## MDOT – Creating Alignment XML Files for RID

### General Information

This document is intended to provide guidance for creating alignment XML data files (in LandXML format) from geometry created using PowerGEOPAK. This process is required in order to convert GEOPAK 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: LandXML Alignment File Creation

1. Open any design model DGN file in PowerGEOPAK.

2. Open Coordinate Geometry (COGO)
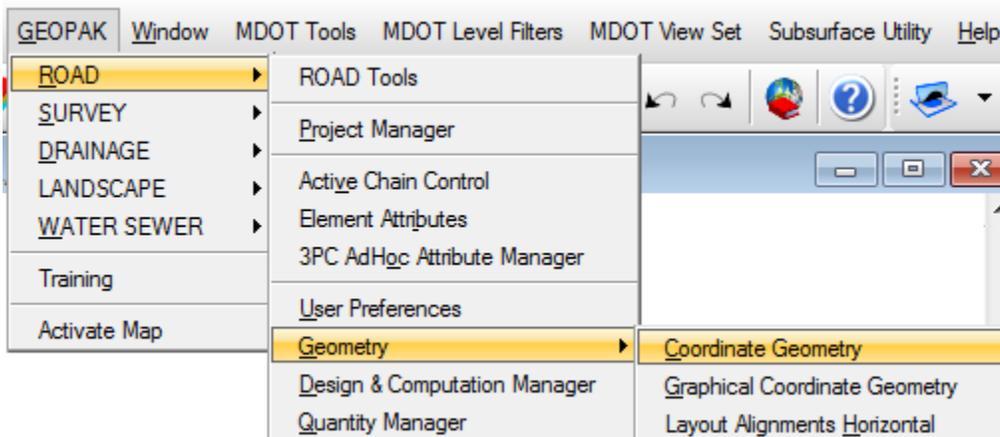
3.  Select the GPK file associated with the project
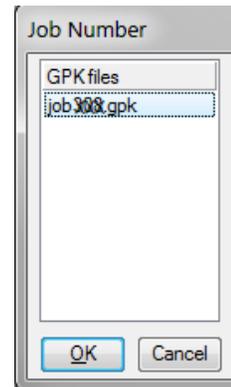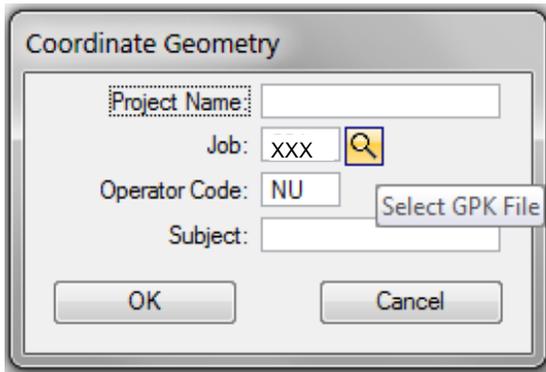


4.  Click OK on each dialog box to continue

5.  On the COGO dialog box select File\Export\LandXML 1.2 Geometry
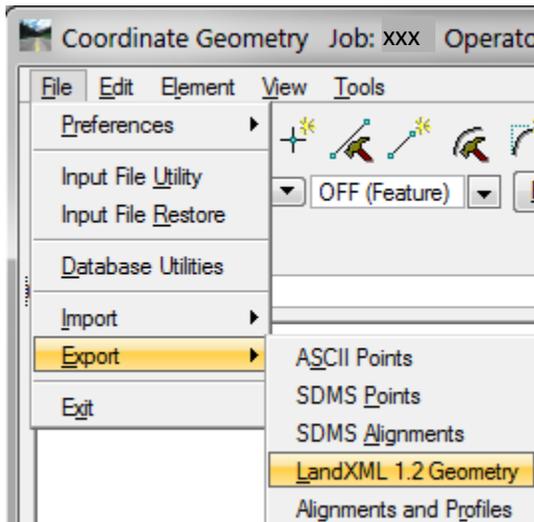


6.  Fill out the Project Name and XML file name according the Standard File Naming Conventions identified in Chapter 3.2 of the MDOT Development Guide

7.  Set the Output Mode to Create

8.  Select the English Unit to International Feet

9.  Set the Element Type to Chains and select the first alignment to be exported from the pull down menu

    NOTE: Do not check the box for all Chains and select all profiles in the LandXML creation dialog in order to export all the data at one time. Doing so creates a file that is unusable by downstream users. Each alignment (Chain) and profile must be selected in groups according to the parent child relationship where the chain is the parent and the profile is the child.

