AASHTOWare BrR/BrD 6.8

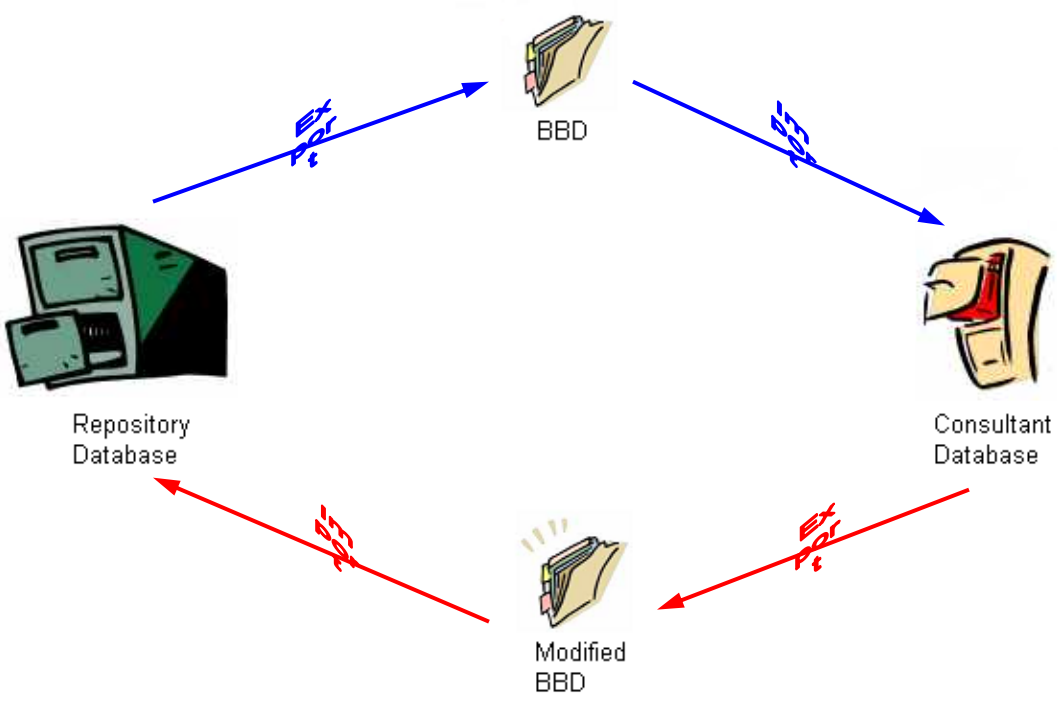
Feature Tutorial

Bridge Exchange Feature Example

Topics Covered

- Overview of Bridge Exchange feature.
- Export a bridge from the repository database.
- Import the bridge to the consultant database.
- Export the bridge from the consultant database.
- Import the bridge back to the repository database.

Overview of Bridge Exchange feature



The Bridge Exchange feature provides the capability of exchanging bridges between repository and consultant databases while maintaining a history of events and analysis results. A repository database is the database where an agency maintains bridge descriptions. The agency can export a bridge using the Bridge Exchange feature and gives the resulting bridge (XML) file to a consultant. Exporting a bridge using the Bridge Exchange feature causes the bridge to be checked out of the repository database. The bridge description cannot be changed in the repository database while the bridge is checked out. The consultant can then import the XML file into their database, called the consultant database, using the Bridge Exchange feature and modify the bridge description. Bridge descriptions that are imported into consultant databases using the Bridge Exchange feature have security on them to prevent consultants from modifying existing data in the bridge description. Consultants can only add new components, such as member alternatives, superstructure definitions, or materials, to the bridge description.

After the consultant has modified the bridge description, they can export the bridge using the Bridge Exchange feature and send the resulting XML file back to the agency. The agency can then import the XML file back into the repository database using the Bridge Exchange feature and review the new data added by the consultant. If the new components pass the quality assurance review by the agency, the agency can then check out the bridge from the repository database, mark the new superstructure definitions and/or member alternatives as "Existing" so they will be used for future ratings instead of the original descriptions and then check the bridge back into the repository database.

The Bridge Exchange feature has the following additional restrictions:

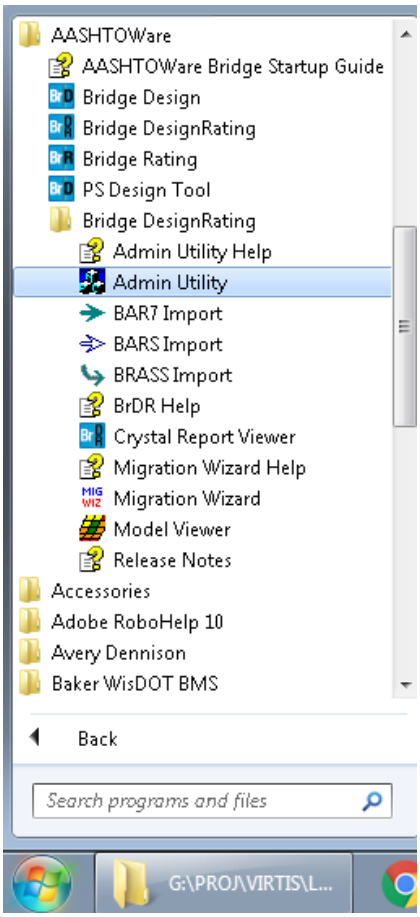
Only one bridge can be exported or imported at a time.
The repository database must have checkin/checkout enabled.
You can only import XML files back into the original repository database from which the bridge was originally exported. For example, if Bridge "A" was exported from repository Database "1", you cannot import Bridge "A" into repository Database "2". It can only be imported back into Database "1".
Timestamps are checked when importing back into the repository database to prevent importing a bridge with a timestamp earlier than the timestamp when the bridge was originally exported from the repository database.
Access Privileges are provided to permit or restrict users from using the Bridge Exchange feature.

