

# Freight and Fuel Transportation Optimization Tool (FTOT) Workshop

## Pre-Workshop Steps

Please complete the following steps in advance of the July 29 workshop. You can email [FTOT-Team@dot.gov](mailto:FTOT-Team@dot.gov) with any questions or issues.

### A. Install Software Dependencies

You will need to install **ArcGIS Pro** and **Tableau Reader** in advance of the training. FTOT requires ArcGIS Pro to run while Tableau Reader is needed to view some of the outputs. You may optionally install **Notepad++** as well. Notepad++ is a useful software tool for editing FTOT scenario files.

#### ArcGIS Pro

1. Contact your organization to install ArcGIS Pro Version 3.0 or higher. If you are upgrading from an earlier version of ArcGIS Pro, the upgrade will remove your old version automatically.
2. After installation is complete, make sure you properly set up the license authorizing the software. Users should contact their system administrator for detailed instructions on activating the ArcGIS Pro license.

*Note: FTOT requires an Advanced ArcGIS license level.<sup>1</sup>*

#### Tableau Reader

1. Download a copy of Tableau Reader [here](#). If you or your organization has access to a Tableau or a Tableau Enterprise license, you can download Tableau Desktop instead for additional functionality.
2. Once the software has been installed, please confirm or adjust the display settings for Tableau:
  - a. Locate the tableau.exe file, which will be in a folder like C:\Program Files\Tableau\Tableau 2023.1\bin.
  - b. Right-click on the tableau.exe file, open “Properties”, and go to the “Compatibility” tab.
  - c. Click the “Change high DPI settings” button.
  - d. Check the box to override high DPI scaling behavior. Set the “Scaling performed by” drop-down box to “System”. Click “OK” twice.

*Note: You do not need to install Tableau Reader if you already have Tableau Desktop on your computer.*

#### Notepad++


Download a copy of Notepad++ [here](#).

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<sup>1</sup> If you only have access to a Basic or Standard license, please reach out and let us know so we can consider this for future development.

## B. Install FTOT

The “Getting Started” section on the [FTOT landing page](#) includes instructions on installing FTOT. Those instructions are also provided below. In addition, the [Installing FTOT](#) video tutorial walks through the installation process:

1. Go to the [FTOT-Public](#) code repository.
2. Click the “Code” button (  ) in the upper-right of the page. Then click “Download ZIP”.
3. Unzip the file on your computer into C:\FTOT. You should see the “program” subfolder and several other files directly within the C:\FTOT folder.
  - a. Note: The repository may download as “FTOT-Public” or “FTOT-Public-master”. You will need to rename the top-level folder to “FTOT”.
4. Double-click the “simple\_setup.bat” file to complete installation. If the file doesn’t run automatically, you can open a Command Prompt window, drag and drop the .bat file to the Command Prompt, click into the window, and hit enter. The batch script will create an FTOT-specific copy of ArcGIS’s Python environment and install additional required Python packages.
5. To confirm successful installation, look for a new “python3\_env” folder within the C:\FTOT folder.

## C. Download FTOT Documentation and Datasets

You will also need to download a zip file with FTOT’s documentation and datasets, which includes FTOT’s default multimodal network and facilities geospatial data, quick start scenarios, and reference scenarios.

### FTOT Documentation and Datasets

1. Go to FTOT’s [Documentation and Scenario Datasets](#) page and download the zip file for the “Current release version” of materials.
2. Unzip these materials into your C:\FTOT folder. You should now see “scenarios” and “documentation” subfolders directly within the C:\FTOT folder.
3. There are four documentation files. **Please take a quick look through these files in advance of the training:**

Document	Description
<i>User Guide</i> <i>FTOT_Documentation_2025_2_UserGuide_final.pdf</i>	Installation instructions and details on customizing scenarios, creating input files, and interpreting results.
<i>Technical Documentation</i> <i>FTOT_Documentation_2025_2_final.pdf</i>	Manual on how FTOT works, the underlying data and assumptions, and FTOT’s structures and functions.
<i>Quick Start Tutorial</i> <i>FTOT_Documentation_2025_2_QS_final.pdf</i>	How-to guide for running Quick Start #1 and #2 example scenarios.
<i>Reference Scenarios Documentation</i> <i>FTOT_Documentation_2025_2_ReferenceScenarios_final.pdf</i>	How-to guide for running Reference Scenarios demonstrating FTOT’s different functionalities.

## D. Run Quick Start 1 (QS1)

Before the training, run Quick Start #1 to confirm FTOT is installed correctly. You can follow the instructions in the Quick Start Tutorial document or in the [Running Your First Scenario](#) video demo. Instructions are also below:

1. Open the C:\FTOT\scenarios\quick\_start\qs1\_rmp\_dest folder.
2. Double-click the run\_v8.bat file to run it. Alternatively, open a Command Prompt window, drag and drop the .bat file to the Command Prompt, click into the window, and hit enter.
3. The scenario will run in the Command Prompt for roughly 10 minutes. When it is complete, you will see a note in the Command Prompt that the “M step” (generating maps of results) is complete. You should also see new “Reports” and “Maps” subfolders within the qs1\_rmp\_dest directory.
4. Navigate to the “Maps” subfolder to find a map with the optimal route as seen below.
5. **Email FTOT-Team@dot.gov confirming you successfully installed FTOT, ran Quick Start #1, and plan to follow along with the FTOT Training.**

