



OpenRoads Designer Alignment Annotation

OpenRoads Software Version

This document was prepared using OpenRoads Designer CONNECT Edition –Update 3 – Version 10.03.00.43

Alignment Design Files

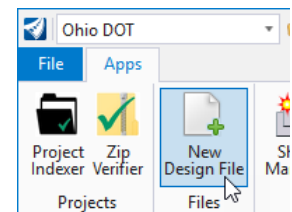
For ODOT projects, each geometric alignment is typically stored in its own design file. This multi-file approach, also referred to as a “federated” approach, allows multiple users on a project to create and edit horizontal and vertical geometry simultaneously.

On larger projects, there could be several design files containing geometric alignment information. To facilitate easy access to all the alignments, each alignment design file is referenced to a “collector” file. The collector file is stored in the following folder and named as follows:

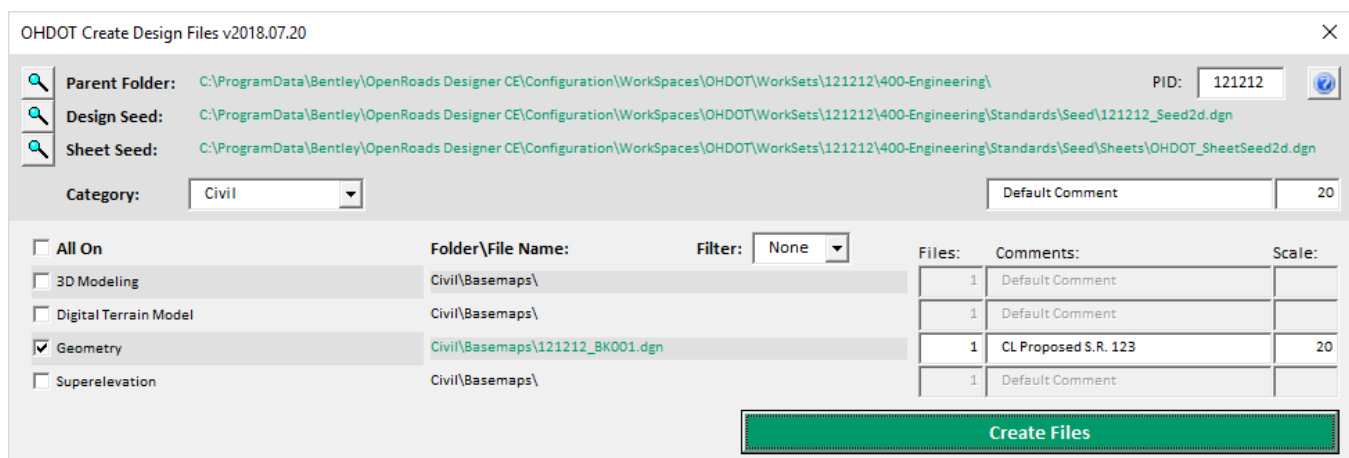
\\400-Engineering\Civil\Basemaps\#####_BK000.dgn

Where ##### is the Project Identification (PID) number for the project.

Alignment design files are created using the **OHDOT_Files.mvba** application. The application is accessed from the Ohio DOT WorkFlow by selecting the **New Design File** icon as shown at right.