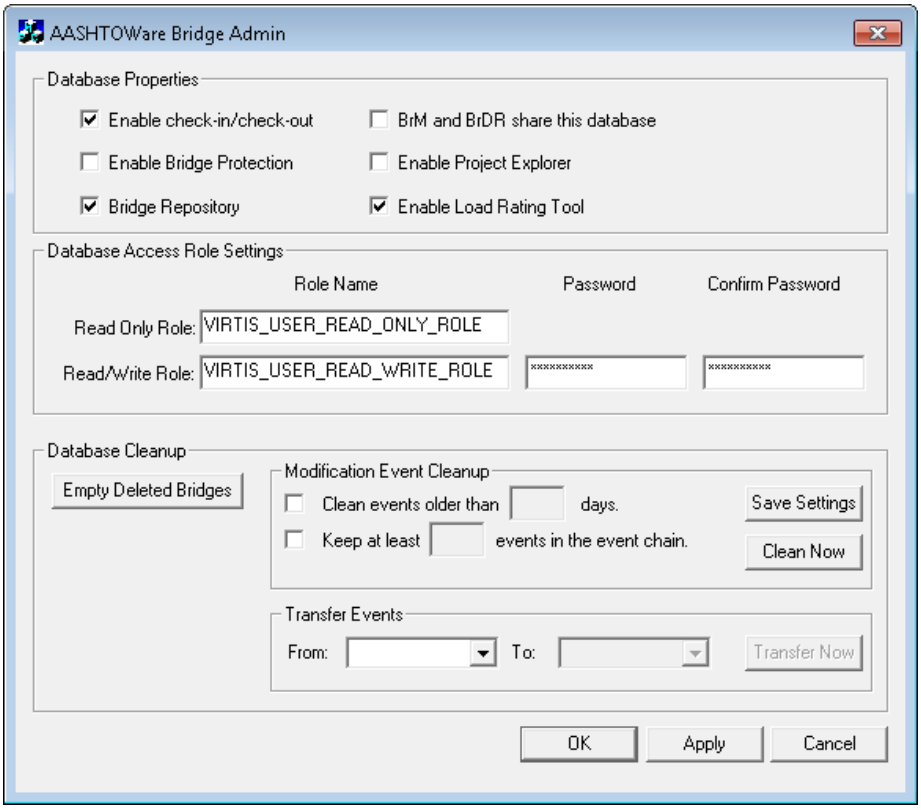
The Import/Export feature of BrR/BrD still operates as detailed in Import/Export BrR/BrD Data. Using the File/Import or File/Export functions will import or export bridge descriptions without the security features available in the Bridge Exchange feature.

Export a bridge from the repository database

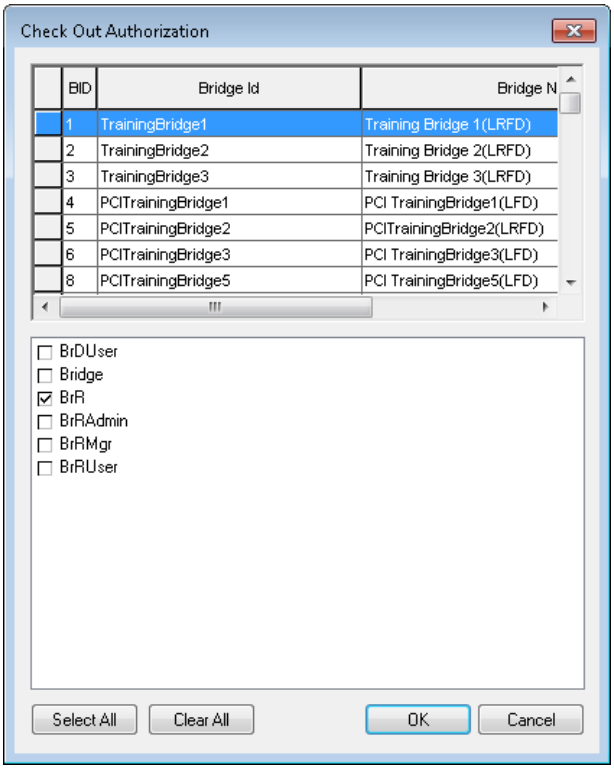
In this example, we will export TrainingBridge3 from the repository database and import into the consultant database. A new member alternative will be created for adding section loss data. Then, we will export the bridge from the consultant database and import back into the repository database.

Before exporting TrainingBridge3 from BrR/BrD, we need to check whether the repository database has the proper properties for the Bridge Exchange feature. To do that, start BridgeWareAdmin as the owner of the database and make sure the database has checkin/checkout and bridge repository enabled. Close BridgeWareAdmin after the properties are confirmed.



