These instructions were created with:

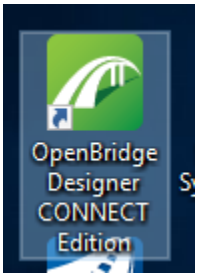
OpenBridge Designer CONNECT Edition Version 10.09.00.10

OpenBridge Designer for Starting Bridge Model

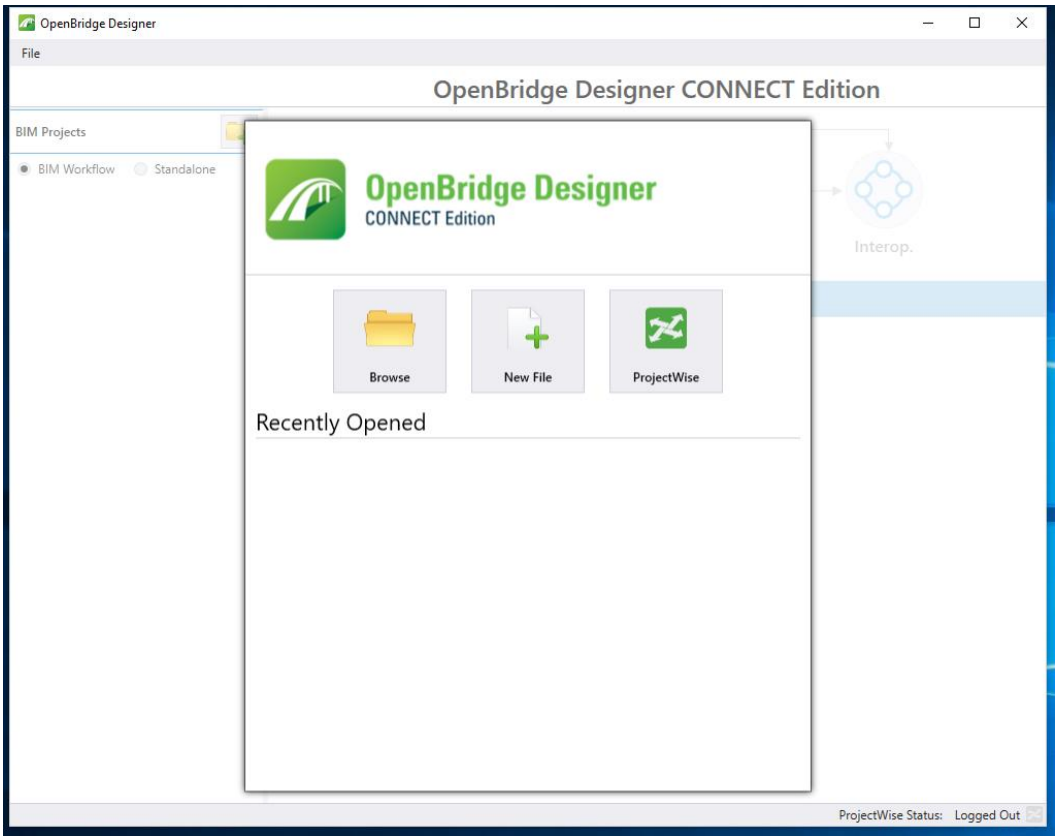
OpenBridge Designer (OBD) will be used for creating the model through the OpenBridge Modeler (OBM) module. The Standalone File Groups option should be used. If the BIM Workflow option is used, then the model of the bridge is needed to send analysis data to the analytical module programs.

The following steps should be followed:

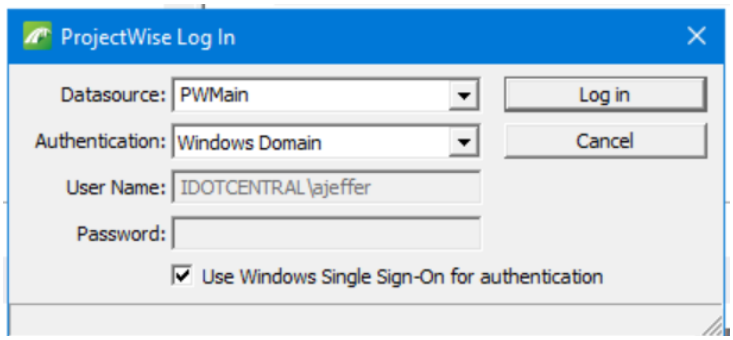
1. Launch OpenBridge Designer (OBD).



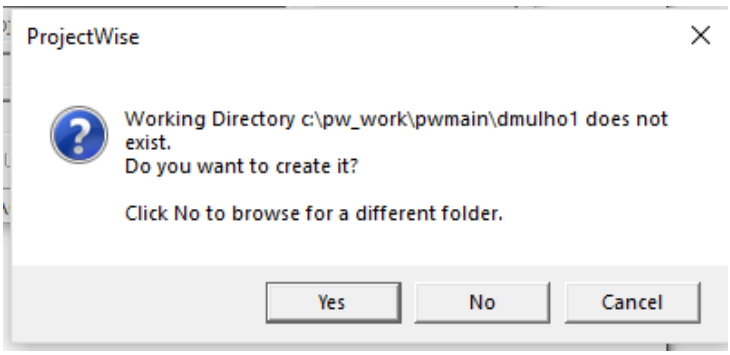
2. Select ProjectWise in OpenBridge Designer interface.



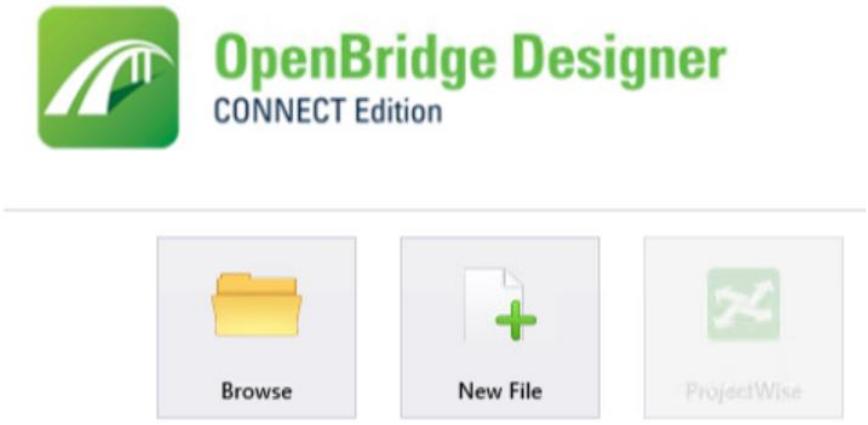
3. In the ProjectWise Log In window, select the Windows Domain or ProjectWise Authentication option. This is dependent on the version of ProjectWise Client being used. Toggle on Use Windows Single Sign-On for authentication and click Log in button.



