

# Folder and File documentation with work detail

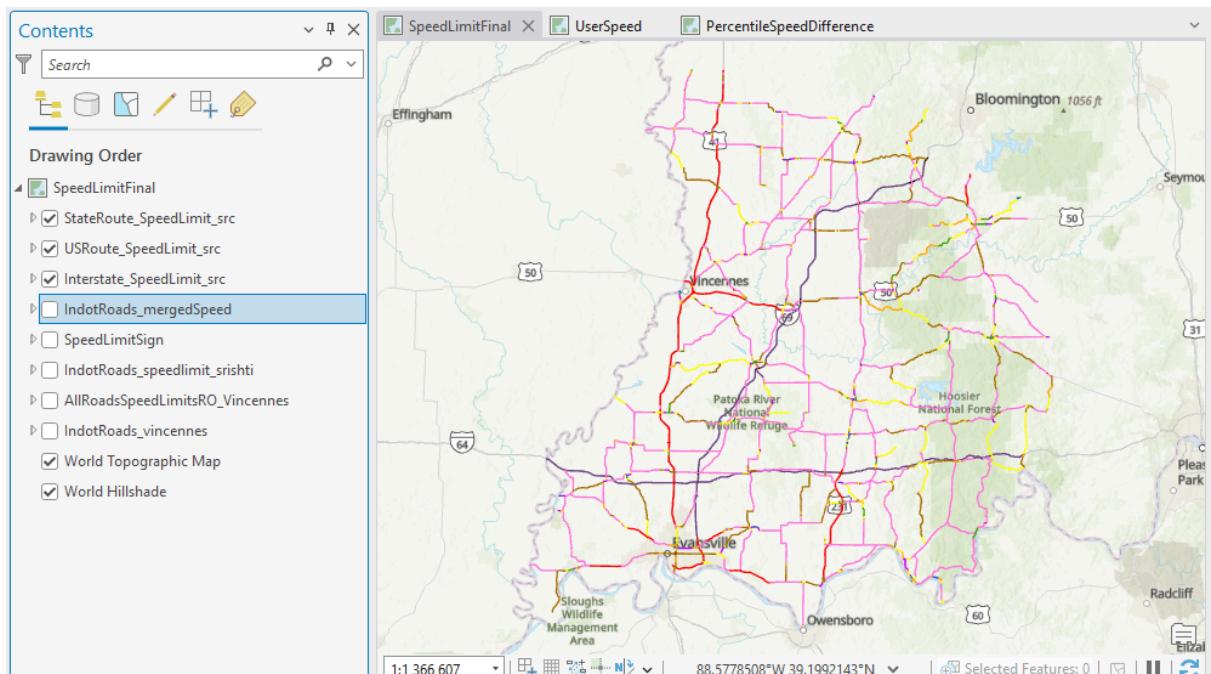
## Project files path:

T:\traffic\\_\_ Traffic Engineering\\_TPE\Interns\Summer 2025\Srishti Roy Chowdhury\Project files

## Project 1: SpeedLimit

### • SpeedLimitFinal

Posted speed limit map created using regulatory signs. There are three separate layers for three types of roads (i.e. Interstate, USroute, Stateroute). There is also a



merged one.

