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**THE 5TH
HOUSTON SUSTAINABILITY INDICATORS REPORT
OPPORTUNITY AMONG THE HOUSTON DISTRICTS**



RICE UNIVERSITY
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**THE 5TH
HOUSTON SUSTAINABILITY INDICATORS REPORT
OPPORTUNITY AMONG THE HOUSTON DISTRICTS**

by

Lester King, PhD, AICP, LEED

September 2015

**Shell Center for Sustainability
Rice University
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Executive Summary

The eleven (11) Council Districts are the administrative boundaries for elected representatives of the City of Houston. The Districts represent the primary spatial mechanism, through which capital improvement spending is distributed annually throughout the city. On an annual basis, citizens have the capability to identify issues or projects they would like to have funded in their discreet districts; elected officials have the capability to advocate for projects they would like to have funded in their discreet districts; and city staff have the capability to identify projects that require funding for maintenance and development of the city. These three options represent the main avenues to influence the sustainable development of the City of Houston.

This study challenges a few prevailing 'norms' such as the '*Within the Loop*' designation for preferred location. The study shows this should perhaps be replaced with the more appropriate, '*West Inner Loop*', since this is the area that is truly desirable in terms of real estate value and investment. The East Inner Loop contains many beautiful neighborhoods and other boastful assets, however, the West Inner Loop is where the majority of investment is targeted.

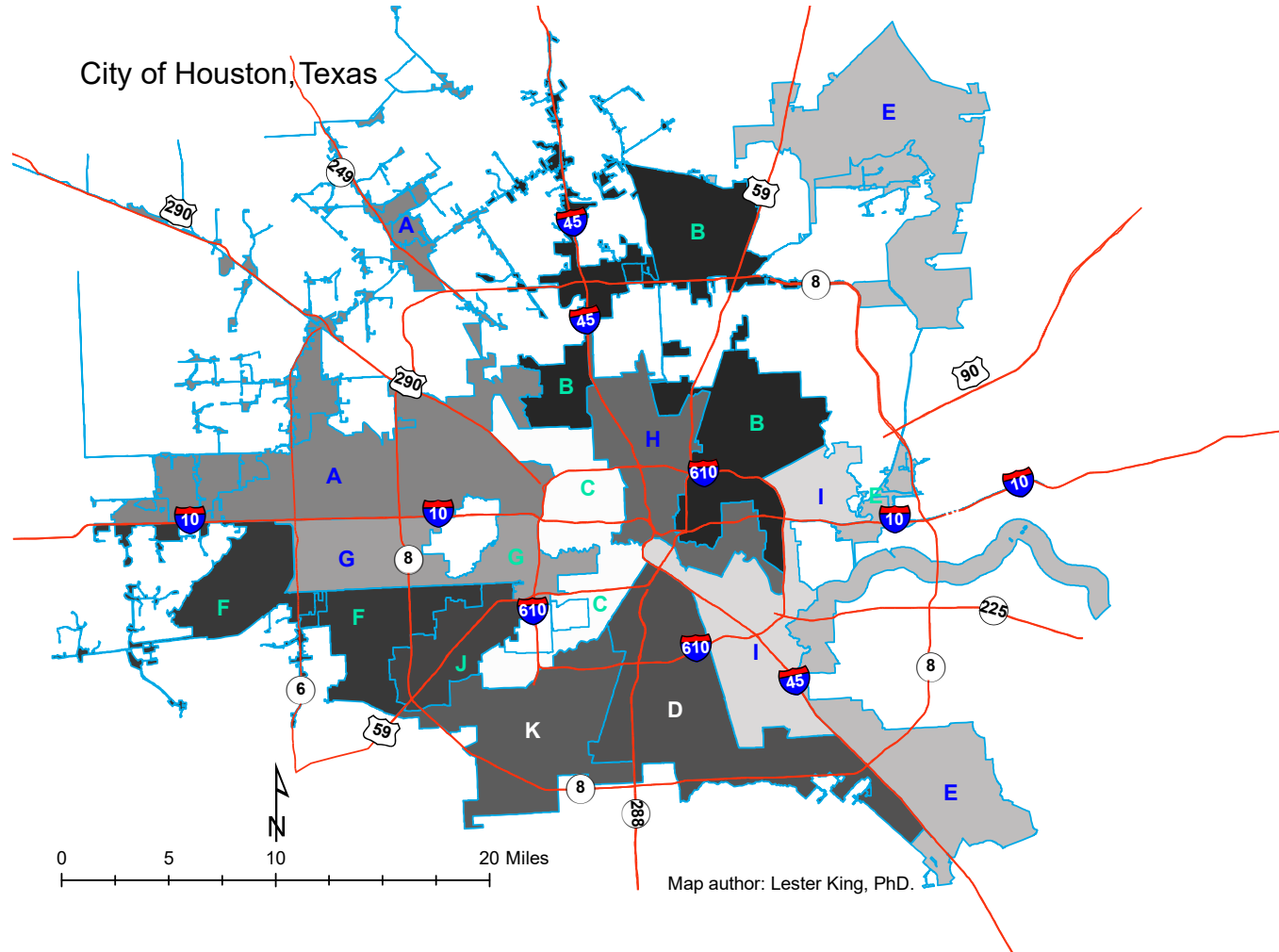
Notions of gentrification occurring in several areas, is fact checked in this report. **Our research shows that gentrification is occurring in very few places throughout the city.** What is more true is that many parts of the city have become more mixed with various combinations of Black, White and Hispanic residents. This is good news for multicultural Houston, however **many areas are still firmly segregated by single races/ ethnicities.** In the Historic African-American community of the Third Ward, for example, a frequent fear is that this area will become gentrified just like the Fourth Ward has become. This report shows that between 1990-2013, there has been no significant gentrification. We define gentrification as an area which was previously more than 75% one race/ethnicity, then changes to more than 50% of a different race/ethnicity. This does not mean that the threat does not exist. Our research shows that highways and major thoroughfares like Highway 288, US Interstate 45 and Main street (US 90), may be acting as de facto "barriers" to significant penetration of vulnerable and worried communities like Houston's Third Ward. In addition to the physical barriers, there is the liability attached to investing in perceived "distressed" neighborhoods regardless of location. Thirdly, in 2013, portions of the population, still have somewhat of a socio-cultural stigma attached to moving into neighborhoods identified as minority. Research shows that minority neighborhoods that have become gentrified are those where there has been significant population loss prior to the big gentrification push. The Midtown community of Houston is one such example.

