

# Whose Version Should We Believe?

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IM223989

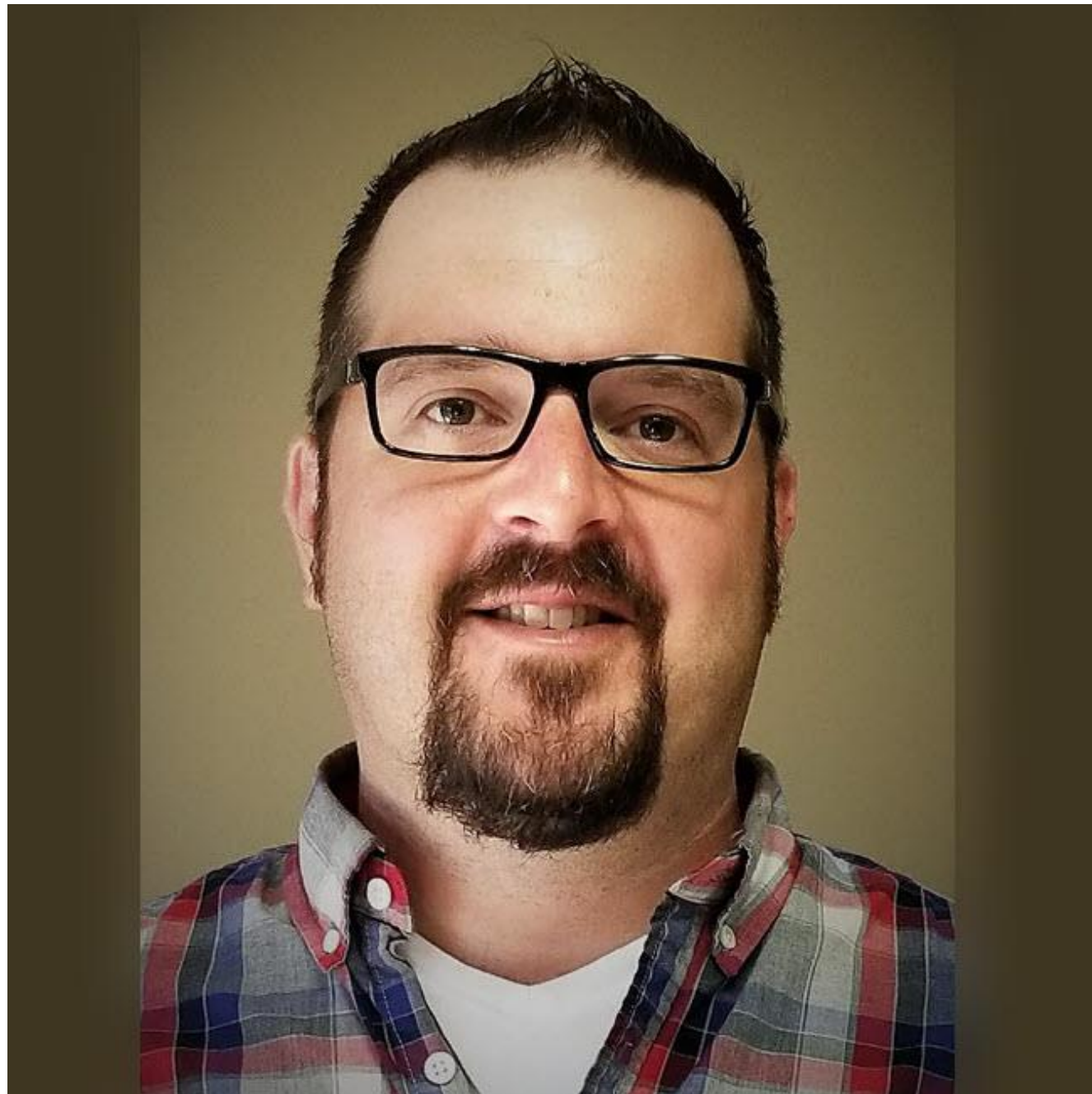




# Class Summary

**Revising the Story with Vault** - This class will introduce you to the powerful tools that are available in Vault Workgroup software and Vault Professional software for revision management, approval workflows, and engineering change orders (ECO). Learn how categories are used to control the flow of your data and versions and revisions are intertwined. We will also cover how to apply different revision schemes and how to initiate and track change via a change order.





# About the speaker

## Technical Services Manager

I spent the first 12-years of his career in the Autodesk channel working for an Autodesk reseller. I've has been using AutoCAD since r13, cut my solid modeling teeth on Mechanical Desktop, and have been using Inventor since before it was known as Inventor.

I am now the Technical Services Manager at Prairie Machine, a mining equipment manufacturer. Reporting to the general manager, I am responsible for overseeing the company's technical operations and the strategic technical growth.

# Engineering Drawing

From Wikipedia “*Engineering drawing*”

*Engineering drawing (the activity) produces engineering drawings (the documents). More than just the drawing of pictures, it is also a language—a graphical language that communicates ideas and information from one mind to another. Most especially, it communicates all needed information from the engineer who designed a part to the workers who will make it.*





# Vault vs. Vault

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Vault Basic provides ***version* control** but no tools to manage and track change.

Vault Workgroup and Professional are systems **managing the change** of your files, from creation to retirement





## Vault vs. Vault vs. Vault

Three versions of Vault:

- **Vault (Basic)** = Version Management
- **Vault Workgroup** = Vault + “Project lifecycles”: tools to manage change on files
- **Vault Professional** = Vault Workgroup + Items and tools for managing changes to items

# What is a Revision?

Webster's dictionary

*the act of revising, which is to make a new, amended, improved, or up-to-date version*





**Why should I care? (Version vs Revision)**



# What is a Version?

## IT IS AN ITERATION

A **Version** is an *iteration* of a document, like having multiple copies.

## WORTH IS EQUAL

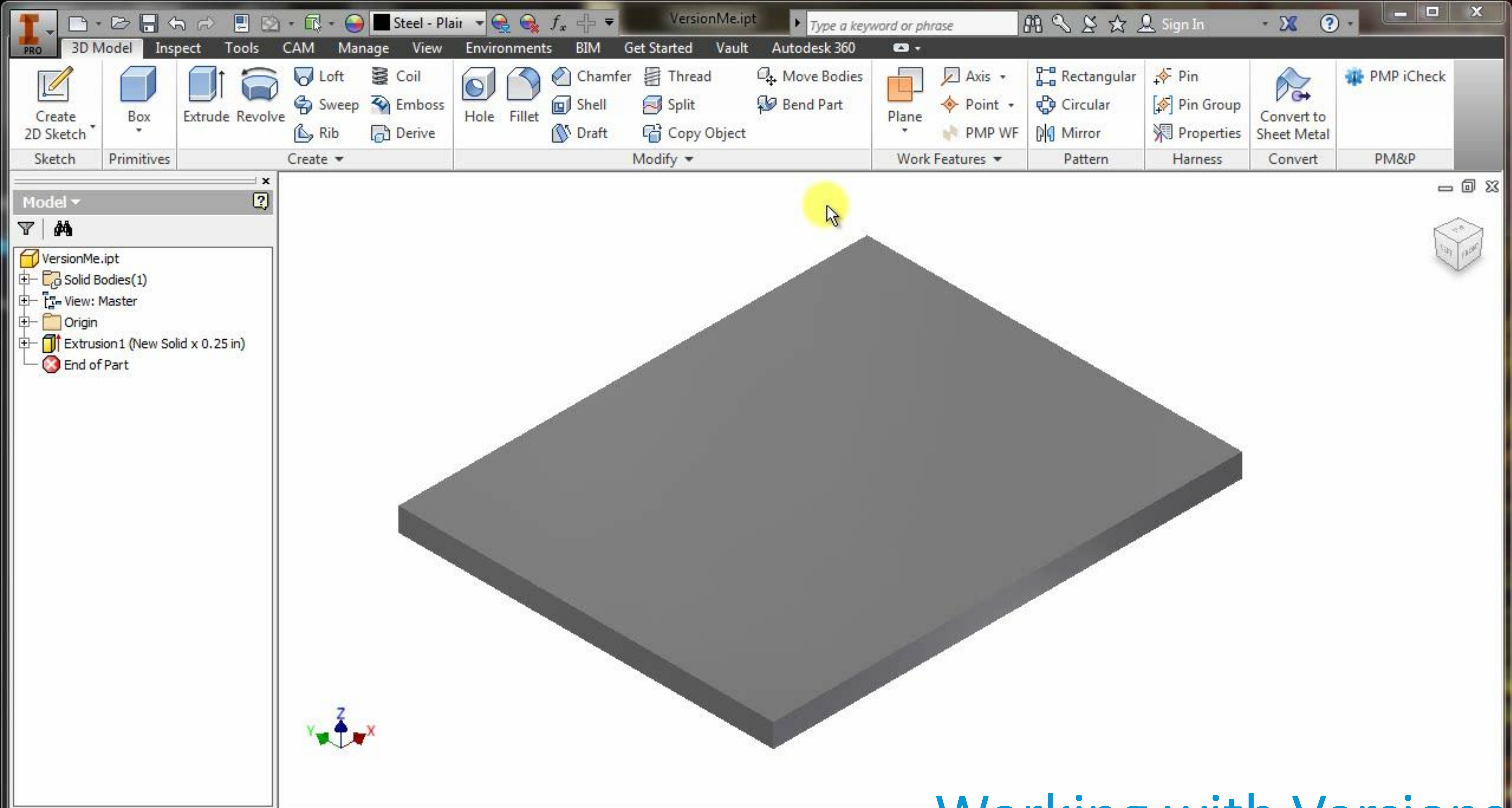
All **versions** have the same *worth*. They are very important during the design (WIP) phase, to track the design changes and provide the ability to go back if a misstep occurs.

