MDOT – Creating Alignment XML Files for RID (ORD)

General Information

This document is intended to provide guidance for creating alignment XML data files (in LandXML format) from geometry created using OpenRoads Designer. This process is required to convert civil geometry to a format that can be submitted as RID and used by downstream users. Only civil geometry data (horizontal and vertical alignments) are converted with this workflow. A working knowledge of CADD and GEOPAK are necessary to complete this process.

Common alignments to convert include:

- Project Plan Grade Lines

- Project Controlling Alignments (proposed geometry that is necessary to convey the design intent of the project)

Part 1: DGN and XML Alignment File Creation

1. Create a blank 2D DGN file using the correct project seed file.

    a. Name the file A-XXXXXX_Align_20YY-MM-DD.dgn

    b. This file will be submitted as RID. The purpose of this drawing is to contain all proposed project alignments in one DGN file without the need for any references

2. Reference in each file that contains civil geometry for the project. This would include alignment files, as well as any other geometry data that is used as controlling geometry data (IE ditches with an independent alignment and profile, retaining walls etc.)

3. In the Geometry ribbon group, select **General Tools → Import/Export → Export Geometry**
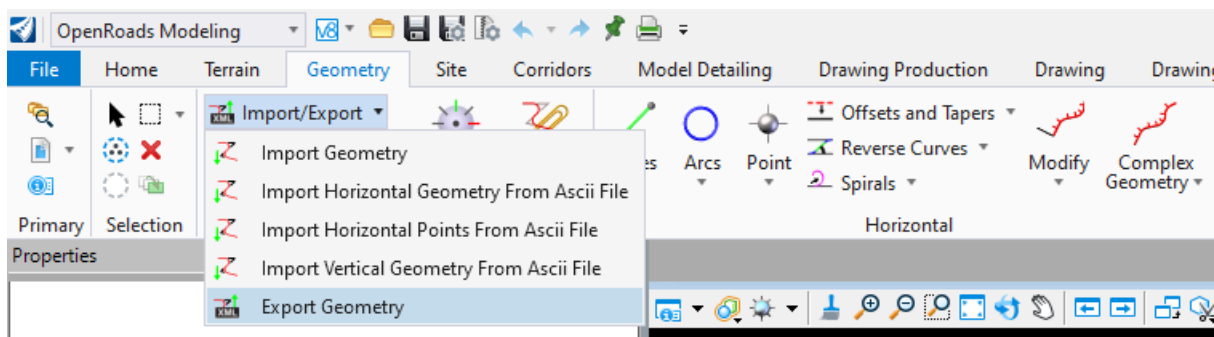
a. Data point to accept LandXML Version 1.2

b. Select each civil geometry element that is required to be exported to XML

c. Left click to accept whether only active profiles should be exported. Most projects should be exported with Only Active Profiles.
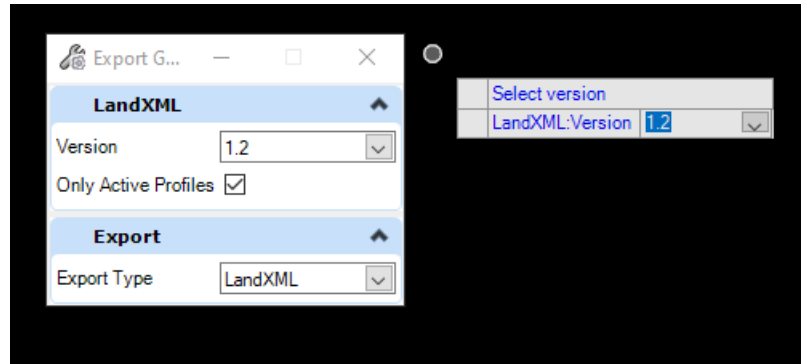
4. Save the XML file with the name **A-XXXXXX_LandXML_Geometry_20YY-MM-DD.xml**

