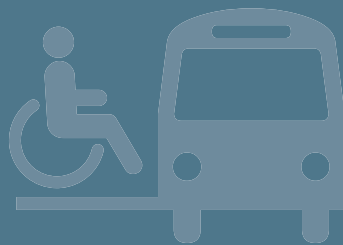
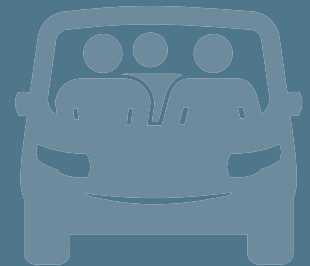
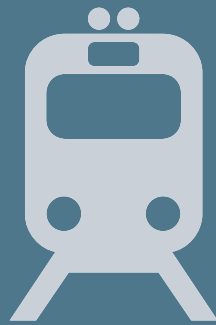
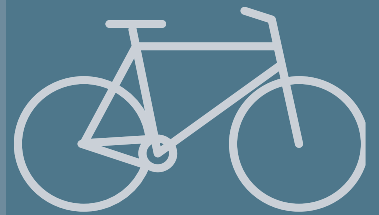
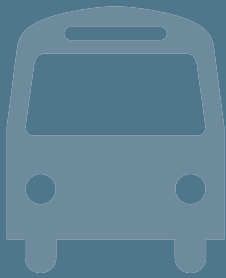


# Managing Mobility in the Atlanta Region



**ARC**

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## PLAN VISION

The Atlanta Region will provide integrated, multimodal transportation for low-income populations, older adults, veterans, limited English proficiency populations and persons with disabilities. Local and regional actors will coordinate to deliver comprehensive and mutually supportive service.

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## PLAN GOALS

- Establish a decision-making framework based on the personal process HST populations use to evaluate mobility options.
- Develop a menu of local and regional tactics that will work in a coordinated manner to improve mobility in the Atlanta region.

# NEEDS ASSESSMENT: POPULATIONS

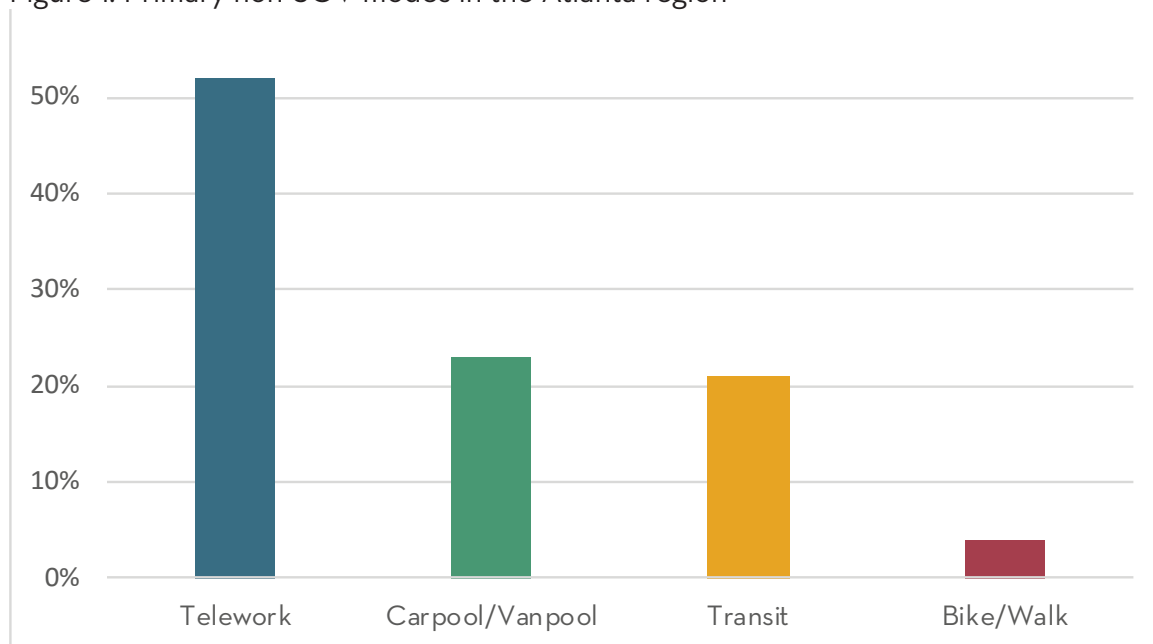
HST focuses on the transportation options available to frequently underserved populations, such as individuals with low incomes, individuals with disabilities, individuals with limited English proficiency, and older adults. The non-single occupancy vehicle (SOV) options available to HST populations include: fixed-route/guideway transit, ADA paratransit, carpool/vanpool, specialized services, and teleworking. Despite the presence of these modes in the Atlanta region, gaps persist. In assessing the needs of HST populations, the following key findings emerged:

**Non-drive alone commutes are on the upswing, and residents of metro Atlanta use a variety of non-SOV options for their travel needs.**

Fixed-route/guideway public transit is the most widely used non-SOV option due to its geographic coverage, relative affordability, travel time, availability and lack of eligibility restrictions. Carpool and vanpool are also impactful modes in the region; approximately 5% of Atlanta region residents report carpooling or vanpooling as their primary transportation mode for work commutes.<sup>1</sup>Teleworking has been a key reason for increased non-SOV commuters, increasing from 8% in 2010 to 13% in 2014.<sup>2</sup>

Hybrid demand-response/fixed route transit is a relatively new and possibly under-utilized option in the Atlanta region. Also known as deviated fixed route, this option is characterized by having a fixed route and the possibility to schedule pick-ups/drop-offs at certain locations. In the Atlanta region, the only example of this service is “Flex” in Cobb County.<sup>3</sup>

Figure 1. Primary non-SOV modes in the Atlanta region



1 2014 Regional Commuter Survey Technical Report  
2 2014 Regional Commuter Survey Technical Report  
3 CCT Flex

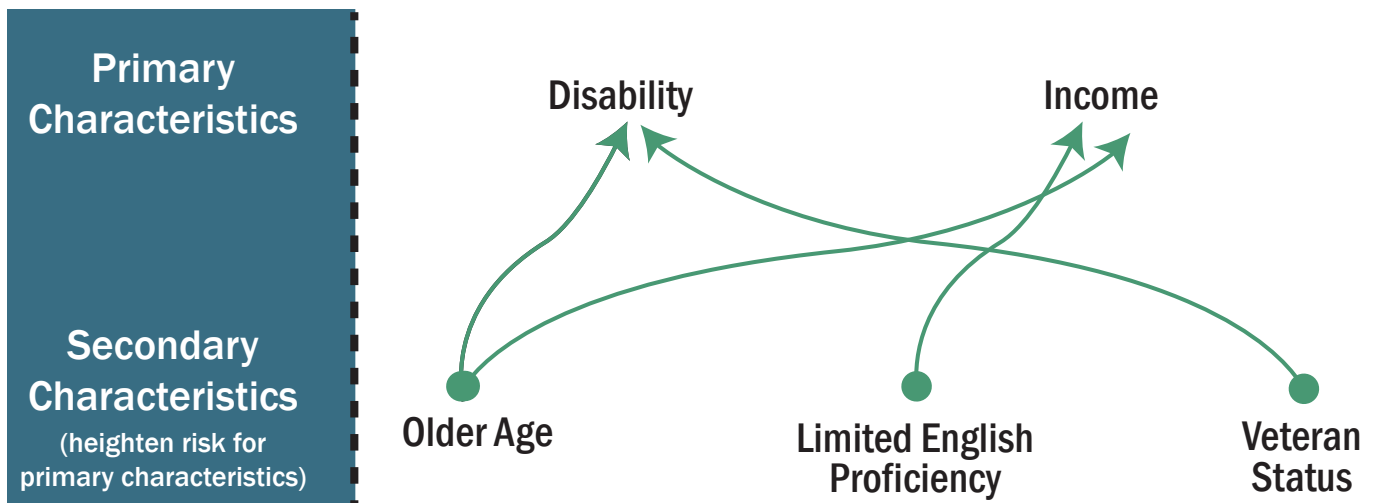
**Personal characteristics frequently compound and increase the vulnerability of HST populations (Figure 2).**

Households with lower incomes spend a disproportionately large percentage (67%) of their income on housing and transportation costs as compared to 54% for the average household in the Atlanta region.<sup>4</sup> Individuals who report having a disability are more likely to have a lower income than those who do not report having a disability. The median income for those with a disability is \$22,367 compared to a median income of \$32,968 for those who do not report having a disability.<sup>5</sup> Of adults ages 65+, 35.20% have a disability compared to 8.50% of adults aged 18-64 in the Atlanta region.<sup>6</sup> Approximately 40% older adults fall into the “low income” range compared to 23% of the region’s total.<sup>7</sup>

Of veterans nationwide, 27% report having a disability compared to 13.8% of non-veterans, and veterans make up 16% of the sheltered homeless population, but only 10% of the general population.<sup>8</sup> The foreign-born population, which represents the highest percentage of individuals with limited English proficiency (\$23,752 median income), is more likely to have a lower income than the region as a whole (\$28,753 median income).<sup>9</sup> Having a low income does not equal a lack of car ownership, in fact 23% of households in the Atlanta region have “low income”, only 6% of households in the Atlanta region are “zero car households”.<sup>10</sup>

Nine (9%) percent of total commuters are in poverty, versus 21.2% of public transit users are in poverty, demonstrating that public transit users in the Atlanta region are significantly more likely to live in poverty than driving commuters. Plus, car ownership can be significantly more expensive than public transit depending on personal factors.

Figure 2. Primary and secondary characteristics in HST populations



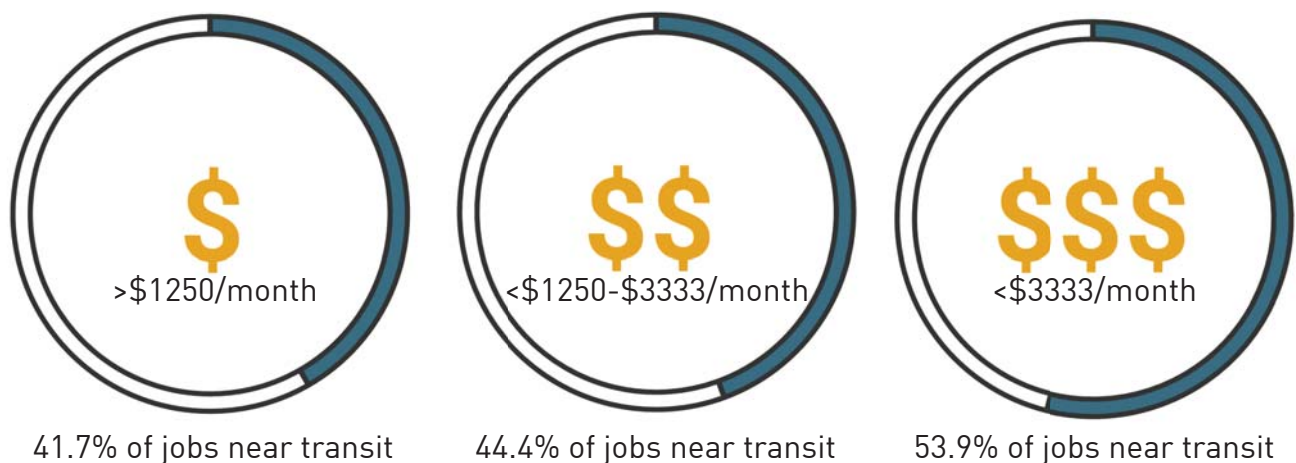
4 American Community Survey  
 5 American Community Survey  
 6 American Community Survey  
 7 American Community Survey  
 8 American Community Survey and Profile of Sheltered Homeless Veterans for Fiscal Years 2009 and 2010  
 9 American Community Survey  
 10 H+T Index Data Download

**Transit Access to origins and destinations is not comprehensive.**

The Atlanta region’s transit system accesses only 47.9% of jobs, 29% of households, and 25.8% of workers in the region.<sup>11</sup> In order for transit to be a viable option, both trip origin and destination must be near transit. The less income an individual makes, the less likely they are to have transit providing them access to employment – 41.7% of jobs held by workers making up to \$1250/month were within a half mile of transit, compared to 44.4% of jobs held by workers making \$1250-3333/month, and 53.9% of jobs held by workers making more than \$3333/month were within a half mile of transit (Figure 3 below).<sup>12</sup>

The Atlanta region has a “suburbanization of jobs” issue contributing to lack of job access. The lack of access to jobs by transit hinders economic mobility and likely results in higher rates of car ownership in the Atlanta region.

Figure 3. Low wage jobs and transit access (ACS, Center for Neighborhood Technology).



**Switching to non-SOV options may result in a myriad of other benefits.**

If the Atlanta region’s transit system did facilitate higher access to jobs and other key destinations, rates of car ownership would likely go down. If rates of car ownership and usage were reduced, then improvements could be expected in traffic congestion, air quality, and related public health concerns for the entire Atlanta region. Reducing the percentage that individuals with low income spend on transportation, potentially through public transit improvements, could reduce the need for some public assistance. Improving public transit, and other non-SOV options more broadly, could benefit not only HST populations, but the entire Atlanta region’s population.

11 American Community Survey

12 American Community Survey and Center for Neighborhood Technology.

# NEEDS ASSESSMENT: SERVICE

As HST populations try to access transportation services, they frequently encounter barriers to use. Many members of HST populations choose their home locations based on transportation options; however, that approach does not solve potential gaps in the system. Levels of awareness about transportation options vary widely; many members of the HST population may not be aware of the choices at all. Comprehensive HST requires transportation choices that meet the needs of the populations; agencies must remove barriers related to infrastructure, amenities, affordability, safety and security to improve access for all.

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## **Paratransit and fixed route coverage is geographically limited.**

The Atlanta region is served by six public transit agencies, and each agency with fixed route/guideway transit service is also required to operate paratransit service that takes people curb-to-curb within a 3/4 mile buffer of a transit route. However, the existing transit agencies and their associated paratransit services do not provide full geographic coverage of the region. In addition, some trips may extend beyond the geographic boundaries of an agency. The persisting geographic gaps in service limit transit access.

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## **Cost of service remains a concern for many low-income individuals.**

Monthly transit passes are often unaffordable for those with low incomes. Monthly passes can be prohibitively expensive; paying for a monthly pass all at once while living paycheck to paycheck is an obstacle to purchase. Additionally, when traveling as a family, the costs rapidly accumulate. With cost concerns on the forefront, it is unsurprising that many low-income households own a vehicle despite high costs of car ownership. Additional first/last mile connectivity options, such as TNCs and taxis are also too expensive for many low income households.

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## **Traditional mobility management approaches fail to incorporate HST populations.**

Mobility management works to coordinate and synchronize service within a community by focusing on all customers, including low wage workers, older adults, people with disabilities, veterans and communities with limited English proficiency. There is a general lack of awareness of transportation options, and navigating the system can be extremely complicated. A lack of smartphones and basic cellphones further exacerbates to this issue.

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## **A lack of amenities, particularly for transit and walking, is a barrier.**

Where transportation options do exist, limited service parameters and infrastructure disrepair still limit use. A lack of wheelchair accessible shuttles, poor sidewalk maintenance, and a lack of lighting continually arise as barriers faced by HST populations.

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## **Crime and the perception of crime contribute to a lack of feeling safe and secure when using non-SOV travel.**

A lack of safety and security while taking transit emerged as primary concern for HST populations. Panhandling, crime, and a perception of crime are all barriers to using public transportation.



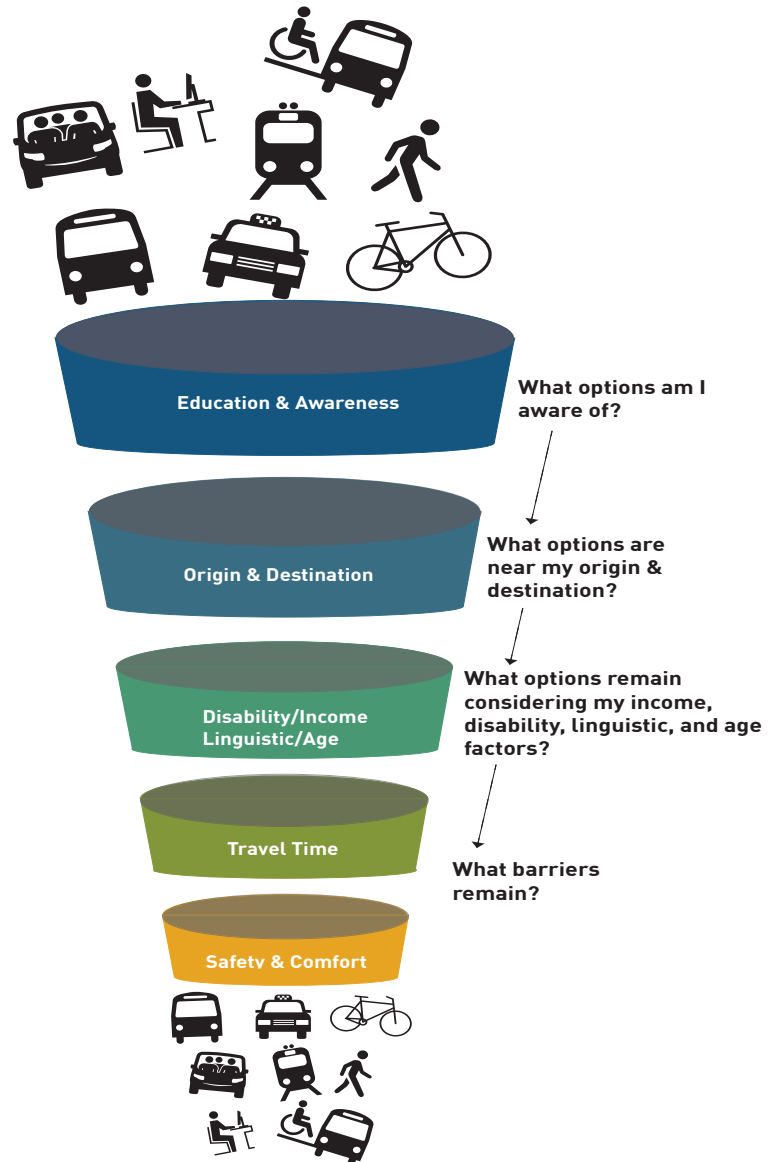
# TARGETED IMPROVEMENTS

Based on the identified needs for both HST populations and the provision of service, the plan outlines a strategic approach for action. The strategic approach identifies targeted improvements that will help to expand the transportation options available to HST populations. Using a framework that considers the personal decision-making processes of HST populations, the targeted improvements incorporate both local and regional tactics.

## Establish a framework based on personal decision-making processes.

The personal decision making process follows a funnel (Figure 4); as HST populations consider mobility options, their choices are reduced by barriers. At the beginning of the decision making process, HST populations have access to any and all options. Ultimately, after considering origins and destinations, disability/income/linguistic/age factors, travel time, and safety/comfort, HST populations are left with far fewer mobility options than non-HST populations. In order to expand options for HST populations, the plan looks at potential improvements—by mode—at each key decision-making point. The ultimate goal is to widen the options available to HST populations to the same level as non-HST populations. These improvements will yield returns across the board.

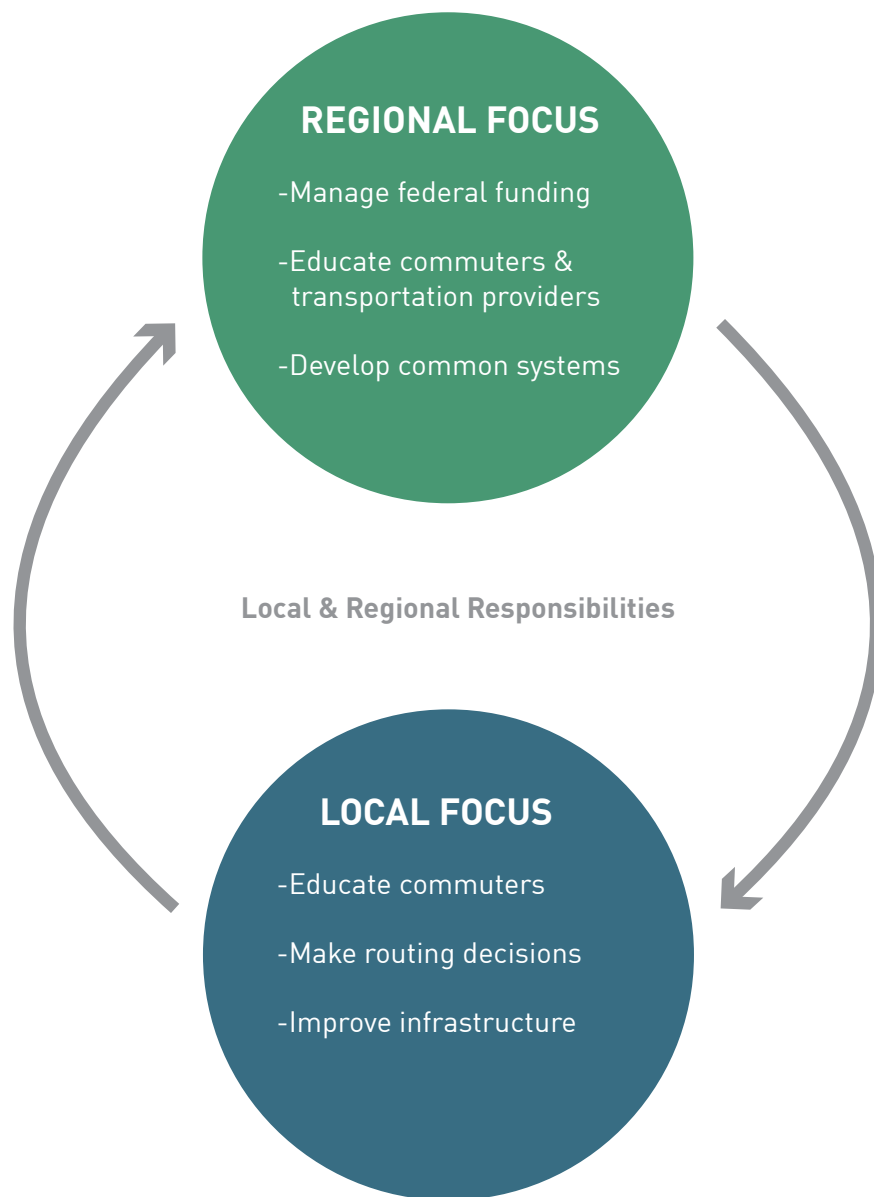
Figure 4. Personal decision-making process funnel



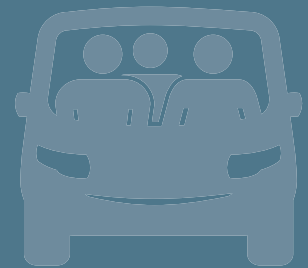
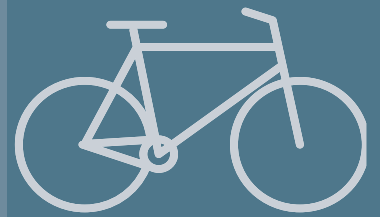
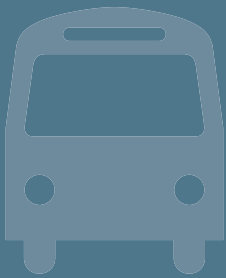
## Develop a menu of local and regional tactics that can enhance mobility in the Atlanta region.