## CHECK-IN

Vault automatically creates and maintains versions of files as they are checked-in.

## PREVIOUS VERSIONS

Previous versions can be restored at any time



Working with Versions





## What is a Revision?

A **Revision** is a *milestone*, the act of making a change and completing the work required.



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

## Revisions are Permanent Versions

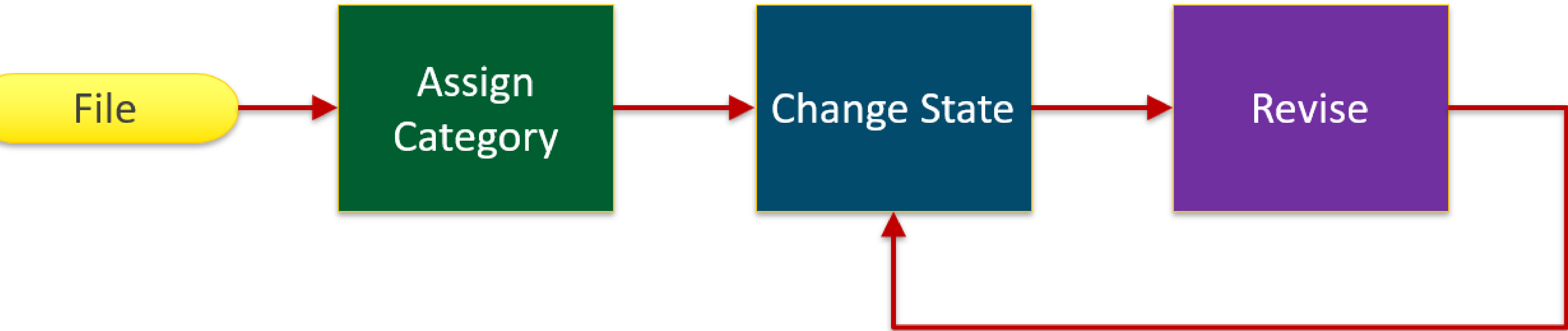
**Revisions** are made up of *multiple versions*... the versions are the steps to get to the final revision

**Revisions** are the permanent version



# Lifecycles





## What are Lifecycles?

*“A **lifecycle definition** is an engine that can be configured to automatically assign security, behaviors, and properties to Vault objects based on where the object is in the life of the design process.”*

Autodesk Vault Professional 2014

FileEditViewGoToolsActionsHelp

New

Report...

Plot...

Check In...

Find...

Default View

Layout

Workspace Sync...

Change Category...

Change State...

Revise...

Search Help

Project Explorer

PMP1998

PMP1999

PMP2000

PMP2005

PMP2010

PMP2011

PURCHASED PARTS

WORKING - MIKE THOMAS

Electrical

My Search Folders

My Shortcuts

Add new group

Home

Project Explorer

Contacts

Item Master

Change Order List

WORKING - MIKE THOMAS

(D:\\_Vault Working Folder\Designs\WORKING - MIKE THOMAS\)

Search WORKING - MIKE THOMAS

Name

Description

Folder

ACM - LIFECYCLE

HSM

PADLOCK BOM

File

2014.dwg

VC\_TEST01.dwg

VC\_TEST01.iam

VC\_TEST02.dwg

VC\_TEST02.iam

VersionMe.ipt

History

Uses

Where Used

Change Order

Preview

Number of versions:

5

(Local = Version #5)

Number of revisions:

1

Show all versions

Thumbnail

File Name

Revision

State (Historical)

Created By

Checked In

Comment

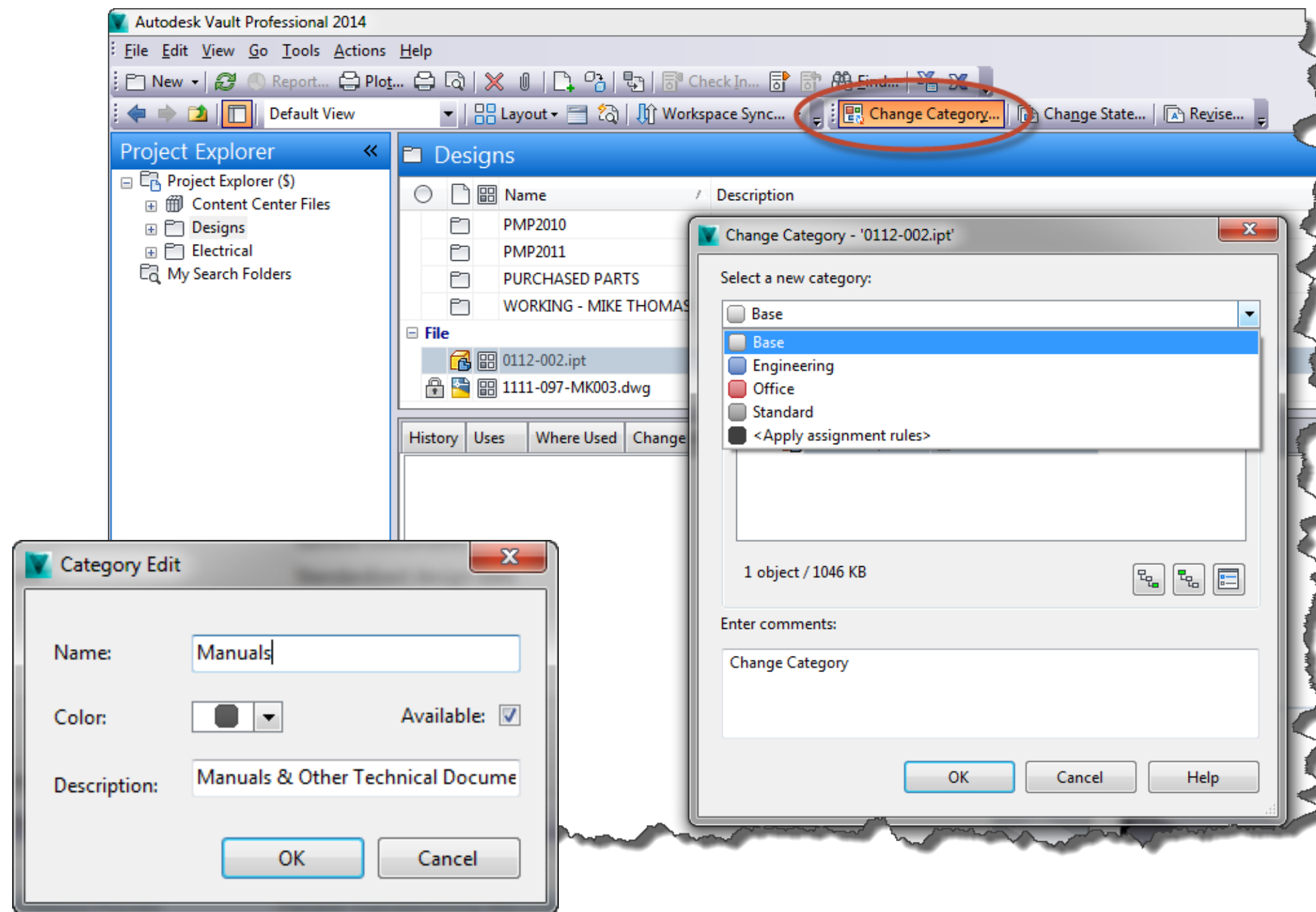
9 Object(s) (1 selected)

