AU Las Vegas 2019

Kenneth Verlinden

Victaulic – VDC Global Content Manager



MEP Mechanical Room Prefabricated with Revit®

Kenneth Verlinden

Victaulic – VDC Global Content Manager

CONNECT & CONSTRUCT SUMMIT





About the Speaker

Kenneth Verlinden

Kenneth Verlinden is the global content manager at Victaulic, the leading manufacturer of mechanical pipe-joining systems. Kenneth has been working for Victaulic since 2001, and leads the teams responsible for software and content development, BIM and training, and drives the development of new offerings that enhance service to Victaulic customers throughout the project life cycle. Kenneth's specialties include CAD design, MEP and fire protection piping, standardization and pre-fabrication and working together with various software suppliers on a daily basis. Prior to joining Victaulic, Kenneth worked at a chemical plant as a design engineer. He holds an electro-mechanical bachelor degree, is an Autodesk Revit MEP certified professional and an Autodesk Instructor.

Victory + Hydraulic = Victaulic

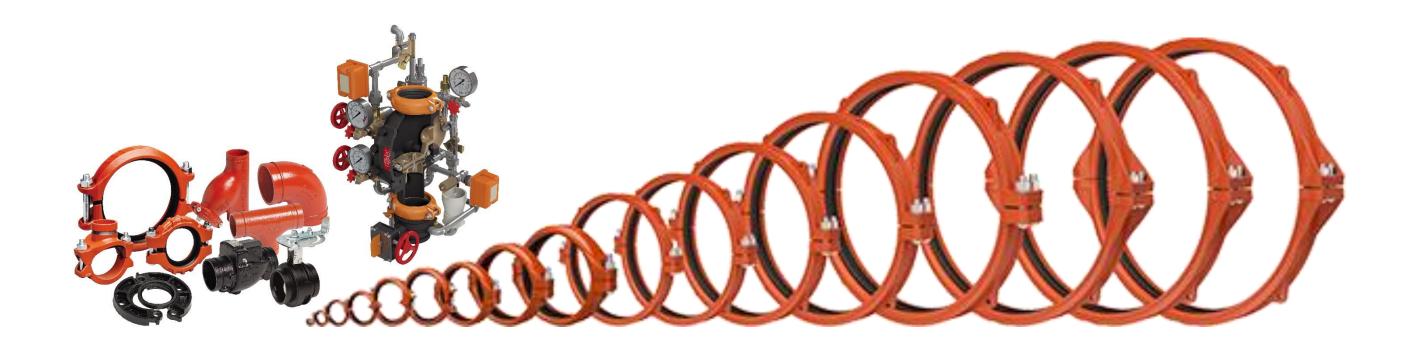
Since 1919

Celebrating it's 100th anniversary this year, Victaulic is the world leader in grooved mechanical pipe joining solutions.



Victaulic

Victaulic products are used in some of the world's most demanding markets, including oil, gas and chemical; mining; power generation; water and wastewater treatment; and military and marine systems; as well as commercial building and fire protection applications. With a wide offering of products & services, Victaulic's selection ranges from couplings and fittings to Victaulic Tools for Revit™.



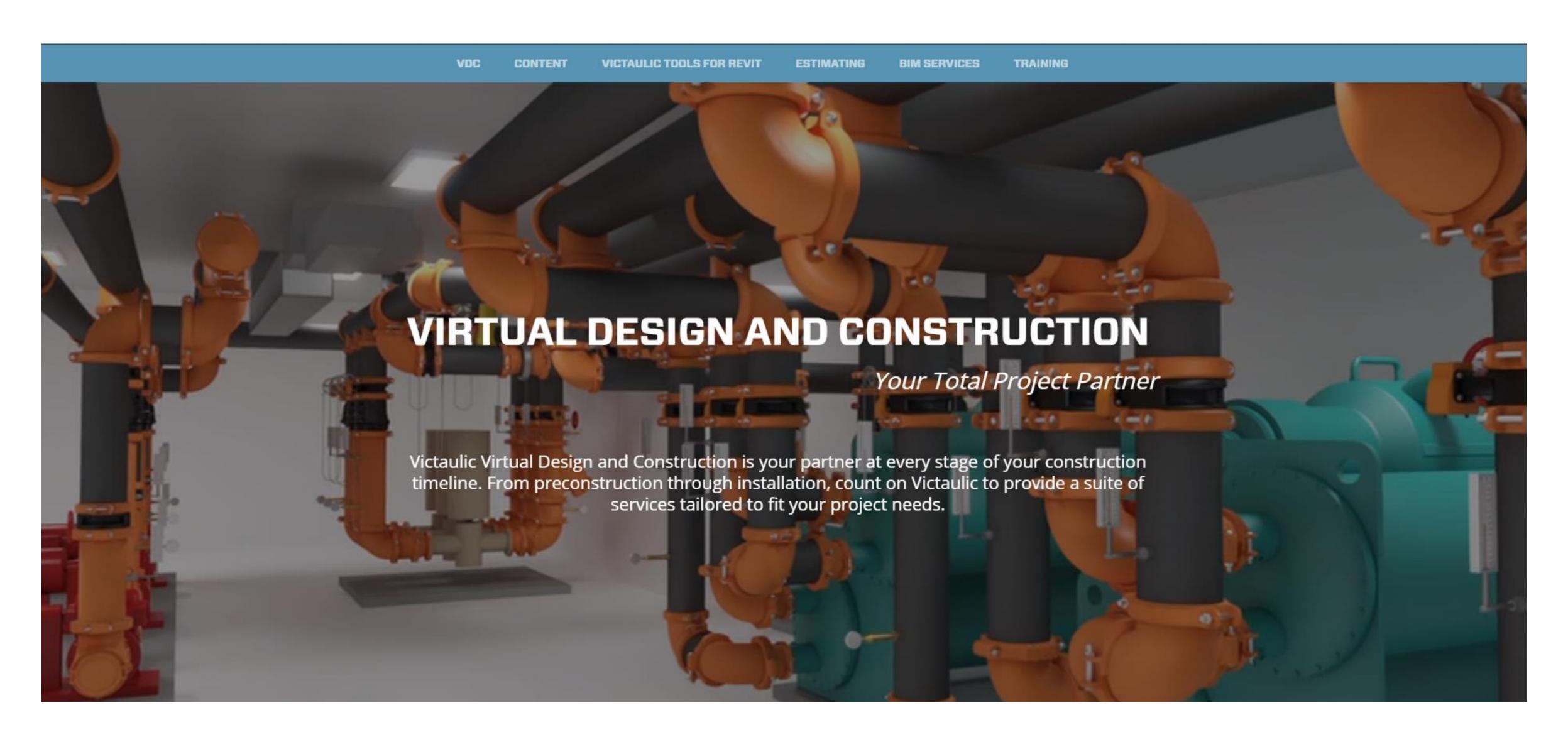


Fabrication - Modularization

 Modular construction is a process in which buildings/parts are constructed off-site, under controlled plant conditions, using the same materials and designing to the same codes and standards as conventionally built facilities. (Source: Modular Building Institute)







Drawing Packages - Content Dev & Support - Estimating - Modularity & Fabrication Review - Revit Training