Working along the structure of the funnel, the plan develops a multimodal menu of tactics to enhance HST in the Atlanta region. The plan suggests strategies that will work to expand the options available to HST populations on the regional and local level through education and awareness, trip origin and destination, disability/income/linguistic/age factors, travel time, and safety and comfort. Together, these strategies should work to increase the number of options available to HST populations after the decision-making process is completed.

Figure 5. Regional and local menu of options



# HST PLAN PART 1: NEEDS ASSESSMENT



**ARC**

# INTRODUCTORY INFORMATION

## Definitions

- **Area Median Income** - The “area median income” (AMI) is the median income of a certain geographic area defined annually by the United States Department of Housing and Development (HUD). The median splits the income distribution into two equal parts: one-half of the cases falling below the median income and one-half above the median.
- **Atlanta regional population** - For the purposes of this plan unless otherwise noted, the regional population is defined as the Atlanta-Sandy Springs-Roswell Metropolitan Statistical Area (MSA) and includes only the non-institutionalized, civilian population. This MSA is made up of 29 counties: Barrow, Bartow, Butts, Carroll, Cherokee, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Haralson, Heard, Henry, Jasper, Lamar, Meriwether, Morgan, Newton, Paulding, Pickens, Pike, Rockdale, Spalding, and Walton. The most recently available data at the time of this plan’s publication was the US Census’s American Community Survey 5-year estimates. (See Appendix A).
- **Demand-response transportation (DRT)** – Also known as demand-responsive transportation, this is any transportation option that takes people directly from their home to their destination without stopping or requiring a transfer. It can be a component of a trip that incorporates transit (demand-response can be combined with other options to complete the trip). These trips might also be referred to as curb-to-curb (picked up/dropped off at the curb) or door-to-door (picked up/dropped off at the door) to express this nuance. Carpool/vanpool, taxis/transportation network companies (e.g., Lyft/Uber), and specialized services (defined below, including ADA paratransit) are all types of DRT.
- **Guideway transit** - Also known as personal rapid transit, group rapid transit, or people mover, this is a capital expense for right-of-way facilities for rail or the exclusive use of buses, including the buildings and structures dedicated for the operation of transit vehicles including elevated and subway structures, tunnels, bridges, track and power systems for rail, and paved highway lanes dedicated to bus.<sup>14</sup>
- **Human Services Transportation (HST)** – An approach to transportation services and planning that integrates personal needs arising from various characteristics (e.g., age, disability, limited English proficiency, low income, and veteran status) into the larger transportation system.
- **Hybrid demand-response/fixed transit** – This option combines elements of both fixed route/guideway public transit (i.e., bus and train) and demand-response transportation (DRT, defined above). Also known as deviated fixed route, this option is characterized by having some components of fixed routes and points in the service while also providing the possibility to schedule a pick-up/drop-off at certain locations (e.g., home, various destinations). In the Atlanta region, the only example of this service, called “Flex”, is in Cobb County.<sup>15</sup>
- **Mobility Management (MM)** – An approach to transportation services and planning that focuses on coordination, capturing efficiencies, integrating modal options, and in some cases, specific needs of Human Services Transportation (HST) populations.
- **National population** - For the purposes of this plan, the national population includes only the non-institutionalized, civilian population.
- **Non-SOV options** – Non-single occupancy vehicle options (SOV) include all travel modes except

14 “Fact Book Glossary”

15 “Cobb Community Transit FLEX.”

## NEEDS ASSESSMENT

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driving a car by oneself. For the purposes of this plan, they include fixed route/guideway public transit (i.e., bus and train), cycling, walking, carpool/vanpool, taxis and transportation network companies (e.g., Lyft/Uber), “specialized services” (defined below), hybrid demand-response/fixed transit, and telework/teleconnect.

- **Personal eligibility** - This indicates the personal characteristics that identify a potential user of a service as eligible or ineligible. Many “specialized services” require a potential user to go through an eligibility determination process. Often these characteristics relate to age, disability, limited English proficiency, low income, veteran status, or a combination of multiple characteristics. Personal eligibility and “trip eligibility” may be used in combination to determine eligibility.
- **Specialized services** – These services are for people with disabilities and/or with medical needs who require a curb-to-curb trip (some may also go door-to-door). This includes Americans with Disabilities Act (ADA) paratransit provided by transit agencies as well as many other services.
- **Telework/teleconnect** – Telework is the concept of working from one’s home. Though it is not exactly a transportation mode/option, it is a commuting option with growing adoption rates in the Atlanta region. Teleconnect refers to other non-work related trips that may be done online instead of in-person (e.g., medical appointments by videoconference and online shopping).
- **Trip eligibility** – This indicates the geographic or “trip purpose” (defined below) eligibility components of a trip. For example, for ADA paratransit, only trips with both origin (starting location) and destination (finishing location)  $\frac{3}{4}$  of a mile from fixed route service are eligible. If the home location of a person (often the origin or destination) falls outside of the service area, it does not make them ineligible for the service so long as they can be transported to the service area for the ADA paratransit trip. While ADA paratransit does not have trip purpose restrictions, many specialized services do (e.g., must be medical purpose).
- **Trip purpose** – This is the primary reason for the transportation trip. Particularly for specialized services, trip purposes can be very limited (e.g., Medicaid trips are only for medical purposes).
- **Veterans** – Unless otherwise noted, this plan uses data from the US Census American Community Survey to discuss statistics related to HST populations, including veterans. The Census defines veterans as “men and women who have served (even for a short time), but are not currently serving, on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard, or who served in the U.S. Merchant Marine during World War II. People who served in the National Guard or Reserves are classified as veterans only if they were ever called or ordered to active duty, not counting the 4-6 months for initial training or yearly summer camps”.<sup>16</sup>

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16 “Veterans. Definitions and concepts.” (Emphasis added)

## Acronyms

- Aging and Disability Resource Connection (ADRC)
- American Community Survey (ACS)
- American Public Transit Association (APTA)
- Americans with Disabilities Act (ADA)
- Area Median Income (AMI)
- Atlanta Regional Commission (ARC)
- Center for Neighborhood Technology (CNT)
- Cherokee Area Transportation System (CATS)
- Federal Highway Administration (FHWA) Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Federal Highway Administration (FHWA) Surface Transportation Program (STP)
- Federal Highway Administration (FHWA) Transportation Alternatives Program (TAP)
- Federal Transportation Administration (FTA)
- General Transit Feed Specification (GTFS) data
- General Transit Feed Specification Real Time (GTFS RT) data
- Georgia Department of Community Health (DCH)
- Georgia Department of Human Services (DHS)
- Georgia Regional Transportation Authority (GRTA)
- Gwinnett County Transit (GCT)
- Human Services Transportation (HST)
- Leadership in Energy and Environmental Design (LEED) certification
- Metropolitan Atlanta Rapid Transit Authority (MARTA)
- Metropolitan Planning Organization (MPO)
- Mobility Services for All Americans (MSAA) grant
- National Center for Mobility Management (NCMM)
- Limited English proficiency (LEP)
- Regional Transportation Plan (RTP)
- Single-occupancy vehicle (SOV)
- Temporary Assistance for Needy Families (TANF)
- Transportation Improvement Program (TIP)
- Transportation Network Company (TNC)
- United States Department of Housing and Development (HUD)
- Veterans Administration (VA)
- Veterans Transportation and Community Living Initiative (VTCLI)
- World Health Organization (WHO)

# HST PLAN PART 1: NEEDS ASSESSMENT

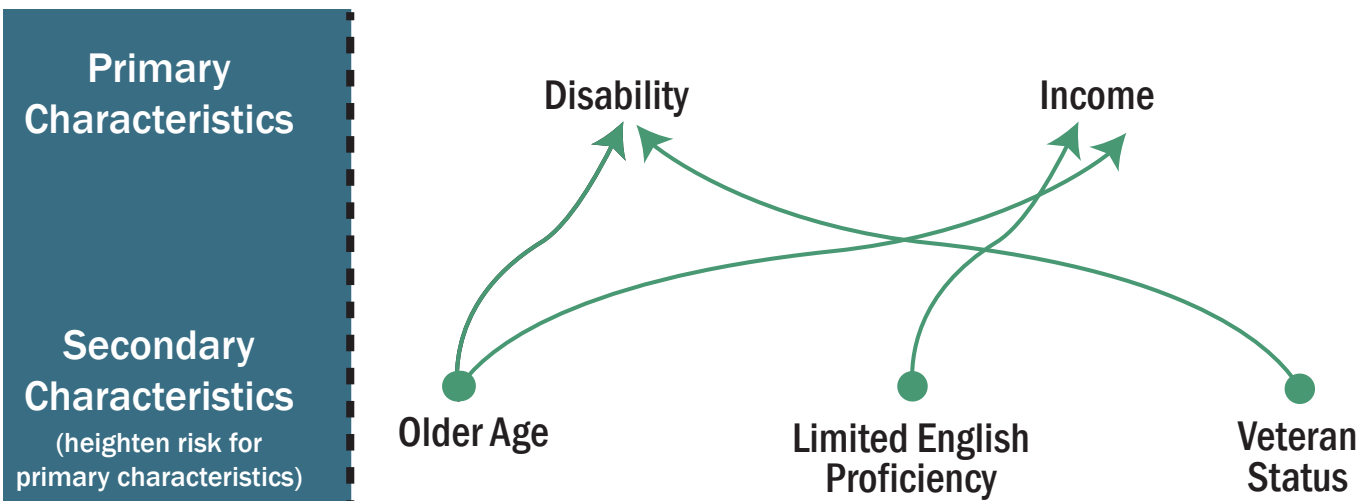
Humans Services Transportation (HST) focuses on the transportation options available to, accessible to, and needed by frequently underserved populations, whose options are often reduced due to personal characteristics such as disability, age, limited English proficiency, veteran status, and low income.

In order to improve HST, both the diversity of people seeking HST solutions and the available options must first be analyzed. From there, a decision making framework is implemented to further explore existing transportation barriers. Ultimately, solutions are framed around the barriers identified through the needs assessment.

## THE DIVERSITY OF PEOPLE & THEIR TRANSPORTATION NEEDS

Characteristics commonly found in HST populations are frequently correlated; three populations in the Atlanta region have a higher likelihood of having a disability and/or low income. These include older adults (65 years of age or older), individuals with limited English proficiency (LEP), and individuals with a veteran status. Correlations between disability and income exist as shown in Figure 6. More than one of these characteristics (i.e., disability, low income, veteran status) can affect a person, further limiting viable transportation options. These characteristics are subject to change throughout a person's life (due to age in particular), so individuals may experience year-to-year fluctuations in these characteristics. HST needs, then, are not static, but dynamic for both individuals and the population as a whole. The sections below provide further details and data on each of the HST characteristics.

Figure 6. Primary and secondary characteristics in HST populations





## Individuals with Disability

Nationwide, 12.6% of the United States' population have a disability.<sup>14</sup> Of the Atlanta region's population aged 18+, 12.3% have at least one disability (Figure 7).<sup>15</sup>

Figure 7. Atlanta region population with at least one disability



### Spectrum & Diversity of Disability

Various definitions of disability exist and, in order to better understand their meanings, it's important to note the models of thought from which the definitions originate. The two primary models of disability theory are the medical model and the social model of disability.

#### Medical Model of Disability

The medical model of disability is rooted in World Health Organization (WHO) taxonomy. Originally published in 1980, the WHO's International Classification of Impairments, Disabilities and Handicaps report framed disability as an interrelated set of definitions<sup>16</sup>:

**Impairment:** In the context of health experience, impairment is any loss or abnormality of psychological, physiological, or anatomical structure or function.

**Disability:** In the context of health experience, a disability is any restriction or lack (resulting from an impairment) of ability to perform

<sup>14</sup> American Community Survey

<sup>15</sup> American Community Survey

<sup>16</sup> International Classification of Impairments, Disabilities, and Handicaps A Manual of Classification Relating to the Consequences of Disease

an activity in the manner or within the range considered normal for a human being.

**Handicap:** In the context of health experience, a handicap is a disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfillment of a role that is normal (depending on age, sex, and social and cultural factors) for that individual.

#### Social Model of Disability

The social model of disability emerged as a response to the medical model of disability. Wherein the medical model focuses on defining disability as something originating at the individual level, the social model of disability suggests that "disability is not an attribute of an individual, but rather a complex collection of conditions, many of which are created by the social environment."<sup>17</sup> By taking this perspective, proponents of the social model of disability were able to argue for disability rights as human rights.

#### Biopsychosocial Model of Disability

The biopsychosocial model of disability is the current accepted model by the WHO. This model is an integration of the medical and social models of disabilities resulting from the realization by the WHO that disability is "an interaction between features of the person and features of the overall context in which the person lives, but some aspects of disability are almost entirely internal to the person, while another aspect is almost entirely external."<sup>18</sup> A graphic representation of the biopsychosocial model of disability from the 2002 WHO International Classification of Functioning, Disability and Health report can be found below.<sup>19</sup>

**Body Functions:** Physiological functions of body systems (including psychological functions).

<sup>17</sup> "Definitions of the models of disability"

<sup>18</sup> Towards a Common Language for Functioning, Disability and Health ICF Towards a Common Language for Functioning, Disability and Health: ICF the International Classification of Functioning, Disability and Health

<sup>19</sup> Towards a Common Language for Functioning, Disability and Health ICF Towards a Common Language for Functioning, Disability and Health: ICF the International Classification of Functioning, Disability and Health



## NEEDS ASSESSMENT

**Body Structures:** Anatomical parts of the body such as organs, limbs and their components.

**Impairments:** Problems in body function or structure such as a significant deviation or loss.

**Activity:** The execution of a task or action by an individual.

**Participation:** Involvement in a life situation.

**Activity Limitations:** Difficulties an individual may have in executing activities.

**Participation Restrictions:** Problems an individual may experience in involvement in life situations.

**Environmental Factors:** The physical, social and attitudinal environment in which people live and conduct their lives.

### *United States Census Bureau Definition of Disability*

The disability-related data seen in this plan has primarily been gathered from the American Community Survey (ACS) conducted by the U.S. Census Bureau. Around the same time that the WHO released its biopsychosocial model of disability, the Census Bureau began developing a new set of ACS questions regarding disability that would move away from “questions focused on the presence of specific conditions, rather than the impact those conditions might have on basic functioning.”<sup>20</sup> In 2008, the ACS defined individuals with disabilities as those that report any one of the following: Hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and/or independent living difficulty.

Ultimately, the definitions of disability are fluid and expansive. Incorporating the needs of all persons with disabilities is a core tenant of HST, and the transportation options available should accommodate disability across the spectrum.

<sup>20</sup> “American Community Survey (ACS). Disability Methodology.”

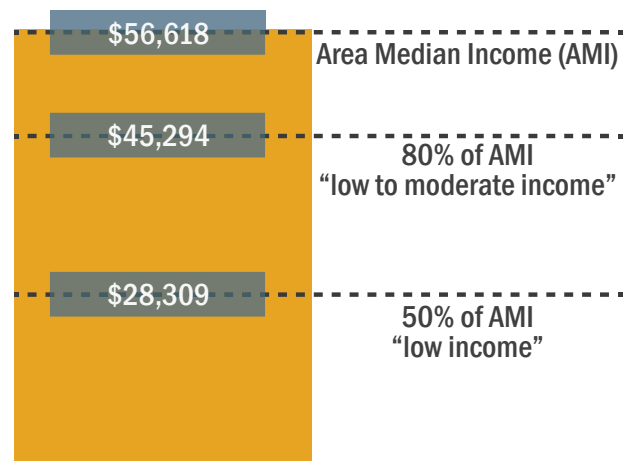
## Individuals with Low-Incomes

Cost can be a barrier to many transportation options for those with low incomes, regardless of disability. In the Atlanta region, the median income for individuals is \$28,753. The median income for households is \$56,618.

A household is defined as having “low to moderate income” when income is 80% of the area median income (AMI) of a given geographic area.<sup>14</sup> As illustrated in Figure 8, for the Atlanta region, the 2014 household AMI was \$56,618, and the “low to moderate income” limit for households was \$45,294. In 2014, 40.1% of households in the Atlanta region had an income less than \$45,000.<sup>15</sup>

A household is defined as having “low income” when income is at or below 50% of the household AMI.<sup>16</sup> For the Atlanta region, the 2014 “low income” upward limit was \$28,309. In 2014, 25.5% of households in the Atlanta region had an income less than \$30,000, while 20.7% of households had an income less than \$25,000.

Figure 8. Area median household income



<sup>14</sup> A “household” is defined in the Census as “one or more people who occupy a housing unit” and can vary in size and relationship between the individuals that occupy the housing unit (for instance the average household has 2.63 people). HUD uses the median income for families in metropolitan and non-metropolitan areas to calculate income limits for eligibility in a variety of housing programs. HUD estimates the median family income for an area in the current year and adjusts that amount for different family sizes so that family incomes may be expressed as a percentage of the area median income. “Low-to Moderate-income” definition is that used by HUD & Community Development Block Grants.

<sup>15</sup> Income statistics for the Atlanta region are provided by the census’s American Factfinder in buckets per every \$5000 of household income, and thus this (under \$45,000) is the income bucket that most closely aligns with the AMI calculation.

<sup>16</sup> HUD definition

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## Older Adults

In the Atlanta region, 9.9% of the population is aged 65+.<sup>17</sup> Older adults require special consideration in planning for their variety of healthcare and quality of life needs.

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## Veterans

Civilian veterans make up 8.20% of the civilian population of the Atlanta region.<sup>18</sup>

Veterans of more recent wars report a higher rate of disability related to their military service than do veterans of earlier wars: 30% of veterans who served in the Gulf War era I (August 1990 to August 2001)<sup>19</sup> report a disability related to their military service, while a smaller 16% of the total veteran population, inclusive of that Gulf War era I group, reports having a disability connected to their military service.<sup>20</sup> This has placed a corresponding increased pressure on the VA healthcare system and associated transportation benefits: as of November 2015, there were 9.11 million enrollees nationwide.<sup>21</sup> Serving those numbers and their additional eligible family members are 144 VA Hospitals and 1,211 outpatient sites nationwide.<sup>22</sup> In 2014, the Atlanta region was home to 331,331 veterans, 60,985 of which served in the Gulf War era I and 43,577 served in Gulf War era II (September 2001 to present).<sup>23</sup> There were 91,772 VA Healthcare enrollees in the Atlanta region in 2014.<sup>24</sup>

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## People with Limited English Proficiency (LEP)

Nationwide, 8.6% of people report that they speak English “less than very well”.<sup>25</sup> In the Atlanta region,<sup>26</sup> 7.3% report that they speak English “less than very

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17 American Community Survey

18 American Community Survey

19 Gulf War era I includes Operation Desert Shield and Operation Desert Storm. Gulf war era II includes Operation Iraqi Freedom (now called Operation New Dawn) and the continuing Operation Enduring Freedom. For more information, see Gulf Era Veterans Report: Pre-9/11.

20 News Release March 18, 2015: Employment Situation of Veterans--2014

21 VA Benefits and Healthcare Utilization

22 VA Benefits and Healthcare Utilization

23 American Community Survey

24 American Community Survey

25 American Community Survey

26 A caveat to these statistics is that a relatively low 41% of Atlanta's foreign-born population is naturalized (about 300,000), which ranks 46th among 65 metros, which means a large portion may not be reached by the census.

well”.<sup>27</sup> Of those who report speaking English “less than very well”, 62.9% are Spanish speakers and 37.0% speak other languages.<sup>28</sup>

Inability to understand intake processes, service, schedules, routes, driver communication, and signage because of a language barrier has the potential to reduce transportation options, and the safety and efficiency of the available options.

A look at the foreign born population can approximate a description of the region's population with low-English proficiency.<sup>29</sup> A look at birth places for foreign born provides an idea of the languages that might be spoken by the group who speak English “less than very well”.<sup>30</sup>

Central America and Asia are the most common regions of birth for the foreign population. Figure 9 shows the foreign born population by region of origin. A large portion of many regional counties' foreign born populations are from Latin America: 85.3% of Hall's, 59.2% of Clayton's, 55.9% of Cherokee's, 50.3% of Gwinnett's, 45.6% of Dekalb's, and 38.6% of Fulton's.<sup>31</sup> A few other birth regions stood out for specific regional counties' foreign-born populations: 38.0% of Fulton's, 32.8% of Gwinnett's and 28.7% of Dekalb's foreign born were born in Asian countries, 19.3% of Cherokee county's foreign born were born in Europe, and 17.6% of Dekalb's foreign born were born in African countries.<sup>32</sup>

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## Compounding Criteria

Within the HST population, multiple barriers are frequently correlated, further exacerbating potentially limited mobility.

### *Disability and Low-Income*

The two main barriers to transportation options—disability and low income—are also correlated with each other: the median income for those with a disability is \$22,367 compared to a regional median income of \$28,753 (Figure 10).

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27 American Community Survey

28 American Community Survey

29 Fewer relevant data points are available in American Fact

30 Finder on those who speak English “less than well” than those who are foreign born, necessitating this approximation. Of the Atlanta region's foreign born residents, 44.7% speak English “less than very well” (American Community Survey).

