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A Model for Identifying Gentrification in East Nashville, Tennessee

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A MODEL FOR IDENTIFYING GENTRIFICATION IN EAST NASHVILLE, TENNESSEE

THESIS

A thesis submitted in partial fulfillment of the
Requirements for the degree of Master of Arts in the
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By

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Lexington, Kentucky

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ABSTRACT OF THESIS

A MODEL FOR IDENTIFYING

GENTRIFICATION IN EAST NASHVILLE, TENNESSEE

Gentrification methodologies rarely intersect. Analysis of the process has been cornered to incorporate either in-depth, neighborhood case studies or large-scale empirical investigations. Understanding the timing and extent of gentrification has been limited by this dichotomy. This research attempts to fuse quantitative and qualitative methods to discern the impact of gentrification between census tracts in East Nashville, Tennessee. By employing archival research, field surveys, and census data analysis this project attempts to comprehend the conditions suitable for gentrification to occur and its subsequent effect on residents and the built environment. A model was generated to determine the relationship between *a-priori* knowledge and empirical indicators of gentrification. Trends were gleaned between these methods, although gentrification's chaotic and complex nature makes it difficult to pin down.

KEYWORDS: gentrification, East Nashville, empirical methods, census data

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May 7, 2014

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To Donovan and the underprivileged residents of East Nashville

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PREFACE

I have always been fascinated with maps and data. As a child I would study and memorize statistical and demographic information for states and countries around the world. Growing up on a dairy farm in rural Kentucky I was intrigued by places thousands of miles away, and maps were the only way I could learn more about them. Perhaps this is where my enchantment with cities and urban geography started. They were foreign to me and I wanted to know more.

When choosing a topic to study for my thesis I knew I wanted to investigate the urban, and I knew that I wanted to incorporate empirical data. I did not choose the topic of gentrification as my first point of entry into this project. I knew that I wanted to study East Nashville from the beginning. I became familiar with the area while an undergraduate at Western Kentucky University in Bowling Green, Kentucky. Nashville is only a 45-minute drive south on Interstate 65. Ever since I have known the area East Nashville was the hip part of town. It was gritty, full of dive bars and quirky establishments. It had a beautiful architecture and diverse array of residents.

This project was as much a case study of the history of East Nashville as it was an investigation into gentrification. While empirical data can generalize and gloss over the negative effects caused by gentrification, this could not be farther from my intention. By investigating the area and where the impacts of gentrification are occurring most heavily, I hope this research can shed light on the underprivileged residents of East Nashville who feel the effects of the process most severely.

CHAPTER ONE: INTRODUCTION

Introduction to East Nashville

East Nashville is an eclectic mix of neighborhoods in the process of change. Sitting on the east bank of the Cumberland River adjacent to downtown Nashville, the 26-square-mile enclave has a long and rich history. East Nashville emerged as a picturesque nineteenth century suburb following the Industrial Revolution. The district subsequently experienced periods of destruction and decline in the early to mid-twentieth century. This was followed by periods of reinvestment in the latter decades of the century, and today is characterized as a chic, diverse neighborhood comparable to New York's East Village.

Since the early 1990s, neighborhood change in East Nashville has accelerated. In April 1998, a tornado destroyed nearly 300 structures in the community, and is seen as a turning point in the redevelopment of East Nashville. Significant investment from the city of Nashville and insurance claims saw an influx of capital to the area. Changes in the built environment are noticeable as you travel through East Nashville. In some sectors, it is hard to pass a street where reinvestment and construction is not occurring. The area is comprised of a diverse housing stock with turn of the century heritage including Victorian, Gothic, and Neoclassical architecture. Coupled with a central urban location and a plethora of unique amenities catering to a burgeoning middle class, East Nashville is widely regarded as a gentrifying neighborhood.

Argument

It has been common knowledge for locals that neighborhoods in East Nashville are undergoing gentrification. While the area has been studied through the lens of gentrification, an in-depth investigation into these gentrifying neighborhoods beyond colloquial knowledge remains elusive.

Scholars, activists, and cities have investigated gentrification since the mid-1960s. Nested within numerous disciplines and contexts, the controversy that the phenomenon generates may be greater than the actual scale of its extent in cities. Nevertheless it continues to be studied through concepts of urban redevelopment, social justice, and political economy. Appropriate methods of measuring gentrification continue to be contested to this day. The bulk of gentrification literature has largely been theoretical in nature, relying on qualitative means to interpret the process. Alternative theories of the causes and implications of gentrification have been proposed, yet empirical questions to describe it are still not completely understood.

Since the 1990s, East Nashville has undergone significant redevelopment and reinvestment in the built environment. These activities have occurred in tandem with what most Nashvillians recognize as a gentrifying community. East Nashville encompasses a large portion of Nashville, and as such, the extent of gentrification within certain neighborhoods is greater than others.

Are there differences between gentrifying areas and non-gentrifying neighborhoods? Are areas in East Nashville identified as undergoing rapid gentrification associated with the displacement of black residents? This research

attempts to link qualitative and quantitative methods to understand gentrification processes in East Nashville. Field surveys were conducted to classify gentrifying neighborhoods from non-gentrifying neighborhoods. Empirical data recognized in the literature as descriptors of gentrification was then collected. Using these variables, distinctions between East Nashville neighborhoods were identified through the lens of gentrification. What has made East Nashville the eclectic neighborhood that is known as today? Are there moments in East Nashville's history that have created a suitable site for gentrification to occur? Has the city of Nashville influenced or enhanced this course through political means? Archival data from the city of Nashville was collected to discern the patterns of investment and disinvestment in East Nashville since its inception. Gentrification is a complex and chaotic process, yet through a combination of quantitative and qualitative methods, this research aims to grasp the timing and extent of gentrification in East Nashville.

Chapter two investigates the history of East Nashville beginning with its foundation as Nashville's first suburb in the mid-nineteenth century. East Nashville grew rapidly into the middle of the twentieth century though it witnessed significant periods of destruction from numerous natural disasters. The following decades saw waves of decline in the region as middle-class residents left the area and urban renewal projects were implemented by the city. Beginning in the late 1970s Nashville began to re-invest in East Nashville and some middle-class citizens began to move back to the area. These projects show Nashville's dedication to growing East Nashville into a more prosperous sector of the city.

Chapter three investigates the gentrification literature through a series of

important discussions and theories into the causes and definitions of the process. The chapter also highlights ways that the gentrification phenomenon has been and might be measured using a combination of quantitative and qualitative methods.

Chapter four discusses the methodologies implemented in this project beginning with an overview of the project and research question. The chapter describes the qualitative field surveys and the quantitative empirical methods utilized throughout the research process.

Chapter five looks at certain demographic indicators in East Nashville to discern whether the area is a suitable site to examine gentrification. Chapter six looks at the change of these indicators over time to determine whether there may or may not be correlations between the field surveys and empirical census data. Chapter seven concludes this project.

CHAPTER TWO: MAKING THE CASE FOR EAST NASHVILLE

Nashville's Early History

The city of Nashville, Tennessee was founded in 1779 on the banks of the Cumberland River, a major tributary of the Ohio River. Because of this strategic location, the city grew rapidly as an important port and industrial city. This was noted by a Regional/Urban Assistance Team examining redevelopment in East Nashville:

> The unique juxtaposition of North South rail lines adjacent to the terminus of a navigable waterway at Nashville served "heavy" industries that developed on the river's edge because of the economic advantage of barge shipment to that farthest destination within the interior of the Southeastern United States. [1]

Nashville was made the permanent capital of Tennessee in 1843, and continued to expand as the region's dominant shipping port and railroad hub. The city steadily grew throughout the 1800s, despite being a Southern city during the Civil War. By 1900 Nashville had approximately 80,000 residents. Wealthy shipping merchants, railroad syndicates, and well-to-do whites dominated. Nashville's economic scene during this time period. The surrounding topography favored commercial development on the West Bank of the Cumberland River, making it a desirable location within the city. Beginning in the mid- to late-1800s, several of these individuals relocated to East Nashville, the city's first suburb, located on the east bank of the Cumberland River.

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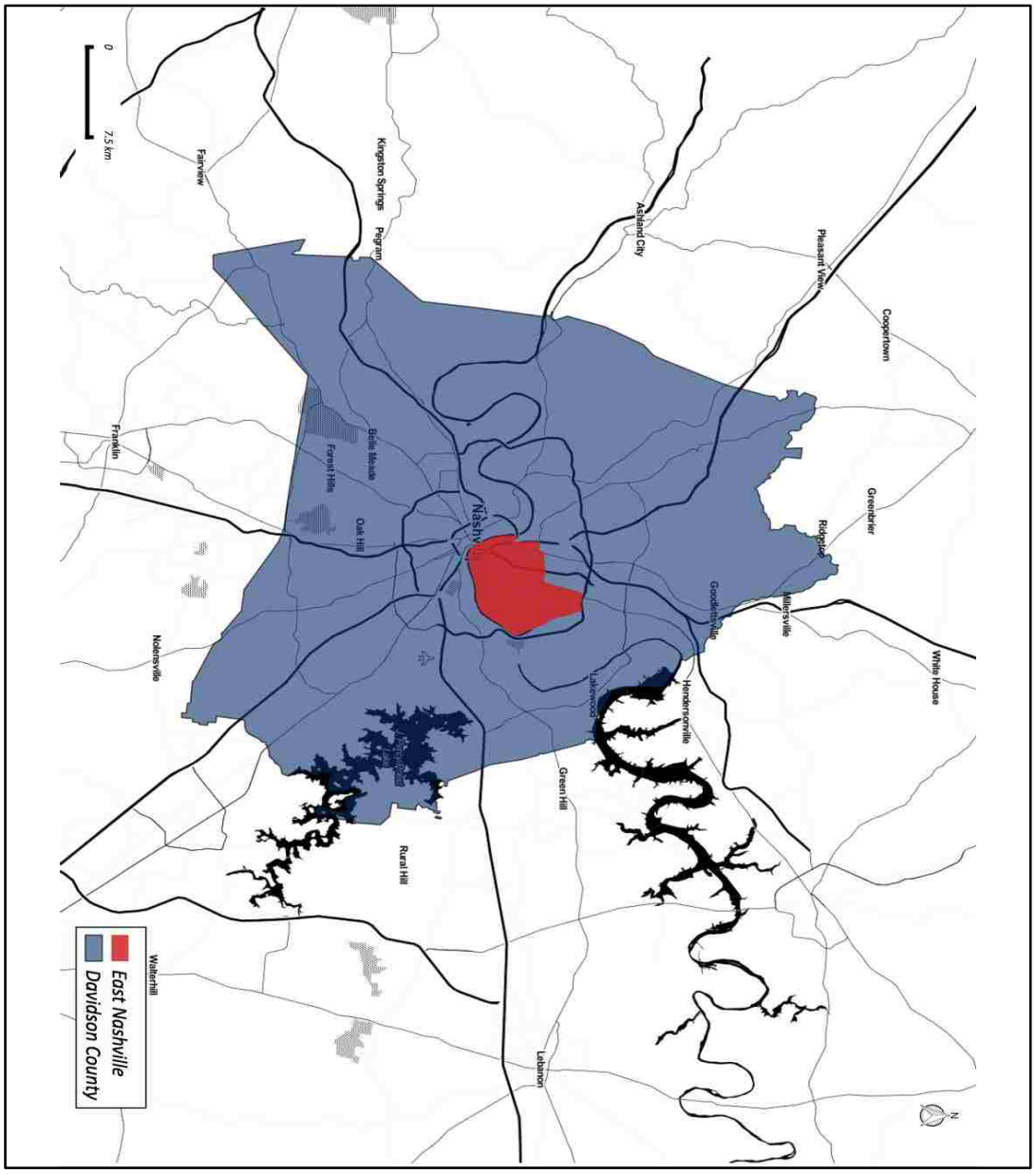
[1] Regional/Urban Design Assistance Team Program (American Institute of Architects), *Rediscovery: A Plan for East Nashville*, American Institute of Architects, Middle Tennessee Chapter and Frist Foundation, (Nashville, Tennessee, 1999), 1.1.



Map 2.1. Davidson County, Tennessee and East Nashville

The first Nashville suburbanites moved to the bluffs above the eastern bank of the Cumberland River. When the city was first settled, East Nashville was a fertile, wooded section of the county located between approximately two miles from the settlements of Fort Nashborough. East Nashville's rolling topography and heavily wooded landscape afforded an ideal location to support the growth of residential neighborhoods. The first neighborhood became known as Edgefield, an exclusive suburb in East Nashville just miles from downtown. Edgefield was noted by residents for its lack of pollution and quiet atmosphere when compared to Nashville's bustling downtown core.

Map 2.2. East Nashville neighborhood districts

Large tracts of East Nashville were owned by wealthy families during the late eighteenth to mid-nineteenth century, and frequently changed hands between these affluent landowners, notably the Hobson and Weakly Families. Beginning in 1873, a group of partners known as the East Edgefield Land Company purchased and then began to subdivide the area into 218 lots. [2] Construction of homes followed soon after in 1875. This area became known as East End because of its location on the eastern edge of Nashville's city limits. The area grew rapidly over the next decade, and by 1889 there were 69 homes in the East End neighborhood. [3] The building of the Woodland Street Bridge in 1886 and the introduction of electric streetcar lines increased accessibility to the area. [4]

[2] Davidson County Courthouse Chancery Court Records, *Deed Book 49*, 624.
[3] Nashville City Atlas 1889 (Philadelphia: C.M. Hopkins Co., 1889), 19.
[4] Fedora Small Frank, *Beginnings on Market Street*, (Nashville: By the Author, 1976), 80.

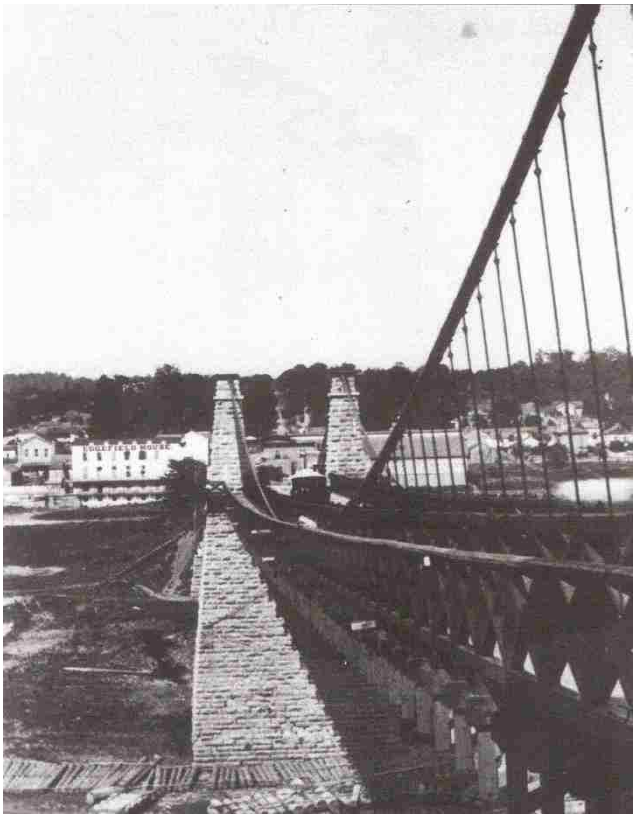


Figure 2.1. Opening of the Woodland Street Bridge. [5]

While there were relatively few large employers located in the East Nashville community, an extensive network of trolley lines offered access to a full range of diverse employment opportunities on the west side of the river.

Victorian and Queen Anne style homes were prevalent throughout East End and Edgefield, while large family estates dominated Lockeland Springs. [6] Between 1875 and 1908, over 400 families relocated to East Nashville. [7] East Nashville

[5] E.M. Fleenor, "East Nashville Fire, March 22, 1916" *East Nashville*, (Arcadia), 93.
[6] William Walled, ed., *Nashville 1990 to 1910*, (Nashville: Vanderbilt University Press, 1972), 12.
[7] Philip J.M. Thomason, "A Preservation Study of the East End and Lockeland Springs Neighborhoods of Nashville, Tennessee," (master's thesis, Middle Tennessee State University, 1981), p. 77.

continued to expand throughout the 1920s and 1930s, and hundreds of frame or brick bungalow style homes were constructed, while the built environment of East Nashville expanded further east into farmland.

East Nashville continued to grow throughout the twentieth century despite a number of obstacles. In the early 1900s, portions of East End were zoned commercial, and the residential character along these blocks was transformed. The Great Fire of 1916 and a tornado in 1933 destroyed and damaged a number of structures within the East Nashville community.

Figure 2.2. The Great Fire of 1916. [8]

[8] E.M. Fleenor, 84.

Figure 2.3. Tornado of 1933. [9]

Numerous middle-class residents began to leave East Nashville during the post-war period for suburbia. The automobile replaced the need for trolley lines and provided a means for residents to expand outward. As such, inner city neighborhoods became the homes of the elderly and renters. The 1950s witnessed a decline in the housing stock and many structures were razed after falling into disrepair. Newly vacated properties changed ownership to lower-income and minority residents.

Urban renewal projects in the 1960s demolished large sections of East Nashville, including the entire east side of the East End neighborhood between Shelby Avenue and Woodland Street. These historic homes were replaced with modern housing under the East Nashville Urban Renewal project, which aimed to provide housing to displaced persons from the downtown Capitol Hill Slum. During

[9] Ibid, 87.

this decade hundreds of Victorian-style homes continued to fall into disrepair as properties were converted into rental units. This further isolated poor and minority residents of the inner-city, generating an overall decline in the neighborhood with sharp increase in violence and crime. Despite these impediments, the Lockeland Springs, East End, and Edgefield neighborhoods still exhibit their original character.

East Nashville is noted for its diversity. The Regional/Urban Assistance Team, who was assigned to develop a report on future neighborhood revitalization after the 1998 tornado, describes the residents:

> The 25,000 or so people who make up the community include "yuppies," as they are called; urban pioneers; public housing residents; blue-collar workers; and retirees, all reflecting a broad mix of race, ethnicity, and geographic origin. In the truest sense, East Nashville is a town within a city.[10]

East Nashville was considered an undesirable part of Nashville for much of the 1970s and 1980s. The 1970s saw the return of some middle-class families to the area. The spring of 1998 is considered a turning point in the revitalization of East Nashville, when a tornado damaged an estimated 300 homes in the community. The influx of insurance money and Nashville's clean-up effort enhanced revitalization efforts in East Nashville. Then mayor of Nashville, Phil Bredesen, appointed a Tornado Recovery Board in July 1998 to assist the East Nashville community's efforts.

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[10] *Rediscovery*, 1.5.

Urban Renewal

The East Nashville Urban Renewal Project (ENURP) was one of the largest and most extensive community improvement programs in the United States. [11] The Nashville City Council unanimously approved the project in December 1958, with construction lasting from July 1959 to 1969. According to the 1969 Annual Report of the Nashville Housing Authority (1969):

> Thanks largely to a master urban renewal plan, the blighted neighborhood of ten years ago is today a pleasant residential, industrial, and business community. Strategically located just east of downtown Nashville, the project area embraces more than three square miles (2,052 acres) east of the Cumberland River...The urban renewal plan has made possible a new and improved street system, expansion of water and sewer facilities, and other public improvements such as parks, libraries, firehalls and expanded school properties. Hundreds of slum buildings were removed to make this redevelopment possible. [12]

The ENURP removed a total of 1,734 substandard structures in the redevelopment area, which were purchased and cleared, comprising an area of 485 acres. [13] In addition to providing land for public improvements, 1,595 new dwelling units were constructed. [14] Nearly $13 million ($83 million 2013 dollars) were paid to property owners for these parcels, and an estimated $11 million ($69 million 2013 dollars) worth of public investments were incorporated into the project area. [15] When the project was initiated, 48.2 percent of the area's private housing stock, excluding

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[11] Metropolitan Development and Housing Agency, *The Annual Report of the Nashville Housing Authority*, (Nashville, Tennessee, 1970), 9.

[12] Ibid.

[13] Ibid.

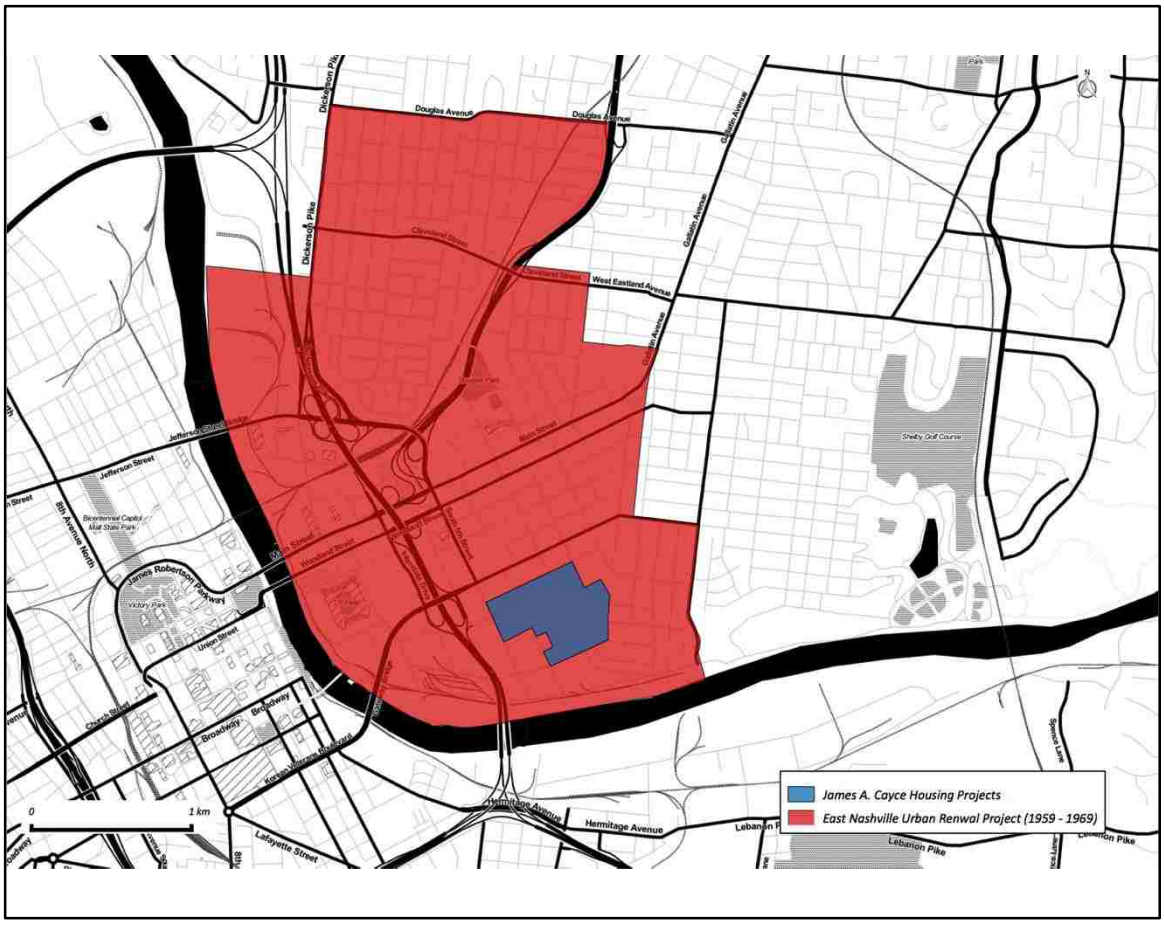
[14] Ibid, 10.

[15] Ibid.

public housing, was classified as substandard. In 1969, with the project approximately 90 percent complete, the level of substandard housing within the project area among the private housing stock had been reduced to 10.1 percent. Within the entire project area, 6,475 of the 6,601 dwelling units in the area received some sort of rehabilitation. [16]

Hundreds of blighted structures were removed to provide space for 184 acres of residential development, requiring the relocation of approximately 2,000 East Nashville families. Twenty-nine acres were earmarked for commercial uses, and 110 acres were assembled and improved for industrial development, resulting in 61 new business and industrial facilities within the project area. [17]

[16] Ibid.
[17] Ibid.



Map 2.3. Urban renewal and housing projects in East Nashville

However, the ENURP was not a complete success. Approximately 551 units in the project were found to be substandard in 1970, indicating that much of the rehabilitation effort was not sufficient to reverse the deterioration of many units. [18] Compounding the problems persisting inside the urban renewal area, the rate of deterioration around the periphery of the project was not halted, increasing from 25.2 percent substandard in 1960 to 39.9 percent in 1970. According to the Nashville Planning Commission:

[18] Nashville and Davidson County and Nashville and Davidson County Planning Commission, *Inner City Blight: Analysis, Proposals*, (Nashville: The Commission, 1973), 28.

> This continued decline suggests that some form of public action is required around urban renewal projects if the general area is to be stabilized, and indicates that the improvement afforded through the project is not enough to reverse maintenance trends in the surrounding residences. [19]

At the time of the ENURP there were three major general criticisms of urban renewal discussed nationally: higher rents, fewer dwelling units, and the displacement of residents. In the East Nashville project, the total number of dwelling units did decrease, but only moderately by 7.5 percent, or 492 dwelling units. [20] At approximately three persons per household, this left 1,476 people without a place to live and sufficient public housing was not available to absorb the excess. [21] Furthermore, each of the seven residential census tracts in the ENURP showed substantial increases in the real monthly contract rent. The average increase was approximately $16 per month. Families below the poverty level had a mean disposable income in 1967 of about $165 per month. [22] An increase in rent of $16 reduced disposable income by 9.7 percent. Available records on the ENURP are not sufficiently clear to ascertain the phasing of relocation and redevelopment, but it indicates that of the 1,630 families requiring relocation, all were relocated with the assistance of the Metropolitan Development and Housing Authority. [23]

Unlike many cities where urban renewal resulted in a sharp increase in net residential densities, East Nashville densities changed very little. [24] The area had a net residential density of 7.18 dwelling units per residential acre prior to the project

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[19] Ibid.
[20] Ibid, 30.
[21] Ibid.
[22] Ibid.
[23] Ibid.
[24] Ibid, 31.

and 7.46 at its completion. Both of the figures are in the low range of medium density. [25] While the net densities were similar between the two periods, reflecting little overall change in lot size and structure types, gross densities declined because of slightly fewer housing units. East Nashville was slightly less crowded with more spacious public facilities at the completion of the urban renewal project.

East Nashville is home to the city's largest community housing project, James A. Cayce Homes. The Cayce housing projects were constructed in the late-1940s to provide low-rent housing to low-income residents of Nashville. Cayce Homes housed 386 white families with an average income of $17,600 – compared to the citywide average of $24,500 in 1951. [26]

Redevelopment Districts

The city has two active redevelopment districts within East Nashville – East Bank and Five Points. A year after the tornado of 1998, a team of city planning experts from around the country was brought in by the American Institute of Architects and the East Nashville community to form a Regional/Urban Design Assistance Team (R/UDAT). Their goal was to complete a comprehensive, long-range plan for the affected areas. This plan outlined economic, physical, and organizational strategies intended to enhance East Nashville. A key recommendation of the R/UDAT Plan was the application of design guidelines for the commercial sections of the area. The guidelines were intended to spur new

[25] Ibid.

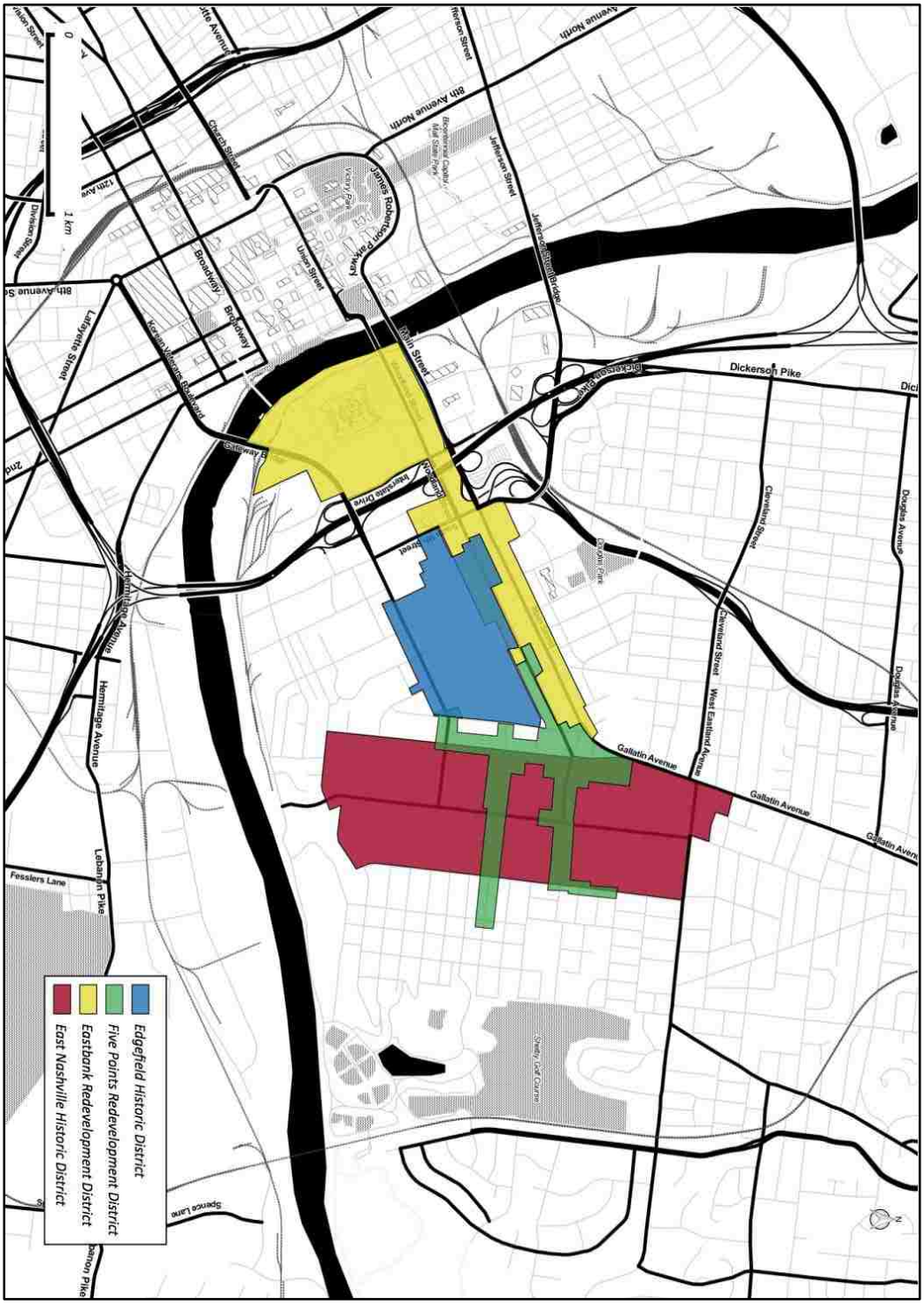
[26] Metropolitan Development and Housing Agency, *The Annual Report of the Nashville Housing Authority*, (Nashville, Tennessee, 1952), 14.

development and redevelopment within the surrounding districts by:

- Providing economic vitality through commercial redevelopment by serving the area's diverse population and encouraging positive urban reinvestment
- Emphasizing sensitivity to the pedestrian environment while accommodating the area's parking needs
- Encouraging mixed-use development
- The adaptive use and sensitive rehabilitation of existing older buildings
- Protecting and enhancing the economic viability of the area
- Eliminating and preventing the recurrence of blight
- Assuring adequate light, air, open space, and off-street parking [27]

The Metropolitan Development and Housing Agency (MDHA), through Restrictive Covenants Running in the Five Points and East Bank Redevelopment Area, enforce these guidelines.

[27] *Rediscovery*, 1.6.



Map 2.4. Redevelopment and historic districts in East Nashville

Historic Districts

Within East Nashville, two neighborhoods are listed in the National Register of Historic Places – the East Nashville Historic District and Edgefield Historic

District. The Edgefield Historic District is situated across the Cumberland River directly east of downtown Nashville. Within the district, 194 of the 254 buildings are considered historically or architecturally significant. [28] Edgefield Historic District contains a number of large city houses built for the wealthy in the late nineteenth century. These structures exude a variety of Victorian domestic architecture characteristic of the nineteenth century. Edgefield also contains smaller, middle-class homes dating from the latter decades of the nineteenth century to the 1920s, notably craftsman cottage style and bungalows.

Figure 2.4. An eclectic home typical of East Nashville with visible ornamentation; located in the Edgefield Historic District.

[28] Thomas Paine, *National Register of Historic Places Inventory – Nomination Form, Edgefield Historic District*, (Nashville, Tennessee, 1977), 1.

