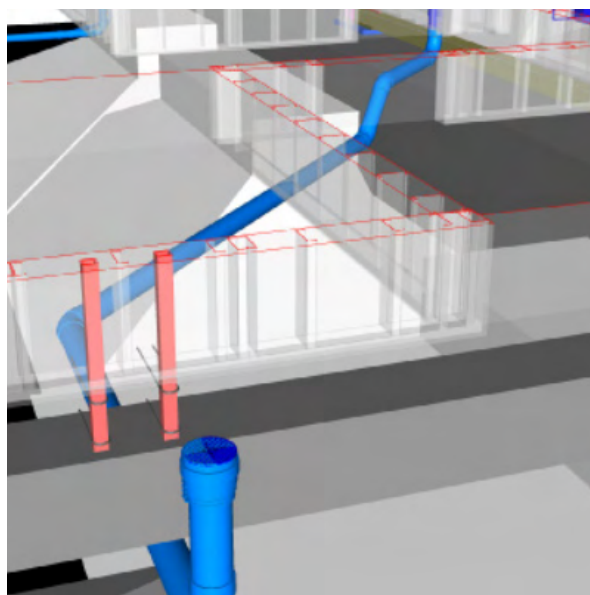
Identifying opportunities for prefabrication construction is crucial for cost and time savings. Also, this approach helps redefine the project delivery process. Whether it involves modular in-wall fixture rough-ins, equipment skids, or stanchions, we can support prefabrication activities, leading to better schedules and improved safety on the job site.



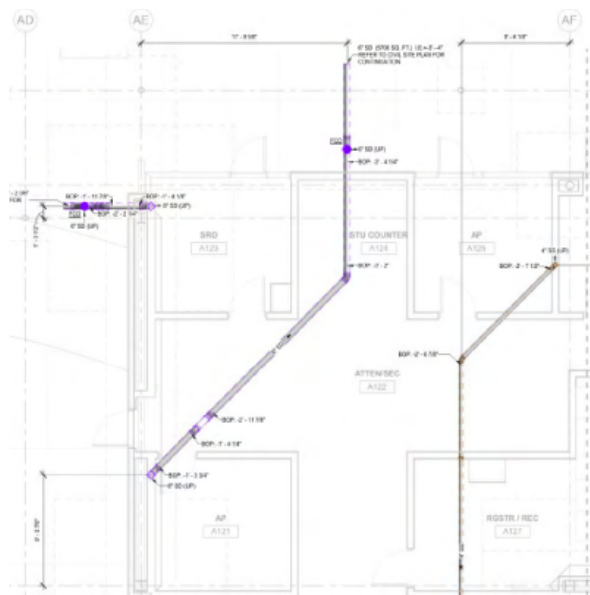
Shop Drawings

After completing model coordination, we generate Issued For Construction (IFC) Shop Drawings, an essential element of our mech BIM services. These drawings precisely depict the scope, design intent and construction routing and are submitted to the design team for approval. The field team then utilizes these shop drawings to schedule and continue sequencing the work.

