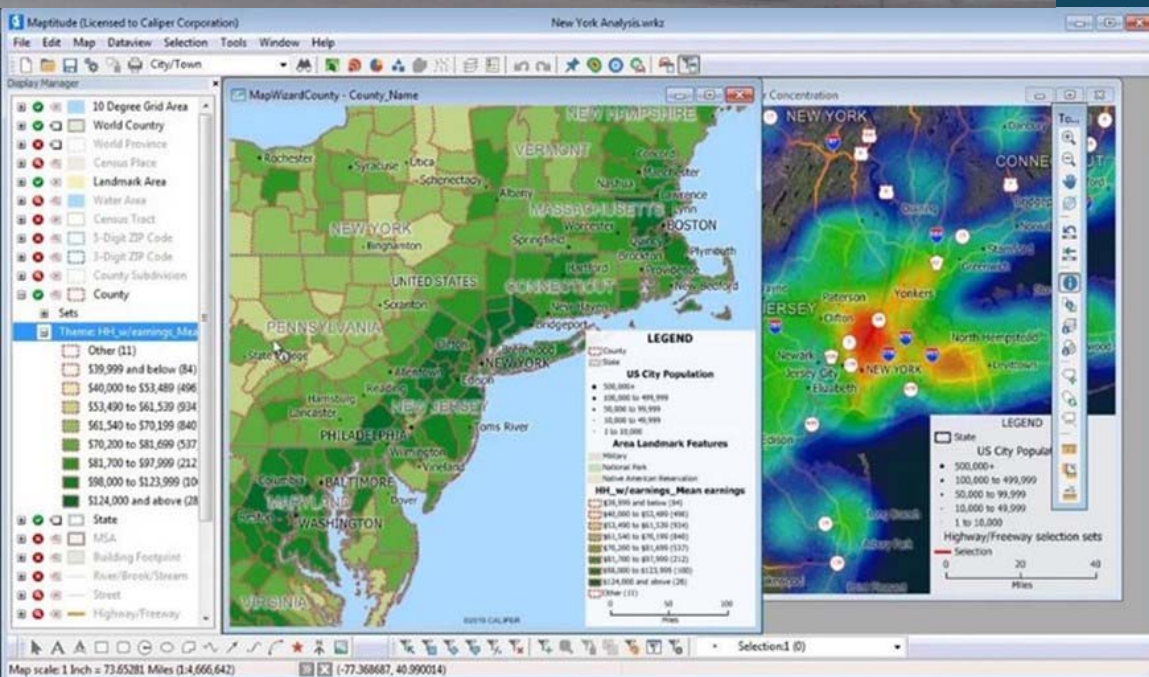




*Day- and night-time
populations and
traffic counts*

*A GIS application
in Business*

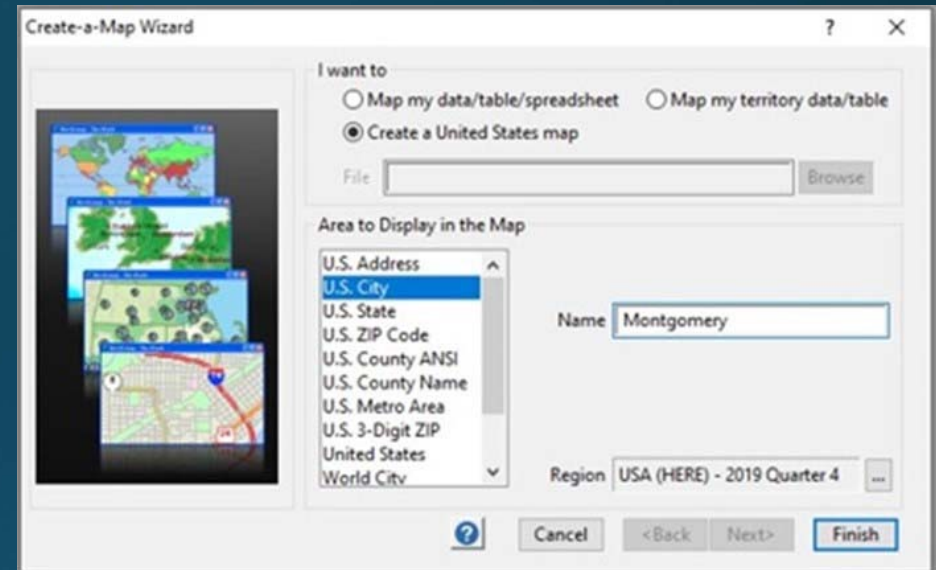
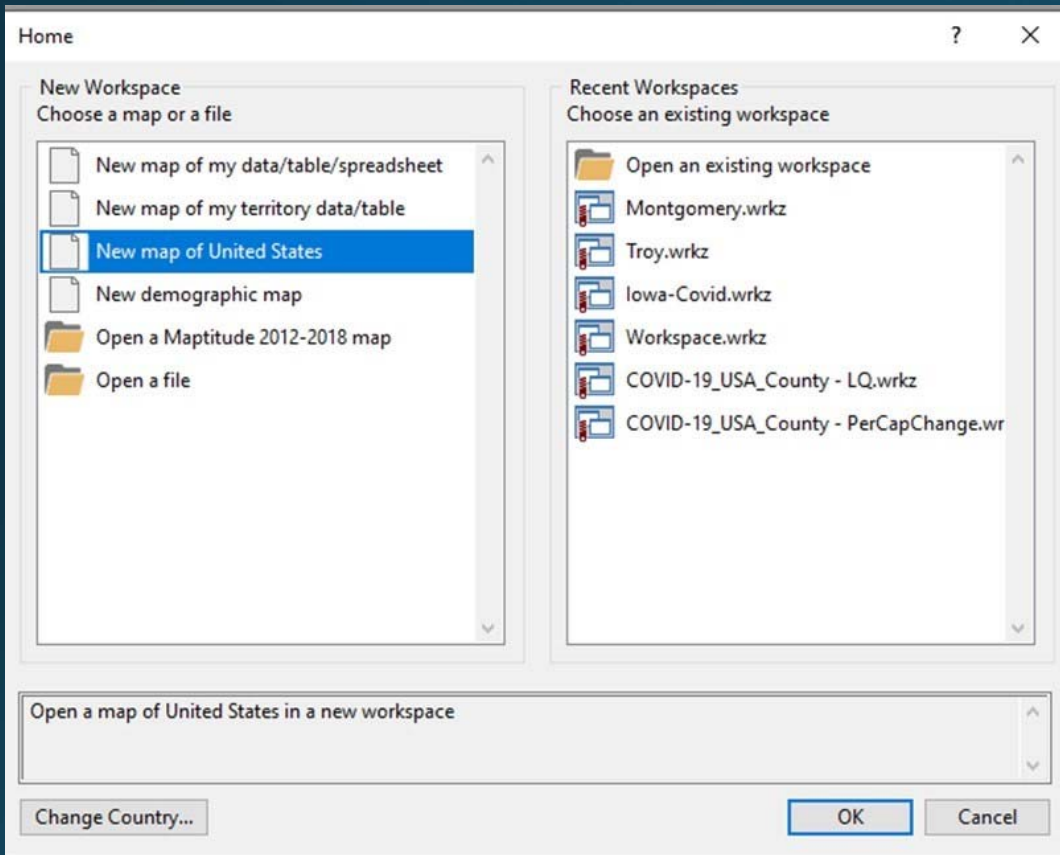
Troy University



Brett Lucas – Spokane, WA

Purpose of Presentation

- Introduce the student to the Maptitude GIS software package
- Use some of the tools in Maptitude to solve a Business problem
- Case study of McDonald's in Montgomery, Alabama
 - Use of day- and night population patterns at the Block Group level
 - The role traffic counts or AADT's (Annual Average Daily Traffic) play
 - With GIS we can see which locations benefit from the "drive-to-work" verses the "drive-to-home" commute patterns
- GIS is just one tool in the geographer's tool-belt
 - Other tools in include Google Maps (wealth of information including street view) and field observations



- Maptitude comes with a country package
- Includes street and demographic data
- Boundaries (state, county, zip, tract, etc.)
- Built in geocoder

- An example of the demographic and ACS data that comes with Maptitude

2018 American Community Survey (ACS) 5-year Data Fields:

INCOME:

Median Household Income
 Median Household Income Change (%)
 Median Household Income, Householder Age <25
 Median Household Income, Householder Age 25-44
 Median Household Income, Householder Age 45-64
 Median Household Income, Householder Age 65+
 Mean Household Income
 Mean Household Income Change (%)
 Households with Income <\$10,000¹
 Households with Income \$10,000-14,999¹
 Households with Income \$15,000-24,999¹
 Households with Income \$25,000-34,999¹
 Households with Income \$35,000-49,999¹
 Households with Income \$50,000-74,999¹
 Households with Income \$75,000-99,999¹
 Households with Income \$100,000-149,999¹
 Households with Income \$150,000-199,999¹
 Households with Income \$200,000+¹
 Median Household Inc: White²
 Median Household Inc: Black²
 Median Household Inc: Am Indian²
 Median Household Inc: Asian²
 Median Household Inc: Hawaiian²
 Median Household Inc: Other²
 Median Household Inc: 2+ Races²
 Median Household Inc: Non-Hisp White²
 Median Household Inc: Hispanic²
 Aggregate Inc: White
 Aggregate Inc: Black
 Aggregate Inc: Am Indian
 Aggregate Inc: Asian
 Aggregate Inc: Hawaiian
 Aggregate Inc: Other
 Aggregate Inc: 2+ Races
 Aggregate Inc: Non-Hisp White
 Aggregate Inc: Hispanic

POPULATION:

Population
 Population Change (%)
 Daytime Population Age 18+
 Male Population
 Female Population

AGE:

Age <5
 Age 5 to 9
 Age 10 to 14
 Age 15 to 19
 Age 20 to 24
 Age 25 to 34
 Age 35 to 44
 Age 45 to 54
 Age 55 to 59
 Age 60 to 64
 Age 65 to 74
 Age 75 to 84
 Age 85+
 Age 21+
 Age 18+ ¹
 Age 65+ ¹

BIRTHS:

Women With Birth in Past 12 Months²
 Total²
 Unmarried ²
 Unmarried Women/1000²
 Women Age 15-50/1000²
 Women Age 15-19/1000²
 Women Age 20-34/1000²
 Women Age 35-50/1000²

RESPONSIBLE FOR GRANDCHILD:

Grandparent living w/ own grandchild <18²
 Grandparent responsible for grandchild <18²
 Age <1 ²
 Age 1-2 ²
 Age 3-4 ²
 Age 5+ ²
 Female²
 Married ²

EDUCATION:

In school (Age 3+)
 Nursery/Preschool
 Kindergarten
 Elementary
 High School
 College/Grad School
 Population Age 25+
 <9th Grade
 Some High School
 High School Grad
 Some College
 Associates Degree
 Bachelor's Degree
 Graduate/Professional Degree
 Percent High School Grad or Higher
 Percent College Grad or Higher

MILITARY VETERANS:

Civilian 18+
 Civilian 18+ Veterans

PREVIOUS RESIDENCE:

Residence One Year Ago Population age 1+ ²
 Same house²
 Different house²
 Diff house Same county²
 Diff house Diff county²
 Diff house Diff county Same state²
 Diff house Diff county Diff state²
 Abroad²

NATIVITY:

Native²
 Native Born in US²
 Native Born in US Res state²
 Native Born in US Diff state²
 Native Born outside US²
 Foreign born²
 Foreign Naturalized citizen²
 Foreign Not a citizen²
 Population born outside the US²
 Born outside US Native²

EMPLOYMENT STATUS:

Population 16+²
 In labor force²
 In LF: Civilian
 In LF: Civilian Employed
 In LF: Civilian Unemployed
 In LF: Armed Forces
 Not in labor force
 In LF: Civilian Percent Unemployed
 Females 16+²
 Females 16+ In labor force²
 Females 16+ In LF: Civilian²
 Females 16+ In LF: Civilian Employed²

TRAVEL TO WORK

Workers 16+ All Mode Total
 Car Drove alone
 Car Carpooled
 Public trans
 Walked
 Other means
 Worked at home
 Mean travel time to work
 Travel time <5 min
 Travel time 5-9 min
 Travel time 10-14 min
 Travel time 15-19 min
 Travel time 20-24 min
 Travel time 25-29 min
 Travel time 30-34 min
 Travel time 35-39 min
 Travel time 40-44 min
 Travel time 45-59 min
 Travel time 60-89 min
 Travel time 90+ min

OCCUPATION:

Employed civilian population 16+
 Manage/prof
 Service
 Sales/office
 Nat res/constr/maint
 Prod/transp/material

INDUSTRY OF EMPLOYMENT:

Ag/forestry/fish/mine
 Construction
 Manufacturing
 Wholesale trade
 Retail trade
 Transportation/warehouse
 Information
 Finance/ins/RE/rental
 Prof/scientific/admin
 Ed/health/soc services
 Art/ent/rec/acc/food
 Other (ex public admin)
 Public administration

CLASS OF WORKER:

Private wage/salary
 Government
 Self-employed

HOUSING UNITS:

Occupied
 Vacant
 Homeowner vacancy rate
 Rental vacancy rate
 Units in Structure:
 Housing units 1 detached
 Housing units 1 attached
 Housing units 2
 Housing units 3-4
 Housing units 5-9
 Housing units 10-19
 Housing units 20+
 Housing units Mobile home
 Housing units Boat/RV/van

Year Built:
 Built 2010+
 Built 2000 to 2009
 Built 1990 to 1999
 Built 1980 to 1989
 Built 1970 to 1979
 Built 1960 to 1969
 Built 1950 to 1959
 Built 1940 to 1949
 Built 1939 or earlier

