TAZ Boundaries

and

TAZ Splits

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Part 1: WFRC Practices for TAZ Boundaries

What are some of the things we look at?

Overall size

Governmental & cartographic boundaries

Geographical barriers

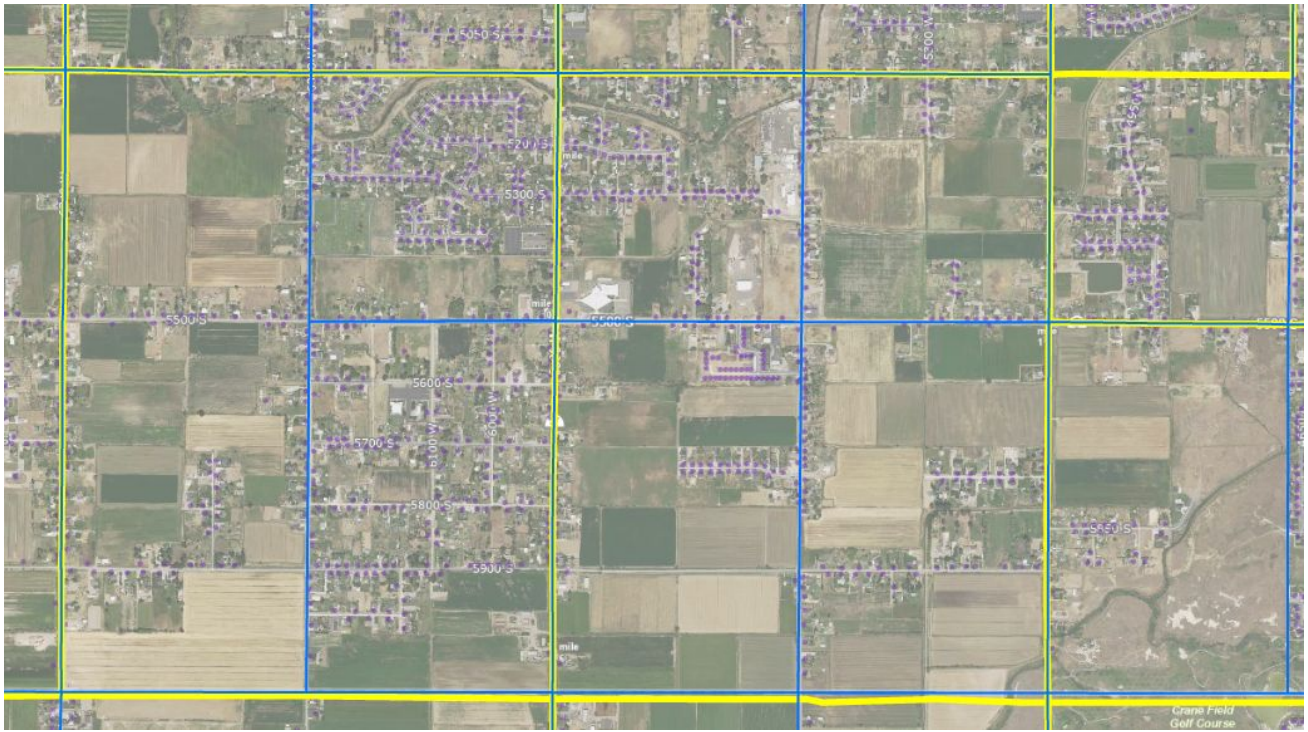
Neighborhood barriers

Transportation barriers

Overall size

Are there high growth areas where existing TAZ's may be too large in the future?

- Population
- Employment

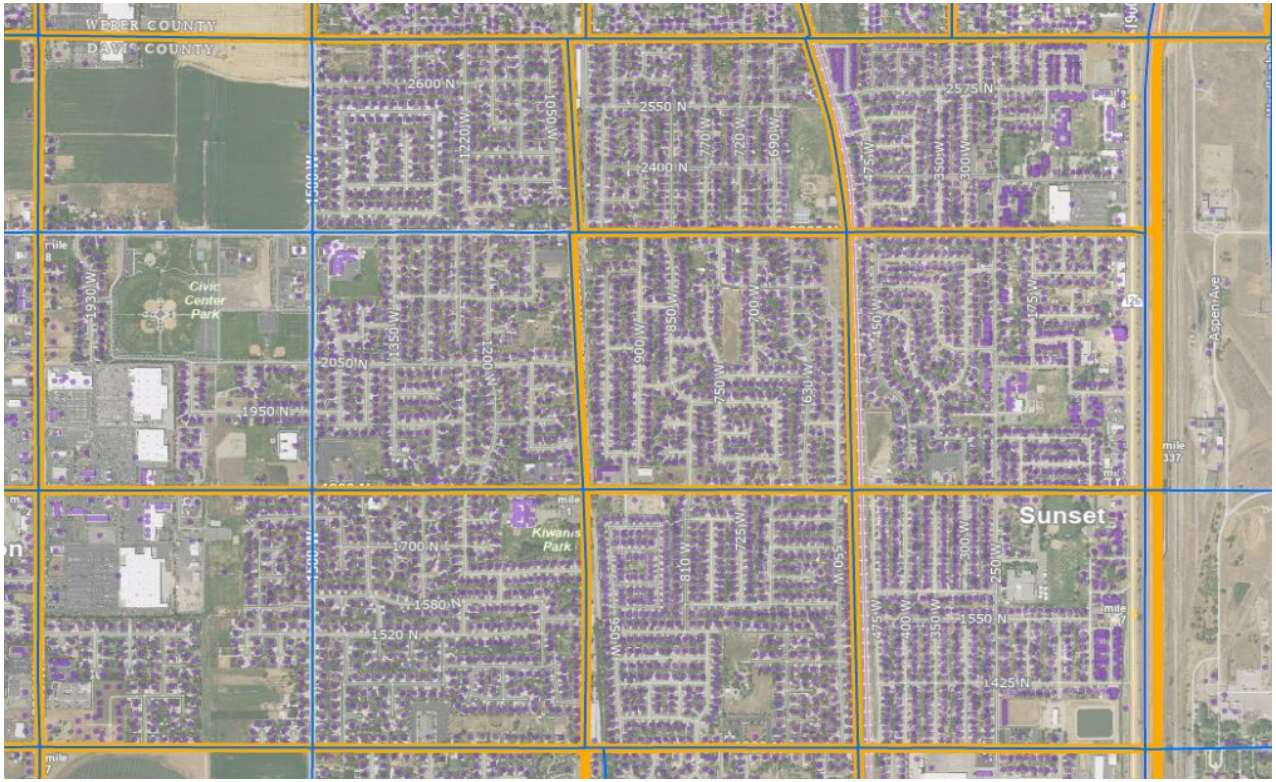


Governmental & cartographic boundaries

Where are the county and city boundaries?

