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NASHVILLE REGION'S 2019 VitalSigns®

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This report was prepared in cooperation with the U.S. Department of Transportation Federal Highway Administration and Federal Transit Administration, and the Tennessee Department of Transportation.

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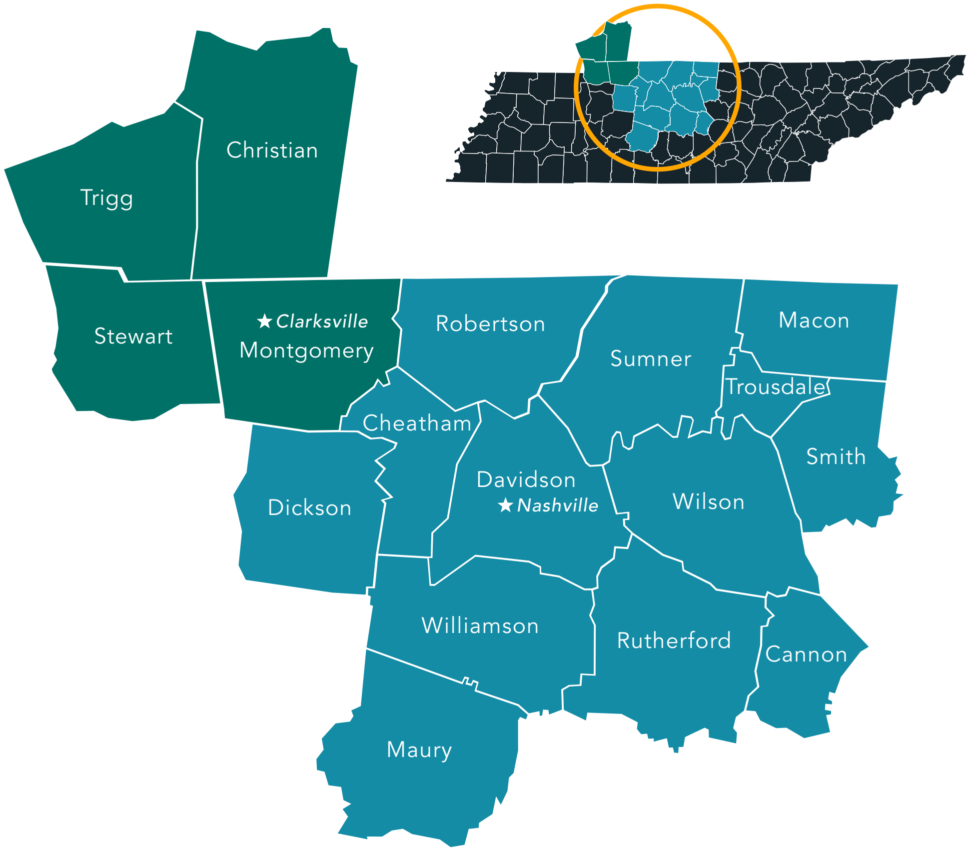
ABOUT VITAL SIGNS

Now in its seventh year, the Vital Signs report tracks existing and emerging issues that impact the Middle Tennessee region's economic well-being and quality of life. Vital Signs considers each issue and pairs data from the Census and other sources with original survey data from a survey of Middle Tennessee residents – creating an understanding of the issues before the region and how Middle Tennesseans feel about and understand those issues. Vital Signs is created by the Nashville Area Chamber of Commerce, relying on the Chamber's Research Center for data collection and analysis. The Greater Nashville Regional Council (GNRC) is the Chamber's lead partner in the creation of Vital Signs.

Chamber leaders brought the Vital Signs program to Nashville after the Chamber's Leadership Study Mission to Toronto in 2011 where Nashville leaders learned of Toronto's Vital Signs initiative. The Vital Signs process was created in 2001 by Community Foundations of Canada as a broad, agenda-setting mechanism focused on outcomes and solutions to key community issues. The Vital Signs trademark is used with permission from Community Foundations of Canada.

Vital Signs 2019 highlights five issues impacting the Middle Tennessee Region. This report also provides takeaways and solution-oriented ideas on how residents might engage on these issues of regional importance.

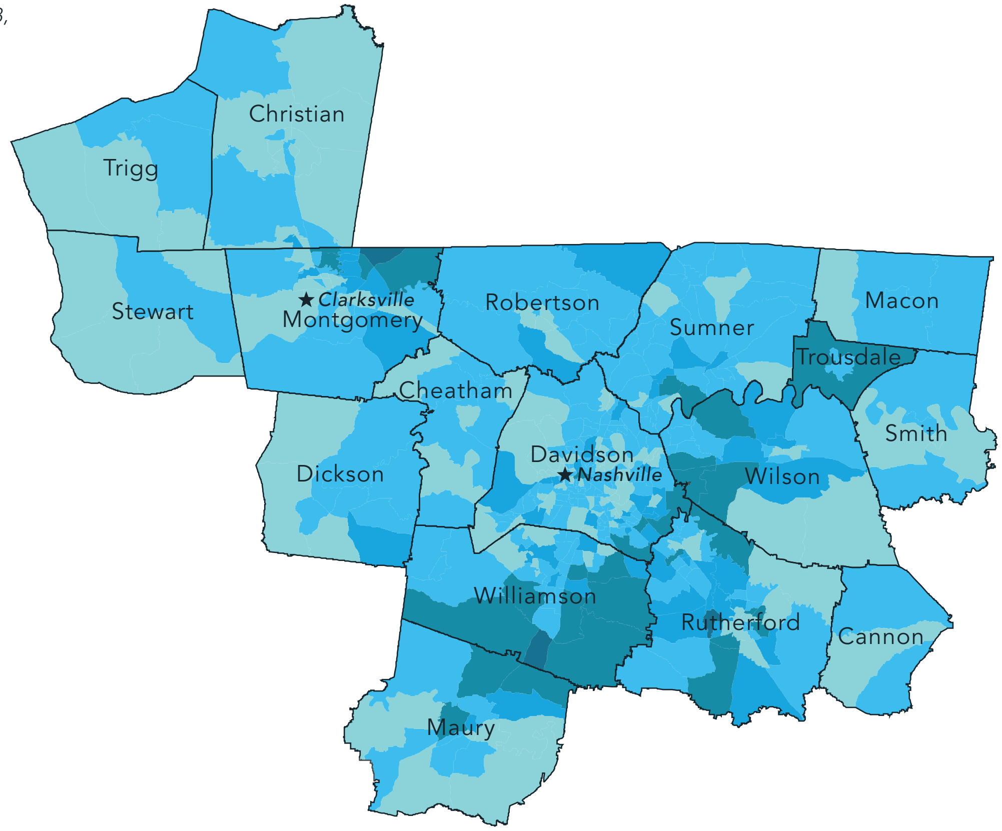
Metropolitan Statistical Areas (MSAs) are geographic entities with a core urban area of 50,000 or more population, delineated by the Office of Management and Budget (OMB), and revised with the Decennial Census. Unless otherwise noted, data presented throughout this edition of Vital Signs represents the combined Nashville and Clarksville MSAs.