Rooms 1
 Rooms 2
 Rooms 3
 Rooms 4
 Rooms 5
 Rooms 6
 Rooms 7
 Rooms 8
 Rooms 9+
 Median rooms
 Bedrooms None
 Bedrooms 1
 Bedrooms 2
 Bedrooms 3
 Bedrooms 4
 Bedrooms 5+

HOUSING UNIT TENURE:

Owner occupied
 Renter occupied
 Owner occupied Avg Household size
 Renter occupied Avg Household size
 Year Householder Moved In:
 2015 or later
 2010 to 2014
 2000 to 2009
 1990 to 1999
 1980 to 1989
 1979 or earlier

HOUSING UNIT UTILITIES:

Heating Fuel:
 Heat Utility gas
 Heat Bottled/tank/LP gas
 Heat Electricity
 Heat Fuel oil/kerosene
 Heat Coal/coke
 Heat Wood

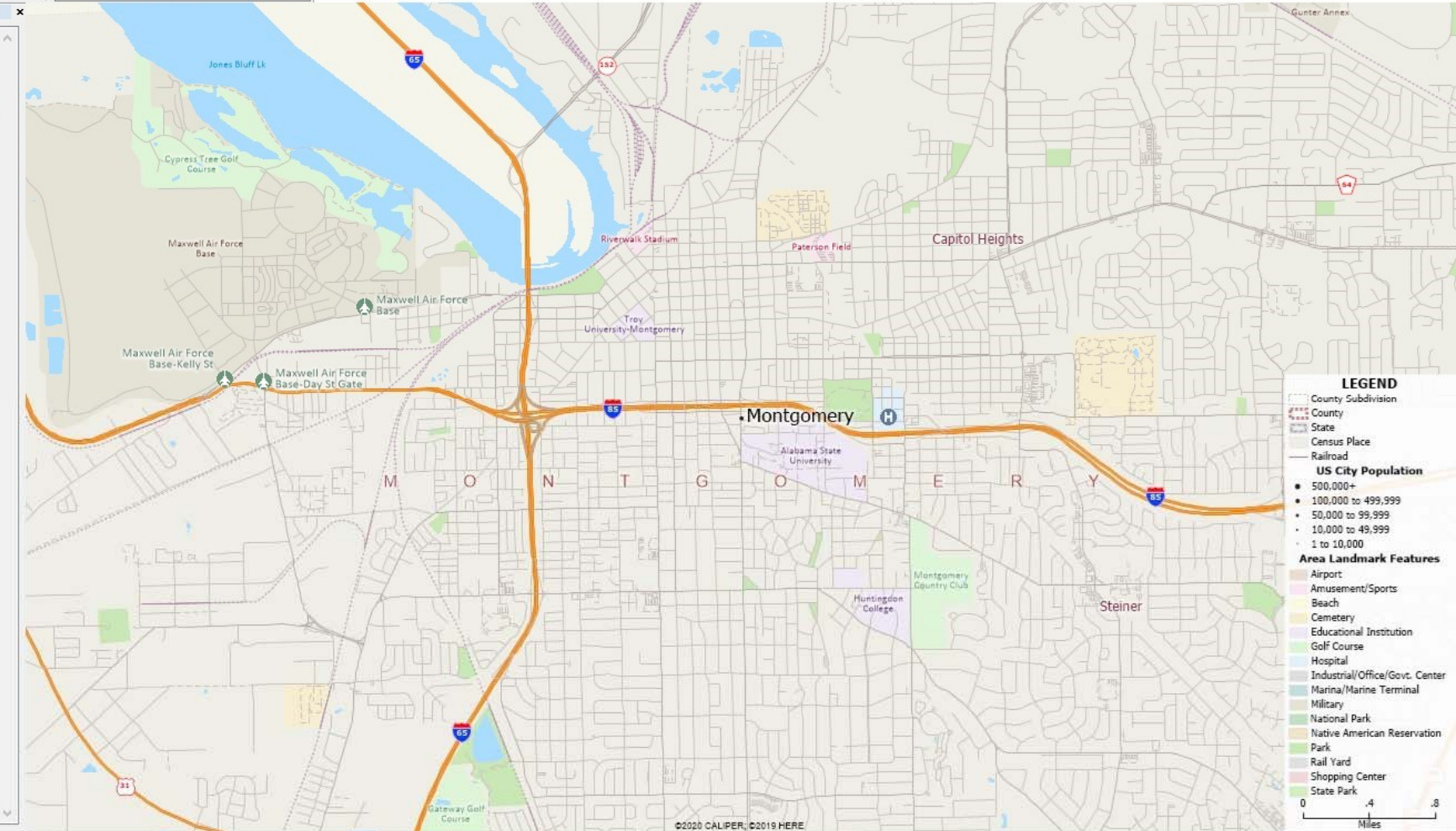


Census Place

Selection (0)

Display Manager

- 10 Degree Grid Area
- World Country
- World Province
- Census Place
- Landmark Area
- Water Area
- Census Tract
- 5-Digit ZIP Code
- 3-Digit ZIP Code
- County Subdivision
- County
- State
- MSA
- Building Footprint
- River/Brook/Stream
- Street
- Highway/Freeway
- Railroad
- Time Zone
- 5-Digit ZIP Point
- Landmark
- World City
- City/Town



LEGEND

- County Subdivision
- County
- State
- Census Place
- Railroad
- US City Population**
- 500,000+
- 100,000 to 499,999
- 50,000 to 99,999
- 10,000 to 49,999
- 1 to 10,000
- Area Landmark Features**
- Airport
- Amusement/Sports
- Beach
- Cemetery
- Educational Institution
- Golf Course
- Hospital
- Industrial/Office/Govc. Center
- Marina/Marine Terminal
- Military
- National Park
- Native American Reservation
- Park
- Rail Yard
- Shopping Center
- State Park

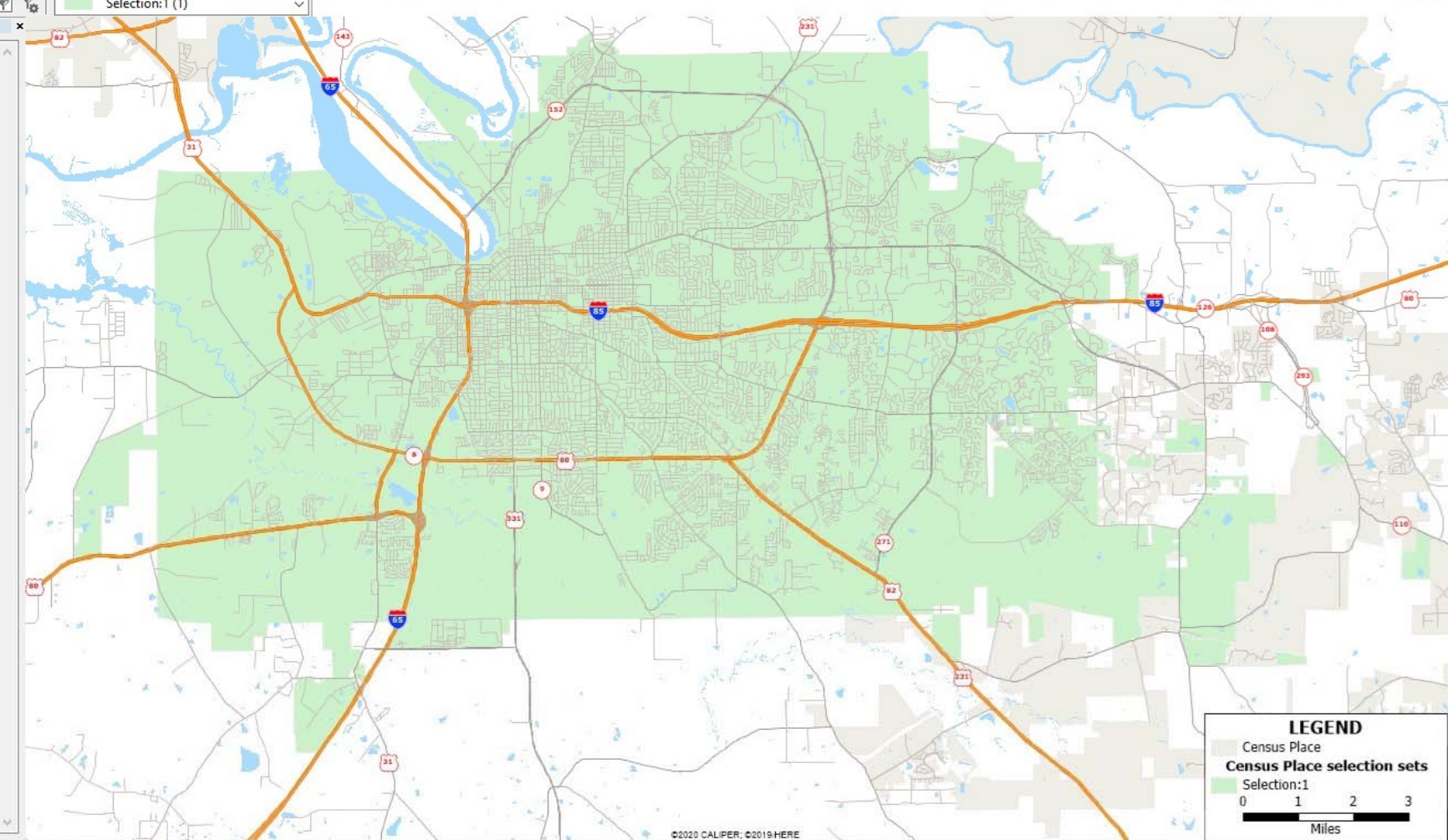
• This is how the map comes in

Map scale: 1 Inch = 0.61123 Miles (1:38,728)



Display Manager

- 10 Degree Grid Area
- World Country
- World Province
- Census Place**
- Landmark Area
- Water Area**
- Census Tract
- 5-Digit ZIP Code
- 3-Digit ZIP Code
- County Subdivision
- County
- State
- MSA
- Building Footprint
- River/Brook/Stream
- Street**
- Highway/Freeway
- Railroad
- Time Zone
- 5-Digit ZIP Point
- Landmark
- World City
- City/Town**



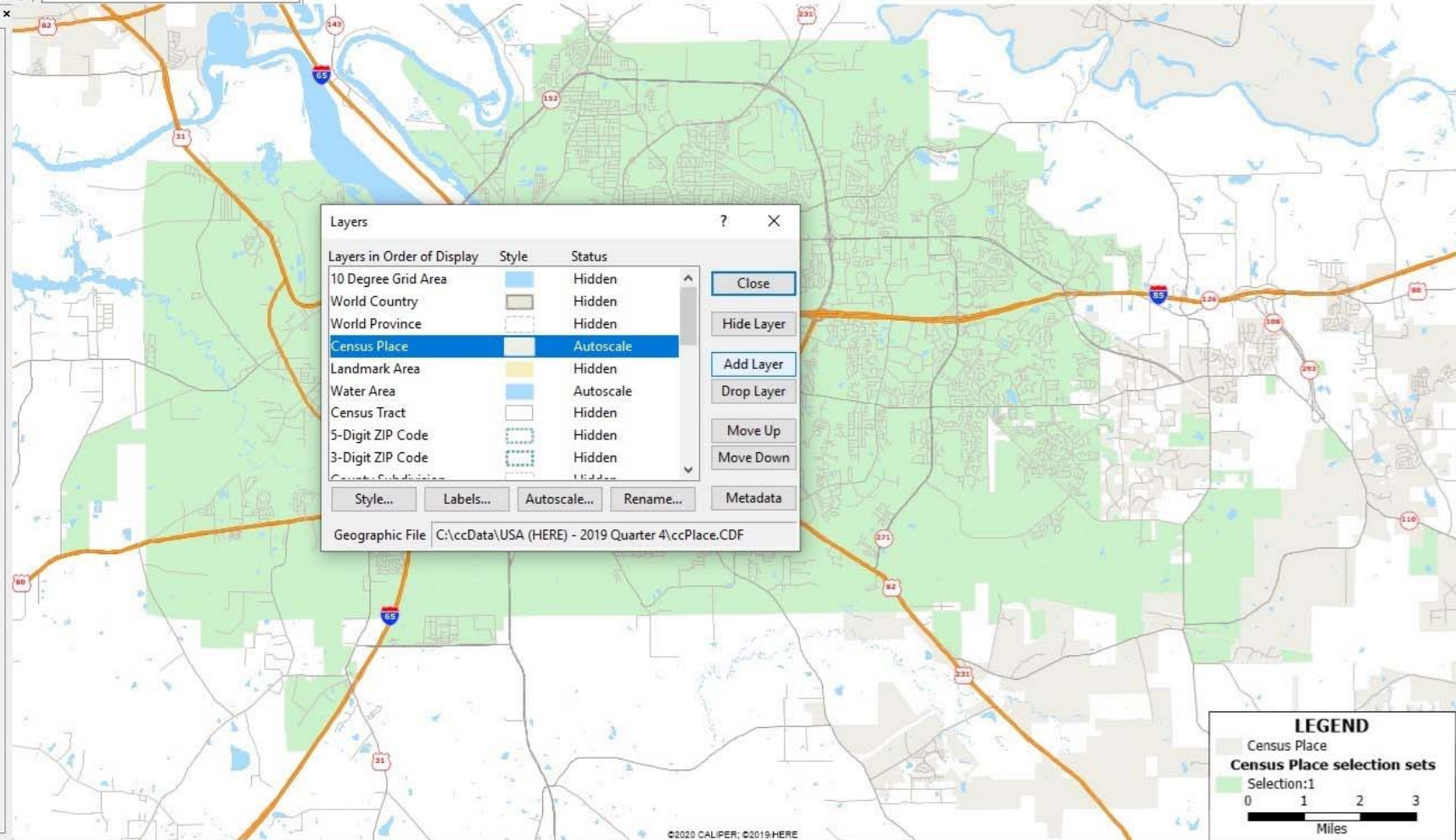
Created a selection set highlighting Montgomery (area layer)