5. Detach all references in the active DGN file

6. Import the Geometry XML file created in step 4 using select **General Tools → Import/Export → Import Geometry**
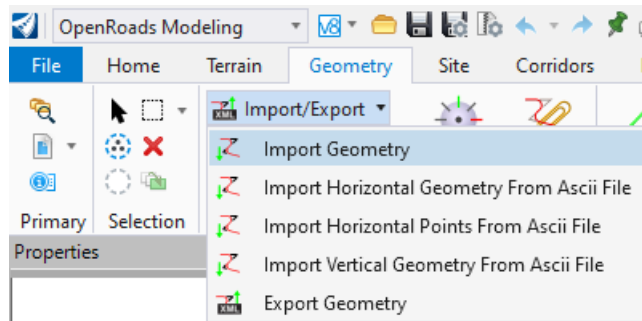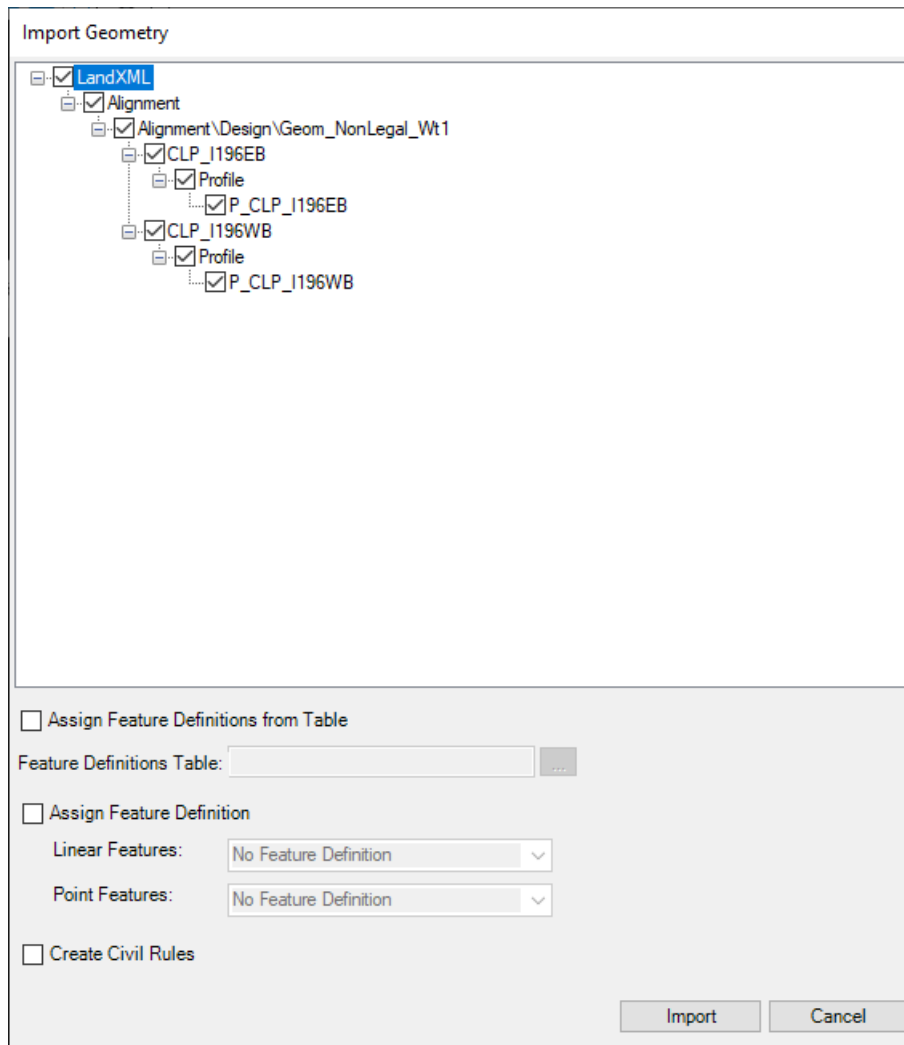

NOTE: Ensure that there is no file filter in the dialog box when choosing the XML file. Otherwise, you may not see the XML file as an option to import
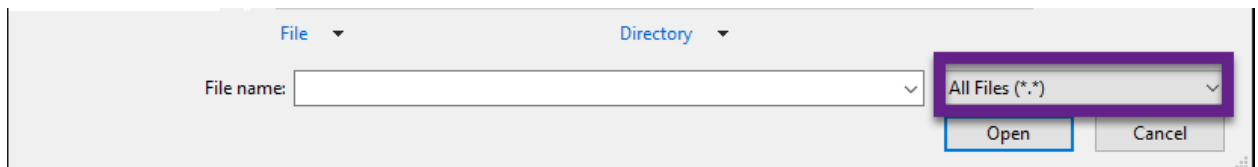
7. Import all alignments in the XML file. Ensure that correct profiles contained within each alignment.