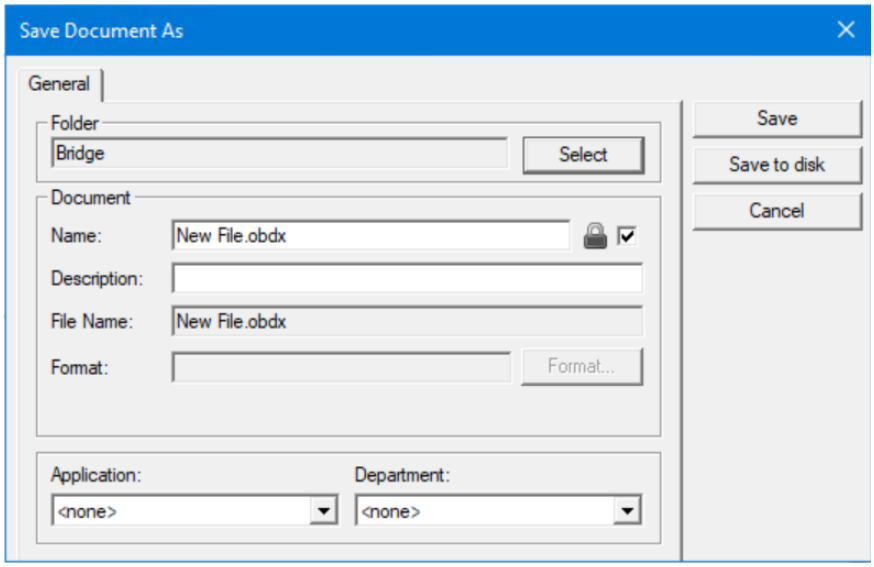
If this is the first time logging in to this ProjectWise datasource on the computer you are using, respond **Yes** to the warning to create the Working Directory.



4. Create an obdx file by selecting New File.

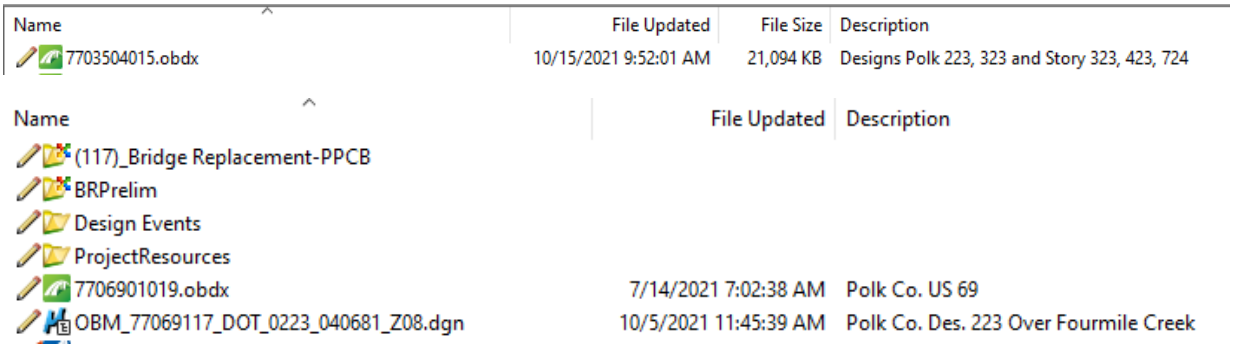


5. Use Select button and browse to Bridge folder for the correct Project Directory.

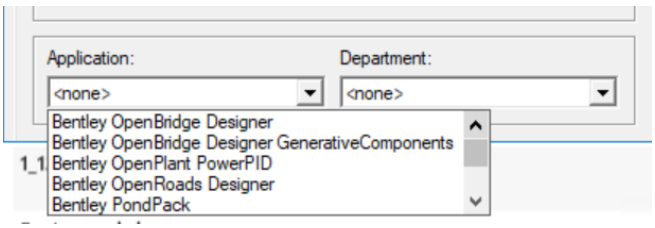


6. Enter a Document Name that matches the project directory number. Add a logical description and location of the project in Document Description field. Providing a good description with a location of the structure will help users in locating the proper file in a project.
   Name example: 0603003092.obdx
   Description examples: Polk Co. US 69 or Designs Polk Co. 223, 323 & Story Co. 323, 423, 724

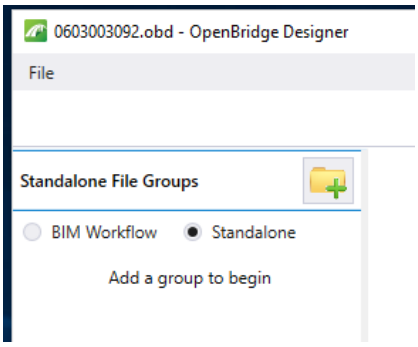
Examples of obdx file Name and Description in ProjectWise:



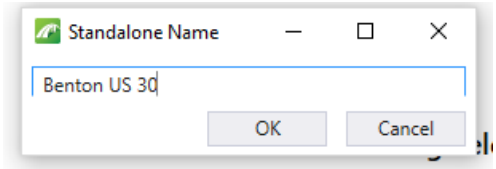
7. Select Application field and change from <none> to Bentley OpenBridge Designer for future recognition by ProjectWise for the associated application.
   The Bentley OpenBridge Designer GenerativeComponents option should only be selected if working with a Generative Component in your model due to performance issues.