10. Check the box for Export Profiles

11. In the profile box, select all the associated profiles for the selected chain (each chain may only be exported once, so all associated profiles must be selected at the same time. <mark>HINT</mark>: Use the Control Key to make multiple selections)

   <mark>NOTE:</mark> The dialog should look similar to the one below
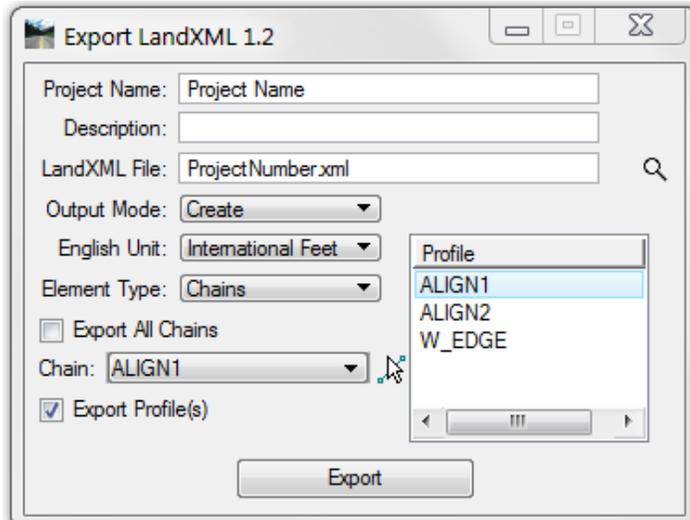


12. Click Export

13. Change the Output Mode to Append

14. Select the next chain to be included in the XML file

15. Select any profiles associated with the chain

   <mark>NOTE:</mark> The dialog should look similar to the one below
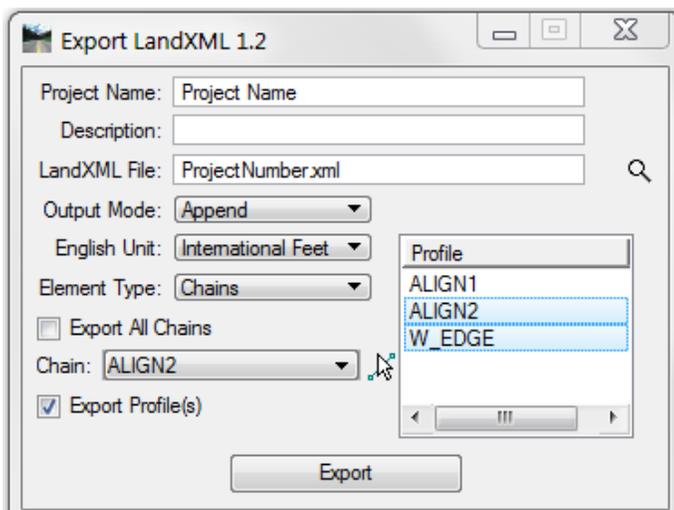


16. Verify the English Unit is still set to International Feet. XML files created with other units are unusable by downstream users.

17. Click Export

18. Repeat Steps 14 -17 until all the necessary project alignments are included in the XML file

19. Close the Dialog

    NOTE: An existing XML file created with this workflow can be appended with new data at any time.  It is not possible to overwrite\update geometry already included in an XML file. If an alignment that has already been exported requires an update\revision, a new XML file must be created.

    NOTE: Horizontal and vertical geometry\alignments created with previous version of PowerGEOPAK can be exported with this workflow provided they are stored in a GPK file.

## 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.