pmpw2k8v1

sandbox

mthomas



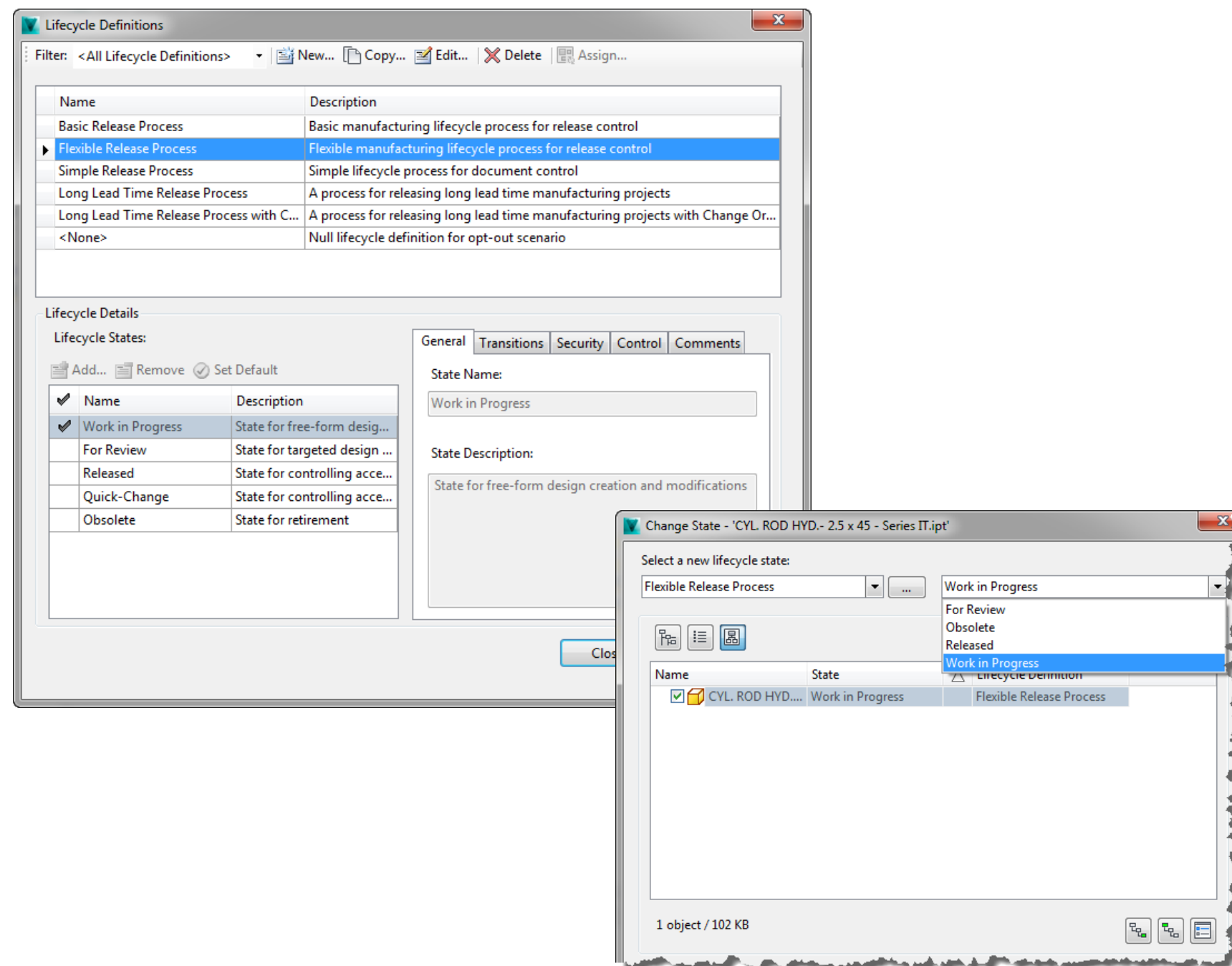


# What are Categories?

A label applied to files, folders, custom objects, or items

## Key Aspects:

- Assigns **User-defined Properties**
- Assigns **lifecycle definitions**
- Assigns **revision schemes**



# Lifecycle Definitions

*“A lifecycle definition is an engine that can be configured to automatically assign security, behaviors, and properties to Vault objects based on where the object is in the life of the design process. This functionality allows you to streamline your work environment by removing the overhead involved in managing groups of files, custom objects, or an entire project.”*



# Lifecycle States

Vault Lifecycle **States** identify the current status within the lifecycle.

- The number and type of **states** is based on the Lifecycle Definition Transition Rules.
- The **transition** can occur manually or automatically.

# Lifecycle Definitions

The **Transition of a State** determines

- the property **Criteria requirements** (*Compliance*)
- the **Actions** that occur
- the **Security**



Autodesk Vault Professional 2014

FileEditViewGoToolsActionsHelp

NewReport...Plot...Check In...Find...Change Category...Change State...Revise...

Default ViewLayoutWorkspace Sync...Change Category...Change State...Revise...

Project Explorer

PMP1998PMP1999PMP2000PMP2005PMP2010PMP2011PURCHASED PARTWORKING - MIKEElectricalMy Search Folders

My Shortcuts

Add new group

HomeProject ExplorerContactsItem MasterChange Order List

WORKING - MIKE THOMAS

(D:\\_Vault Working Folder\Designs\WORKING - MIKE THOMAS\)

Search WORKING - MIKE THOMAS

Folder

ACM - LIFECYCLEHSMPADLOCK BOM

File

2014.dwgVC\_TEST01.dwgVC\_TEST01.iamVC\_TEST02.dwgVC\_TEST02.iamVersionMe.ipt

HistoryUsesWhere UsedChange OrderPreview

Number of versions:11(Local = Version #5)