31 American Community Survey

32 American Community Survey

## NEEDS ASSESSMENT

Figure 9. Foreign born population by region of origin

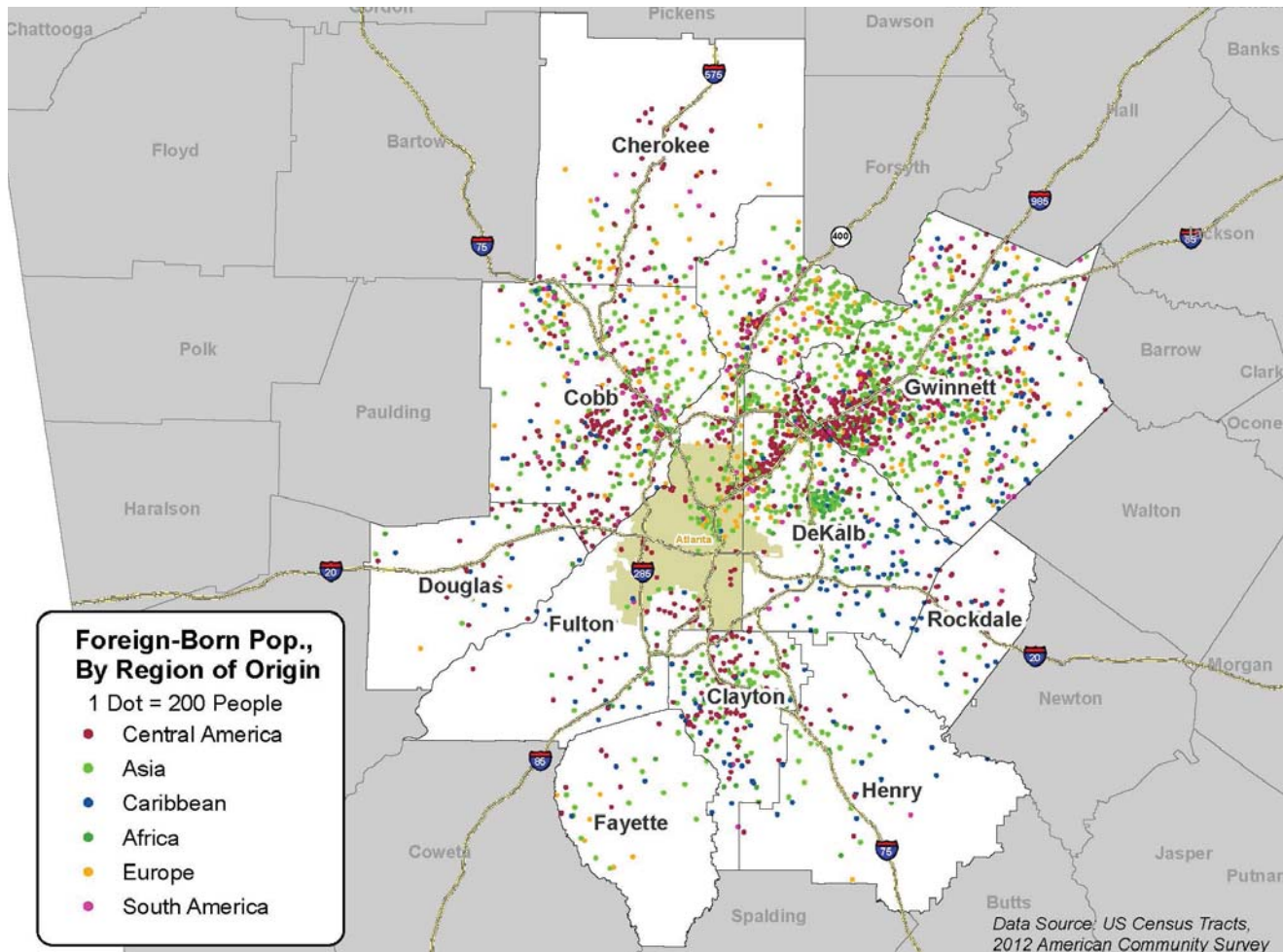
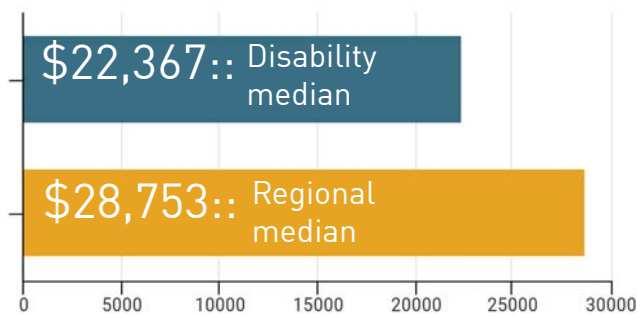


Figure 10. Median income for people with a disability



Source: American Community Survey

### *Veteran Status, Disability, and Income*

Nationwide, veterans have much higher median incomes than their non-veteran counterparts: \$37,466 is the veteran median individual income compared to \$26,214 for non-veterans.<sup>33</sup> The

<sup>33</sup> American Community Survey

same is true in the Atlanta region, in which the median individual income for veterans is \$41,236 income compared to \$28,753 for the region.<sup>34</sup> This relatively heartening economic outlook for veterans is counterbalanced by their concurrent over-representation in the nation's homeless population: the National Center for Veterans Analysis and Statistics found that in 2010, veterans made up 16% of the sheltered homeless population, but only 10% of the general population.<sup>35</sup> More than half of the sheltered veteran population that year also had a disability, and the sheltered veteran population was on average much older than the sheltered non-veteran population.<sup>36</sup> The same study found that from 2009 to 2010, the number of sheltered veterans increased in both emergency shelters and in

transitional housing, and in both principal cities and

<sup>34</sup> American Community Survey

<sup>35</sup> Profile of Sheltered Homeless Veterans for Fiscal Years 2009 and 2010

<sup>36</sup> Profile of Sheltered Homeless Veterans for Fiscal Years 2009 and 2010



suburban and rural areas.<sup>37</sup>

The connection of veteran status with disability is strong: 27.0% of veterans nationwide report having a disability compared to 13.8% of non-veterans.<sup>38</sup> Disabilities specifically resulting from their military service are reported by 19.5% of veterans nationwide.<sup>39</sup> In the Atlanta region, 17.67% of veterans have a disability related to their military service while 22.28% of veterans have a disability of any kind, resulting from their military service or otherwise (Figure 11).<sup>40</sup>

*Age, Disability, and Income*

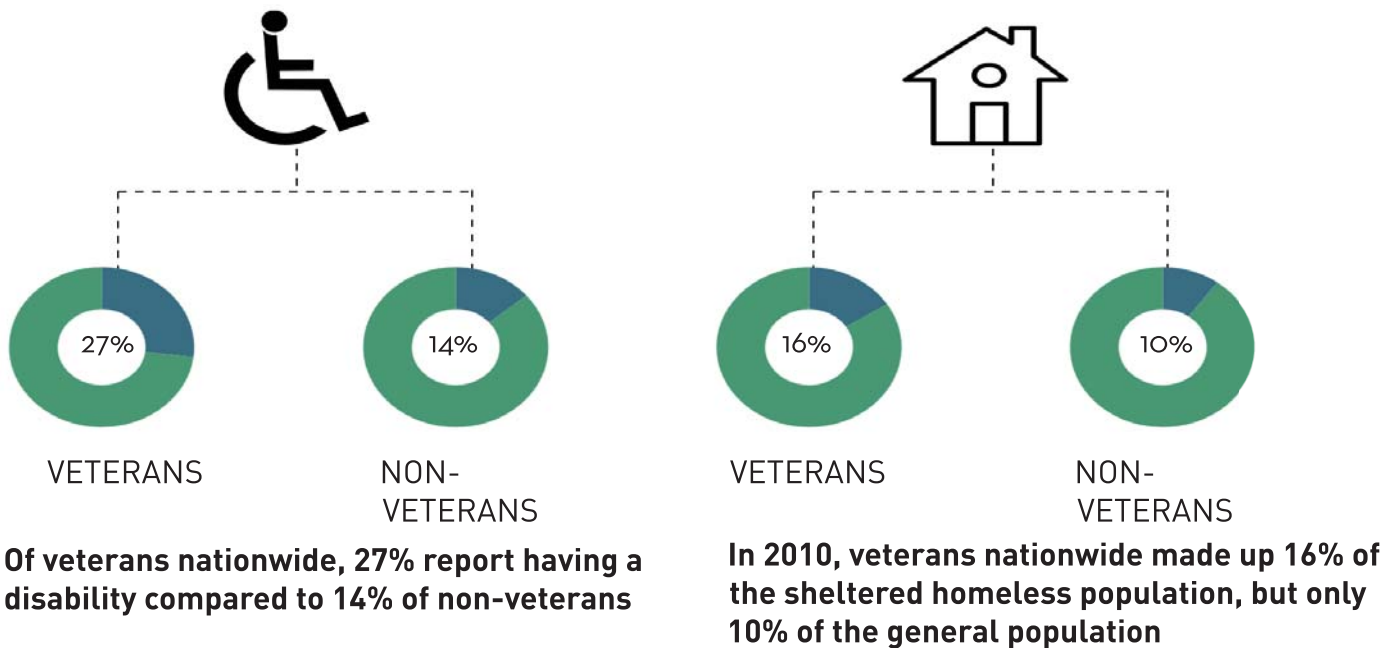
Older adults aged 65+ are much more likely than other ages to have a disability; of adults aged 65+ in the Atlanta region, 35.20% of the adults aged 65+ have a disability compared to the 8.50% of adults aged 18-64 in the Atlanta region who have a disability.<sup>41</sup> Nationwide, 36.3% of adults age 65 or older have a disability compared to 10.2% of those

aged 18-64.<sup>42</sup> As shown in Figure 12, of households with a householder aged 65 or older, approximately 54% have incomes that fall approximately within the “low to moderate income” range (compared to 40% of the total region population inclusive of that age group),<sup>43</sup> and approximately 40% fall into the “low income” range (compared to 23% of the total region population inclusive of that age group).<sup>44</sup>

*LEP and Low Income*

The reduction of transportation options for LEP individuals might also be exacerbated by low incomes. The median income for the Atlanta region’s foreign born individuals is \$23,752, compared to the median individual income for the region as a whole of \$28,753 (Figure 13).<sup>45</sup>

Figure 11. Having a veteran status increases the likelihood an individual will have a disability and be without a home.



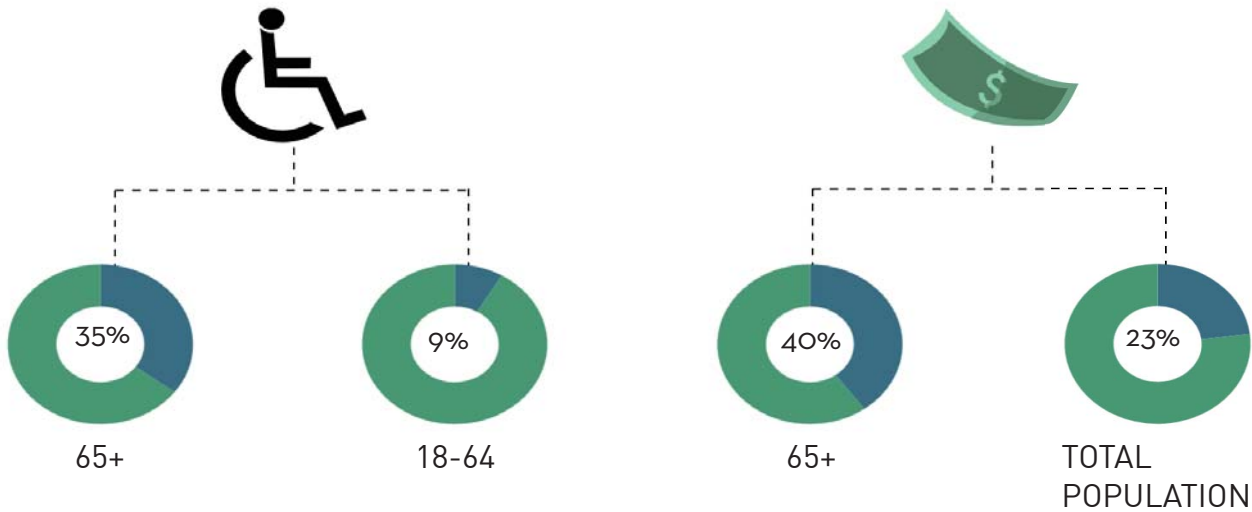
Source: American Community Survey, Profile of Sheltered Homeless Veterans for Fiscal Years 2009 and 2010

37 Profile of Sheltered Homeless Veterans for Fiscal Years 2009 and 2010  
 38 American Community Survey  
 39 American Community Survey  
 40 American Community Survey  
 41 American Community Survey

42 American Community Survey  
 43 The census’s American Factfinder provides income buckets that do not align perfectly with the 80% AMI and 50% AMI calculations used to determine these categories, so the closest buckets to those calculations were used to determine the percentage of the 65+ householder population falling into these categories.  
 44 American Community Survey  
 45 American Community Survey

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Figure 12. Individuals aged 65+ are more likely to have a lower income and have a disability

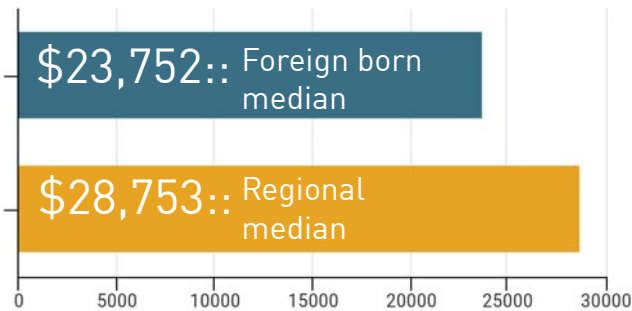


**35% of adults aged 65+ have a disability compared to 8/5% of adults aged 18-64**

**40% of adults aged 65+ live in a “low-income” household (<\$28,753) compared to 23% of the total region’s households**

Source: American Community Survey

Figure 13. The median income for the foreign born population is lower than the regional median income



Source: American Community Survey

In conclusion, recognizing that many of the characteristics of HST populations are correlated and compounding, transportation options should cater to users across the spectrum. By matching HST characteristics to the existing transportation system, gaps in the provision of services can be identified.

# EXISTING TRANSPORTATION OPTIONS

Disability and income greatly reduce the accessibility of generally available transportation options. Due to disability, some may not have the ability to independently drive a personal vehicle. Due to income restrictions, many with lower incomes are not able to afford a personal vehicle. Therefore, they often rely on non-SOV (single occupancy vehicle) options to get around the region. Non-single occupancy vehicle options include all travel options except driving a car by oneself. For the purposes of this plan, they include fixed route/guideway public transit (i.e., bus and train), cycling, walking, carpool/vanpool, taxis and transportation network companies (e.g., Lyft/Uber), “specialized services” (defined below), hybrid demand-response/fixed transit, and telework/teleconnect. These options are described below, and some are also defined in the definitions section of the plan.

## Fixed-route/guideway transit and ADA Paratransit

Fixed-route/guideway transit is public transportation operating with routes that are fixed (run on regular schedules) and stops/stations in fixed locations. It includes both trains and buses that operate as described. Fixed “guideway” more specifically refers to trains (and buses in some cases) that have dedicated infrastructure such as train tracks or dedicated bus lanes. The six public transit agencies in the Atlanta region are: the Atlanta Streetcar, Cherokee Area Transportation System (CATS), Cobb Linc, Georgia Regional Transportation Authority (GRTA), Gwinnett County Transit (GCT), and the Metropolitan Atlanta Rapid Transit Authority (MARTA).

ADA paratransit is required by the federal government within civil rights legislation, and it specifies that all transit agencies in the United States with fixed route/guideway transit service provide a “complementary” demand-response service that takes people curb-to-curb.<sup>17</sup> The service area is defined by a ¾ mile buffer to either side of each transit route. Disability status alone, not the individual’s home

location, determines eligibility. This enables anyone with a disability to access the service as long as they are able to obtain transportation to the service area and their trip destination is also within the service area (also known as “trip eligibility”). Each transit agency has their own methods for determining ADA paratransit eligibility within the parameters allowed by the federal government. CATS, Cobb Linc, GCT, and MARTA all provide paratransit services. Atlanta Streetcar does not, but its route is entirely within the MARTA ADA paratransit service area. GRTA is excluded from the requirement due to operating solely commuter bus service.<sup>18</sup> ADA paratransit trips with most of the region’s agencies are \$4.00 per one-way trip, per person.<sup>19</sup> CATS is an exception with a \$2.50 per one-way trip, per person fare.<sup>20</sup>

Whereas ADA paratransit requires an eligibility determination based on the ability of the individual to access and navigate the transit system, fixed-route/guideway transit is available to the general public without eligibility restrictions.

Fixed-route/guideway transit tends to offer fixed schedules (except in the case of ADA paratransit), so minimal advance planning is needed. Following the passage of the ADA, the physical accessibility of transportation increased markedly in the United States. All MARTA train stations and trains are ADA-accessible. However, malfunctioning and closed elevators present difficulties on a short-term basis. Inconsistent stop announcements can also be a barrier. All buses in Atlanta’s regional transit system are also ADA-compliant; however, not all bus stops are connected to accessible sidewalks. This can render many bus stops inaccessible. A regional transit map is shown in Figure 16 for reference.<sup>21</sup> Of all non-SOV options, fixed-route/guideway transit and Americans with Disabilities Act (ADA) paratransit enable customers with disabilities to travel the longest distances and for the widest range of allowable trip purposes (as compared with other services requiring that trips are for purposes such as medical or work).

Affordability is also an important factor. Individual fixed route/guideway transit trips in the Atlanta

18 Americans with Disabilities Act of 1990, as amended with ADA Amendments Act of 2008, Sec. 223(a)

19 “MARTA Mobility Fare,” “Fares and Transfers,” “Fare Policy and Prices”

20 CATS

21 “ATLTransit”

17 “Part 37--Transportation services for individuals with disabilities.”

## NEEDS ASSESSMENT

region range from \$1 - \$5 depending on the agency (Figure 14).<sup>22</sup> The Atlanta region's transit agencies have both individual trip fares and zonal fares. There are no agencies with a distance or time based fare, so regardless of whether the trip involves five stops or twenty, the trip cost is the same. More details about the process of transferring between the transit agencies can be found at [atltransit.org](http://atltransit.org),<sup>23</sup> an online resource created and maintained by ARC. Some of the regional transit agencies offer discounted fares for older adults, youth, and/or Medicare card holders.<sup>24</sup> Children also ride for free at some agencies.<sup>25</sup> Some other US transit agencies extend these discounts to veterans and other population groups.<sup>26</sup>

Figure 14. Transit base fares

### Base Fares

Atlanta Streetcar		Cherokee Area Transit System		CobbLinc	
Fare product	Cost	Fare product	Cost	Fare product	Cost
Local	\$1.00	Local	\$1.25	Local	\$2.50
				Express	\$5.00

Gwinnett County Transit		GRTA Xpress		Metropolitan Atlanta Rapid Transit Authority	
Fare product	Cost	Fare product	Cost	Fare product	Cost
Local	\$2.50	Green Zone	\$3.00	Local	\$2.50
Zone 1	\$3.75	Blue Zone	\$4.00		
Zone 2	\$5.00				

Source: [Atltransit.org](http://Atltransit.org) "Fares, passes & breeze card"

Both fixed-route/guideway transit and ADA paratransit may be available transportation options for a person depending on a number of factors such as disability type, location, and service hours. Of the six agencies, five provide "all day" service Monday to Friday. Figure 15 illustrates the service hours of each agency.<sup>27</sup> GRTA provides closed-door, commuting-only service from outlying counties to the urban core in Atlanta with stops in Midtown and Downtown in the City of Atlanta. In addition, CobbLinc and GCT also operate some routes of closed-door, commuting-only service.

Figure 15. Transit agency hours

Transit Agency	M-F	Sat.	Sun./Holiday
Atlanta Streetcar	6 AM-11 PM (1 AM on Fri)	8:30 AM-1 AM	9 AM-11 PM
CATS	8 AM-4 PM	None	None
Cobblink	4:30 AM-12:50 AM	None	None
GRTA	5:30 AM-9 AM, 3 PM-7 PM	None	None
GCT	6 AM-9 PM	None	None
MARTA	4:45 AM-1 AM	6 AM-1 AM	6 AM-1 AM

Source: [Atltransit.org](http://Atltransit.org) "Fares, passes & breeze card"

In addition, there are a number of shuttles in the Atlanta region such as The Buc,<sup>28</sup> the Atlantic Station Shuttle<sup>29</sup>, and a privately owned and operated Royal Bus Lines service along Buford Highway and surrounding areas.<sup>30</sup> These shuttles can be used in conjunction with traditional fixed route service to provide first and last mile connectivity.

The scope of geographic access and high degree of flexibility for potential trip destinations make these options the most popular of non-SOV options in the Atlanta region (Figure 17). The data in Figure 17 is broken into two categories: 1) all commuters (right) and 2) commuters with living within ½ mile of transit (left).

22 "Fares, passes & breeze card."

23 "Transfers"

24 "Fares, passes & breeze card."

25 "Fares, passes & breeze card."

26 "Military service pass"

27 "Hours of Operation", "MARTA Mobility Guide", "CCT General Information", "CCT, GCT, "Routes and Schedules", "Commuter Tools"

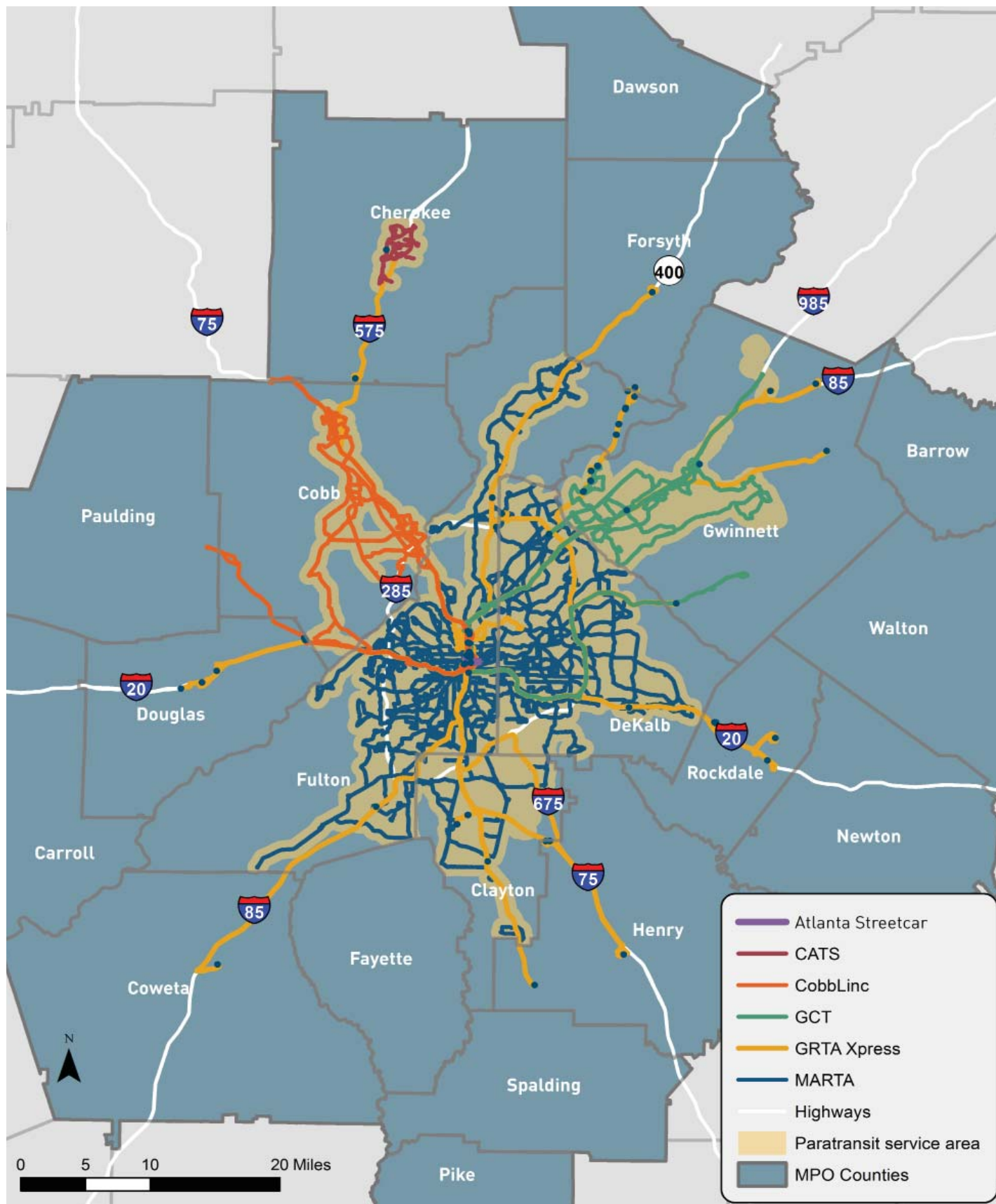
28 "About "The Buc" « Bucride"

29 "Shuttle Information"

30 Evitt



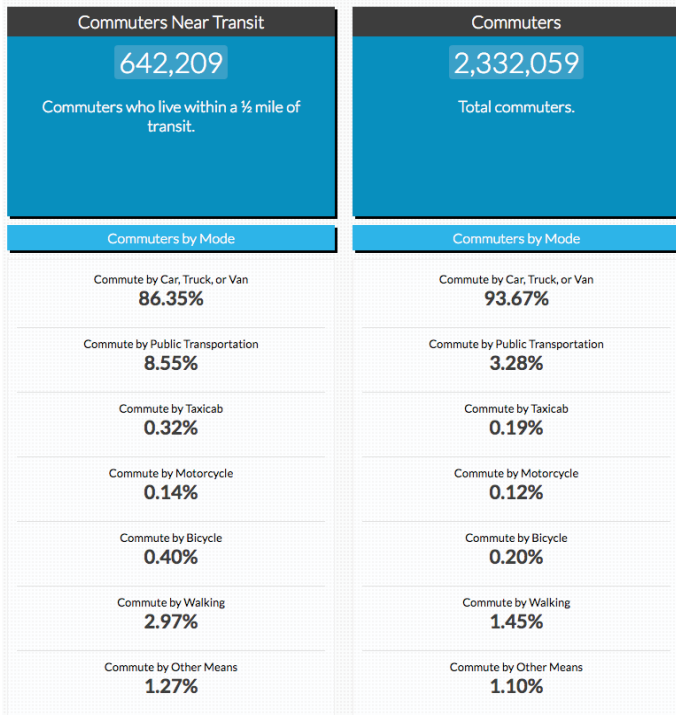
Figure 16. Fixed-route/guideway and paratransit options in the Atlanta Region





## NEEDS ASSESSMENT

Figure 17. Use of non-SOV options



Source: Center for Neighborhood Technology “AllTransit Maps & Analysis”.

