Land Use DGN Files

For your own project, these exercises would have to be done prior to beginning GEOPAK drainage.

This exercise allows the user to create a Land Use file.

2.1 Land Use DGN Creation

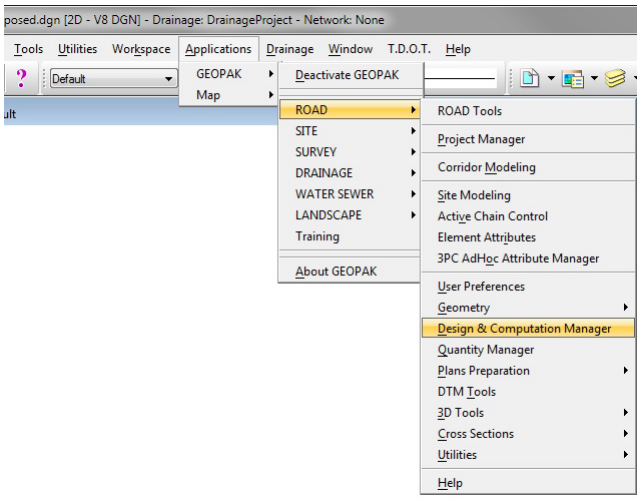
The shapes created in the land use DGN file are used to specify run-off coefficients (C value) for different land use areas. These values are then used to calculate the composite run-off coefficient. This composite value is used in conjunction with rainfall data in the rational formula to calculate the Q discharge for the drainage area. This composite run-off coefficient can be manually calculated and entered as a value but by creating these shapes this can be done automatically for any drainage area specified on your project.

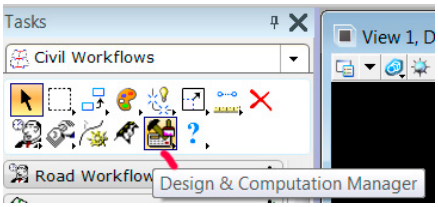
Step 1. Create a new DGN file for placement of land use shape elements from DGN seed file SEED2D.DGN and open it. Reference your proposed file, which contains proposed edges of pavement and slope lines. Also reference your survey topo file.

- Land use.dgn

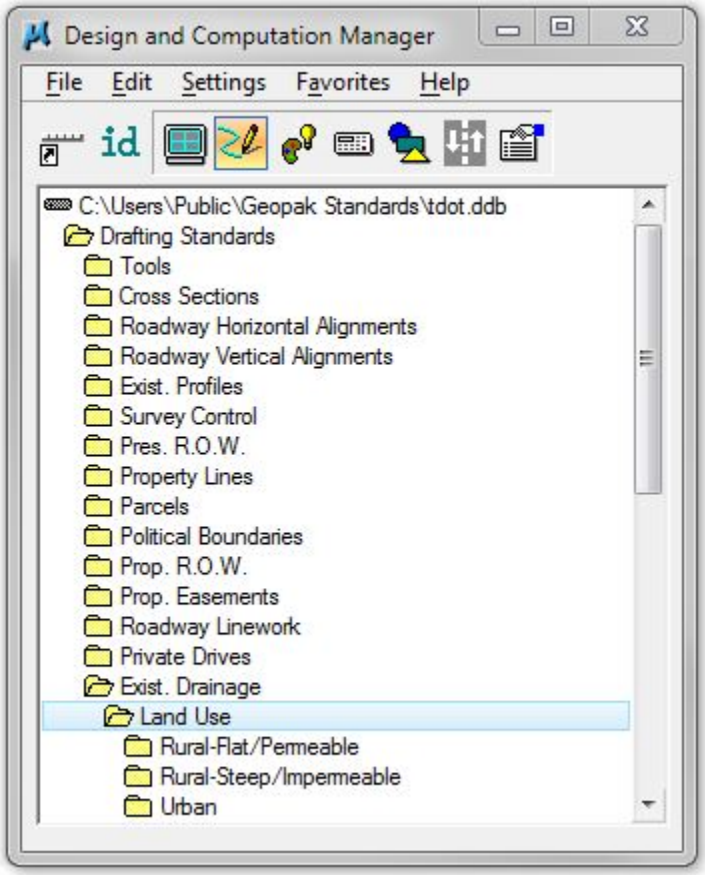
NOTE: For further guidance in creating a new DGN file see **Exercise 2** of the MicroStation V8 Manual

Step 2. Access **D & C Manager** from the MicroStation menu bar drop down location
Applications>GEOPAK> Road>Design & Computation Manager
or from task navigation with Geopak's **Civil Workflows**, it is the second icon from the end on the right.