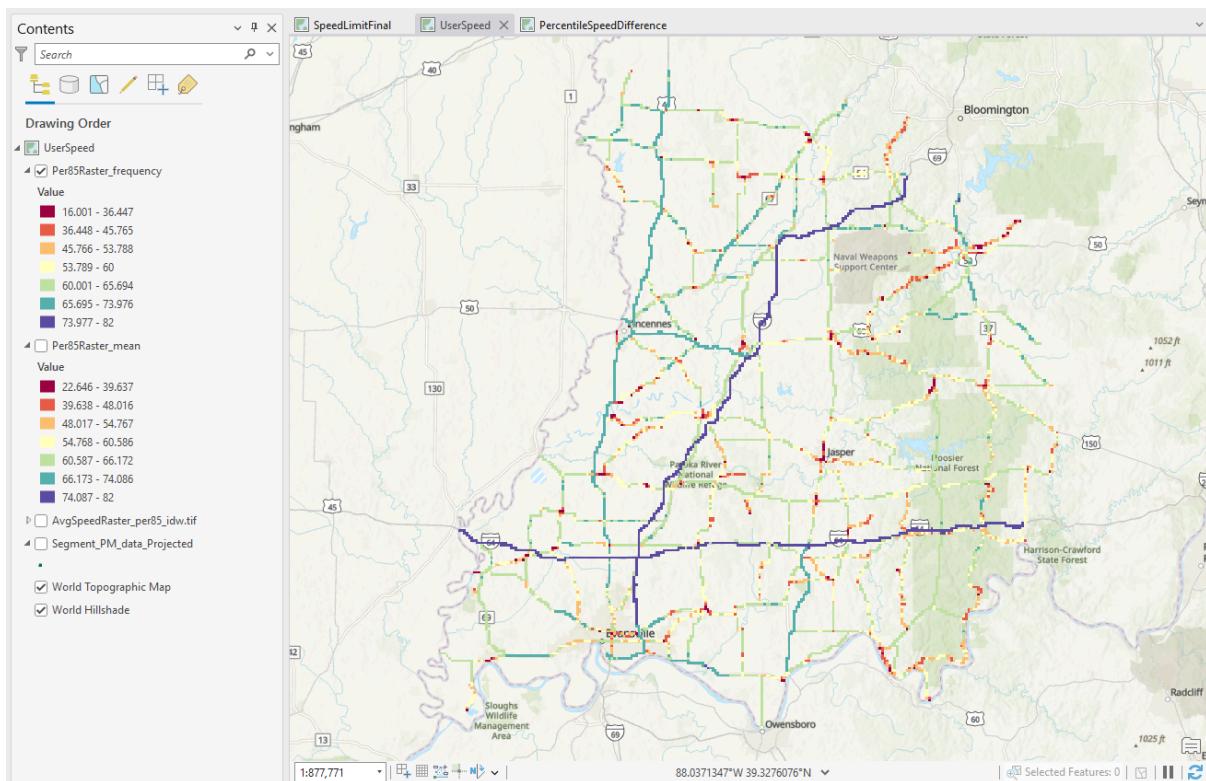
**Approach:** Snapping the speed sign point features to the road line feature -> splitting the road line at snapped points -> performed spatial join to assign speed value from point feature to split lines -> manual checks to correct the errors -> used symbology to represent different speeds with colors.

### • UserSpeed

Vehicle's speed map using 10 miles speed segment data. I used percentile85speed\_overall to create layers. There are two layers—frequency and mean. During raster conversion, mean is considered to assign new values for raster for a specific section and in another one, frequency was the cell assignment type.

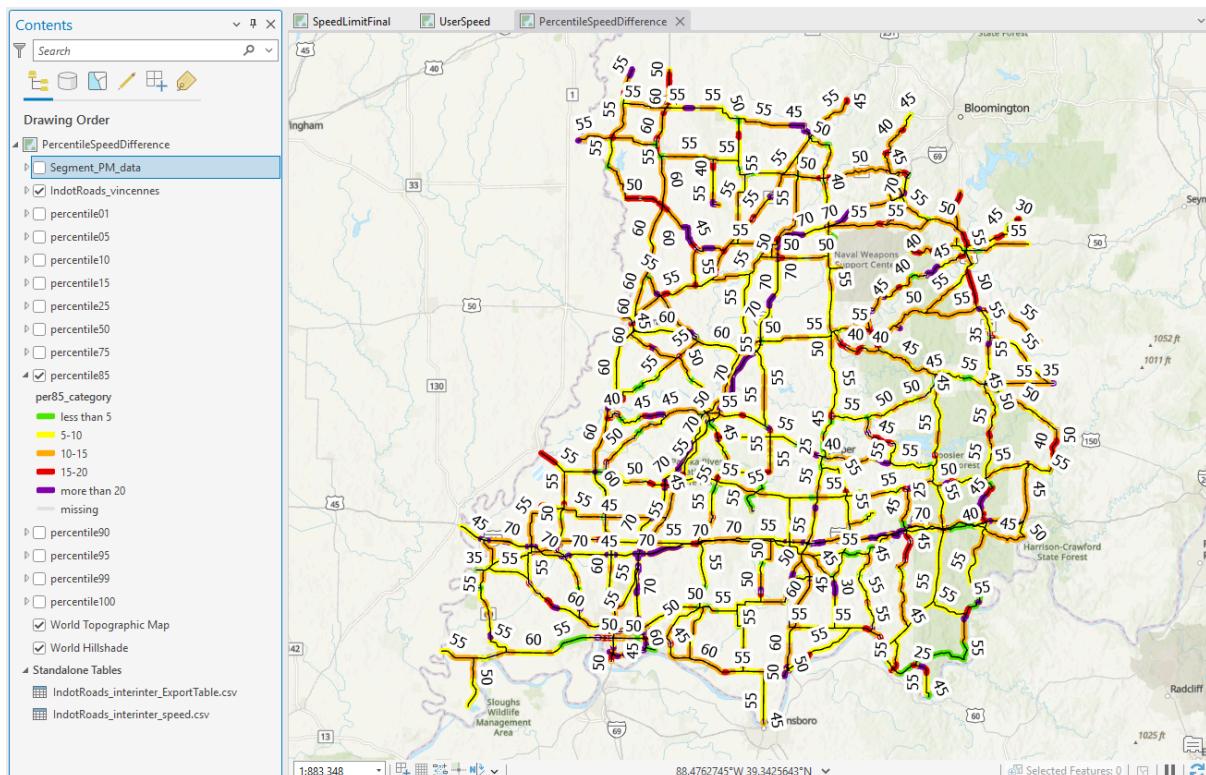
**Approach:** Converting the table into XY point feature -> project the layer into our desired projection -> performed Point to Raster -> used symbology to represent different speeds with colors.