The area also contains a number of churches with styles ranging from Gothic to Richardsonian Romanesque. In 1976, Thomas Paine noted that Edgefield had begun to show signs of decay:

> Some of the houses, particularly the larger ones, have been allowed to deteriorate, often having been divided into apartments or rooms by absentee landlords. Several others have been extensively altered and some have been torn down and replaced by small inexpensive houses of little merit. Nevertheless, the condition of the neighborhood and of the individual structures, for the most part, remains good. [29]

As one of Nashville's earliest residential suburbs and home to a number of prominent citizens, Edgefield is important to the city's social history. By the 1850s Edgefield was beginning to develop as a residential area, partially as a result of the opening of a suspension bridge to replace an old wooden bridge across the Cumberland River in 1853.

As Nashville continued to expand eastward, residents began to settle in what is now the East Nashville Historic District. Located two miles east-northeast of the center of downtown Nashville, the East Nashville Historic District is a middle-class residential area developed during the late nineteenth and early twentieth centuries. The well-preserved streetcar suburb "offers an encapsulated view of Nashville's suburban growth between the 1880s and 1930." [30]

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[29] Ibid, 5-6.

[30] Thomas Paine, *National Register of Historic Places Inventory – Nomination Form, East Nashville Historic District*, (Nashville, Tennessee, 1982), 1.

Figure 2.5. Victorian architecture in census tract 192; a typical historic structure found within the East Nashville Historic District.

The district is characterized primarily by buildings of the twentieth century, especially neoclassical architecture popular in the early years of the century. The location of houses of various styles roughly corresponds to the sequence of subdivision in the district from 1875 to 1921. The majority of homes are comprised of Victorian and bungalow style architecture.

The city of Nashville adopted an ordinance in 1974 to create historic zoning. Edgefield was the first historic zoning district, designated in 1978. The historic zoning protects the architectural character of historic neighborhoods by managing growth and change through a zoning overlay.

Map 2.5. Historic overlay zones in East Nashville

CHAPTER THREE: THE GENTRIFICATION PARADIGM

What is Gentrification?

The term gentrification was coined in 1964 by British sociologist Ruth Glass, who described it as a process of neighborhood change where original occupiers are displaced and the social character of the district is altered. This process begins in places where downgraded, previously expensive real estate becomes upgraded once again. Glass notes that "once this process of 'gentrification' starts in a district, it goes on rapidly until all or most of the original working class occupiers are displaced, and the whole social character of the district is changed." [31] Over 50 years later, Ruth Glass has generated a topic of study that has produced thousands of research papers, articles, and books on the topic. Early definitions of gentrification focused on the rehabilitation and consequent transformation of derelict, working class districts into middle-class neighborhoods. [32] [33] Today, gentrification has expanded beyond Glass's focus on "sweat equity" to a new articulation of neoliberal urban policy. [34] Eric Clark highlights several of these recurrent themes in his definition of gentrification:

> Gentrification is a process involving a change in population of land-users such that the new users are of high socio-economic status than the previous users, together with an associated change in the built environment through a

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[31] Ruth Glass, *London: Aspects of Change* (MacGibbon & Kee, London), 22-23.
[32] Neil Smith and Peter Williams, "Gentrification of the City," *Boston: AUen and Unwin* (1986).
[33] Rowland Atkinson and Gary Bridge, *Gentrification in a Global Context* (Routledge, 2004).
[34] Neil Smith, "New Globalism, New Urbanism: Gentrification as Global Urban Strategy," *Antipode* 34, no. 3 (2002).

> reinvestment in fixed capital. The greater difference in socio-economic status, the more noticeable the process, not least because the more powerful the new users are, the more marked will be concomitant change in the built environment. [35]

The Gentrifiers

Exactly *who* are the gentrifiers transforming the landscape? Scholars argue that a "new middle-class – the white collar workers associated with a post-industrial, service-oriented economy – drives gentrification." [36] Consumption explanations contend that a market for a phenomenon like gentrification would not occur without consumer demand and preferences. [37] In essence, gentrification would not exist without players to participate in the process. The tastes of the new middle class prefer "a set of cultural changes, such as increasing interest in diversity and taste for historic properties." [38] Classic models of gentrification describe the gentry as educated young professionals, often white, and affluent. [39] [40]

Early literature draws attention to gays and lesbians as active participants in the construction of urban social space through gentrification. [41] Manuel Castells' work in San Francisco first noted that the spatial concentration of gays were

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[35] Eric Clark, "The Order and Simplicity of Gentrification: A Political Challenge," *Gentrification in a global context: the new urban colonialism* (2005): 25.
[36] Japonica Brown-Saracino, *The Gentrification Debates: A Reader* (Routledge, 2013), 65.
[37] David Ley, "The New Middle Class and the Remaking of the Central City," (1997).
[38] *Gentrification Debates*, 65.
[39] David Ley and Cory Dobson, "Are There Limits to Gentrification? The Contexts of Impeded Gentrification in Vancouver," *Urban Studies* 45, no. 12 (2008).
[40] Richard Lloyd, *Neo-Bohemia: Art and Commerce in the Postindustrial City* (Routledge, 2010).
[41] Loretta Lees, Tom Slater, and Elvin K Wyly, *The Gentrification Reader* (Routledge London, 2010).

instrumental to the gentrification of certain neighborhoods. These post-war spatial concentrations, along with counterculture movements of the 1970s, were active in one of the earliest forms of gentrification.

Why does gentrification generally take place in urban settings? The answer lies within the city itself. Central locations that offer a combination of cultural and practical amenities are ideal for most gentrifiers. They are attracted to the "work, shops, and the cultural activities of the central city, a set of linkages between home, work, and leisure that we will later see to an important component of the 'structure of feeling' for the inner city." [42] Gentrifiers have been described as a new, cultural middle class predisposed to the resettlement of diverse neighborhoods composed of residents with backgrounds different than their own, underscoring the complexity of this contradiction. [43] The identities of the gentry are shaped by their locational preferences, occupation, and social network. [44] Gentrifiers can be generally described as members of the middle class seeking a neighborhood sharing their cultural attitudes.

Gentrifiable Spaces

Most gentrifiers seek central locations within the city, but how can these places be described further? Financial and property interests are necessary but not sufficient enough to foresee the opportunities involved in neighborhood

[42] Ley, "New Middle Class," 38.
[43] Ibid.
[44] Atkinson and Bridge, *Global Context*.

transformation. There are no specific rules that can make neighborhoods a suitable site for gentrification. However, a set of common strategies for the creation of gentrifiable housing can be generated:

- **Devalued yet attractive housing stock.** Gentrification takes place in neighborhoods with a housing stock that has the potential to appreciate in value for a number of factors. Spaces composed of architecturally stimulating buildings with historic character, or spaces with symbolic value as a landmark location, are commonly sought after by investors or gentrifiers. These neighborhoods have a high-degree of housing quality, where interesting or socially approved architectural signatures provide landscapes of distinction. [45] Gentrified areas can also be composed of commercial and industrial structures with the potential to be repurposed.
- **Commercial center.** Because of their central location, gentrifiable spaces are found adjacent to a commercial district. Local neighborhood commercial areas with the potential for transformation to the types of shops, restaurants, and facilities preferred by the gentry are typical in the gentrification process.
- **Amenities.** Access to quality of life measures commonly found within the city designate gentrifiable places, often characterized by "a unique spatial amenity such as access to a waterfront, a hilltop location or a spectacular view." [46] These places offer access to open space, leisure and cultural

[45] Dobson and Ley, "Limits to Gentrification."
[46] Robert Beauregard, "The Chaos and Complexity of Gentrification," in *The Gentrification Reader*, ed. Loretta Lees et al. (London: Routledge, 2010), 20.

facilities, and heighten the general livability and manageability of a particular urban setting. [47]

Pre-gentrified neighborhoods are composed of a devalued housing stock. Devalued neighborhoods are found where original middle-class residents have moved outward from the inner city, and are subsequently replaced by households of lower income. These households may maintain the status of the property for a time, but soon move on the same trajectory of upward and outward mobility as those they replaced. [48] Central to the production of deteriorated housing are reproduction and consumption activities. Over time, the neighborhood will eventually be "'invaded by a group of households with a low and virtually stagnant income stream" where "the costs of maintenance and reinvestment in the housing exceed their financial wherewithal and deterioration begins." [49]

Neighborhoods with the potential to gentrify are often experiencing deterioration and decline, but this is not always the case. Gentrifiable places may be "working-class neighborhoods where housing has been well-maintained for many decades, with working-class families replacing working-class families of the same or different ethnicity and race" where "the housing may be inexpensive" relative to other parts of the city. [50]

While certain types of urban communities were recognized as essential precursors to the process, gentrification is now recognized to occur in rural and

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[47] Ley, "New Middle Class."
[48] Beauregard, "Chaos and Complexity."
[49] Ibid, 20.
[50] Ibid, 17.

suburban locations. Gentrification is "mutating, so that we now have different types of gentrification such as rural gentrification, new-build gentrification, and super-gentrification." [51] These variations and modifications help focus attention on the underlying attributes of gentrification.

The Gentrified

Who are the individuals that are likely to be "gentrified"? In a sense, who are those that are likely to be relocated, often displaced, by the process? The creation of gentrifiable housing is interdependent upon gentrifiable people. The process relies upon the existence of prior occupants who can easily be displaced or replaced, and are often unable or unwilling to resist. [52] Individuals most likely to be gentrified are located near the inner city and live in architecturally desirable housing that has depreciated in value. They can further be described as "marginal to the labor market or outside it: unemployed males and working-class white, black and Hispanic youth, the elderly, welfare mothers, and many working-class households and underemployed individuals near the poverty line." [53] Neighborhood transition "typically occurs first, and over time most deeply, in areas that are of modest income, avoiding at first very-low-income areas." [54]

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[51] L. Lees, T. Slater, and E.K. Wyly, *Gentrification* (Routledge/Taylor & Francis Group, 2008), xxi.
[52] Robert A Beauregard, "Trajectories of Neighborhood Change: The Case of Gentrification," *Environment and planning A* 22, no. 7 (1990).
[53] Beauregard, "Chaos and Complexity," 18.
[54] Dobson and Ley, "Limits to Gentrification," 2474.

An important issue within gentrification debates is the comparative power of those gentrified to the gentrifiers. The gentrified occupy housing with the possibility to be gentrified, and are themselves economically and politically powerless relative to the gentrifiers. These individuals have few economic resources and their consumption potential is weak relative to the potential gentrifiers. Thus, their attractiveness to proponents of redevelopment is also weak. Low-income neighborhoods are relatively undesirable to local-government officials, therefore lacking political power. According to Beauregard:

> The location of these 'powerless' households in gentrifiable residential areas is not a 'law' of capitalism, which inevitably produces the conditions for gentrification, nor do those potentially gentrified always succumb without a struggle. Instead, the location of economically and politically weak households in certain types of neighborhood at a particular historical time combines with the inner-city location of the potential gentry, among other factors, to produce the conjuncture which is labeled gentrification. [55]

Gentrifying neighborhoods produce higher tax yields than their pre-gentrified conditions, eliciting the "approval of local political leaders, who correspondingly moderate their support for displacees." [56]

Gentrification unfolds in a particular locale and is specific to that place. The combination of actors, events, attributes, and outcomes are rarely the same. However, generalities exist that highlight parallels that are analytically useful. Neighborhoods and cities never move from a state of decline to renaissance on their own. Gentrification is fostered by boosters that include quasi-government redevelopment bodies, local press, city governments, real estate organizations,

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[55] Beauregard, "Chaos and Complexity," 18.

[56] Sharon Zukin, "Gentrification: Culture and Capital in the Urban Core," in *The Gentrification Reader*, ed. Loretta Lees et al. (Routledge, London, 2010), 223.

banks, and neighborhood associations. These bodies have an invested interest in economic stimulation within their communities.

Neighborhood Changes

Areas undergoing gentrification are characterized by an upward trend in housing prices and property value. This can result in financial impacts on homeowners and renters, with unpredictable effects on homeowners particularly. Property values may reach a high, while others may reproduce "unsustainable speculative property price increases." [57] These places often see a loss of affordable housing for rental properties, which significantly reduces the low-cost alternatives for low-income residents. Soaring property values can be fortunate for homeowners but troubling to renters. However, increasing property values generate rising property taxes and some homeowners may find themselves being taxed out of their property. [58]

Gentrification affects the population through changes in income, status, race, and ethnicity. Sometimes a highly racialized process, gentrification is typically thought of as affluent whites coming into a black or Latino neighborhood. Racial change may be a frequent and even iconic feature, but it is not a defining characteristic of gentrification. In some cases, "white-collar workers were affected by gentrification more than blue-collar workers, with whites displaced more

[57] Atkinson and Bridge, *Global Context*, 5.
[58] Marixsa Alicea, "Cuando Nosotros Viviamos...: Stories of Displacement and Settlement in Puerto Rican Chicago," *Centro Journal* 13, no. 2 (2001).

frequently than members of other races" through the early 1970s. [59]

Older cities during the postwar period witnessed an outmigration of white, middle-class residents and an influx of working-class communities of color. Revitalization efforts in several major US cities accelerated the displacement of blacks by whites. This scenario has tended to follow a similar pattern in following decades.

Gentrification Debates

Is gentrification a "back-to-the-city-movement of capital," or is it a "back-to-the-city-movement of people?" [60] This key question has generated a dichotomy of gentrification scholarship for several decades. One group sought to define gentrification as an expression of uneven development by understanding the dynamics of investment and profitability that supported rehabilitation, upgrading, and price increases in some city neighborhoods. Neil Smith's rent gap theory has been central to this production-side literature of gentrification. Another group of scholars studied the demand and consumption-side of neighborhood embourgeoisment: investigating the in-movers' origins and their impact on the cultural, commercial, residential, and political environments of the cities in which they took residence. David Ley's work on the new middle class is at the center of this consumption-side literature. After decades of debate, "most gentrification researchers now accept that production and consumption, supply and demand,

[59] Zukin, "Culture and Capital," 223.
[60] Atkinson and Bridge, *Global Context*, 6.

economic and cultural, and structure and agency" all contribute to processes of gentrification. [61]

Producing the Rent Gap

In 1979, Neil Smith first presented the rent gap model as a conceptual tool for understanding the mechanisms of investment-disinvestment-reinvestment processes in cities:

> The physical deterioration and economic depreciation of inner-city neighborhoods is a strictly logical, "rational" outcome of the operation of the land and housing market. This is not to suggest it is at all natural, however, for the market itself is a social product. [62]

Rent describes an agreement where a transfer payment is made to the owner of a commodity, productive resource, or property. Ground rent, colloquially known as land value, equals the total returns to the owner based on some combination of potential uses of the property. Ground rent is capitalized "through some combination of tenant payment, entrepreneurial activity, and asset appreciation captured at resale." [63] In the case of owner occupancy, ground rent is capitalized when the property is sold and materializes within the sale price. Capitalized ground rent describes the actual amount of ground rent that the landowner is able to capture given the present use of the property. The potential ground rent of a property is the sum that can be profited under the land's highest and best use. A

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[61] Lees, Slater, and Wyly, *Gentrification*, xxii.

[62] Neil Smith, "Toward a Theory of Gentrification a Back to the City Movement by Capital, Not People," *Journal of the American Planning Association* 45, no. 4 (1979): 543.

[63] Lees, Slater, and Wyly, *Gentrification*, 51.

rent gap appears when potential ground rent grows measurably larger than capitalized ground rent. The rent gap is produced by capital depreciation, which reduces the amount of the ground rent able to be exploited. [64] As neighborhood deterioration continues, the rent gap widens. Gentrification occurs when the rent gap is wide enough for developers to purchase properties cheaply, pay the costs associated with rehabilitation, and sell the end product for a profit.

The rent gap is just one tool for investigating gentrification in a larger process of uneven development and has been one of the most debated themes in the study of gentrification. These debates fall into three broad categories. First, the rent gap has been proven difficult to measure and operationalize. Ground rent and potential rent do not correlate to existing datasets, and specifying them requires a contextual understanding of market and neighborhood conditions. Second, the rent gap model is criticized for its perceived determinism, leaving minimal room for human agency or local specificity. Lastly, the rent gap is limited in its usefulness as a predictive tool. While it provides conditions for gentrification, it is of little use for anticipating where gentrification will occur. These criticisms have receded over time and the rent gap has proven an indispensable construct for the conditions of profitability.

The New Middle Class

Consumption-side literature has sought to describe the social makeup of the gentry. David Ley's decades-long research on the new middle class in six Canadian

[64] Smith, "Toward a Theory."

cities during the 1970s has been at the center of this work. Ley describes the new middle class as the professional-managerial sector of the workforce that has evolved from the manufacturing views of nineteenth century capital and labor. [65] Beginning in the mid-twentieth century, long-term economic trends were dominated by white-collar services. A new sector of the workforce emerged and was disproportionately concentrated in cities where white-collar occupations were prevalent. While this class is an expansive and heterogeneous category, within it lie groups who have been key actors in the remaking of the central city over the last several decades. These assemblages include a cultural new class who "share a vocation to enhance the quality of life in pursuits that are not simply economistic" and have shaped "new inner-city environments, where they are to some degree both producer and consumer." [66] This new middle class advocated for a shift toward livable, amenity-rich cities with improvements in education and leadership.

Ley situates the new middle class between labor market, production, and urban planning changes. As Fordist economies reached a prolonged crisis beginning in the early 1970s, a "savage deindustrialization" over the next twenty years restructured the economic geographies of advanced nations. [67] The resultant market was competitive and flexible in its production techniques, producing more specialized goods and services. Consumers began to bypass standardized, mass-produced goods in favor of distinctive commodities from independent retailers.

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[65] D. Ley, *The New Middle Class and the Remaking of the Central City* (Oxford University Press, 1996).
[66] Ley, *New Middle Class*, 15.
[67] Ibid, 16.

Central to the identity formation of members of the new middle class is the "symbolic repertoire of non-standardized products." [68]

Niches within the market were not limited to goods and services. Within urban settings, the renovation of architecturally attractive housing stock by a new group of specialists emerged to exploit this market. [69] The authentic character of these inner-city neighborhoods was a stark contrast to the standardized and mass-produced suburbs of the Fordist era. Quality of life measures within urban governance were raised to unprecedented visibility, while local cultures and traditions became more valued. The new middle class played an important role in the development of the postmodern patterns of consumption and politics. Gentrifiers represent the "epitome, and among the pioneers, of a post-Fordist model of consumption." [70]

Commercial spaces in gentrified areas cater to the consumer preferences of the middle class creating a "space of consumption." [71] Warde asserts gentrification can be described as the "transformation in the built environment, via building work that exhibits some common distinctive, aesthetic features and the emergence of

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[68] Ibid, 18.
[69] David Ley, "Styles of the Times: Liberal and Neo-Conservative Landscapes in Inner Vancouver, 1968–1986," *Journal of historical geography* 13, no. 1 (1987).
[70] Ley, *New Middle Class*, 18.
[71] Sharon Zukin, "Urban Lifestyles: Diversity and Standardisation in Spaces of Consumption," *Urban studies* 35, no. 5-6 (1998): 825.

certain types of local service provision." [72] The renovation of commercial space is the result of direct investment or secondary spillover effects.

Ley and others have been criticized for contending a particular set of origins within economic production. Other scholarship has generated work that describes the roots of gentrification beyond class as a chaotic process where marginal gentrifiers, such as gays and lesbians, are significant. Yet consumption-side literature has been vital for understanding the gentry as connected to broader economic and social processes.

Measuring Gentrification

Most research on gentrification has largely been theoretical in nature. Research on gentrification from the mid-1970s to the mid-1990s attempted to advance alternative theories of the causes and implications of the phenomenon. [73] According to Wyly and Hammel:

> The uncertainty over the extent of gentrification stems not only from the complexity of the process, but also from the difficulty of observing and measuring the phenomenon. [74]

Empirical questions are not completely understood and after decades of research scholars still disagree on the extent, timing, and location of gentrified

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[72] Alan Warde, "Gentrification as Consumption: Issues of Class and Gender," *Environment and Planning D: Society and Space* 9, no. 2 (1991): 225.
[73] Ibid.
[74] Daniel J Hammel and Elvin K Wyly, "A Model for Identifying Gentrified Areas with Census Data," *Urban Geography* 17, no. 3 (1996): 248.

neighborhoods in American cities. [75] This is due in part to academic research traditions that have evolved since the 1970s.

Early empirical studies on gentrification relied heavily on a mix of evidence to document what was seen as a nascent and generally positive process of upgrading, revitalization, or renaissance. [76] [77] Beginning in the 1980s, political economists began examining the process more critically. By this time, a majority of scholars regarded the empirical research of gentrification as an unnecessary boundary-demarcation exercise, whose results can only be described as examples of inductive empiricism. [78] Empirical gentrification studies were limited as they were often applied without complementary or qualitative sources, producing an enduring dichotomy between census-based analyses and detailed case studies.

Settling on appropriate measures remain vague due to the diverse types of change in social structure and housing characteristics among cities and neighborhoods. [79] Because of this, conceptually distinct processes may be mistaken as gentrification. For example, newly constructed publicly subsidized housing for low-income residents usually removes the bottom tier of housing stock thereby

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[75] Elvin K Wyly and Daniel J Hammel, "Modeling the Context and Contingency of Gentrification," *Journal of Urban Affairs* 20, no. 3 (1998).
[76] Shirley Bradway Laska and Daphne Spain, "Urban Policy and Planning in the Wake of Gentrification Anticipating Renovators' Demands," *Journal of the American Planning Association* 45, no. 4 (1979).
[77] Wyly and Hammel, "Context and Contingency."
[78] Ibid, 305.
[79] Beauregard, "Trajectories."

boosting the median rent across census tracts. [80] Housing indicators are biased by filtering and displacement processes that diffuse rent increases outward from the core of gentrification activity. [81] This method invariably identifies established middle-class and elite districts in the central city that never experienced disinvestment or downward filtering; policy relevance and theoretical implications of neighborhood change in these districts should be distinguished from those of gentrification. [82]

This logic can be reversed by seeking out visible evidence of reinvestment prior to analyzing statistical measures correlating with neighborhood change. Wyly and Hammel developed an alternative method for comparative examinations of gentrification by bridging the gap between the neighborhood case study and census-based approaches. [83]

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[80] Wyly and Hammel, "Context and Contingency."
[81] Warde, "Gentrification as Consumption: Issues of Class and Gender."
[82] Larry S Bourne, "The Demise of Gentrification? A Commentary and Prospective View," *Urban Geography* 14, no. 1 (1993).
[83] Wyly and Hammel, "Context and Contingency."

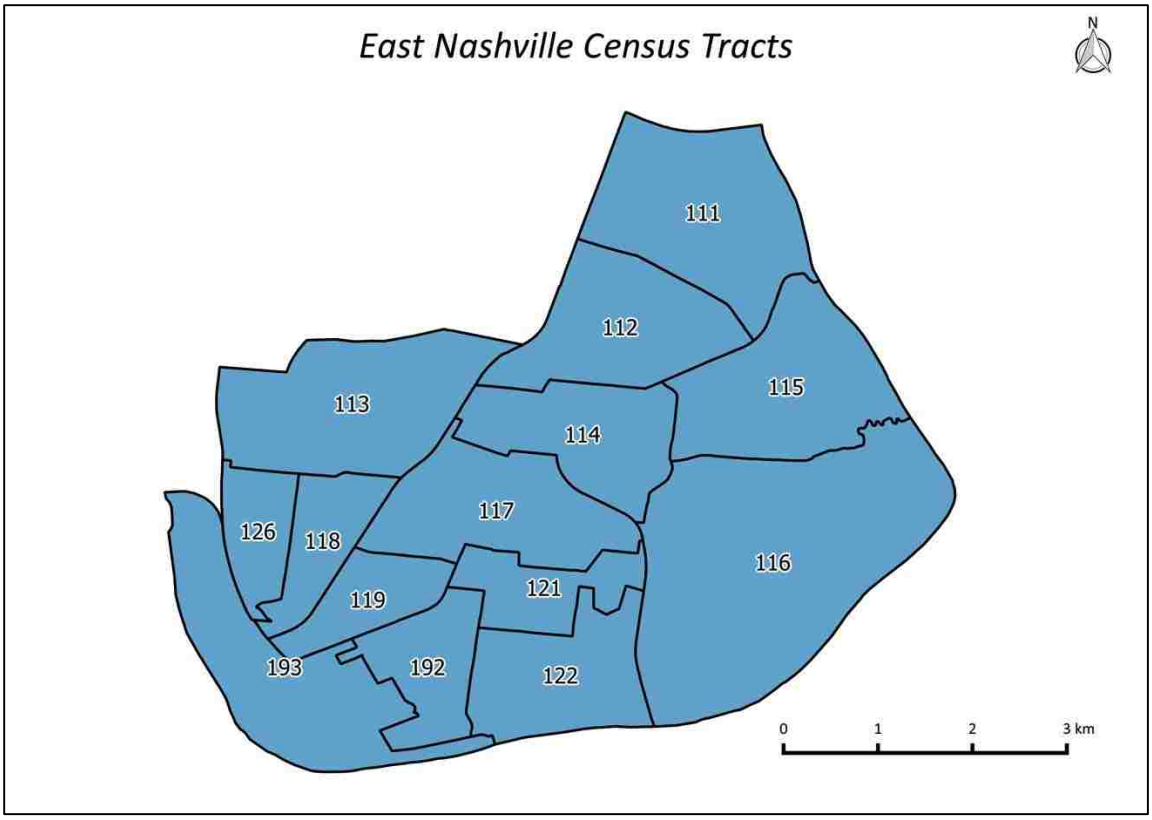
CHAPTER FOUR: METHODOLOGY

Overview and research question

By conducting field surveys of all census tracts within East Nashville, the extent of areas undergoing significant residential reinvestment was documented. Next, a database was constructed from tract-level estimates from the U.S. Census Bureau's Decennial Census and American Community Survey 5-year estimates. Using clear empirical indicators of recent changes in urban housing and labor markets, this technique elicits the following question:
Are gentrifying neighborhoods in East Nashville sufficiently similar to one another and different from non-gentrifying East Nashville neighborhoods? This question establishes a null hypothesis that integrates contingency in both outcome and process: Gentrification's chaotic and complex nature suggest that social and economic variation within gentrified neighborhoods is likely to exceed that between these tracts and non-gentrifying areas.

Field Surveys

Before conducting field surveys, the geographic boundaries of East Nashville were determined using colloquial knowledge from Google Maps. From these boundaries the census tracts that comprise East Nashville were found using 2010 TIGER/LINE Shapefiles provided by the U.S. Census Bureau. Currently East Nashville has 14 census tracts shown in Map 4.1.



Map 4.1. Census tracts in East Nashville

Next, a database template was created listing the roads in each census tract utilizing ArcMap 10.1. First, a shapefile was produced from Davidson County, Tennessee census tracts to show only tracts in East Nashville. This was done by selecting the 14 tracts that comprise East Nashville and creating a layer from that selection. A shapefile containing Roads for Davidson County, Tennessee was then added into the data frame. Two DBF files containing information on Address Range and Address References were placed into the data frame. Address Range refers to the collection of all possible structure numbers from the first structure number to the last structure number and all numbers of a specified parity between, along an

edge side relative to the direction in which the edge is coded. [84] The Address References file contains address range identifier (ARID) and linear feature identifier (LINEARID) attributes. Each address range applies to a single edge side and has a unique ARID value. [85] LINEARID is a unique identification number for linear features and is used to associate the name and attributes of linear features to their spatial edges and address ranges as appropriate. [86] A join was executed between these .DBF files using the ARID attribute as the common identifier. Next, a spatial join was used to connect the Roads shapefile with the newly joined Address Range .DBF file, with LINEARID as the common identifier between the two files. The Roads shapefile, which only had Road names featured in the attribute table, then contained address ranges for each road in Davidson County. Address range columns were labeled as TOHN (to house number) and FROMHN (from house number). To determine which roads and their respective address ranges were in East Nashville, the intersect tool was used. From this, each road and address range for each respective census tract in East Nashville was identified. All columns and fields from the intersect file were copied and pasted into an excel workbook file and sorted by census tract. Field surveys were then executed using this template.

Qualitative methods were employed using field surveys to determine the extent of gentrification for each census tract. To do this, criteria were determined to designate *a-priori* classification of each tract. Table 4.1 lists the criteria implemented in the survey.

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[84] U.S. Census Bureau, *TIGER/Line Shapefiles Technical Documentation 2014*, 4-88.
[85] Ibid.
[86] Ibid, 4-93.

Table 4.1. Criteria used to determine *a-priori* classifications of census tracts [87] [88]

Criteria	***Census Tract***
1. Preliminary analysis	Tract must have experienced sustained period of decline and disinvestment, with median household incomes below the central city average.
2. Field work – interpretation of the built environment	Structures within census tract must show visible evidence of reinvestment and renovation -Structurally sound reconstruction of buildings -Renovations to accessorize structures, porches -Sandblasted brick or recently painted -Addition of accessories (e.g., carriage lights, porch furniture, cast iron ornamentation, fencing, fountains) -Home security system
3. Field work – interpretation of the cultural environment	Businesses in tract are geared toward middle- or upper-class consumption -Pedestrianized streets -Middle-class restaurants (coffee shops, ethnic eateries, microbrew-pubs) -Eclectic businesses/establishments geared toward creatives (galleries, gay/lesbian bars) -Street art -Specialty food stores (organic, wine and cheese shops, coffee roasters) -High-end and/or specialty retail (designer clothing, housewares, upper-class pet stores, gift stores) -Prevalence of expensive and/or luxury vehicles in the neighborhood

Note: See Appendices D through I for examples of structural reinvestment

Each individual tract was then assigned into one of four categories: (1) *No*; (2) *Limited*; (3) *Possible*; (4) *Probable*. Following Hammel & Wyly and Heidkamp &

[87] Hammel and Wyly, "Model for Identifying Gentrified Areas," 250.
[88] C. Patrick Heidkamp and Susan Lucas, "Finding the Gentrification Frontier Using Census Data: The Case of Portland, Maine," *Urban Geography* 27, no. 2 (2006): 110.

Lucas, the *a priori* classification guidelines for census tracts are as follows: [89] [90]

(1) *No*: Areas in which socioeconomic changes should not be confused with gentrification. Historically, these neighborhoods are often middle- or upper-class tracts. Gentrification involves the reinvestment in and rebuilding of physical structures that have undergone a period of disinvestment. Therefore, areas of new construction were excluded.

(2) *Limited*: Tracts with median incomes below the central city median in 1990. These areas constitute areas of East Nashville that have experienced general decline and disinvestment. They have the potential for gentrification, but show no substantial evidence of reinvestment activity.

(3) *Possible*: Composed of neighborhoods that have experienced a sustained period of decline with median household incomes below the city average. Reinvestment, rebuilding, and/or renovation is at a comparatively lower level in comparison to the *probable* category, or confined to a small area, questioning whether changes are significant at the neighborhood level. As a general rule, less than 50% of the total number of individual buildings in each census tract displayed some characteristics of physical upgrading.

[89] Hammel and Wyly, "Model for Identifying Gentrified Areas."
[90] Heidkamp and Lucas, "Gentrification Frontier."

