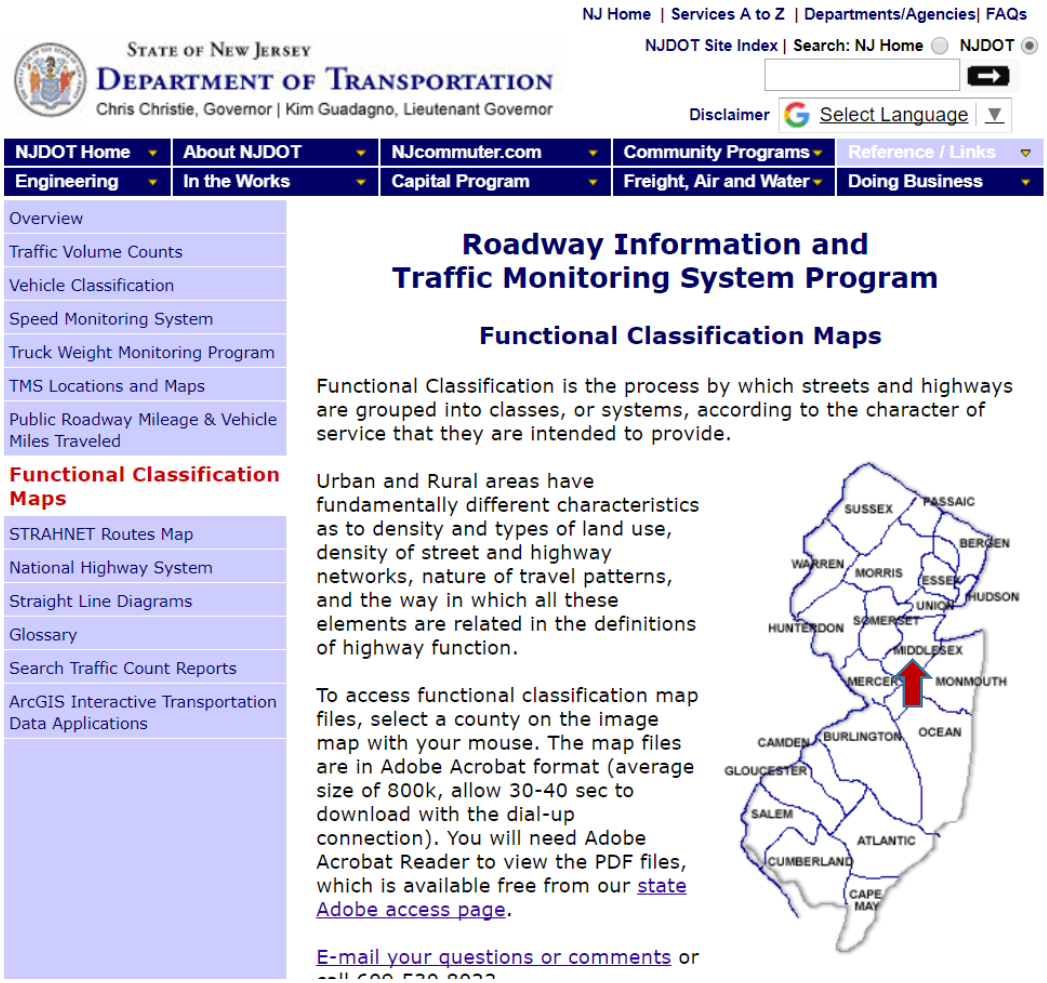
GUIDELINE OF USING TRAFFIC CLUSTER AND MATERIAL CATALOG FOR PAVEMENT M-E DESIGN IN NEW JERSEY

DECEMBER, 2017

CENTER FOR ADVANCED INFRASTRUCTURE AND TRANSPORTATION (CAIT)