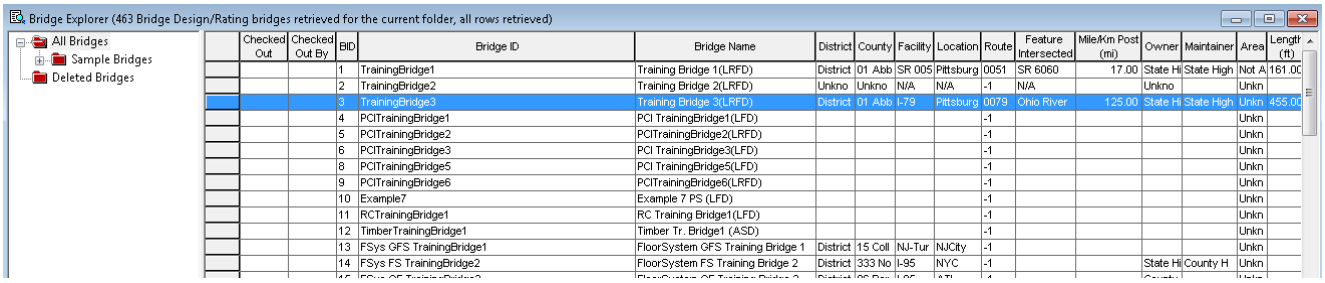


Start BrR/BrD and log into the repository database as BrR. BrR belongs to a user group that has read, write, create, and delete access privileges of Bridge Exchange feature. Read, write, and create access privileges are needed to perform a Bridge Exchange export or import. Delete access privilege is needed to cancel a Bridge Exchange export. Select all bridges and click Bridge\Check Out Authorization\By Bridge.

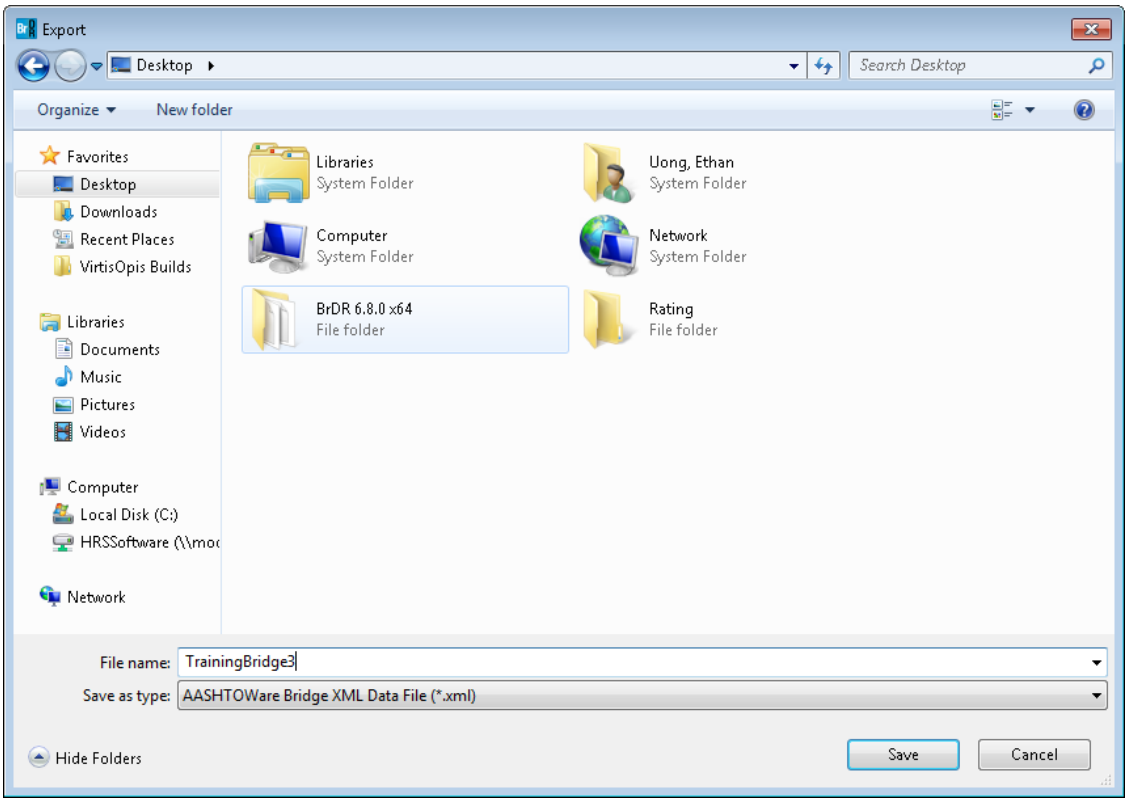


Check BrR and click OK.

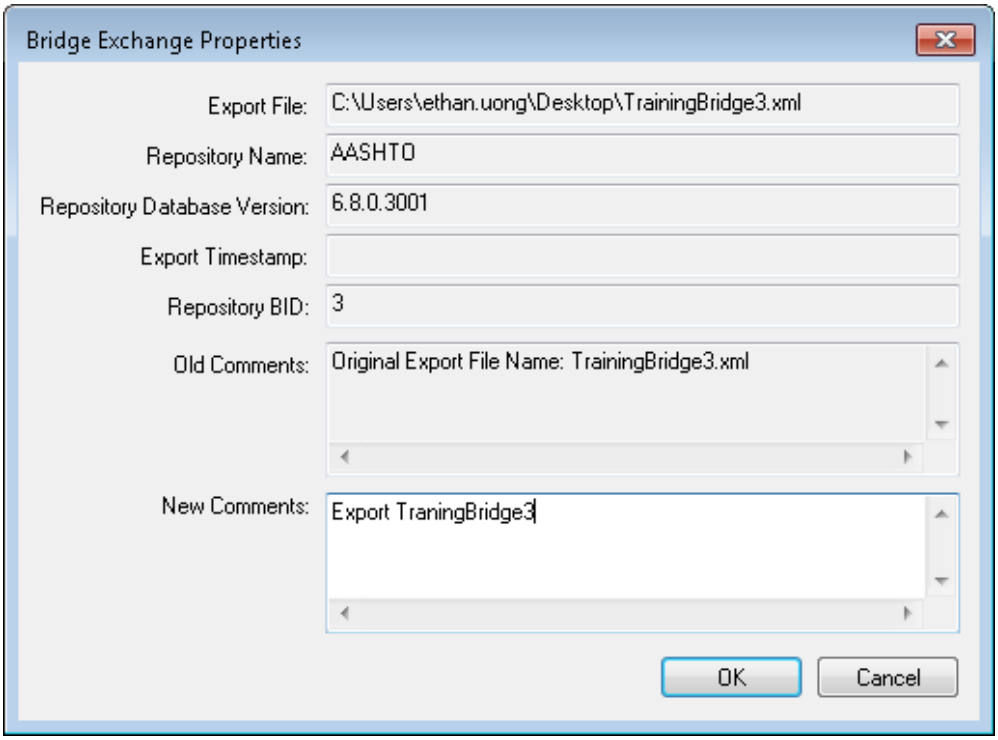
Select TrainingBridge3 in the Bridge Explorer for export.



