

InRoads GUIDs

Surfaces and Geometry

GUID Overview

GUID stands for **G**lobal **U**nique **I**dentifier. These internal alpha-numeric tags are assigned to geometry and surfaces when they are created in InRoads, and they manage alignments and surfaces that are displayed in plan, profile and cross section graphics.

Here's an example surface GUID: **ff1b4e47-e125-45a3-ad99-636ffb400315**

GUIDs work behind the scenes. The only method for viewing this ID is to generate XML output using the *File > Translators > LandXML Translator* or to view the XML-formatted IRD roadway design library data file.

Working With GUIDs

Surfaces

Profiles and cross section sets are based on specific surfaces. When these evaluation items are generated, InRoads internally ties the surface's GUIDs to the profile or cross section graphics. This allows you to close and reopen InRoads and to load the appropriate surface without the need to regenerate profiles and cross section sets. It also enables you to update, annotate and generate end area volumes from cross sections.

When a surface is copied, it is tagged with a new GUID. When a surface is renamed, the GUID remains the same. **Use the native InRoads surface tools to copy and rename surfaces in order to maintain the GUIDs.**

When a surface is regenerated in the Roadway Designer, the GUID can change. Why is this significant?

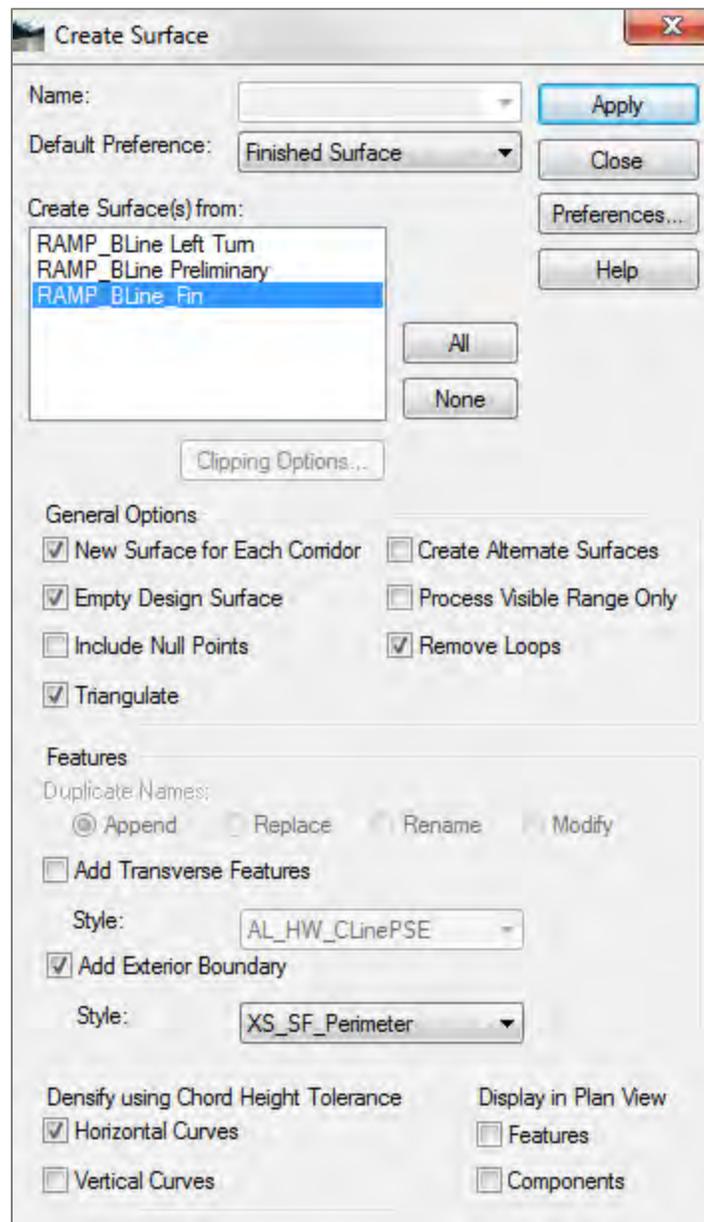
Surfaces have an overall GUID, but the individual features in that surface also have their own unique GUIDs. Certain settings in the InRoads *Modeler > Roadway Designer > Create Surface* dialog can overwrite surface feature GUIDs, which can impact the way that features are displayed in plan view as well as how they are updated in cross sections and profiles.