Although the data is available as a vector data layer (point feature), I found it more useful to convert it into raster data for better representation.



### ● PercentileSpeedDifference

This map represents the difference between the posted speed and the actual vehicle's speed. It has map layers for percentile data. For this map I used the posted speed limit map made by me. The color of each layer represents the speed differences, and the legend shows the posted speed limit for that segment of road.

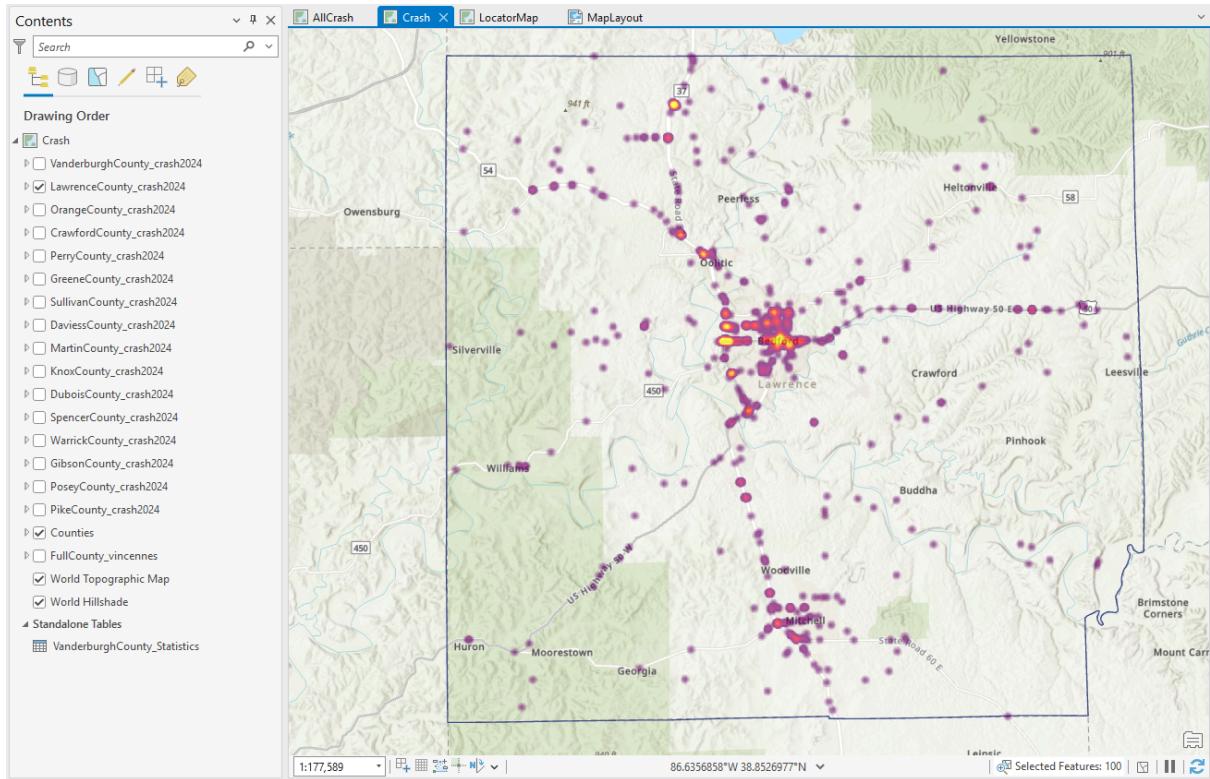


**Approach:** Performed spatial join to add the segment data with posted speed map  
 -> create two extra fields for each percentile--one is for differences and the other one to categorize the differences, which is used in symbology -> used symbology to represent speed differences with different colors.