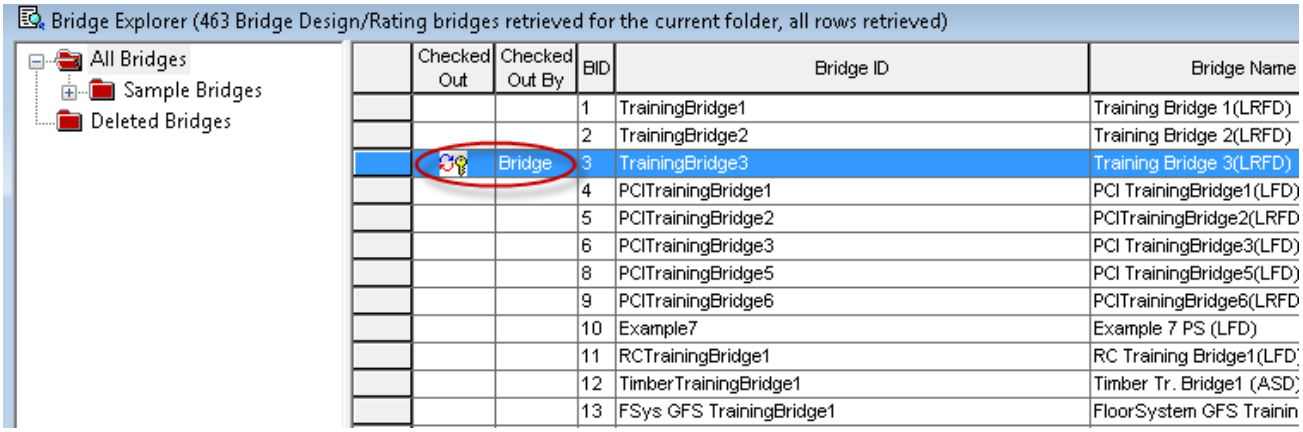
Select Bridge/Bridge Exchange/Export from the menu. An export file dialog will open. Enter “TrainingBridge3” as the name of the xml file.



Click Save and the Bridge Exchange Properties dialog will open with the information of the export. Enter "Export TrainingBridge3" as the New Comments.

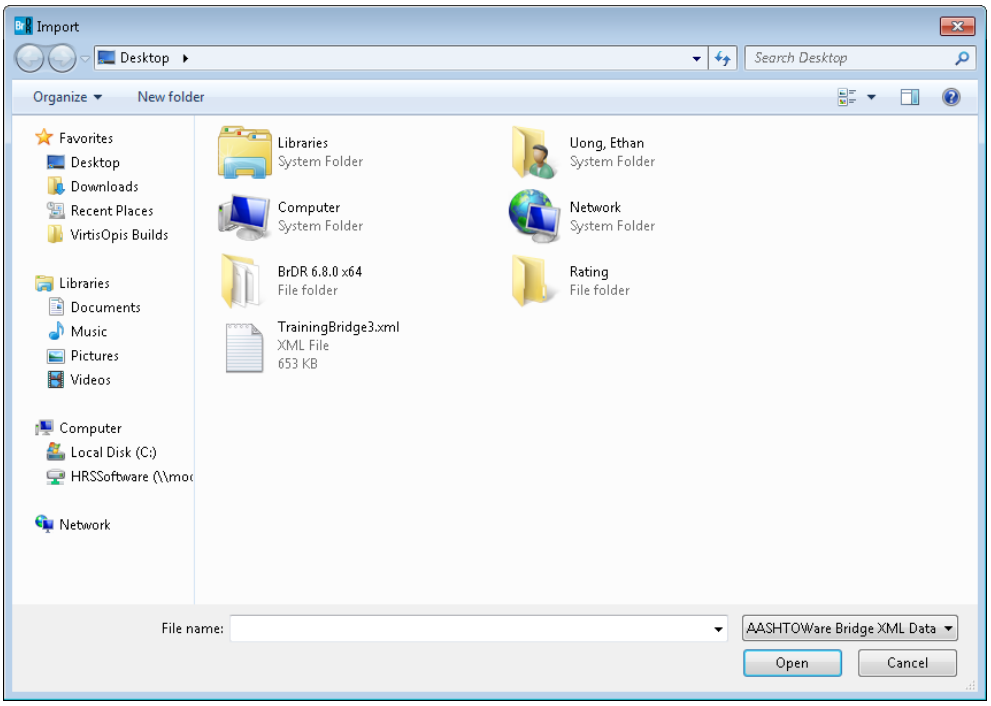


Click OK to complete the export. The Bridge Explorer will be updated to reflect TrainingBridge3 has been exported for exchange by BrR.