Create Surface Options

When you initially create a surface, each feature is assigned an internal unique identifier. If you regenerate the surface using the same name with the **Empty Design Surface** option toggled on, the features are automatically deleted from the surface and replaced with updated ones, each with their own new GUID.

What are the consequences of this workflow? If you have the **Display in Plan View** toggled on when you create the initial surface, then regenerate the surface with the **Empty Design Surface** toggled on, you will not be able to erase the plan features using the *Surface > Update 3-D/Plan Surface Display* command. This is because the features that had been drawn to graphics no longer exist.

Also, you will not be able to use the *Evaluation > Cross Section > Cross Sections > Update Cross Section* command to turn the design surface feature display on or off, because those features no longer exist.



How can you update your cross section sets and profiles after you regenerate your design surface?

Toggle off the **Empty Design Surface** option so that the features will update according to the *Duplicate Names* option in the *Features* area.

Duplicate Names

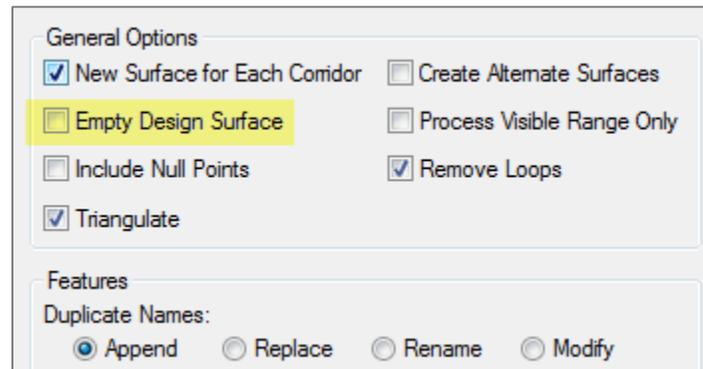
These options determine what happens to a feature or a component when it is placed in a surface where a feature of the same name already exists.

Use the **Append** option to append the existing features and components with the new ones. This may result in duplicate components within the same area.

Use the **Replace** option to replace the existing features and components with new ones.

Use the **Rename** option to rename the new features and components when duplicates are found and to retain the existing ones.

The **Modify** option means that when existing features are modified, the feature names and their GUIDs, as well as the component names, are retained. Points are modified based on changes in the design and the settings.



Geometry

Like surfaces, specific horizontal alignments are the basis for profiles and cross section sets. When the evaluation items are generated, InRoads internally ties the alignment's GUID to the profile or cross section graphics.

When a horizontal alignment is copied, it is tagged with a new GUID. When an alignment is renamed, the GUID remains the same. **Use the native InRoads geometry tools to copy and rename horizontal alignments and geometry projects in order to maintain the GUIDs.**

The key to working with InRoads geometry is being aware that InRoads geometry uses GUIDs.

InRoads geometry elements drawn in MicroStation are tied to the graphics by the GUID. When you use the MicroStation **Copy Parallel** command, use the **Use Active Attributes** option to disconnect the new offset graphic element so that it remains independent of the InRoads geometry. This way, you can redisplay the InRoads alignment without impacting the MicroStation elements.

The IRD roadway design library establishes corridors from specific horizontal alignments using the geometry's GUID. You will receive an error message if this alignment is not available when the IRD file is opened.

Summary

InRoads ties surfaces and geometry to graphics, profiles and cross sections using a Global Unique Identifier. This tag allows InRoads to manage the display of features and alignments. Use the appropriate InRoads tools to copy or rename surfaces and geometry, and use the suitable design surface options in the **Create Surface** command to overwrite or replace surface features and components when you regenerate a roadway design.

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