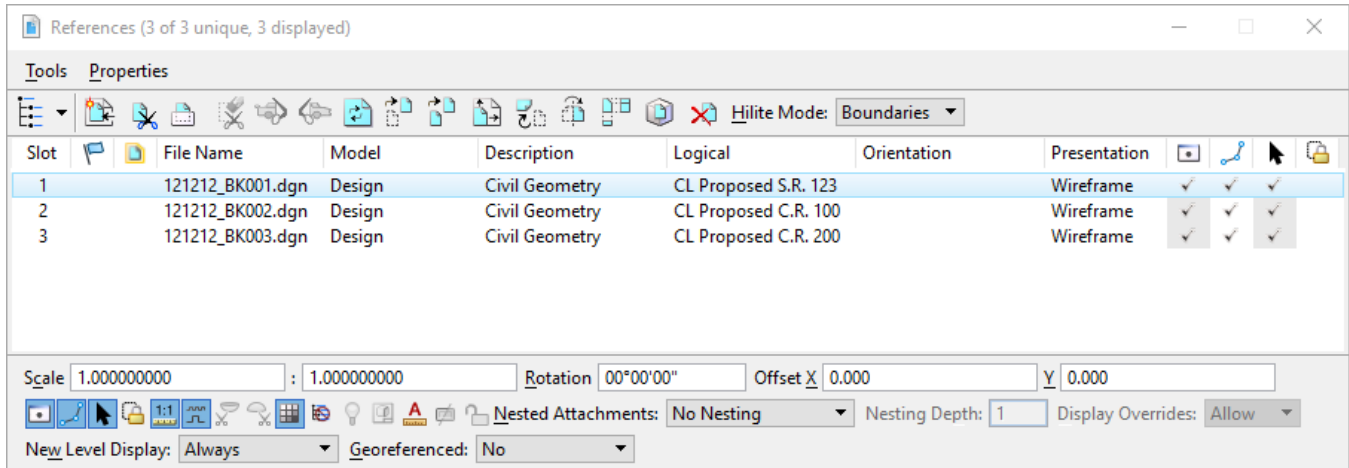
In the example below, a Geometry basemap named 121212_BK001.dgn is created for the proposed centerline of S.R. 123.



When the file is created, the application will check for the existence of a “BK000” collector file for the geometry. If the file does not already exist, the application will create the file. As new geometry files are created, the application attaches the new file to the BK000 file.



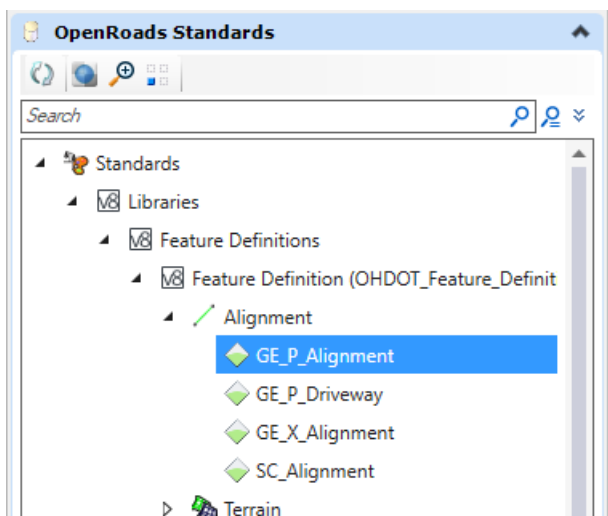
The example below shows three geometry files attached as a reference to the BK000 file for the project.



The BK000 file is used as a reference to any other file within the project that the user needs read-only access to the alignments for the project. When attaching the BK000 file, use a Nest Depth setting of 1.

Alignment Feature Definitions

Alignment elements are assigned a **Feature Definition**, which controls the symbology of the element (level, color, line style, and line weight) as well as the annotation properties of the element. The OHDOT Standards include feature definitions for alignments, which can be reviewed from the *Project Explorer* dialog, as shown below.



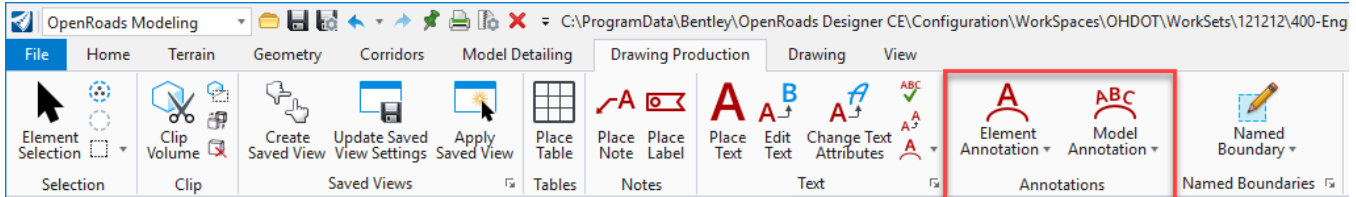
Note that the alignment feature definition controls the symbology and annotation settings for both the horizontal geometry and the proposed vertical alignment.