NOTE: If the "Assign Feature Definition" checkboxes are left unchecked then the geometry will be imported using the same feature definition that it was exported with.
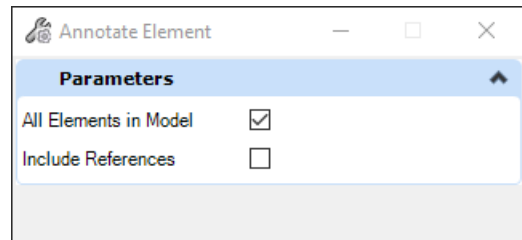
Create Civil Rules should be left unchecked

8. In the Drawing Production ribbon group select **Element Annotation → Annotate Element**
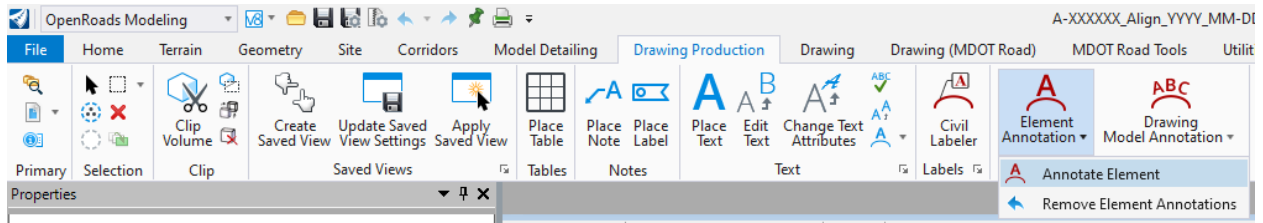
a. Select the checkmark to annotate all elements in the model

b. Left click to annotate all elements

9. Change the level display so that the annotations are displayed with the desired tick interval. There should only be one tick mark spacing level turned on in the file.
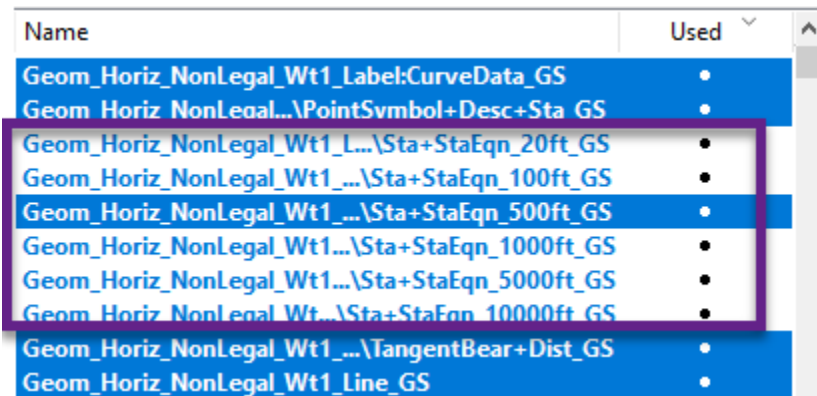
10. Save Settings

Technical Support

Please email any questions, issues or problems associated with this document to:

MDOT-EngineeringSupportTraining@Michigan.gov

Additional Design Services Help and Support can also be obtained through the following email resources:

MDOT-BridgeDesignSupport@Michigan.gov – For help with bridge design software, cells, levels, and workspace tools.

MDOT-Drainage-Utility@Michigan.gov – For help with GEOPAK Drainage, drainage cells and other subsurface utility modeling tools.

MDOT-CaddSupport@Michigan.gov – For help with cells, levels, line styles, dimensions, and other CADD and workspace tools.

MDOT-RoadwayModelingSupport@Michigan.gov – For help with roadway modeling, modeling templates, civil cells and workspace tools.

MDOT-Survey_Support@Michigan.gov – For help with survey data, workflows and processes.