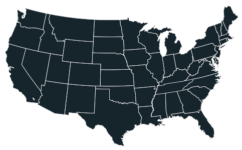


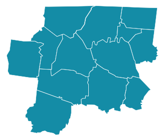
POPULATION CHANGE BY **CENSUS** TRACT

Between 5-Year Periods: 2009-2013 and 2014-2018, American Community Survey 5 Year Estimates

- **Negative Change – 25**
- **25 – 700**
- **700 – 1500**
- **1500 – 3500**
- **3500 – 6500**







	United States	Clarksville MSA	Nashville MSA
Population	328,239,523	307,820	1,934,317
Median Age	38.2	30.5	36.5
Median Home Value	$229,700	$168,600	$261,900
Median Household Income	$61,937	$51,280	$65,919
Educational Attainment High School or Above	88.3%	92.7%	90.0%
Educational Attainment Bachelor's Degree or Above	32.6%	27.7%	35.9%
Population With Commute of 45 Minutes or More	17.9%	13.8%	19.9%

WORKFORCE DEVELOPMENT

TOPLINE

★ The Clarksville and Nashville MSAs have significant untapped talent. Adults who could be trained or re-trained can provide a game-changing pipeline of talent for existing and new businesses, as well as provide life-changing opportunities for Middle Tennessee residents.

★ The continued expansion of automation and artificial intelligence will change the nature of many existing, well-paid jobs. This new reality requires action across the region to prepare workers to thrive in this new environment.

Today's model for successful economic development hinges on workforce. Companies will only consider a city or region if they see a path to secure the workforce their company needs.

Policymakers often discuss workforce in terms of what percentage of people are unemployed and looking for work. The Vital Signs survey conducted of residents in the Nashville and Clarksville MSAs in fall of 2019 found an unemployment rate of **9%**, meaning that just under **10%** of the region's residents were unemployed and looking for work. With a regional economy that, at the close of 2019 was on the rise, this was a stark difference from the normally reported **2% - 4%** unemployment rates. See the related sidebar for explanation of this difference.

Adding more detail to the picture, the Vital Signs' resident survey also found that **18%** of those working hold more than one job.

Most people **think that unemployment measures** are based on the **number of people collecting unemployment benefits**, but since **those benefits can run out prior to one getting a job**, it **is an incomplete measure**. Thus, unemployment is also measured **each month** through the **Current Population Survey** that utilizes a **statistically significant sampling size** on a larger geographic level. That sample size **decreases** as one approaches a more **localized geography**. For example, a sample size of **900 respondents** on the state level is f**ar less significant** when spread **across 95 counties**. While the ***Vital Signs* survey** has a **much larger sampling** on the county level, it was **not intended** as a stringent labor force assessment survey and is **far less strict** in the questions it asked to determine whether an individual is **truly considered employed** or **unemployed**.

Middle Tennessee region's workforce pipeline is supplied through three streams:

First, the region has a pipeline of workers trained through educational opportunities, including traditional Pre-K through 12 education and post-secondary education for young people, as well as adults returning to school for post-secondary education or certification.

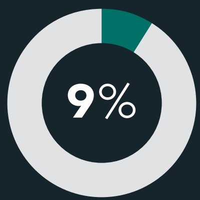
Second, Middle Tennessee has experienced success in attracting talent. There is a large migration of skilled workforce moving to the region from other areas of the country and the world.

Third, the retention of existing workforce is critical. Ensuring that the existing workforce wants to stay in Middle Tennessee and sees paths to opportunity and success in the region is crucial.

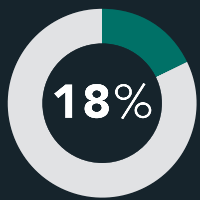
Each of these pipelines have a positive impact on providing educated and skilled workers. However, data shows that while Middle Tennessee is successfully attracting new talent and retaining existing talent, the region is not training homegrown talent to meet the jobs of tomorrow. There is promise here, however, with over **25%** of survey respondents signifying that they intend on pursuing additional formal education within the next two years. Providing opportunities and support for the existing workforce to gain new skills, certifications and degrees is crucial to developing the workforce that employers seeks. Analyzing current disparities between educational attainment levels and racial and ethnic groups is key in discussions about where workforce development can be proactive in attempts to eliminate these disparities moving forward.

The largest jump in earnings between educational attainment levels occurs at Bachelor's level attainment, with a **38%** increase. There is a **34%** increase when a high school diploma or equivalent is attained, a **19%** increase with some college or an Associate's degree, and a **24%** increase with a Graduate or Professional Degree. The educational attainment and earnings data demonstrate that Black or African American, Two or More Races, and Hispanic or Latino groups are underrepresented at Bachelor and higher educational attainment levels. White and Asian groups both see increases at this juncture.

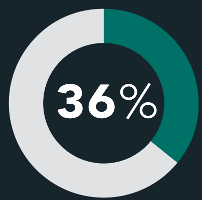
SURVEY RESULTS



OF RESIDENTS UNEMPLOYED AND LOOKING FOR WORK



OF RESIDENTS HOLD MORE THAN ONE JOB



OF MT WORKERS FEEL THEY WILL NEED ADDITIONAL EDUCATION OR TRAINING TO ADVANCE THEIR CAREER

Source: Vital Signs 2019 Survey

EDUCATION AND **MEDIAN EARNINGS** IN THE **NASHVILLE** MSA

EDUCATION

	White Alone	Black or African American Alone	Asian Alone	Two or More Races	Hispanic or Latino	White, Not Hispanic or Latino
Less than High School	9.2%	11.9%	15.0%	6.9%	36.0%	7.8%
High School Diploma or Equivalent	27.3%	28.2%	17.7%	21.6%	30.2%	26.8%
Some college, no degree	20.0%	24.9%	8.1%	26.4%	12.6%	20.4%
Associate's degree	7.2%	8.0%	5.4%	6.0%	4.3%	7.3%
Bachelor's degree	24.1%	16.6%	29.0%	26.7%	12.0%	24.7%
Graduate or professional degree	12.5%	10.4%	24.8%	12.4%	4.9%	12.9%

Source: American Community Survey 2016-2018 1-Year Estimates, 3 Year Weighted Average

MEDIAN EARNINGS

BY EDUCATIONAL ATTAINMENT

$23,072 **LESS THAN** HIGH SCHOOL

$30,888 HIGH SCHOOL **DIPLOMA** OR **EQUIVALENT**

$36,724 **SOME** COLLEGE OR **ASSOCIATE'S** DEGREE

$50,764 **BACHELOR'S** DEGREE

$62,697 **GRADUATE** OR **PROFESSIONAL** DEGREE

BY RACE

$30,942 **AMERICAN INDIAN** OR **ALASKA NATIVE**

$37,188 **ASIAN**

$27,814 **BLACK** OR **AFRICAN AMERICAN**

$25,194 **NATIVE AMERICAN** AND **PACIFIC ISLANDER**

$25,131 **OTHER**

$29,543 **TWO** OR **MORE** RACES

$36,606 **WHITE** ALONE

BY ETHNICITY

$24,017 **HISPANIC** OR **LATINO**

$39,919 **WHITE ALONE, NOT HISPANIC** OR **LATINO**

Source: American Community Survey 2014-2018 5-Year estimates

EDUCATION AND **MEDIAN EARNINGS** IN THE **CLARKSVILLE** MSA

EDUCATION

	White Alone	*Black or African American Alone*	*Hispanic or Latino*	*White, Not Hispanic or Latino*
Less than High School	**8.3%**	**11.7%**	**13.9%**	**7.8%**
High School Diploma or Equivalent	**29.3%**	**27.8%**	**20.2%**	**30.2%**
Some college, no degree	**27.0%**	**28.3%**	**31.1%**	**26.5%**
Associate's degree	**9.7%**	**11.2%**	**12.2%**	**9.4%**
Bachelor's degree	**16.8%**	**13.8%**	**15.5%**	**17.0%**
Graduate or professional degree	**8.9%**	**7.2%**	**7.0%**	**9.0%**