LEGEND

- Census Place
- Census Place selection sets**
- Selection:1
- 0 1 2 3
- Miles

Display Manager

- 10 Degree Grid Area
- World Country
- World Province
- Census Place**
- Landmark Area
- Water Area
- Census Tract
- 5-Digit ZIP Code
- 3-Digit ZIP Code
- County Subdivision
- County
- State
- MSA
- Building Footprint
- River/Brook/Stream
- Street
- Highway/Freeway
- Railroad
- Time Zone
- 5-Digit ZIP Point
- Landmark
- World City
- City/Town**



Layers

Layers in Order of Display	Style	Status
10 Degree Grid Area		Hidden
World Country		Hidden
World Province		Hidden
Census Place		Autoscale
Landmark Area		Hidden
Water Area		Autoscale
Census Tract		Hidden
5-Digit ZIP Code		Hidden
3-Digit ZIP Code		Hidden
County Subdivision		Hidden

Close Hide Layer Add Layer Drop Layer Move Up Move Down Metadata

Geographic File C:\ccData\USA (HERE) - 2019 Quarter 4\ccPlace.CDF

• Layers icon to add additional layers to the map

LEGEND

Census Place

Census Place selection sets

Selection:1

0 1 2 3

Miles

Display Manager

- 10 Degree Grid Area
- World Country
- World Province
- Census Place**
- Landmark Area
- Water Area
- Census Tract
- 5-Digit ZIP Code
- 3-Digit ZIP Code
- County Subdivision
- County
- State
- MSA
- Building Footprint
- River/Brook/Stream
- Street
- Highway/Freeway
- Railroad
- Time Zone
- 5-Digit ZIP Point
- Landmark
- World City
- City/Town**

- Add block groups and traffic count layers

File Open

This PC > Windows (C:) > ccdata

Name	Date modified	Type	Size
Block 2010	10/4/2018 8:45 PM	File folder	
Block Group 2019	4/17/2019 7:06 PM	File folder	
Block Group 2020	4/11/2020 2:32 PM	File folder	
Caliper Healthcare Data 2019	5/31/2020 1:32 PM	File folder	
Canada (HERE) - 2019 Quarter 4	5/23/2020 3:39 PM	File folder	
Canada 2019 Business Location Layers	8/29/2019 7:21 PM	File folder	
Canada 2019 Point of Interest (POI) Layers	8/29/2019 7:21 PM	File folder	
CanadaHighwayExit	9/29/2018 3:19 PM	File folder	
Consumer Expenditure	12/28/2019 3:23 PM	File folder	
Geodemographic Segmentation 2020	4/11/2020 2:30 PM	File folder	
HDMA 2010	4/22/2018 12:48 PM	File folder	
North America (HERE) - 2015	8/4/2018 5:25 PM	File folder	
Population Projections for US Counties	7/27/2020 6:33 AM	File folder	
Schools - 2019	5/14/2019 6:34 PM	File folder	
Segmentation	3/7/2020 1:15 PM	File folder	
USA (HERE) - 2019 Quarter 4	8/23/2020 1:24 PM	File folder	
USA 2017 Business Location Layers	6/25/2018 7:39 PM	File folder	
USA 2017 Point of Interest (POI) Layers	6/23/2018 7:01 PM	File folder	
USA 2018 Business Count Layers	11/2/2019 5:31 PM	File folder	
USA 2019 Banking	8/29/2019 5:46 PM	File folder	
USA 2019 Business Location Layers	6/12/2019 6:06 PM	File folder	
USA 2019 Point of Interest (POI) Layers	6/12/2019 6:32 PM	File folder	
USA 2019 Traffic Count Layer	4/26/2020 6:01 AM	File folder	
USA 2020 Business Count Layers	9/15/2020 7:34 PM	File folder	

File name: Caliper Data

Geographic File (*.cdf;*.dbd)

Open Cancel

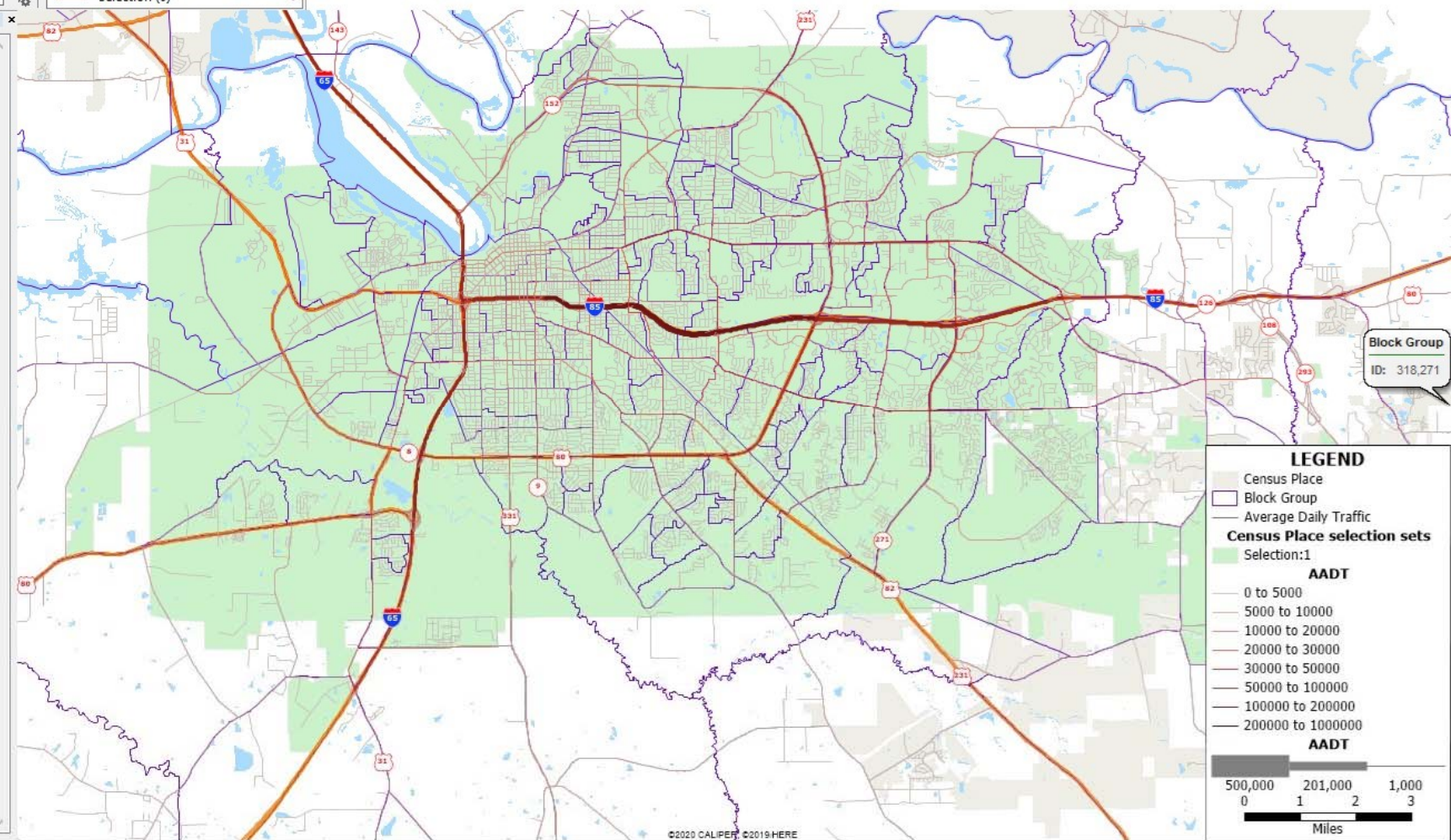
LEGEND

- Census Place
- Census Place selection sets**
- Selection:1
- 0 1 2 3 Miles



Display Manager

- 10 Degree Grid Area
- World Country
- World Province
- Census Place
- Landmark Area
- Water Area
- Census Tract
- 5-Digit ZIP Code
- 3-Digit ZIP Code
- County Subdivision
- County
- State
- MSA
- Building Footprint
- River/Brook/Stream
- Street
- Highway/Freeway
- Railroad
- Time Zone
- 5-Digit ZIP Point
- Landmark
- World City
- City/Town**
- Block Group
- Average Daily Traffic



Block Group
ID: 318,271

LEGEND

- Census Place
- Block Group
- Average Daily Traffic
- Census Place selection sets
- Selection:1

AADT

- 0 to 5000
- 5000 to 10000
- 10000 to 20000
- 20000 to 30000
- 30000 to 50000
- 50000 to 100000
- 100000 to 200000
- 200000 to 1000000

AADT

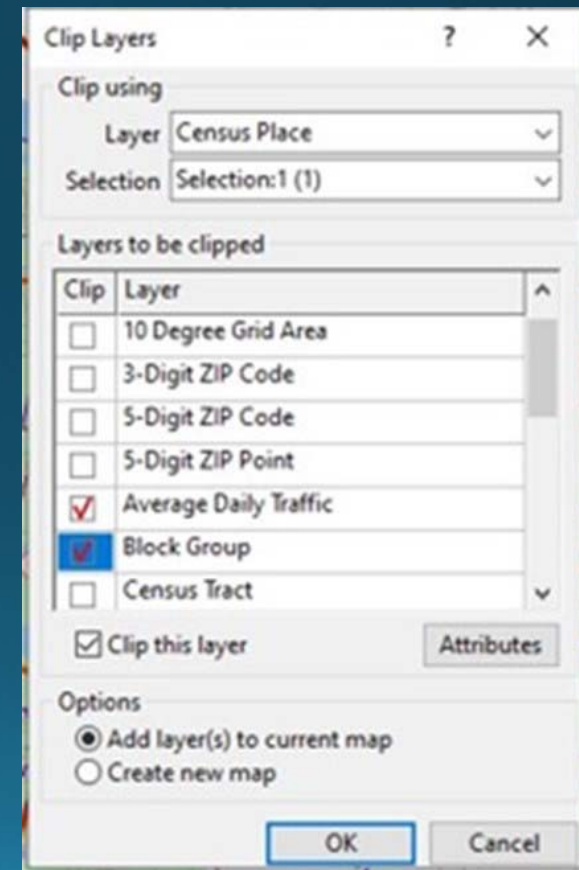
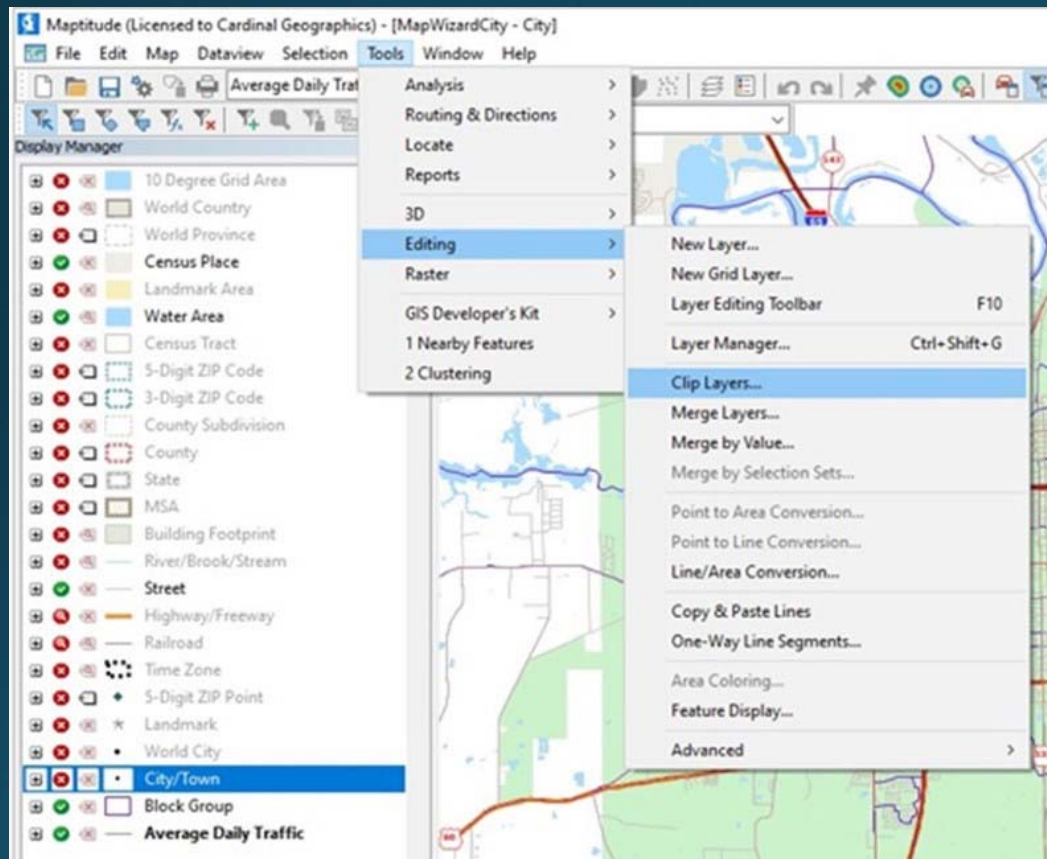
500,000 201,000 1,000