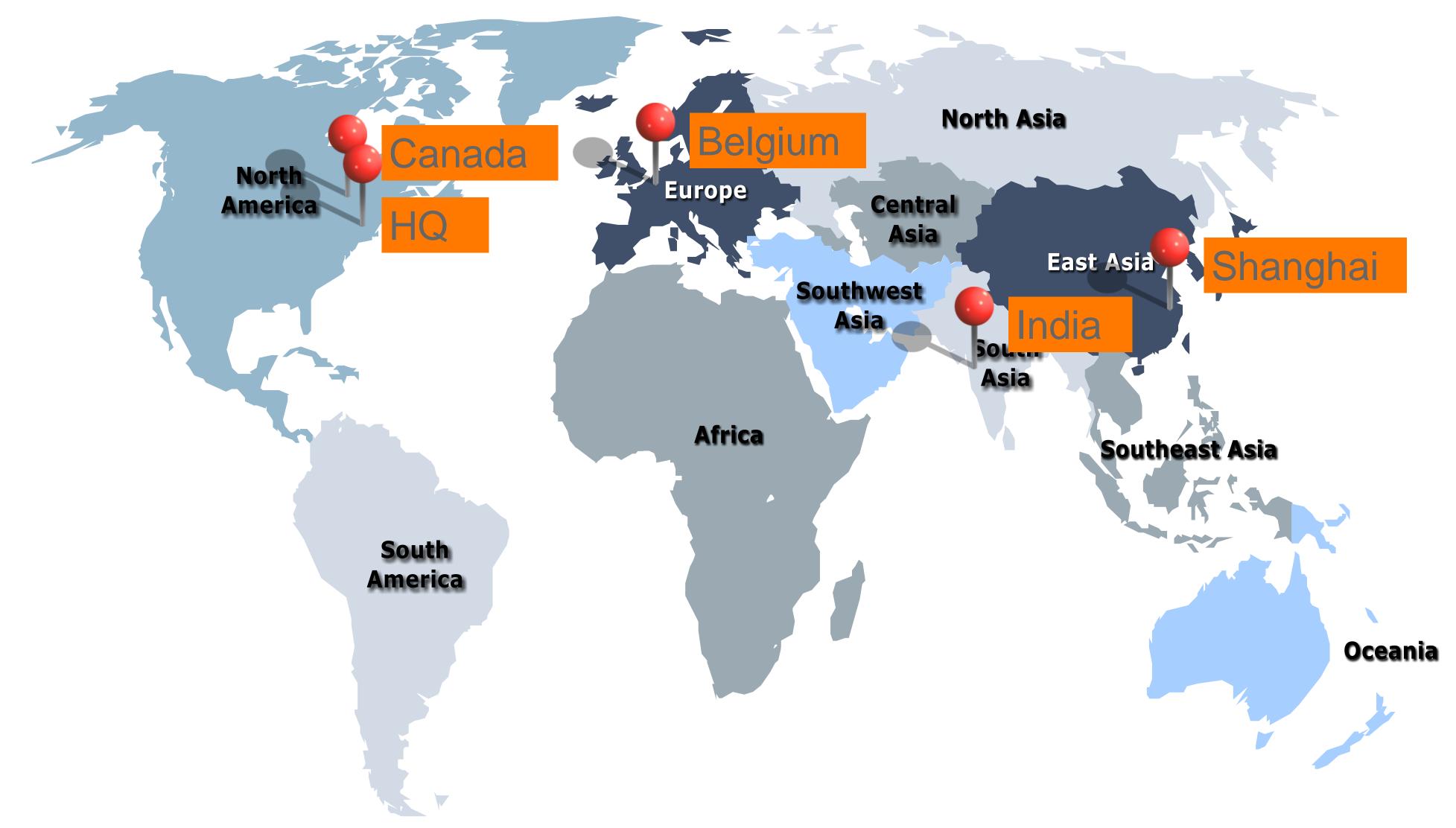


Victaulic, your partner from A to Z



Faster from the Start

VDC Service Locations



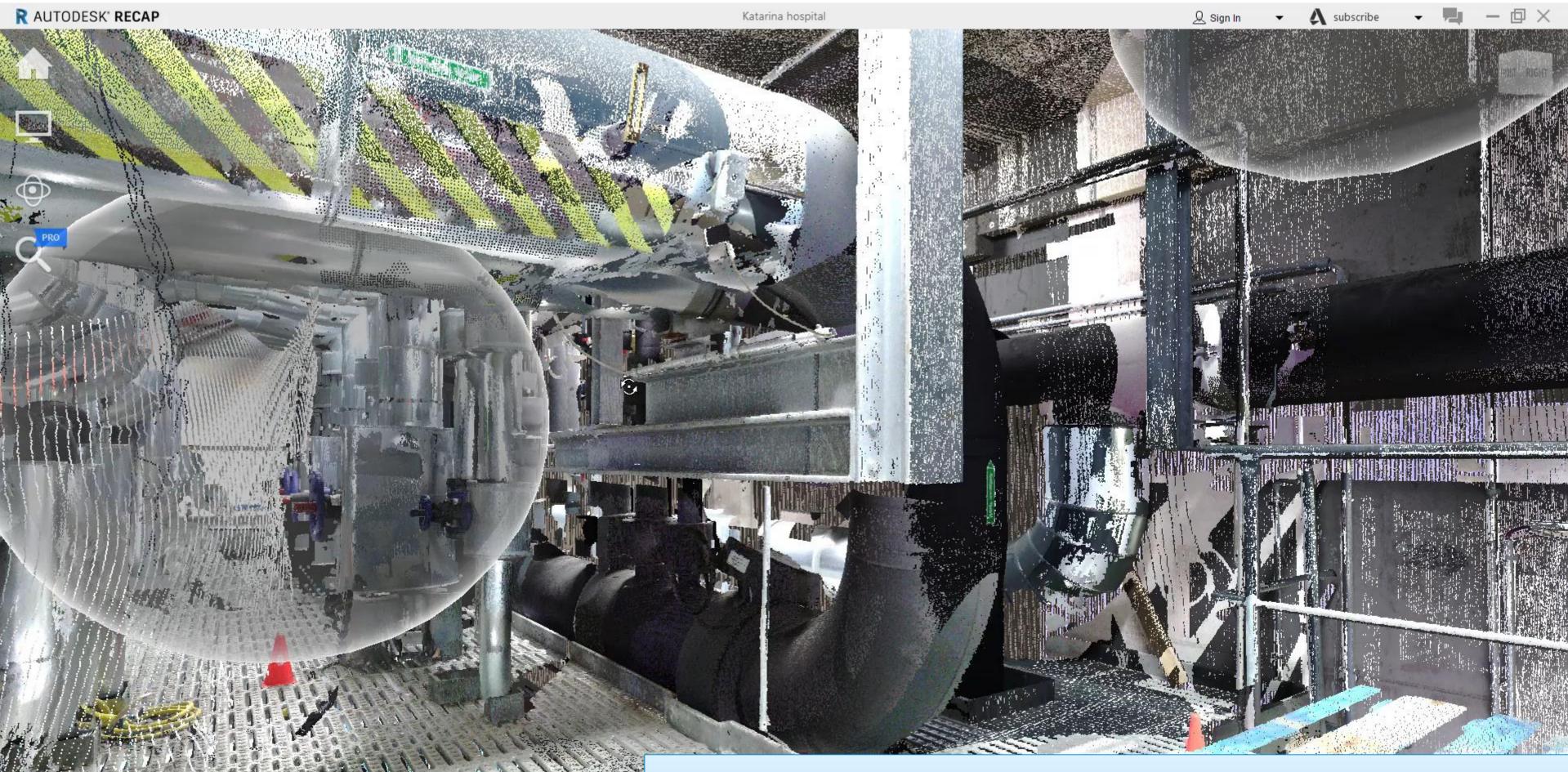
100+ Persons Globally



(Retrofit) Projects

Laser scanning

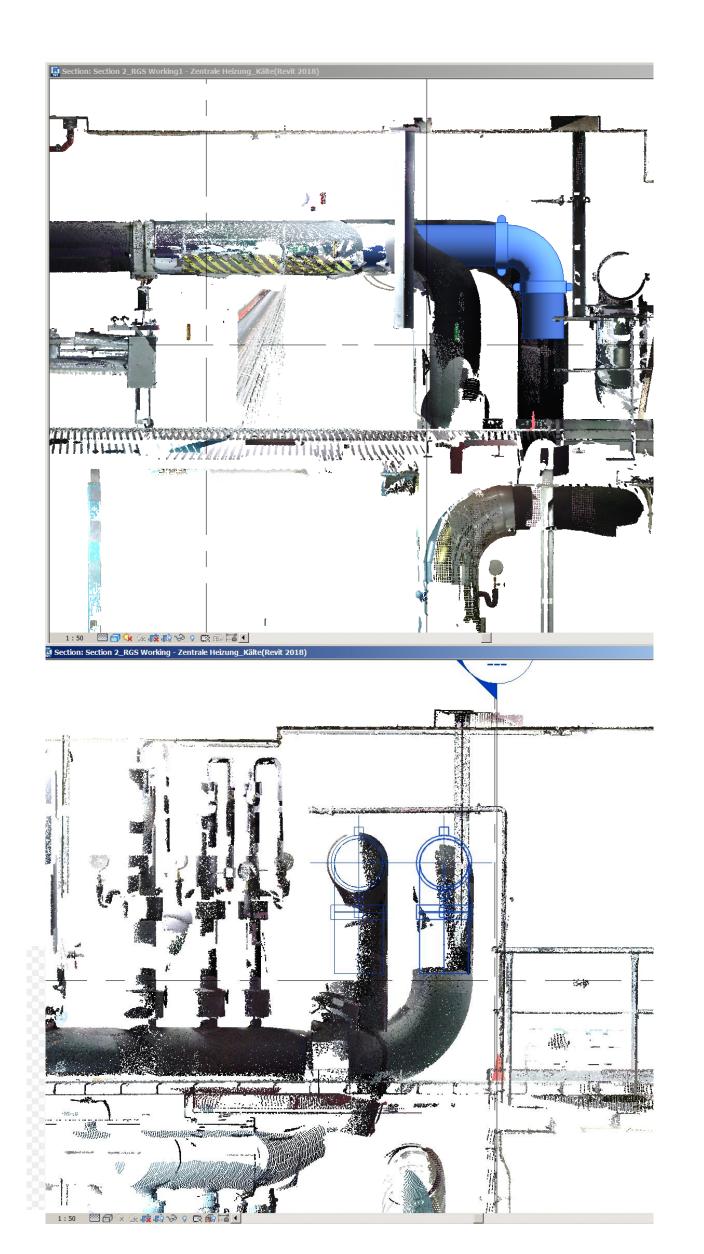


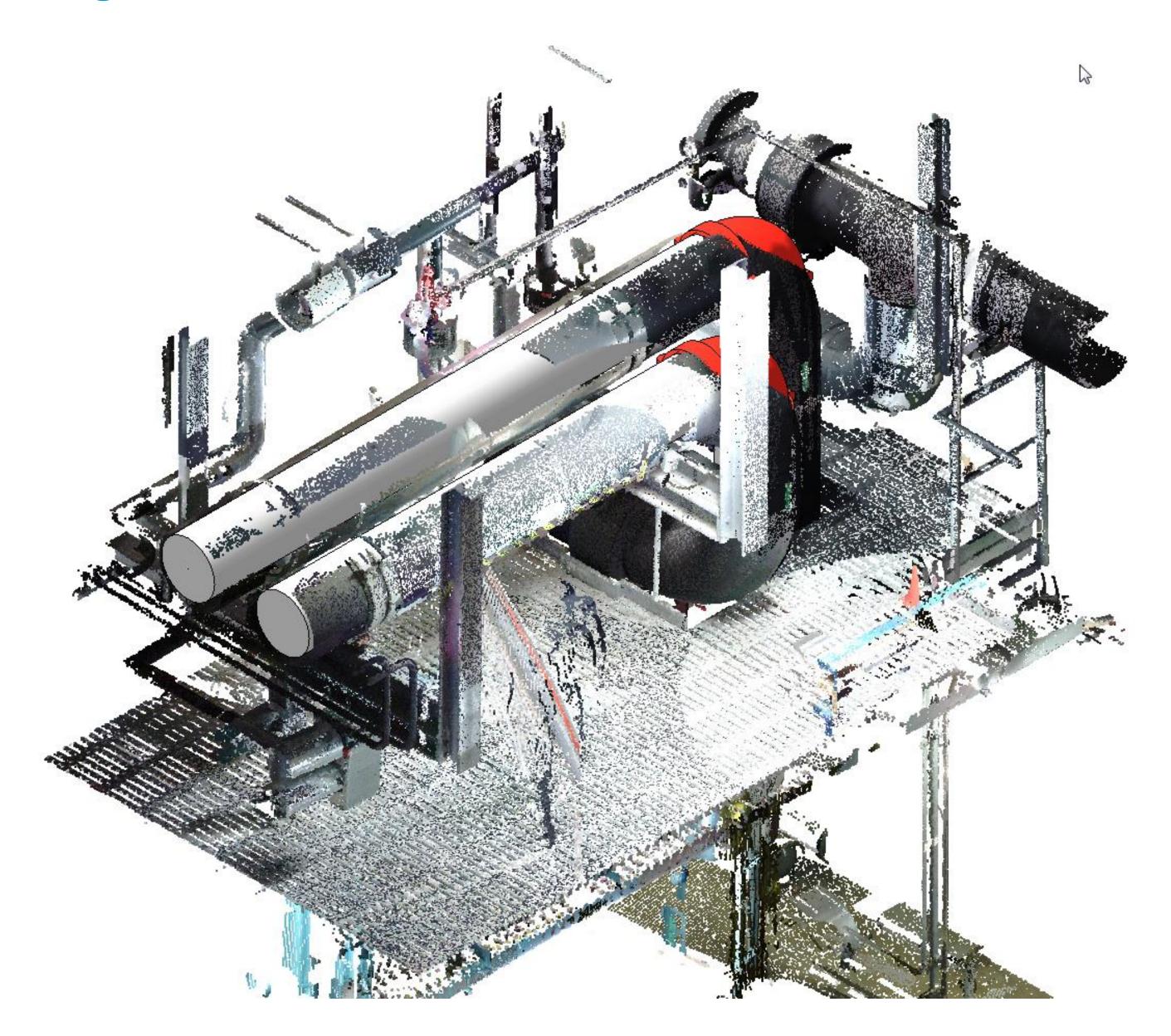




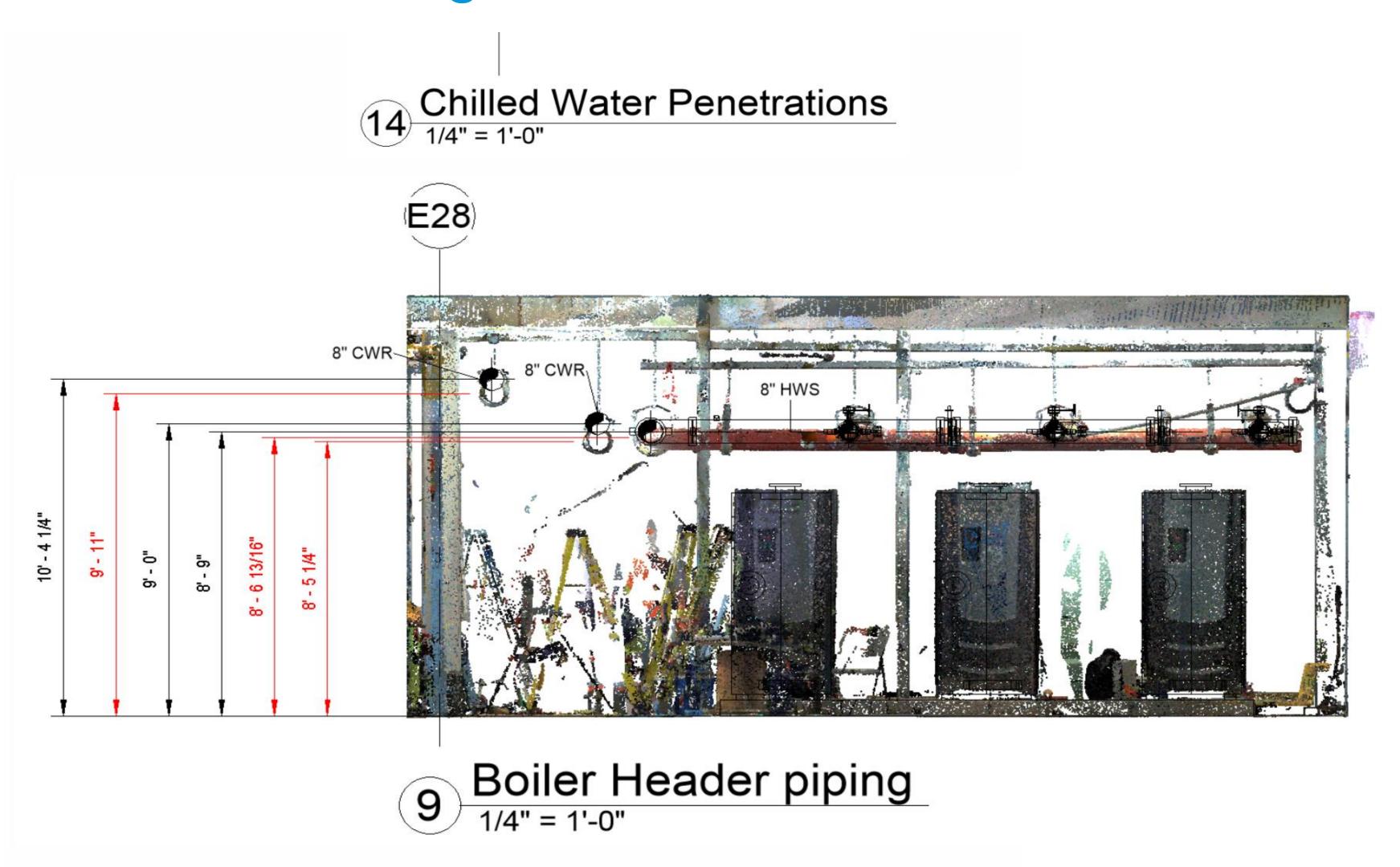
VDC has own scanner service
Save time – collect all data – accuracy level

Laser scanning





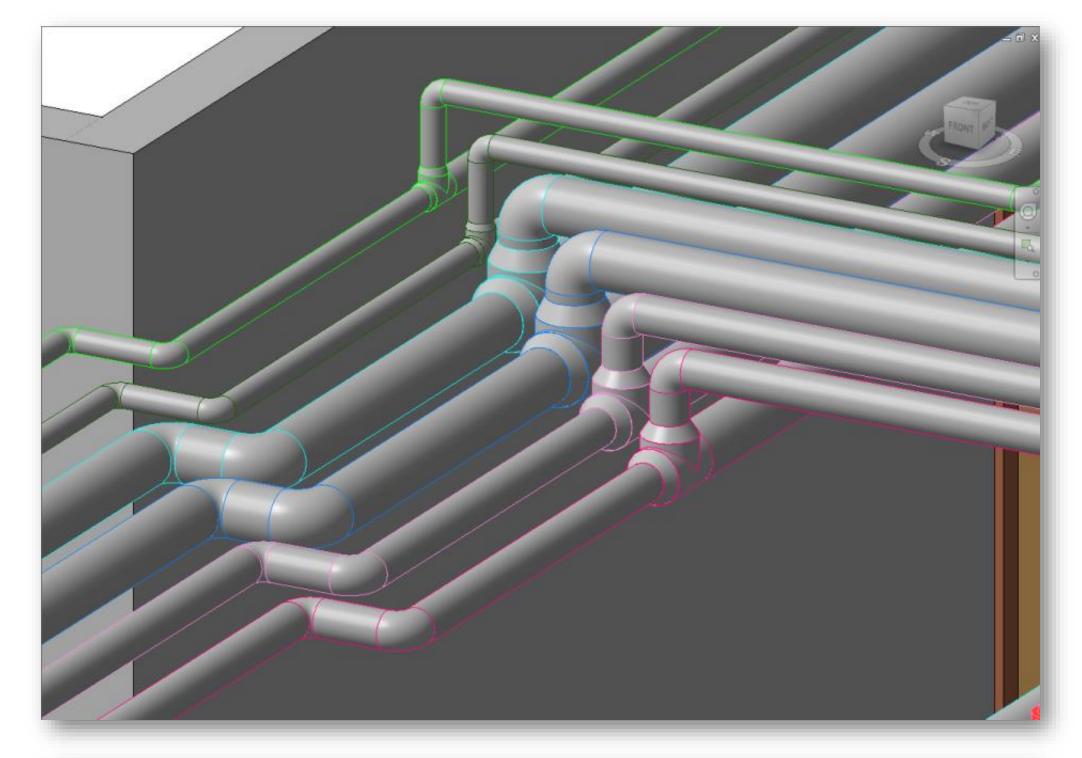
Laser scanning

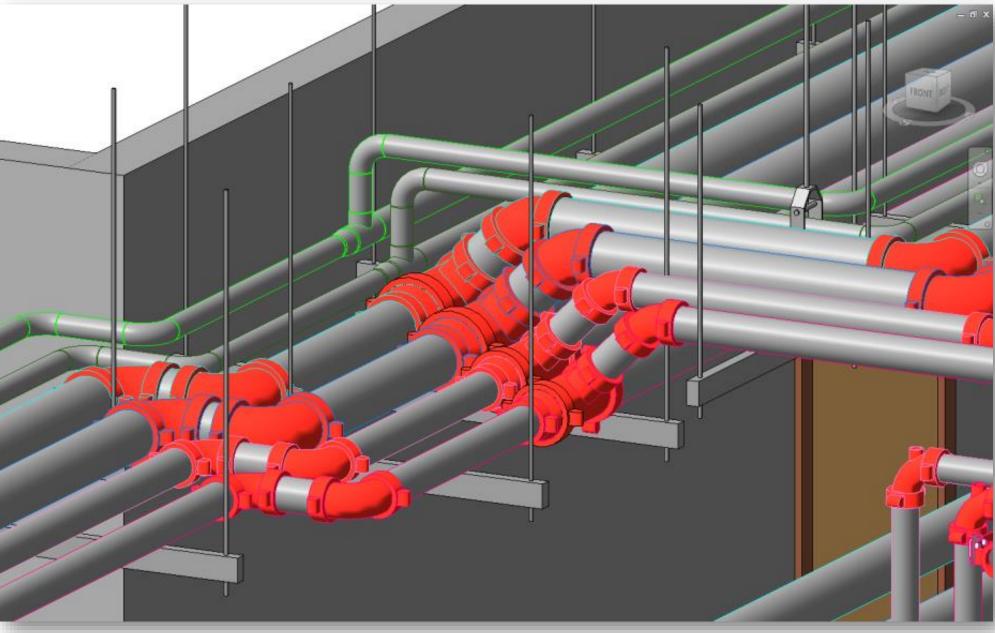


Model

Converting an Engineers Model

- Avoid out of the box standard Revit MEP content
 - Dimensional space issues
- P&ID ⇔ Revit model
 - Valve schedule
 - Pressure/temperature gauges
 - Mating flanges





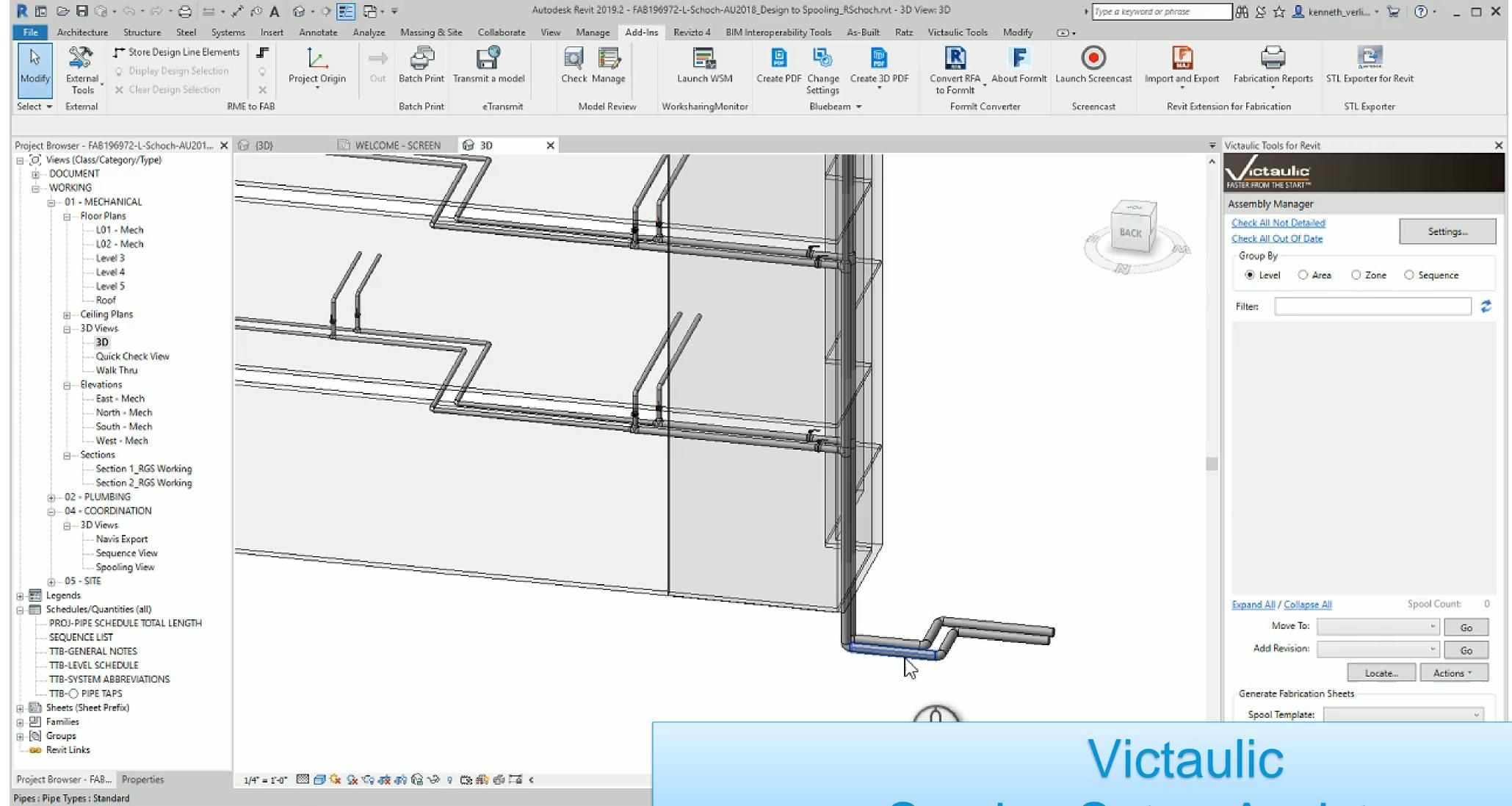
Converting an Engineers Model





Converting an Engineers Model



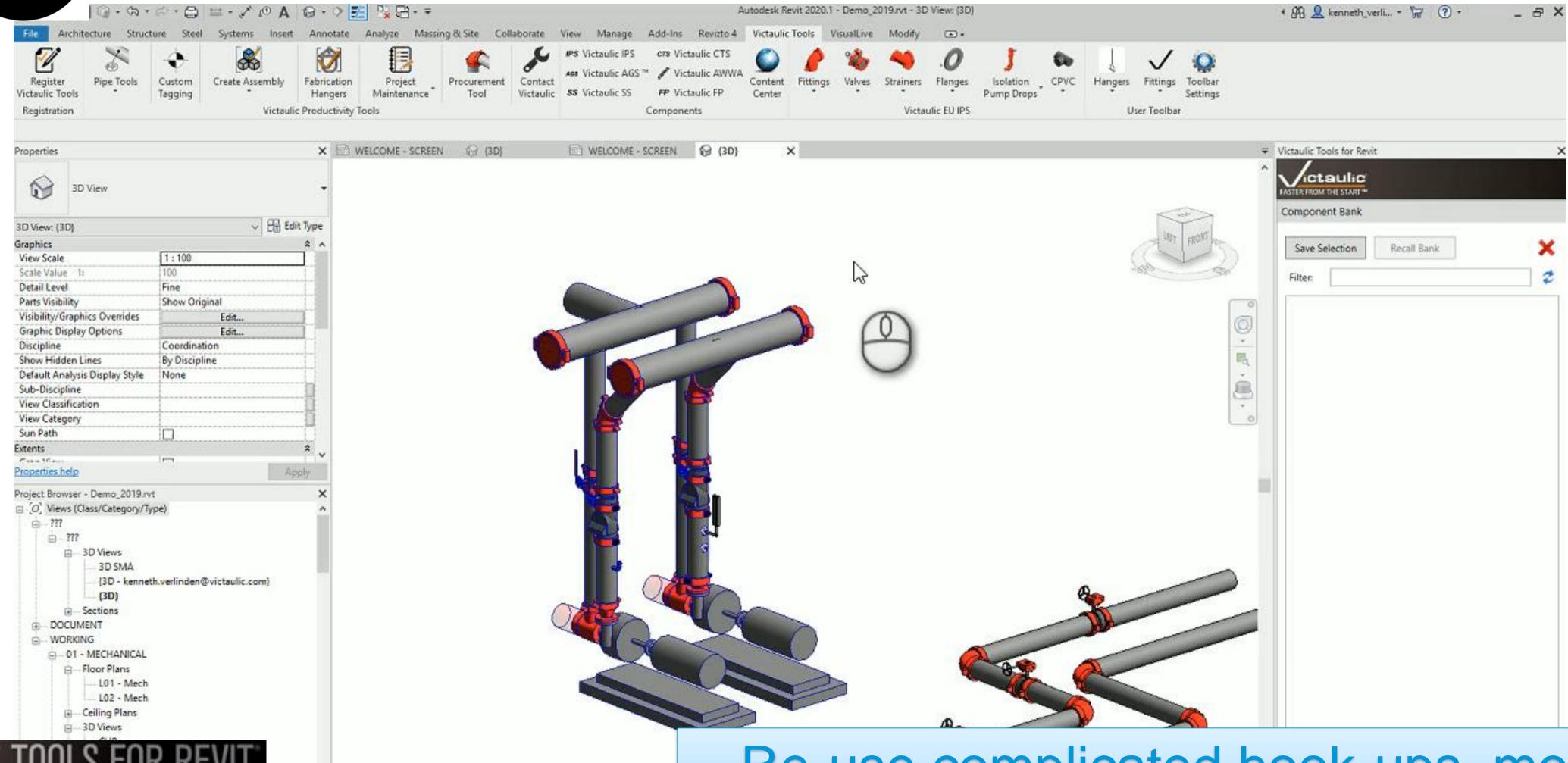


Service Setup Assistance



Click to select. TAR for alternates. CTRL adds. SHIFT unselects.

