2019

ASSESSING THE DEGREE OF ACCESS TO URBAN PUBLIC PARKS FOR OLDER ADULTS IN THE VILLAGES METROPOLITAN AREA OF FLORIDA, 2017

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Partial Fulfillment Statement:

A thesis/dissertation submitted in partial fulfillment of the requirements for the degree of Master of Urban and Regional Studies and Planning at Virginia Commonwealth University.

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MURP Thesis

Virginia Commonwealth University

Richmond, Virginia

May 10, 2019

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Acknowledgment

Sitting in the quiet library in the drizzling afternoon, accompanied by the sound of the keyboard, my postgraduate life is about to draw a full stop. During the three years at Virginia Commonwealth University, I had many beautiful memories and also experienced many difficulties and setbacks. Now I think it is an inevitable process. Three years, sounds like a long time, but really into the study and life here, and feel very short. As I approach the completion of my thesis, I would like to thank many people from the bottom of my heart.

First of all, I want to thank my most beloved advisor, Dr. Suen. This paper was completed under the guidance of my committee chair Dr. Suen. His profound professional knowledge, severely scientific attitude, rigorous academic spirit, and tireless teaching ethics have all exerted a profound impact on me. From the very beginning, Dr. Suen has continued to broaden my thinking, so that I was inspired and determined the title of the thesis. In the subsequent revision of the paper, Dr. Suen devoted much effort, and every time I was greatly benefited, thus expanding my thinking. I will keep Dr. Suen's inculcation in mind, as a creed to guide me along the way. Here, I would like to extend my most sincere gratitude and heartfelt thanks to Dr. Suen!

Secondly, I am also very grateful to my committee members, Dr. Gough, and Dr. Gendron. The successful completion of this paper is inseparable from their concern and help. In the process of my postgraduate study, Dr. Gough has taken special care of me both in my studies and in my normal life. She is knowledgeable and gave me a lot of care and inspiration, which will benefit me all my life. I sincerely thank Dr. Gough for her teaching and care for me under the guidance of all the new graduates! At the same time, I would also like to thank Dr. Gendron for her valuable comments during my thesis writing. Dr. Gendron has done a lot of work on this topic, helping me overcome the difficulties, thank her very much! Both Dr. Gough and Dr. Gendron have given me very constructive comments and key inspirations in my paper writing framework and writing ideas. I am grateful.

In addition, I would like to thank Kathryn Benedict, Rachel Jordan, and Brook Saba McDowell for their valuable suggestions on my paper; I am grateful to Dr. Denia Lee Hing for helping me in my academic counseling. At the same time, I want to express my gratitude to all my classmates and friends as well as the faculty and staff of L. Douglas Wilder School of Government and Public Affairs. I have learned from them what I lacked before, no matter

in formal academic communication or informal life communication. Thanks all of them for their company, which has enriched my life in the past two years. Thanks for the happy years we have spent together.

Finally, I want to thank my parents and my sister for their constant encouragement and support for me, so that I have the motivation to overcome difficulties and move forward bravely. They gave me tremendous support in material and spiritual terms, and also gave me the greatest motivation. I am grateful to all my parents have done for me. It is their hard work to train me to grow up so that I can have the opportunity to study in graduate school. Thanks to my sister's love and encouragement to me, which makes me optimistic and confident. I will continue to persist and strive to return their kindness as soon as possible. Their health and safety are my greatest wish. In the years to come, I will use what I have learned and work hard to provide them with a better life, and never let down the family's earnest expectations for me!

Confucius says, " Thus things flow away day and night." Growth is also the same, continually bidding farewell to yourself; it is also a separation from you. However, it is good to have you all the way! I am sure we will cross our path again in the future.

I hope this paper will be the new start instead of the end of my academic thinking. I hope that this preceding sentence is not just a hope.

TABLE OF CONTENTS

Abstract

With the rapid urbanization, the urban residents' demand for urban public parks is increasing. As a unique and representative age group, older adults put forward new requirements for the evaluation and rational planning of urban parks. Park accessibility is an important index reflecting the rationality of park layout, the accessibility of residents to the park and the social equity of park services.

In this paper, buffer analysis and network analysis based on the ArcGIS platform were selected to analyze service accessibility and green transportation accessibility of The Villages metropolitan area of Florida respectively and then make a summary analysis. In particular, this paper chooses service area, common facilities, and recreational amenities as the evaluation factors of service accessibility. Besides, the coverage area of three modes of green transportation, namely walking, public transportation and bicycle, in different periods is selected as the evaluation factor of green transportation accessibility in this paper.

The results show that: 1) The accessibility level of the study area is generally low, and more than half of the study area is not within the service scope of the park. 2) The urban parks serving the study area are relatively unevenly distributed; the road network is imperfect, and there are open circuit and blank area. 3) Park accessibility ratio of four modes of transportation in different time levels motor vehicles > bicycles > walking > public transportation. The research results can provide a reference for the optimization of the spatial layout of public parks in age-friendly cities.

Key Words: urban public park, park accessibility, buffer analysis, network analysis, older adults

1. Introduction

This study will examine the degree of accessibility to urban parks for older adults in The Villages metropolitan area of Florida, which has the highest aging rate in the United States as of 2017. As leaving results of human society's ultimate development in the last century, both the aging population and urbanization are important issues that humanity is facing (World Health Organization, 2007). World Health Organization (WHO) in 2007 pointed out that the aging population, like urbanization, is one of the two trends of globalization, which will directly affect the development of the 21st century. Besides, urban parks, as an essential part of urban public open spaces, are essential to improve the citizens' quality of life in urban environments (Kara & Akçit, 2015). The number and structure of parks may have an impact on human well-being (Richards et al., 2017). Particularly, the needs of public space for older adults differ from those of other age groups and need to be considered separately (Yung et al., 2016).

Therefore, this research examines urban parks in The Villages metropolitan area of Florida as the research object. Florida is one of the most representative areas with the highest population of older adults in the United States (Christie, 2011). ArcGIS and related software were used to study the research object by examining the spatial layout of urban parks from the perspective of older adults for accessibility. Through the quantitative evaluation and analysis of the service status quo, this paper is aimed to provide a new way of thinking for the layout of urban parks and related policies which are favorable to older adults.

1.1 Problem Statement

This research will identify the current accessibility of urban parks to older adults in The Villages metropolitan area of Florida in 2017 and explore how to enhance older adults' opportunity to access urban parks to accommodate more people and provide the resources they need (Thorne et al., 2013) while helping make cities senior friendly and socially sustainable. The initial assumption of this paper is that higher accessibility to urban parks can provide better service for the increasing older adults in the process of urbanization. With the increasing numbers of older adults globally, the creation of age-friendly cities is imminent and a topic of high importance (WHO, 2007). This research for The Villages metropolitan area of Florida, as the region with the highest percentage of older adults in the United States

(the U.S.), will provide sustainable reference and guidance for the promotion of livable communities for older adults and the construction of age-friendly cities.

Orenstein & Hamburg (2010) pointed out that there is a positive correlation between population growth and land development rate nationwide. It has been recognized for an extended period that urban planning and the protection of open space are both crucial factors in promoting sustainable urban development (Esbah et al., 2009) with the same pace (Fulton et al., 2002). Elsewhere in the developed places, urban expansion and loss of open space have become essential planning and policy issues in the U.S. (Orenstein & Hamburg, 2010). As more land is being urbanized to meet the housing needs of the growing population for large-size housing, urban green space is regarded as a vital but decreasing resource (Orenstein & Hamburg, 2010).

Bengston et al. (2004) noted that managing growth and protecting open space is at the heart of sustainable development, namely, achieving growth and development regarding economic, environmental, and socially sustainable development. Urban growth reduces open space both inside and outside the city, affecting biodiversity and ecosystem services (McDonald et al., 2010); urban public open space improves the quality of life, and physical and mental health of residents, which has quantifiable economic value and can affect house prices (Richards et al., 2017). According to ParkScore (2018), parks can also help reduce crime and revitalize local economies. Studies have shown that young males are the most significant users of parks, while older adults are rarely considered during park planning (Kinney, 2016).

This research will focus on older adults as a representative group of a rising population and explore their accessibility to urban public parks, an essential part of the urban ecological environment and indispensable public open spaces in cities. This article has two goals as follows:

1.1.1 Goal 1: Determine the current degree of accessibility to urban public parks for older adults in The Villages Metropolitan Area of Florida

Objective 1: Collect the data of urban parks and older adults for the study area in 2017, and then establish the relevant databases.

Objective 2: Analyze the current degree of accessibility to urban parks for older adults in The Villages metropolitan area of Florida, and compare the research results of different calculating units to explore the prevailing rules and the causes of their formation.

1.1.2 Goal 2: Determine how the research findings can help the construction of age-friendly cities

Objective 1: Find the relevance between the results and the creation of age-friendly cities. According to the results of the previous phase, this paper will determine the different accessibility and similar accessibility resulting from planning interventions.

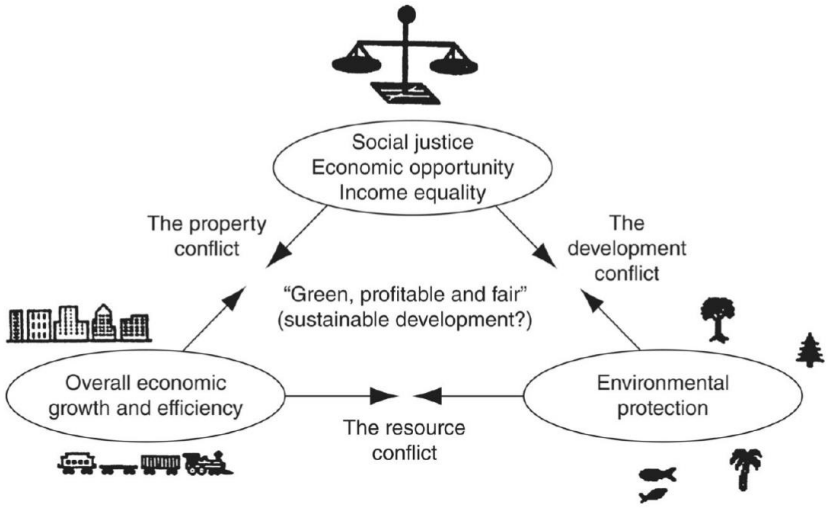
Objective 2: The area with higher scores affected by older adults' aggregation will be studied to track their history to discover the primary causes of these exceptional cases and successful planning or policy interventions. Also, this thesis will also focus on previous unsuccessful efforts and identify why they failed and how to improve.

Objective 3: Put forward constructive suggestions. In the end, this paper will put forward sustainable recommendations for other cities in the process of urbanization and population aging, based on all the previous research results and analysis.

2. Literature Review

WHO (2007) points out that having a large area of green space is regarded as one of the most desirable conditions for an age-friendly city. Many studies have shown that the social function of urban development space is essential to the opportunity for older adults, such as providing opportunities for social interaction, avoiding loneliness and promoting social life of older adults (Kweon et al., 1998). With the further deepening of urbanization, the density of cities is increasing to cope with the growth of population and urbanization. At last, there are fewer green spaces, and the social functions of urban public spaces are relatively neglected (Lo&Jim, 2012). However, with the growth and rapid longevity of the population, older adults who would benefit from more public open spaces should be considered (Yung, 2016). Yung (2016) proposes that the distribution of active and passive facilities in open space could be determined according to the needs of older adults as one of the primary user groups.

Figure-1 The Triangle of Conflicting Goals for Planning, and the Three Associated Conflicts



Data Source: Campbell, S. (2015).

According to the theoretical framework of the constructed triangular model (Figure-1), Campbell (2015) points out that sustainability is the replication capability of a system that can balance the three conflicts (property conflict, resource conflict, and development conflict) of the economy, environment, and equity over a long period. Besides, Campbell

(2015) argues conflicts within sustainability mainly have three aspects: property conflict between economic growth and social equity, resource conflict between the economic utility of society and environmentally ecological utility, and development conflict between social equity and environmental preservation. To resolve these conflicts, planners need to coordinate the interests of these three interrelated conflicts at the same time (Campbell, 2015). Campbell's theory (2015) is constructive to identify this research topic because it helps define three levels and three conflicts of sustainable development.

2.1.1 Supporting Readings

This paper will focus on the social aspect of sustainable development. When it comes to sustainability, people often think about the environment and economic growth, ignoring social justice (Mueller & Dooling, 2011). Mueller & Dooling (2011) argue that the challenge facing planning is to integrate equity into sustainable development planning because of the lack of attention to equity in urban sustainability discussions (Walzer, 1983). In consideration of Mueller & Dooling (2011), sustainable development planning should pay attention to the social aspect of a community, namely social equity.

Similarly, Mueller & Dooling's research (2011) helps identify the research methods and analytic process. The theoretical framework proposed by Mueller & Dooling (2011) states that the planning process of sustainable development should give priority to the analysis of the community's current social and environmental context (deficits and existing advantages), rather than to the planning of future expected results, namely goals and objectives. Therefore, this research will explore the existing conditions of the study area; then analyze the gap between different study units. Finally, this research will make recommendations for the future development of other aging regions.

2.2 Urbanization

Globally, population growth and urban growth have put enormous pressure on land supply, turning land into a panic resource (Grekousis & Mountrakis, 2015). The definition of urbanization in this study is that a country has a growing proportion of people living in urban areas with a decline in the percentage of people living in rural areas (Satterthwaite et al.,

2010). Satterthwaite et al. (2010) argued that no country could prosper without urbanization and that all prosperous countries are major urbanized countries.

Table-1 The Process of Urbanization in the United States

Stage	Period	Characteristics
1st	before 1790	1. Residents' life footprints in America mainly appeared near the waterfront line. 2. In 1790, the urbanization rate in the U.S. was less than 5%.
2nd	1790 - 1870	Cities in the U.S. started to grow, caused by a marketplace economy.
3rd	1870 - 1920	1. Industrial period. 2. The emergence of the distinctive downtown, which leads America to a city dominated country. 3. As of 1920, the urbanization rate in the U.S. reached 51.2%.
4th	1920 - 1970	The economy in the U.S. was booming not only because of World War I and World War II, but also caused by the bourgeoisie expanded the domestic market and stimulated spending on significant expenditure consumption, such as housing and automobiles
5th	1970 - now	The U.S. urban population grew by 12% from 1970 (73.6%) to 2017 (82%).

The Table-1 displays that the five stages of Urbanization in the United States so far and their characteristics. This research focuses on the fifth stage. Data Source: Goldfield (1990), U.S. Census Bureau (2012), The World Bank Group (2018)

According to Goldfield (1990), the process of urbanization in the U.S. has gone through five stages (Table-1). Since 1970, urbanization in the U.S. has entered the fifth era (Goldfield, 1990) as shown in Table-1 above and the American urban population first exceeded 80% in 2006 (The World Bank Group, 2018). Today, the U.S. is a highly urbanized society. Residents per square mile of land area in the U.S. grew by more than 60% from 1970 (57.5) to 2017 (92.2) (Statista, 2018). The resident population in the U.S. is expected to increase from 309 million (US Census Bureau, 2018) in 2010 to 417 million (Colby, 2015) in 2060. The total urban and developed area is expected to increase by 39 million to 69 million

acres between 2010 and 2060 as urbanization intensifies in the U.S. (United States Department of Agriculture, 2010), resulting in a sharp expansion of the urbanized areas (McDonald et al., 2010), which may have significant ecological impacts (McDonald et al., 2010).

When it comes to a global perspective, it is easily seen that urbanization in the U.S. is leading the world average. One-half Americans lived in urban areas in 1920, but the world urbanization rate exceeded 50 (51.2%) until 2007 for the first time (The World Bank Group, 2018), which is 87 years later than the U.S. Therefore, studying the accessibility of urban parks for older adults can provide continuous insight into the urban formation, human history, and planning interventions for the future development of other regions in the U.S. and provide sustainable guidance. At the same time, this paper can provide a sustainable reference for other regions of the world that are undergoing or are about to experience urbanization and face population aging issues.

2.3 The Importance and Accessibility of Urban Parks

In this thesis, urban parks are defined as pocket parks (Mertes & Hall, 1996), neighborhood parks, community parks, trails, and large urban parks within city limits (Mertes & Hall, 1996). As an essential part of conservation planning, urban parks have many environmental, social, and economic benefits (Caruso, 2018), which are firmly related to the city's sustainable development (Bengston et al., 2004). Urban parks are essential to improve citizens' quality of life in urban environments (Kara & Akçit, 2015) because urban parks provide not only ecosystem services (Richards et al., 2017) but also social, physical, and mental health opportunities (EnviroAtlas, 2013). Parks help city-dwellers develop a sense of attachment to the cities they live in (Ranasinghe & Hemakumara, 2018; NSW Government, 2010). However, growing urbanization between 1990 and 2000 led to a decline in the number of open spaces in the U.S., destroying natural habitats and reducing the amount of recreation and other benefits that people enjoy from open spaces (McDonald et al., 2010). Hence, voters of land conservation measures in the U.S. unanimously support open space protection (Cho et al., 2008).

The accessibility of urban parks is defined as the ease and difficulty of reaching the targeted park from any point in the region. Accessibility is determined by the current unique

distribution of parks and urban population. It can objectively reflect the spatial distribution pattern and service fairness of urban parks. It is a crucial index to evaluate whether urban residents can enjoy urban parks conveniently and equally. This paper will determine the accessibility of urban parks to older adults from four perspectives: transportation accessibility, area ratio, amenities, and recreational facilities.

Urban parks provide a public space for American people in a privatized society to meet the diverse physical and psychological needs of the population. The author of this paper also used to study the archival history of Monroe Park. During the study, the author found that when citizens' lives began to stabilize, they began to pay attention to the quality of life (Carneal & Cheek, 1996), by proactively asking for public open spaces. Taking the history of Monroe Park as an example, we can easily find that Monroe Park did not develop into a park at the very beginning of its inception (Rhodeside & Harwell, 2008). After the city recovered from the Civil War, the demand for public open space came into being (Carneal & Cheek, 1996). Until then, Monroe Park began to serve the surrounding residents in the form of a park (Carneal & Cheek, 1996). Later, with the increase of urban population and housing demand (Carneal & Cheek, 1996; Barton-Aschman Associates & Richmond, 1976), Monroe Park started to play its real role and value that it has today. It can be said that with the continuous deepening of urbanization, citizens' demand for urban public open space is also increasing.

Particularly, the importance of urban parks to the health of residents is unquestionable. Hales et al. (2018) have conducted a nationally representative US adult survey that shows differences in urbanization levels that affect obesity. The results of this research reflect that the lower the level of urbanization in a region, the higher the level of obesity in adulthood in the region (Hales et al., 2018). However, studies have shown that parks have a positive effect on public health (Kinney, 2016). Therefore, under the increasingly tense situation of urban public land in the U.S., the use of urban parks to ensure the health of residents is particularly important.

Also, urban parks are somewhat connected to segregation and just cities. After examining the ethnic composition of minority communities in Boston, Massachusetts, and the relationship between community poverty and open space for leisure, Duncan et al. (2013) stated that the geographic location of recreational open spaces might be ethnically diverse in the community. The poverty of the neighborhood is unfair, which may be partly due to

residential segregation. At the same time, Duncan et al. (2013) found that black communities in Boston are unlikely to have recreational open spaces, so policy interventions are needed that may help reduce obesity to promote fair access. Another example is the urban renewal project of Lafayette Park in Detroit in the 1950s. With the expansion of the city, the automobile factory has gradually retired from the urban center to the urban fringe at that time (Detroitexpatroit, 1970). Blacks, as strong support for the labor force in the automotive industry, were isolated in downtown, resulting in a worse environment in the city center, with slums everywhere (Detroitexpatroit, 1970). Therefore, the race will be considered as a factor in this paper, and relevant data collection and analysis will be carried out.

A previous study (Le Texier et al., 2018) pointed out that the average visit to urban parks is not enough because of the changing geographical conditions and uneven spatial distribution. The statement remains true, even though various regulators have developed a series of policies on urban public open space provision and access to ensure the development of green cities. For example, the European Environment Agency recommends that people should be able to enter open spaces within 15 minutes (1 mile) of walking (Stanners & Bourdeau, 1998); according to the WHO, the per capita green area in urban areas should be at least 9 square meters per person (Schirnding & WHO, 2002). In addition, the European Environment Agency (2000) recommends that 5,000 square meters of public open spaces should be reached by residents within 300 meters of any location. Based on the updated quantitative standard (ParkScore, 2018), this paper will evaluate the current walking accessibility of urban parks to older adults in The Villages metropolitan area of Florida.

2.4 Older Adults

With the continuous development of cities all over the world and the improvement of public health and living standards, the ratio of people over 60 years old is increasing (WHO, 2007). According to WHO (2007), the proportion of the world's population over 60 years of age will rise substantially, such as the proportion of the urban population in major regions of the world, from 2006 to 2050. Among them, North America's population over 60 will account for 27% of the total population, which will increase by 10% compared to 2006 (17%) (WHO, 2007).

An aging society refers to the population structure model that older adults account for or exceeds a specific proportion of the total population in a particular area (Gavrilov & Heuveline, 2003). According to the traditional standard of the U.S., an area where older adults over 60 years old reach 10% of the total population, the region is entering an aging society. This study, however, will use the new standard from the WHO.

Table-2 WHO Standards

Term	Definition
"aging society"	7% of pop. is ≥ 65 years old.
"aged society"	14% of pop. is ≥ 65 years old.
"super-aged society"	20% of pop. is ≥ 65 years old.

Data Source: WHO and Lin &Hing, 2015

With the further aging global population, the needs of older adults will play an increasingly important role in the formation of cities (Grahame, 2018). The needs of older adults for urban parks differ from those of other age groups and need to be considered separately (Yung et al., 2016).

Aging communities are defined as over 7% of the total population aged 65 and over. The spatial distribution of older adults means the dispersion degree of older adults in a city. There are many factors (Valerio, 1997) are affecting the spatial distribution of older adults, such as health care (Manor, 1993; WHO, 2007), environmental conditions (Valerio, 1997; WHO, 2007), and social conditions (Valerio, 1997). Because many factors are affecting the distribution of older adults, this paper will avoid subdividing the study area from the density of older adults to facilitate the study, while also delineating the study area from the consistency of the number of older adults.

2.5 The Relationship Between Urban Parks and Older Adults

WHO (2007) points out that having a large area of green space is regarded as one of the most desirable conditions for an age-friendly society. Many studies have shown that the social function of urban development space is essential to the life of older adults, such as providing opportunities for social interaction, avoiding loneliness and promoting social life of older adults (Kweon et al., 1998). With the further deepening of urbanization, the density of cities is increasing to cope with the growth of population and urbanization. There are

fewer green spaces ultimately than there are before, and the social functions of urban public spaces are relatively neglected (Lo&Jim, 2012). However, with the development of the aging population, the needs of older adults for public open spaces need to be considered (Yung, 2016). Yung (2016) proposes that the distribution of active and passive facilities in open space could be determined according to the needs of older adults as one of the primary user groups.

Yung et al. (2016) explored the evolution of urban public space forms in 2012 and proposed the concept of open space sharing ratio, namely, the degree of landscape aggregation in urban centers. Richards et al. (2017) predicted future changes in cities, population and wealth are tied to Southeast Asia by analyzing existing relationships among urban size, wealth, and population density. Also, Thorne et al. (2013) explore how the San Francisco Bay Area, California, could increase its population by 3.07 million while maintaining its ecosystem and biodiversity. Gomben et al. (2012) understand the future of open space planning based on dynamic urban changes in multi-ethnic areas and explore the impact of ethnic change on future development and loss of open space. Additionally, Yung et al. (2016) investigated the relationship between the social needs of older adults in Hong Kong, the public open space in the community, and proposed policy recommendations that were appropriate for the local community.

According to Thorne et al. (2013), more than 50% of people worldwide live in urban areas, affecting biodiversity, ecosystem structure, and ecological processes. Because of the high population density, the coverage rate of urban open space is relatively low, and the per capita green space is relatively small (Richards et al., 2017). McDonald et al. (2010) found that in metropolitan areas of the U.S. between 1990 and 2000, cities with more massive population growth lost more open space. What is more, according to Orenstein & Hamburg (2010), the number of open spaces decreased as the population increased, but the loss rate of open space varied with population growth.

According to Cho et al. (2008), the higher the density of open space, the higher the diversity of land use. Esbah et al. (2009) argued that less debris surrounded by compatible land uses and well-connected natural or near-natural open spaces were more accessible to maintain public ecological integrity. Wealthier cities have more open space and will have more population density and wealth in the future, according to Richards et al. (2017). Cities

with higher open coverage might include parks and remaining habitat fragments that are intended to be incorporated into the city through design, which usually formed larger discrete areas with continuous green coverage, thus providing a more aggregated landscape structure (Richards et al., 2017). Besides, the diversity and decentralization of vision and landscape in public open spaces are more valuable because they provide easier access to conveniences, such as shopping areas and public infrastructure (Cho et al., 2008)

Gomben et al. (2012) argued that preferences for various types of housing and living conditions would increase as social demographic variables such as race composition changed. Yung et al. (2016) pointed out that it was essential to identify and understand the social needs of residents to plan public open spaces suitable for users of all ages. In particular, public open spaces enhanced the social well-being and active aging of older adults (Yung et al., 2016). Further, Yu et al. (2011) even proposed negative planning's theory of using environmental infrastructure as a tool to guide and build sustainable urban development.

Satterthwaite et al. (2010) argued that as long as the long-term trend in most low-income and middle-income countries is economic growth, the level of urbanization in the world is likely to continue to increase. Increased urban public wealth may increase the demand for green space among the affluent urban population, which may lead to better conservation and open space creation (Richards et al., 2017). Rapid urban development has put tremendous pressure on urban ecosystems (Peng et al., 2016). As cities become more prominent and more densely populated in the future, their green space will decline (Richards et al., 2017). According to Yung et al. (2016), the distribution of open space in cities with the higher density of residential buildings is lower, and the utilization rate of residents is lower than that of residents in low-density communities. Obtaining natural and pleasant landscapes is conducive to local attachment and social connections (Yung et al., 2016)

3. Methodology

This research will assess the degree of accessibility to urban parks for older adults in The Villages metropolitan area of Florida in 2017. For the demographic database, this paper will collect total population data and total older adults (65+) data. For the parks accessibility database, this research will collect park entrance data, road data, common facility data, and recreational amenity data. Later, this paper will evaluate the accessibility degree of each block group in The Villages metropolitan area of Florida by using the six evaluation indicators: service area coverage, common facilities, recreational amenities, walkability, public transportation accessibility, and bicycling accessibility.

3.1 Subject Selection

This paper selects the aging rate P (P = the total population of older adults over 65 years old / the total population of the region x 100%) to express the aging level of each metropolitan area in the U.S. by using the latest 2017 ACS 5-Year Estimates data. Then this research decides to choose The Villages metropolitan area of Florida as the study area, not only because that Florida is one of the most representative regions with the highest population aging rate in the U.S. (Christie, 2011), but also because of The Villages metropolitan area's highest population ageing rate in the U.S..

Taking the Census block groups as the study units, this paper will divide The Villages metropolitan area of Florida into block groups. Because block groups are the smallest geographic unit for census data collecting in the U.S. Then all eligible parks within and around The Villages metropolitan area of Florida will be counted, and the relevant information of these parks will be registered in this research.

3.2 Evaluation Index

To better understand and evaluate the degree of accessibility to urban parks for older adults in The Villages metropolitan area of Florida in 2017, this paper mainly analyzes and calculates the overall accessibility analysis of Census block group as the basic calculation unit from two aspects: service accessibility and green transportation accessibility of urban public parks. This paper will use the simple buffer method and network analysis method to calculate the cumulative resistance between urban public parks and older adults and display

the calculation results graphically, to indicate the resistance of different locations to urban parks clearly and intuitively. Among them, this paper will use service area coverage, common facilities, and recreational amenities like the three evaluation index of service accessibility of urban public parks; while walkability, public transportation accessibility, and bicycling accessibility will be used as the evaluation index of green transportation accessibility of urban public parks. All the six indicators will account for 20% each (full score: 120).

Then, this study will weigh the park's accessibility of each city according to six evaluation indicators, and then get the accessibility degree of older adults in each region. After that, this paper will calculate the accessibility score of each block group, and then ranks them. At this point, the calculated score is assumed to be different, i.e., either high or low. Then, this study will superimpose the population information layer on the block group layer, and analyze whether they are matching, that is, if the accessibility score of older adults is higher in places with a larger population and lower in areas with a smaller population. According to the analysis results, this paper will analyze which block groups have suitable matches and which block groups have bad matches and then examine the reasons for these differences.

3.3 Urban Public Park Classification

It is worth mentioning that because of the mixed park classification and overlapped park types online; this paper will customize park types for subsequent analysis. The park types in this paper will consider pocket parks (Molnar, 2015), neighborhood parks, community parks, trails, and large urban parks (Mertes & Hall, 1996). It is noteworthy that all of these park types are public and not private.

Pocket parks serve a limited population area or specific function/age group (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99c-114). The size of this kind of park is about 0.057 to 1 acre, and the service radius is no more than 0.25 mile (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99-114).

Neighborhood parks provide neighborhood residents with daily recreation, sports, and social places or providing places for older adults or other population types to rest during the day (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99-114). The size of

this kind of park is about 2 to 10 acres, with a service radius around 0.25 to 0.5 mile (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99-114).

Community parks provide daily recreation and social activity space for the whole community (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99-114). The size of this kind of park is about 20 to 60 acres, and the service radius is approximability 0.5 to 3 mile (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99-114).

Trails are defined as exercising trail or walking trail (Mertes & Hall, 1996; Molnar, 2015). The size of this kind of park is varied, and the service radius is no more than 0.5 mile (Mertes & Hall, 1996).

Large urban parks are usually beyond urban or urban growth areas and provide space for professional activities and preserve unique landscapes, open spaces, or environmental features (Mertes & Hall, 1996). This kind of parks also allows group activities (Mertes & Hall, 1996). The size of this kind of park is no less than 50 acres, with the service radius is no more than 5 mile (Mertes & Hall, 1996).

3.4 Data Collection

This paper mainly collects data from three aspects: demographic data, urban public parks data, and road data. Besides, this paper will use city limits data, water body data, block groups boundary data, County boundary data, and state boundary data as a supplement. All demographic data came from the official website of U.S. Fact Finder and the American Community Survey (ACS) 5-Year Estimates. All visualization (ArcGIS) shapefile data came from the 2017 Tiger shapefile on the official website of U.S. Census Bureau, the official website of Florida State Park, the official website of Sumter County, the official website of Lake County, the official website of Marion County, the official website of Citrus County, the official website of Hernando County, the official website of Pasco County, and the official website of Polk County.

3.4.1 Demographic Data Collection

The primary demographic data needed in this research are the total population, the total population over 65 years old, median age, age dependence rate, and older adult dependence rate. This paper will obtain the secondary data of the demographic data in The Villages

metropolitan area of Florida from the 2013-2017 American Community Survey (ACS) 5-Year Estimates. The closer these data are to the original data in the initial stage, the more details can be obtained. These specific categorized data can help the author better understand and analyze the current situation of the study area.

The population over 65 years old is the vital data of this research. Also, this article will collect four additional demographic data: total population, median age, age dependence rate, and elderly dependence rate. These four kinds of data can help the author better understand the demographics of the study area and analyze whether the accessibility of each block group is matched.

3.4.2 Urban Public Park Data Collection

This paper will obtain the secondary geographical data of public parks for The Villages metropolitan area of Florida mainly from U.S. Census Bureau, official websites, and Google Map. There are three types of public park data being collected: park entrance, common facilities, and recreational amenities.

For the analysis of park accessibility, this study considers that arriving at the park entrance point is equal to entering the park's space. For park entrance data, this paper will collect general information such as park name, park entrance location, park type, park owner, construction status, and amenities of urban parks in the study area and within 5 miles of the study area boundary. Additionally, these related pieces of information of the parks will mainly be obtained from related local official websites, National Park Services, and Google Map.

This article will record the available facilities and recreational amenities, and establish relevant databases. In this research, the original data for these databases will be collected from the local government official websites at first, and then collected by the author if some of the secondary data cannot be found. For common facility data, this paper will consider park size, and if there are available facilities in the park such as playground, picnic area, and restrooms. For recreational amenity data, this research will consider if the parks can offer amenities that other parks do not have, such as boat ramp, fishing, swimming, wildlife, hunting, and observation tower.

3.4.3 Road Data Collection

The road data in this paper mainly come from the 2017 current road network data of the GIS database and local official websites in the research area. The road network database in this paper is primarily composed of the existing road central line data and bus stops data to evaluate urban public parks' walkability, bicycling accessibility, and public transportation accessibility of green transportation accessibility. The data of road centerline includes information such as road name, road level, speed limit, road length, and walking time. In this study, the road network will be built based on the road center line. The bus stops data mainly includes bus stop name and bus stop location.

When it comes to the walkability of urban public parks, the European Environment Agency recommended that people should be able to enter open spaces within 15 minutes (1 mile) of walking (Stanners & Bourdeau, 1998). Later, the European Environment Agency (2000) recommended that 5,000 square meters of public open spaces should be reached by residents within 300 meters of any location. Then, a more subsequent study (ParkScore, 2018) suggested that a ten-minute (half-mile) walk to a park is an ideal walking distance in the U.S. This study will use the newest walking time standard (ParkScore, 2018) as the starting point to do the analysis in GIS. However, people of different age groups walk at slightly different speeds. Studies (Parise et al., 2004; TranSafety, 1997) show that the average walking speed of older adults is about 0.03-0.04 mile/minute. Also, bus stops will also be considered in this paper, for those older adults may take buses if the destination is a little bit far from their starting point. According to KIM et al. (2005), the average walking distance to bus stops in North America is approximately 5 minutes (0.25 mile).

Therefore, the maximum walking speed (0.04 mile/minute), 5-minute, 10-minute, and 15-minute walking distance (ParkScore, 2018) will be the primary criteria for the accessibility analysis in this research. In order to analyze the accessibility and internal imbalance of The Villages Metropolitan Area in Florida more intuitively and effectively, this paper takes three time breaks (5 minutes, 10 minutes, and 15 minutes) as indicators, using network analysis and overlay analysis, and classifies all 41 block groups for each kind of green transportation according to given thresholds.

3.5 Buffer analysis of Park Service Accessibility

This paper uses Buffer Geoprocessing Tool and Overlay Analysis Tool in ArcGIS 10.6.1 to study the service area and leisure services of urban public parks to evaluate the service accessibility of the urban public parks. The service radius of urban parks reflects the recreational service capacity of urban public parks and is the essential parameter for the evaluation and planning of urban public parks. According to the previous classification of urban public parks (p. 16), this paper chooses 0.25 mile, 0.5 miles, 3 miles, 0.25 mile, and 5 miles as the maximum service radius of a pocket park, neighborhood park, community park, trail, and large urban park respectively. This paper calculates and analyses the service area and service area ratio of urban public parks with different service radius. The service area here includes not only service area coverage, but also common facilities and recreational amenities. Also, the service area ratio refers to the percentage of urban public park service area in a research unit (block group) to the total area of the study unit (block group) to analyze the degree of urban public park service accessibility for each block group.

3.6 Network Analysis of Park Green Transportation Accessibility

This paper uses the Network Analysis Tool and Overlay Analysis Tool in ArcGIS 10.6.1 to study the urban public parks' service area of walking, bicycling and taking buses to evaluate the green transportation accessibility of urban public parks in the study area. After that, the paper converts the calculation results into time breaks, which are divided into 0-5 minutes, 5-10 minutes, and 10-15 minutes (p. 19). According to the previous pedestrian walking speed of 0.04 mile/min (p. 19), the degree of accessibility of older adults in three green transportation modes was calculated.

3.7 Calculating the Park Accessibility Score

This paper chooses the Buffer Geoprocessing, Network Analysis, and Overlay Analysis of ArcGIS as the primary method to study the service accessibility (service area coverage, common facilities, and recreational facilities) and green transportation accessibility (walkability, public transportation accessibility, and bicycling accessibility) of urban public parks (Table-3). The total score of the urban public parks' accessibility is 120, and each one of the six evaluation indexes is 20 separately. Take the calculation method of the urban

public parks' service area accessibility as an example. First, this paper will score the parks' service area coverage for each study unit (block group) based on different park types, and record the percentage of parks' service area, i.e., parks' service area ratio (p. 20), and taking the value over twice of the median value as the full score - 20 (ParkScore, 2018). Similarly, the other five kinds of urban public parks' accessibility are calculated in the same method. After that, this study builds older adults' concentration and urban public parks' accessibility matching map of The Villages metropolitan area of Florida by using ArcGIS to understand the current service area and blind service area of the parks.

Table-3 Data Analysis Method

Data Type			**Analysis Method**
Demographic Data			Add information to block groups layer in ArcGIS 10.6.1
Park Accessibility (120)	Service Accessibility (60)	Service Area Coverage (20)	Buffer Geoprocessing and Overlay analysis in ArcGIS; Using service area data for different park types to calculate the percentage of the park area to each area
		Common Facilities (20)	Buffer Geoprocessing and Overlay analysis in ArcGIS; If the parks can offer facilities that most parks have, such as playground, picnic area, and restrooms
		Recreational Amenities (20)	Buffer Geoprocessing and Overlay analysis in ArcGIS; If the parks can offer amenities that other parks do not have, such as boat ramp, fishing, swimming, wildlife, hunting, and observation tower
	Green Transportation Accessibility	Walkability (20)	Network Analysis and Overlay analysis in ArcGIS; Consider 5min, 10min, and 15min

	(60)	Public Transportation Accessibility (20)	Network Analysis and Overlay analysis in ArcGIS; Consider 5min, 10min, and 15min
		Bicycling Accessibility (20)	Network Analysis and Overlay analysis in ArcGIS; Consider 5min, 10min, and 15min

Later, based on the previous results this paper obtained, this thesis will determine:

1) Whether the accessibility to the urban parks with a large senior population (65+) is high, and the park accessibility of low senior population (65+) areas is low.

2) Which block groups are very good matched, and which are not. What are the reasons?

3) What is the referential value of good parts to other areas around U.S./world and how to improve bad parts of the result?

This thesis will further study these of previous successful planning interventions and unsuccessful efforts; finally, this research will also propose sustainable recommendations for other regions in the U.S.

4. Analysis

This research divides the accessibility evaluation of urban public parks into two parts: service accessibility (buffer analysis) and green transportation accessibility (network analysis). Service accessibility includes service area accessibility, common facilities accessibility, and recreational amenities accessibility; while green transportation accessibility includes walkability, public transportation accessibility, and bicycling accessibility. Service accessibility represents the theoretical basis of urban planners in planning urban public parks aims to residents generally, while green transportation accessibility emphasizes the real path of urban public parks for older adults specifically in practice. This paper hopes to jointly determine the accessibility of urban public parks in the study area by evaluating their service accessibility and green transportation accessibility.

For data collection, the necessary information about the study area is required. For demographic data, according to the latest 2017 ACS 5-Year Estimates data, the population information data of the major metropolitan areas in the U.S. were analyzed, and this paper focused on the metropolitan area with the highest aging rate - the Villages Metropolitan Area in Florida (Appendix Table-1). Then, population information tables of 41 local block groups were generated by using the 2017 ACS 5-Year Estimates data.

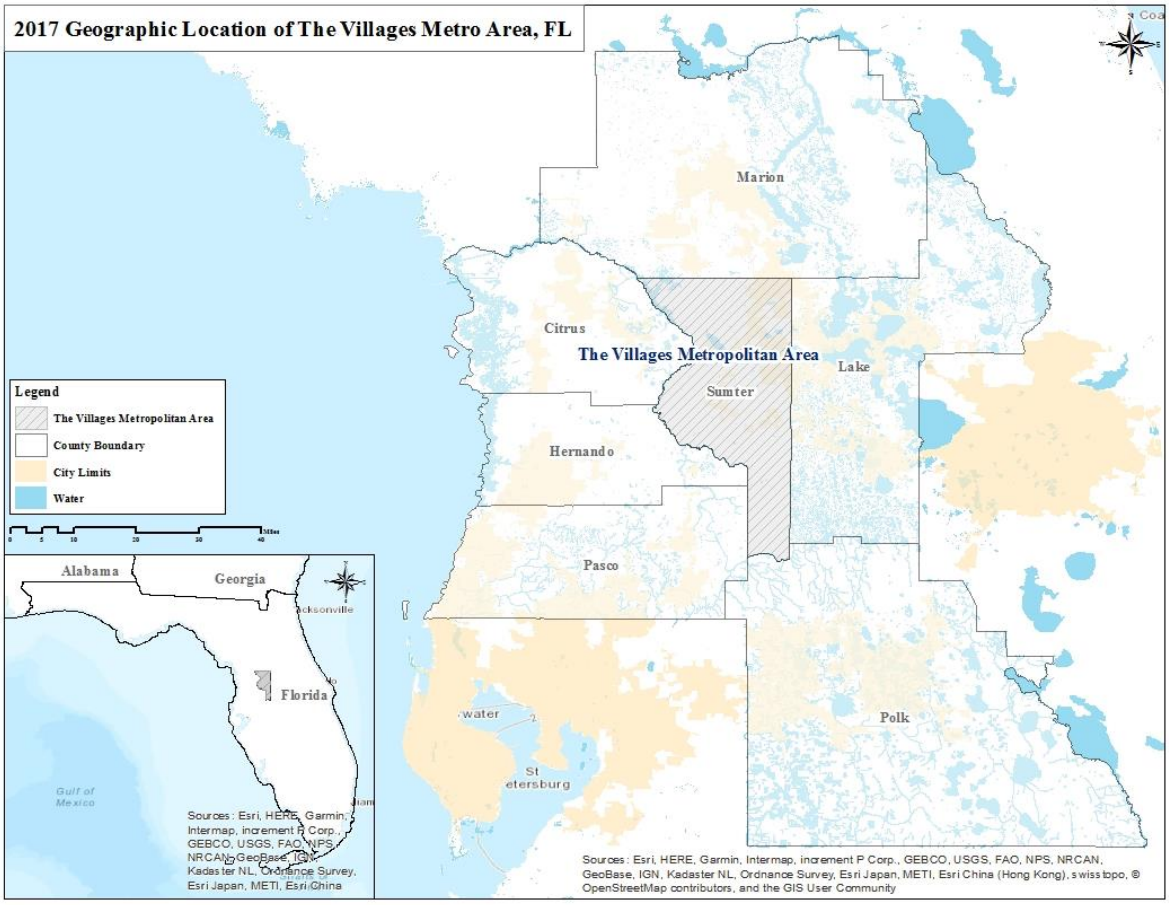
For geographic data, the researcher generated park information tables based on the park information from local government websites and Google Maps. Also, other primary shapefile data such as the road data of the Villages Metropolitan Area and surrounding counties in 2017 were generated from Tiger geographic data website.

4.1 Overview of The Villages Metropolitan Area in Florida

As the fastest growing metropolitan area in the U.S. for four consecutive years from July 2012 to July 2016 (Krishna, 2017), The Villages metropolitan area is located in the central part of Florida, which is in the southeastern United States (Figure-2). The elevation of the study area increases from low to high from northwest to southeast. Besides, the elevation of the northeast corner of the study area is relatively high (Board of Sumter County Commissioners, 2018). Sumter County, the seat of The Villages metropolitan area, was founded on January 8, 1853 (Florida Historical Society, 1908, P. 34), named after Gen. Thomas Sumter in memory of his heroic deeds in the American Revolutionary War (Frisaro,

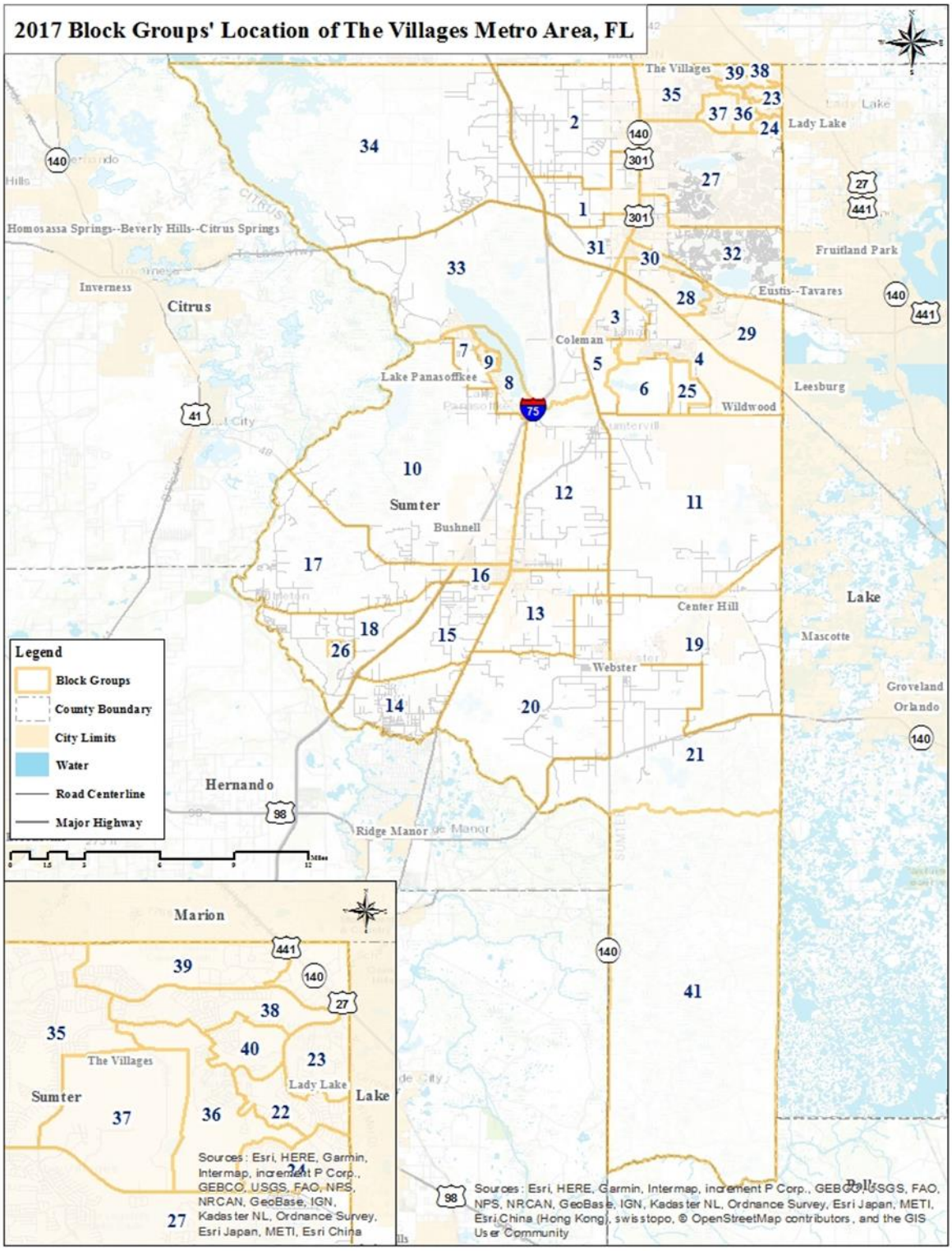
1988, P. 63). The Villages Metropolitan Area has jurisdiction over The Villages, City of Coleman, City of Bushnell, City of Wildwood, City of Webster, and City of Center Hill (Board of Sumter County Commissioners, 2019).

Figure-2 Geographical Location Map of The Villages Metro Area, FL



The total study area is 580 mi^2, of which 33 mi^2 are water and accounting for about 5.7% of the total area (United States Census Bureau, 2011). The research scope of this article covers urban areas within The Villages Metropolitan Area, involving a total of 41 block groups. For the convenience of analysis, these 41 block groups are numbered and corresponding to 1-41 (Appendix Table-2). The geographical distribution of all 41 block groups is shown as Figure-3 below.