## Project 2: Crash

- Crash

County-wise crash maps of 2024. All the layers are created separately to export the maps with all components in pdfs for further use.



- LocatorMap

The map of Indiana State with counties to locate the particular county in the exported map within the state.

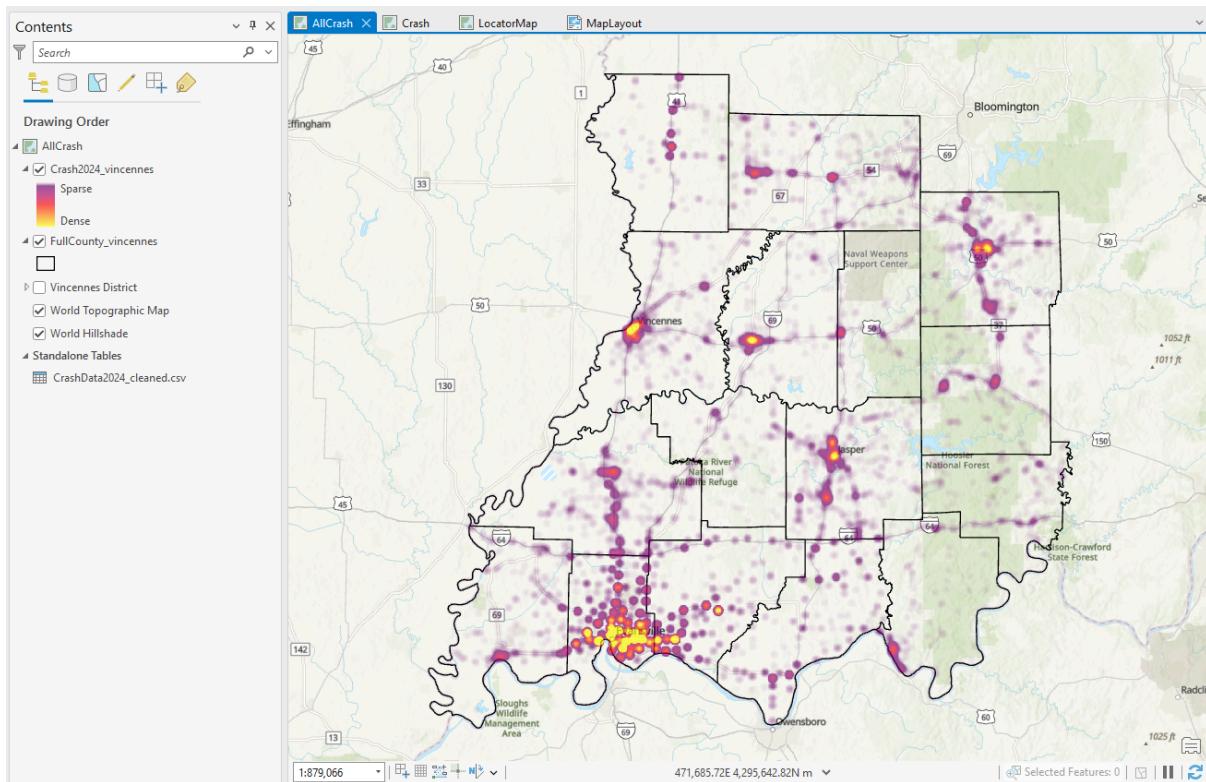
- MapLayout

Layout map for organizing and converting the individual county crash maps into pdfs with all other map components.

- AllCrash

An aggregated 2024 crash map of the Vincennes District. Color shades are used to represent the concentration of crash cases.

**Approach:** County-wise 2024 crash tables are converted to XY points -> projected them into desired projection system -> eliminated the animal and parking lot crashes -> created heat map, where used radius is 5 in order to identify the hotspots clearly.