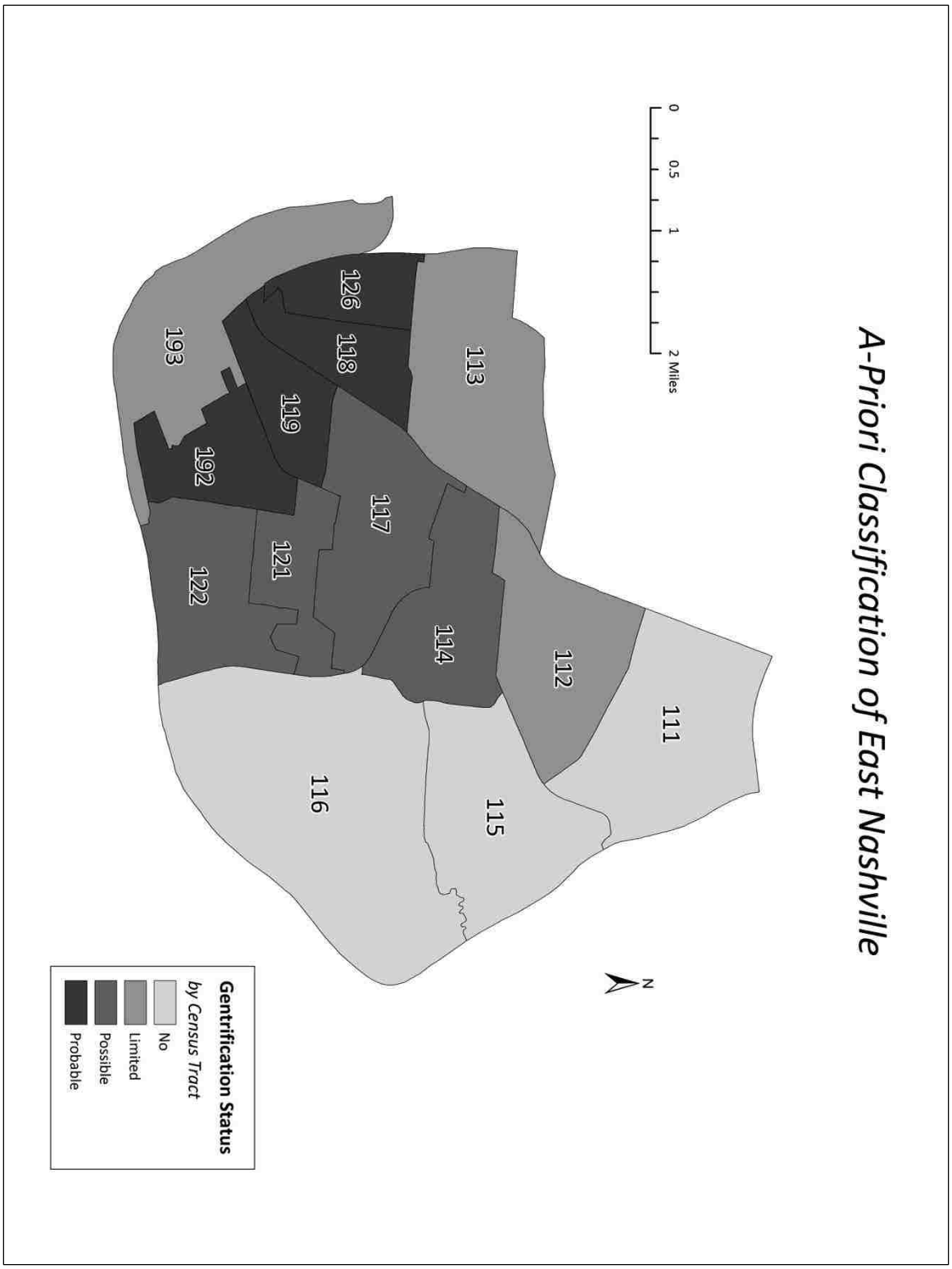
Figure 4.1. A structurally sound bungalow-style home at the junction of Woodland and S. 16th typical of homes in the East End neighborhood and *Possible* census tract 121.

(4) *Probable***:** Tracts where more than 50% of residential buildings displayed a minimum of three characteristics of physical upgrading. These tracts also displayed at least three indicators of change in the non-residential physical environment. All tracts must have median household incomes below the 1990 central city average.

Figure 4.2. Exterior renovation in census tract 118, near the corner of N. 6th and Douglas located in a *Probable* census tract.

To determine this classification, each street was surveyed by tract using the template derived from ArcMap. The results of the survey are classified census tracts based on their level of gentrification as shown in Map 4.2.

Figure 4.3. Newly remodeled homes with visible evidence or reinvestment, on the corner of Lischey and Douglas near the intersection of census tracts 118 and 126. Found within a *Probable* tract.



Map 4.2. *A-priori* Classification of Census Tracts in East Nashville

Empirical Methods

To begin the quantitative research of this project, census variables were assigned in an attempt to measure changes in socioeconomic structure resultant of gentrification. [91] [92] Variables were derived from the 1990 and 2000 United States Decennial Census, as well as 2009-2013 5-year estimates from the American Community Survey. Gentrification did not begin in earnest in East Nashville until the mid- to late-1990s, and it is anticipated that the socioeconomic changes produced by gentrification will not have taken hold until the 2000s. As such, change variables incorporated into the analysis should be able to distinguish gentrified from non-gentrified tracts most effectively for the 2000 and 2009-2013 period.

These variables were derived from the U.S. Census Bureau's Factfinder website in tabular form. For 1990 data, the website *socialexplorer.com* was utilized. Data prior to 2000 could not be found for the tracts in question on Factfinder. Variables were first broken down into socioeconomic and housing classes as shown in Table 4.2.

[91] Ley, "Styles of the Times."

[92] Larry S Bourne and David F Ley, *Changing Social Geography of Canadian Cities*, vol. 2(McGill-Queen's Press-MQUP, 1993).

Table 4.2. Census variables used in analysis [93] [94]

Socioeconomic variables:
1. Median household income
2. Change in median household income
3. Percentage of workers with managerial, professional, or technical occupations
4. Change in percentage of workers with managerial, professional, or technical occupations
5. Percentage of persons age 25+ with bachelor's degree or higher
6. Change in percentage of persons age 25+ with bachelor's degree or higher
7. Change in black residents
8. Change in college enrolled population age 18+
Housing variables:
9. Median rent
10. Change in median rent
11. Median home value
12. Change in median home value

Note: Change variables represent percentage change over previous decade; all other measures refer to end of decade.

A change in the "proportion of the population employed in managerial, technical, and professional occupations reflect the growth of tertiary employment and…the emergence of a new social class based on distinctive consumption patterns." [95] Growth in median household income, educational attainment, and professional occupations are associated with gentrifiable areas. Median rent and house value also follow this pattern. Some studies exclude racial composition as an indicator of displacement resulting from gentrification, citing it to be a fundamentally class-based phenomenon. However, fluctuations in racial composition have transpired roughly alongside other socioeconomic changes in East Nashville. Certain tracts within East Nashville have witnessed a sharp decline in the

[93] Hammel and Wyly, "Model for Identifying," 256.
[94] Heidkamp and Lucas, "Gentrification Frontier," 112.
[95] Ibid, 113.

percentage of black residents since the 1980s. This change has occurred in tandem with an increase of the percentage of white residents in some of these census tracts.

Variables in the analysis were broken down further into two categories: (1) historical conditions and (2) change over time.

Historical conditions variables included:

- Percentage of persons age 25 years and over with bachelor's degree or higher
- Median household income
- Percentage of persons age 16 years and over in managerial, professional, or technical occupations
- Median gross rent
- Median home value

Historical conditions variables describe the neighborhood variables for two time periods utilizing: (1) 2000 Decennial Census Data and (2) 2009-2013 5-year American Community Survey estimates. Change variables implemented in the analysis were as follows:

- Percent change in the number of persons age 25 years and over with bachelor's degree or higher
- Percent change in the number of persons age 18 years and over enrolled in college or graduate school
- Percent change in median household income
- Percent change in the number of persons age 16 years and over in

managerial, professional, or technical occupations

- Percent change in median gross rent
- Percent change in median home value
- Percent change in persons identifying as black

Change variables account for the percent change of a given variable between two time periods by integrating: (1) 1990 Decennial Census Data and 2000 Decennial Census Data; and (2) 2000 Decennial Census Data and 2009-2013 American Community Survey estimates.

American Community Survey (ACS) 5-year estimates from 2009-2013 were used to describe the most recent empirical data for each tract. These 5-year estimates were designated as 2009-2013 in this project. The percent change in the number of persons age 18 years and over enrolled in college or graduate school was only calculated for the 2000 and the 2009-2013 5-year estimates. Data for 1990 could not be found; therefore a change for the time period between 1990 and 2000 could not be determined. Persons identified in managerial, professional, or technical occupations are used interchangeably in this text.

The U.S. Census often changes the boundaries of census tracts over time. Census tracts changed slightly in East Nashville between 2000 and 2010 as shown in Map 4.3. Starting in 2010, census tract 192 was shaped from what were tracts 120 and 123 in the 1990 and 2000 census. Census tract 193 was created from tracts 124 and 125 in the previous two decennial censuses. Fortunately, the extent of these newly formed tracts had not changed. Therefore, when collecting empirical data

from the 1990 and 2000 decennial census, these tracts and their data were combined to represent their current respective tracts.

Map 4.3. Census tract boundary changes from 2000 to 2010 in East Nashville

Heidkamp and Lucas identify three problems concerning the use of census data to distinguish between gentrifying and non-gentrifying neighborhoods:

> First, gentrifying areas do not directly correspond to either block group or census tract boundaries; second the impacts of gentrification are highly localized and cannot therefore be adequately captured using areal units from the Census; and finally, the boundaries of census tracts and block groups change over time. The localized nature of gentrification and the "patchwork" pattern produced by the juxtaposition of gentrified and ungentrified neighborhoods means that the boundaries of gentrified areas are highly unlikely to coincide with the boundaries of spatial units used in the Census. [96]

[96] Ibid.

Gale and Spain also suggest that analyzing gentrification through census tract data is insufficient because it "fails to capture the very localized impacts of gentrification. [97] [98] [99]

Historical conditions data was manipulated to create a histogram for each variable by census tract in East Nashville. Tracts were categorized by their *a-priori* classification to easily discern trends between tracts. This process was repeated for change variables. To determine the percent change for a respective variable in each tract, a simple calculation was employed. This calculation can be described as: $(x - y) / y$ where x equals more recent data and y equals older data.

Historical conditions and change variables were mapped by census tracts to visualize these variables spatially using ArcMap 10.1. The East Nashville census tract shapefile created previously was joined with an excel table containing all variables. The GEOID for each tract was used as the common identifier. GEOIDs are numeric codes that uniquely identify all administrative/legal and statistical geographic areas for which the Census Bureau tabulates data. [100]

To further comprehend trends between tracts and *a-priori* classification, a ranking system was employed. This was done for the time periods in question. Historical conditions rankings contain data from 2000 and 2009-2013. Change rankings contain data obtained from their percent change from 1990 to 2000, and

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[97] Jeffrey R Henig and Dennis E Gale, "The Political Incorporation of Newcomers to Racially Changing Neighborhoods," *Urban Affairs Review* 22, no. 3 (1987).
[98] Daphne Spain, "A Gentrification Research Agenda for the 1990s," *Journal of Urban Affairs* 14, no. 2 (1992).
[99] Heidkamp and Lucas, "Gentrification Frontier," 113.
[100] U.S. Census Bureau, *Technical Documentation*, 3.26.

2000 to 2009-2013. Each tract was ranked on a scale of 1 to 14 for each variable. For example, a tract with the highest median household income would receive a ranking of 1 while the lowest would receive a ranking of 14. For change variables, a tract with the largest decrease in the number of black residents would receive a ranking of one, while the highest increase would receive a ranking of 14. This particular variable is the only variable where a ranking of 1 indicates the largest decrease; all other variables with a ranking of 1 indicate a tract with the largest increase of the variable in question. This is due to the relationship between the displacement of black residents from gentrification processes. Each tract was then assigned an average ranking on a scale of 1 to 14. To execute the average ranking, each tract's ranking per variable was summed and averaged by the total number of variables. For historical conditions the total number was 5. Change variables for the 2000 time period totaled 6, while 2009-2013 totaled 7. An average ranking near 1 would indicate higher gentrification impacts based on the data, while a ranking near 14 would indicate this to a lesser extent. To discern trends based on *a-priori* classification, tracts and their per variable ranking were totaled and averaged based on their classification. For change variables, all *limited* tracts (two) and their ranking for each variable were summed and divided by the total number of variables included (in this case 14). This was done for the 3 other classifications as well. An average ranking per variable for each of the 4 *a-priori* classes was calculated.

CHAPTER FIVE: A SUITABLE SITE?

Do the historical conditions of a neighborhood provide basis to discriminate gentrification between census tracts? While not always the case, these variables do show general tendencies between tracts in East Nashville. These conditions also provide a context for how we can describe East Nashville as a place of diversity and point to the prior level of investment within tracts.

Educational Attainment

In 2000, census tracts 121 and 122 – classified as *possible* – had the highest share of persons with a bachelor's degree or higher, with 34% and 26% respectively. More educated individuals appear to be residing in the *no* and *possible* tracts, with the exception of census tracts 114 and 117. *Probable* census tract 192 had the highest proportion of college graduates with 19%, as shown in Figure 5.1.

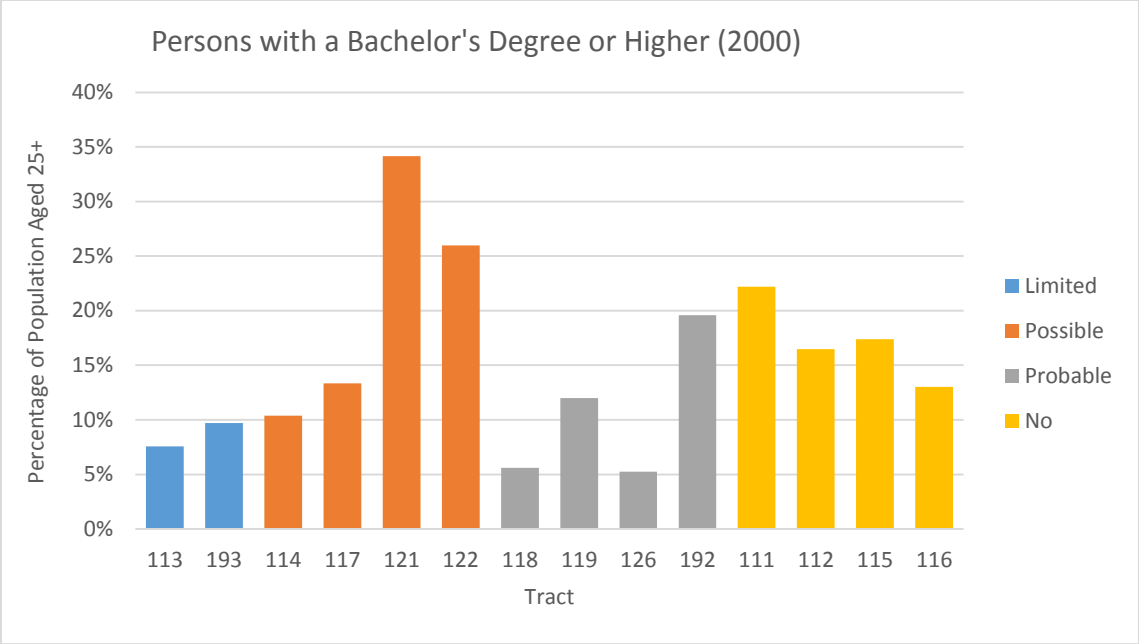


Figure 5.1. Individuals with a bachelor's degree or higher as a percentage of persons age 25 and over in East Nashville. By Davidson County, Tennessee census tract for year 2000. [101]

In Figure 5.2, there is a visible increase in the percentage of persons with a bachelor's degree in all census tracts, except in *limited* tracts in the 5-year estimates. Once again, tracts 121 and 122 had the highest proportion of college graduates, with over 50% in census tract 122. The proportion of college graduates nearly doubled in all *probable* tracts. Map 5.1 shows the historical conditions of these two datasets by census tract.

[101] U.S. Census Bureau, "Sex by Educational Attainment for the Population 25 Years and Over: 2000," SF3 Sample Data Table P037, http://factfinder.census.gov, (accessed September 1, 2014).

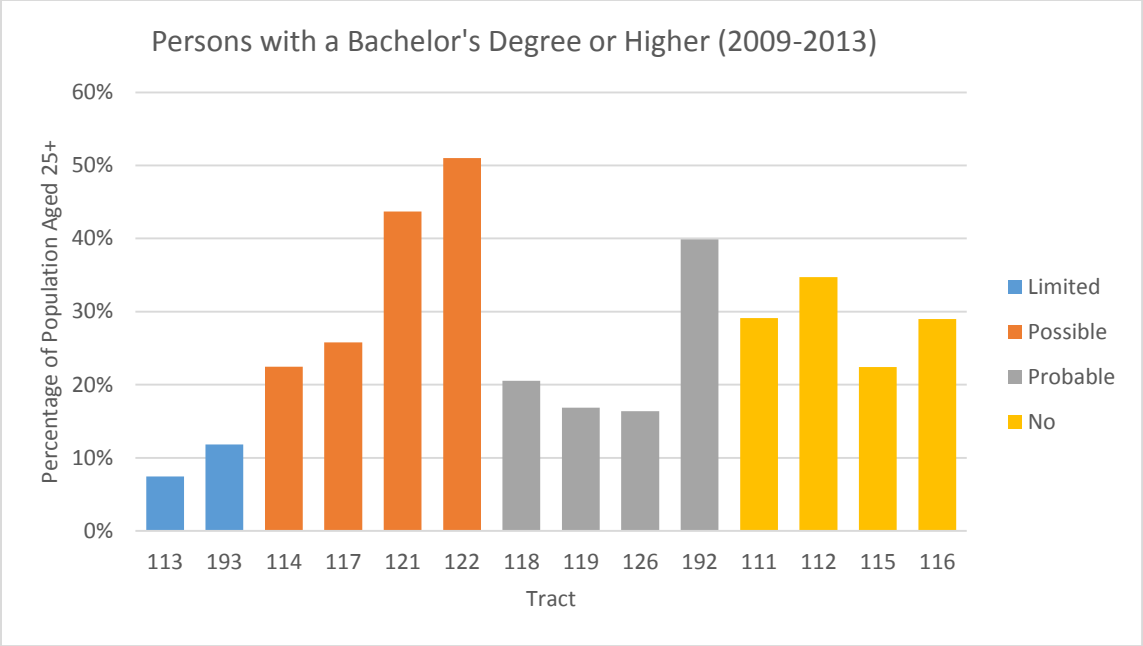
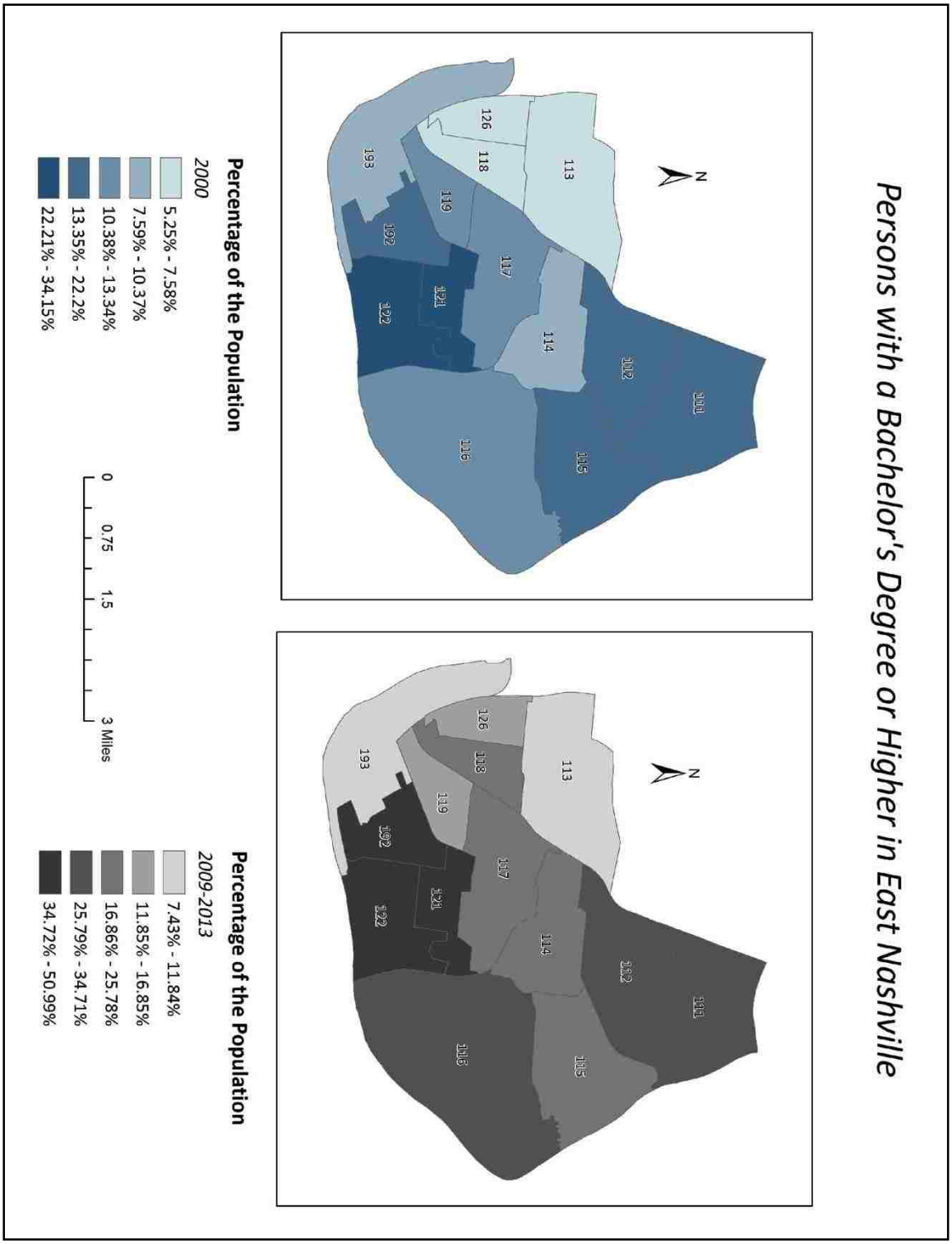


Figure 5.2. Individuals with a bachelor's degree or higher as a percentage of persons age 25 and over in East Nashville. By Davidson County, Tennessee census tract for years 2009-2013. [102]

[102] U.S. Census Bureau, "Educational Attainment: 2009-2013," ACS 5-year estimates Table S1501, http://factfinder.census.gov, (accessed September 1, 2014).



Map 5.1. Educational attainment in East Nashville [103] [104]

[103] U.S. Census, "Educational Attainment," Table P037.

[104] U.S. Census, "Educational Attainment," Table S1501.

Income

In 2000, we can see some slight trends in median household with regards to *a-priori* classification, as shown in Figure 5.3. Tracts classified as *no* have the highest median income of all census tracts in East Nashville. This is not surprising, as the level of investment and high socioeconomic status has maintained in these tracts over the past several decades. P*ossible* tracts had the second highest average of household incomes in East Nashville, followed by *probable* tracts.

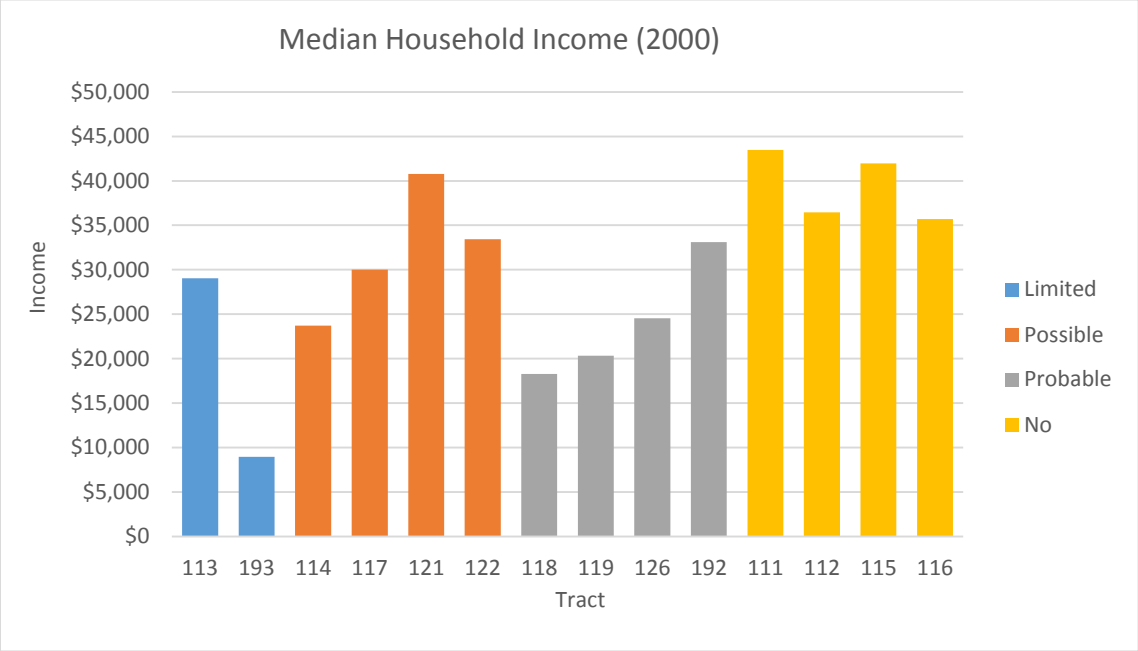


Figure 5.3. Median Household Income in 1999 dollars. By Davidson County, Tennessee census tract for year 2000. [105]

In 2009-2013 we see the same general trends of median household income as the year 2000, with some slight gains in *possible* census tracts with reference to Figure 5.4. Census tract 121, a *possible* tract, now has the highest median income of all

[105] U.S. Census Bureau, "Median Household Income: 2000," SF3 Sample Data Table HCT012, http://factfinder.census.gov, (accessed September 1, 2014).

census tracts in East Nashville. Map 5.2 demonstrates the historical conditions of these two datasets by census tract.

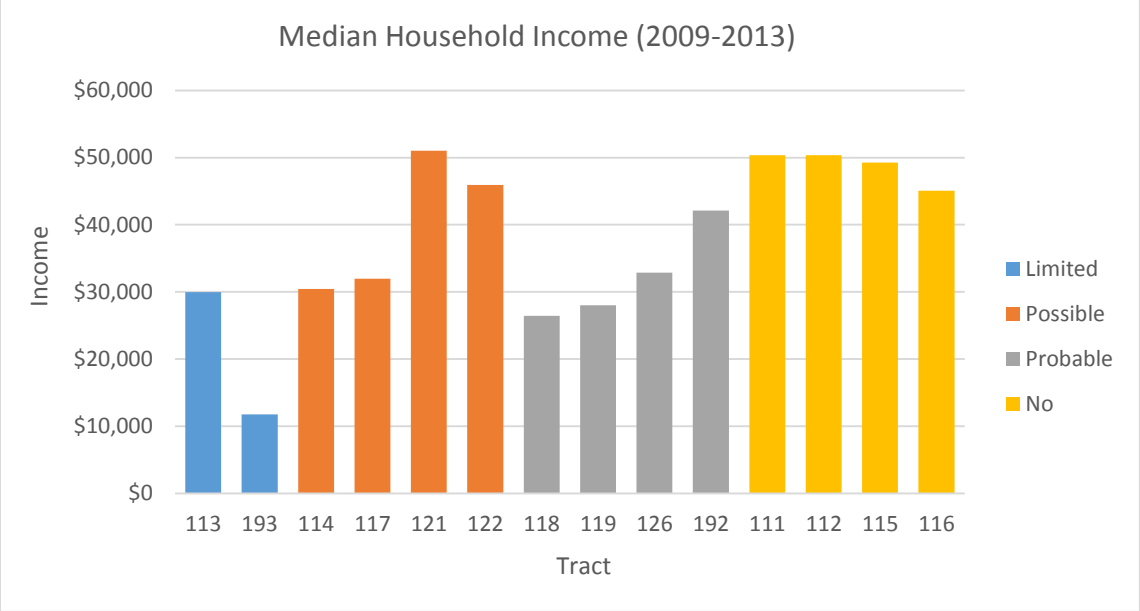
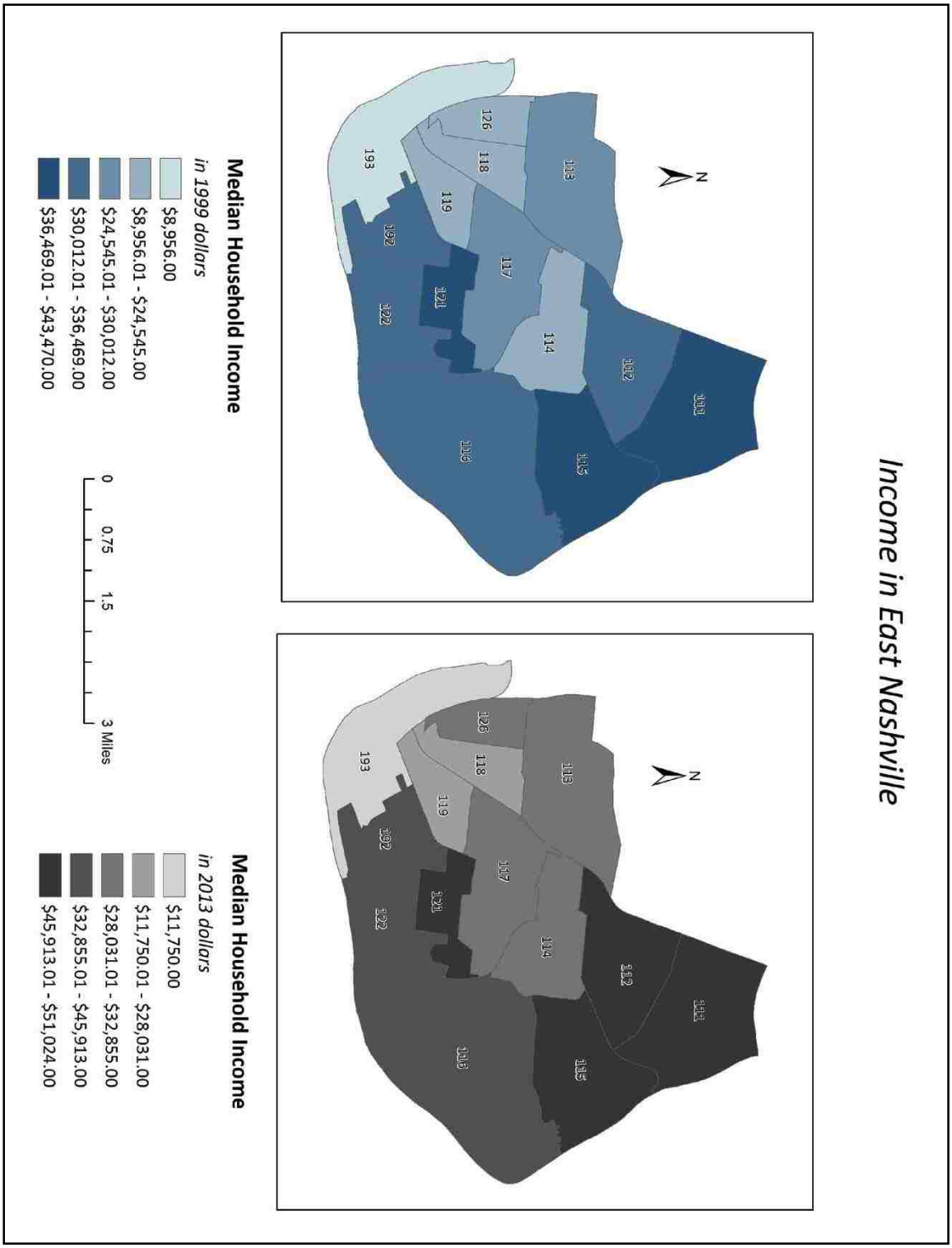


Figure 5.4. Median Household Income in 2013 dollars. By Davidson County, Tennessee census tract for years 2009-2013. [106]

[106] U.S. Census Bureau, "Median Household Income: 2009-2013," ACS 5-year estimates Table B19013, http://factfinder.census.gov, (accessed September 1, 2014).



Map 5.2. Income in East Nashville [107] [108]

[107] U.S. Census, "Median Income," Table HCT012.

[108] U.S. Census, "Median Income," Table B19013.

Managerial, Professional and Technical Workers

As a percentage of employed workers age 16 and over, there is less of a clear trend in the number of managerial workers based upon their *a-priori* classification for the year 2000. Looking closer at Figure 5.5, *probable* tracts do tend to have the same proportion of professional workers. The exception here is tract 192 once again, where the level of investment has been higher than the other three tracts within the *probable* category. Neighborhood change in this area perhaps began earlier, drawing attention to the notion that gentrification begins in areas that are of modest income, avoiding at first very-low-income areas. *Possible* tracts 121 and 122 have the highest percentage of managerial workers with 50% and 45%, respectively.