Figure-3 Block Groups' Location Map of The Villages Metro Area, FL

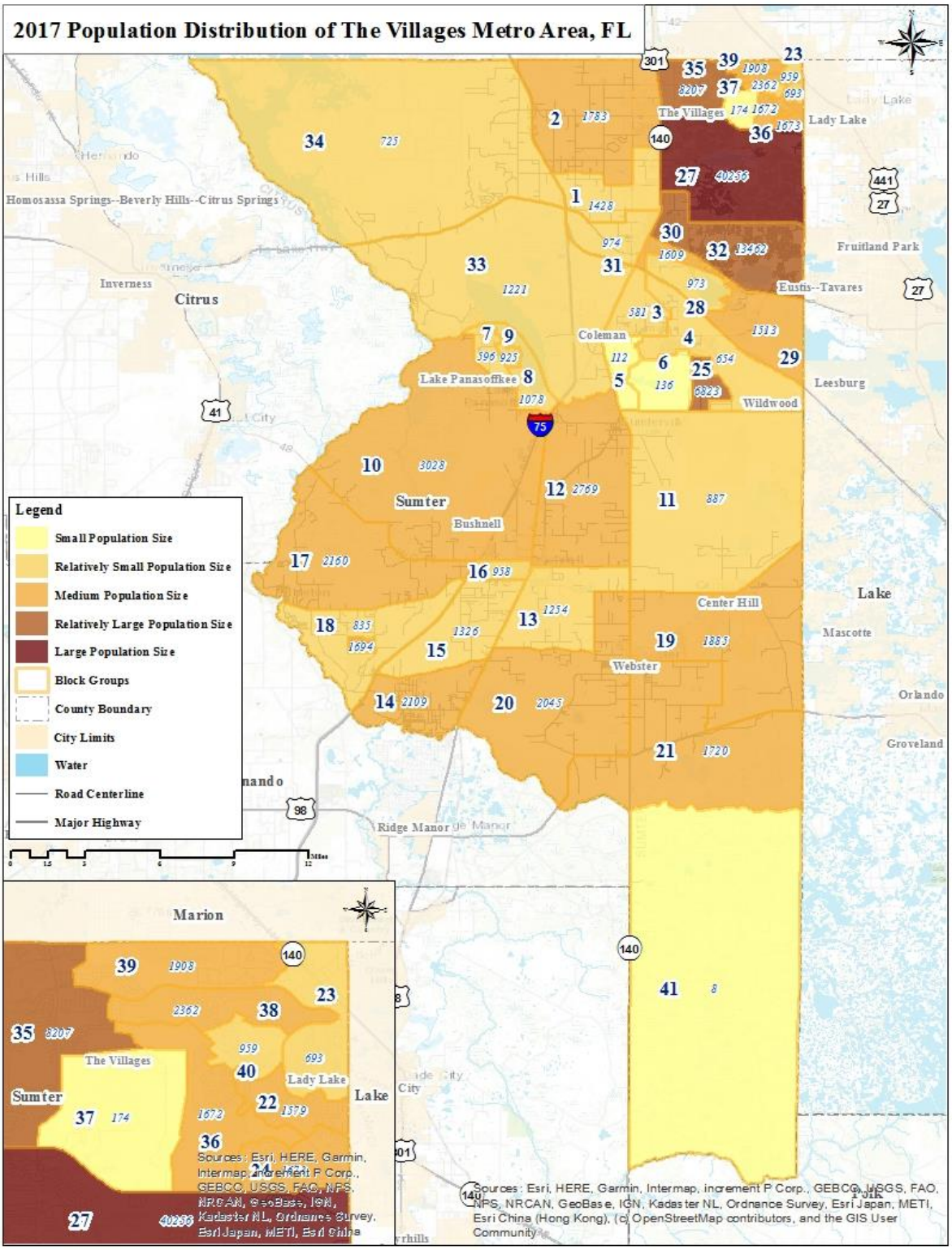


In the study area, the block groups in the northeast corner are relatively concentrated, and the block groups in the northwest corner and south of the central area are relatively more extensive and more dispersed (Figure-3).

4.1.1 Current Population Status in The Villages Metropolitan Area, FL

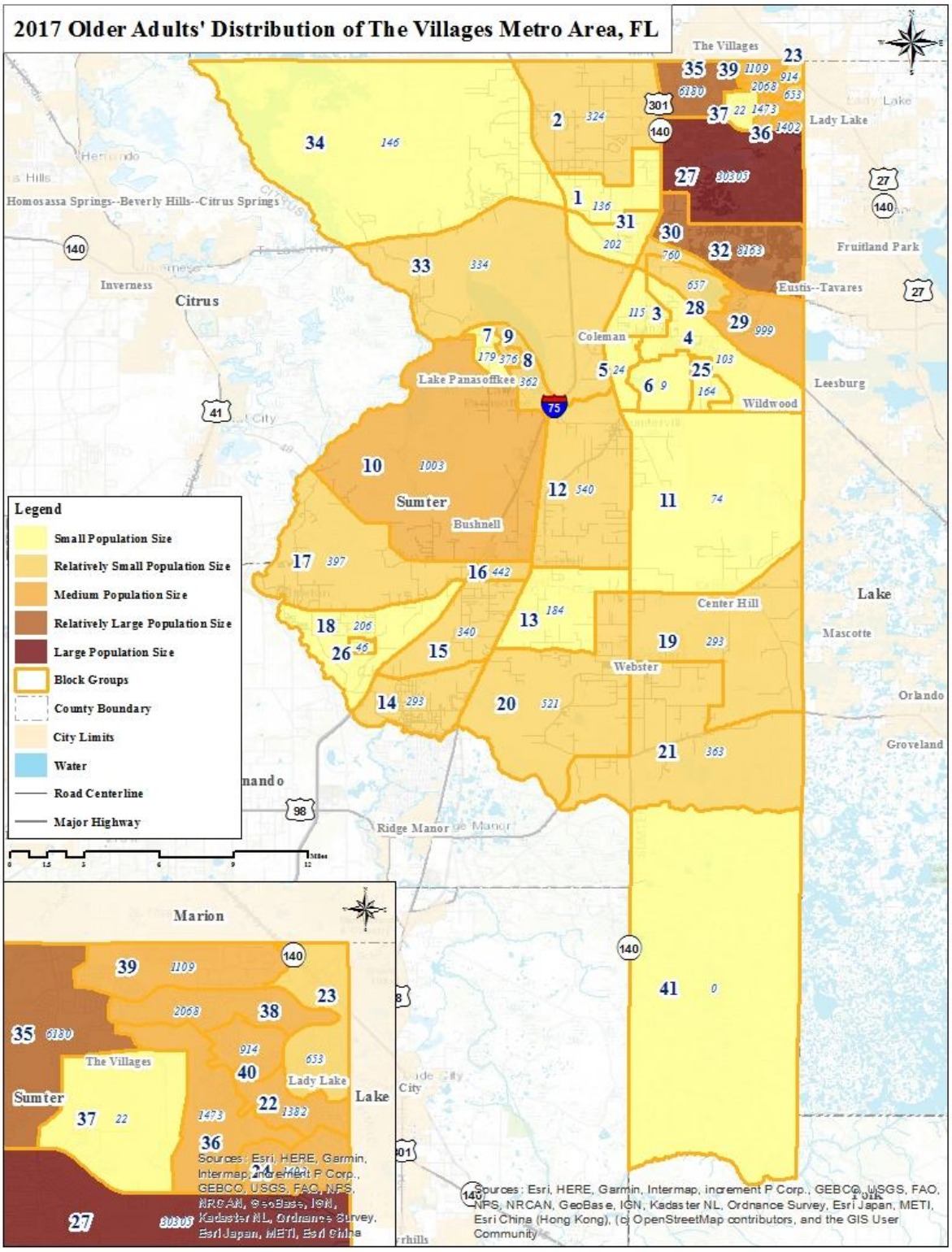
According to the ACS 5-Year Estimates from 2013 to 2017, the total population of the study area was 116,754 in 2017, with a population density of 214 persons per square mile. This population density is more than double the population density of 98 persons per square mile in 2000 (U.S. Census Bureau, Census 2000 Summary File 1, Matrices P13 and PCT12). The general spatial distribution characteristics of the population in 2017 can be seen from the figures below (Figure-4 & 5).

Figure-4 Current Population Distribution Map of The Villages Metro Area, FL



From the figure above (Figure-4), we can find that the areas with the largest population concentration in the study area are mainly concentrated in the Northeast corner, especially Block Group No. 27, followed by Block Group No. 25, No. 32, and No. 35.

Figure-5 Current Older Adults' Distribution Map of The Villages Metro Area, FL

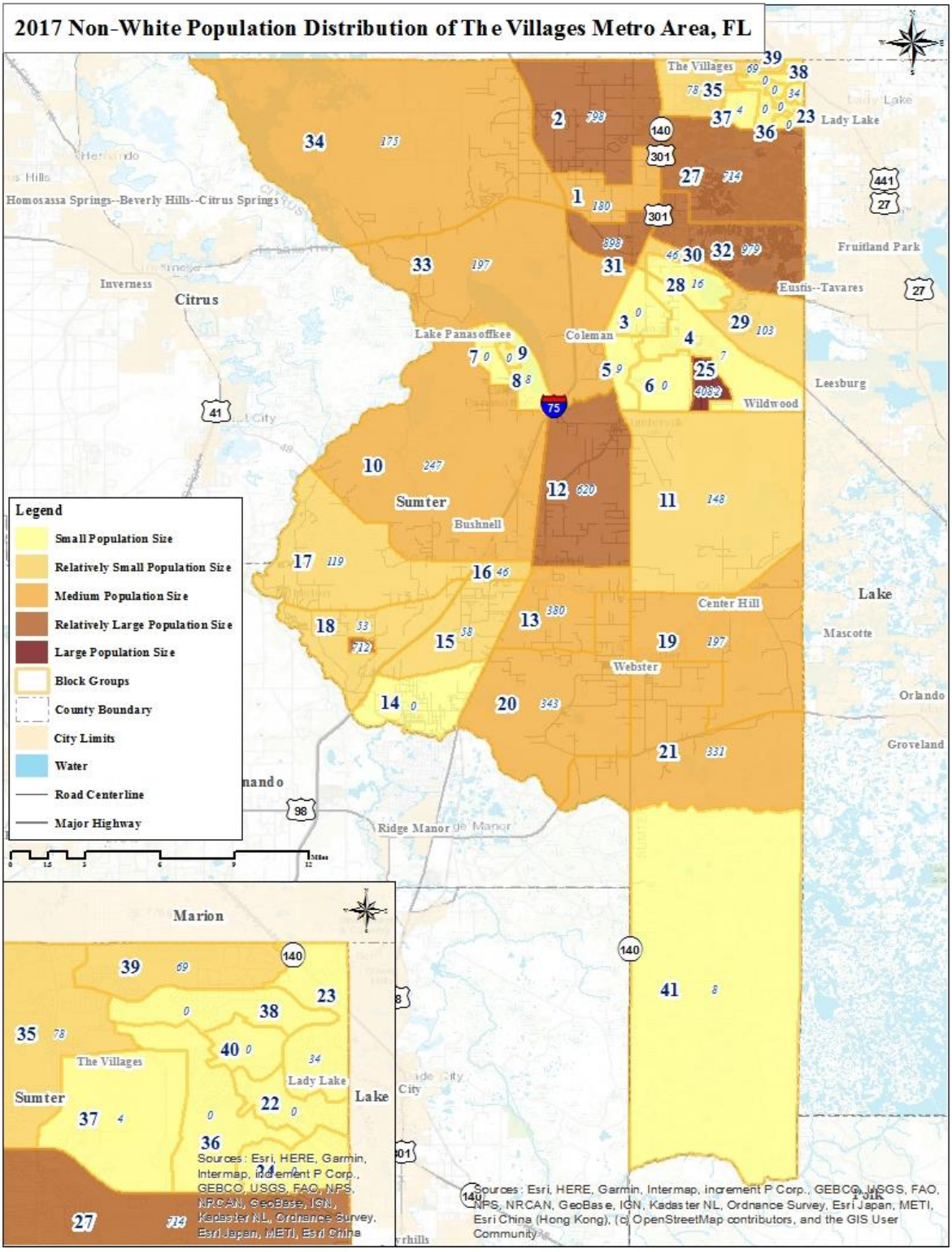


Similarly, the area with the most extensive distribution of older adults (65+) is mainly in the Northeast corner, especially Block Group No. 27, followed by Block Group No. 32 and No. 35.

From the comparison of the two maps above (Figure-4 & 5), it can be seen that the residents in the study area are mainly distributed in the areas where the traffic network is concentrated. Besides, the more the total population in the region, the more older adults in the region in general.

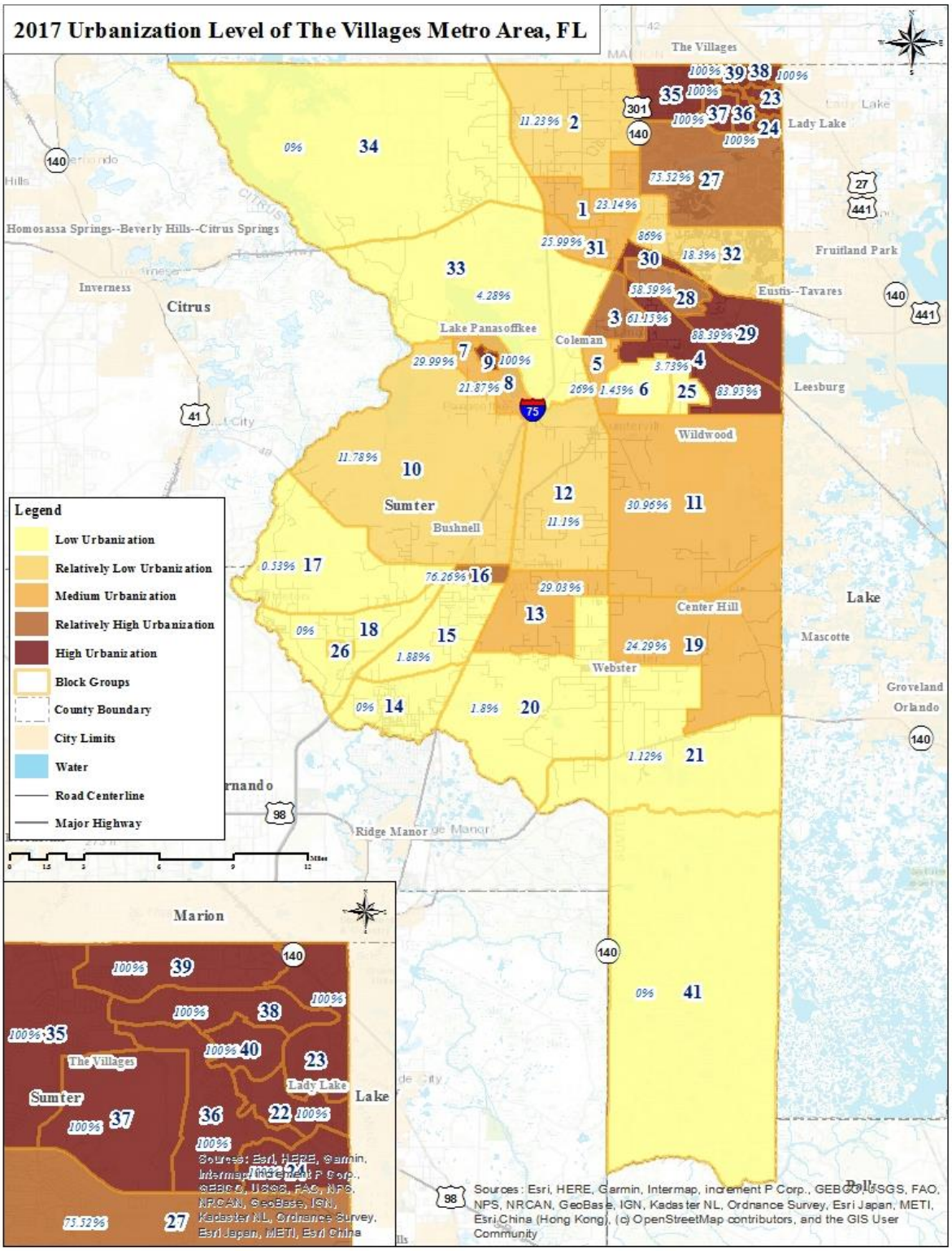
Additionally, this paper uses a population of white descent, i.e. "White alone or in combination with one or more other races" (ACS 5-Year Estimates, 2019), as supplementary demographic data to create the non-white population's distribution map below (Figure-6), by subtracting the population of white descent (ACS 5-Year Estimates, 2019) from the total population (Appendix Table-17). Because the race information of older adults in the study area is not available on the Factfinder official website, this paper uses the race information of the total population in the study area instead.

Figure-6 Current Non-White Population's Distribution Map of The Villages Metro Area, FL



From the figure above (Figure-6), we can find that the areas with broad non-white population distribution in the study area are mainly concentrated in the middle part of the study block and northeast corner, especially Block Group No. 25, followed by Block Group No. 2, No. 12, No. 27, No. 31, and No. 32.

Figure-7 Current Urbanization Level Map of The Villages Metro Area, FL



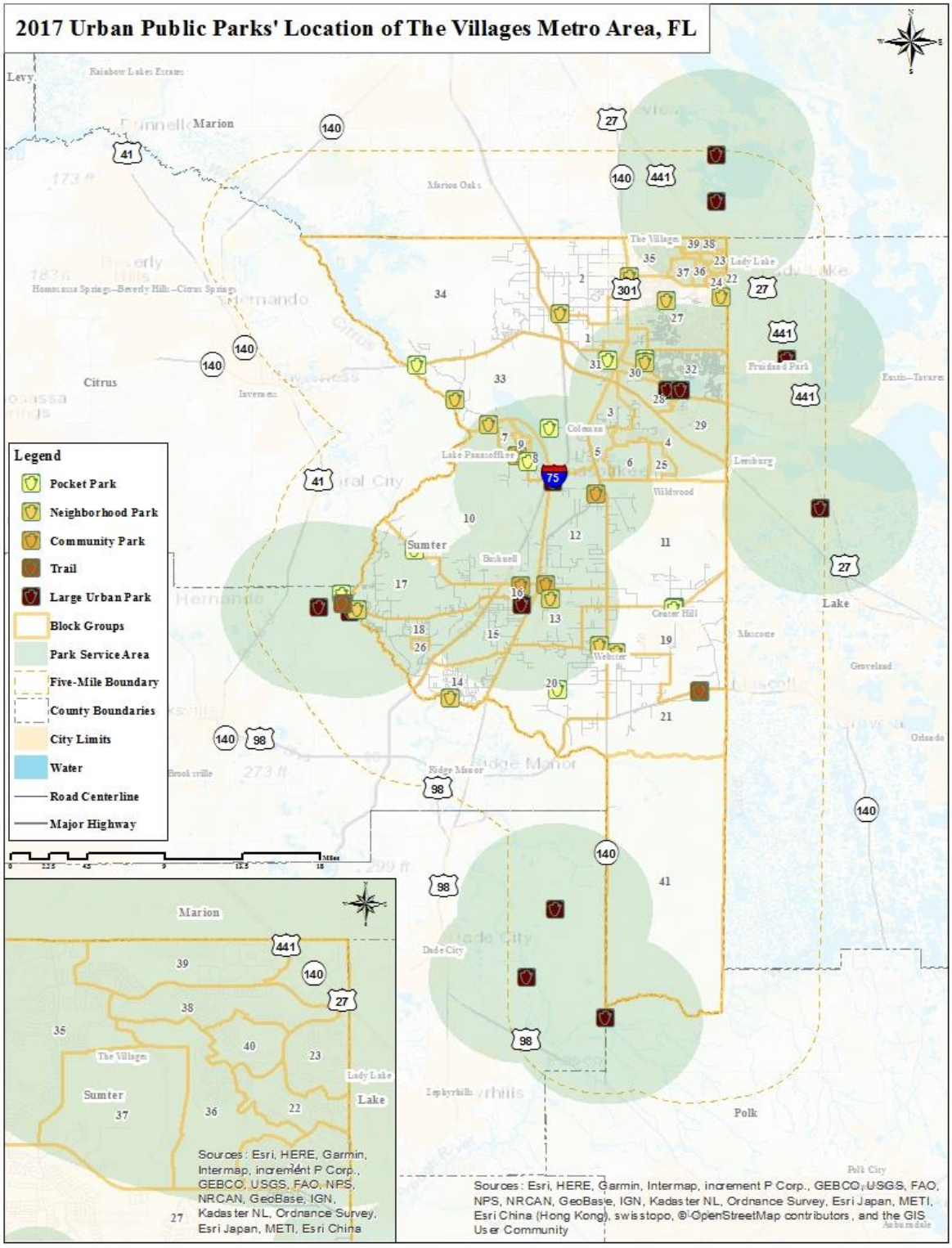
As can be seen from Figure-7, the current level of urbanization in the study area is generally not high, but the differentiation among the study area is prominent. Among them,

there are twelve block groups of the study area - nine block groups in the northeast corner of the study area (Block Group No. 22, No. 23, No. 24, No. 35, No. 36, No. 37, No. 38, No. 39, No. 40), three block groups in the northeast of the study area (Block Group No. 4, No. 29, and No. 30), and the Block Group No.9 in the northwest - having already achieved a high level of urbanization. The urbanization level of the northwest and southwest corners of the study area is low.

4.1.2 Current Urban Park Status in The Villages Metropolitan Area, FL

Based on the official information of Sumter County, Lake County, Polk County, Pasco County, Hernando County, Citrus County, and Marion County, the necessary information of all public parks in and around the study area is obtained. Since the maximum service radius of a park is 5 miles in this paper, the researcher expands the perimeter of the whole study area to 5 miles from the original study boundary to ensure all the target parks are included.

Figure-8 Current Urban Public Park Location Map of The Villages Metro Area, FL



According to Figure-8, there are 43 developed urban public parks in the 5- mile buffer boundary and serve The Villages Metropolitan Area, including nine pocket parks, 13

neighborhood parks, five community parks, three trails, and 13 large urban parks. Among them, there are 16 urban public parks in city limits, including three pocket parks, seven neighborhood parks, two community parks, and four large urban parks. Other 27 urban public parks are outside the city limits. In addition, there are 30 urban public parks in The Villages metropolitan area, and the other 13 urban public parks are outside the study area. Additionally, the selected parks are relatively dispersed. Parks in the metropolitan area are mainly concentrated in the northeast and southwest corners.

4.2 Service Accessibility

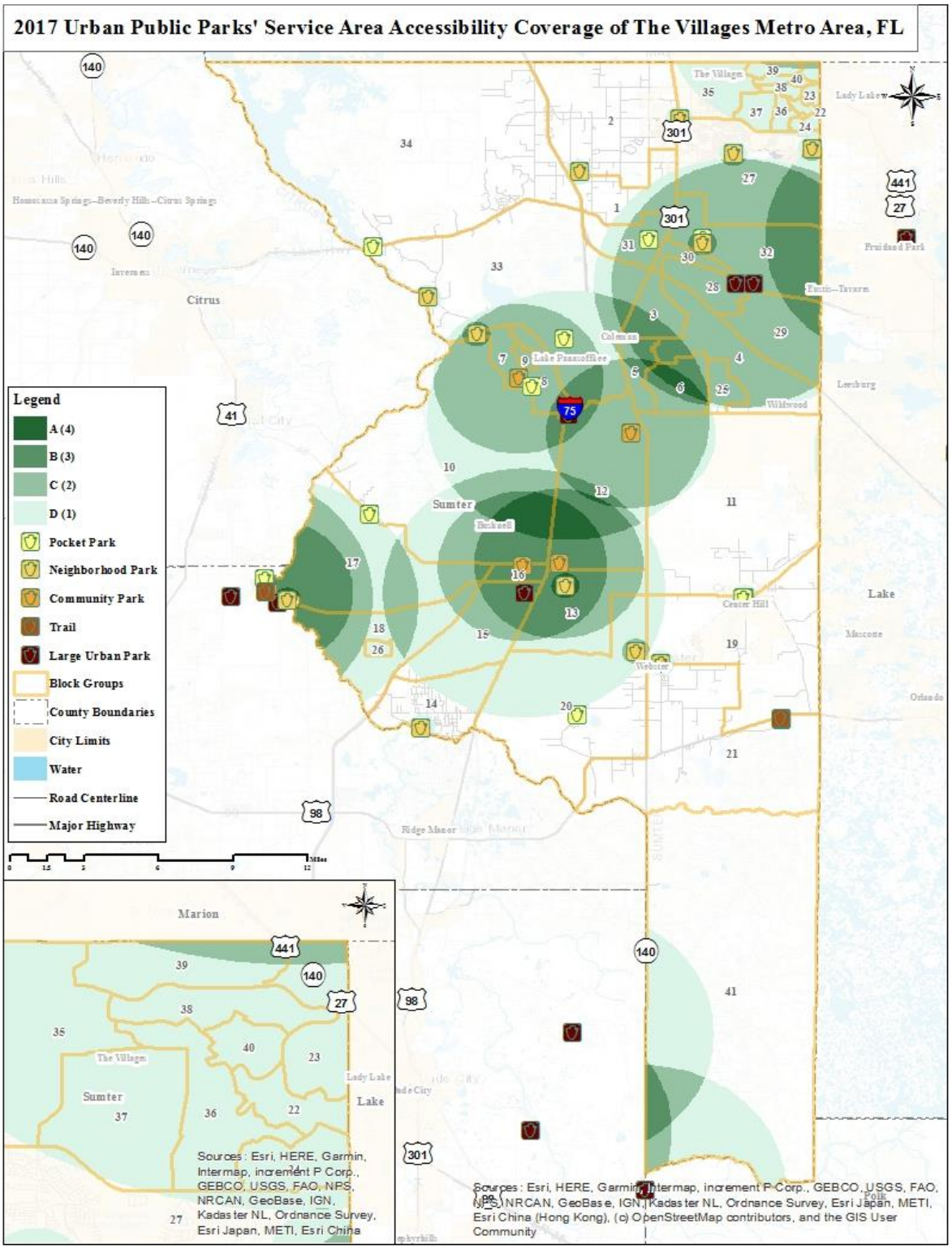
In order to facilitate statistics and analysis, this paper classifies parks into five categories (Appendix Table-14) according to the official website information: pocket park (Molnar, 2015), neighborhood park, community park, trail, and large urban park (Mertes & Hall, 1996). Firstly, the trail is determined, and its buffer radius is set to 0.5 miles (Mertes & Hall, 1996). Then, state parks (no national parks in the study area) serving more residents and parks with a size of about 50 acres and above are classified as large urban parks, and their buffer radius is set to 5 miles (Mertes & Hall, 1996). Secondly, parks of about 20 acres and above and parks serving community residents are classified as community parks, and their buffer radius is set to 3 miles (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99-114). Then, parks about 2-10 acres in size and parks serving neighborhood residents are classified as neighborhood parks, and their buffer radius is set to 0.5 miles (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99-114). Finally, this paper classifies parks of about 0.57-1 acres and parks with small service scope as a pocket park, and their buffer radius is set to 0.25 mile (Mertes & Hall, 1996; Addison Park District & Bonestroo, 2010, pp 99-114).

According to the information provided by the official website, this paper collects all the service facilities and amenities of 43 urban public parks which meet the requirements and then makes statistics. This paper defines that the common facilities are owned by more than half of the urban public parks and recreational amenities are owned by less than half of the urban public parks.

4.2.1 Service Area Coverage

In this study, all kinds of target parks are scored 1 each initially. For a place where parks' service area is overlaying, its service area values can be superimposed to calculate the values of all parks there. Then, the area of each park service area coverage is multiplied by its value, and the service coverage weighted area of each park service area is obtained, as shown in Figure-9 below.

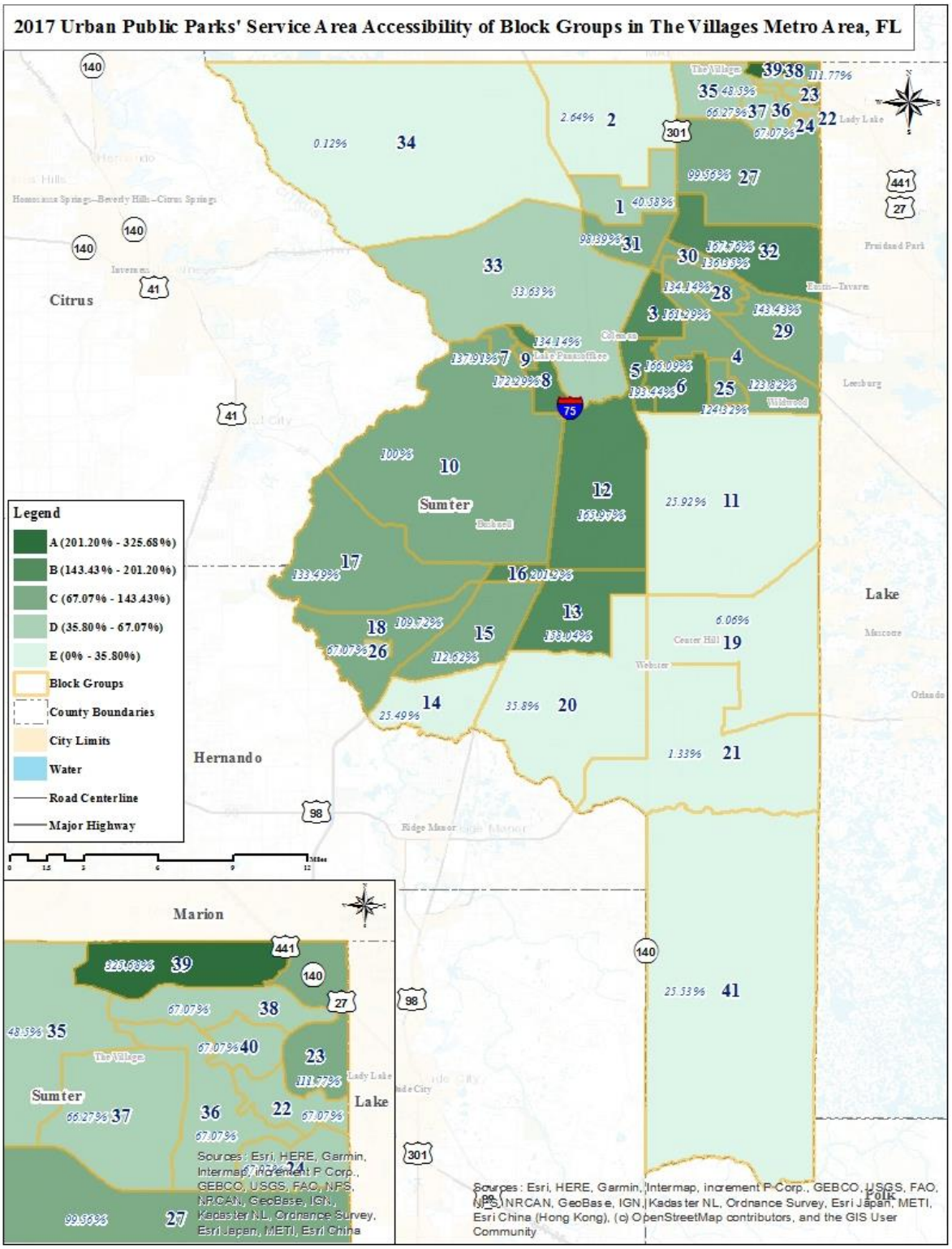
Figure-9 Urban Public Parks' Service Area Accessibility Coverage of The Villages Metro Area, FL



In general, there is a relative lack of urban public parks' service area coverage within the study area. The service area coverage of urban public parks serving The Villages Metro Area in the study area is only 272.34 mi^2, accounting for 47% of the total area of the study area, less than half of the total area of the study area. As can be seen from Figure-9 above, the developed urban public parks in the study area are mainly distributed around in the northeast, middle part, and southwest corners. Also, the urban public parks' service area coverage at these places (the junction of the study area and Herna9ndo County, the intersection of the study area and Lake County, and the junction of the study area and Polk/Pasco County) is relatively high.

For each block group, this paper divides the weighted area of the parks' service area coverage in the region by the area of the region to get an area ratio. Then, 41 service area ratios were ranked in this study (Appendix Table-4). Finally, the author used the natural break tool in ArcGIS to divide the service area ratios of 41 block groups into five categories - A, B, C, D, and E to make a visual map on Figure-10 below. From A to E, the service area ratios of the block groups gradually decrease.

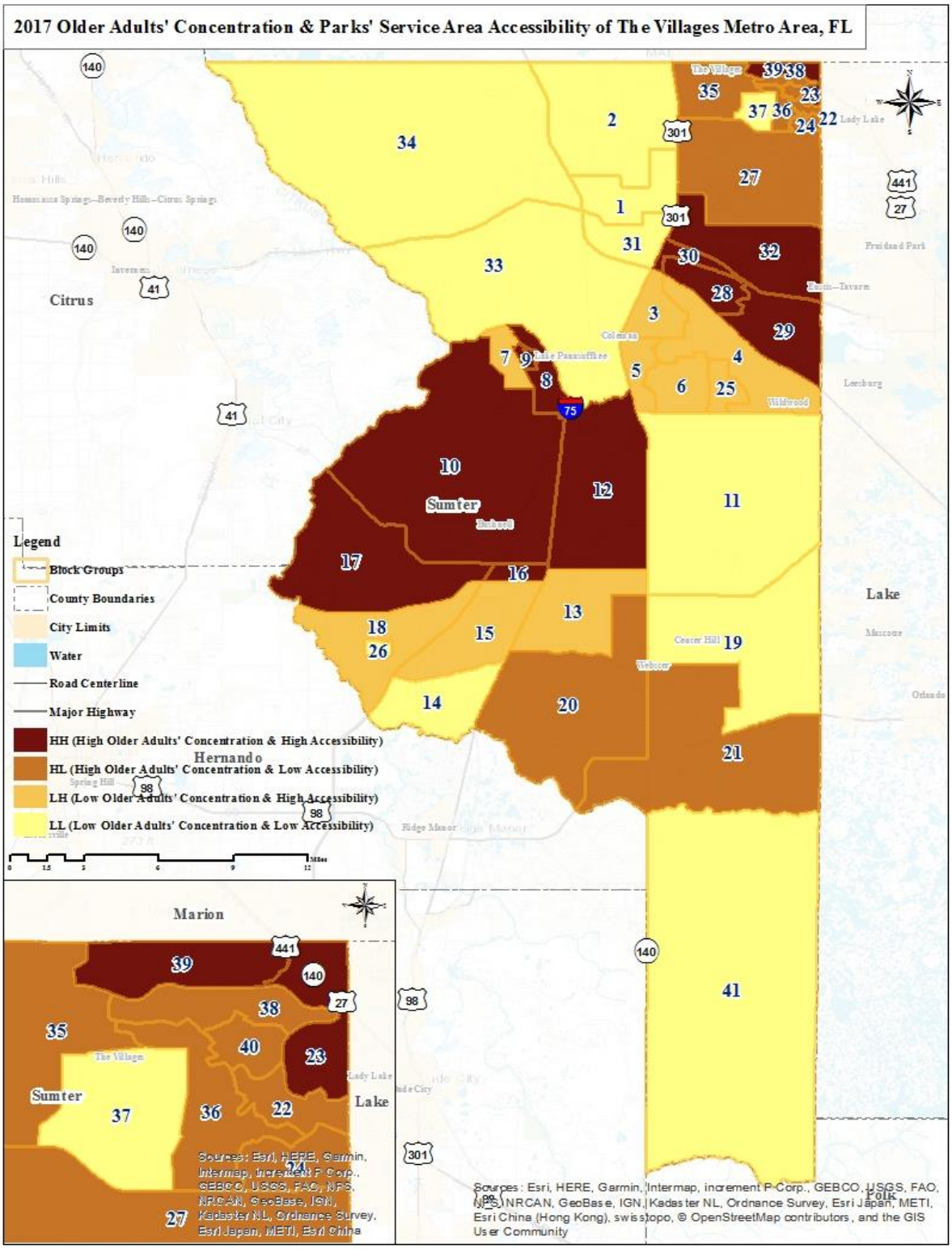
Figure-10 Urban Public Parks' Service Area Accessibility of Block Groups in The Villages Metro Area, FL



As can be seen from Figure-10 above, we can find that the areas with better urban public park service area coverage are mainly concentrated in the northeast and southwest corners of the study area. Among them, the block group in the front row of the park service area coverage is Block Group No. 39. However, the areas with lower park service area coverage are mainly concentrated in the northwest and southeast of the study area, especially in Block Group No. 2, No. 11, No. 14, No. 19, No. 20, No. 21, Nco. 34, and No. 41.

For older adults' concentration and urban public parks' service area accessibility of the study area, the author using the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' service area accessibility score data (Appendix Table-4) to create a visual map on Figure-11 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' service area accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-11 below showed the matching between older adults' concentration and urban public parks' service area accessibility of the study region.

Figure-11 Older Adults' Concentration & Urban Public Parks' Service Area Accessibility of Block Groups in The Villages Metro Area, FL



According to Figure-11 above, we can find that the matching situation of older adults' concentration and urban public parks' service area accessibility in the study area is scattered and relatively general. Generally speaking, 22 block groups are having relatively good matching with older adults' concentration and park service area accessibility, while there are 19 block groups not having good matching with older adults' concentration and park service area accessibility. Among them, there are 12 block groups (Block Group No. 8, No. 9, No. 10, No. 12, No. 16, No. 17, No. 23, No. 28, No. 29, No. 30, No. 32,and No. 39) of the study area have relatively good matching with high older adults' concentration and high park service area accessibility. Besides, there are 10 block groups (Block Group No. 1, No. 2, No. 11, No. 14, No. 19, No. 31, No. 33, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park service area accessibility. However, there are nine block groups (Block Group No. 20, No. 21, No. 22, No. 24, No. 27, No. 35, No. 36, No. 38, and No. 40) of the study area having low park service area accessibility, although these block groups have high older adults' concentration. In addition, there are 10 block groups (Block Group No. 3, No. 4, No. 5, No. 6, No. 7, No. 13, No. 15, No. 18, No. 25, and No. 26) of the study area having low older adults' concentration, although these block groups have high park service area accessibility.

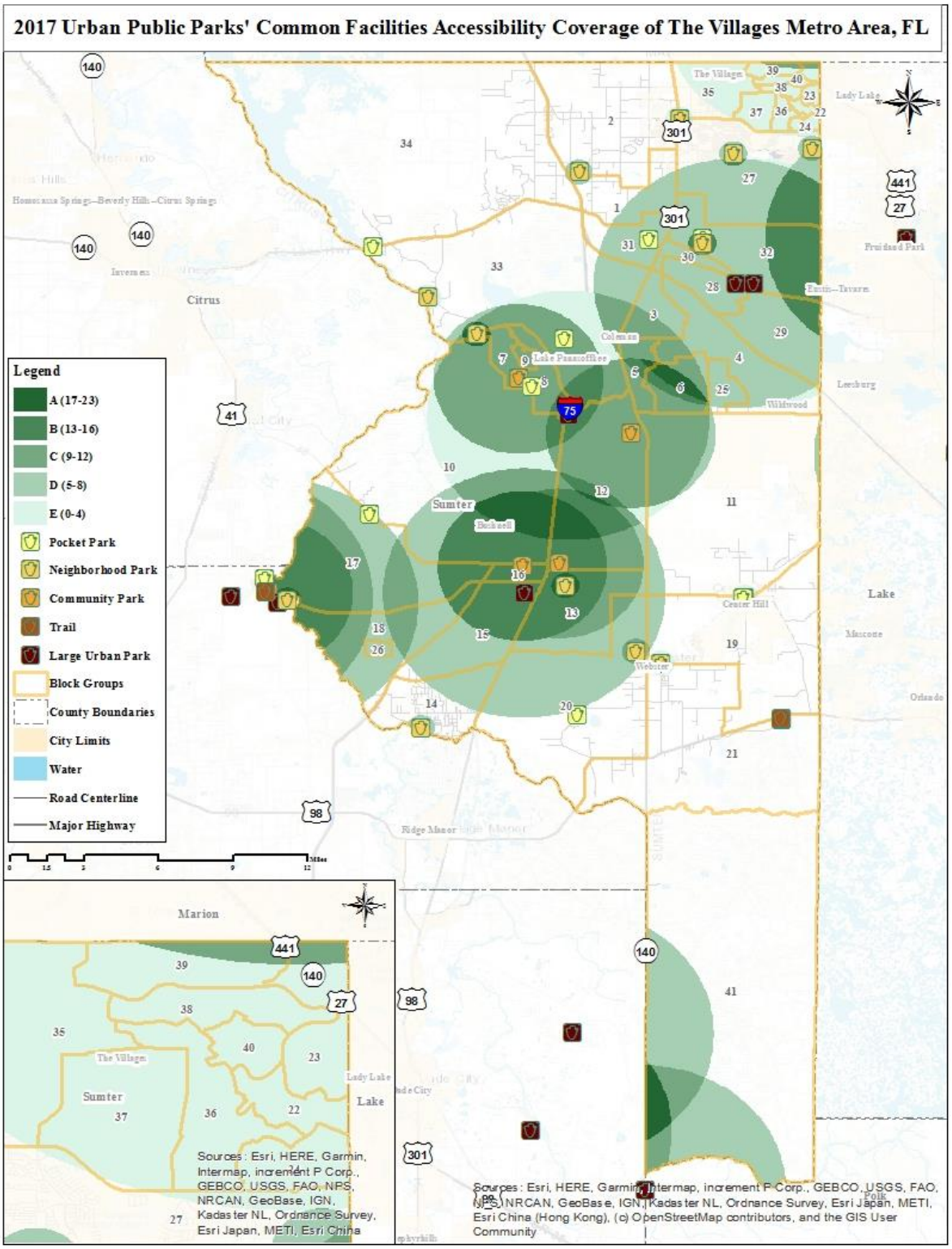
4.2.2 Common Facilities

In this paper, whether the park has picnic area, picnic tables, grills, basketball courts, playground, hiking/walking path, restrooms/portlets or not is taken as the scoring basis of parks common facilities. According to the information provided by the official website, this paper collects all the service facilities of 43 urban public parks which meet the requirements and then makes statistics. These seven evaluation factors are the common facilities owned by more than half of the urban public parks. Among them, 34 parks have picnic area, 29 parks offer picnic tables, 28 parks have grills, 28 parks offer basketball courts, 26 parks have playground, 25 parks offer hiking/walking path, and 31 parks have restrooms/portlets (Appendix Table-15).

In this study, the above parks' common facilities are scored 1 each initially. For parks providing different kinds of common facilities, its final common facilities values can be superimposed to calculate the small initial values of all parks' common facilities. Then, the

area of each park service area is multiplied by its value, and the common facilities weighted area of each park service area is obtained, as shown in Figure-12 below.

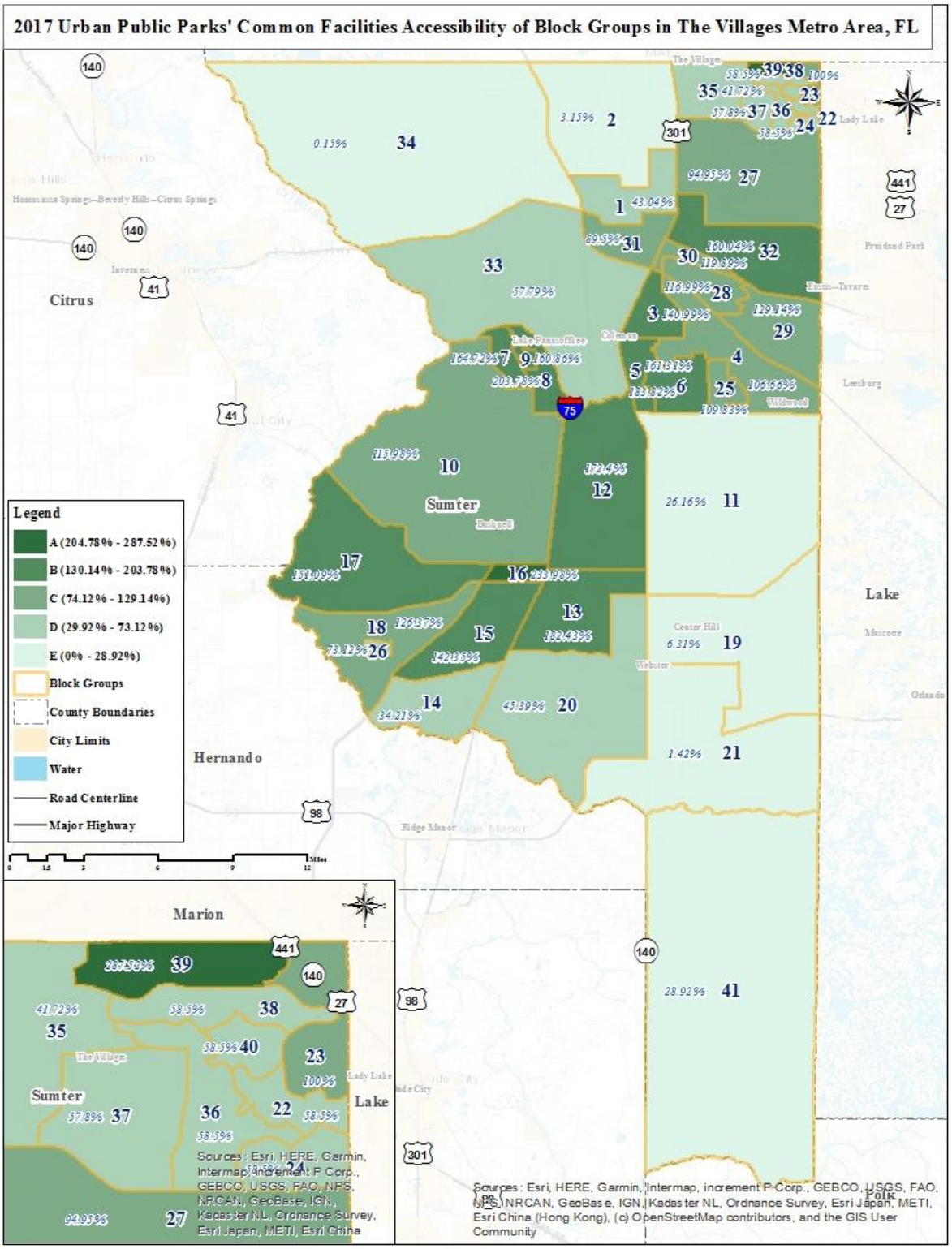
Figure-12 Urban Public Parks' Common Facilities Accessibility Coverage of The Villages Metro Area, FL



As can be seen from Figure-12 above, the relatively prominent block groups with more common facilities generally are in the southwest side, central part, and southern corner of the study area. However, the common facilities accessibility of the northeastern corner of the region is relatively weak.

For each block group, this paper divides the weighted area of the common facilities in the block group region by the original area of the block group region to get an area ratio. Then, 41 common facilities area ratios were ranked in this study (Appendix Table-5). Finally, the author used the natural break tool in ArcGIS to divide the common facilities area ratios of 41 block groups into five categories - A, B, C, D, and E - to make a visual map on Figure-13 below. From A to E, the common facilities area ratios of the block groups gradually decrease.

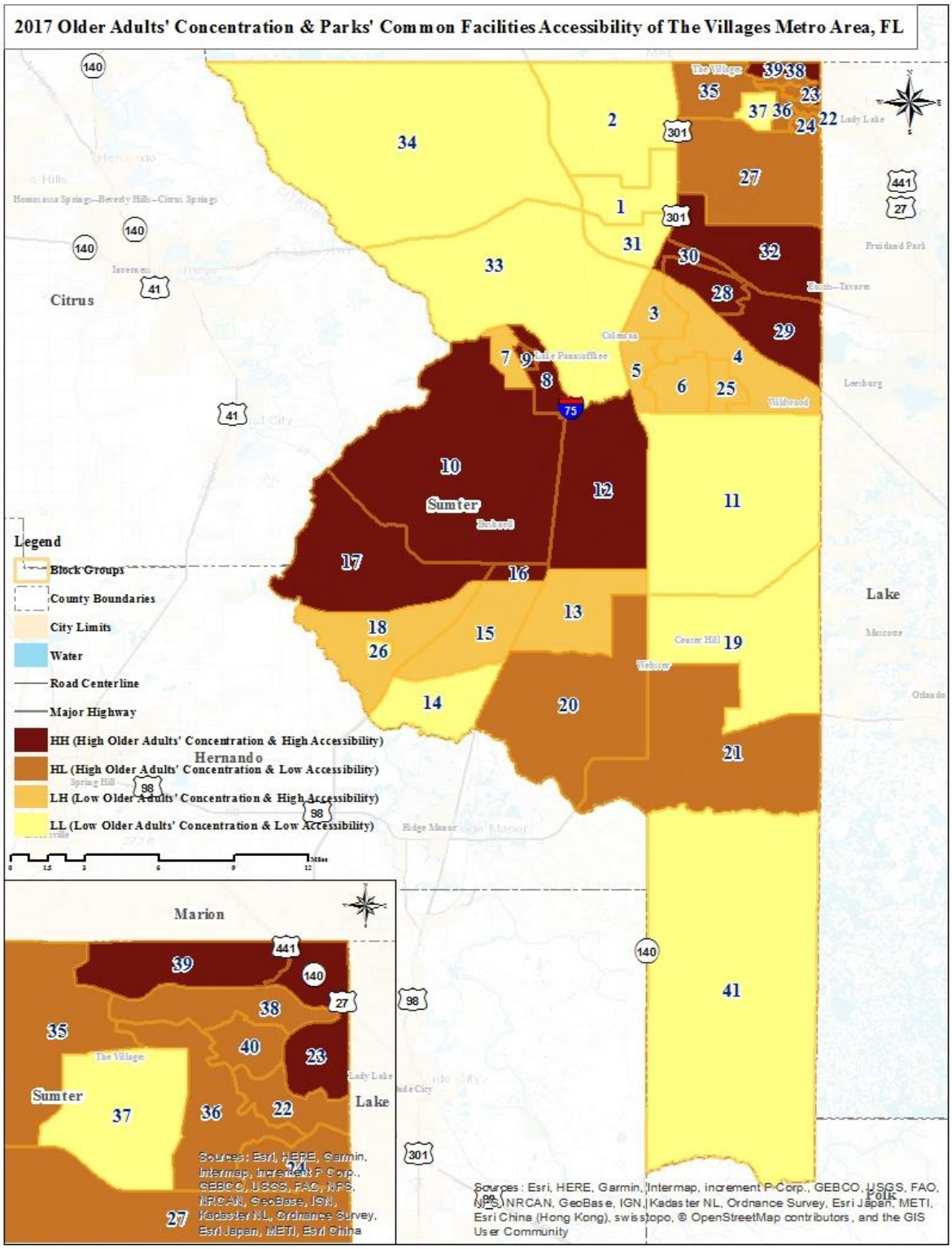
Figure-13 Urban Public Parks' Common Facilities Accessibility of Block Groups in The Villages Metro Area, FL



From Figure-13 above, we can find that the areas with better urban public parks' common facilities coverage are mainly concentrated in the northeast and southwest directions of the study area. Among them, the two block groups with the highest level of the park service community are Block Group No. 16 and No. 26. However, the lack of parks common facilities is mainly concentrated in the northwest and southeast of the study area, especially in Block Group No.2, No. 11, No. 19, No. 21, No. 34, and No. 41.