Source: American Community Survey 2016-2018 1-Year Estimates, 3 Year Weighted Average

MEDIAN EARNINGS

BY EDUCATIONAL ATTAINMENT

$**20,209**
LESS THAN HIGH SCHOOL

$**31,211**
HIGH SCHOOL **DIPLOMA** OR **EQUIVALENT**

$**34,428**
SOME COLLEGE OR **ASSOCIATE'S** DEGREE

$**42,180**
BACHELOR'S DEGREE

$**53,502**
GRADUATE OR **PROFESSIONAL** DEGREE

BY RACE

$**25,617**
ASIAN

$**26,792**
BLACK OR **AFRICAN AMERICAN**

$**23,013**
OTHER

$**22,054**
TWO OR **MORE** RACES

$**32,086**
WHITE ALONE

BY ETHNICITY

$**27,295**
HISPANIC OR **LATINO**

$**32,411**
WHITE ALONE, NOT HISPANIC OR **LATINO**

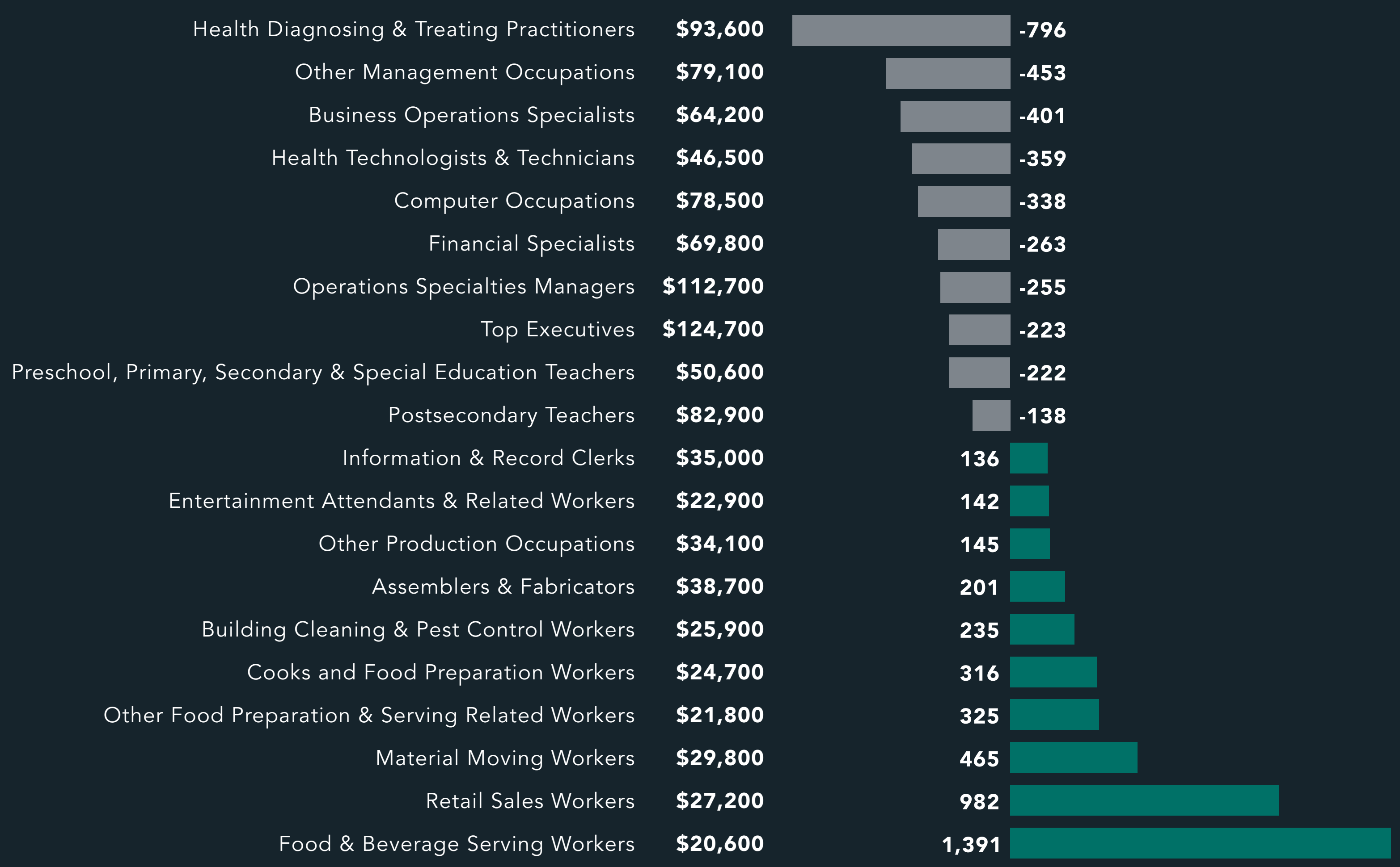
Source: American Community Survey 2014-2018 5-Year estimates

The Vital Signs' regional resident survey reveals that many Middle Tennessee workers understand the need for additional skills training to succeed in the current and future work environment. In fact, **36%** of Middle Tennessee workers feel they will need additional education or training to advance their career.

These workers are correct – types of occupations are changing, and the skills needed to fill these occupations are changing. In the next ten years, the Nashville MSA will continue to see a shortage of skilled workers in healthcare, finance, technology and education while continuing to see a surplus of lower skilled workers who will also be most impacted by automation. Middle skill workers such as machinists and CNC operators reach an equilibrium point.

OCCUPATIONAL **GAPS**

POTENTIAL AVERAGE ANNUAL OCCUPATION GAPS OVER 10 YEARS IN THE **NASHVILLE MSA**



Source: JobsEQ Data as of 2019Q3 except wages which are as of 2018.

Likewise, the Clarksville MSA also sees a shortage of healthcare, management, and technology workers, however social services occupations will also be in demand. Unlike the Nashville MSA, middle skilled workers such as those employed in metals and plastics (stamping and molding) will also be in surplus. This presents an opportunity to the Clarksville MSA to focus on industries like medical device manufacturing which much like the automotive industry has a need for these skilled workers.