Do the census boundary delineations nest within?

Other boundaries of significance?

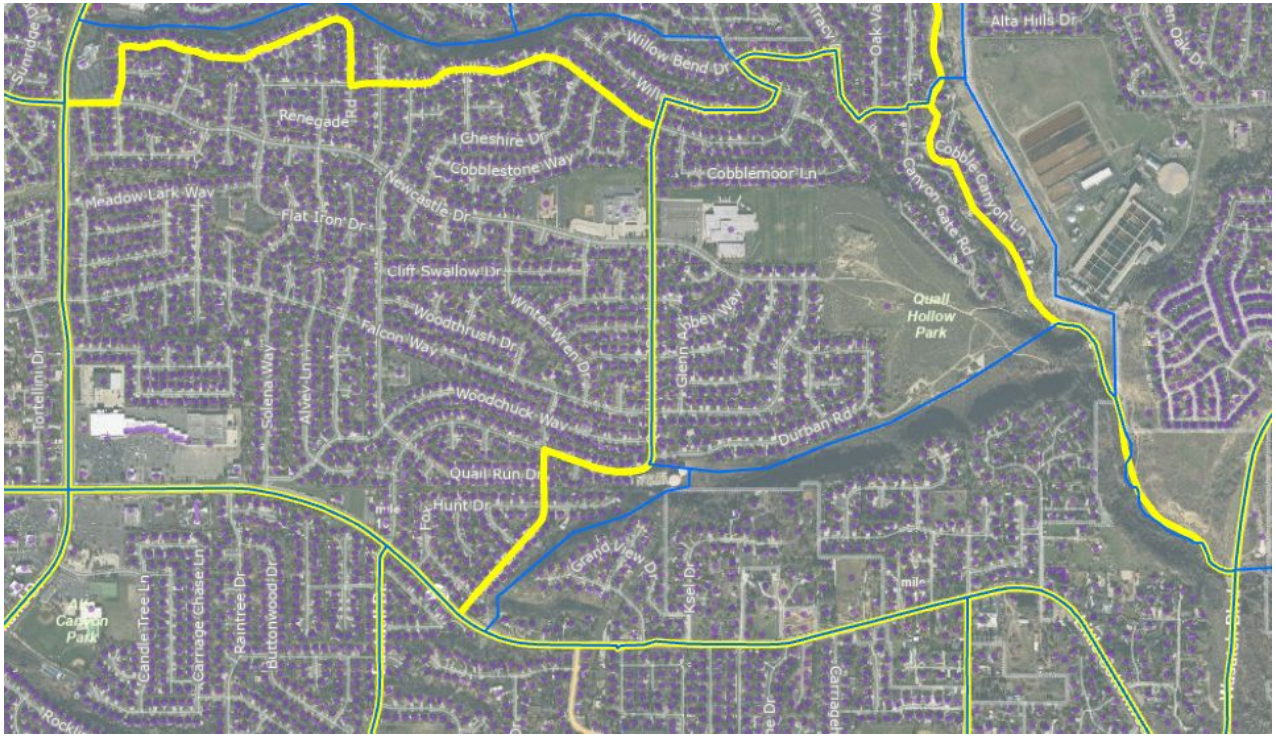


Geographical barriers

Is there a river or canal separating the flow of traffic?

Is there a ravine of some sort that divides a neighborhood?

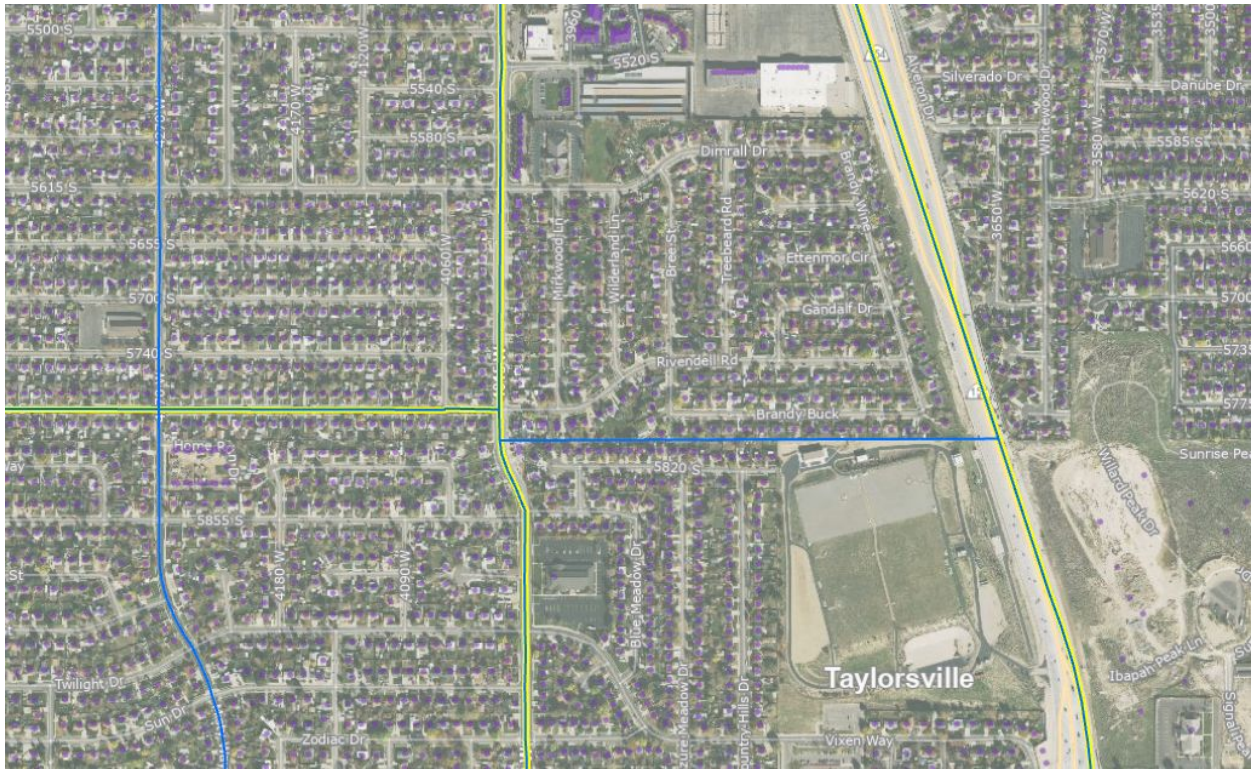
Does the slope of the hillside prevent further development?