We are pleased to present this report in its more thematic format for your review. We hope you will find it useful in its ability to contribute to a better understanding of actual development patterns within the municipal boundaries of the City of Houston.

Sincerely,

A handwritten signature in black ink, appearing to read "Lester O. King". The signature is stylized and fluid.

Lester O. King, PhD



The map above shows the outline of the City of Houston and boundaries of each council district. In the Northwest and West of the city, the tendrils represent streets and the land immediately adjacent (commercial property), that was recently annexed into the City.

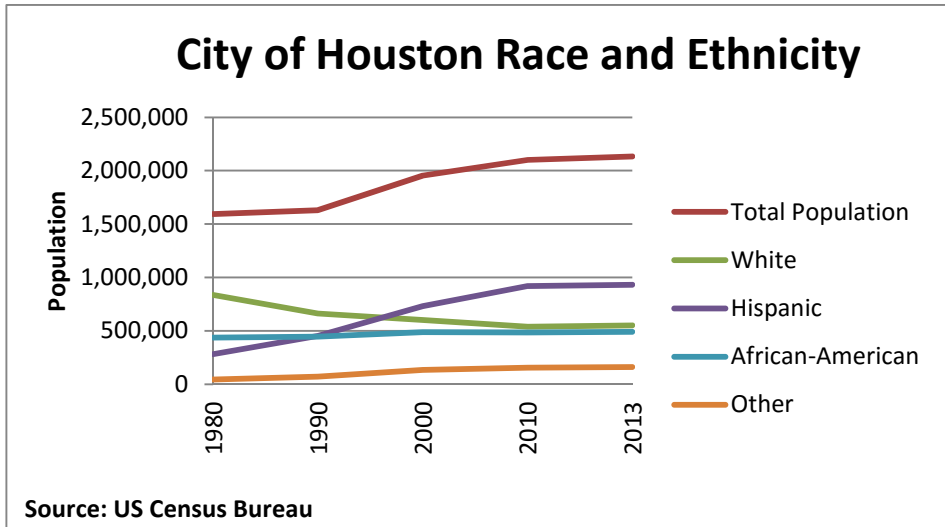
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TABLE OF CONTENTS

