

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

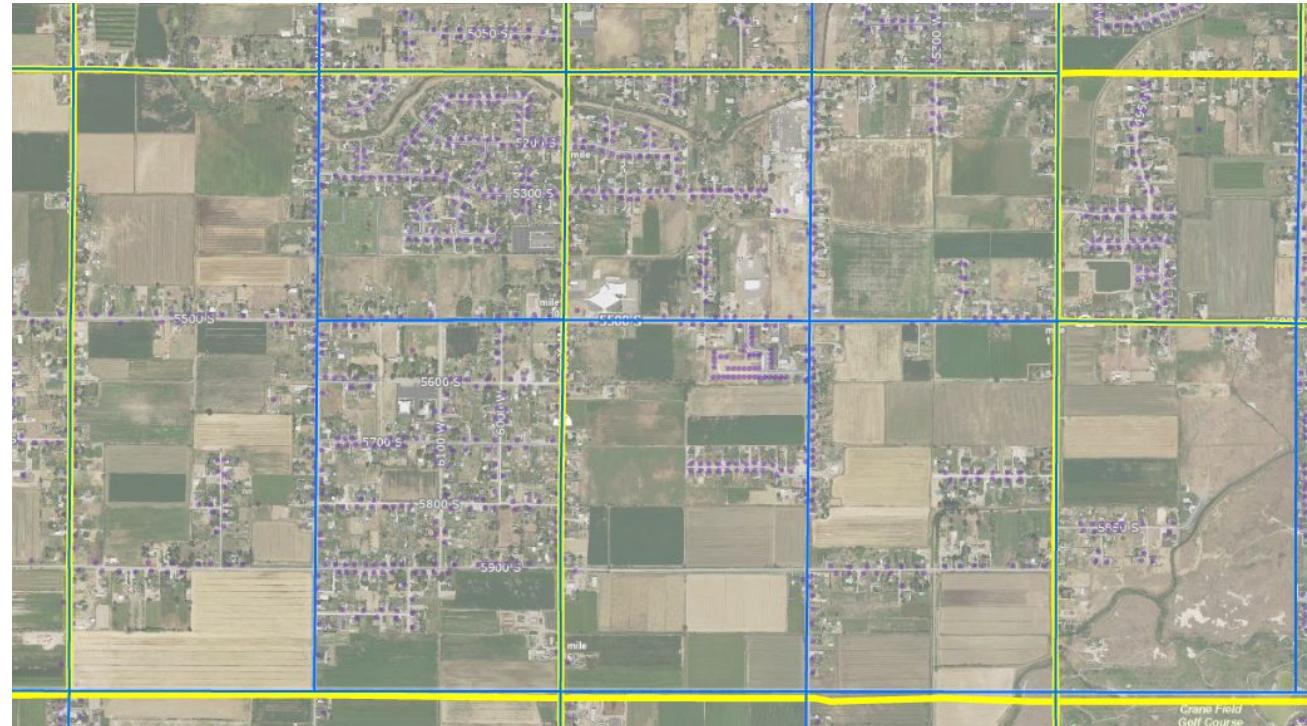
Neighborhood barriers

Transportation barriers

Overall size

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

- Population
- Employment

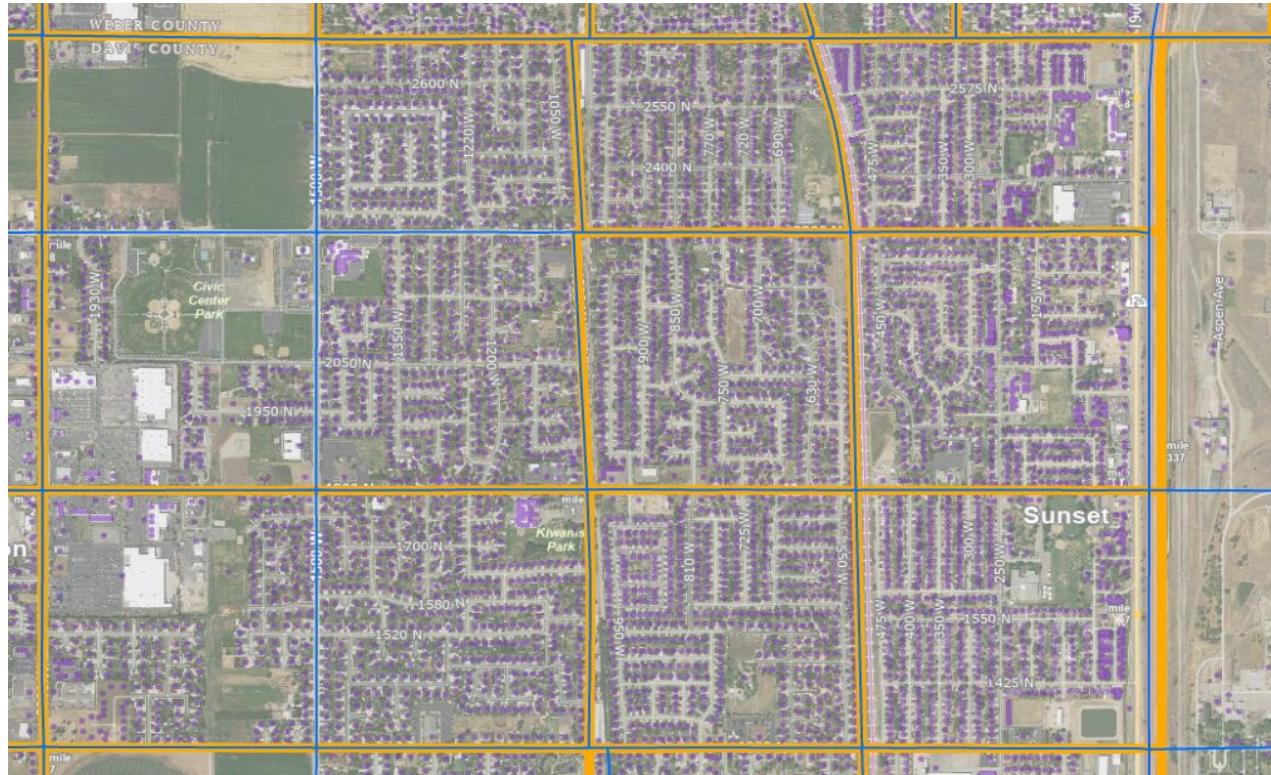


Governmental & cartographic boundaries

Where are the county and city boundaries?

Do the census boundary delineations nest within?

Other boundaries of significance?