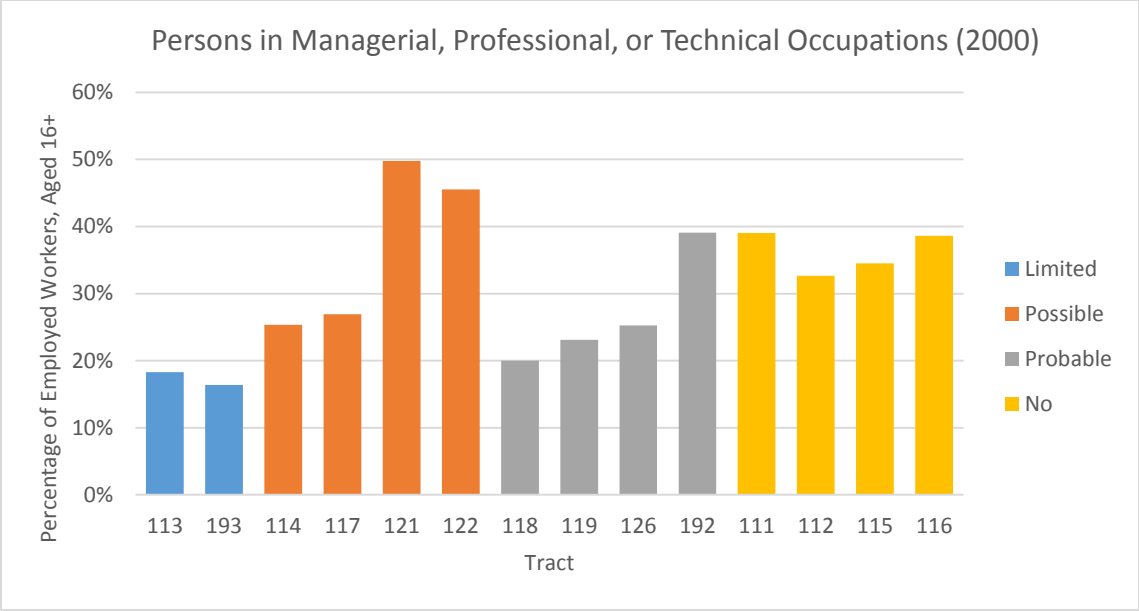


Figure 5.5. Individuals in managerial, professional, or technical occupations as a percentage of persons age 16 and over in East Nashville. By Davidson County, Tennessee census tract for year 2000. [109]

The same analysis can be said of the percentage of managerial, professional, or technical workers for 2009-2013 in Figure 5.6. Overall, *probable* tracts have a smaller percentage of managerial workers than *no* and possible areas, from 20% - 30%, with the exception of tract 192 with a 55% share. Map 5.3 shows the historical conditions of these two datasets by census tract.

[109] U.S. Census Bureau, "Sex by Occupation for the Employed Civilian Population 16 Years and Over: 2000," SF3 Sample Data Table P050, http://factfinder.census.gov, (accessed September 1, 2014).

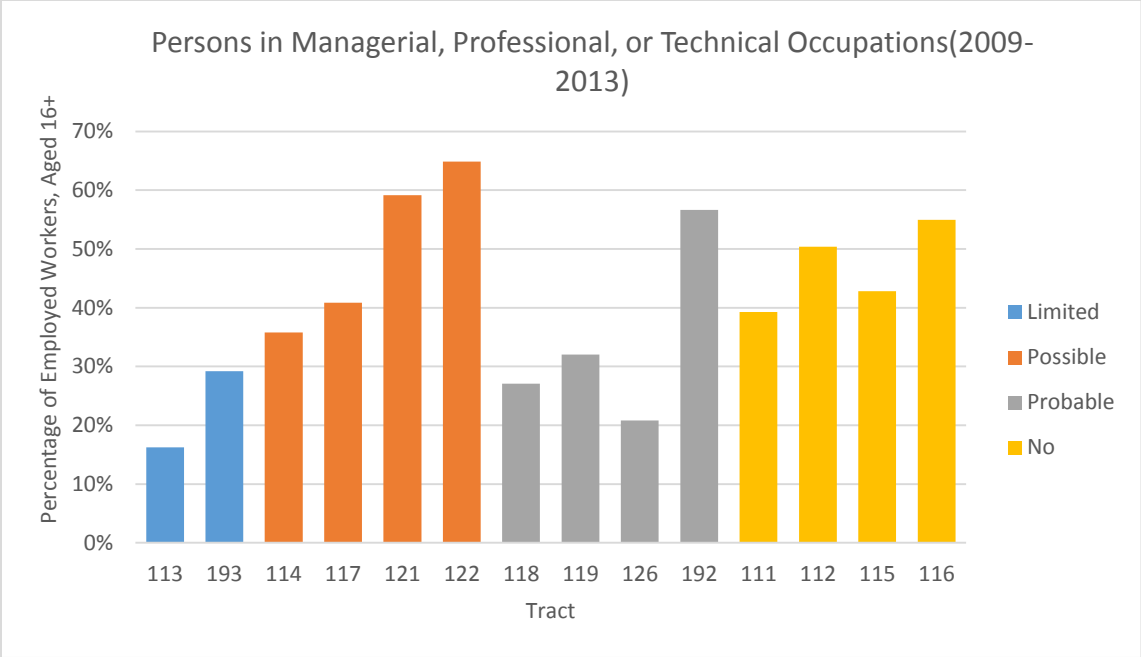


Figure 5.6. Individuals in managerial, professional, or technical occupations as a percentage of persons age 16 and over in East Nashville. By Davidson County, Tennessee census tract for years 2009-2013. [110]

[110] U.S. Census Bureau, "Sex by Occupation for the Civilian Employed Population 16 Years and Over: 2009-2013," ACS 5-year estimates Table C24010, http://factfinder.census.gov, (accessed September 1, 2014).

Map 5.3. Occupations in East Nashville [111] [112]

[111] U.S. Census, "Occupations," Table P050

[112] U.S. Census, "Occupations," Table C24010

Rent

In 2000, we can see some slight differences of total median rents based on neighborhood classification with reference to Figure 5.7. *No* tracts had the highest average rents, followed by *possible* and *probable* areas. These median rents are indicative of the overall condition of the housing stock in census tracts during this time.

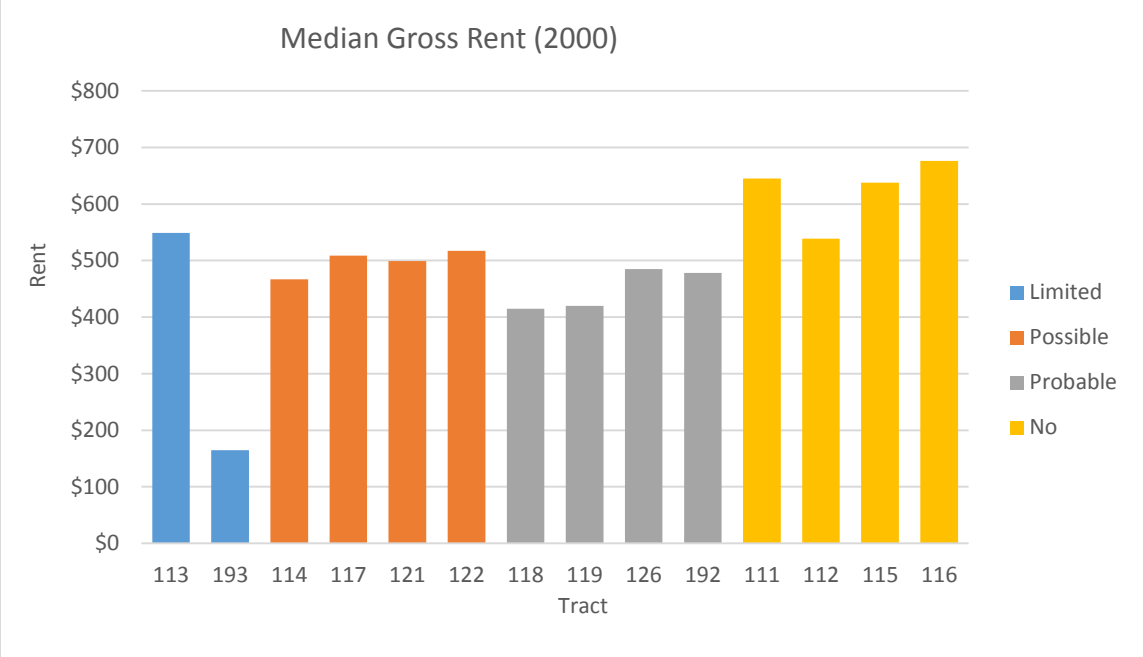


Figure 5.7. Median Gross Rent in 1999 dollars. By Davidson County, Tennessee census tract for year 2000. [113]

As shown in Figure 5.8, ACS 2009-2013 estimates for median gross rents display a more homogenous mixture of median gross rents per census tract than in 2000. *Probable* tracts 118, 126, and 192 all have median rents approaching $800; nearly

[113] U.S. Census Bureau, "Median Gross Rent (Dollars): 2000," SF3 Sample Data Table H063, http://factfinder.census.gov, (accessed September 1, 2014).

on par with the highly invested *no* census tracts. Map 5.4 visualizes the historical conditions of these two datasets by census tract.

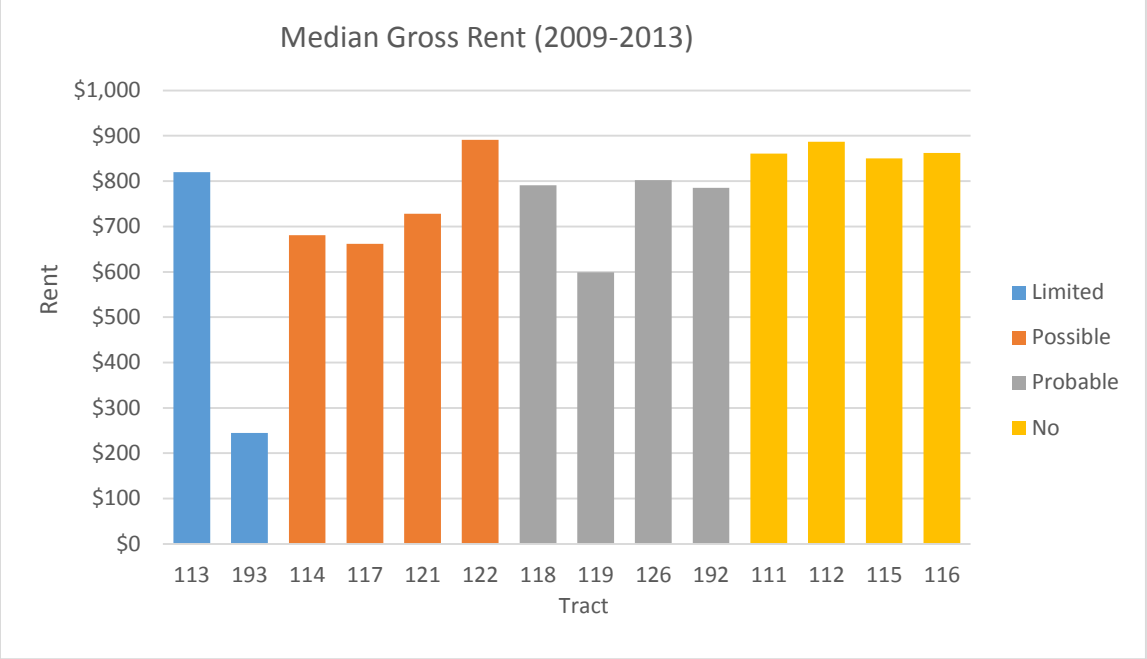
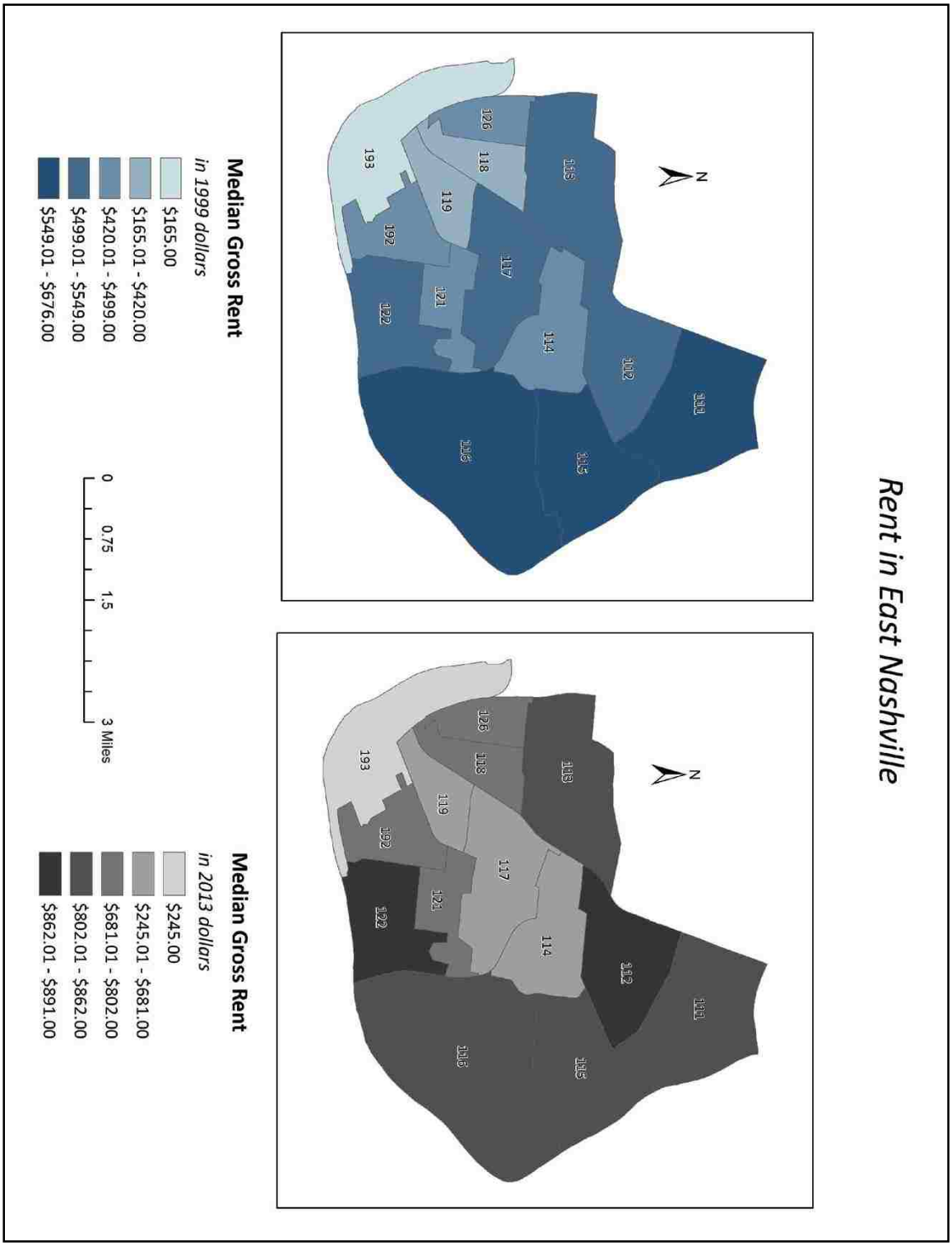


Figure 5.8. Median Gross Rent in 2013 dollars. By Davidson County, Tennessee census tract for years 2009-2013. [114]

[114] U.S. Census Bureau, "Median Gross Rent (Dollars): 2009-2013," ACS 5-year estimates Table B25064, http://factfinder.census.gov, (accessed September 1, 2014).



Map 5.4. Rent in East Nashville [115] [116]

[115] U.S. Census, "Median Rent," Table H063.

[116] U.S. Census, "Median Rent," Table B25064.

Value

Overall median home values in 2000 show some slight indications of gentrification pressures as shown in Figure 5.9. *No* tracts have the highest average values, followed by *possible* and *probable* tracts. Census tract 192 is again an outlier in its group, with values comparable and sometimes higher than *no* tracts. Census tract 193 should be excluded, as it has the smallest total number of owner occupied homes in 2000 with only 55. Taking this into account, *possible* tract 121 has the highest average home values at $108, 100.

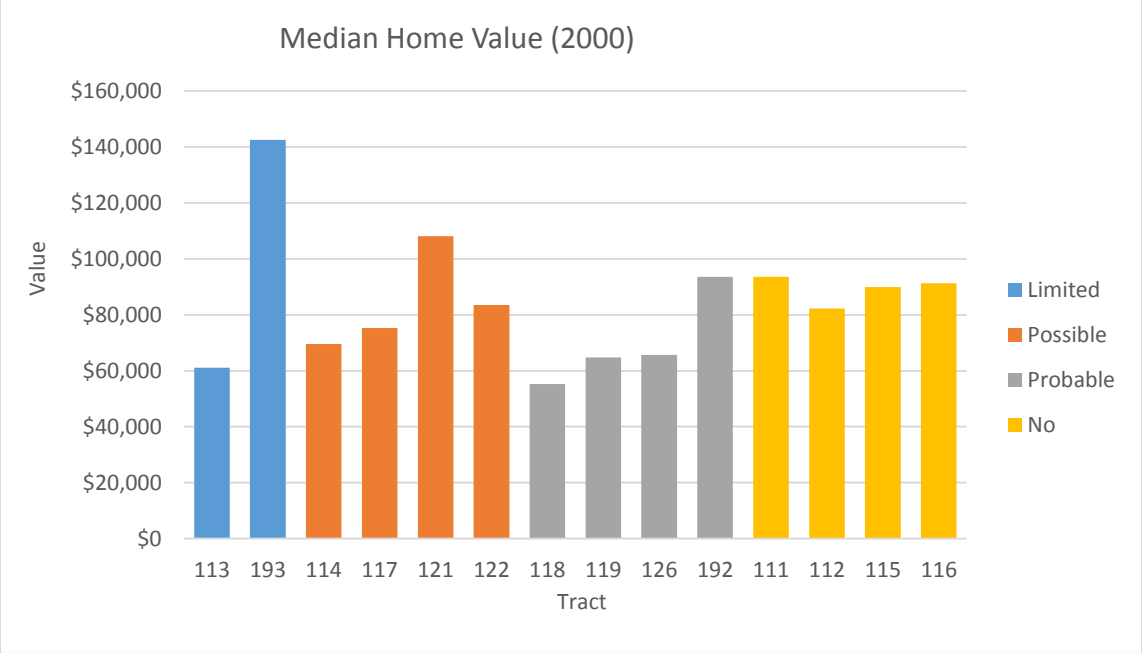


Figure 5.9. Median home value in 1999 dollars. By Davidson County, Tennessee census tract for year 2000. [117]

[117] U.S. Census Bureau, "Median Value (Dollars) for Specified Owner-Occupied Housing Units: 2000," SF3 Sample Data Table H076, http://factfinder.census.gov, (accessed September 1, 2014).

Home values tend to follow the same patterns in 2009-2013 as demonstrated in Figure 5.10. Not including tract 193, *possible* tracts 121 and 122, along with *probable* tract 192, represent the three highest median home values. Large portions of these tracts include portions of the Edgefield Historic District and the East Nashville Historic District. Map 5.5 displays the historical conditions of these two datasets by census tract.

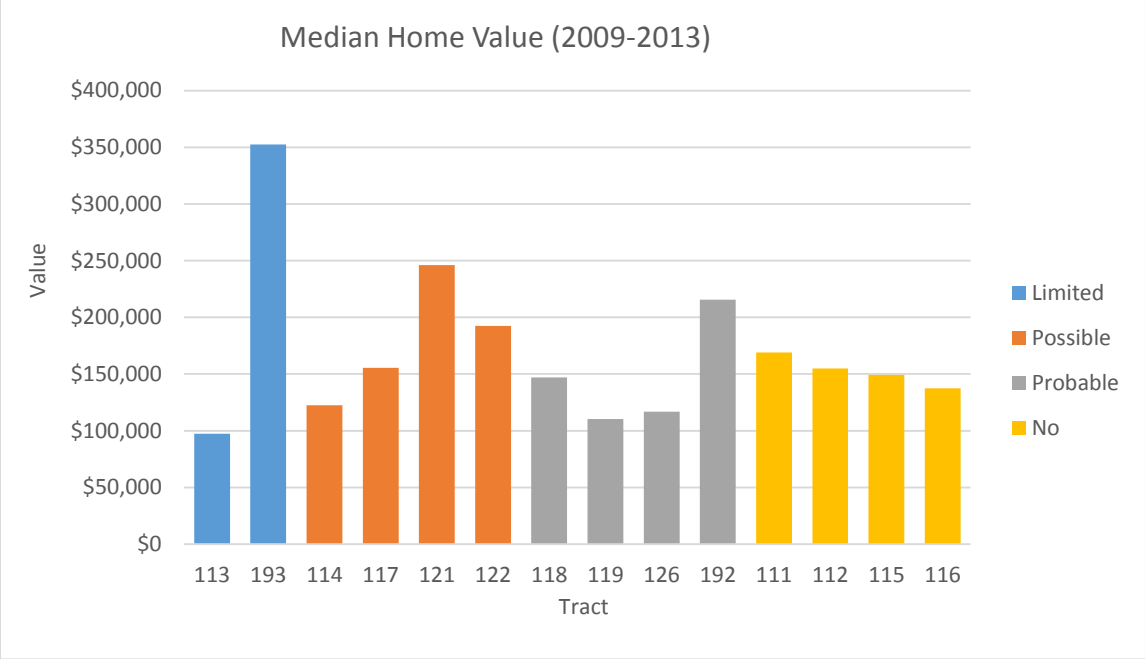
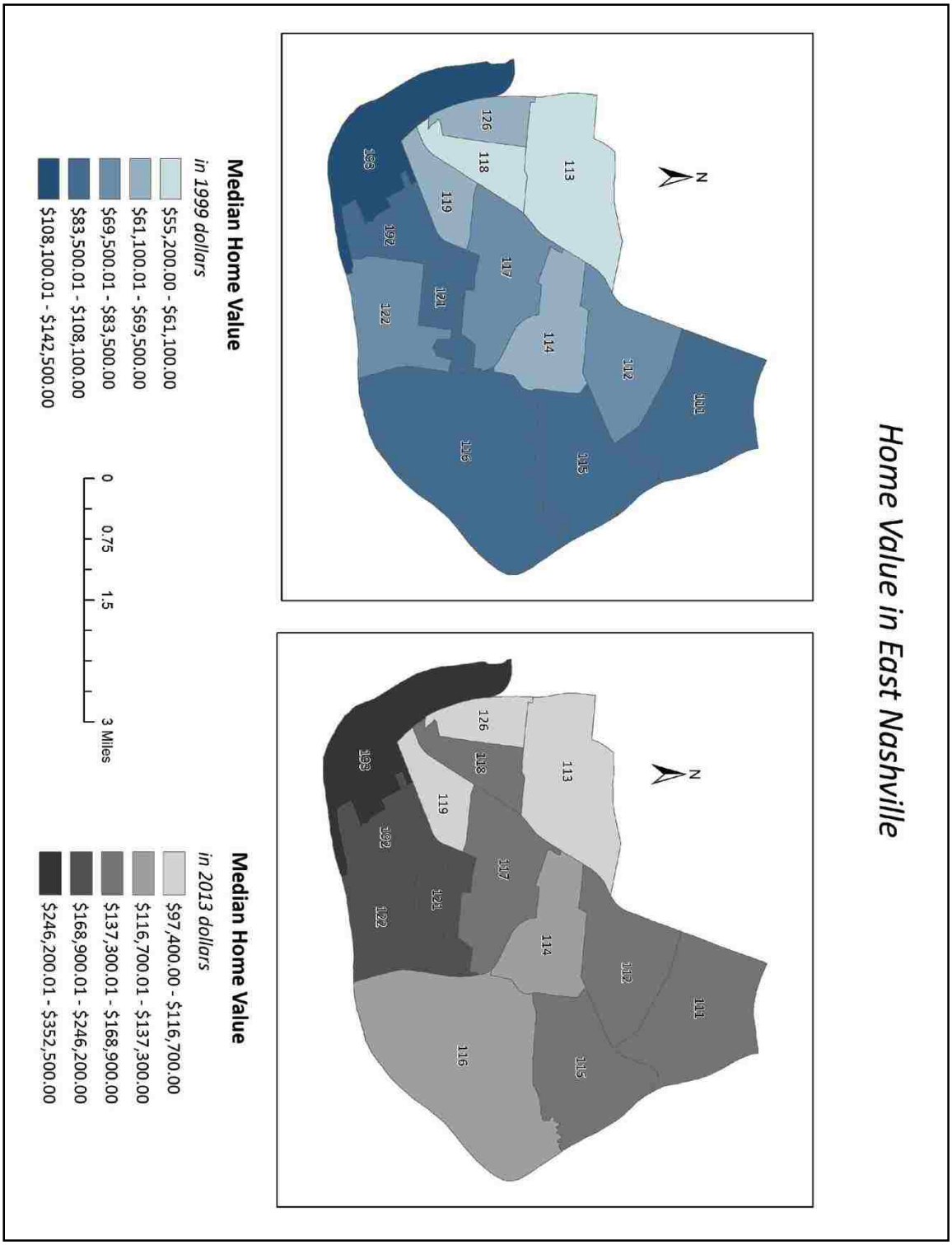


Figure 5.10. Median home value in 2013 dollars. By Davidson County, Tennessee census tract for years 2009-2013. [118]

[118] U.S. Census Bureau, "Median Value (Dollars): 2009-2013," ACS 5-year estimates Table B25077, http://factfinder.census.gov, (accessed September 1, 2014).



Map 5.5. Home values in East Nashville [119] [120]

[119] U.S. Census, "Median Value," Table H076.

[120] U.S. Census, "Median Value," Table B25077.

CHAPTER SIX: GENTRIFICATION AS NEIGHBORHOOD CHANGE

Change in Educational Attainment

Was there an increase in the percentage of persons age 25 and over with a bachelor's degree? Yes.

From 1990 to 2000, the largest percent increase of persons with a bachelor's degree or higher are in tracts classified as *possible* and *probable*. Tract 119 – *probable* – had the largest percent change, with +200% change in college graduates as shown in Figure 6.1.

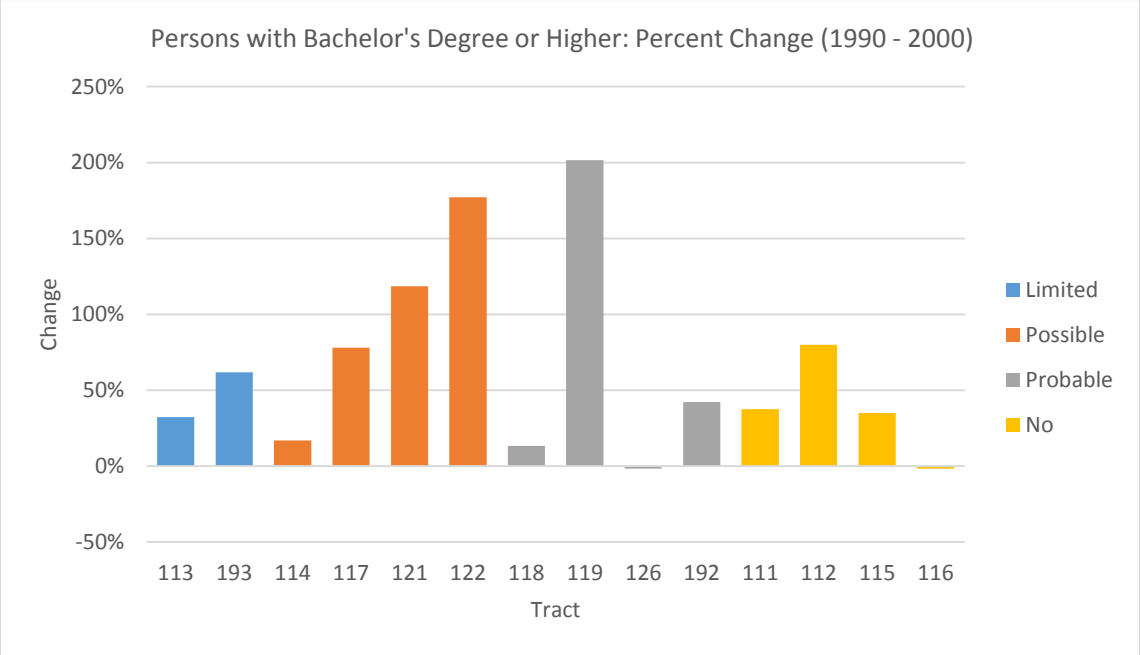


Figure 6.1. Percent change of individuals with a bachelor's degree or higher, persons age 25 and over in East Nashville. By Davidson County, Tennessee census tract for years 1990 to 2000. [121] [122]

[121] U.S. Census Bureau, "Educational Attainment for the Population 25 Years and Over: 1990," prepared by Social Explorer table T22, (accessed September 1, 2014).
[122] U.S. Census, "Educational Attainment," Table P037.

From 2000 to 2009-2013 there is an evident percent increase in the number of people with bachelor's degree or higher as demonstrated in Figure 6.2. The largest gains were found in census tracts classified as *probable*, with the highest increase in tract 126 at almost +250%. Surprisingly, census tract 119, which had the highest percent increase of college graduates from 1990 to 2000, had the lowest rate of increase with just over +11%. Map 6.1 visualizes the percent change for these two datasets by census tract.

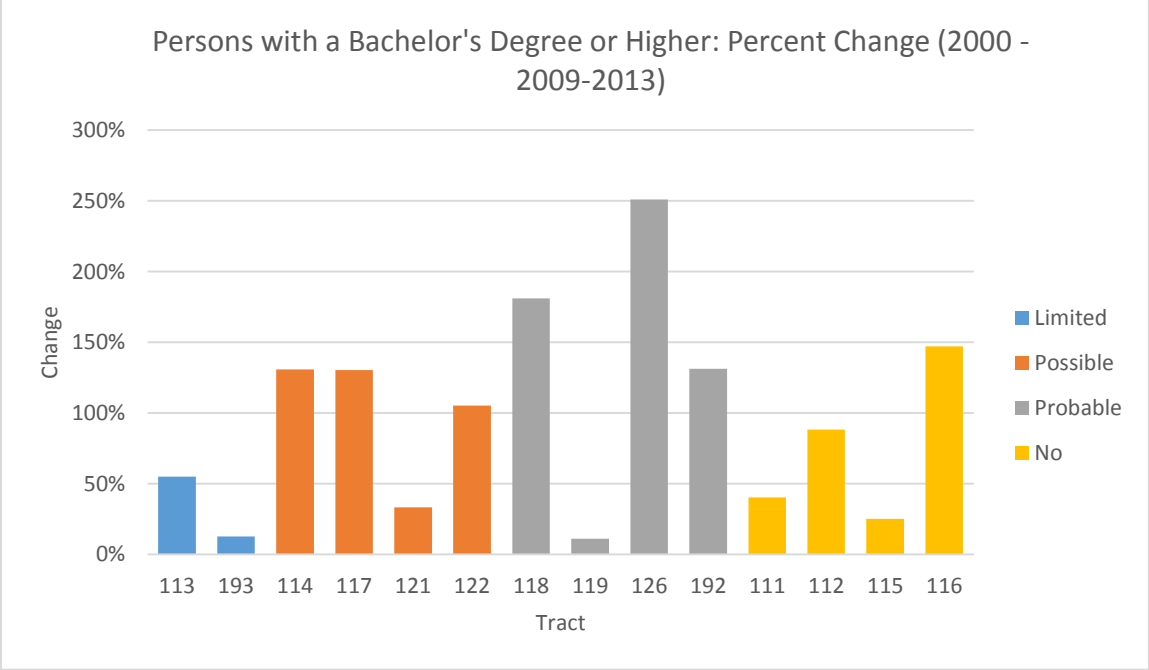
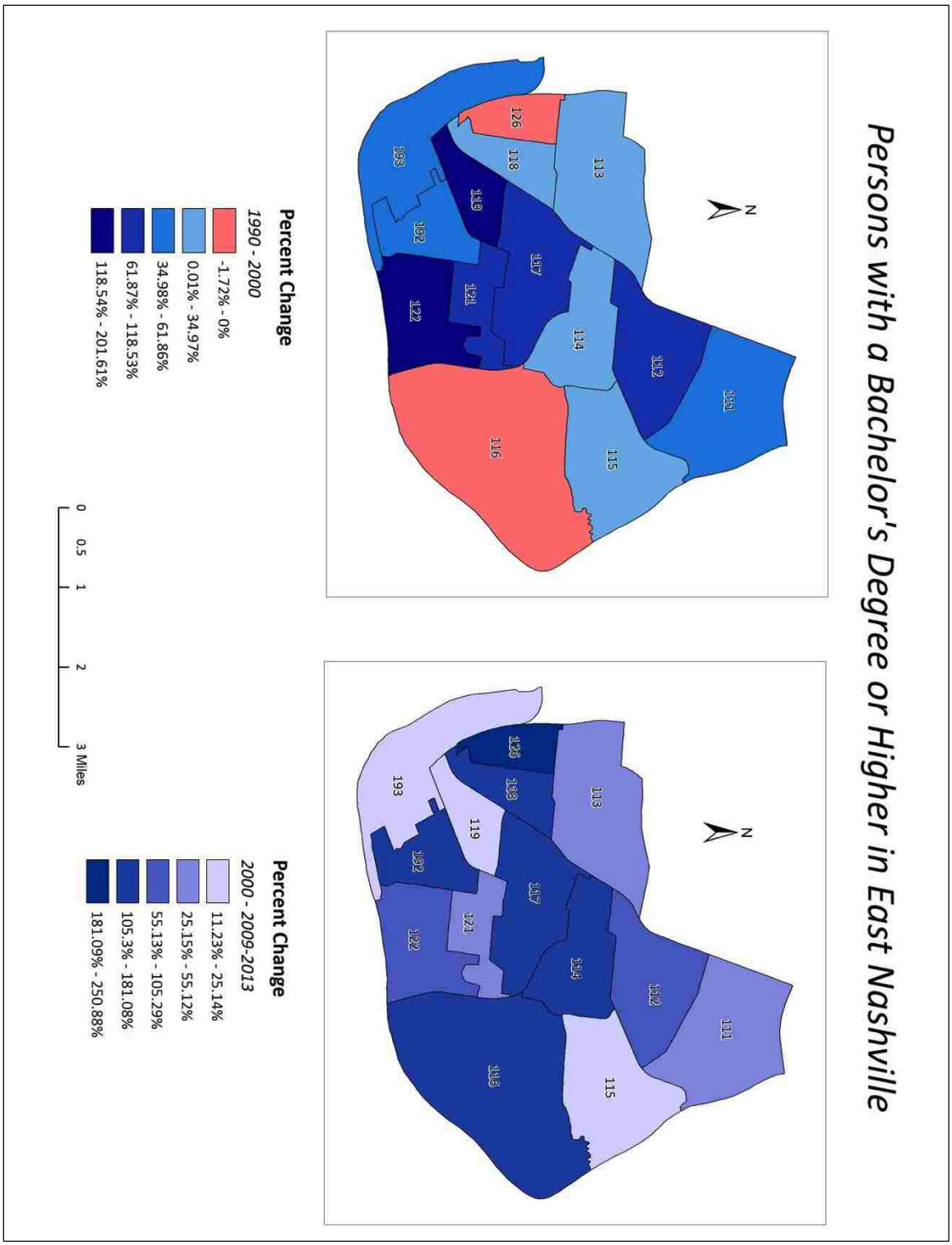


Figure 6.2. Percent change of individuals with a bachelor's degree or higher, persons age 25 and over in East Nashville. By Davidson County, Tennessee census tract for years 2000 to 2009-2013. [123] [124]

[123] Ibid.