0 1 2 3

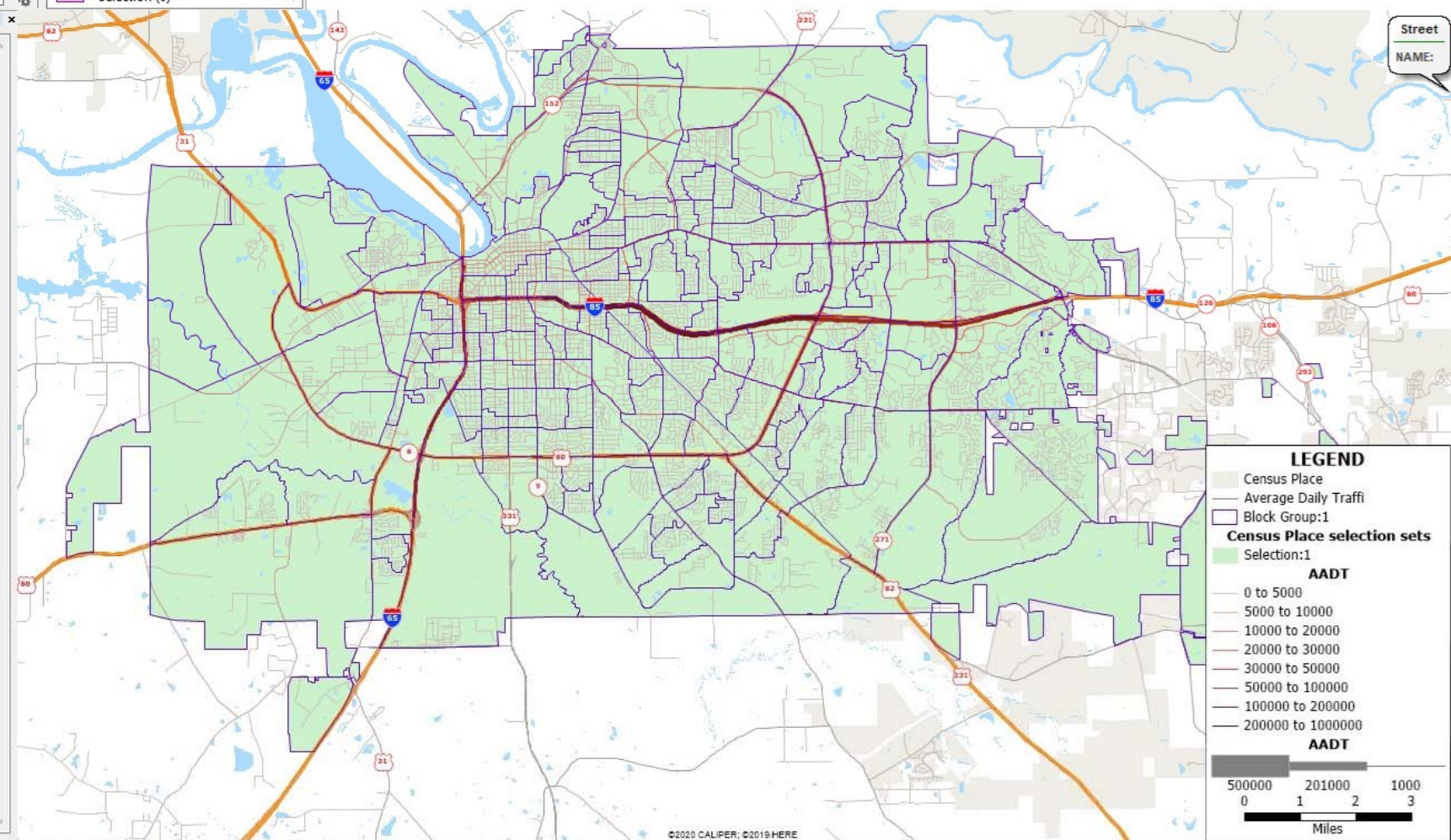
Miles

- Layers added
- Problem?
- Whole country

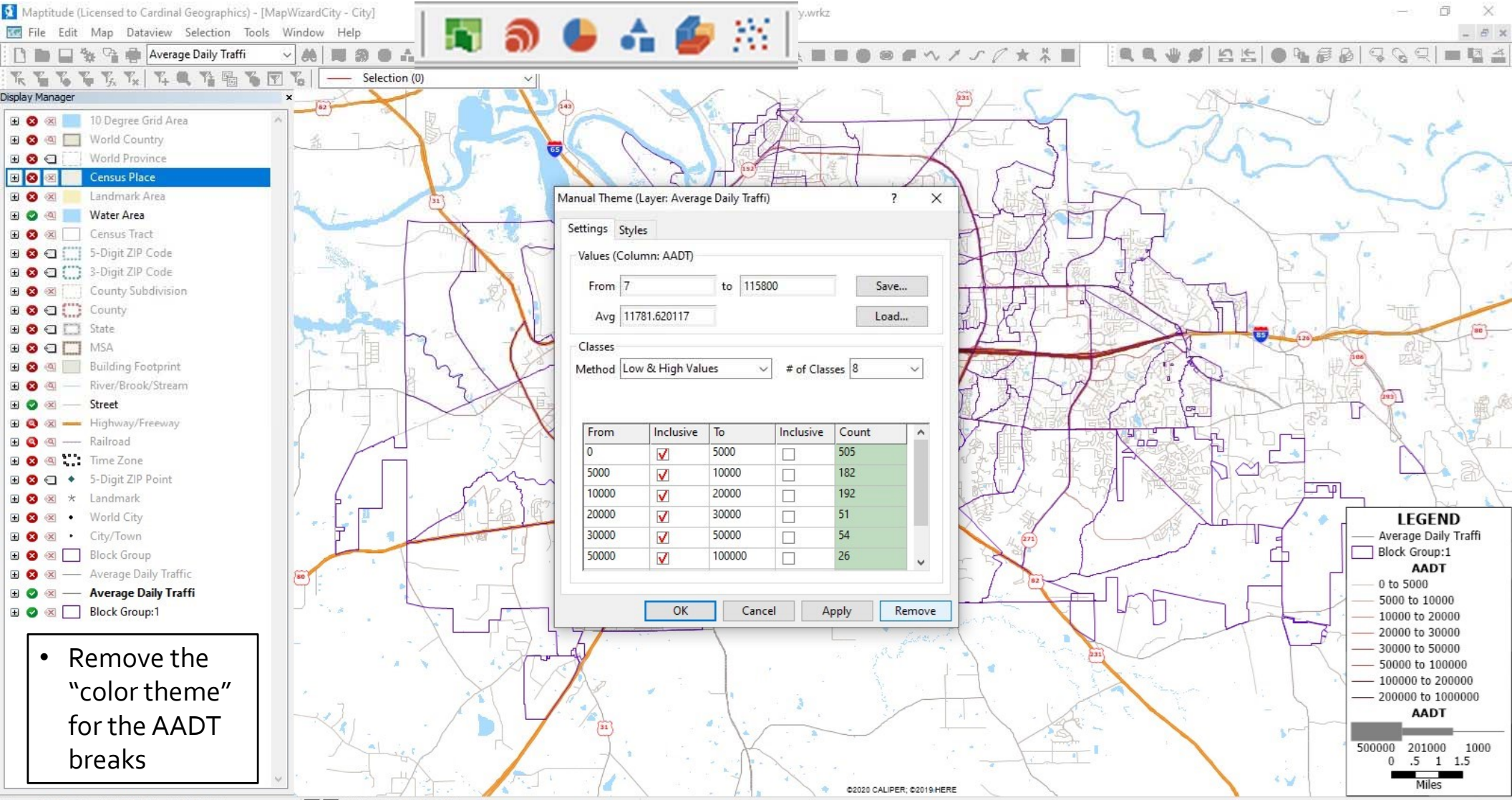
- We need to clip the new layers brought in
- Use the Census Area (selection of Montgomery) as a “cookie cutter”



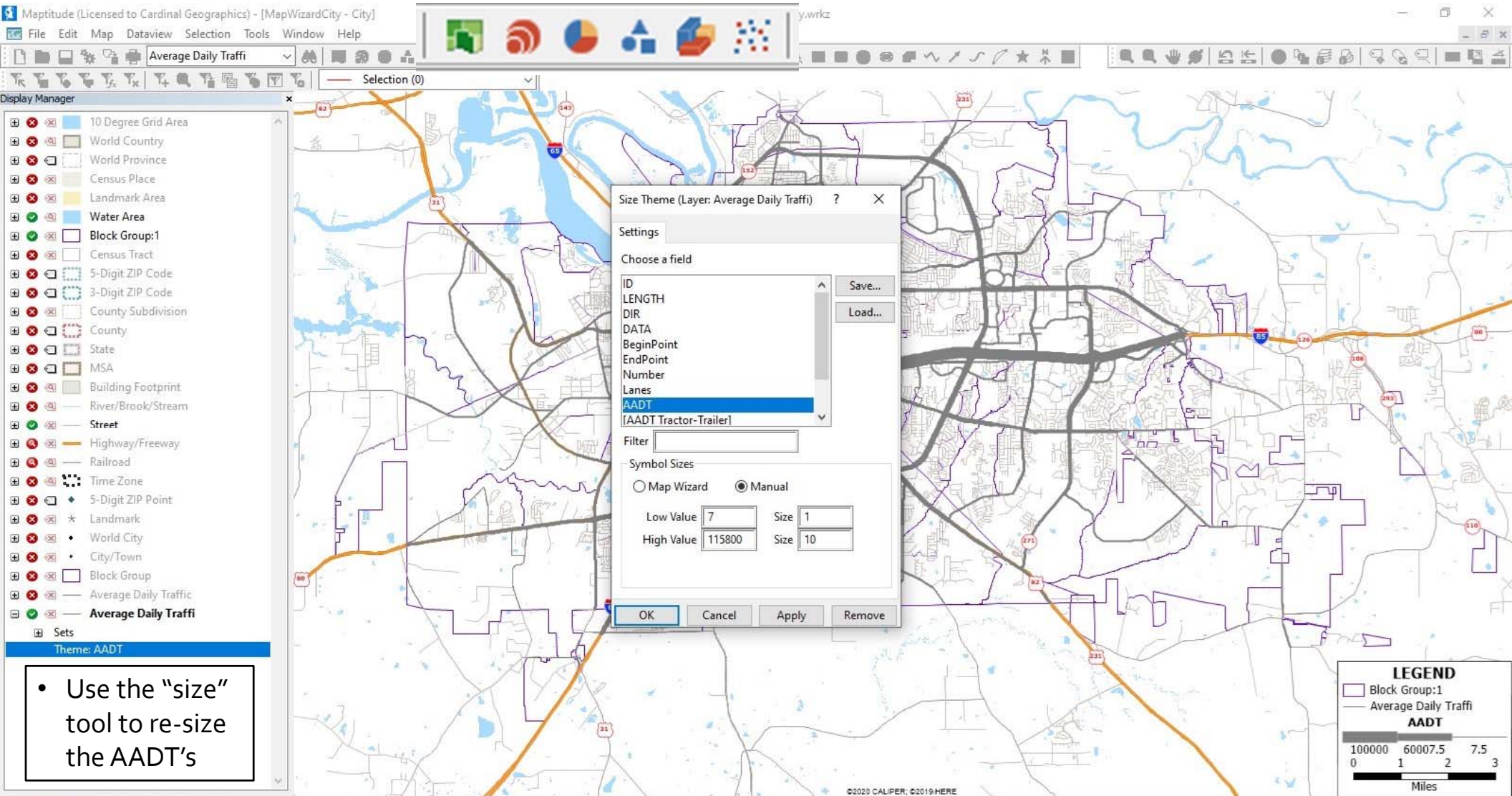
- 10 Degree Grid Area
- World Country
- World Province
- Census Place
- Landmark Area
- Water Area
- Census Tract
- 5-Digit ZIP Code
- 3-Digit ZIP Code
- County Subdivision
- County
- State
- MSA
- Building Footprint
- River/Brook/Stream
- Street
- Highway/Freeway
- Railroad
- Time Zone
- 5-Digit ZIP Point
- Landmark
- World City
- City/Town
- Block Group
- Average Daily Traffic**
- Average Daily Traffic
- Block Group:1



- Map w/ clipped layers
- AADT needs to be "re-sized"