Alignment Annotation

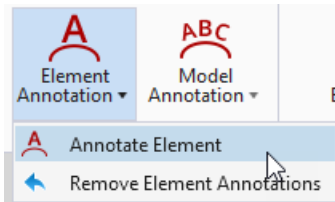
When geometric alignments are placed in the file, the annotation is not automatically generated by the software. The user must identify the alignments that are to be annotated either individually, by selecting the specific alignments, or by annotating all of the alignments contained in the active model, or all models in the active file.

Annotation commands are selected from the **OpenRoads Modeling** WorkFlow in the **Drawing Production** tab, as shown below.



Element Annotation

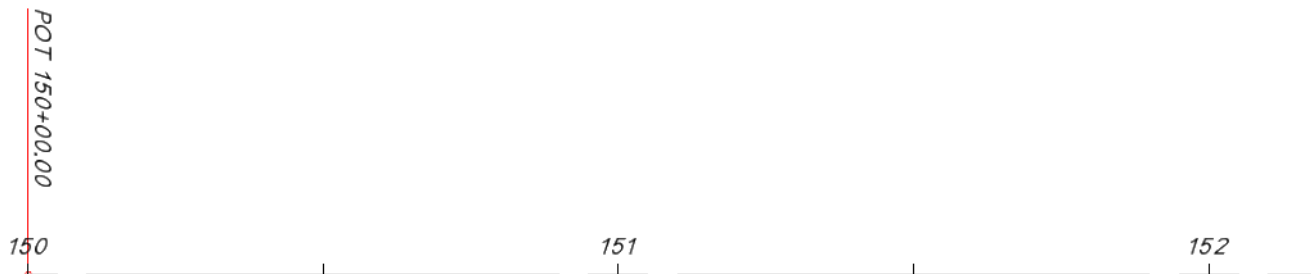
Individual elements are annotated by selecting the **Element Annotation** command from the **Drawing Production** tab. Two commands are available as shown below.



Annotate Element

The **Annotate Element** command is used to annotate one or more selected elements. The command prompts to select the OpenRoads element to be annotated. Multiple elements can be selected. Reset (right-click) to complete the selection process and initiate the annotation placement.

An example of annotation at the beginning of an alignment is shown below.



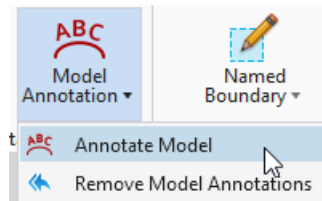


Remove Element Annotations

The **Remove Element** Annotations command is used to remove the annotation from selected elements. When prompted, select the elements to remove the annotation. Reset (right-click) to end the selection process and initiate the removal process.

Model Annotation

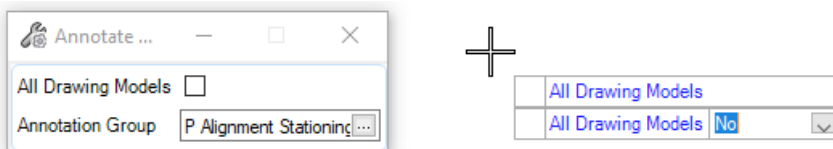
The **Model Annotation** command is used to annotate all of the elements in the active model, or all models, by selecting a specific Annotation Group. Two options are available as shown below.