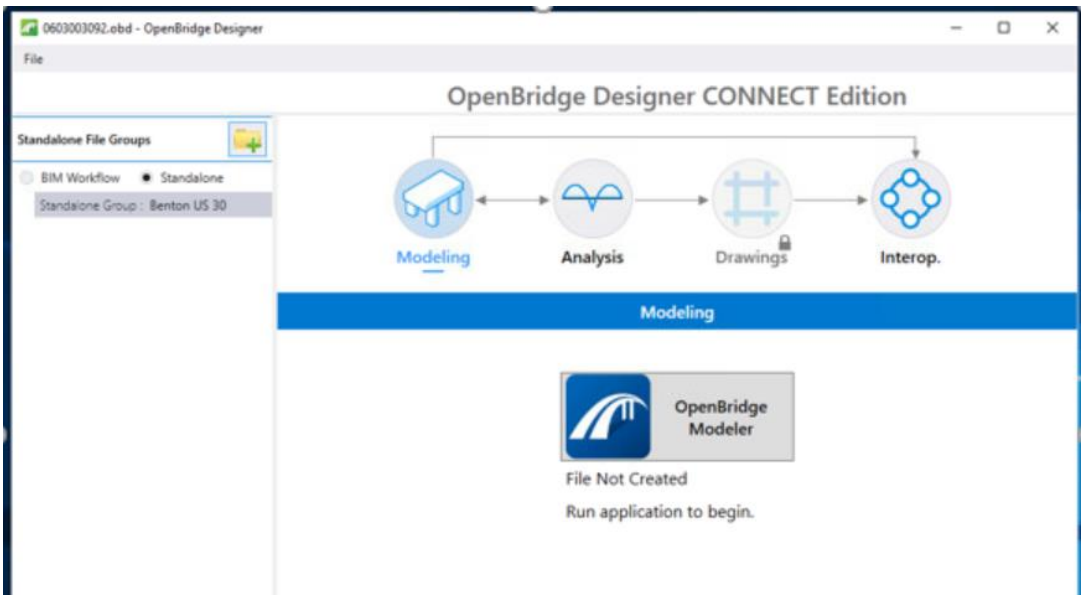
8. Select Department field and change from <none> to Bridge – Bridge Design.
9. Click Save button.
10. Create Standalone Group by selecting the Standalone workflow option. (Standalone workflow is the default selection, *currently Iowa DOT will not be using the BIM Workflow option*.)
11. Click the Add Group button (folder with green plus).



12. Enter project name into following dialog when prompted.

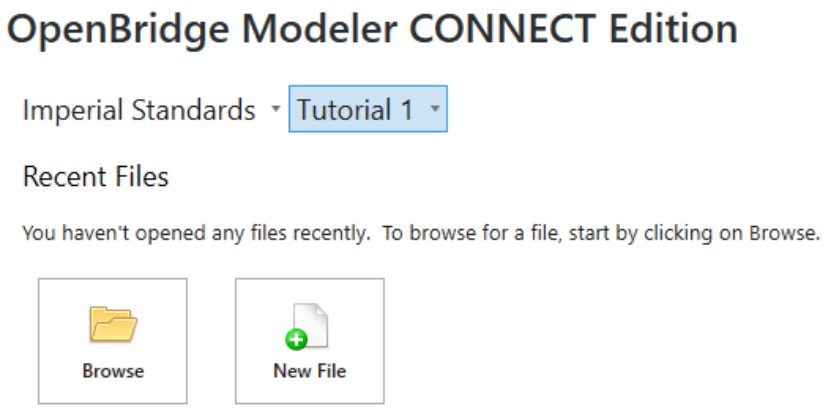


13. Click OK button.
14. Check that the Modeling module icon is highlighted.
15. Launch OpenBridge Modeler (OBM) from the shortcut for applications listed in the lower portion.

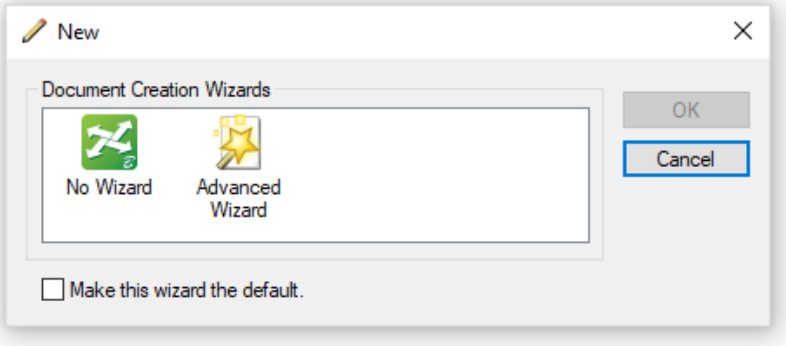


16. When OpenBridge Modeler window opens, select New File.

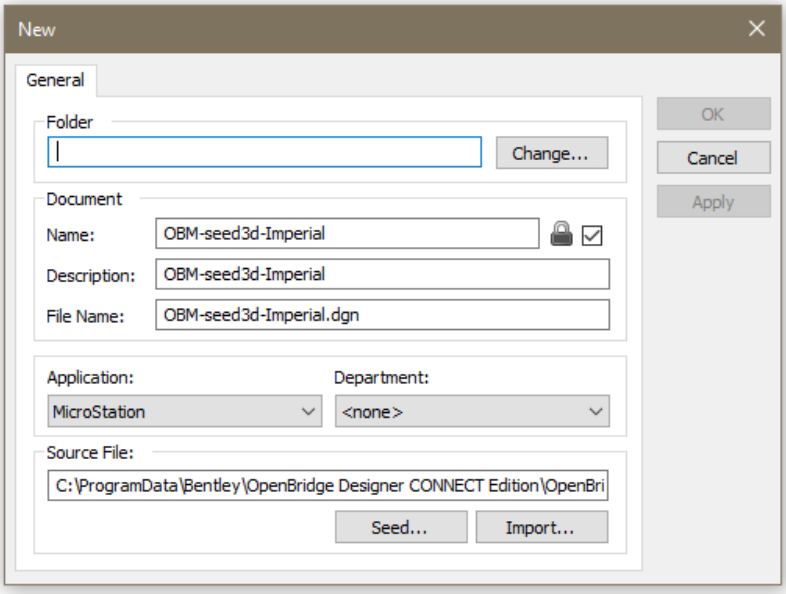
    The CONNECT workspace will load after creation of the new file.



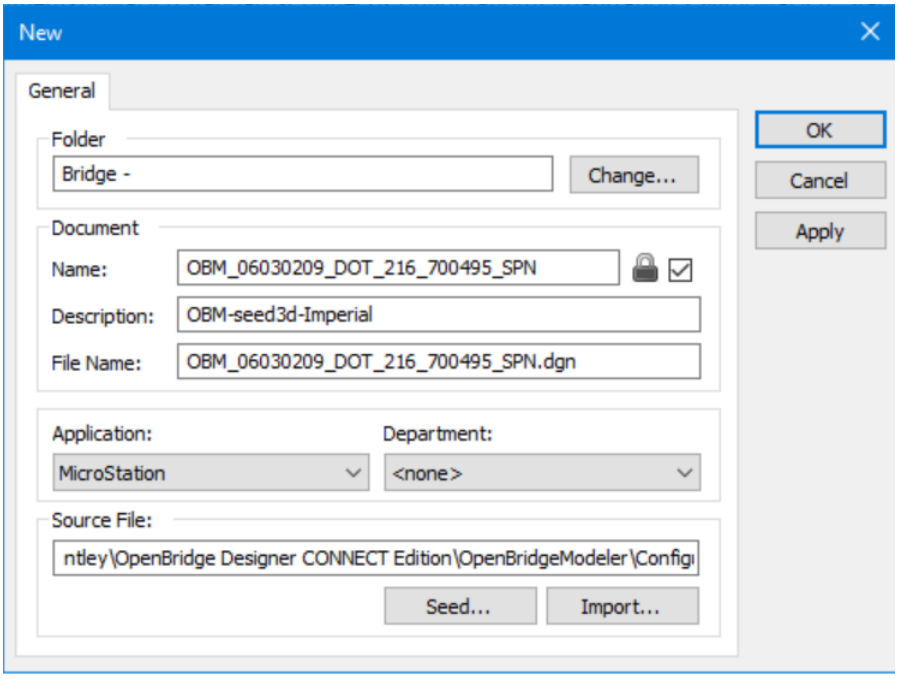
17. Select No Wizard in the New file dialog box.
18. Click OK button.