- Remove the "color theme" for the AADT breaks



- Use the "size" tool to re-size the AADT's

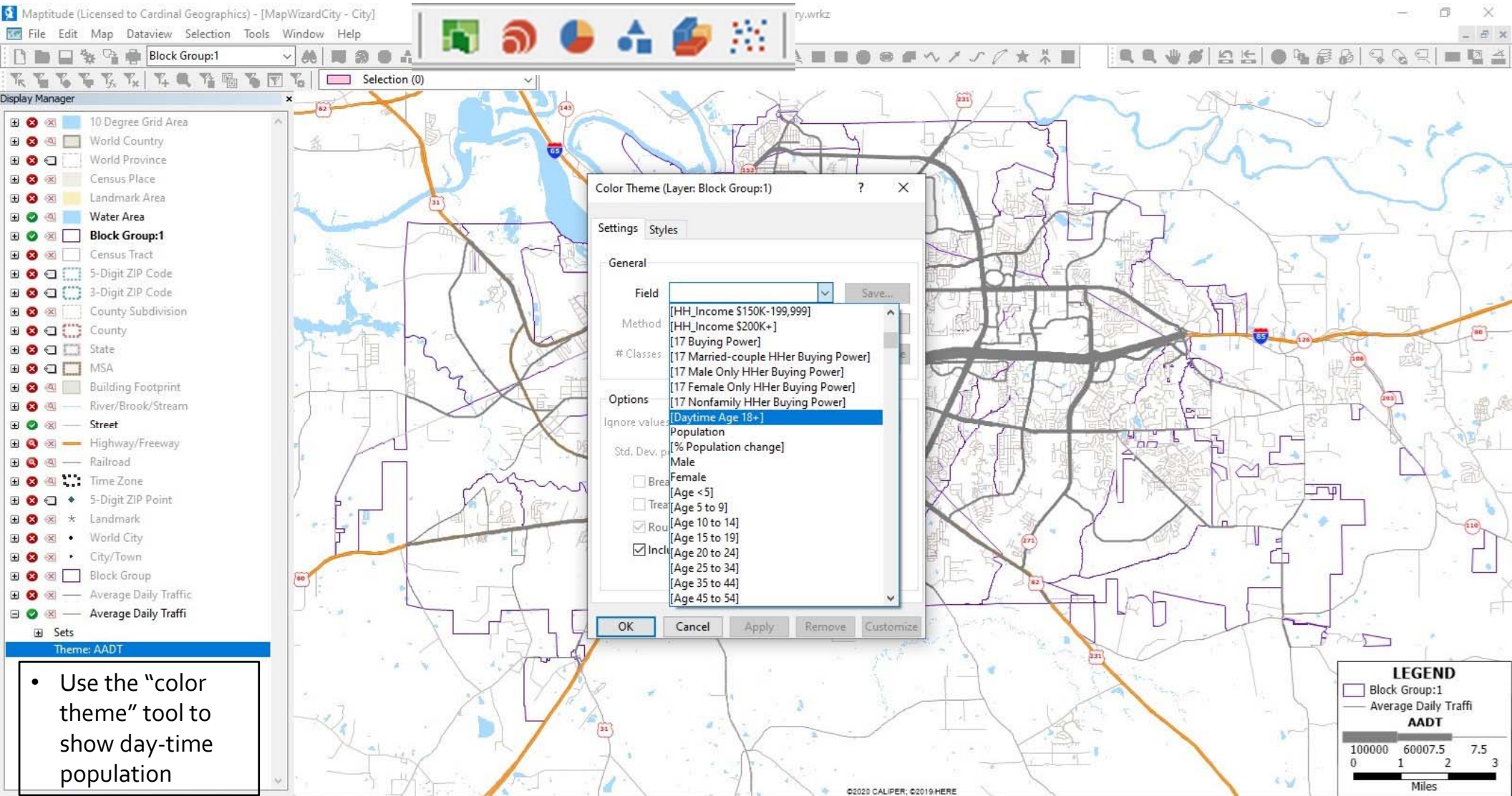
LEGEND

- Block Group:1
- Average Daily Traffic

AADT

100000	60007.5	7.5
0	1	2
3		

Miles



- Use the "color theme" tool to show day-time population

Map scale: 1 Inch = 1.81688 Miles (1:115,118)



Display Manager

Theme: Daytime Age 18+

- Other
- 1,160 and below
- 1,160 to 2,600
- 2,600 to 6,000
- 6,000 to 10,000
- 10,000 and above

Census Tract

5-Digit ZIP Code

3-Digit ZIP Code

County Subdivision

County

State

MSA

Building Footprint

River/Brook/Stream

Street

Highway/Freeway

Railroad

Time Zone

5-Digit ZIP Point

Landmark

World City

City/Town

Block Group:1

Average Daily Traffic

AAADT

Sets

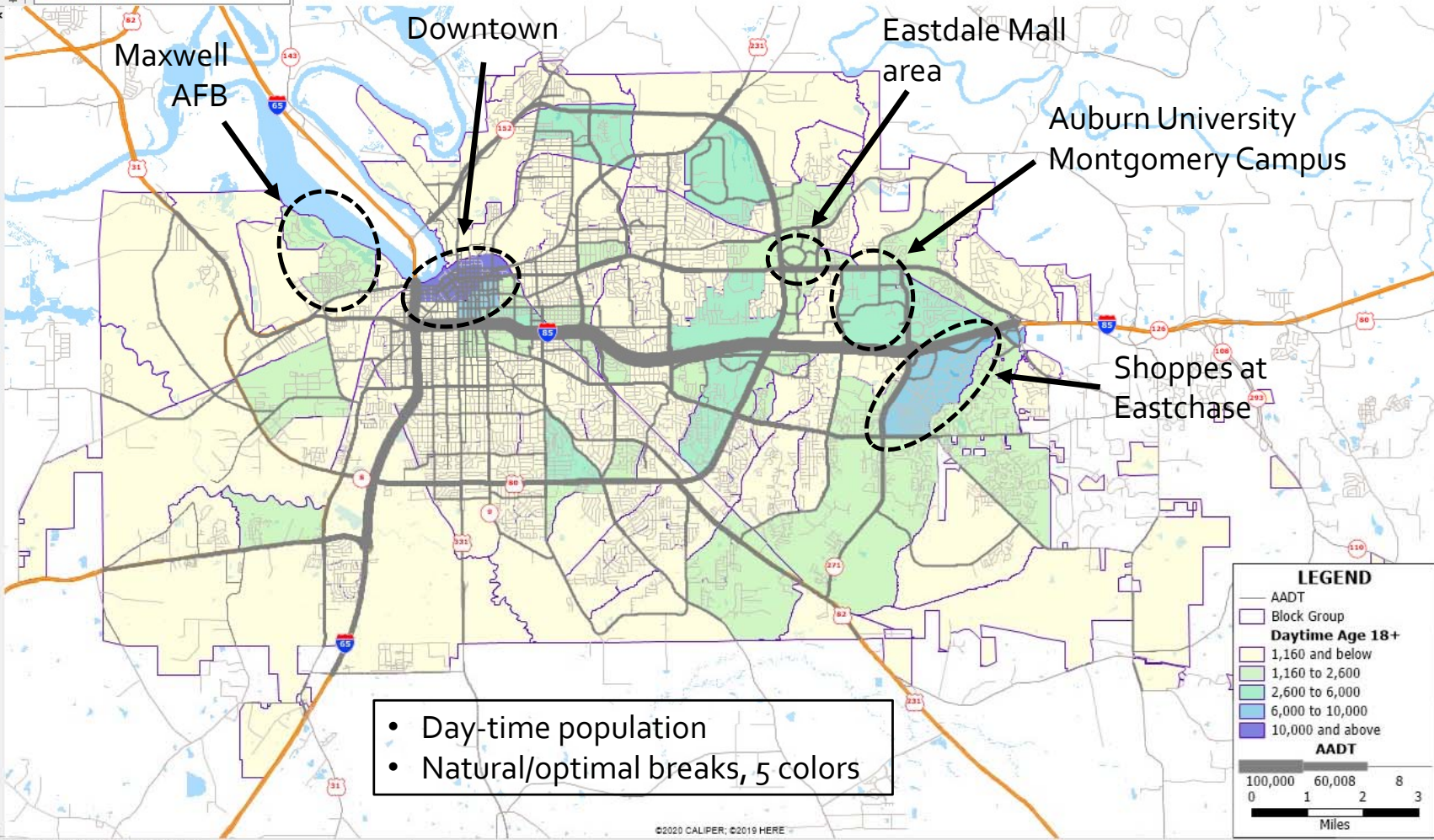
Theme: AADT

M-McDonalds Layer

Sets

Theme: Type

- Other
- Inside Walmart
- Stand-alone



Theme: Population

- Other
- 670 and below
- 670 to 1,240
- 1,240 to 2,000
- 2,000 to 3,900
- 3,900 and above