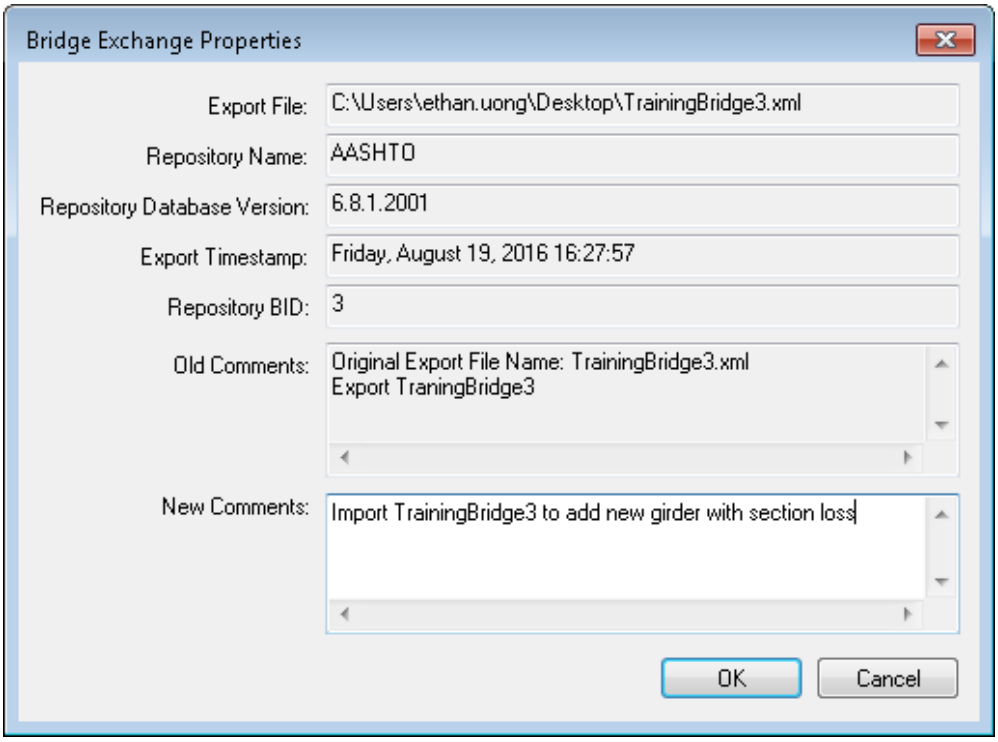


Import the bridge to the consultant database

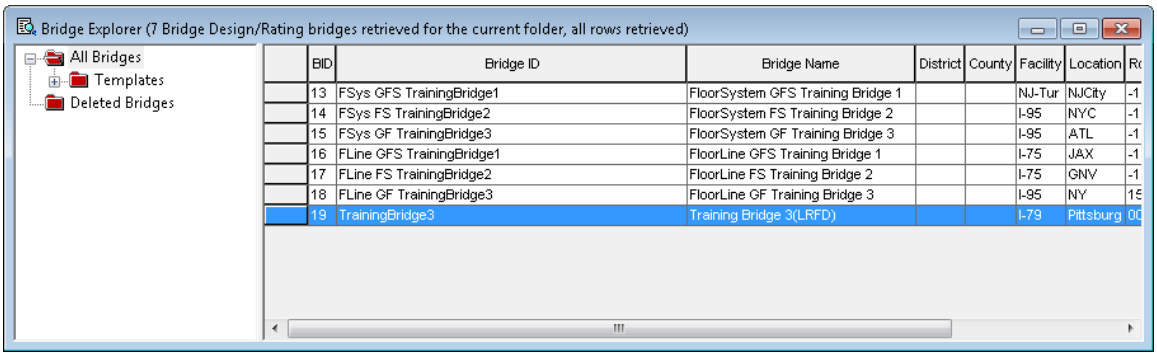
Start BrR/BrD and log into the consultant database. Select Bridge/Bridge Exchange/Import from the menu. An import file dialog will open. Select “TrainingBridge3.xml” as the file to import.



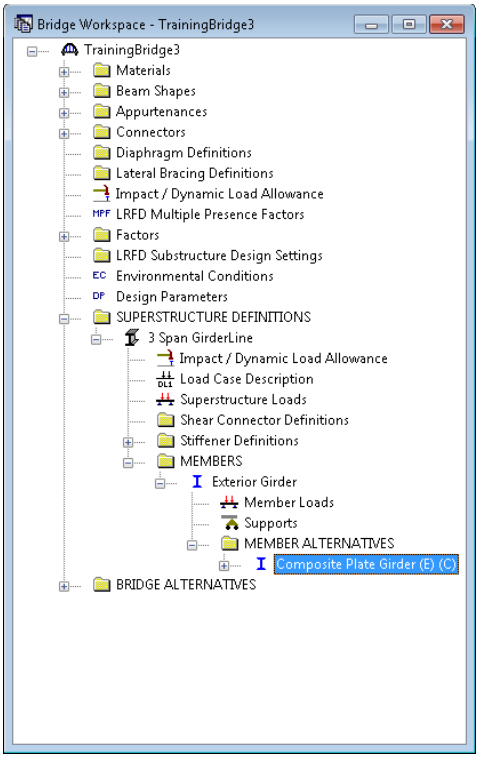
Click Open and the Bridge Exchange Properties dialog will open with the information of the import. All exchange comments are displayed in Old Comments. Enter "Import TrainingBridge3 to add new girder with section loss" as the New Comments.