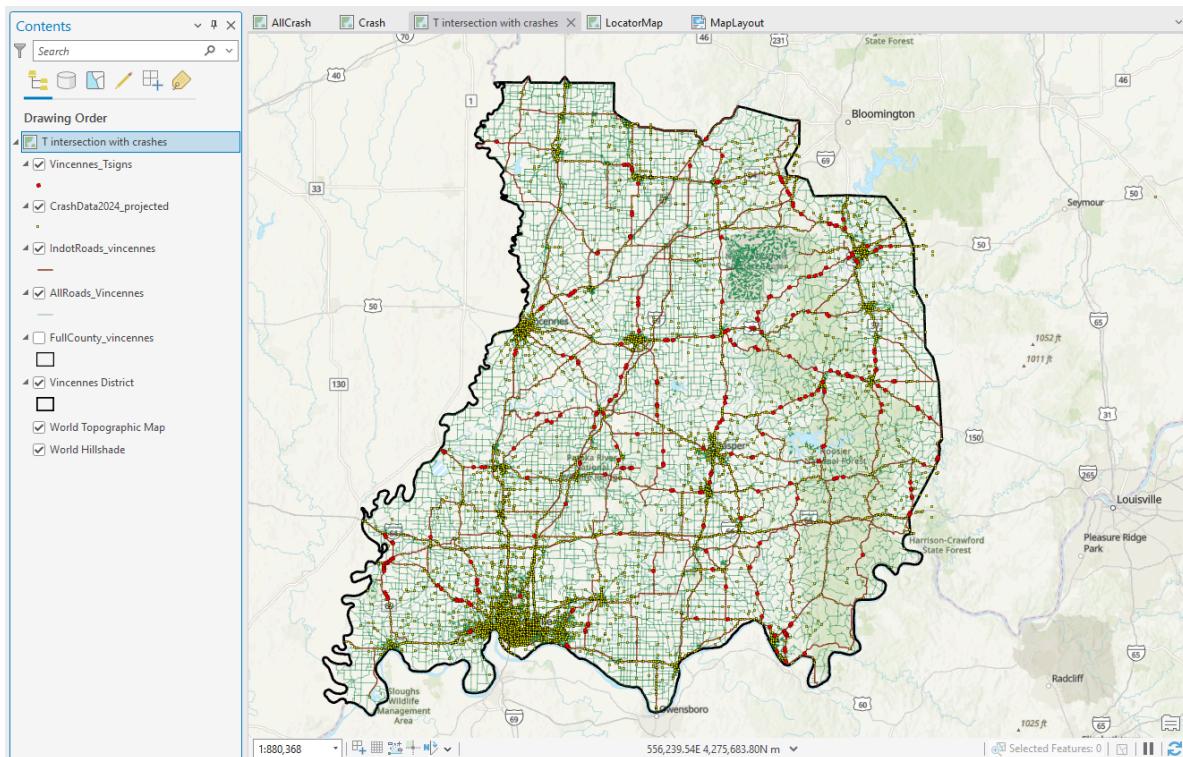
### County-wise crash map pdfs directory path:

T:\traffic\\_\_ Traffic Engineering\\_TPE\Interns\Summer 2025\Srishti Roy Chowdhury\Project files\Crash

- **T intersection with crashes**

An aggregated 2024 crash map of the Vincennes District with the T-intersection signs.

**Approach:** Added the T-signs layer exported from the sign sheet and panel data to the previously created point cashes.

