PE Upper-Level Decision Trees

Upper-Level Decision Tree defines the upper portion of the decision tree. The system allows only one Upper-Level Decision Tree and it will be applied to all Decision Tree sets in the system. Typically, Upper-Level Decision Tree uses high-level variables in the logic, such as Pavement Type, Traffic Leve or Roadway Category. Then, the lower level decision trees are assigned to the end nodes defined in upper level decision tree.

The configuration of Upper-Level Decision Tree is done in the **Upper-Level Decision Tree** window. Navigate to it by following the steps below:

1. Select **Setup** from the top banner menu
2. Click **Network Analysis Setup**
3. Click **Decision Trees**
4. Click **Upper Level Decision Tree** menu

To view or update the Upper Level Decision Tree, follow the steps below:

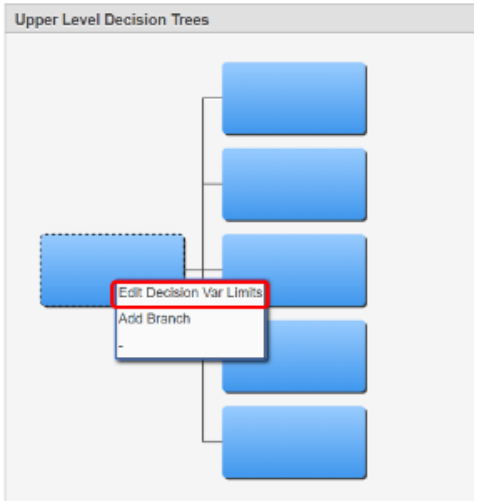
1. Open the Upper Level Decision Tree window. From here you can make changes on the Upper-Level Decision Trees. Out of the box, the Upper-Level Decision Tree has a Pavement Type variable. You can either use it as is, or expand from here, or delete all the nodes and configure different variables.

   Note: The set of decision tree variables that may be selected are configured in the **Upper-Level Dec Tree Variable** column in the Setup PMS Analysis window. See Chapter 5 for more information on configuring data variables.

   To edit the tree, use the right-click function to delete existing branches and/or to add branches. The Add command adds a node or nodes as children beneath the node you right clicked. After selecting this command, the system displays a dialog box, so you may enter the number of nodes needed. Then click **OK**.

2. Right-click the parent node will open a menu. Select **Edit Decision Var Limits** (this command is only available for nodes that have children).

3. The Model Tree Node window will now be open. The left pane, Variables, pane shows the variables and the right, Limits, pane shows the values that determine which tree branch will be selected. Additionally, in the right in the Node# column you set the branch corresponding on which value.
   a. Select a variable in the Variables pane
   b. The Limits pane will now show the list of options for the selected variable

c. Complete the node number column for each branch of the decision tree to assign each option to a branch