OCCUPATIONAL **GAPS**

POTENTIAL AVERAGE ANNUAL OCCUPATION GAPS OVER 10 YEARS IN THE **CLARKSVILLE MSA**

Health Diagnosing & Treating Practitioners	$89,900	-60
Other Management Occupations	68,100	-44
Preschool, Primary, Secondary & Special Education Teachers	55,800	-40
Health Technologists & Technicians	42,100	-27
Business Operations Specialists	58,700	-25
Computer Occupations	68,600	-19
Counselors, Social Workers & Other Community & Social Service Specialists	41,400	-19
Top Executives	91,600	-19
Financial Specialists	59,000	-16
Opertations Specialties Managers	89,600	-15
Textile, Apparel and Furnishings Workers	26,700	10
Metal Workers and Plastic Workers	39,500	11
Building Cleaning & Pest Control Workers	25,300	21
Assemblers & Fabricators	36,200	22
Other Production Occupations	36,800	23
Other Food Preparation & Serving Related Workers	19,400	28
Material Moving Workers	29,400	29
Cooks and Food Perparation Workers	21,700	35
Retail Sales Workers	23,800	92
Food & Beverage Serving Workers	20,700	133

Source: JobsEQ Data as of 2019Q3 except wages which are as of 2018.

TRANSIT/TRANSPORTATION

TOPLINE

- ★ The value of transportation is in providing *access* – giving residents access to jobs, education and amenities – to fully participate in the region's economy and civic life.
- ★ Middle Tennessee residents remain interested in road-widening to address congestion concerns, despite research and statements from transportation officials and elected officials in Middle Tennessee that road-widening won't alleviate onerous commutes.
- ★ With Middle Tennessee's rapid and projected growth, the region must invest in transit to allow more residents to move efficiently and conveniently around the region.
- ★ Dedicated transit funding is key to the continued vitality of the region, yet Middle Tennessee residents are unclear on which revenue sources can generate enough to meaningfully impact transportation.

As the Middle Tennessee region grows, the need for effective, reliable, regional mobility options grows more pressing. Over **30%** of regional residents within the Nashville and Clarksville MSAs commute across county lines when traveling to work, demonstrating the link between transportation investments, workforce development, and the health and success of the region's economy. The Vital Signs Middle Tennessee residents' survey noted that, **for 69% of respondents, traffic patterns have gotten worse during the last two-year period.**

As noted above, Middle Tennessee's economic health is now driven, in large part, by availability of workforce. Through this lens, transportation is critical and the goal for transportation investment should be access to jobs and educational opportunities.

TRANSIT ACROSS THE REGION

	Clarksville MSA	Montgomery County	Nashville MSA	Davidson County
Jobs Accessible in **30-minute Trip** for an Average **Household**	*3,063*	*4,401*	*36,857*	*86,746*
Jobs Located within **1/2 Mile of Transit**	*27.7%*	*44.1%*	*54.3%*	*83.4%*
Workers Living within **1/2 Mile of Transit**	*13.9%*	*19.8%*	*32.3%*	*67.9%*

Source: Center for Neighborhood Technology, AllTransit

While Vital Signs resident survey respondents were clear on how traffic is negatively impacting their lives, their familiarity with the solutions to address the challenge is fraught with mixed signals and misunderstanding of how investment in different modes and infrastructure could make significant improvements. Additionally, the survey findings revealed that Middle Tennessee residents did not understand which funding sources were available for transportation and transit improvements, and what levels of revenue would be necessary to move the needle on improving mobility.

When asked specifically about the need for leaders to provide Middle Tennesseans with a plan – including a funding strategy – for regional transit, over **73% of survey respondents replied that it was "moderately" to "extremely important."** Yet, when asked if they would support some sort of tax increase to fund transit solutions, only **37% of residents polled said yes.**

The Vital Signs resident survey results also reveal a lack of consensus among residents in which investments – including roads and interstates, transit, smart technology – they believe will improve mobility and access. Survey respondents were supportive of increased bus service and frequency, traffic light optimization, dedicated bus lanes, and even a rail service. However, the most preferred solution across the region is to widen or expand our existing roads. Studies have shown that this is not a viable solution. Roads and interstates that are widened are known to "induce demand," which means that as the road is widened, more drivers are drawn to it and the capacity gains that were touted as the benefit of the road widening are soon overwhelmed by the new drivers drawn to the road and congestion follows (Lee, 1999). Middle Tennessee's rapid growth – and its projected future growth (see below) – dictate that road and interstate widening are not the solution to give Middle Tennesseans the access they need to jobs, education and amenities.

As the Tennessee Department of Transportation, the Greater Nashville Regional Council and many local mayors have noted, the region simply cannot build its way out of the problem. The focus must be on providing transit to help Middle Tennesseans move efficiently and conveniently around the region.

SURVEY RESULTS

What top strategy would you like to see the region **focus on more** as we look to **improve traffic conditions**?

Strategy	%	Strategy	%
WIDEN/EXPAND EXISTING ROADS	27.1%	IMPROVE CYCLING INFRASTRUCTURE	5.4%
OPTIMIZE TRAFFIC-LIGHT MANAGEMENT	17.0%	BUILD MORE RING ROADS	4.1%
BUILD A RAIL NETWORK ALONG MAJOR INTERSTATE CORRIDORS	16.6%	CHARGE A CONGESTION ROAD PRICING AT TOLLS	5.0%
INCREASE BUS FREQUENCY, OPERATING HOURS, LINES AND CROSSTOWN CONNECTIONS	12.5%	BUILD TUNNELS	2.9%
ADD DEDICATED BUS LANES	6.5%	OTHER	3.1%

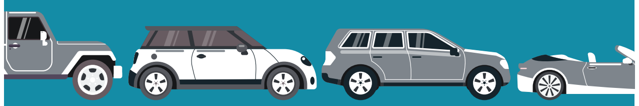
Percentage of respondents who **support** each **funding source type for transit**.

%	Funding source	%	Funding source	%	Funding source
39.6%	VEHICLE REGISTRATION FEE OR WHEEL TAX	33.5%	SALES TAX	24.2%	PROPERTY TAX
37.4%	VEHICLE EMISSIONS FEE	32.9%	GAS TAX	22.5%	TAKE FUNDING FROM OTHER SOURCES

Source: Vital Signs 2019 Survey

By **2045** our region's **population** is expected to **increase by 60%** and the amount of **road congestion** is expected to **more than double.**

Source: Greater Nashville Regional Council, 2019



Respondents to the Vital Signs Middle Tennessee residents survey also preferred funding sources that research has shown will not generate viable amounts of funding needed to meaningfully invest in improved mobility. The respondents' preferred transportation investments are not the investments that research shows could actually improve access. Meanwhile, the funding sources that are most popular with survey respondents cannot generate enough funding to make significant improvements.

Moving Forward, a group of business and community leaders dedicated to creating regional transportation solutions, conducted a study of viable revenue streams to fund transit. The study revealed that a dedicated sales tax or property tax revenue stream is the most viable source to fund transit, with sales tax being the most commonly utilized. These two revenue sources generate substantially greater revenues than others commonly used such as vehicle registration or emissions fees. For example, a half-cent sales tax increase could potentially generate an additional $143 million across the region, while a one-cent property tax increase could potentially generate an additional $5.2 million across the region. In contrast, a revenue source such as vehicle registration fees could potentially generate between $1.3 and $2 million for every additional dollar levied through the fee. *(movingforward-midtn.com)*

The area that is unclear is how residents view the relationship between transit solutions and dedicated funding. The Middle Tennessee region has the ability raise taxes for transit funding on a county by county basis (through the IMPROVE Act) or through a Regional Transportation Authority-created district (across jurisdictions through 2009 legislation on Regional Transportation Authorities). Cross-jurisdictional agreements between counties could be used to fund and build out transit infrastructure. However, as noted above, the Vital Signs regional resident survey revealed support for transit options, but very little commitment to funding these options through additional taxing measures.