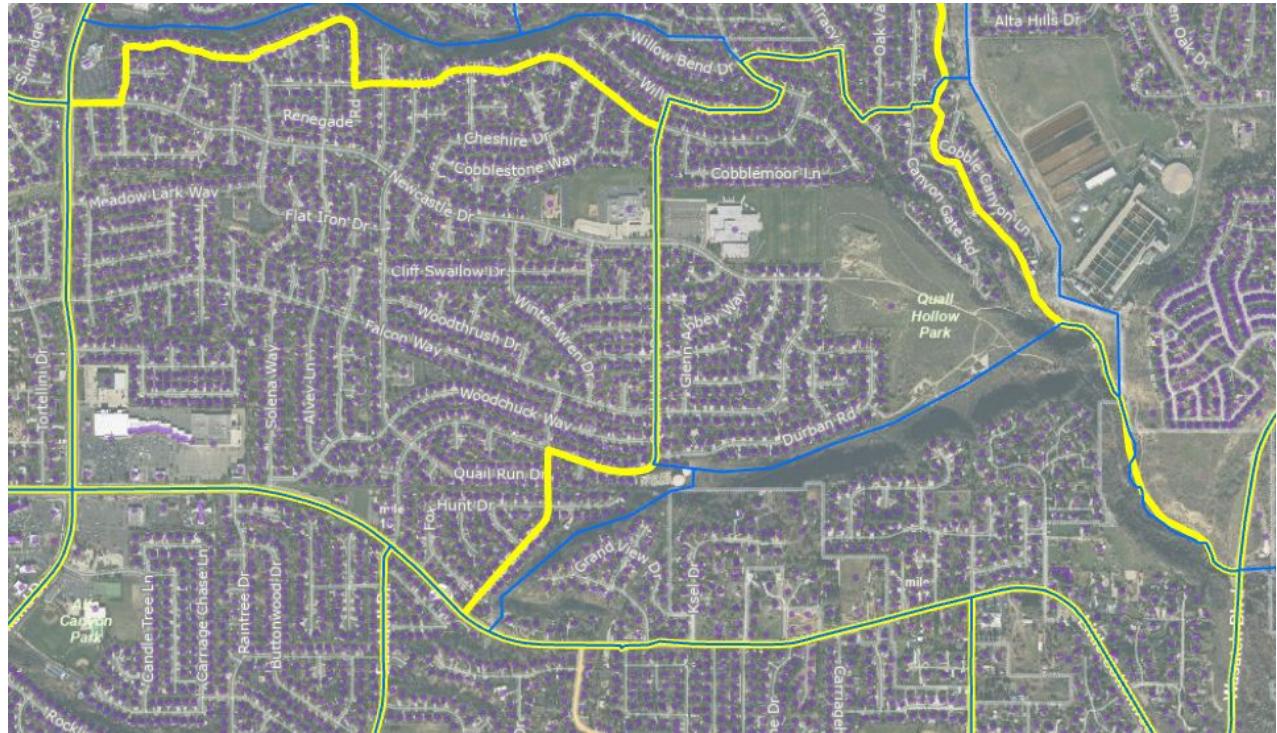


Geographical barriers

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

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

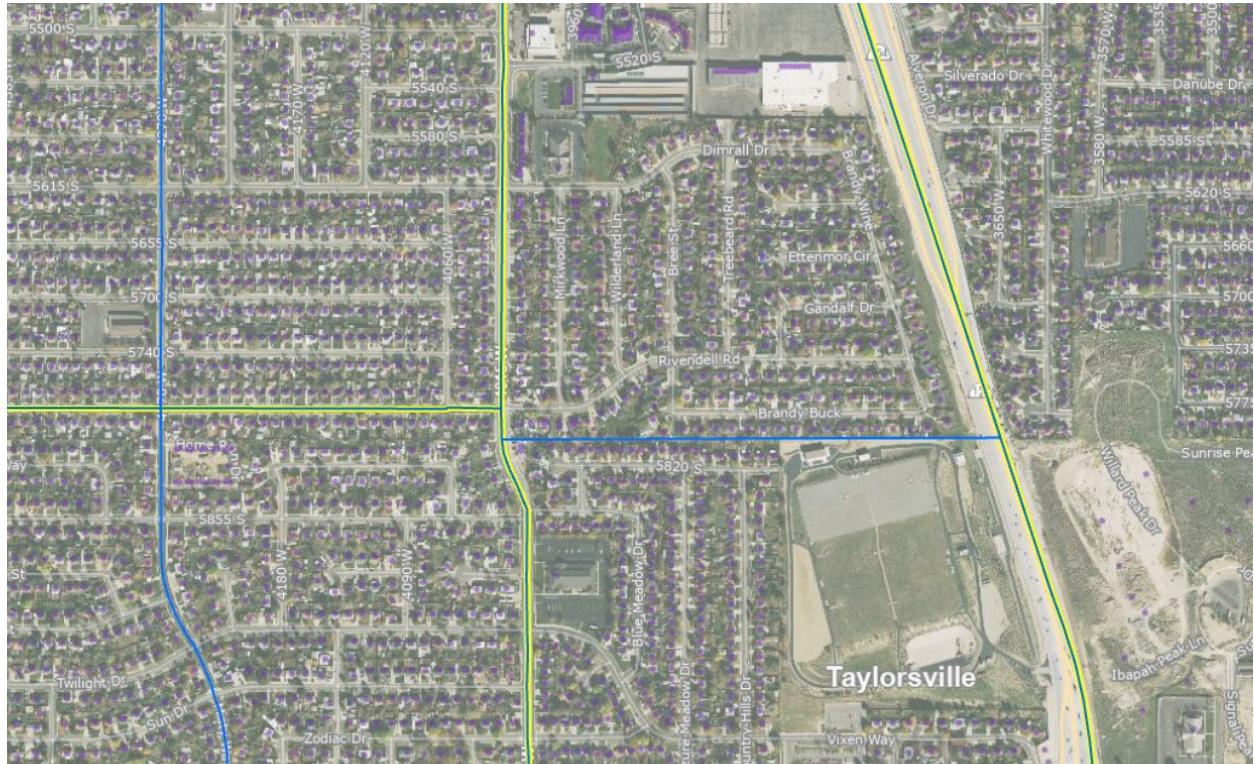
Does the slope of the hillside prevent further development?



Neighborhood barriers

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

Other development features that guide access and egress?