Number of revisions:5

Show all versions

ThumbnailFile NameRevisionState (Historical)Created ByChecked InComment

9 Object(s) (1 selected)

pmpw2k8v1sandboxmthomas



# Making Revisions



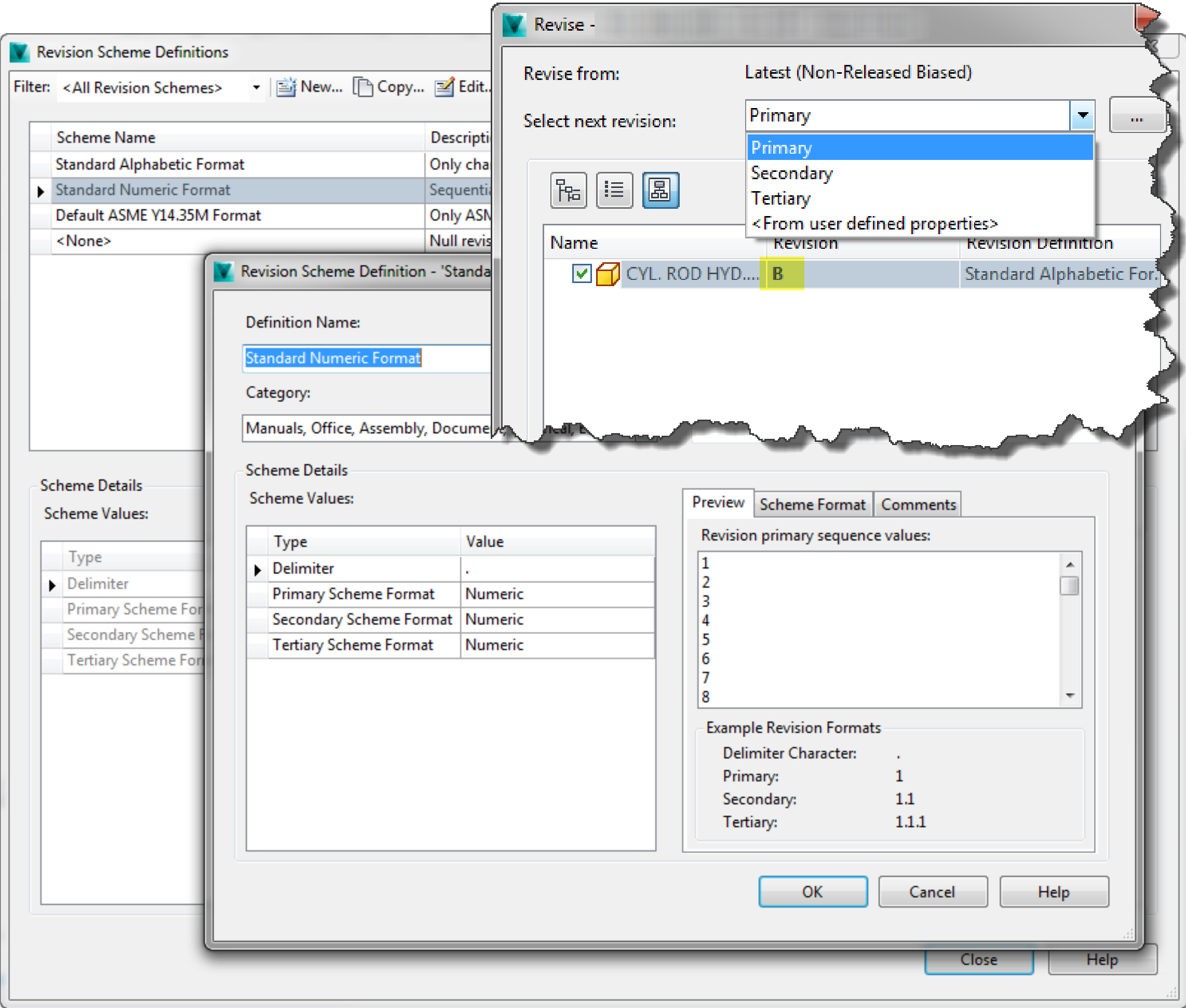


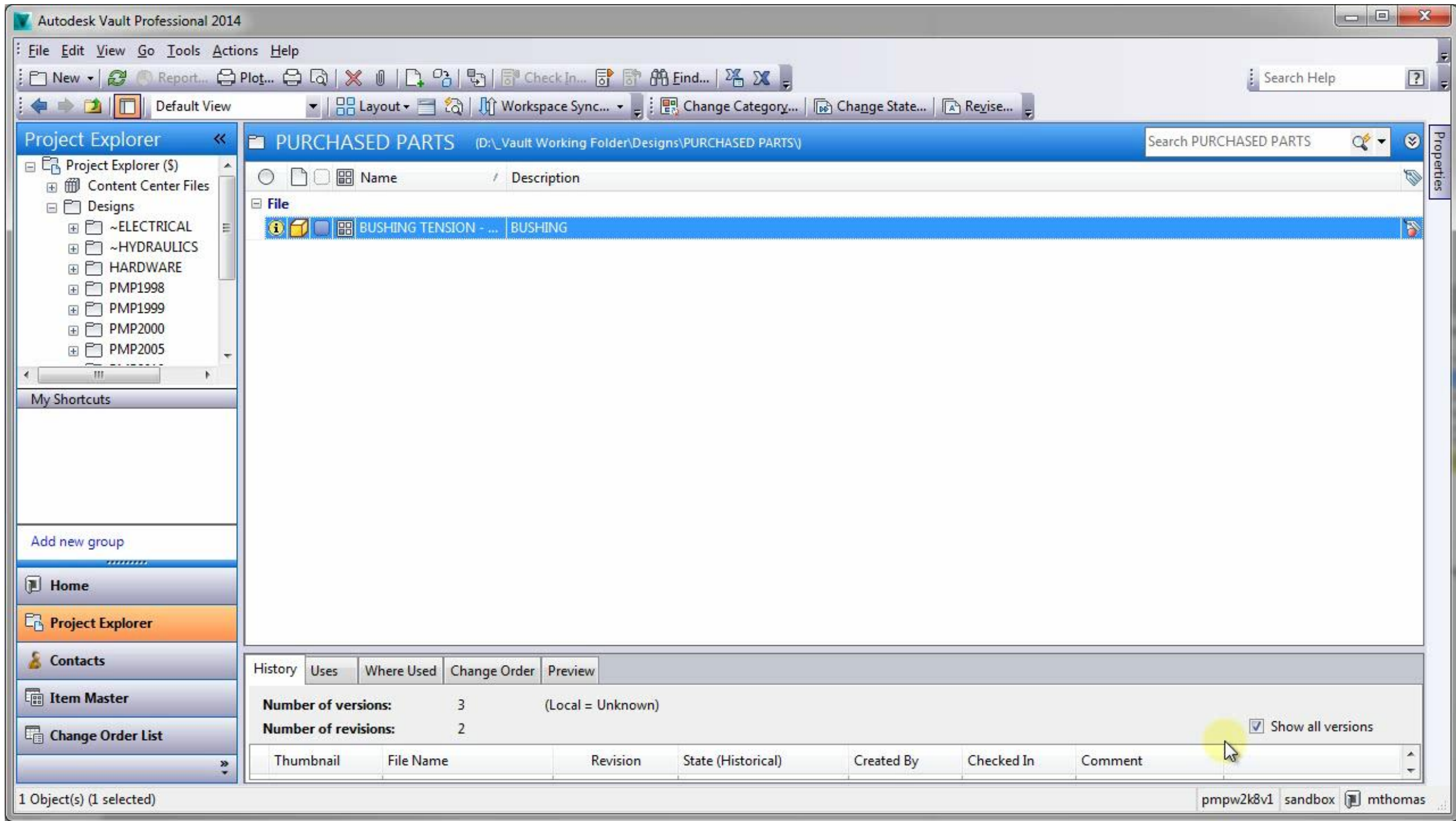
# Revisions

**Revision Schemes** define the sequence and format of the Revision Value

## The “Out-of-the-box” Schemes

- Standard Alphabetic (A, B, B.1, B.1.1 to ZZ)
- Default Alphabetic (same as standard but starts at rev “-“)
- Standard Numeric (1, 2, 2.1, 2.1.1 to 99)
- Default Numeric (same as standard but starts at rev “-“)
- Default ASME Y14.35M (-, A, B, A.1, A.1.1 | no I, O, Q, S, X, Y)