Clearly, much more must be done to make the case for transit as the most efficient and effective way to allow Middle Tennessee's existing and growing population to access jobs, education and amenities and the need for dedicated funding to make transit a reality.

WHAT'S **NEXT**

Support for dedicated funding is paramount if the Middle Tennessee region wants to improve transportation options and give all Middle Tennesseans more access to jobs and education. Regional leaders must make the case for transit and dedicated funding, using metrics and real-life examples to demonstrate how transit investment connects residents to opportunity. Using congestion and commute time metrics do not fully tell the story of how a comprehensive transit system could impact the overall quality of life for the region and provide underserved communities increased opportunities at prosperity.

The transportation issues facing Middle Tennessee are too big and complex for any one organization or governmental agency to solve alone. It will require a coordinated effort among partners to co-create a Unified Transportation Plan, and to identify resources, roles, and responsibilities for its implementation. A new platform has been established for the development of Middle Tennessee's Unified Transportation Plan. Adoption of this plan is set for early 2021 and activities leading up to its completion must provide an opportunity to make the case for transit investments and the need for dedicated funding.

Visit ***SolveThisTogether.org***.

Transportation is of course, a continuing issue of concern for business and community stakeholders. These groups have taken the initiative to come together, bringing expertise and influence to transportation solutions across the Nashville region. Moving Forward is one such group that is dedicated to creating regional transportation solutions that work for Middle Tennesseans. Moving Forward brings the community together by empowering business, community, and transit thought leaders to engage with the critical transportation issues facing Middle Tennessee.

Visit ***movingforwardmidtn.com***

HOUSING

TOPLINE

- ★ In the Vital Signs survey, Middle Tennessee residents voiced concern about their future financial security. Housing expenses are the largest expense faced by most households and have risen rapidly in Middle Tennessee.
- ★ In the same survey, **39%** of respondents met the definition of "housing cost burdened," by spending over **30%** of their income on housing. The figure was higher for respondents who were African American or Latino, who are renters, or who had lower educational attainment.
- ★ Housing affordability and workforce development are linked in two directions. Residents with lower educational attainment are less successful in the workforce and more likely to be housing cost-burdened. Meanwhile, the lack of housing to meet the needs – cost, size, location – of workers impacts where workers can live and their access to jobs and education.

Affordability is a critical issue for Nashville and Middle Tennessee residents. Cost of living, including the two main expenses faced by most households – housing and transportation costs – continue to rise as the region grows. Despite experiencing income growth, many residents struggle to find the housing types and locations they prefer within their budget. Residents could be experiencing this issue for several different reasons: overall affordability of homes, locations of housing, or type of housing to fit the household's needs.

As with transportation, housing affordability is a crucial issue for workforce and, as such, is a crucial issue for the region's economic health and prosperity. Housing affordability and workforce development are linked in a manner that can create a vicious cycle. Residents with lower educational attainment are less successful in the workforce and more likely to be housing cost-burdened. Meanwhile, the lack of housing to meet the needs – cost, size, location – of workers impacts where workers can live and their access to jobs and education to attain a better job.

SURVEY RESULTS

What is the top **reason you chose your community** and **your home**?

AFFORDABILITY OF THE HOUSING IN THE AREA	17.3%
FAMILY CONNECTIONS	13.1%
AVAILABILITY OF THE TYPE OF HOUSING WANTED	11.0%
SAFETY	8.7%
NEIGHBORHOOD FEEL (SENSE OF PLACE)	8.4%
GREW UP IN THIS COMMUNITY	8.0%
DISTANCE TO MY JOB	7.2%
QUALITY OF SCHOOLS FOR HOUSEHOLD'S CHILDREN (NOW OR IN THE FUTURE)	7.2%
OTHER	4.5%
ACTIVITIES AND AMENITIES AVAILABLE FOR MY FAMILY	3.0%
DISTANCE TO INTERSTATES	2.7%
DISTANCE TO SCHOOLS	2.3%
ACTIVITIES AND AMENITIES AVAILABLE FOR PEOPLE MY AGE	2.0%
PARKS AND GREENSPACE	1.8%
SERVICES OFFERED BY THE COMMUNITY	1.4%
SOCIAL NETWORK	1.0%
DISTANCE TO PUBLIC TRANSIT	0.8%

Source: Vital Signs 2019 Survey

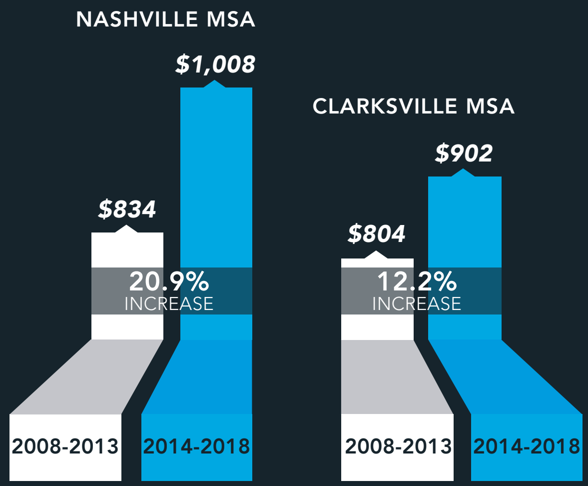
44% of **Middle Tennessee residents** rank **affordability** as one of their **top three priorities** when choosing a home and community.

Source: Vital Signs 2019 Survey

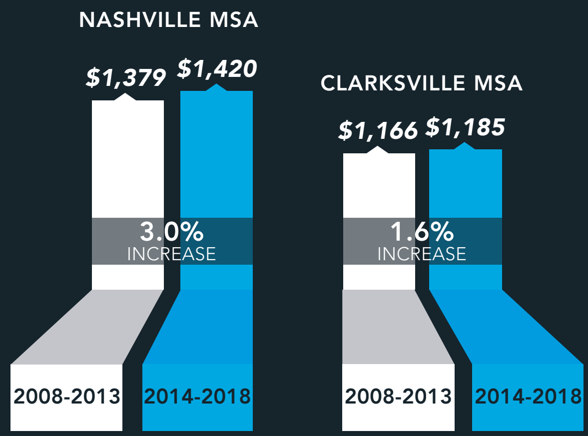
HOUSING COSTS CHANGE **OVER TIME**

Source: ACS 2013-2018 5-Year estimates

MEDIAN GROSS **RENT**



MEDIAN MONTHLY **OWNER COSTS** WITH **MORTGAGE**



MEDIAN HOUSEHOLD **INCOME INCREASE** PAIRED WITH **MEDIAN HOME PRICE INCREASE** FOR THE REGION

Median home price as an obstacle to homeownership juxtaposed against the increase in median household income shows that even though monthly costs increased much less for homeowners, sale price has increased at a much higher rate than income. This is most notable in the Nashville MSA.