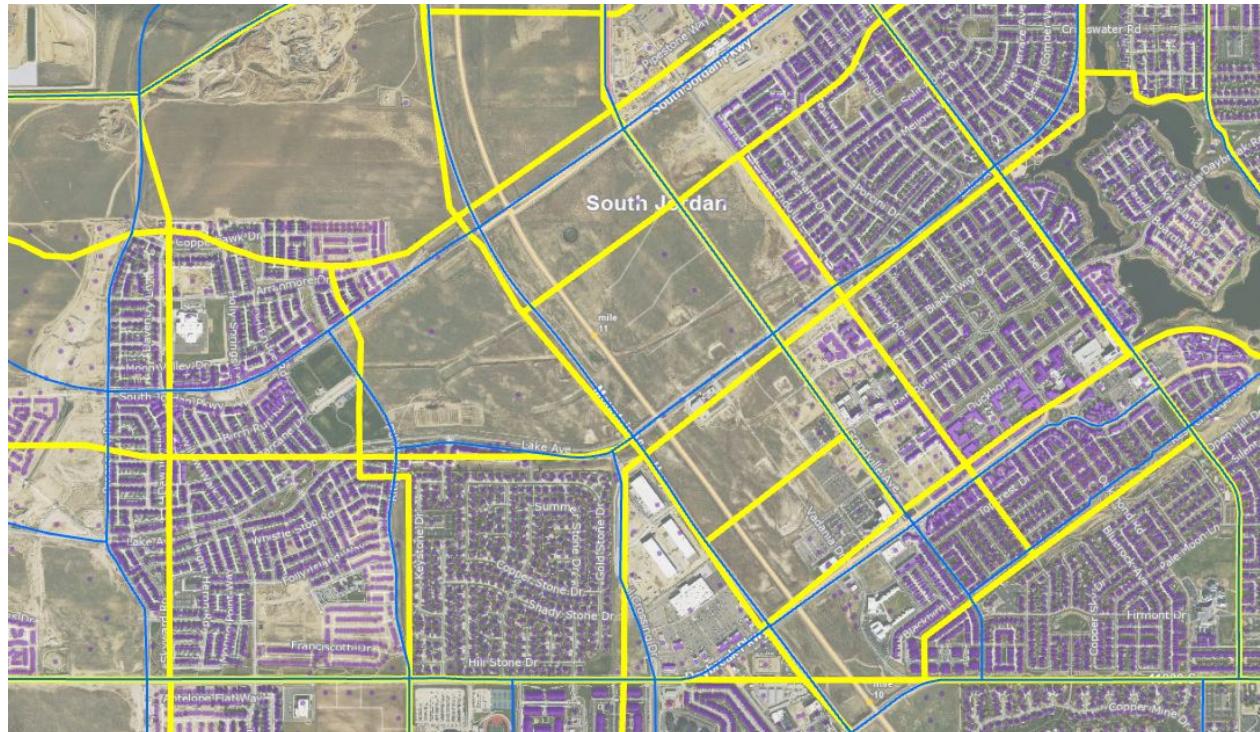


Transportation barriers

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!

Querênciâ 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.

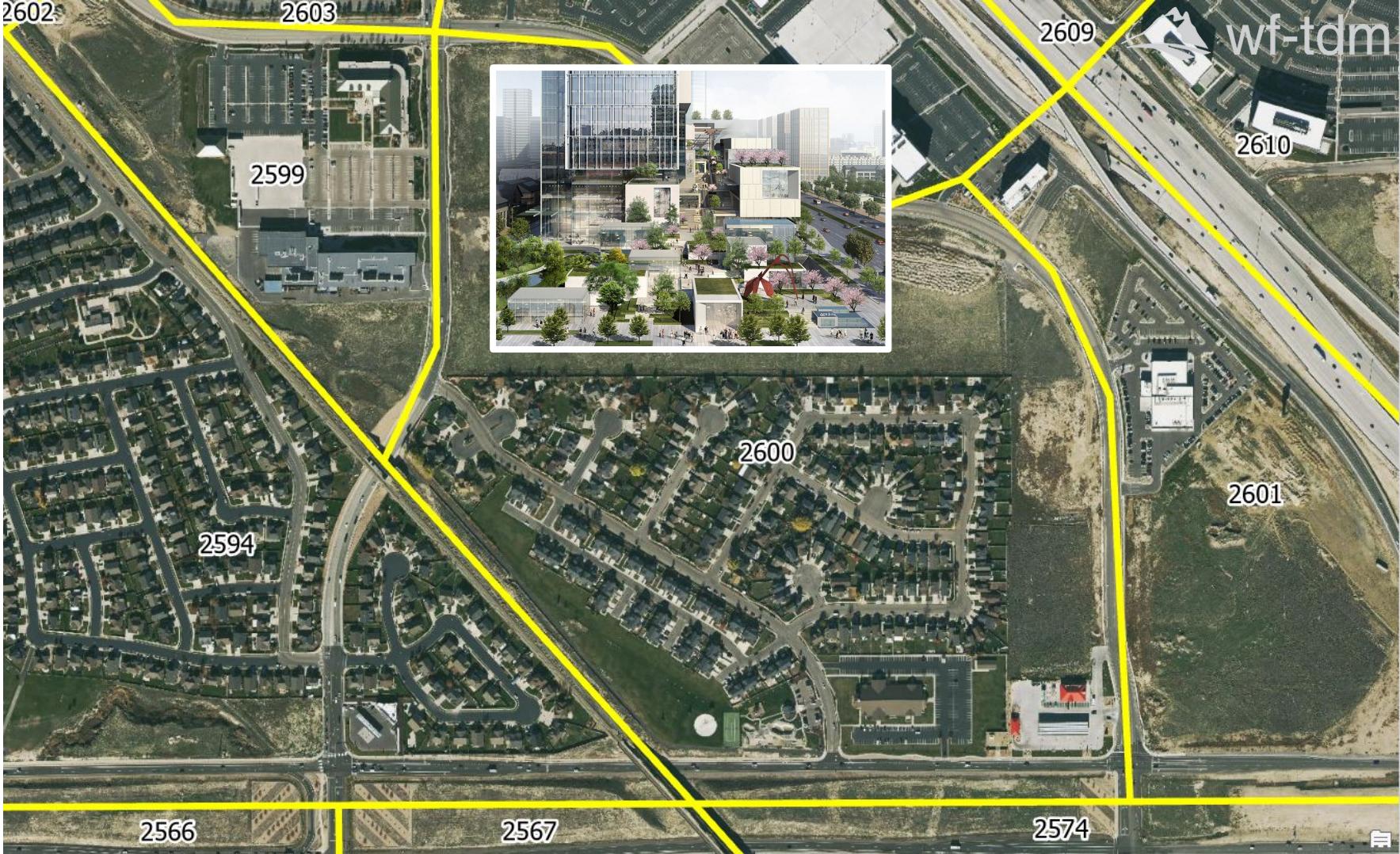
Enhanced Traffic Management—More detailed TAZs can aid in traffic management, especially in urban areas where traffic congestion and land-use patterns are complex. This can lead to more effective traffic flow management and congestion reduction strategies.

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.