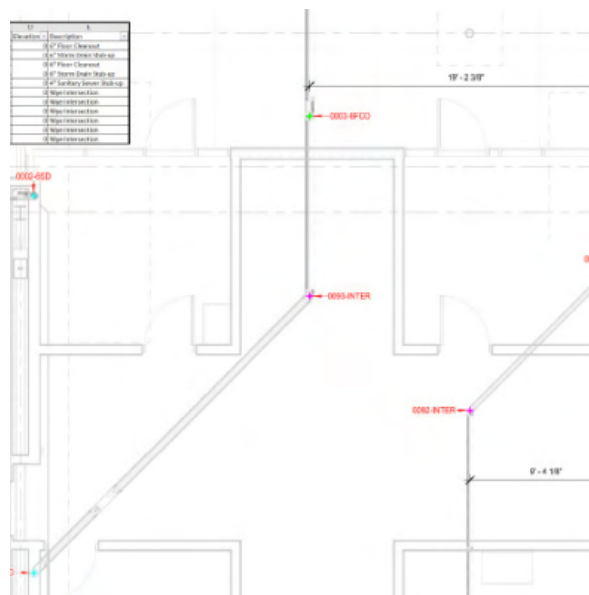
PREFABRICATION PLANNING



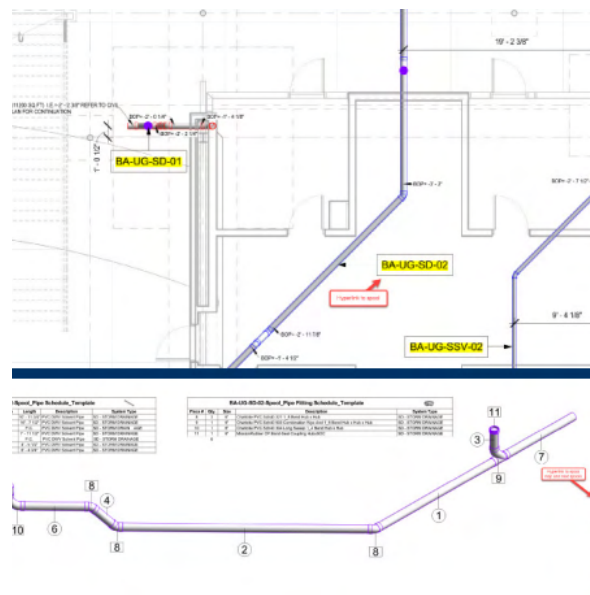
Model



Shop Drawing



Layout Points



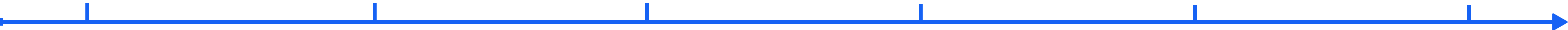
Spool Map & Spools



Fabricate



Field Install



Values:



Deep knowledge of means and methods to minimize material use and labor cost: underground, under-slab, in-slab, or overhead routing.



We build the BIM model right the first time, incorporating all of the client's means/methods, system routing, and prefabrication preferences.



At the start of every project, we spend time with the field team to understand their preferred methods and prefabrication desires and capabilities. We familiarize ourselves with all our available options.



Once the BIM coordination process is complete and an area is "Signed-off," the trades are locked into that routing, and any changes in the model (or in the field) must be rerouted around the other trades.



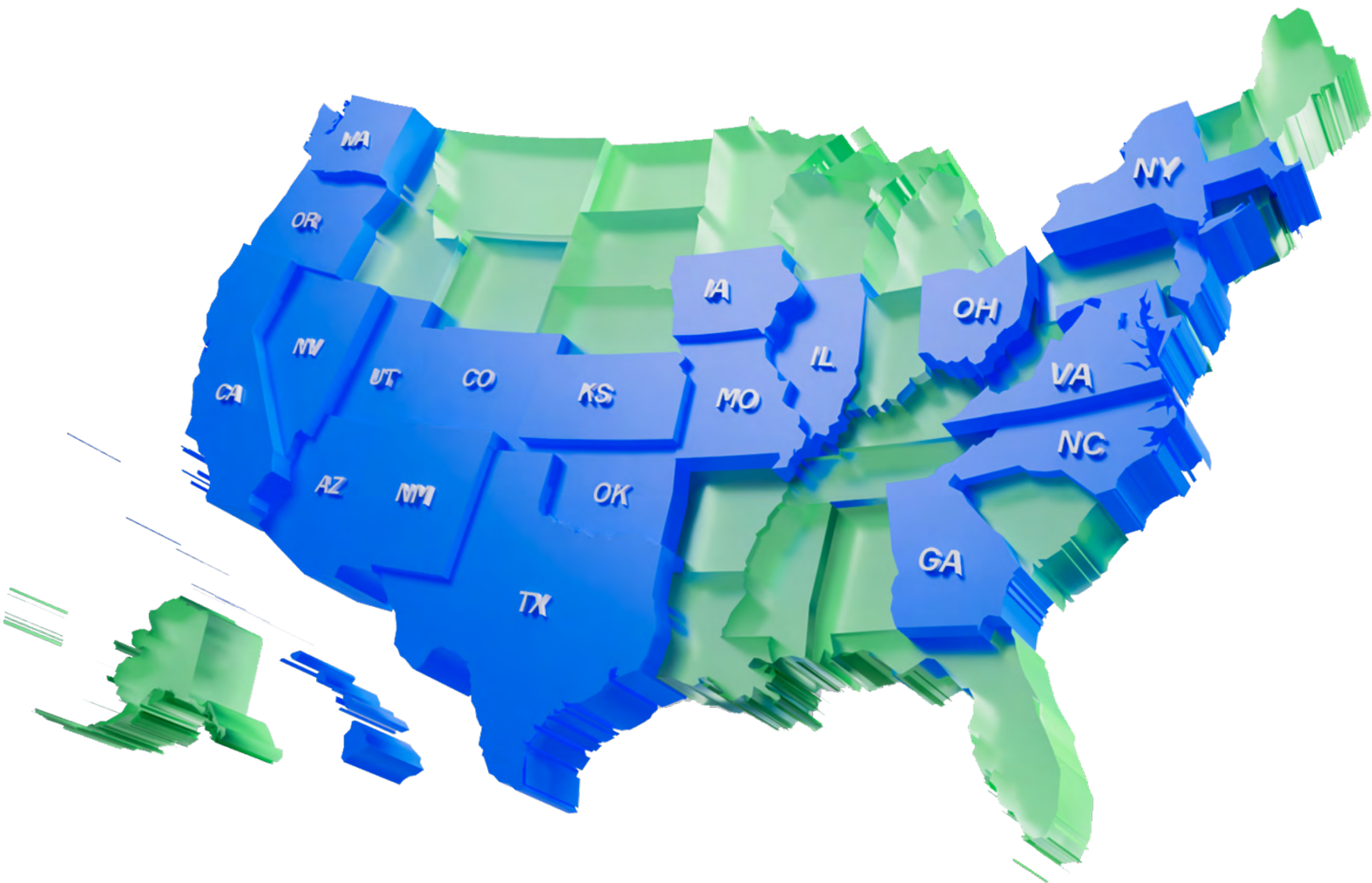
Shop/installation drawings are produced from the "Sign-off" model, the material is procured, and the field team proceeds with the installation per this set of drawings.

