

MANAGING SUBASSEMBLY REFERENCE FILES (PKT) IN A DWG AND FOR PROJECTS

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Overview

Guidance is provided on managing subassemblies and assemblies. Subassemblies and assemblies may be updated with MDT Civil 3D State Kit updates. Users may also need to develop and save customized subassemblies and assemblies for project specific needs. Updating or maintaining use of applied subassemblies and assemblies, whether using MDT Civil 3D State Kit delivered or user-created, in project files is explained for successful outcomes.

Process Provenance

- Date of development: 9/4/2024
- Revision date: N/A
- Application/Tool(s): *AutoCAD / Civil 3D*
- Version(s): *13.6.1916.0 Civil 3D 2024.4 Update*
- Environment(s): *MDT Civil 3D State Kit r2024 v2.0.0*
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Statement of Need

Subassemblies and assemblies are a cornerstone to design activities. Proper management with subassembly version updates and storage is essential to avoid loss of data.

References

[Civil 3D 2022 to 2024 Subassembly Updates](#)

[MDT Civil 3D State Kit User Tool Palettes – Release 2024](#)

[Autodesk Civil 3D 2024 - New in Subassembly Workflows](#)

Process Description and Examples

The MDT State Kit Updater delivers subassembly PKT files with MDT Civil 3D State Kit r2024 versions. These PKT files are updated through the state kit release process. MDT Civil 3D State Kit delivered PKT files are located at:

C:\MDOH\StateKit\Civil 3D\2024\Subassemblies

Customized subassembly and assembly files are prepared in a dedicated location and saved with project files in BIM 360 (or identified document management system for consultants external to MDT). The state kit delivered User folder is located at:

C:\mdoh\StateKit\Civil 3D\User

Section I. Updated Subassemblies in DWG File

General information on enhancements included with Autodesk Civil 3D 2024 is available for review:

[Autodesk Civil 3D 2024 – New in Subassembly Workflows](#)

When a subassembly PKT file that is referenced into a drawing is updated, symbols and tooltips are displayed next to the items in the Prospector tree to alert you. You have two options on how to respond to the alerts - update subassembly to the new version or maintain existing subassembly version.

Procedure – Update PKT Subassembly to New Version

1. Right-click the out-of-date subassemblies in the PROSPECTOR and select UPDATE ALL SUBASSEMBLIES to update them in the drawing. This will update the subassemblies to the latest subassembly PKT version.

Procedure – Maintain PKT Subassembly Version

This option may be used to keep the current version of the subassembly intact in the dwg. This is done by switching the reference to a PKT file that has been saved as the current version of the subassembly. This subassembly will now be static, and no further warnings of version updates will be shown.

1. Right-click the out-of-date items in the PROSPECTOR tree and select CHANGE SUBASSEMBLY PKT FILE.

2. Browse to C:\MDOH\StateKit\Civil 3D\2024\Subassemblies and select the PKT file of the subassembly having the current version appended to the subassembly name.

Example: If the current version of MDT Lane in the dwg shows the version being used in the Prospector as 1.0, then to maintain that version select the MDT Lane_1-0.pkt file.

Note: If at any time, you want to use the latest subassembly version, repeat steps 1 and 2 of this procedure, selecting the PKT without version appended to the subassembly name.

Procedure – Update or Maintain Non-PKT Subassemblies

See [Civil 3D 2022 to 2024 Subassembly Updates](#).

Section II. Save and Use Modified Project Specific PKT Files & Assemblies

Procedure – Save and Share a Project Specific Custom Subassembly

Option 1 - Customized PKT files can be created using Subassembly Composer for project specific needs and saved in the project specific folder location:
\\ACCDocs\Montana Dept of Transportation\~Project Name~\Project Files\RD - Road Design\Subassemblies.

Subassembly PKT files saved in the project folder may be imported directly into a dwg from the project Subassemblies folder using the ToolSpace Prospector without the need to add or access a subassembly on a palette.

Option 2 – A Subassembly may be added to a user’s tool palette from a PKT file as a means to create a sharable subassembly palette for project users. See [MDT Civil 3D State Kit User Tool Palettes – Release 2024](#)

1. Create a New tab in the User palette with a Unique Name (i.e. ~Project~ - Subs)
2. Import the PKT subassembly to the local User palette and close Civil 3D so the palette ATC file can be saved in the C:\MDOH\StateKit\Civil 3D\User\Toolpalette\Palettes\ folder.

3. The ATC file can then be copied to the project Subassembly folder
\\ACCDocs\Montana Dept of Transportation\~Project Name~\Project Files\RD - Road Design\Subassemblies.

Procedure – Use a Shared Project Specific Custom Subassembly

Option 1 - Import the Subassembly from the project Subassemblies folder into the dwg. Refer to [Autodesk Civil 3D 2024 - New in Subassembly Workflows](#)

Option 2 –

1. With all instances of Civil 3D closed, copy the shared palette ATC file from the project Subassembly folder to C:\MDOH\StateKit\Civil 3D\User\Toolpalette\Palettes\.
2. Open Civil 3D and navigate to the User palette using the button on the MDT Tools ribbon.
3. Select a subassembly from the project tab and add it to an assembly in the dwg.

Procedure – Save and Share a Project Specific Custom Assembly

Customized assemblies can be created in any DWG file for project specific needs and added to a tool palette for sharing between DWG files. An Assembly may be added to a User palette from a DWG file as a means to create a sharable assembly for project users. See [MDT Civil 3D State Kit User Tool Palettes – Release 2024](#).

1. Create a New tab in the User palette with a Unique Name (i.e. ~Project~ - Assemblies) Make sure that the DWG file that contains the assembly to be shared is saved in the project folder and not in a local location.
2. Add the Assembly to the local User palette by dragging the assembly onto the palette from the DWG.
3. Close Civil 3D so the ATC file will be saved in the C:\MDOH\StateKit\Civil 3D\User\Toolpalette\Palettes\ folder.
4. The ATC file can then be copied to the project Assembly folder
\\ACCDocs\Montana Dept of Transportation\~Project Name~\Project Files\RD - Road Design\Assemblies\.

Procedure – Use a Shared Project Specific Custom Assembly

To use a shared project specific custom assembly, a palette will need to be added to the User palette location.

1. Close all instances of Civil 3D.
2. Copy the shared palette ATC file from the project Assembly folder to C:\MDOH\StateKit\Civil 3D\User\Toolpalette\Palettes\.
3. Open Civil 3D and navigate to the User palette using the button on the MDT Tools ribbon.
4. Select an Assembly from the project tab and add it to a DWG file.