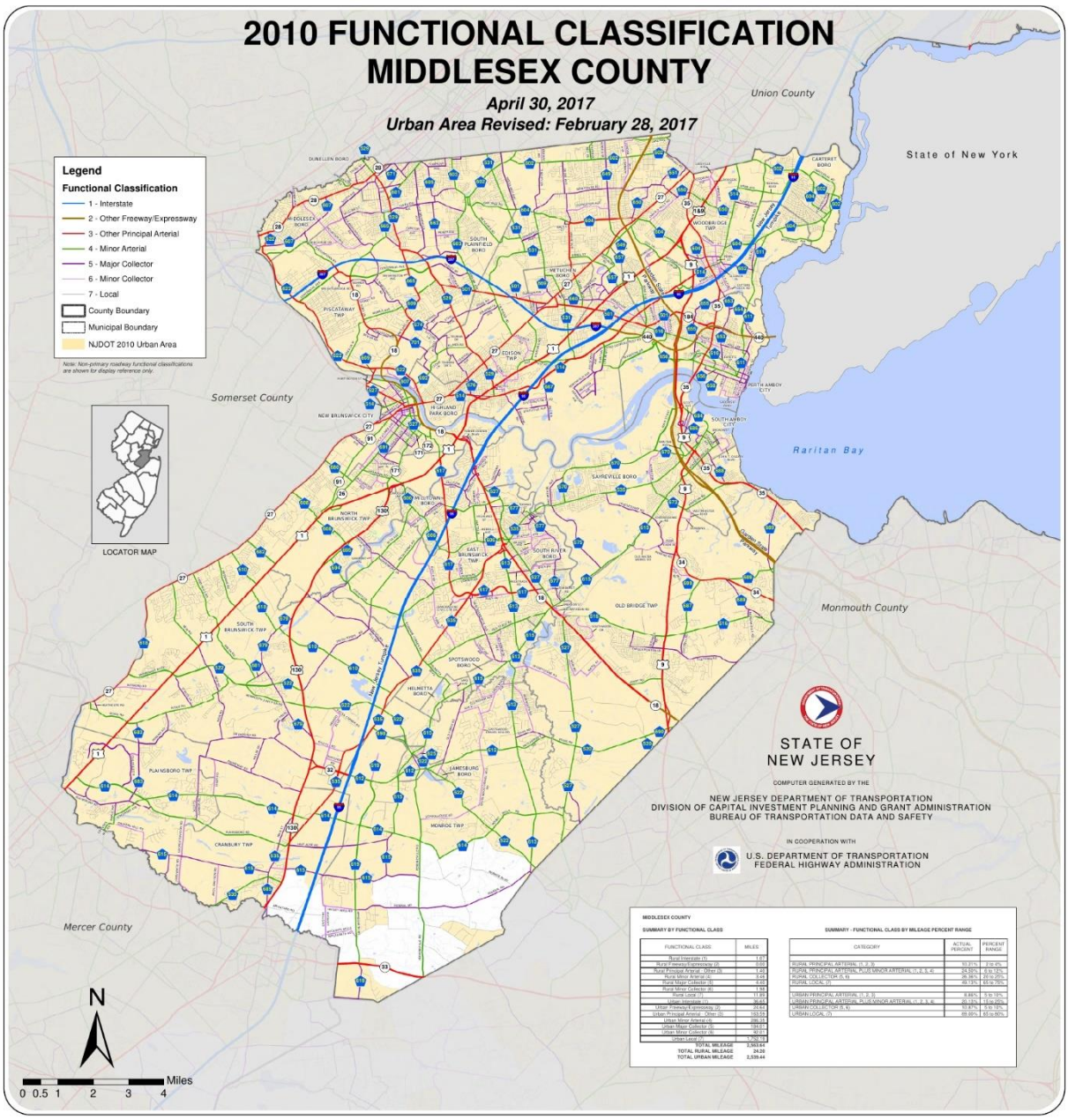
RUTGERS UNIVERSITY

1. **Select the road classification based on NJDOT information from the following link**
   http://www.state.nj.us/transportation/refdata/roadway/fcmaps.shtm



On the map, click the county where the designed pavement section is located.