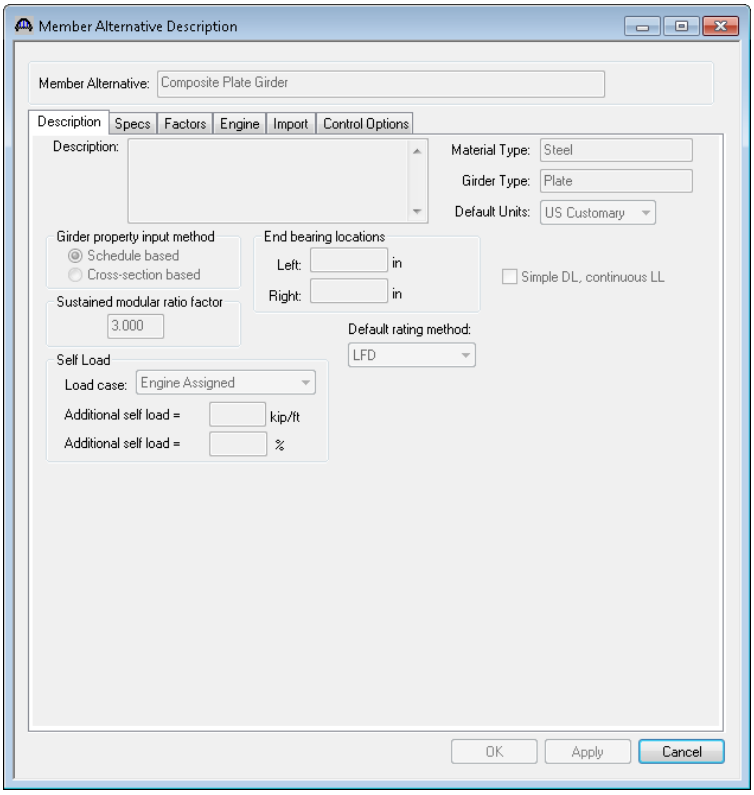
Click OK to complete the import. The Bridge Explorer will be updated with TrainingBridge3.



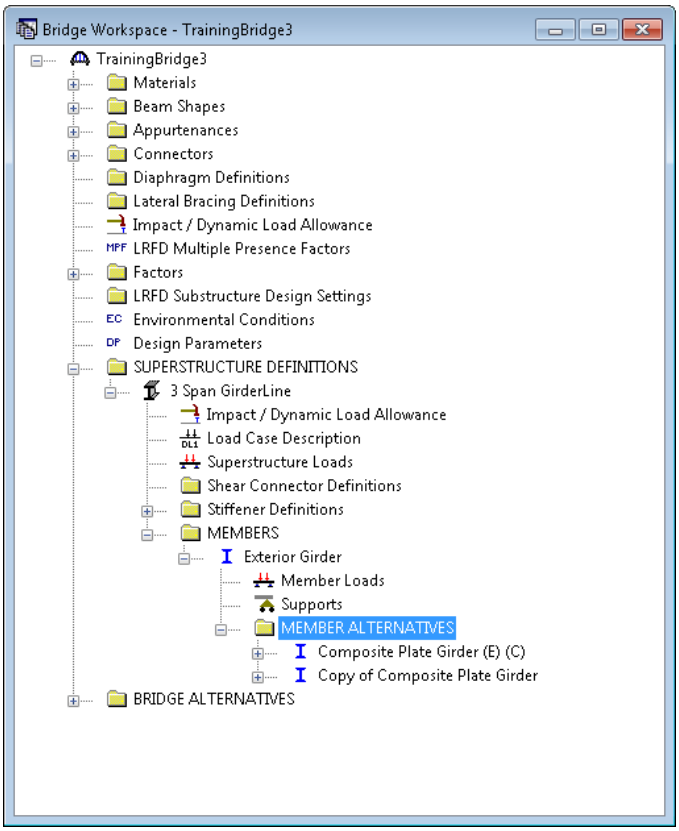
Double click TrainingBridge3 to open the Bridge Workspace.



Double click “Composite Plate Girder” to open the Member Alternative Description window. Since the bridge is imported into the consultant database using the Bridge Exchange feature, the window is read-only.