[124] U.S. Census, "Educational Attainment," Table S1501.



Map 6.1. Educational attainment change in East Nashville [125] [126] [127]

[125] U.S. Census, "Educational Attainment," Table T22.

[126] U.S. Census, "Educational Attainment," Table P037.

Change in College Enrollment

Was there an increase in the number of college students? Mostly.

Census tracts 126 and 118 – both *probable* tracts – had the highest percent change of college students with +84% and +82%, respectively. Census tract 192, which had the lowest increase of college graduates, had the largest decrease in change of college students, with -30%. All *limited* and possible tracts had an increase of over 40% in the number of college students, with the exception of census tract 121 as shown in Figure 6.3.

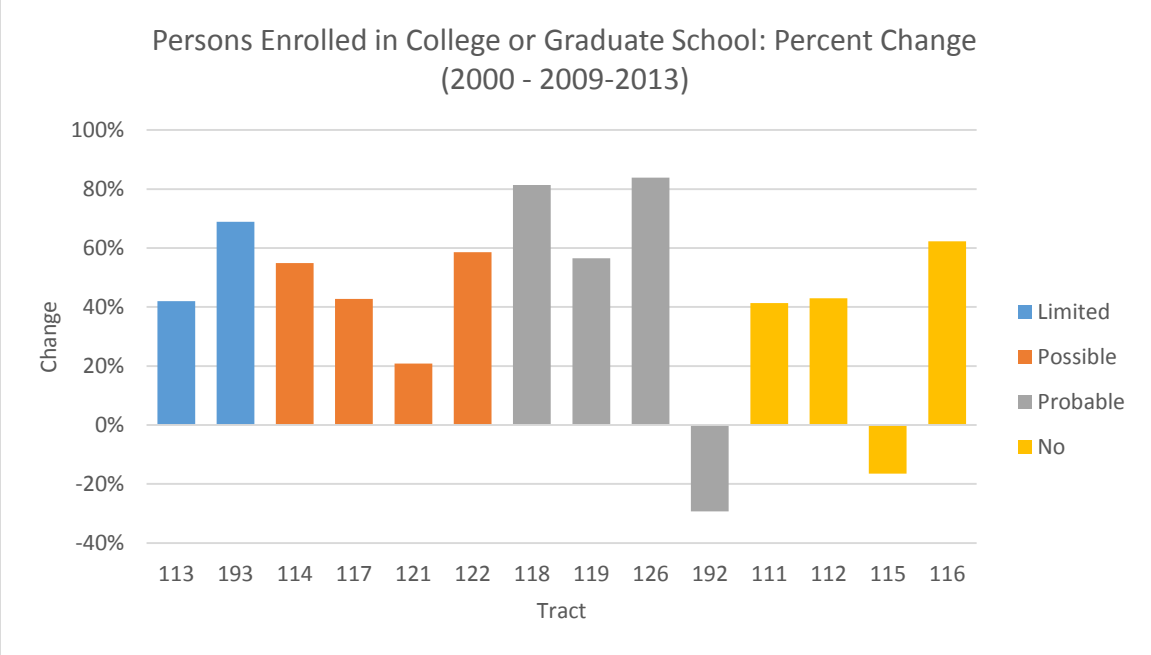


Figure 6.3. Percent change of individuals enrolled in college or graduate school, persons age 18 and over in East Nashville. By Davidson County, Tennessee census tract for years 2000 to 2013. [128] [129]

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[127] U.S. Census, "Educational Attainment," Table S1501.

[128] U.S. Census Bureau, "Sex by College or Graduate School Enrollment by Age for the Population 15 Years and Over: 2000," SF3 Sample Data Table PCT024, http://factfinder.census.gov, (accessed September 1, 2014).

Was there an increase in median household income? Mostly.

Between 1990 and 2000, median incomes rose the most in tracts categorized as *probable* as demonstrated in Figure 6.4. Census tract 126 and 192 had the highest increase with +91% and +52%, respectively. Other *possible* and *probable* tracts saw slighter increases, with the exception of census tract 114, which saw a slight decrease in income.

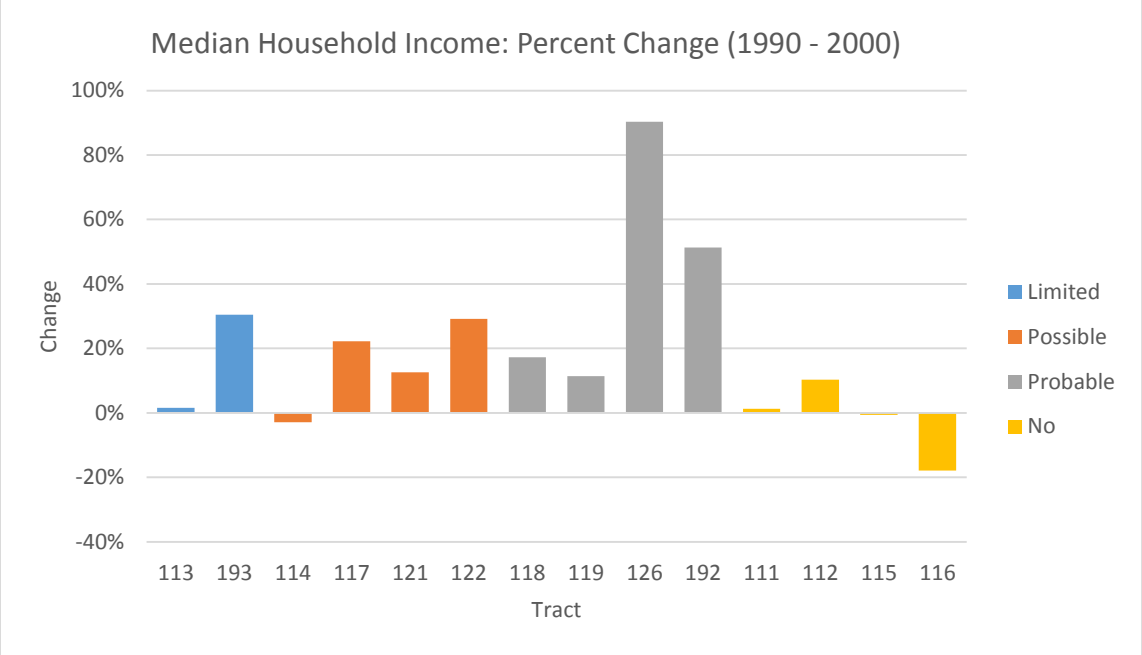


Figure 6.4. Percent change of median household income in East Nashville. By Davidson County, Tennessee census tract for years 1990 to 2000. [130] [131]

[129] U.S. Census Bureau, "Sex by College or Graduate School Enrollment by Age for the Population 15 Years and Over: 2009-2013," ACS 5-year estimates Table 14004, http://factfinder.census.gov, (accessed September 1, 2014).
[130] U.S. Census Bureau, "Median Household Income in 1989 Dollars: 1990," prepared by Social Explorer table T43, (accessed September 1, 2014).
[131] U.S. Census, "Median Income," Table HCT012.

As shown in Figure 6.5, Median household incomes rose much more explicitly from 2000 to 2009-2013. The largest gains in three *probable* census tracts 118, 126, and 192. Three *possible* tracts also see over a 100% increase in income. Map 6.2 displays the percent change for these two datasets by census tract.

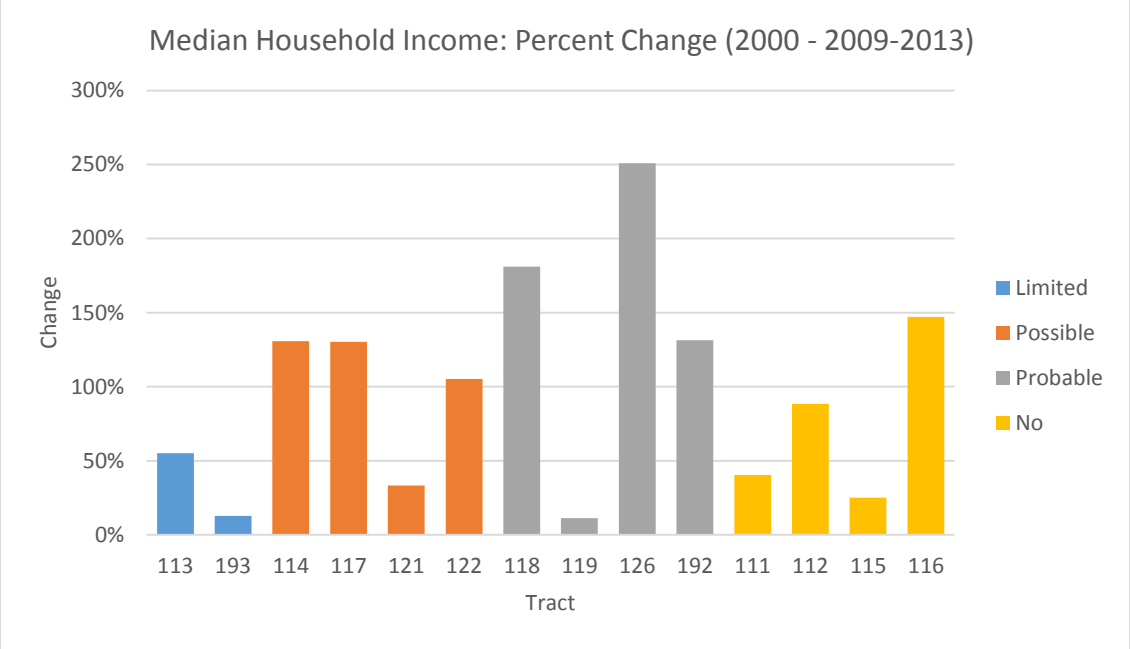
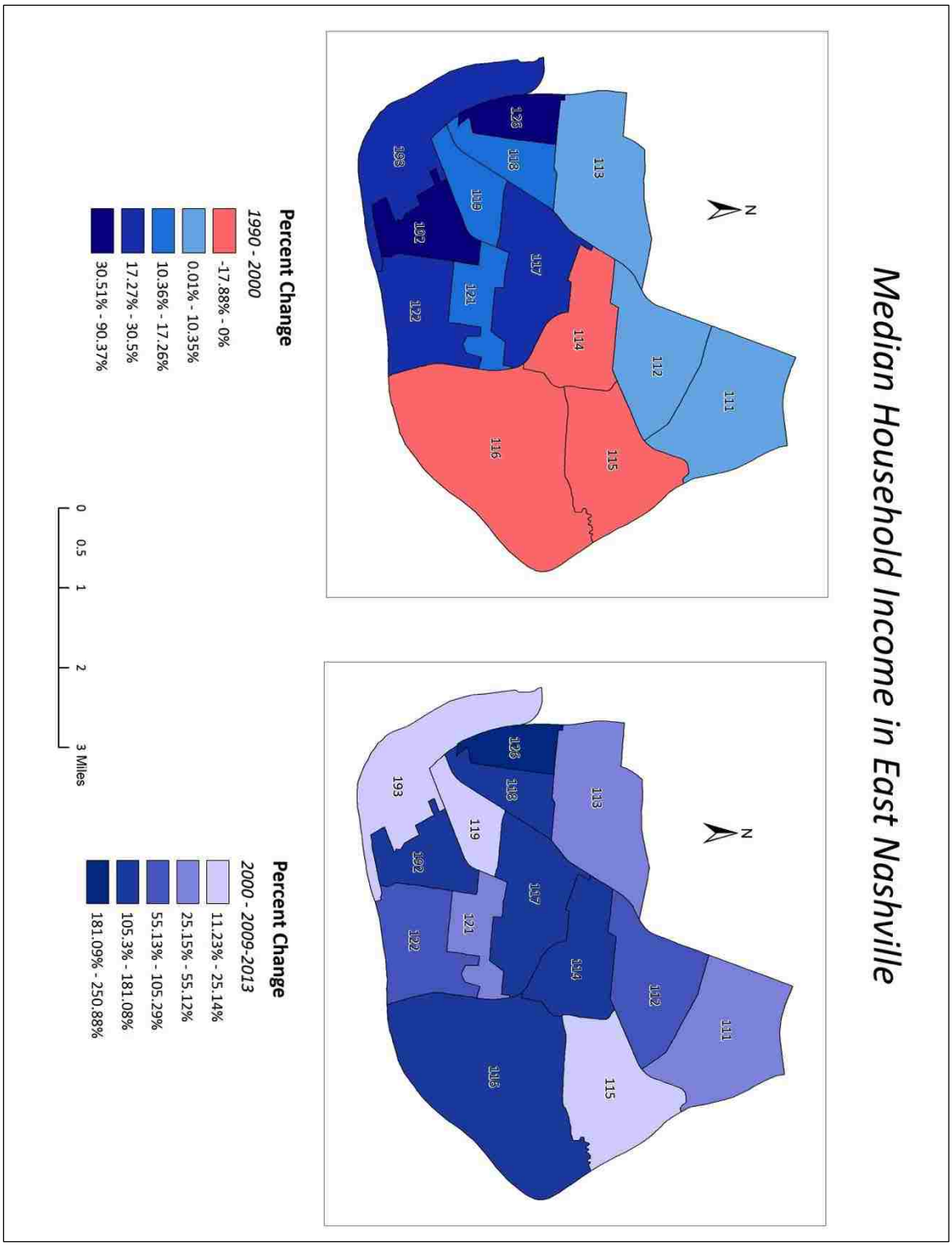


Figure 6.5. Percent change of median household income in East Nashville. By Davidson County, Tennessee census tract for years 2000 to 2009-2013. [132] [133]

[132] Ibid.

[133] U.S. Census, "Median Income," Table B19013.



Map 6.2. Income change in East Nashville [134] [135] [136]

[134] U.S. Census Bureau, "Median Income," Table T43.

[135] U.S. Census, "Median Income," Table HCT012.

Occupational Change

Was there an increase in the presence of managerial, professional, or technical workers? Yes, but less so from 2000 – 2009-2013.

From 1990 to 2000, *probable* census tracts saw the largest gains of managerial workers with census tract 126 accounting for a 288% increase. *Possible* tracts followed closely behind, with tract 122 accumulating a 249% gain in professional workers. The smallest increases were found in census tracts categorized as *no* as shown in Figure 6.6.

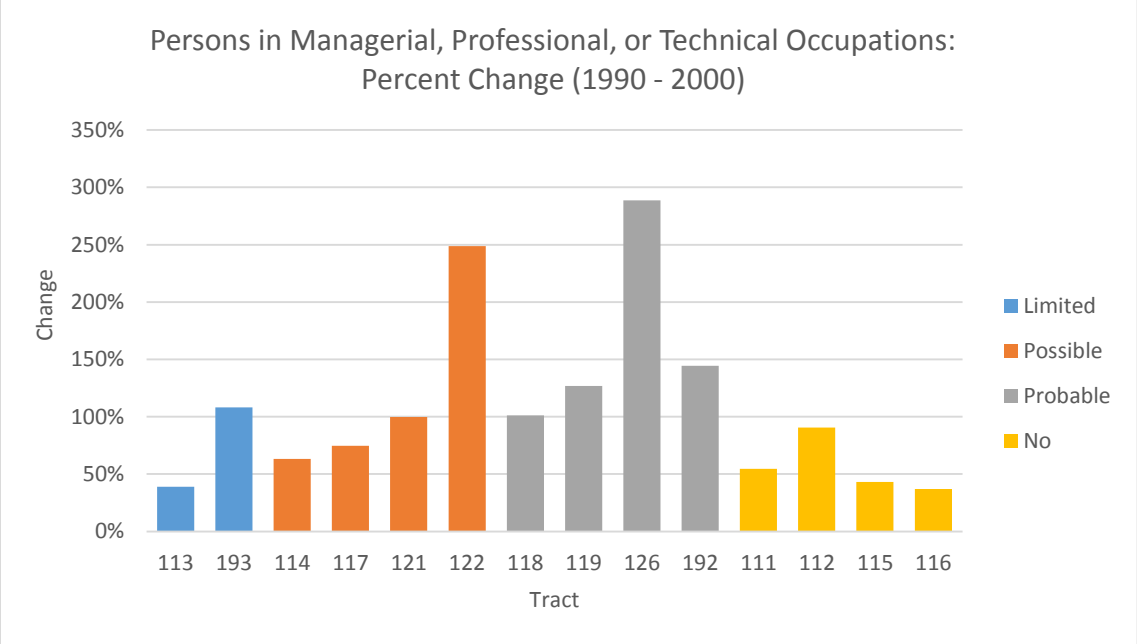


Figure 6.6. Percent change of individuals in managerial, professional, or technical occupations, age 16 and over in East Nashville. By Davidson County, Tennessee census tract for years 1990 to 2000. [137] [138]

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[136] U.S. Census, "Median Income," Table B19013.

[137] U.S. Census Bureau, "Occupation: 1990," prepared by Social Explorer table T39, (accessed September 1, 2014).

[138] U.S. Census, "Occupations," Table P050

From 2000 to 2009-2013, there is a heterogeneous trend in changes of managerial, professional, or technical workers as demonstrated in Figure 6.7. Percent increases overall are much lower than from 1990 to 2000, with the most obvious increases in *possible* tracts. Census tract 193 has the highest increase, with almost 80%, however it has the lowest number of total employed workers in East Nashville, with just fewer than 200 total workers. Map 6.3 visualizes the percent change for these two datasets by census tract.

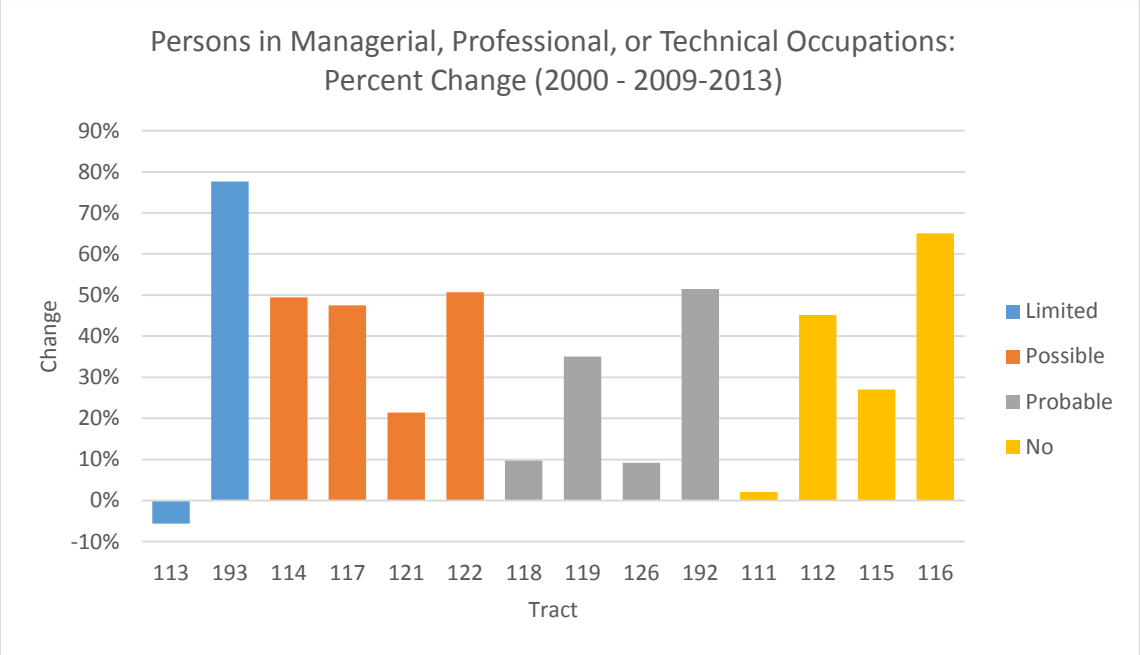
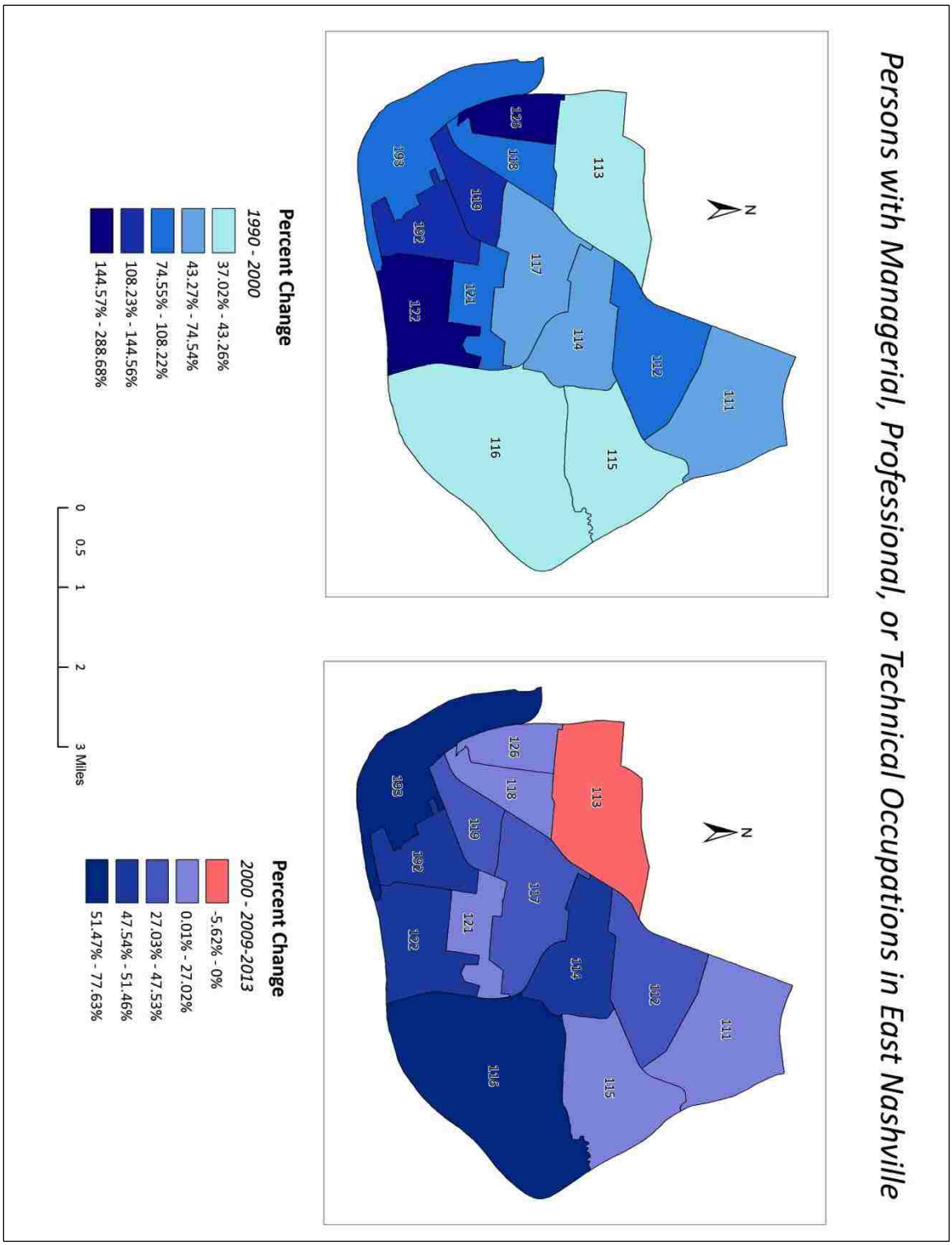


Figure 6.7. Percent change of individuals in managerial, professional, or technical occupations, age 16 and over in East Nashville. By Davidson County, Tennessee census tract for years 2000 to 2013. [139] [140]

[139] Ibid.

[140] U.S. Census, "Occupations," Table C24010



Map 6.3. Occupational change in East Nashville [141] [142] [143]

[141] U.S. Census, "Occupation," Table T39

[142] U.S. Census, "Occupations," Table P050

Rent Change

Was there an increase in median gross rents? No, there was not from 1990 to 2000. However, from 2000 to 2009-2013 there was.

As shown in Figure 6.8, changes in median gross rents from 1990 to 2000 were not indicative of gentrification pressures in East Nashville, except for tract 118 and slightly in tract 126.

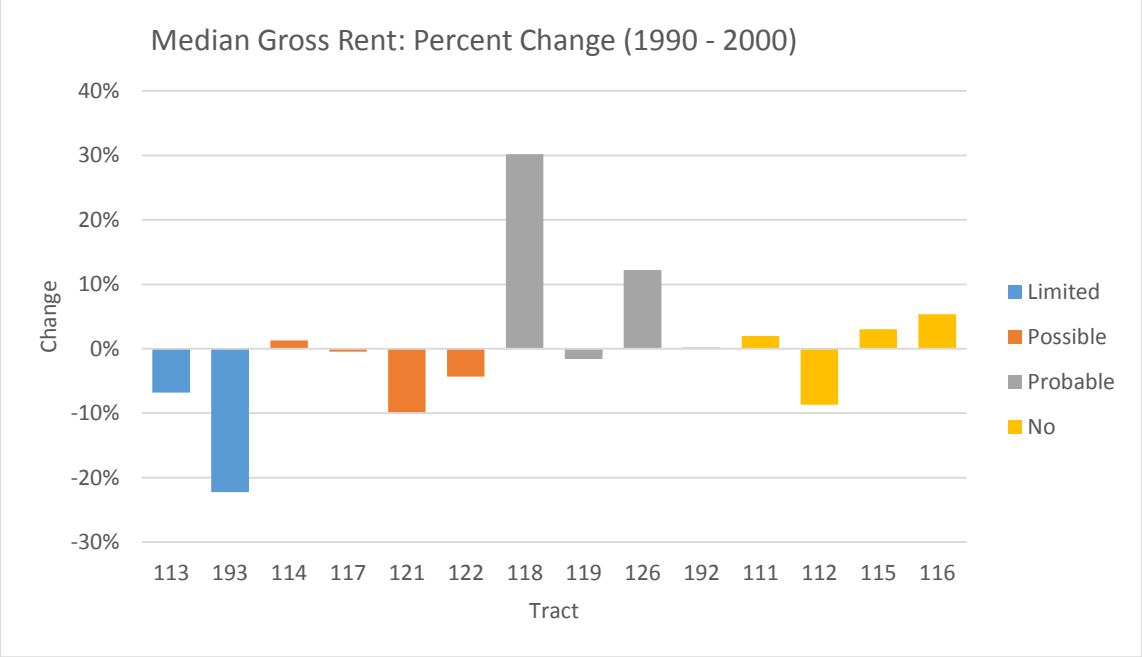


Figure 6.8. Percent change in median gross rent. By Davidson County, Tennessee census tract for years 1990 to 2000. [144] [145]

[143] U.S. Census, "Occupations," Table C24010

[144] U.S. Census Bureau, "Median Gross Rent for Specified renter-occupied housing units paying cash rent: 1990," prepared by Social Explorer table T82, (accessed September 1, 2014).

[145] U.S. Census, "Median Rent," Table H063.

From 2000 to 2009-2013 we can see trends in the changes of gross rents in East Nashville. Tracts classified as *probable* had the highest percent increase of median gross rent, with census tract 118 representing the highest with +43% as demonstrated in Figure 6.9. The extent is less severe in *possible* tracts, with the exception of tract 122, which had a 29% increase. Map 6.4 displays the percent change for these two datasets by census tract.

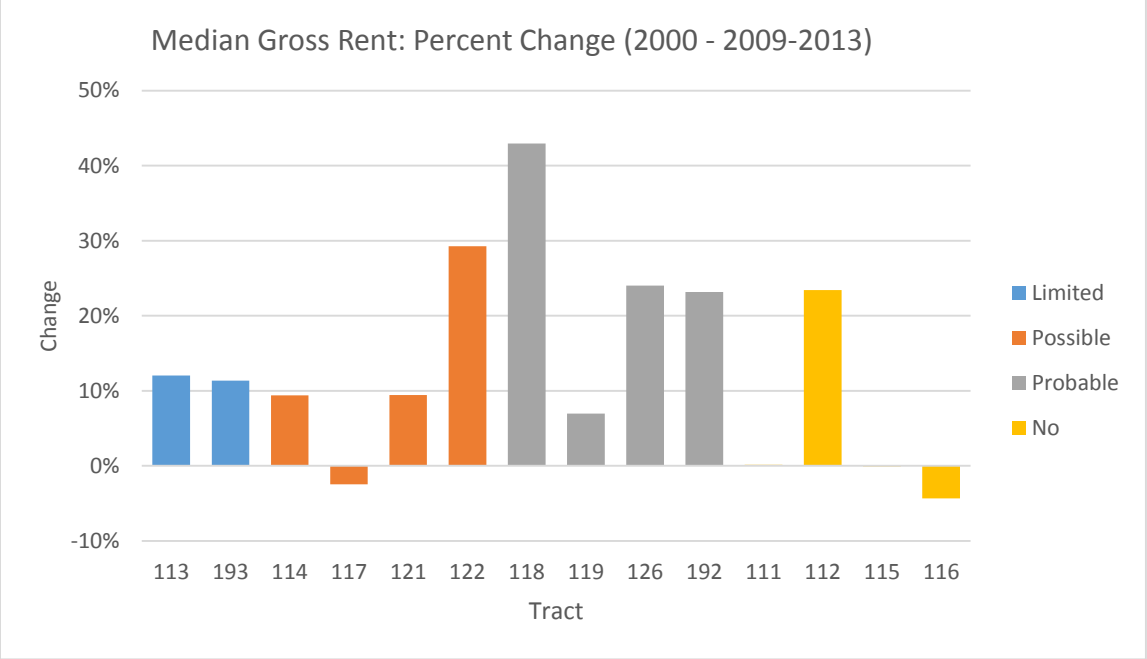
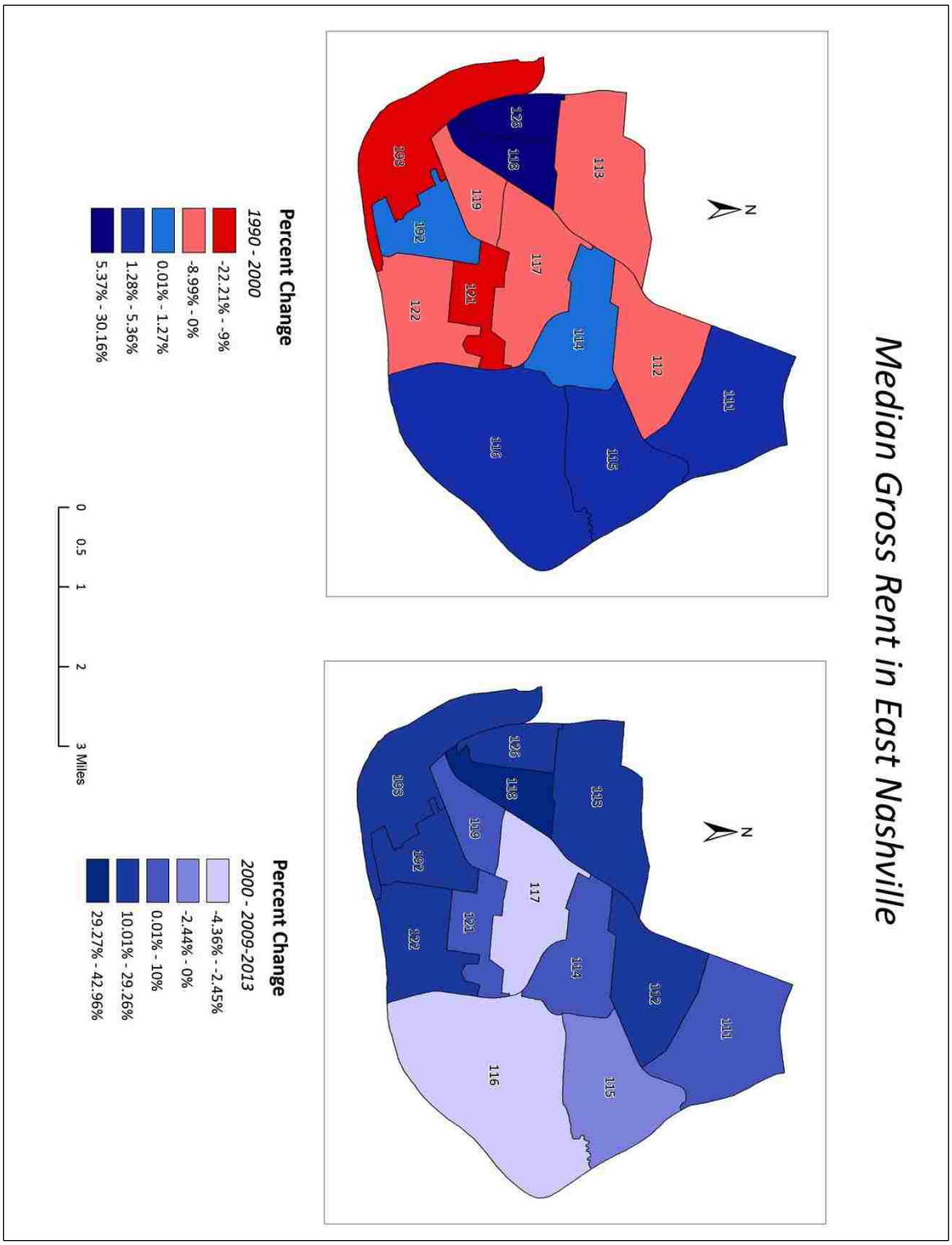


Figure 6.9. Percent change in median gross rent. By Davidson County, Tennessee census tract for years 2000 to 2013. [146] [147]

[146] Ibid.