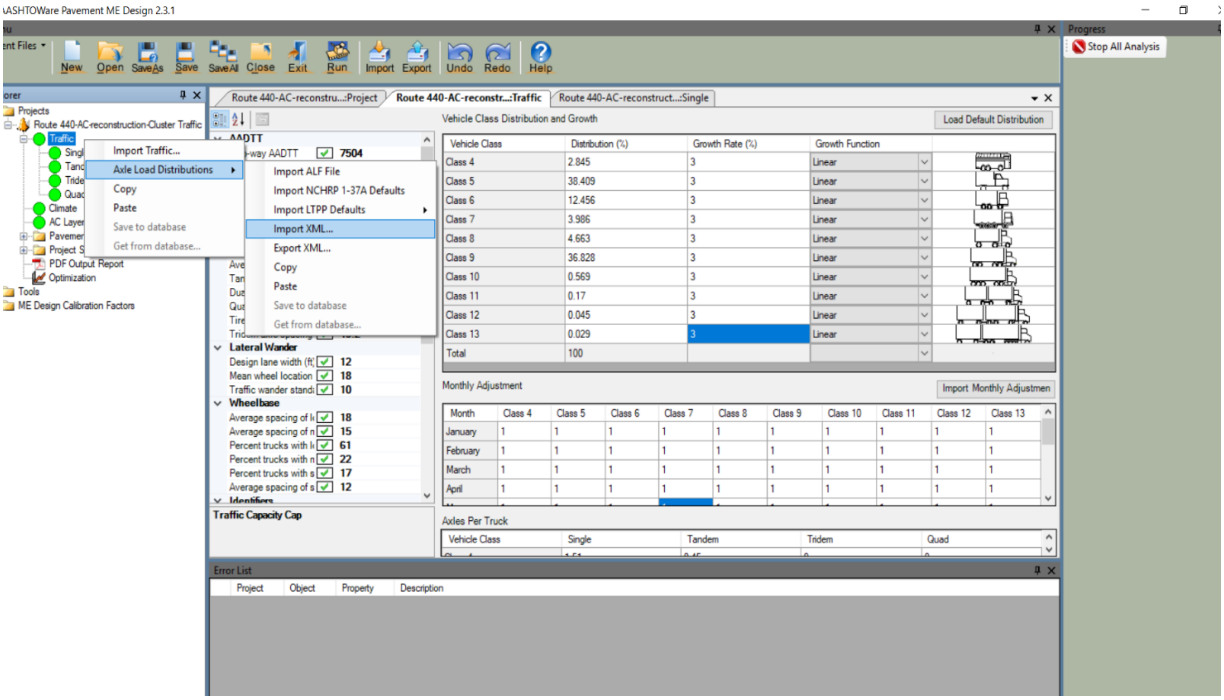
For example, click on Middlesex County. A road classification map will pop out as shown.



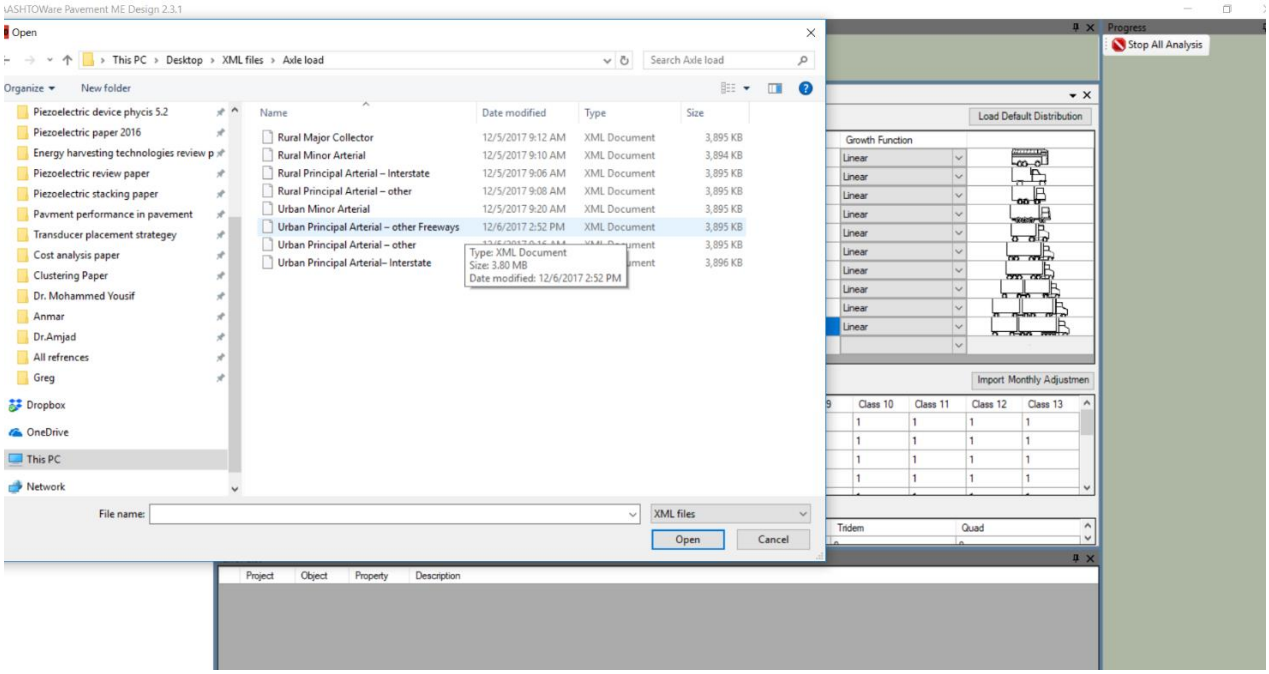
Use the legend to find the selected route classification. For example, Route 440 in Middlesex County is classified as Urban Other Freeway/Expressway. This classification is essential to select axle load spectra input. Pay attention to the yellow or white area when selecting the classification, which is referred to urban and rural areas.