Annotate Model

Select this command to annotate all the elements in a model, or in all models, by selecting a specific Annotation Group.

When the command is selected, the user is prompted as shown below. Issue a data point (left mouse-click) to initiate the process.



Remove Model Annotations

Select this command to remove all annotations from the active model or all models in the active file.

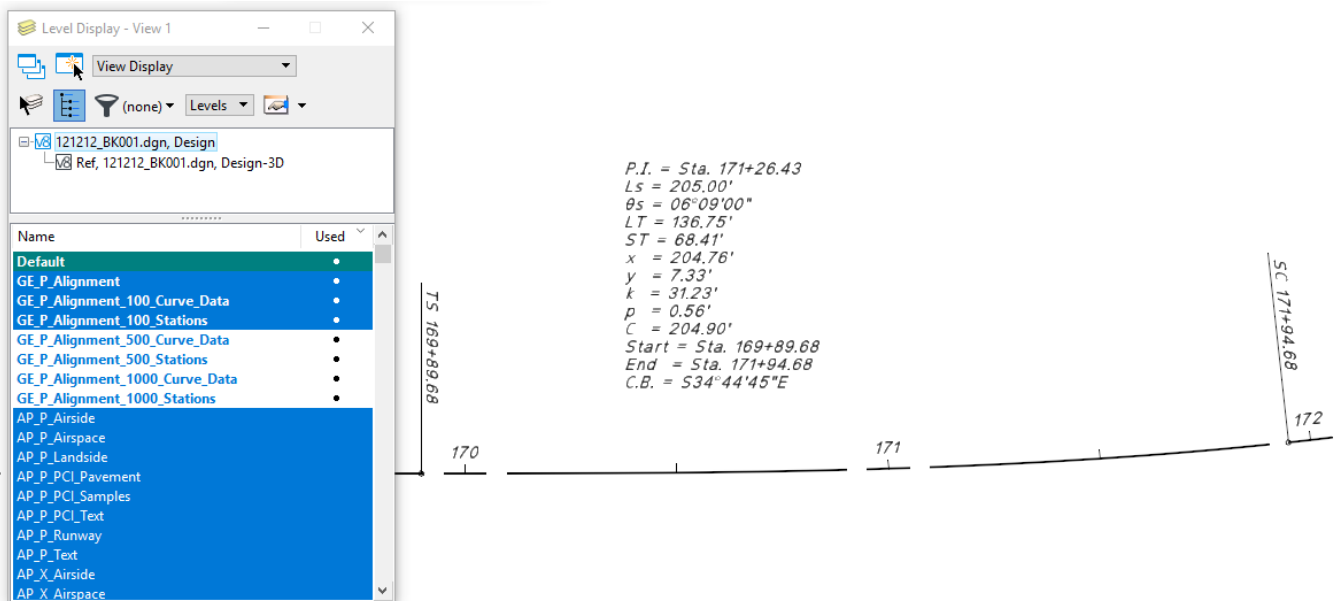


Alignment Annotation Levels

Stationing is defined by the Feature Definition assigned to the alignment element. Annotation is frequently drawn at different intervals depending on the type of sheet that is displaying the alignment information (20-scale plan vs. a 500-scale schematic sheet). There is no way to assign an element template to an alignment in one file with one set of annotation values appropriate for the 20-scale plan, and a different element template in another file with a different set of annotation values appropriate for a 500-scale schematic plan. In order to facilitate different station and tic intervals, It is necessary to define the text for multiple scales in the Feature Definition that is assigned to the element.