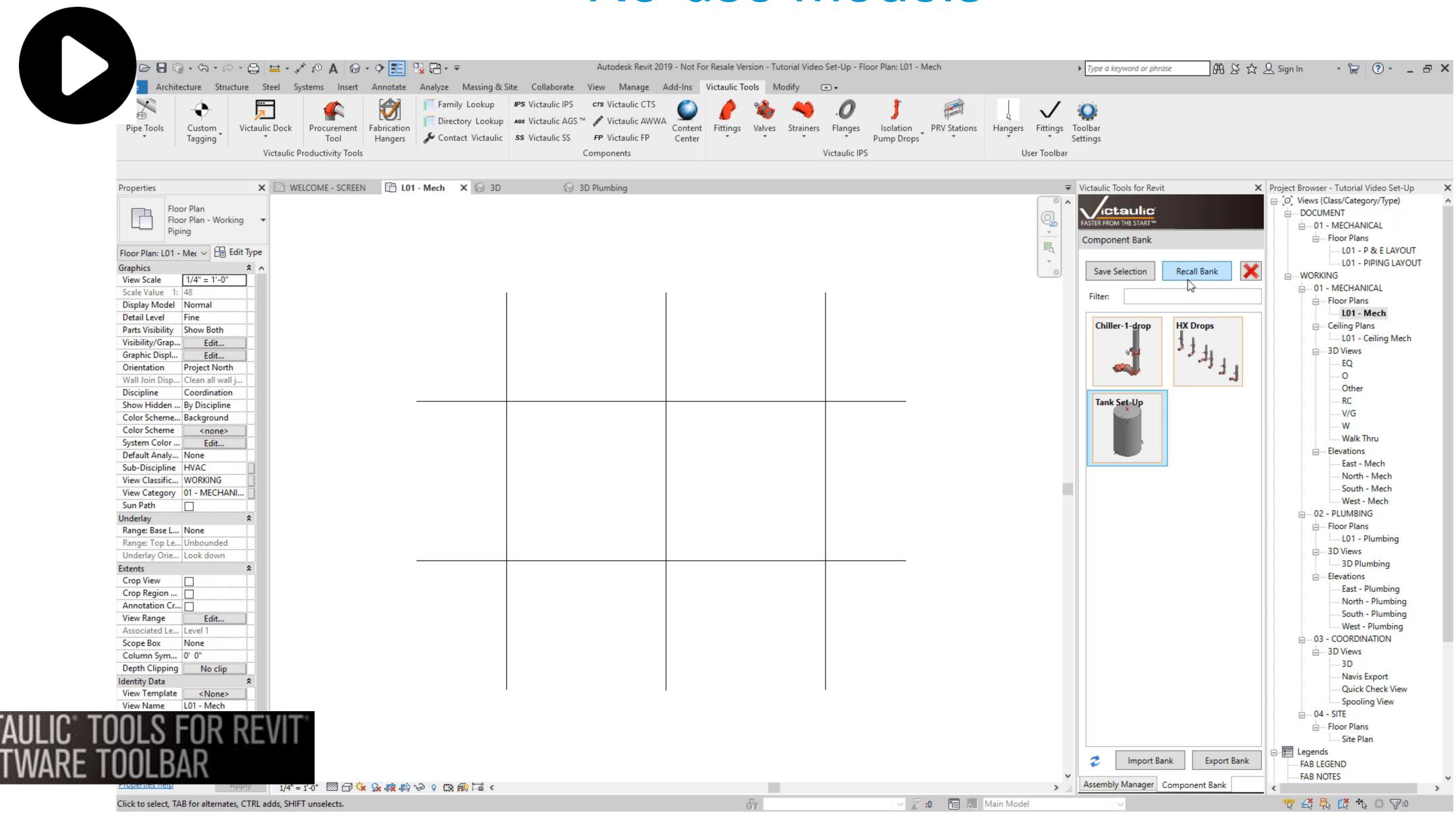
Re-use models



图画家 54 物成的信号 4 欧丽奇篇 4

Re-use complicated hook-ups, modules, skids.

Re-use models

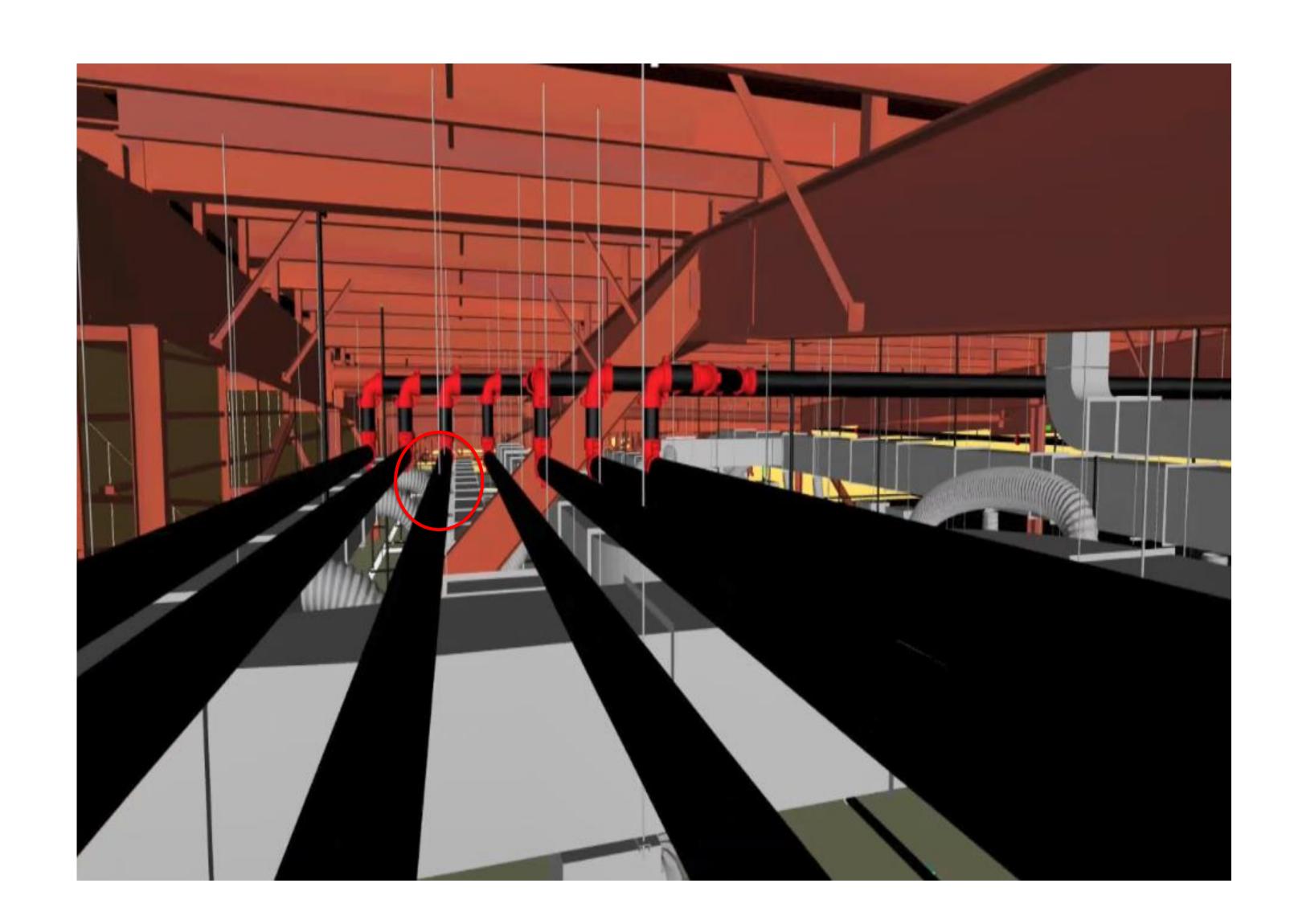


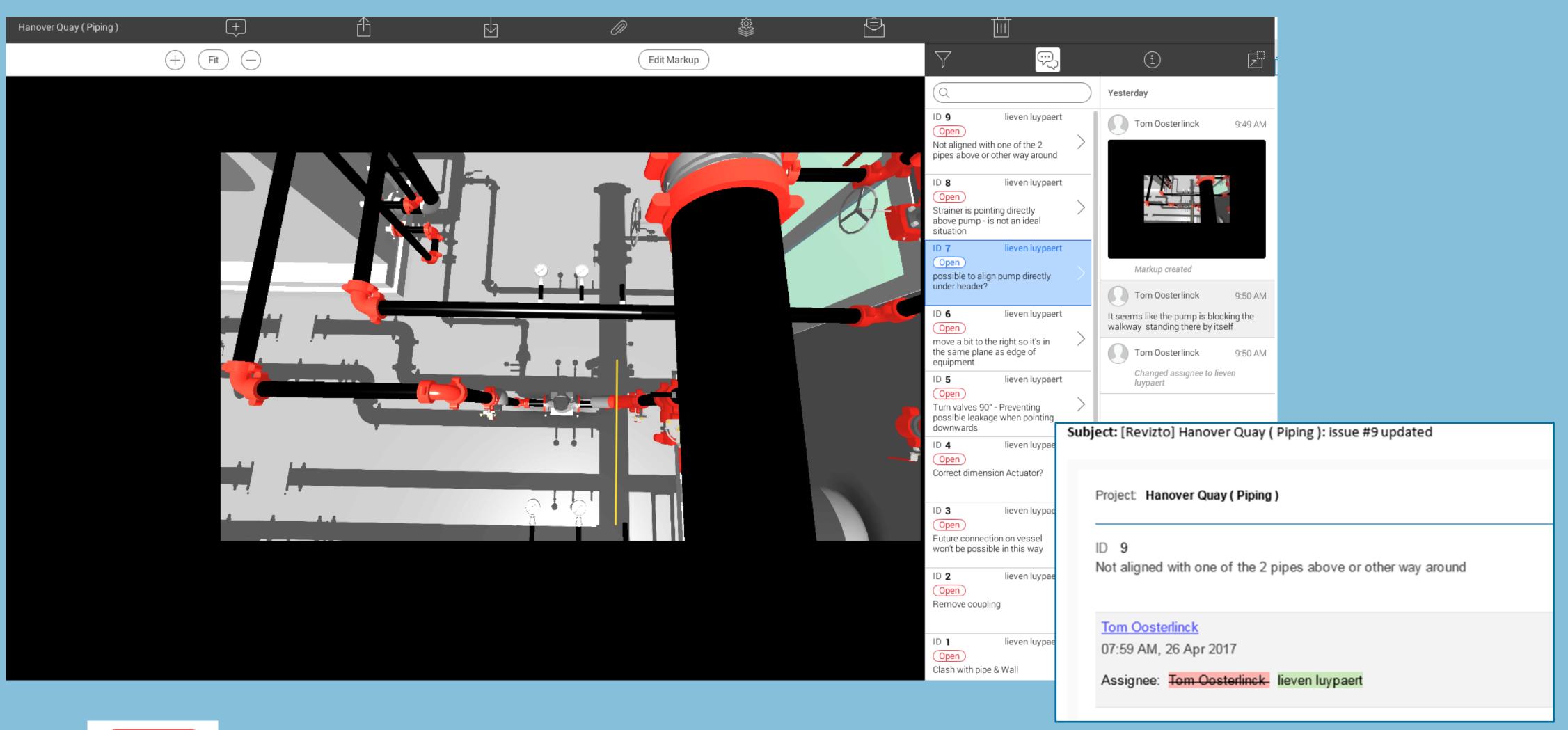
Collaboration

Collaboration

- Customer
- Colleagues globally
- Coordination with other trades
- Model Review
- Virtual Reality
 - Model Review
 - System Review









Collaboration



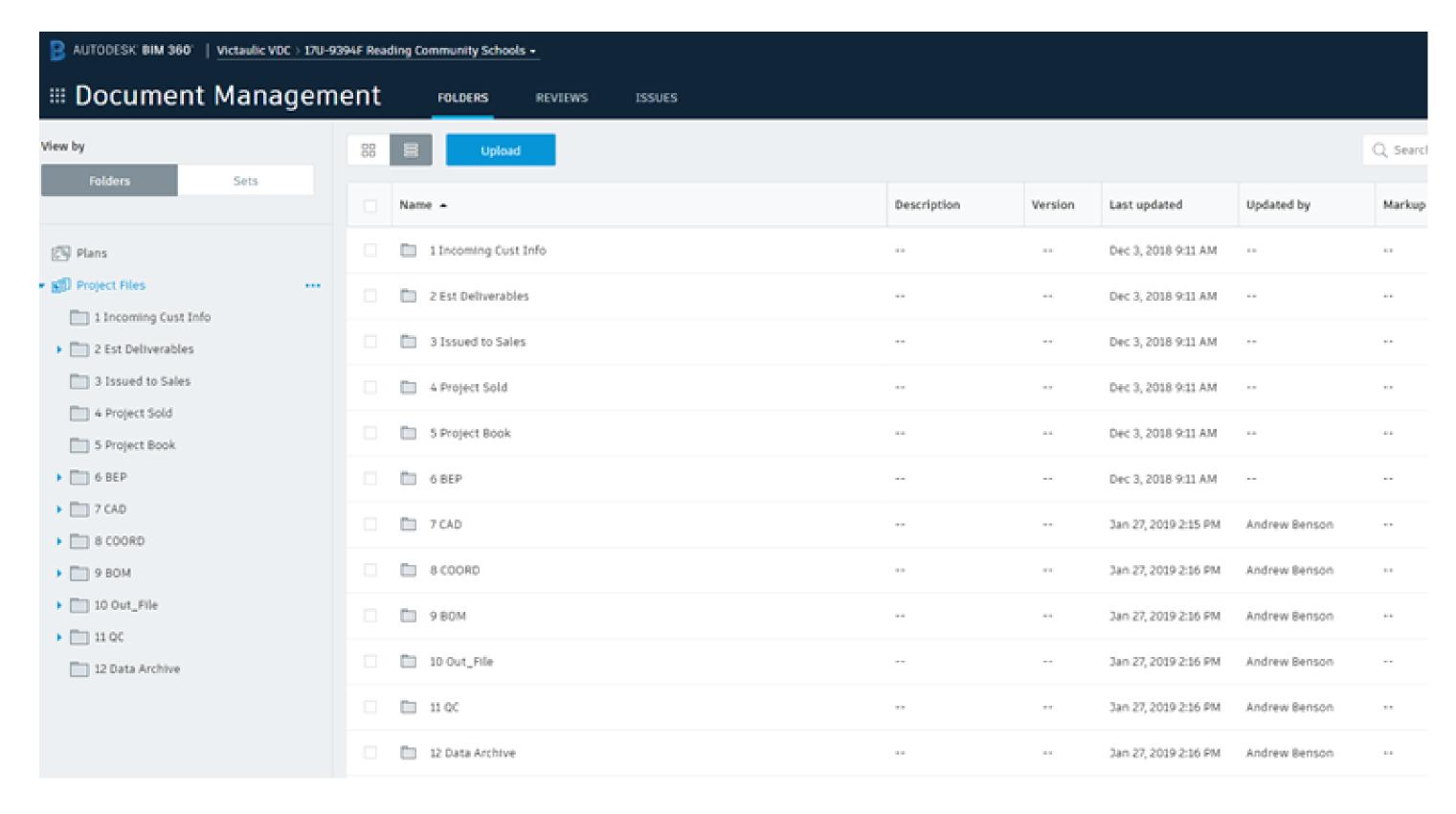
revizto

Victaulic loans you a license during the course of the project.