[147] U.S. Census, "Median Rent," Table B25064.



Map 6.4. Rent change in East Nashville [148] [149] [150]

[148] U.S Census, "Median Rent," Table T82.

[149] U.S. Census, "Median Rent," Table H063.

Change in Home Values

Was there an increase in in median home values? Mostly.

From 1990 to 2000, census tracts classified as *possible* had the highest increase in median home values, followed by *probable* tracts as demonstrated in Figure 6.10. Census tract 193 had the highest overall increase, but it should be noted that there are less than 100 owner occupied homes in that tract. *No* tracts had the smallest increase in median home values.

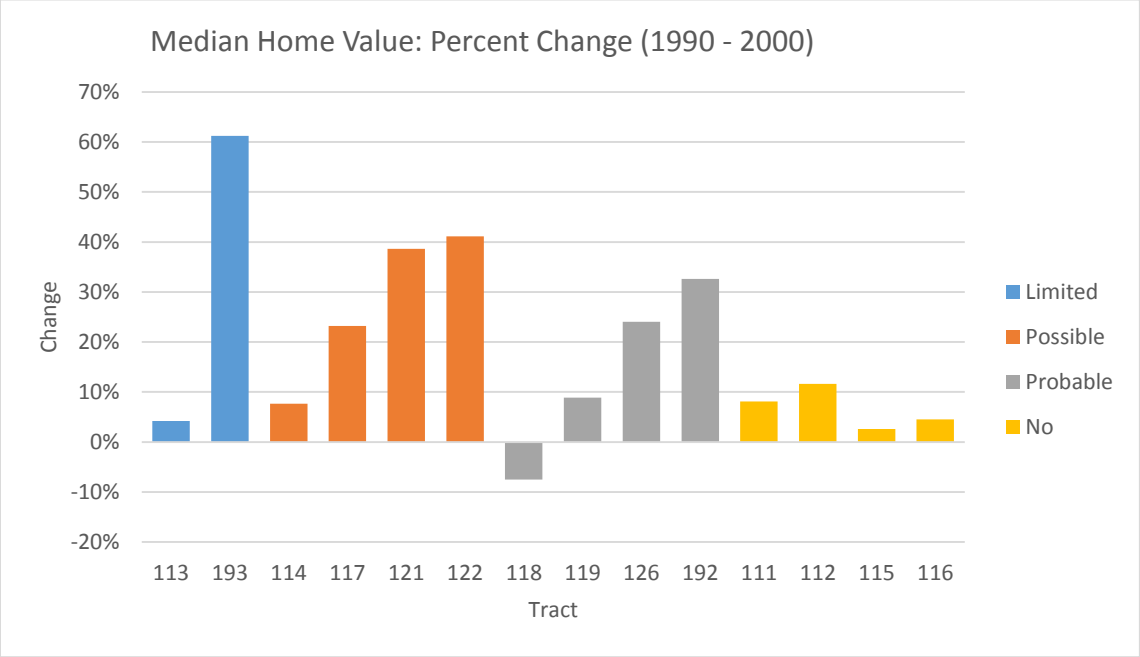


Figure 6.10. Percent change of median home value. By Davidson County, Tennessee census tract for years 1990 to 2000. [151] [152]

[150] U.S. Census, "Median Rent," Table B25064.

[151] U.S. Census Bureau, "Median Value for Specified owner-occupied housing units: 1990," prepared by Social Explorer table T80, (accessed September 1, 2014).

[152] U.S. Census, "Median Value," Table H076.

With reference to Figure 6.11, from 2000 to 2009-2013 there is a more dramatic increase in home values, notably in *probable* tracts. Census tract 118, which had the only percent decrease in home values from 1990 to 2000, has the highest increase from 2000 to 2009-2013 with 100%. *No* tracts had the lowest increases of home values. Map 6.5 visualizes the percent change for these two datasets by census tract.

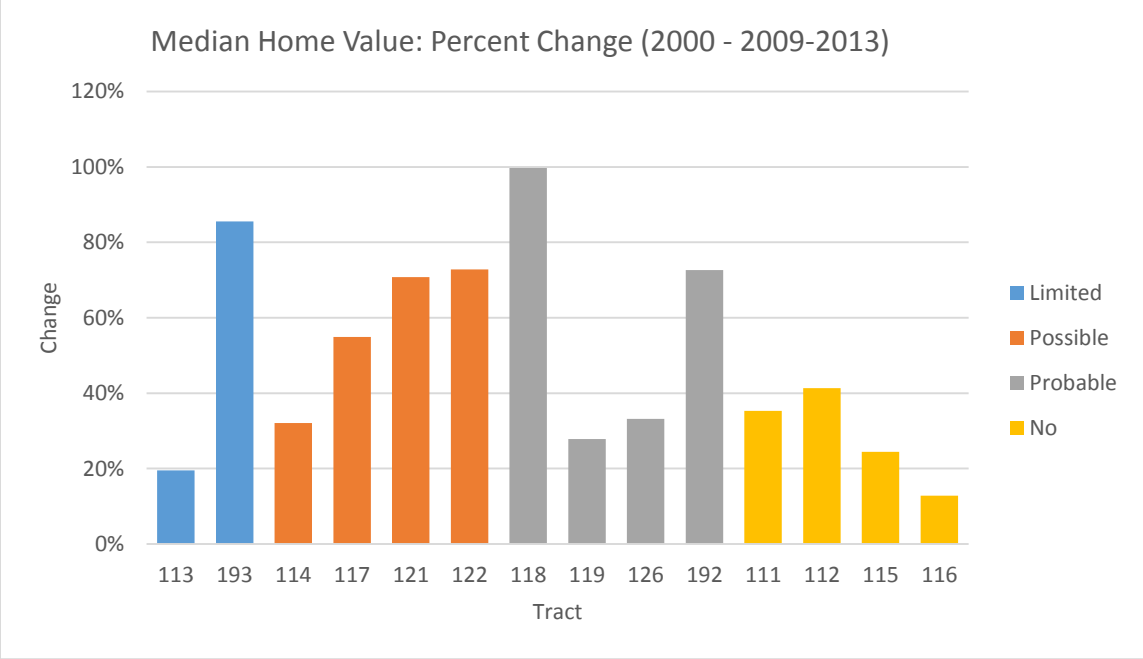
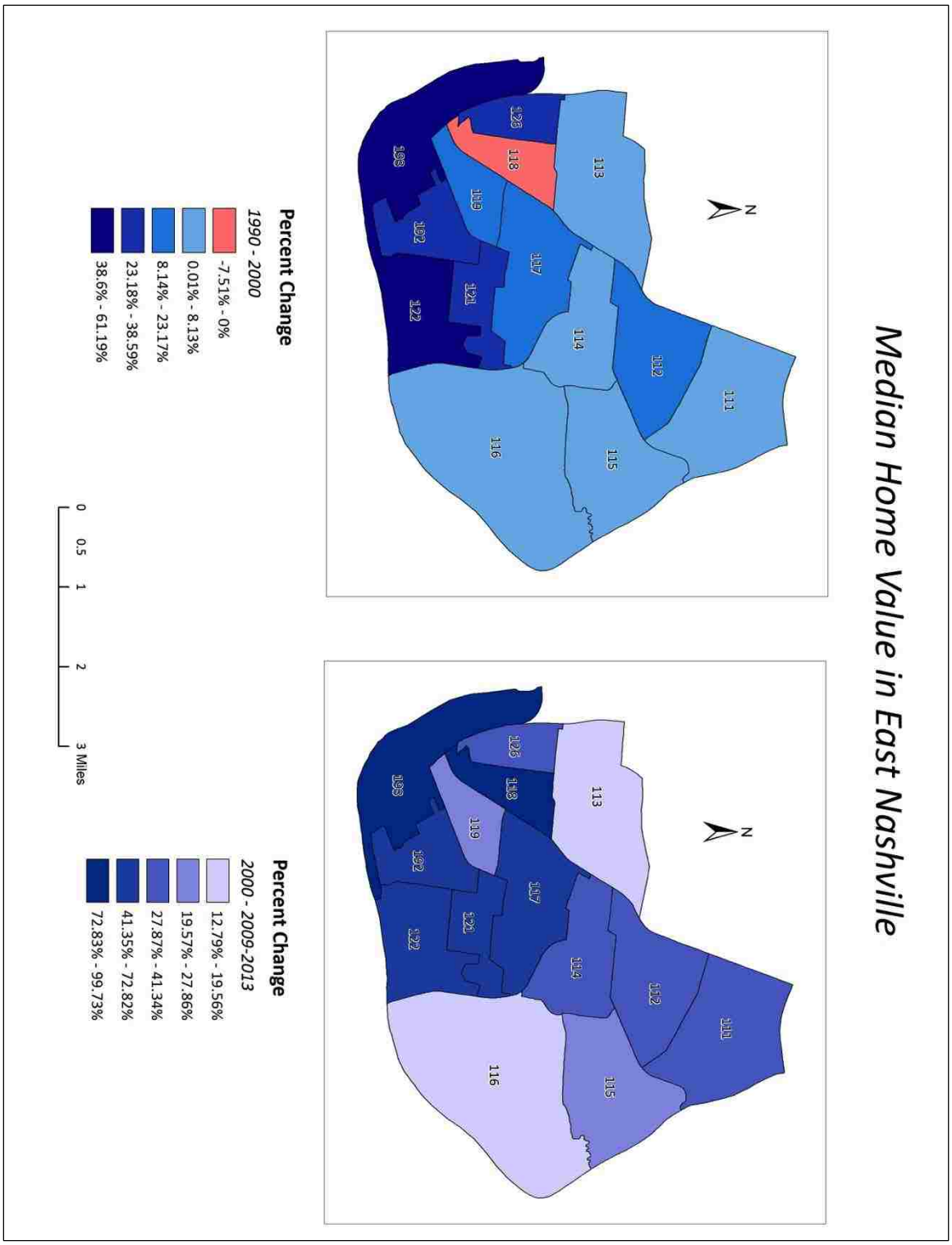


Figure 6.11. Percent change of median home value. By Davidson County, Tennessee census tract for years 2000 to 2013. [153] [154]

[153] Ibid.

[154] U.S. Census, "Median Value," Table B25077.



Map 6.5. Home value change in East Nashville [155] [156] [157]

[155] U.S. Census, "Median Value," Table T80.

[156] U.S. Census, "Median Value," Table H076.

Racial Displacement

Was there a decrease in the presence of black residents? Yes.

Beginning in 2000, the percentage of black residents began to decrease in the majority of *possible* and *probable* census tracts. The proportion of black residents in tracts designated *no* and *limited* begin to witness an increase in the number of black residents as shown in Figure 6.12.

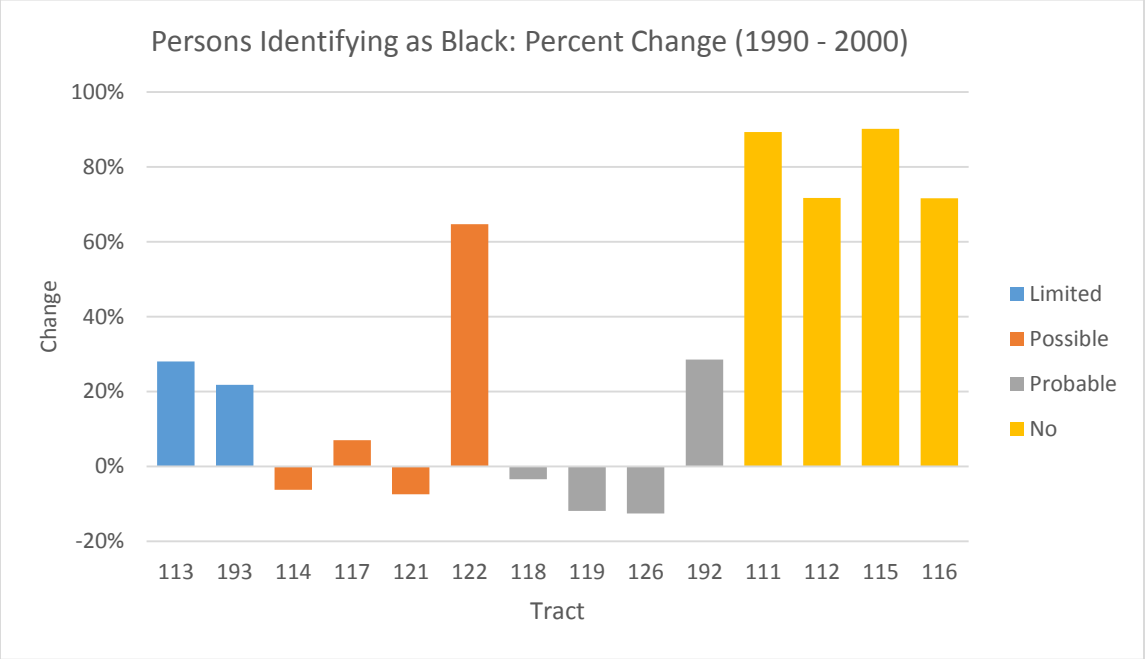


Figure 6.12. Percent change of persons identifying as black in East Nashville. By Davidson County, Tennessee census tract for years 1990 to 2000. [158] [159]

[157] U.S. Census, "Median Value," Table B25077.

[158] U.S. Census Bureau, "Race: 1990," prepared by Social Explorer table T12, (accessed September 1, 2014).

[159] U.S. Census Bureau, "Race of Householder: 2000," SF1 Sample Data Table H006, http://factfinder.census.gov, (accessed September 1, 2014).

With reference to Figure 6.13, from 2000 to 2009-2013 census tracts projected to be undergoing gentrification began to see a staggering decrease in the percent change of black residents. All tracts classified as *limited*, *possible*, and *probable* witnessed a negative percent change in the number of black residents. Tracts categorized as *possible* had the largest regressions. Map 6.6 demonstrates the percent change for these two datasets by census tract.

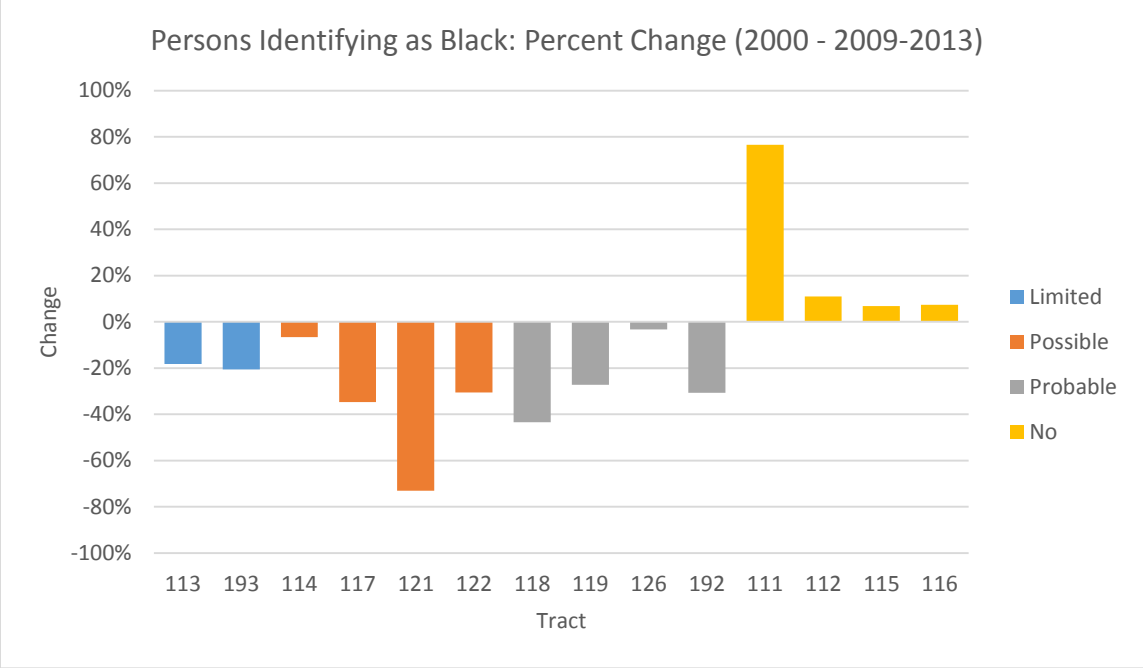
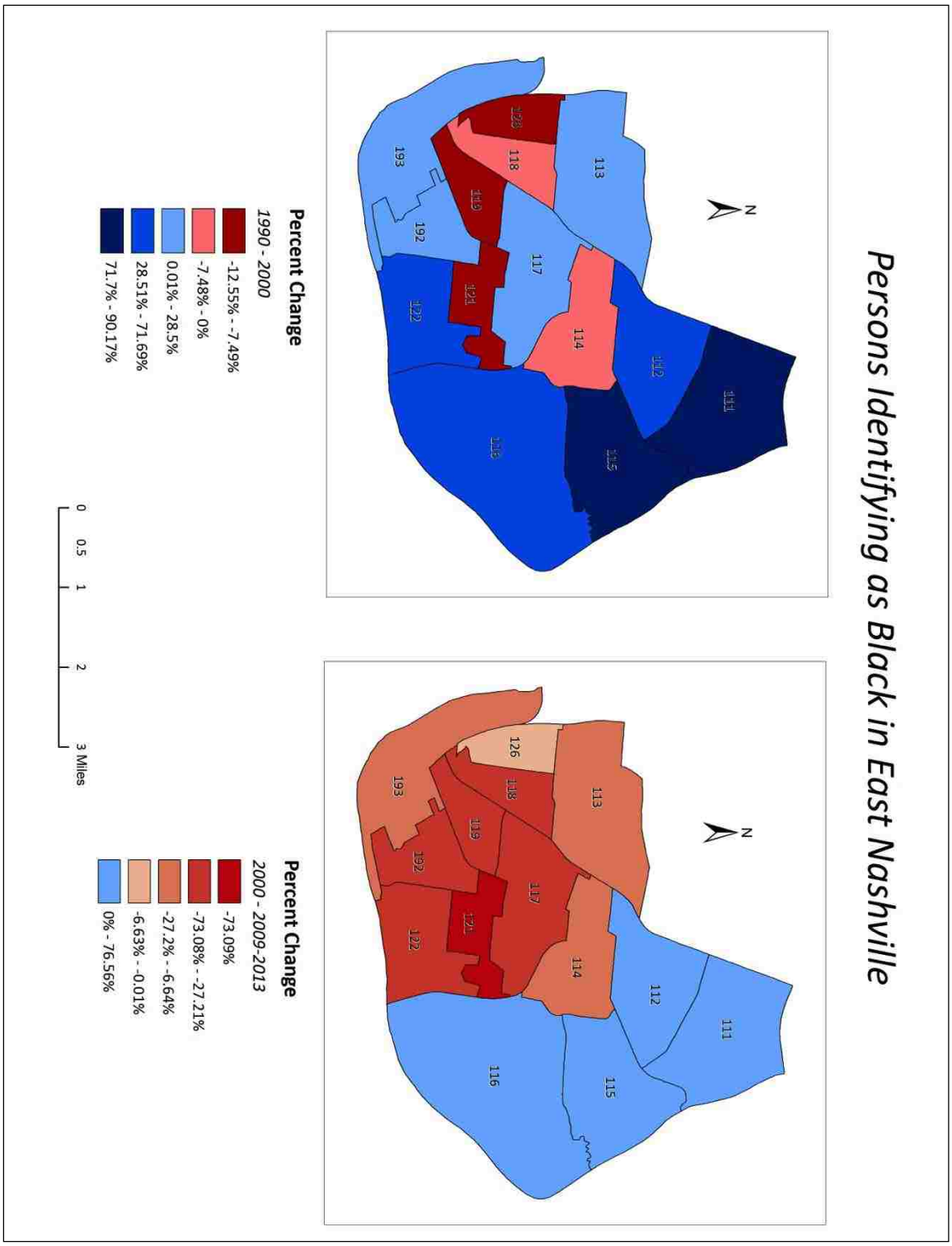


Figure 6.13. Percent change of persons identifying as black in East Nashville. By Davidson County, Tennessee census tract for years 2000 to 2013. [160] [161]

[160] Ibid.

[161] U.S. Census Bureau, "Race: 2009-2013," ACS 5-year estimates Table B02001, http://factfinder.census.gov, (accessed September 1, 2014).



Map 6.6. Change in black residents in East Nashville [162] [163] [164]

[162] U.S. Census Bureau, "Race," Table T12.

[163] U.S. Census Bureau, "Race," Table H006.

[164] U.S. Census Bureau, "Race," Table B02001.

CHAPTER SEVEN: CONCLUSION

Rowland Atkinson describes that measuring gentrification and displacement with aggregate data can be problematic. He contends that the "difficulties of directly quantifying the amount of displacement and other 'noise' in the data are hard to overcome." [165] Neither qualitative nor quantitative techniques alone can fully answer the enigma of where gentrification is taking place. This project aimed to combine the methods to more accurately describe the level of its impacts and where in East Nashville. While we can see correlations between the results of the two methods, clear-cut and profound answers are inexact.

The historical conditions for each *a-priori* classification category from years 2000 and 2009-2013 show that East Nashville is a suitable site where gentrification may take place. In both time periods the rankings for each class remained the same, as shown in *Appendices F* and *I*. *Limited* tracts had the highest average rank per variable indicating those tracts' sustained level of disinvestment. *Probable* tracts had the second highest average rank per variable followed by *possible* tracts, which was expected. *No* tracts had the lowest average rank per variable which points to their high level of investment that has maintained over time.

Change variables and their average ranking per *a-priori* classification for the two time periods measured follow the same pattern as the historical conditions, as evidenced in *Appendices N* and *S*. The rankings are reversed, however, because a higher ranking for change over time for the selected gentrification indicators suggests a higher level of neighborhood change. *Probable* tracts had the lowest

[165] Rowland Atkinson, "Measuring gentrification and displacement in Greater London," *Urban Studies* 37, no. 1 (2000): 149.

average ranking per variable in both 2000 and 2009-2013, which demonstrates a correlation between the field survey and the empirical data. This indicates that gentrification is taking place most strongly in these tracts and this was anticipated. *Possible* tracts had the second lowest ranking per variable, followed by *limited* tracts. *No* tracts had the highest average. The results for these three classifications were also anticipated and bolster the results of the field survey.

East Nashville provided an interesting site to explore the process of gentrification for several reasons. It has a diverse history that has experienced high levels of investment, disinvestment, and reinvestment from both citizens and the city of Nashville. It consists of areas that have not witnessed significant changes over the last few decades. On the other hand, it has areas that are undergoing rapid redevelopment. This dichotomy permitted an investigation that indicated differences between gentrifying and non-gentrifying places in East Nashville by census tract. Census tracts may not be an appropriate scalar factor to measure gentrification in particular sites. Atkinson notes that "further research at a finer spatial scale using a more qualitative approach" may more appropriately supplement work on measuring gentrification. [166] Census tracts may be too large and generalized to investigate gentrification's localized impacts.

Wyly and Hammel's work on measuring gentrification during the 1990s greatly influenced the methodology of this research. They assert:

> Although restricted in magnitude, gentrification inscribes remarkably similar social and economic changes in the inner city. Clearly, these changes are the result of different and possibly unrelated processes, reflecting the varied and

[166] Ibid, 163.

> conflicting interests of current prospect residents, developers, financial institutions, and public officials. [167]

Gentrification's chaotic nature makes it difficult for a standardized method to be replicated in different sites and expect the same interpretable results. Gentrification is a *process* and not a noun. It is not stagnant nor fixated. Its nature is constantly evolving and described through multiple theories and disciplines. Research on measuring gentrification from past quasi-accepted methods may be outdated because of its fluid nature. In East Nashville the phenomenon is already evidenced colloquially. Discrepancies arise between the local knowledge of the insiders who live there and the outsiders who research the process. Conceivably, future research on measuring gentrification's impacts should move beyond exactly *where* it is occurring to *what* is occurring to that particular place and its citizens.

Looking back, perhaps completing the quantitative methods first to determine a scale of gentrification followed by the field survey would have gleaned more evocative results. Moving forward, this research would like compare the changes occurring in East Nashville with the ongoing development in downtown Nashville. Are there correlations between these changes and the citizens in Nashville? Are downtown developments stimulating newcomers to move to East Nashville as a re-emerging inner-city suburb? In continuing to develop this research, the project aims to develop a more personal, place-based narrative to describe the positive and negative effects of gentrification on the residents of East Nashville.

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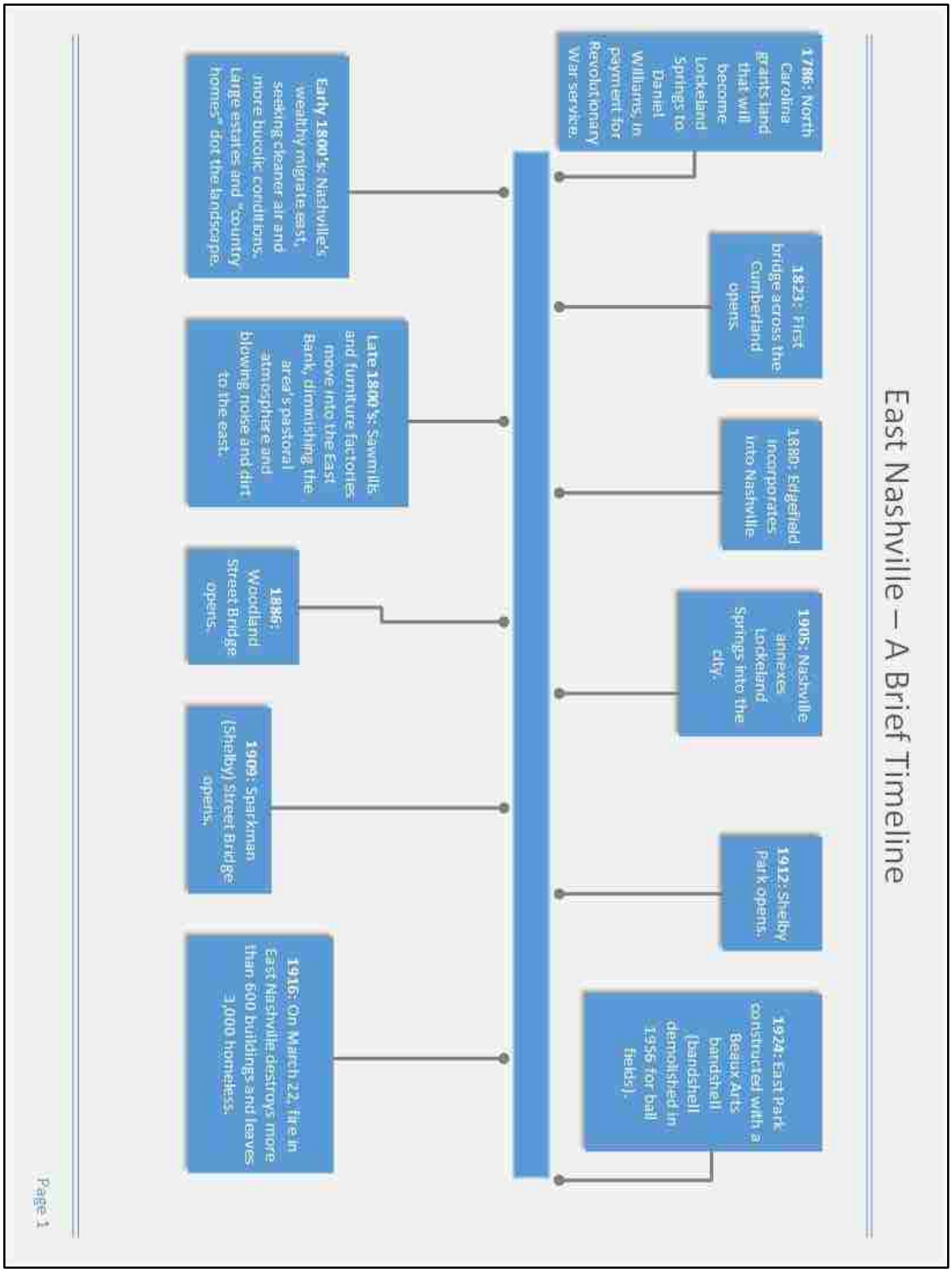
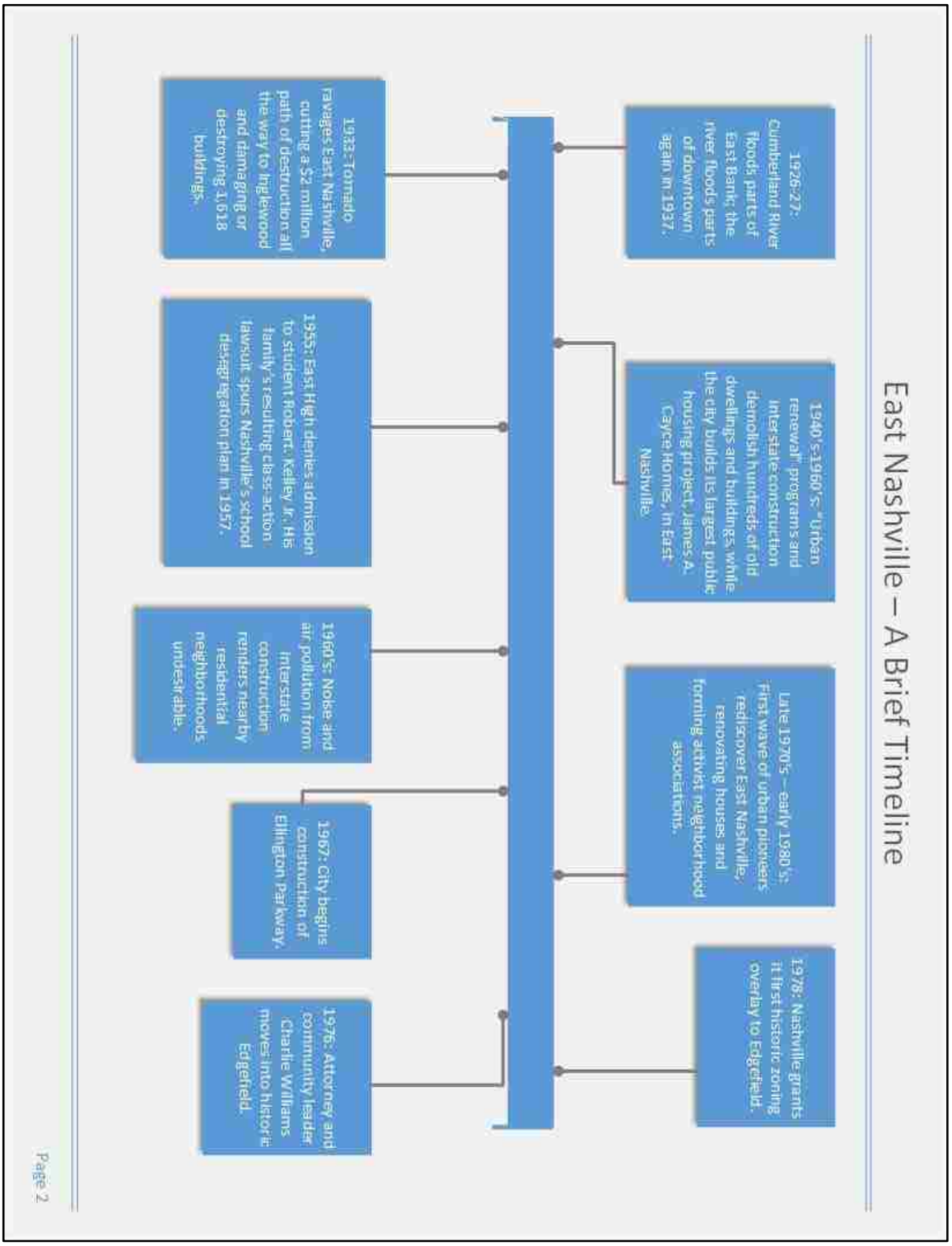
[167] Wyly and Hammel, "Context and Contingency," 324.