2. **Import XML files for axle load distribution (Single, Tandem, Tridem, and Quad)**

The axle load spectra can be input into Pavement ME software through importing .XML files in the folder “Traffic XML > Axle Load XML”. The .XML files already include all axle load spectra for single, tandem, tridem and quad for each road classification. Right click on Traffic, then select Axle Load Distributions > Import XML… as shown below. After importing, check that all axle load inputs by clicking single, tandem, tridem and quad axles one by one.

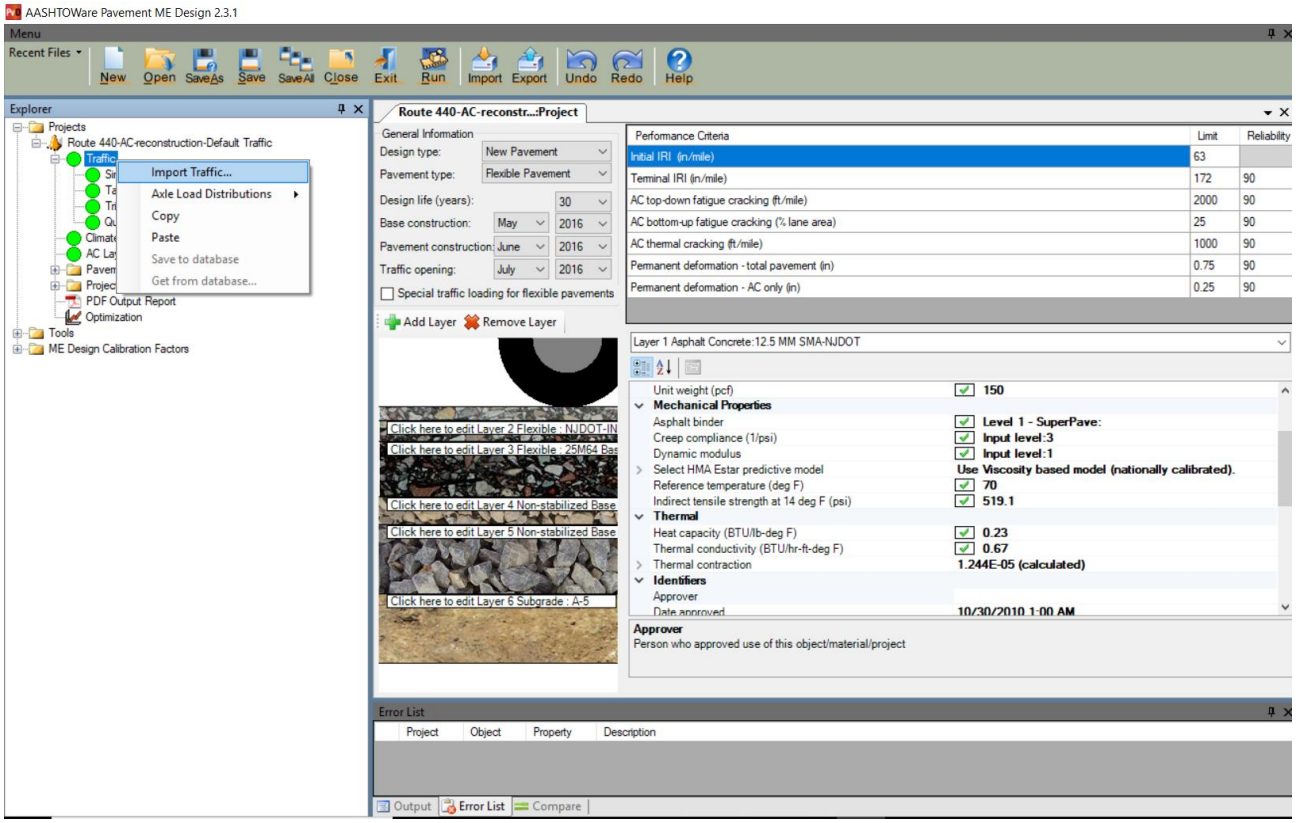


For example, for Route 440, select XML file with the name of “Urban other Freeway/Expressway”