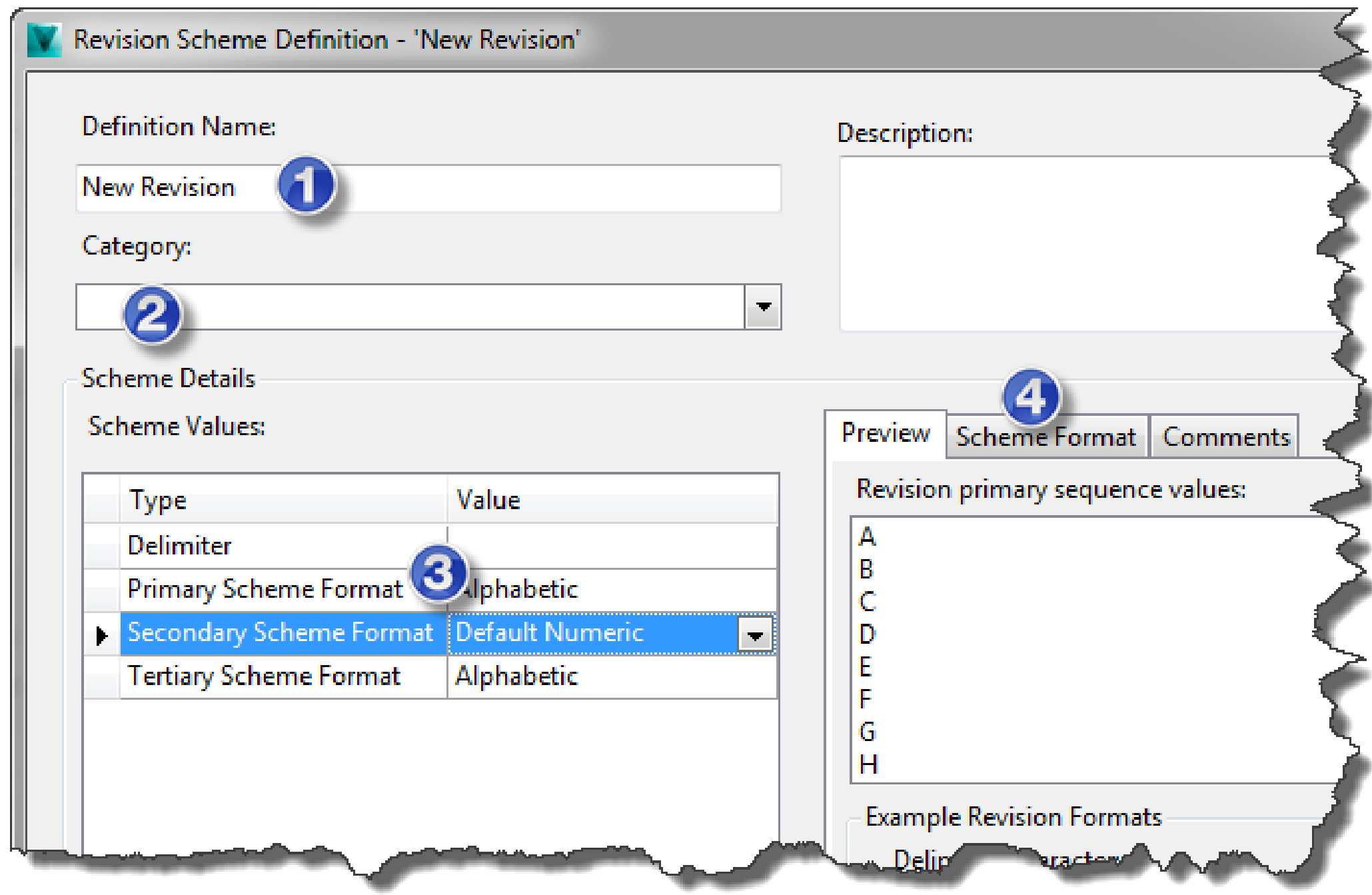




## Revision Bump

*bump* the revision to the next available value in the current revision scheme

State Transitions can perform the revision bump automatically