Census Tract

5-Digit ZIP Code

3-Digit ZIP Code

County Subdivision

County

State

MSA

Building Footprint

River/Brook/Stream

Street

Highway/Freeway

Railroad

Time Zone

5-Digit ZIP Point

Landmark

World City

City/Town

Block Group:1

Average Daily Traffic

AADT

Sets

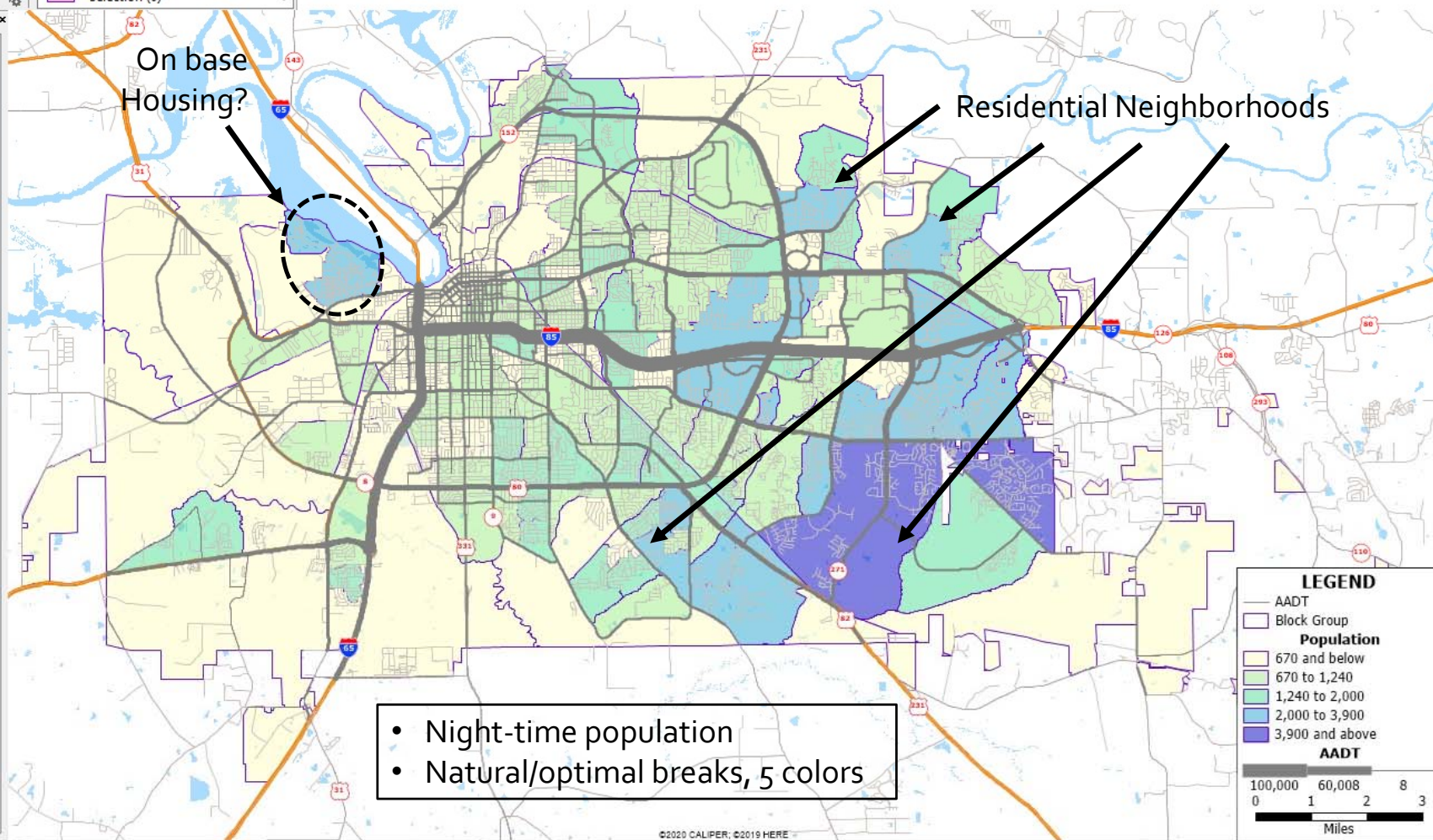
Theme: AADT

M-McDonalds Layer

Sets

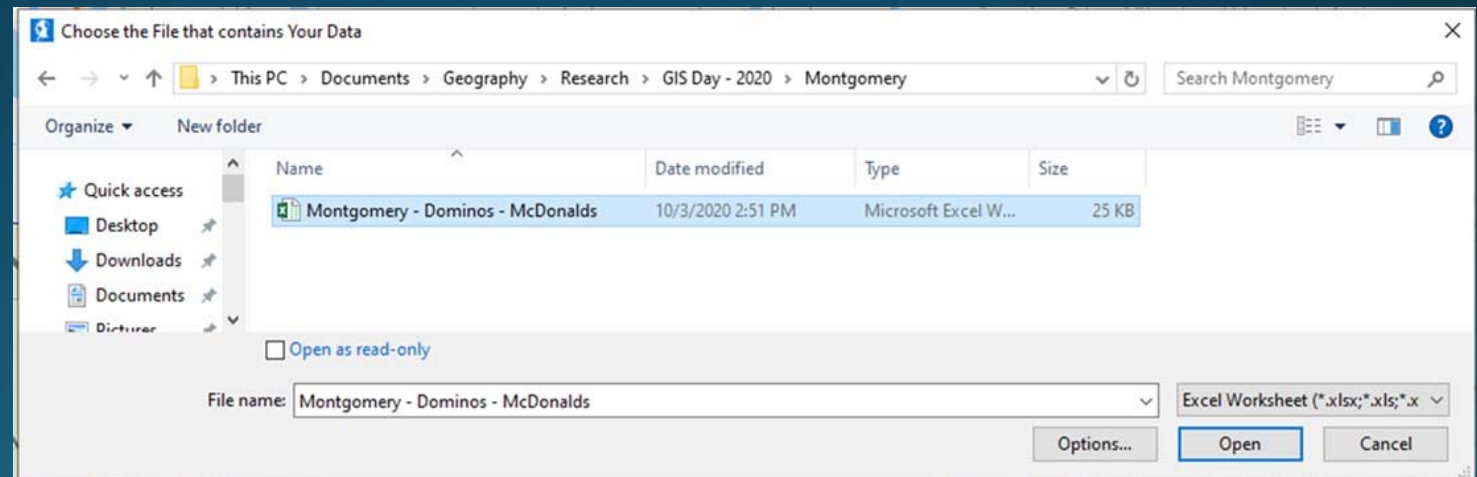
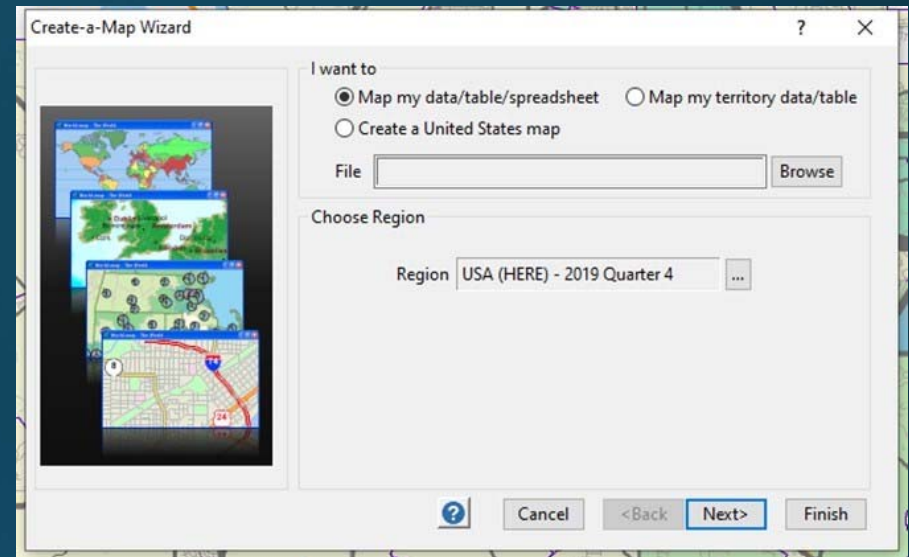
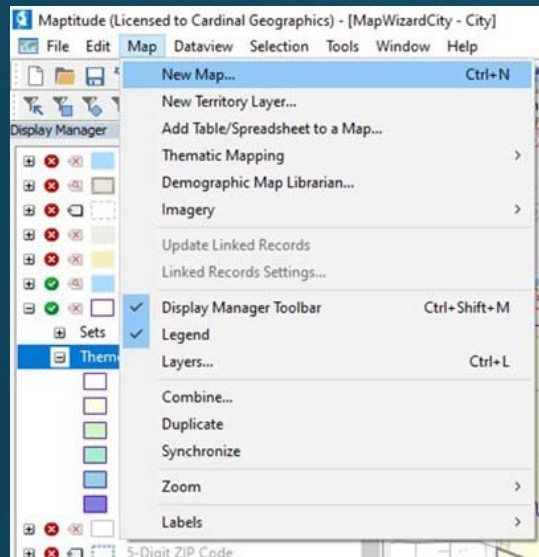
Theme: Type

- Other
- Inside Walmart
- Stand-alone



- Night-time population
- Natural/optimal breaks, 5 colors

- Next we need to bring in our location data
- Excel spreadsheet
 - State, City, Address, Zip Code
 - Lat/Long
- Other geographic files (i.e. shapefile)



- Spreadsheet with address information

	A	B	C	D	E
1	State	City	Address	Zip	Type
2	AL	Montgomery	935 W South Blvd	36105	Stand-alone
3	AL	Montgomery	700 W Fairview Ave	36105	Stand-alone
4	AL	Montgomery	3450 Day St	36108	Stand-alone
5	AL	Montgomery	2601 Cong W L Dickinson Dr	36109	Stand-alone
6	AL	Montgomery	2212 Madison Ave	36107	Stand-alone
7	AL	Montgomery	2681 Zelda Rd	36107	Stand-alone
8	AL	Montgomery	2621 E South Blvd	36116	Stand-alone
9	AL	Montgomery	3801 Eastern Blvd	36116	Inside Walmart
10	AL	Montgomery	1590 Eastern Blvd	36117	Stand-alone
11	AL	Montgomery	5765 Atlanta Hwy	36117	Stand-alone
12	AL	Montgomery	2750 Taylor Rd	36117	Stand-alone
13	AL	Montgomery	9145 Eastchase Pkwy	36117	Stand-alone

Create-a-Map Wizard

Review Fields to be Used to Map Your Data

Matching	Your Fields
Address	Address
City/State	City
State	State
ZIP Code	Zip
Tract ANSI	None
County ANSI	None
County Name	None
Metropolitan CRSA Code	None

Example Value
100 Main St, 205 W 9th St, 350 Blueberry Path

Buttons: ? Cancel <Back Next> Finish

Create-a-Map Wizard

Make a Map of

File: (...)\Montgomery - Dominos - McDonalds.xlsx) M-McDonalds

Add your data to existing map City

Coordinates...

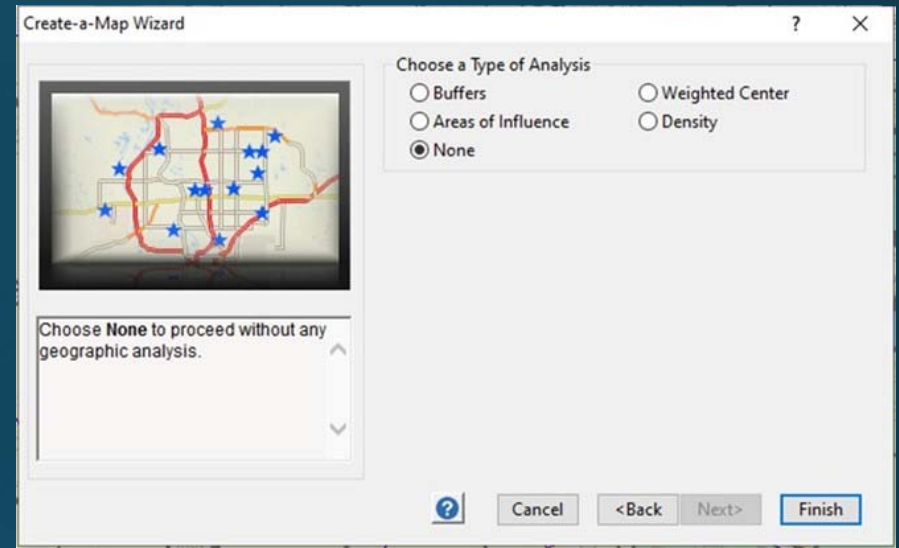
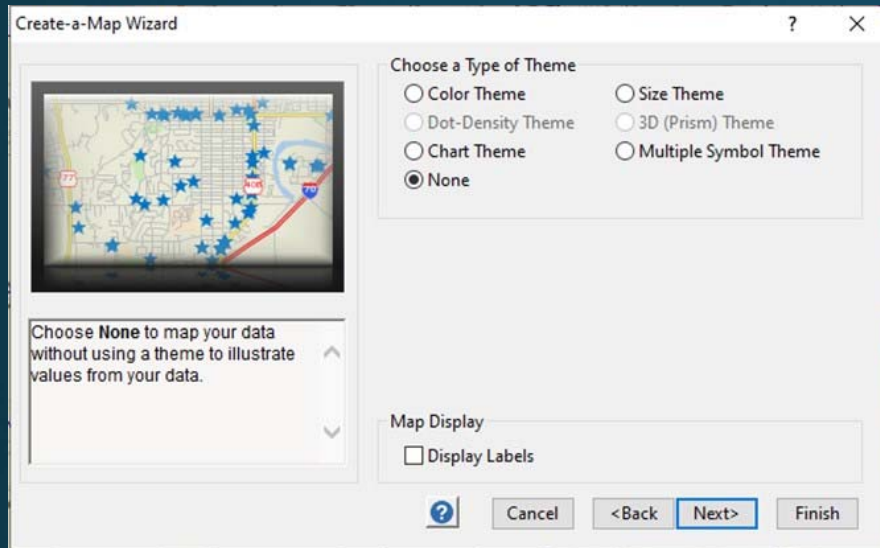
Type of Map

- Locate records in your file by Address, ZIP Code or City
- Locate records in your file by Address
- Locate records in your file by ZIP Code
- Locate records in your file by City/State
- Show ZIP Code boundaries with your data attached
- Locate records in your file by State
- Locate records in your file by World City
- Show State boundaries with your data attached

Use the street address, postal code, and city information in your data to place one point on the map for each record in your file at the most accurate location possible

Buttons: ? Cancel <Back Next> Finish

	A	B	C	D	E	F	G
1	Latitude	Longitude	State	City	Address	Zip	Type
2	32.325572	-86.328129	AL	Montgomery	935 W South Blvd	36105	Stand-alone
3	32.35196	-86.318772	AL	Montgomery	700 W Fairview Ave	36105	Stand-alone
4	32.369565	-86.345071	AL	Montgomery	3450 Day St	36108	Stand-alone
5	32.419902	-86.231501	AL	Montgomery	2601 Cong W L Dickinson Dr	36109	Stand-alone
6	32.380182	-86.275634	AL	Montgomery	2212 Madison Ave	36107	Stand-alone
7	32.364531	-86.268295	AL	Montgomery	2681 Zelda Rd	36107	Stand-alone
8	32.327697	-86.255063	AL	Montgomery	2621 E South Blvd	36116	Stand-alone
9	32.326353	-86.231804	AL	Montgomery	3801 Eastern Blvd	36116	Inside Walmart
10	32.355818	-86.21832	AL	Montgomery	1590 Eastern Blvd	36117	Stand-alone
11	32.382812	-86.200254	AL	Montgomery	5765 Atlanta Hwy	36117	Stand-alone
12	32.339603	-86.180104	AL	Montgomery	2750 Taylor Rd	36117	Stand-alone
13	32.362686	-86.137799	AL	Montgomery	9145 Eastchase Pkwy	36117	Stand-alone



- Map Wizard walks the user through the process
- Choose the type of theme depending on the data you have
- Choose the type of analysis

Locate by Address Results

Results	Number of Records
Total Records Examined	12
Located By Address and ZIP Code	9
Located By Address and Nearby ZIP Code	2
Located By Exact Address and City	0
Located By Address and City	0
Located By ZIP Code	1
Records Located	12
Records Not Located	0

OK

Block Group

Selection (0)

Display Manager

Theme: Daytime Age 18+

- Other
- 1,160 and below
- 1,160 to 2,600
- 2,600 to 6,000
- 6,000 to 10,000
- 10,000 and above

Census Tract

5-Digit ZIP Code

3-Digit ZIP Code

County Subdivision

County

State

MSA

Building Footprint

River/Brook/Stream

Street

Highway/Freeway

Railroad

Time Zone

5-Digit ZIP Point

Landmark

World City

City/Town

Block Group:1

Average Daily Traffic

AADT

Sets

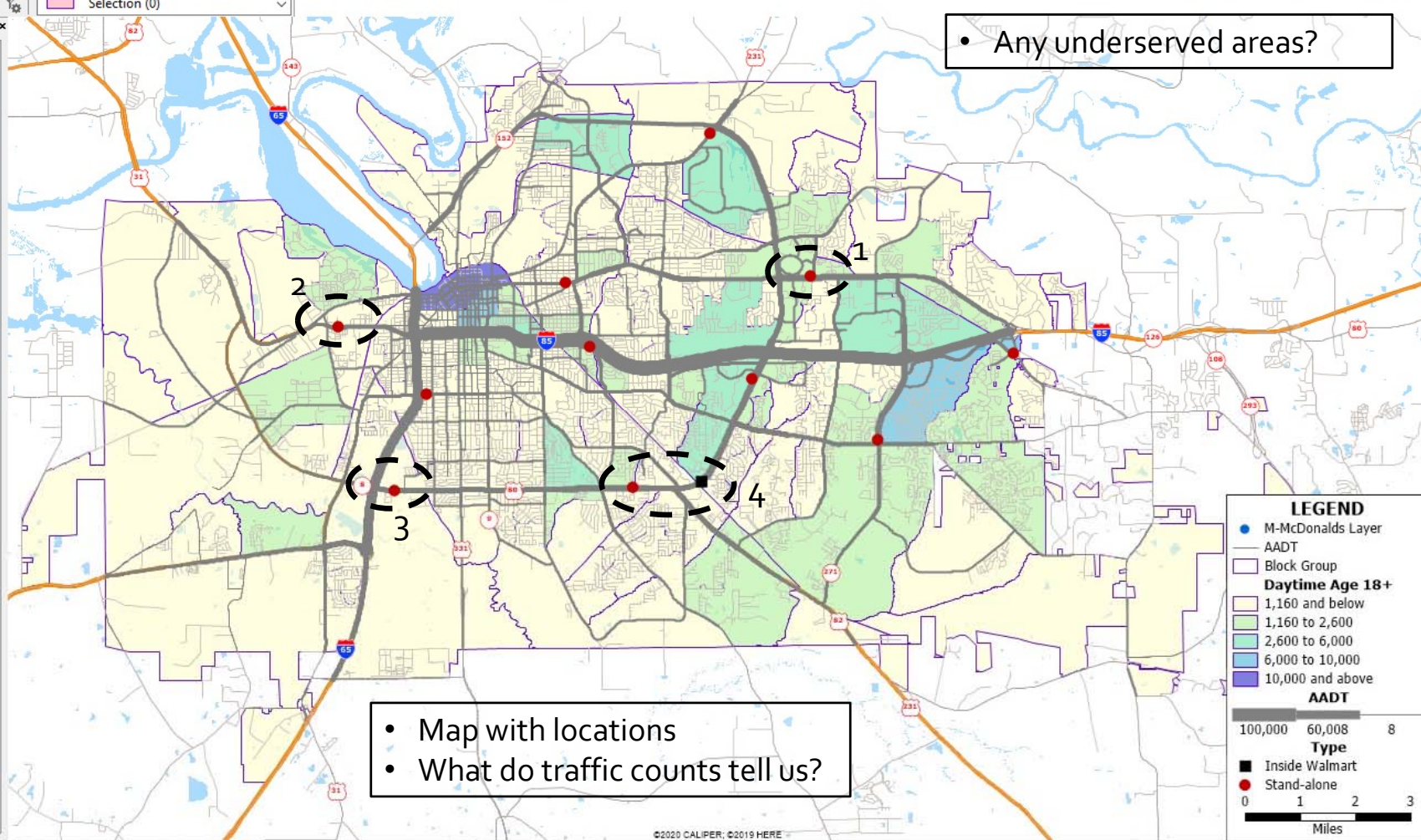
Theme: AADT

- M-McDonalds Layer

Sets

Theme: Type

- Other
- Inside Walmart
- Stand-alone



• Any underserved areas?