Neighborhood barriers

Is there a wall or a subdivision layout affecting the flow of traffic?

Other development features that guide access and egress?

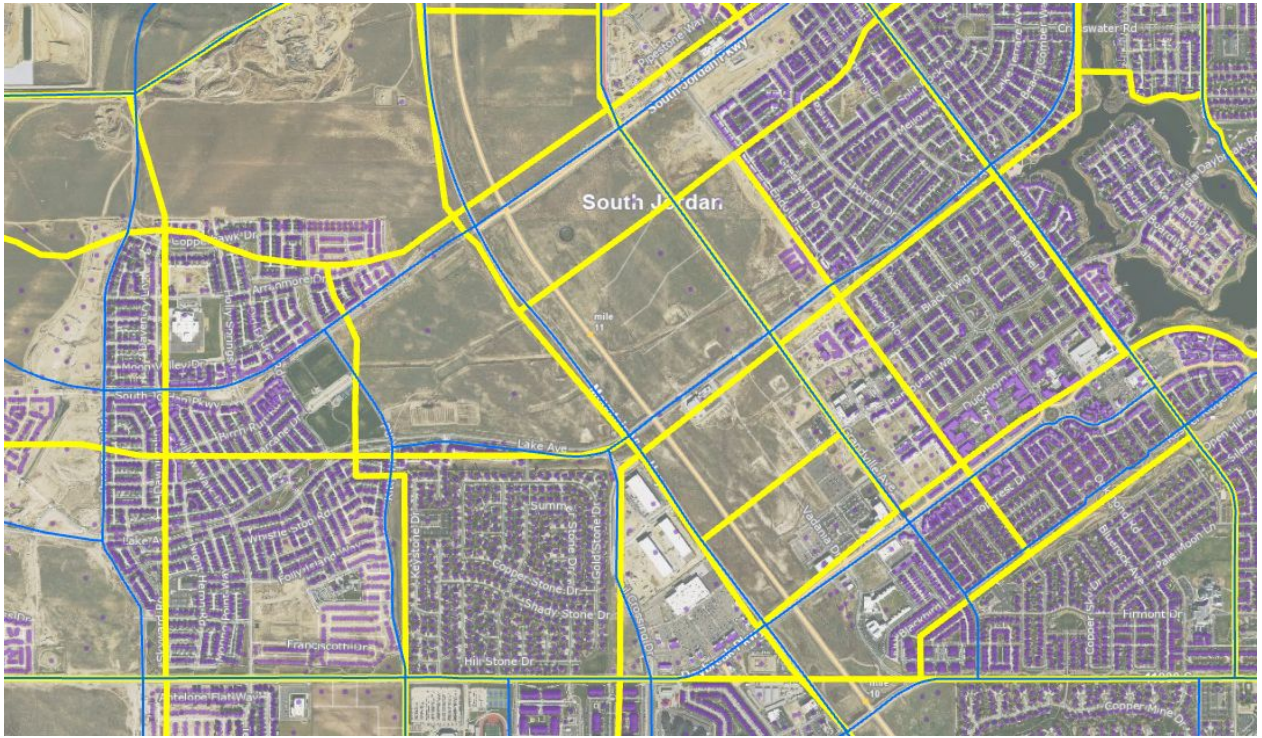


Transportation barriers

Is there a freeway that lacks an overpass?

Is there a transit or freight railway that can't be crossed affecting the flow of vehicles?

Both? All of the above all at once?

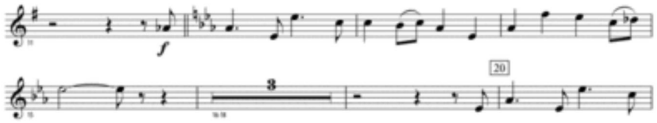


Part 2: TAZ Split Process

If my life had a soundtrack based on places I've lived

Home on the Range – Oh give me a home where the buffalo roam…

Theme from Dallas



All Hail, Spanish High School – Stand now as ever to fight and die for you!

Querência Amada – Olha p'ra ao céu azul, e grita junto comigo, viva Rio Grande do Sul!

The Cougar Song – Rise and shout, the Cougars are out!

Hang on Sloopy… sloopy hang on… O…H…I…O…

My Kind of Town… Chicago is!

Lehi High School Song – Let mirth and gladness banish all sadness

ChatGPT… Why do we split TAZs?

Increased Accuracy–Smaller TAZs can provide more detailed data, improving the accuracy of traffic forecasts and transportation models. This is particularly important in areas with diverse land uses or significant variations in travel patterns.

Better Representation of Local Conditions–Smaller TAZs can more effectively represent local conditions and variations in population density, land use, and transportation facilities. This leads to better understanding and planning of local transportation needs.