For older adults' concentration and urban public parks' common facilities accessibility of the study area, the author using the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' common facilities accessibility score data (Appendix Table-5) to create a visual map on Figure-14 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' common facilities accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-14 below showed the matching between older adults' concentration and urban public parks' common facilities accessibility of the study region.

Figure-14 Older Adults' Concentration & Urban Public Parks' Common Facilities Accessibility of Block Groups in The Villages Metro Area, FL



According to Figure-14 above, we can find that the matching situation of older adults' concentration and urban public parks' common facilities accessibility in the study area is scattered and relatively good. Generally speaking, 23 block groups are having relatively good matching with older adults' concentration and park common facilities accessibility, while there are 18 block groups not having good matching with older adults' concentration and park common facilities accessibility. Among them, there are 12 block groups (Block Group No. 8, No. 9, No. 10, No. 12, No. 16, No. 17, No. 23, No. 28, No. 29, No. 30, No. 32, and No. 39) of the study area have relatively good matching with high older adults' concentration and high park common facilities accessibility. Besides, there are 11 block groups (Block Group No. 1, No. 2, No. 11, No. 14, No. 19, No. 26, No. 31, No. 33, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park common facilities accessibility. However, there are nine block groups (Block Group No. 20, No. 21, No. 22, No. 24, No. 27, No. 35, No. 36, No. 38, and No. 40) of the study area having low park common facilities accessibility, although these block groups have high older adults' concentration. In addition, there are 9 block groups (Block Group No. 3, No. 4, No. 5, No. 6, No. 7, No. 13, No. 15, No. 18, and No. 25) of the study area having low older adults' concentration, although these block groups have high park common facilities accessibility.

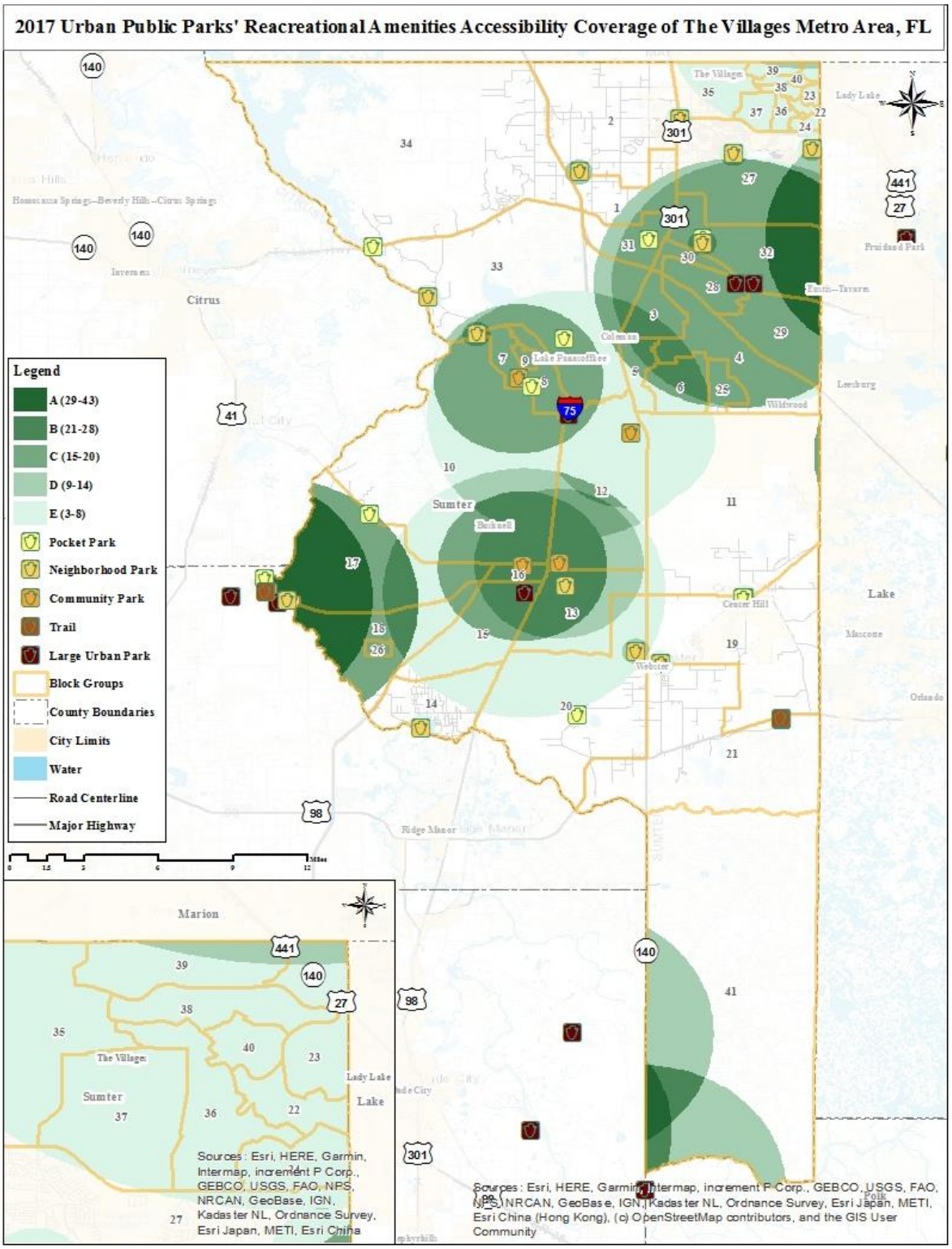
4.2.3 Recreational Amenities

In this paper, parks' recreational amenities score is based on whether parks provide recreational amenities such as ADA compliance, pet/dog-friendly or dog park, boat ramp, fishing, swimming, biking/fitness trail, wildlife, hunting, horse riding, camping, other sports field, and observation tower. According to the information provided by the official website, this paper collects all the service amenities of 43 urban public parks which meet the requirements and then makes statistics. All of the evaluation factors are the recreational amenities owned by less than half of the urban public parks (Appendix Table-16).

In this study, the above parks' recreational amenities are scored 1 each initially. For parks providing different types of recreational amenities, their final recreational amenities values can be superimposed to calculate the small initial values of all parks' recreational amenities. Then, the area of each park service area is multiplied by its value, and the

recreational amenities weighted area of each park service area is obtained, as shown in the map on Figure-15 below.

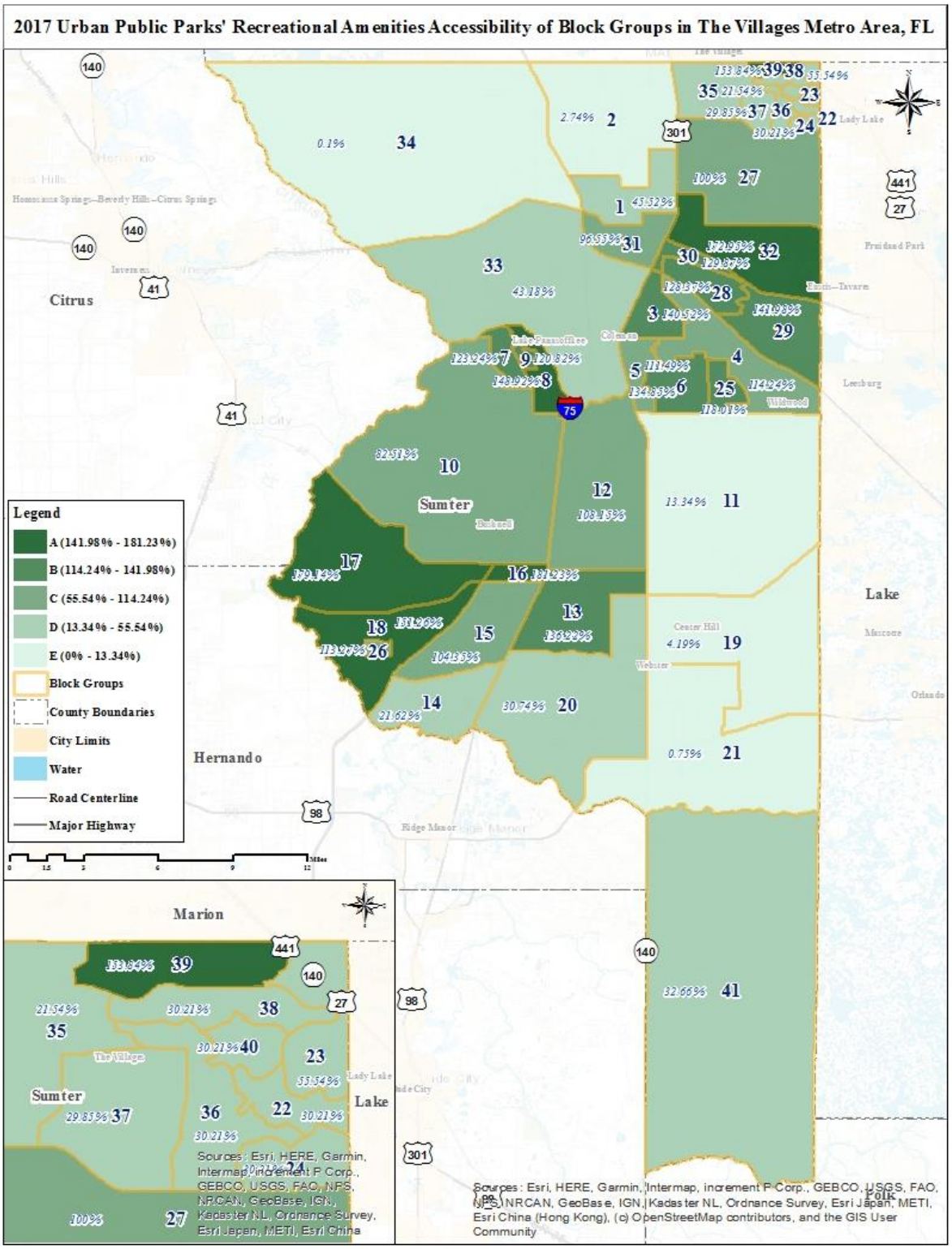
Figure-15 Urban Public Parks' Recreational Amenities Accessibility Coverage of The Villages Metro Area, FL



As can be seen from Figure-15 above, most parks in the study area provide more or less recreational amenities. Generally speaking, the target parks in the southwest corner, northeast side, and south direction of the study area offer more diverse recreational facilities. However, the recreational amenities provided by urban public parks in the northeast corner and central part of the study area is relatively scarce.

For each block group, this paper divides the recreational amenities weighted area of the region by the original area of the region to obtain an area ratio. Then, 41 recreational amenities area ratios were ranked in this study (Appendix Table-6). Finally, the author used the natural break tool in ArcGIS to divide the recreational amenities area ratios of 41 block groups into five categories - A, B, C, D, and E - to make a visual map on Figure-16 below. From A to E, the recreational amenities area ratios of the block groups gradually decrease.

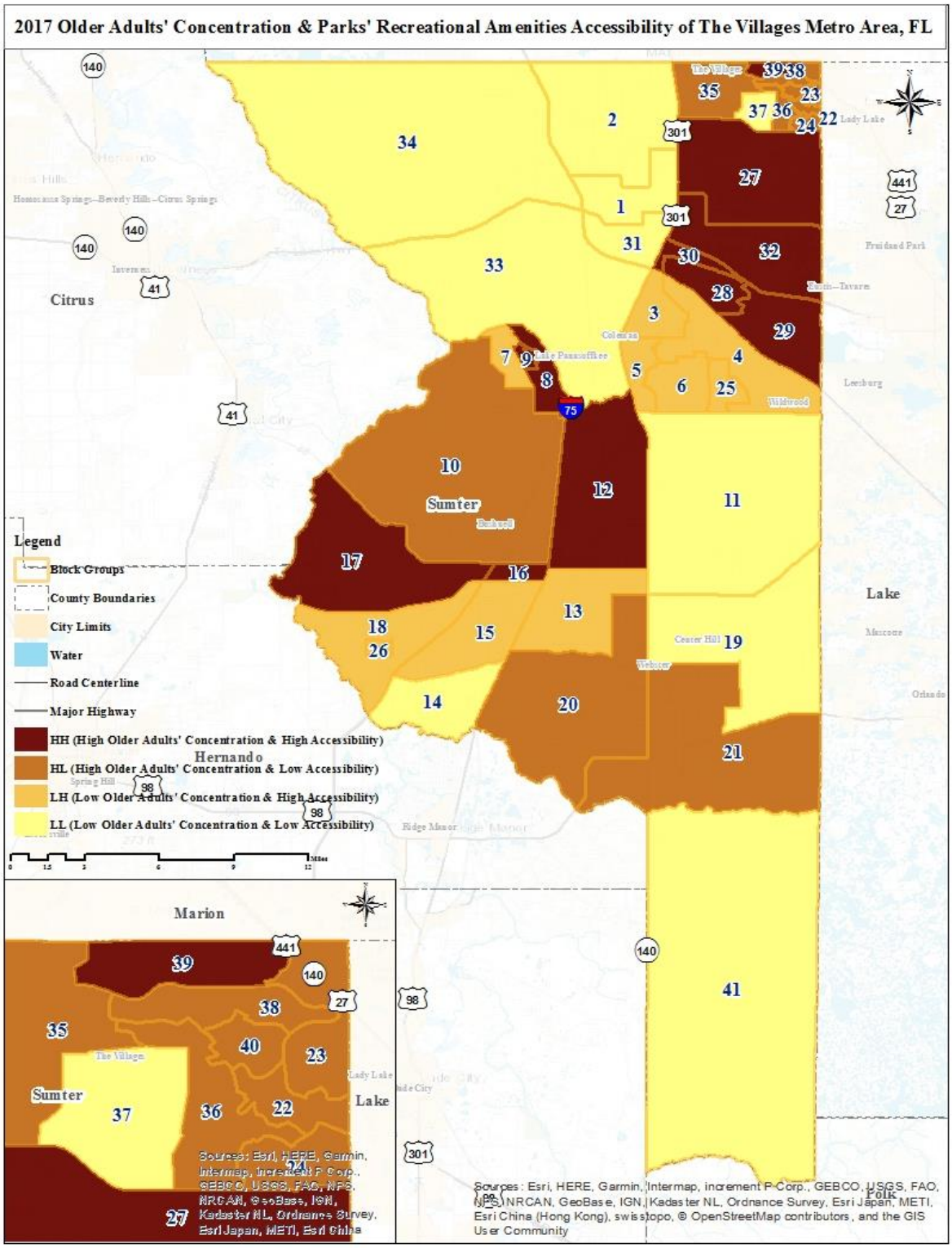
Figure-16 Urban Public Parks' Recreational Amenities Accessibility of Block Groups in The Villages Metro Area, FL



From the map on Figure-16 above, we can find that the areas with better recreational facilities coverage are also concentrated in the northeast corner, central part, and southwest side of the study area. Among them, the six block groups with the highest level of the parks' recreational amenities are Block Group No. 8, No. 16, No. 17, No. 18, No. 32, and No. 39. However, the areas lacking recreational facilities are mainly concentrated in the northwest and southeast of the study area, especially in Block Group No. 2, No. 11, No. 19, No. 21, and No. 34.

For older adults' concentration and urban public parks' recreational facilities accessibility of the study area, the author using the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' recreational facilities accessibility score data (Appendix Table-6) to create a visual map on Figure-17 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' recreational facilities accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area care set to low park accessibility. The Figure-17 below showed the matching between older adults' concentration and urban public parks' recreational facilities accessibility of the study region.

Figure-17 Older Adults' Concentration & Urban Public Parks' Recreational Amenities Accessibility of Block Groups in The Villages Metro Area, FL



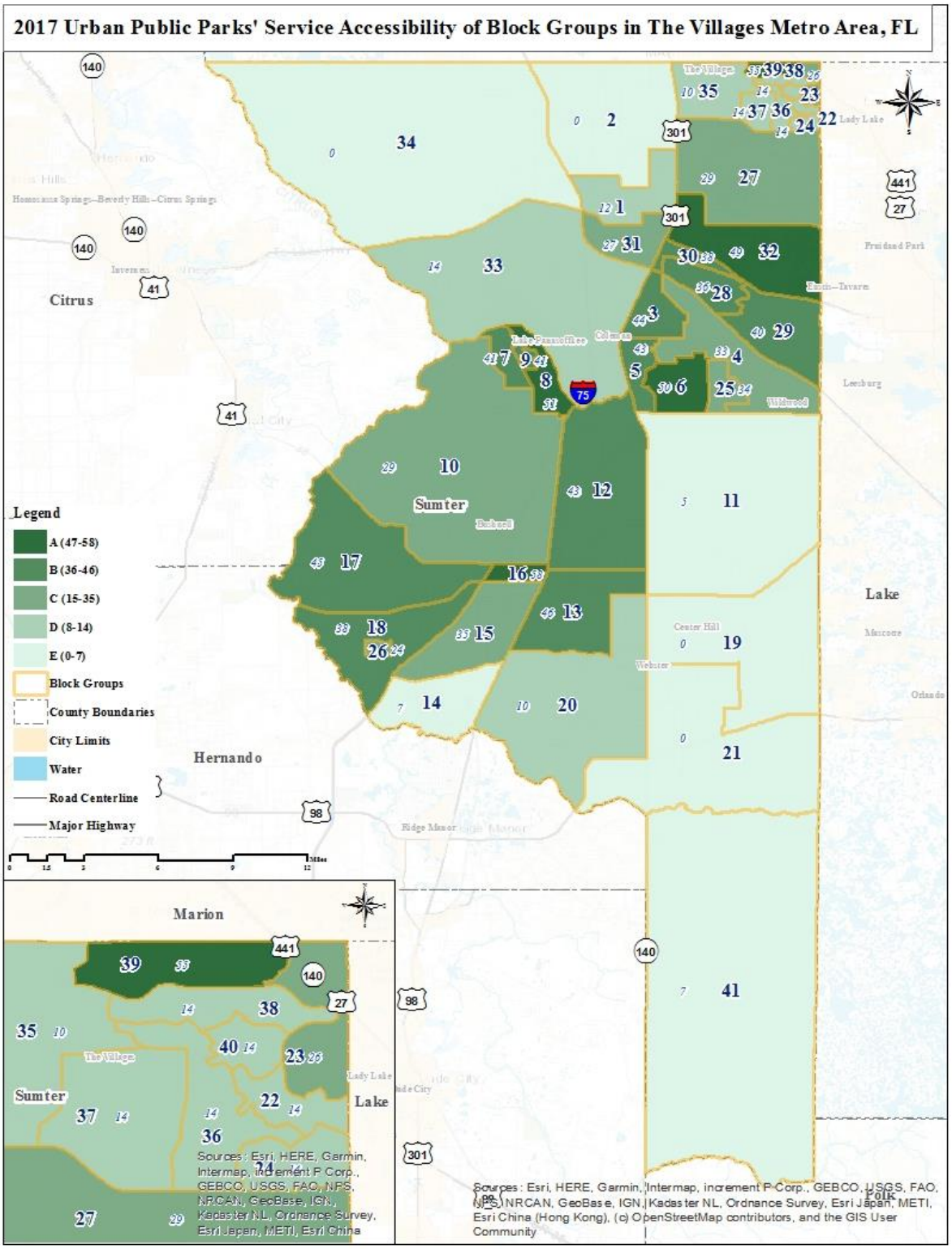
According to Figure-17 above, we can find that the matching situation of older adults' concentration and urban public parks' recreational facilities accessibility in the study area is scattered and relatively general. Generally speaking, 21 block groups are having relatively good matching with older adults' concentration and park recreational facilities accessibility, while there are 20 block groups not having good matching with older adults' concentration and park recreational facilities accessibility. Among them, there are 11 block groups (Block Group No. 8, No. 9, No. 12, No. 16, No. 17, No. 27, No. 28, No. 29, No. 30, No. 32, and No. 39) of the study area have relatively good matching with high older adults' concentration and high park recreational facilities accessibility. Besides, there are 10 block groups (Block Group No. 1, No. 2, No. 11, No. 14, No. 19, No. 31, No. 33, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park recreational facilities accessibility. However, there are 10 block groups (Block Group No. 10, No. 20, No. 21, No. 22, No. 23, No. 24, No. 35, No. 36, No. 38, and No. 40) of the study area having low park recreational facilities accessibility, although these block groups have high older adults' concentration. In addition, there are 10 block groups (Block Group No. 3, No. 4, No. 5, No. 6, No. 7, No. 13, No. 15, No. 18, No. 25, and No. 26) of the study area having low older adults' concentration, although these block groups have high park recreational facilities accessibility.

4.2.4 Summary

In this paper, the three urban public parks' service accessibility evaluation scores of park service area accessibility score, common facilities accessibility score, and recreational amenities accessibility score are 20 points respectively. In order to avoid deviating from the result of outliers, the 41 area ratios are divided by a median area ratio for each category, and a percentage value is obtained. For each category, the percentage value is more than 200% of the median as 20 points, the percentage value is less than 10% of the median as 0 points, and other percentage values range from 10% to 200% of the median as 1 to 19 points evenly distributed to obtain one of the three evaluation scores of the study area. Then, this paper summarizes the total service accessibility scores of each block group (full score: 60) according to the scores of the three categories (Appendix Table-7). Additionally, the author used the natural break tool in ArcGIS to divide the total scores of these 41 block groups into

five categories - A, B, C, D, and E - to make a visual map on the Figure-18 below. From A to E, the total scores of the block groups gradually decrease.

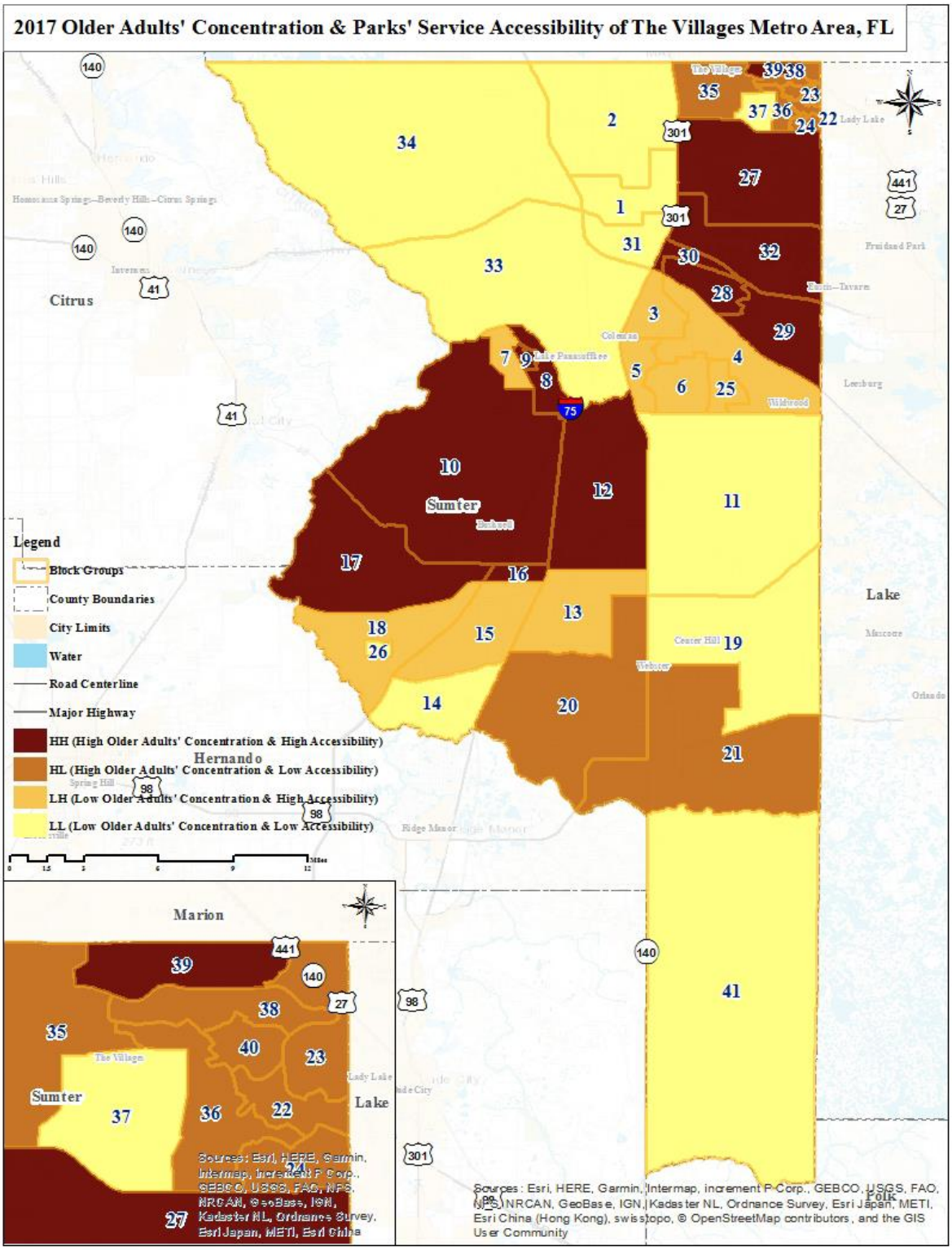
Figure-18 Urban Public Parks' Service Accessibility of Block Groups in The Villages Metro Area, FL



As can be seen from Figure-18 above, we can find that the areas with better park accessibility are mainly concentrated in the northeast and central parts of the study area. Among them, the five block groups in the front row of the park accessibility are Block Group No. 6, No. 8, No. 16, No. 32, and No. 39. However, the areas with lower park total accessibility scores were mainly in the northwest corner, southwest side, and southeast directions of the study area, especially in Block Group No. 2, No. 11, No. 14, No. 19, No. 21, No. 34, and No. 41.

For older adults' concentration and urban public parks' service accessibility of the study area, the author using the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' service accessibility total score data (Appendix Table-7) to create a visual map on Figure-19 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' service accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-19 below showed the matching between older adults' concentration and urban public parks' service accessibility of the study region.

Figure-19 Older Adults' Concentration & Urban Public Parks' Service Accessibility of Block Groups in The Villages Metro Area, FL

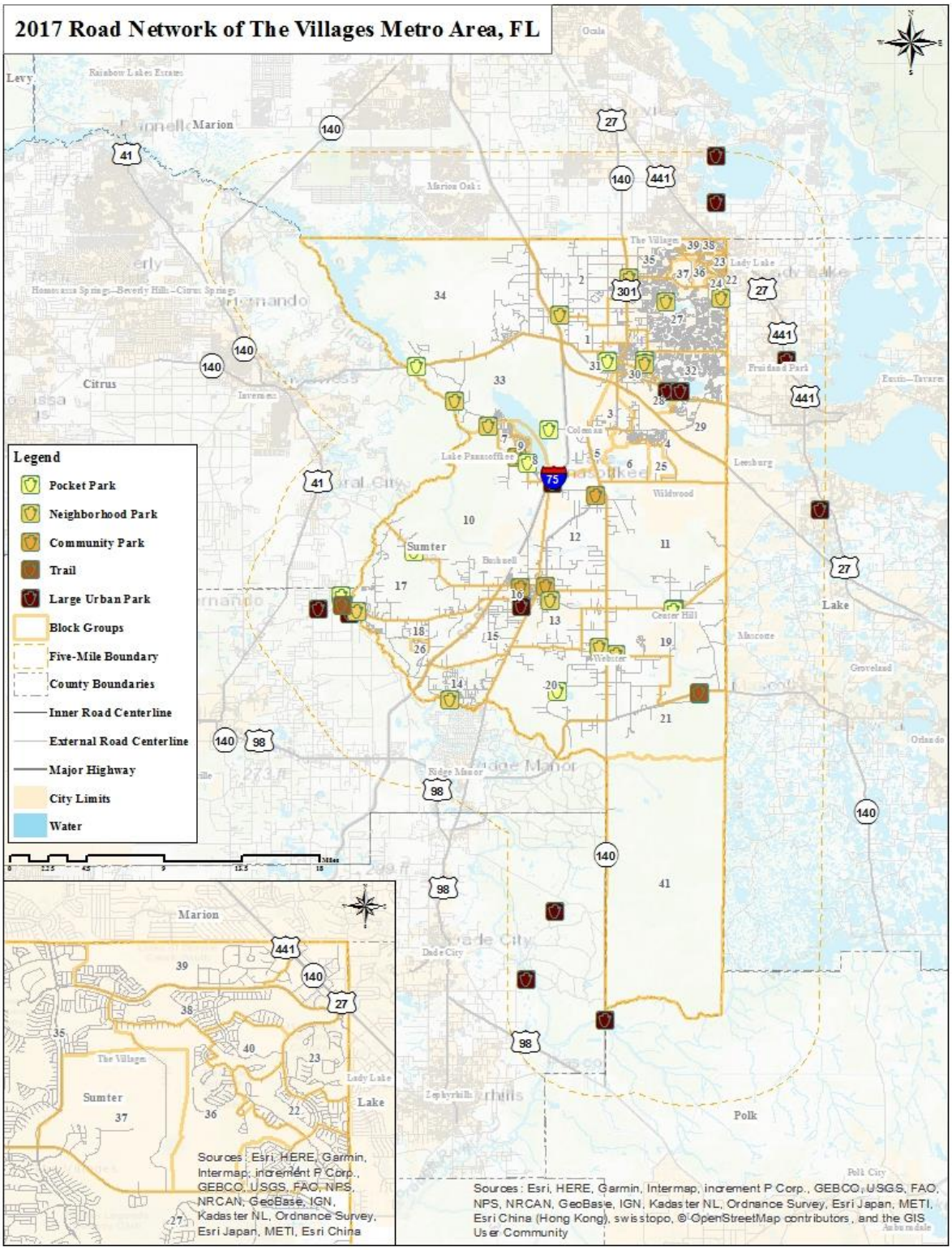


According to Figure-19 above, we can find that the matching situation of older adults' concentration and urban public parks' service accessibility in the study area is scattered and relatively good. Generally speaking, 23 block groups are having relatively good matching with older adults' concentration and park service accessibility, while there are 18 block groups not having good matching with older adults' concentration and park service accessibility. Among them, there are 12 block groups (Block Group No. 8, No. 9, No. 10, No. 12, No. 16, No. 17, No. 27, No. 28, No. 29, No. 30, No. 32, and No. 39) of the study area have relatively good matching with high older adults' concentration and high park service accessibility. Besides, there are 11 block groups (Block Group No. 1, No. 2, No. 11, No. 14, No. 19, No. 26, No. 31, No. 33, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park service accessibility. However, there are nine block groups (Block Group No. 20, No. 21, No. 22, No. 23, No. 24, No. 35, No. 36, No. 38, and No. 40) of the study area having low park service accessibility, although these block groups have high older adults' concentration. Also, there are nine block groups (Block Group No. 3, No. 4, No. 5, No. 6, No. 7, No. 13, No. 15, No. 18, and No. 25) of the study area having low older adults' concentration, although these block groups have high park service accessibility.

4.3 Green Transportation Accessibility

According to Figure- 20, the traffic roads in the northeast corner of the study area are dense, and the road networks in other parts are relatively scattered. The northwest corner of the area and the southern traffic roads are sparse. The result matches the local urban distribution and population distribution. The road network of the northeast corner in the study area with a more developed economy and the denser population is also more dense and complicated.

Figure-20 Current Status of Road Networks in The Villages Metro Area, FL



This paper calculates the park accessibility under different modes of travel. Residents will choose different modes of travel depending on the accessibility of the park. This study

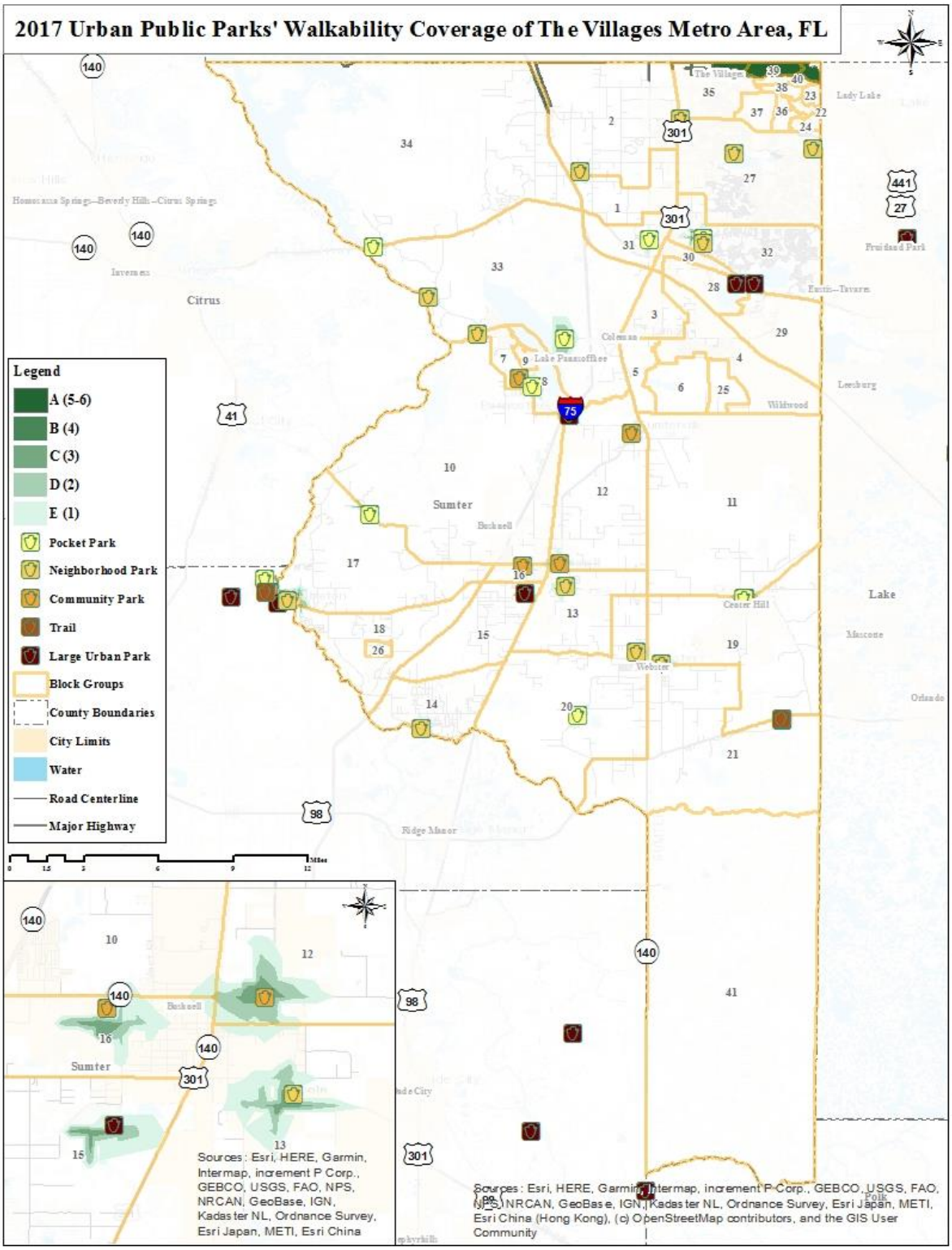
divides the time for older adults to use the various means of transportation to reach the park, which is set to 5 minutes, 10 minutes, and 15 minutes. This gives the park accessibility under different modes of travel.

This paper selects three common means of public travel in the region to evaluate the green transportation accessibility of parks in the study area, including walking, public transportation, and bicycling (Table-4 and Appendix Table-8). This article will take the total score of the accessibility of these three means of transportation. The value is taken as the total score of the green transportation accessibility (full score: 60) and then added to the service accessibility score to derive the total score of park accessibility (full score: 120).

4.3.1 Walkability

Compared with other modes of travel, the convenience of walking to the park is the highest, which can best reflect the equity of urban public parks (Rouse et al., 2018). The accessibility of the walking mode primarily reflects the current development of urban road traffic and the rationality of the layout of urban parks. This study evaluated the overall walkability of all urban parks within the study area, without distinguishing the park level. This article uses the walking distance of older adults for a limited period (5 minutes, 10 minutes, and 15 minutes) as the basis for the score of the walkability. Considering the walking speed of older adults, this study used 0.2 miles, 0.4 miles, and 0.6 miles as the walking distance of older adults for 5 minutes, 10 minutes, and 15 minutes, and initially scored 3, 2, and 1 respectively. For the overlapping parts of the walking range, the initial small values 3, 2, and 1 were superimposed to calculate the final values of all the park walking areas. Then, the weighted area of each walking area is obtained by multiplying the area of each walking area with its value, as shown in Figure-21 below.

Figure-21 Urban Public Parks' Walkability Coverage Map of The Villages Metro Area, FL

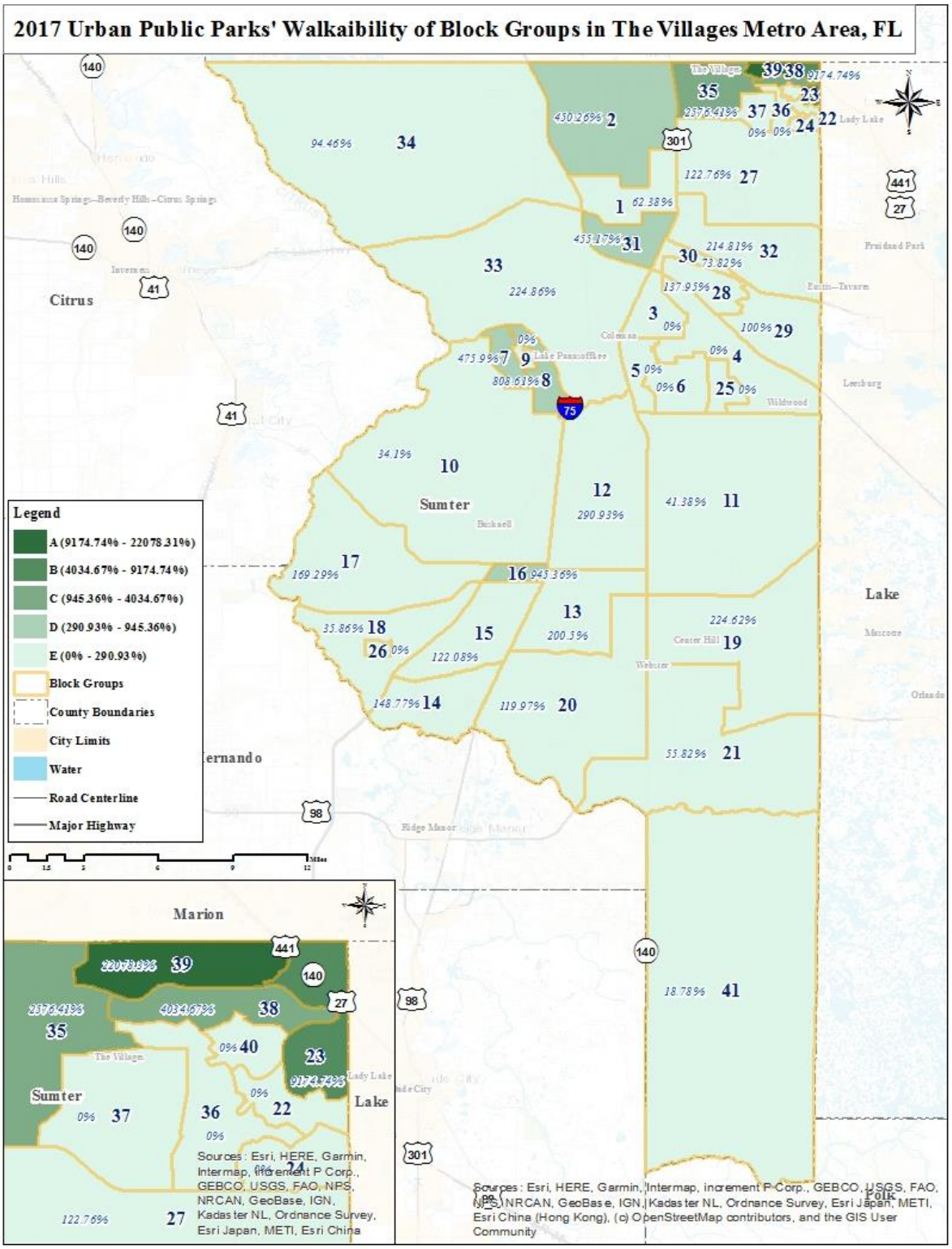


Generally speaking, the walkability coverage of urban public parks serving The Villages Metro Area is only 13.42mi^2 in the study area, accounting for about 2.3% of the total area of the study area. More specifictly, the service area with excellent accessibility (consumption time: 0-5 minutes) is 3.24 mi^2, accounting for 0.6% of the total area of the study area. The service area with general accessibility (consumption time: 5-10 minutes) is 3.28 mi^2, accounting for 0.6% of the total area of the study area. The service area with poor accessibility (consumption time: 10-15 minutes) is 6.9 mi^2, accounting for 1.2% of the total area of the study area.

As can be seen from Figure-21 above, the target park's walkability spatial distribution is balanced and scattered, but the parks' walkability coverage within The Villages Metropolitan area are relatively concentrated in the north, central and southwest directions.

For each block group, this paper divides the weighted walking area of the region by the area of the region to get an area ratio. Then, 41 walkability area ratios were ranked in this study (Appendix Table-9). Finally, the author used the natural break tool in ArcGIS to divide the walkability area ratios of 41 block groups into five categories - A, B, C, D, and E - to make a visual map on Figure-22 below. From A to E, the walkability area ratios of the block groups gradually decrease.

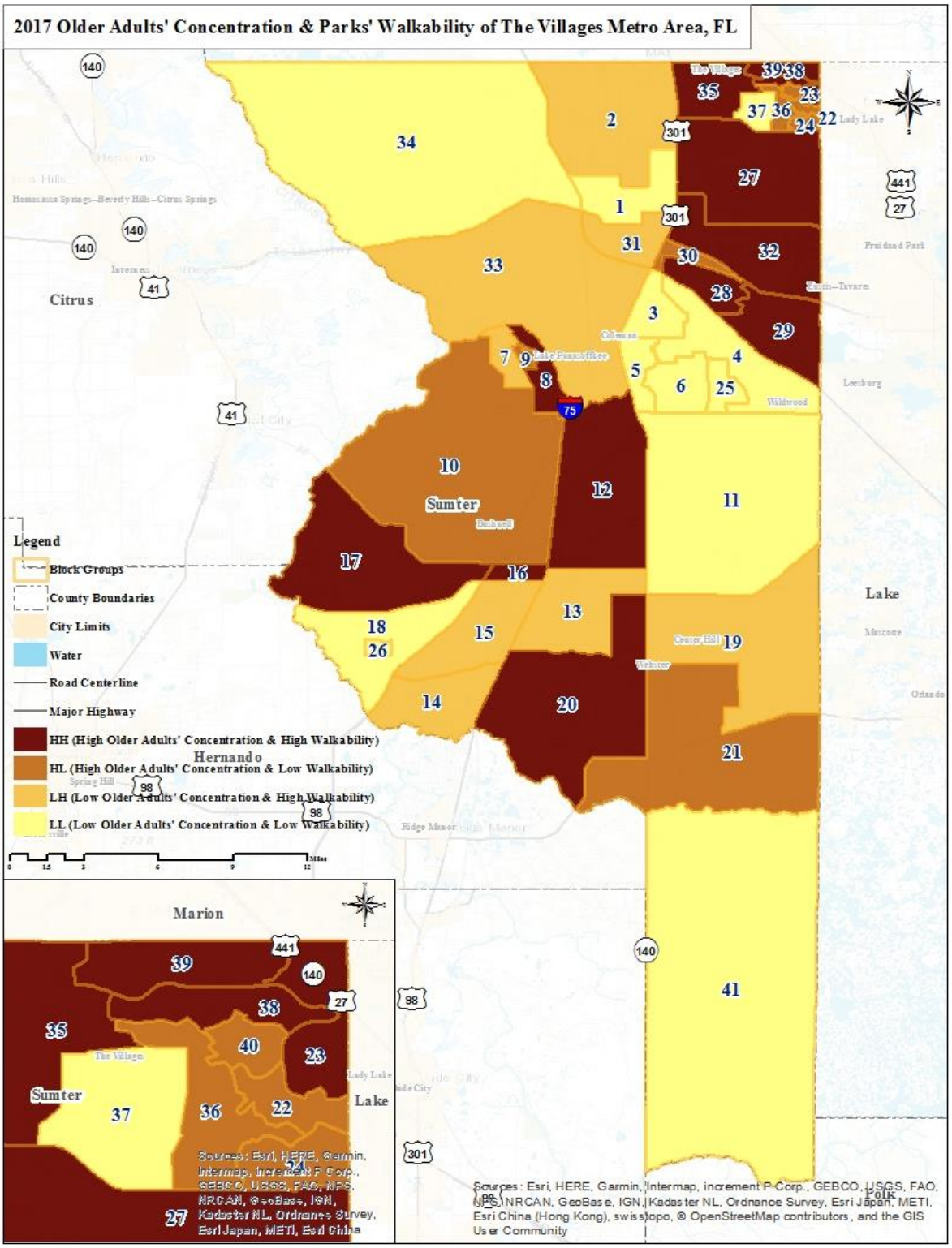
Figure-22 Urban Public Parks' Walkability of Block Groups in The Villages Metro Area, FL



From Figure-22 above, we can find that most block groups in the entire study area have poor urban public parks' walkability. Of course, the areas with better parks' walkability are mainly concentrated in the northeast corner of the study area. Among them, the block group with the highest level of the parks' walkability area is Block Group No. 39, following by Block Group No. 23. However, the other areas do not have satisfying urban public parks' walkability.

For older adults' concentration and urban public parks' walkability of the study area, the author using the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' walkability score data (Appendix Table-9) to create a visual map on Figure-23 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' walkability, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-23 below showed the matching between older adults' concentration and urban public parks' walkability of the study region.

Figure-23 Older Adults' Concentration & Urban Public Parks' Walkability of Block Groups in The Villages Metro Area, FL



According to Figure-23 above, we can find that the matching situation of older adults' concentration and urban public parks' walkability in the study area is scattered and relatively good. Generally speaking, 25 block groups are having relatively good matching with older adults' concentration and park walkability, while there are 16 block groups not having good matching with older adults' concentration and park walkability. Among them, there are 13 block groups (Block Group No. 8, No. 12, No. 16, No. 17, No. 20, No. 23, No. 27, No. 28, No. 29, No. 32, No. 35, No. 38, and No. 39) of the study area have relatively good matching with high older adults' concentration and high park walkability. Besides, there are 12 block groups (Block Group No. 1, No. 3, No. 4, No. 5, No. 6, No. 11, No. 18, No. 25, No. 26, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park walkability. However, there are eight block groups (Block Group No. 9, No. 10, No. 21, No. 22, No. 24, No. 30, No. 36, and No. 40) of the study area having low park walkability, although these block groups have high older adults' concentration. Also, there are eight block groups (Block Group No. 2, No. 7, No. 13, No. 14, No. 15, No. 19, No. 31, and No. 33) of the study area having low older adults' concentration, although these block groups have high park walkability.