## Revision Schemes

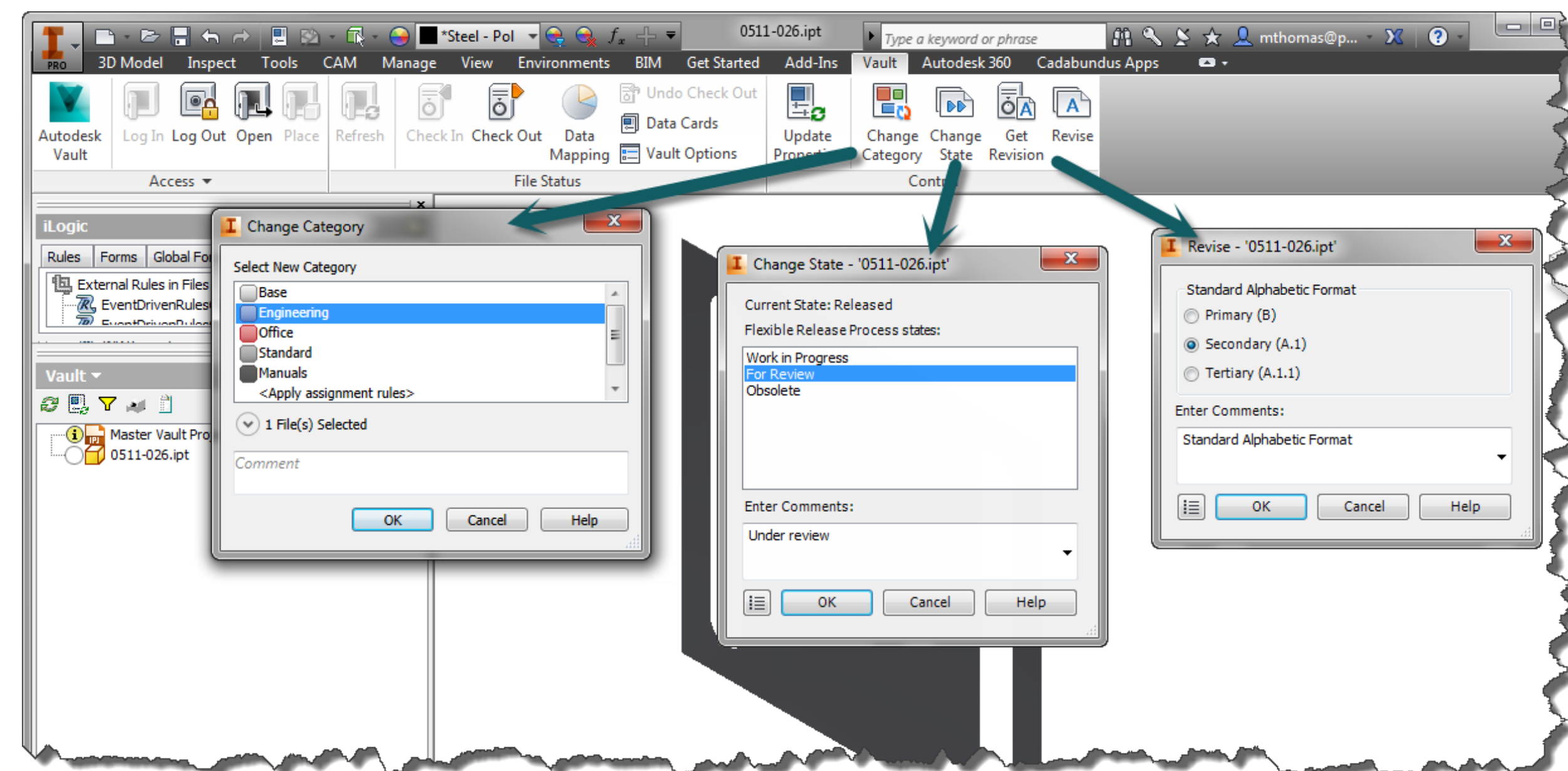
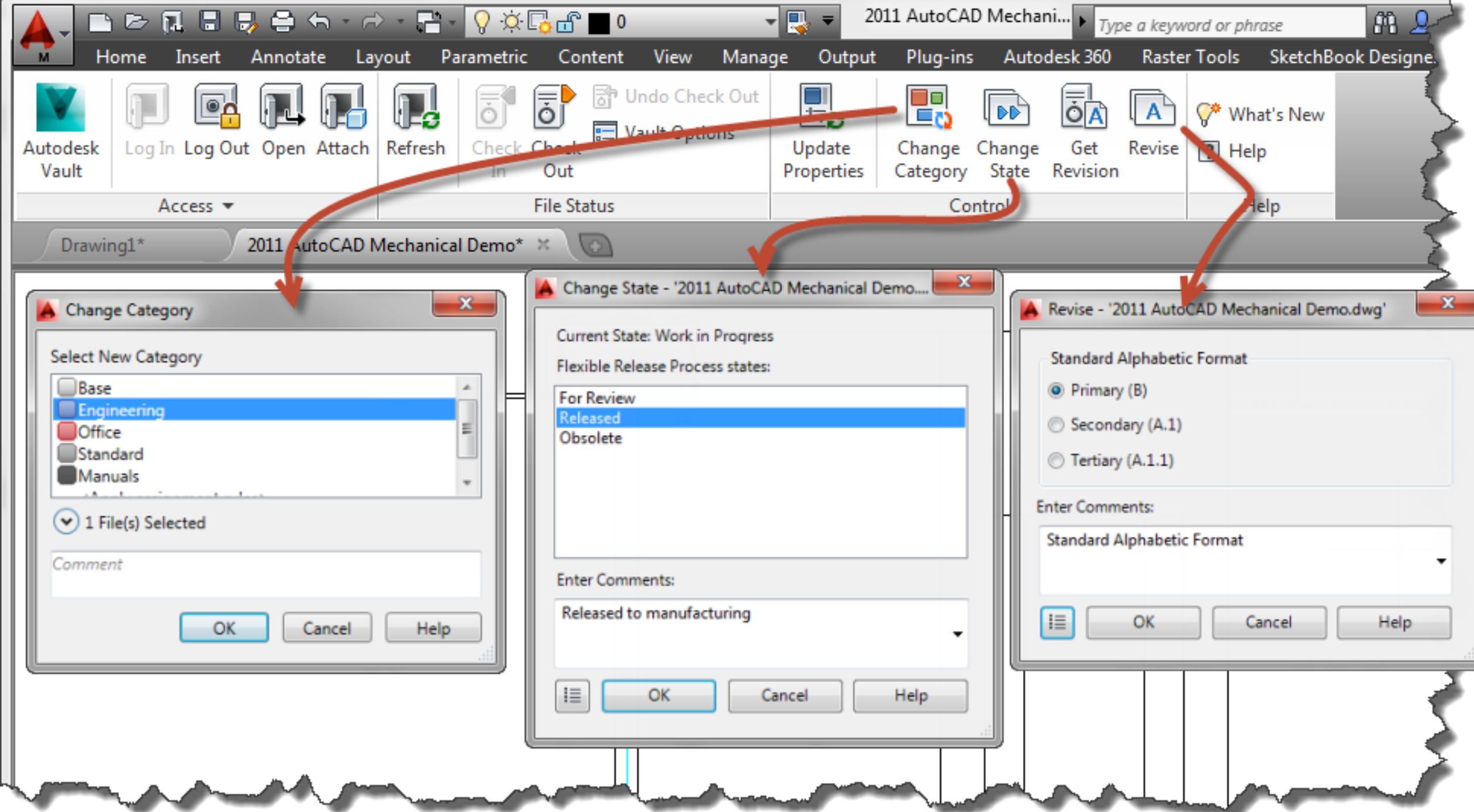
**Revision Schemes** define the sequence and format of the Revision