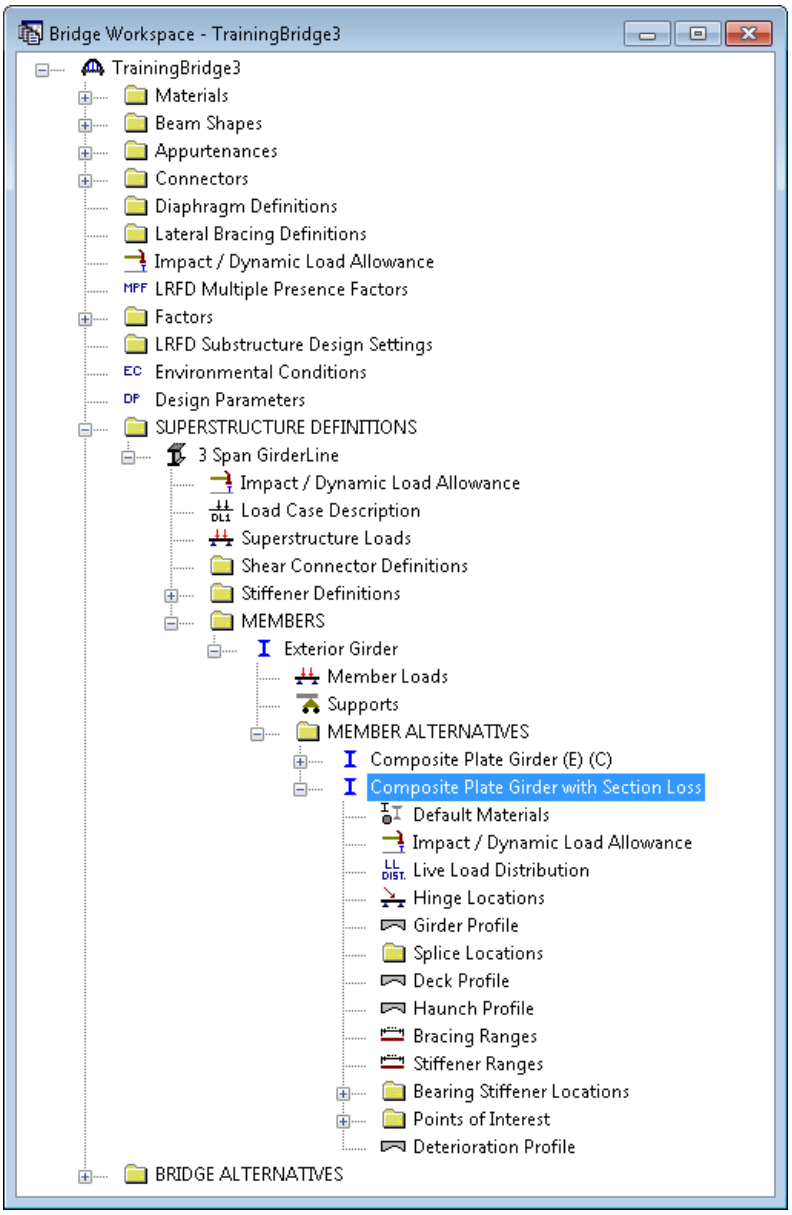


Make a copy of the "Composite Plate Girder" member alternative and enter the deterioration in this copy. To make a copy of "Composite Plate Girder", click on "Composite Plate Girder" in the tree and select Edit/Copy from the menu. Now click on MEMBER ALTERNATIVES in the tree and select Edit/Paste from the menu. The Bridge Workspace tree will be updated with the new copy.

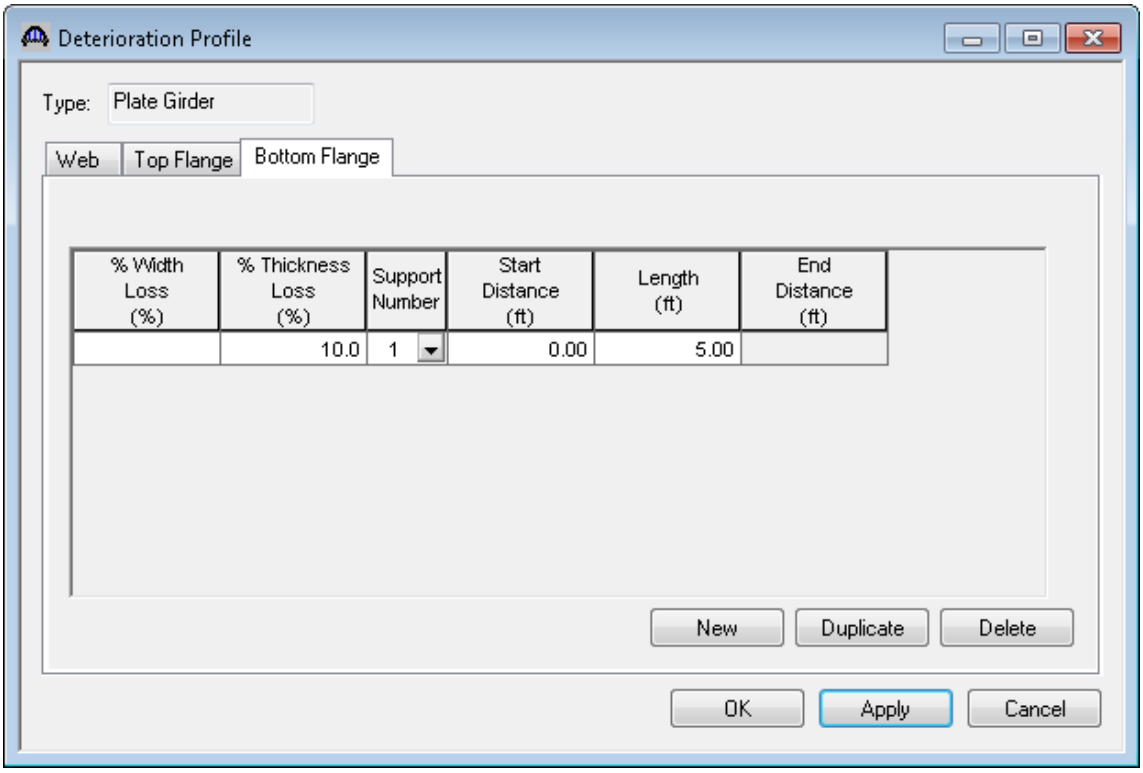


Double click “Copy of Composite Plate Girder” to open the Member Alternative Description window. Since this member alternative is added after the bridge is imported into the consultant database, the data can be modified. Change the name of the member alternative to “Composite Plate Girder with Section Loss”. Click OK to close the window.

The resulting Bridge Workspace is shown below.