Improved Planning and Decision Making–Finer TAZ divisions allow for more precise planning and decision-making. Transportation planners can better assess the impact of proposed transportation projects or policies at a more localized level.

Adaptation to Changes–As urban areas grow and change, the original TAZ boundaries may no longer reflect current land use or traffic patterns. Splitting TAZs can help in adapting the transportation models to these changes.

Enhanced Traffic Management–More detailed TAZs can aid in traffic management, especially in urban areas where traffic congestion and land-use patterns are complex. This can lead to more effective traffic flow management and congestion reduction strategies.

Data Resolution for Emerging Technologies–With advancements in technology, such as GPS and mobile data, transportation planners have access to more granular data. Smaller TAZs can better utilize this high-resolution data for analysis and planning.

My kind of TAZ, 2600 is.

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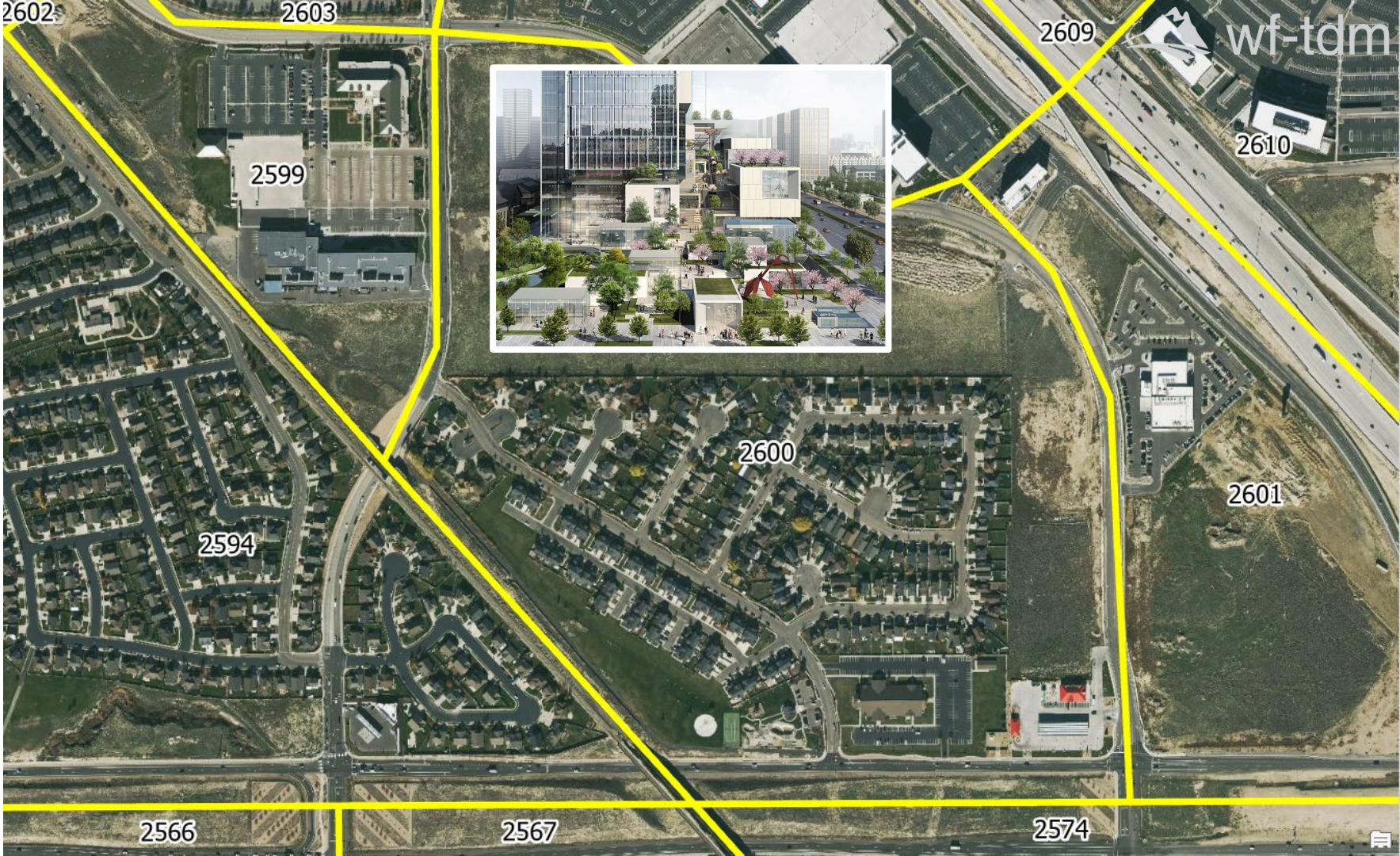
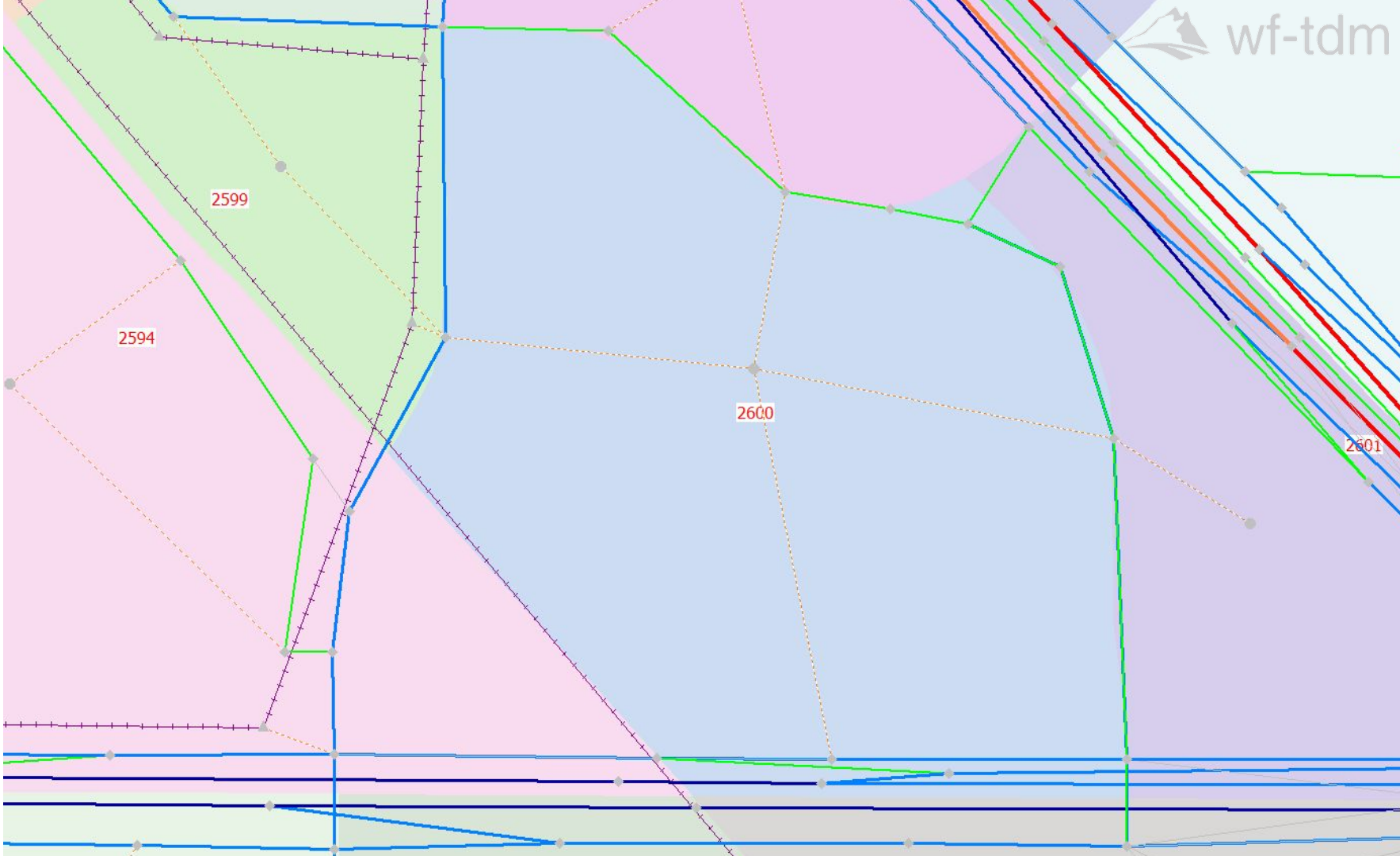