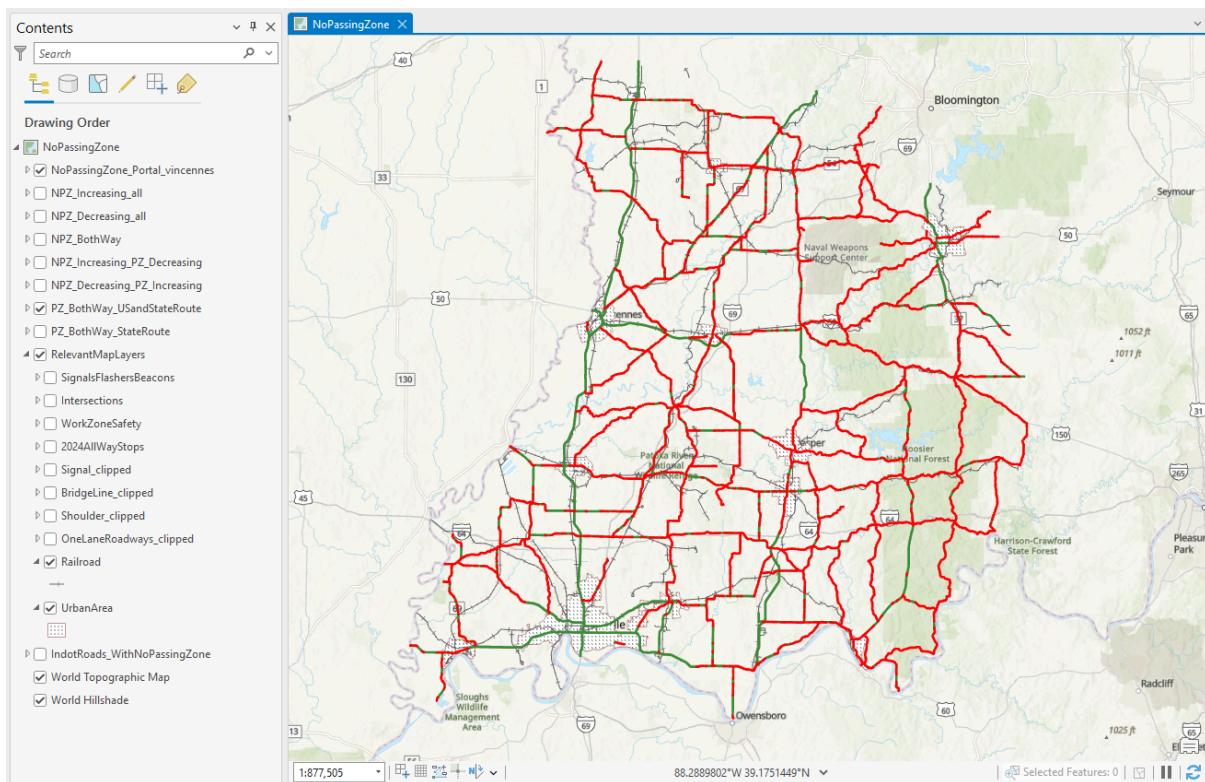


## Project 3: NoPassingZone

- **NoPassingZone**

This map is developed considering the map layers created by Fabiha and the one that is available in the ArcGIS portal. The Map includes both the passing zone and no-passing zone with its direction (i.e., increasing or decreasing or both way) and geometric length both in feet and meters in the attribute table for further use in order to eliminate the short (no)-passing zones. Also, some other layers (for example, railroads, urban areas, signals, workzonesafety, etc.), that might be helpful in decision making are added to the map.

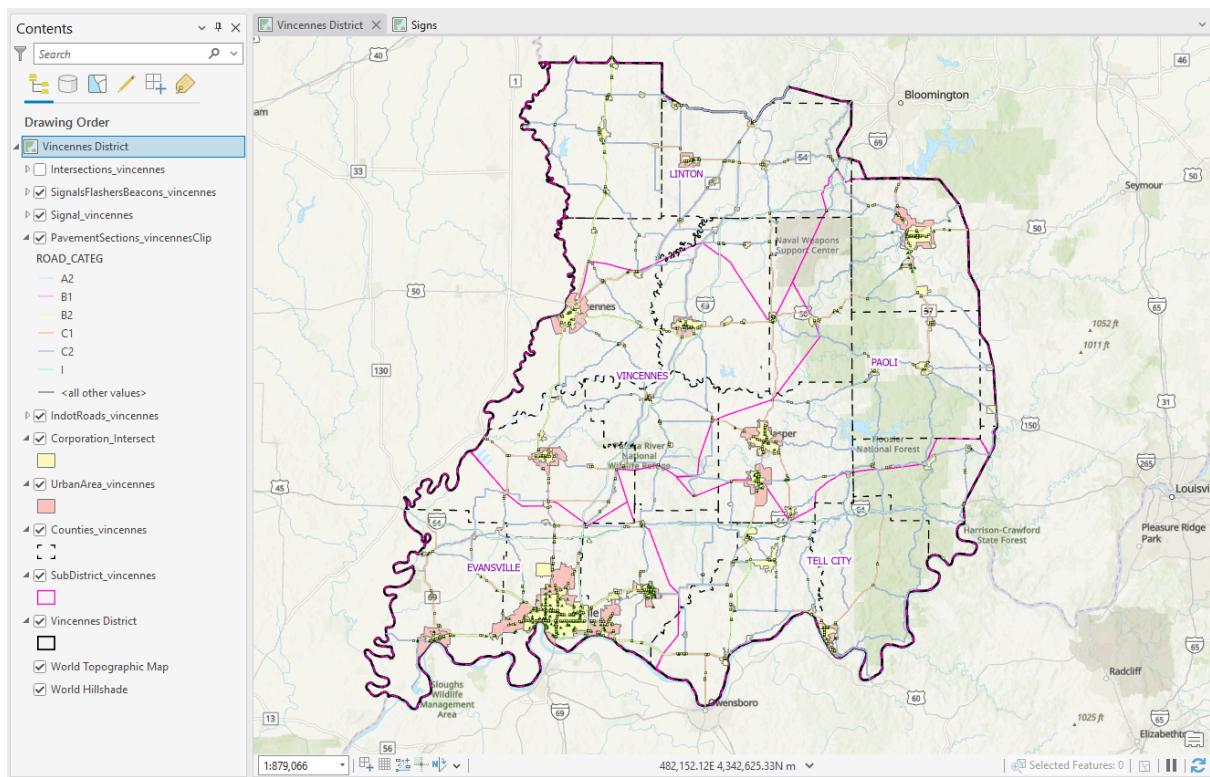
**Approach:** Collected no-passing zone map layer from portal -> eliminated the npz geometry from the road line feature, taken into account the directions and got the passing zones -> calculated the geometry and represented the zones with different color.