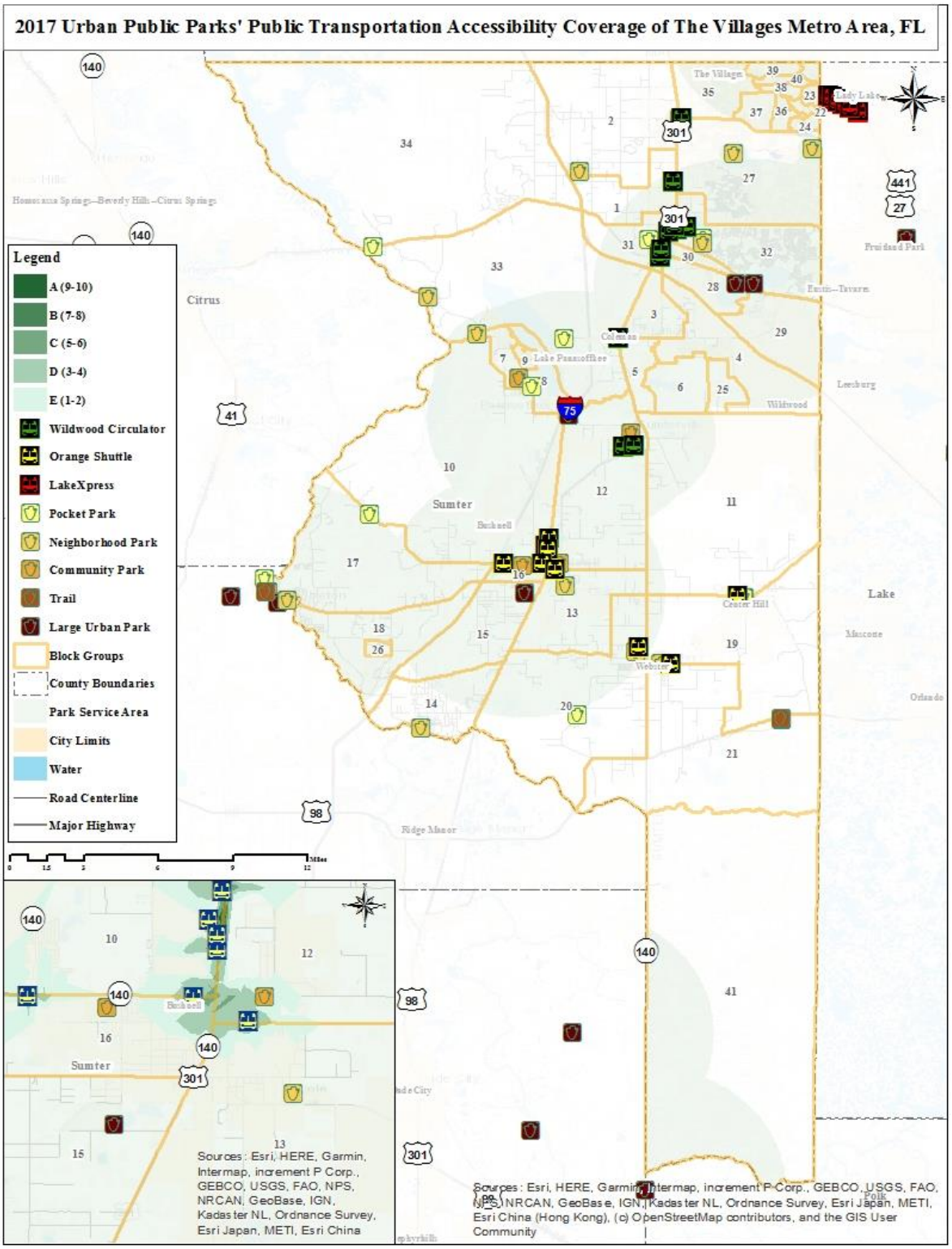
4.3.2 Public Transportation Accessibility

This article selected buses as the measurement indicators of public transportation accessibility, involving a total of 31 bus stops (3 bus routes). Because taking the bus is the primary mode of travel to work when residents in the study area chose public transportation (Appendix Table-8). There are two bus routes within the study area, a total of 21 bus stops: Wildwood Circulator with 11 bus stops in the north-eastern part of the study area, and Orange Shuttle with 10 bus stops in the middle parts of the study area (Sumter County Board of County Commissioners & Florida Department of Transportation, 2019). Besides, there is also a bus route within 1.5 miles of LakeXpress route with ten bus stops in Lake County from the study area boundary (Lake County Board of County Commissioners, Communications Department, 2019). Because 1.5 mile is almost the ultimate distance for people to walk 30 minutes to a bus station (KIM et al., 2005).

This article took the walking distance of older adults to the bus station within a limited time (5 minutes, 10 minutes, and 15 minutes) as the basis of the score of parks' public

transportation accessibility. In this study, 0.2 miles, 0.4 miles, and 0.6 miles were used as 5, 10, and 15 minutes walking distance for older adults to the bus stops, and initially scored 3, 2, and 1 separately. For the overlapping parts of the walking range, the initial small values 3, 2, and 1 were superimposed to calculate the final values of all public transportation accessibility. Then, this paper multiplied the area of each bus station's pedestrian area by its value and got the weighted area of each bus station's pedestrian area (Appendix Table-10). After that, this study only took the intersection of bus stops and park service areas to ensure that residents can reach the park service area from bus stops within a limited period, as shown in the map on Figure-24 below.

Figure-24 Urban Public Parks' Public Transportation Accessibility Coverage of The Villages Metro Area, FL

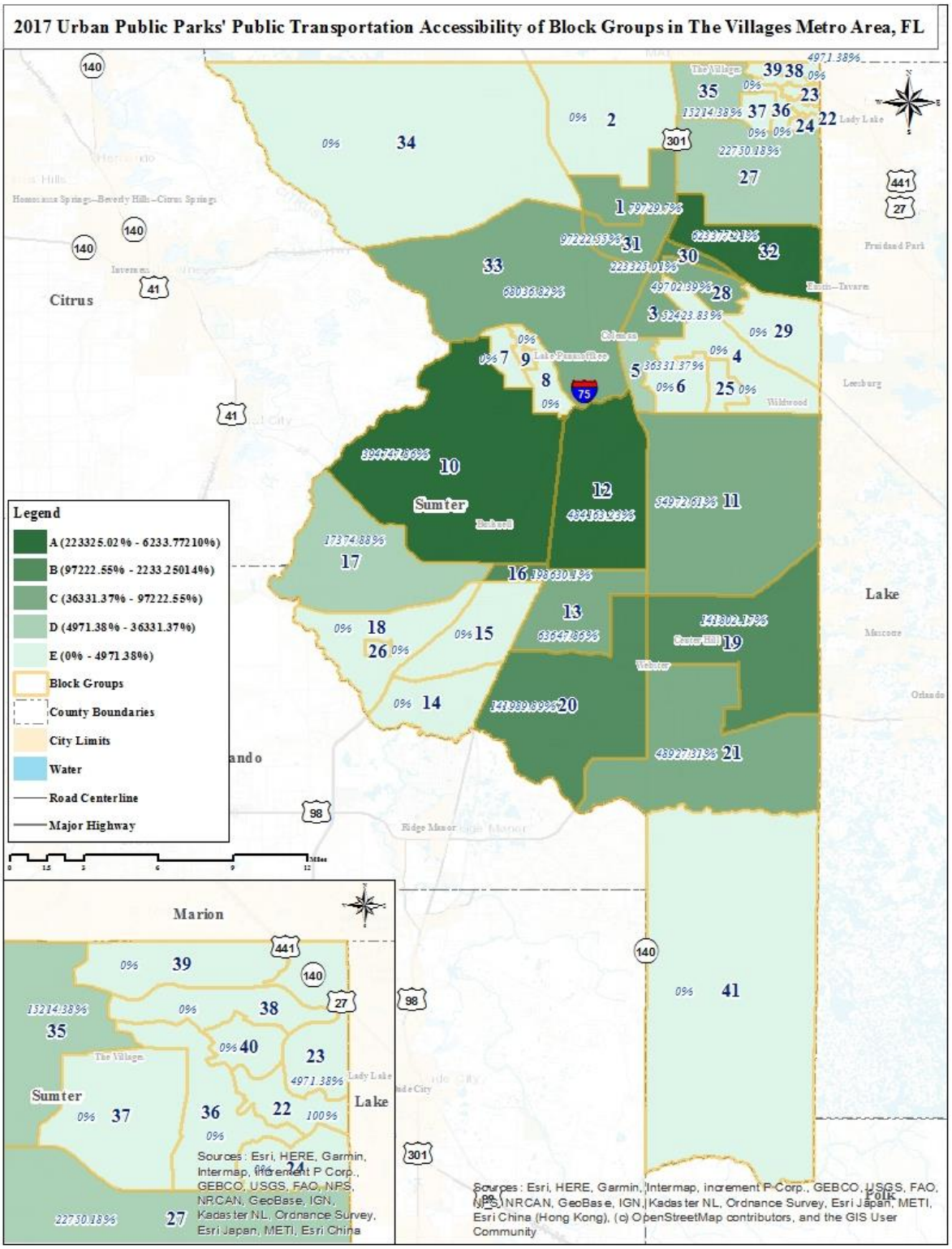


Generally speaking, the public transportation accessibility coverage of urban public parks serving The Villages Metro Area is only 6.05 mi^2 in the study area, accounting for about 1% of the total area of the study area. More specifictly, the service area with excellent accessibility (consumption time: 0-5 minutes) is 0.33 mi^2, accounting for 0.1% of the total area of the study area. The service area with general accessibility (consumption time: 5-10 minutes) is 1.24 mi^2, accounting for 0.2% of the total area of the study area. The service area with poor accessibility (consumption time: 10-15 minutes) is 4.48 mi^2, accounting for 0.8% of the total area of the study area.

As can be seen from Figure-24 above, the LakeXpress bus stops in the northeastern part of the study area is many and close, with high public transportation accessibility. However, it is challenging for older adults in the study area to walk to the LakeXpress bus stations in 15 minutes, which shows that this bus route (LakeXpress) has little impact on the public transportation accessibility of urban public parks in the study area. Bus stations in other areas are more dispersed and have accessibility in general. The distribution of bus stops in the study area is scattered but relatively concentrated in the northeast corner of the study area. In addition, the bus stations within the study area span most of the block groups in the study area, and all of these bus stops are within the service scope of urban public parks in the study area.

For each block group, this paper divides the weighted pedestrian area of the bus station within the block group region by the original area of the block group region to get an area ratio. Then, 41 public transportation accessibility area ratios were ranked in this study (Appendix Table-10). Finally, the author used the natural break tool in ArcGIS to divide the public transportation accessibility area ratios of 41 block groups into five categories - A, B, C, D, and E - to make a visual map on Figure-25 below. From A to E, the public transportation accessibility area ratios of the block groups gradually decrease.

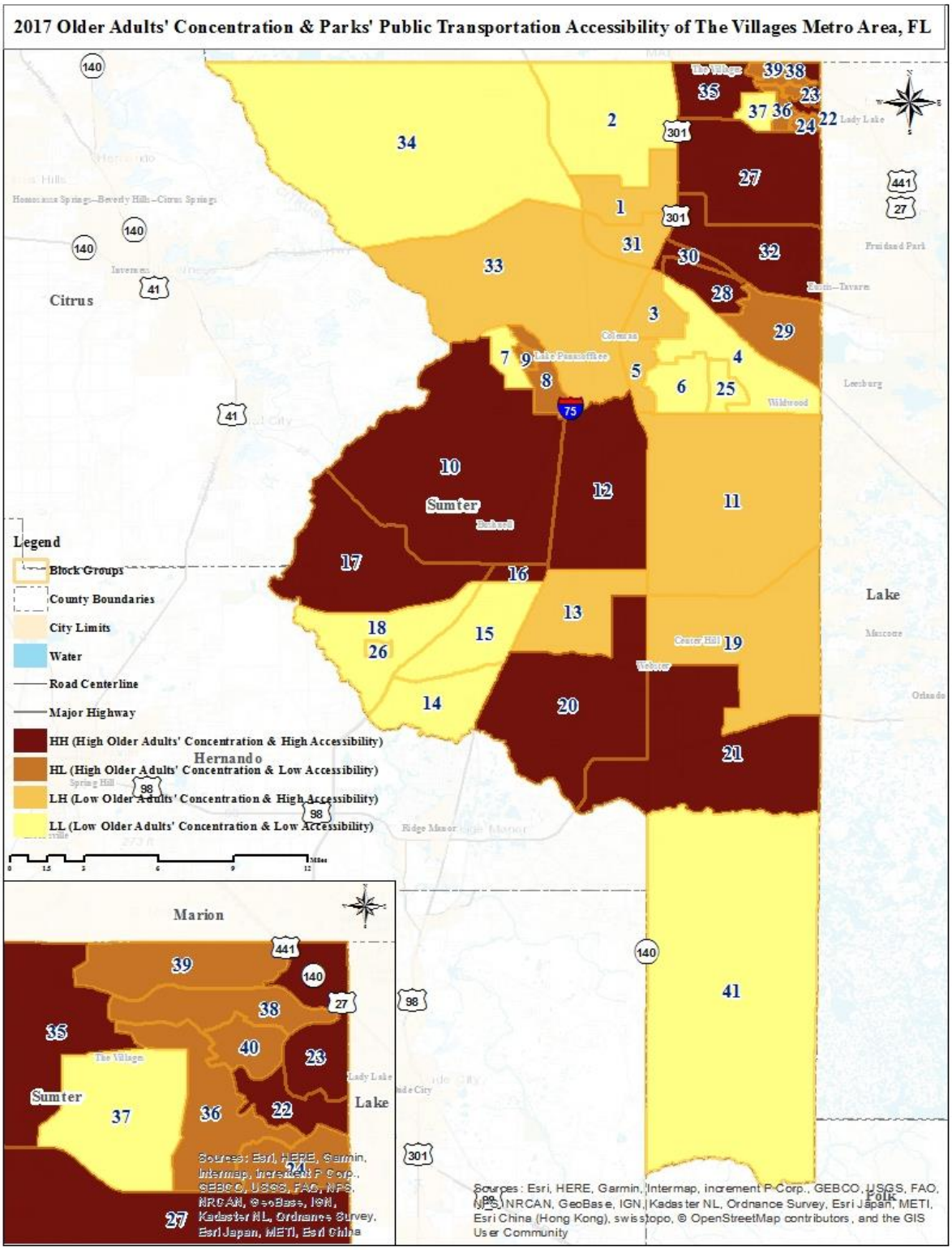
Figure-25 Urban Public Parks' Public Transportation Accessibility of Block Groups in The Villages Metro Area, FL



From the map on Figure-25 above, we can find that the areas with high urban public parks' public transportation accessibility are mainly concentrated in the middle part of the study area. Among them, urban public parks' public transportation accessibility varies greatly in different block groups. The block groups with the highest level of public transportation accessibility are Block Group No. 10, No. 12, and No. 32. However, more than half of the block groups were lacking public transportation accessibility, mainly in the northeast, northwest, southeast, and middle section of the study area. There are even twenty block groups with zero urban public parks' public transportation accessibility: Block Group No. 2, No. 4, No. 6, No. 7, No. 8, No. 9, No. 14, No. 15, No. 18, No. 24, No. 25, No. 26, No. 29, No. 34, No. 36, No. 37, No. 38, No. 39, No. 40, and No. 41 (Appendix Table-10).

For older adults' concentration and urban public parks' public transportation accessibility of the study area, the author using the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' public transportation accessibility score data (Appendix Table-10) to create a visual map on Figure-26 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' public transportation accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-26 below showed the matching between older adults' concentration and urban public parks' public transportation accessibility of the study region.

Figure-26 Older Adults' Concentration & Urban Public Parks' Public Transportation Accessibility of Block Groups in The Villages Metro Area, FL

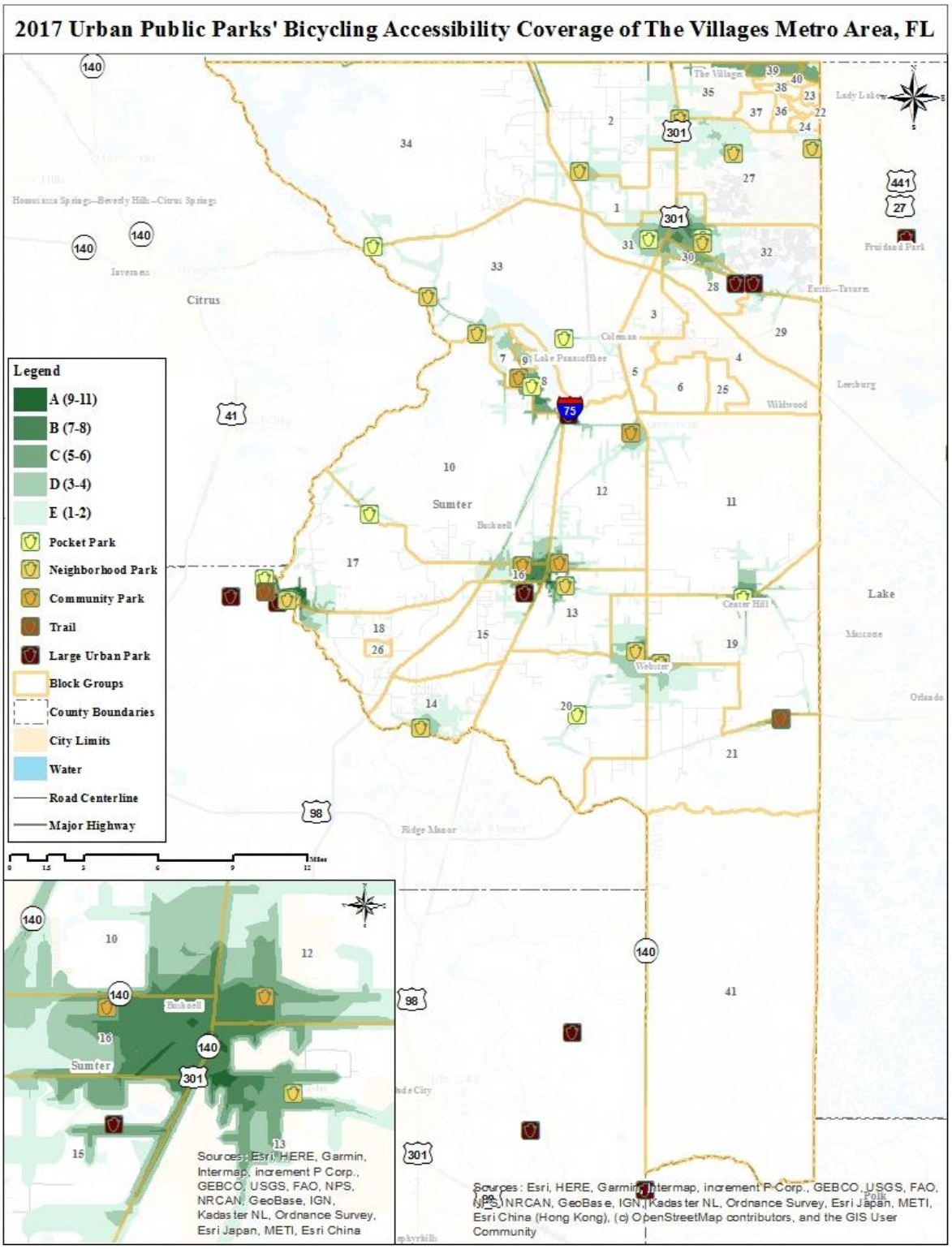


According to Figure-26 above, we can find that the matching situation of older adults' concentration and urban public parks' public transportation accessibility in the study area is scattered and relatively good. Generally speaking, 25 block groups are having relatively good matching with older adults' concentration and park public transportation accessibility, while there are 16 block groups not having good matching with older adults' concentration and park public transportation accessibility. Among them, there are 13 block groups (Block Group No. 10, No. 12, No. 16, No. 17, No. 20, No. 21, No. 22, No. 23, No. 27, No. 28, No. 30, No. 32, and No. 35) of the study area have relatively good matching with high older adults' concentration and high park public transportation accessibility. Besides, there are 12 block groups (Block Group No. 2, No. 4, No. 6, No. 7, No. 14, No. 15, No. 18, No. 25, No. 26, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park public transportation accessibility. However, there are eight block groups (Block Group No. 8, No. 9, No. 24, No. 29, No. 36, No. 38, No. 39, and No. 40) of the study area having low park public transportation accessibility, although these block groups have high older adults' concentration. Also, there are eight block groups (Block Group No. 1, No. 3, No. 5, No. 11, No. 13, No. 19, No. 31, and No. 33) of the study area having low older adults' concentration, although these block groups have high park public transportation accessibility.

4.3.3 Bicycling Accessibility

This article takes three limited periods of bicycling time (5 minutes, 10 minutes, and 15 minutes) of older adults to the parks as the basis of the score of parks' public transportation accessibility. According to Vlakveld et al. (2015), the average cycling speed of older adults is 17.1km/h in the simple traffic situation and 14.9km/h in a complicated traffic situation. Thus, this paper will use the average biking speed of older adults 0.165 miles/ min (9.94 miles/ h) as the study basis. In this study, 0.825 miles, 1.65 miles, and 2.475 miles are used as 5, 10, and 15 minutes bicycling distance for older adults to the target parks, and initially scored 3, 2, and 1 separately. For the overlapping parts of the walking range, the initial small values 3, 2, and 1 were superimposed to calculate the final values of all bicycling accessibility. Then, this paper multiplies the area of each bicycling coverage area by its value, and gets the weighted area of each bicycling coverage area, as shown in Figure-27 below.

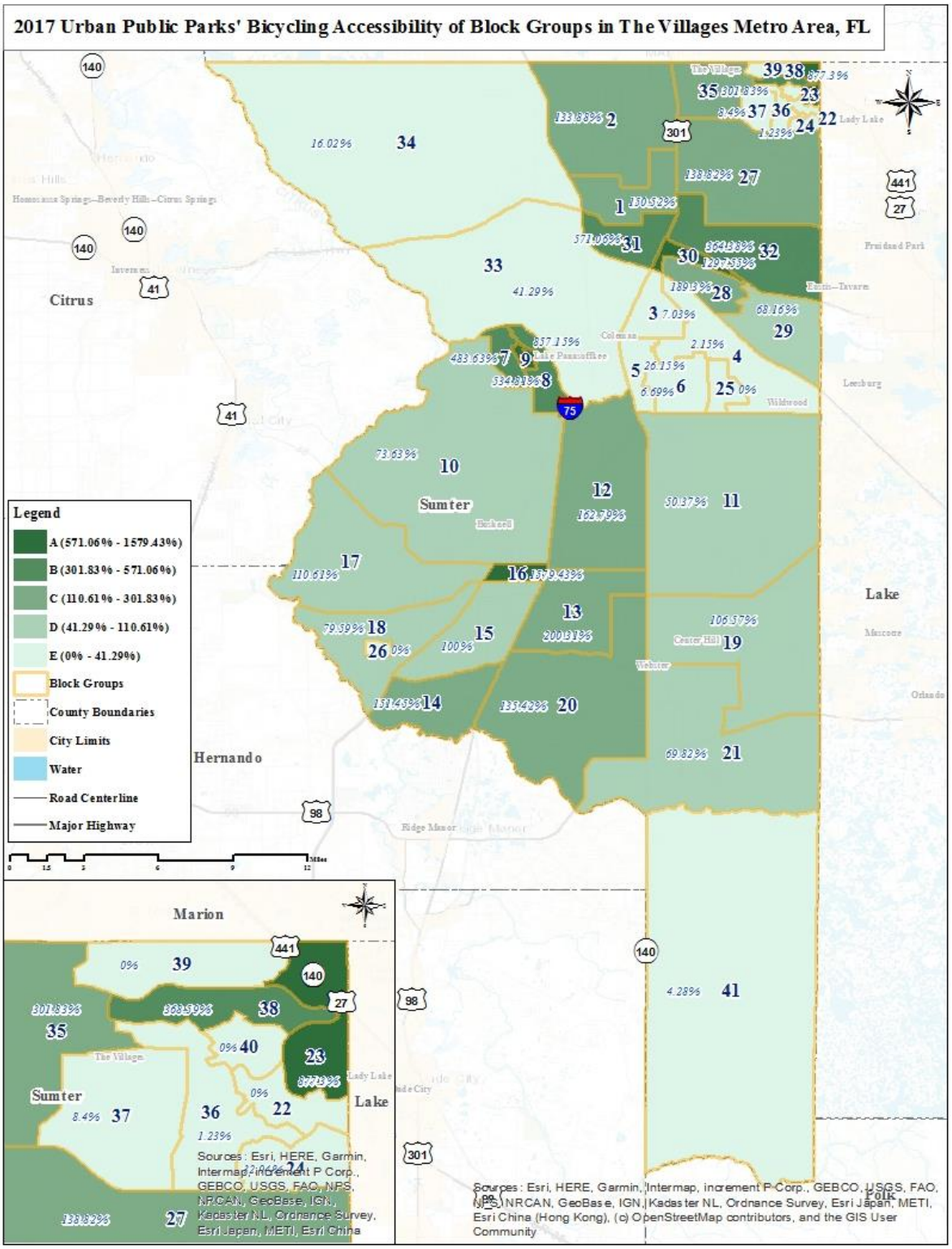
Figure-27 Urban Public Parks' Bicycling Accessibility Coverage of The Villages Metro Area, FL



From Figure-27 above, we can find that the bicycling accessibility within the study area is generally poor, the coverage area is small, and the main point divergence appears on the northeast-southwest axis of the study area. Generally speaking, the bicycling accessibility coverage of urban public parks serving The Villages Metro Area is only 79.8 mi^2 in the study area, accounting for about 13.8% of the total area of the study area. More specifictly, the service area with excellent accessibility (consumption time: 0-5 minutes) is 12.95 mi^2, accounting for 2.2% of the total area of the study area. The service area with general accessibility (consumption time: 5-10 minutes) is 23.32 mi^2, accounting for 4.0% of the total area of the study area. The service area with poor accessibility (consumption time: 10-15 minutes) is 43.53 mi^2, accounting for 7.5% of the total area of the study area.

For each block group, this paper divides the weighted bicycling coverage area of parks within the block group region by the original area of the block group region to get an area ratio. Then, 41 bicycling area ratios were ranked in this study (Appendix Table-11). Finally, the author used the natural break tool in ArcGIS to divide the bicycling area ratios of 41 block groups into five categories - A, B, C, D, and E - to make a visual map on Figure-28 below. From A to E, the bicycling area ratios of the block groups gradually decrease.

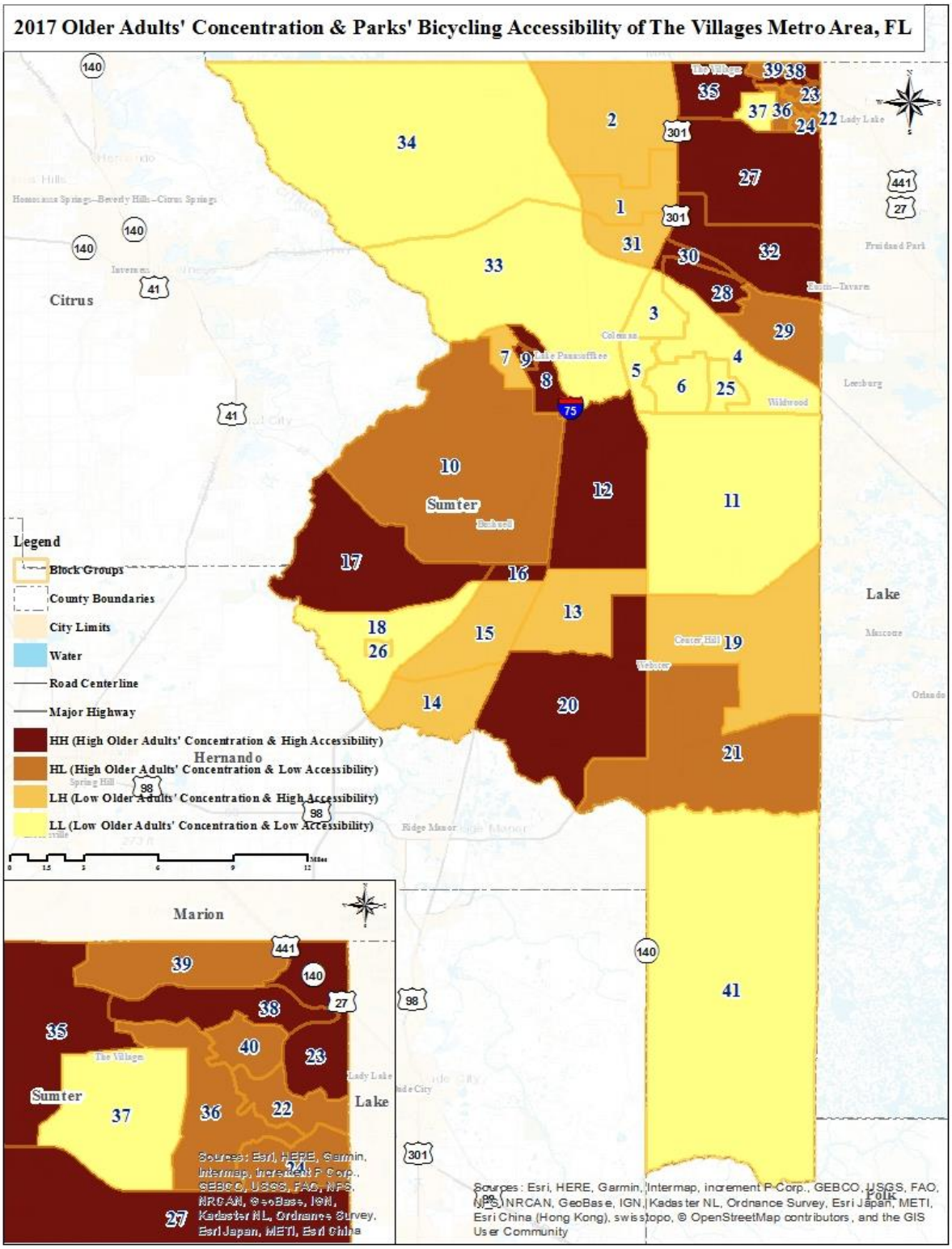
Figure-28 Urban Public Parks' Bicycling Accessibility of Block Groups in The Villages Metro Area, FL



From Figure-28 above, we can find that the urban public parks' bicycling accessibility in the northeast and central parts of the study area is relatively high, especially Block Group No. 9, No. 16, No. 23, and No. 30. However, more than one third block groups, especially in the northwest, southeast, and parts of the northeast corner in the study area have relatively poor urban public parks' bicycling accessibility: Block Group No. 3, No. 4, No. 5, No. 6, No. 22, No. 24, No. 25, No. 33, No. 34, No. 36, No. 37, No. 39, No. 40, and No. 41.

For older adults' concentration and urban public parks' bicycling accessibility of the study area, the author using the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' bicycling accessibility score data (Appendix Table-11) to create a visual map on Figure-29 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' bicycling accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-29 below showed the matching between older adults' concentration and urban public parks' bicycling accessibility of the study region.

Figure-29 Older Adults' Concentration & Urban Public Parks' Bicycling Accessibility of Block Groups in The Villages Metro Area, FL



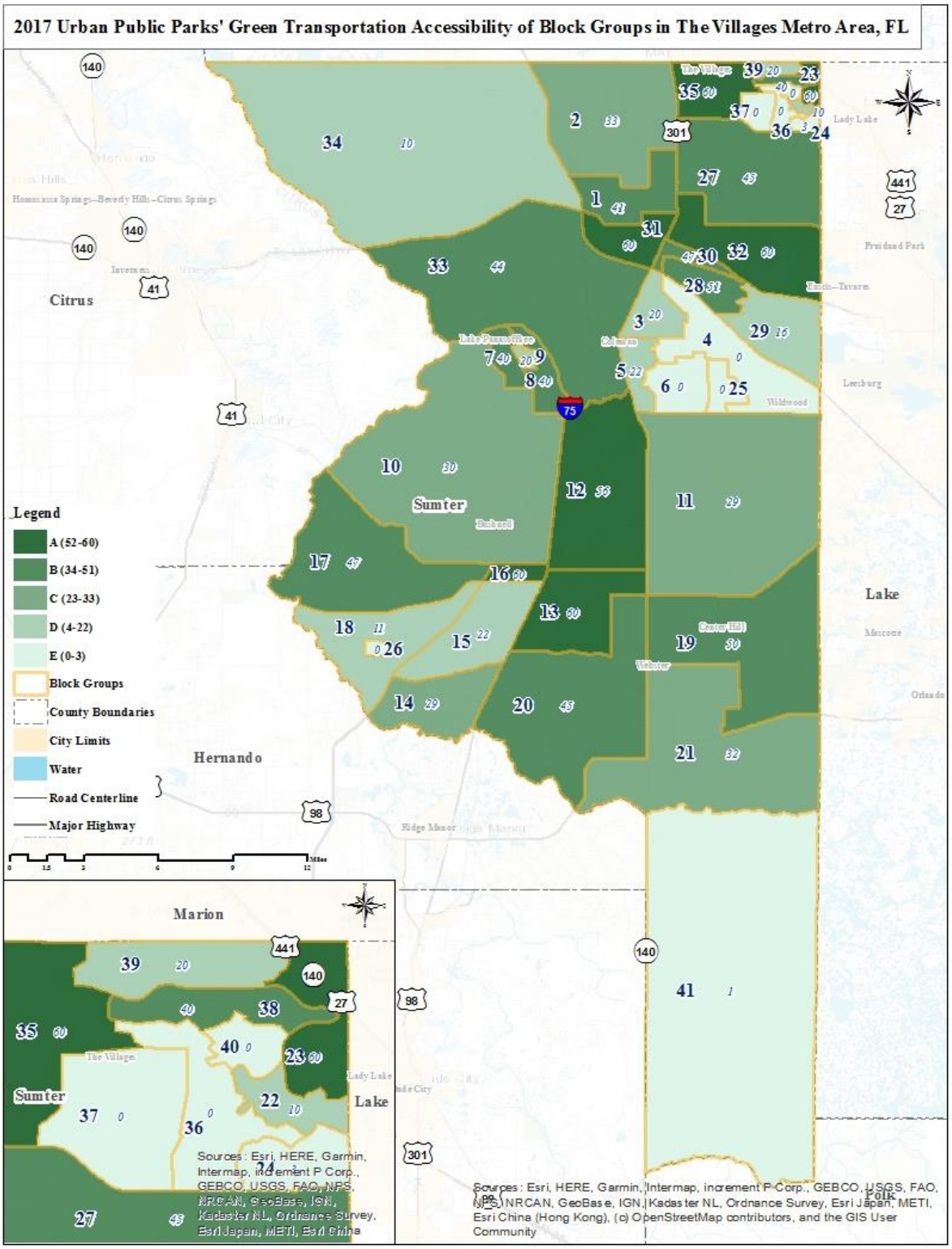
According to Figure-29 above, we can find that the matching situation of older adults' concentration and urban public parks' bicycling accessibility in the study area is scattered and relatively good. Generally speaking, 25 block groups are having relatively good matching with older adults' concentration and park bicycling accessibility, while there are 16 block groups not having good matching with older adults' concentration and park bicycling accessibility. Among them, there are 13 block groups (Block Group No. 8, No. 9, No. 12, No. 16, No. 17, No. 20, No. 23, No. 27, No. 28, No. 30, No. 32, No. 35, and No. 38) of the study area have relatively good matching with high older adults' concentration and high park bicycling accessibility. Besides, there are 12 block groups (Block Group No. 3, No. 4, No. 5, No. 6, No. 11, No. 18, No. 25, No. 26, No. 33, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park bicycling accessibility. However, there are eight block groups (Block Group No. 10, No. 21, No. 22, No. 24, No. 29, No. 36, No. 39, and No. 40) of the study area having low park bicycling accessibility, although these block groups have high older adults' concentration. Also, there are eight block groups (Block Group No. 1, No. 2, No. 7, No. 13, No. 14, No. 15, No. 19, and No. 31) of the study area having low older adults' concentration, although these block groups have high park bicycling accessibility.

4.3.4 Summary

In this paper, the three urban public parks' green transportation accessibility evaluation scores of park walkability score, public transportation accessibility score, and bicycling accessibility score are 20 points respectively. In order to avoid deviating from the result of outliers, the 41 area ratios are divided by a median area ratio for each category, and a percentage value is obtained. For each category, the percentage value is more than 200% of the median as 20 points, the percentage value is less than 10% of the median as 0 points, and other percentage values range from 10% to 200% of the median as 1 to 19 points evenly distributed to obtain one of the three evaluation scores of the study area. Then, this paper summarizes the total green transportation accessibility scores of each block group (full score: 60) according to the scores of the three categories (Appendix Table-12). Additionally, the author used the natural break tool in ArcGIS to divide the total scores of these 41 block

groups into five categories - A, B, C, D, and E - to make a visual map on the Figure-30 below. From A to E, the total scores of the block groups gradually decrease.

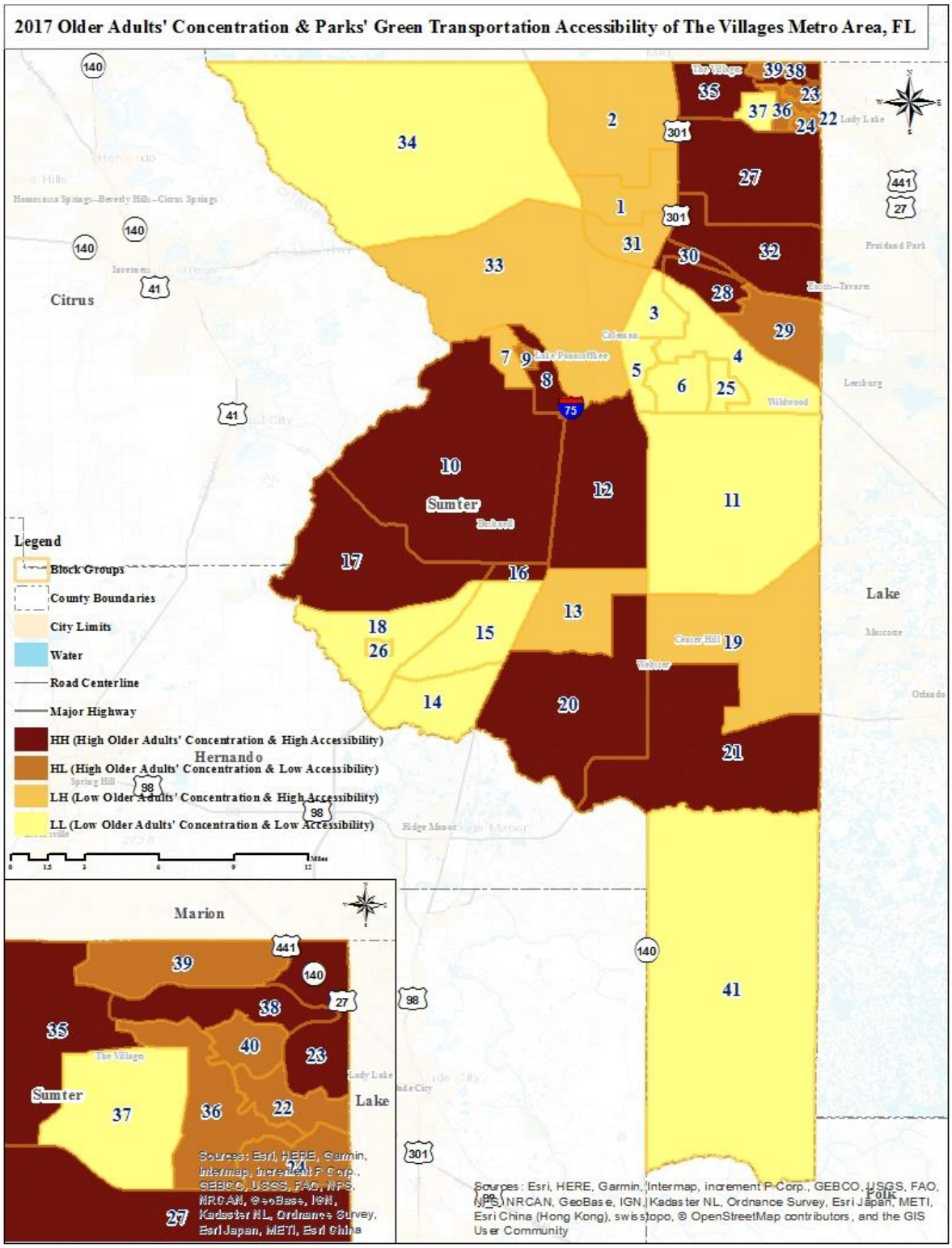
Figure-30 Urban Public Parks' Green Transportation Accessibility of Block Groups in The Villages Metro Area, FL



As can be seen from Figure-30 above, we can find that the areas with better park accessibility are mainly concentrated in the northeast and central parts of the study area. Among them, the eight block groups in the front row of the park accessibility are Block Group No. 12, No. 13, No. 16, No. 23, No. 31, No. 32, No. 35, and No. 39. However, the areas with lower park total accessibility scores were mainly in the northeast corner, east side, and southeast directions of the study area, especially in Block Group No. 4, No. 6, No. 25, No. 24, No. 36, No. 37, No. 40, and No. 41.

For older adults' concentration and urban public parks' green transportation accessibility of the study area, the author using the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' green transportation accessibility total score data (Appendix Table-12) to create a visual map on Figure-31 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' green transportation accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-31 below showed the matching between older adults' concentration and urban public parks' green transportation accessibility of the study region.

Figure-31 Older Adults' Concentration & Urban Public Parks' Green Transportation Accessibility of Block Groups in The Villages Metro Area, FL

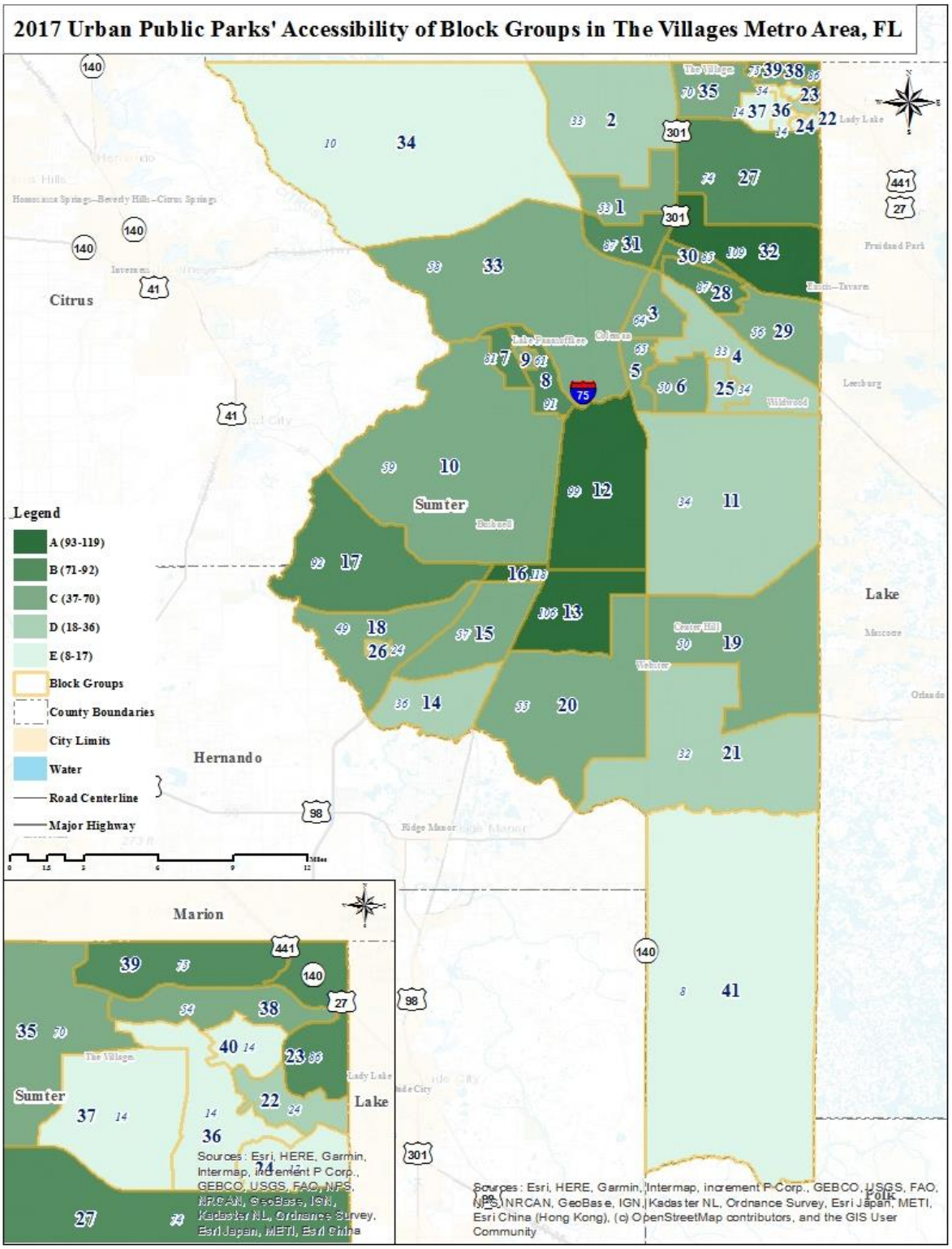


According to Figure-31 above, we can find that the matching situation of older adults' concentration and urban public parks' green transportation accessibility in the study area is scattered and relatively good. Generally speaking, 27 block groups are having relatively good matching with older adults' concentration and park green transportation accessibility, while there are 14 block groups not having good matching with older adults' concentration and park green transportation accessibility. Among them, there are 14 block groups (Block Group No. 8, No. 10, No. 12, No. 16, No. 17, No. 20, No. 21, No. 23, No. 27, No. 28, No. 30, No. 32, No. 35, and No. 38) of the study area have relatively good matching with high older adults' concentration and high park green transportation accessibility. Besides, there are 13 block groups (Block Group No. 3, No. 4, No. 5, No. 6, No. 11, No. 14, No. 15, No. 18, No. 25, No. 26, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park green transportation accessibility. However, there are seven block groups (Block Group No. 9, No. 22, No. 24, No. 29, No. 36, No. 39, and No. 40) of the study area having low park green transportation accessibility, although these block groups have high older adults' concentration. Besides, there are seven block groups (Block Group No. 1, No. 2, No. 7, No. 13, No. 19, No. 31, and No. 33) of the study area having low older adults' concentration, although these block groups have high park green transportation accessibility.

4.4 Total Accessibility

When it comes to the total urban public parks' accessibility of the study area, the two urban public parks' accessibility evaluation scores of park service accessibility score and green transportation accessibility score are 60 points respectively in this paper. This paper summarizes the total accessibility scores of each block group (full score: 120) according to the scores of the two categories (Appendix Table-13). Additionally, the author used the natural break tool in ArcGIS to divide the total scores of these 41 block groups into five categories - A, B, C, D, and E - to make a visual map on the Figure-32 below. From A to E, the total scores of the block groups gradually decrease.

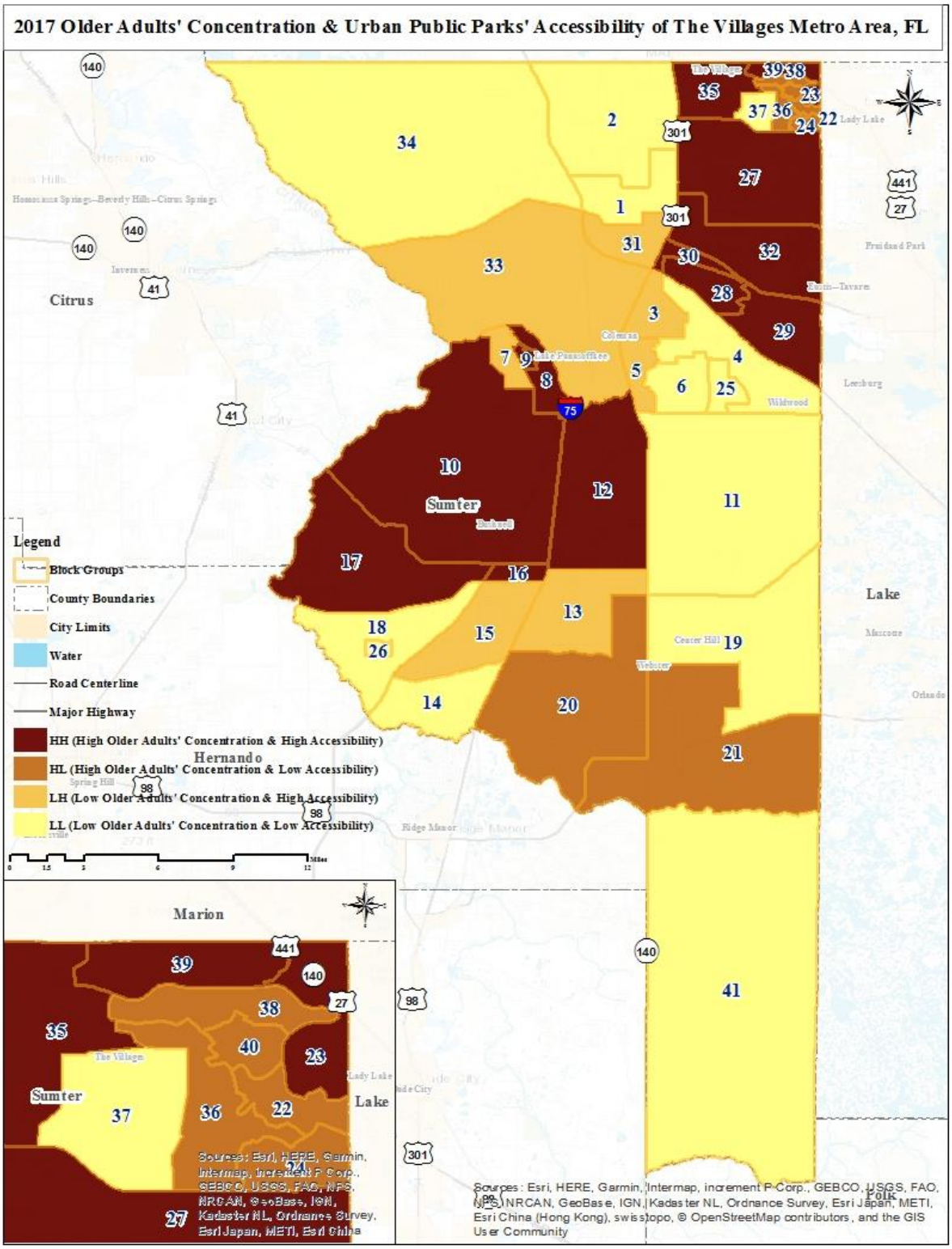
Figure-32 Urban Public Parks' Accessibility of Block Groups in The Villages Metro Area, FL



As can be seen from Figure-32 above, we can find that the areas with better park accessibility are mainly concentrated in the northeast, central, and southwest corner of the study area. Among them, the block groups in the front row of the park accessibility are Block Group No. 12, No. 13, No. 16, No. 23, No. 27, No. 32, and No. 39. However, the areas with lower park total accessibility scores were mainly in the northeast, northwest, and southeast directions of the study area, especially in Block Group No. 24, No. 34, No. 36, No. 37, No. 40, and No. 41.