My kind of TAZ, this one is.



TAZ Split Process

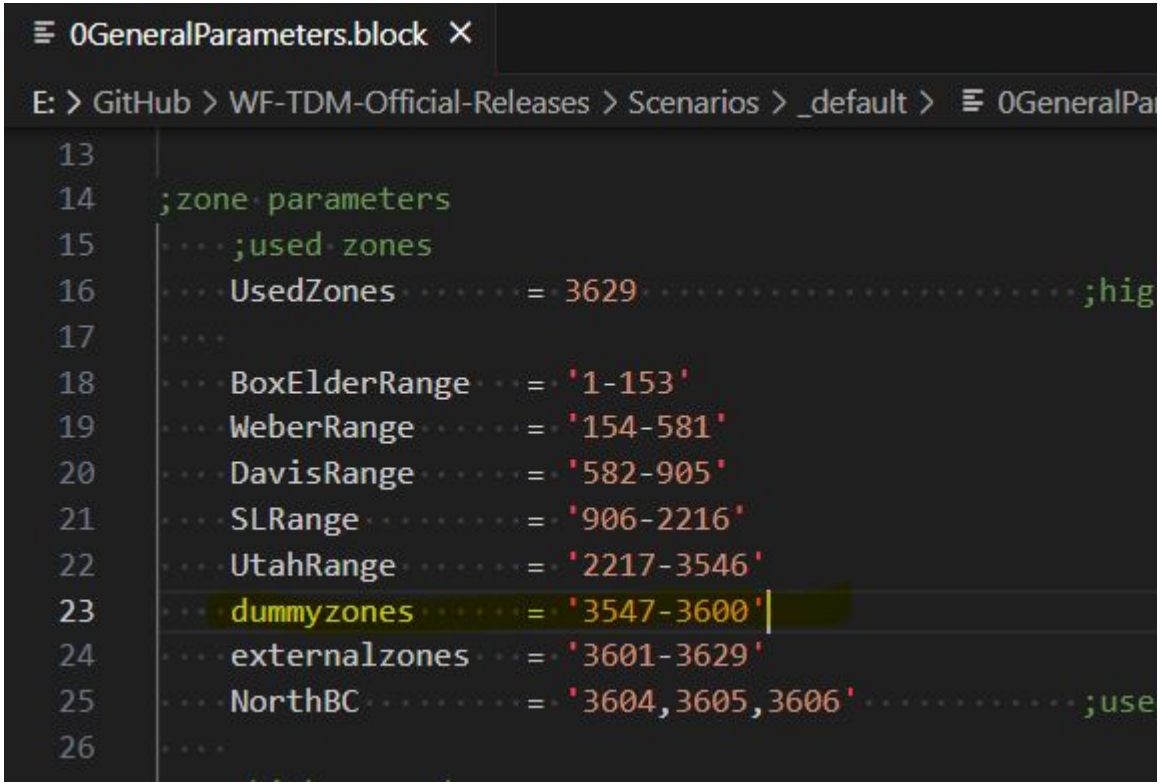
- Plan out TAZ splits and numbering
- Edit the TAZ shapefile
- Edit the master network
- Edit the general parameters
- Edit the zonal input files

Plan out TAZ splits and numbering

Look at General Parameters to see what TAZ numbers are available for new TAZs resulting from splits.

TAZ numbers in the ‘dummyzones’ range are safe to use.