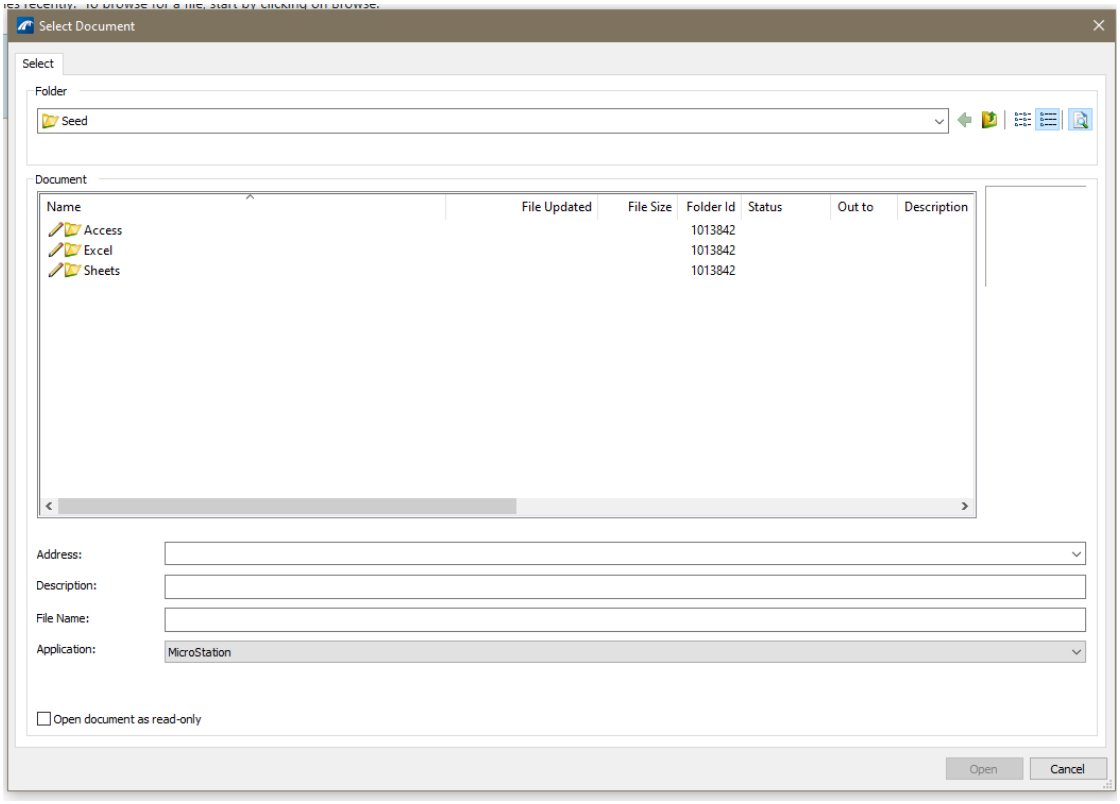
19. The new dialog box displays.



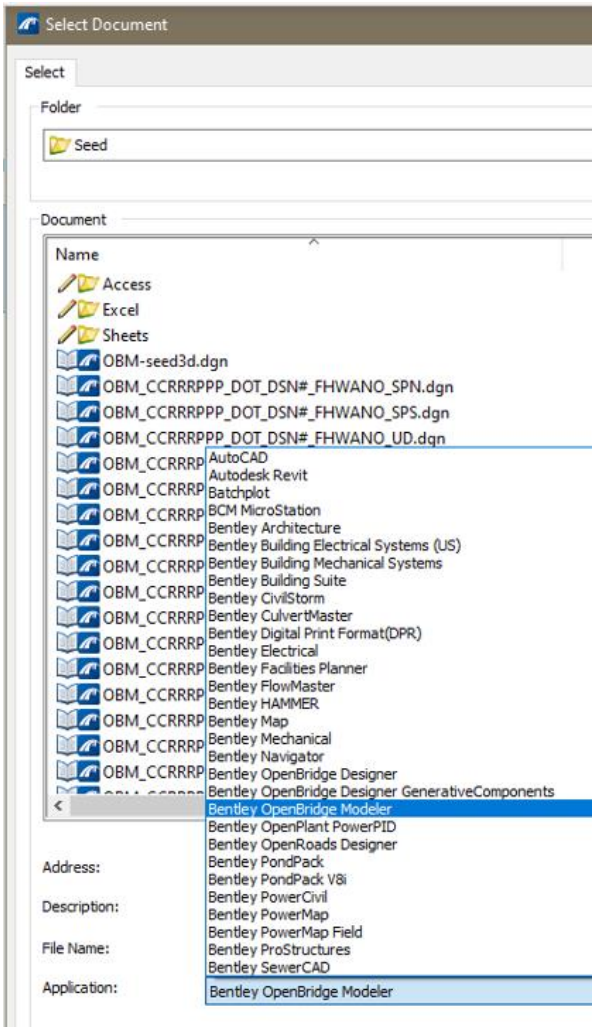
20. Select Change… button in Folder and locate Project Directory in ProjectWise and select the Bridge folder to place the OBD/OBM files in.



21. Select Seed… button to locate the proper Seed File to use with the set Geographic Coordinate System/Zone (Iowa Regional Coordinate System IaRCS).

