



# **Census Geography Considerations for the Knoxville Regional TPO Travel Demand Model**

**TNMUG**

**May 31, 2018**

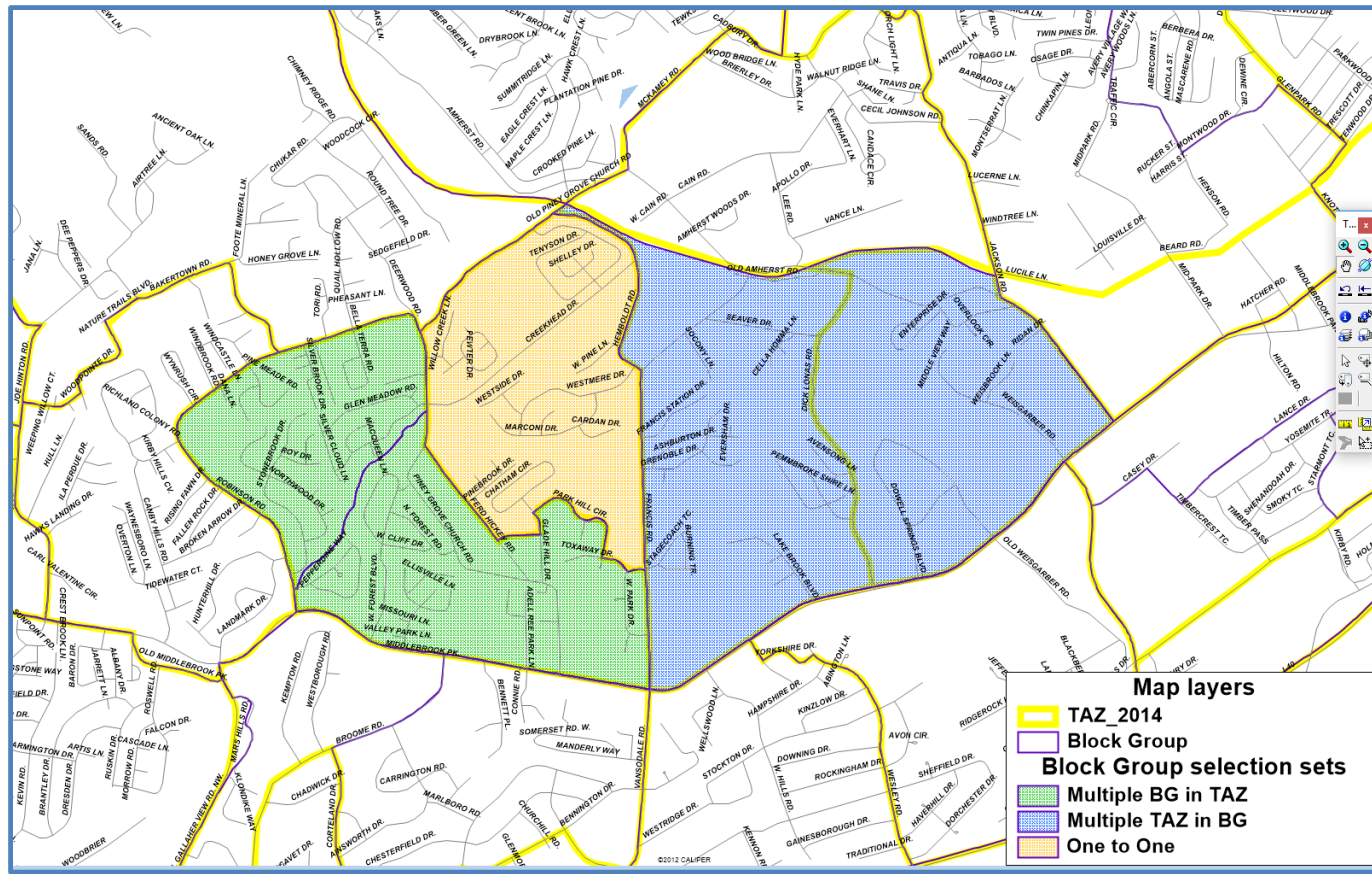
# Knoxville TPO Block Group/TAZ Counts

- Overall roughly 2 to 1 Ratio of TAZs to BGs:

County	Traffic Analysis Zones	Block Groups	Ratio (TAZ:BG)
Anderson	86	53	1.62
Blount	165	78	2.12
Grainger	22	16	1.38
Hamblen	104	42	2.48
Jefferson	69	32	2.16
Knox	508	242	2.10
Loudon	61	31	1.97
Roane	37	41	0.90
Sevier	81	44	1.84
Union	20	14	1.43
<b>Total Region</b>	<b>1153</b>	<b>593</b>	<b>1.94</b>

# Block Group/TAZ Nesting

- Most common case is multiple TAZs per Block Group.
- In general good “nesting” although some cases where TAZs and BG’s split one another.



