

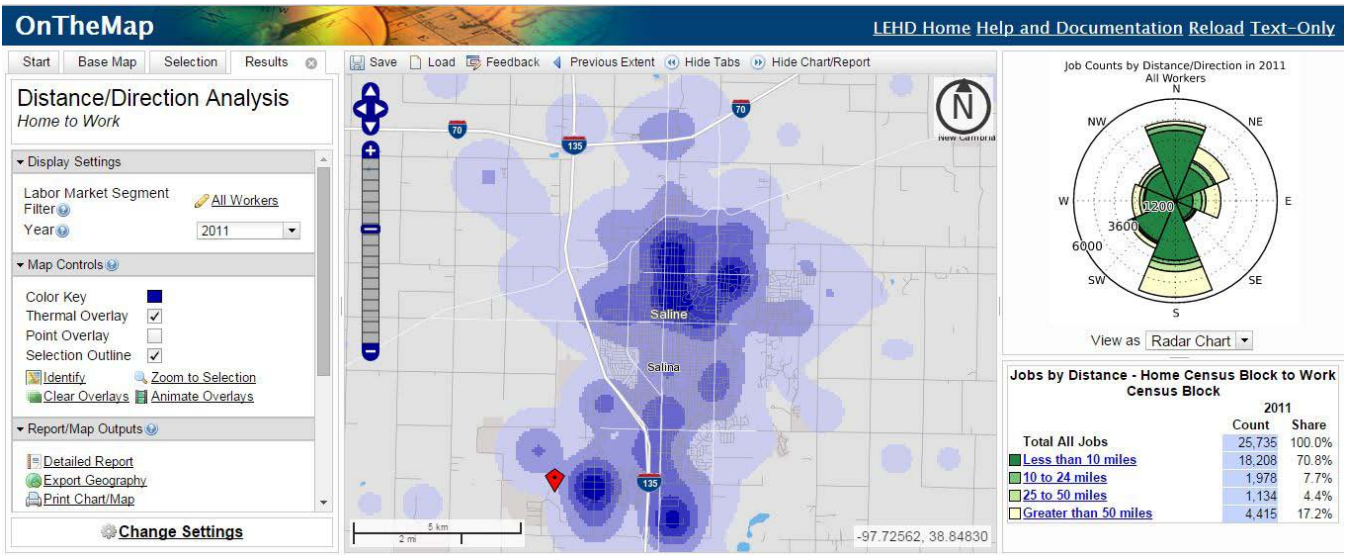


# Kansas RTAP Fact Sheet

A Service of The University of Kansas Transportation Center for Rural Transit Providers

## No-Cost Census Tools to Support Transit Service Planning

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All images: KU Transportation Center, U.S. Bureau of the Census

The output on this map illustrates the distribution of jobs in Saline County, with the darker color representing higher density of jobs. The radar chart at the right indicates the direction and distance of travel of employees from home to work. The direction of travel for workers in Saline County tends to be more north and south, with 71 percent of the trips less than 10 miles.

A number of useful tools developed by the U.S. Census Bureau and their partners over the past 10 years provides greater access than ever to data to support transit service planning and development to even the smallest transit agency. While no substitute for full transit planning services, these tools are useful to transit managers for analyzing demographic, economic, and travel indicators for sketch planning, proposal development, and presentations to local elected officials and for other public meetings. A wide variety of tools provide output in the form of reports, spreadsheets and maps.

This article will provide an overview of a few selected free applications available on the Census website. Also provided are example outputs from these applications, and a link to a list with some of the most useful resources that I've found to assist rural transit service planning.

### What data do you need?

When planning for new or expanding (or modifying your) transit services, a number of data elements are useful to help inform your decisions. For the purposes of this article we'll examine three primary areas of needs for data: 1) population profile of your service area, 2) economic profiles of your service area, and 3) employment and/or commuter patterns. Armed with this data about your service area, you will be able to forecast demand and quantify need, evaluate existing conditions and changes in service area, and eventually plan new or expanded services.

Key indicators of a need for public transit include an assessment of low-income households, number of older people in your service area, number of people with disabilities, and households with no vehicle available. Additional indicators in determining a transit market may

include single parents with children at home, military veterans, persons with high housing costs, areas with individuals with lower educational attainment, and areas with more foreign-born residents.

Rural transit agency managers do not always have a county or city planning staff that can respond quickly to Census data needs. Luckily more and more of this information is very readily available from the Census website, if you just know where to find it. Census data is updated every 10 years, if not updated on a rotating annual basis with the American Community Survey. And many of the tools allow you to generate interactive maps, all without the use of commercial GIS packages.