### Carpool/Vanpool and Taxis/Transportation Network Companies (e.g. Lyft/Uber)

Demand-response transportation (DRT) options for the general public may be available and accessible for some people with disabilities. Commuting rideshare (specifically for work/employment purposes) may be an option for some who can find suitable carpool-mates—through Georgia Commute Options or otherwise--and where vehicle access is possible<sup>31</sup>. In addition to this formal option, people arrange trips with friends/colleagues more informally. Additionally, some may have the ability to travel by private taxi or Transportation Network Companies (TNC) such as Uber and Lyft, which offer curb-to-curb service to the general public. For these ride-hailing options to be available to someone with a disability, however, he or she must 1) be able to afford the private service (typically more expensive than other options), 2) be able to use the associated company’s scheduling system, and 3) be able to access the vehicles used by the company. Private accessible services that offer door-to-door service are often available for much higher rates than public services—rates that likely exclude many potential users from

these options. Rates for these options are difficult to report or estimate. Carpool/vanpoolers make their own financial arrangements, and taxi/TNCs have fare structures that are subject to change and often combine both time and distance in their calculations.

These options are often not counted in the census as a specific mode, so regional surveys are used to better understand the impact of this option in the region. In a regional commuter survey conducted in 2014, 5% of respondents in the Atlanta region<sup>32</sup> carpooled or vanpooled as their primary mode. This was the same percentage of respondents who reported carpooling or vanpooling in 2010. Approximately half of all carpoolers rode with a co-worker, while the other half reported riding with a family member. In addition, “the 2014 survey found a shift in the distribution of carpool occupancy to more riders per carpool.

### Specialized Services

DRT options specifically for HST populations are called “specialized services.” ADA paratransit is part of specialized services (map and details above). Human Service Agencies, such as the Department of Human Services (DHS), the Veterans Administration (VA) Medical Centers, Senior Services (in varying counties), and Department of Community Health (DCH, oversees Medicaid and Medicare), may also provide demand-response transportation options for certain types of trips and destinations. These services are tied to specific medical or senior services, most often not commuting or errand-related needs, and they are for individuals who meet the eligibility requirements of each agency’s service. In some counties without fixed route/guideway transit in the Atlanta region, the county itself may provide local demand-response transportation. These counties include Bartow, Cherokee, Coweta, Dawson, Hall, Henry, Forsyth, and Paulding within the Metropolitan Planning Organization (MPO) 20-county planning area. The personal and trip eligibility factors differ by county. In general, vehicles owned/operated by these agencies are likely to be ADA accessible.

Volunteer network options may also exist for HST populations through either formal (such as ICARE<sup>33</sup>)

31 Georgia Commute Options

32 The study scope of the report was the Atlanta 20-county nonattainment area (not the MSA).

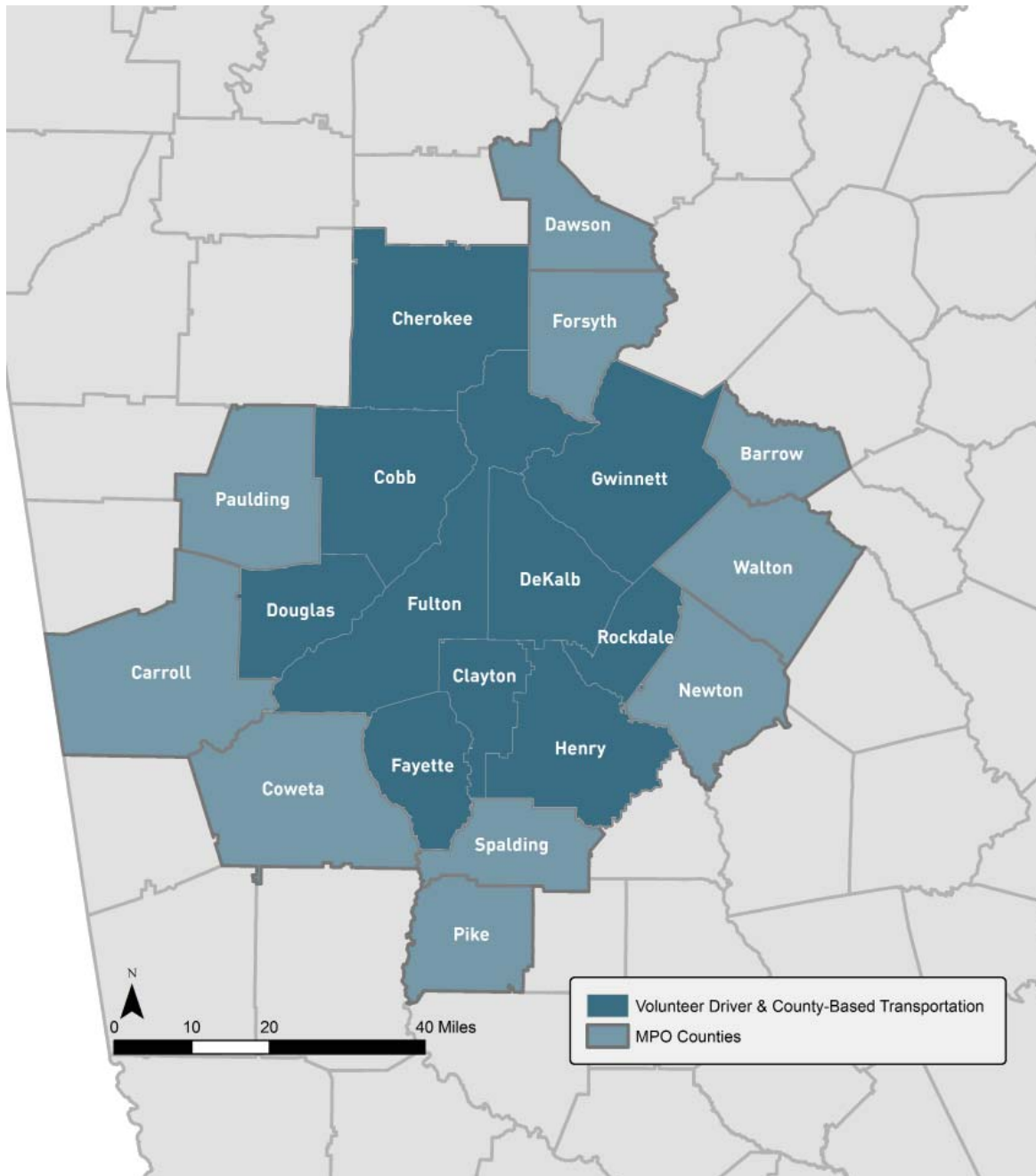
33 ICARE Volunteer Rides for Seniors

or informal (such as faith-based or community organizations) networks. Volunteer network options frequently offer door-through-door service, which allows drivers to help the elderly at points throughout the journey. These programs are not available in all areas, nor is there a regional database that keeps current data. Awareness of and ability to locate the services, as well as consistency of service with volunteer turnover, may interfere with this being a

viable, sustainable option. In addition, as the vehicles tend to be personally owned, they may not be ADA accessible.

“County-based agency senior transportation programs” are based within county-run senior centers. They may perform demand response trips through volunteer drivers, vouchers, or county vehicles. Figure 18 shows counties with volunteer drivers and county-based agency transportation.

Figure 18. Counties where both volunteer driver and county-based specialized services exist



Source: ARC project data and database from SimplyGetThere.org

## NEEDS ASSESSMENT

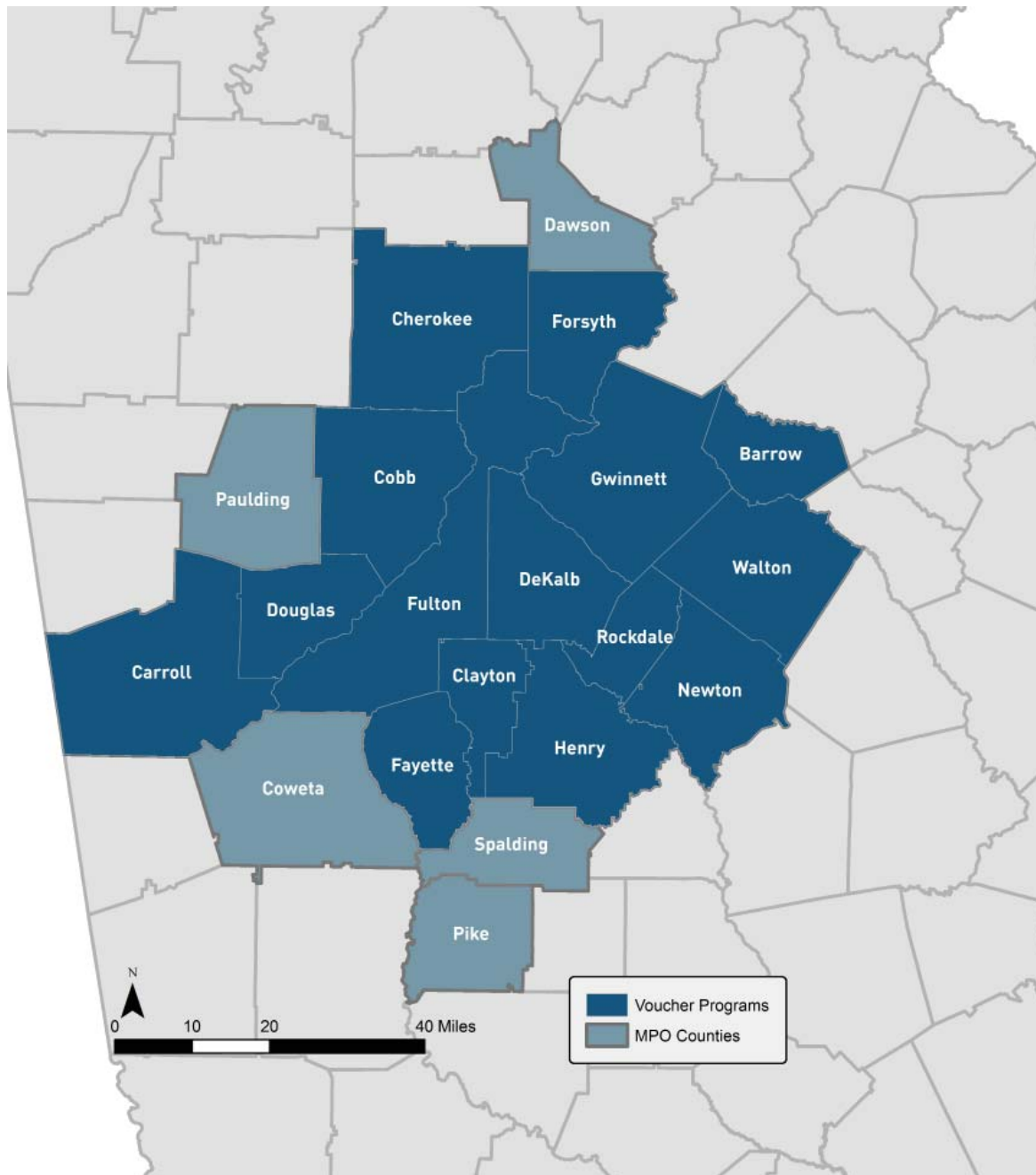
Voucher and discount programs are in place to help cover the costs of transportation. Vouchers may be used in conjunction with volunteer networks or to pay for other options. Even with these programs, transportation affordability can still be a challenge or an outright barrier. Costs to the rider for these options will vary based on individual agreements. Figure 19 shows counties with voucher programs.

“Private transportation providers” are limited

liability corporations with their own fleets of vehicles that can be requested to transport HST populations. Private transportation providers exist in every county in the Atlanta MPO other than Barrow.

Taken as a group, these services cover a significant portion of the Atlanta region. Awareness of and an understanding of how one might qualify for the different transportation options and financial assistance programs such as these also can serve as

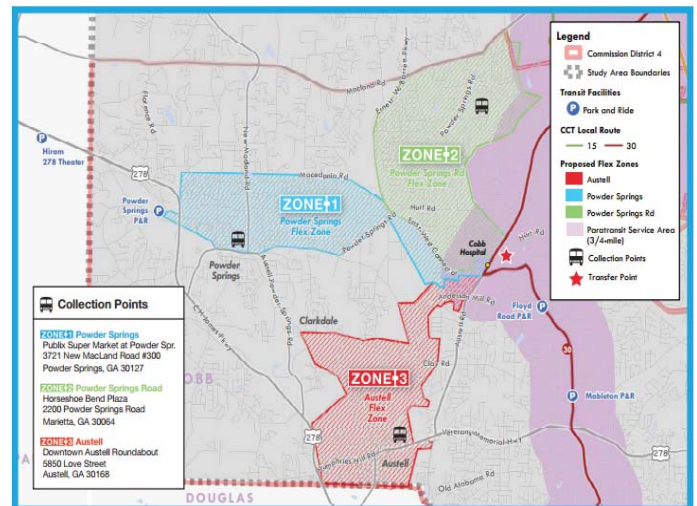
Figure 19. Counties where voucher programs exist



Source: ARC project data and database from SimplyGetThere.org

a large barrier to efficient transportation choices for HST populations. A survey of older adults living in the region revealed that older adults, especially those who are not internet savvy, are often perplexed by the region's convoluted set of transportation provider choices, as the appropriateness of each often varies by destination, as well as a number of other factors.<sup>34</sup> When surveyed, 65% of older adults said that if they were unable to drive temporarily or long term, they would have family or friends drive them around. Another 20% indicated that they did not know how they would get around under those circumstances.<sup>35</sup> Older adults are often not informed of all of their options and may not know where to get assistance with this information. These awareness issues have been reported by other HST populations as well.<sup>36</sup>

Figure 20. Map of Cobb County Transit Flex



Source: Cobb Community Transit, Flex map

### Hybrid Demand-Response/Fixed Transit

This option combines elements of both fixed route/guideway transit (i.e., bus and train) and demand-response transportation (DRT, defined above). Also known as deviated fixed route, this option is characterized by having some components of fixed routes and points in the service while also providing the possibility to schedule a pick-up/drop-off at certain locations (e.g., home, various destinations). In the Atlanta region, the only example of this service called “Flex” is in Cobb County (map in Figure 20).<sup>37</sup> At the time of Plan drafting, this service has been in operation just over one year.

### Cycling and Using Sidewalks

These may be options for an individual, depending on a number of factors. Some of these factors include the type of disability, the availability and condition of sidewalk/cycling infrastructure such as lighting,<sup>38</sup> the availability of safe crosswalks,<sup>39</sup> the extent of separation from high speed traffic lanes, bike facilities at transit connections,<sup>40</sup> and the street grid connectivity, land use patterns, and urban density required for origins and destinations to be within appropriate distances for these active modes.<sup>41</sup> More details on the status of the sidewalk and cycling infrastructure in Atlanta is provided in the Walk! Bike! Thrive! Bicycle and Pedestrian Plan for the Atlanta region.<sup>42</sup>

Of the 2,100 miles of sidewalks and curbs in the City of Atlanta, 395 miles of sidewalk are in disrepair and 216 miles of curbs are in disrepair.<sup>43</sup> As a part of their Project Civic Access initiative, the U.S. Department of Justice conducted an ADA compliance review of the City of Atlanta in 2009. The review resulted in an agreement that involved City of Atlanta’s Department of Public Works completing an inventory of 757 miles of city streets which had been resurfaced since 1992, when the ADA became effective:

34 Cobb County  
 35 Regional Live Beyond Expectations Strategic Plan and associated surveys  
 36 CPACS Discussion Group  
 37 Cobb Community Transit FLEX.

38 Poverty Forum ETA  
 39 Bike-Ped Taskforce Discussion  
 40 Poverty Forum ETA  
 41 Transportation Coordinating Committee Work Session on Mobility Management & HST Breakout sessions  
 42 Walk, Bike, Thrive!  
 43 The City of Atlanta. Department of Public Works



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“The inventory found 18,884 intersection nodes with ADA ramp requirements. Of the nodes surveyed in the inventory, 3,080 [16%] intersection nodes were ADA compliant, 8,705 of the ramps were non-compliant, and 7,099 intersection nodes had no ADA ramps. The inventory only include[d] ramps on roads resurfaced since 1992. The backlog of curb ramps jumps to 31,442 when all city streets are considered.”<sup>44</sup>

The Department of Public Works inventory and subsequent report estimated that approximately \$52 million would be required to make the curb ramps ADA compliant<sup>45</sup>, while a more recent study found that the total replacement cost of the City of Atlanta’s 2,100 miles of sidewalks was close to \$400 million.<sup>46</sup> Additional complete sidewalk blockages also frequently result from extended construction projects, adding to the barriers faced by those attempting to use sidewalks safely.<sup>47</sup>

### Telework/Teleconnect

Telework is the concept of working from one’s home. Though it is not a transportation mode/option, it is a commuting option with growing adoption rates in the Atlanta region. Teleconnect refers to other non-work related trips that may be done online instead of in-person. Examples of teleconnect include medical appointments by videoconference and online shopping, but there are many more.

As with carpool and vanpool, data for teleworking are often less available. From a 2014 commuter survey, the following figures were revealed: One-third of respondents (33%) indicated they teleworked, even if only occasionally. This is a 22% increase from 2010 when 27% of respondents reported teleworking.

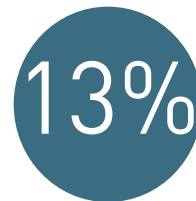
- Not only did the 2014 survey find that more commuters are choosing to telework, even if occasionally, the rate at which respondents are teleworking has also increased. More than one-quarter of respondents (26%) teleworked full time. This is a significant increase

from the 2010 survey that found 17% of respondents teleworked 5+ days a week.

- Half of all respondents (50%) worked for an employer that had a telework program, with 52% of them being informal arrangements with their supervisors.
- In 2014, 25% of respondents used a non-drive alone commute as their primary commute mode as opposed to 19% in 2010. This is a significant change from 2010 with the majority of the increase attributed to more respondents reporting teleworking.<sup>48</sup>

However, it should be noted that teleworking is either not possible or unlikely for all job types.

Figure 21. Percentage of weekly trips in the Atlanta region made by teleworking



of weekly trips in the Atlanta region were made by teleworking

While a host of transportation options exist in the Atlanta region, HST populations still face barriers in access. By analyzing existing options in relation to origins and destinations, gaps and focus areas can be identified.

## EXPLORING BARRIERS

The HST plan was developed with significant public involvement. During outreach, the conversations were framed around how HST populations go through their personal decision-making process to arrive at which transportation options to use (see Appendices C-E).

The funnel in Figure 22 demonstrates how the options available to HST populations are reduced as they encounter barriers. The following portion of the needs assessment will follow the shape

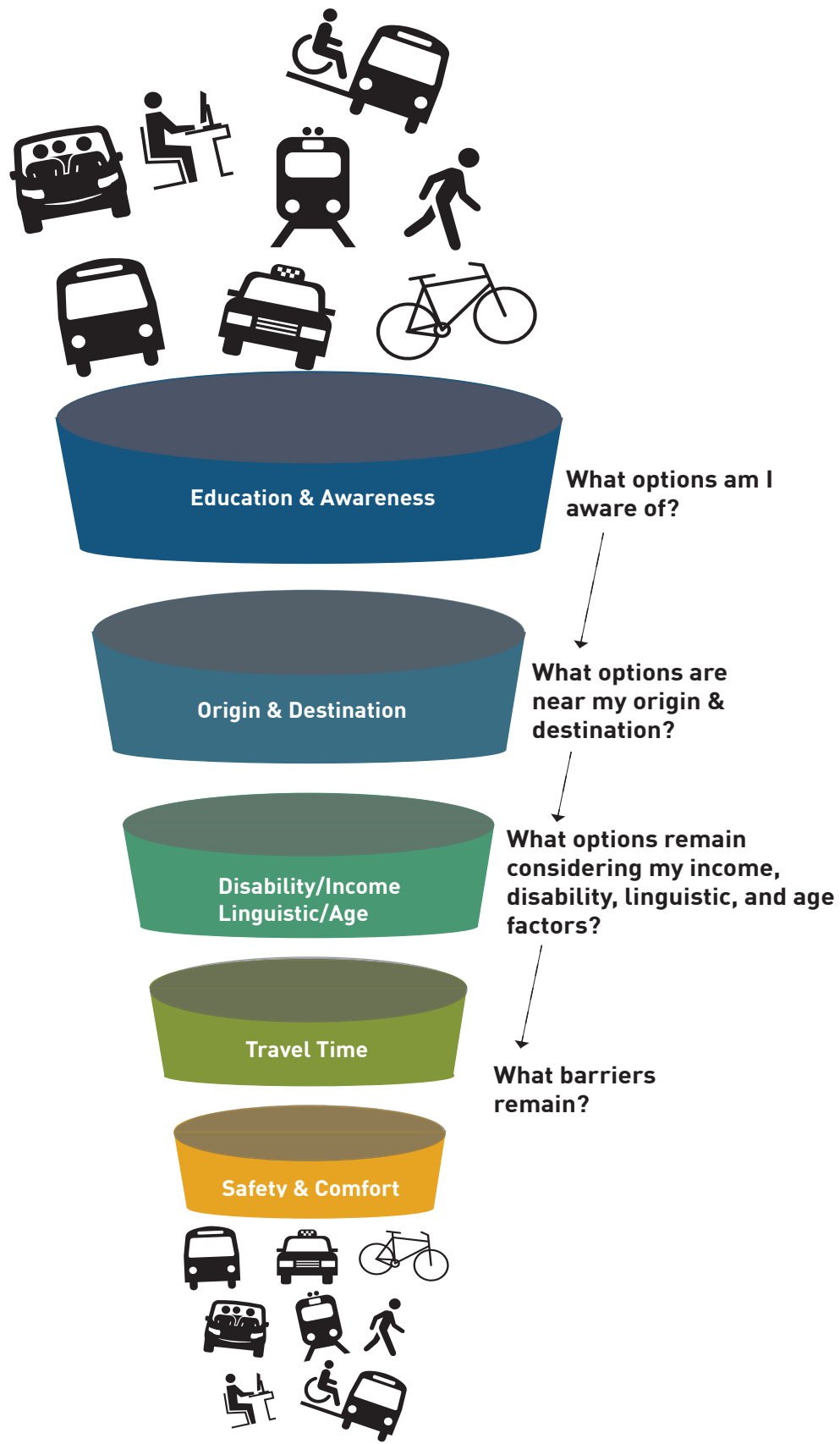
44 Carrillo et al.