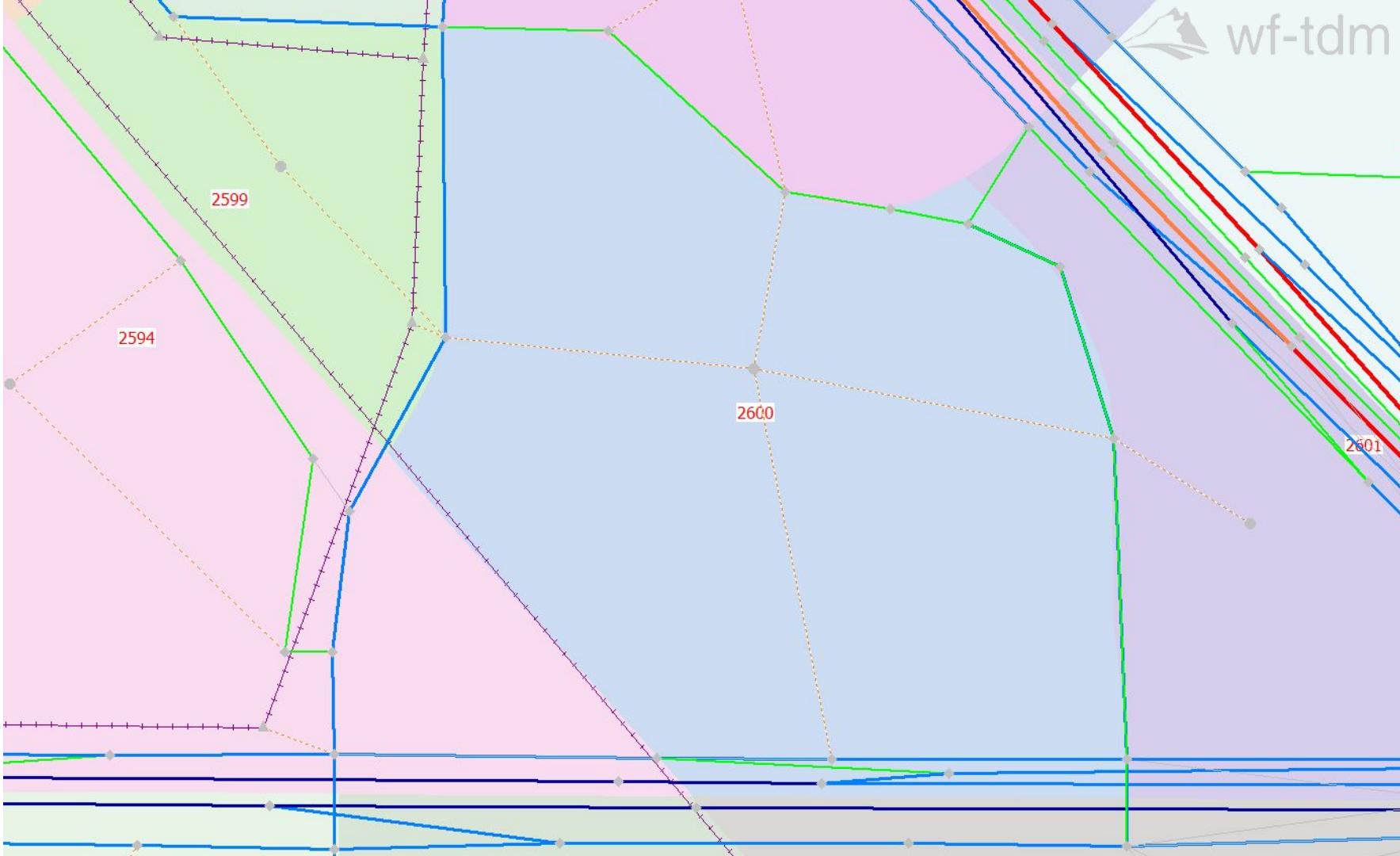


My kind of TAZ, 2600 i.s.



wf-tdm

My kind of TAZ, this one is.



- 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

```
0GeneralParameters.block ×  
E: > GitHub > WF-TDM-Official-Releases > Scenarios > _default > 0GeneralPa  
13  
14 ;zone parameters  
15 ;used zones  
16 UsedZones = 3629 ;high  
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';use  
26
```

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)