LODS

	Design Development	CoreBIM	EnhancedBIM	MaxBIM
	Our DD package is designed with engineers and Design-Build contractors at heart. We will work with your team to complete SD, DD and CD documents at every phase.	CoreBIM is an introductory package to satisfy the BIM requirements of your project.	EnhancedBIM is our middle-tier BIM/ VDC package, including all model elements needed for a thorough constructability review.	MaxBIM is the preferred BIM/VDC package to utilize technology to fully create labor savings in the field. That includes total involvement with your project management, field, and shop teams.
Modeling	LOD 200	LOD 300	LOD 350	LOD 400+
1. System distribution	+	+	+	+
2. Scheduled equipment	+	+	+	+
3. Clearance zones	-	+	+	+
4. Cans, sleeves, and blockouts	-	+	+	+
5. Hangers, straps and racks	-	-	+	+
6. In-wall fixtures	-	-	+	+
7. Seismic bracing (Engineered by others)	-	-	-	+
8. Floor-mounted supports.	-	-	-	+
Drawing Deliverables				
1. Shop Drawings issued for Construction	Floor plans, sections, elevations, and detail sheets ready to be stamped by EOR	+	+	+
2. Penetration and canning sheets	-	+	+	+
3. Total Station layout files for penetrations and supports	-	+	+	+
4. Installation Drawings with elevation and dimension call-outs	-	-	+	+
5. Spool maps and individual spools for offsite prefabrication	-	-	Isometric views by system/area	+
6. MAJ files for HVAC fabrication	-	-	+	+
7. Hanger & Pipe fabrication cut-lists	-	-	-	+
Project Management				
1. Bill of materials per shop drawing and spool/production area	Bill of Materials	Bill of materials per shop drawing	Bill of materials per shop drawing	Bill of materials per shop drawing and spool/production area
2. Design validation and routing optimization	+	+	+	+
3. Pre-construction:	-	-	+	+
Submittal Review	-	-	+	+
Specification Review	-	-	+	+
Material Matrix and Cost Saving Solutions	-	-	+	+
Prefabrication and modular analysis	-	-	+	+
4. Project scheduling (BIM & CPM analysis)	-	-	-	+
5. Field technology: Model and drawings in the hands of your shop and field foreman.	-	-	-	+
Model Coordination				
1. Trade coordination meeting attendance		+	+	+
2. Clash resolution		+	+	+