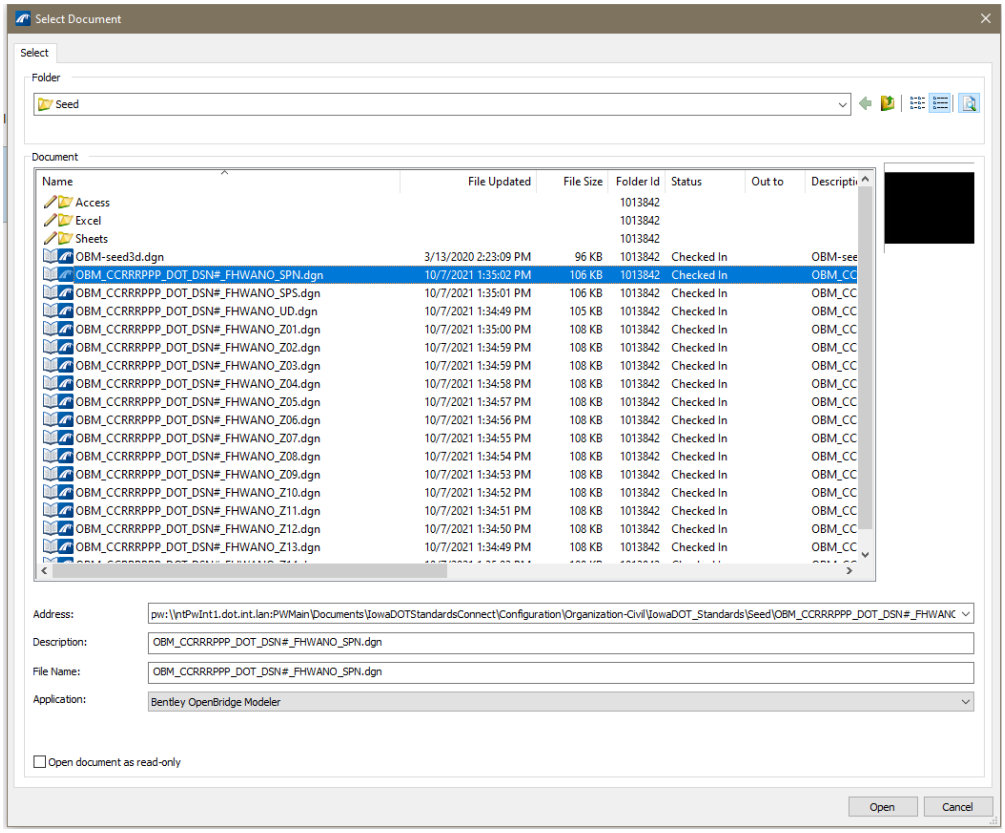


22. Select Application field and change from MicroStation to Bentley OpenBridge Modeler.

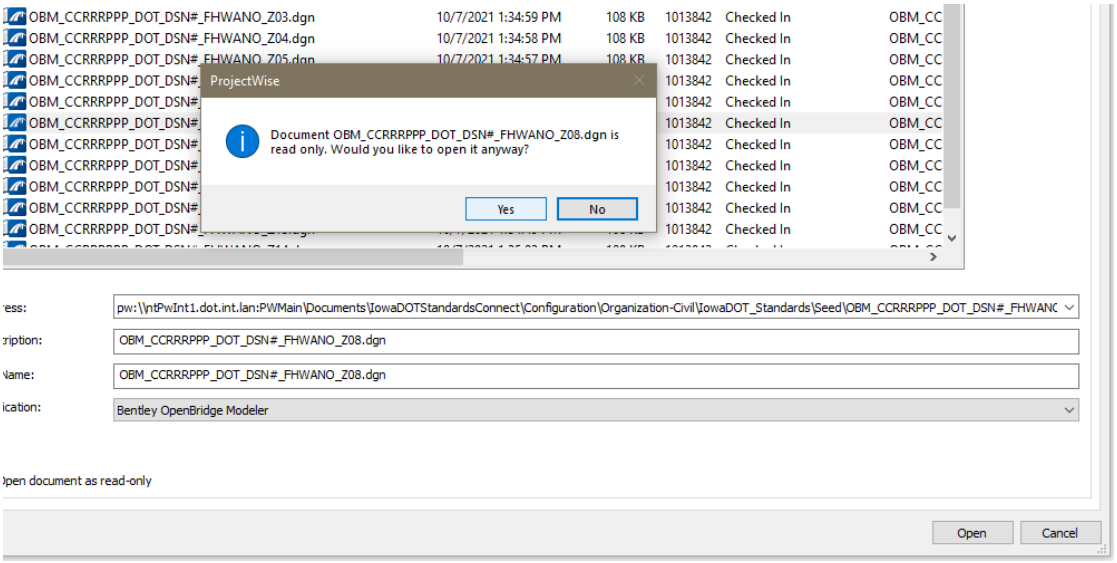


23. Browse to the proper Seed File to use with the set Geographic Coordinate System/Zone (Iowa Regional Coordinate System, IaRCS).

    The Seed files are located at:
    PWMain\Documents\IowaDOTStandardsConnect\Configuration\Organization-Civil\IowaDOT_Standards\Seed\