## Project 4: Signs

- **Vincennes District**

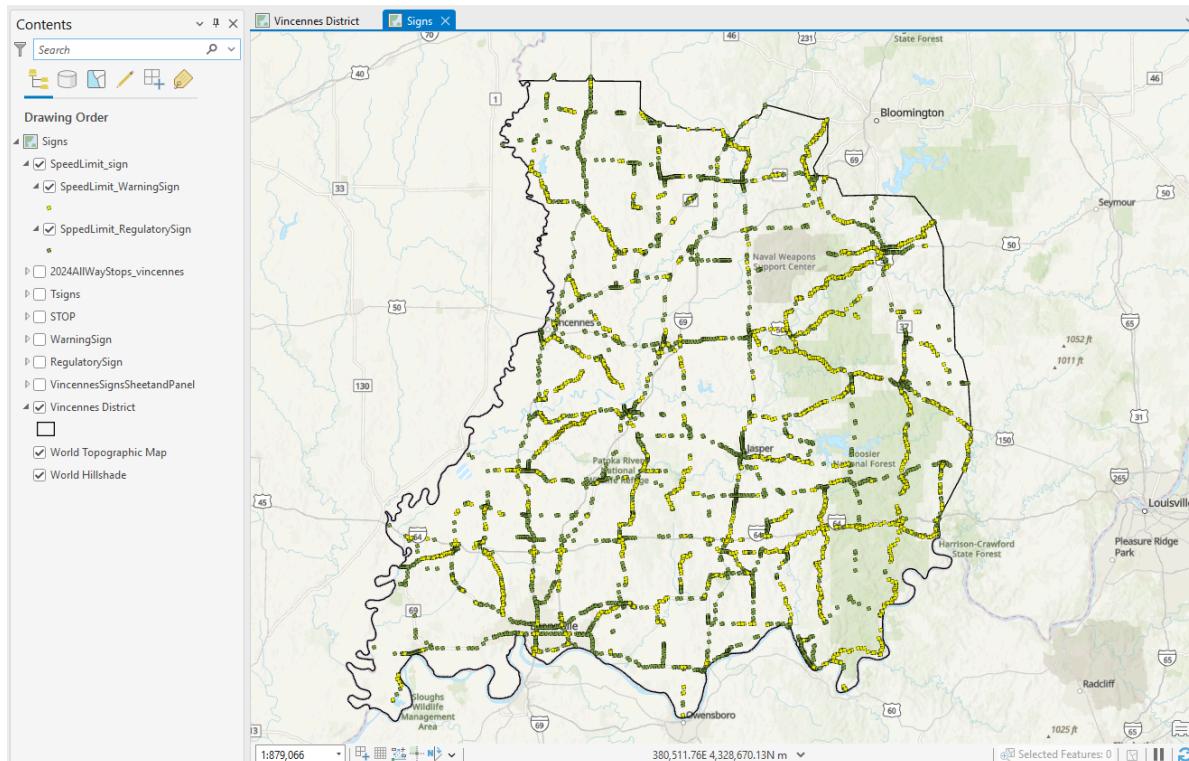
This map consists of multiple feature layers like a small introduction to INDOT Vincennes district. It includes the subdistrict, counties, intersections, signals, urban areas, corporation areas, etc. All layers are pulled out from the ArcGIS organization portal.



## • Signs

Different types of signs are exported from the sign sheet and panel shapefile provided by Nathan.

**Approach:** Added the sign sheet and panel data in the map layer -> exported each type of sign filtering the MUTCD variable (to identify the exact mutcd code of a particular sign I followed the sign catalog).