So looking at the base v9.0 model, you numbering can start 3547



Plan out TAZ splits and numbering

Sketch out the proposed TAZ splits considering the following in both the existing and future scenarios:

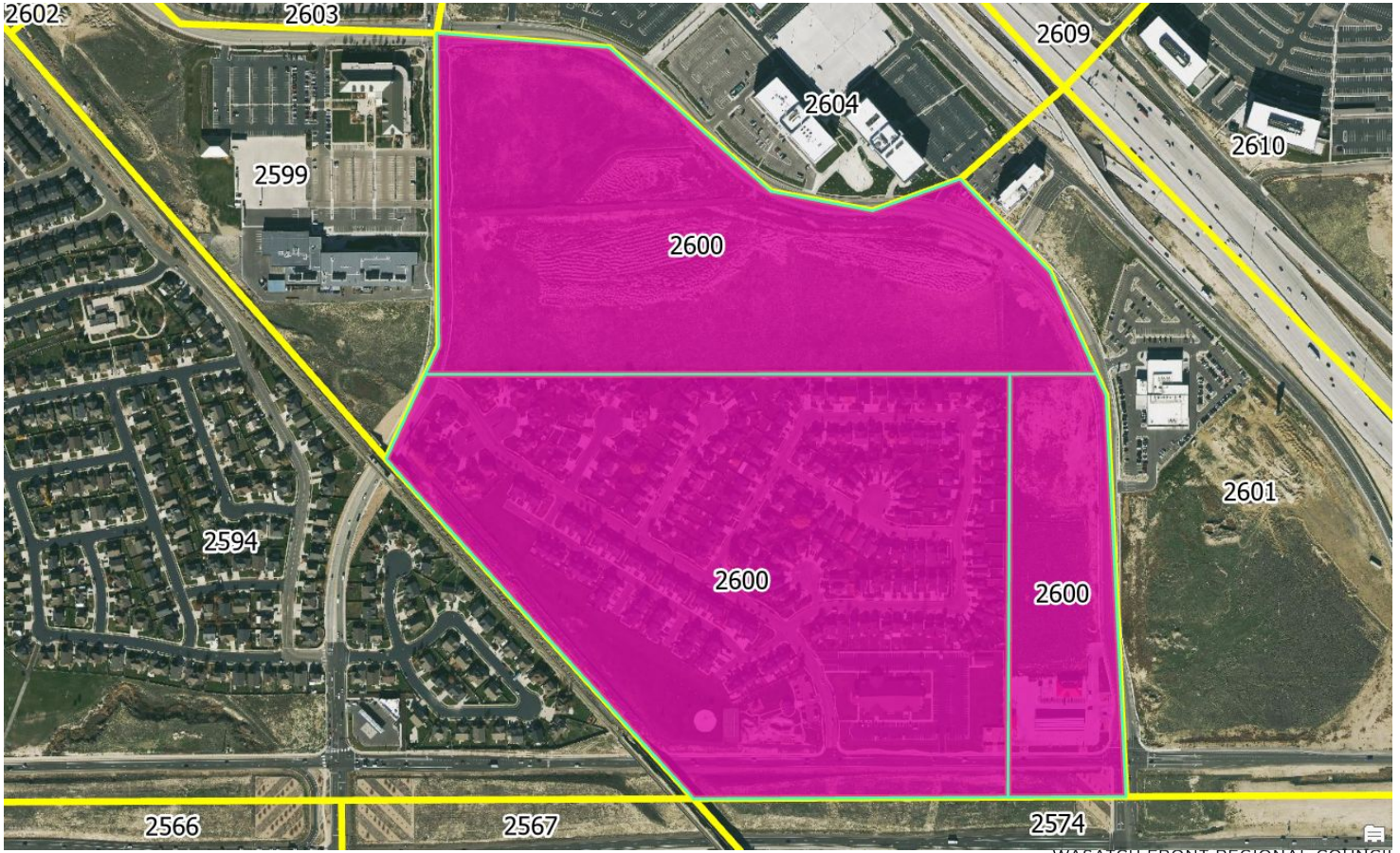
- Roadway network
- Access to transit
- Land use
- Barriers (natural and man–made)

Have someone else review!

Edit the TAZ Shapefile (in GIS software)

Select TAZ you want to split and use the split tool.

This TAZ is split into 3 parts. After splitting, each part has fields that need to be updated.



Edit the TAZ Shapefile (in GIS software)

wf-tdm

Update shapefile fields:

TAZID new TAZs should get sequential numbering starting at highest model TAZID+1

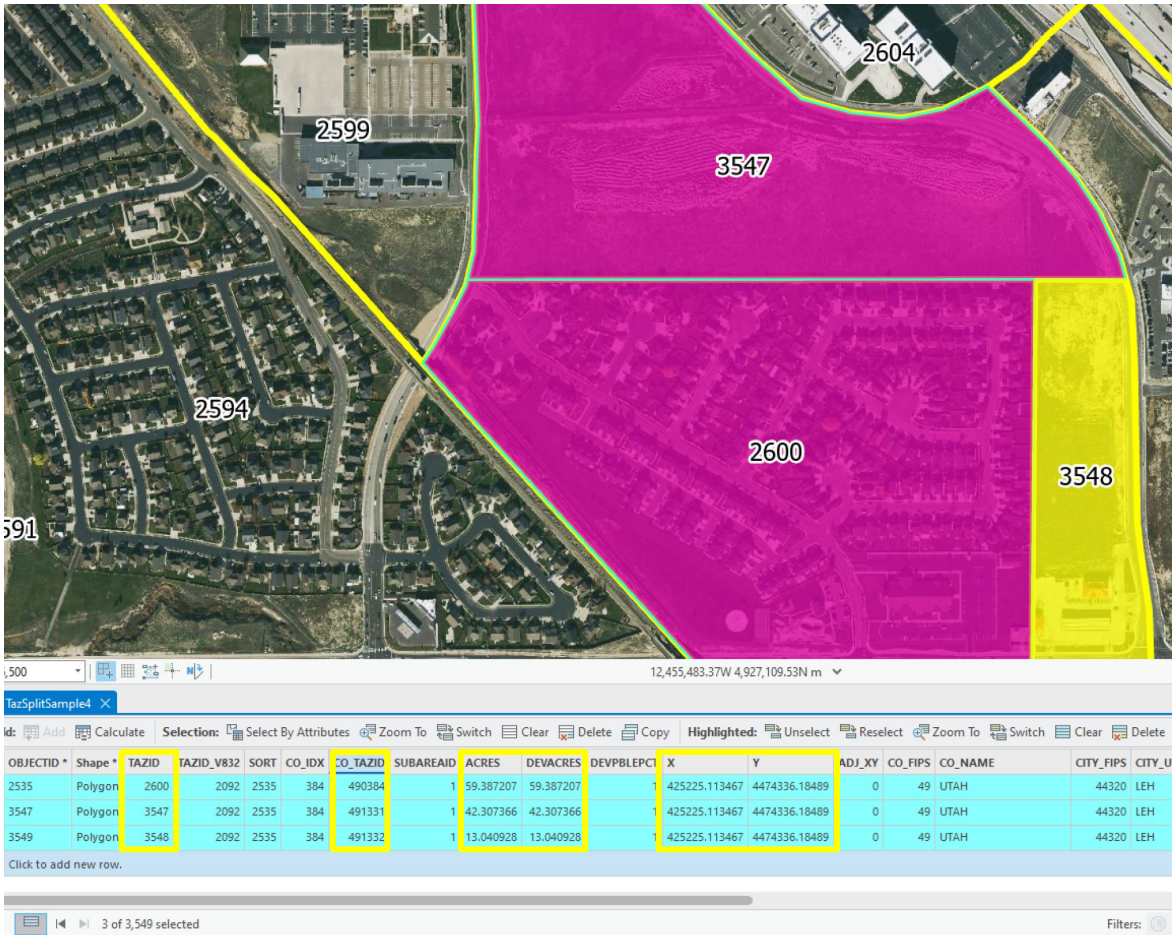
COTAZID new TAZs should get sequential numbering starting at highest county COTAZID+1

ACRES calculate area of all split TAZs

DEVACRES use **DEVPBLEPCT** field or join to environmental constraints shapefile found in `Inputs\TAZ\_Source` to recalculate

X, Y update centroid coordinates in UTM Zone 12N

Have someone else review!



Edit the master network

Load all transit line files.

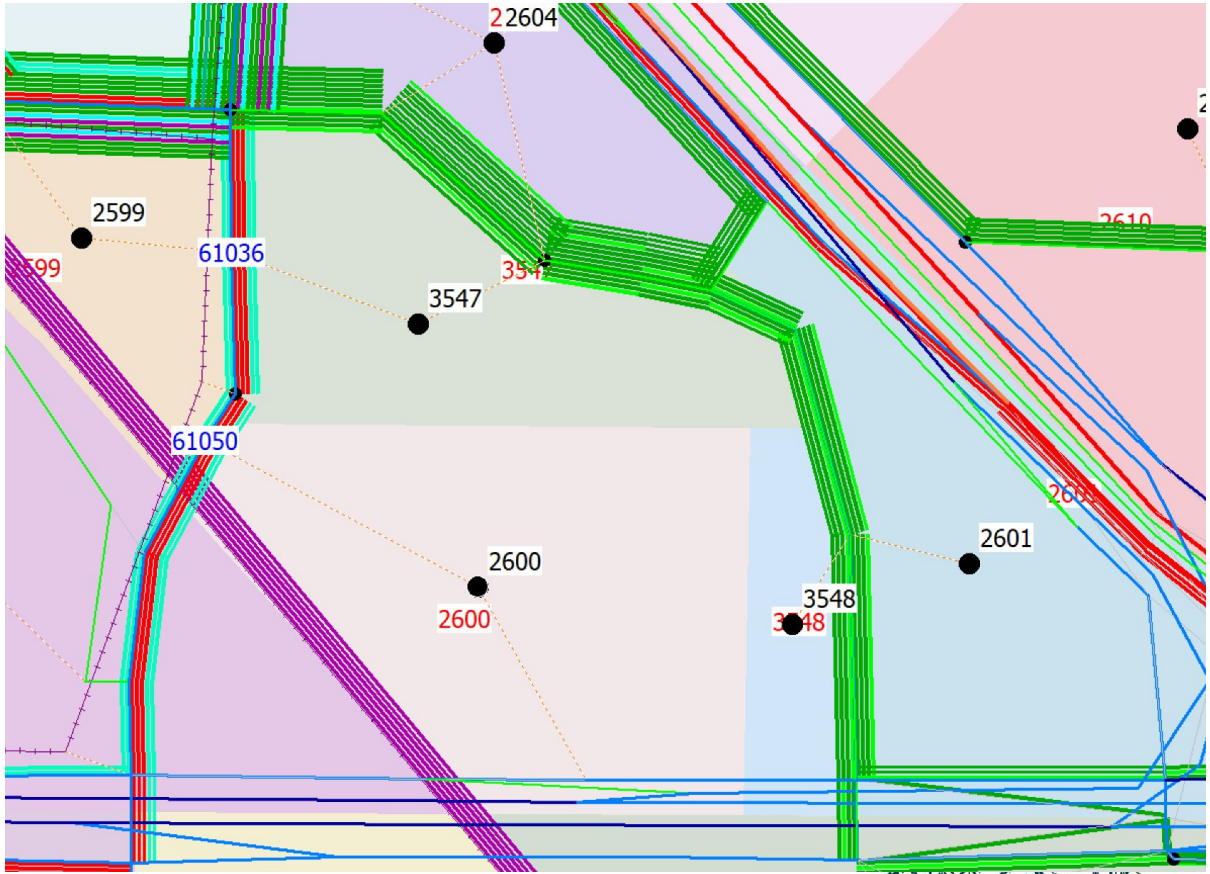
Move original centroid to proper location.