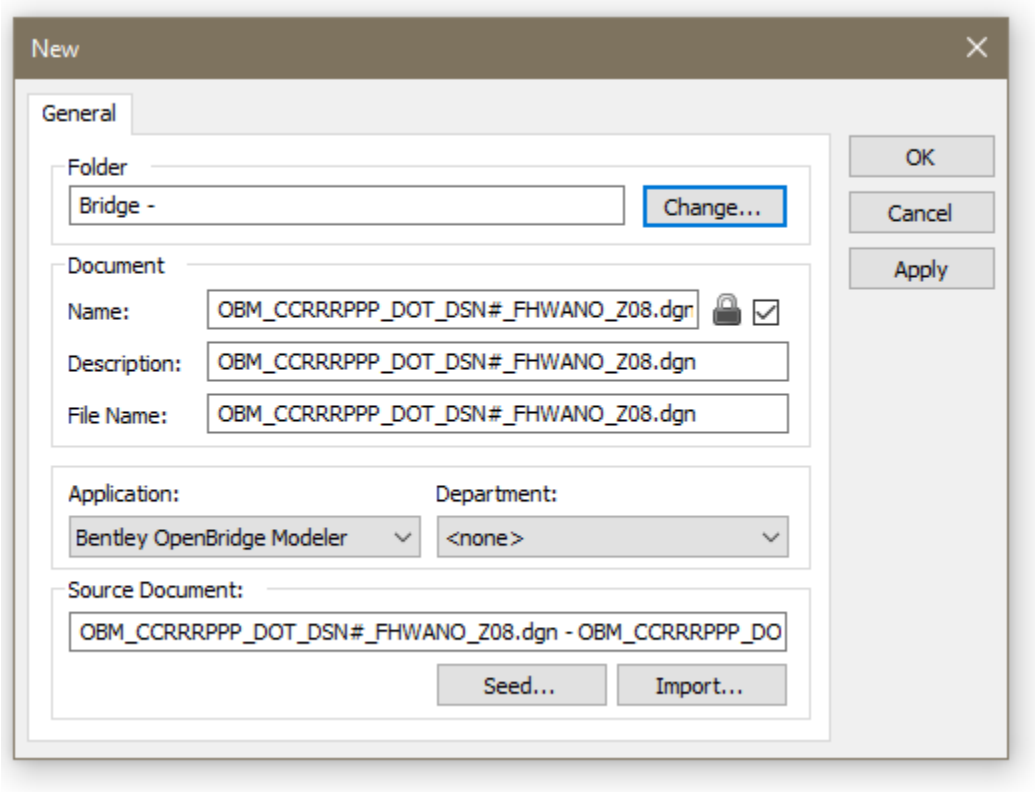


24. Select Open button.



25. Select Yes button.

26. The new dialog box displays.



27. Change the name of the file in Name field and add a proper description in Description field. Providing a good description with a location of the structure will help users in locating the proper file in a project.

    Name: **OBM_CCRRRPPP_DOT_DSN#_FHWANO_Z08.dgn**

    OBM = Designates this as an OpenBridge Modeler file.

    CCRRRPPP = County (CCC) Route (RRR) Paren (PPP) from the Project Number.

    DOT = Signifies entity responsible for creation of model (DOT = Iowa DOT). If the project is created by a Consultant, then DOT would be replaced with the Consultants abbreviated name.

    DSN# = Four-digit Design Number of structure.

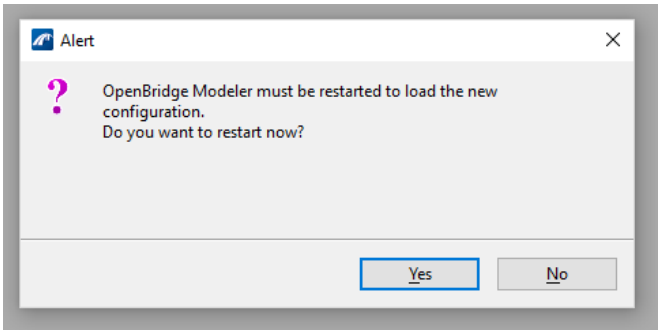
    FHWANO = The six-digit FHWA Number.

    Name Example: **OBM_77069117_DOT_0223_040681_Z08.dgn**
    Description Example: **Polk Co. Des. 223 Over Fourmile Creek**

Example listing of files.

Name	File Updated	Description
(245)_Bridge-Unspecified		
BRPrelim		
Design Events		
ProjectResources		
15-77-035-040-01_STRUCTURES_OVER_VIEW_Z08.dgn	10/6/2021 2:22:19 PM	Project Overview Polk-Story
7703504015.obdx	10/15/2021 9:52:01 AM	Designs Polk 223, 323 and Story 323, 423, 724
OBM_77035245_DOT_0423_040791_Z08.dgn	10/15/2021 9:51:40 AM	NE 126TH AVE (ELKHART INTERCHANGE) BRIDGE
OBM_77035246_DOT_0323_041871_Z08.dgn	6/23/2021 1:19:19 PM	NE 142ND AVE OVER I-35
OBM_77035305_DOT_0724_041891_Z08.dgn	6/23/2021 1:04:45 PM	NE 158TH AVE OVER I-35
OBM_85035269_DOT_0323_049141_Z08.dgn	6/23/2021 12:41:40 PM	315TH ST BRIDGE OVER I-35
OBM_85035284_DOT_0223_049011_Z08.dgn	6/23/2021 1:10:56 PM	IA 210 OVER I-35

28. Select Application field and change from MicroStation to Bentley OpenBridge Modeler.
29. Select Department field and change from <none> to Bridge – Bridge Design.
30. Click OK button.
31. Click Yes button for the configuration Alert and restart.