45 The City of Atlanta. Department of Public Works.

46 Carrillo et al.

47 Transportation Coordinating Committee Work Session on Mobility Management & HST Breakout sessions

Figure 22. Personal decision-making process funnel



## NEEDS ASSESSMENT

of the funnel, acknowledging that the expansive groundwork for the origin and destination portion of the funnel was outlined in the previous sections featuring HST populations and existing transportation options.

When discussing barriers, it is important to differentiate between barriers that are overcome (HST rider uses non-SOV option) and those that are not overcome (i.e. choice riders since other options exist). People who have no other options generally fall into three groups: 1) those with disabilities/medical conditions prohibiting them from driving (who also do not have enough income for ongoing transportation assistance), 2) people with extremely low income, and 3) people with suspensions on their driver's license.

During the public outreach sessions, experiences were shared about missing the last bus of the evening after leaving work and sleeping in the train station until they started again. Other experiences included people walking 2+ hours due to missing the last bus to get home. Construction projects would leave people with visual impairments with a complete lack of awareness about where to go safely in an area with which they were generally very familiar. Wheelchair users set out on a trip unaware of the sidewalk barriers and missing curb ramps, finding they needed to have their wheelchair in the street alongside cars to get where they need to go. These experiences are frightening and potentially life-threatening, yet they happen more often than many would realize. Going through daily

experiences such as these would be inconceivable to some people, and yet it is simply a part of daily life for others.

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### Education & Awareness

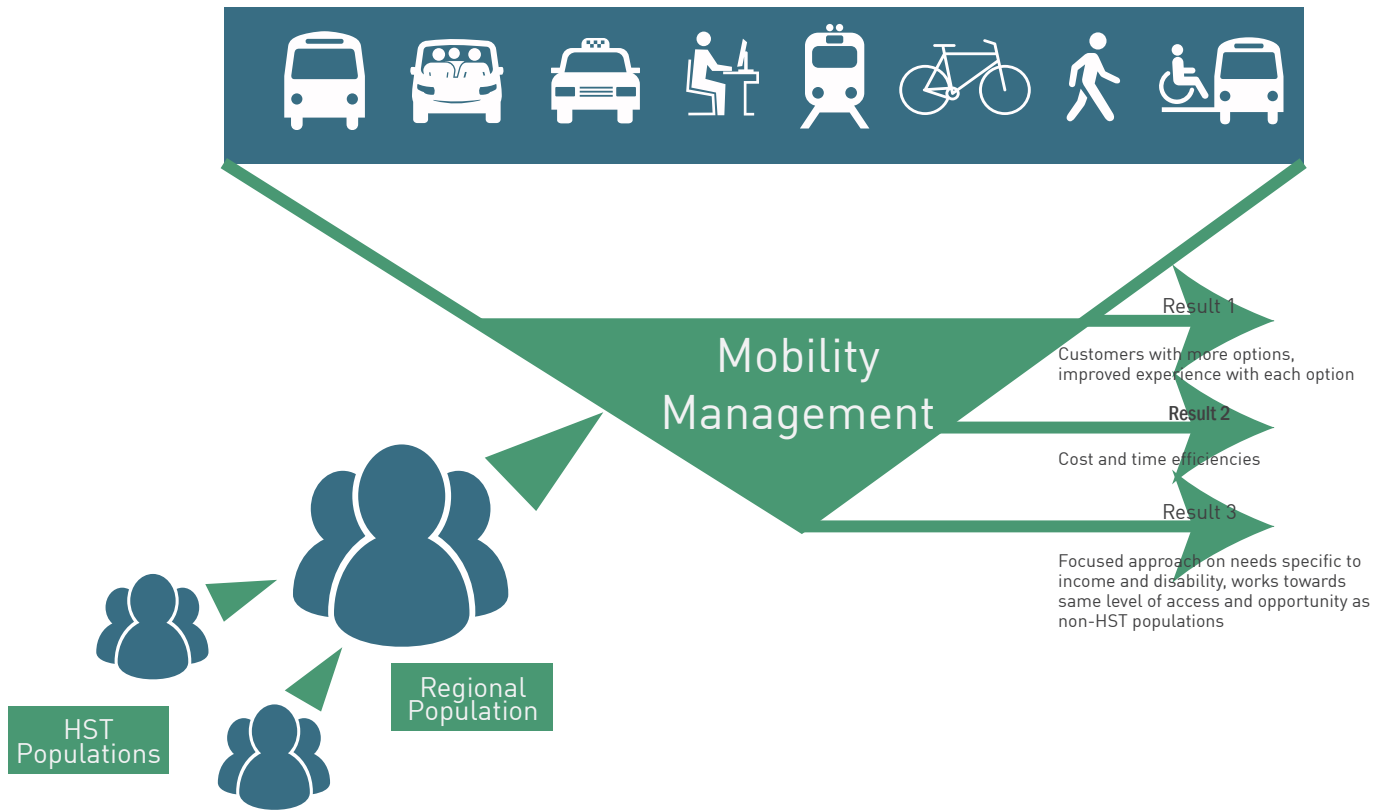
Users start their journey of identifying transportation solutions by examining all of the options of which they are aware.

In traditional settings, Mobility Management plays a key role in facilitating efficiencies in transportation and education for its users (Figure 23). The concepts of HST and Mobility Management (MM) have some crossover. Both the American Public Transit Association (APTA) and the National Center for Mobility Management (NCMM) agree that MM is a strategic approach to transportation service coordination resulting in greater efficiencies in the transportation system, particularly through modal integration. They would also agree that customer service plays a big role in successful MM, and how the customer interacts with the services is of paramount importance. Where they differ is in their focus on specific populations. While the NCMM would include HST populations in their definition of MM, APTA would not necessarily do so (but would certainly consider them more broadly within the customer service approach).<sup>49</sup> This is an important distinction to consider, particularly when merging the concepts of MM and HST, as ARC approaches the topics in this plan. ARC, therefore, operates under the broader definition of MM that is explicitly inclusive of HST populations.

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49 "Mobility Management"

Figure 23. The relationship between mobility management and human services transportation



### Origins & Destinations

After developing an awareness of existing transportation options, HST populations must see if the existing service provides access to their necessary origins and destinations.

When HST populations are making transportation decisions, origins and destinations are crucial; “can I get where I need to go?” Ensuring each person has adequate non-SOV transportation has two sides: 1) individual choices of riders and 2) collective choices of the agencies that plan and provide transportation services. It is critical that both sides come together when matching people with potential options.

Overall, the Atlanta region’s transit system accesses 25.8% of workers, 29% of households, and 47.9% of jobs (Figure 24). In order to improve those figures, strategic exploration of the system and comprehensive targeted improvements must be made.

By providing data on the home location of HST populations and on a variety of potential destinations as they relate to transportation options, gaps in the system can be identified.

### Origins

To start, HST populations often situate themselves as favorably as they can, geographically and financially, to access the transportation options that they know will work best for them. The home location is the top determinant of an individual’s access to non-SOV options including fixed route/guideway transit.

Housing density patterns are dispersed throughout the region. Homes are often in counties with no fixed route/guideway public transit. In addition, counties that have transit may not connect directly with homes along routes.

Figures 25-32 on the following pages show the relationship between existing transit service and populations with disabilities, aging populations, and low-income populations. Additionally, two maps on the following pages utilize an “Equitable Target Areas” (ETAs) index.

The ETA index “helps ARC better understand complexities in communities of concern - high percentage of people living in poverty or high minority population - and how to make wise decisions regarding



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investments.”<sup>50</sup> ARC uses the ETA index to understand transportation access from homes of people living in poverty or high minority population to key destinations such as grocery stores, grade schools, higher education, hospitals, and libraries. The ETA index is shown relative to both rail lines (Figure 31) and bike/walk trips (Figure 33).

While not mapped, Figure 32 shows the overall access to transit by race.

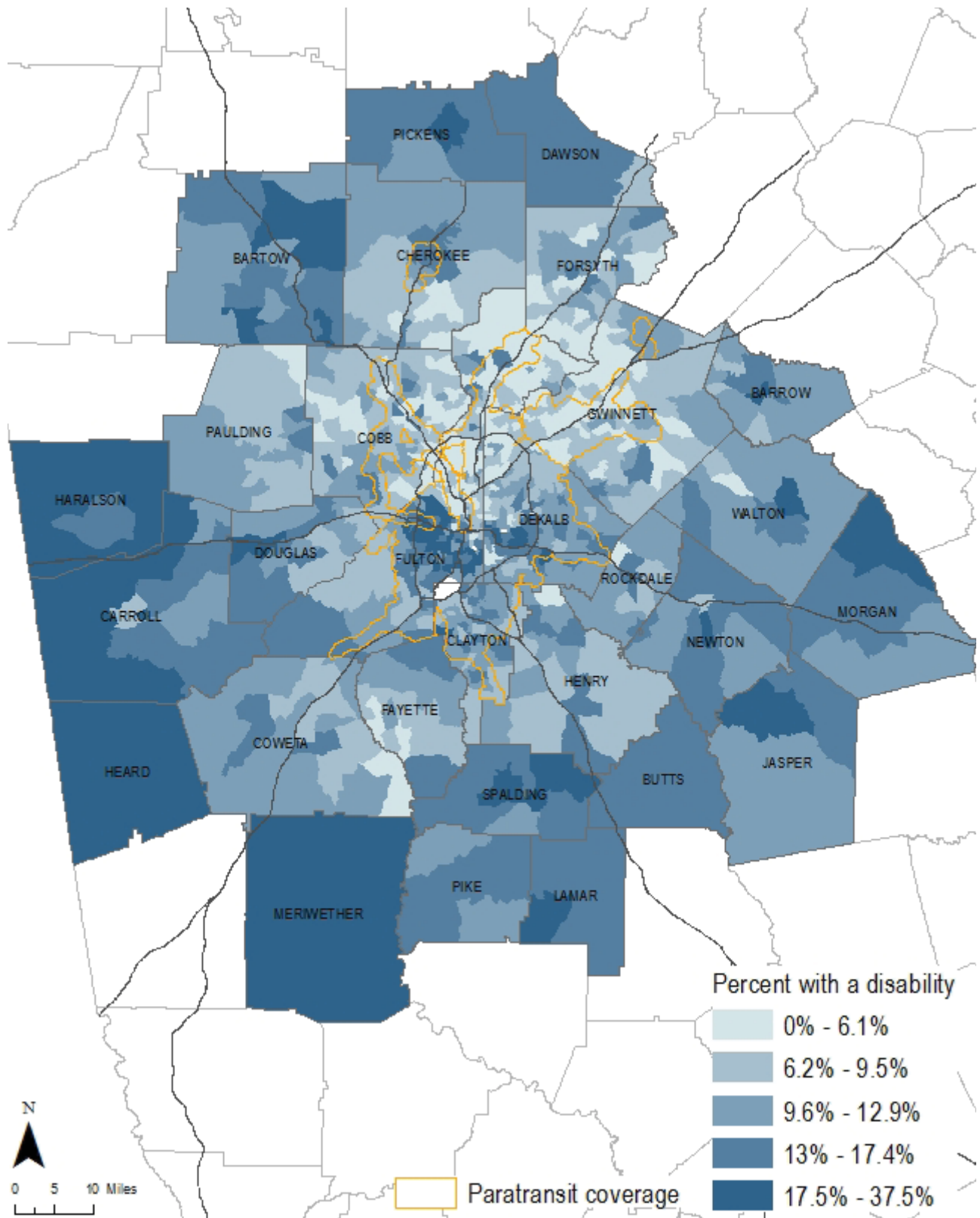
Figure 24. Transit access to workers, households, and jobs

The Atlanta region’s transit system accesses **25.8% of workers, 29% of households, and 47.9% of jobs** in the region.



Source: American Community Survey, Center for Neighborhood Technology

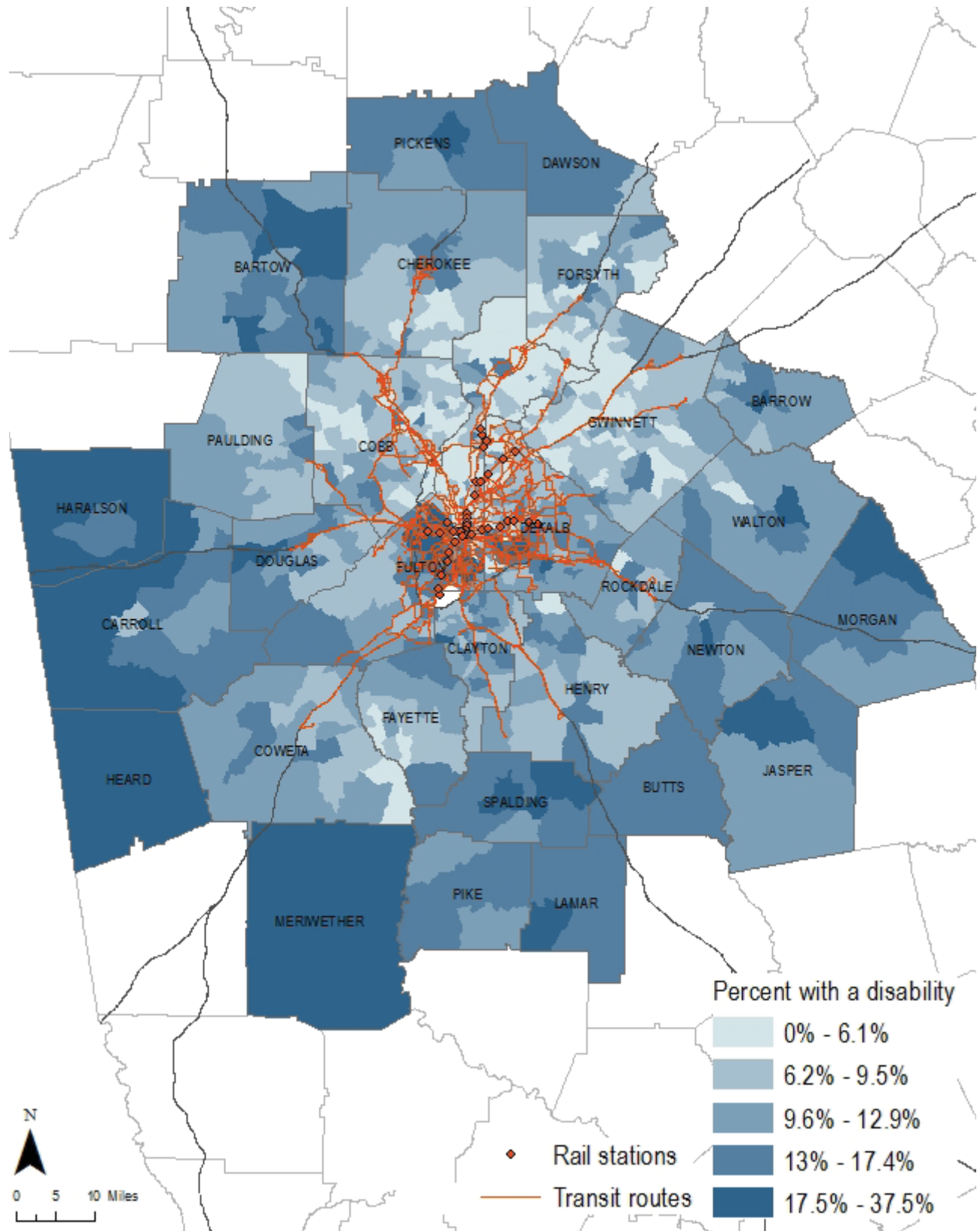
Figure 25. The Atlanta region's population with a disability compared to paratransit coverage



Data source: American Community Survey

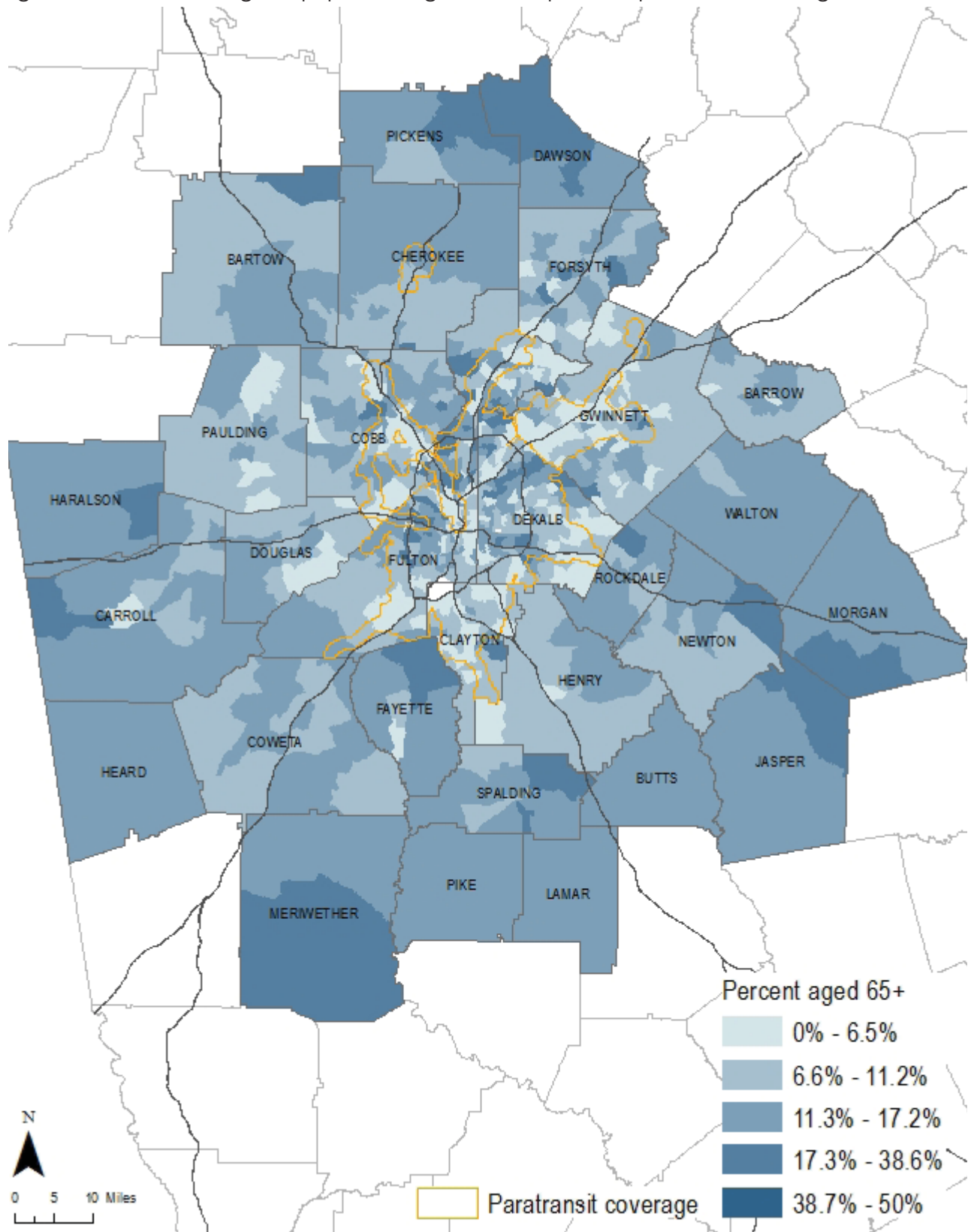
## NEEDS ASSESSMENT

Figure 26. The Atlanta region's population with a disability compared to transit routes & rail stations



Data source: American Community Survey & GTFS for regional transit operators

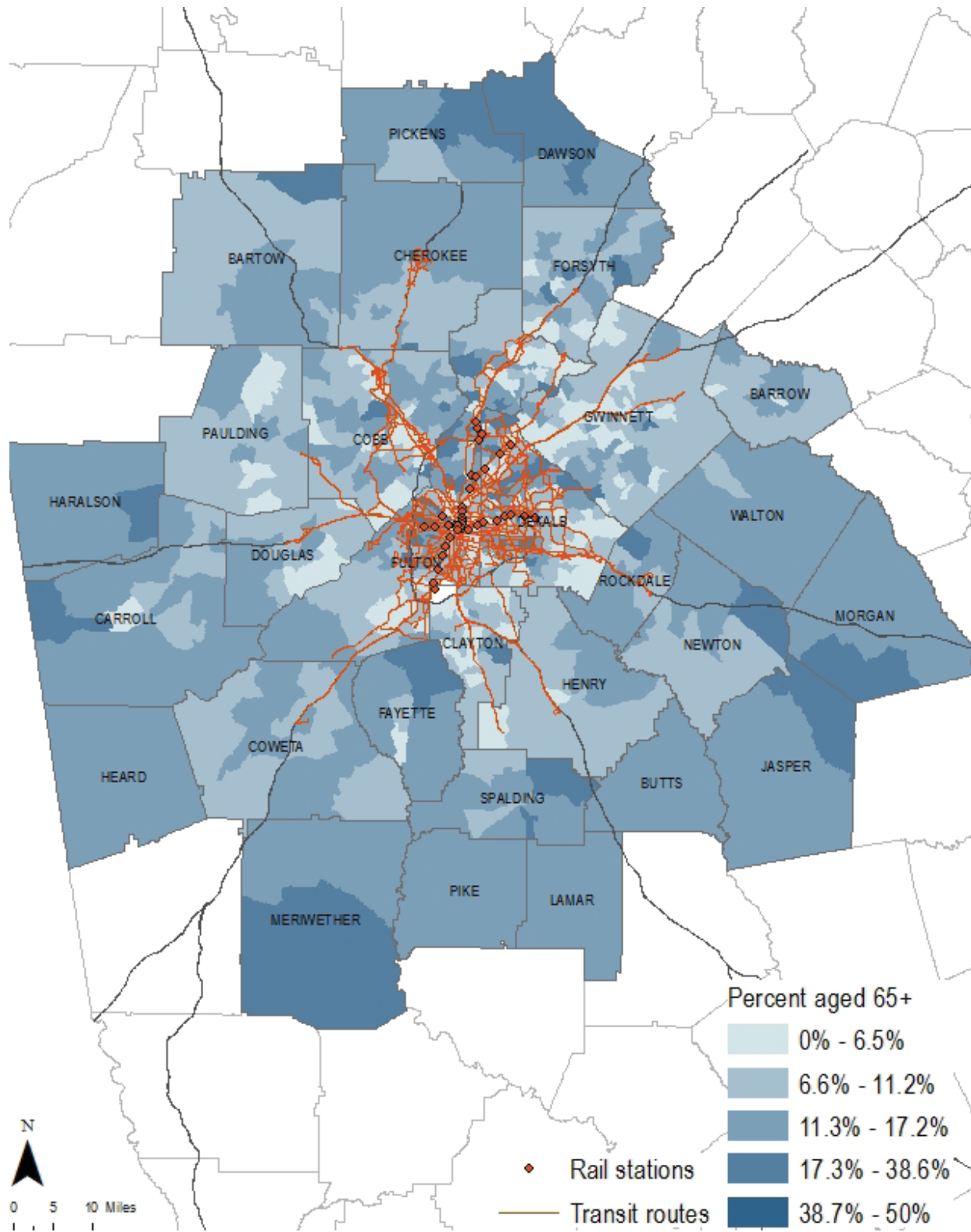
Figure 27. The Atlanta region's population aged 65+ compared to paratransit coverage