• Map with locations
• What do traffic counts tell us?

LEGEND

- M-McDonalds Layer
- AADT
- Block Group
- Daytime Age 18+
- 1,160 and below
- 1,160 to 2,600
- 2,600 to 6,000
- 6,000 to 10,000
- 10,000 and above

AADT

100,000	60,008	8
---------	--------	---

Type

- Inside Walmart
- Stand-alone

0 1 2 3 Miles

Display Manager

- Thema
- Update Linked Records
- Linked Records Settings...
- Display Manager Toolbar Ctrl+Shift+M
- Legend Ctrl+L
- Layers...
- Combine...
- Duplicate
- Synchronize
- Zoom
- Labels

Street

Highway/Freeway

Railroad

Time Zone

5-Digit ZIP Point

Landmark

World City

City/Town

Block Group:1

Average Daily Traffic

AADT

Sets

Theme: AADT

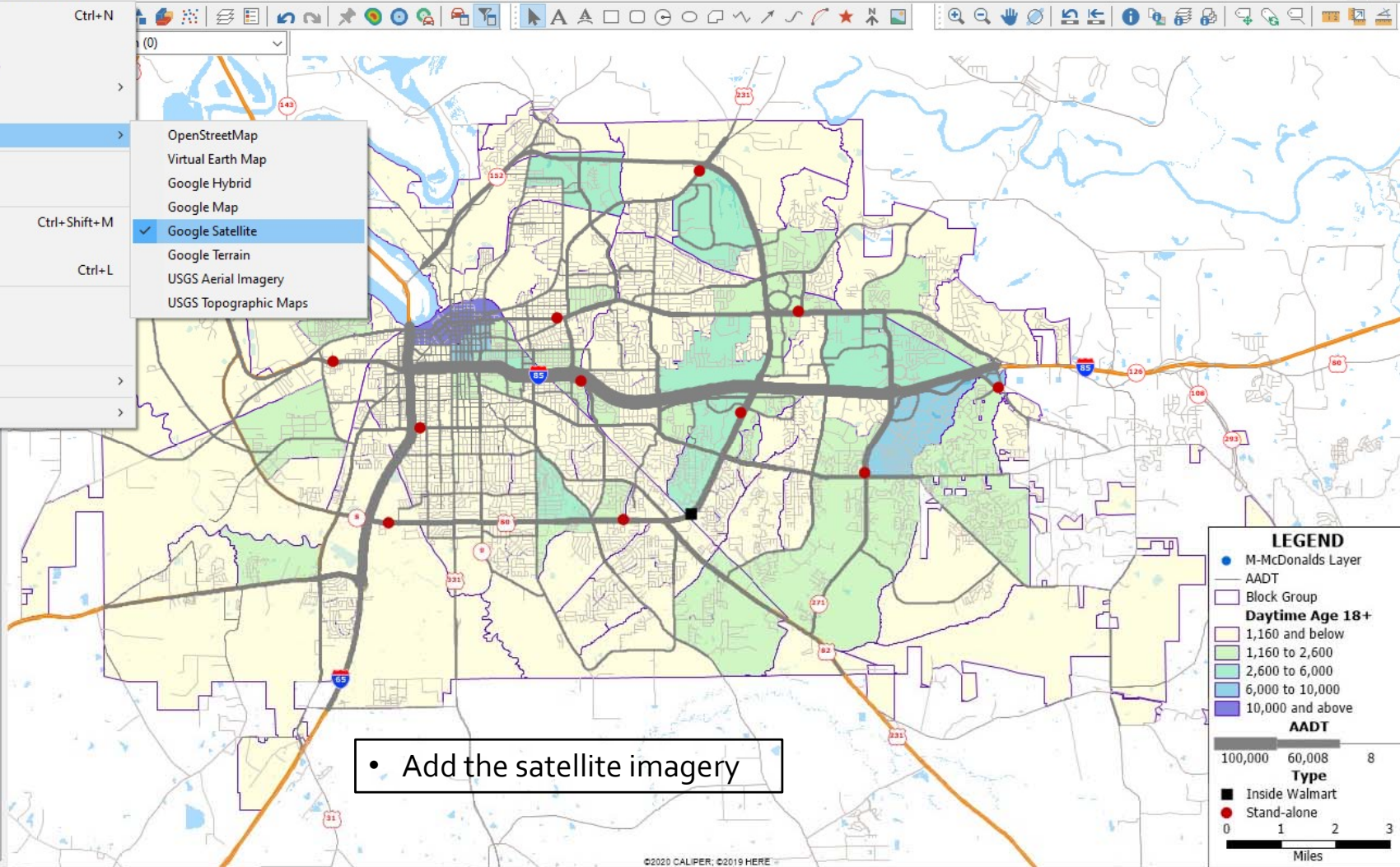
M-McDonalds Layer

Sets

Theme: Type

- Other
- Inside Walmart
- Stand-alone

- OpenStreetMap
- Virtual Earth Map
- Google Hybrid
- Google Map
- Google Satellite
- Google Terrain
- USGS Aerial Imagery
- USGS Topographic Maps

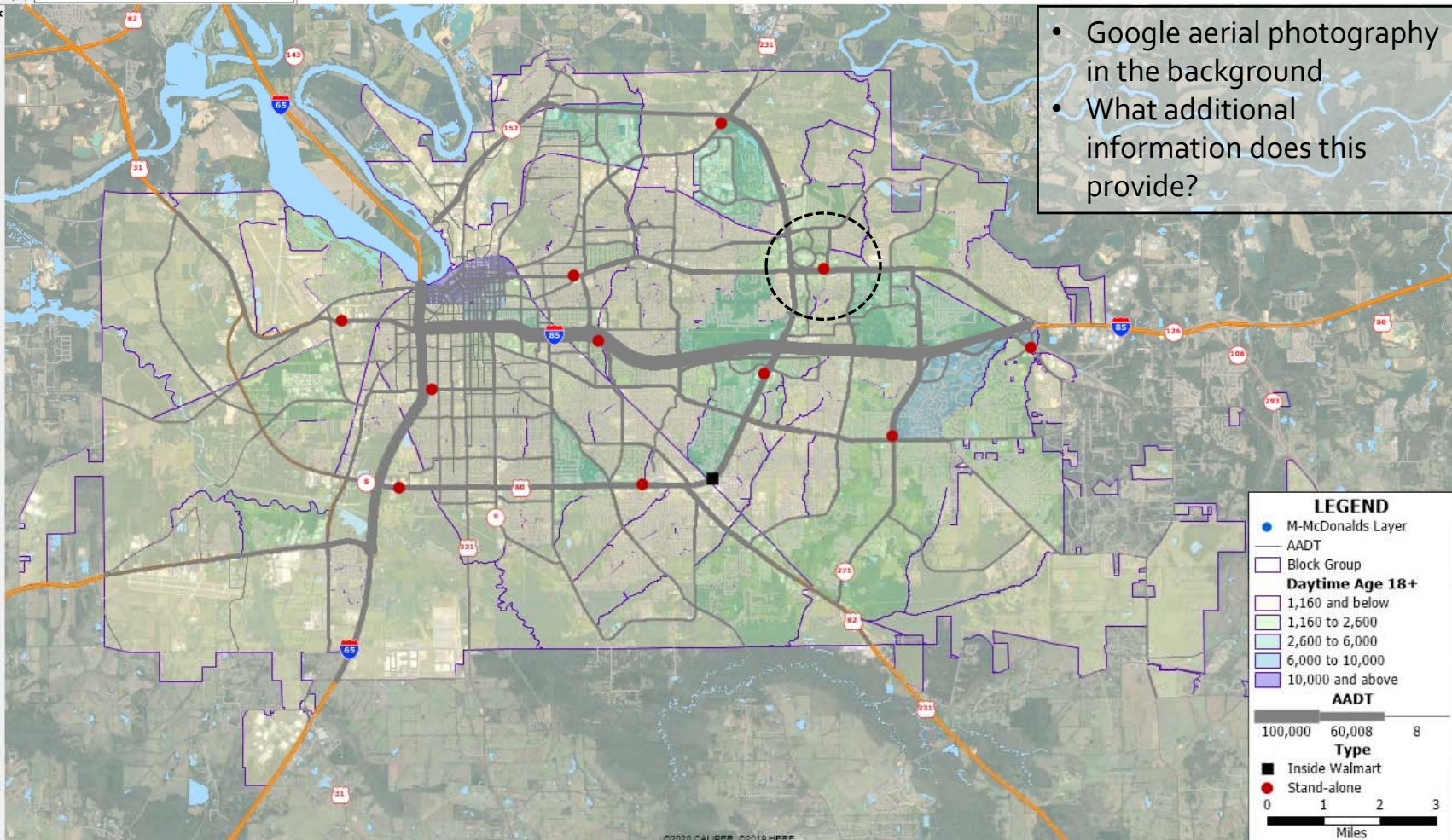


• Add the satellite imagery

Add Google Satellite image layer to map

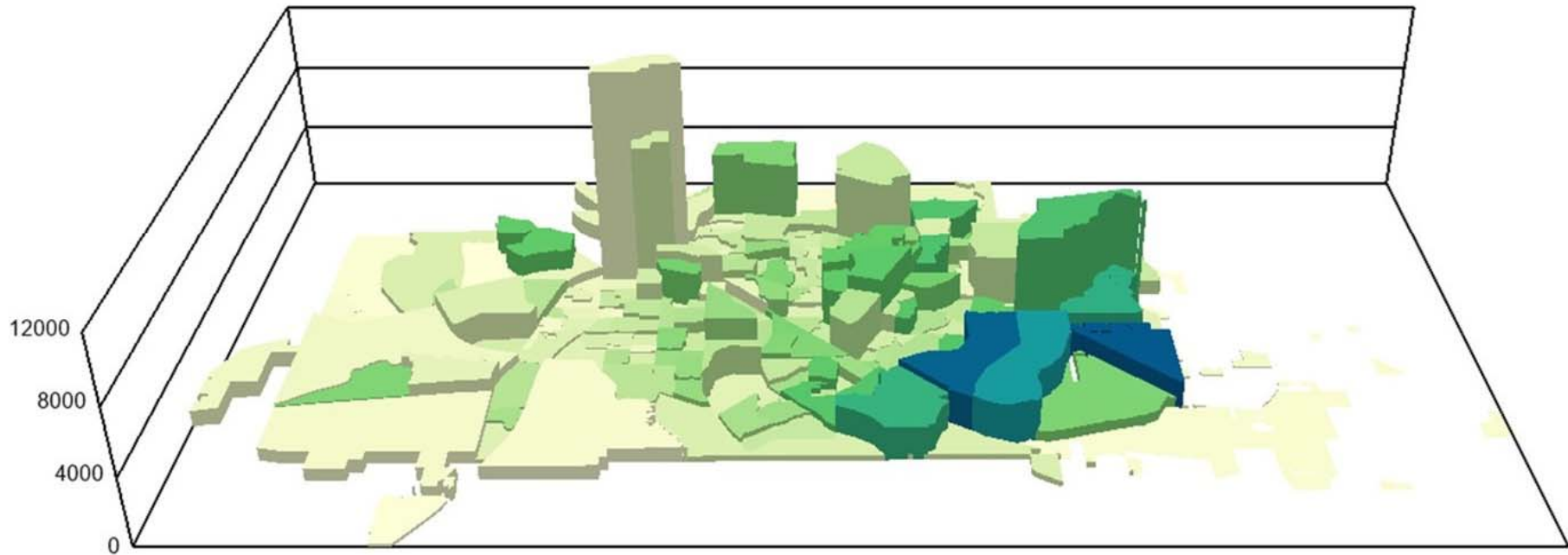
Display Manager

- Google Satellite
- 10 Degree Grid Area
- World Country
- World Province
- Census Place
- Landmark Area
- Water Area
- Block Group
- Sets
- Theme: Daytime Age 18+
 - Other
 - 1,160 and below
 - 1,160 to 2,600
 - 2,600 to 6,000
 - 6,000 to 10,000
 - 10,000 and above
- Census Tract
- 5-Digit ZIP Code
- 3-Digit ZIP Code
- County Subdivision
- County
- State
- MSA
- Building Footprint
- River/Brook/Stream
- Street
- Highway/Freeway
- Railroad
- Time Zone
- 5-Digit ZIP Point
- Landmark
- World City
- City/Town
- Block Group:1
- Average Daily Traffic
- AADT



- Google aerial photography in the background
- What additional information does this provide?