NASHVILLE MSA

MEDIAN HOME PRICE

5 YEAR INCREASE ***51.2%***

10 YEAR INCREASE ***40.7%***

MEDIAN HOUSEHOLD INCOME

5 YEAR INCREASE ***26.8%***

10 YEAR INCREASE ***27.2%***

CLARKSVILLE MSA

MEDIAN HOME PRICE

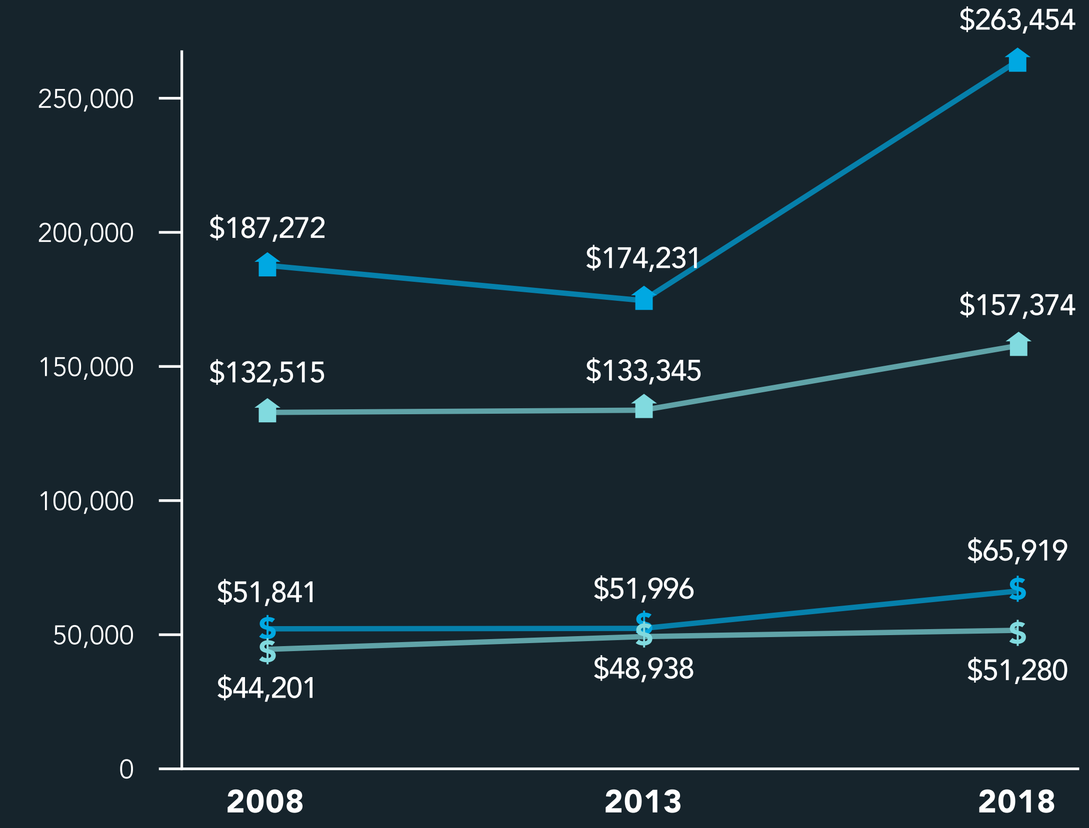
5 YEAR INCREASE ***18.0%***

10 YEAR INCREASE ***18.8%***

MEDIAN HOUSEHOLD INCOME

5 YEAR INCREASE ***4.8%***

10 YEAR INCREASE ***16.0%***

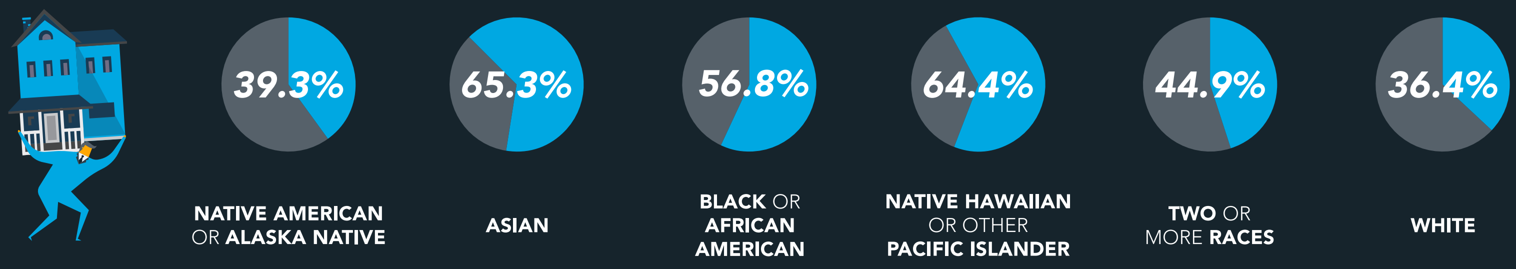


Source: ACS 2018 1 Year Estimates, Zillow

Construction of new housing has not kept pace with the region's rapid growth. As a result, residents continue to experience increases in home pricing. **The Vital Signs Middle Tennessee resident survey revealed that 39% of households spend more than a third of their take home pay on rent or mortgage costs.** That number significantly increases when considering non-white households and ownership status. This begs the question of how the community as a whole is benefiting from the current prosperity of the region.

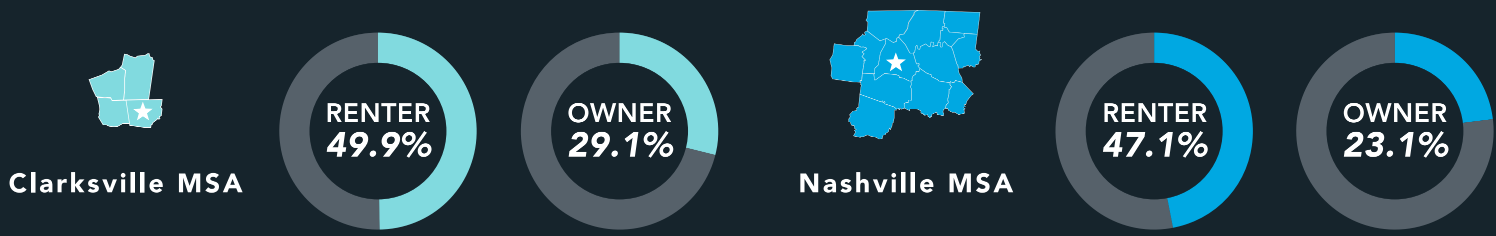
Dimension is added to the concept of cost burden by considering transportation costs as well. The Housing and Transportation Index produced by the Center for Neighborhood Technology sets the transportation burden threshold at **15%** and finds that this applies to **100%** of households in the joint-metro region. Utilizing this **45%** of income metric for housing and transportation combined dramatically increases the percentage of total household that are cost burdened to **75%** in the Nashville MSA and **88%** in the Clarksville MSA.

HOUSING **COST BURDENED** BY **RACE/ETHNICITY**



Source: Vital Signs 2019 Survey

HOUSING **COST BURDENED** BY **OWNERSHIP STATUS**



Source: American Community Survey 2018 1 Year Estimates

WHAT'S **NEXT**

In 2020, the Greater Nashville Regional Council (GNRC) will undertake its first ever Regional Housing Assessment to determine what types of housing exist in Middle Tennessee and what housing types are needed to meet the needs of changing demographics.

