ACTIVITY 963
CREATING DELIVERABLES, PRECONSTRUCTION TO CONSTRUCTION, TBC MODEL CREATION

Contents

Overview

This guide details the process and procedures to create deliverables for construction under the 963 activity. Deliverables are summarized in the final section.

Process Provenance

- Date of development: *12/18/2023*

- Revision date: *6/10/2024*

- Application/Tool(s): *Autodesk Civil 3D*

- Version(s): *13.4.2455.0 Civil 3D 2022.2.6 Update*

- Environment(s): *MDT Civil 3D State Kit r2022 v1.25*

- Author: *MDT Engineering Workflow Steering Committee*

Statement of Need

Users need to create the deliverable(s) for Activity 963. The preconstruction design team will provide deliverables to construction for use in building the Trimble Business Center model. This will include the pertinent information from corridors, alignments, profiles, surfaces, and point layout. For more information, please see the 963 activity description.

Process Description and Examples

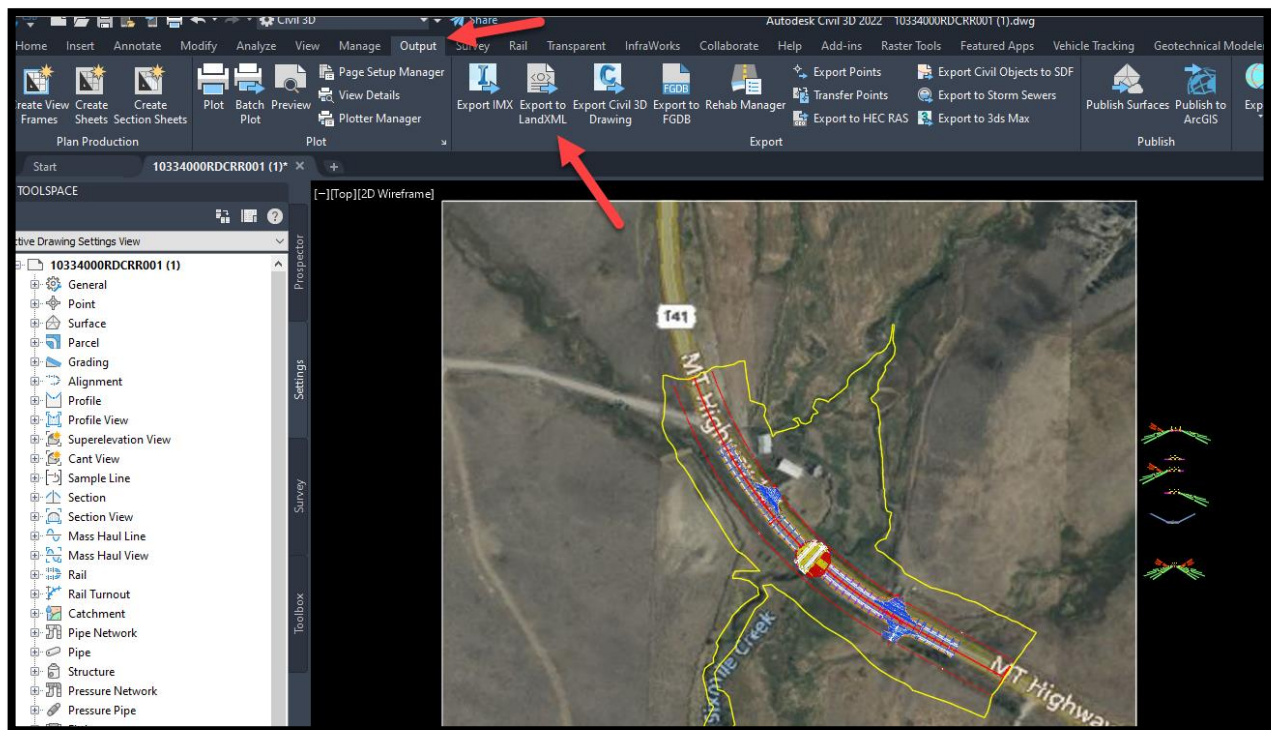## Section I. Exporting alignments and surfaces – Autodesk Civil 3D

Procedure –

1. Step 1.

    Open drawing with alignment and profile. (Alignment and profile source drawing or another drawing that alignment and profile is data shortcut to.)
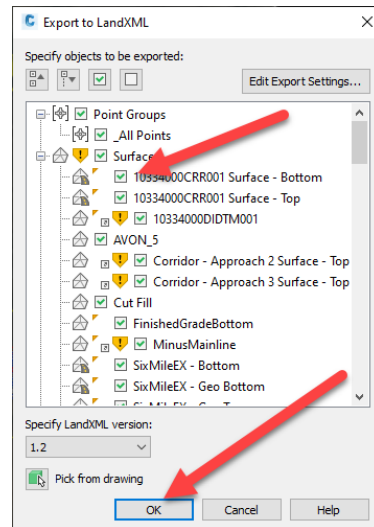
2. Step 2.