# Model Variables Provided by Census Data

- Perhaps Most Critical is the Decennial Counts of Persons and Households at Census Block.
  - Try to follow Block Group boundaries, but make sure your TAZs respect Block boundaries if at all possible!
  - But, Block boundaries can and do change each decennial census
- American Community Survey/CTPP Provide:
  - Household Income, Age, Workers, Vehicles, etc
  - Can only get down to Block Group in 5-year ACS, so have to deal with ‘averages’. Still it’s better than nothing.

GEOID	LABEL	TOTPOP	HHPOP	HH	AVGHHSIZE	AVG_MEDHHINC	PCT_HH_W_SR	WRKR_PER_HH	STD_PER_HH	VEH_PER_HH
47001	Anderson County, Tennessee	75263	74184	30548	2.43	43620	0.2990	1.1194	0.3959	1.8481
47009	Blount County, Tennessee	123722	121699	48728	2.50	45991	0.2986	1.2392	0.4189	2.0073
47057	Grainger County, Tennessee	22653	22472	9003	2.50	32364	0.3073	1.0816	0.4081	2.0385
47063	Hamblen County, Tennessee	62721	61958	24315	2.55	39596	0.2957	1.1879	0.4510	1.8879
47089	Jefferson County, Tennessee	51759	50132	19797	2.53	39745	0.3120	1.2607	0.4235	2.0330
47093	Knox County, Tennessee	436983	424821	181100	2.35	47694	0.2336	1.2557	0.3801	1.7679
47105	Loudon County, Tennessee	49188	48741	19543	2.49	51074	0.3663	1.1479	0.3793	2.0384
47145	Roane County, Tennessee	53765	53056	22117	2.40	42223	0.3296	1.0889	0.3777	1.9867
47155	Sevier County, Tennessee	91295	90369	36815	2.45	43649	0.2821	1.3215	0.3965	1.9525
47173	Union County, Tennessee	19177	19018	7406	2.57	34399	0.2760	1.0273	0.4496	1.9922
470010201001	Block Group 1, Census Tract 201, Anderson County, Tennessee	1416	1416	790	1.79	28750	0.2228	1.0063	0.0709	1.1696
470010201002	Block Group 2, Census Tract 201, Anderson County, Tennessee	1639	1630	661	2.47	22708	0.1861	1.0333	0.6067	1.3449

Example Data Summary Table of KRTM Model Attributes 2009-2013 American Community Survey, 5-Year Estimates