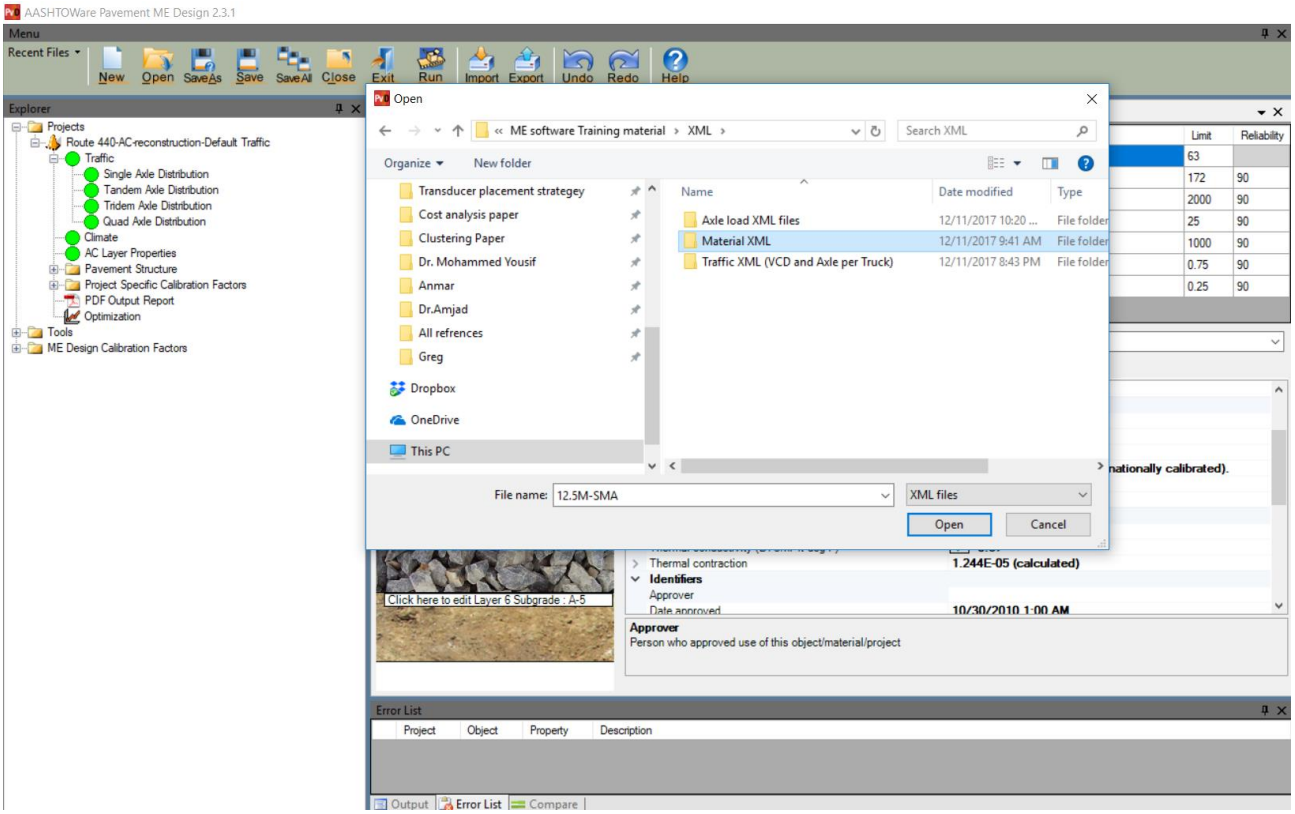


3. **Import XML files for Vehicle Class Distribution (VCD) and Axle /Truck Ratio**

The VCD and Axle/Truck Ratio can be easily imported from .XML files using import file option. In explorer section, go to traffic button and select import traffic. Then go to folder "Traffic XML > VCD and Axle per Truck XML" to select the required data based on road classification.



For example, for Route 440, select XML file with the name of "Urban other Freeway/Expressway"