For older adults' concentration and urban public parks' accessibility of the study area, the author used the total population of older adults (65+) data (Appendix Table-3) and the urban public parks' accessibility total score data (Appendix Table-13) to create a visual map on Figure-33 below. For older adults' concentration, the top 50% block groups (21 block groups) with the high population of older adults (65+) is high older adults' concentration, and the last 50% (20 block groups) is low older adults' concentration in this paper. For urban public parks' accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-33 below showed the matching between older adults' concentration and urban public parks' accessibility of the study region.

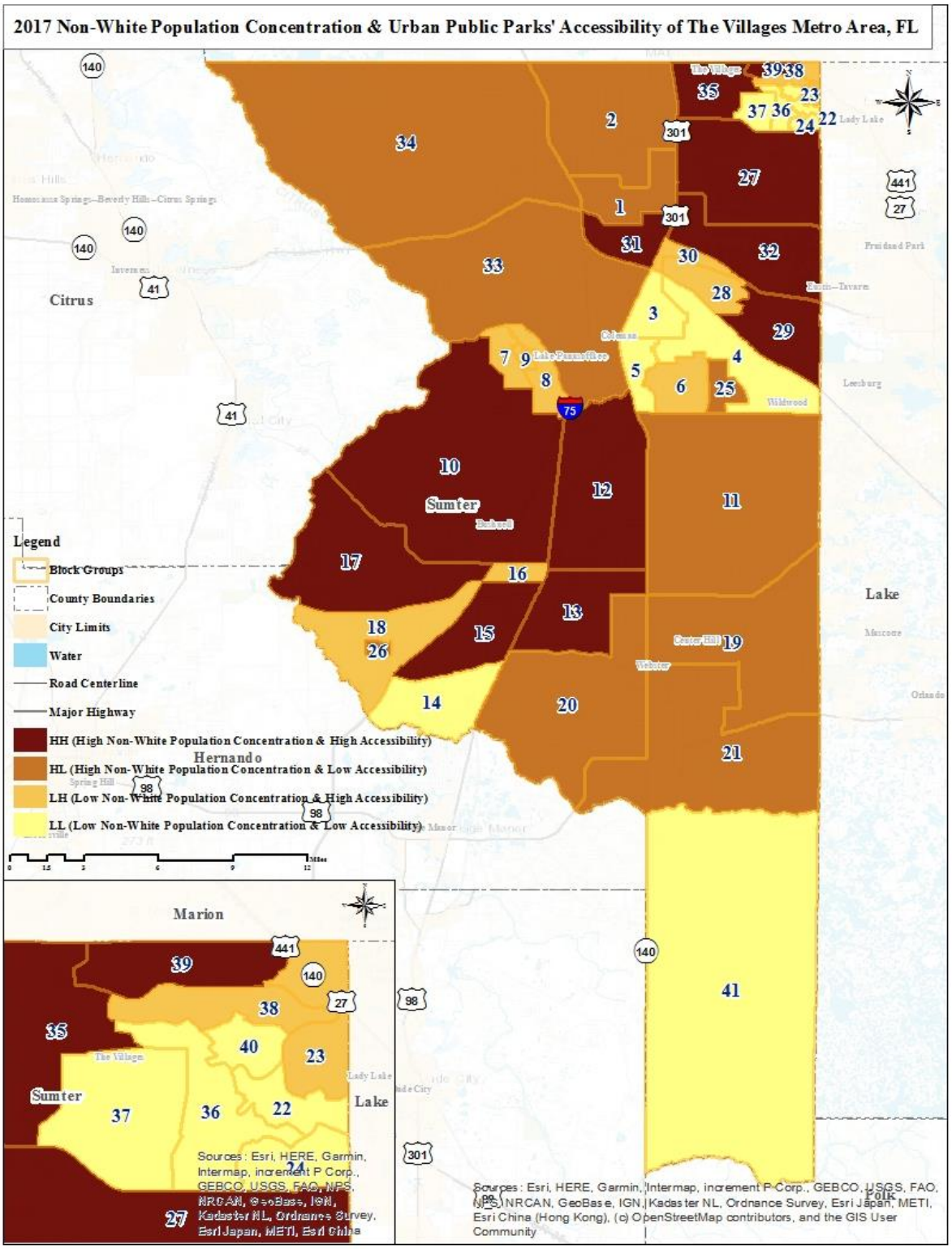
Figure-33 Older Adults' Concentration and Urban Public Parks' Accessibility Match of Block Groups in The Villages Metro Area, FL



According to Figure-33 above, we can find that the matching situation of older adults' concentration and urban public parks' accessibility in the study area is scattered and relatively good. Generally speaking, 27 block groups are having relatively good matching with older adults' concentration and park accessibility, while there are 14 block groups not having good matching with older adults' concentration and park accessibility. Among them, there are 14 block groups (Block Group No. 8, No. 9, No. 10, No. 12, No. 16, No. 17, No. 23, No. 27, No. 28, No. 29, No. 30, No. 32, No. 35, and No. 39) of the study area have relatively good matching with high older adults' concentration and high park accessibility. Besides, there are 13 block groups (Block Group No. 1, No. 2, No. 4, No. 6, No. 11, No. 14, No. 18, No. 19, No. 25, No. 26, No. 34, No. 37, and No. 41) of the study area also having relatively good matching with low older adults' concentration and low park accessibility. However, there are seven block groups (Block Group No. 20, No. 21, No. 22, No. 24, No. 36, No. 38, and No. 40) of the study area having low park accessibility, although these block groups have high older adults' concentration. Also, there are seven block groups (Block Group No. 3, No. 5, No. 7, No. 13, No. 15, No. 31, and No. 33) of the study area having low older adults' concentration, although these block groups have high park accessibility.

For non-white population's concentration and urban public parks' accessibility of the study area, the author used the total population of non-white population data (Appendix Table-17) and the urban public parks' accessibility total score data (Appendix Table-13) to create a visual map on Figure-34 below. For non-white population's concentration, the top 50% block groups (21 block groups) with the high non-white population is high non-white population's concentration, and the last 50% (20 block groups) is low non-white population's concentration in this paper. For urban public parks' accessibility, the first 50% block groups (21 block groups) of the study area with high park accessibility score are set to high park accessibility, and the last 50% block groups (20 block groups) of the study area are set to low park accessibility. The Figure-34 below showed the matching between the non-white population's concentration and urban public parks' accessibility of the study region.

Figure-34 Non-White Population's Concentration and Urban Public Parks' Accessibility Match of Block Groups in The Villages Metro Area, FL



According to Figure-34 above, we can find that the matching situation of non-white population's concentration and urban public parks' accessibility in the study area is scattered and relatively not good. Generally speaking, 21 block groups are having relatively good matching with non-white population's concentration and park accessibility, while there are 20 block groups not having good matching with non-white population's concentration and park accessibility. Among them, there are eleven block groups (Block Group No. 10, No. 12, No. 13, No. 15, No. 17, No. 27, No. 29, No. 31, No. 32, No. 35, and No. 39) of the study area have relatively good matching with high non-white population's concentration and high park accessibility. Besides, there are ten block groups (Block Group No. 3, No. 4, No. 5, No. 14, No. 22, No. 24, No. 36, No. 37, No. 40, and No. 41) of the study area also having relatively good matching with low non-white population's concentration and low park accessibility. However, there are ten block groups (Block Group No. 1, No. 2, No. 11, No. 19, No. 20, No. 21, No. 25, No. 26, No. 33, and No. 34) of the study area having low park accessibility, although these block groups have high non-white population's concentration. Also, there are ten block groups (Block Group No. 6, No. 7, No. 8, No. 9, No. 16, No. 18, No. 23, No. 28, No. 30, and No. 38) of the study area having low non-white population's concentration, although these block groups have high park accessibility. It is worth noting that Block Group No. 2 and No. 25, especially Block Group No. 25, have the largest non-white populations in the region without good park accessibility.

5. Discussion

Generally speaking, the results of this study show that the accessibility level of urban public parks in the study area is generally poor, only one third of the block groups have relevantly good accessibility degree; the matching situation of older adults' concentration and urban public parks' accessibility in the study area is scattered, and relatively good, about two-thirds block groups have relatively good matching with older adults' concentration and urban public park accessibility.

Based on the results obtained above, it is not difficult to find that older adults' concentration and urban public park accessibility are matched in most areas (27 block groups) within the study area. However, Block Group No. 22, No. 24, No. 36, No. 38, and No. 40 in the northeast corner of the study area and No. 20 and No. 21 in the south have high older adults' concentration and low urban public park accessibility. Among them, Block Group No. 22, No. 24, No. 36, No. 38, and No. 40 in the northeast corner of the study area are high urbanization areas, which indicates that these areas have been intensively utilized in recent years due to land intensive use. There are few urban public parks and fewer bus routes, so there is a shortage of urban public parks. In the case of Block Group No. 20 and No. 21 in the southern part of the study area, there are fewer parks, less transportation, and fewer roads. Therefore, although these areas are widespread, due to the low urbanization process and the lack of affluence in the region, the supply of urban public parks is in short supply.

In addition, Block Group No. 13, No. 15, and No. 18 in the southwestern part of the study area and Block Group No. 3, No. 5 ,No. 7, No. 31, and No. 33 in the middle of the study area have a high urban public park accessibility with low older adults' concentration. Among them, although Block Group No. 7 and No. 31 have a small population in the region, the urbanization process is high, and the traffic is developed (especially Block Group No. 31). The service coverage of the nearby public parks is good, and the facilities inside the park are also excellent. The result leads to a situation of oversupply. The accessibility and public transport accessibility of urban public parks near Block Group No. 13, No. 15, and No. 18 in the southwest and Block Group No. 3, No. 5, and No. 33 in the middle are relatively good, so there is an oversupply situation.

5.1 Urban Public Parks' Service Accessibility

There are more than 43 urban public parks in the study area, but the rest of them are being renovated and not open to the public in 2017. Also, the state government has given the study area a lot of budget support (Brown, 2016). The fact shows that the state and local governments attach importance to the urban public parks in the study area.

In addition, the research area is good at using the network to propagate itself, positively promotes itself through online videos, and is known by more and more older people through strategic marketing (Parrish, 2014). From the local official website (Thevillages.com, 2016; Board of Sumter County Commissioners, 2019) and propaganda copy (Flick, 2015; Vaamonde, 2019), it is found that squares, parks, entertainment, and recreation centers are the main propaganda content and are often mentioned. Besides, the study area is rich in entertainment activities. For example, The Villages provides many entertainment activities and gathers more than 50 entertainment clubs at any time. It is considered "adult Disney World" (Leins, 2017).

5.2 Urban Public Parks' Green Transportation Accessibility

When it comes to means of transportation that older adults of The Villages Metro Area, FL chose, it can be seen that older adults in the study region have chosen motorcycle, bicycle, or other means as their work mode of travel from 2010 to 2017, compared to other age groups in the region (Table-4). Also, the older adults in the region from 2010 to 2014 chose to walk more than the other age groups in the region (Table-4). Besides, older adults in the 2010 and 2011 regions have chosen more public transportation than other age groups in the region (Table-4).

Table-4 2010-2017 Means of Transportation to Work of The Villages Metro Area, FL

Year	Total		Car, truck, or van - drove alone		Car, truck, or van - carpooled		Public transportation		Walked		Motorcycle, bicycle, or other means		Worked at home	
	Total	≥ 65	Total	≥ 65	Total	≥ 65	Total	≥ 65	Total	≥ 65	Total	≥ 65	Total	≥ 65
2010	20879	2957	15959	2017	2251	169	79	22	241	111	903	269	1446	369
2011	2084C6	3082	15204	1749	2288	233	140	22	346	151	1161	393	1707	534

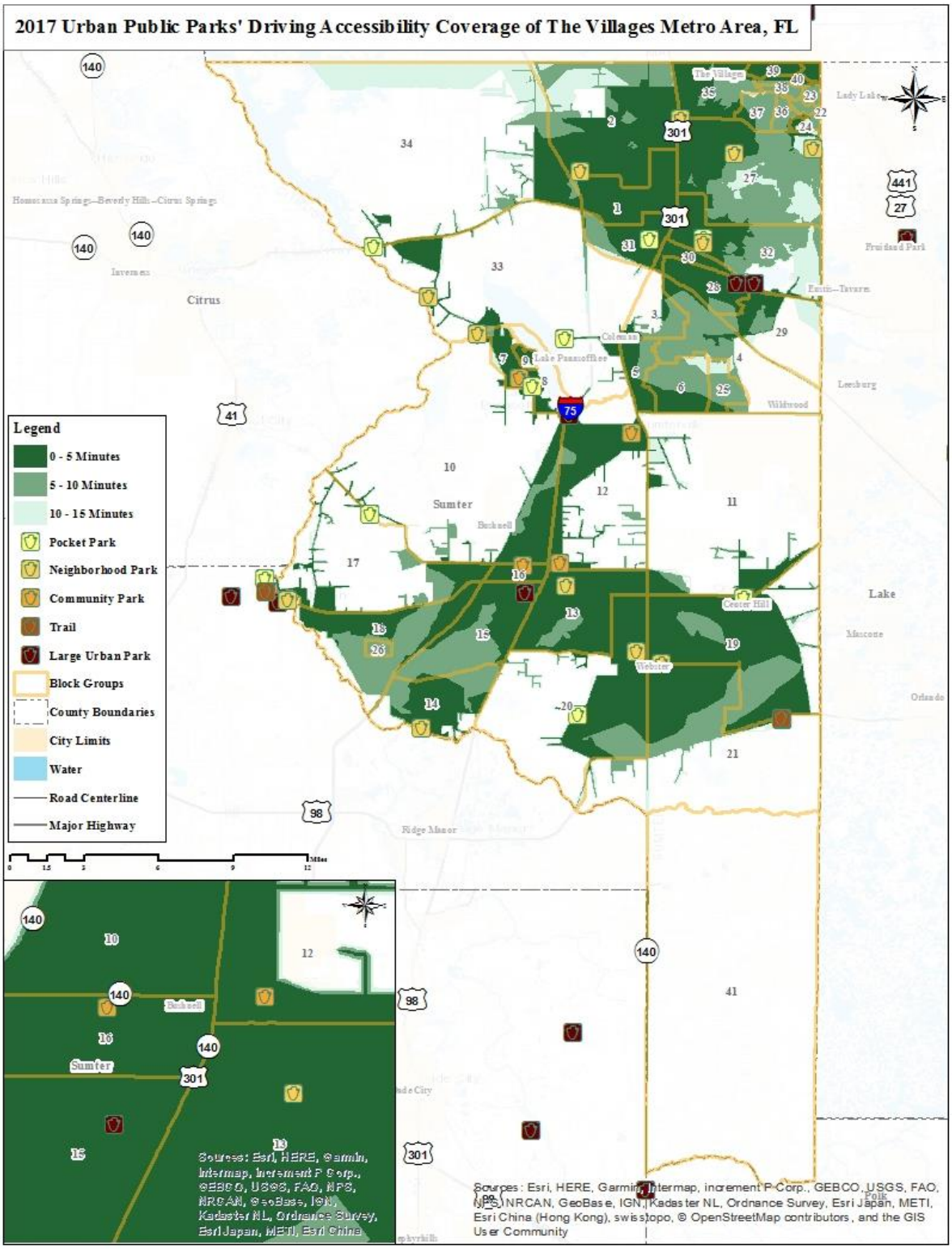
2012	20882	3122	15257	1691	1948	219	198	18	341	138	1332	502	1806	554
2013	20170	3161	15040	1654	1755	224	178	15	309	82	1197	533	1691	653
2014	21034	3809	15718	2132	1726	217	177	17	322	91	1413	630	1678	722
2015	21514	3874	16269	2268	1558	190	132	0	286	46	1451	601	1818	769
2016	22115	4094	16825	2617	1332	135	101	0	191	15	1688	672	1978	655
2017	22900	4220	17354	2556	1395	135	60	0	201	14	1587	712	2303	803

Data Source: 2006-2010 ACS 5-Year Estimates, 2007-2011 ACS 5-Year Estimates, 2008-2012 ACS 5-Year Estimates, 2009-2013 ACS 5-Year Estimates, 2010-2014 ACS 5-Year Estimates, 2011-2015 ACS 5-Year Estimates, 2012-2016 ACS 5-Year Estimates, 2013-2017 ACS 5-Year Estimates.

From Table-4 above, in addition, the age of older adults in the region between 2010 and 2017, the choice of walking and public transportation for work travel has decreased drastically, and the choice of motorcycle, bicycle, or other means has increased dramatically. Also, although the motor vehicle is the primary mode of work for the elderly population in the region, the proportion of the elderly population who chooses Car, truck, or van has also dropped slightly (10%), from about 74% in 2010 to 64% in 2017.

This article takes three limited periods of driving time (5 minutes, 10 minutes, and 15 minutes) of older adults to the parks and creates a network analysis map showing the driving accessibility coverage in the study area, as shown in Figure-35 below to compare with the three kind of green transportation accessibility coverage status in the study region (Table-5).

Figure-35 Urban Public Parks' Driving Accessibility Coverage of The Villages Metro Area, FL



Generally speaking, as can be seen from Figure-35 above, the driving accessibility coverage of urban public parks serving The Villages Metro Area is 376.08 mi^2 in the study area, accounting for about 64.8% of the total area of the study area. More specifictly, the service area with excellent accessibility (consumption time: 0-5 minutes) is 138.20 mi^2, accounting for 23.8% of the total area of the study area. The service area with general accessibility (consumption time: 5-10 minutes) is 204.33 mi^2, accounting for 35.2% of the total area of the study area. The service area with poor accessibility (consumption time: 10-15 minutes) is 33.55 mi^2, accounting for 5.8% of the total area of the study area. It also shows that the traffic condition in the middle and northeast of the study area is relatively good than other parts of the study area.

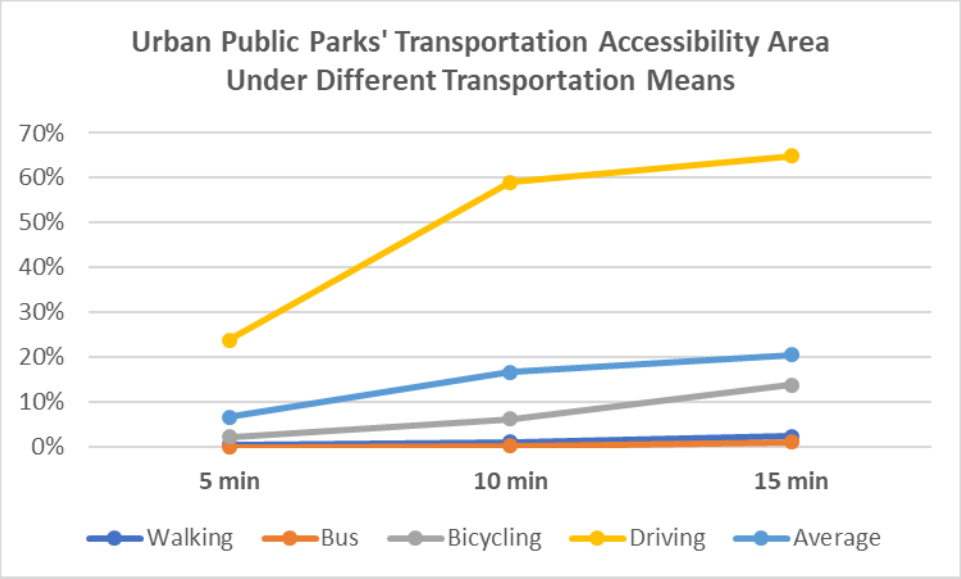
As can be seen from Table-5 and Figure-36 below, the driving accessibility of the study area is the best, far superior to the three common green transportation modes (walking, public transportation, and bicycling) in the study area.

Table-5 Urban Public Parks' Accessible Area Ratio Under Four Means of Transportation in The Villages Metro Area, FL

Means of Transportation	0-5 min	5-10 min	10-15 min	Total
Walking	**0.6%**	**0.6%**	**1.2%**	**2.3%**
Public Transportation	**0.1%**	**0.2%**	**0.8%**	**1.0%**
Bicycling	**2.2%**	**4.0%**	**7.5%**	**13.8%**
Driving	**23.8%**	**35.2%**	**5.8%**	**64.8%**
Average	**6.7%**	**10.0%**	**3.8%**	**20.5%**

Also, urban public parks' bicycling accessibility in the study area is significantly better than walkability and public transportation accessibility. Besides, urban public parks' walkability is better than public transportation accessibility in the study area.

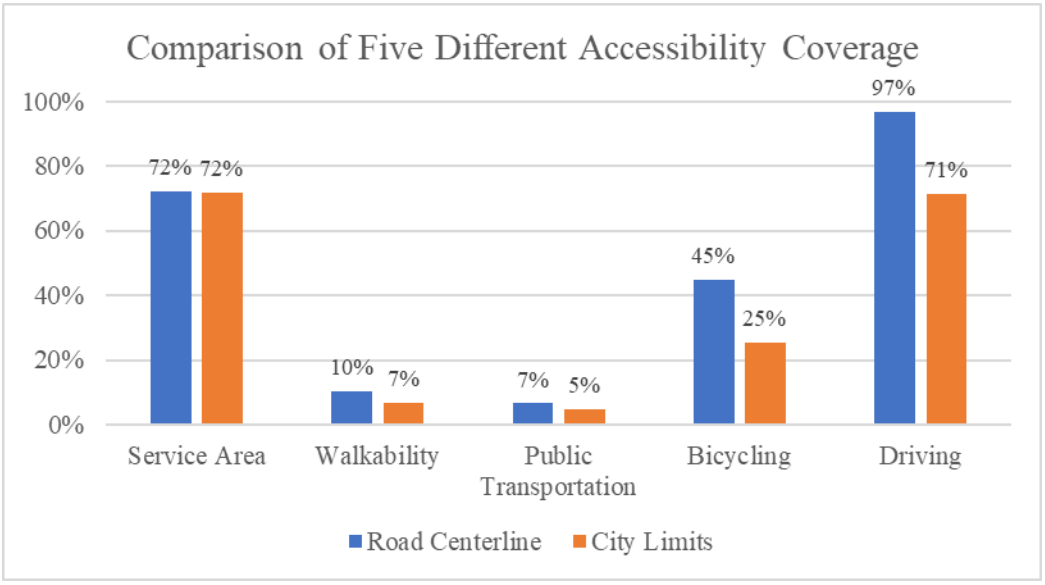
Figure-36 Urban Public Parks' Accessible Area Ratio Under Four Means of Transportation in The Villages Metro Area, FL



The result also explains why in the choice of green transportation modes from 2014 to 2017 (Table-4), public transportation has almost no choice for older adults, the choice rate of walking is also declining, and the choice rate of bicycles has increased.

Additionally, although there are only two bus routes in the area, all bus stops are within the service scope of urban public parks. The result shows that the combination of theory and reality is relatively good, considering the accessibility of urban public parks at the beginning of the design of the two bus routes.

Figure-37 Comparison of Five Different Park Accessibility Coverage Ratio in The Villages Metro Area, FL

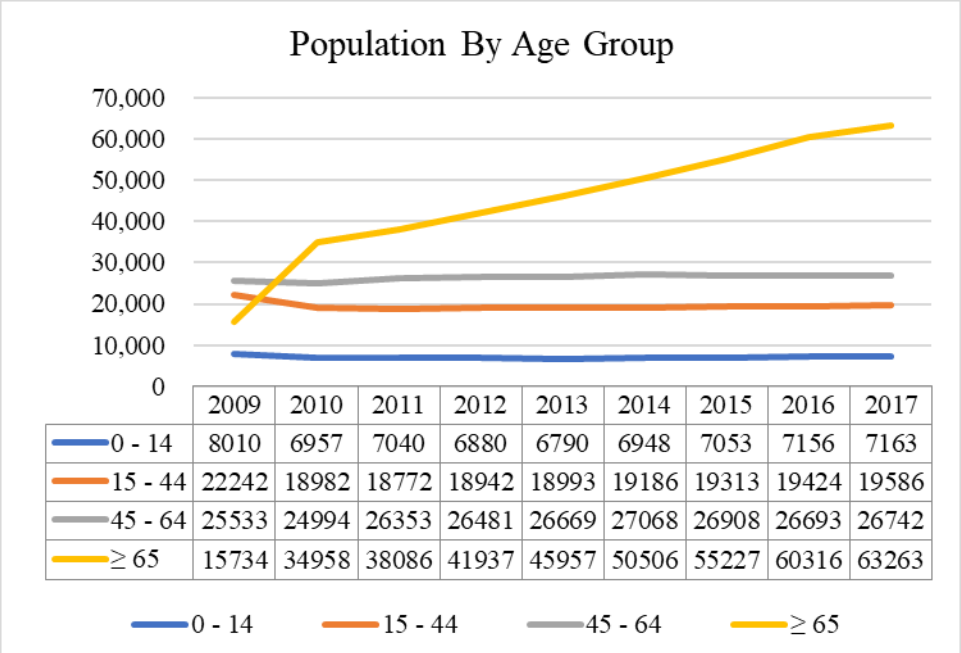


Generally speaking, when we put the five different park accessibility coverage ratio together and make the table (Figure-37) above, we can find that: the green transportation accessibility in the research area is generally poor. The road coverage ratio of driving accessibility (97%) in the study area even exceeded the road coverage ratio of the service area accessibility (72%), which is about to cover all roads in the study area.

5.3 Demographic Change

GIS-based accessibility research, from the perspective of the relationship between parks and older adults, can better evaluate the spatial distribution of urban parks and is the primary means to evaluate the rationality of the spatial distribution of urban parks and the fairness of services. In retrospect, when we put people first, it is not difficult to find some mismatches in the accessibility of urban public parks in the study area, which may also be related to local population changes and distribution.

Figure-38 2009-2017 Population by Age Groups in The Villages Metro Area, FL

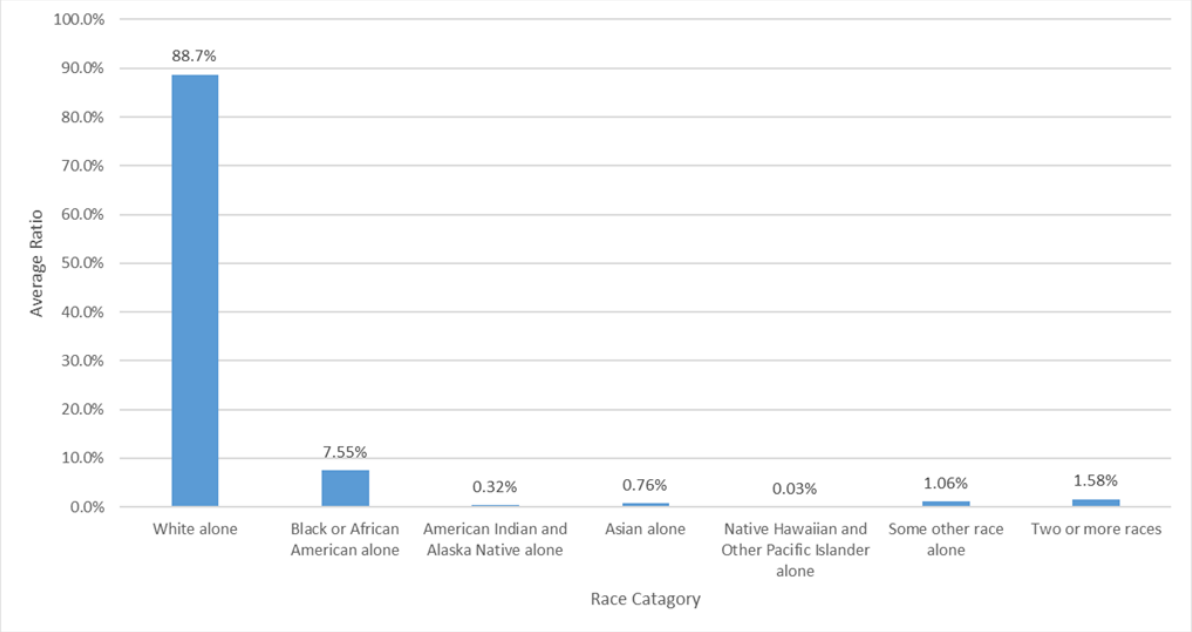


	2009	2010	2011	2012	2013	2014	2015	2016	2017
0 - 14	8010	6957	7040	6880	6790	6948	7053	7156	7163
15 - 44	22242	18982	18772	18942	18993	19186	19313	19424	19586
45 - 64	25533	24994	26353	26481	26669	27068	26908	26693	26742
≥ 65	15734	34958	38086	41937	45957	50506	55227	60316	63263

Data Source: 2005-2009 ACS 5-Year Estimates, 2006-2010 ACS 5-Year Estimates, 2007-2011 ACS 5-Year Estimates, 2008-2012 ACS 5-Year Estimates, 2009-2013 ACS 5-Year Estimates, 2010-2014 ACS 5-Year Estimates, 2011-2015 ACS 5-Year Estimates, 2012-2016 ACS 5-Year Estimates, 2013-2017 ACS 5-Year Estimates.

As can be seen from the figure (Figure-38) above, from 2009 to 2017, the number of older adults in the study area continued to increase, accounting for an increasing proportion significantly. By comparison, there was no significant increase in the number of people in other age groups between 2009 and 2017 (there was no significant change in the overall trend). Notably, this change led to a sustained increase in the median age and age dependency ratio, particularly for the old- age dependency ratio, in the study area over the past eight years.

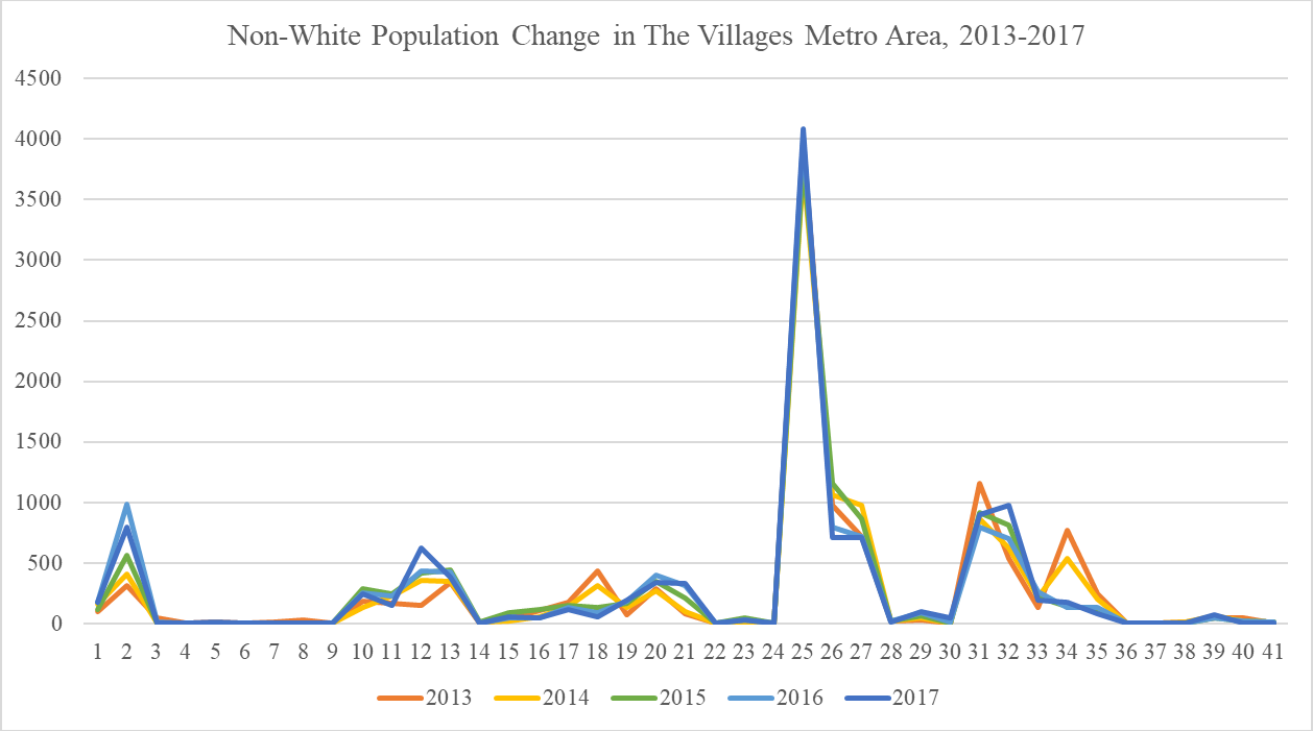
Figure-39 Current Race Proportion in The Villages Metropolitan Area, FL



Data Source: 2017 ACS 5-Year Estimates.

From the figure (Figure-39) above, it can be found that the race in the study area is dominated by "White alone" (88.7%). "Black or African American alone" accounts for only 7.55% of the local population, while each other races account for less than 2%.

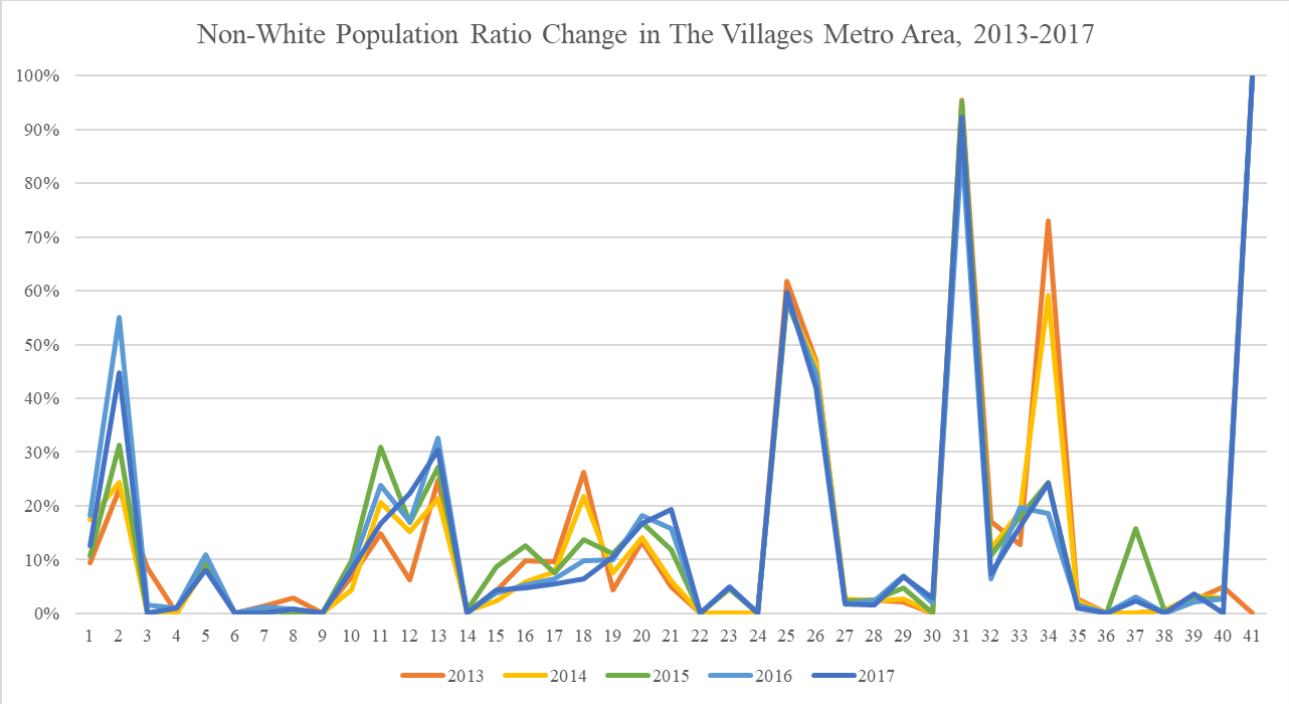
Figure-40 2013-2017 Non-White Population in The Villages Metro Area, FL



Data Source: 2009-2013 ACS 5-Year Estimates, 2010-2014 ACS 5-Year Estimates, 2011-2015 ACS 5-Year Estimates, 2012-2016 ACS 5-Year Estimates, 2013-2017 ACS 5-Year Estimates.

The figure above (Figure-40) and the figure below (Figure-41) respectively show the non-white population and its percentage of all 41 block groups in the study area from 2013 to 2017.

Figure-41 2013-2017 Non-White Population Ratio in The Villages Metro Area, FL



Data Source: 2009-2013 ACS 5-Year Estimates, 2010-2014 ACS 5-Year Estimates, 2011-2015 ACS 5-Year Estimates, 2012-2016 ACS 5-Year Estimates, 2013-2017 ACS 5-Year Estimates.

Combined with the figure above (Figure-40 & Figure-41) and Figure-34 (p. 91), it can be found that block groups with significantly increased non-white population (3 block groups in total, respectively Block Group No. 2, No. 12, and No. 21) have poor accessibility to urban public parks, such as Block Group No. 2 and No. 21. Block groups with a significantly reduced non-white population (6 block groups in total, respectively Block Group No. 18, No. 26, No. 27, No. 31, No. 34, and No. 35) have better accessibility to urban public parks, such as Block Group No. 18, No. 27, No. 31, and No. 35. Block groups with a significantly increased non-white population (9 block groups in total, respectively Block Group No. 1, No. 2, No. 11, No. 13, No. 23, No. 29, No. 30, No. 33, and No. 41) have poor accessibility to urban public parks, such as Block Group No. 1, No. 2, No. 11, No. 33, and No. 41.

For those who live in which there is not any age limit or cannot afford to live in communities like The Villages, the most significant difference should be the focus of local policies compared with the study area in this research. For example, the development policy of Richmond, VA in recent years is shown to have promoted local economic growth by encouraging young people's immigration, reducing the dependency ratio, and reducing the

support burden of the young labor force through youth-friendly planning interventions (Table-6).

Table-6 Main Demographic Change from 2009 to 2016 around Monroe Park in Richmond, VA

Total population Change from 2009 to 2016 around Monroe Park in Richmond, VA										
District	GEO ID	Geography	2009	2010	2011	2012	2013	2014	2015	2016
Monroe Ward	1400000US51760030500	Census Tract 305, Richmond city, Virginia	2311	3272	3300	3331	3295	2798	3362	3633
VCU	1400000US51760040300	Census Tract 403, Richmond city, Virginia	3016	3309	3158	3499	3509	3977	3674	3848
Oregon Hill	1400000US51760041200	Census Tract 412, Richmond city, Virginia	3119	1187	1170	1273	1309	1304	1287	1380

Median age Change from 2009 to 2016 around Monroe Park in Richmond, VA										
District	GEO ID	Geography	2009	2010	2011	2012	2013	2014	2015	2016
Monroe Ward	1400000US51760030500	Census Tract 305, Richmond city, Virginia	29	24.1	25	25.1	25.2	26	26.3	26.6
VCU	1400000US51760040300	Census Tract 403, Richmond city, Virginia	31	19.1	19.3	19.1	19.2	19.3	19.3	19.2
Oregon Hill	1400000US51760041200	Census Tract 412, Richmond city, Virginia	35.1	23.7	23.2	24.2	24.5	26.3	27	27.4

Sex ratio (males per 100 females) from 2009 to 2016 around Monroe Park in Richmond, VA										
District	GEO ID	Geography	2009	2010	2011	2012	2013	2014	2015	2016
Monroe Ward	1400000US51760030500	Census Tract 305, Richmond city, Virginia	23.9	128	125	107	108	94.7	97.8	118
VCU	1400000US51760040300	Census Tract 403, Richmond city, Virginia	22.6	48.9	76.7	82	80.7	83.4	80	78.4
Oregon Hill	1400000US51760041200	Census Tract 412, Richmond city, Virginia	19.4	107	86.9	90.9	88.1	89.8	101	116

Age dependency ratio from 2009 to 2016 around Monroe Park in Richmond, VA										
District	GEO ID	Geography	2009	2010	2011	2012	2013	2014	2015	2016
Monroe Ward	1400000US51760030500	Census Tract 305, Richmond city, Virginia	23.8	8.4	11.3	9	9.5	9	6.1	6.1
VCU	1400000US51760040300	Census Tract 403, Richmond city, Virginia	30.1	3.1	2.6	2	3.1	2.6	2.7	2.6
Oregon Hill	1400000US51760041200	Census Tract 412, Richmond city, Virginia	71.5	6.4	7.6	7.3	6.6	6.4	4.7	8

Old-age dependency ratio from 2009 to 2016 around Monroe Park in Richmond, VA										
District	GEO ID	Geography	2009	2010	2011	2012	2013	2014	2015	2016
Monroe Ward	1400000US51760030500	Census Tract 305, Richmond city, Virginia	10.2	1.7	4.7	4.5	4.4	6	5.2	5.6
VCU	1400000US51760040300	Census Tract 403, Richmond city, Virginia	22.3	1.7	0.5	0.4	0.9	1.2	1.6	1.5
Oregon Hill	1400000US51760041200	Census Tract 412, Richmond city, Virginia	31.3	2.7	4	3.5	2.8	2.4	1.5	3.7

Child dependency ratio from 2009 to 2016 around Monroe Park in Richmond, VA										
District	GEO ID	Geography	2009	2010	2011	2012	2013	2014	2015	2016
Monroe Ward	1400000US51760030500	Census Tract 305, Richmond city, Virginia	13.6	6.7	6.6	4.5	5.1	3	0.9	0.5
VCU	1400000US51760040300	Census Tract 403, Richmond city, Virginia	7.7	1.5	2.1	1.5	2.2	1.4	1.1	1.1
Oregon Hill	1400000US51760041200	Census Tract 412, Richmond city, Virginia	40.2	3.7	3.7	3.8	3.8	4	3.2	4.3

Data Source: U.S. Census Bureau, 2006-2010 ACS 5-Year Estimates, 2007-2011 ACS 5-Year Estimates, 2008-2012 ACS 5-Year Estimates, 2009-2013 ACS 5-Year Estimates, 2010-2014 ACS 5-Year Estimates, 2011-2015 ACS 5-Year Estimates, 2012-2016 ACS 5-Year Estimates.

It is worth noting that before this change, one of the primary users of Monroe Park was the senior population, especially African Americans. Richmond's development policies and demographic data show that local government set the goal to balance the ratio of male and female, increase the young male labor force, and slow the aging of the local population through the youth-friendly planning intervention.

Therefore, for this kind of areas, the local government, and planners in planning urban public parks, can try to take the diversity of the park user groups into account. Without disturbing local development policies, the urban public parks to be built should be considered

in an all-round way (such as park location and service area, ADA compliance accessibility, recreational amenities, and transportation accessibility) to meet the diverse needs of different users of parks.

In fact, since 2009, the study area has been paying more and more attention to and working on the construction of public service facilities such as urban public parks. In 2009, the local government passed regulations (Board of Sumter County Commissioners, 2018) that cross service boundaries to serve older adults to a large extent better. Secondly, Board of Sumter County Commissioners (2018) believes that the research area should regularly review and update the local land development plan to mitigate the impact of new development on urban public lands such as parks. Besides, the Board of Sumter County Commissioners (2018) plans to add multiple green modes of transportation (such as walking and bicycling) to urban public parks.

These apply to other regions facing an aging society. As more residents become aware of the increasing issues of population aging and urbanization, implementation methods or planning guidelines will follow.

6. Recommendations

In general, there are several policy recommendations for improving the accessibility of local urban public parks. The three most important points are: first of all, the urban public park to considering the natural resources of the candidate area in the site selection process can also be considered in combination with the location of the park and the scope of services to serve old adults better. Secondly, the existing urban public parks in the region can enhance the construction of common facilities and the development of more distinctive recreational amenities. Finally, the bus system in the area needs to be upgraded, both the increase in the bus routes and the increase in the length of service. More detailed recommendations are as follows:

6.1 Balancing the Distribution of Urban Public Parks

Firstly, the layout of the entrances of urban public parks should be balanced in order to improve the service accessibility of urban public parks. From Figure-9, we can see that the distribution of urban public parks in the study area is not balanced. For the entire region, the service area of urban public parks that have been built and opened to the public is less than 50% of the entire area. As a result, older adults in the northwest corner and southeast direction of the study area (especially Block Group No. 20 and No. 21) will have fewer opportunities to enjoy the services of urban public parks than those living near urban public parks. This is not conducive to the uniform development of urban public park service accessibility spacially. Therefore, in order to improve the overall accessibility area of urban public parks in the study area, park entrances can be added appropriately near the northwest corner and southeast direction of the study area. Improving existing parks and add new parks are both important; only then the study area can shape a win-win situation.

Secondly, urban public parks need to be added appropriately to achieve full coverage of green transportation accessibility. From Figure-21, Figure-24, and Figure-27, it can be seen that the green transportation accessibility of urban public parks in the study area is very low, and the coverage area is tiny. Therefore, the study area can add parks to meet the equity of park service and eliminate blind service areas in regions where the services of urban public parks are relatively weak, but older adults are relatively concentrated (such as Block Group NO. 22, No. 24, No. 36, No. 38, and No. 40 in the northeastern corner of the study area).

Because of the high urbanization, dense population, and less non-construction land in this part of block groups, smaller pocket parks and neighborhood parks can be added to these block groups as the first step, or larger urban public parks or trails with more flexible entrances can be added to the regions with a relatively small population and low urbanization (e.g., Block Group No. 37) near these block groups.

Thirdly, the provision of park service facilities needs to be strengthened to optimize the service accessibility of urban public parks in an all-around way. From Appendix Table-14, Appendix Table-15, and Appendix Table-16, we can find that even for the most common facility-picnic area, only 34 of the 43 target parks provide this service. The result shows that there is still much room for improvement in park service facilities in the study area. Therefore, the urban public parks in the service research area can reexamine the common facilities provided by themselves and supplement them as much as possible. Besides, for recreational amenities, the urban public parks in the service research area can be improved and optimized as appropriate to provide more colorful recreational amenities and activities for the local older adults.

More specifically, strengthening the identity of urban public service facilities (not just urban public parks) for older adults. This suggestion applies not only to the research area of this article but also to other places where age-friendly society is to be built. A prime example is the Intergenerational Park in Oregon (Age-Friendly Innovators, 2019) designed for different age groups. This intergenerational park is equipped with several age-friendly accessibility features, such as an ADA compliant bench, multiple height water dispenser, and a tai chi area (Age-Friendly Innovators, 2019). Besides, the local people can also make full use of the public open space such as the square as the entertainment place for older adults. If there is no existing park near the place where older adults live, the leisure life of older adults can be enriched by doing tai chi in the morning and square dancing in the evening. In addition, the local government can also organize non-profit organizations to care for the physical and mental health of older adults, through holding social dancing parties regularly, helping older adults to repair or tidy up their houses, and engaging older adults with memory impairment in social activities (such as serving in public welfare restaurants) or other activities that older adults can be engaged in. These are not entirely within the scope of urban

public park construction, but they all reach the same goal by different means. The above suggestions apply to age-friendly society to serve older adults better

6.2 Optimizing the Internal Road Network Structure

The public transportation accessibility of urban public parks is poor. Besides, there are more broken roads, and the road network in the southeast is sparse. Also, there are fewer bus routes in the region, especially when compared to Lake County. Moreover, the running time of the bus routes in the area is too short to be convenient for the people. The serving time also explains why older adult over the age of 65 in the study area in recent years is almost not considering walking and taking buses when choosing a travel vehicle (Table-4) but is increasingly considering driving. These are several policy recommendations for improving the transportation accessibility of urban public parks in the study area.

Firstly, the blank road network and should be improved and the broken roads should be connected. According to Figure-20, the existing road classes in the study area are adequate, but the roads are scattered, and there are a lot of blank road networks and broken roads. Therefore, the study area can strengthen the transportation accessibility of urban public parks by incorporating the underlying roads into municipal management, connecting broken roads and forming ring roads to reduce dead corners, and improving the blank road network in regions where older adults gather more, such as Block Group No. 27.

Secondly, urban roads are built on the non-street side of existing parks in order to add entrances. The ancients said that to get rich, we should build roads first. If we want to improve the accessibility of urban public parks within the study area, it is a faster way to build roads and increase the entrance of existing parks.

Thirdly, combining the demand of urban residents for green space with road class and means of transportation, the travel mechanism under different modes of transportation is established. The study area can establish an independent road grading system for pedestrian, public transportation, and bicycling to shorten the travel time of older adults. At the same time, the study area can provide more green travel space for older adults by adding slow lanes and recreational facilities along the road to form urban greenways to connect major urban public parks.

Fourth, to provide a variety of barrier-free facilities and available access, to increase the safety and convenience of older adults' traveling, but also to enhance the accessibility of urban public parks. For example, setting curves at road intersections, setting up bicycle lanes, low flooring of buses, providing ADA Compliance services for buses, etc. The design of bus accessibility facilities, more specifically, including bus stop accessibility design (for example, route map and braille board, platform without height difference with bus, wide enough waiting area and platform blind, smooth seats with backrest and sunshade), the barrier-free design of buses (such as landslide and folding chairs, ADA special seat and fixed non-slip belt, and emergency call button), and barrier-free design of roads (the road slopes down slightly at the junction with the bus station to facilitate boarding and the laying of a blind crossing).

