

## MicroStation – Reference Display Overrides and New Level Display

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### Overview

This tech note describes how Display Overrides and the New Level Display functionality impact level display when using nested and direct references.

Nested referencing includes three files. File 1 has file 2 referenced into it; this relationship is called a direct reference. File 2 has file 3 referenced into it; again this is a direct reference. The relationship between file 1 and file 3 is a nested reference with a depth of 1. Nesting can reach a depth of 99 references but this is not recommended.

**Example 1:** There are 3 base plans AL, DR, and RD and a sheet file. The Sheet file has the RD base referenced into it, as direct reference. The RD has the AL and DR referenced into it as direct references. The Sheet now has the AL and DR as nested references.

Level control for the referenced base files has to be done in the sheet file

**Example 2:** There are 3 base plans ES, PV, and SP, a container file, and a sheet file. The sheet file has the container file referenced into it as direct reference. The container has the ES, PV, and SP base plans referenced into it as direct references. The sheet now has the ES, PV, and SP as nested references.

Level control for the nested base should be done in the container file.

MicroStation Help uses different terms. To put them into WSDOT/CAE context, file types and descriptions are shown below.

MicroStation	WSDOT/CAE	Description
Master file	Active file	Main file which all the other references are viewed. Typically this file contains the title block and/or final display for printing. File 1
Parent file	Reference file	This file represents two potential file types at WSDOT; a base plan with project data in it or a container file with no project data in it. File 2
Nested	Nested file	These files can contains the project data, i.e. alignment, drainage, roadway, etc. items. File 3
Model	dgn file	At WSDOT we normally use the default model when we create a drawing so we usually only have one model in a dgn file.

## Display Overrides

The following is an excerpt from MicroStation Help with the WSDOT/CAE terms inserted.

Display Overrides list box — Controls how override settings are saved for nested references. For a specific nested reference, overrides let you control the settings for reference display, locate, snap, raster reference display, and level display.

Menu Item	Description
Always Override	A <b>Nested file</b> reference's settings in its <b>Active file</b> always override the <b>Reference file's</b> settings for the <b>Nested file</b> reference. If you change a <b>Nested file</b> reference's settings in its <b>Reference file</b> , those settings will not take precedence over its settings in the <b>Active file</b> . Key-in: reference set nestOverrides=always
Never Override	If you change a <b>Nested file</b> reference's settings in its <b>Active file</b> , those settings will never override the settings that were set in its <b>Reference file</b> . After changing a <b>Nested file</b> reference's settings in its <b>Sheet file</b> , closing, and reopening the file, the settings will revert to the way they were set in its <b>Reference file</b> . Key-in: reference set nestOverrides=never
Allow Overrides	If you change a <b>Nested file</b> reference's settings in its <b>Reference file</b> , those settings will override the settings that were set in its <b>Active file</b> until those settings are changed in the <b>Active file</b> . Once the <b>Nested file</b> reference's settings are overridden in the master file <b>Active file</b> , the file settings will not match and the files will operate independently from each other. The <b>Nested file</b> reference's settings will be set one way in the <b>Reference file</b> , and another way in the <b>Active file</b> . Key-in: reference set nestOverrides=allow

### WSDOT Consideration:

**Always Override:** The level display of nested base plans, is controlled in the sheet file. This is the choice to use with Example 1. Though this method must be used in each sheet location in the plan set.

**Never Override:** The level display of nested base plans is controlled in the reference (container) file. This is the choice to use with Example 2. This allows the levels to be set in the container file and automatically displayed the same across the plan set.

**Allow Overrides:** The level display of nested base plans is controlled in the reference file, the same as Never Override. But changing a level display in the sheet file will then operate as if Always Override was set. This could be difficult to manage.

## New Level Display

The following is an excerpt from the MicroStation Help with the WSDOT/CAE terms inserted.

New Level Display — Specifies whether a reference displays new levels. The setting also applies to new levels in **Nested file** references that are attached to the **Reference file**.

Menu Item	Description
Config Variable	New levels in the reference are displayed according to the setting for the MS_REF_NEWLEVELDISPLAY configuration variable. Key-in: reference set newLevelDisplay=fromconfig
Always	New levels in the reference are always displayed. Key-in: reference set newLevelDisplay=always
Never	New levels in the reference are never displayed. Key-in: reference set newLevelDisplay=never

### WSDOT Consideration:

**Config Variable:** WSDOT/CAE sets the configuration variable to 1, this is the same setting as Always.

**Always:** If a new level is added to a base file, in both the container file (the direct reference) and the sheet file (the nested reference) the level will be turned on and displayed. This could result in unwanted levels turned on in plan sheet set or the seeming loss of level control in references.

**Never:** If a new level is added to a base map, in both the container file (the direct reference) and sheet file (the nested reference) the level will remain turned off and not displayed. The new level will be available to be turned on if so desired depending on the method of level control used.

In all cases, it is important to check that the levels are turned on and off correctly for a particular plan set. At the top of this Tech Note is a link to example data. Use these to see the results of level are added and adjusted.

For questions or comments on this tech note, contact your regional CAE Support Coordinator or the WSDOT CAE Help Desk at (360) 709-**8013**.