# 2006 – 2010 CTPP Data for TransCAD

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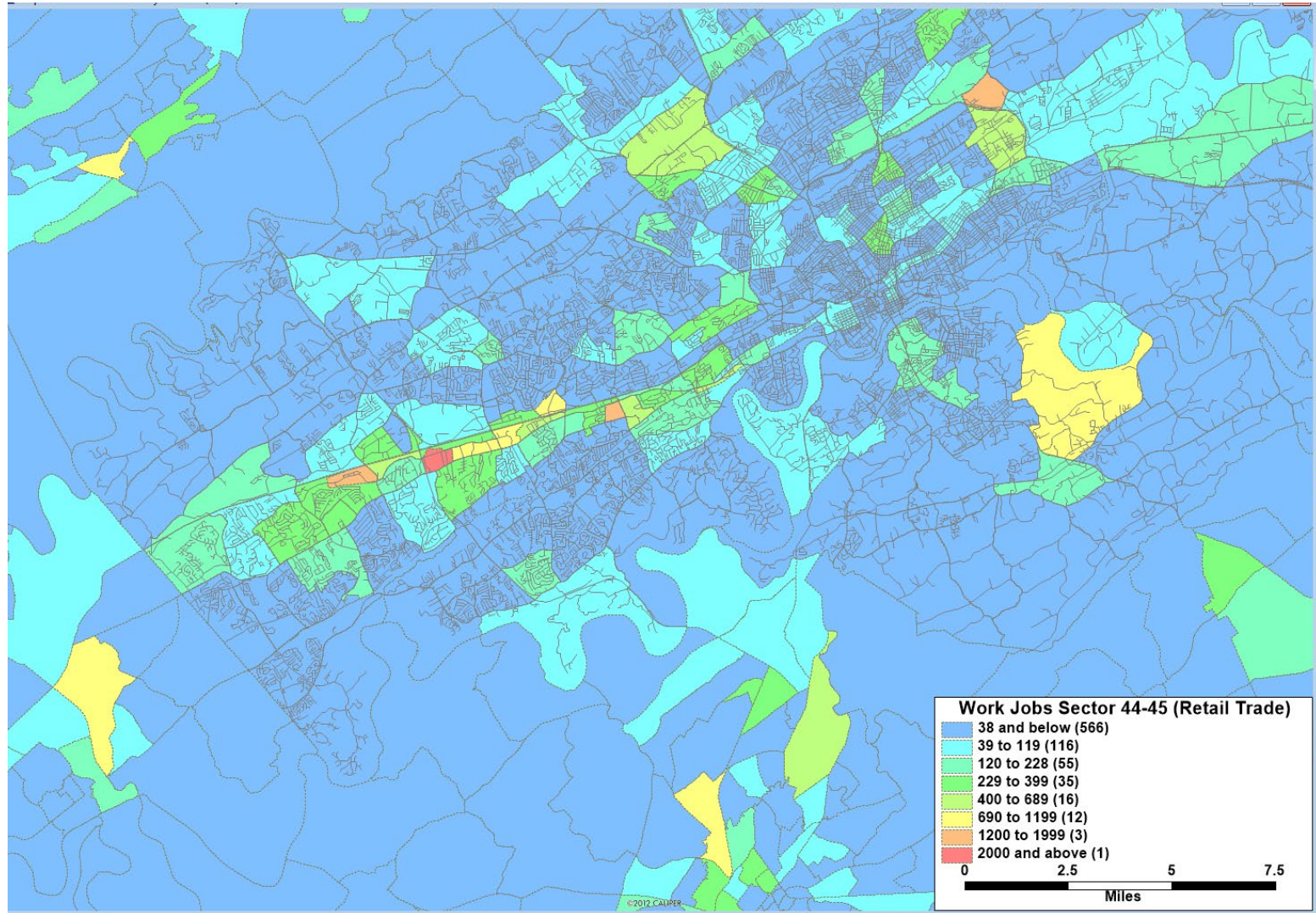
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# Example of CTPP Worker Count Data



# Slides from CTPP Small Area Geography Webinar

CTPP (**C**ensus **T**ransportation **P**lanning **P**roducts program)

“Policy Change Announcement on Small and Custom Geography in CTPP”

- Next CTPP data (2012 – 2016) will be released in 2019 with no change to tabulation geography.
- Future releases will no longer include data at the TAZ (Transportation Analysis Zone) and TAD (Transportation Analysis District) levels.
- Instead, data will be tabulated at a new, smallest CTPP geography - the standard Census Block Group level.
- This change is being implemented to use resources effectively and to maximize data quality at the smallest geographies practical.

# Slides from CTPP Small Area Geography Webinar

To prepare for this change you can:

- Review the relationship between your model TAZs and Census geography (Blocks, Block Groups and Tracts.)
- Familiarize yourself with the PSAP (Participant Statistical Areas Program) and its related geography criteria.
- Comment on the Federal Register announcement on the geography criteria if appropriate. (Comment period ends May 16, 2018.)
- Get to know and work with other PSAP participants in your area.
- Prepare to modify your TAZs and Census geography (through the PSAP) if appropriate.



# Slides from CTPP Small Area Geography Webinar

## Getting Started

- Review your geographies: where they do and don't align
- Approach tract and block group delineation from the point of view of a traditional PSAPer and see where employment thresholds and current TAZ delineations solve problems
- So far we know
  - Our modelers don't want to change TAZs
  - Our county contacts don't want to change block groups
- But people like TAZs and block groups because they are small

# Slides from CTPP Small Area Geography Webinar

## Employment Thresholds & TAZs to the Rescue!

- Show tangible benefits of your participation. Example...
  - PSAP delineation starts with a look at tracts
    - Split those over population maximum
    - Merge tracts under population minimum

# Slides from CTPP Small Area Geography Webinar



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## Ingredients for Success

If...

- Employment thresholds are in place,

...and...

- You can get all parties to agree that TAZs and block groups matched
  - One-to-one or
  - As nested geographies (TAZs within block groups or block groups within TAZs)

... a lot of progress can be made