MDOT - Existing Ground Terrain Model Creation

General Information

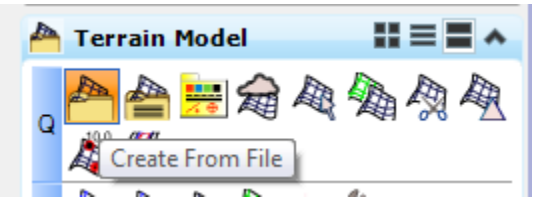
This document is intended to provide guidance in preparing an existing terrain model for design modeling use with the MDOT_02 workspace. This process is only required if the survey delivered existing ground triangle DGN file does not include a selectable terrain model (typical on survey data delivered prior to Jan 2016). A working knowledge of CADD, GEOPAK, and roadway modeling are necessary to complete this process.

Part 1: File Creation

Create a blank 3D DGN file using the proper Michigan State Plane Zone seed file for the project. It should be named according to the *Standard Naming Conventions*. This file will be a Model file designated with the "M" prefix and will need to be included in the milestone RID submittals in order for the proposed corridor files to retain their integrity. It should be stored in the project working DGN model file directory.

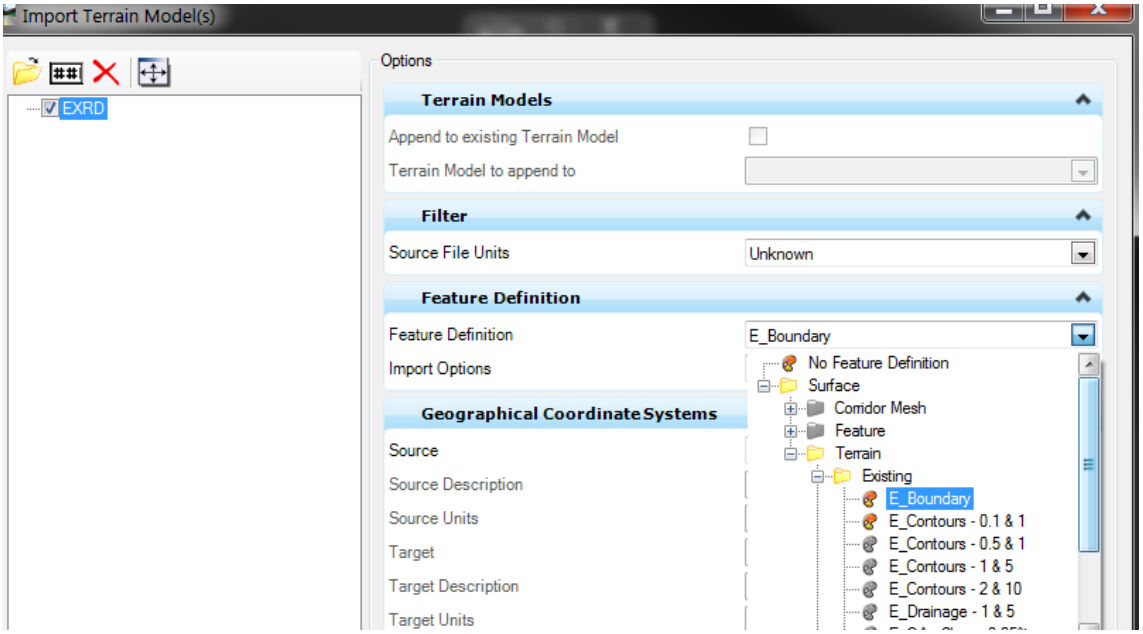
Part 2: Terrain Creation

Import the existing TIN file delivered from survey using the Create Terrain from File command on the Terrain Model Dialog.



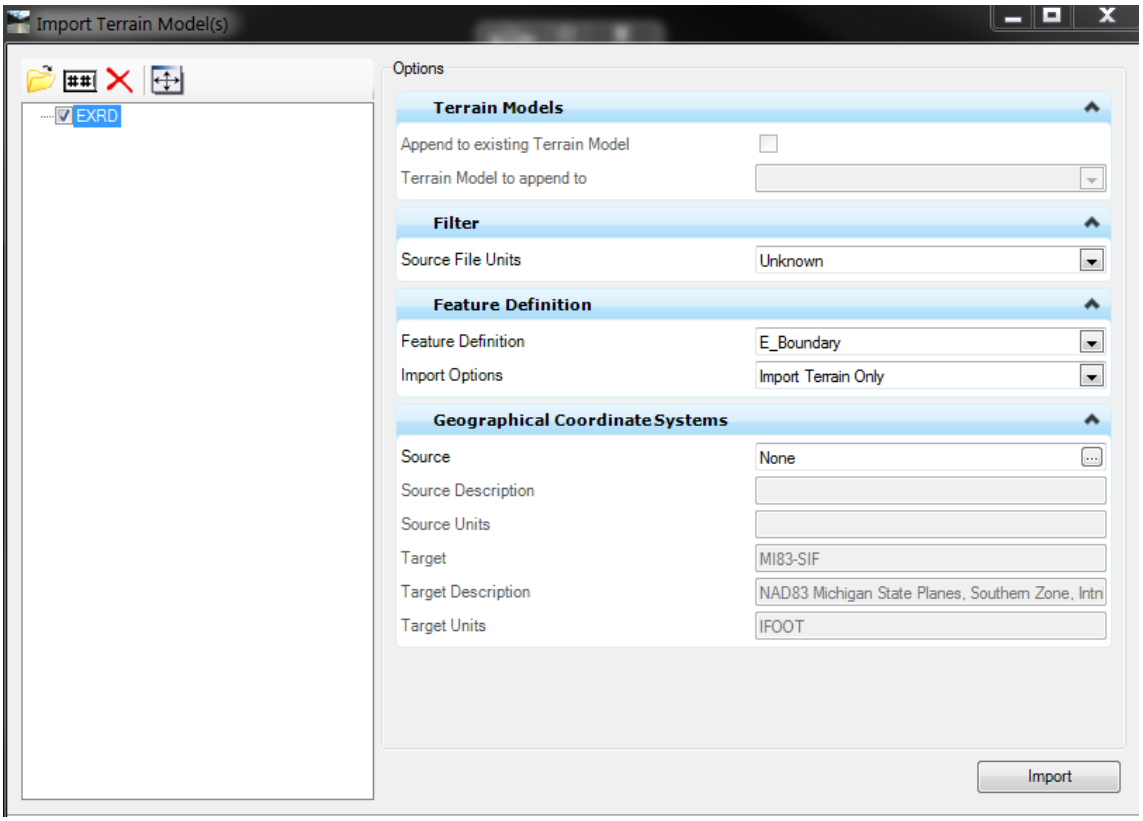
Select the survey provided existing TIN file provided from survey from the project directory.

Apply the feature definition (all that is required is the boundary however any of the Terrain Existing Feature Styles are acceptable.)



Import the terrain only as shown below.

NOTE: Make sure the correct Michigan State Plane Coordinate system and units are applied.



Part 3: File Storage and Usage

Save the existing ground triangle 3D DGN file created with this workflow in the project directory along with the working corridor and other model files.

Attach the existing ground triangle 3D DGN file to any corridor modeling DGN file and use it as the Active Terrain instead of the survey provided Survey 3D (also known as the 3D PL) 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.