To learn more please visit ***GNRC.org***.

INFRASTRUCTURE

TOPLINE

- ★ Cities and towns across Middle Tennessee face the challenge of addressing older infrastructure stressed by growth.
- ★ Investments in transportation, education, health, safety and welfare needs account for more than **90%** of overall infrastructure needs.
- ★ Among the various infrastructure needs, regional mayors often point to the construction and maintenance of schools as the most pressing challenge.

As the Middle Tennessee region grows, the need for maintenance of existing infrastructure and construction of new infrastructure becomes more pressing. The cost of infrastructure needs across the Nashville region totals nearly **$8** billion. Transportation, education, health, safety and welfare investments account for more than **90%** of needs. Transportation infrastructure needs in Middle Tennessee alone account for nearly **20%** of statewide needs (Greater Nashville Regional Council, 2019). With Middle Tennessee projected to continue to experience population growth, it is unsurprising that the region faces significant infrastructure needs.

The State of Tennessee compiles an annual inventory of public infrastructure needs across the state. This inventory is known as the Public Infrastructure Needs Inventory (PINI). The PINI describes the extent and type of capital investment needed in each county. Categories tracked include: transportation and utilities, public buildings, water and wastewater infrastructure, law enforcement and public health related facilities and vehicles, fire protection, housing, industrial development, education related facilities and systems, and recreation or community facilities. It is important to note that the projects listed within a given, five-year timeframe may not be completed in that timeframe and may be rolled to the next five-year list. This could potentially cause projects needs and cost to increase over time.

PROJECTIONS OF INFASTRUCTURE NEEDS BY COUNTY

County	July 2014 - June 2019 Projects	July 2014 - June 2019 Estimated Cost	July 2014 - June 2019 Per Capita	July 2018 - June 2023 Projects	July 2018 - June 2023 Estimated Cost	July 2018 - June 2023 Per Capita
CANNON	84	$142,946,718	$10,391	80	$58,629,380	$4,054
CHEATHAM	120	$280,959,910	$7,066	118	$269,018,015	$6,652
DAVIDSON	671	$4,546,065,909	$6,802	723	$9,196,584,935	$13,279
DICKSON	149	$292,112,908	$5,776	151	$267,309,880	$5,001
MACON	63	$107,029,025	$4,653	67	$151,886,764	$6,259
MAURY	305	$347,517,524	$4,064	307	$422,694,580	$4,481
MONTGOMERY	323	$1,038,673,937	$5,468	367	$1,667,994,179	$8,099
ROBERTSON	210	$439,950,816	$6,462	284	$639,489,030	$9,005
RUTHERFORD	360	$1,309,206,535	$4,532	362	$1,992,320,607	$6,132
SMITH	120	$112,993,076	$5,944	121	$130,830,000	$6,561
STEWART	58	$59,364,051	$4,471	54	$35,404,000	$2,611
SUMNER	397	$643,768,014	$3,728	407	$892,507,082	$4,769
TROUSDALE	43	$162,952,947	$20,364	49	$126,788,474	$11,514
WILLIAMSON	351	$1,458,941,923	$7,109	400	$2,154,943,418	$9,299
WILSON	283	$929,780,104	$7,416	415	$1,581,143,595	$11,244

Source: Tennessee Advisory Commission on Intergovernmental Relations, 2020

SURVEY RESULTS

On infrastructure, **Middle Tennessee residents** expressed being **satisfied/very satisfied** with:

- **54.9%** MANAGEMENT OF STORMWATER RUNOFF DURING RAINS
- **49.9%** MAINTENANCE OF RURAL OR COUNTRY ROADS
- **66.0%** QUALITY OF WATER UTILITIES
- **62.8%** QUALITY OF GARBAGE COLLECTION
- **57.4%** QUALITY OF SEWER SERVICES
- **44.7%** QUALITY OF RECYCLING SERVICES
- **57.1%** MAINTENANCE OF HIGHWAYS BETWEEN CITIES
- **55.3%** AVAILABILITY OF PUBLIC PARKING
- **55.3%** MAINTENANCE OF CITY STREETS
- **68.5%** QUALITY OF PARKS AND RECREATIONAL FACILITIES

Source: Vital Signs 2019 Survey

The Vital Signs **Middle Tennessee resident** survey found that, **across infrastructure investments** - including roads, water services, parks and recreational facilities - **most residents were satisfied** or **very satisfied** with the **maintenance** and **quality** of the **facilities**.

When asked what infrastructure investment should be the focus of elected officials, Vital Signs survey respondents prioritized city streets, rural or county roads, recycling services, highways between cities, and parks and recreation (note that "schools" was not an option in this question).

In discussing the inclusion of "infrastructure" as a topic in Vital Signs 2019, county mayors noted that maintaining existing public schools and building new schools is the most pressing infrastructure need faced by many fast-growing Middle Tennessee cities and counties. Providing a safe and high-quality education for children to learn is imperative to providing access and opportunities to quality jobs in the future. A community's attractiveness is also based, in large part, on the quality (or perception of quality) of its schools, including the quality of the physical structures. In the Vital Signs resident survey, **55%** of Middle Tennesseans reported being satisfied or very satisfied with their local school district.

While transportation and utilities needs make up a significant portion regional infrastructure needs, education infrastructure needs surpass both combined. **Approximately $3.4 billion in education investments have been identified in the form of new schools, or renovations and additions at existing schools.**

SURVEY RESULTS

In order to **adequately fund** the following, would you **support** an **increase** in **sales/property taxes**?

FUND CONSTRUCTION OF NEW SCHOOLS | **FUND MAINTENANCE OF NEW SCHOOLS**

Source: Vital Signs 2019 Survey

WHAT'S **NEXT**

In recent years, regional counties and cities have raised taxes to build and maintain schools. Even with local government funds being spread thin across local needs, the Vital Signs resident survey reveals some interest in raising local tax revenue to provide safe and adequate schools for children throughout the region.

SOLID WASTE

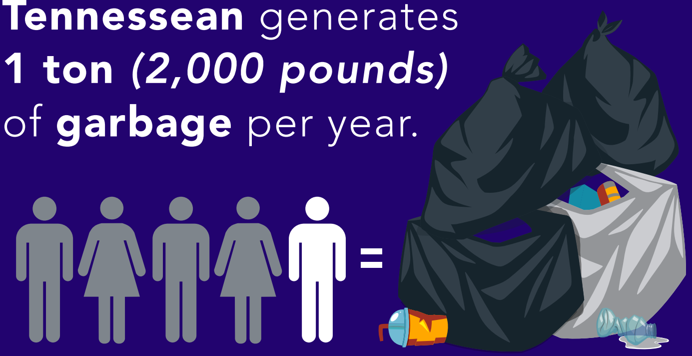
TOPLINE

- ★ With Middle Tennessee's continued growth comes commensurate growth in the amount of residential and commercial garbage generated in the region.
- ★ Regional leaders are exploring solid waste management alternatives.
- ★ The Vital Signs survey of Middle Tennessee residents shows, however, that the public has little understanding of the problem or agreement on what should be done to address the increasing challenge of trash.

