

Practical Lab 02: CREATING GEOSPATIAL DATA

Adding Data

1. Open ArcMap and connect to G:\Geography-Data\DC DATA
2. From the DC GIS geodatabase add
 - a. Avenue_Ln
 - b. Street_Grid_Ln
3. Change color of layer(s) to make them easy to see
Turn layers off
4. Connect to your Practical2 folder
5. Add TheMall.jpg. Click Yes to create pyramids.
6. Right Click TheMall > Zoom To Layer
 - a. Zoom in and pan around – see landmarks clearly etc.
7. Turn on vector layers (Street and Avenue). Why can't you see the roads?
8. Zoom to Full Extent to show they are not in the same spatial area.

Georeferencing

9. Customize > Toolbars > Georeferencing
10. Zoom to vector layer, we know this has correct coordinates
11. From Georeferencing toolbar, click Georeferencing > Fit to Display
12. Find control points (*Add street name labels to vector layers for easier reference*)
 - a. 15th St and Constitution Ave, NW
 - b. N. Capitol and Mass Ave.
 - c. 7th St and I St, SW Waterfront
 - d. East Capitol St and 2nd St
 - e. 17th St and H St (Farragut W Metro)
13. Add control points by clicking on the Image and **then** the street vectors. Zoom in/out and turn layers on/off as needed.
14. Once all are in place, **Georeferencing > Rectify (save as TheMallProj)**
15. **Save** your map document to your Practical2 folder (Practical2.mxd)

Create New Layers

16. Open ArcCatalog
17. In your Practical2 folder create a new geodatabase (Practical2.mdb)
18. Create new polygon layer for buildings call **MallBuildings**.
 - a. MD State Plane coordinate system
 - b. Field 1: Name, text, keep default Length
 - c. Field 2: Type, text, keep default Length (Fed/Smithsonian)

19. Create line layer called **Paths**
 - a. MD State Plane
20. Add these layers to your Practical2.mxd in ArcMap
21. Add Editor toolbar
22. Start editing, choose the MallBuldings layer you just created
23. Select MallBuildings from the Create Features pane, the select the polygon construction tool
24. Trace **10 buildings** and populate the attribute table appropriately
25. Do the same for the Paths layer. Trace a path (walking tour) of the buildings you've traced.

Create Map

26. Create a map of the Mall area highlighting your buildings and walking tour.
27. Include all the proper cartographic elements, such as scale bar, title, metadata, legend etc.
28. Use other layers from the DC Data GDB to design and construct a nice map.