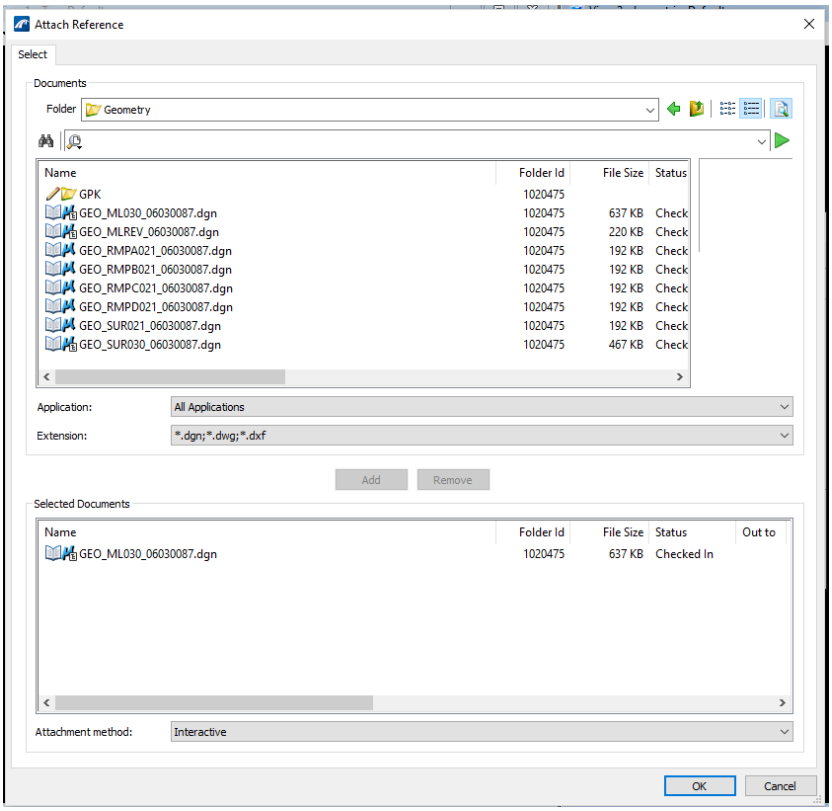


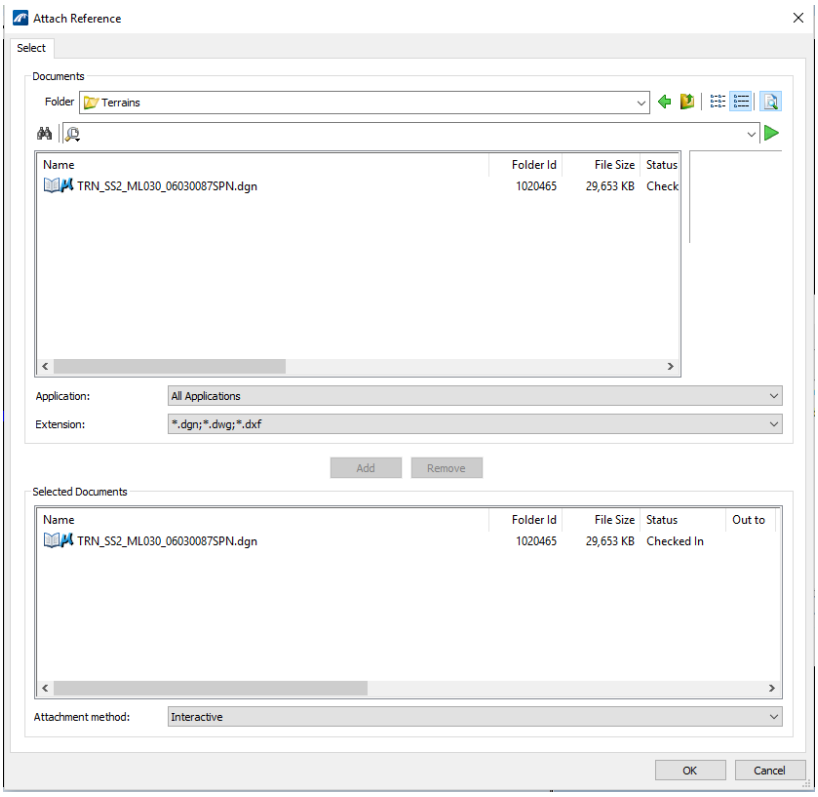
Note: Steps 16 -30 can be skipped if the file is created using Copy Seed.
Refer to CONNECT Seed Files and Naming Convention

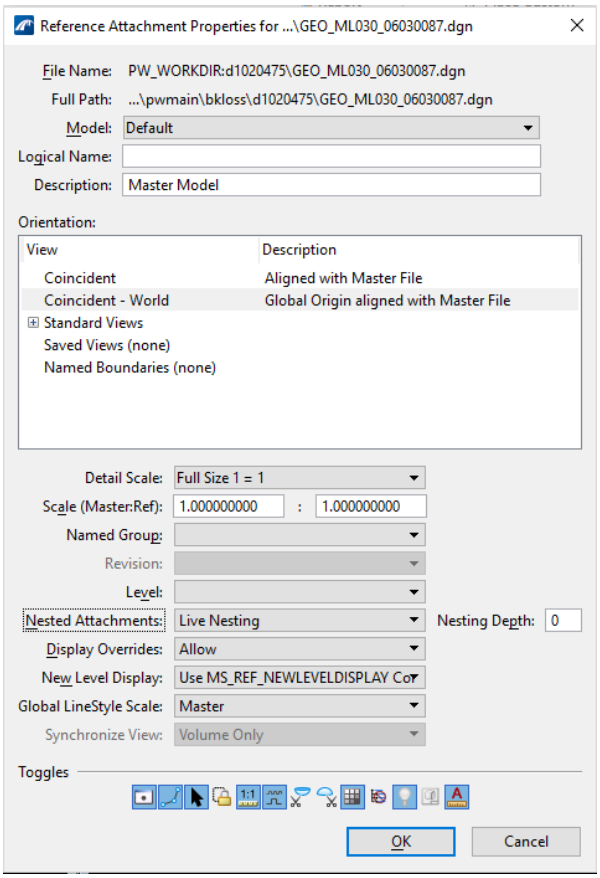
32. When OpenBridge Modeler completes loading, activate the OpenBridge Modeling workflow from the pick list in the upper left corner if it is not already active.
33. Reference the geometry and terrain files needed for the location of the bridge. Always use Coincident World orientation when referencing models.

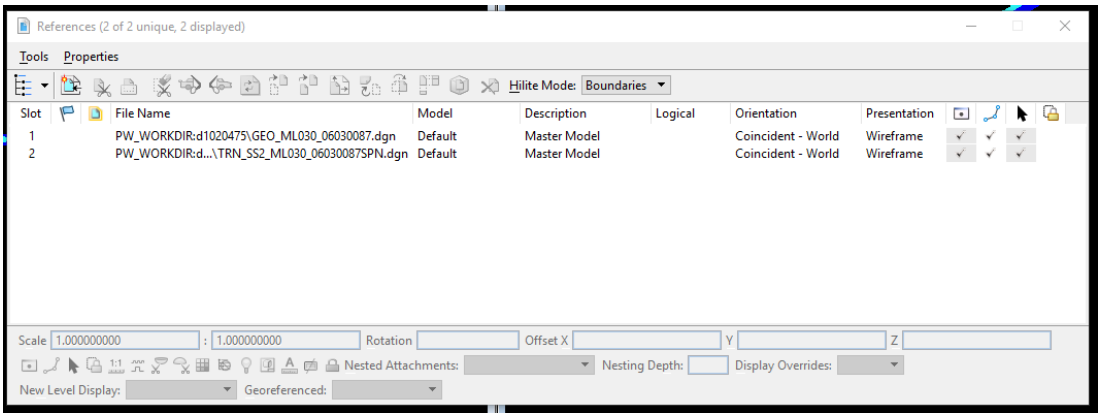
    GEO_ prefix named files are located at Design/CADD_Files/Geometry. This contains alignments and profiles for the project.

    TRN_ prefix named files are located at Design/CADD_Files/Terrains. This contains any terrain models for the project.


Attach Reference
Select
Documents
Folder Geometry
Name Folder Id File Size Status
GPK 1020475
GEO_ML030_06030087.dgn 1020475 637 KB Check
GEO_MLREV_06030087.dgn 1020475 220 KB Check
GEO_RMPA021_06030087.dgn 1020475 192 KB Check
GEO_RMPB021_06030087.dgn 1020475 192 KB Check
GEO_RMPC021_06030087.dgn 1020475 192 KB Check
GEO_RMPD021_06030087.dgn 1020475 192 KB Check
GEO_SUR021_06030087.dgn 1020475 192 KB Check
GEO_SUR030_06030087.dgn 1020475 467 KB Check
Application: All Applications
Extension: *.dgn;*.dwg;*.dxf
Add
Remove
Selected Documents
Name Folder Id File Size Status Out to
GEO_ML030_06030087.dgn 1020475 637 KB Checked In
Attachment method: Interactive
OK
Cancel