Last but not least, optimize public transportation routes and services. According to Government Advocacy & Campaigns (2011), public transportation is particularly crucial for older adults to avoid social isolation and health problems. However, the public transportation accessibility of urban public parks in the study area is even lower than that of walkability. Therefore, public transportation routes and services in the study area need to be optimized urgently. There are two bus routes in the study area: Wildwood Circulator and Orange Shuttle, which operate only on Monday, Wednesday, and Friday (Sumter County Board of County Commissioners & Florida Department of Transportation, 2019). Wildwood Circulator in the north runs from 8:45 a.m. to 2:45 p.m. and Orange Shuttle in the middle runs from 7:45 a.m. to 3:30 p.m. (Sumter County Board of County Commissioners & Florida Department of Transportation, 2019). For senior residents, the daily cost is $0.25-$0.5; while for regular residents, the daily cost is $0.5 - $1 (Sumter County Board of County Commissioners & Florida Department of Transportation, 2019). For public transportation in the study area, suggestions are as follows. Adding bus routes and bus stops for the two existing bus routes, such as the densely populated northeastern corner; advocating residents to travel by public transportation in the study area, a certain degree of free mechanism can be implemented to encourage residents to choose buses as their significant means of travel; extending bus service, for example, increasing the number of service days; and setting up bus lanes to improve the public transportation accessibility within a specific time range, etc.

7. Limitation

Although the study area The Villages Metropolitan Area, FL in this research is a unique super-aging area, some findings or policy implications may not be available elsewhere. However, the research methodology in this paper applies to most areas that are in the process of urbanization and that want the public infrastructure to serve the local older adults better.

In addition, this research only considers walking, public transportation, and bicycling as the three conventional means of green transportation in the study area, without considering driving routes because of the trails of older adults (65+) disabilities (WHO, 2007) and the hidden benefits for older adults (Rissel et al, 2012) and the environment (Minnesota Pollution Control Agency, 2017) to choose green transportation. Besides, this paper does not consider the impact of spatial resistance on traffic accessibility in different periods and money cost. All these factors will affect the accessibility evaluation of urban public parks.

References:

Addison Park District, & Bonestroo. (2010, June). 2010 Park & Recreation Comprehensive Master Plan. Retrieved from https://addisonparks.org/wp-content/uploads/2017/02/0.-Cover-Executive-Summary.pdf

Age-Friendly Innovators. (2019). Intergenerational Park. Retrieved from http://agefriendlyinnovators.org/intergenerational-park/

Arjmand, R. (2017). *Public urban space, gender and segregation: Women-only urban parks in Iran* (Routledge studies in human geography; 65).

Barton-Aschman Associates, & Richmond. (1976). *Oregon Hill neighborhood planning study: Technical report*. Richmond, VA: Dept. of Planning and Community Development.

Bengston, D. N., Fletcher, J. O., & Nelson, K. C. (2004). Public policies for managing urban growth and protecting open space: Policy instruments and lessons learned in the United States. *Landscape and Urban Planning, 69*(2-3), 271-286. doi:10.1016/j.landurbplan.2003.08.007

Board of Sumter County Commissioners. (2018, October 14). Unified Sumter County/Center Hill/Coleman/Webster Comprehensive Plan. Retrieved from https://www.sumtercountyfl.gov/DocumentCenter/612

Board of Sumter County Commissioners. (2019). Cherry Lake Park. Retrieved from https://www.sumtercountyfl.gov/200/Cherry-Lake-Park

Board of Sumter County Commissioners. (2019). Cities & Communities of Sumter County. Retrieved from https://sumtercountyfl.gov/613/Sumter-County-Cities-Communities

Board of Sumter County Commissioners. (2019). Coleman Landing Boat Ramp. Retrieved from https://discoversumterfl.com/coleman-landing-boat-ramp/

Board of Sumter County Commissioners. (2019). Croom-A-Coochee Park. Retrieved from https://www.sumtercountyfl.gov/202/Croom-A-Coochee-Park

Board of Sumter County Commissioners. (2019). Lake Deaton Park. Retrieved from https://discoversumterfl.com/lake-deaton-park-2/

Board of Sumter County Commissioners. (2019). Lake Miona Park. Retrieved from https://www.sumtercountyfl.gov/204/Lake-Miona-Park

Board of Sumter County Commissioners. (2019). Lake Okahumpka Park. Retrieved from https://www.sumtercountyfl.gov/205/Lake-Okahumpka-Park

Board of Sumter County Commissioners. (2019). Lake Panasoffkee Recreation Park. Retrieved from https://www.sumtercountyfl.gov/Facilities/Facility/Details/Lake-Panasoffkee-Recreation-Park-13

Board of Sumter County Commissioners. (2019). Marsh Bend (Lake Pan) Outlet Park. Retrieved from https://discoversumterfl.com/marsh-bend-lake-pan-outlet-park/

Board of Sumter County Commissioners. (2019). Millenium Park & Community Center. Retrieved from https://discoversumterfl.com/millenium-park-community-center-2

Board of Sumter County Commissioners. (2019). Sumter County, Florida Downloadable Maps. Retrieved from https://www.sumtercountyfl.gov/238/Downloadable-Maps

Board of Sumter County Commissioners. (2019). Oxford Park. Retrieved from https://discoversumterfl.com/oxford-park-2/

Board of Sumter County Commissioners. (2019). Roy Bug Story Park. Retrieved from https://www.sumtercountyfl.gov/211/Roy-Bug-Story-Park

Board of Sumter County Commissioners. (2019). Royal Park. Retrieved from https://www.sumtercountyfl.gov/Facilities/Facility/Details/Royal-Park-10

Board of Sumter County Commissioners. (2019). Rutland Park. Retrieved from https://www.sumtercountyfl.gov/213/Rutland-Park

Board of Sumter County Commissioners. (2019). Shady Brook Greenway Park. Retrieved from https://discoversumterfl.com/shady-brook-greenway-park/

Board of Sumter County Commissioners. (2019). Van Fleet State Trail – Mabel Traillhead. Retrieved from https://discoversumterfl.com/van-fleet-state-trail-mabel-traillhead-2/

Board of Sumter County Commissioners. (2019). Wahoo Voting Center/Historical Site. Retrieved from https://www.sumtercountyfl.gov/215/Wahoo-Voting-Center

Board of Sumter County Commissioners. (2019). Wysong Park & Boat Ramp. Retrieved from https://discoversumterfl.com/wysong-park-boat-ramp/

Brown, R., & Brown, R. (2016, August 23). Park projects in Lake and Sumter getting boost from state. Retrieved from https://www.dailycommercial.com/news/article_83c0525f-1ce6-5fc2-8e35-0d01bb29bf6e.html

Campbell, S. (2015). Green Cities, Growing Cities, Just Cities?: Urban Planning and the Contradictions of Sustainable Development. In S. S. Fainstein & J. DeFilippis (Eds.), *Readings in Planning Theory* (4th ed., pp. 217-242). John Wiley & Sons, Incorporated.

Carneal, D. S., & Cheek, R. (1996). *Richmonds Fan District*. Richmond, VA: Council of Historic Richmond Foundation.

Caruso, G. (2018). The provision of urban space and its accessibility: Spatial data effects in Brussels. *PLoS One, 13*(10), E0204684.

Cho, S., Poudyal, N. C., & Roberts, R. K. (2008). Spatial analysis of the amenity value of open space. *Ecological Economics, 66*(2-3), 403-416. doi:10.1016/j.ecolecon.2007.10.012

Christie, L. (2011, May 27). The oldest places in America. Retrieved from https://money.cnn.com/2011/05/26/real_estate/americas_oldest_states/index.htm

City of Bushnell, FL. (2018). City of Bushnell, FL. Retrieved from http://www.cityofbushnellfl.com/index.php/community/parks-and-recreation-facilities/community-center.html

City of Inverness. (2019). Hillcrest Park. Retrieved from https://www.inverness-fl.gov/161/Hillcrest-Park

City of Leesburg, FL. (2018). Facilities & Parks. Retrieved from https://www.leesburgflorida.gov/government/departments/recreation/facilities_and_parks.php

City of Leesburg, FL. (2018). Poker Run Fundraiser to Benefit Kids Korner Playground. Retrieved from https://www.leesburgflorida.gov/news_detail_T6_R152.php

City of Leesburg, FL. (2019). Towne Square. Retrieved from https://www.leesburgpartnership.com/venue/towne-square/

City of Wildwood, Florida. (2019). Parks & Recreation. Retrieved from https://www.wildwood-fl.gov/?SEC=F0AC1958-958D-4F8A-94BD-0CCBFBDCB3E4

City of Wildwood, Florida. (2019). Dog Park. Retrieved from https://www.cityofwildwood.com/542/Dog-Park

CoastalTravelGuide.com. (2014). Nobleton Wayside Park, Hernando County Florida Parks. Retrieved from http://www.coastaltravelguide.com/Florida/Hernando/Parks/NobletonWaysidePark.htm

Colby, S., Ortman, Jennifer M., author, & U.S. Census Bureau, issuing body. (2015). *Projections of the size and composition of the U.S. population: 2014 to 2060* (Current population reports. Series P-25, Population estimates and projections; 1143).

Daniel Callahanbriarcliff Manor, N.Y. (1993). Let the Senior Choose. *New York Times (1923-Current File)*, p. A17.

Detroitexpatroit. (1970, January 01). 005: Lafayette Park (An Example in Collaborative Design). Retrieved September 20, 2018, from http://detroiturbandesign.blogspot.com/2011/01/005-lafayette-park-example-in.html

Duncan, D., Kawachi, T., White, I., & Williams, K. (2013). The Geography of Recreational Open Space: Influence of Neighborhood Racial Composition and Neighborhood Poverty. *Journal of Urban Health, 90*(4), 618-631.

EnviroAtlas. (2013, September). Space per Capita - EnviroAtlas Community Data Fact Sheet. Retrieved from https://enviroatlas.epa.gov/enviroatlas/DataFactSheets/pdf/ESC/SpacePerCapita.pdf

Esbah, H., Cook, E. A., & Ewan, J. (2009). Effects of Increasing Urbanization on the Ecological Integrity of Open Space Preserves. *Environmental Management, 43*(5), 846-862. doi:10.1007/s00267-009-9274-z

Flick, W. (2015, February 16). Battling Age with Active Living: The Villages in Florida. Retrieved from https://www.laterlivingblog.com/battling-age-with-active-living-the-villages-in-florida/

Florida Center for Instructional Technology. (2007). Sumter County Maps. Retrieved from http://fcit.usf.edu/florida/maps/galleries/county/sumter/index.php

Florida Department of Environmental Protection. (2019). Experiences & Amenities. Retrieved from https://www.floridastateparks.org/parks-and-trails/colt-creek-state-park/experiences-amenities

Florida Department of Environmental Protection. (2019). General James A. Van Fleet State Trail. Retrieved from https://www.floridastateparks.org/parks-and-trails/general-james-van-fleet-state-trail

Florida Department of Environmental Protection. (2019). Lake Griffin State Park. Retrieved from https://www.floridastateparks.org/parks-and-trails/lake-griffin-state-park

Florida Department of Environmental Protection. (2018). Withlacoochee State Trail. Retrieved from https://www.floridastateparks.org/parks-and-trails/withlacoochee-state-trail

Florida Fish and Wildlife Conservation Commission. (2019). Hope Park Public Boat Ramp. Retrieved from https://public.myfwc.com/LE/boatramp/public/Ramp.aspx?FacilityID=MR70007RH&Name=Hope Park Public Boat Ramp

Florida Fish and Wildlife Conservation Commission. (2019). Venetian Gardens Public Boat Ramp. Retrieved from https://public.myfwc.com/LE/boatramp/public/Ramp.aspx?FacilityID=LK00218KI

Florida Historical Society. (1908). Publications of the Florida Historical Society. Retrieved from https://books.google.com/books?id=WZQ-AAAAYAAJ&pg=RA2-PA34#v=onepage&q&f=false

Florida's Adventure Coast. (2018, May 30). Nobleton Wayside Park. Retrieved from https://floridasadventurecoast.com/nobleton-wayside-park/

Frisaro, F. R. (1988, February 21). Indian heritage runs deep throughout Central Florida. Retrieved from https://news.google.com/newspapers?id=C7hPAAAAIBAJ&sjid=CQcEAAAAIBAJ&pg=2347,3456475

Fulton, W., President, & Solimar Organization. (2002, November). The Mid-size City: Exploring Its Unique Place in Urban Policy. Retrieved from http://livable.org/storage/documents/reports/Other/The_Mid-Sized_City_Exploring_its_Unique_Place_in_Urban_Policy.pdf

GateHouse Media, LLC. (2005, March 28). Carney Island offers three walking trails. Retrieved from https://www.ocala.com/news/20050101/carney-island-offers-three-walking-trails

Gavrilov, L. A., & Heuveline, P. (2003). Aging of Population. In P. Demeny & G. McNicoll (Ed.), *The Encyclopedia of Population*. Retrieved from http://longevity-science.org/Population_Aging.htm

Goldfield, D. R. (1990). The Stages of American Urbanization. *OAH Magazine of History, 5*(2), 26-31. doi:10.1093/maghis/5.2.26

Gomben, P., Lilieholm, R., & Gonzalez-Guillen, M. (2012). Impact of Demographic Trends on Future Development Patterns and the Loss of Open Space in the California Mojave Desert. *Environmental Management, 49*(2), 305-324. doi:10.1007/s00267-011-9749-6

Government Advocacy & Campaigns. (2011, June 29). Transportation for Seniors, Public Bus Transportation, Senior Transport... Retrieved from https://www.aarp.org/home-garden/transportation/info-06-2011/aarp-transportation-for-those-who-dont-drive.html

Grahame, A. (2018, October 10). What would an age-friendly city look like? Retrieved from https://www.theguardian.com/cities/2018/oct/10/what-would-an-age-friendly-city-look-like

Grekousis, G., & Mountrakis, G. (2015). Sustainable Development under Population Pressure: Lessons from Developed Land Consumption in the Conterminous U.S. *Plos One, 10*(3), 1-19. doi:10.1371/journal.pone.0119675

Hales, C., Fryar, C., Carroll, M., Freedman, D., Aoki, Y., & Ogden, C. (2018). Differences in Obesity Prevalence by Demographic Characteristics and Urbanization Level Among Adults in the United States, 2013-2016. *JAMA, 319*(23), 2419-2429.

Hernando County, FL. (2019). Parks and Preserves | Hernando County, FL. Retrieved from https://www.hernandocounty.us/Home/Components/FacilityDirectory/FacilityDirectory/24/103

Human Transit. (2016, January 22). Basics: Walking distance to transit. Retrieved from https://humantransit.org/2011/04/basics-walking-distance-to-transit.html

Kara, C., & Akçit, N. (2015). Analyzing /open space accessibility by using GIS: Case study of northern Cyprus cities. *9535*, 953513-953513-8.

KIM, Jumsan, KIM, Jongmin, JUN, Misun, & KHO, Seongyoung. (2005). DETERMINATION OF A BUS SERVICE COVERAGE AREA REFLECTING PASSENGER ATTRIBUTES. *Journal of the Eastern Asia Society for Transportation Studies,6*(0), 529-543.

Kinney, J. (2016, May 19). What 174 Parks in 25 U.S. Cities Reveal About Public Space Design. Retrieved from https://nextcity.org/daily/entry/parks-design-health-public-space-use-studies

Kweon, B., Sullivan, W. C., & Wiley, A. R. (1998). Green Common Spaces and the Social Integration of Inner-City Older Adults. *Environment and Behavior, 30*(6), 832-858. doi:10.1177/001391659803000605

Lake County BCC. (2007). PEAR Park - Nature Center & Conservation Area. Retrieved from https://www.lakecountyfl.gov/offices/parks_and_trails/pear_park.aspx

Lake County Board of County Commissioners, Communications Department. (2019). Schedules & Maps. Retrieved from https://ridelakexpress.com/schedules

Le Texier, M., Schiel, K., & Caruso, G. (2018). The provision of urban space and its accessibility: Spatial data effects in Brussels. *PloS One, 13*(10), E0204684.

Leins, C. (2017, October 11). Getting Old Doesn't Have to Be Boring. Retrieved from https://www.usnews.com/news/best-states/articles/2017-10-11/the-villages-retirement-community-disney-world-for-adults

Lin, Y., & Huang, C. (2015, November 19). Aging in Taiwan: Building a Society for Active Aging and Aging in Place. Retrieved from https://academic.oup.com/gerontologist/article/56/2/176/2952870

Lo, A. Y., & Jim, C. (2010). Differential community effects on perception and use of urban greenspaces. *Cities, 27*(6), 430-442. doi:10.1016/j.cities.2010.07.001

Marion County, FL. (2019). Carney Island Recreation & Conservation Area. Retrieved from https://www.marioncountyfl.org/Home/Components/FacilityDirectory/FacilityDirectory/24/663

McDonald, R. I., Forman, R. T. T., & Kareiva, P. (2010). Open Space Loss and Land Inequality in United States' Cities, 1990–2000. *PLoS ONE, 5*(3), e9509. doi:10.1371/journal.pone.0009509

Minnesota Pollution Control Agency. (2017, September 13). Bus, bike, and walk. Retrieved from https://www.pca.state.mn.us/bus-bike-and-walk

Molnar, D. (2015). *Anatomy of a Park: Essentials of Recreation Area Planning and Design*. Long Grove, IL: Waveland Press.

Mueller, E. J., & Dooling, S. (2011). Sustainability and vulnerability: Integrating equity into plans for central city redevelopment. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability, 4*(3), 201-222. doi:10.1080/17549175.2011.633346

NSW Government. (2010). Recreation and Open Space Guidelines for Local Government. Retrieved from http://www.planning.nsw.gov.au/

Orenstein, D. E., & Hamburg, S. P. (2010). Population and pavement: Population growth and land development in Israel. *Population and Environment, 31*(4), 223-254. doi:10.1007/s11111-010-0102-4

ParkScore. (2018). Methodology. Retrieved from http://parkscore.tpl.org/methodology.php#sm.0000q0pwwo3wueezyn32f14z7e8k9

Parise, C., Sternfeld, B., Samuels, S., & Tager, I. B. (2004). Brisk Walking Speed in Older Adults Who Walk for Exercise. *Journal of the American Geriatrics Society, 52*(3), 411-416. doi:10.1046/j.0002-8614.2003.52114.x

Parrish, J. (2014, August 15). The Villages. Retrieved from https://marketingincolor.com/work/the-villages/

Pasco County, Florida. (2019). Withlacoochee River Park. Retrieved from https://www.pascocountyfl.net/303/Withlacoochee-River-Park

Peng, Y., Qian, J., Ren, F., Zhang, W., & Du, Q. (2016). Sustainability of Land Use Promoted by Construction-to-Ecological Land Conversion: A Case Study of Shenzhen City, China. *Sustainability, 8*(7), 671. doi:10.3390/su8070671

Rhodeside & Harwell, Inc. (2008, February). Monroe Park Master Plan. Retrieved from http://www.richmondgov.com/planninganddevelopmentreview/PlansAndDocuments.aspx

Richards, D. R., Passy, P., & Oh, R. R. (2017). Impacts of population density and wealth on the quantity and structure of urban space in tropical Southeast Asia. *Landscape and Urban Planning, 157*, 553-560. doi:10.1016/j.landurbplan.2016.09.005

Rissel, C., Curac, N., Greenaway, M., & Bauman, A. (2012, July). Physical activity associated with public transport use--a review and modeling of potential benefits. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3407915/

Satterthwaite, D., McGranahan, G., & Tacoli, C. (2010). Urbanization and its implications for food and farming. *Philosophical Transactions of the Royal Society B: Biological Sciences, 365*(1554), 2809–2820. doi:10.1098/rstb.2010.0136

SceneOnLine. (2019). PARKS - WITHLACOOCHEE BICENTENNIAL HALL. Retrieved from http://sceneonline.biz/page/parks-withlacoochee-bicentennial-hall

Schirnding, Y. V., & WHO. (2002). Chapter 3: International Indicator Initiatives. In *Health in Sustainable Development Planning: The Role of Indicators* (pp. 27-46). Geneva: World Health Organization.

Southwest Florida Water Management District. (2018). Wysong Park. Retrieved from https://www.swfwmd.state.fl.us/recreation/wysong-park

Southwest Florida Water Management District. (2018). Green Swamp West Tract. Retrieved from https://www.swfwmd.state.fl.us/recreation/green-swamp-west-tract

Statista. (2018). Population density of the United States 2017 | Statistic. Retrieved from https://www.statista.com/statistics/183475/united-states-population-density/

Sumter County Board of County Commissioners, & Florida Department of Transportation. (2019). Reservations & Shuttle Schedules. Retrieved from https://www.sumtercountyfl.gov/184/Reservations-Shuttle-Schedules

Sumter County Board of County Commissioners. (2019). Facilities and Parks. Retrieved from https://www.sumtercountyfl.gov/196/Facilities-and-Parks

Sumter County GIS Department. (2019). Sumter County, Florida Downloadable Maps. Retrieved from https://www.sumtercountyfl.gov/238/Downloadable-Maps

The Online Fisherman, Inc. (2019). Hope Boat Ramp at Sam Phillips Park (Annual Park Pass Required). Retrieved from https://www.theonlinefisherman.com/florida-boat-ramps/hope-boat-ramp-at-sam-phillips-park-annual-park-pass-required

The World Bank Group. (2018). Urban population (% of total). Retrieved from https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS

The World Bank Group. (2018). Urban population (% of total). Retrieved from https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=US

Thevillages.com. (2016). The Villages Recreation. Retrieved from https://www.thevillages.com/recreation/

Thevillages.com. (2016). Spanish Springs® Town Square. Retrieved from https://www.thevillages.com/lifestyle/town-squares/spanish-springs-town-square

Thorne, J. H., Santos, M. J., & Bjorkman, J. H. (2013). Regional Assessment of Urban Impacts on Landcover and Open Space Finds a Smart Urban Growth Policy Performs Little Better than Business as Usual. *PLoS ONE, 8*(6), e65258. doi:10.1371/journal.pone.0065258

TranSafety, Inc. (1997, October 1). Study Compares Older and Younger Pedestrian Walking Speeds. Retrieved from http://www.usroads.com/journals/p/rej/9710/re971001.htm

TripAdvisor. (2019). Great boat ramp - Review of Venetian Gardens Park, Leesburg, FL. Retrieved from https://www.tripadvisor.com/ShowUserReviews-g34388-d6720322-r340300056-Venetian_Gardens_Park-Leesburg_Lake_County_Florida.html

United States Department of Agriculture. (2010). Loss of Open Space. Retrieved October 11, 2018, from https://www.fs.fed.us/science-technology/loss-of-open-space

U.S. Census Bureau. (2010, October 05). Age Groups and Sex: 2010. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_QTP1&prodType=table

U.S. Census Bureau. (2012). United States Summary: 2010. In *2010 Census of Population and Housing: Population and housing unit counts* (pp. 20-26). Washington, D.C.: U.S. Dept. of Commerce, Economics and Statistics Administration, U.S. Census Bureau.

U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates. (2018). AGE AND SEX. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_S0101&prodType=table

US Census Bureau. (2018, April 30). Decennial Census of Population and Housing. Retrieved from https://www.census.gov/programs-surveys/decennial-census/decade.2010.html

US Census Bureau, Geography Division. (n.d.). Block Groups. Retrieved from https://www.census.gov/cgi-bin/geo/shapefiles/index.php?year=2017&layergroup=Block Groups

Vaamonde, A. (2019, April 10). Why You Might Want a Place at The Villages - Papa - Grandkids On-demand. Retrieved from https://www.joinpapa.com/the-villages-community-florida/

Valerio, C. (1997). *Elderly Americans: Where they choose to retire* (Garland studies on the elderly in America). New York: Garland Pub.

Vlakveld, Twisk, Christoph, Boele, Sikkema, Remy, & Schwab. (2015). Speed choice and mental workload of elderly cyclists on e-bikes in simple and complex traffic situations: A field experiment. *Accident Analysis and Prevention, 74*, 97-106.

Watson, K. B., Carlson, S. A., Humbert-Rico, T., Carroll, D. D., & Fulton, J. E. (2015, June 16). Walking for Transportation: What do U.S. Adults Think is a Reasonable Distance and Time? Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4589135/

World Health Organization. (2007). *Global age-friendly cities: A guide.* Geneva: World Health Organization.

Yu, K., Wang, S., & Li, D. (2011). The negative approach to urban growth planning of Beijing, China. *Journal of Environmental Planning and Management, 54*(9), 1209-1236. doi:10.1080/09640568.2011.564488

Yung, E. H., Conejos, S., & Chan, E. H. (2016). Social needs of the senior and active aging in public open spaces in urban renewal. *Cities, 52*, 114-122. doi:10.1016/j.cities.2015.11.022

Yung, E. H., Conejos, S., & Chan, E. H. (2016). Public open spaces planning for the senior: The case of dense urban renewal districts in Hong Kong. *Land Use Policy, 59*, 1-11. doi:10.1016/j.landusepol.2016.08.022

ZipMap. (2019). Sumter County - Florida Zip Code Boundary Map. Retrieved from https://www.zipmap.net/Florida/Sumter_County.htm

Appendix

Table-1 Aging Rate of All U.S. Metropolitan Areas, 2017

GEOId	Geography	Total population	Total Population: 65 years and over	Median age (years)	Total Old-age dependency ratio	Aging Rate
310M300US45540	The Villages, FL Metro Area	116754	63263	66.4	140.9	54.2%
310M300US39460	Punta Gorda, FL Metro Area	173236	66342	58.1	78.4	38.3%
310M300US26140	Homosassa Springs, FL Metro Area	141373	50184	55.9	71.7	35.5%
310M300US42700	Sebring, FL Metro Area	100177	34526	53.1	71.9	34.5%
310M300US15060	Brookings, OR Micro Area	22377	7223	55.6	61.5	32.3%
310M300US42680	Sebastian-Vero Beach, FL Metro Area	147981	45596	52.2	59.3	30.8%
310M300US35840	North Port-Sarasota-Bradenton, FL Metro Area	768381	235356	51.6	58.3	30.6%
310M300US34260	Mountain Home, AR Micro Area	41093	12528	51.8	58.7	30.5%
310M300US34940	Naples-Immokalee-Marco Island, FL Metro Area	356774	107599	49.7	58.1	30.2%
310M300US18900	Crossville, TN Micro Area	58178	17169	50.5	56.2	29.5%
310M300US39140	Prescott, AZ Metro Area	220972	63907	52.2	53.7	28.9%
310M300US23240	Fredericksburg, TX Micro Area	25939	7434	50.2	55.8	28.7%
310M300US14820	Brevard, NC Micro Area	33291	9513	50.6	51.8	28.6%
310M300US12700	Barnstable Town, MA Metro Area	213900	60860	52.4	50.9	28.5%
310M300US37220	Pahrump, NV Micro Area	43296	12266	51.6	51.9	28.3%
310M300US29420	Lake Havasu City-Kingman, AZ Metro Area	204691	57356	50.4	52.1	28.0%
310M300US36100	Ocala, FL Metro Area	343778	96367	48.5	52.7	28.0%
310M300US38820	Port Angeles, WA Micro Area	73439	20155	50.5	49.9	27.4%

310M300US15980	Cape Coral-Fort Myers, FL Metro Area	700165	188866	47.8	49.3	27.0%
310M300US37740	Payson, AZ Micro Area	53145	14355	49.3	51.3	27.0%
310M300US20660	Easton, MD Micro Area	37461	10073	49.7	49.2	26.9%
310M300US40760	Ruidoso, NM Micro Area	19497	5236	50.9	49.1	26.9%
310M300US28500	Kerrville, TX Micro Area	50761	13540	47.8	49.6	26.7%
310M300US35440	Newport, OR Micro Area	47307	12271	50.9	45.7	25.9%
310M300US23820	Gardnerville Ranchos, NV Micro Area	47632	12095	50.8	44.8	25.4%
310M300US23860	Georgetown, SC Micro Area	61065	15363	48.5	45.5	25.2%
310M300US38940	Port St. Lucie, FL Metro Area	454482	114331	47.1	45.3	25.2%
310M300US24420	Grants Pass, OR Metro Area	84514	21066	47.6	45	24.9%
310M300US43500	Silver City, NM Micro Area	28382	7023	45.9	45.6	24.7%
310M300US36140	Ocean City, NJ Metro Area	94549	23124	48.7	42.4	24.5%
310M300US18300	Coos Bay, OR Micro Area	62921	15340	48.3	42.8	24.4%
310M300US46020	Truckee-Grass Valley, CA Micro Area	98838	24126	49.8	42.1	24.4%
310M300US19660	Deltona-Daytona Beach-Ormond Beach, FL Metro Area	623675	151803	47.1	42.2	24.3%
310M300US44020	Spirit Lake, IA Micro Area	17000	4126	48.7	42.9	24.3%
310M300US39260	Prineville, OR Micro Area	21717	5246	48	42.9	24.2%
310M300US40700	Roseburg, OR Micro Area	107576	25922	47	42.7	24.1%
310M300US43760	Sonora, CA Micro Area	53899	12974	48.6	40.7	24.1%
310M300US38240	Pinehurst-Southern Pines, NC Micro Area	94191	22394	44.7	43.3	23.8%
310M300US25940	Hilton Head Island-Bluffton-Beaufort, SC Metro Area	206781	49045	43.2	42	23.7%
310M300US14700	Branson, MO Micro Area	85837	20129	46.1	41.3	23.5%
310M300US34820	Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area	432772	100500	46.5	39.8	23.2%
310M300US45340	Taos, NM Micro Area	32809	7593	47.7	39.9	23.1%

310M300US33980	Morehead City, NC Micro Area	68699	15649	47.4	38.6	22.8%
310M300US38840	Port Clinton, OH Micro Area	40769	9276	48.3	39.3	22.8%
310M300US36020	Oak Harbor, WA Micro Area	80323	18260	44.1	38.8	22.7%
310M300US37340	Palm Bay-Melbourne-Titusville, FL Metro Area	568183	129240	47.1	38.8	22.7%
310M300US26300	Hot Springs, AR Metro Area	97994	22167	44.7	39.7	22.6%
310M300US22260	Fergus Falls, MN Micro Area	57790	12979	46.6	40.2	22.5%
310M300US13620	Berlin, NH-VT Micro Area	38322	8519	48.3	36.5	22.2%
310M300US21860	Fairmont, MN Micro Area	20084	4462	45.2	39.6	22.2%
310M300US31940	Marinette, WI-MI Micro Area	64101	14164	47.8	37.7	22.1%
310M300US37540	Paris, TN Micro Area	32263	7120	45.3	38.7	22.1%
310M300US47820	Washington, NC Micro Area	47316	10443	45.4	38.7	22.1%
310M300US10980	Alpena, MI Micro Area	28730	6326	47.6	37.4	22.0%
310M300US14660	Brainerd, MN Micro Area	92315	20308	45.4	39.2	22.0%
310M300US21540	Escanaba, MI Micro Area	36395	8011	46.9	38.2	22.0%
310M300US41540	Salisbury, MD-DE Metro Area	394925	86716	44.6	37.6	22.0%
310M300US41760	Sandpoint, ID Micro Area	41855	9228	47.7	38.2	22.0%
310M300US32300	Martinsville, VA Micro Area	65212	14254	45.8	37.9	21.9%
310M300US42860	Seneca, SC Micro Area	75926	16644	45	38	21.9%
310M300US33940	Montrose, CO Micro Area	40908	8916	44.7	39	21.8%
310M300US10660	Albert Lea, MN Micro Area	30619	6643	44.3	38.5	21.7%
310M300US31220	Ludington, MI Micro Area	28800	6256	46	37.7	21.7%
310M300US37260	Palatka, FL Micro Area	72435	15701	44.8	38.3	21.7%
310M300US43220	Shelton, WA Micro Area	61569	13338	45.9	36.8	21.7%
310M300US10820	Alexandria, MN Micro Area	36891	7967	44.3	37.9	21.6%
310M300US26460	Hudson, NY Micro Area	61481	13273	47.4	35.9	21.6%
310M300US27020	Iron Mountain, MI-WI Micro Area	30048	6468	47.3	36.5	21.5%
310M300US38340	Pittsfield, MA Metro Area	127751	27450	46.5	35.3	21.5%
310M300US13540	Bennington, VT Micro Area	36054	7723	46.6	36.1	21.4%

310M300US24330	Grand Rapids, MN Micro Area	45237	9683	45.9	37.3	21.4%
310M300US11980	Athens, TX Micro Area	79687	16948	43.8	37.4	21.3%
310M300US47620	Warren, PA Micro Area	40345	8600	46.7	36.1	21.3%
310M300US17340	Clearlake, CA Micro Area	64095	13561	45.8	36.3	21.2%
310M300US47240	Vineyard Haven, MA Micro Area	17275	3659	45.9	35.3	21.2%
310M300US27780	Johnstown, PA Metro Area	135871	28395	45	35	20.9%
310M300US43740	Somerset, PA Micro Area	75619	15816	45.9	34.4	20.9%
310M300US11580	Arcadia, FL Micro Area	35675	7410	40.7	35.1	20.8%
310M300US11700	Asheville, NC Metro Area	445625	92774	44	34.7	20.8%
310M300US23300	Freeport, IL Micro Area	45839	9549	44.7	36.3	20.8%
310M300US42140	Santa Fe, NM Metro Area	147514	30703	45.3	34.7	20.8%
310M300US35260	New Castle, PA Micro Area	88231	18234	44.9	35	20.7%
310M300US41260	St. Marys, PA Micro Area	30781	6385	46.7	34.8	20.7%
310M300US48260	Weirton-Steubenville, WV-OH Metro Area	120337	24925	45.3	34.5	20.7%
310M300US28580	Key West, FL Micro Area	76745	15792	46.7	32	20.6%
310M300US15860	Cañon City, CO Micro Area	46601	9564	44.8	32.3	20.5%
310M300US25460	Harrison, AR Micro Area	45110	9237	43.1	35.8	20.5%
310M300US28700	Kingsport-Bristol-Bristol, TN-VA Metro Area	306745	62984	44.8	34.4	20.5%
310M300US30380	Lewistown, PA Micro Area	46452	9501	43.6	35.9	20.5%
310M300US32780	Medford, OR Metro Area	212070	43506	43	35	20.5%
310M300US13100	Beatrice, NE Micro Area	21632	4403	44.2	35.4	20.4%
310M300US19700	Deming, NM Micro Area	24319	4950	39	38.3	20.4%
310M300US36340	Oil City, PA Micro Area	52880	10791	46	34.3	20.4%
310M300US43420	Sierra Vista-Douglas, AZ Metro Area	126516	25825	40.5	35.6	20.4%
310M300US14780	Brenham, TX Micro Area	34667	7045	42	34.9	20.3%
310M300US24620	Greeneville, TN Micro Area	68520	13886	44.3	33.8	20.3%
310M300US29060	Laconia, NH Micro Area	60383	12266	46.7	33.6	20.3%

310M300US40260	Roanoke Rapids, NC Micro Area	72726	14769	44.6	34.5	20.3%
310M300US21180	Elkins, WV Micro Area	29152	5898	43.1	33.4	20.2%
310M300US22280	Fernley, NV Micro Area	52303	10551	43.8	35	20.2%
310M300US41780	Sandusky, OH Micro Area	75369	15249	44.6	34.3	20.2%
310M300US45900	Traverse City, MI Micro Area	147606	29862	45.1	33.9	20.2%
310M300US11820	Astoria, OR Micro Area	38021	7638	44.1	33.3	20.1%
310M300US15700	Cambridge, MD Micro Area	32386	6506	44.4	34.2	20.1%
310M300US19260	Danville, VA Micro Area	103881	20909	44.5	34	20.1%
310M300US22580	Forest City, NC Micro Area	66523	13350	44.5	34.1	20.1%
310M300US32980	Merrill, WI Micro Area	27994	5618	46.9	33.2	20.1%
310M300US35580	New Ulm, MN Micro Area	25243	5076	42.5	34.7	20.1%
310M300US40860	Rutland, VT Micro Area	59676	11986	46.4	32.5	20.1%
310M300US14140	Bluefield, WV-VA Micro Area	103652	20746	43.2	33.4	20.0%
310M300US22800	Fort Madison-Keokuk, IA-IL-MO Micro Area	59856	11998	44.1	34.4	20.0%
310M300US30300	Lewiston, ID-WA Metro Area	62273	12460	42.7	34.1	20.0%
310M300US32380	Mason City, IA Micro Area	50636	10152	44.5	33.9	20.0%
310M300US35460	Newport, TN Micro Area	35262	7060	44.7	33.7	20.0%
310M300US35900	North Wilkesboro, NC Micro Area	68525	13695	44.1	33.9	20.0%
310M300US43980	Spencer, IA Micro Area	16387	3270	42.2	34.9	20.0%
310M300US44980	Sunbury, PA Micro Area	93038	18640	44.3	33.3	20.0%
310M300US10760	Alexander City, AL Micro Area	40756	8100	43.3	33.8	19.9%
310M300US15460	Burlington, IA-IL Micro Area	46803	9310	43.4	34.4	19.9%
310M300US16500	Centralia, WA Micro Area	76012	15140	42.8	34.2	19.9%
310M300US23660	Galesburg, IL Micro Area	51374	10233	42.2	33	19.9%
310M300US41100	St. George, UT Metro Area	155577	30973	35.9	38	19.9%
310M300US42380	Sayre, PA Micro Area	61546	12232	44.4	34.2	19.9%
310M300US15340	Bucyrus, OH Micro Area	42231	8372	43	34.1	19.8%

310M300US29460	Lakeland-Winter Haven, FL Metro Area	652256	128991	40.4	34.3	19.8%
310M300US49660	Youngstown-Warren-Boardman, OH-PA Metro Area	548821	108805	43.9	33.2	19.8%
310M300US28900	Klamath Falls, OR Micro Area	66018	12974	42.6	33.5	19.7%
310M300US46380	Ukiah, CA Micro Area	87497	17221	42.4	33.6	19.7%
310M300US48540	Wheeling, WV-OH Metro Area	143801	28337	44.2	32.4	19.7%
310M300US10140	Aberdeen, WA Micro Area	71454	13976	43.5	32.9	19.6%
310M300US17200	Claremont-Lebanon, NH-VT Micro Area	216739	42387	45.1	31.4	19.6%
310M300US31930	Marietta, OH Micro Area	60871	11921	43.8	32.3	19.6%
310M300US19060	Cumberland, MD-WV Metro Area	100012	19506	42.1	31.4	19.5%
310M300US28620	Kill Devil Hills, NC Micro Area	39502	7720	46.2	31.7	19.5%
310M300US47340	Wabash, IN Micro Area	31848	6202	42	32.9	19.5%
310M300US11020	Altoona, PA Metro Area	124736	24172	43.1	32.3	19.4%
310M300US16180	Carson City, NV Metro Area	54219	10499	43	32.2	19.4%
310M300US24640	Greenfield Town, MA Micro Area	70926	13785	45.9	31.1	19.4%
310M300US39060	Pottsville, PA Micro Area	144287	27956	44.2	31.8	19.4%
310M300US39820	Redding, CA Metro Area	178919	34728	41.8	32.9	19.4%
310M300US44580	Sterling, IL Micro Area	56823	11009	42.9	33.4	19.4%
310M300US45520	The Dalles, OR Micro Area	25687	4996	40.9	33.6	19.4%
310M300US36380	Okeechobee, FL Micro Area	40228	7752	41	32.8	19.3%
310M300US36580	Oneonta, NY Micro Area	60750	11702	42	30	19.3%
310M300US43020	Shawano, WI Micro Area	45642	8795	43.8	33.3	19.3%
310M300US44420	Staunton-Waynesboro, VA Metro Area	120283	23249	43.2	32	19.3%
310M300US15220	Brownwood, TX Micro Area	37787	7250	41	33	19.2%

310M300US15900	Canton, IL Micro Area	35733	6872	42.5	31.7	19.2%
310M300US20180	DuBois, PA Micro Area	80539	15445	44.2	30.8	19.2%
310M300US34340	Mount Airy, NC Micro Area	72315	13855	43.4	32.5	19.2%
310M300US45860	Torrington, CT Micro Area	184454	35388	46.9	31.1	19.2%
310M300US49220	Wisconsin Rapids-Marshfield, WI Micro Area	73427	14068	43.8	32.4	19.2%
310M300US16140	Carroll, IA Micro Area	20428	3906	41.7	34	19.1%
310M300US21840	Fairfield, IA Micro Area	17945	3425	40.9	31	19.1%
310M300US26500	Huntingdon, PA Micro Area	45686	8728	42.9	30.8	19.1%
310M300US29780	Las Vegas, NM Micro Area	28203	5384	42.9	31.4	19.1%
310M300US32540	McAlester, OK Micro Area	44673	8533	41	32.5	19.1%
310M300US34580	Mount Vernon-Anacortes, WA Metro Area	121725	23285	41.4	32.7	19.1%
310M300US37140	Paducah, KY-IL Micro Area	97319	18571	42.9	32.4	19.1%
310M300US37620	Parkersburg-Vienna, WV Metro Area	91816	17521	43	32	19.1%
310M300US42540	Scranton--Wilkes-Barre--Hazleton, PA Metro Area	557942	106363	42.8	31.2	19.1%
310M300US46460	Union City, TN-KY Micro Area	36918	7066	42.7	32.4	19.1%
310M300US15780	Camden, AR Micro Area	29572	5623	43.2	32.3	19.0%
310M300US19300	Daphne-Fairhope-Foley, AL Metro Area	203360	38687	42.6	32.3	19.0%
310M300US24020	Glens Falls, NY Metro Area	126884	24161	44.8	30.8	19.0%
310M300US39500	Quincy, IL-MO Micro Area	76865	14600	41.2	32.6	19.0%
310M300US43940	Spearfish, SD Micro Area	25018	4749	41.4	30.2	19.0%
310M300US45300	Tampa-St. Petersburg-Clearwater, FL Metro Area	2978209	564782	42	31.3	19.0%
310M300US11940	Athens, TN Micro Area	52569	9926	42.6	31.7	18.9%
310M300US13220	Beckley, WV Metro Area	121699	22953	42.7	31.3	18.9%
310M300US16460	Centralia, IL Micro Area	38305	7228	41.8	32.3	18.9%
310M300US22520	Florence-Muscle Shoals, AL Metro Area	147025	27773	42	31.3	18.9%

310M300US27300	Jacksonville, IL Micro Area	39551	7480	41.6	31	18.9%
310M300US32000	Marion, NC Micro Area	45069	8521	43.3	31.3	18.9%
310M300US32700	McPherson, KS Micro Area	28792	5438	40.8	32.7	18.9%
310M300US32740	Meadville, PA Micro Area	86847	16455	42.8	31.7	18.9%
310M300US48460	West Plains, MO Micro Area	40139	7573	40.2	33.2	18.9%
310M300US12780	Bartlesville, OK Micro Area	51867	9729	40.1	32.6	18.8%
310M300US13020	Bay City, MI Metro Area	105350	19757	42.9	31	18.8%
310M300US14300	Bonham, TX Micro Area	33787	6359	41.9	31.3	18.8%
310M300US17700	Coffeyville, KS Micro Area	33463	6285	40.3	32.6	18.8%
310M300US18220	Connersville, IN Micro Area	23426	4414	42.4	32	18.8%
310M300US29260	La Grande, OR Micro Area	25810	4852	39.8	31.9	18.8%
310M300US31820	Manitowoc, WI Micro Area	79680	15019	44.5	31.4	18.8%
310M300US13260	Bedford, IN Micro Area	45669	8541	42.6	31.6	18.7%
310M300US33420	Mineral Wells, TX Micro Area	28109	5260	41	32.4	18.7%
310M300US38300	Pittsburgh, PA Metro Area	2348143	438752	43	30.1	18.7%
310M300US40220	Roanoke, VA Metro Area	313069	58544	42.6	30.9	18.7%
310M300US41400	Salem, OH Micro Area	104584	19604	43.8	31	18.7%
310M300US42460	Scottsboro, AL Micro Area	52326	9808	43	31.4	18.7%
310M300US43260	Sheridan, WY Micro Area	29964	5604	42.1	31.5	18.7%
310M300US45380	Taylorville, IL Micro Area	33562	6290	42.7	31	18.7%
310M300US45740	Toccoa, GA Micro Area	25625	4792	42.3	31.8	18.7%
310M300US16620	Charleston, WV Metro Area	219964	41016	43.1	30.7	18.6%
310M300US17540	Clinton, IA Micro Area	47587	8872	42.2	31.9	18.6%
310M300US21640	Eufaula, AL-GA Micro Area	28341	5259	40.3	30.6	18.6%
310M300US23340	Fremont, NE Micro Area	36576	6820	39.1	32.3	18.6%
310M300US23900	Gettysburg, PA Metro Area	101589	18883	43.3	30.6	18.6%
310M300US24820	Greenville, OH Micro Area	51919	9664	41.8	32.5	18.6%
310M300US28820	Kinston, NC Micro Area	57934	10749	41.9	31.5	18.6%
310M300US35100	New Bern, NC Metro Area	125953	23423	38.3	31	18.6%
310M300US46740	Valley, AL Micro Area	33895	6300	43	31	18.6%
310M300US13460	Bend-Redmond, OR Metro Area	175321	32437	42.1	30.7	18.5%

310M300US16540	Chambersburg-Waynesboro, PA Metro Area	153003	28244	41.3	31.4	18.5%
310M300US21900	Fairmont, WV Micro Area	56575	10441	41.3	30	18.5%
310M300US25900	Hilo, HI Micro Area	196325	36232	42.1	31	18.5%
310M300US27460	Jamestown-Dunkirk-Fredonia, NY Micro Area	130846	24230	42.3	30.5	18.5%
310M300US30140	Lebanon, PA Metro Area	137616	25475	41.2	31.6	18.5%
310M300US31900	Mansfield, OH Metro Area	121533	22520	41.4	31	18.5%
310M300US39780	Red Bluff, CA Micro Area	63247	11708	41.1	32.2	18.5%
310M300US14100	Bloomsburg-Berwick, PA Metro Area	84917	15616	41.2	29	18.4%
310M300US15620	Cadillac, MI Micro Area	47897	8800	42.4	31.5	18.4%
310M300US19000	Cullowhee, NC Micro Area	41725	7673	37.2	28.6	18.4%
310M300US19500	Decatur, IL Metro Area	107587	19745	41	30.9	18.4%
310M300US26740	Hutchinson, KS Micro Area	63360	11670	40.1	31.4	18.4%
310M300US27740	Johnson City, TN Metro Area	200767	36998	41.7	29.7	18.4%
310M300US35420	New Philadelphia-Dover, OH Micro Area	92531	17053	40.9	31.5	18.4%
310M300US35500	Newton, IA Micro Area	36789	6786	42.6	31.1	18.4%
310M300US35660	Niles-Benton Harbor, MI Metro Area	154948	28504	42	31	18.4%
310M300US36860	Ottawa-Peru, IL Micro Area	150541	27769	42.5	30.9	18.4%
310M300US37580	Paris, TX Micro Area	49401	9092	40.4	31.8	18.4%
310M300US38580	Point Pleasant, WV-OH Micro Area	57203	10550	42.1	31	18.4%
310M300US38620	Ponca City, OK Micro Area	45173	8307	38.6	32.5	18.4%
310M300US12380	Austin, MN Micro Area	39386	7194	39.3	32	18.3%
310M300US15260	Brunswick, GA Metro Area	115939	21202	41.9	30.9	18.3%
310M300US17220	Clarksburg, WV Micro Area	93985	17219	42.3	30.2	18.3%
310M300US34100	Morristown, TN Metro Area	116352	21280	41.6	30.6	18.3%
310M300US35140	Newberry, SC Micro Area	37914	6948	41.5	30.8	18.3%
310M300US44220	Springfield, OH Metro Area	135520	24770	41.2	31	18.3%
310M300US11420	Angola, IN Micro Area	34459	6268	42.7	29.9	18.2%

310M300US12300	Augusta-Waterville, ME Micro Area	121289	22066	44.2	29.3	18.2%
310M300US14620	Bradford, PA Micro Area	42070	7644	42.5	29.4	18.2%
310M300US15740	Cambridge, OH Micro Area	39414	7160	42.4	30.7	18.2%
310M300US15940	Canton-Massillon, OH Metro Area	402098	73321	42.1	30.4	18.2%
310M300US20340	Duncan, OK Micro Area	44293	8082	40.5	31.4	18.2%
310M300US24100	Gloversville, NY Micro Area	53955	9802	43.4	29.6	18.2%
310M300US29020	Kokomo, IN Metro Area	82457	14975	41.5	30.8	18.2%
310M300US31020	Longview, WA Metro Area	103590	18821	41.4	30.9	18.2%
310M300US39980	Richmond, IN Micro Area	66972	12163	41.1	30.4	18.2%
310M300US16420	Central City, KY Micro Area	31153	5626	42	29.6	18.1%
310M300US24940	Greenwood, SC Micro Area	94769	17159	40.4	30.5	18.1%
310M300US37660	Parsons, KS Micro Area	20553	3719	41	31.1	18.1%
310M300US39860	Red Wing, MN Micro Area	46138	8369	42.9	30.7	18.1%
310M300US42020	San Luis Obispo-Paso Robles-Arroyo Grande, CA Metro Area	280119	50662	39	28.4	18.1%
310M300US42940	Sevierville, TN Micro Area	95523	17260	42.4	29.7	18.1%
310M300US46060	Tucson, AZ Metro Area	1007257	182720	38.2	30.1	18.1%
310M300US10620	Albemarle, NC Micro Area	60875	10970	42.4	29.9	18.0%
310M300US13780	Binghamton, NY Metro Area	245446	44233	40.5	29.1	18.0%
310M300US18460	Cornelia, GA Micro Area	43878	7888	39.5	30.4	18.0%
310M300US18740	Coshocton, OH Micro Area	36602	6602	41.4	30.9	18.0%
310M300US19180	Danville, IL Metro Area	79207	14271	40.2	31	18.0%
310M300US19940	Dixon, IL Micro Area	34670	6243	42.7	29.1	18.0%
310M300US25880	Hillsdale, MI Micro Area	45909	8244	42	30	18.0%
310M300US28180	Kapaa, HI Micro Area	71093	12829	42.1	30.2	18.0%
310M300US28300	Keene, NH Micro Area	76109	13705	42.5	28.3	18.0%
310M300US28740	Kingston, NY Metro Area	180129	32421	43.6	28.3	18.0%
310M300US31680	Malvern, AR Micro Area	33480	6037	41.7	29.6	18.0%
310M300US31980	Marion, IN Micro Area	67615	12141	39.9	29.3	18.0%
310M300US35220	New Castle, IN Micro Area	48649	8767	42.2	29.5	18.0%