### ACS: A useful source of data

The American Community Survey (ACS) is the mandatory ongoing survey from the U.S. Census that samples a small

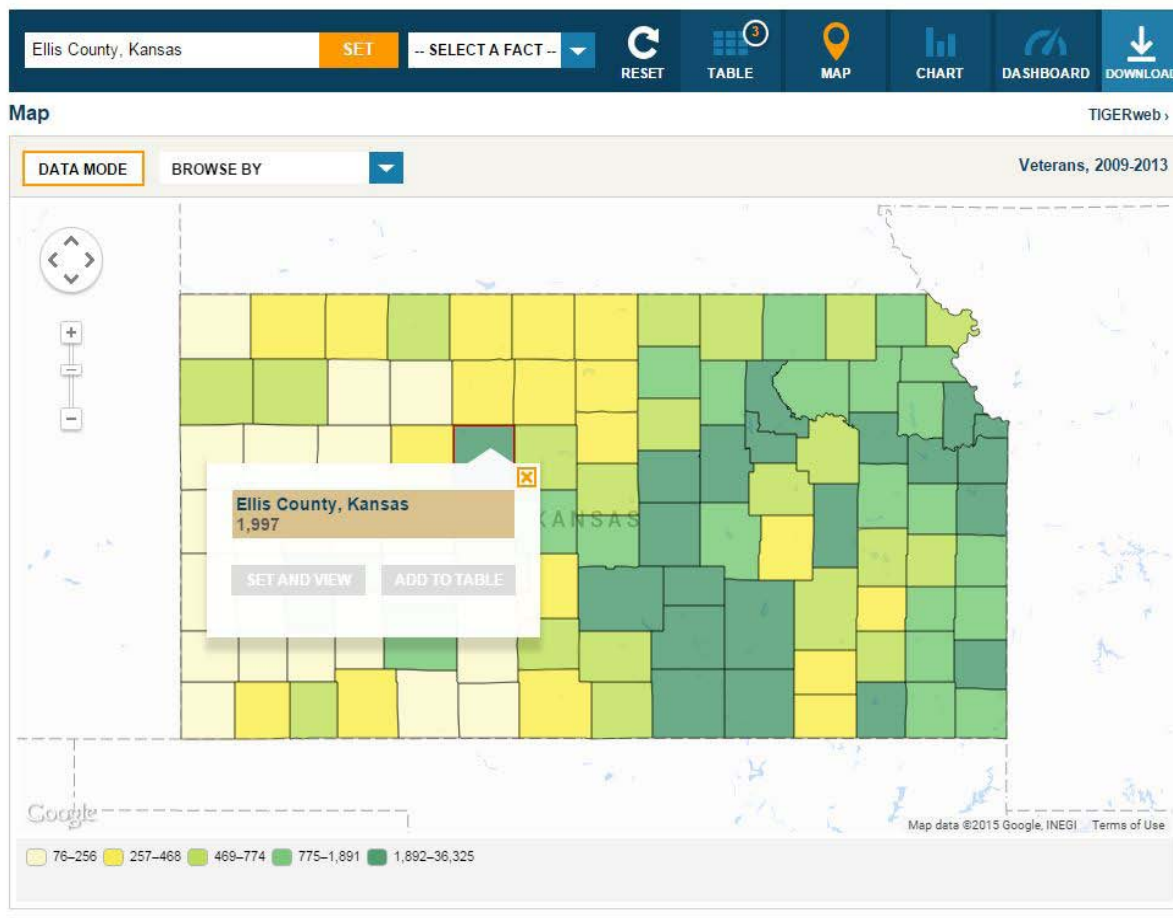
percentage of the population every year (about 3 million surveys per year). The data is collected from all counties and federally-recognized Tribes. One-year, three-year and five-year estimates are provided; the five-year estimates are the most accurate for areas with very small populations. The 2009-2013 five-year estimates are the most recently available.

### Census data tools to support transit planning

We're going to take a brief look at three tools on the Census.gov website that provide a great deal of power for transit planning: OnTheMap, American Fact Finder, and QuickFacts. Several others are useful to transit agencies, such as Census Explorer, Census Data Mapper, Census Flows Mapper, Small Area Income and Poverty Estimates (SAIPE), and TigerWEB. A resource list, available online from the Kansas RTAP page, provides some details about these resources along with website addresses (see page 4).