AASHTOWare Pavement ME Design 2.3.1
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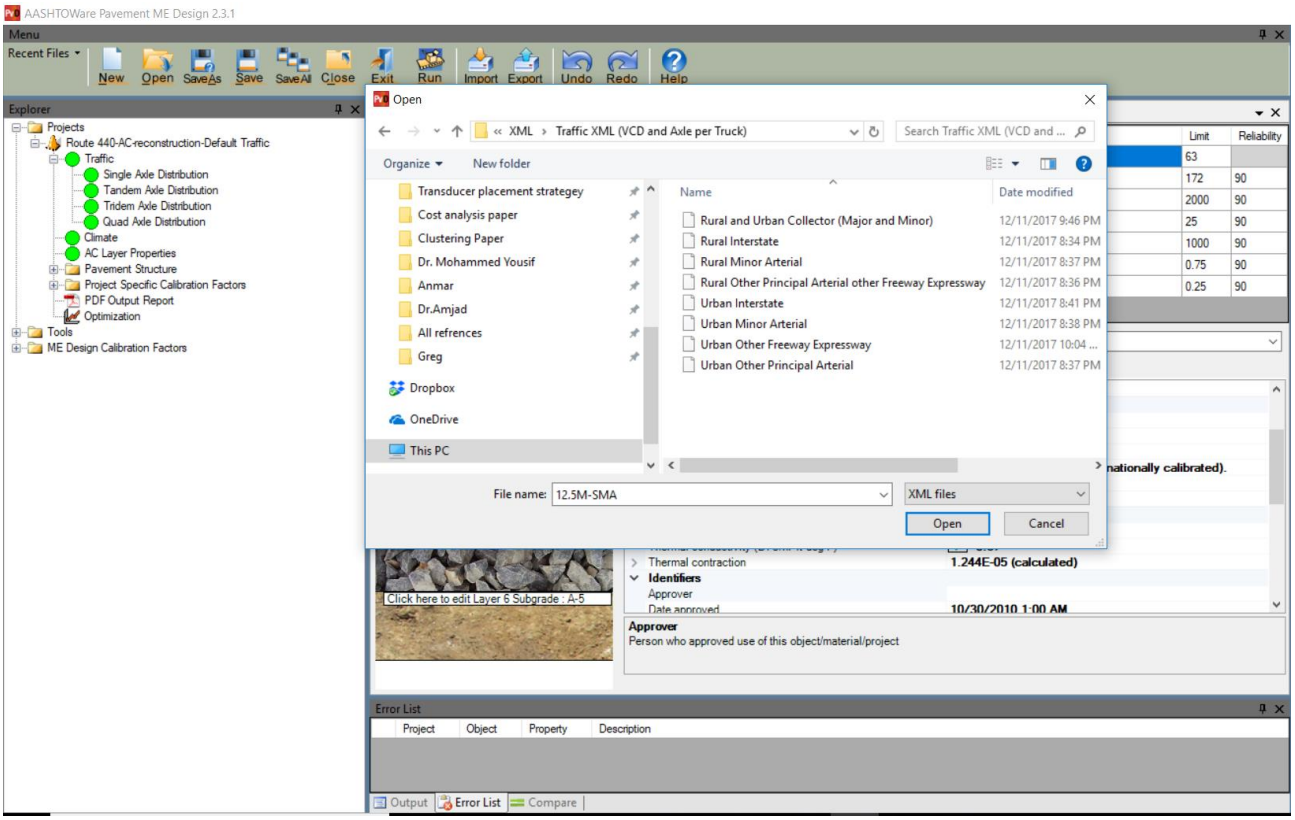
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Urban Interstate
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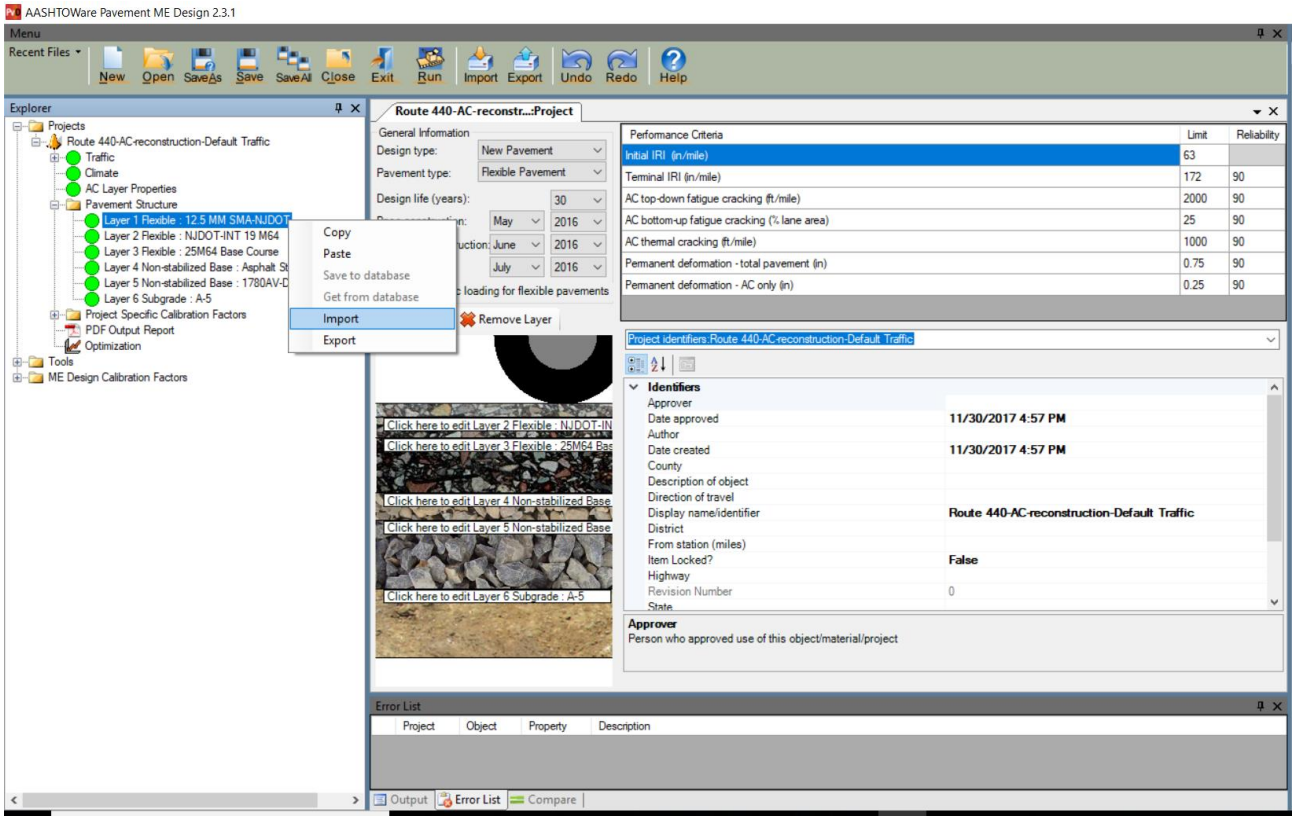