310M300US42420	Scottsbluff, NE Micro Area	38493	6945	39.8	31.5	18.0%
310M300US43700	Somerset, KY Micro Area	63974	11508	42	30.2	18.0%
310M300US46100	Tullahoma-Manchester, TN Micro Area	101773	18273	41	30.1	18.0%
310M300US11220	Amsterdam, NY Micro Area	49500	8852	41.1	30.2	17.9%
310M300US18500	Corning, NY Micro Area	97539	17489	42.4	29.9	17.9%
310M300US23620	Gainesville, TX Micro Area	39064	6979	40.5	30.8	17.9%
310M300US26580	Huntington-Ashland, WV-KY-OH Metro Area	360603	64673	41.3	29.6	17.9%
310M300US33180	Middlesborough, KY Micro Area	27469	4914	41.6	29.4	17.9%
310M300US36700	Orangeburg, SC Micro Area	89116	15921	39.5	29.9	17.9%
310M300US38740	Poplar Bluff, MO Micro Area	42826	7683	40.3	30.6	17.9%
310M300US46540	Utica-Rome, NY Metro Area	295267	52966	41.6	29.5	17.9%
310M300US46780	Van Wert, OH Micro Area	28262	5046	41.4	30.5	17.9%
310M300US48700	Williamsport, PA Metro Area	115398	20711	41	29.2	17.9%
310M300US12740	Barre, VT Micro Area	58691	10458	43.5	28.4	17.8%
310M300US18980	Cullman, AL Micro Area	81703	14508	40.6	29.7	17.8%
310M300US19420	Dayton, TN Micro Area	32478	5790	40.7	30.1	17.8%
310M300US21020	Elizabeth City, NC Micro Area	63388	11312	40.9	29.6	17.8%
310M300US23460	Gadsden, AL Metro Area	103132	18407	40.9	29.6	17.8%
310M300US24460	Great Bend, KS Micro Area	27067	4820	39.6	30.7	17.8%
310M300US26260	Hope, AR Micro Area	30682	5460	40	31.2	17.8%
310M300US27420	Jamestown, ND Micro Area	21058	3758	39.7	28.8	17.8%
310M300US32180	Marshall, MO Micro Area	23010	4097	37.9	30	17.8%
310M300US33060	Miami, OK Micro Area	31725	5641	38.2	31	17.8%
310M300US34500	Mount Vernon, IL Micro Area	38358	6845	40.9	29.7	17.8%
310M300US11740	Ashland, OH Micro Area	53299	9414	40.4	29.7	17.7%
310M300US21660	Eugene, OR Metro Area	363471	64464	39.4	28	17.7%
310M300US21980	Fallon, NV Micro Area	24022	4249	38.9	29.9	17.7%
310M300US25300	Hannibal, MO Micro Area	38911	6905	40.6	30	17.7%

310M300US25860	Hickory-Lenoir-Morganton, NC Metro Area	364044	64595	42.6	29.2	17.7%
310M300US26780	Hutchinson, MN Micro Area	35816	6351	40.4	30.2	17.7%
310M300US31340	Lynchburg, VA Metro Area	258995	45864	39.8	28.5	17.7%
310M300US35820	North Platte, NE Micro Area	36920	6544	40.5	30.5	17.7%
310M300US36460	Olean, NY Micro Area	78175	13811	41.7	29.6	17.7%
310M300US38860	Portland-South Portland, ME Metro Area	525776	93008	43.4	28.1	17.7%
310M300US40980	Saginaw, MI Metro Area	193803	34251	40.8	29.2	17.7%
310M300US42900	Seneca Falls, NY Micro Area	34843	6158	42.2	28.4	17.7%
310M300US45580	Thomaston, GA Micro Area	26241	4652	41.5	29.6	17.7%
310M300US10540	Albany, OR Metro Area	121074	21303	39.7	29.7	17.6%
310M300US11780	Ashtabula, OH Micro Area	98622	17406	42.5	29.5	17.6%
310M300US12860	Batavia, NY Micro Area	58537	10301	43.2	28.6	17.6%
310M300US26860	Indiana, PA Micro Area	86551	15273	39.7	27.5	17.6%
310M300US28380	Kennett, MO Micro Area	30905	5436	39.4	31.1	17.6%
310M300US29380	Lake City, FL Micro Area	68484	12036	40.7	29	17.6%
310M300US30820	Lock Haven, PA Micro Area	39321	6934	38.5	28.4	17.6%
310M300US30880	Logan, WV Micro Area	34428	6055	43	28.5	17.6%
310M300US32460	Mayfield, KY Micro Area	37259	6563	40.3	30.4	17.6%
310M300US38100	Picayune, MS Micro Area	55049	9706	41	29.7	17.6%
310M300US38700	Pontiac, IL Micro Area	36812	6487	41.6	29.1	17.6%
310M300US44860	Sulphur Springs, TX Micro Area	35929	6321	39.6	30.8	17.6%
310M300US49460	Yankton, SD Micro Area	22660	3997	42.1	28.9	17.6%
310M300US49740	Yuma, AZ Metro Area	204281	35943	34.1	31.2	17.6%
310M300US15580	Butte-Silver Bow, MT Micro Area	34514	6034	39.9	28.1	17.5%
310M300US18420	Corinth, MS Micro Area	37242	6505	40.1	29.7	17.5%
310M300US19220	Danville, KY Micro Area	54186	9464	40.4	28.7	17.5%
310M300US20020	Dothan, AL Metro Area	147790	25850	40.7	29.4	17.5%
310M300US28060	Kalispell, MT Micro Area	96147	16861	42.3	29.2	17.5%

310M300US29980	Lawrenceburg, TN Micro Area	42591	7467	39.6	30.5	17.5%
310M300US43140	Shelby, NC Micro Area	97038	16996	41.7	29	17.5%
310M300US45020	Sweetwater, TX Micro Area	14990	2630	38.8	30.6	17.5%
310M300US48820	Willmar, MN Micro Area	42577	7448	39.5	29.9	17.5%
310M300US12180	Auburn, NY Micro Area	78319	13610	42.5	27.9	17.4%
310M300US17660	Coeur d'Alene, ID Metro Area	150128	26135	39.7	29.4	17.4%
310M300US18260	Cookeville, TN Micro Area	109133	19041	38.7	28.4	17.4%
310M300US20260	Duluth, MN-WI Metro Area	279205	48720	41	27.8	17.4%
310M300US21580	Española, NM Micro Area	39455	6850	40.7	29.6	17.4%
310M300US23380	Fremont, OH Micro Area	59559	10380	41.7	29.3	17.4%
310M300US24500	Great Falls, MT Metro Area	81816	14237	38.4	28.9	17.4%
310M300US34900	Napa, CA Metro Area	141005	24521	40.8	28.5	17.4%
310M300US36820	Oskaloosa, IA Micro Area	22301	3891	39.7	29.8	17.4%
310M300US39380	Pueblo, CO Metro Area	163368	28356	38.8	29.1	17.4%
310M300US40300	Rochelle, IL Micro Area	51619	8970	41.9	29.1	17.4%
310M300US42220	Santa Rosa, CA Metro Area	500943	87139	41.4	27.9	17.4%
310M300US10300	Adrian, MI Micro Area	98585	17040	41.6	28.3	17.3%
310M300US11680	Arkansas City-Winfield, KS Micro Area	35732	6173	38.2	29.4	17.3%
310M300US13660	Big Rapids, MI Micro Area	43181	7485	36.4	27.2	17.3%
310M300US13720	Big Stone Gap, VA Micro Area	58763	10184	40.9	27.8	17.3%
310M300US17020	Chico, CA Metro Area	225207	38949	36.9	27.7	17.3%
310M300US20460	Durant, OK Micro Area	45068	7796	37.8	29.2	17.3%
310M300US21300	Elmira, NY Metro Area	86883	14998	41.2	28.3	17.3%
310M300US22700	Fort Dodge, IA Micro Area	36945	6396	39.6	28.3	17.3%
310M300US24300	Grand Junction, CO Metro Area	148798	25803	38.9	28.6	17.3%
310M300US32260	Marshalltown, IA Micro Area	40476	6988	38.5	30	17.3%
310M300US42780	Selinsgrove, PA Micro Area	40570	7020	39.7	28.3	17.3%
310M300US47460	Walla Walla, WA Metro Area	63861	11031	38.2	28.1	17.3%

310M300US12820	Bastrop, LA Micro Area	26290	4520	39.6	29.6	17.2%
310M300US17740	Coldwater, MI Micro Area	43543	7492	41.2	29	17.2%
310M300US28940	Knoxville, TN Metro Area	862490	148601	40.5	27.9	17.2%
310M300US30660	Lincoln, IL Micro Area	29488	5065	40.6	26.9	17.2%
310M300US31060	Los Alamos, NM Micro Area	18031	3099	43	28.8	17.2%
310M300US32100	Marquette, MI Micro Area	67145	11536	39.1	26.6	17.2%
310M300US32280	Martin, TN Micro Area	33776	5796	38.1	27.2	17.2%
310M300US32620	McComb, MS Micro Area	52337	9016	38.9	30.1	17.2%
310M300US33100	Miami-Fort Lauderdale-West Palm Beach, FL Metro Area	6019790	1037790	40.7	27.7	17.2%
310M300US40580	Rocky Mount, NC Metro Area	148157	25413	41.2	28.6	17.2%
310M300US43300	Sherman-Denison, TX Metro Area	126146	21713	40.2	29.2	17.2%
310M300US46500	Urbana, OH Micro Area	39005	6725	42.1	28.8	17.2%
310M300US12660	Baraboo, WI Micro Area	63340	10845	41.3	28.6	17.1%
310M300US15820	Campbellsville, KY Micro Area	25406	4342	38.4	28.2	17.1%
310M300US17460	Cleveland-Elyria, OH Metro Area	2062764	353092	41.3	28	17.1%
310M300US18820	Crawfordsville, IN Micro Area	38288	6534	40.5	28.5	17.1%
310M300US19580	Defiance, OH Micro Area	38311	6544	40	28.7	17.1%
310M300US23980	Glasgow, KY Micro Area	53408	9133	40.8	28.9	17.1%
310M300US26340	Houghton, MI Micro Area	38469	6583	34.2	27.3	17.1%
310M300US31580	Madisonville, KY Micro Area	45985	7844	41.3	28.6	17.1%
310M300US39020	Portsmouth, OH Micro Area	76871	13129	39.8	28	17.1%
310M300US43460	Sikeston, MO Micro Area	38858	6635	40	28.9	17.1%
310M300US45180	Talladega-Sylacauga, AL Micro Area	91843	15685	41.5	27.7	17.1%
310M300US48300	Wenatchee, WA Metro Area	115723	19802	38.8	29.5	17.1%
310M300US10900	Allentown-Bethlehem-Easton, PA-NJ Metro Area	832790	141264	41.3	27.6	17.0%

310M300US12120	Atmore, AL Micro Area	37621	6413	39.6	28.1	17.0%
310M300US15380	Buffalo-Cheektowaga-Niagara Falls, NY Metro Area	1136670	193434	40.8	27.3	17.0%
310M300US25740	Helena, MT Micro Area	77915	13255	42.2	27.7	17.0%
310M300US30060	Lebanon, MO Micro Area	35488	6050	40.1	29.2	17.0%
310M300US32500	Maysville, KY Micro Area	17167	2916	40.7	28.5	17.0%
310M300US33580	Mitchell, SD Micro Area	23157	3944	37.9	28.9	17.0%
310M300US36900	Ottumwa, IA Micro Area	44155	7522	39	28.8	17.0%
310M300US37800	Pella, IA Micro Area	33127	5626	39.5	28.8	17.0%
310M300US47540	Wapakoneta, OH Micro Area	45778	7780	41.1	29	17.0%
310M300US12620	Bangor, ME Metro Area	152284	25664	41.8	26.1	16.9%
310M300US12900	Batesville, AR Micro Area	37097	6275	39.8	28.5	16.9%
310M300US14340	Boone, IA Micro Area	26381	4455	41.4	28	16.9%
310M300US18380	Cordele, GA Micro Area	23005	3881	38.3	28.9	16.9%
310M300US22540	Fond du Lac, WI Metro Area	102082	17280	41.2	27.7	16.9%
310M300US25760	Helena-West Helena, AR Micro Area	19518	3307	38.2	29.9	16.9%
310M300US33020	Mexico, MO Micro Area	25763	4349	39.6	28.2	16.9%
310M300US33220	Midland, MI Metro Area	83489	14137	41.5	27.6	16.9%
310M300US37020	Owosso, MI Micro Area	68617	11608	42	27.7	16.9%
310M300US45820	Topeka, KS Metro Area	233382	39507	39.9	28.7	16.9%
310M300US47180	Vincennes, IN Micro Area	37763	6369	38.1	27.2	16.9%
310M300US47420	Wahpeton, ND-MN Micro Area	22731	3846	40.1	27.6	16.9%
310M300US48500	West Point, MS Micro Area	19990	3381	39.4	28.5	16.9%
310M300US14220	Bogalusa, LA Micro Area	46449	7803	39.9	28.4	16.8%
310M300US16860	Chattanooga, TN-GA Metro Area	548359	92104	40.1	27.2	16.8%
310M300US19340	Davenport-Moline-Rock Island, IA-IL Metro Area	383141	64554	39.6	28.1	16.8%
310M300US19380	Dayton, OH Metro Area	800893	134673	39.4	27.5	16.8%
310M300US20980	El Dorado, AR Micro Area	40022	6714	39.7	28.3	16.8%

310M300US24980	Grenada, MS Micro Area	21379	3589	40.3	28.3	16.8%
310M300US25580	Hastings, NE Micro Area	31564	5313	37.9	28.4	16.8%
310M300US25780	Henderson, NC Micro Area	44420	7484	40.6	28.5	16.8%
310M300US27380	Jacksonville, TX Micro Area	51594	8657	38	29.1	16.8%
310M300US27540	Jasper, IN Micro Area	54850	9233	40.9	28.5	16.8%
310M300US30260	Lewisburg, PA Micro Area	45056	7571	39.4	25.6	16.8%
310M300US30900	Logansport, IN Micro Area	38248	6438	40.5	28.3	16.8%
310M300US32660	McMinnville, TN Micro Area	40210	6772	40.1	28.4	16.8%
310M300US35020	Natchez, MS-LA Micro Area	51794	8716	39.3	28.2	16.8%
310M300US49780	Zanesville, OH Micro Area	85933	14441	40.2	27.9	16.8%
310M300US29540	Lancaster, PA Metro Area	536494	89833	38.5	28.3	16.7%
310M300US34540	Mount Vernon, OH Micro Area	60945	10207	38.9	27.8	16.7%
310M300US35980	Norwich-New London, CT Metro Area	270772	45184	41	26.4	16.7%
310M300US40460	Rockingham, NC Micro Area	45447	7598	40.2	27.9	16.7%
310M300US42300	Sault Ste. Marie, MI Micro Area	38023	6342	39.7	25.9	16.7%
310M300US44780	Sturgis, MI Micro Area	60890	10189	39.4	28.7	16.7%
310M300US45620	Thomasville, GA Micro Area	44909	7500	39.6	28.2	16.7%
310M300US47920	Washington Court House, OH Micro Area	28659	4791	41.1	28.2	16.7%
310M300US10100	Aberdeen, SD Micro Area	42608	7068	37.8	27.8	16.6%
310M300US10700	Albertville, AL Micro Area	94738	15694	38.8	28.3	16.6%
310M300US11860	Atchison, KS Micro Area	16466	2732	35.9	27.8	16.6%
310M300US12980	Battle Creek, MI Metro Area	134327	22244	39.9	27.5	16.6%
310M300US13340	Bellefontaine, OH Micro Area	45323	7534	41	27.9	16.6%
310M300US15140	Brownsville, TN Micro Area	17944	2985	40	27.7	16.6%
310M300US16380	Celina, OH Micro Area	40723	6757	39.8	28.8	16.6%
310M300US17420	Cleveland, TN Metro Area	120388	20016	39.9	27.1	16.6%
310M300US18180	Concord, NH Micro Area	147958	24542	42.8	26.1	16.6%
310M300US31620	Magnolia, AR Micro Area	23992	3976	36.2	26.6	16.6%

310M300US32020	Marion, OH Micro Area	65483	10859	40.8	26.6	16.6%
310M300US37940	Peru, IN Micro Area	36035	5973	39.9	26.9	16.6%
310M300US40180	Riverton, WY Micro Area	40354	6693	38.3	28.5	16.6%
310M300US44540	Sterling, CO Micro Area	21885	3629	37.5	26.7	16.6%
310M300US44900	Summerville, GA Micro Area	24880	4141	40.3	27.4	16.6%
310M300US45660	Tiffin, OH Micro Area	55549	9229	39.5	27.2	16.6%
310M300US46900	Vernon, TX Micro Area	12972	2157	37.2	27.5	16.6%
310M300US48980	Wilson, NC Micro Area	81379	13471	40.4	27.7	16.6%
310M300US11500	Anniston-Oxford-Jacksonville, AL Metro Area	115527	19005	39.1	26.7	16.5%
310M300US13500	Bennettsville, SC Micro Area	27505	4536	39.9	26.1	16.5%
310M300US20220	Dubuque, IA Metro Area	96571	15897	38.6	27.2	16.5%
310M300US20540	Dyersburg, TN Micro Area	37751	6238	40.5	27.8	16.5%
310M300US20820	Effingham, IL Micro Area	34164	5652	39.1	27.8	16.5%
310M300US25420	Harrisburg-Carlisle, PA Metro Area	565008	93448	40.3	26.7	16.5%
310M300US26700	Huron, SD Micro Area	18163	2991	37.9	28.9	16.5%
310M300US37460	Panama City, FL Metro Area	196135	32337	40	26.4	16.5%
310M300US37900	Peoria, IL Metro Area	377258	62435	39	27.6	16.5%
310M300US38500	Plymouth, IN Micro Area	46752	7722	39.8	28.4	16.5%
310M300US38920	Port Lavaca, TX Micro Area	21821	3609	37.7	28.4	16.5%
310M300US43100	Sheboygan, WI Metro Area	115094	19006	41.3	27.2	16.5%
310M300US48900	Wilmington, NC Metro Area	277496	45664	39.6	25.8	16.5%
310M300US49300	Wooster, OH Micro Area	115915	19144	38.7	28	16.5%
310M300US10460	Alamogordo, NM Micro Area	65130	10656	35.6	27.3	16.4%
310M300US14740	Bremerton-Silverdale, WA Metro Area	258903	42340	39.1	26.1	16.4%
310M300US16020	Cape Girardeau, MO-IL Metro Area	97136	15891	37.6	26.4	16.4%
310M300US18620	Corsicana, TX Micro Area	48239	7922	38.9	28.7	16.4%
310M300US19460	Decatur, AL Metro Area	152445	24983	40.5	26.9	16.4%
310M300US20140	Dublin, GA Micro Area	57251	9415	38.9	27.6	16.4%
310M300US32940	Meridian, MS Micro Area	104392	17172	38.7	27.4	16.4%

310M300US34660	Murray, KY Micro Area	38616	6318	34.7	25	16.4%
310M300US36620	Ontario, OR-ID Micro Area	53260	8720	36.9	28.5	16.4%
310M300US36980	Owensboro, KY Metro Area	117319	19270	39.3	27.8	16.4%
310M300US41460	Salina, KS Micro Area	61291	10075	38.4	27.6	16.4%
310M300US46520	Urban Honolulu, HI Metro Area	990060	162580	37.6	26.4	16.4%
310M300US46620	Uvalde, TX Micro Area	27015	4431	33.8	29.3	16.4%
310M300US48180	Waycross, GA Micro Area	54829	8991	39.1	27.7	16.4%
310M300US49020	Winchester, VA-WV Metro Area	134712	22039	41	26.8	16.4%
310M300US10940	Alma, MI Micro Area	41319	6734	39	25.7	16.3%
310M300US12100	Atlantic City-Hammonton, NJ Metro Area	272926	44540	41.1	26.4	16.3%
310M300US13180	Beaver Dam, WI Micro Area	87833	14317	42.4	25.9	16.3%
310M300US18100	Columbus, NE Micro Area	32875	5360	38.3	28.3	16.3%
310M300US21500	Erie, PA Metro Area	277794	45175	39	26.3	16.3%
310M300US30340	Lewiston-Auburn, ME Metro Area	107317	17543	40.7	26.5	16.3%
310M300US30620	Lima, OH Metro Area	104157	16988	38.6	27	16.3%
310M300US33140	Michigan City-La Porte, IN Metro Area	110839	18081	40.2	26.4	16.3%
310M300US33780	Monroe, MI Metro Area	149619	24345	42.2	26.5	16.3%
310M300US34620	Muncie, IN Metro Area	115938	18843	35.4	25.1	16.3%
310M300US35700	Nogales, AZ Micro Area	46358	7572	36.6	29.3	16.3%
310M300US38180	Pierre, SD Micro Area	21956	3570	39	27.1	16.3%
310M300US38420	Platteville, WI Micro Area	51742	8423	35.6	25.7	16.3%
310M300US39740	Reading, PA Metro Area	415500	67608	39.9	26.7	16.3%
310M300US40380	Rochester, NY Metro Area	1080653	176313	39.9	26.1	16.3%
310M300US42820	Selma, AL Micro Area	40755	6627	39.3	27.6	16.3%
310M300US43320	Show Low, AZ Micro Area	107902	17550	35.9	29	16.3%
310M300US49620	York-Hanover, PA Metro Area	442216	72001	41	26.5	16.3%
310M300US10420	Akron, OH Metro Area	703398	114001	40.2	25.8	16.2%

310M300US13740	Billings, MT Metro Area	167545	27180	39	26.8	16.2%
310M300US15500	Burlington, NC Metro Area	157844	25600	39.7	26.6	16.2%
310M300US25540	Hartford-West Hartford-East Hartford, CT Metro Area	1213123	196948	40.7	25.7	16.2%
310M300US26540	Huntington, IN Micro Area	36520	5915	40.3	26.2	16.2%
310M300US27100	Jackson, MI Metro Area	158989	25827	41	26.3	16.2%
310M300US29860	Laurel, MS Micro Area	84875	13790	37.8	27.7	16.2%
310M300US29900	Laurinburg, NC Micro Area	35445	5759	39.3	26.9	16.2%
310M300US31500	Madison, IN Micro Area	32293	5230	40.6	25.7	16.2%
310M300US35300	New Haven-Milford, CT Metro Area	862127	139534	40.1	25.7	16.2%
310M300US36940	Owatonna, MN Micro Area	36612	5941	39.3	27.7	16.2%
310M300US39660	Rapid City, SD Metro Area	143711	23301	38.3	26.8	16.2%
310M300US44100	Springfield, IL Metro Area	210550	34213	40.2	26.6	16.2%
310M300US48140	Wausau, WI Metro Area	135293	21854	40.7	26.7	16.2%
310M300US49180	Winston-Salem, NC Metro Area	658195	106513	40.4	26.5	16.2%
310M300US10580	Albany-Schenectady-Troy, NY Metro Area	881862	141719	40	25.2	16.1%
310M300US18880	Crestview-Fort Walton Beach-Destin, FL Metro Area	261048	41906	38.2	25.8	16.1%
310M300US21700	Eureka-Arcata-Fortuna, CA Micro Area	135490	21751	37.7	24.9	16.1%
310M300US22420	Flint, MI Metro Area	410881	66191	40.1	26.6	16.1%
310M300US27980	Kahului-Wailuku-Lahaina, HI Metro Area	164180	26485	40.9	26.2	16.1%
310M300US39300	Providence-Warwick, RI-MA Metro Area	1613154	259288	40.2	25.3	16.1%
310M300US45500	Texarkana, TX-AR Metro Area	149889	24179	38.6	26.8	16.1%
310M300US10220	Ada, OK Micro Area	38289	6110	35.5	26.5	16.0%
310M300US16660	Charleston-Mattoon, IL Micro Area	63439	10179	35.8	24.6	16.0%

310M300US16820	Charlottesville, VA Metro Area	228825	36685	38.1	25	16.0%
310M300US21460	Enterprise, AL Micro Area	51073	8152	39.3	26.5	16.0%
310M300US22500	Florence, SC Metro Area	206109	32880	39.6	26.4	16.0%
310M300US22840	Fort Payne, AL Micro Area	71194	11415	39	27	16.0%
310M300US27160	Jackson, OH Micro Area	32624	5230	40.2	26.7	16.0%
310M300US31380	Macomb, IL Micro Area	31597	5064	31.3	23.8	16.0%
310M300US34460	Mount Sterling, KY Micro Area	46120	7382	40	26.7	16.0%
310M300US38220	Pine Bluff, AR Metro Area	93590	14962	39.2	25.8	16.0%
310M300US47940	Waterloo-Cedar Falls, IA Metro Area	170055	27281	36.1	25.8	16.0%
310M300US47980	Watertown, SD Micro Area	27963	4488	38.3	26.9	16.0%
310M300US13380	Bellingham, WA Metro Area	212738	33931	36.9	24.9	15.9%
310M300US15020	Brookhaven, MS Micro Area	34542	5479	37.8	26.6	15.9%
310M300US18860	Crescent City, CA Micro Area	27442	4357	38.7	25.2	15.9%
310M300US20900	El Campo, TX Micro Area	41430	6603	37.3	27.5	15.9%
310M300US21780	Evansville, IN-KY Metro Area	315263	50199	39.3	25.9	15.9%
310M300US22300	Findlay, OH Micro Area	75508	11982	38.9	25.8	15.9%
310M300US25200	Hailey, ID Micro Area	27765	4408	41.5	26.7	15.9%
310M300US27180	Jackson, TN Metro Area	129538	20560	37.9	26	15.9%
310M300US34780	Muskogee, OK Micro Area	69471	11080	37.7	26.8	15.9%
310M300US36840	Ottawa, KS Micro Area	25599	4068	40	26.7	15.9%
310M300US40420	Rockford, IL Metro Area	341150	54095	39.4	26.4	15.9%
310M300US40660	Rome, GA Metro Area	96471	15318	38.3	26.2	15.9%
310M300US45460	Terre Haute, IN Metro Area	170642	27093	38.1	25.2	15.9%
310M300US11620	Ardmore, OK Micro Area	48407	7637	38.1	26.9	15.8%
310M300US16060	Carbondale-Marion, IL Metro Area	126592	20031	36.3	24.7	15.8%
310M300US20100	Dover, DE Metro Area	173145	27333	37.3	26	15.8%
310M300US22340	Fitzgerald, GA Micro Area	17272	2730	39	26.9	15.8%

310M300US22900	Fort Smith, AR-OK Metro Area	280705	44404	38.5	26.4	15.8%
310M300US24700	Greensburg, IN Micro Area	26480	4179	38.8	26.5	15.8%
310M300US35740	Norfolk, NE Micro Area	48257	7642	38.1	26.8	15.8%
310M300US36300	Ogdensburg-Massena, NY Micro Area	110817	17477	38	24.7	15.8%
310M300US37120	Ozark, AL Micro Area	49393	7798	37.1	26	15.8%
310M300US37420	Pampa, TX Micro Area	22962	3617	36.7	26.8	15.8%
310M300US48580	Whitewater-Elkhorn, WI Micro Area	102917	16306	39.4	25.4	15.8%
310M300US48940	Wilmington, OH Micro Area	41869	6611	39.8	26.1	15.8%
310M300US13060	Bay City, TX Micro Area	36744	5766	37.2	26.9	15.7%
310M300US20700	East Stroudsburg, PA Metro Area	167306	26292	42.6	24.7	15.7%
310M300US23140	Frankfort, IN Micro Area	32455	5092	38.2	27	15.7%
310M300US23180	Frankfort, KY Micro Area	71986	11305	40.7	25.2	15.7%
310M300US33620	Moberly, MO Micro Area	24987	3914	39.2	25.2	15.7%
310M300US35940	Norwalk, OH Micro Area	58497	9210	39.2	26.4	15.7%
310M300US36500	Olympia-Tumwater, WA Metro Area	269885	42272	38.9	25.1	15.7%
310M300US37080	Oxford, NC Micro Area	58503	9181	42.5	24.8	15.7%
310M300US39220	Price, UT Micro Area	20512	3214	36.4	27.1	15.7%
310M300US43900	Spartanburg, SC Metro Area	325504	51137	38.7	25.7	15.7%
310M300US44060	Spokane-Spokane Valley, WA Metro Area	547688	86053	38.3	25.3	15.7%
310M300US11140	Americus, GA Micro Area	35855	5610	35.4	25.8	15.6%
310M300US11660	Arkadelphia, AR Micro Area	22495	3507	33.8	23.9	15.6%
310M300US12460	Bainbridge, GA Micro Area	27023	4213	37.9	26.1	15.6%
310M300US23500	Gaffney, SC Micro Area	56549	8846	38.9	25.7	15.6%
310M300US24260	Grand Island, NE Metro Area	84596	13201	37.5	26.8	15.6%
310M300US27660	Jennings, LA Micro Area	31405	4894	38.1	26.5	15.6%
310M300US29100	La Crosse-Onalaska, WI-MN Metro Area	136291	21303	36.9	24.4	15.6%

310M300US30940	London, KY Micro Area	127352	19906	38.8	25.8	15.6%
310M300US32220	Marshall, TX Micro Area	66606	10396	37.7	26.5	15.6%
310M300US41140	St. Joseph, MO-KS Metro Area	127137	19835	38.4	25.1	15.6%
310M300US42740	Sedalia, MO Micro Area	42309	6617	37.9	26.4	15.6%
310M300US43060	Shawnee, OK Micro Area	71614	11160	37.6	25.9	15.6%
310M300US44140	Springfield, MA Metro Area	630385	98436	38.2	24.4	15.6%
310M300US45060	Syracuse, NY Metro Area	659262	102959	39.2	24.8	15.6%
310M300US46340	Tyler, TX Metro Area	222277	34654	36.6	26.2	15.6%
310M300US22100	Farmington, MO Micro Area	66248	10248	39.2	24.5	15.5%
310M300US24860	Greenville-Anderson-Mauldin, SC Metro Area	872463	135477	38.5	25.2	15.5%
310M300US28100	Kankakee, IL Metro Area	110801	17148	37.7	25.5	15.5%
310M300US31660	Malone, NY Micro Area	51054	7909	40.5	23.9	15.5%
310M300US34740	Muskegon, MI Metro Area	172707	26768	39.1	25.5	15.5%
310M300US37860	Pensacola-Ferry Pass-Brent, FL Metro Area	476702	73877	38	24.6	15.5%
310M300US42980	Seymour, IN Micro Area	43779	6784	38.2	25.8	15.5%
310M300US43780	South Bend-Mishawaka, IN-MI Metro Area	320010	49538	38	25.4	15.5%
310M300US44180	Springfield, MO Metro Area	455133	70753	36.6	25.2	15.5%
310M300US45140	Tahlequah, OK Micro Area	48404	7495	35	25.1	15.5%
310M300US49100	Winona, MN Micro Area	50992	7889	34.5	23.4	15.5%
310M300US49380	Worthington, MN Micro Area	21854	3382	36	26.7	15.5%
310M300US17060	Chillicothe, OH Micro Area	77125	11882	40.5	24.5	15.4%
310M300US18020	Columbus, IN Metro Area	81024	12438	38.1	25.3	15.4%
310M300US18660	Cortland, NY Micro Area	48334	7459	36.2	23.8	15.4%
310M300US27900	Joplin, MO Metro Area	176759	27159	36.8	25.7	15.4%
310M300US30420	Lexington, NE Micro Area	25944	3983	36.8	26.7	15.4%
310M300US33300	Milledgeville, GA Micro Area	54194	8338	36.1	23.3	15.4%
310M300US34700	Muscatine, IA Micro Area	42923	6627	38.1	26	15.4%
310M300US35060	Natchitoches, LA Micro Area	39051	6006	33.6	25.3	15.4%

310M300US38460	Plattsburgh, NY Micro Area	81224	12534	39.4	23.3	15.4%
310M300US41820	Sanford, NC Micro Area	59805	9192	37.9	25.8	15.4%
310M300US42620	Searcy, AR Micro Area	78706	12084	36.3	25.2	15.4%
310M300US47020	Victoria, TX Metro Area	99028	15274	36.4	26.1	15.4%
310M300US47080	Vidalia, GA Micro Area	36122	5568	36.9	26.2	15.4%
310M300US48020	Watertown-Fort Atkinson, WI Micro Area	84586	13028	40.1	24.6	15.4%
310M300US14420	Borger, TX Micro Area	21704	3326	36.9	26.1	15.3%
310M300US16300	Cedar Rapids, IA Metro Area	266122	40772	38.1	25.1	15.3%
310M300US27500	Janesville-Beloit, WI Metro Area	161226	24728	39.3	25.2	15.3%
310M300US30280	Lewisburg, TN Micro Area	31753	4862	39.3	25.1	15.3%
310M300US30980	Longview, TX Metro Area	216934	33222	37	25.6	15.3%
310M300US31260	Lufkin, TX Micro Area	87700	13385	36.8	26	15.3%
310M300US31420	Macon-Bibb County, GA Metro Area	229966	35137	38.1	25.1	15.3%
310M300US37500	Paragould, AR Micro Area	44197	6768	37.7	25.4	15.3%
310M300US40340	Rochester, MN Metro Area	214485	32804	38.4	25.4	15.3%
310M300US40620	Rolla, MO Micro Area	44873	6870	34.8	24.1	15.3%
310M300US47700	Warsaw, IN Micro Area	78720	12065	38	25.4	15.3%
310M300US16340	Cedartown, GA Micro Area	41444	6280	37.1	25.8	15.2%
310M300US19820	Detroit-Warren-Dearborn, MI Metro Area	4304613	653830	40	24.5	15.2%
310M300US21420	Enid, OK Metro Area	62421	9507	35.7	25.9	15.2%
310M300US22820	Fort Morgan, CO Micro Area	28123	4261	36.6	25.9	15.2%
310M300US24660	Greensboro-High Point, NC Metro Area	751590	114079	38.8	24.4	15.2%
310M300US24900	Greenwood, MS Micro Area	40334	6126	35.6	25.7	15.2%
310M300US26090	Holland, MI Micro Area	114145	17311	39.7	25.3	15.2%
310M300US35860	North Vernon, IN Micro Area	27840	4229	39.6	24.9	15.2%
310M300US39540	Racine, WI Metro Area	195101	29650	40.1	24.9	15.2%
310M300US40780	Russellville, AR Micro Area	84973	12915	36.3	24.7	15.2%
310M300US41180	St. Louis, MO-IL Metro Area	2804998	427609	39	24.5	15.2%

310M300US46980	Vicksburg, MS Micro Area	56616	8621	37.6	25.1	15.2%
310M300US12140	Auburn, IN Micro Area	42524	6421	39.1	25.1	15.1%
310M300US20740	Eau Claire, WI Metro Area	165833	25096	36.7	23.8	15.1%
310M300US36660	Opelousas, LA Micro Area	83580	12591	36.2	26.1	15.1%
310M300US39900	Reno, NV Metro Area	449442	68047	38.2	24.1	15.1%
310M300US40740	Roswell, NM Micro Area	65454	9893	35.3	26.1	15.1%
310M300US43340	Shreveport-Bossier City, LA Metro Area	443974	67091	36.7	25	15.1%
310M300US44940	Sumter, SC Metro Area	107379	16185	36	24.9	15.1%
310M300US48100	Wauchula, FL Micro Area	27326	4125	34.9	25.9	15.1%
310M300US10740	Albuquerque, NM Metro Area	905049	136007	37.7	24.3	15.0%
310M300US10780	Alexandria, LA Metro Area	154385	23130	37.3	24.8	15.0%
310M300US20420	Durango, CO Micro Area	54469	8148	39.7	22.7	15.0%
310M300US21260	Ellensburg, WA Micro Area	43726	6563	33.3	22.3	15.0%
310M300US24140	Goldsboro, NC Metro Area	124496	18736	37.3	24.6	15.0%
310M300US25180	Hagerstown-Martinsburg, MD-WV Metro Area	261156	39259	39.8	24.3	15.0%
310M300US27620	Jefferson City, MO Metro Area	151056	22713	38.5	24.1	15.0%
310M300US36780	Oshkosh-Neenah, WI Metro Area	169540	25384	38	23.3	15.0%
310M300US41420	Salem, OR Metro Area	410119	61700	36.3	25	15.0%
310M300US43380	Sidney, OH Micro Area	48902	7324	39.3	25.2	15.0%
310M300US44620	Stevens Point, WI Micro Area	70371	10560	36.6	23	15.0%
310M300US13820	Birmingham-Hoover, AL Metro Area	1144097	170598	38.4	24.1	14.9%
310M300US14860	Bridgeport-Stamford-Norwalk, CT Metro Area	947328	140926	40.2	24	14.9%
310M300US19760	DeRidder, LA Micro Area	36598	5438	37.5	24.7	14.9%
310M300US33660	Mobile, AL Metro Area	414328	61878	37.3	24.4	14.9%
310M300US34020	Morgan City, LA Micro Area	52578	7829	38	24.6	14.9%

310M300US37980	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metro Area	6065644	903492	38.6	23.7	14.9%
310M300US38260	Pittsburg, KS Micro Area	39099	5837	32.5	23.6	14.9%
310M300US43580	Sioux City, IA-NE-SD Metro Area	168647	25204	36.7	25.4	14.9%
310M300US45780	Toledo, OH Metro Area	605204	90050	37.3	23.8	14.9%
310M300US14380	Boone, NC Micro Area	53421	7923	30.6	20.6	14.8%
310M300US19540	Decatur, IN Micro Area	35018	5175	33.3	27.4	14.8%
310M300US28860	Kirksville, MO Micro Area	29887	4424	29.1	22.5	14.8%
310M300US31140	Louisville/Jefferson County, KY-IN Metro Area	1278203	188897	38.8	23.7	14.8%
310M300US47780	Washington, IN Micro Area	32777	4854	34.6	26.4	14.8%
310M300US13420	Bemidji, MN Micro Area	45847	6724	33.4	24.4	14.7%
310M300US13900	Bismarck, ND Metro Area	128673	18935	36.9	23.7	14.7%
310M300US13980	Blacksburg-Christiansburg-Radford, VA Metro Area	181863	26821	34	21.5	14.7%
310M300US14460	Boston-Cambridge-Newton, MA-NH Metro Area	4771936	701871	38.7	22.7	14.7%
310M300US24380	Grants, NM Micro Area	27049	3982	36.4	24.1	14.7%
310M300US25840	Hermiston-Pendleton, OR Micro Area	87889	12883	36.4	24.7	14.7%
310M300US27700	Jesup, GA Micro Area	29833	4399	38.2	24.3	14.7%
310M300US32140	Marshall, MN Micro Area	25789	3801	35.6	24.4	14.7%
310M300US32860	Menomonie, WI Micro Area	44260	6485	34.2	22.4	14.7%
310M300US41660	San Angelo, TX Metro Area	118498	17360	34.1	23.7	14.7%
310M300US48660	Wichita Falls, TX Metro Area	150940	22235	35.3	23.5	14.7%
310M300US12260	Augusta-Richmond County, GA-SC Metro Area	589519	85927	37.2	23.6	14.6%
310M300US16940	Cheyenne, WY Metro Area	97031	14157	36.8	23.5	14.6%
310M300US18700	Corvallis, OR Metro Area	88249	12918	32.8	21.3	14.6%
310M300US22620	Forrest City, AR Micro Area	26688	3897	38.4	23.1	14.6%
310M300US26220	Hood River, OR Micro Area	22938	3344	39	24	14.6%

310M300US35620	New York-Newark-Jersey City, NY-NJ-PA Metro Area	20192042	2954170	38.2	23	14.6%
310M300US43180	Shelbyville, TN Micro Area	46854	6820	37.2	24.4	14.6%
310M300US43660	Snyder, TX Micro Area	17346	2539	35.6	24.3	14.6%
310M300US49340	Worcester, MA-CT Metro Area	934923	136760	40.2	22.9	14.6%
310M300US10180	Abilene, TX Metro Area	169000	24460	33.9	23.4	14.5%
310M300US18060	Columbus, MS Micro Area	59558	8635	36.6	23.6	14.5%
310M300US25060	Gulfport-Biloxi-Pascagoula, MS Metro Area	388082	56366	37.4	23.6	14.5%
310M300US27260	Jacksonville, FL Metro Area	1447884	209975	38.1	23.1	14.5%
310M300US38060	Phoenix-Mesa-Scottsdale, AZ Metro Area	4561038	662220	36.2	23.9	14.5%
310M300US10500	Albany, GA Metro Area	153776	22132	36.6	23.7	14.4%
310M300US12580	Baltimore-Columbia-Towson, MD Metro Area	2792050	401803	38.3	22.7	14.4%
310M300US13140	Beaumont-Port Arthur, TX Metro Area	408663	58935	36.9	23.4	14.4%
310M300US22060	Faribault-Northfield, MN Micro Area	65251	9407	36.6	22.7	14.4%
310M300US24580	Green Bay, WI Metro Area	315847	45608	38.5	23.3	14.4%
310M300US26660	Huntsville, TX Micro Area	85299	12259	36.5	20.7	14.4%
310M300US28020	Kalamazoo-Portage, MI Metro Area	335020	48320	35.7	22.8	14.4%
310M300US28340	Kendallville, IN Micro Area	47421	6833	38.5	24	14.4%
310M300US29500	Lamesa, TX Micro Area	13095	1892	33.1	23.8	14.4%
310M300US29740	Las Cruces, NM Metro Area	213849	30758	32.9	23.9	14.4%
310M300US31700	Manchester-Nashua, NH Metro Area	406371	58520	40.5	22.4	14.4%
310M300US41860	San Francisco-Oakland-Hayward, CA Metro Area	4641820	668877	38.8	22	14.4%
310M300US46140	Tulsa, OK Metro Area	977869	140551	36.8	23.7	14.4%
310M300US46180	Tupelo, MS Micro Area	139354	20131	37.4	24	14.4%

310M300US10860	Alice, TX Micro Area	41318	5908	34.5	24.9	14.3%
310M300US15420	Burley, ID Micro Area	43920	6286	33.8	26.1	14.3%
310M300US25500	Harrisonburg, VA Metro Area	131717	18808	33.6	21.7	14.3%
310M300US27600	Jefferson, GA Micro Area	63851	9117	38.7	23.7	14.3%
310M300US33340	Milwaukee-Waukesha-West Allis, WI Metro Area	1575101	225277	37.6	23	14.3%
310M300US33740	Monroe, LA Metro Area	178970	25563	35.8	23.6	14.3%
310M300US42200	Santa Maria-Santa Barbara, CA Metro Area	442996	63210	33.7	22.5	14.3%
310M300US45980	Troy, AL Micro Area	33287	4744	31.4	21.6	14.3%
310M300US46300	Twin Falls, ID Micro Area	105287	15049	34.1	25	14.3%
310M300US11060	Altus, OK Micro Area	25574	3633	34.2	23.6	14.2%
310M300US17380	Cleveland, MS Micro Area	33121	4692	35	23.3	14.2%
310M300US18580	Corpus Christi, TX Metro Area	450183	63712	35.7	23.3	14.2%
310M300US22660	Fort Collins, CO Metro Area	330976	46924	35.7	21.6	14.2%
310M300US25700	Hays, KS Micro Area	28877	4102	32	22.1	14.2%
310M300US32340	Maryville, MO Micro Area	22744	3225	29	20.4	14.2%
310M300US34220	Moultrie, GA Micro Area	45890	6530	36	24.1	14.2%
310M300US35380	New Orleans-Metairie, LA Metro Area	1260660	179100	37.7	22.4	14.2%
310M300US40060	Richmond, VA Metro Area	1270158	180685	38.5	22.3	14.2%
310M300US40900	Sacramento--Roseville--Arden-Arcade, CA Metro Area	2268005	322400	37	22.8	14.2%
310M300US42100	Santa Cruz-Watsonville, CA Metro Area	273263	38885	37.3	21.6	14.2%
310M300US44740	Storm Lake, IA Micro Area	20369	2890	35.1	23.6	14.2%
310M300US46700	Vallejo-Fairfield, CA Metro Area	434981	61554	37.7	22.4	14.2%
310M300US47220	Vineland-Bridgeton, NJ Metro Area	154952	22010	36.8	22.9	14.2%

310M300US12680	Bardstown, KY Micro Area	45131	6358	38.9	23	14.1%
310M300US16100	Carlsbad-Artesia, NM Micro Area	56793	8024	35.9	23.7	14.1%
310M300US17140	Cincinnati, OH-KY-IN Metro Area	2156723	303166	37.7	22.7	14.1%
310M300US24740	Greenville, MS Micro Area	48002	6750	36.7	23.6	14.1%
310M300US26620	Huntsville, AL Metro Area	444908	62516	38.4	22.2	14.1%
310M300US33540	Missoula, MT Metro Area	114231	16074	35.4	21.1	14.1%
310M300US37100	Oxnard-Thousand Oaks-Ventura, CA Metro Area	847834	119246	37.5	22.7	14.1%
310M300US37300	Palestine, TX Micro Area	57747	8134	39.1	21.2	14.1%
310M300US45940	Trenton, NJ Metro Area	373362	52772	38.6	22	14.1%
310M300US49260	Woodward, OK Micro Area	21140	2972	36	23.3	14.1%
310M300US23060	Fort Wayne, IN Metro Area	429060	60063	36.4	23.3	14.0%
310M300US29340	Lake Charles, LA Metro Area	205559	28781	36.3	22.9	14.0%
310M300US30780	Little Rock-North Little Rock-Conway, AR Metro Area	730346	102469	36.5	22.6	14.0%
310M300US33860	Montgomery, AL Metro Area	373507	52268	36.8	22.4	14.0%
310M300US36740	Orlando-Kissimmee-Sanford, FL Metro Area	2390859	334638	36.9	22	14.0%
310M300US45700	Tifton, GA Micro Area	40531	5683	35.5	23	14.0%
310M300US15540	Burlington-South Burlington, VT Metro Area	216751	30219	37.7	20.9	13.9%
310M300US19620	Del Rio, TX Micro Area	48976	6810	31.7	24.3	13.9%
310M300US27860	Jonesboro, AR Metro Area	128344	17827	35	22.6	13.9%
310M300US28260	Kearney, NE Micro Area	55381	7676	33.8	22.1	13.9%
310M300US29300	LaGrange, GA Micro Area	69433	9632	36.2	22.8	13.9%
310M300US29620	Lansing-East Lansing, MI Metro Area	472092	65820	35.3	21.4	13.9%
310M300US47380	Waco, TX Metro Area	263009	36438	33.5	22.5	13.9%
310M300US14180	Blytheville, AR Micro Area	43534	6007	36.1	23.2	13.8%

310M300US16700	Charleston-North Charleston, SC Metro Area	744195	102911	36.6	21.6	13.8%
310M300US21380	Emporia, KS Micro Area	33302	4602	32.9	21.7	13.8%
310M300US23580	Gainesville, GA Metro Area	192865	26569	36	23	13.8%
310M300US44500	Stephenville, TX Micro Area	41016	5666	30	21.2	13.8%
310M300US48620	Wichita, KS Metro Area	642339	88860	35.8	23	13.8%
310M300US17260	Clarksdale, MS Micro Area	24296	3327	34	23.4	13.7%
310M300US28140	Kansas City, MO-KS Metro Area	2088830	287172	37.1	22.3	13.7%
310M300US29820	Las Vegas-Henderson-Paradise, NV Metro Area	2112436	289329	36.9	21.9	13.7%
310M300US31300	Lumberton, NC Micro Area	134187	18407	35.9	22.6	13.7%
310M300US41060	St. Cloud, MN Metro Area	194660	26601	34.5	21.7	13.7%
310M300US14540	Bowling Green, KY Metro Area	169250	23063	35	21.3	13.6%
310M300US15660	Calhoun, GA Micro Area	56424	7664	37	22.2	13.6%
310M300US17900	Columbia, SC Metro Area	808377	109888	36.3	21.3	13.6%
310M300US20500	Durham-Chapel Hill, NC Metro Area	550281	74977	36.7	20.9	13.6%
310M300US21140	Elkhart-Goshen, IN Metro Area	202924	27668	35.4	23.3	13.6%
310M300US38900	Portland-Vancouver-Hillsboro, OR-WA Metro Area	2382037	323761	37.8	21.2	13.6%
310M300US11540	Appleton, WI Metro Area	233025	31487	38.4	21.7	13.5%
310M300US26380	Houma-Thibodaux, LA Metro Area	211179	28528	36.2	21.9	13.5%
310M300US26960	Ionia, MI Micro Area	64147	8670	38.7	21.4	13.5%
310M300US28540	Ketchikan, AK Micro Area	13745	1861	39.5	21.1	13.5%
310M300US30220	Levelland, TX Micro Area	23273	3143	33.4	22.5	13.5%
310M300US31860	Mankato-North Mankato, MN Metro Area	99244	13384	32.6	20.4	13.5%