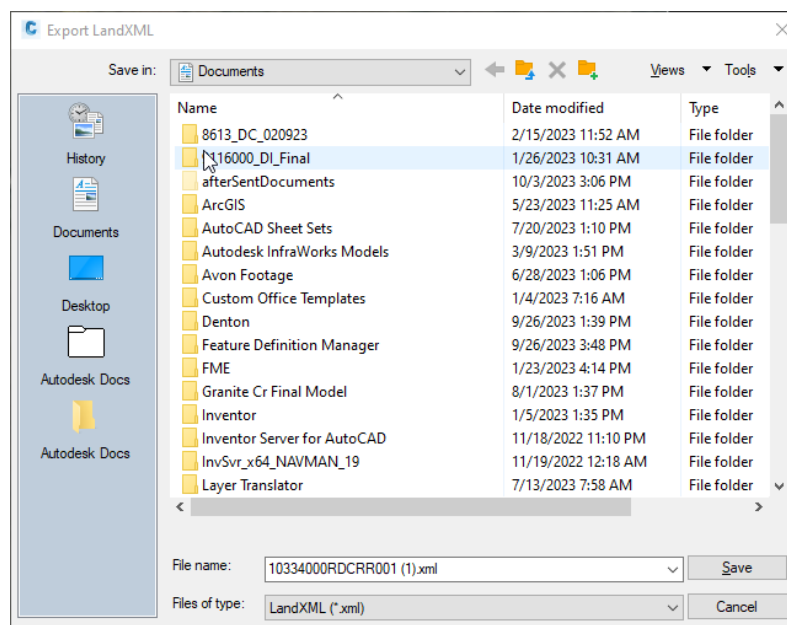   Click on the Output tab, then Export to LandXML.

3. Step 3.

   Select the surfaces, alignments with accompanied profiles, pipe networks, or offset alignments desired for deliverable. Then click OK.

   Note on versions: Trimble seems to import 1.2 versions, but exports a version previous to 1.2

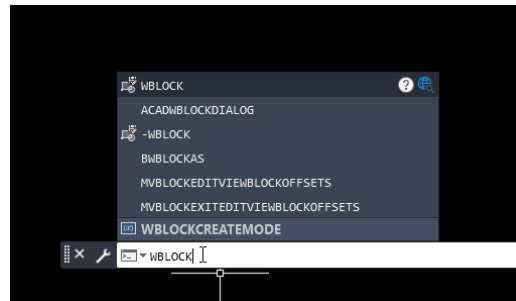4. Step 4.

   Select File path for XML

Section II.   Exporting CAD Lines
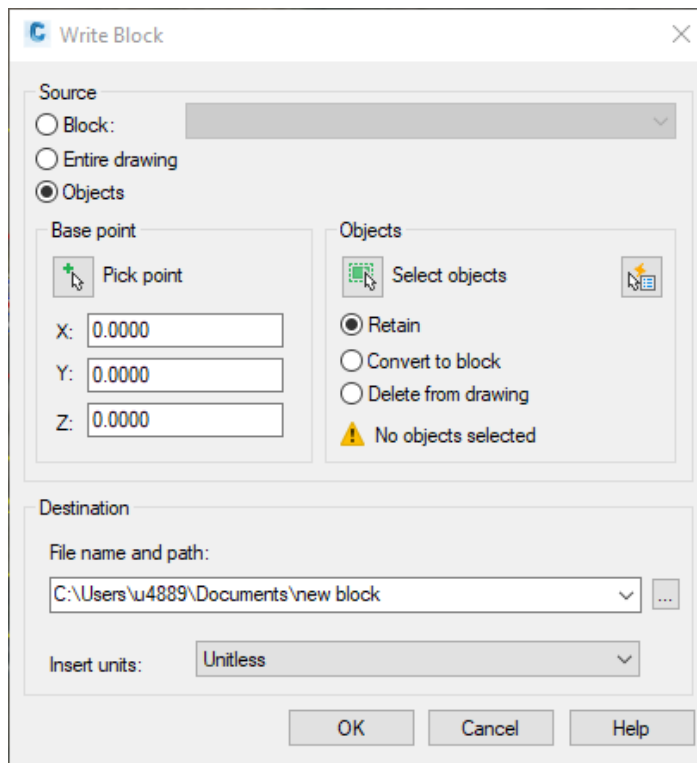
Procedure –

1. Step 1.

   Open the drawing file that contains the desired linework.