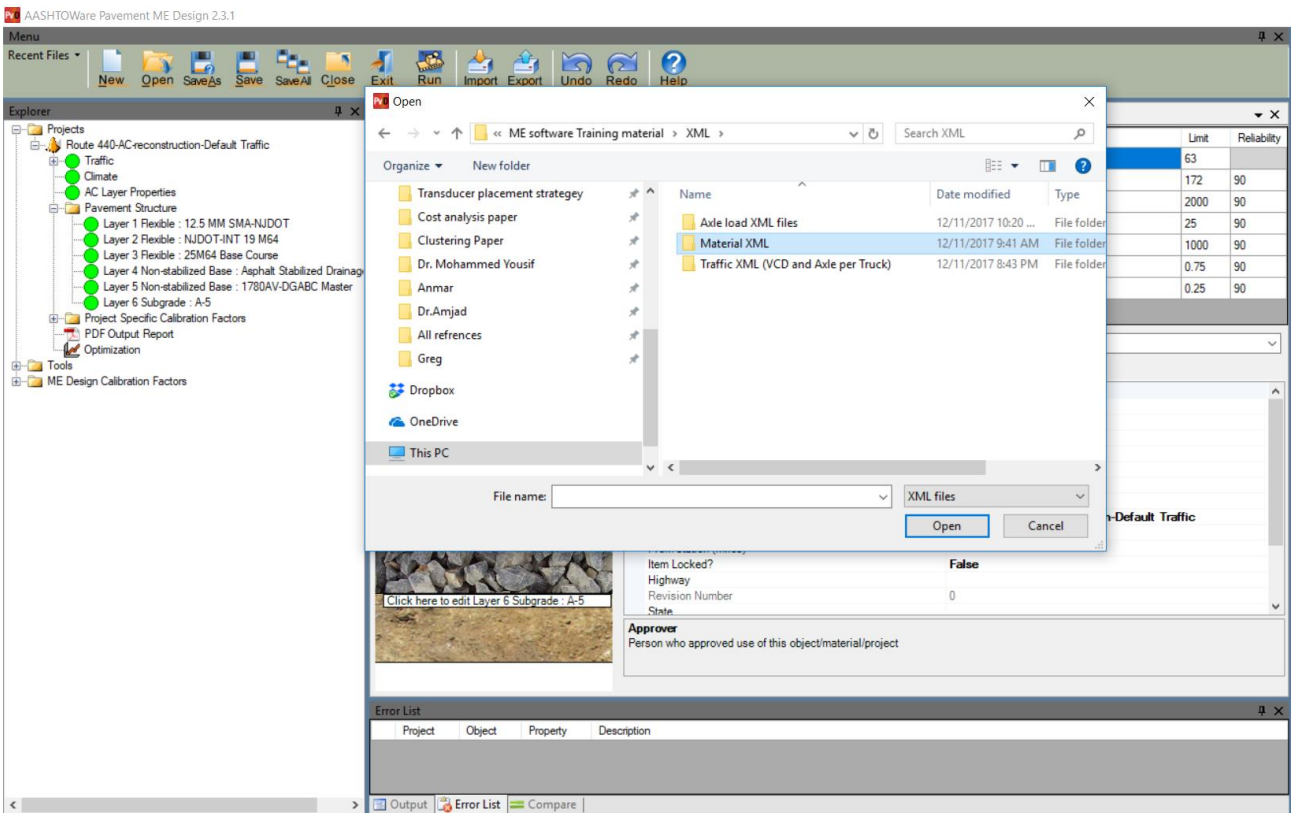
4. **Import XML files for material properties**
   In pavement structure section, go to the required layer and right click to see import option. For example, click on 12.5 SMA layer and select import.