Document Management

- One source of truth for all documentation
- Documentation revisioning
- Less email communication clutter
- Cloud based replication servers

Media	Pre Docs	Post Docs
Servers	3	1
Network Drives	5	0
Replications	5	0
Folders	>250	<40
Project Files	8	1





Went from 270 folders to 27! Fully automated project creation process



Project Reporting Information and Management

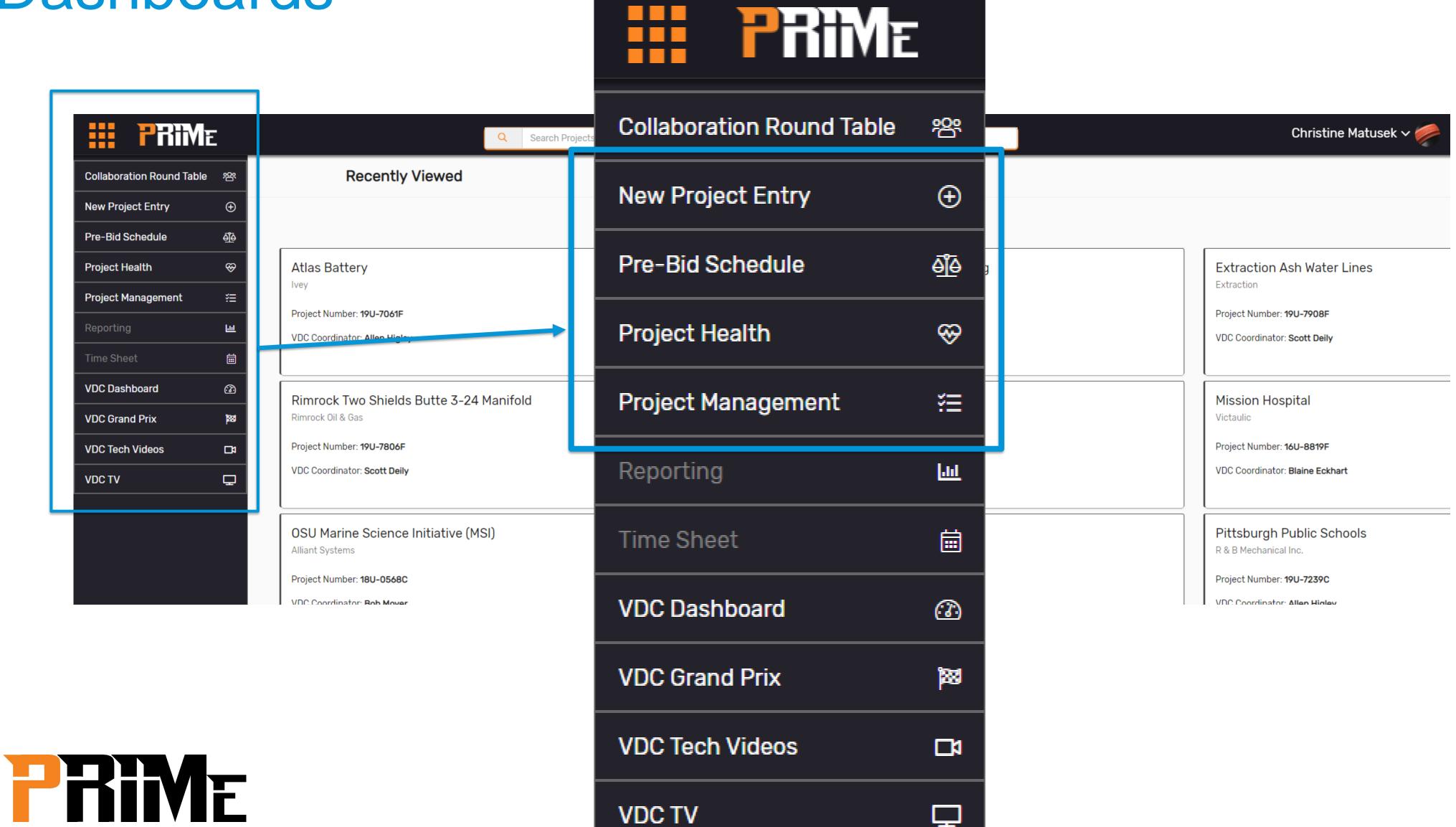


PRIMe is a web-based tool designed for VDC, by VDC, that incorporates multiple functions of the VDC business.

- Pick one
- Re-use the one inside the company
- Try it out



Source: Gartner (February 2019)



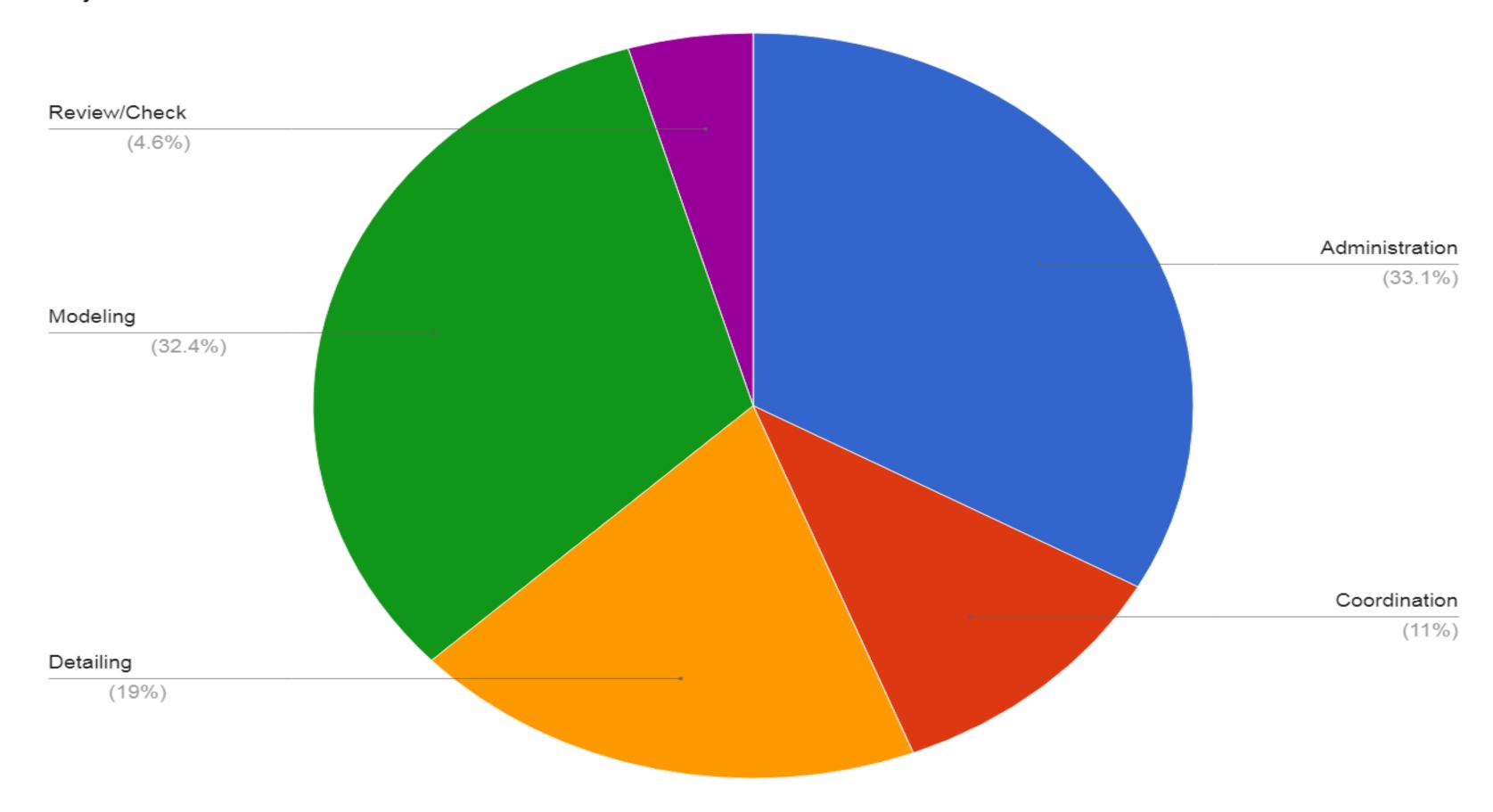
End-to-end project lifecycle management

VDC More than modeling

- Project Intake
- Project KOM
- Project Review
- Piping LYT
- Review
- ABOM
- Internal coordination
- External coordination
- EQP Modeling
- Fab spools

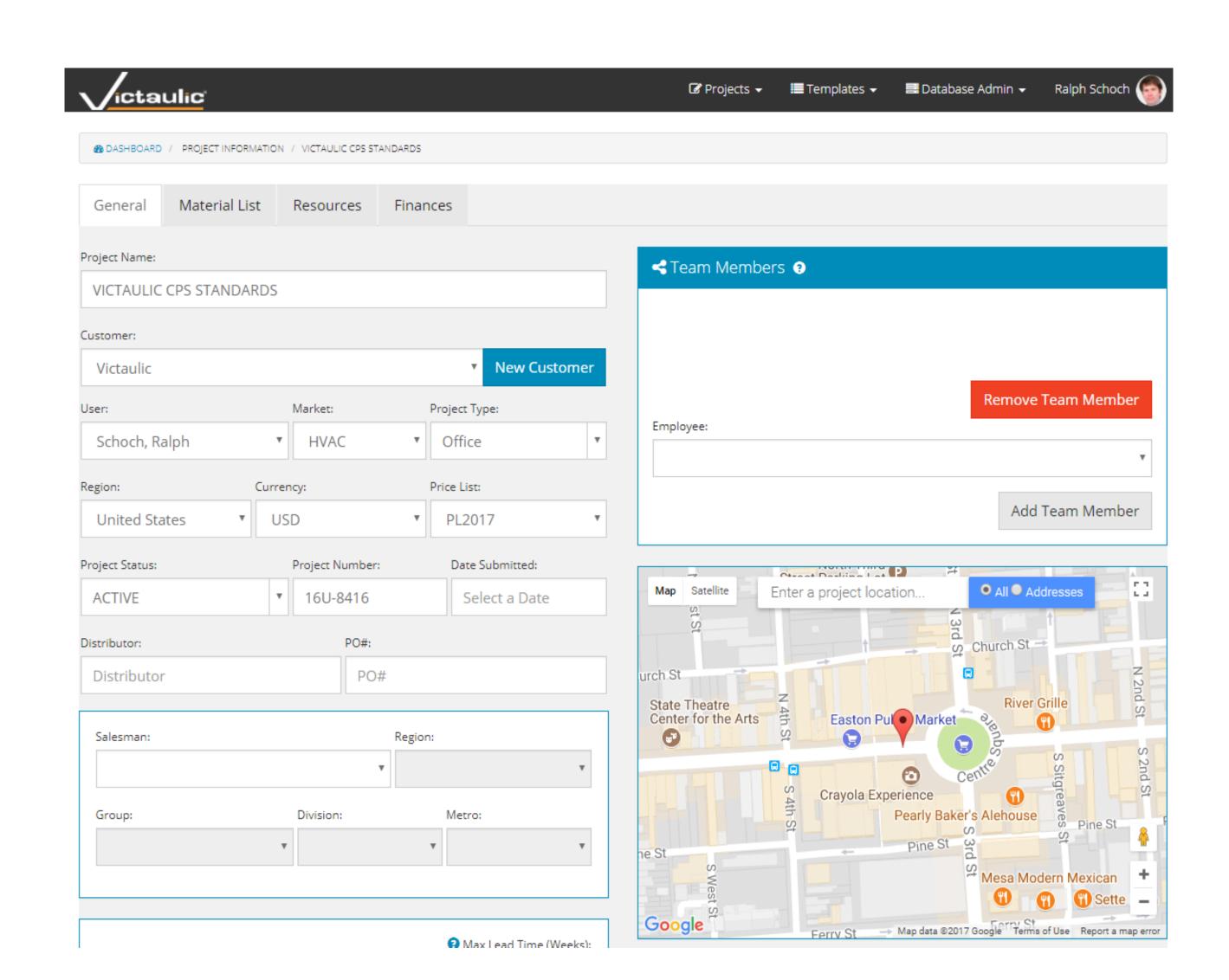


Project Hours Distribution 2018 to 2019 for US



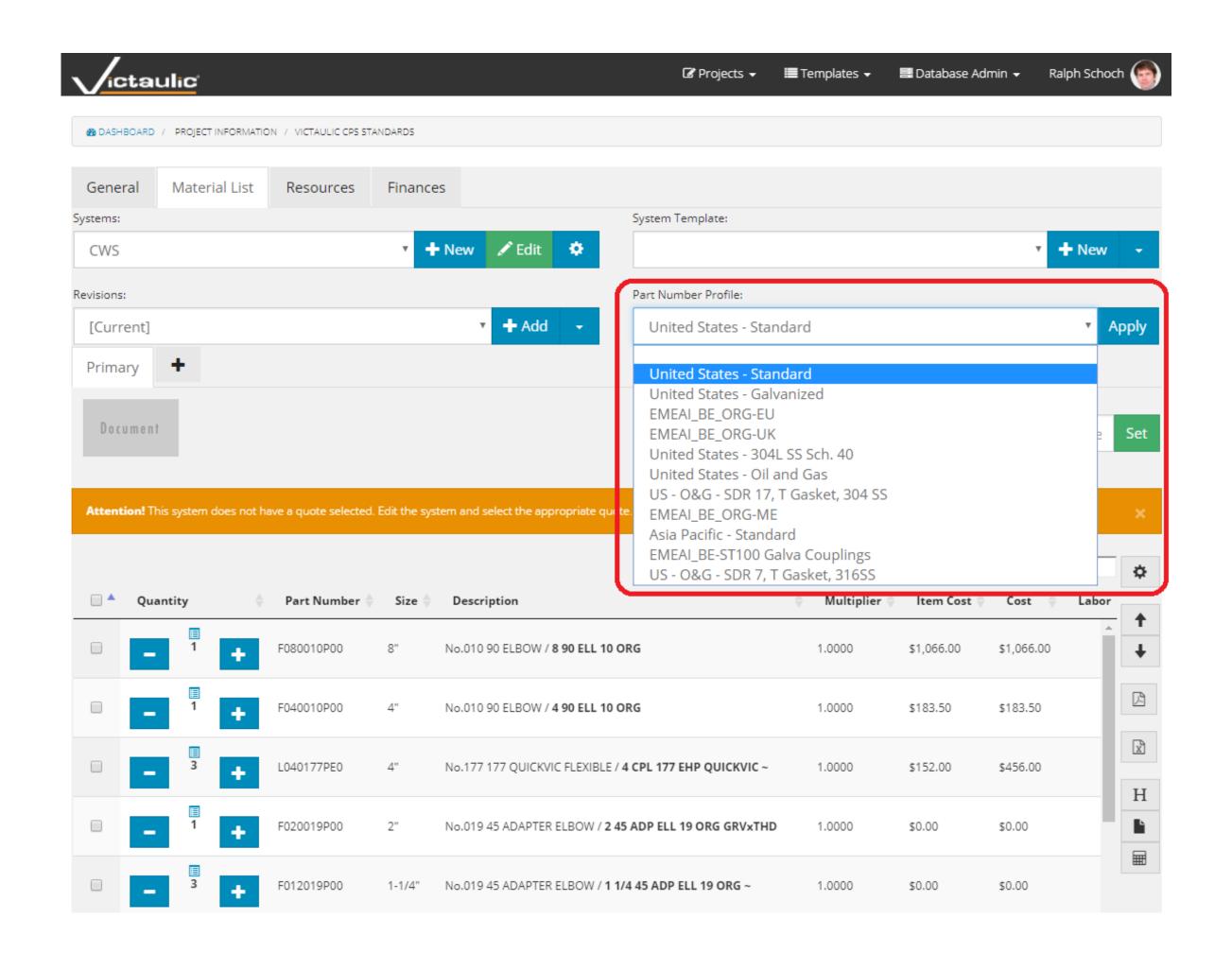
- Projects
- Resources
- Scheduling
- Bill of materials
- Cut length sheet pipes
- Instant comparisons
 - Price
 - Material differences





Dashboard – Bill Of Materials

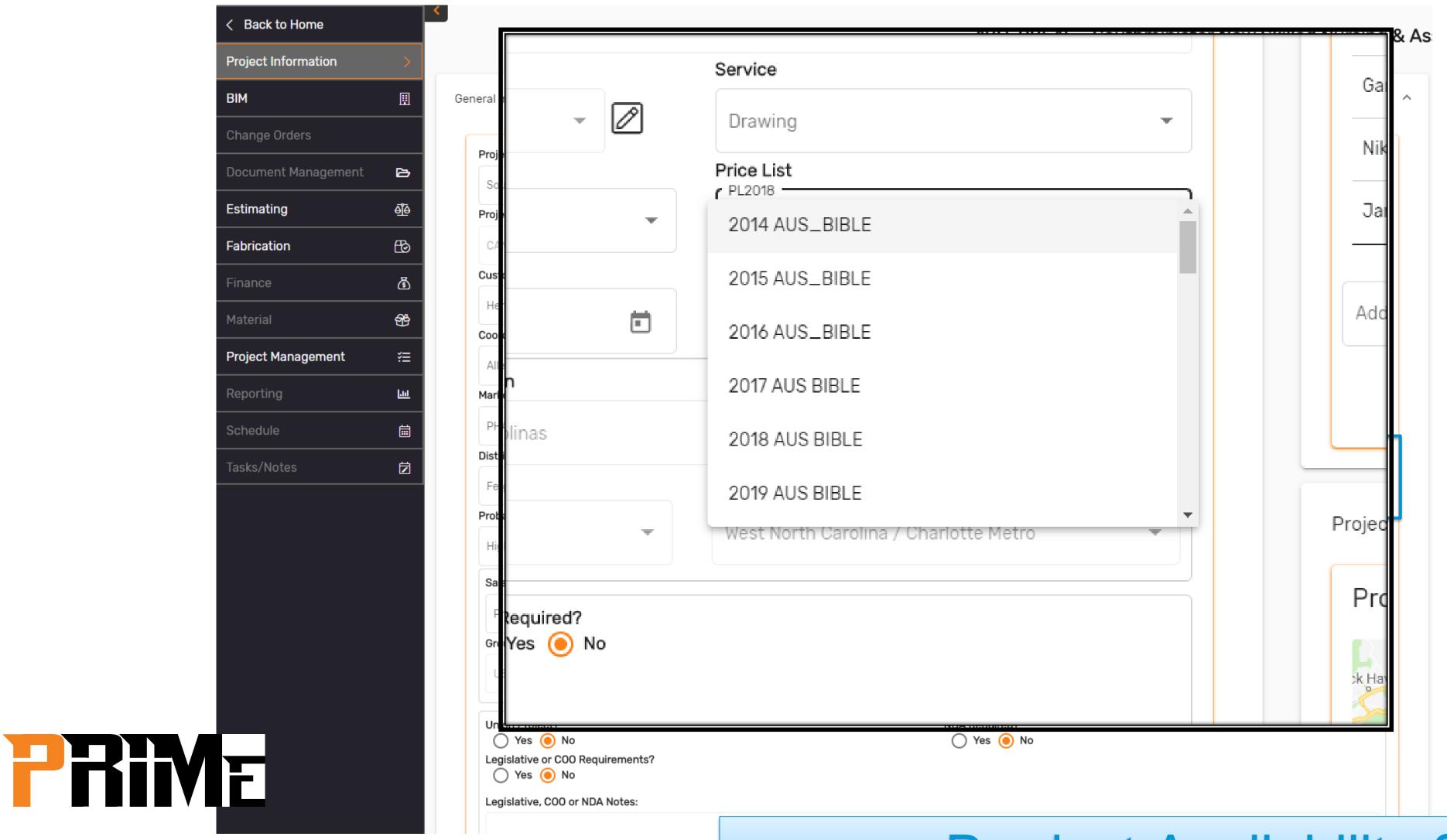
- Partnumber profile
 - Painted
 - Galvanized
 - Stainless Steel
 - Gasket selection
 - Region specific products
- 1 revit family = multiple partnumbers