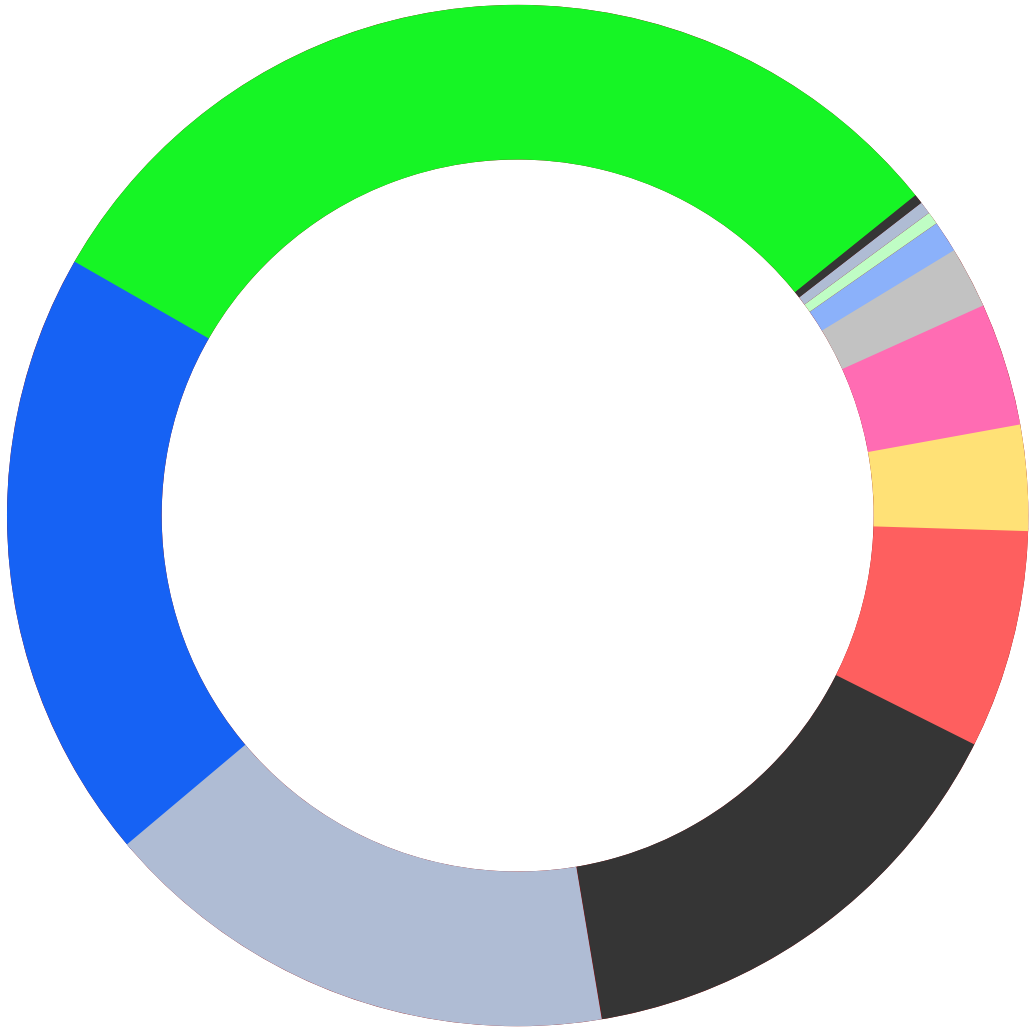
PROJECT EXPERIENCE

Nationwide territories



- | | | | | |
|-------------------|-----------------|------------|------------------|------------|
| ■ Arizona | ■ Illinois | ■ Virginia | ■ North Carolina | ■ Oklahoma |
| ■ California | ■ Massachusetts | ■ Georgia | ■ New Jersey | ■ Hawaii |
| ■ Colorado | ■ Missouri | ■ Maryland | ■ New Mexico | ■ Nevada |
| ■ Washington, D.C | ■ Oregon | ■ Kansas | ■ New York | ■ Utah |
| ■ Iowa | ■ Texas | ■ Ohio | ■ Washington | |

Types of Project Experience



- | | | | |
|--------------------------------|------------------------------|---------------------------|--------------------------------|
| Data Center
30.9% | Public Works
16.5% | Healthcare
6.9% | Education / Lab
3.8% |
| Commercial
19.6% | Life Science
15.3% | Aviation
3.4% | Mixed Use
1.9% |
| Tech-Commercial
0.9% | Energy
0.2% | Retail
0.4% | Residential
0.1% |



PROJECTS



UC Santa Barbara Classroom Building

Market Sector:

Higher Education

Size:

125,000 sq. ft

Year:

2020 — 2021

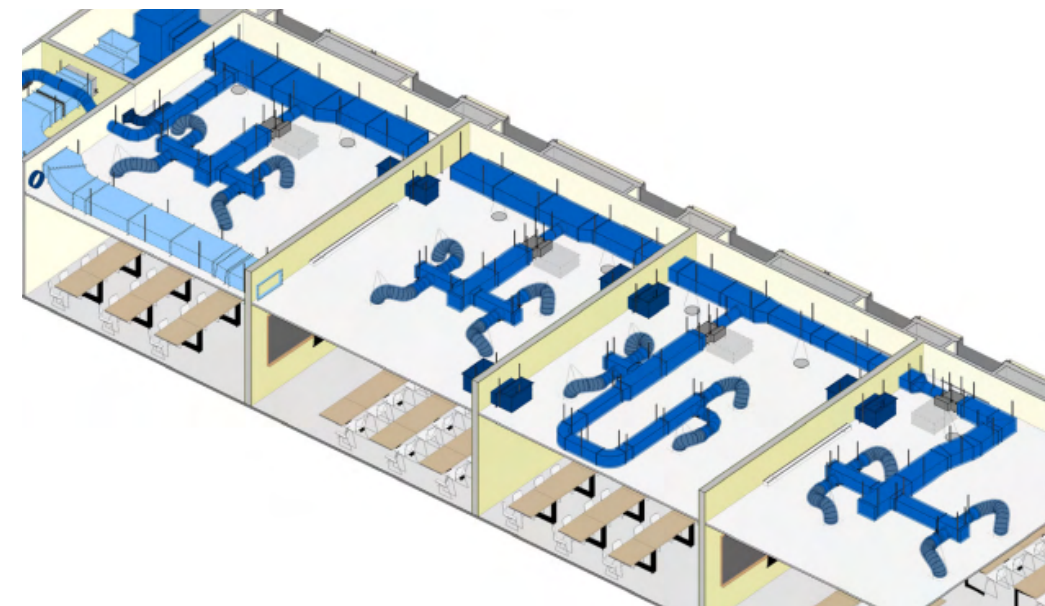
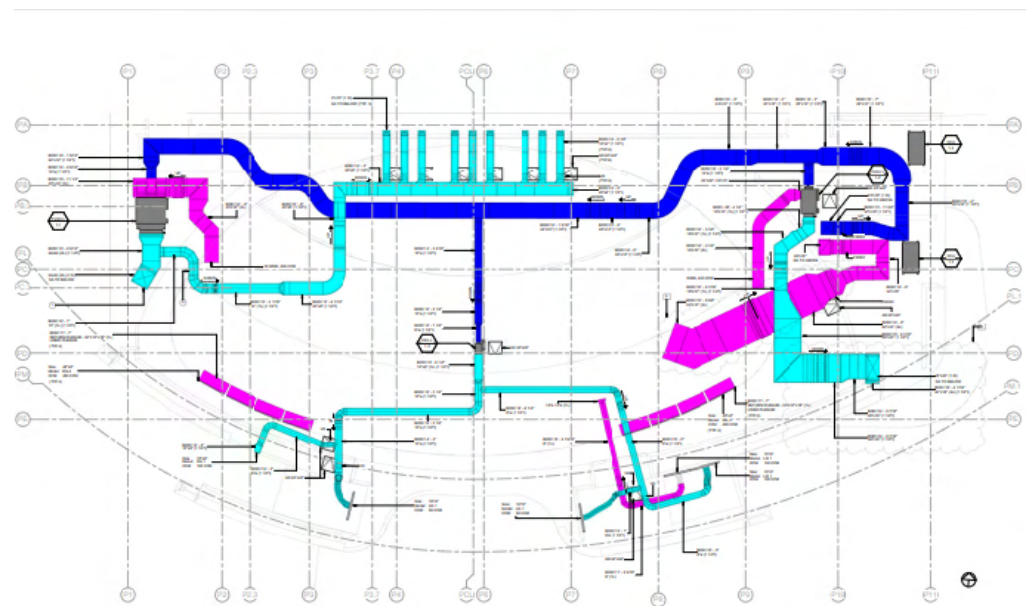
Location:

Santa Barbara, CA

Services Provided:

BIM & VDC, BIM Coordination, Mechanical, Coordination Management, General Contractor

VEC was able to coordinate structural steel beam haunches and beam penetrations early to consolidate pipe and duct pass-throughs and reduce the overall quantity of steel modifications. This resulted in cost savings for the Owner while also allowing beam haunches, modifications and penetrations to be CNC pre-cut during steel prefabrication as opposed to being cut-in-field.