### **Sign catalog softcopy path:**

T:\traffic\\_\_ Traffic Engineering\\_TPE\Interns\Summer 2025\Srishti Roy Chowdhury\Resource exploring

### **Project 5: RPM**

- RPM Dataset Link

[https://ingov-my.sharepoint.com/:x/r/personal/dareed\\_indot\\_in\\_gov/\\_layouts/15/Doc.aspx?sourcedoc=%7B2B4F576C-7E7C-4F9F-9427-BE9E186ABA4F%7D&file=RPM%20Tracker.xlsx&fromShare=true&action=default&mobileredirect=true](https://ingov-my.sharepoint.com/:x/r/personal/dareed_indot_in_gov/_layouts/15/Doc.aspx?sourcedoc=%7B2B4F576C-7E7C-4F9F-9427-BE9E186ABA4F%7D&file=RPM%20Tracker.xlsx&fromShare=true&action=default&mobileredirect=true)

- **RPM related to other documents path**

T:\traffic\\_\_ Traffic Engineering\\_TPE\Interns\Summer 2025\Srishti Roy Chowdhury\Project files\RPM

### **Cleaned Table Path:**

#### **Cleaning Crash Lat Long Data of 2023 & 2024**

T:\traffic\\_\_ Traffic Engineering\\_TPE\Interns\Summer 2025\Srishti Roy Chowdhury\TableCrashDataClean\_LatLong0

### **Shapefiles path:**

T:\traffic\\_\_ Traffic Engineering\\_TPE\Interns\Summer 2025\Srishti Roy Chowdhury\Layers

- **All\_Shapefiles**

Shapefiles of the map layers that have been exported from the ArcGIS portal for local use.

The shapefiles are available in this folder-

- VincennesDistrictBoundary
- SubDistricts
- UrbanArea
- Corporation
- Counties---clipped with Vincennes district boundary
- FullCounty---the boundary of counties is preserved
- AllIndotFacilities
- AllRoads
- IndotRoads---Interstate, US route, State route
- Railroads
- BridgeLine

- Intersections
- Signal
- SignalFlashersBeacons
- SignsSheetand Panel
- 2024AllWayStop
- Lane
- Shoulder
- WorkZoneSafety

#### • **Shapefile\_crash**

The shapefiles are available in this folder-

- Individual County Shapefiles

#### • **Shapefile\_NoPassingZone**

The shapefiles are available in '**NPZ\_PZ**' folder-

- NPZ layer collected from portal---including increasing, decreasing and both ways
- NPZ Increasing (all)---including both directions npz
- NPZ Decreasing (all)---including both directions npz
- NPZ Increasing PZ Decreasing
- NPZ Decreasing PZ Increasing
- PZ\_BothWay---both directions passing zone

#### • **Shapefile\_sign**

The shapefiles are available in this folder-

- RegulatorySign
- RegulatorySign\_edited----rearranged and categorized the legend and assigned new legend to each regulatory sign for further use
- SpeedLimitSign
- STOP
- WarningSign
- SpeedLimit\_WarningSign
- SpeedLimit\_RegulatorySign
- Vincennes\_Tsigns---this is used in the crash map

#### • **Shapefile\_SpeedLimit**

The shapefiles are available in this folder-

- Interstate\_SpeedLimit\_src---this map is mainly exported from the portal as I found it more reliable
- USRoute\_SpeedLimit\_src---this map is created using the regulatory speed sign
- StateRoute\_SpeedLimit\_src---this map is created using the regulatory speed sign
- IndotRoads\_mergedSpeed---merged version of first three layers
- SpeedLimitSign

- IndotRoads---only the layer for Vincennes district
- AllRoadsSpeedLimitsRO---exported speed map from the ArcGIS portal [doubtful about the use of this layer]

- **Shapefile\_RPM**

The shapefiles are available in this folder-

- PavementScetions
- PKHistories
- PKHistory\_2021to2024

- **X**

The shapefiles that have been created during trial-and-error work. Not for use.

## **Map exploring, Table exploring, and Resource exploring**

These folders consist of some rough works.

### **State Speed Map**

Folder Name: **State\_speed\_map**

Folder Path: T:\traffic\\_\_ Traffic Engineering\\_TPE\Interns\Summer 2025\Srishti Roy Chowdhury\state\_speed\_map

This folder consists of multiple folders and a work documentation file which has all the details about the folders, files and each step of work.