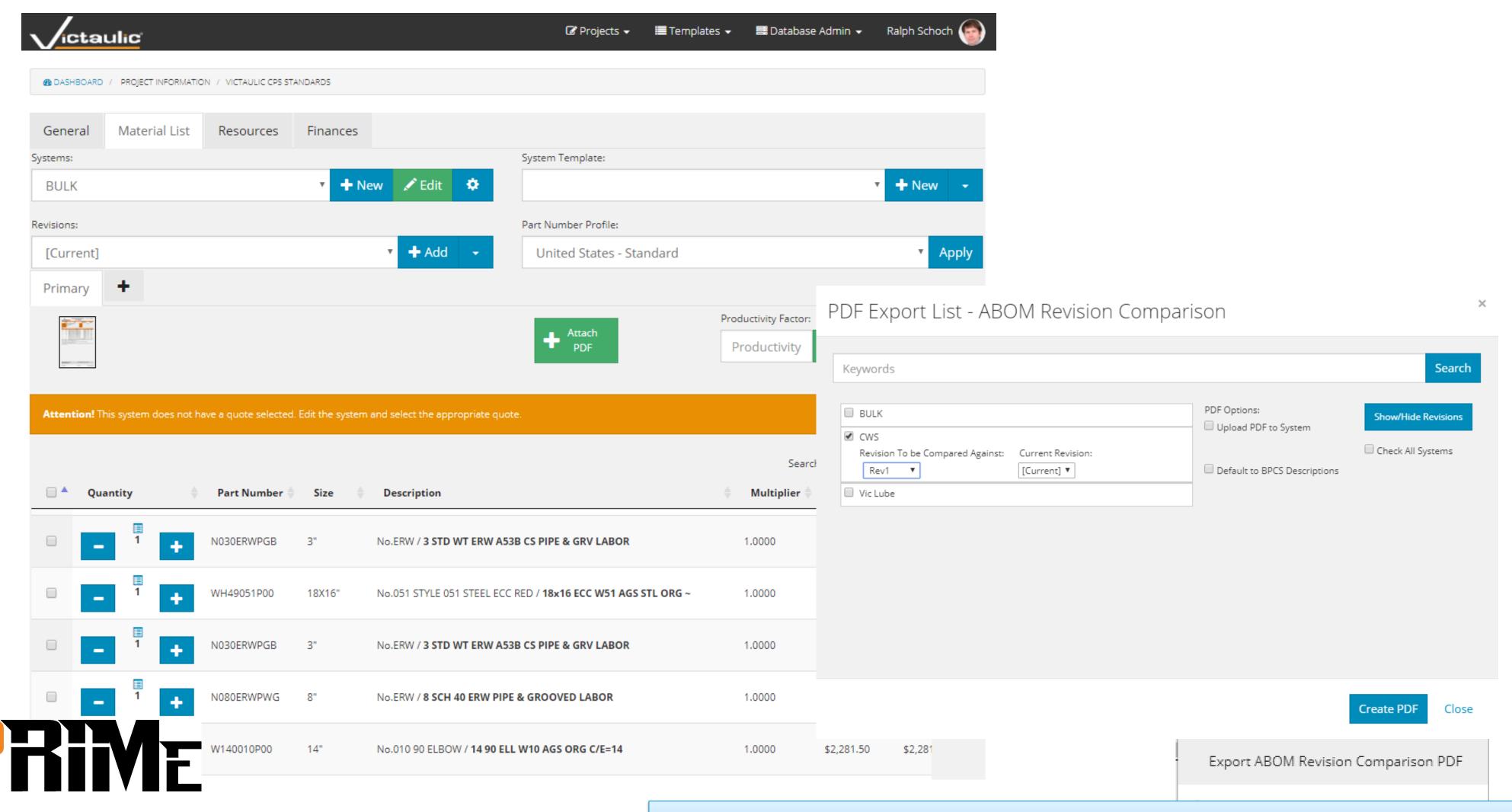
Correct Product Selection

Dashboard – Bill Of Materials



Product Availability Service

Dashboard - Budget Control

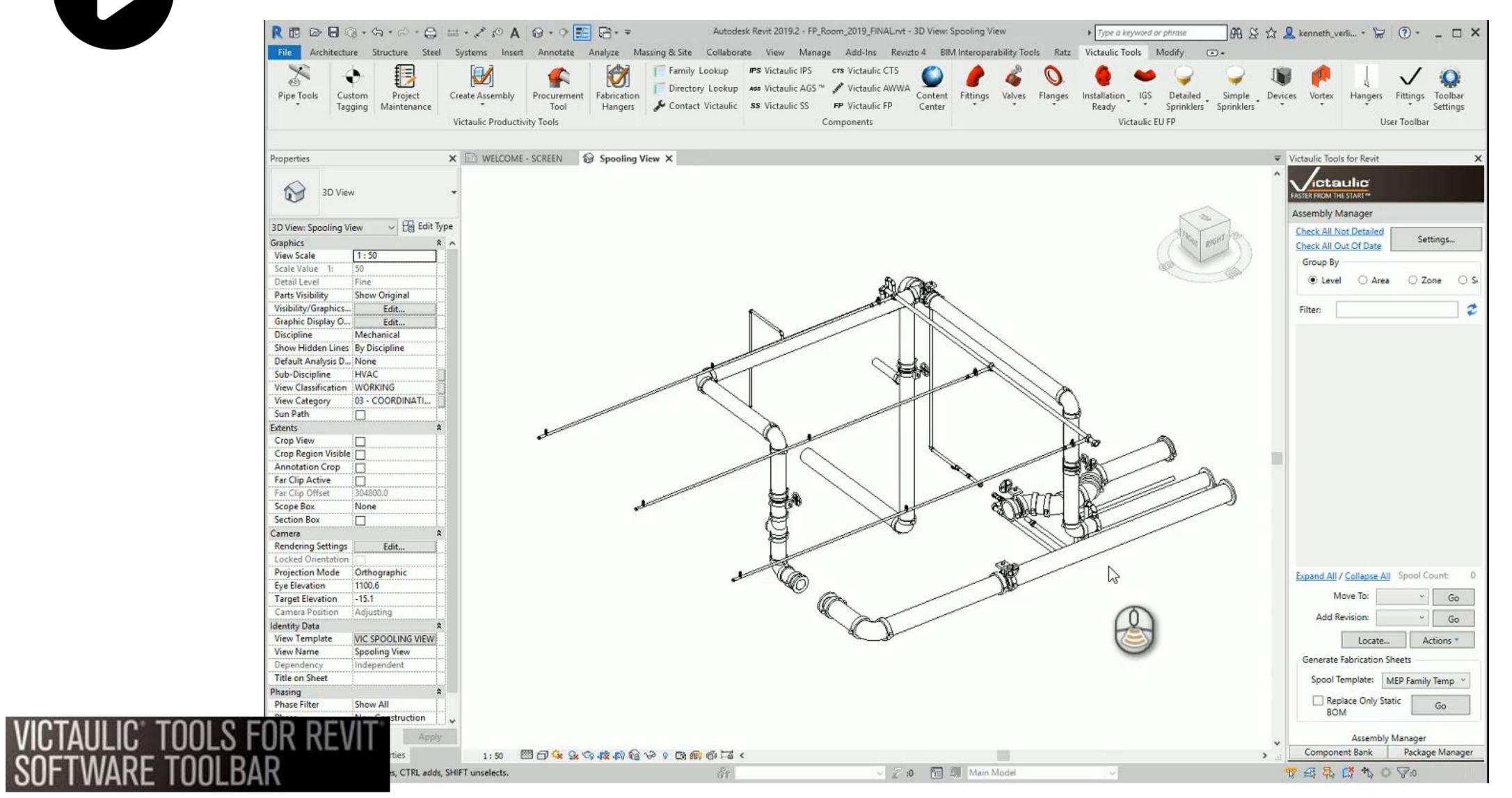


Continuous Project Health Check

Prefabrication

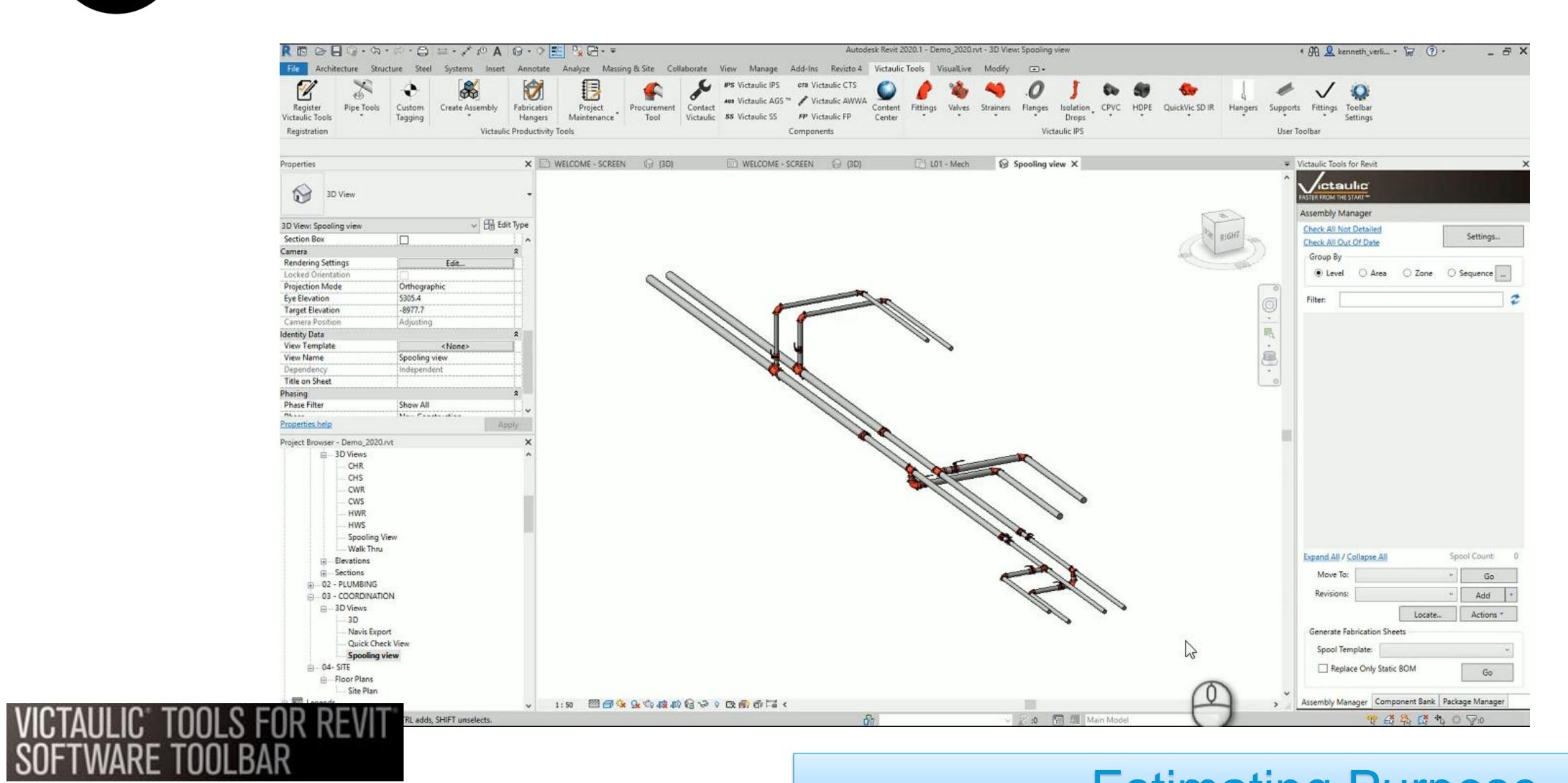


Selecting Spools



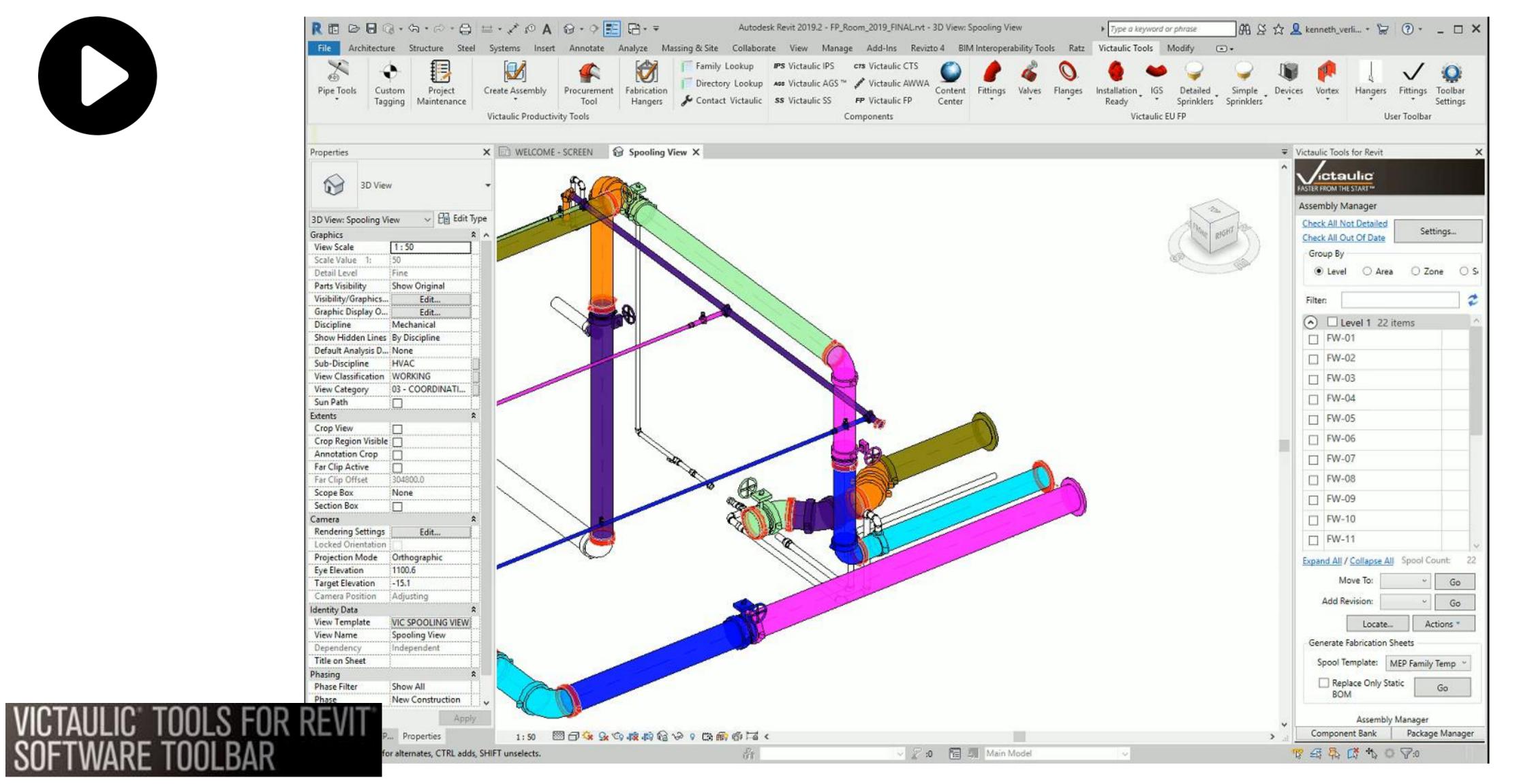


Auto Spooling



Populating Spools





AGS - ADVANCE GROOVE SYSTEM

BC - BY CONTRACTOR BE - BEVELED END FCS - FIELD CUT TO SUIT FOB - FLAT ON BOTTOM FOS - FLAT ON SIDE

FOT - FLAT ON TOP FV - CONTRACTOR TO FIELD VERIFY

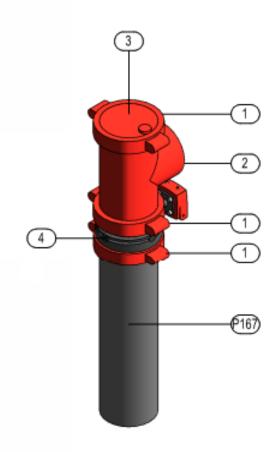
PE - PLAIN END TYP - TYPICAL VG - VICTAULIC GROOVE

FJ - FIELD JOINT

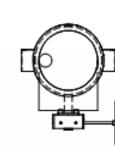
ALL DIMENSIONS ARE FROM CENTERLINE OF PIPE OR END OF PIPE, UNLESS OTHERWISE NOTED.