310M300US40080	Richmond-Berea, KY Micro Area	105191	14244	35.3	20.8	13.5%
310M300US24340	Grand Rapids-Wyoming, MI Metro Area	1039182	138918	35.7	21.5	13.4%
310M300US34420	Mount Pleasant, TX Micro Area	32664	4372	34	23.3	13.4%
310M300US47260	Virginia Beach-Norfolk-Newport News, VA-NC Metro Area	1717708	230338	35.7	20.9	13.4%
310M300US14260	Boise City, ID Metro Area	677346	90120	35.8	22	13.3%
310M300US16220	Casper, WY Metro Area	81023	10779	36.3	21.3	13.3%
310M300US16980	Chicago-Naperville-Elgin, IL-IN-WI Metro Area	9549229	1271885	37	21.1	13.3%
310M300US23540	Gainesville, FL Metro Area	277056	36729	31.7	19.3	13.3%
310M300US24220	Grand Forks, ND-MN Metro Area	101694	13553	31.9	20.4	13.3%
310M300US25220	Hammond, LA Metro Area	128850	17083	34.9	21.4	13.3%
310M300US49700	Yuba City, CA Metro Area	170227	22644	34.3	22.2	13.3%
310M300US13940	Blackfoot, ID Micro Area	45369	6007	33.3	24	13.2%
310M300US18780	Craig, CO Micro Area	13056	1723	37.7	21.6	13.2%
310M300US19140	Dalton, GA Metro Area	143407	18876	36.2	21.8	13.2%
310M300US21060	Elizabethtown-Fort Knox, KY Metro Area	150253	19818	37	21.2	13.2%
310M300US27140	Jackson, MS Metro Area	578565	76554	36	21.3	13.2%
310M300US34860	Nacogdoches, TX Micro Area	65411	8628	30.6	20.8	13.2%
310M300US42340	Savannah, GA Metro Area	377476	49731	35	20.8	13.2%
310M300US48220	Weatherford, OK Micro Area	29169	3839	30.7	21.2	13.2%
310M300US17500	Clewiston, FL Micro Area	39064	5119	33.7	22	13.1%
310M300US22140	Farmington, NM Metro Area	128221	16841	34.6	22.1	13.1%
310M300US31460	Madera, CA Metro Area	154440	20191	33.7	22.1	13.1%
310M300US31540	Madison, WI Metro Area	640072	83993	35.9	20	13.1%
310M300US39700	Raymondville, TX Micro Area	21839	2858	33.4	21	13.1%

310M300US44460	Steamboat Springs, CO Micro Area	24359	3180	39.9	19.2	13.1%
310M300US11100	Amarillo, TX Metro Area	261827	33954	34.7	21.2	13.0%
310M300US20060	Douglas, GA Micro Area	43048	5581	35.9	20.8	13.0%
310M300US30460	Lexington-Fayette, KY Metro Area	500689	65311	35.8	20.2	13.0%
310M300US34060	Morgantown, WV Metro Area	137475	17899	33.6	18.6	13.0%
310M300US38540	Pocatello, ID Metro Area	84113	10956	33.2	21.7	13.0%
310M300US38780	Portales, NM Micro Area	19313	2508	29.7	20.8	13.0%
310M300US46220	Tuscaloosa, AL Metro Area	239589	31090	33.6	19.7	13.0%
310M300US25620	Hattiesburg, MS Metro Area	148399	19134	34	20.5	12.9%
310M300US29180	Lafayette, LA Metro Area	487633	62697	35.4	20.7	12.9%
310M300US34180	Moses Lake, WA Micro Area	93420	12039	32.6	22.6	12.9%
310M300US36420	Oklahoma City, OK Metro Area	1353504	174728	34.9	20.8	12.9%
310M300US38380	Plainview, TX Micro Area	34527	4468	33	21.8	12.9%
310M300US40940	Safford, AZ Micro Area	37700	4849	33.1	21.5	12.9%
310M300US41740	San Diego-Carlsbad, CA Metro Area	3283665	425217	35.4	20	12.9%
310M300US44300	State College, PA Metro Area	160646	20703	31.3	17.9	12.9%
310M300US45220	Tallahassee, FL Metro Area	377674	48578	33.3	19	12.9%
310M300US49420	Yakima, WA Metro Area	248279	32044	32.7	22.6	12.9%
310M300US12940	Baton Rouge, LA Metro Area	828741	105821	34.9	20.1	12.8%
310M300US19860	Dickinson, ND Micro Area	30316	3894	34.3	20.6	12.8%
310M300US21120	Elk City, OK Micro Area	22971	2946	35.1	20.8	12.8%
310M300US28780	Kingsville, TX Micro Area	32104	4101	28	20.4	12.8%
310M300US30700	Lincoln, NE Metro Area	323402	41542	33.3	20	12.8%
310M300US31080	Los Angeles-Long Beach-Anaheim, CA Metro Area	13261538	1691429	36.4	19.7	12.8%
310M300US37780	Pecos, TX Micro Area	14791	1896	35.4	19.8	12.8%
310M300US16740	Charlotte-Concord-Gastonia, NC-SC Metro Area	2427024	308080	37.3	20.2	12.7%

310M300US17980	Columbus, GA-AL Metro Area	309979	39421	34.4	20.2	12.7%
310M300US26900	Indianapolis-Carmel-Anderson, IN Metro Area	1989032	253130	36.3	20.5	12.7%
310M300US27060	Ithaca, NY Metro Area	104415	13290	30.4	17.7	12.7%
310M300US33460	Minneapolis-St. Paul-Bloomington, MN-WI Metro Area	3526149	448517	36.8	20.1	12.7%
310M300US45000	Susanville, CA Micro Area	31470	4001	36.2	17.8	12.7%
310M300US49820	Zapata, TX Micro Area	14415	1832	29.4	23.8	12.7%
310M300US13700	Big Spring, TX Micro Area	37911	4770	36.7	19.2	12.6%
310M300US14020	Bloomington, IN Metro Area	165393	20821	30.5	17.8	12.6%
310M300US14500	Boulder, CO Metro Area	316782	39969	36.2	18.7	12.6%
310M300US24060	Glenwood Springs, CO Micro Area	75692	9522	37.1	19.7	12.6%
310M300US32820	Memphis, TN-MS-AR Metro Area	1344058	169976	35.9	20.4	12.6%
310M300US36540	Omaha-Council Bluffs, NE-IA Metro Area	914190	115515	35.4	20.5	12.6%
310M300US40820	Ruston, LA Micro Area	47536	5993	27.6	18.8	12.6%
310M300US47580	Warner Robins, GA Metro Area	188764	23830	35.6	20.1	12.6%
310M300US11460	Ann Arbor, MI Metro Area	361509	45102	33.4	18.3	12.5%
310M300US15180	Brownsville-Harlingen, TX Metro Area	420201	52630	31.4	22.3	12.5%
310M300US19780	Des Moines-West Des Moines, IA Metro Area	623113	77856	35.7	20.2	12.5%
310M300US33500	Minot, ND Micro Area	78122	9794	32	19.5	12.5%
310M300US41940	San Jose-Sunnyvale-Santa Clara, CA Metro Area	1969897	246855	36.9	19.4	12.5%
310M300US42660	Seattle-Tacoma-Bellevue, WA Metro Area	3735216	468099	37.1	19.1	12.5%
310M300US14010	Bloomington, IL Metro Area	189407	23395	33.5	18.8	12.4%

310M300US16580	Champaign-Urbana, IL Metro Area	237849	29573	31	18.3	12.4%
310M300US18140	Columbus, OH Metro Area	2023695	249985	35.8	19.4	12.4%
310M300US34300	Mountain Home, ID Micro Area	26232	3244	31.4	20	12.4%
310M300US34980	Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area	1830410	227102	36.3	19.4	12.4%
310M300US41500	Salinas, CA Metro Area	433168	53745	33.9	20.3	12.4%
310M300US22220	Fayetteville-Springdale-Rogers, AR-MO Metro Area	514166	63288	33.9	19.9	12.3%
310M300US33700	Modesto, CA Metro Area	535684	65844	33.9	20.4	12.3%
310M300US41700	San Antonio-New Braunfels, TX Metro Area	2377507	292293	34.4	19.8	12.3%
310M300US43620	Sioux Falls, SD Metro Area	250564	30870	35	20	12.3%
310M300US26820	Idaho Falls, ID Metro Area	140427	17115	32.6	21.7	12.2%
310M300US48060	Watertown-Fort Drum, NY Metro Area	116567	14245	31.9	19.3	12.2%
310M300US12020	Athens-Clarke County, GA Metro Area	202780	24492	31.8	17.8	12.1%
310M300US20940	El Centro, CA Metro Area	179957	21816	32.2	20.5	12.1%
310M300US40140	Riverside-San Bernardino-Ontario, CA Metro Area	4476222	542153	34	19.7	12.1%
310M300US17820	Colorado Springs, CO Metro Area	698595	84040	34.4	19	12.0%
310M300US24780	Greenville, NC Metro Area	176484	21106	32	18.1	12.0%
310M300US25820	Hereford, TX Micro Area	18947	2269	31.8	21.3	12.0%
310M300US28420	Kennewick-Richland, WA Metro Area	279653	33646	33.6	20.3	12.0%
310M300US31180	Lubbock, TX Metro Area	309722	37212	30.9	18.8	12.0%
310M300US34140	Moscow, ID Micro Area	38697	4633	28.3	17.3	12.0%
310M300US44700	Stockton-Lodi, CA Metro Area	724153	86538	33.9	19.8	12.0%

310M300US46660	Valdosta, GA Metro Area	143969	17327	31.6	18.8	12.0%
310M300US15680	California-Lexington Park, MD Metro Area	110979	13184	36.5	18.8	11.9%
310M300US16260	Cedar City, UT Micro Area	48504	5748	29.1	20.1	11.9%
310M300US19740	Denver-Aurora-Lakewood, CO Metro Area	2798684	333697	36.3	18.5	11.9%
310M300US26940	Indianola, MS Micro Area	26915	3210	34.9	18.4	11.9%
310M300US30020	Lawton, OK Metro Area	129066	15350	33	18.6	11.9%
310M300US47900	Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area	6090196	723284	36.7	18.3	11.9%
310M300US47660	Warrensburg, MO Micro Area	53941	6348	29.9	17.7	11.8%
310M300US11900	Athens, OH Micro Area	65563	7697	28.6	16	11.7%
310M300US13300	Beeville, TX Micro Area	32729	3843	35.2	17.6	11.7%
310M300US17580	Clovis, NM Micro Area	50283	5862	30.8	19	11.7%
310M300US21740	Evanston, WY Micro Area	20758	2426	35.1	19.9	11.7%
310M300US27220	Jackson, WY-ID Micro Area	33699	3929	37.9	17.6	11.7%
310M300US41220	St. Marys, GA Micro Area	52252	6114	31.6	18.4	11.7%
310M300US29200	Lafayette-West Lafayette, IN Metro Area	214760	24943	29.6	17.3	11.6%
310M300US44660	Stillwater, OK Micro Area	80634	9354	27.2	16.8	11.6%
310M300US49080	Winnemucca, NV Micro Area	17088	1981	35.6	19	11.6%
310M300US20380	Dunn, NC Micro Area	128753	14830	33.9	18.7	11.5%
310M300US14580	Bozeman, MT Micro Area	100733	11471	33.4	16.7	11.4%
310M300US21340	El Paso, TX Metro Area	838527	95670	31.9	18.9	11.4%
310M300US22020	Fargo, ND-MN Metro Area	232660	26530	32.3	17.3	11.4%
310M300US23420	Fresno, CA Metro Area	971616	110868	31.8	19.1	11.4%
310M300US24540	Greeley, CO Metro Area	285729	32490	34.2	18.4	11.4%
310M300US26980	Iowa City, IA Metro Area	166520	18989	31.1	16.8	11.4%
310M300US34380	Mount Pleasant, MI Micro Area	70572	8028	27.4	16	11.4%

310M300US14720	Breckenridge, CO Micro Area	29722	3352	39.2	15.5	11.3%
310M300US27940	Juneau, AK Micro Area	32434	3679	38	17	11.3%
310M300US20580	Eagle Pass, TX Micro Area	57471	6426	29.6	19.7	11.2%
310M300US37060	Oxford, MS Micro Area	52744	5896	29.3	15.8	11.2%
310M300US12060	Atlanta-Sandy Springs-Roswell, GA Metro Area	5700990	635508	36.1	17.5	11.1%
310M300US22380	Flagstaff, AZ Metro Area	138639	15433	30.6	16.5	11.1%
310M300US23700	Gallup, NM Micro Area	72849	8076	31.6	18.7	11.1%
310M300US40100	Rio Grande City, TX Micro Area	63420	7023	28.8	19.9	11.1%
310M300US46820	Vermillion, SD Micro Area	13907	1541	25	15.5	11.1%
310M300US11180	Ames, IA Metro Area	95888	10568	25.9	15.3	11.0%
310M300US39580	Raleigh, NC Metro Area	1273985	140739	36.3	17.2	11.0%
310M300US17860	Columbia, MO Metro Area	174589	19080	30.6	15.9	10.9%
310M300US22860	Fort Polk South, LA Micro Area	51906	5636	30.1	17.1	10.9%
310M300US25100	Guymon, OK Micro Area	21409	2331	32.5	17.7	10.9%
310M300US12220	Auburn-Opelika, AL Metro Area	156597	16836	31	15.9	10.8%
310M300US15100	Brookings, SD Micro Area	33697	3653	26.7	15.7	10.8%
310M300US26020	Hobbs, NM Micro Area	69505	7519	31.7	18.3	10.8%
310M300US29940	Lawrence, KS Metro Area	117806	12728	29.2	15.4	10.8%
310M300US22180	Fayetteville, NC Metro Area	385337	41168	31.2	16.7	10.7%
310M300US32900	Merced, CA Metro Area	267390	28611	30.8	18	10.7%
310M300US36830	Othello, WA Micro Area	19261	2061	28.4	19.7	10.7%
310M300US47300	Visalia-Porterville, CA Metro Area	458809	48912	30.6	18.4	10.7%
310M300US44340	Statesboro, GA Micro Area	73742	7826	28.1	15.3	10.6%
310M300US44920	Summit Park, UT Micro Area	39731	4202	38.8	16.6	10.6%
310M300US19100	Dallas-Fort Worth-Arlington, TX Metro Area	7104415	749437	34.6	16.8	10.5%
310M300US19980	Dodge City, KS Micro Area	34658	3609	31.1	17.6	10.4%

310M300US32580	McAllen-Edinburg-Mission, TX Metro Area	839539	87567	28.9	18.6	10.4%
310M300US29660	Laramie, WY Micro Area	37944	3911	27.1	14.1	10.3%
310M300US33260	Midland, TX Metro Area	165430	17059	31.8	16.7	10.3%
310M300US36260	Ogden-Clearfield, UT Metro Area	642274	66184	31.4	17.7	10.3%
310M300US44260	Starkville, MS Micro Area	49392	5081	25.4	14.2	10.3%
310M300US11380	Andrews, TX Micro Area	17577	1788	31.6	17.3	10.2%
310M300US12540	Bakersfield, CA Metro Area	878744	89227	31.3	16.8	10.2%
310M300US23780	Garden City, KS Micro Area	41028	4199	30.8	17.4	10.2%
310M300US28660	Killeen-Temple, TX Metro Area	432797	44314	31.1	16.3	10.2%
310M300US17300	Clarksville, TN-KY Metro Area	278844	28141	30.5	16	10.1%
310M300US21220	Elko, NV Micro Area	54105	5440	34.4	16.1	10.1%
310M300US26420	Houston-The Woodlands-Sugar Land, TX Metro Area	6636208	673566	34	16.1	10.1%
310M300US12420	Austin-Round Rock, TX Metro Area	2000590	197589	34.2	14.9	9.9%
310M300US17780	College Station-Bryan, TX Metro Area	248554	24675	27.2	14.4	9.9%
310M300US41620	Salt Lake City, UT Metro Area	1170057	115806	32.3	16	9.9%
310M300US20300	Dumas, TX Micro Area	22016	2161	30.5	16.8	9.8%
310M300US25720	Heber, UT Micro Area	29306	2883	33.3	17.1	9.8%
310M300US39420	Pullman, WA Micro Area	47794	4700	24.5	13.1	9.8%
310M300US40540	Rock Springs, WY Micro Area	44527	4339	34	15.4	9.7%
310M300US11260	Anchorage, AK Metro Area	399360	38366	33.5	14.8	9.6%
310M300US25260	Hanford-Corcoran, CA Metro Area	150183	14215	31.5	15	9.5%
310M300US30580	Liberal, KS Micro Area	22948	2182	29.5	16.1	9.5%
310M300US31740	Manhattan, KS Metro Area	98884	9355	26.4	13.4	9.5%

310M300US36220	Odessa, TX Metro Area	155744	14793	30.3	15.7	9.5%
310M300US20780	Edwards, CO Micro Area	53726	5045	36.5	13.8	9.4%
310M300US48780	Williston, ND Micro Area	32916	3102	31.3	14.7	9.4%
310M300US46860	Vernal, UT Micro Area	36343	3378	30.1	16.3	9.3%
310M300US30860	Logan, UT-ID Metro Area	133408	12207	25.4	15.3	9.2%
310M300US29700	Laredo, TX Metro Area	269624	23659	28.4	15.3	8.8%
310M300US39940	Rexburg, ID Micro Area	51130	4509	24.4	13.8	8.8%
310M300US21820	Fairbanks, AK Metro Area	100031	8659	31	12.9	8.7%
310M300US27340	Jacksonville, NC Metro Area	192685	16442	26	12.7	8.5%
310M300US22780	Fort Leonard Wood, MO Micro Area	53132	4261	27.6	11.5	8.0%
310M300US25980	Hinesville, GA Metro Area	79977	6398	28.6	12.6	8.0%
310M300US27920	Junction City, KS Micro Area	35796	2805	26.4	12.8	7.8%
310M300US23940	Gillette, WY Micro Area	48116	3685	33.2	11.9	7.7%
310M300US39340	Provo-Orem, UT Metro Area	587190	43009	24.6	12.6	7.3%

Data Source: 2013-2017 ACS 5-Year Estimates

Table-2 Number Correspondence Table of the 41 Block Groups in The Villages, FL Metro Area

No.	Id	Geography
1	1500000US121199101001	Block Group 1, Census Tract 9101
2	1500000US121199101002	Block Group 2, Census Tract 9101
3	1500000US121199103001	Block Group 1, Census Tract 9103
4	1500000US121199103002	Block Group 2, Census Tract 9103
5	1500000US121199103003	Block Group 3, Census Tract 9103c
6	1500000US121199103004	Block Group 4, Census Tract 9103
7	1500000US121199104011	Block Group 1, Census Tract 9104.01
8	1500000US121199104012	Block Group 2, Census Tract 9104.01
9	1500000US121199104013	Block Group 3, Census Tract 9104.01
10	1500000US121199104021	Block Group 1, Census Tract 9104.02
11	1500000US121199105001	Block Group 1, Census Tract 9105
12	1500000US121199105002	Block Group 2, Census Tract 9105
13	1500000US121199105003	Block Group 3, Census Tract 9105

14	1500000US121199106011	Block Group 1, Census Tract 9106.01
15	1500000US121199106012	Block Group 2, Census Tract 9106.01
16	1500000US121199106013	Block Group 3, Census Tract 9106.01
17	1500000US121199106021	Block Group 1, Census Tract 9106.02
18	1500000US121199106022	Block Group 2, Census Tract 9106.02
19	1500000US121199107001	Block Group 1, Census Tract 9107
20	1500000US121199107002	Block Group 2, Census Tract 9107
21	1500000US121199107003	Block Group 3, Census Tract 9107
22	1500000US121199108001	Block Group 1, Census Tract 9108
23	1500000US121199108002	Block Group 2, Census Tract 9108
24	1500000US121199108003	Block Group 3, Census Tract 9108
25	1500000US121199109001	Block Group 1, Census Tract 9109
26	1500000US121199110001	Block Group 1, Census Tract 9110
27	1500000US121199112001	Block Group 1, Census Tract 9112
28	1500000US121199113011	Block Group 1, Census Tract 9113.01
29	1500000US121199113012	Block Group 2, Census Tract 9113.01
30	1500000US121199113013	Block Group 3, Census Tract 9113.01
31	1500000US121199113021	Block Group 1, Census Tract 9113.02
32	1500000US121199114001	Block Group 1, Census Tract 9114
33	1500000US121199115001	Block Group 1, Census Tract 9115
34	1500000US121199115002	Block Group 2, Census Tract 9115
35	1500000US121199117011	Block Group 1, Census Tract 9117.01
36	1500000US121199117012	Block Group 2, Census Tract 9117.01
37	1500000US121199117013	Block Group 3, Census Tract 9117.01
38	1500000US121199117021	Block Group 1, Census Tract 9117.02
39	1500000US121199117022	Block Group 2, Census Tract 9117.02
40	1500000US121199117023	Block Group 3, Census Tract 9117.02
41	1500000US121199800001	Block Group 1, Census Tract 9800

Data Source: 2013-2017 ACS 5-Year Estimates

Table-3 Current Population and Urbanization Status of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Total Population	Total Population (Age≥65)	City Limits
1	1428	136	23%
2	1783	324	11%
3	581	115	61%
4	654	103	84%
5	112	24	26%
6	136	9	1%
7	596	179	30%
8	1078	362	22%
9	925	376	100%
10	3028	1003	12%
11	887	74	31%
12	2769	540	12%
13	1254	184	29%
14	2109	293	0%
15	1326	340	2%
16	958	442	76%
17	2160	397	1%
18	835	206	0%
19	1885	293	24%
20	2045	521	2%
21	1720	363	1%
22	1579	1382	100%
23	693	653	100%
24	1673	1402	100%
25	6823	164	4%
26	1694	46	0%

27	40256	30305	76%
28	973	657	59%
29	1513	999	88%
30	1609	760	86%
31	974	202	26%
32	13462	8163	18%
33	1221	334	4%
34	725	146	0%
35	8207	6180	100%
36	1672	1473	100%
37	174	22	100%
38	2362	2068	100%
39	1908	1109	100%
40	959	914	100%
41	8	0	0%

Data Source: 2013-2017 ACS 5-Year Estimates, Sumter County GIS Department. (2019).

Table-4 Urban Public Parks' Service Area Accessibility Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Weighted Area (mi^2)	Area Ratio Ranking	Score
1	2531.970432	41%	4
2	164.4063557	3%	0
3	10063.00606	161%	16
4	7724.802719	124%	12
5	10362.47184	166%	16
6	12068.41245	193%	19
7	8604.416817	138%	13
8	10749.02125	172%	17
9	8368.744183	134%	13
10	6238.987223	100%	10

11	1617.223234	26%	2
12	10355.01941	166%	16
13	9860.091388	158%	15
14	1590.332106	25%	2
15	7026.08357	113%	11
16	12553.11628	201%	20
17	8328.569349	133%	13
18	6845.543393	110%	11
19	378.1016118	6%	0
20	2233.370137	36%	3
21	83.11959803	1%	0
22	4184.372092	67%	6
23	6973.101774	112%	11
24	4184.372092	67%	6
25	7756.228902	124%	12
26	4184.385401	67%	6
27	6211.380791	100%	10
28	8368.744183	134%	13
29	8948.307591	143%	14
30	8506.960817	136%	13
31	6138.692575	98%	9
32	10466.3264	168%	16
33	3345.873993	54%	5
34	7.468782892	0%	0
35	3026.149884	49%	4
36	4184.372092	67%	6
37	4134.674387	66%	6
38	4184.372092	67%	6
39	20319.41766	326%	20
40	4184.372092	67%	6

41	1592.77055	26%	2

Table-5 Urban Public Parks' Common Facilities Accessibility Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Weighted Area (mi^2)	Area Ratio Ranking	Score
1	12315.56084	43%	4
2	902.3747308	3%	0
3	40342.56599	141%	14
4	30519.82837	107%	10
5	46156.88643	161%	16
6	52597.4404	184%	18
7	47130.82335	165%	16
8	58307.47367	204%	20
9	46028.09301	161%	16
10	33186.97908	116%	11
11	7485.394157	26%	2
12	49328.91591	172%	17
13	52198.80459	182%	18
14	9789.513056	34%	3
15	40731.49813	142%	14
16	66949.95347	234%	20
17	43231.08965	151%	15
18	36159.56626	126%	12
19	1804.919396	6%	0
20	12987.51846	45%	4
21	406.0402282	1%	0
22	16737.48837	58%	5
23	28613.53239	100%	10
24	16737.48837	58%	5

25	31426.78164	110%	11
26	20921.927	73%	7
27	27167.69065	95%	9
28	33474.97673	117%	11
29	36952.35718	129%	12
30	34304.27654	120%	12
31	25610.16757	90%	9
32	45792.18185	160%	16
33	16534.39728	58%	5
34	42.42432017	0%	0
35	11937.48545	42%	4
36	16737.48837	58%	5
37	16538.69755	58%	5
38	16737.48837	58%	5
39	82269.68889	288%	20
40	16737.48837	58%	5
41	8275.184038	29%	2

Table-6 Urban Public Parks' Recreational Amenities Accessibility Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Weighted Area (mi^2)	Area Ratio Ranking	Score
1	25225.37828	46%	4
2	1517.311406	3%	0
3	77866.1022	141%	14
4	63301.91543	114%	11
5	61778.78384	111%	11
6	74720.85848	135%	13
7	68288.35644	123%	12
8	82520.94765	149%	14

9	66949.95347	121%	12
10	45718.29868	83%	8
11	7390.583983	13%	1
12	59927.13671	108%	10
13	75484.15778	136%	13
14	11980.09559	22%	2
15	57824.91235	104%	10
16	100424.9302	181%	18
17	99266.11132	179%	17
18	83817.44114	151%	15
19	2320.812897	4%	0
20	17035.19652	31%	3
21	413.2596081	1%	0
22	16737.48837	30%	3
23	30776.90828	56%	5
24	16737.48837	30%	3
25	65392.73564	118%	11
26	62765.78101	113%	11
27	55412.34413	100%	10
28	71134.32556	128%	12
29	78676.72301	142%	14
30	71963.62536	130%	13
31	53501.36609	97%	9
32	95837.24133	173%	17
33	23928.23832	43%	4
34	52.73695728	0%	0
35	11937.48545	22%	2
36	16737.48837	30%	3
37	16538.69755	30%	3
38	16737.48837	30%	3

39	85245.74357	154%	15
40	16737.48837	30%	3
41	18098.70421	33%	3

Table-7 Urban Public Parks' Service Accessibility Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Service Accessibility			
	Service Area	Common Facilities	Recreational Amenities	Total
1	4	4	4	12
2	0	0	0	0
3	16	14	14	44
4	12	10	11	33
5	16	16	11	43
6	19	18	13	50
7	13	16	12	41
8	17	20	14	51
9	13	16	12	41
10	10	11	8	29
11	2	2	1	5
12	16	17	10	43
13	15	18	13	46
14	2	3	2	7
15	11	14	10	35
16	20	20	18	58
17	13	15	17	45
18	11	12	15	38
19	0	0	0	0
20	3	4	3	10
21	0	0	0	0

22	6	5	3	14
23	11	10	5	26
24	6	5	3	14
25	12	11	11	34
26	6	7	11	24
27	10	9	10	29
28	13	11	12	36
29	14	12	14	40
30	13	12	13	38
31	9	9	9	27
32	16	16	17	49
33	5	5	4	14
34	0	0	0	0
35	4	4	2	10
36	6	5	3	14
37	6	5	3	14
38	6	5	3	14
39	20	20	15	55
40	6	5	3	14
41	2	2	3	7

Table-8 2013-2017 Means of Transportation to Work of The Villages Metro Area, FL

Year	Total	Car, truck, or van	Bus or trolley bus	Streetcar or trolley car	Subway or elevated	Railroad	Ferryboat	Taxicab	Motorcycle	Bicycle	Walked	Other means
2013	20170	16795	153	15	10	0	0	0	40	45	309	2803
2014	21034	17444	160	17	0	0	0	0	59	51	322	1303
2015	21514	17827	126	0	0	0	6	0	58	63	286	3148
2016	22115	18157	95	0	0	0	6	0	79	59	191	3528
2017	22900	18749	54	0	0	0	6	0	71	26	201	3793

Data Source: 2009-2013 ACS 5-Year Estimates, 2010-2014 ACS 5-Year Estimates, 2011-2015 ACS 5-Year Estimates, 2012-2016 ACS 5-Year Estimates, 2013-2017 ACS 5-Year Estimates.

Table-9 Urban Public Parks' Walkability Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Weighted Area (mi^2)	Area Ratio Ranking	Score
1	70.55699568	62%	6
2	509.2401634	450%	20
3	0	0%	0
4	0	0%	0
5	0	0%	0
6	0	0%	0
7	538.2420402	476%	20
8	914.5452964	809%	20
9	0	0%	0
10	38.57153721	34%	3
11	46.80034813	41%	4
12	329.044558	291%	20
13	226.7690025	201%	20
14	168.2544526	149%	14
15	138.0761418	122%	12
16	1069.200066	945%	20
17	191.4644821	169%	16
18	40.56054796	36%	3
19	254.0474518	225%	20
20	135.6819337	120%	12
21	63.13684206	56%	5
22	0	0%	0
23	10376.66064	9175%	20
24	0	0%	0
25	0	0%	0
26	0	0%	0
27	138.8463185	123%	12

28	156.0213201	138%	13
29	113.1003538	100%	10
30	83.49493055	74%	7
31	514.796792	455%	20
32	242.9543699	215%	20
33	254.3129642	225%	20
34	106.8345049	94%	9
35	2913.926774	2576%	20
36	0	0%	0
37	0	0%	0
38	4563.221676	4035%	20
39	24970.64102	22078%	20
40	0	0%	0
41	21.23665535	19%	1

Table-10 Urban Public Parks' Public Transportation Accessibility Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Weighted Area (mi^2)	Area Ratio Ranking	Score
1	0.35165903	79730%	20
2	0	0%	0
3	0.231222654	52424%	20
4	0	0%	0
5	0.160244614	36331%	20
6	0	0%	0
7	0	0%	0
8	0	0%	0
9	0	0%	0
10	1.741090774	394748%	20
11	0.242464389	54973%	20

12	2.135469772	484163%	20
13	0.280727822	63648%	20
14	0	0%	0
15	0	0%	0
16	0.876085872	198630%	20
17	0.076634365	17375%	20
18	0	0%	0
19	0.625438357	141802%	20
20	0.626266323	141990%	20
21	0.215800752	48927%	20
22	0.000441064	100%	10
23	0.021926984	4971%	20
24	0	0%	0
25	0	0%	0
26	0	0%	0
27	0.100342844	22750%	20
28	0.219219345	49702%	20
29	0	0%	0
30	0.985006269	223325%	20
31	0.428813662	97223%	20
32	2.749492547	623377%	20
33	0.300085914	68037%	20
34	0	0%	0
35	0.06710514	15214%	20
36	0	0%	0
37	0	0%	0
38	0	0%	0
39	0	0%	0
40	0	0%	0
41	0	0%	0

Table-11 Urban Public Parks' Bicycling Accessibility Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Weighted Area (mi^2)	Area Ratio Ranking	Score
1	1860.150284	151%	15
2	1654.533621	134%	13
3	86.83293569	7%	0
4	26.53593317	2%	0
5	323.1893496	26%	2
6	82.71281479	7%	0
7	5976.79008	484%	20
8	6609.280586	535%	20
9	10592.71773	857%	20
10	909.9194927	74%	7
11	622.4219576	50%	5
12	2011.778136	163%	16
13	2475.491409	200%	20
14	1871.585189	151%	15
15	1235.811468	100%	10
16	19518.75617	1579%	20
17	1366.886472	111%	11
18	983.5839761	80%	8
19	1317.061032	107%	10
20	1673.564318	135%	13
21	862.7942414	70%	7
22	0	0%	0
23	10841.77411	877%	20
24	407.0574172	33%	3
25	0	0%	0

26	0	0%	0
27	1715.589578	139%	13
28	2339.365355	189%	18
29	842.3896611	68%	6
30	16035.25073	1298%	20
31	7057.221597	571%	20
32	4503.005995	364%	20
33	510.2397684	41%	4
34	198.037699	16%	1
35	3730.058615	302%	20
36	15.21404111	1%	0
37	103.8252442	8%	0
38	4555.114108	369%	20
39	0	0%	0
40	0	0%	0
41	52.91947792	4%	0

Table-12 Urban Public Parks' Green Transportation Accessibility Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	**Green Transportation Accessibility**			
	Walkability	**Public Transportation**	**Bicycling**	**Total**
1	6	20	15	41
2	20	0	13	33
3	0	20	0	20
4	0	0	0	0
5	0	20	2	22
6	0	0	0	0
7	20	0	20	40
8	20	0	20	40
9	0	0	20	20

10	3	20	7	30
11	4	20	5	29
12	20	20	16	56
13	20	20	20	60
14	14	0	15	29
15	12	0	10	22
16	20	20	20	60
17	16	20	11	47
18	3	0	8	11
19	20	20	10	50
20	12	20	13	45
21	5	20	7	32
22	0	10	0	10
23	20	20	20	60
24	0	0	3	3
25	0	0	0	0
26	0	0	0	0
27	12	20	13	45
28	13	20	18	51
29	10	0	6	16
30	7	20	20	47
31	20	20	20	60
32	20	20	20	60
33	20	20	4	44
34	9	0	1	10
35	20	20	20	60
36	0	0	0	0
37	0	0	0	0
38	20	0	20	40
39	20	0	0	20

40	0	0	0	0
41	1	0	0	1

Table-13 Urban Public Parks' Accessibility Score of the 41 Block Groups in The Villages, FL Metro Area

Block Group	Service Accessibility	Green Transportation Accessibility	Total
1	12	41	53
2	0	33	33
3	44	20	64
4	33	0	33
5	43	22	65
6	50	0	50
7	41	40	81
8	51	40	91
9	41	20	61
10	29	30	59
11	5	29	34
12	43	56	99
13	46	60	106
14	7	29	36
15	35	22	57
16	58	60	118
17	45	47	92
18	38	11	49
19	0	50	50
20	10	45	55
21	0	32	32
22	14	10	24
23	26	60	86
24	14	3	17

25	34	0	34
26	24	0	24
27	29	45	74
28	36	51	87
29	40	16	56
30	38	47	85
31	27	60	87
32	49	60	109
33	14	44	58
34	0	10	10
35	10	60	70
36	14	0	14
37	14	0	14
38	14	40	54
39	55	20	75
40	14	0	14
41	7	1	8

Table-14 Urban Public Parks' Information around The Villages, FL Metro Area

No.	Park Name	Acres	Park Type	Common Facilities	Recreational Amenities
1	CHERRY LAKE PARK	2.58	Pocket Park	5	5
2	OXFORD PARK	2.45	Pocket Park	3	3
3	WYSONG PARK & UPSTREAM BOAT RAMP	5.00	Neighborhood Park	0	4
4	Erwin Bryan Park	4.46	Neighborhood Park	3	6
5	VAN FLEET TRAIL - MABEL TRAILHEAD	1.69	Trail	6	7
6	GENERAL JAMES A. VAN FLEET STATE TRAIL (MAIN ENTRANCE)	2.00	Trail	6	8
7	LAKE GRIFFIN STATE PARK (MAIN ENTRANCE)	620.00	Large Urban Park	6	13
8	COLT CREEK STATE PARK (MAIN ENTRANCE)	0.03	Large Urban Park	5	13
9	NOBLETON WAYSIDE PARK & BOAT RAMP	2.00	Community Park	5	4
10	LAKE TOWNSEN REGIONAL PARK	324.89	Large Urban Park	5	15
11	LAKE TOWNSEN REGIONAL PARK	13.47	Large Urban Park	5	15
12	WITHLACOOCHEE BICENTENNIAL HALL PARK	0.57	Pocket Park	4	3
13	NOBLETON PARK	4.30	Neighborhood Park	3	1
14	WITHLACOOCHEE STATE TRAIL (SECONDARY ENTRANCE)	0.03	Trail	3	9
15	Hope Boat Ramp at Sam Phillips Park	0.00	Large Urban Park	4	4
16	Carney Island Recreation & Conservation Area	0.00	Large Urban Park	5	8
17	PEAR Park	312.15	Large Urban Park	6	16
18	WITHLACOOCHE RIVER PARK	406.00	Large Urban Park	7	10
19	GREEN SWAMP - WEST TRACT	37350.00	Large Urban Park	5	10
20	Lake Okahumpka Park	130.00	Large Urban Park	6	12
21	Royal Park	4.90	Neighborhood Park	7	13
22	Rutland Park	0.90	Pocket Park	5	4
23	Marsh Bend Outlet Park	9.83	Neighborhood Park	6	7
24	Coleman Landing Park	1.00	Pocket Park	5	2
25	Lake Panasoffkee Recreation Park	18.00	Community Park	7	12
26	Sumterville Park and Community Building	1.00	Pocket Park	5	4
27	Croom-A-Coochee Park	2.60	Pocket Park	7	5
28	Roy Bug Story Park	0.29	Pocket Park	4	3
29	Lake Miona Park	4.97	Neighborhood Park	6	6
30	Shady Brook Greenway Park	84.84	Large Urban Park	4	4
31	Wahoo Voting Center	0.72	Pocket Park	4	3
32	Lake Panasoffkee Dog Park	0.66	Pocket Park	2	3
33	Dade Battlefield Historic State Park	80.00	Large Urban Park	6	8
34	Kenny Dixon Sports Complex	30.00	Community Park	7	10
35	Sam S. Harris Memorial Park	11.00	Neighborhood Park	4	3
36	Hewitt	5.00	Neighborhood Park	5	3
37	Center Hill Park	0.00	Pocket Park	3	2
38	Wildwood Dog Park	0.00	Pocket Park	2	1
39	Millennium Park	4.97	Neighborhood Park	6	6
40	City of Wildwood Park	0.00	Pocket Park	2	2
41	Bushnell Community Center Grounds	0.00	Community Park	3	6
42	Dr Martin Luther King JR Park	4.50	Neighborhood Park	7	3
43	Lake Deaton Park	130.00	Large Urban Park	2	5

Table-15 Urban Public Parks' Common Facilities Information around The Villages, FL Metro Area

Park No.	Picnic Area	Picnic Tables	Grills	Playground	Hiking/Walking Path	Basketball	Restrooms/Portalets	Total
1	1	1	1	1	1			5
2	1			1		1		3
3							0	0
4				1	1	1		3
5	1	1	1		1	1	1	6
6	1	1	1		1	1	1	6
7	1	1	1	1	1		1	6
8	1	1	1			1	1	5
9	1	1	1		1	1		5
10	1			1	1	1	1	5
11	1			1	1	1	1	5
12				1	1	1	1	4
13	1	1	1				0	3
14					1	1	1	3
15	1	1	1				1	4
16	1	1	0	1	1		1	5
17	1		1	1	1	1	1	6
18	1	1	1	1	1	1	1	7
19	1	1	1		1		1	5
20	1	1	1	1	0	1	1	6
21	1	1	1	1	1	1	1	7
22	1	1	1	0	0	1	1	5
23	1	1	1	0	1	1	1	6
24	1	1	1	0	0	1	1	5
25	1	1	1	1	1	1	1	7
26	1	1	1	1	0	0	1	5
27	1	1	1	1	1	1	1	7
28	1	1	1	0	0	0	1	4
29	1	1	1	1	0	1	1	6
30	1	1	1	0	0	0	1	4
31	1	1	1	0	0	0	1	4
32	1			1	0	0	0	2
33	1	1	1	1	0	1	1	6
34	1	1	1	1	1	1	1	7
35	0			1	1	1	1	4
36	0	1	1	1	1	1		5
37	0			1	1	1		3
38	0	1		0	1	0	0	2
39	1	1	1	1	0	1	1	6
40	0			1	0	1		2
41	1			1	1	0		3
42	1	1	1	1	1	1	1	7
43	1			0	0	0	1	2

Table-16 Urban Public Parks' Recreational Amenities Information around The Villages, FL Metro Area

Park No.	Pet/Dog Station	Boat Ramp	Biking/Fitness Trail	Picnic Pavilions, Shelters or Gazebos	Pavillion	Fishing Access	Swimming
1			1				
2	1						
3		1				1	0
4				1			
5	1		1	1			
6	1		1	1			
7	1	1				1	0
8	1	1	1	1		1	
9		1		1			1
10		1	1	1	1	1	1
11		1	1	1	1	1	1
12							
13		1					
14	1		1	1			
15		1				1	
16	0	1		1		1	1
17	1		1	1	1		
18		1	1			1	
19		1	1			1	
20	1	1	1	1		1	0
21	1	0	0	1		0	0
22	1	1	0			1	0
23	1	1	0	1		1	0
24		1	0	1		0	0
25		0	0	1		0	0
26		0	0			0	0
27		0	0	1		0	0
28		1	0	1		1	0
29	1	1	0	1		1	0
30		1	0	1		1	0
31		0	0			0	0
32	1	0	0			0	0
33	1	0	1			0	0
34	0	0	1			0	0
35		0	1			0	0
36		0	1	1		0	0
37		0	1			0	0
38	1	0	0			0	0
39	1	0	1		1	0	0
40		0	1			0	0
41		0	1	1		0	0
42	0	0	1			0	0
43		1	0		1	1	0

Park No.	Baseball/Softball	Volleyball Court	Football/Soccer	Racquetball Courts	Shuffleboard	Sports Fields	Sink	Stove
1	1	1	1					
2	1							
3								
4	1		1	1	1			
5								
6								
7		1						
8								
9								
10	1	1						
11	1	1						
12					1			
13								
14								
15								
16		1						
17	1		1			1		
18								
19								
20	0	1	0		1			
21	1	1	0	1	1		1	1
22	0		0					
23	0	1	0					
24	0		0					
25	1	1	1		1			
26	0		0				1	
27	1		1					
28	0		0					
29	0		0					
30	0		0					
31	0		0					
32	0		0					
33	0	0	0					
34	1	1	1	1				
35	1	0	0					
36	0	0	1					
37	1	0	0					
38	0	0	0					
39	0	0	1					
40	1		0					
41	1	0	0		1			
42	0	1	1					
43	0	0	0					

Park No.	Golf Course	Horseshoe	Building / Meeting Room	Concession Stand/Building	Electricity	Geo-Seeking	Birding	Wildlife Viewing
1		1						
2								
3								1
4		1						
5								1
6								1
7		1				1		1
8							1	1
9								
10		1			1			1
11		1			1			1
12			1					
13								
14						1	1	1
15								
16		1		1				1
17						1	1	1
18			1					1
19							1	1
20	1	1						
21	0	1	1	1				
22	0							
23	0							
24	0							
25	0	1	1	1				
26	0		1					
27	0	1						
28	0							
29	0	1						
30	0							
31	0		1					
32	0							
33	0							1
34	1	1						
35	0			1				
36	0							
37	0							
38	0							
39	0	1						
40	0							
41	0							
42	0							
43	0							1

Park No.	Skateboard/Roller Blading	Pickleball	Tennis	Camping	Show/Exhibit/Amphitheater	Recreation/Nature Center
1						
2						
3						
4						
5	1					
6	1					
7				1	1	
8				1		
9						
10	1					
11	1					
12						1
13						
14	1				1	
15						
16						
17		1	1			1
18	1			1		1
19				1		
20				1		
21				0		
22				0		
23				1		
24				0		
25	1		1	0		
26				0		
27				0		
28				0		
29				0		
30				0		
31				1		
32				0		1
33				0	1	1
34	1		1	0		
35				0		
36				0		
37				0		
38				0		
39				0		1
40				0		
41				0		1
42				0		
43				0		

Park No.	Historical Site/Museum/Nature education	Refrigerator	Horseback Riding	Canoeing-paddling	Observation (Tower/Pavillion)	Other	total
1							5
2						1	3
3				1			4
4							6
5			1				7
6			1			1	8
7	1			1		1	13
8	1		1	1		1	13
9				1			4
10			1		1	1	15
11			1		1	1	15
12							3
13							1
14			1				9
15						1	4
16							8
17				1	1	1	16
18					1	1	10
19			1	1		1	10
20						1	12
21		1					13
22							4
23							7
24							2
25						1	12
26		1					4
27							5
28							3
29							6
30							4
31							3
32	1						3
33	1	1				1	8
34						1	10
35							3
36							3
37							2
38							1
39							6
40							2
41						1	6
42							3
43							5

Table-17 2013-2017 Non-White Population Information in The Villages, FL Metro Area

No.	Total Population					White Population					Non-White Population				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
1	1057	889	1088	959	1428	958	733	972	785	1248	99	156	116	174	180
2	1371	1677	1816	1795	1783	1054	1268	1249	806	985	317	409	567	989	798
3	514	614	614	562	581	470	614	614	553	581	44	0	0	9	0
4	918	733	857	793	654	918	733	849	785	647	0	0	8	8	7
5	132	94	82	73	112	120	86	74	65	103	12	8	8	8	9
6	48	61	80	178	136	48	61	80	178	136	0	0	0	0	0
7	707	916	987	704	596	697	909	981	696	596	10	7	6	8	0
8	1167	1041	901	960	1078	1134	1041	901	953	1070	33	0	0	7	8

9	1084	1070	949	1122	925	1084	1070	949	1122	925	0	0	0	0	0
10	2736	2893	2935	3008	3028	2549	2764	2650	2751	2781	187	129	285	257	247
11	1121	1125	785	959	887	955	893	542	731	739	166	232	243	228	148
12	2484	2375	2445	2557	2769	2331	2015	2030	2120	2149	153	360	415	437	620
13	1361	1619	1636	1296	1254	1025	1273	1192	874	874	336	346	444	422	380
14	2068	2212	2244	2360	2109	2062	2203	2229	2353	2109	6	9	15	7	0
15	990	958	1049	1262	1326	949	936	959	1213	1268	41	22	90	49	58
16	1093	946	954	950	958	986	890	834	900	912	107	56	120	50	46
17	1777	1764	2050	2064	2160	1605	1626	1897	1932	2041	172	138	153	132	119
18	1652	1437	996	888	835	1217	1125	859	801	782	435	312	137	87	53
19	1581	1767	1530	1865	1885	1512	1633	1360	1680	1688	69	134	170	185	197
20	2125	1942	2054	2194	2045	1841	1667	1705	1794	1702	284	275	349	400	343
21	1660	1569	1738	1976	1720	1578	1473	1531	1663	1389	82	96	207	313	331
22	1225	1369	1382	1547	1579	1225	1369	1382	1547	1579	0	0	0	0	0
23	1080	1113	1048	696	693	1080	1113	1001	662	659	0	0	47	34	34
24	2065	2051	2038	1957	1673	2065	2051	2038	1957	1673	0	0	0	0	0
25	6434	6500	6577	6838	6823	2464	2741	2761	2826	2741	3970	3759	3816	4012	4082
26	2071	2283	2580	1792	1694	1098	1224	1426	995	982	973	1059	1154	797	712
27	32500	35565	38169	39003	40256	31781	34586	37302	38285	39542	719	979	867	718	714
28	742	770	898	916	973	723	752	876	894	957	19	18	22	22	16
29	1546	1581	1407	1342	1513	1514	1538	1341	1249	1410	32	43	66	93	103
30	625	568	552	740	1609	625	568	552	726	1563	0	0	0	14	46
31	1209	955	961	914	974	55	93	46	121	76	1154	862	915	793	898
32	3145	5240	7559	10929	13462	2607	4614	6746	10224	12483	538	626	813	705	979
33	1032	1163	1229	1344	1221	901	942	1008	1078	1024	131	221	221	266	197
34	1054	917	601	691	725	285	375	455	562	550	769	542	146	129	175
35	9298	8853	8731	9198	8207	9054	8652	8604	9062	8129	244	201	127	136	78
36	1664	1833	1825	1654	1672	1664	1833	1825	1654	1672	0	0	0	0	0
37	42	50	19	101	174	42	50	16	98	170	0	0	3	3	4
38	2408	2438	2531	2477	2362	2393	2424	2525	2474	2362	15	14	6	3	0
39	1732	1901	1745	2024	1908	1688	1838	1695	1980	1839	44	63	50	44	69
40	865	847	846	889	959	822	823	824	865	959	43	24	22	24	0
41	26	9	13	12	8	26	0	0	0	0	0	9	13	12	8

Data Source: 2009-2013 ACS 5-Year Estimates, 2010-2014 ACS 5-Year Estimates, 2011-2015 ACS 5-Year Estimates, 2012-2016 ACS 5-Year Estimates, 2013-2017 ACS 5-Year Estimates.

Vita

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