Add new nodes for new TAZs.

Modify surrounding network as needed.

Connect zones to highway network.

Have someone else review!



Edit the General Parameters

wf-tdm

Modify zone parameters.

Add new zones to appropriate ranges.

Modify dummyzones range.

Have someone else review!

0GeneralParameters.block

E: > GitHub > WF-TDM-Official-Releases > Scenarios > _defaul

```
13
14  ;zone parameters
15      ;used zones
16      UsedZones       = 3629
17
18      BoxElderRange   = '1-153'
19      WeberRange      = '154-581'
20      DavisRange      = '582-905'
21      SLRange         = '906-2216'
22      UtahRange       = '2217-3546'
23      dummyzones      = '3547-3600'
24      externalzones   = '3601-3629'
25      NorthBC         = '3604,3605,3606'
26
27      ;highway nodes
28      HwyNodes        = '10000-99999'
29
30
31
32
33
34
35      ;colleges/universities
```

0GeneralParameters.block

E: > GitHub > WF-TDM-Official-Releases > Scenarios > _default > 0GeneralParameters.bloc

```
13
14  ;zone parameters
15      ;used zones
16      UsedZones       = 3629                  ;highest value
17
18      BoxElderRange   = '1-153'
19      WeberRange      = '154-581'
20      DavisRange      = '582-905'
21      SLRange         = '906-2216'
22      UtahRange       = '2217-3546,3547-3548'
23      dummyzones      = '3549-3600'
24      externalzones   = '3601-3629'
25      NorthBC         = '3604,3605,3606'      ;used in 2_Mod
26
27      ;highway nodes
28      HwyNodes        = '10000-99999'         ;note: highway
29                                              ;  WFRC Transi
30                                              ;  WFRC Highwa
31                                              ;  MAG Transit
32                                              ;  MAG Highway
33
34
35      ;colleges/universities
```

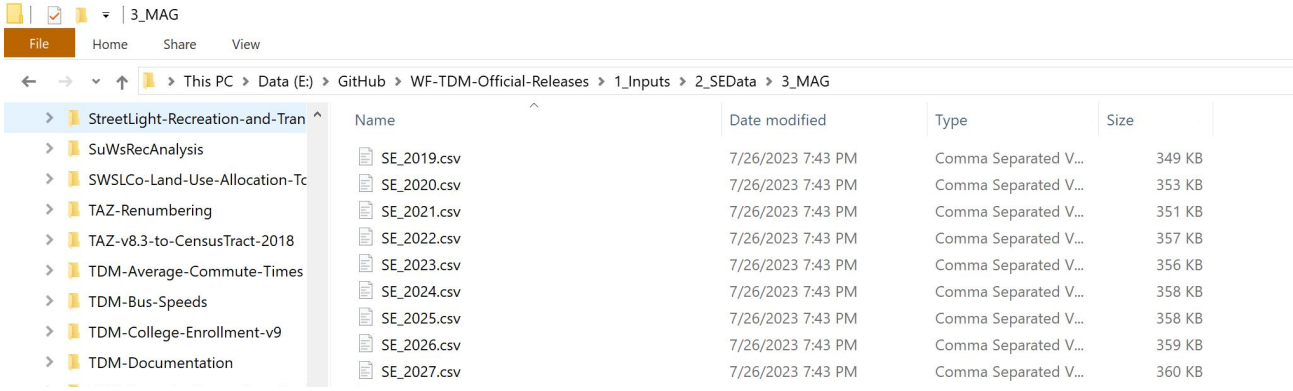
WASATCH FRONT REGIONAL COUNCIL

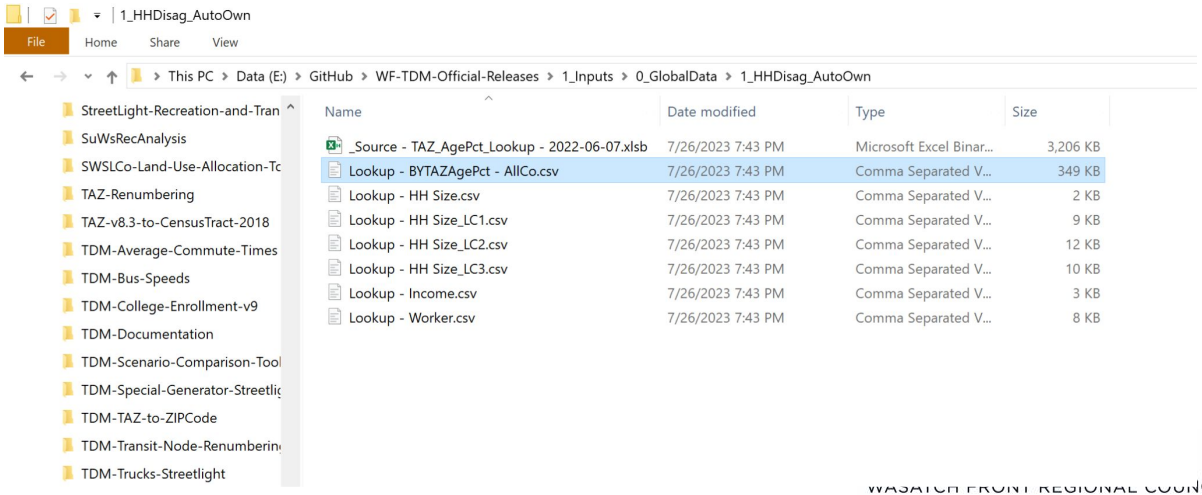
Edit zonal input files

Socioeconomic files For each scenario year, duplicate original TAZ row. Give new TAZID and COTAZID. Calculate distribution for all population and employment categories, as well as K-12 enrollment. Total of all new TAZs should equal total of original TAZ.

Age percent file Duplicate original TAZ row and give new COTAZIDs. Adjust life cycle distribution.

Have someone else review!





Did we miss anything?