2. FAB NUMBER IS TO BE MARKED ON TWO SIDES OF

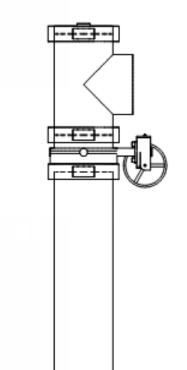
Mark	Qty	Size	Description	End Prep	Length
1	3	DN250	VIC QUICKVIC COUPLING STYLE 107N (RIGID)		
2	1	DN250	VIC TEE No 20		
3	1	DN250xDN15(T)	VIC IPS CAP No 60 w/Tap		
4	1	DN250	VIC-300 MSTRL BUTTERFLY VALVE W/GO		
P167	1	DN250	PIPE: ASTM A-53, ERW, BLACK STEEL, SCH 40	(VGxVG)	952mm











300-500 spools average project:

Views placed

View templates assigned

BOM/Schedules placed

Stamps

Barcode/QR code

Zone 2

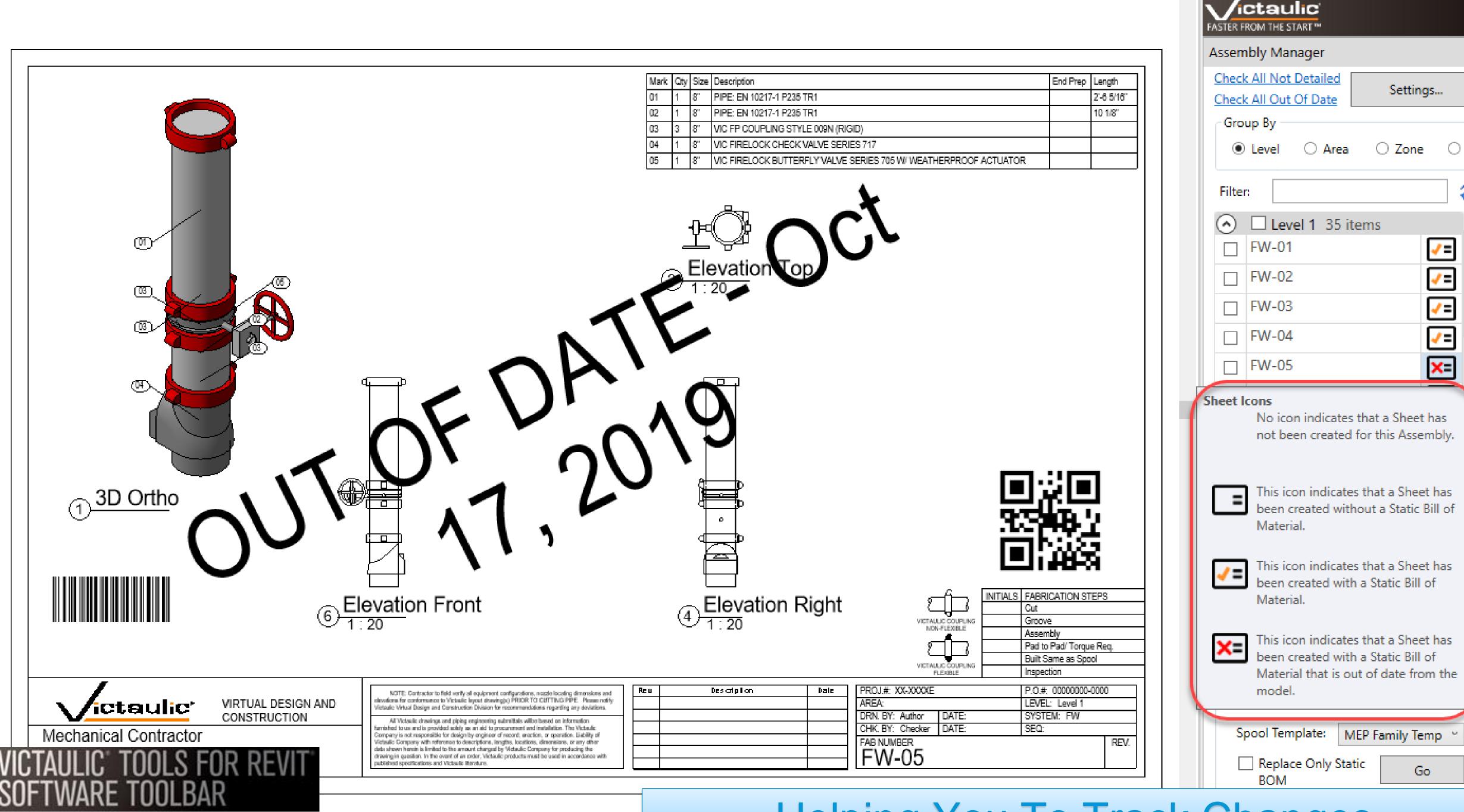
Ctaulic Construction Piping Services

NOTE: Contractor to field verify all equipment configurations, nozz elevations for conformance to Victaulic layout drawing(s) PRIOR TO CUT Victaulic Construction Piping Services Division for recommendations regar

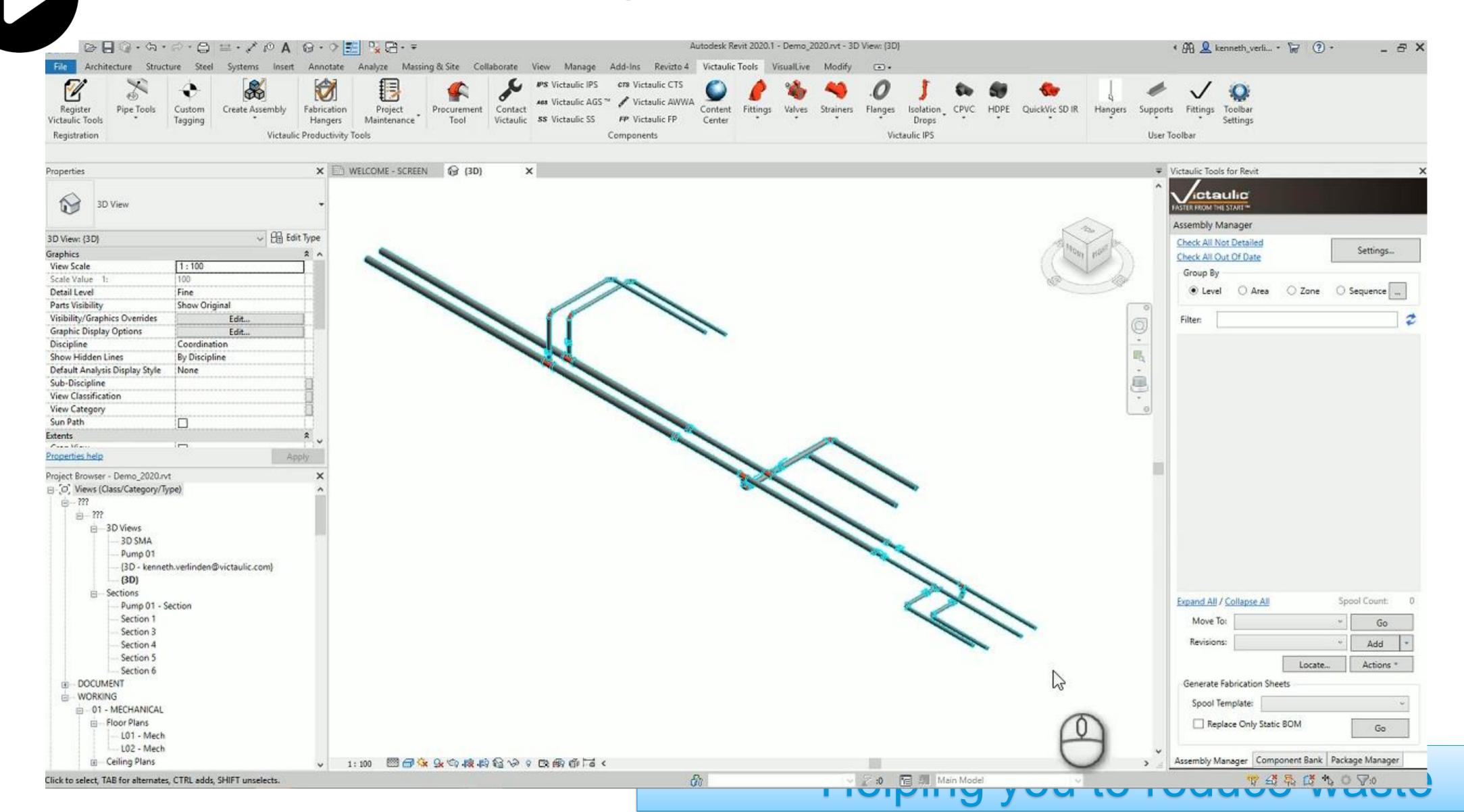
All Victaulic drawings and piping engineering submittals willbe based furnished to us and is provided solely as an aid to procurement and installs Company is not responsible for design by engineer of record, erection, or or Victaulic Company with reference to descriptions, lengths, locations, dimer data shown herein is limited to the amount charged by Victaulic Company drawing in question. In the event of an order, Victaulic products must be us

published specifications and Victaulic literature.

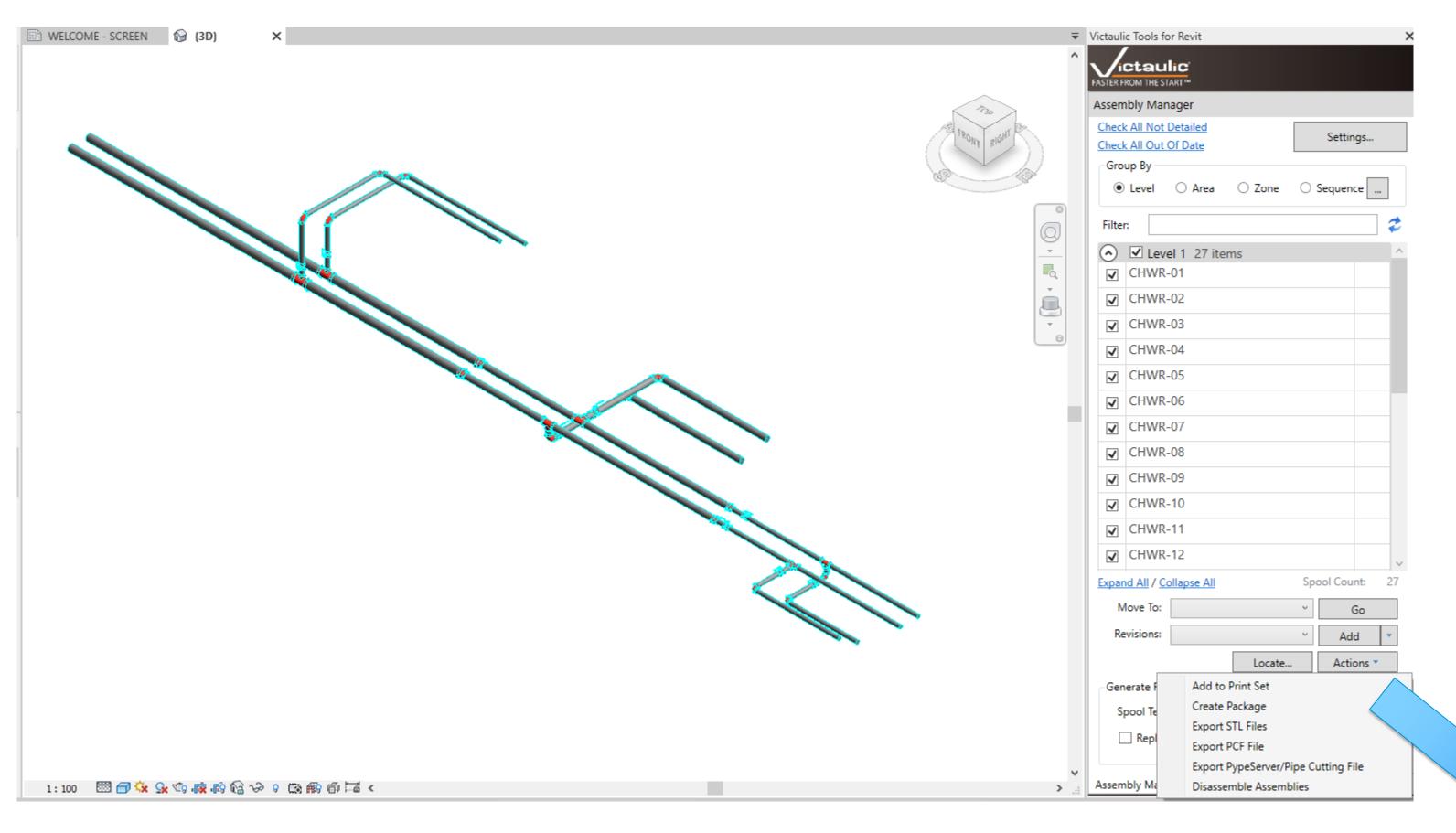
VICTAULIC TOOLS FOR REVIT SOFTWARE TOOLBAR



Cut lengths optimization



Cut lengths optimization – 3rd party



Add to Print Set

Create Package

Export STL Files

Export PCF File

Export PypeServer/Pipe Cutting File

Disassemble Assemblies



Jobsite Assistance

Jobsite Assistance

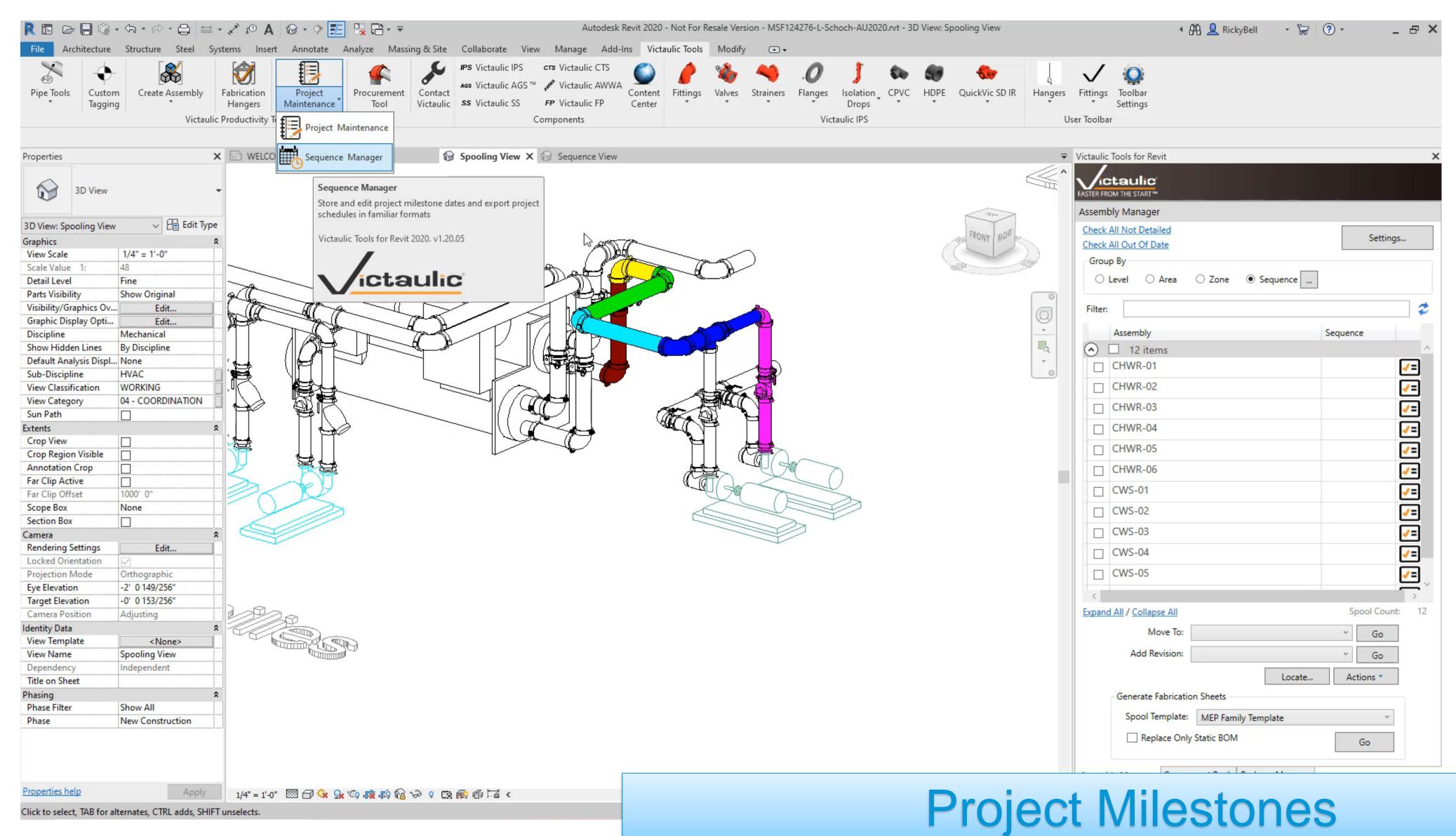
- Material Management
- Fabrication Map
- Sequencing
- # zones
- Spool identification
- Just in time delivery