APPENDIX

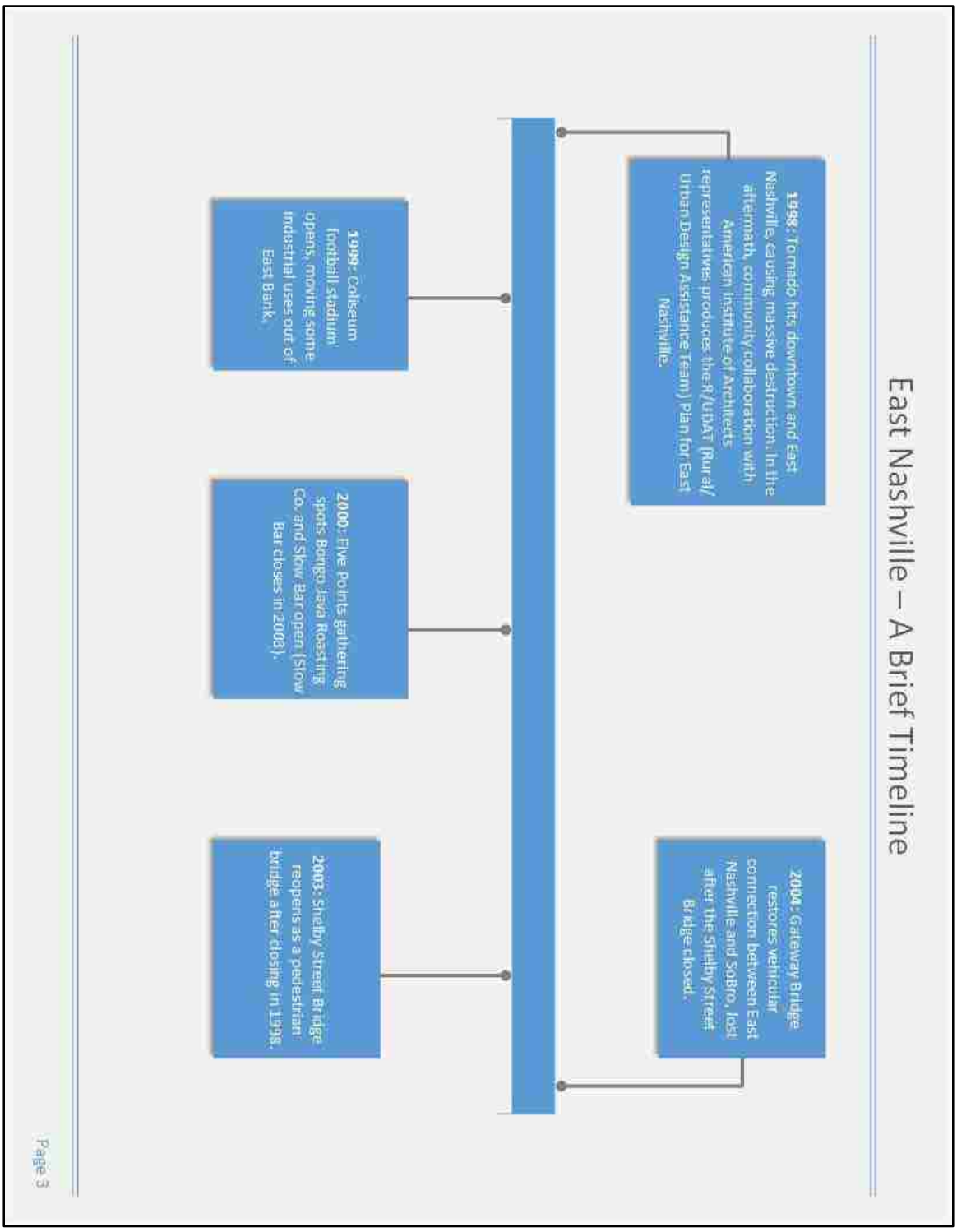
Appendix A. East Nashville Timeline, page 1



Appendix B. East Nashville Timeline, page 2



Appendix C. East Nashville Timeline, page 3



Appendix D. 2000: Historic Conditions Variables Rank per Tract, per Variable

2000: Historical Conditions Variables Rank per Tract, per Variable						
A-Priori Classification	**Census Tract**	**Number of college graduates**	**Median Household Income**	**Managerial, Professional, or Technical workers**	**Median Gross Rent**	**Median Home Value**
Limited	**113**	12	9	13	4	13
	193	11	14	14	14	1
Possible	**114**	10	11	9	11	4
	117	7	8	8	7	9
	121	1	3	1	8	2
	122	2	6	2	6	7
Probable	**118**	13	13	12	13	14
	119	9	12	11	12	12
	126	14	10	10	9	11
	192	4	7	3	10	3
No	**111**	3	1	4	2	4
	112	6	4	7	5	8
	115	5	2	6	3	6
	116	8	5	5	1	5

Each census tract's ranking for each historical conditions variable for the year 2000, on a scale of 1 to 14.

Appendix E. 2000: Overall Rank, Historical Conditions Variables per Tract

2000: Overall Rank, Historical Conditions Variables per Tract			
A-Priori Classification	**Census Tract**	**Overall Rank – Historical Conditions Variables**	**Average Ranking per Variable**
Limited	**113**	10	10.2
	193	11	10.8
Possible	**114**	9	9
	117	8	7.8
	121	2	3
	122	4	4.6
Probable	**118**	14	13
	119	13	11.2
	126	12	10.8
	192	6	5.4
No	**111**	1	2.8
	112	7	6
	115	3	4.4
	116	5	4.8

Each tract's average ranking per variable. Based upon this average, tracts were then sorted on a scale of 1 to 14. A ranking near 1 indicates a higher level of socioeconomic wealth and investment than a ranking near 14.

Appendix F. 2000: Historical Conditions Variables Rank per A-Priori Classification

2000: Historical Conditions Variables Rank per A-Priori Classification		
A-Priori Classification	**Rank Historical Conditions Variables**	**Average Rank per Variable**
Limited	4	8.75
Possible	2	5.08
Probable	3	8.42
No	1	3.75

Tracts were combined by *a-priori* classification from members of the same group. All variables for each respective group and their tract rankings were summed and averaged to obtain a rank for each *a-priori* class on a scale of 1 to 4. Limited and probable tracts have nearly the same low average. This shows that conditions are favorable for gentrification to occur.

Appendix G. 2009-2013 Historical Conditions Variables Rank per Tract, per Variable

2009-2013: Historical Conditions Variables Rank per Tract, per Variable						
A-Priori Classification	**Census Tract**	**Number of college graduates**	**Median Household Income**	**Managerial, Professional, or Technical workers**	**Median Gross Rent**	**Median Home Value**
Limited	**113**	14	11	14	6	2
	193	13	14	11	14	1
Possible	**114**	8	10	9	11	11
	117	7	9	7	12	6
	121	2	1	2	10	2
	122	1	5	1	1	4
Probable	**118**	10	13	12	8	9
	119	11	12	10	13	13
	126	12	8	13	7	12
	192	3	7	3	9	3
No	**111**	5	2	8	4	5
	112	4	3	5	2	7
	115	9	4	6	5	8
	116	6	6	4	3	10

Each census tract's ranking for each historical conditions variable for 2009-2013 ACS 5-year estimates, on a scale of 1 to 14.

Appendix H. 2009-2013: Overall Rank, Historical Conditions Variables per Tract

2009-2013: Overall Rank, Historical Conditions Variables per Tract			
A-Priori Classificaition	**Census Tract**	**Overall Rank Historical Conditions Variables**	**Average Rank per Variable**
Limited	**113**	9	9.4
	193	13	10.6
Possible	**114**	10	9.8
	117	8	8.2
	121	2	3.4
	122	1	2.4
Probable	**118**	t-11	10.4
	119	14	11.8
	126	t-11	10.4
	192	5	5
No	**111**	4	4.8
	112	3	4.2
	115	7	6.4
	116	6	5.8

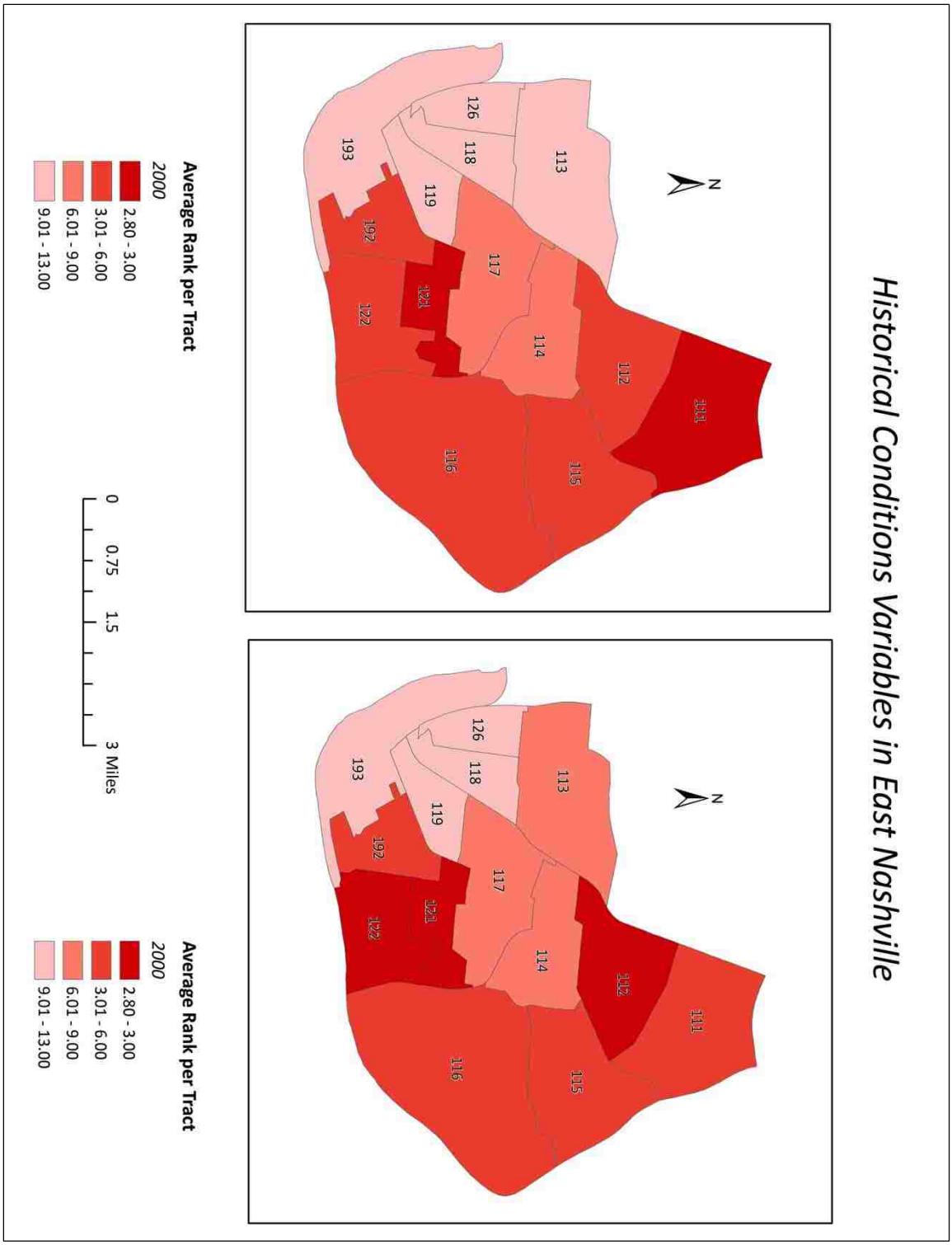
Average rank per variable and overall rank for historical conditions for 2009-2013 5-year estimates.

Appendix I. 2009-2013: Historical Conditions Variables Rank per A-Priori Classification

2009-2013: Historical Conditions Variables Rank per A-Priori Classification		
A-Priori Classification	**Overall Rank Historical Condistions Variables**	**Average Rank per Variable**
Limited	4	8.33
Possible	2	4.96
Probable	3	7.83
No	1	4.42

A-priori classification ranking on a scale of 1 to 4. *Possible* tracts have made gains on *no* tracts, indicating the results of gentrification are being shown empirically.

Appendix J. Historical conditions ranking by Davidson County, Tennessee census tract



Appendix K. 2000: Criteria

2000: Does census tract meet criteria of gentrification indicator variables?							
A-Priori Classification	**Census Tract**	**Decrease in black residents?**	**Increase in bachelor's degrees?**	**Increase in income?**	**Increase in managerial, profession, or technical workers?**	**Increase in rents?**	**Increase in home value?**
Limited	**113**	✓	✓	✓	✓		✓
	193		✓	✓	✓		✓
Possible	**114**	✓	✓		✓	✓	✓
	117		✓	✓	✓		✓
	121	✓	✓	✓	✓		✓
	122		✓	✓	✓		✓
Probable	**118**	✓	✓	✓	✓	✓	
	119	✓	✓	✓	✓		✓
	126	✓		✓	✓	✓	✓
	192		✓	✓	✓	✓	✓
No	**111**		✓	✓	✓	✓	✓
	112		✓	✓	✓		✓
	115		✓		✓	✓	✓
	116				✓	✓	✓

If checked, census tract meets criteria associated with the empirical effects of gentrification.

Appendix L. 2000: Change Variables Rank per Tract, per Variable

2000: Change Variables Rank per Tract, per Variable							
A-Priori Classification	**Census Tract**	**Decrease in black residents?**	**Increase in bachelor's degrees?**	**Increase in income?**	**Increase in managerial, profession, or technical workers?**	**Increase in rents?**	**Increase in home value?**
Limited	**113**	8	10	10	13	11	12
	193	7	6	3	5	14	1
Possible	**114**	4	11	13	10	6	10
	117	6	5	5	9	8	6
	121	3	3	7	7	13	3
	122	10	2	4	2	10	2
Probable	**118**	5	12	6	6	1	14
	119	2	1	8	4	9	8
	126	1	14	1	1	2	5
	192	9	7	2	3	7	4
No	**111**	13	8	11	11	5	9
	112	12	4	9	8	12	7
	115	14	9	12	12	4	13
	116	11	13	14	14	3	11

Tract ranking for each change variable from 1990 to 2000, on a scale of 1 to

Appendix M. 2000: Overall Rank, Change Variables per Tract

2000: Overall Rank, Change Variables per Tract			
A-Priori Classificaition	**Census Tract**	**Overall Rank - Change Variables**	**Average Rank per Variable**
Limited	**113**	t-12	10.67
	193	t-5	6.00
Possible	**114**	10	9.00
	117	7	6.50
	121	t-5	6.00
	122	2	5.00
Probable	**118**	8	7.33
	119	t-3	5.33
	126	1	4.00
	192	t-3	5.33
No	**111**	11	9.50
	112	9	8.67
	115	t-12	10.67
	116	14	11.00

Each tract's average ranking per variable. Based upon this average, tracts were then sorted on a scale of 1 to 14. A ranking near 1 indicates a higher level of socioeconomic change from gentrification processes than a ranking near 14.

Appendix N. 2000: Change Variables Rank per A-Priori Classification

2000: Change Variables Rank per A-Priori Classification		
A-Priori Classification	**Rank - Change Variable**	**Average Rank per Variable**
Limited	3	8.33
Possible	2	6.63
Probable	1	5.5
No	4	9.96

Probable tracts have the highest change variable ranking, indicating a correlation between the field survey and empirical variables that gentrification is occurring in the predicted tracts. *No* tracts have the lowest ranking, reinforcing the *a-priori* classification.

Appendix O. 2009-2013: Criteria

2009-2013: Does census tract meet criteria of gentrification indicator variables?								
A-Priori Classification	Census Tract	Decrease in black residents	Increase in bachelor's degrees?	Increase in income?	Increase in managerial, profession, or technical workers?	Increase in rents?	Increase in home value?	Increase in college students?
Limited	**113**	✓	✓	✓		✓	✓	✓
	193	✓	✓	✓	✓	✓	✓	✓
Possible	**114**	✓	✓	✓	✓	✓	✓	✓
	117	✓	✓	✓	✓		✓	✓
	121	✓	✓	✓	✓	✓	✓	✓
	122	✓	✓	✓	✓	✓	✓	✓
Probable	**118**	✓	✓	✓	✓	✓	✓	✓
	119	✓	✓	✓	✓	✓	✓	✓
	126	✓	✓	✓	✓	✓	✓	✓
	192	✓	✓	✓	✓	✓	✓	
No	**111**		✓	✓	✓	✓	✓	✓
	112		✓	✓	✓	✓	✓	✓
	115		✓	✓	✓		✓	
	116		✓	✓	✓		✓	✓

If checked, census tract meets criteria associated with the empirical effects of gentrification.

Appendix P. 2009-2013: Change Variables Rank per Tract, per Variable

2009-2013: Change Variables Rank per Tract, per Variable								
A-Priori Classification	Census Tract	Decrease in black residents?	Increase in bachelor's degrees?	Increase in income?	Increase in managerial, profession, or technical workers?	Increase in rents?	Increase in home value?	Increase in college students?
Limited	**113**	8	9	9	14	6	13	10
	193	7	13	13	1	7	2	3
Possible	**114**	9	5	5	5	9	10	7
	117	3	6	6	6	13	6	9
	121	1	11	11	10	8	5	12
	122	3	7	7	4	2	3	5
Probable	**118**	2	2	2	11	1	1	2
	119	6	14	4	8	10	11	6
	126	10	1	1	12	3	9	1
	192	4	4	4	3	5	4	14
No	**111**	14	10	10	13	11	8	11
	112	13	8	8	7	4	7	8
	115	11	12	12	9	12	12	13
	116	12	3	3	2	14	14	4

Tract ranking for each change variable from 2000 to ACS 5-year estimates from 2009-2013, on a scale of 1 to 14.

Appendix Q. Overall Rank, Change Variables per Tract

2009-2013: Overall Rank, Change Variables per Tract			
A-Priori Classificaition	Census Tract	Overall Rank - Change Variables	Average Rank per Variable
Limited	**113**	12	9.86
	193	5	6.57
Possible	**114**	7	7.14
	117	6	7.00
	121	10	8.29
	122	2	4.43
Probable	**118**	1	3.00
	119	11	8.43
	126	3	5.29
	192	4	5.43
No	**111**	13	11.00
	112	9	7.86
	115	14	11.57
	116	8	7.43

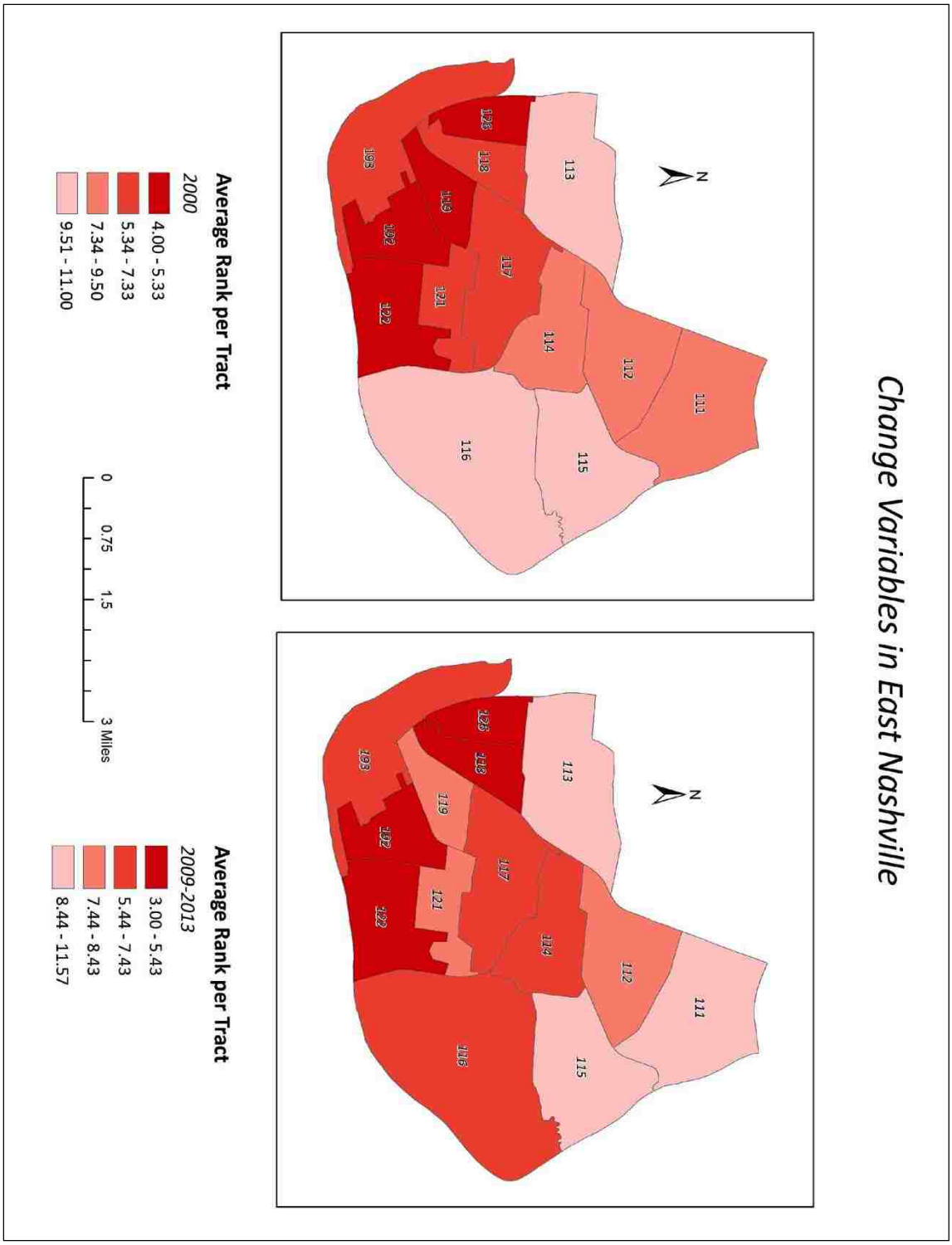
Each tract's average ranking per variable. Census tract 118, where gentrification was predicted to be taking place most heavily, has the top ranking.

Appendix R. 2009-2013: Change Variables Rank per A-Priori Classification

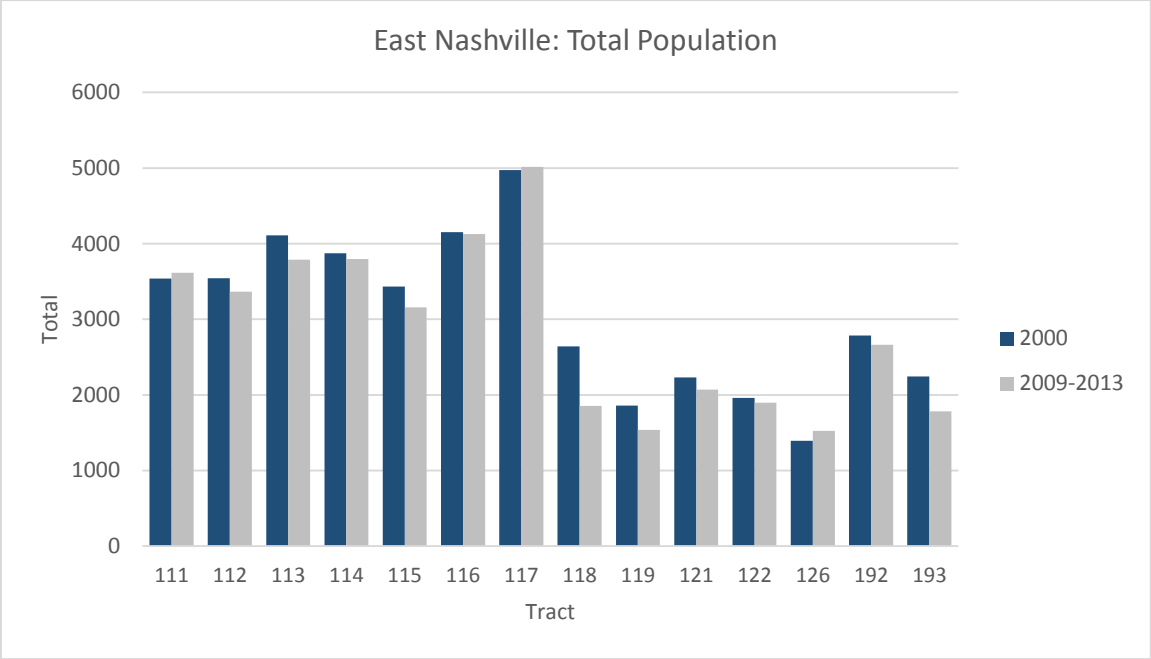
2009-2013: Change Variables Rank per A-Priori Classification		
A-Priori Classification	**Overall Rank - Change**	**Average Rank per Variable**
Limited	3	9.58
Possible	2	7.83
Probable	1	6.46
No	4	11.04

Probable tracts have the highest change variable ranking, indicating a correlation between the field survey and empirical variables for the time period in question. *Possible* gained some ground, while *no* tracts have the lowest ranking, further compounding the methods utilized.

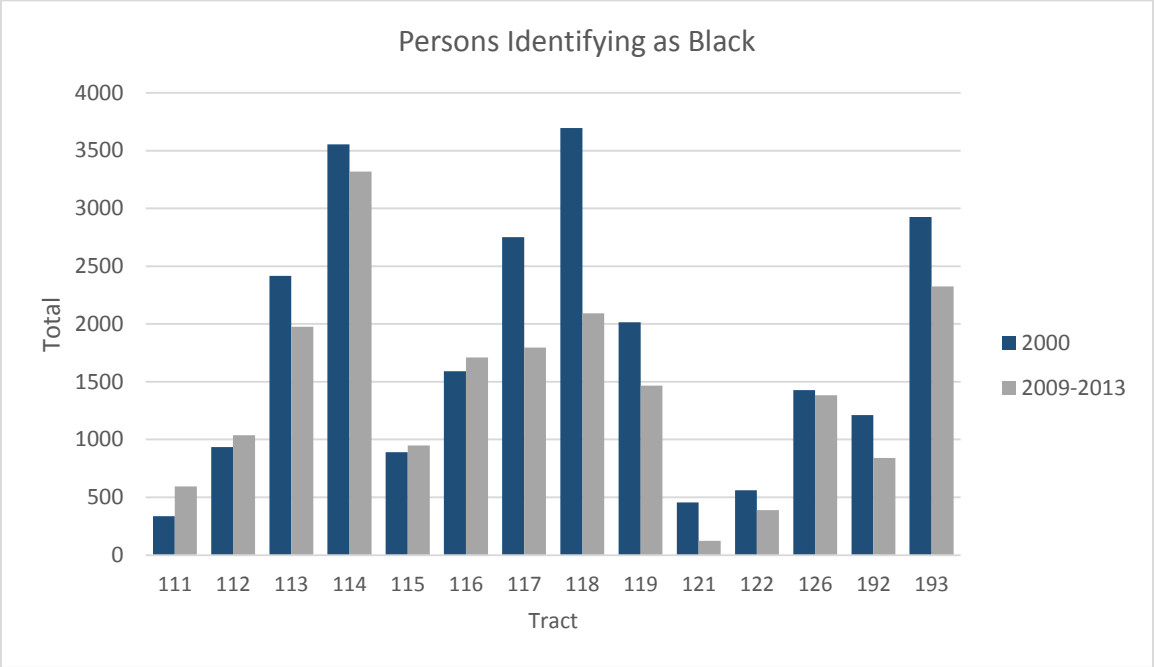
Appendix S. Change variables ranking by Davidson County, Tennessee census tract



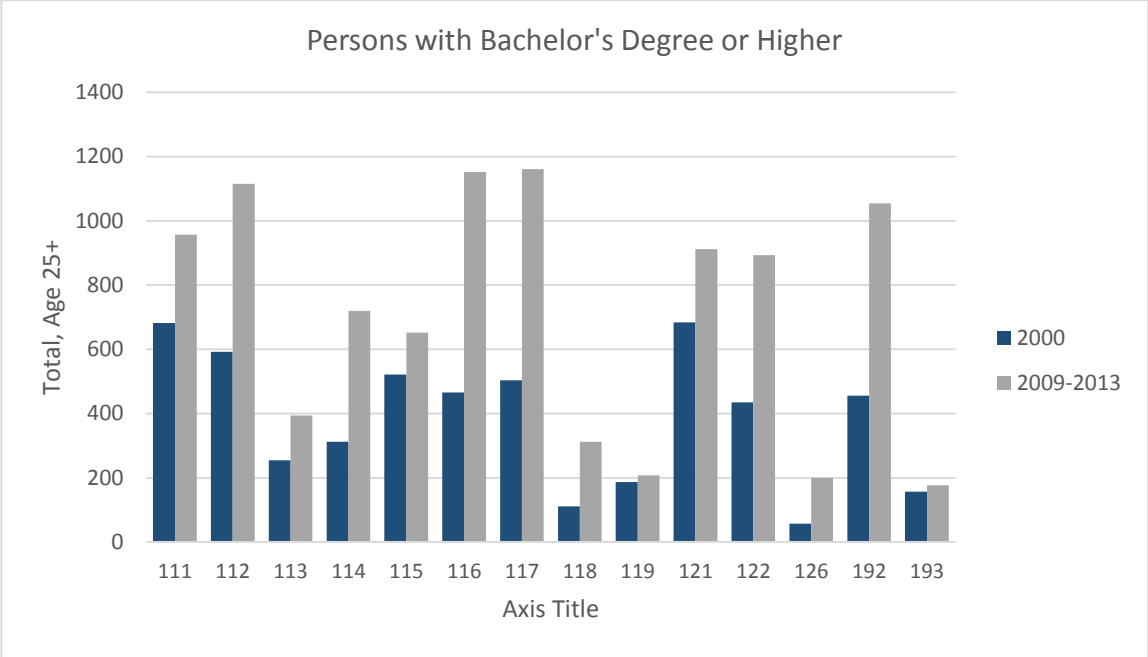
Appendix T. East Nashville total population



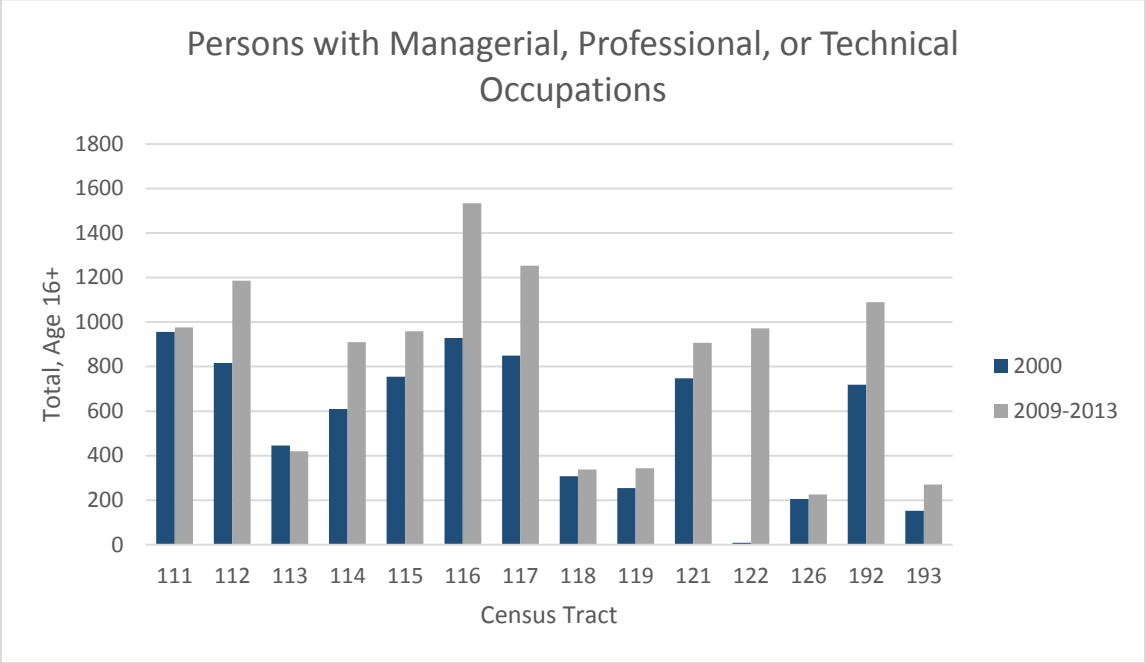
Appendix U. Persons identifying as black in East Nashville