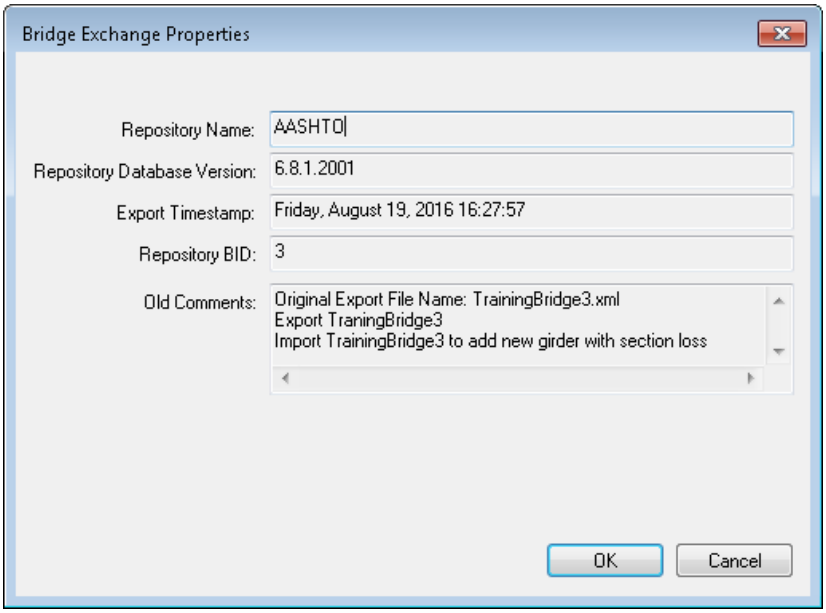
Define deterioration for the bottom flange by double clicking on “Deterioration Profile” in the tree. Enter the following data on the Bottom Flange tab. Click OK to save the data to memory and close the window.



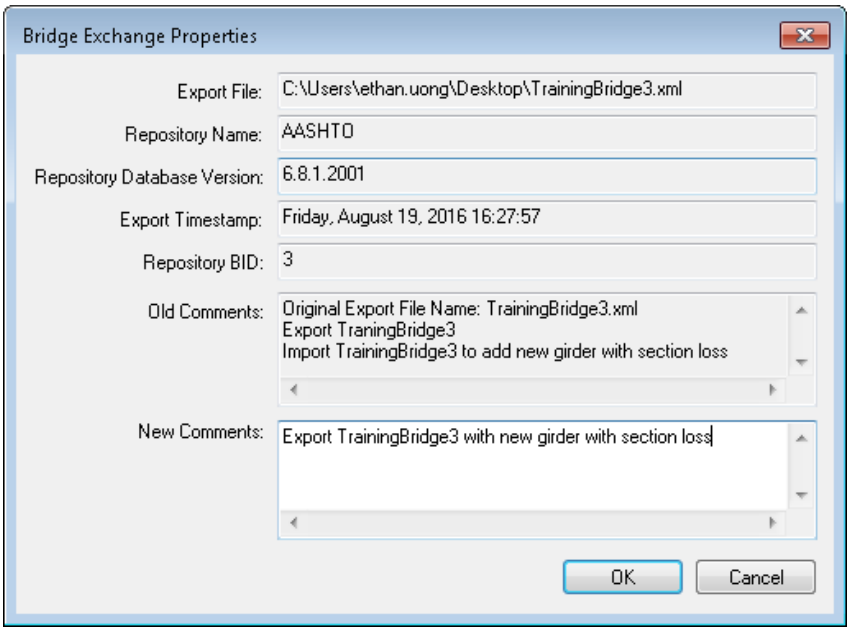
Select File/Save to save the data in the memory to the consultant database. The description of the new member alternative with section loss is complete. Select File/Close to close the Bridge Workspace.

Export the bridge from the consultant database

Select Bridge/Bridge Exchange/Information to review Bridge Exchange Properties. Click OK to close the dialog.

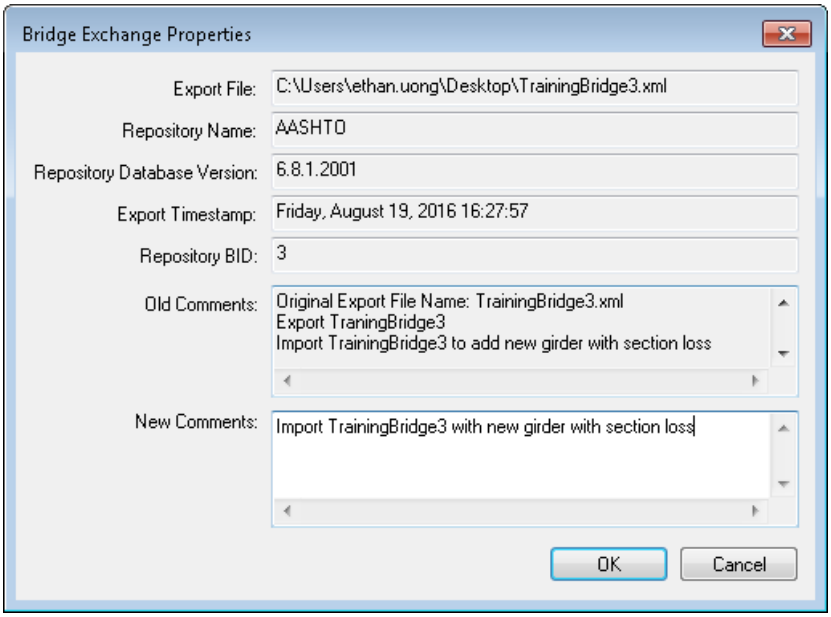


Select Bridge/Bridge Exchange/Export from the menu. An export file dialog will open. Enter "TrainingBridge3" as the name of the XML file. Click Save and the Bridge Exchange Properties dialog will open for New Comments. Enter "Export TrainingBridge3 with new girder with section loss". Click OK to complete the export.



Import the bridge back to the repository database

Start BrR/BrD and log into the repository database. Select Bridge/Bridge Exchange/Import from the menu. An import file dialog will open. Select "TrainingBridge3.XML" as the file to import. Click Open and the Bridge Exchange Properties dialog will open with the information of the import. Enter "Import TrainingBridge3 with new girder with section loss" as the New Comments.



Click OK to complete the import. The Bridge Explorer will be updated to reflect TrainingBridge3 has been imported back into the repository database.