Day- and Night Population



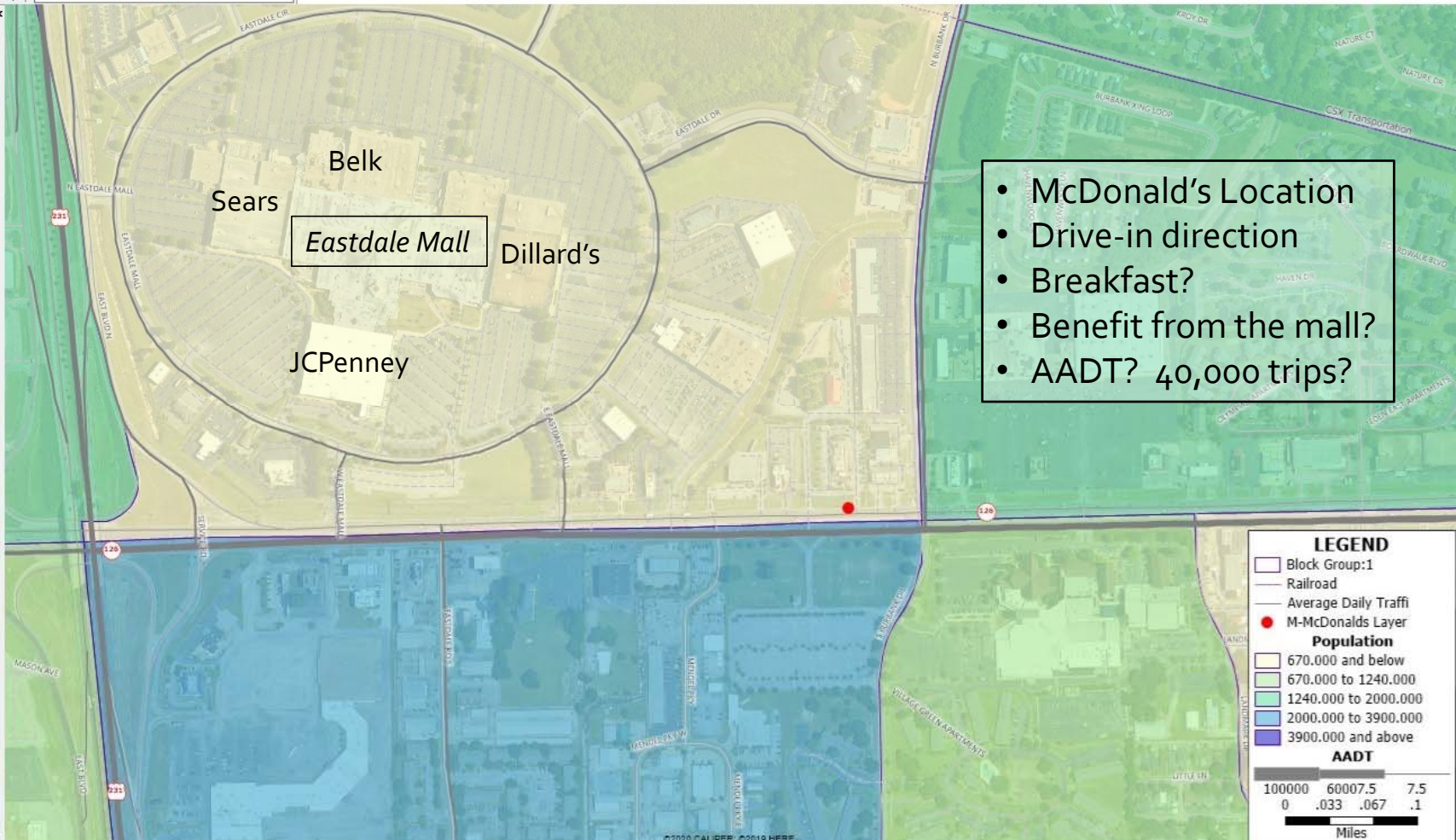
- Prism map
- Another way to visualize the population data?



Height = [Daytime Age 18+]; Color = Population

Display Manager

- Google Satellite
- 10 Degree Grid Area
- World Country
- World Province
- Census Place
- Landmark Area
- Water Area
- Block Group:1
- Sets
- Theme: Population
 - Other
 - 670,000 and below
 - 670,000 to 1240,000
 - 1240,000 to 2000,000
 - 2000,000 to 3900,000
 - 3900,000 and above
- Census Tract
- 5-Digit ZIP Code
- 3-Digit ZIP Code
- County Subdivision
- County
- State
- MSA
- Building Footprint
- River/Brook/Stream
- Street
- Highway/Freeway
- Railroad
- Time Zone
- 5-Digit ZIP Point
- Landmark
- World City
- City/Town
- Block Group
- Average Daily Traffic
- Average Daily Traffic



- McDonald's Location
- Drive-in direction
- Breakfast?
- Benefit from the mall?
- AADT? 40,000 trips?

LEGEND

- Block Group:1
- Railroad
- Average Daily Traffic
- M-McDonalds Layer

Population

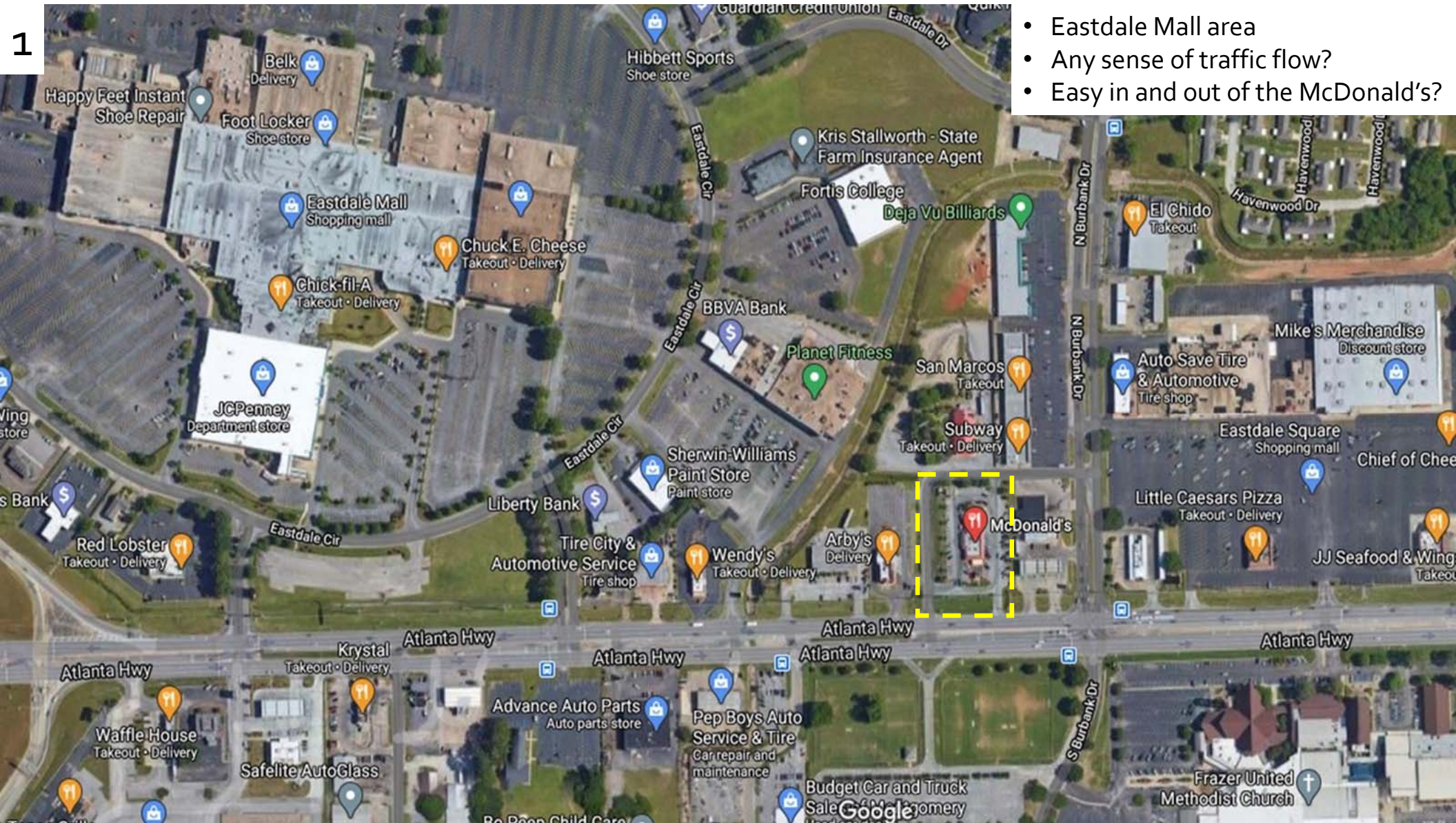
- 670,000 and below
- 670,000 to 1240,000
- 1240,000 to 2000,000
- 2000,000 to 3900,000
- 3900,000 and above

AADT

100000	60007.5	7.5
0	.033	.067
		.1

Miles

1



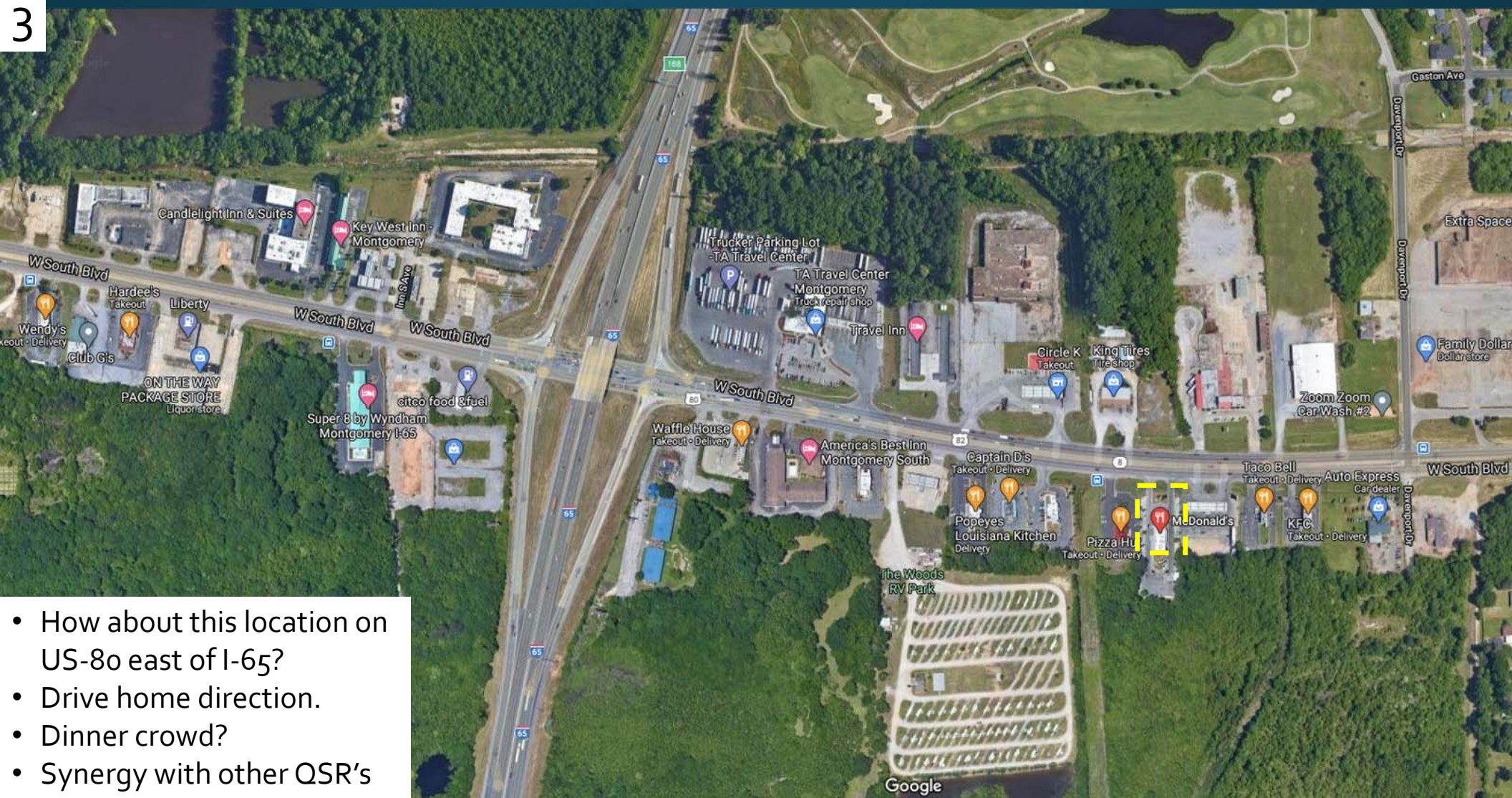
- Eastdale Mall area
- Any sense of traffic flow?
- Easy in and out of the McDonald's?

2



- How about this location southeast of Maxwell AFB ?
- Lunch crowd?

3



- How about this location on US-80 east of I-65?
- Drive home direction.
- Dinner crowd?
- Synergy with other QSR's



- How about these locations near US-80 east and US-231?
- What advantage is Walmart?
- Disadvantage?
- How about the stand-alone location?

- Any questions ?
- Any other applications in business where you can see this approach being worthwhile ?
- Maptitude: <https://www.caliper.com/maptovu.htm>
 - Free student license!!!!!!
- My contact email: brett.lucas@yahoo.com



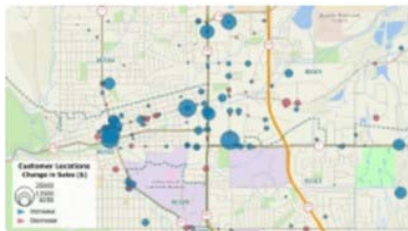
Use aerial and satellite images for geographic editing and reference



Analyze sales and customer data by postal code or ZIP Code



Perform nationwide Census demographic analysis



Locate your customers and facilities



Find Crime hot spots



Create territories based on drive time or distance