Then go to the folder “Material XML” and select 12.5M-SMA.XML file to import material properties of that layer.

Note:

1. Change layer thickness and other information as needed based on your design requirements.
2. Select the region for I-3 and DGABC layers as needed since the typical modulus changes in different regions.
3. Follow the same procedure for all other layers.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Layer 2 Flexible : NJDOT-INT 19 M64
Layer 3 Flexible : 25M64 Base Course
Layer 4 Non-stabilized Base : Asphalt Stabilized Drainag
Layer 5 Non-stabilized Base : 1780AV-DGABC Master
Layer 6 Subgrade : A-5
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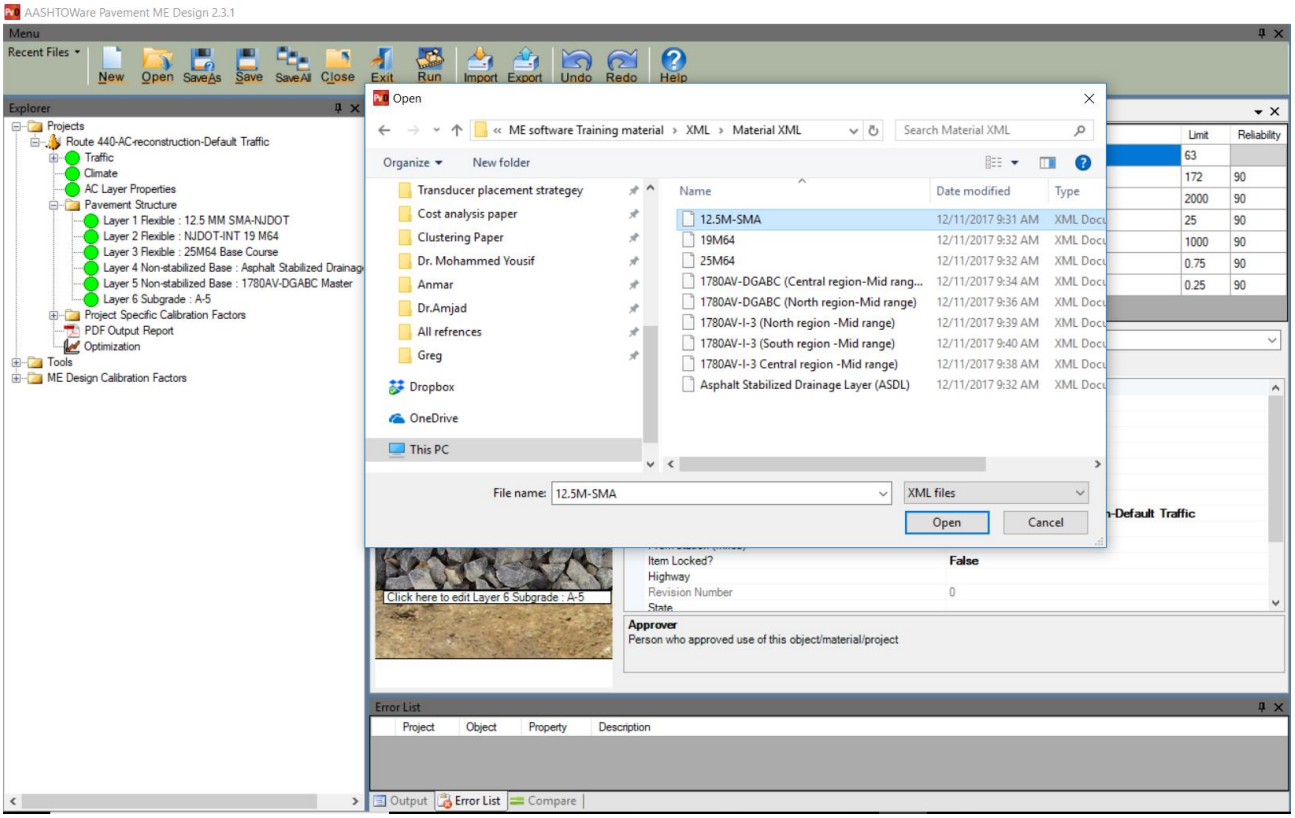
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