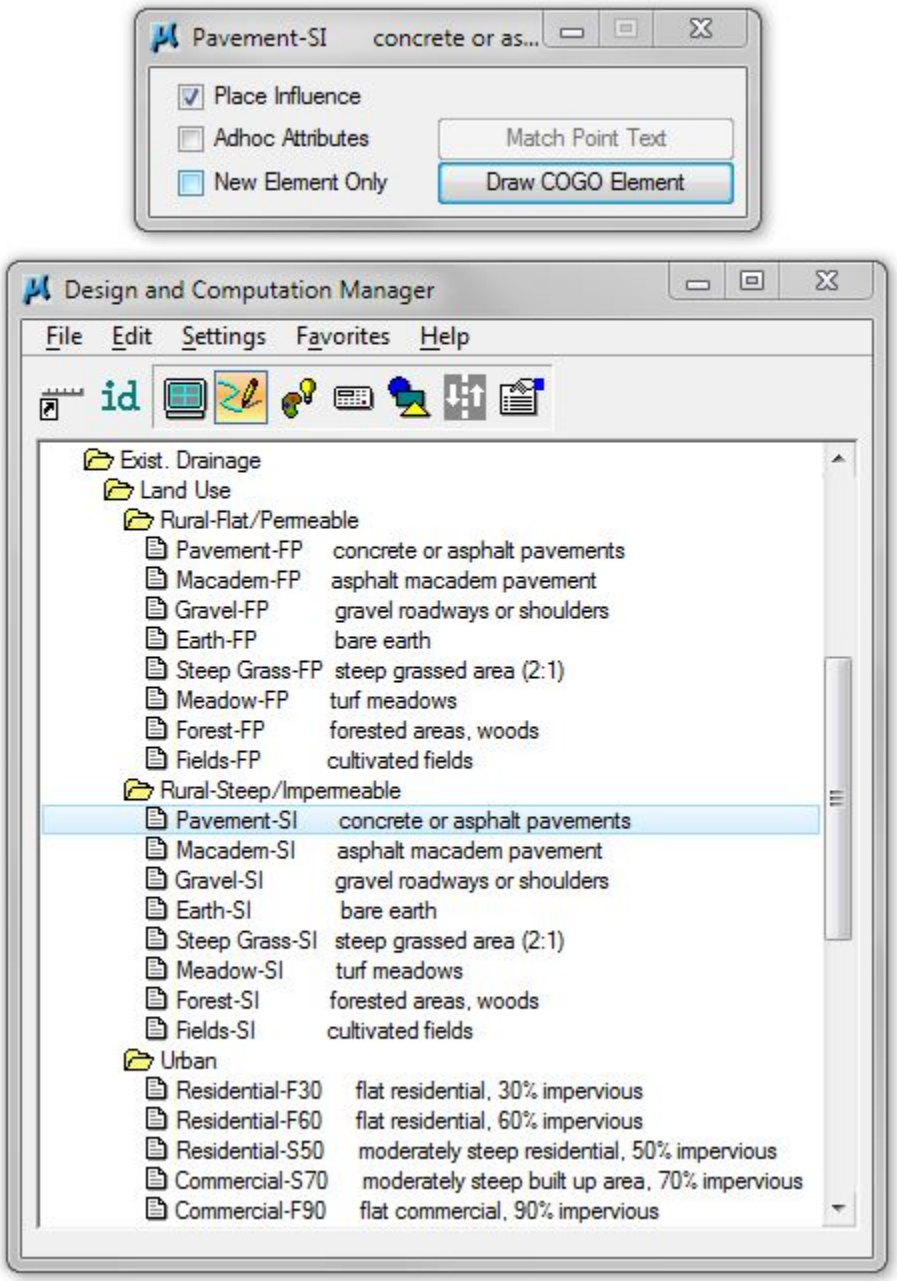




Step 3. In **D & C Manager** go to the land use category under **Drafting Standards\Exist. Drainage\Land Use**.
There you will see the three categories of land use items used by T.D.O.T.



Step 4. Open the desired category and click on the land use item you wish to define on the project. Click on **Place Influence** in the D & C Manager control strip.



NOTE: You should only use types from one section (i.e. Rural-Flat/Permeable or Urban).

Step 5. Use any MicroStation shape command to draw shapes around the areas. You may wish to copy graphics from the reference files to create complex shapes. This could be the proposed edge of pavement lines from the proposed file to shape the pavement area or perhaps the edge lines from a parking lot or woods area from the survey topo file. Anytime you wish to change to a different land use type just click on it in **D & C Manager**. If you have shapes already defined simply use the MicroStation **Change Element Attributes** command to change their symbology.

NOTES:
Shapes must be continuous and closed. Set fill type to None.

It is not necessary to place shapes to cover all areas absolutely. Any areas not delineated by a land use shape will use the **Base C value** entered in the **Drainage Area Definition** dialog.

Step 6. Once shapes have been set up simply reference the DGN file to your proposed DGN file and they will be read when you use **Delineate Subareas** in the **Drainage Area Definition** dialog.