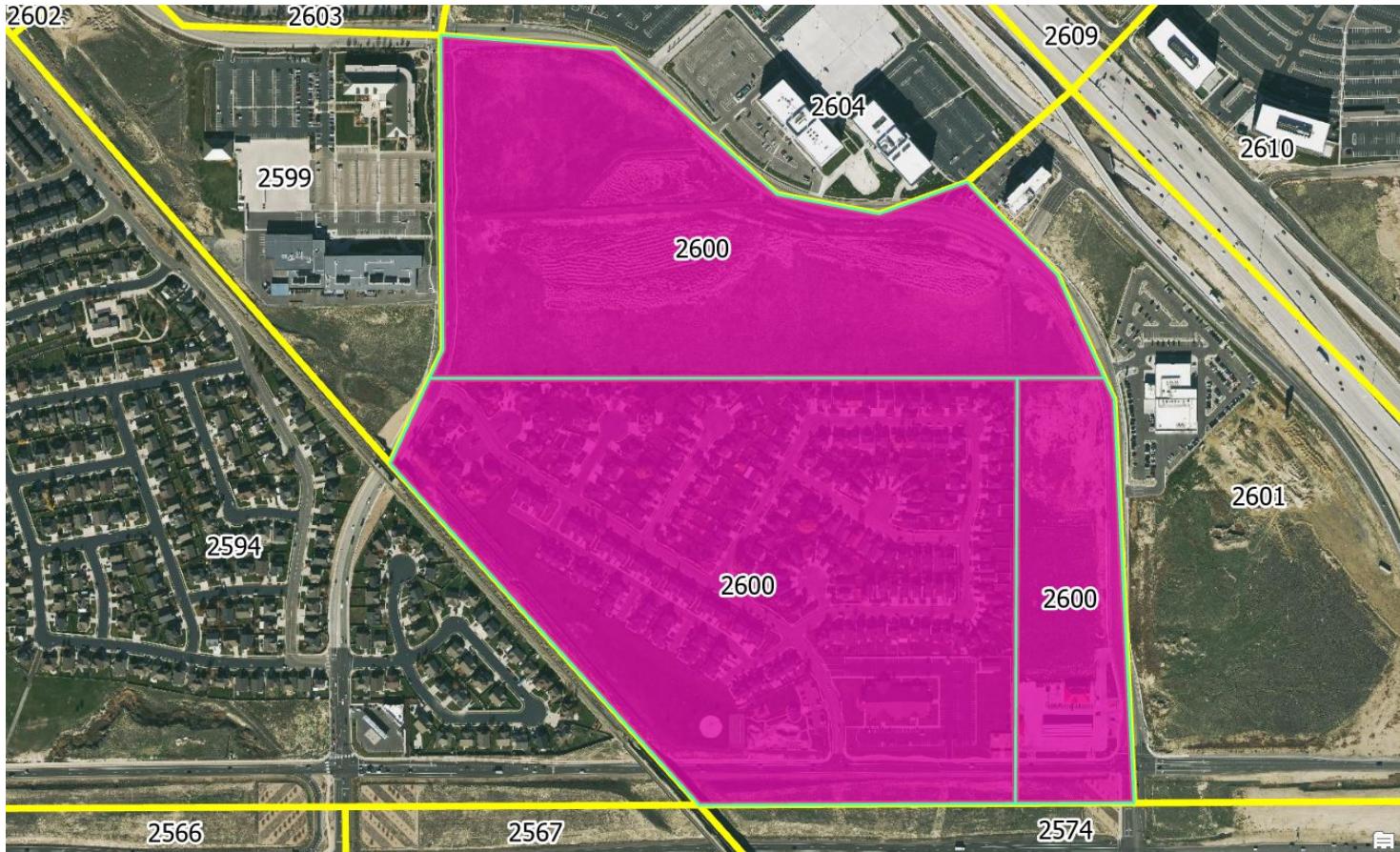
Have someone else review!



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)

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!



OBJECTID *	Shape *	TAZID	TAZID_V832	SORT	CO_IDX	CO_TAZID	SUBAREAID	ACRES	DEVACRES	DEVPBLEPCT	X	Y	ADJ_XY	CO_FIPS	CO_NAME	CITY_FIPS	CITY_U
2535	Polygon	2600	2092	2535	384	490384	1	59.387207	59.387207		425225.113467	4474336.18489	0	49	UTAH	44320	LEH
3547	Polygon	3547	2092	2535	384	491331	1	42.307366	42.307366		425225.113467	4474336.18489	0	49	UTAH	44320	LEH
3549	Polygon	3548	2092	2535	384	491332	1	13.040928	13.040928		425225.113467	4474336.18489	0	49	UTAH	44320	LEH

Click to add new row.

Edit the master network

Load all transit line files.