The screenshot shows the American Fact Finder interface. At the top, there is a navigation bar with options: MAIN, COMMUNITY FACTS (highlighted), GUIDED SEARCH, ADVANCED SEARCH, and DOWNLOAD CENTER. Below the navigation bar, a search prompt asks to "Enter a state, county, city, town, or zip code:" with a text input field and a "GO" button. A sidebar on the left lists various data categories: Population, Age, Business and Industry, Education, Governments, Housing, Income, Origins and Language, Poverty, Race and Hispanic Origin, Veterans, and Show All. The main content area displays results for "Junction City city, Kansas". It shows the population as 24,147, with a source note: "Source: 2009-2013 American Community Survey 5-Year Estimates". Below this, there is a section titled "Popular tables for this geography:" which lists several data tables available for this geography, including 2010 Census data (General Population and Housing Characteristics, Race and Hispanic or Latino Origin, Hispanic or Latino by Type, Households and Families), 2013 American Community Survey data (Demographic and Housing Estimates), 2014 Population Estimates Program (Annual Population Estimates), and Census 2000 data (General Demographic Characteristics). A link for "Want more? Need help? Use Guided Search or visit Census.gov's Quick Facts." is also present.

*American Fact Finder provides easy access to some of the most useful Census data. In this case, just a single click provides 2010, 2013 ACS five-year data, or 2014 estimates.*



QuickFacts provides a quick map to show relative frequencies of particular Census data questions, in this case, where is the highest numbers of veterans living in Kansas counties? By clicking on a county, it is possible to see the exact number, as well as relative comparisons across all counties in Kansas.

**OnTheMap.** This is a web-based mapping and reporting application that illustrates where workers are employed and where they live. OnTheMap also provides companion reports on age, earnings, industry distributions, race, ethnicity, educational attainment, and gender. The data driving this application is based on 2002-2011 Longitudinal Employer-Household Dynamics (LEHD) Origin Destination Employment Statistics (LODES). The illustration on page 1 provides an example of output from the OnTheMap application.

**American Fact Finder** provides access to data about the United States, Puerto Rico and the Island Areas. Data in American FactFinder come from several censuses and surveys, including ACS, American Housing Survey, Annual Economic Surveys, Population Estimates Program, etc. The application includes both guided and advanced searches.

The former sets basic search criteria while the latter allows you to set specialized geographic parameters. American Fact Finder is available at <http://factfinder.census.gov>. See page 2 for an example of data generated using this tool.

**QuickFacts.** The final tool we'll examine is QuickFacts, another tool that provides fast, easy access to summary profiles for frequently-requested data from various Census Bureau programs. The profiles are available for the nation, states, counties and places. A few examples of some of the tables you will find in QuickFacts relevant to planning new service or making service changes include housing costs and auto ownership.

QuickFacts is particularly useful when you are looking for one specific element in your service area, for example, how many veterans live in your county or city—or what percent of my population under the age of 65 has a disability—and

dozens of others. I have not found the mapping function in QuickFacts to be extremely sophisticated, only displaying at the county level. The maps do provide comparisons of the selected data item from one county to another, as shown at right. Some components of QuickFacts are in Beta version (2.0), and illustrate some of the improvements under development; e.g. search by zip code, an improved table display, a “browse more data” feature, and download data.

**A recap**

Table 1 provides a summary of the basic characteristics and best uses for each of the tools covered in this article to help you get started. One of the best ways to learn about the tools is to just dive in and start clicking through the options provided for each of the tools. In addition, video tutorials are available for many of the applications. The resource list shown in the Sources above will help you find the additional

**Census-Related Resources**

- Institute for Policy and Social Research (<http://www.ipsr.ku.edu/>), The University of Kansas. Xan Wedel (xan@ku.edu), (785) 864-9111.
- Weaver, P. (2015). Census Data Tools to Support Rural Transit Service Planning Resource List. <http://www2.ku.edu/~kutc/pdffiles/CDT2015.pdf>

tools and those that might best serve your needs.

And, if you have difficulty using the tools and do not have local technical support available to you, help is readily available from your State Census Data Center(s). A listing of all the State Census Data Centers is available at: <https://www.census.gov/sdc/network.html>.

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**Table 1. Strengths and limitations of these tools**

Census Total	General Description	Strengths	Limitations
<b>American FactFinder</b>	Provides primary access to data from the American Community Survey, the Economic Census, the Population Estimates Program and Annual Economic Survey. A Thematic Map can be created from any table that displays more than one geography of the same type (more than one state, more than one county, etc.).	Provides both guided searches and advanced customized searches, integrating multiple data sets. Very easy to use to create tables.	Mapping function is somewhat difficult to use – not all levels of geography are supported by mapping. Best used for tables of data.
<b>QuickFacts</b>	Provides frequently requested Census Bureau information at the national, state, county, and city level	Quick, easy listings of key Census data.	Analysis detail is limited to the county level. Basic thematic map displays.
<b>OnTheMap</b>	Mapping & reporting application showing where workers are employed & where they live with companion reports on worker characteristics.	Multiple parameters to display on maps and in graphical charts. Very useful in visualizing the travel patterns of the workforce to support employment transportation planning.	Requires some practice to consistently display the maps and charts (primarily because of its strength in allowing customization).

Source: KU Transportation Center, 2015; U.S. Bureau of the Census