Data source: American Community Survey

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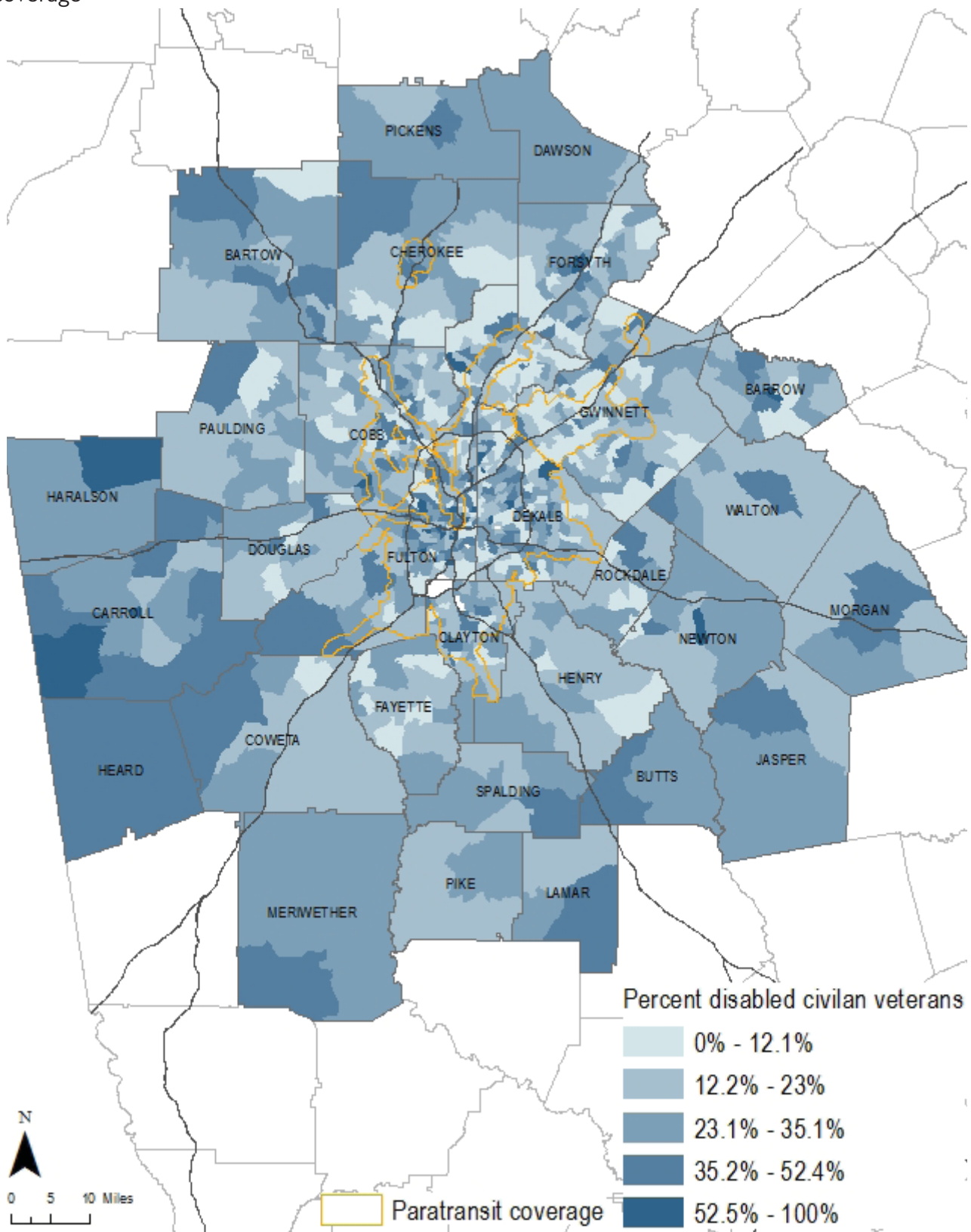
Figure 28. The Atlanta region's population aged 65+ compared to transit routes & rail stations



Data source: American Community Survey & GTFS for regional transit operators



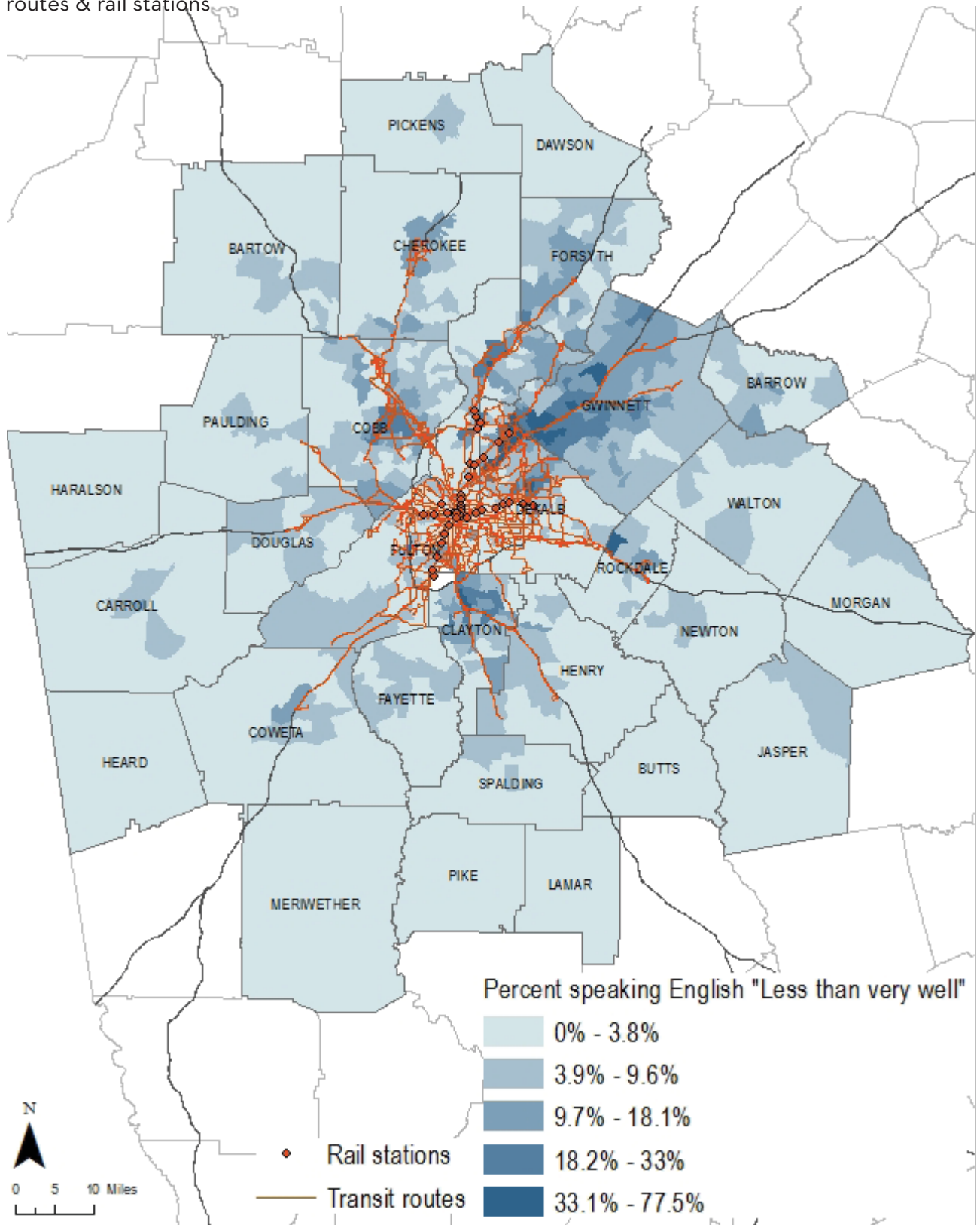
Figure 29. The Atlanta region's population of disabled civilian veterans compared to paratransit coverage



Data source: American Community Survey & GTFS for regional transit operators

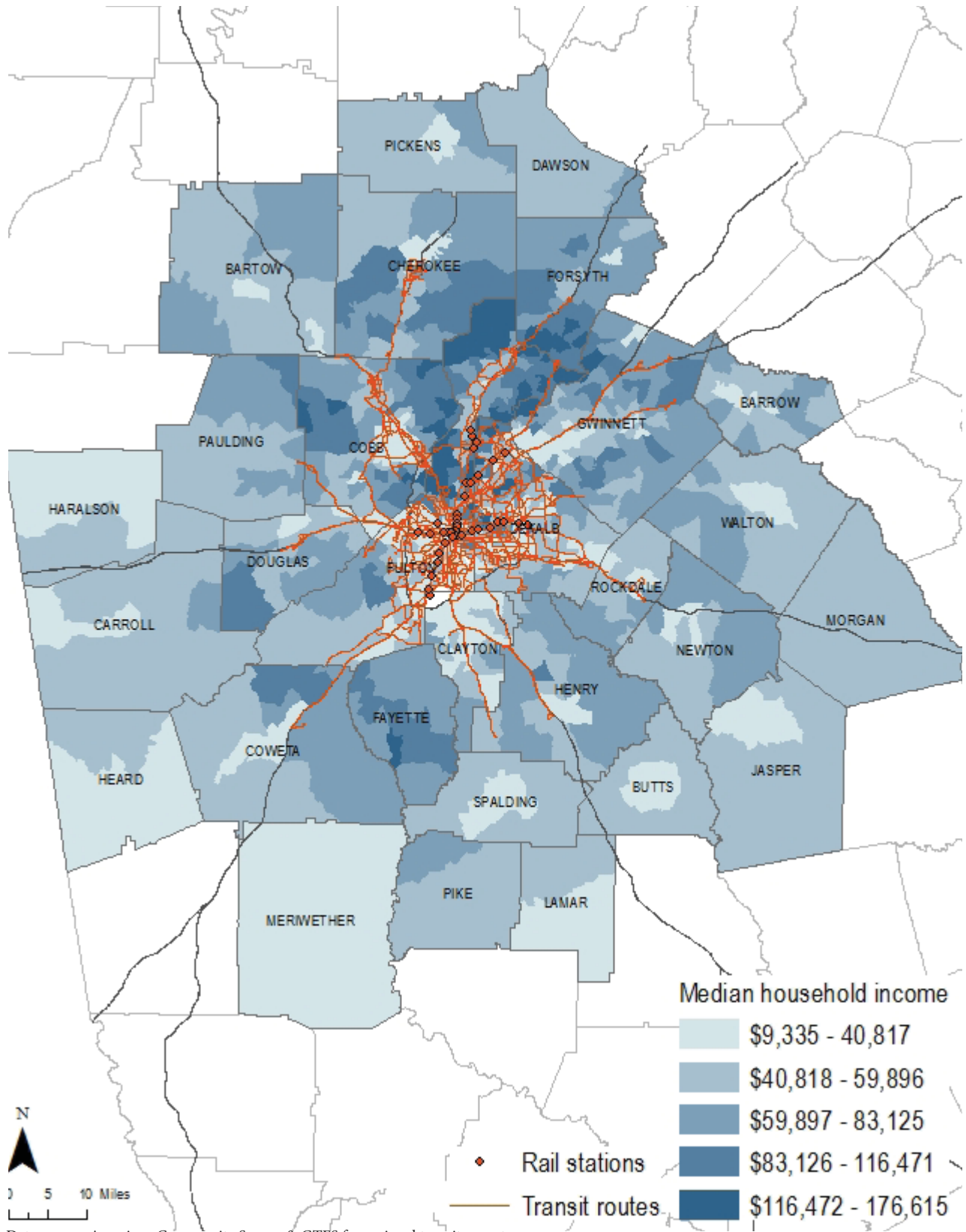
## NEEDS ASSESSMENT

Figure 30. The Atlanta region's population speaking English "less than very well" compared with transit routes & rail stations



Data source: American Community Survey & GTFS for regional transit operators

Figure 31. Median household income compared with transit routes & rail stations

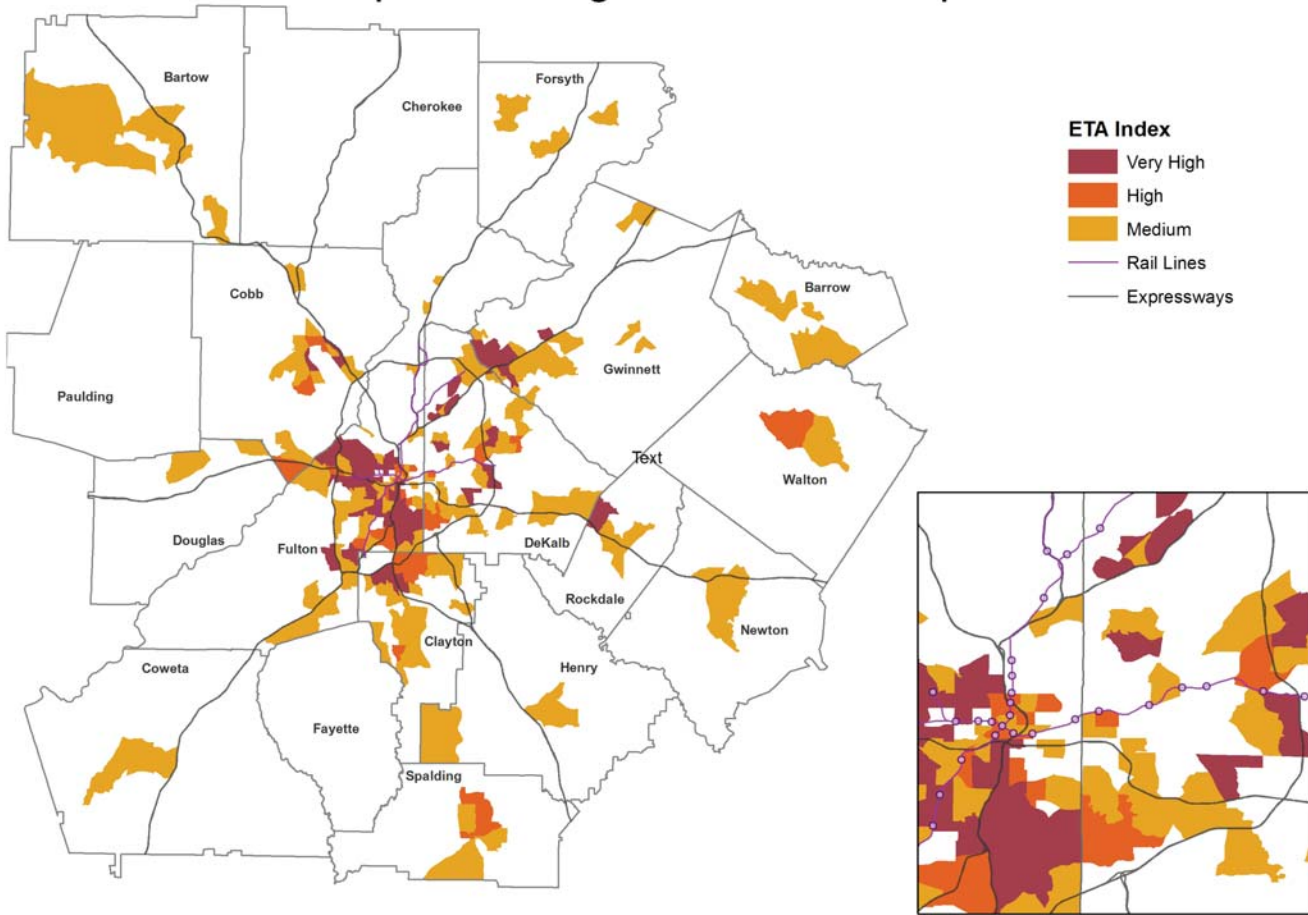


Data source: American Community Survey & GTFS for regional transit operators



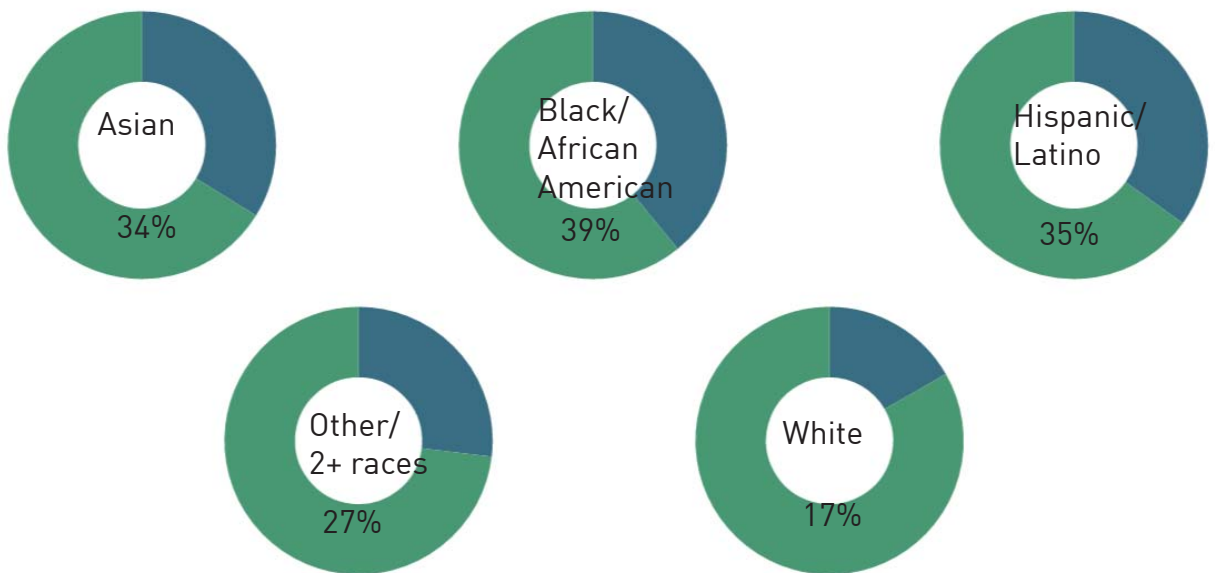
NEEDS ASSESSMENT

Figure 32. Equitable Target Areas and Rail Lines



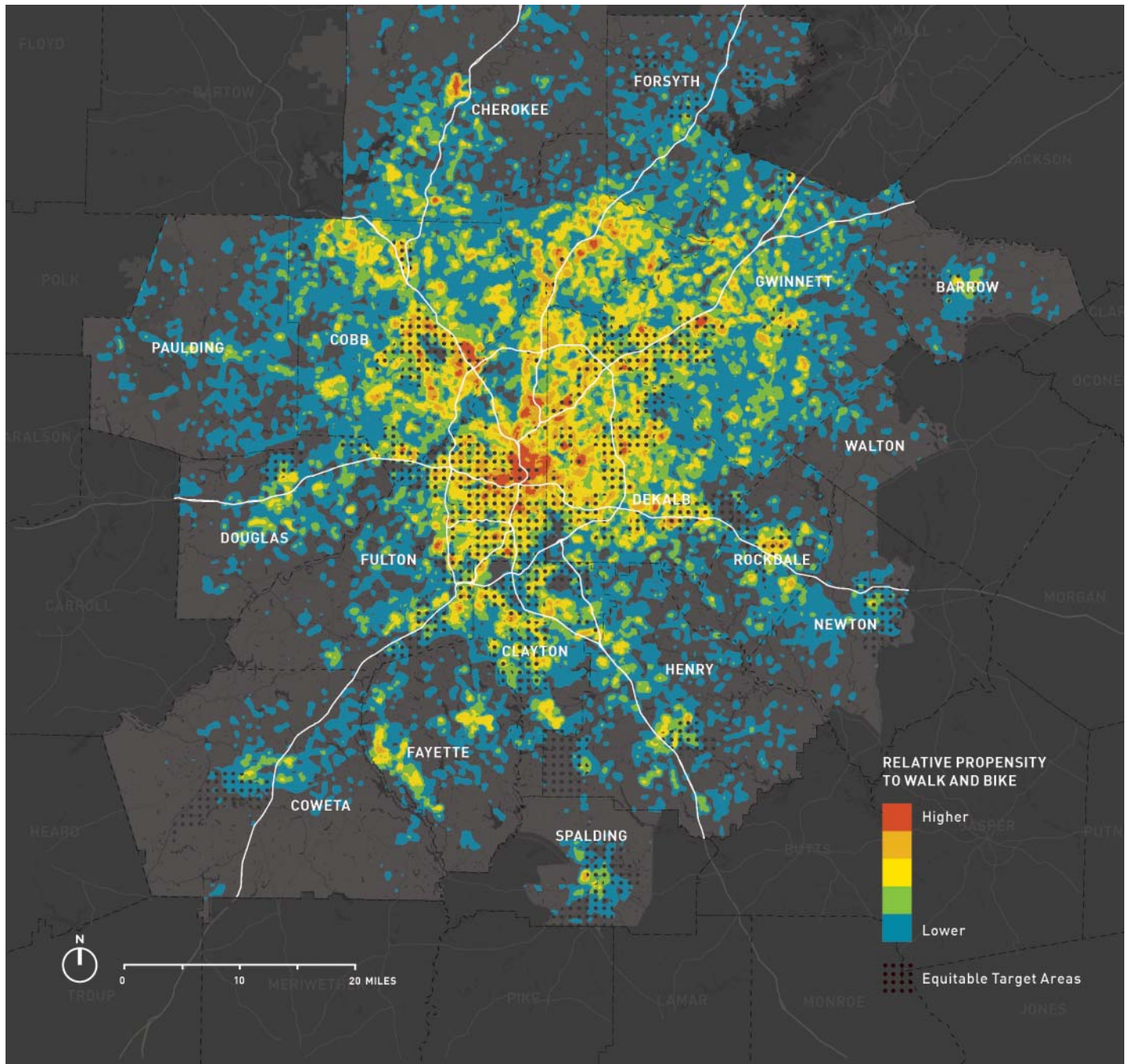
Source: ARC (graphic), HUD (AMI structure)

Figure 33. Access to transit varies by race



Source: American Community Survey, Center for Neighborhood Technology

Figure 34. Equitable Target Areas and Relative Propensity\* to Walk and Bike



\*propensity is the potential that a user could make a walk or bike trip

## NEEDS ASSESSMENT

### Destinations

On the other side of origin is destination. While destinations are personal, finding options that match individuals to their destinations ensures a useful transportation option.