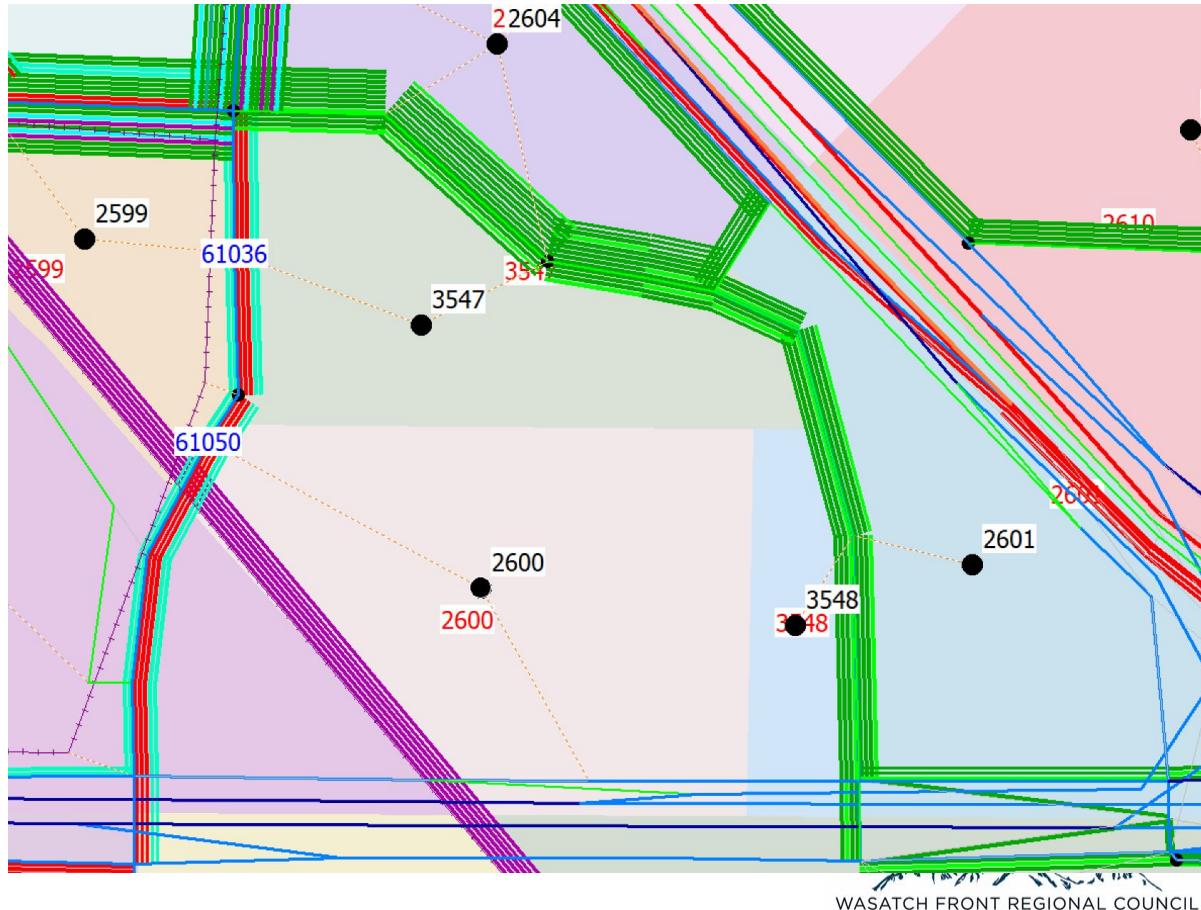
Move original centroid to proper location.

Add new nodes for new TAZs.

Modify surrounding network as needed.

Connect zones to highway network.

Have someone else review!



Edit the General Parameters



Modify zone parameters.

Add new zones to appropriate ranges.

Modify dummyzones range.

Have someone else review!

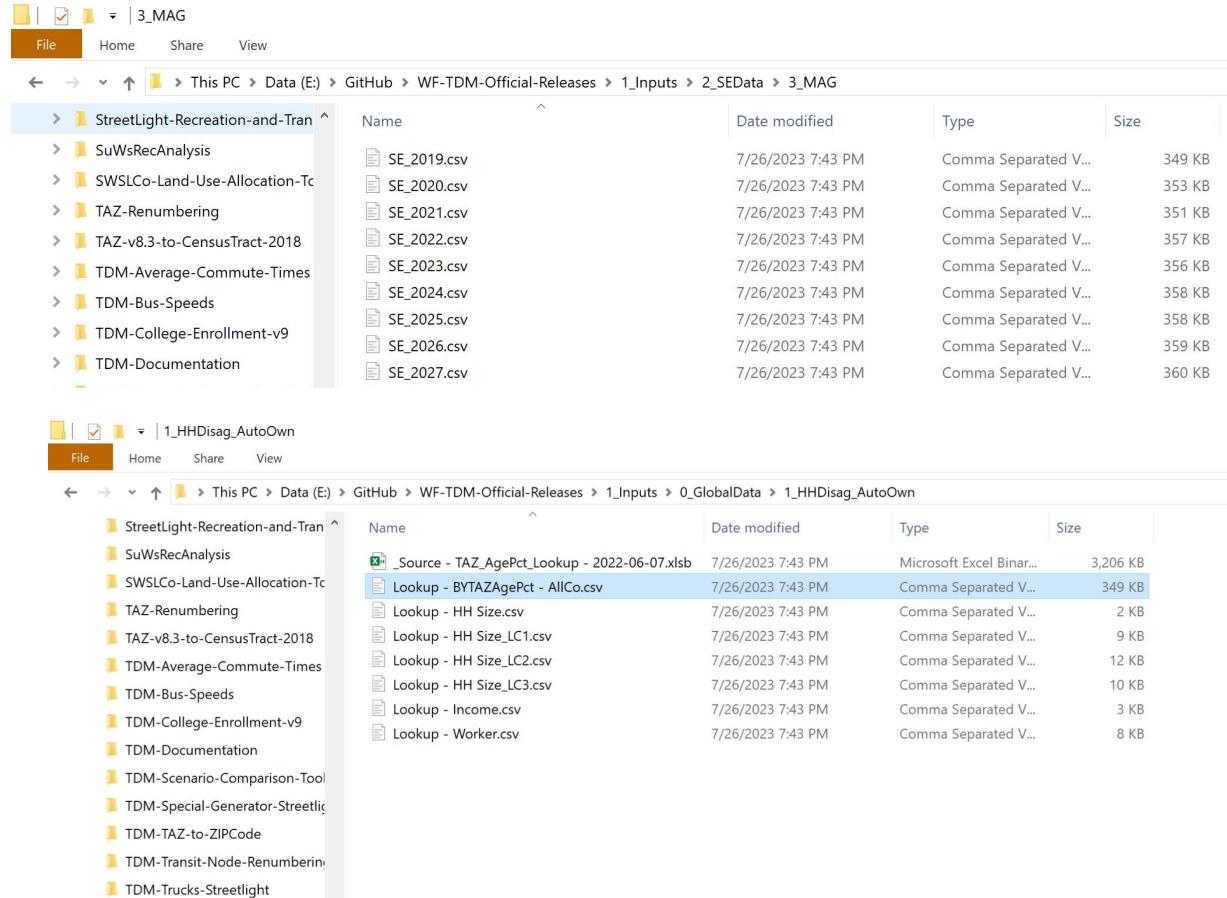
```
≡ 0GeneralParameters.block ×  
E: > GitHub > WF-TDM-Official-Releases > Scenarios > _default  
13  
14 ;zone parameters  
15 ;used zones  
16 UsedZones = 3629  
17  
18 BoxElderRange = '1-153'  
19 WeberRange = '154-581'  
20 DavisRange = '582-905'  
21 SLRange = '906-2216'  
22 UtahRange = '2217-3546'  
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.block  
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' ;highlighted in blue  
24 externalzones = '3601-3629'  
25 NorthBC = '3604,3605,3606' ;used in 2_Mod  
26  
27 ;highway nodes  
28 HwyNodes = '10000-99999' ;note: highway  
29  
30 ;WFRC Transi  
31 ;WFRC Highway  
32 ;MAG Transi  
33 ;MAG Highway  
34  
35 ;all lines are identical
```