# CAD Revisions

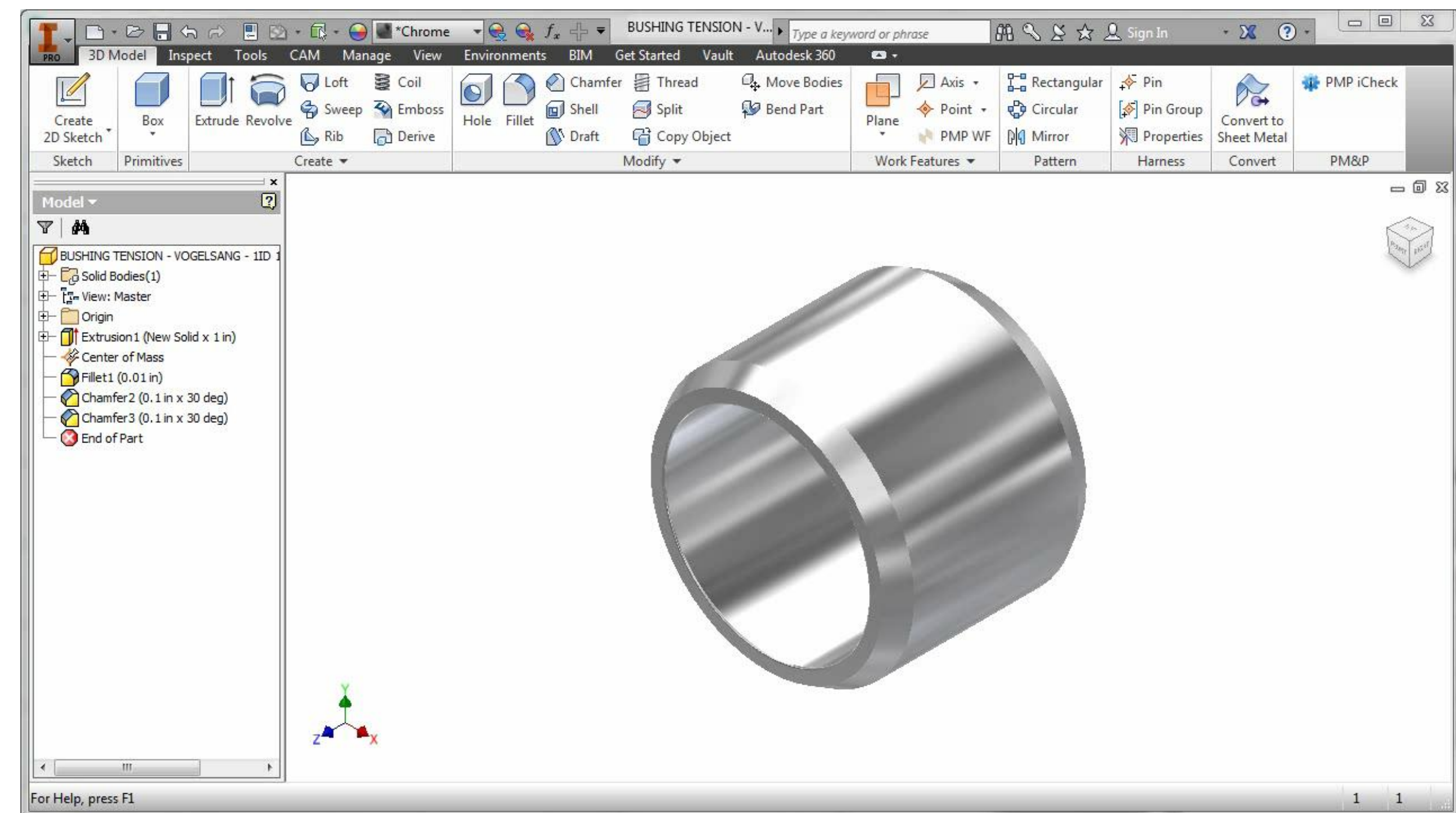




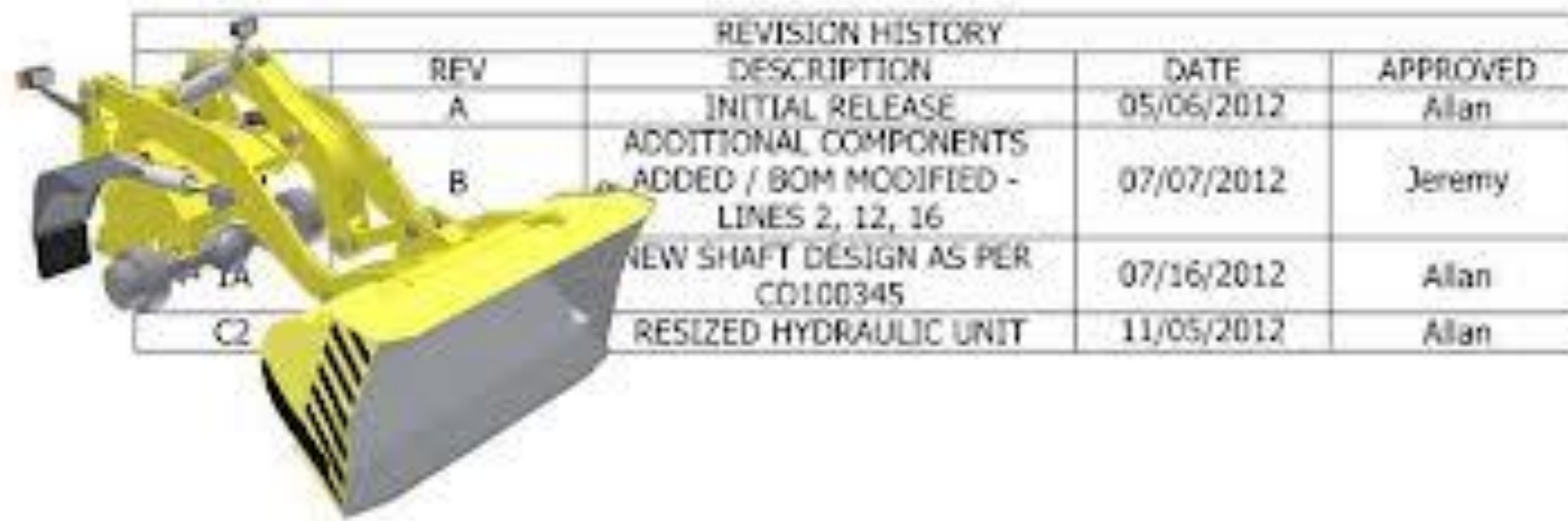


# CAD & Lifecycles

Using the Vault CAD add-in you can perform lifecycle functions from within the Autodesk application, including changing Categories, Changing States, and Revision Bumps







# Revision Tables

Configure **Revision Tables** to extract the revision information from Vault

# Items





# What are Items?

## ITEMS

Items represent the components that the company manage, assemble, sell and manufacture.

## UNIQUELY UNIQUE

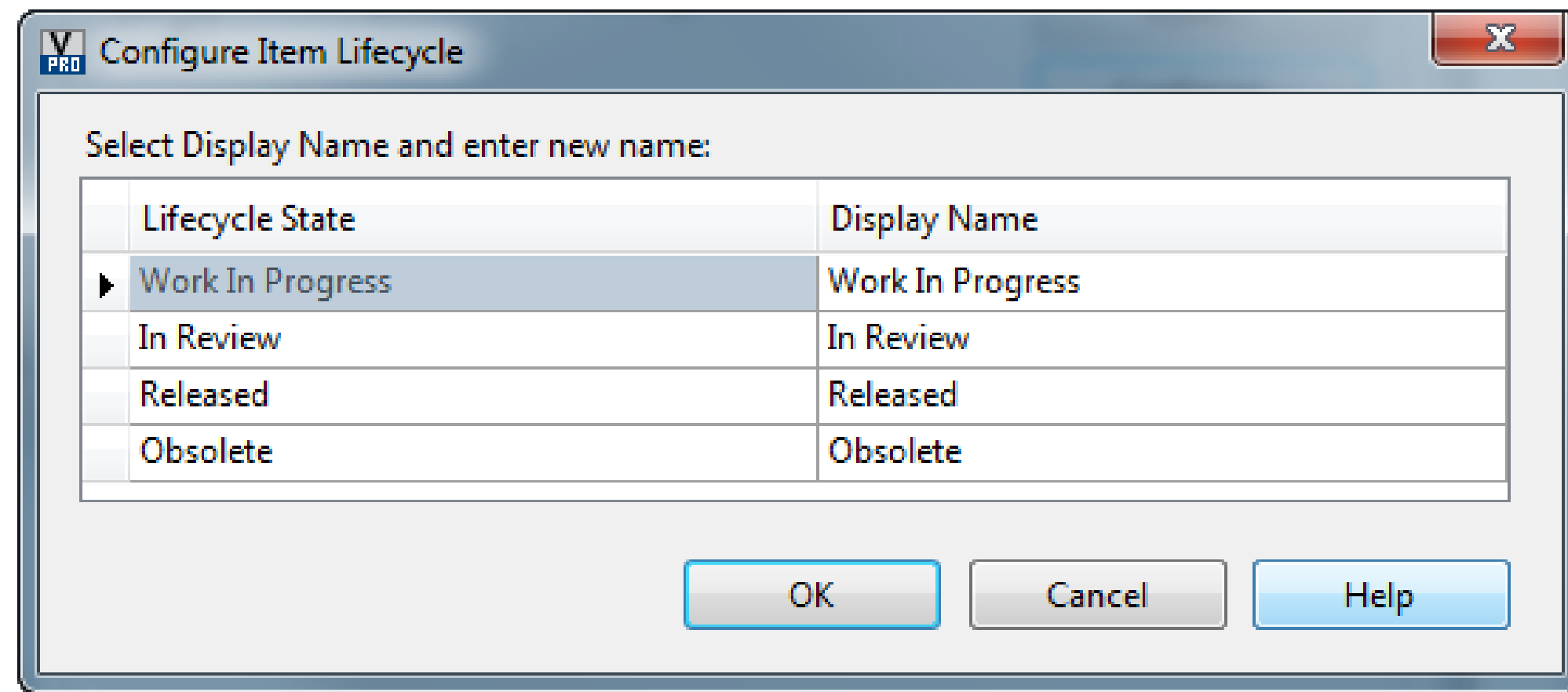
Each item is identified by its own unique item number

## VAULT PROFESSIONAL

items are records stored within an item master.