Sequence manager





Tracking of Spools



Victaulic Tools for Revit Third Party Application Integration

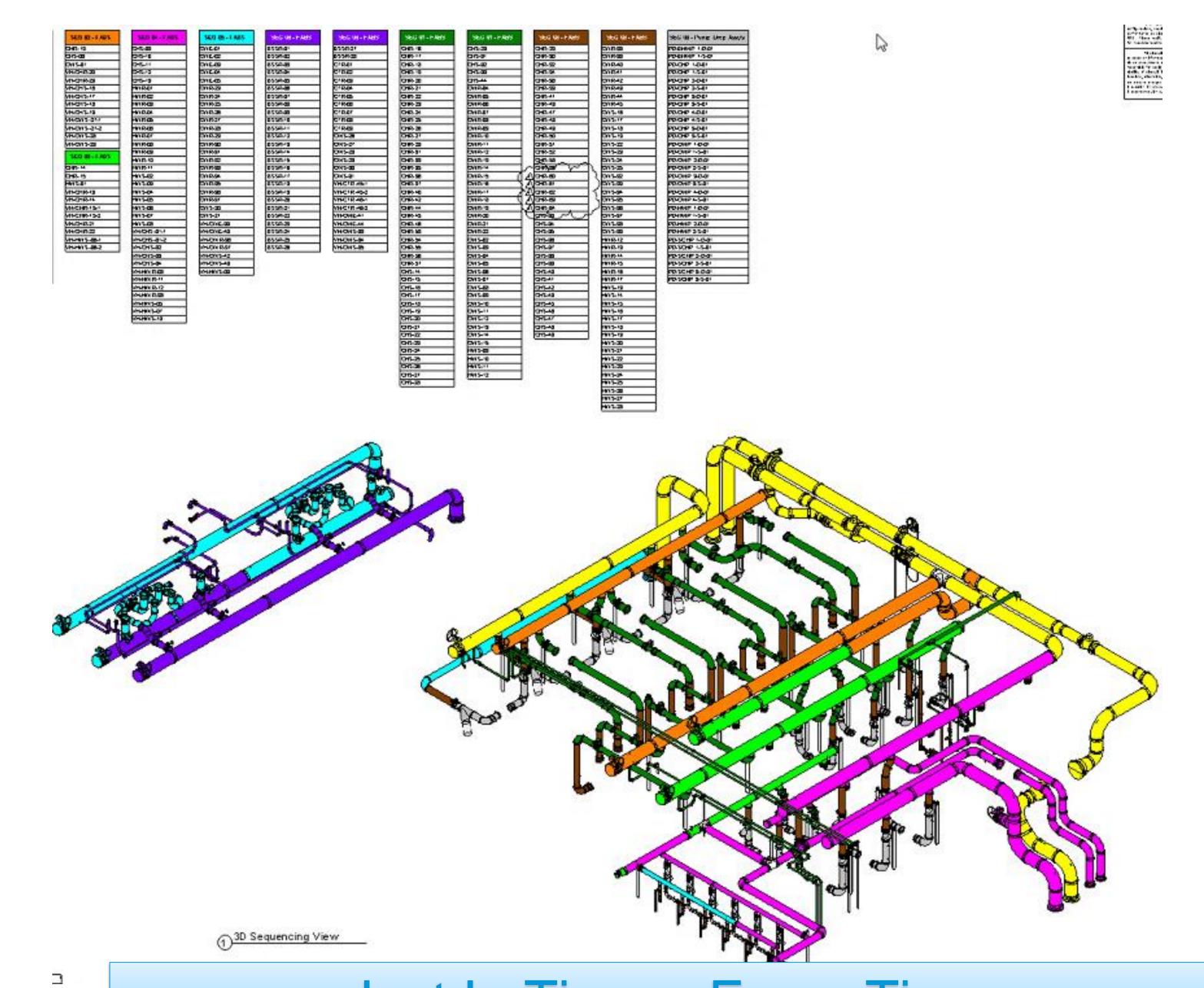
With GTP Stratus

Integration Other Platforms

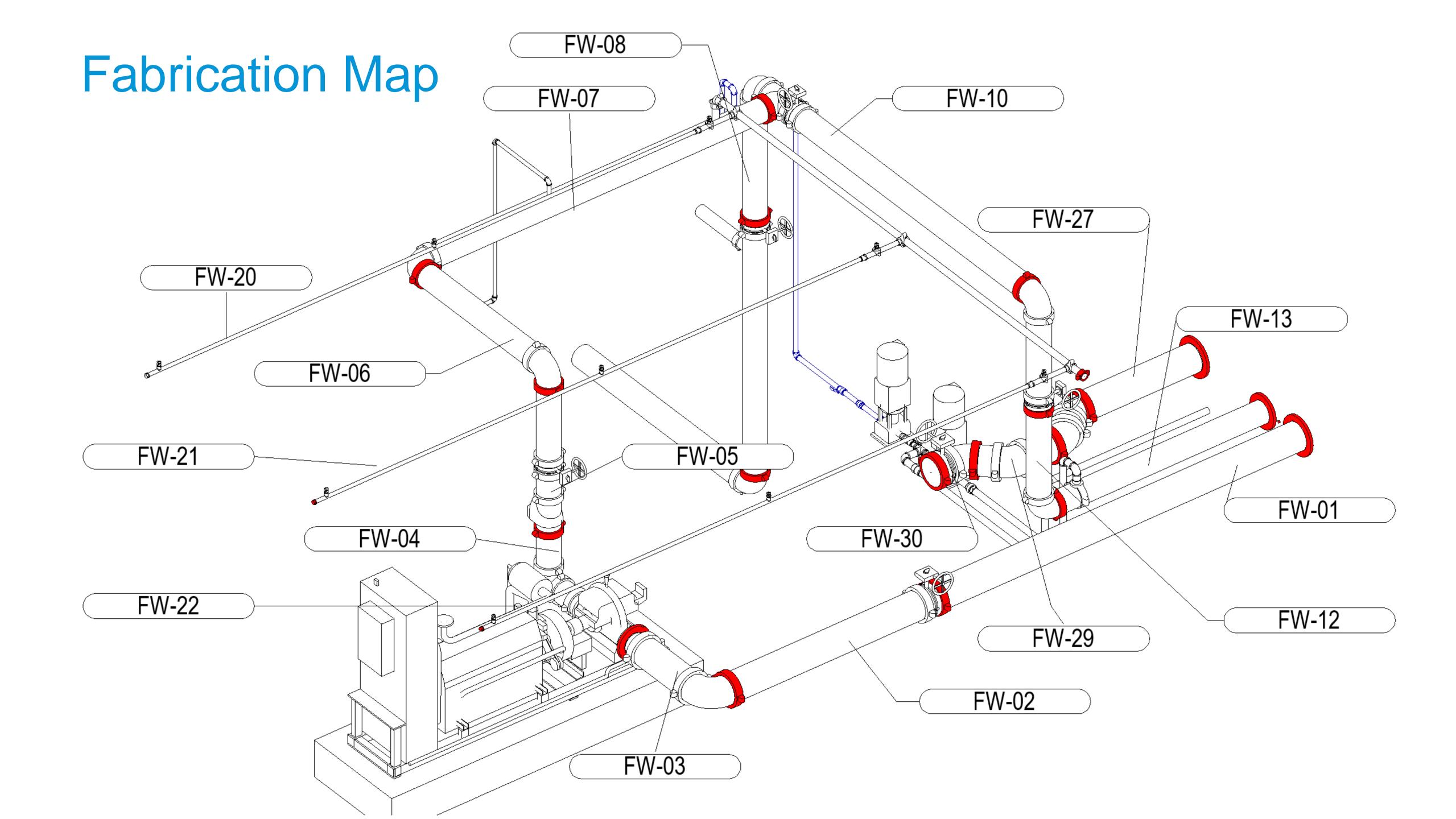
Material Management



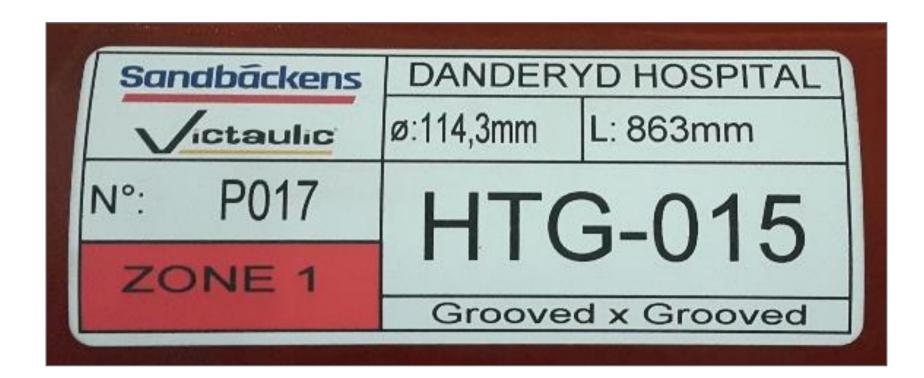




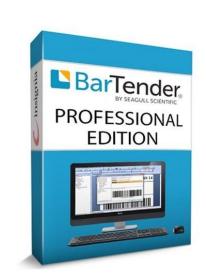
Just In Time – Every Time



Spool Identification



Project name :	CYRUS ONE		Deliver	y Date On site :			
Project number :	19E-7353C			Pipe:	Carbon Stee	icta	I®
Zone:	Zone 2 - Main Loop	_CRACS		•		Victa	ulic
Country Size:	EU		(FCS) =	Real Size + 6"			
Area	Pipe Size	Quantity	Pipe Tag	Pipe length (mm)	DN _	Pipe end conditions	Field Cut
Zone 2 - Main Loop_CRACS	219.1mm	1	P-200	6000	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-201	2104	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-202	6000	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-203	2104	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-204	6000	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-205	2104	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-206	6000	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-207	2104	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-208	6000	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-209	2103	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-210	6000	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-211	2103	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-212	6000	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-213	2103	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-214	6000	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-215	2103	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-216	4759	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS		1	P-217(FCS)	450	200	OGS Groove x Plain	YES
Zone 2 - Main Loop_CRACS	219.1mm	1	P-218	4196	200	OGS Groove x OGS Groove	NO
Zone 2 - Main Loop_CRACS	219.1mm	1	P-219(FCS)	450	200	OGS Groove x Plain	YES
Zone 2 - Main Loop_CRACS	219.1mm	1	P-220	4759	200	OGS Groove x OGS Groove	NO







Modularization – Skids - Packages

Packages - Skids - Modules





Packages - Skids - Modules



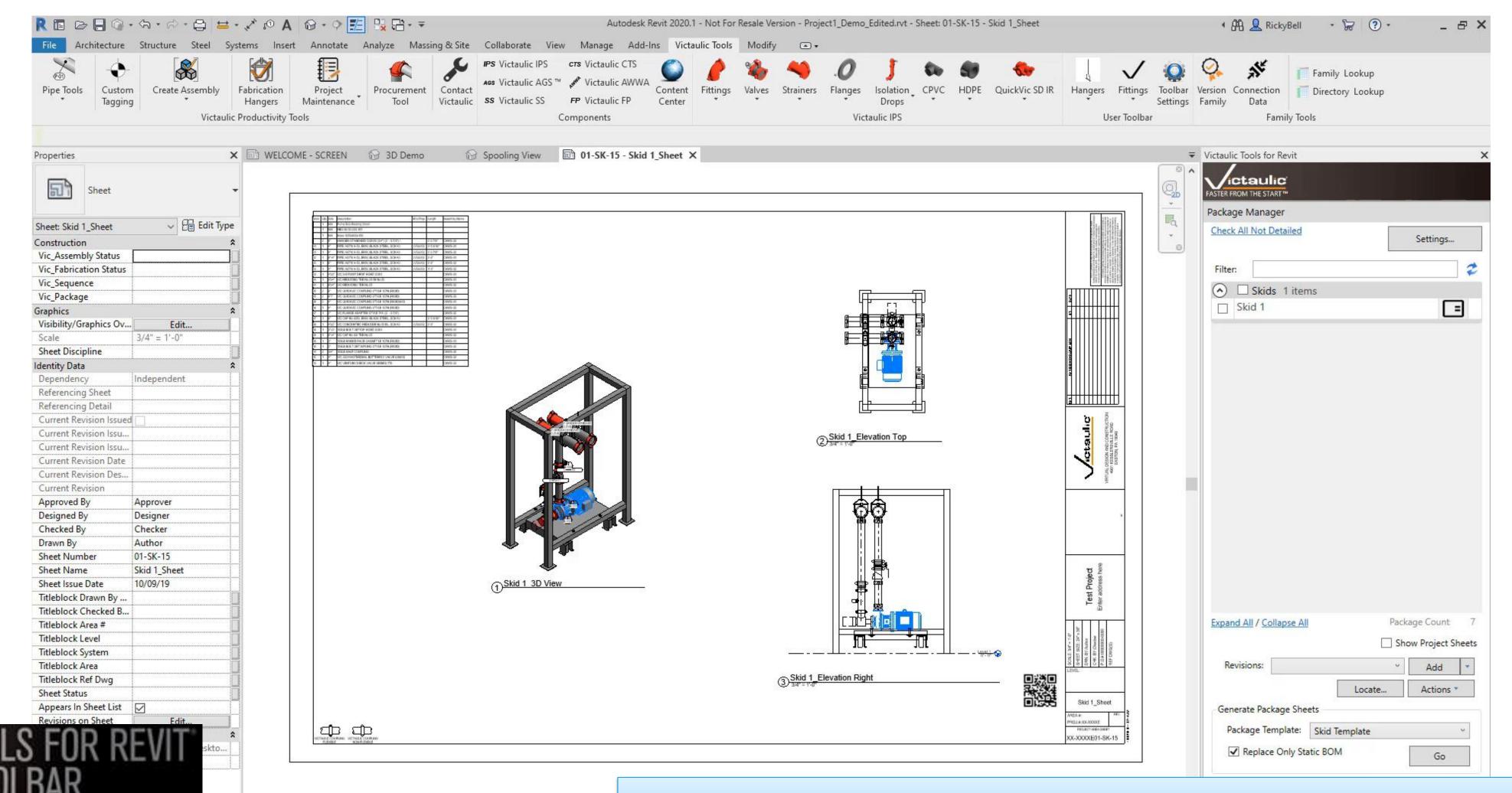




N3 8 <

Click to select, TAB for alternates, CTRL adds, SHIFT unselects.

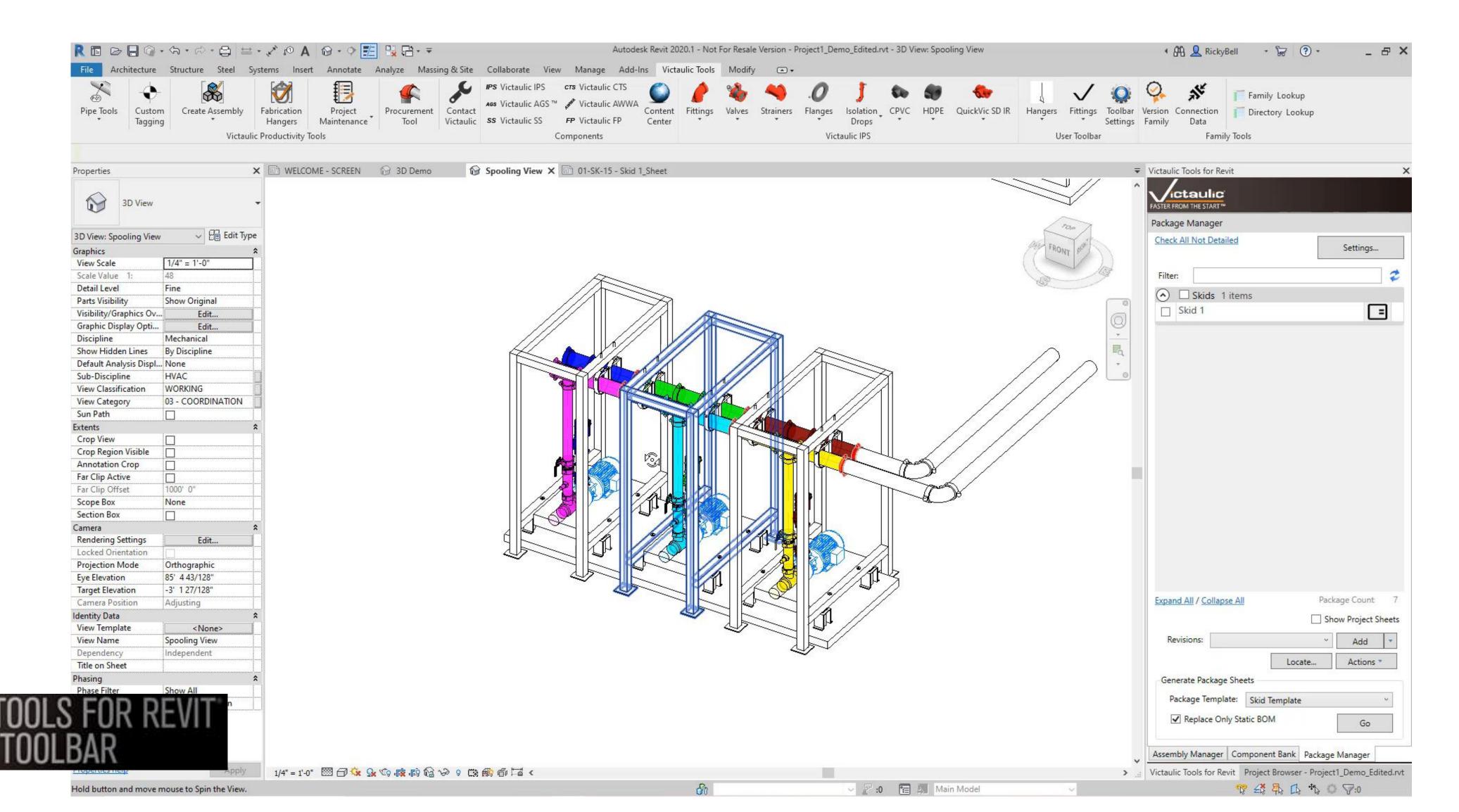
Packages



Can handle multiple assemblies



Packages

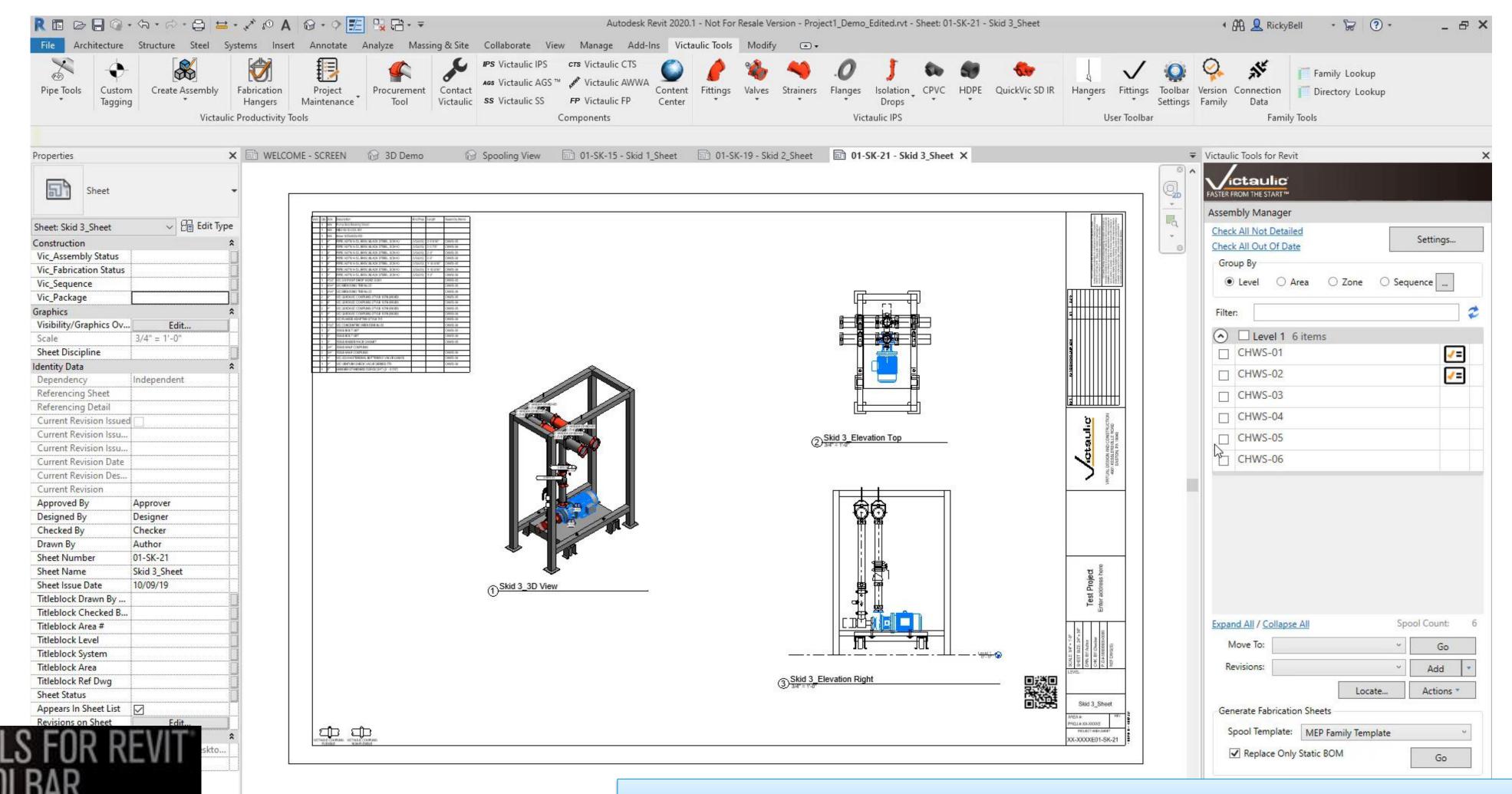




N3 8 €

Click to select, TAB for alternates, CTRL adds, SHIFT unselects.