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.



The screenshot shows two separate windows of Windows File Explorer. Both windows have a similar layout with a navigation bar at the top and a detailed list view below.

Top Window (3_MAG folder):

- Navigation Bar:** File, Home, Share, View.
- Path:** This PC > Data (E:) > GitHub > WF-TDM-Official-Releases > 1_Inputs > 2_SEData > 3_MAG.
- Content:** A tree view on the left shows several subfolders under "3_MAG". To the right is a table listing 10 CSV files, each with a name, date modified, type, and size.

Name	Date modified	Type	Size
SE_2019.csv	7/26/2023 7:43 PM	Comma Separated V...	349 KB
SE_2020.csv	7/26/2023 7:43 PM	Comma Separated V...	353 KB
SE_2021.csv	7/26/2023 7:43 PM	Comma Separated V...	351 KB
SE_2022.csv	7/26/2023 7:43 PM	Comma Separated V...	357 KB
SE_2023.csv	7/26/2023 7:43 PM	Comma Separated V...	356 KB
SE_2024.csv	7/26/2023 7:43 PM	Comma Separated V...	358 KB
SE_2025.csv	7/26/2023 7:43 PM	Comma Separated V...	358 KB
SE_2026.csv	7/26/2023 7:43 PM	Comma Separated V...	359 KB
SE_2027.csv	7/26/2023 7:43 PM	Comma Separated V...	360 KB

Bottom Window (1_HHDIsag_AutoOwn folder):

- Navigation Bar:** File, Home, Share, View.
- Path:** This PC > Data (E:) > GitHub > WF-TDM-Official-Releases > 1_Inputs > 0_GlobalData > 1_HHDIsag_AutoOwn.
- Content:** A tree view on the left shows several subfolders under "1_HHDIsag_AutoOwn". To the right is a table listing 10 files, each with a name, date modified, type, and size.

Name	Date modified	Type	Size
_Source - TAZ_AgePct_Lookup - 2022-06-07.xlsx	7/26/2023 7:43 PM	Microsoft Excel Binar...	3,206 KB
Lookup - BYTAZAgePct - AllCo.csv	7/26/2023 7:43 PM	Comma Separated V...	349 KB
Lookup - HH Size.csv	7/26/2023 7:43 PM	Comma Separated V...	2 KB
Lookup - HH Size_LC1.csv	7/26/2023 7:43 PM	Comma Separated V...	9 KB
Lookup - HH Size_LC2.csv	7/26/2023 7:43 PM	Comma Separated V...	12 KB
Lookup - HH Size_LC3.csv	7/26/2023 7:43 PM	Comma Separated V...	10 KB
Lookup - Income.csv	7/26/2023 7:43 PM	Comma Separated V...	3 KB
Lookup - Worker.csv	7/26/2023 7:43 PM	Comma Separated V...	8 KB

Have someone else review!

Did we miss anything?