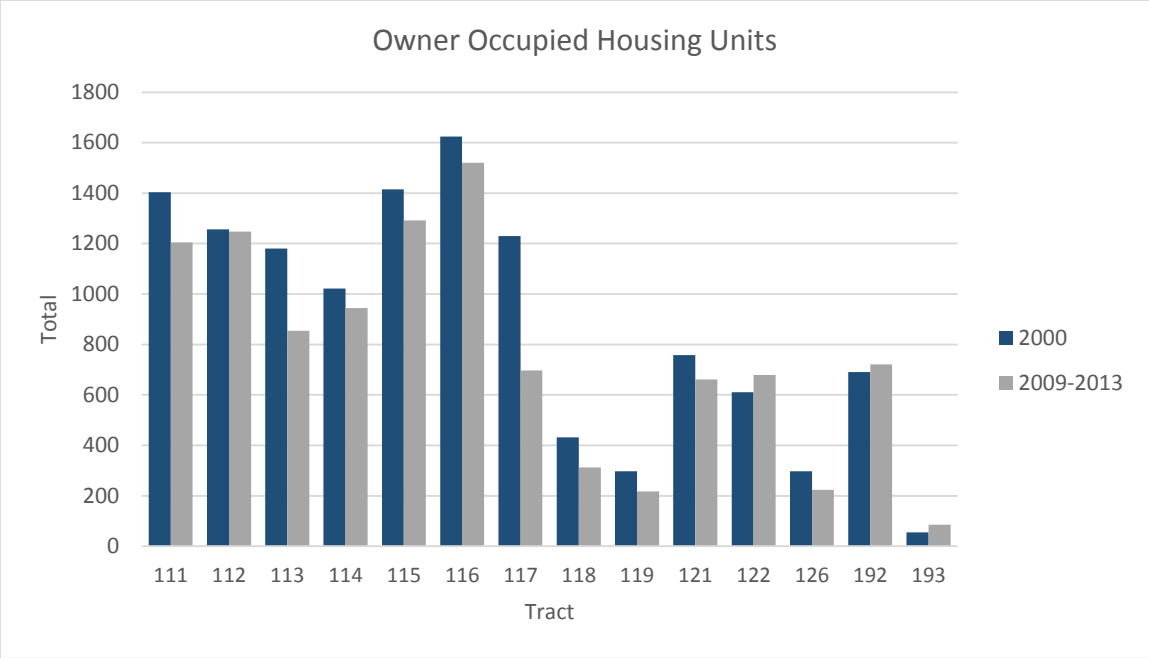
Appendix V. Educational attainment in East Nashville



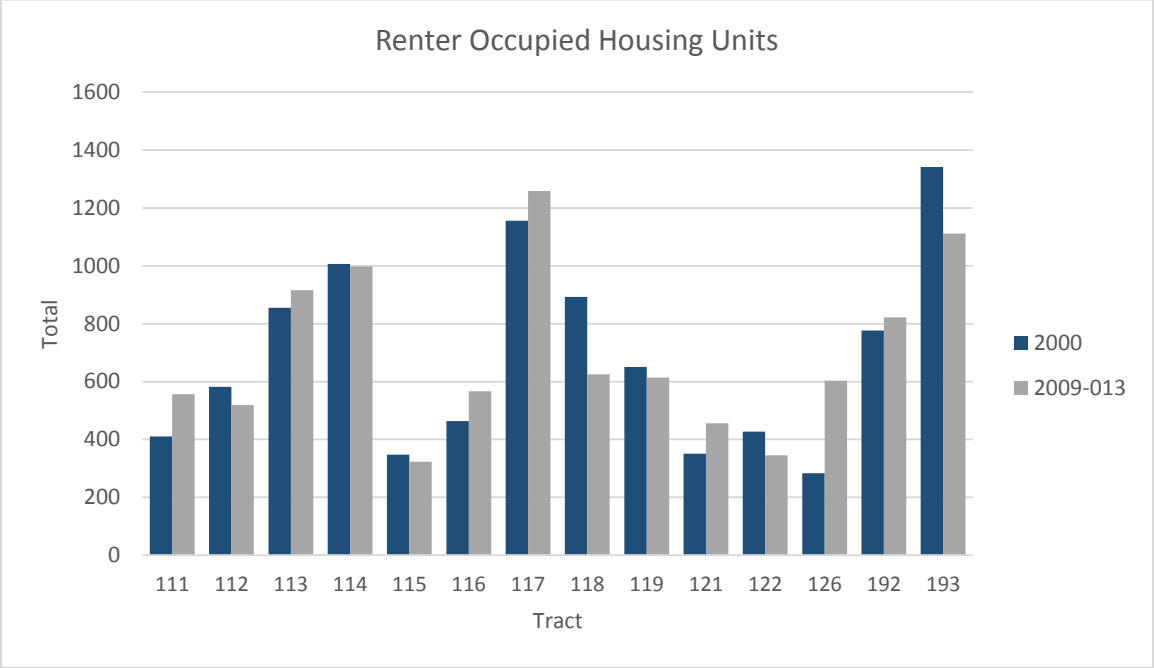
Appendix W. Occupations in East Nashville



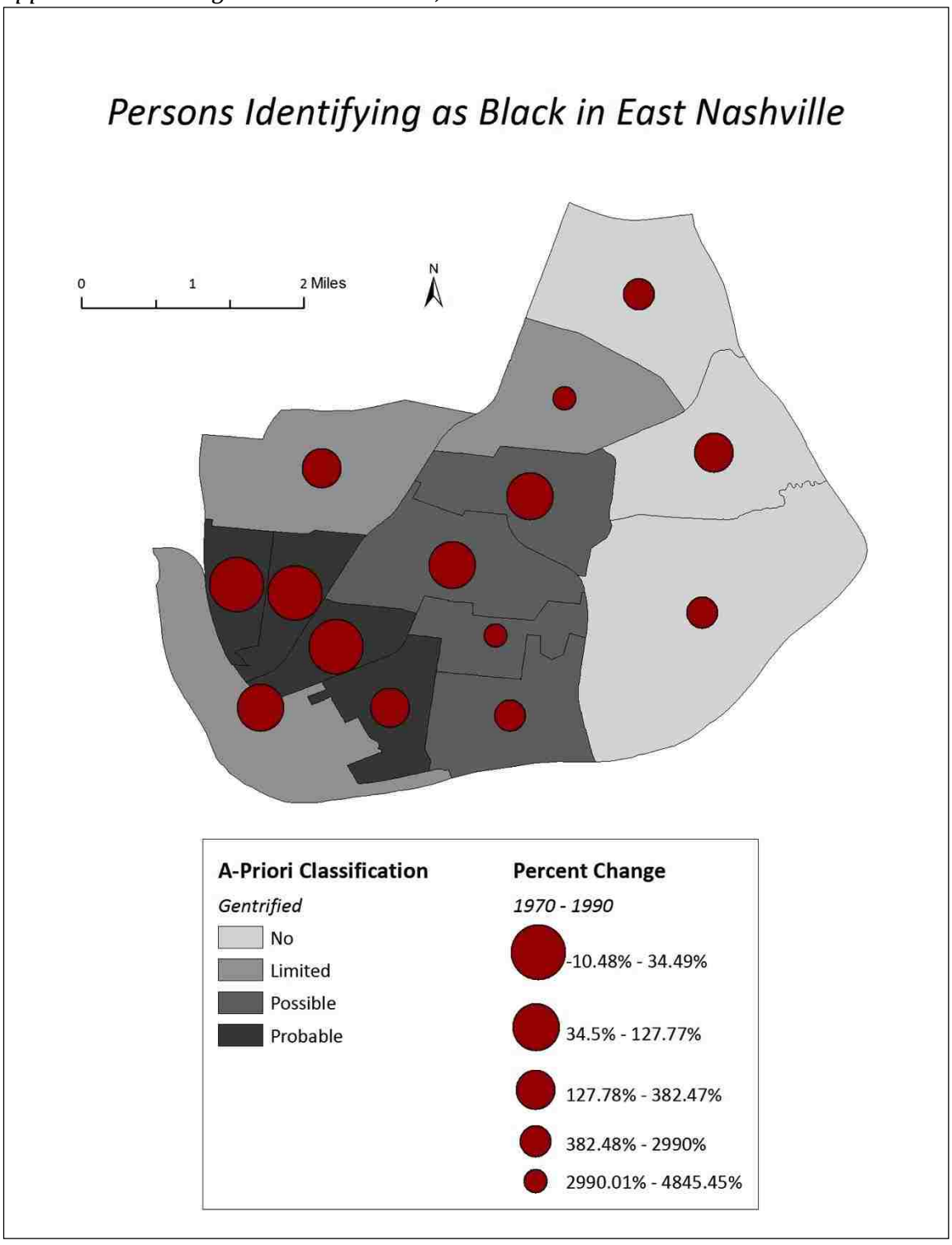
Appendix X. Homeowners in East Nashville



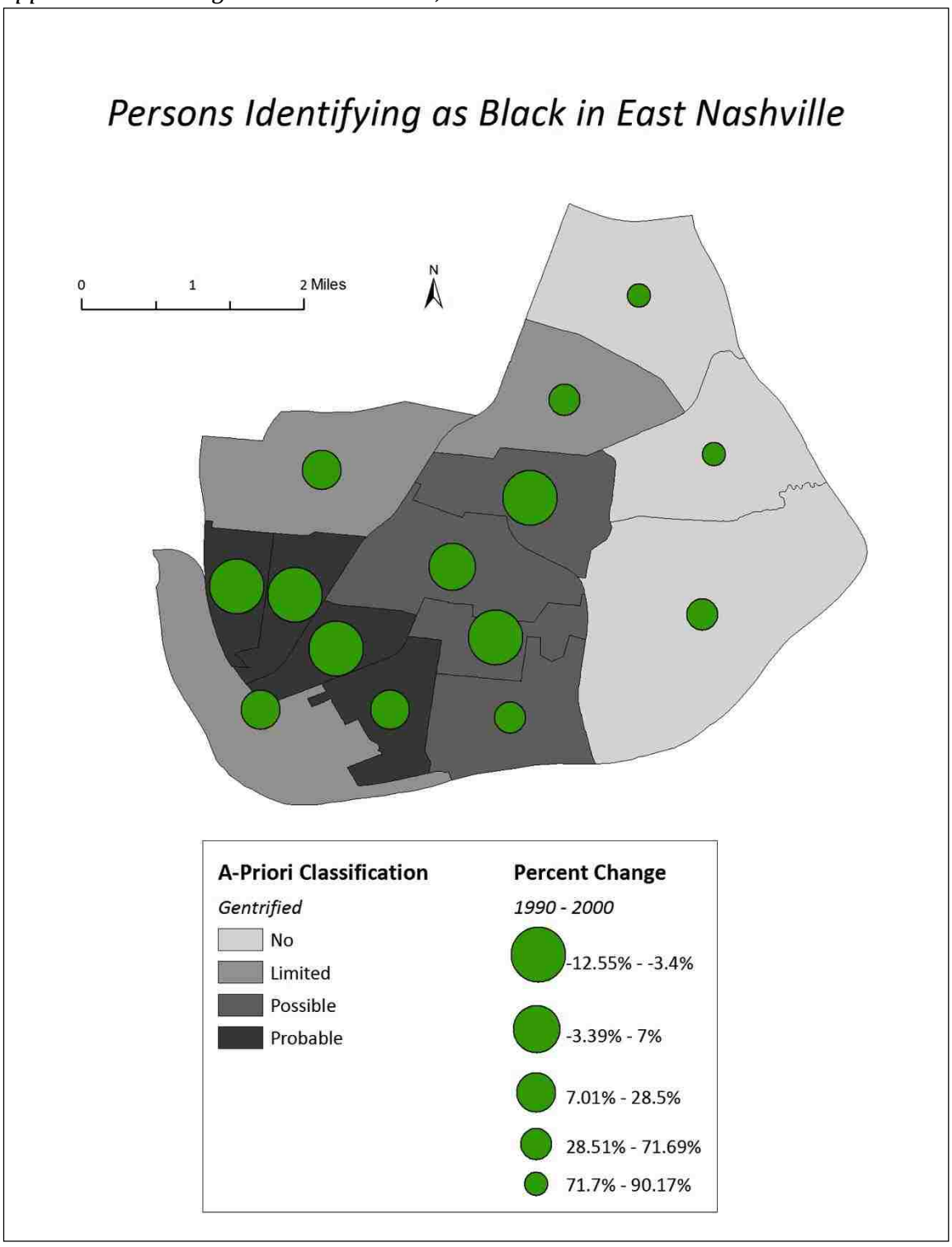
Appendix Y. Renters in East Nashville



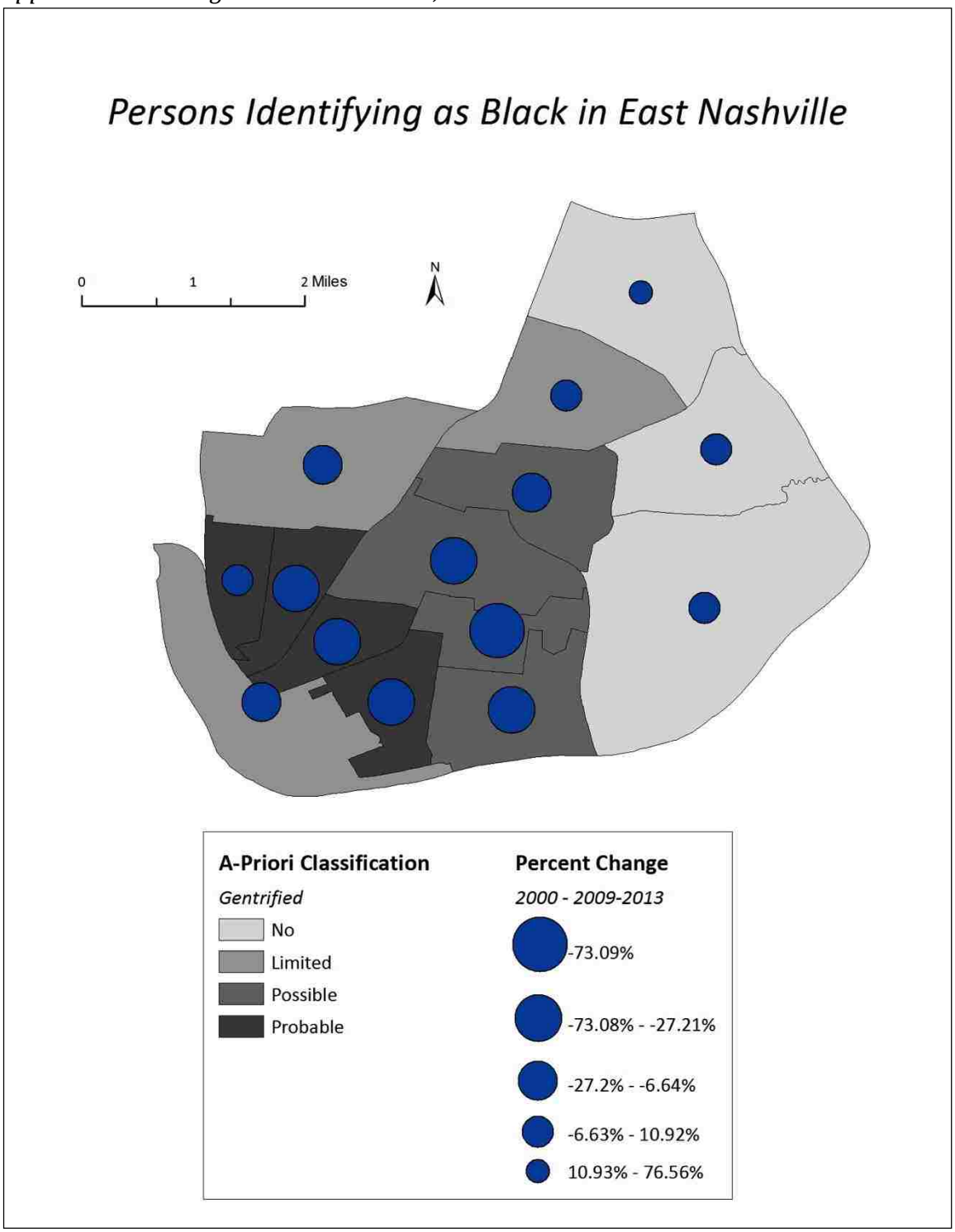
Appendix AA. Change in black residents, 1970 to 1990



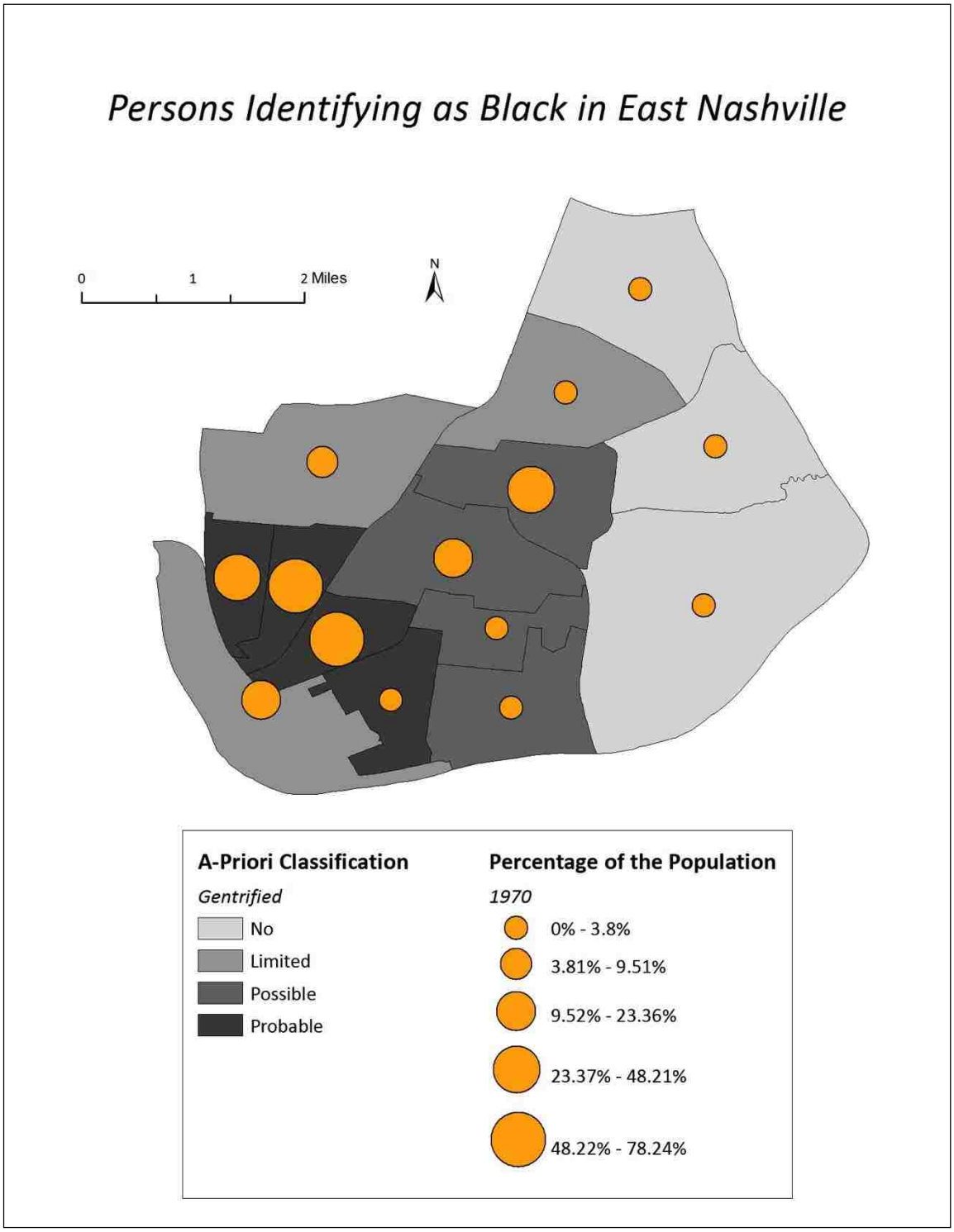
Appendix BB. Change in black residents, 1990 to 2000



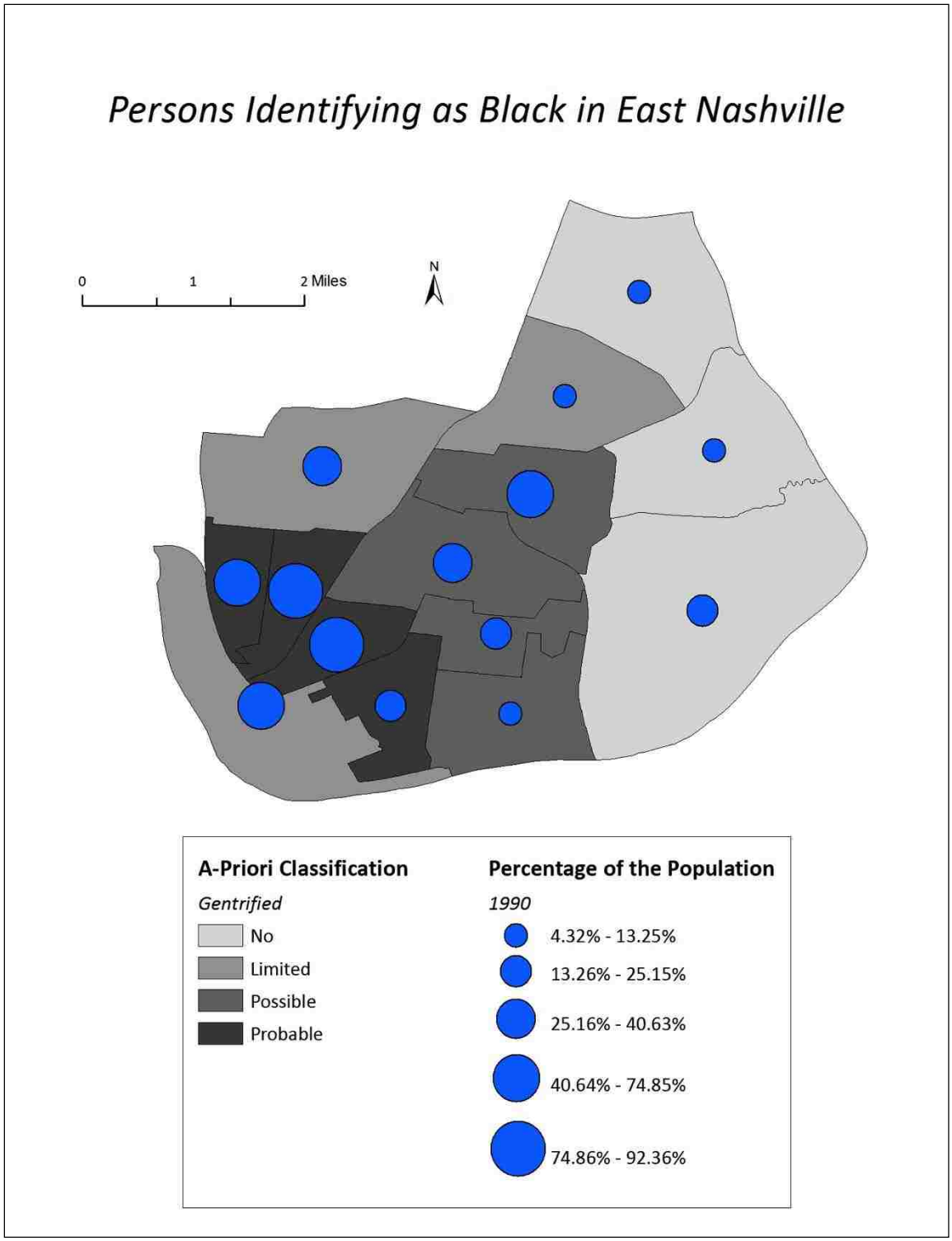
Appendix CC. Change in black residents, 2000 to 2013



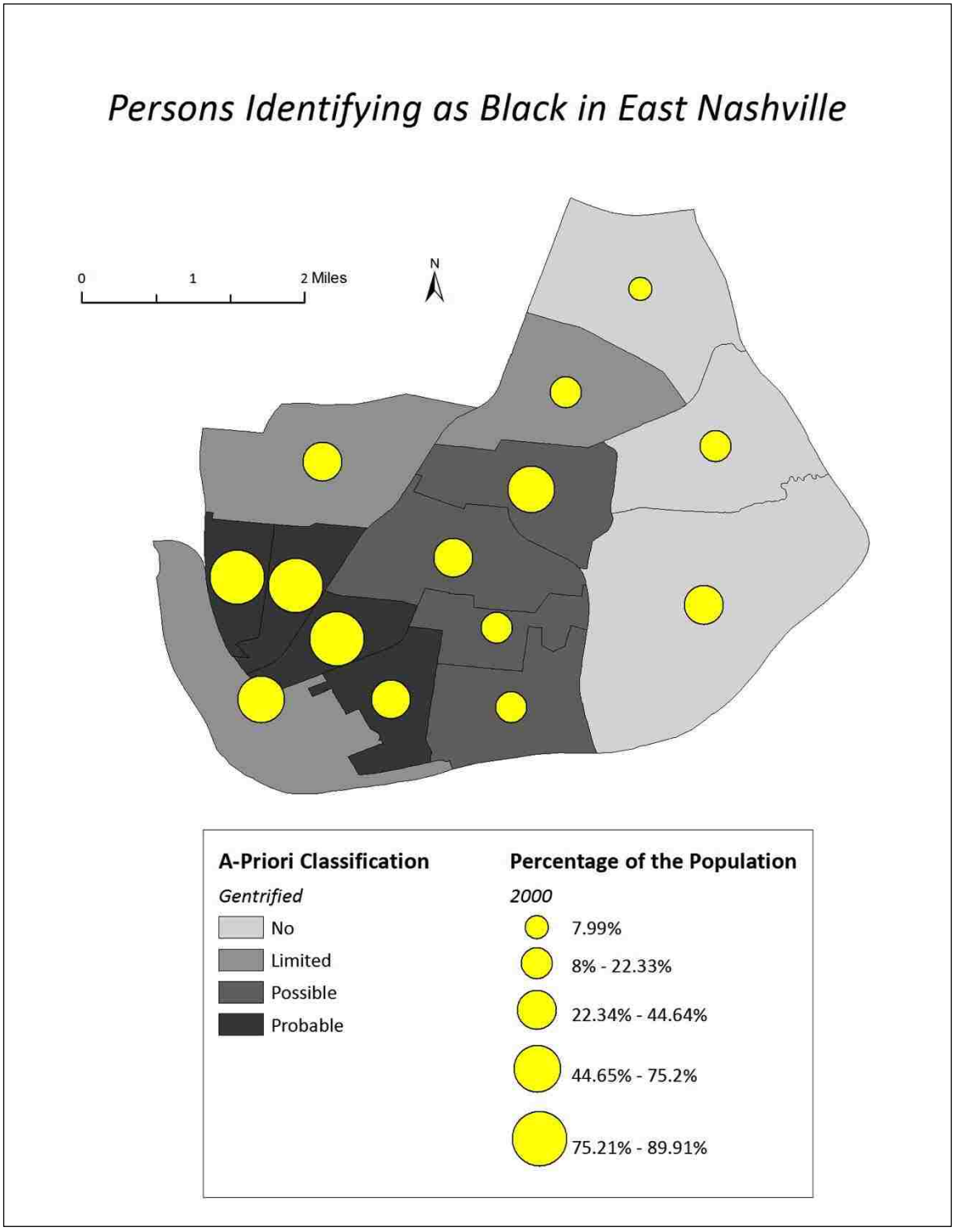
Appendix DD. Black population in East Nashville, 1970



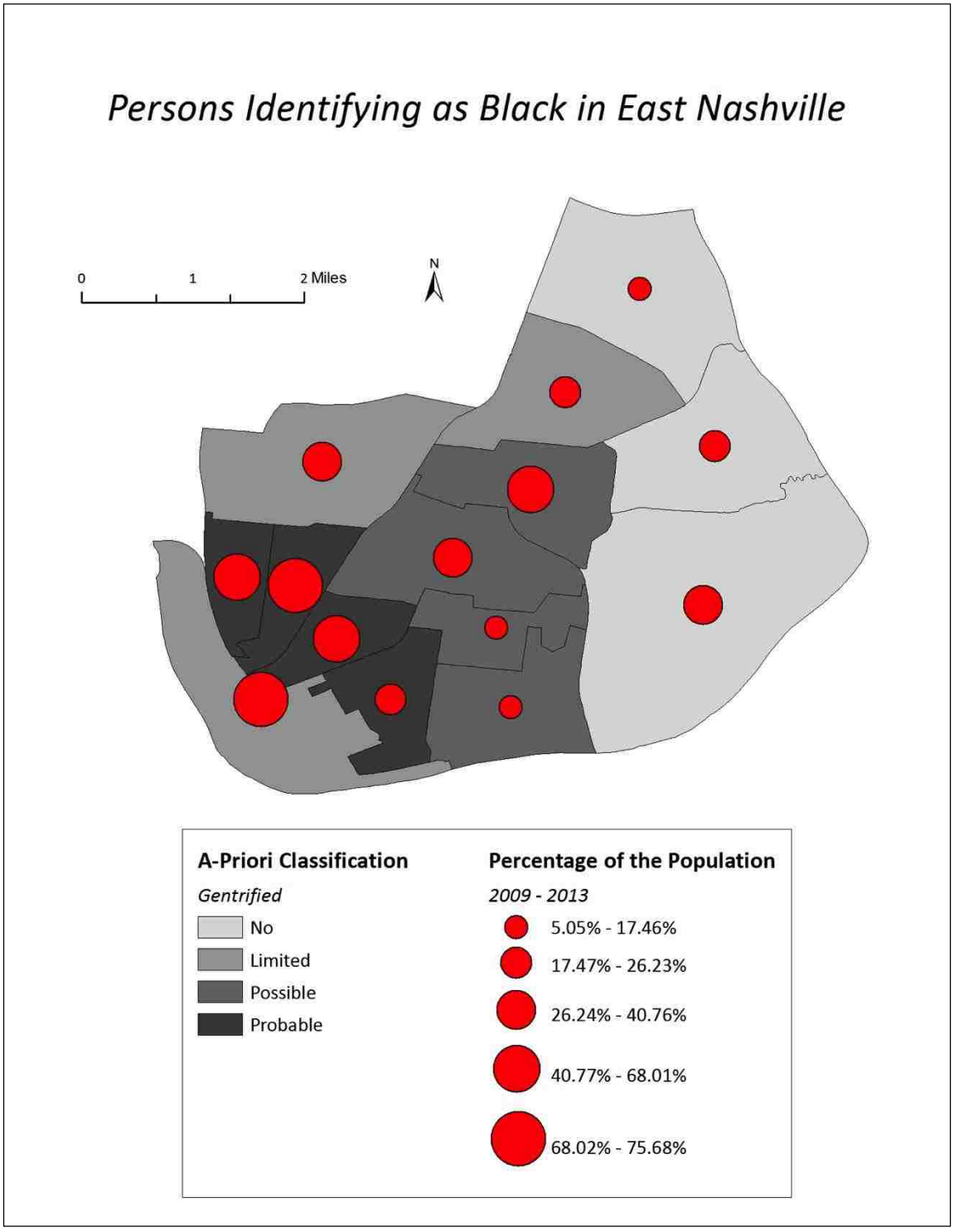
Appendix EE. Black population in East Nashville, 1990



Appendix FF. Black population in East Nashville, 2000



Appendix GG. Black population in East Nashville, 2009-2013



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