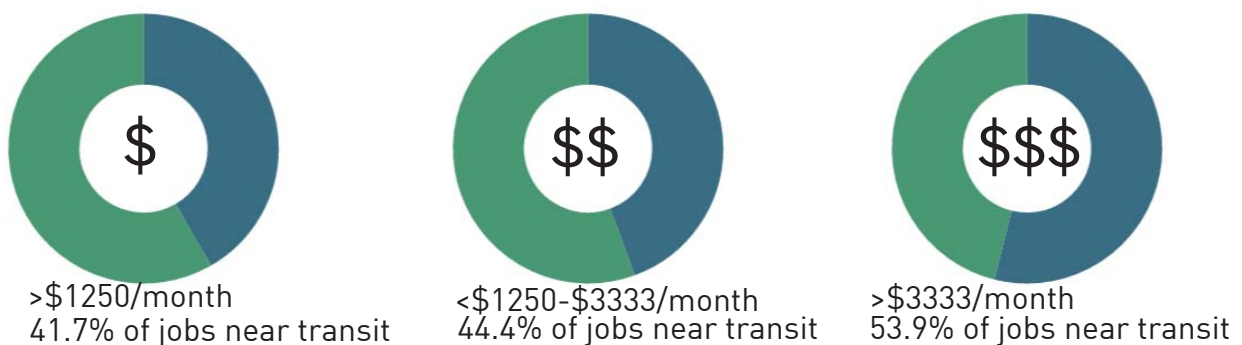
Not every bus route is a match; people must understand where it goes, its frequency, its operating hours, accessibility to and from the stop, and if it connects them with key destinations on the other end. Whether or not a destination is “relevant” is highly personal, but there are some general ways to consider what may be key destinations in the Atlanta region. Below are some key categories of destinations:

- **Employment** – The Atlanta region has areas with low, medium, and high concentrations of jobs. Overall, only 47.9% of jobs in the Atlanta region can be accessed by transit. Due to prohibitively long commutes and locational restrictions, non-SOV options do not work for everyone.<sup>51</sup> Jobs that require late transit departure times (e.g., 11 PM, 12 AM) are a particular area of concern. Without a guaranteed emergency ride home, transit can prove unreliable for people who work off-peak or have frequent scheduling changes. Figure 36 shows the relationship between concentration of jobs and transit lines.

Transit’s access to jobs at a variety of income levels is another key metric for understanding why people with lower income in the Atlanta region find themselves owning a car. Access to transit in the Atlanta region is not equal for workers at various levels of earnings, as Figure 35 shows. Of the total amount of jobs held by workers making up to \$1250/month or less (232,263), 41.7% of these jobs were within a half mile of transit. Comparatively, of the total amount of jobs held by workers making \$1250-3333/month (361,966), 44.4% of these jobs were within a half mile of transit. And of the total amount of jobs held by workers making \$3333/month or more (572,623), 53.9% of these jobs were within a half mile of transit. These figures indicate that the less money one makes, the less likely they are to have transit providing them access to employment.

- **Schools and Universities** – The Atlanta region is home to many universities and schools, all foundational for children and adults to obtain education at various levels.

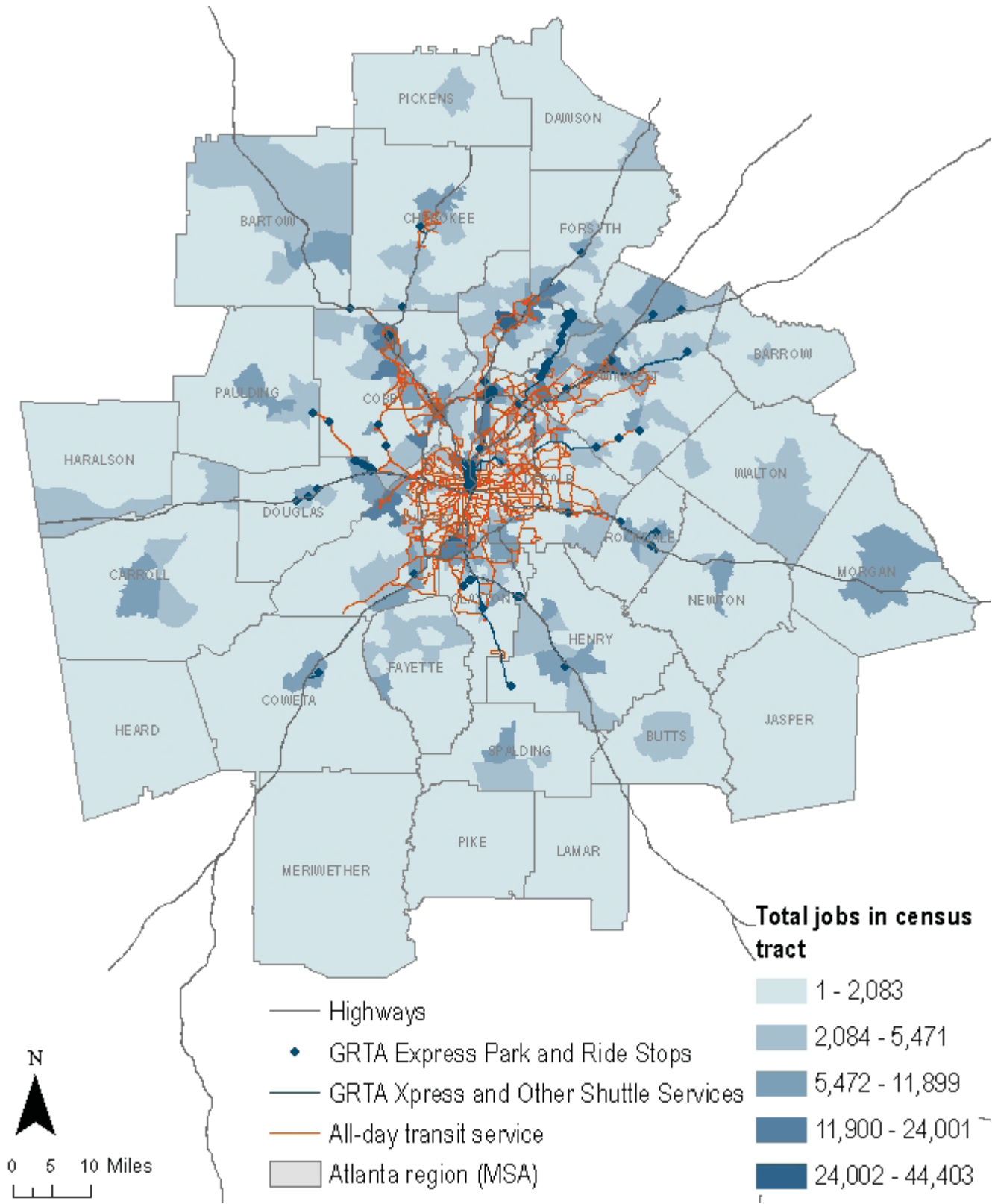
Figure 35. Lower wage jobs have less transit access.



Source: American Community Survey, Center for Neighborhood Technology



Figure 36. Atlanta region's concentration of jobs compared with transit service coverage



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- Medical and Health - Some health facilities are accessible by transit, but many are not. People aged 65+, people with disabilities, and veterans may need to get to medical facilities more often than the general population. A 2010 survey by the CDC found that the number of physician office visits per 100 had 715.4.<sup>52</sup> This was particularly true for males: males aged 45-46 had 323.2 visits per 100 persons per year, males aged 65-74 had 596.9 visits per 100 persons per year, and males aged 75 and over had 759.5 office visits per 100 persons per year.<sup>53</sup> Surveyed regional citizens report a lack of transportation to healthcare centers for those living in low income areas, especially, referring to these areas in the Atlanta region as “healthcare deserts”.<sup>54</sup> One respondent at a public engagement session expressed frustration with the local medical transportation options of which he was aware: “Going to dialysis was a nightmare. When I finally move close to a bus line, I found out that the buses traveled only one route, and I still had to walk a good distance.”<sup>55</sup> In addition, the need for medical and health services increases with age. In working to close the gaps between health facilities on transit, first and last mile connections are particularly important.
- Daily Errands – Daily errands, including but not limited to food, pharmacies, household items, and personal care.
- Social Services
- Places of Worship

For detailed amenity maps, visit [opendata.atlantaregional.com](http://opendata.atlantaregional.com).

In addition, a Brookings Institution report that focuses on the “suburbanization of jobs” trend, remarks that “Atlanta, Grand Rapids, and McAllen all show near-ubiquitous transit coverage in their primary cities and limited suburban coverage,

52 National Center for Health Statistics

53 National Center for Health Statistics

54 Regional Plan Online Survey-Phase 1

55 Transportation Coordinating Committee Work Session on Mobility Management & HST Breakout sessions

pushing their overall coverage rates to the bottom quintile”.<sup>56</sup> Therefore, transit access in the City of Atlanta and the Atlanta region are very different. While people who live and work in the City of Atlanta may have a more transit connected daily experience to and from work, it becomes much less likely across the region as a whole.

The Atlanta region is a network of counties and cities that connect a functional metropolitan area. While jobs might be geographically available and fluid for those in their personal vehicles, those taking transit do not have a comparable level of regional job access. This lack of access affects individuals and their ability to work at the best job for them personally, not only the best, transit-accessible job they can access. “The difference between city and suburban coverage rates is especially problematic because the majority of metropolitan jobs are now in the suburbs... This leaves metro areas’ suburban jobs, such as the 2.2 million in suburban Atlanta, at a structural disadvantage. It is critical that metro areas with majority suburban jobs focus on suburban and suburb-to-suburb routing”.<sup>57</sup>

There is some good news regarding regional connections, “In other large metro areas like Dallas and Atlanta, core transit agencies cannot overcome suburban jurisdictions that elect to ignore transit service entirely. The results of both situations are clear: jobs in cities and suburbs fail to connect with labor pools in other parts of the metro area... Fortunately, leaders in Detroit and Atlanta are attempting to establish more regional transit networks”.<sup>58</sup>

The Brookings report also brings in another, more detailed way of understanding transit usage. Brookings took all job locations as a set and measured how much of the metropolitan workforce could get to them using transit within a 90-minute commute time. The Atlanta region was one of the lowest at “less than 17.5%” labor access rate (exact rate unknown). Brookings explained, “Taken together, these two accessibility shares (transit coverage and labor access) provide a sobering account of the costs of continuous decentralization.

While the majority of households and jobs are near

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transit stops—proving that metropolitan transit networks do reach most of our neighborhoods—the distances between people and their regional jobs are too great to generate higher accessibility rates. Thus, transit routing improvements must address coverage gaps in the suburbs and disconnects between population centers and job nodes.”<sup>59</sup>

Given these circumstances, it is not surprising that the majority of people with low income in the Atlanta region calculate that the costs of a car are necessary. The lack of geographic mobility of the Atlanta region’s transit system contributes to a lack of economic mobility.

Ultimately, Regional transit patterns in the Atlanta region have been designed primarily as “hub and spoke.” The transit system, shared among 6 transit agencies, functions as local service for the immediate counties the transit is located and/or as a way of connecting to the urban core of the City of Atlanta. This helps increase access to City of Atlanta job concentration areas such as Downtown, Midtown, Buckhead, and the airport. Some “reverse commute” lines facilitate connections from the City of Atlanta to outlying counties such as Cobb and Gwinnett.

With the dispersion of both housing and jobs across the region, many of the commuting patterns are not only local trips, nor are they “hub and spoke” trips (to and from the urban core of the City of Atlanta). However, the fixed route/guideway transit system does not operate in a way that facilitates non-local, non-hub and spoke trips. Unless housing and jobs become more connected to transit or the transit system design expands and changes, there will continue to be significant gaps in regional job access with transit. This issue impacts people in the Atlanta region, regardless of income or disability.

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## Disability/Income/Linguistic/Age

The community engagement process for the Human Services Transportation Plan Update involved charrettes with individuals belonging to and working with the primary populations impacted by HST: seniors, persons with disabilities, low income individuals, veterans, and individuals with limited English proficiency. During these sessions,

participants were asked to discuss barriers to accessing transportation. Out of these discussions, four barriers (lack of infrastructure, lack of amenities, lack of affordability, lack of security and safety) emerged and several issues were found to be common across all six modes of transportation discussed (transit, carpool/shuttle, driving, walking, biking, taxi/TNC). The barriers are presented in Figure 38.

### *Lack of Infrastructure*

First and foremost, infrastructure availability was seen as a barrier with regard to transit, carpool/shuttle, and walking. Where infrastructure for a mode did exist, limited service parameters and infrastructure disrepair were identified as an issue by HST populations. The primary two concerns associated with limited service parameters were lack of translation services with regard to driving and transit, as well as lack of wheelchair accessibility with regard to transit, carpool/shuttle, and taxi/TNC.

Some people with disabilities may be unable to use the fixed-route system even with the assistance of another person and/or a mobility device (e.g. wheelchair lifts or low-floor bus ramps). This is because they are unable to travel to or from a fixed-route bus stop or rail station due to the stop/stations’ surrounding environmental conditions (e.g., rain, snow, or ice) or architectural barriers as aforementioned. Those unable to use or access fixed-route transit for these reasons may be eligible for ADA paratransit. While Fulton and DeKalb counties have significant paratransit coverage and both Cobb and Gwinnett counties have some paratransit coverage, those with disabilities in large parts of the region have no access to ADA paratransit services. Many counties with relatively high rates of disability offer no ADA paratransit service.

Infrastructure disrepair was seen as an issue when driving, walking, and biking. Poor customer service, especially with regard to the acceptance of service animals, was also noted as a major concern when using transit, carpool/shuttle, and taxi/TNC systems.

### *Lack of Affordability*

Cost of transportation was recognized as a barrier to transportation when transit, driving, and taxi/TNC was discussed in the community engagement sessions. The main issue brought up was the expensive fare costs associated with transit and taxi/

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59 Tomer

## NEEDS ASSESSMENT

TNC use.<sup>60</sup>

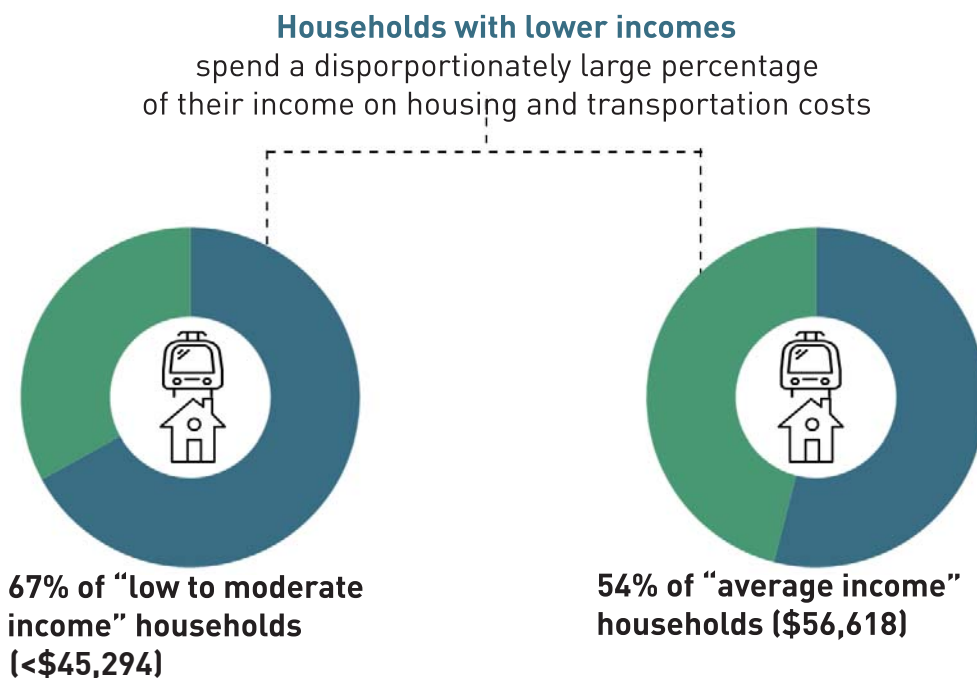
Even when costs do not present outright obstacles to using a service, they may interfere with quality of life by cutting disproportionately into a household's budget that could be spent on other needs/wants.

A “low to moderate income” household in the Atlanta region spends 67% of their household income on housing and transportation.<sup>61</sup> This compares to 54% of the household income spent on those two budget items by a typical household in the region and 57% spent by a typical household nationwide, where a “typical” household is one with the median income for the area, the average household size for the area, and the average commuters per household for area.<sup>62</sup> In addition, 39% of “low to moderate income” household income is spent on housing (compared to the 31% of household income spent on housing by the typical regional household and 33% spent on housing by the typical household nationally).<sup>63</sup>

The Center for Neighborhood Technology (CNT) considers transportation costs to be affordable if they are 15% or less of household income.<sup>64</sup> In the Atlanta region, the “low to moderate income” household spends 28% of its income on transportation (compared to 23% of household income spent on transportation by the typical regional household and 24% of household income spent on transportation by the typical national household).<sup>65</sup>

Households in Atlanta region counties without transit services spend higher portions of their income on transportation costs, and large portions of more rural counties far from the urban core also have relatively low median incomes (Figure 37). The percentage of the “low to moderate income” income workers who are transit riders, 4%, is identical to the percentage of typical workers both regionally and nationally who are transit riders.<sup>66</sup> However, households in the Atlanta region classified as “low to moderate income” have two cars, while the typical household in the region averages 1.82 cars.<sup>67</sup> (The typical national household has two cars.<sup>68</sup>) This relatively high car

Figure 37. Spending by households with lower incomes



Source: American Community Survey, Center for Neighborhood Technology

60 Regional Plan Public Survey Phase I data analysis report  
61 “H + T Index Data Download”  
62 “H + T Index Data Download”  
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ownership rate among low-to-moderate income households likely represents the stories of those in census tracts with relatively low median incomes in the region's peripheral counties that lack transit access (like Bartow, Carroll, Hall, Newton, Spalding, and Walton; see map "Median Income by Census Tract").

Annual auto ownership costs are lower for the region's "low to moderate income" households (\$7,819) than the region's typical household's (\$8,101) and the national typical household's (\$7,894).<sup>69</sup> This cost differential might be due to dissimilarities in the type or costs of cars lower income households are likely to have, deferral of maintenance by those families because of affordability, and lower insurance rates farther from the urban core. Many of the external counties have relatively low median incomes, indicating that high rates of "low to moderate income" households may live in those lower-insurance areas. However, it is important to note that even relatively lower auto ownership costs make up a larger percentage of total income for the low-to-moderate household income than the (relatively higher) auto ownership costs for those with higher household incomes. Regardless of the household income, car ownership is expensive.

Other data indicate that while the household might have a vehicle, not all individuals have access to the vehicle (note 26% responding "no vehicle available" as a motivation for commute option use).

Making transit affordable and accessible for people with low incomes can enable households with lower incomes to reduce their spending in the area of transportation. Helping to alleviate some of the transportation cost burden may have effects throughout the social safety net system; providing reliable, affordable transportation to jobs is key in creating economic mobility and elevating low income families throughout the region.

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## Travel Time

During a focus group conducted in August 2015 to better understand how to market transit to current infrequent or non-riders,<sup>70</sup> many respondents cited trips of 2+ hours to get to and from work. People with multiple jobs per day or mixing destinations

69 "H + T Index Data Download"  
70 Millennials and Transit Focus Group Report.

for education with work have a very difficult time getting around with transit. Contrasting with the ease of moving by car, even considering the traffic congestion the region currently experiences, transit can be seen as an inferior option. Jobs that require late transit departure times (e.g., 11 PM, 12 AM) were a particular area of concern. Many respondents need to catch the last bus or train home. They reported sometimes missing the last bus or train and having great difficulty getting home as a result.

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## Safety & Comfort

Finally, the perception of and actual occurrence of crime were noted by many in the HST populations that were surveyed. These issues were discussed particularly with regard to use of transit and driving (specifically, carjacking).

Additionally, concerns regarding lack of amenities as barriers to transportation access and use were brought up by HST populations with regard to transit and walking. Of the topics discussed, lack of lighting was identified as an issue for both modes.<sup>71</sup>

Beyond these four barriers to transportation, individuals in the sessions also discussed how technological, informational, and behavioral issues at large affected their ability to access transportation. Lack of smartphones and basic cellphones, were cited as technological issues that prevented HST populations from accessing transportation. Lack of awareness of transportation options was also cited as a common informational issue, with many individuals reporting that navigating the transportation system was extremely complicated and often resulted in mental and physical fatigue.<sup>72</sup> Finally, lack of interest and NIMBYism in the general population were identified as behavioral issues that affected transportation access in the region. Figure 38 shows the barriers discussed during public outreach sessions.