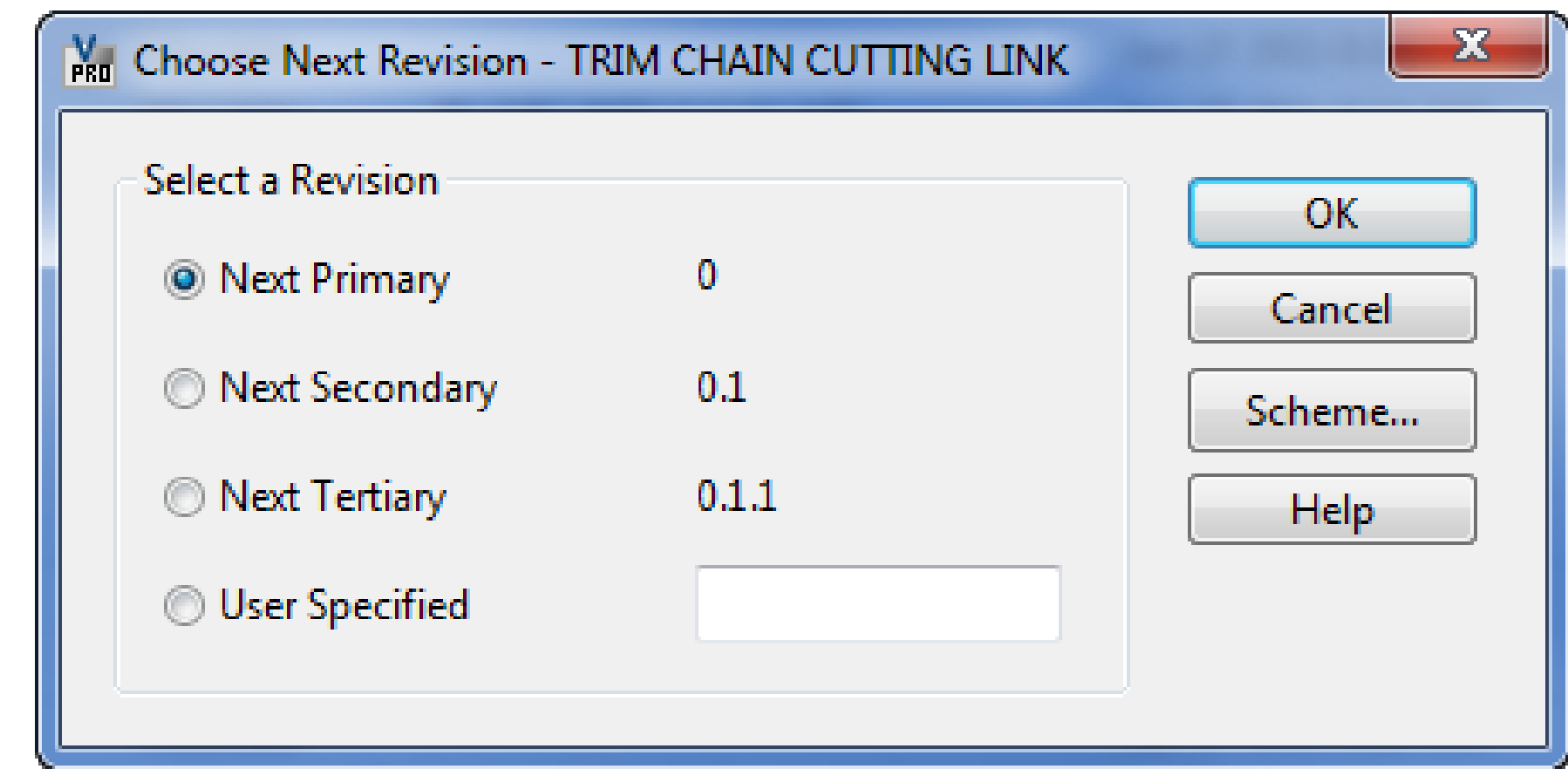
## THE ITEM MASTER

The item master is a master list of everything within the engineering system



## Item States & Rules

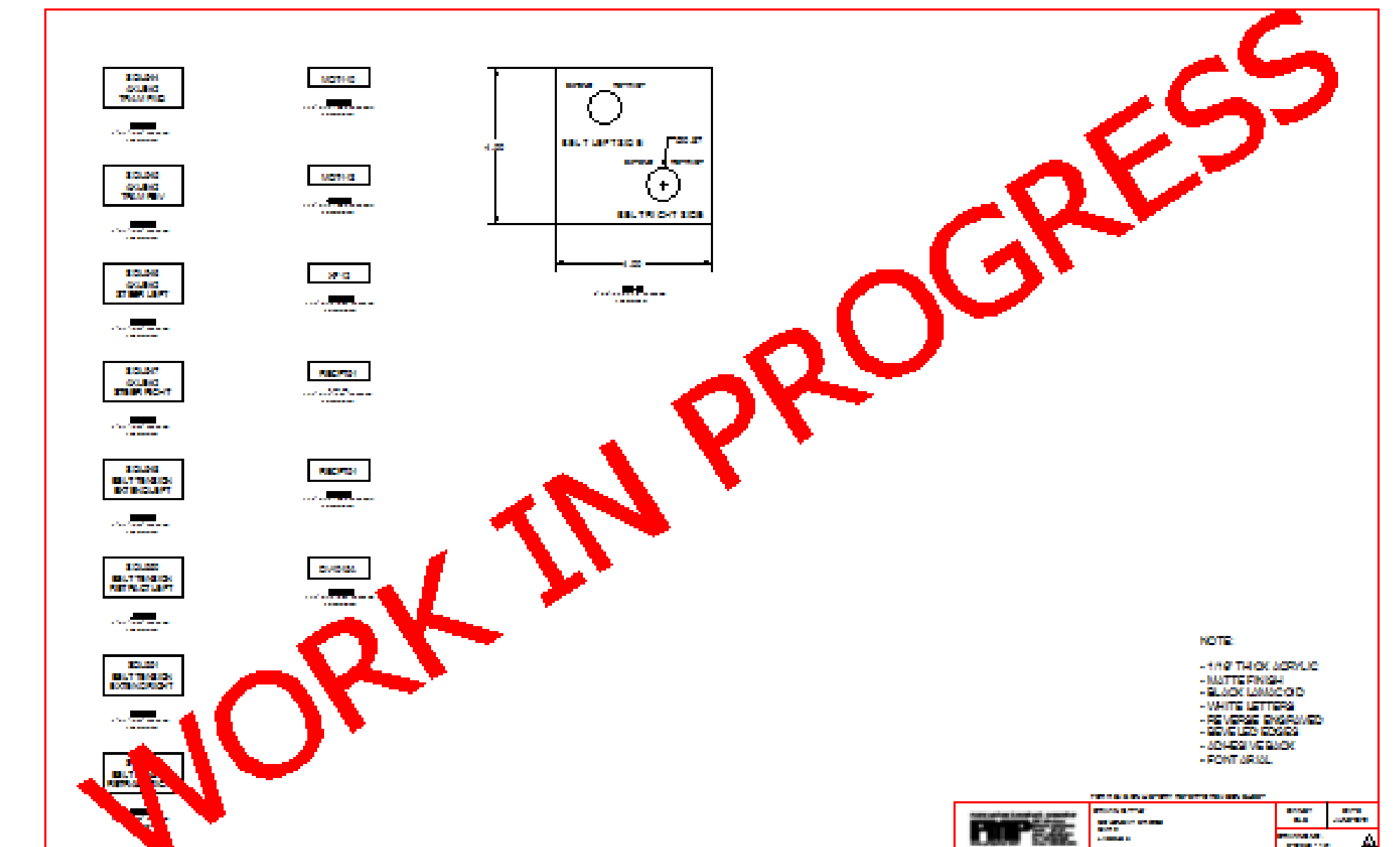
Item Lifecycle Rules control when the revision of the item is automatically “bumped”



## Item Revisions

Revisions are used to track the history of changes applied to an item.





# Watermarks

When viewing the files associated to the Item Vault can be configured to display a watermark on the associated DWF(x)

Visualization

# Files vs Items





# Should I use Items?

1. Do I need to deliver data to a downstream application, like MRP, ERP, PLM, etc, etc?
2. Do non-engineering or non-cad people need access to data about my parts and assemblies? Possibly manipulate Bill Of Material data?
3. Do I want a method to manage revisions? And control what downstream users see of my data?
4. Do I want to manage CAD AND non-CAD things?
5. Do I want to release data locking it from access?
6. Do I want to use Change Orders to control and track revisions?

# Lifecycles

## WHAT DOES THE HELP SAY?

“A lifecycle definition is an engine that can be configured to automatically assign security, behaviors, and properties to Vault contents based on where the content is in the life of the design process. “

“A lifecycle definition uses states to identify the content's status in the lifecycle. Changing the lifecycle state of a file enforces certain lifecycle behaviors configured by the Vault administrator”

## USE ONE BUT NOT BOTH

If you release the item it will automatically lock the file

If you release the file it will NOT release the item.

## FILES VS ITEMS

File lifecycles and Item lifecycles do NOT mix

## REVISIONS

File revisions and Item revisions are NOT tied together



# Lifecycles

## ITEMS ARE RELEASED

- Files remain in the Base category and their state never changes
- Item Lifecycles are used which will lock the file preventing changes
- The revision is controlled by the Item
- Change Orders are completed on the Item

## FILES ARE RELEASED

- Items are never released, remain in the WIP state
- Files categories are used and their state controls the lifecycle
- The revision is controlled by the file
- Change Orders are completed on the files NOT the item
- The item master is used solely for the creation of items and their BOM for export



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