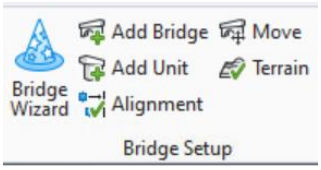

Attach Reference
Select
Documents
Folder Terrains
Name Folder Id File Size Status
TRN_SS2_ML030_06030087SPN.dgn 1020465 29,653 KB Check
Application: All Applications
Extension: *.dgn;*.dwg;*.dxf
Add
Remove
Selected Documents
Name Folder Id File Size Status Out to
TRN_SS2_ML030_06030087SPN.dgn 1020465 29,653 KB Checked In
Attachment method: Interactive
OK
Cancel



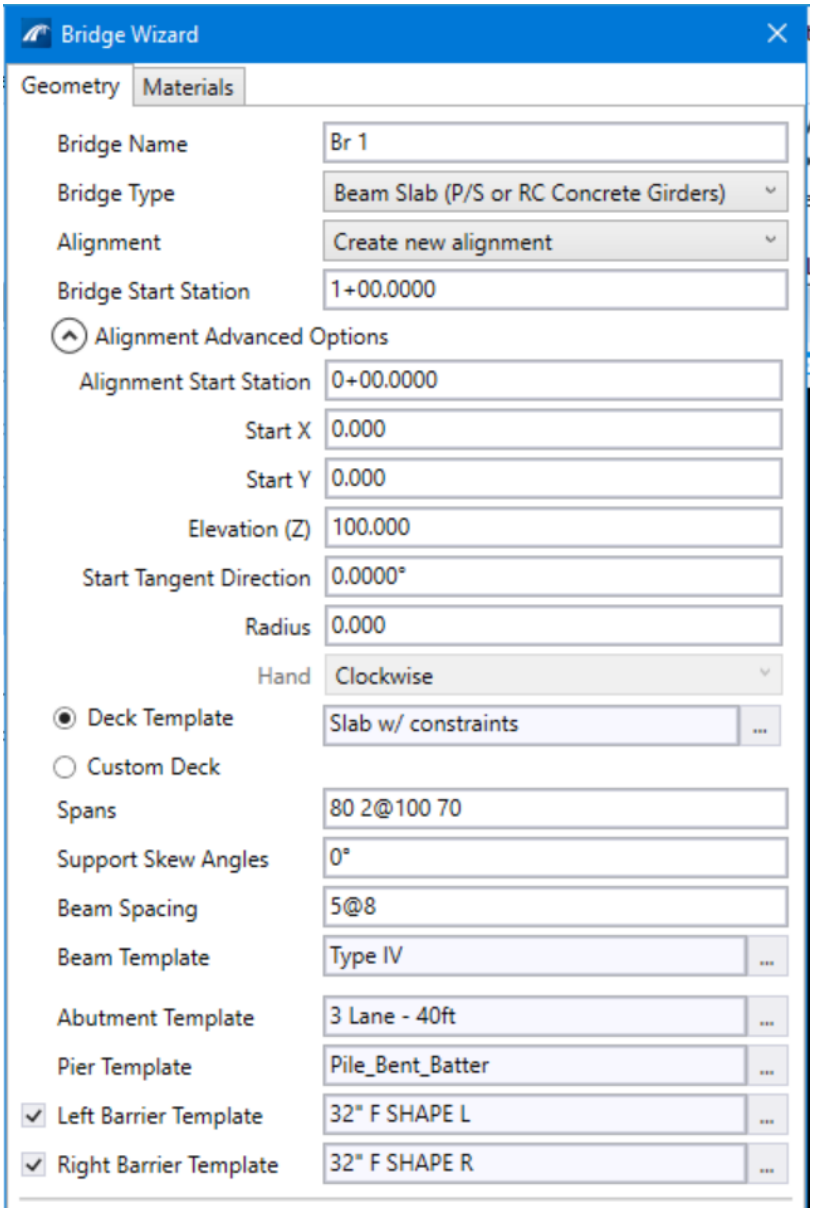


The referenced GEO file should always have Display on for bridge modeling. Turning this reference off may cause problems with the function of the model.

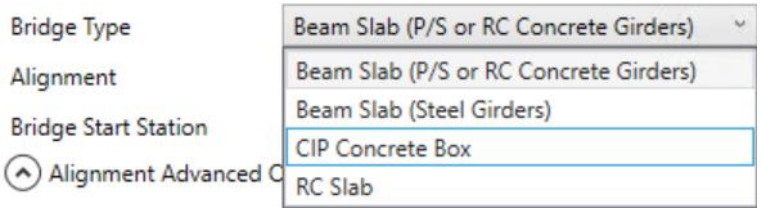
34. Fit the views to see the resulting geometry and terrain.
35. To begin modeling the bridge, select Bridge Wizard in the Bridge Setup tab of the ribbon.



36. Enter fields for the specifics of the bridge to place within the model.

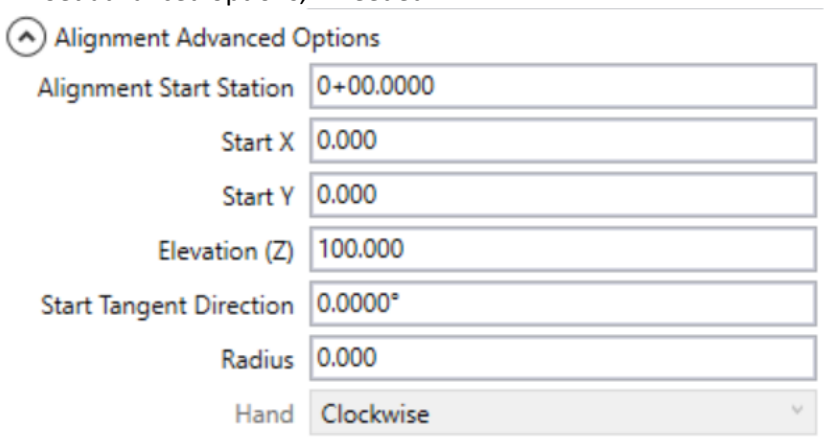


- Enter Bridge Name with County and Design Number. Example Polk Des. 223.
- Select Bridge Type for the specific bridge.



- Select Alignment from the available alignments in the attached referenced GEO file.

- Set advanced options, if needed.



- Select Deck Template from the template library.
- Enter Span lengths.
- Enter Skew Angle for support lines.
- Enter Beam Spacing.
- Select Beam Template from the template library.
- Select Abutment Template from the template library. Abutments available are not Iowa specific. The model will be modified to use a Custom Abutment.
- Select Pier Template from the template library.
- Select Barrier Template from the template library for both left and right barriers.

37. Click OK button.

The model will be placed at the appropriate location. Proceed with any modifications of various components.

Additional information on modifications will be added in the future.