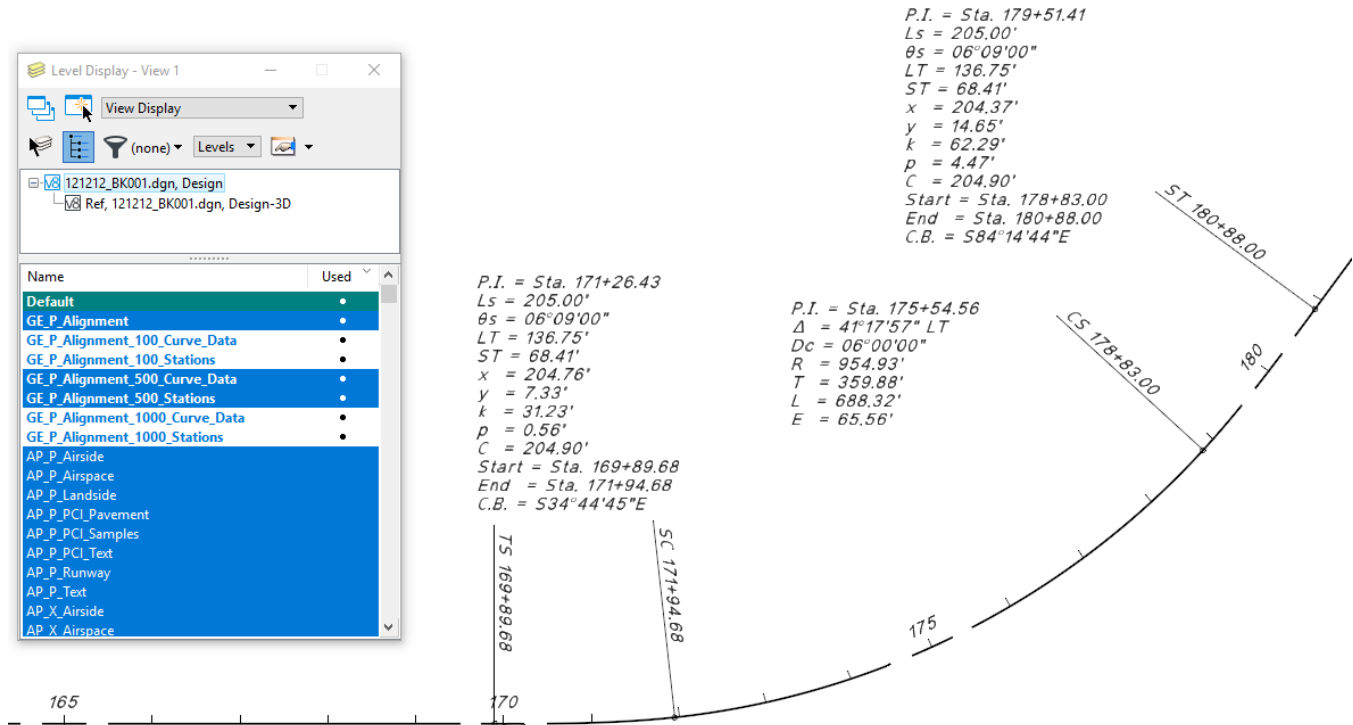
Three groups of levels and element templates are provided to facilitate alignment annotations with 100', 500', and 100' spacing for the major station labels.

In the example below, stations and curve data for a spiral element are visible. The levels for the stations at 100' interval are turned on, while the levels for the 500' and 1000' stationing interval are turned off. The **Annotation Scale** value is set to 1:20.





In the example below, the **Annotation Scale** value is set to 1:100 with the levels for 500' station intervals toggled on.



Note: The levels are named according to the station label intervals (100', 500', and 1000'), not the annotation scale value. For example, the **GE_P_100_Stations** and **GE_P_100_Curve_Data** levels are appropriate for multiple annotation scale values (1:10, 1:20, 1:50).

Also note that the spiral and curve data cannot be configured as a combined curve set with OpenRoads Designer Update 3. This is planned for a future update and will be adjusted in the OHDOT standards after it has been implemented.

Contacts

For any questions, suggestions, or problems with this document please contact the ODOT Office of CADD and Mapping Services by use of the following form on the ODOT website:

https://odot.formstack.com/forms/cadd_servicerequest