With steady regional population growth, comes a steady increase in residential and commercial garbage disposal. The challenge is made more pressing by the fact that local landfills are nearing maximum capacity. This places the burden on Middle Tennessee counties to identify the most cost effective and environmentally conscious methods of reducing and managing solid waste.

In 2019, at the request of Middle Tennessee mayors, the Greater Nashville Regional Council (GNRC), in partnership with city and county solid waste departments and the Tennessee Department of Environment and Conservation (TDEC), led the development of Middle Tennessee's first Solid Waste Master Plan. Metro Nashville Public Works and the Davidson County Solid Waste Region Board have also worked to create a long-term Solid Waste Master Plan with the ultimate goal of achieving "zero waste" in the future. If a community were to achieve "zero waste," that means that **90%** of waste would be diverted from landfills. (Metropolitan Nashville and Davidson County (Metro) Solid Waste Master Plan, 2019)

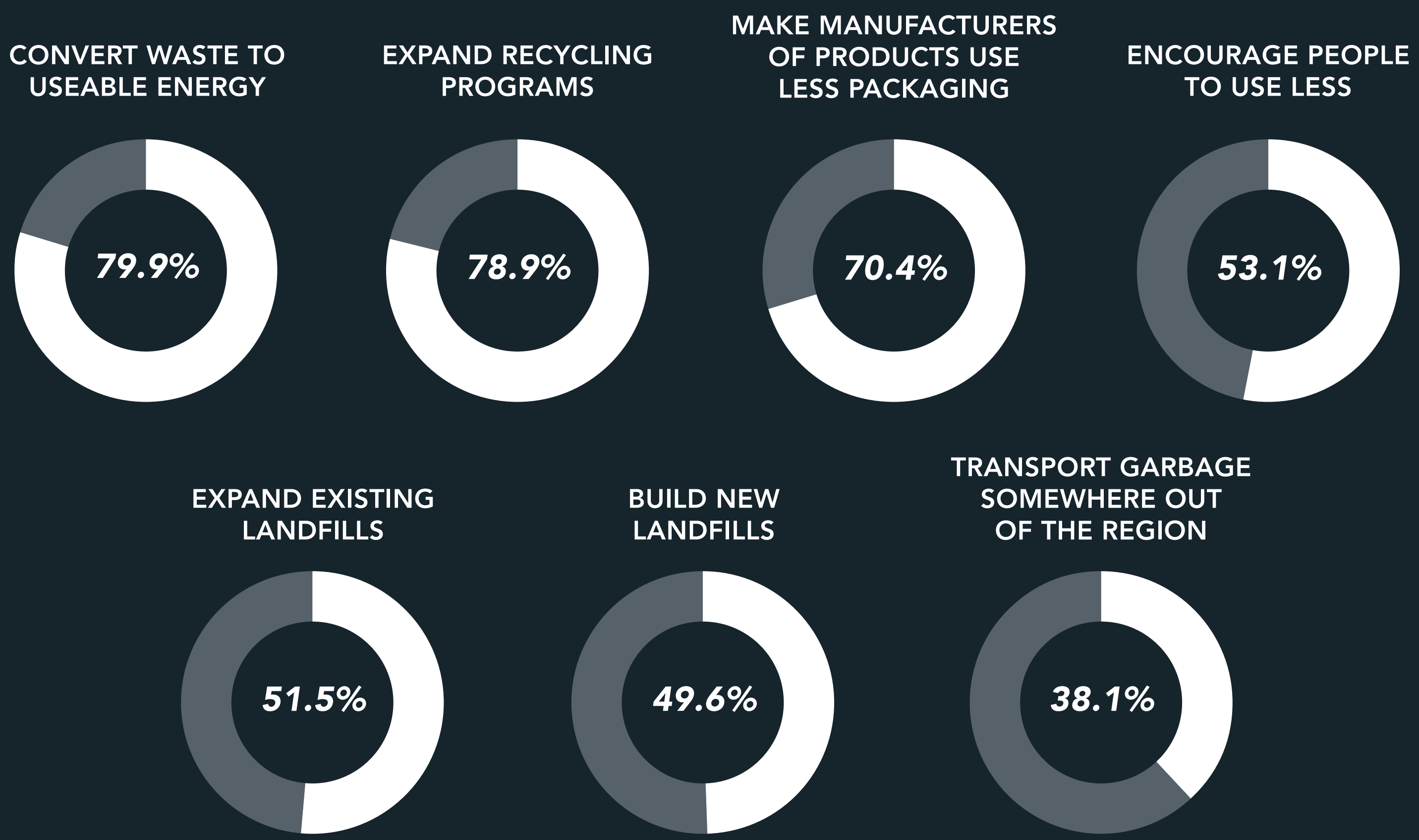
According to TDEC, **each Tennessean** generates **1 ton *(2,000 pounds)*** of **garbage** per year.



Among a variety of infrastructure and service investments, **survey respondents** listed **recycling services** as the **third priority** (behind maintenance of city street and rural/county roads).

SURVEY RESULTS

The amount of household garbage is on the rise across the Greater Nashville Area while landfill space is filling up. The following percentages represent the number of respondents that found each strategy to be somewhat or very effective in reducing solid waste.

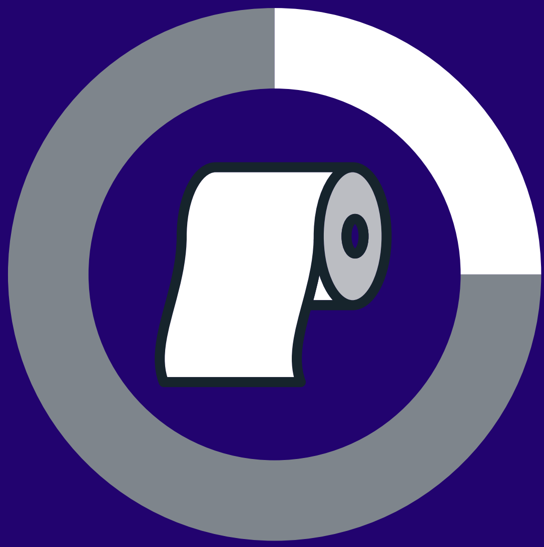


Source: Vital Signs 2019 Survey

Recycling has been front page news because of volatile markets for recyclable materials and the level of contamination that deems recyclables no better than garbage when they arrive at a recycling processing facility. Research from the Greater Nashville Regional Council found that education can help combat the problem of contamination and using southeast markets will help us get back to a realistic foundation to rebuild our recycling systems.

Regional comprehensive plans show that there is commitment among elected officials to achieve solid waste solutions throughout the region. However, this issue has not commonly been at the forefront of constituent concerns. The Vital Signs Middle Tennessee resident survey showed that most residents are unaware of the issue or are unaware of solutions that could be available to our region. Residents throughout the region want to do the right thing, but they need guidance and education to identify what the "right thing" is.

As a starting point, the Vital Signs Middle Tennessee resident survey asked respondents to identify what comes to mind when they think about "solid waste." The responses show that there is a pressing need for education around this topic. Residents aren't even clear that solid waste is different than sewage.



25%
of people think
solid waste = sewage.

Source: Vital Signs 2019 Survey