2. Step 2.

   In the command bar – type **wblock**

Leave **Base point** at 0,0,0.

Toggle **Retain**

Click on **Select objects** icon button.

Highlight the dataset you wish to export, then press **space bar**.

Designate **file path** and click **OK**.

Section III. Exporting Break Lines from the Corridor

Procedure –

1. Create a new drawing using the convert feature lines drawing template:
   C:\MDOH\StateKit\Civil 3D\2022\Templates\Misc\cfl-misc.dwt
   Note: This template must be used as it has specific settings for use with the tool.

2. Data reference in a corridor. Accept the default settings. Any required baseline alignments and profiles will be referenced in automatically.

3. Select the corridor in model space.

4. Ribbon > Corridor contextual tab > Launch Pad panel > **Feature Lines from Corridor** (or type **FeatureLinesFromCorridor** from the command line).
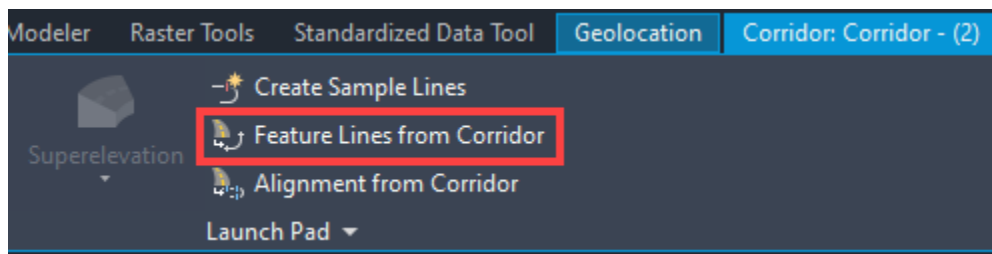
5. Select corridor feature lines by picking individually (turn Selection Cycling on) or by choosing one of the three command line options.

6. The "Extract Corridor Feature Lines" dialog will appear. Accept the default settings.

7. Select or unselect feature lines in the dialog as needed to further refine the selection set, then click **Extract**.

8. Detach/delete the data referenced corridor.

9. Detach/delete any corridor baseline alignments and profiles.

10. Run the **Convert Feature Line** tool from the "MDT Tools" tool palette (or type **MDTCFLLAYER** at the command line.)
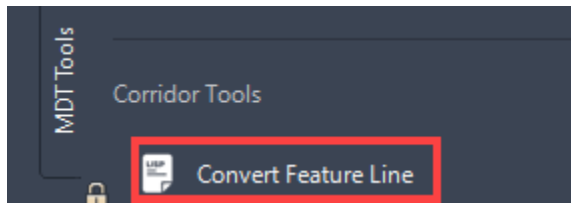
11. Choose "Select" to select individual corridor feature lines (turn Selection Cycling on) or choose "All" to select all corridor feature lines.

12. Verify feature lines have been converted to 3D polylines and 3D polylines have been moved to new layers with the name format: *<[Corridor Feature Code]>-<[Feature Side]>-<[Next Counter]>*

13. [Optional] Use the **LAYMRG** (layer merge) command to combine layers.

14. Save the drawing

Section IV. Deliverables to Construction:

    1.1.   Export all alignments with associated profiles as .XML files. (UPN000COALN001.XML)

    1.2.   Export all design surfaces as .XML files. (UPN000CODTM001.XML)

    1.3.   Export all table coordinates and point features as .CSV [Point name, Northing, Easting, Elevation, Description]. (UPN000CONEZ001.CSV)

    1.4.   Export roadway features as break lines from corridor as .DWG or .DXF file types. (UPN000COCRR001.DWG)

    1.5.   Export Right of Way limits shown as CAD linear features as .DWG or .DXF file types. Export Right of Way limit breaks as a point files as .CSV (UPN000COBRK001.DWG) (UPN000COBRK001.CSV)

    1.6.   Export Culverts shown as CAD linear features as .DWG or .DXF file types. (UPN000COCLV001.DWG)

    1.7.   Readme with all the supplied file names and what data is included in each file. Input explanation for each file uploaded in the comment column of PCMS. (UPN000CORME001.TXT)

1. Place files **in PCMS under the CO** "Construction" folder.

2. Host Pre-Construction-Construction meeting to discuss parameters of design files as they pertain to the Construction model.