Fabrication Map



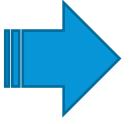
Automating Fabrication Map

Info Customer

Schematic drawing Layout drawing Technical Datasheets

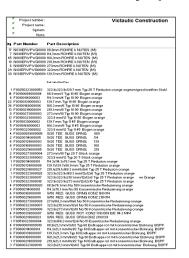






ABOM

Early stage BOQ Avoid delivery problems

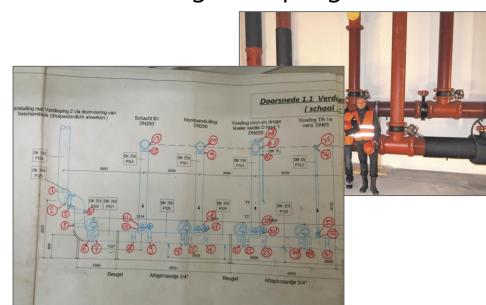


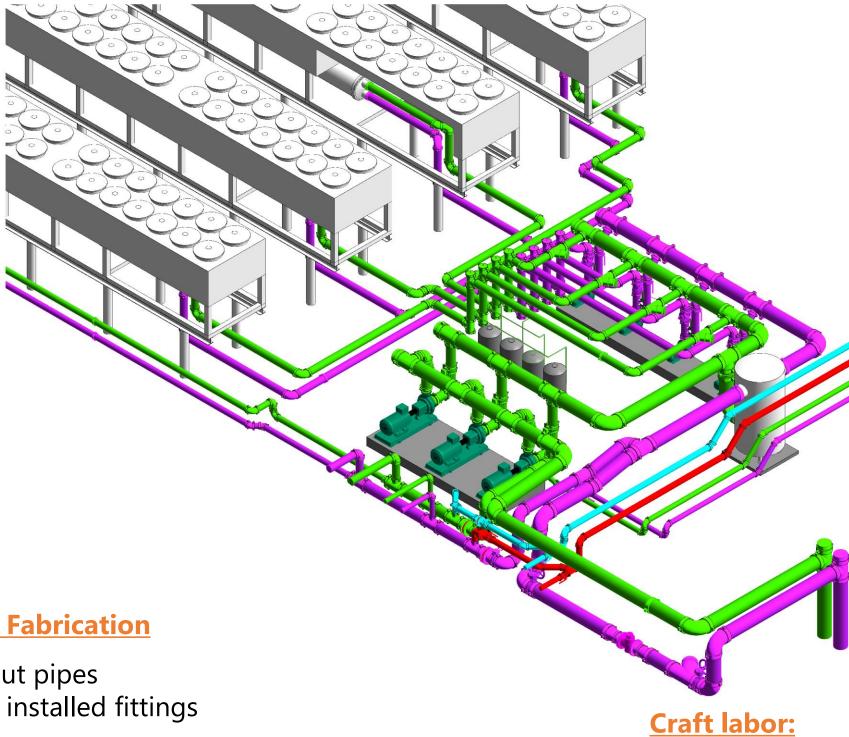
Reality check structural & civil situation



Victaulic Inspection Service

Metal to Metal Torque requirement Positive Offset rigid couplings





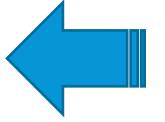
Victaulic Fabrication

Pre cut pipes VicSticks: Pre installed fittings









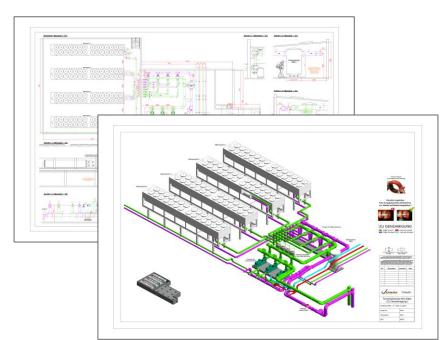
Increase productivity on site Bag&Tag

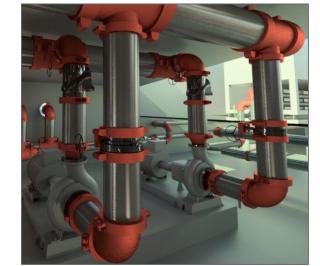




3D Design

Revit model Drawing layout "For Approval "





Collaboration





Construction BOM + Cut <u>lengths</u>

Project number : . Scytem :	Kälte - Technik		ictaulic
			Victaulic
Note:	Lechnikzentra	de Kälte – Gebiete 2 (
			CONSTRUCTION PIPING SERVICES
Gebiete	Quantitit	Produkt nummer	Product Beschreibung
T.R Gebiete 2	92	C01070219000003	St. 107H - 219,1mm Vie Quickvie State Kispplung EPDM / Ocunge
T.R Gebiete 2	27	C0/E1070406000002	St. W07 - 406,4mm Vsc AGS State Kuppling EPDM / Orange
T.R Gebiete 2	24	C01770219000005	St. 177 - 219, Imm Vic Quidric Flenble Kopplung EPDM / Outs
T.R Gebiete 2	4	C07410139000001	St. 741 - 139,7mm Vic Flanschadapter PN10/16 EPDM / Schwarz
T.R Gebiete 2	4	C07310219000007	St. 731D - 219,Imm x 168,Jenn Ansaughiffstox PN10/16 EPDM / Ounge
T.R Gebiete 2	12	F00100219000004	St. 10 - 219, Imm Bogen 90° Orange
T.R Gebiete 2	3	F0W100406000002	St. W10 - 406,4mm AGS Bogen 50° Orange
T.R Gebiete 2	4	P00110219000003	9t 11 - 219,1mm Bogen 45° Orange
T.R Gebiete 2	16	F00200219000005	St. 20 - 219, Imm T - Stricke Orange
T.R Gebiete 2	1	F0W200406000003	St. W20 - 406,4mm AGS T - Stitcke Orange
T.R Gebiete 2	8	F0W250406000007	St. W25 - 406,4mm x 219,1mm AGS Redvaler T - Stricke Orange
T.R Gebiete 2	4	P00500219000021	St. 50 - 219, kmm x 139,7mm Kontentnische Redstäensticke Orange
T.R Gebiete 2	16	P00600219000033	St. C60 - 219, lmm x 26,9mm Endkappe mit konzentnische Bohron BSPF Rot
T.R Gebiete 2	2	F0%600406000002	St. W60 - 406,4mm Endkappe Ossage
T.R Gebiete 2	4	V07160219000001	St. 716 - 219,Imm Brickschlagklappe EPDM / Swharz
T.R Gebiete 2	8	V07610219000003	St. 761 - 219, imm Masterneal Abspecifilappe mit Hebel EPDM / Swhatz
T.R Gebiete 2	1	VW7610406000002	St. W741 - 406/kmm. AGS Masterneal Abspeziklappe mit Handrad EPDM / Swhatz
T.R., Gebiete 2	4	V78800718000001	St. 789 - 219.1mm Strangers/Serventil Oventrop (Not.)











Victaulic and training



Customizable Revit training





Different channels







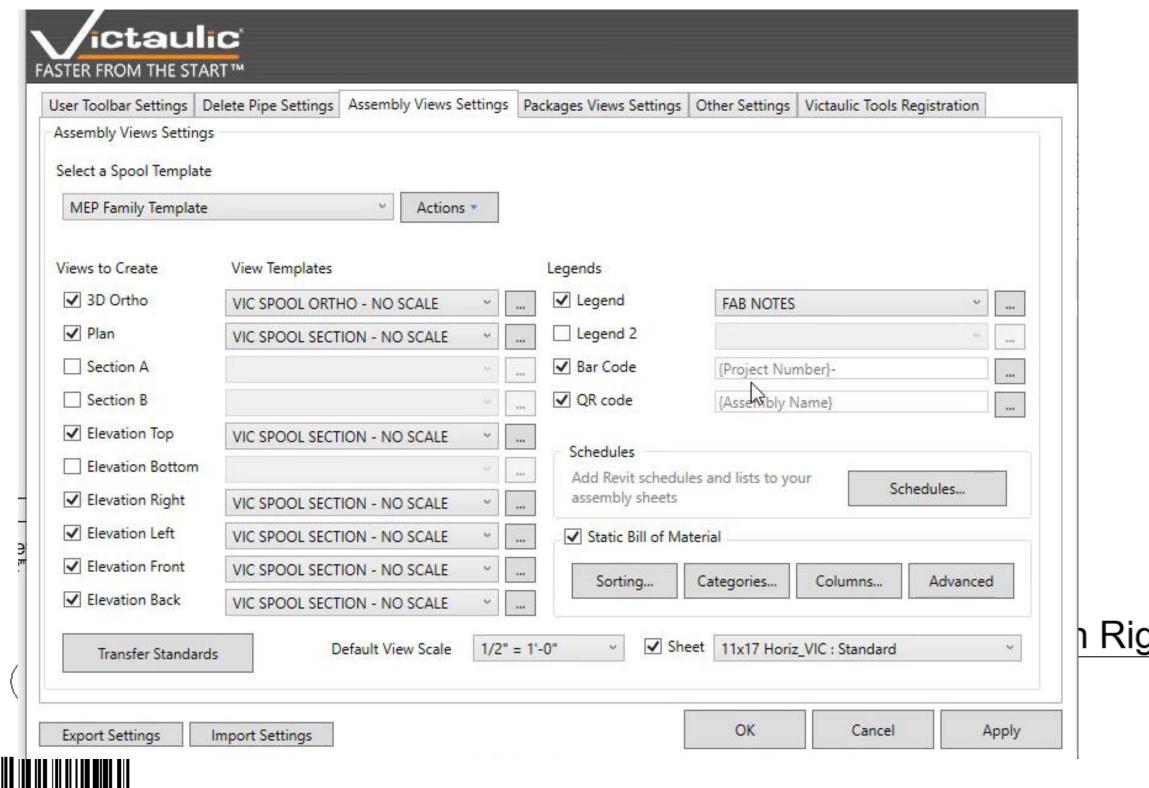
What's Next?

QR Codes

- Link to latest spool drawing
- 3D viewer model



Mark	Qty	Size	Description	End Prep	Length
01	1	8"	PIPE: EN 10217-1 P235 TR1		3'-0 5/8"
02	1	8"	VIC FP COUPLING STYLE 009N (RIGID)		
03	1	8"	VIC FP 90 DEG ELBOW No 001		

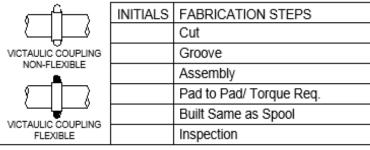




2 Elevation Top

n Right







VIRTUAL DESIGN AND CONSTRUCTION

Mechanical Contractor

Project Name

NOTE: Contractor to field verify all equipment configurations, nozzle locating dimensions and elevations for conformance to Victaulic layout drawing(s) PRIOR TO CUTTING PIPE. Please notify Victaulic Virtual Design and Construction Division for recommendations regarding any deviations.

All Victaulic drawings and piping engineering submittals willbe based on information furnished to us and is provided solely as an aid to procurement and installation. The Victaulic Company is not responsible for design by engineer of record, erection, or operation. Liability of Victaulic Company with reference to descriptions, lengths, locations, dimensions, or any other data shown herein is limited to the amount charged by Victaulic Company for producing the drawing in question. In the event of an order, Victaulic products must be used in accordance with

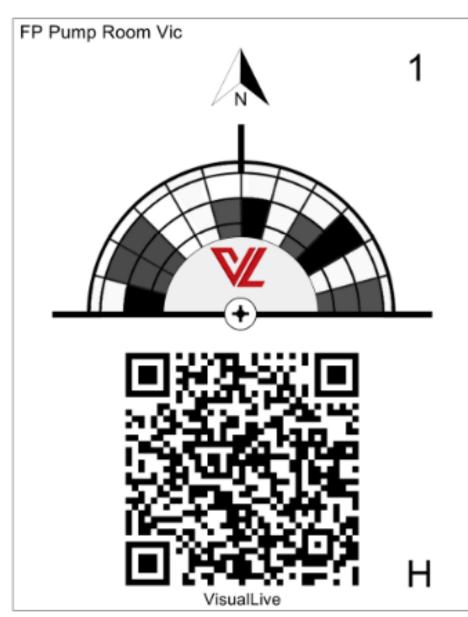
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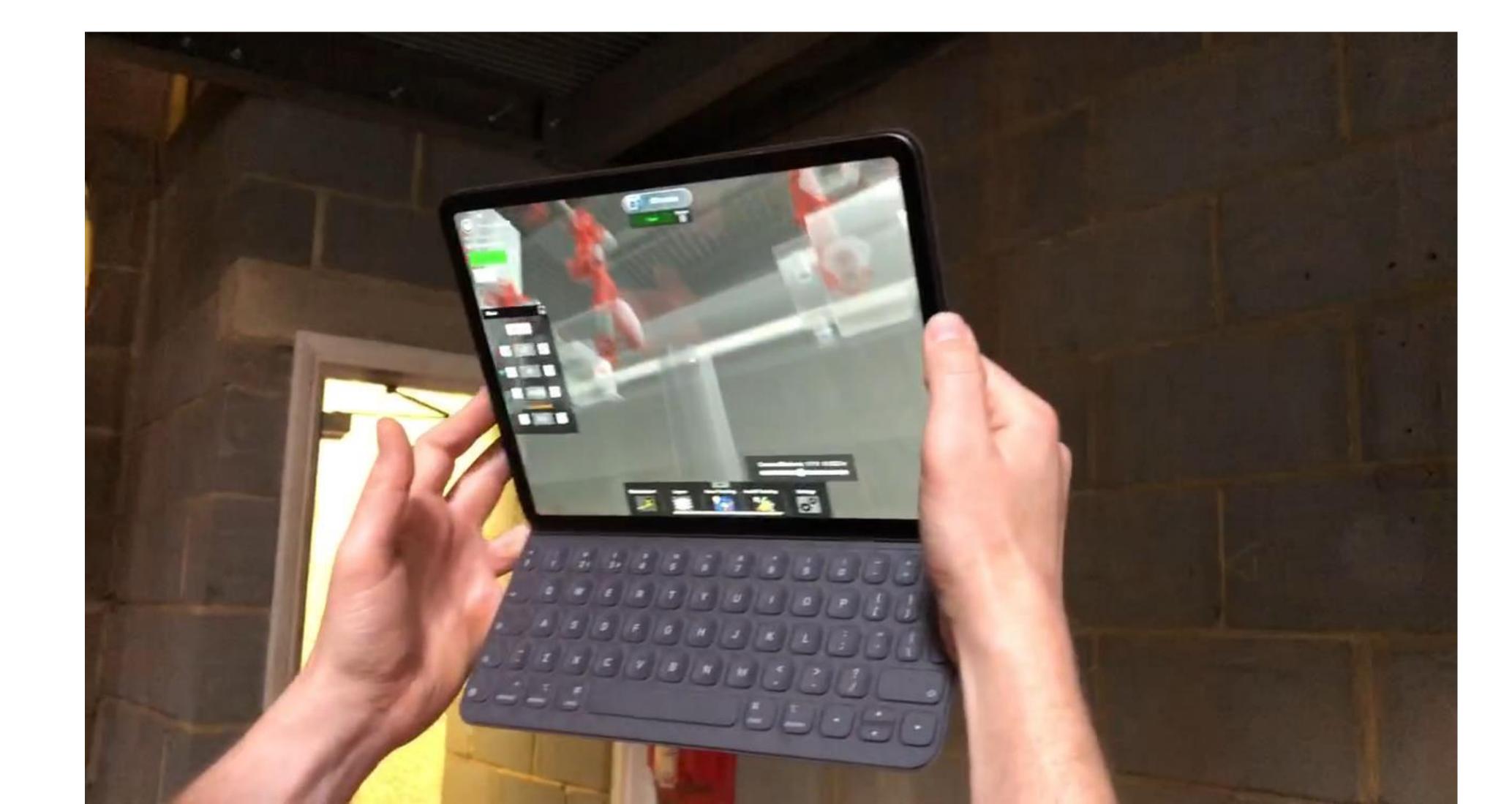






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Questions?



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