SRU Acid Gas Lines & Various Projects

Market Sector:

Industrial

Size:

100,000 sq. ft

Year:

2021 — Ongoing

GC:

Schultz Industrial Services/
PBF Refinery Facility Services

Services Provided:

Process Mechanical



PBF is one of the largest independent petroleum refiners and suppliers of petroleum products in the United States, with their most recent refinery acquisition in Martinez, CA producing over 160,000 barrels per day. When PBF's largest Mechanical contractor Schultz needed high-precision field measurements on a challenging project, they turned to VEC's Onsite Quality Control and Mechanical BIM team to provide touch-less 3D laser scanning, as-built modeling, and mechanical fabrication detailing & spooling. To further eliminate material and labor waste, VEC worked directly with the PBF Facility team to develop and support material ordering and purchasing based-on our high-confidence 3D models.



Del Sol High School & Science Labs

Market Sector:

Education

Size:

270,000 sq. ft.

Year:

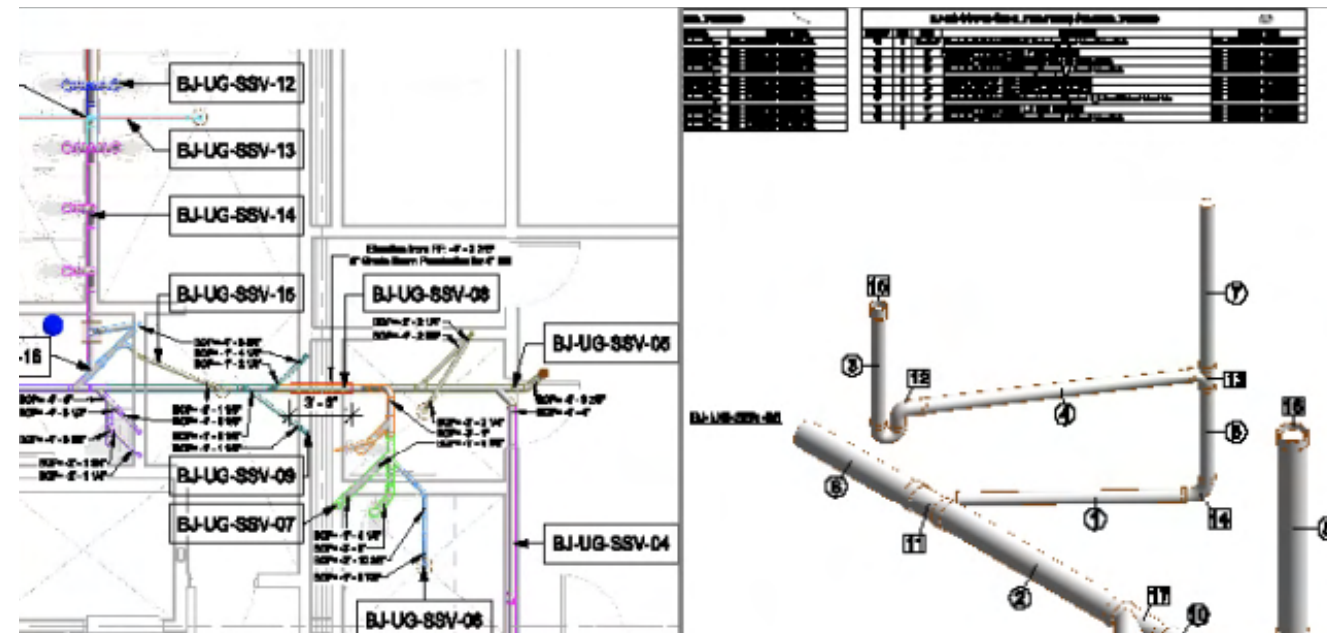
2021 — 2022

Location:

Oxnard, CA

Services Provided:

Plumbing



VEC was selected to fully model and coordinate the plumbing scope for 8 buildings at the new Oxnard High School campus. These included sanitary, grease and lab waste. VEC went through a thorough Value Engineering process to find cost saving solutions and propose options to save on material and fabrication. Dozens of RFI's were generated to clarify and rectify design issues that would have arisen in the field. In addition, thanks to a MaxBIM approach with a full LOD400 model and field deliverables, the project was fully trimmed, laid out and fabricated prior to stepping foot on site.



Helping the best build better.

[Contact for more](#)

sales@vec-us.com

vec-us.com

[+1 \(415\) 888-1832](tel:+14158881832)