71 Poverty Forum ETA  
72 Cobb County



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Figure 38. Barriers to transportation access

Barrier	Transportation Mode						
	Transit	Carpool/Shuttle	Driving	Walking	Biking	Taxi/TNC	
Lack of Infrastructure	<ul style="list-style-type: none"> <li>• Infrastructure unavailable in certain areas</li> <li>• Limited service parameters                             <ul style="list-style-type: none"> <li>○ Limited hours of operation</li> <li>○ Infrequent service</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure unavailable in certain areas</li> <li>• Limited service parameters                             <ul style="list-style-type: none"> <li>• Waiting periods prior to obtaining license</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Infrastructure unavailable in certain areas</li> </ul>			
	<ul style="list-style-type: none"> <li>○ Lack of translation services</li> <li>○ Limited wheelchair accessible seating</li> <li>○ No door-to-door paratransit</li> <li>○ Limitations on companion riders</li> <li>○ Poor connectivity to other transit or modes</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of wheelchair accessible shuttles</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure in disrepair</li> <li>• Lack of translation services</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure in disrepair</li> <li>• Infrastructure is poorly designed</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure in disrepair</li> </ul>		<ul style="list-style-type: none"> <li>• Lack of wheelchair accessible vehicles</li> </ul>
	<ul style="list-style-type: none"> <li>• Poor customer service                             <ul style="list-style-type: none"> <li>○ Service animals not allowed</li> <li>○ Late arrivals</li> <li>○ Improper transfer charges</li> <li>○ No shows</li> <li>○ Drivers have poor interpersonal skills</li> <li>○ Unsanitary conditions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Poor customer service                             <ul style="list-style-type: none"> <li>○ Service animals not allowed</li> </ul> </li> </ul>					<ul style="list-style-type: none"> <li>• Poor customer service                             <ul style="list-style-type: none"> <li>○ Service animals not allowed</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• Long commute times</li> </ul>		<ul style="list-style-type: none"> <li>• Long commute times</li> </ul>				
Lack of Amenities	<ul style="list-style-type: none"> <li>• Lack of bathroom availability</li> <li>• Lack of protected waiting areas                             <ul style="list-style-type: none"> <li>○ Lack of lighting</li> <li>○ Missing shelters and covering</li> <li>○ Poor weather</li> </ul> </li> <li>• Lack of pay phones</li> <li>• Lack of baby seats</li> </ul>			<ul style="list-style-type: none"> <li>• Lack of lighting</li> </ul>			
Lack of Affordability	<ul style="list-style-type: none"> <li>• Expensive fares                             <ul style="list-style-type: none"> <li>○ Monthly passes unaffordable</li> <li>○ Travelling as a family gets expensive</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Cars and associated costs are expensive</li> <li>• Parking is expensive</li> </ul>			<ul style="list-style-type: none"> <li>• Expensive fares</li> </ul>	
Lack of Security and Safety	<ul style="list-style-type: none"> <li>• Perception of crime</li> <li>• Actual crime</li> <li>• Panhandling</li> </ul>		<ul style="list-style-type: none"> <li>• Perception of crime</li> <li>• Actual crime</li> </ul>	<ul style="list-style-type: none"> <li>• Pedestrians not given appropriate right of way</li> </ul>			

## CONCLUSION

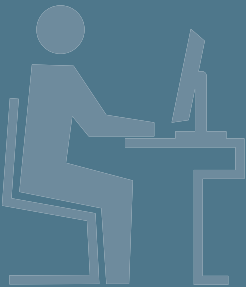
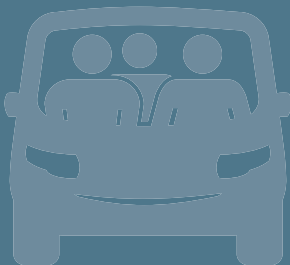
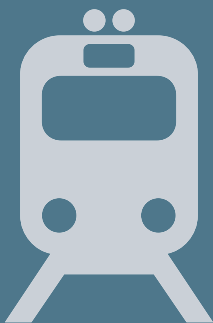
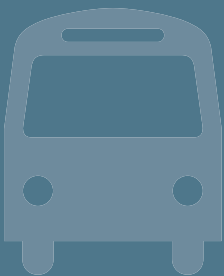
While it would take additional financing for the Atlanta region’s transit system to redesign its approach, expand, and reach higher rates of connectivity between jobs, homes, and workers, this increase could connect with reductions in other types of public spending, such as spending on public assistance. It could also help reduce the cost of traffic congestion to businesses and households alike.

Improvements in transit could also help improve less tangible factors such as public health issues exacerbated by air pollution. Through traffic congestion reduction, it could even contribute to improvements in emotional health and stress levels for the Atlanta region as a whole. Making sure the transit system steadily works towards raising rates of connectivity between jobs, homes, and workers is

not a benefit only for those with lower incomes or a disability – it would benefit the entire Atlanta region in direct and indirect ways, more obvious and less obvious ways. There is a “cost” associated with the transit system not functioning in a way that facilitates higher levels of economic mobility for everyone, and these costs are shared among HST populations and non-HST populations alike. Regional surveys demonstrate two key issues regional residents feel strongly about: 1) transportation is the biggest problem facing residents in the metro area and 2) public transit is considered “very important” by a large majority of the region across 13 counties. The transportation challenges outlined in this plan are critical concerns for many residents of the Atlanta region, HST populations and non-HST populations alike.

*WHILE THESE CONNECTIONS MAY NOT SHOW THEMSELVES CLEARLY ON THE SURFACE, THESE ISSUES OF PUBLIC TRANSIT ACCESS, INCOME LEVELS, ECONOMIC OPPORTUNITY, DISABILITY, TRAFFIC CONGESTION, AND PUBLIC HEALTH ARE INTERWOVEN. BY UNDERSTANDING THEIR CONNECTIVITY, MORE ACTIONS CAN CONTRIBUTE TO IMPROVING THE SITUATION—NOT ONLY TO TRANSPORTATION AS A STAND-ALONE NEED, BUT AS A FACILITATOR OF CONNECTIVITY TO DESTINATIONS THAT IMPROVE QUALITY OF LIFE AS A WHOLE.*

# HST PLAN PART 2: TARGETED IMPROVEMENTS



**ARC**

# HST PLAN PART 2: TARGETED IMPROVEMENTS

HST at the regional/metropolitan-level scale is driven by specific local improvements in counties and municipalities. Together, these local improvements connect to achieve a regional vision for more comprehensive HST.

While the information in the needs assessment section was provided at the regional scale, the strategic approach to targeted improvements looks at both local and regional improvements. Based on a strategic decision-making approach, the plan utilizes a framework to assess existing programs and direct resources towards improvements. The approach can be duplicated on a local level, helping to prioritize investments on the ground.

Through public engagement, the plan identified a decision-making process (shown as a funnel in Figure 39) that HST populations work through to arrive at the options personally available to them. While a few of the steps in the decision-making process apply to all users, HST populations generally encounter additional barriers (and steps in the process) as they refine their options.

All populations making transportation decisions go through the following mental steps:

1. Education and Awareness – They take stock of the transportation options of which they are aware. It is important to note that there may be additional options available to them of which they are unaware.
2. Origin & Destination – Their options will become reduced as they see which options are possible based on their origin and destination locations.

If the person is part of an HST population, they will likely have to explore HST-specific limitations after the geographic options are clear:

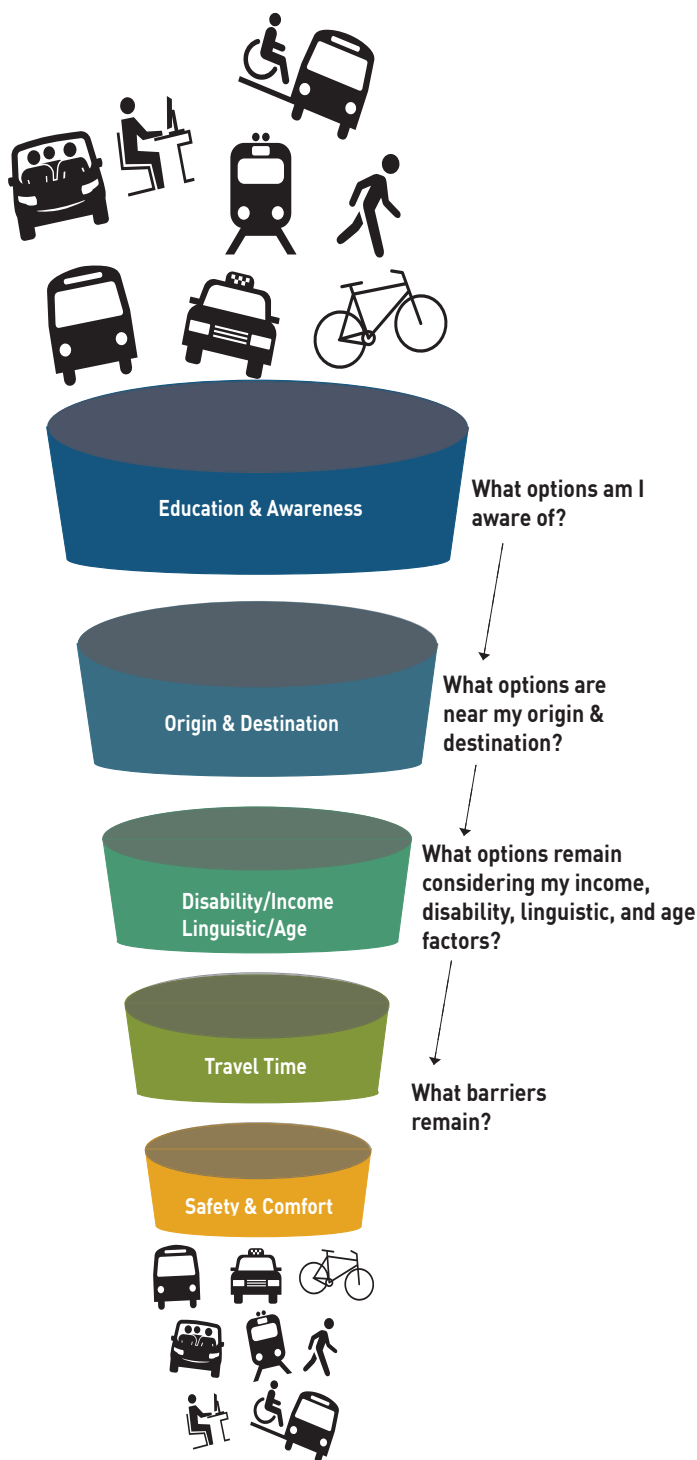
3. Disability/Income/Linguistic/Age factors – Due to a disability, a person may have specific needs (e.g., vehicle equipment) for the trip. When these cannot be met, the option is eliminated. Due to income limitations, some options may be unaffordable once or financially unsustainable to handle on an on-going basis. Due to linguistic limitations, some options may not work from a communication standpoint. Instructions and processes could be difficult or impossible to understand. This also can reduce the available options.

If the person is not part of an HST population, they may not consider disability, income, age, or linguistic factors. Regardless, all populations will close out the process with the following steps (not necessarily in this order):

4. Travel time – They will compare their remaining options by the travel time, keeping efficiency in mind. For some transportation options, they may balance out time with cost or other factors such as the ability to use time on the option effectively (even if their actual trip is longer).
5. Safety & comfort – They will evaluate their safety and comfort on the transportation option given other environmental factors. Weather can be a big factor. Walking, for instance, may not be considered a comfortable option while raining. For a motorized wheelchair user, rain may even damage equipment, causing both safety and comfort issues.

## TARGETED IMPROVEMENTS

Figure 39. Personal decision-making process funnel



Understanding the needs of HST populations as they progress through the decision-making process comprises the first part of a strategic approach: the needs assessment.

As explained in the plan, the decision making process acts as a funnel or filter that removes viable options depending on the personal factors of the user/consumer (Figure 36).

If, at each step of the decision-making process, more options can be kept viable for people with diverse needs, then HST improvements start to reshape the reality of the decision-making process from a funnel/filter to a cylinder. The options identified at the very beginning of the decision-making process can remain options even as people encounter potential barriers.

Therefore, the next step in the strategic approach is identifying targeted improvements that can help to broaden the options that remain intact for HST populations based on their diverse needs.

In summary, the methodology used in this plan to identify tactics first works to understand the needs of HST populations and the options available to them. Next, after gathering background information, it seeks to target improvements through strategic and measurable tactics. Hopefully, many of the outlined strategies are applicable on a local level.

As more counties and municipalities use this framework of needs assessment and strategic solutions, the results will feed up into regional gains. There is no regional progress without effective local action.



# STRATEGIC LOCAL APPROACHES TO HST IMPROVEMENTS

Based on the needs assessment, several strategies are suggested for implementation. These strategies aim to help broaden the options available to HST populations.

When working towards identifying local strategies to improve HST, the following steps should be followed:

1. Local authorities should identify which tactics they already utilize within their existing projects, programs, and initiatives.
2. They should evaluate the potential to measure the impacts of these tactics by quantifying/qualifying the results.
3. They should identify which tactics and results might help achieve locally-important objectives (based on the needs assessment, public outreach, and other processes the authority finds helpful). This helps create a draft list of options to consider and compare with tactics and results already in place.
4. They should try to connect tactics that help bolster each other (such as tactics related to transit and sidewalk improvements).
5. They should attempt to quantify/qualify the potential results of various sets/groups of improvements and compare them against each other.
6. They should choose a set of improvements that will help to expand the available options and move into additional steps such as

phasing, budgeting, comprehensive planning integration, etc.

Using the funnel in Figure 39 as a guiding framework, potential local strategies are recommended for each stage of the decision-making process. Each recommended strategy aims to expand the options available to HST populations at key decision points. Figure 40 suggests targeted improvements, references the potential lead agency for each suggested approach and highlights the relevant mode(s). By implementing these strategies, the Atlanta region can develop a more connected approach to HST. Following Figure 40, a few strategies are called out in additional detail on the subsequent pages.

## TARGETED IMPROVEMENTS

Figure 40. Recommended strategies by lead agency and mode to expand HST options

Strategy		Potential Lead Agency				Mode					
		ARC	City or County	Transit Agency	Fixed Route	Hybrid Demand Response	Specialized Services	Vanpool/ Carpool	Taxi/ TNC	Bike/ Walk	Telework
Education & Awareness	Awareness campaigns	X		X	X	X	X	X	X	X	X
	Training on day-to-day use	X		X	X	X	X	X	X	X	X
Origins & Destinations	Design new/ expand service			X	X	X	X				
	Expand door-to-door service			X		X	X				
	Expand allowable trip purposes			X		X	X				
Disability/Income/Linguistic/Age	Improve ADA accessibility		X	X	X	X	X	X	X		
	Reduce limitations on service animals & companion riders			X	X	X	X	X	X		
	Decrease ridership cost			X	X	X	X				
	Increase translated materials/ information			X	X	X	X	X	X	X	X
	Improve teleconnect elements										X
	Distance and delay reduction techniques			X	X	X	X	X			
Safety & Comfort	Improve police/security presence		X	X	X	X					
	Enhance nearby amenities	X	X	X	X	X				X	

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### **Enhance awareness of HST options.**

Awareness campaigns about new and existing options can help to connect HST populations with information on transportation options. In addition, education for home renters/buyers and employers/businesses about the value of locating near a diversity of non-SOV options can facilitate additional trips.

Additionally, mobility management best practices can be utilized to facilitate improved customer service for HST populations. Through specialized customer attention, HST populations may increase their awareness of available services.

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### **Design new/expand service.**

Service expansions benefit HST populations in a myriad of ways. Altering or adding fixed or hybrid fixed route/demand response routes to reach more origins and destinations for HST populations is a key strategy for enhancing mobility options. Additionally, expanding service hours to accommodate a range of job types is also a valuable strategy for servicing low-income populations. For carpools and vanpools, encouraging the formation of new groups expands options by adding origins and destinations serviced. Lastly, facilitating new volunteer drivers for special services enables more members of HST populations to access transportation.

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### **Improve teleconnect elements.**

Improving disability-specific (i.e. online ADA compliance), income-specific (i.e. income sensitive internet pricing), and language-specific (i.e. non-English language translations for online resources) elements for teleconnect can improve access to teleworking for HST populations.

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### **Distance and delay reduction techniques.**

By route planning along key corridors, offering more frequent service, avoiding traffic congestion, and maintaining state of good repair, travel time on fixed route transit can be reduced. Distance and delay reduction tactics aid both HST and non-HST populations by improving reliability and on-time arrival. For specialized services, hybrid fixed route/demand response service, carpools, and vanpools, route optimization is a valuable tool for reducing delay. Similarly, improving dedicated cycling lanes, increasing greenways, and implementing bicycle and pedestrian signal prioritization at intersections helps to improve travel time for bicyclists and pedestrians by keeping them away from congestion and facilitating easy passage through signals.

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### **Enhance nearby amenities.**

Installing lighting improvements to aid with nighttime visibility, improving seating options, and developing waiting areas with protection from the elements can all improve the safety and comfort of taking transit. In addition, facilitating first and last mile connectivity through amenities can increase the use of transit; improving sidewalk and bicycle facility connections to bus routes and transit stations expands the reach of service.

## STRATEGIC REGIONAL APPROACHES TO HST IMPROVEMENTS

To create a comprehensive approach to HST, regional collaboration between jurisdictions and service-providing organizations is required.

While some non-SOV options can function at the local level—such as cycling and walking—they would also benefit from regional connections that can facilitate additional impact (e.g., strategic improvements in sidewalk/crosswalks that improve accessibility of the regional transit system and regional trail systems). Other modes, by the nature of the distances/jurisdictions they span, require a regional approach. Of all the non-SOV options explained in the Plan, three require high levels of collaboration to make them successful: 1) fixed route/guideway public transit (i.e., bus and train), 2) specialized services, and 3) hybrid demand-response/fixed transit.

Both fixed route/guideway public transit (i.e., bus and train) and specialized services necessitate regional coordination. For fixed route guideway, the six regional transit agencies as well as a few private providers (shuttle operators such as The Buc and the Atlantic Station shuttle) and universities (e.g., Emory, Georgia Tech, and Georgia State) are all involved. The agencies providing public transportation frequently act adjacently to each other at county lines and have passengers that may flow between multiple transit agencies to complete one trip. This prompts the need for a number of regional services to facilitate transfers between the individual transit agencies.

A large number of providers are also involved in the provision of specialized services, which includes ADA paratransit, vouchers, volunteer driver, and senior service programs. Specialized services share a similarity with fixed route/

guideway public transit – both have operating entities that are adjacent to each other at county lines. However, unlike fixed route transit, specialized services often require eligibility of the person and possibly also the trip purpose. Eligibility of the person is often tied to personal characteristics explained in the Plan (e.g., disability, income, age, veteran status, and limited English proficiency). Eligibility of the trip is tied to priorities of the program such as getting people to medical appointments, work, social activities, etc. Some specialized services, such as ADA paratransit, have no trip purpose restrictions. However, ADA paratransit may also go into a further level of eligibility – conditional eligibility, which limits the use of the service for certain trips if fixed route transit is accessible.

The eligibility factor in specialized services is extremely complex; a person can be eligible for one, two, or more services across various agencies at the federal, state, and local levels. There may also be overlap in trip eligibility (e.g., acceptance of medical trips is common across many services). While a few resources for residents exist, there is no regional database that keeps track of the eligibility of residents across all specialized services.

The coordination of fixed route transit and specialized services is best handled at the regional level. While challenging and complex, managing regional collaboration has the potential to reap the largest benefits as the impacts carry throughout the region. The two primary areas of opportunity in relational collaboration are: customer experience across multiple systems and efficiency of time and money. Making these services function more effectively as a system, depending on the tactic, can translate into money saved trip by trip.

The following tactics can be used to streamline and coordinate fixed route transit and/or specialized service at the regional level:

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### **Enhance education and awareness of HST options.**

Like the local approach to HST education and awareness, much can be done at the regional level to better inform customers. By offering phone and web-based services to help HST populations pinpoint relevant transportation options, new users may become aware of additional transportation services available to them. In addition, the deployment of travel ambassadors to assist with travel training can help users to become familiar with the systems and potentially switch to fixed-route from specialized services after training.

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### **Improve the application process.**

A regional application process that utilizes a common application, common eligibility determination process, and common eligibility identification card can ease the administrative burden of providing specialized services. It may also directly assist HST populations by lowering the barriers to obtaining service.

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### **Implement a common fare structure and procurement protocol.**

Developing a regional fare structure—a process that is currently underway with the Breeze Card regional fare payment participants (MARTA, Cobb, Gwinnett, XPress, and the Atlanta Streetcar)—will assist with ease of transfer and may facilitate a greater understanding of the overall system. Similarly relevant to the financial realm, establishing common procurement practices can yield cost savings and ease the administrative burden felt by the transit agencies and specialized service providers.

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### **Develop service agreements to assist with streamlined service provision.**

Developing service agreements that facilitate partnerships for fleet/vehicle sharing, peak/overflow periods, and client sharing in cases of dual eligibility can all lead to cost savings for service providers. In addition, these type of agreements may also help services to better meet demand, particularly during peak periods. Service providers can also facilitate additional trips and assist riders by adopting agreements that allow inter-agency trips with reciprocal transfers and developing routes that utilize common service areas (e.g. a regional paratransit area).

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### **Develop common legal frameworks and reporting mechanisms.**

Continuing to reinforce the theme of adopting regional standards, transit providers can move towards commonly held insurance, common data collection, and common reporting procedures. This can help to save money through lowered premiums, data sharing, and streamlined reporting.

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### **Embrace regional technology applications.**

Common route optimization and scheduling software can improve interoperability by minimizing duplicative work. In addition, universally adopting software to provide passenger updates on vehicle location will help passengers to better plan and meet transfer needs.



## TARGETED IMPROVEMENTS

### EVALUATE AND MONITOR

After the tactics outlined in the Plan are implemented, ongoing monitoring and evaluation is required. A few key performance measures emerged.

#### Ridership Figures

Measuring a change in ridership figures (by total, HST, and self-locating populations) throughout the implementation of local and regional tactics is a useful measure for education and awareness initiatives.

#### Populations & Origins/Destinations

Measuring the percent of the HST population within a walk/bike/drive shed of a transit stop and the number of HST destinations along transit routes provides insight into the benefits of route creation and expansion.

#### Qualitative Policy Improvement

Many of the strategies outlined in the plan rely on policy changes (e.g. companion rider benefits, reduced limitations on service animals, door-to-door service, discounts for HST population etc.). Therefore, qualitative policy improvement is the suggested measurement technique for these strategies.

#### Percent of Amenity ADA Accessible

Most of the recommended tactics for increasing mode choice for people with disabilities is related to ADA enhancements. As such, measuring the percentage change of ADA accessible stations, stops, vehicles, and seating options.

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#### Improved Linguistic Access

Measuring the number of materials or informational elements translated per language, and the overall number of languages offered helps to monitor progress in reducing linguistic barriers.

#### Changes in Amenities

Measuring vehicle, lighting, benches etc. upgrades can take a couple of different forms. Counting the number of amenities, the percentage of stops/stations with amenities, or the percent change in amenities can all yield trackable metrics on amenity enhancements.

# POTENTIAL FUNDING

As outlined in the Plan, HST spans a diversity of needs and a wide variety of transportation options. As such, pinpointing funding options can be a challenge. While the list below is not exhaustive, it illustrates the variety of funding types available.

## Federal Highway Administration (FHWA) Congestion Mitigation and Air Quality Improvement Program (CMAQ)

“The CMAQ program was implemented to support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief.”<sup>1</sup>

## FHWA Transportation Alternatives Program (TAP)

“The TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.”<sup>2</sup>

## FHWA Surface Transportation Program (STP) Urban

“The Surface Transportation Program (STP) provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals, other roadways largely in the right-of-way of former Interstate System routes or other divided highways.”<sup>3</sup>

## Federal Transit Administration (FTA) Section 5307

“The (transit) funds may be used for any capital purpose eligible under 49 U.S.C. 5302(a)(1), including such activities as vehicle replacements, facilities renovation or construction, preventive maintenance, and mobility management.”<sup>4</sup>

## FTA Section 5310

“The purpose of the program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options... Eligible projects include both “traditional” capital investment and “nontraditional” investment beyond the Americans with Disabilities Act (ADA) complementary paratransit services.”<sup>5</sup>

## FTA Section 5311

“An eligible recipient may use the funding for capital, operating, and administrative expenses for public transportation projects that meet the needs of rural communities.”<sup>6</sup>

## Older Americans Act Title III

“Title III provides for formula grants to State agencies on aging, under approved State plans, to stimulate the development or enhancement of comprehensive and coordinated community-based systems resulting in a continuum of services to older persons with special emphasis on older individuals with the greatest economic or social need, with particular attention to low-income minority individuals.”<sup>7</sup>

1 Congestion Mitigation and Air Quality Improvement (CMAQ) Program  
2 Transportation alternatives program (TAP) guidance  
3 MAP-21 - fact sheets - surface transportation

4 Urbanized area formula (section 5307)  
5 Enhanced mobility of seniors & individuals with disabilities - section 5310  
6 Formula grants for other than urbanized areas (5311)  
7 Older Americans Act: Title III Regulations