Acknowledgements	3
Executive Summary.....	4
<i>SOCIAL DEVELOPMENT</i>	8
Gentrification	8
ECONOMIC DEVELOPMENT	16
Affordability	16
ENVIRONMENTAL DEVELOPMENT.....	22
Quality of Life.....	22
CONCLUSION	26
References.....	27

Gentrification

The tremendous growth in the City of Houston is primarily the result of the large influx of Hispanic persons. Almost 700,000 Hispanic persons moved to the city between 1980 and 2013. During this same period, the city lost 267,982 persons from the White cohort and grew by 60,713 persons from the African American cohort. The recent major expansions in apartment and office building in the **West Inner Loop**, does not seem to truly reflect either the growing demographic in terms of income and affordability or the locational preferences of the growing ethnic groups. Many concerned residents from the most distressed neighborhoods that lie close to or within the central urban areas, are concerned about gentrification and possible negative impacts on their communities. These concerns may include unaffordable land value increases and unwanted land uses in close proximity to their homes. Here we take a look at the spatial locations of gentrification and in particular the changing racial and ethnic concentrations of Houston residents over the last 23 years.



- The race and ethnicity composition of the city is as follows in 2013:
 - Hispanic 44%,
 - White 26%,
 - Black 23%, and
 - all Others 8%.
- In 1980 there were at least 500,000 more Whites than Hispanics in the City of Houston. The exact counts were 834,061 White and 281,331 Hispanics. The population counts for Whites and Hispanics were approximately the same around 1996. **Since 1996 the Hispanic population has grown tremendously in Houston as the White cohort has continued to decline.**

Figure 1: City of Houston Race and Ethnicity

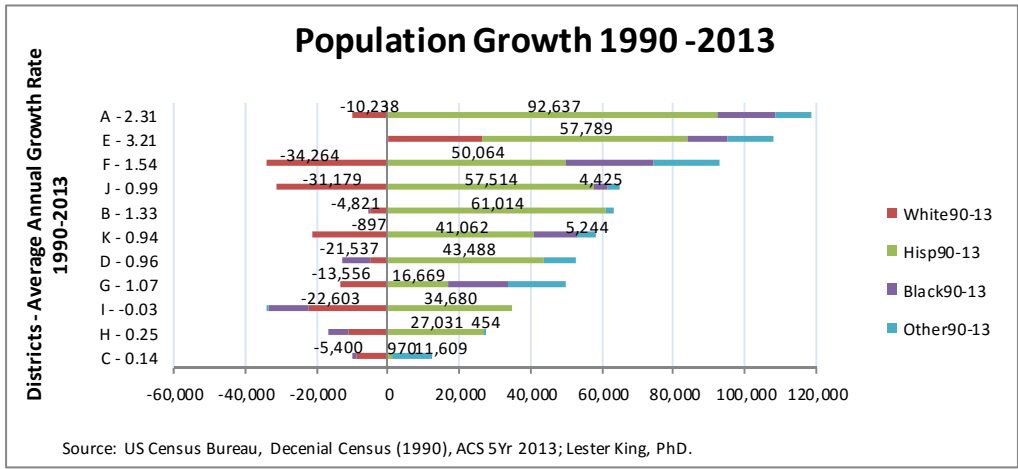


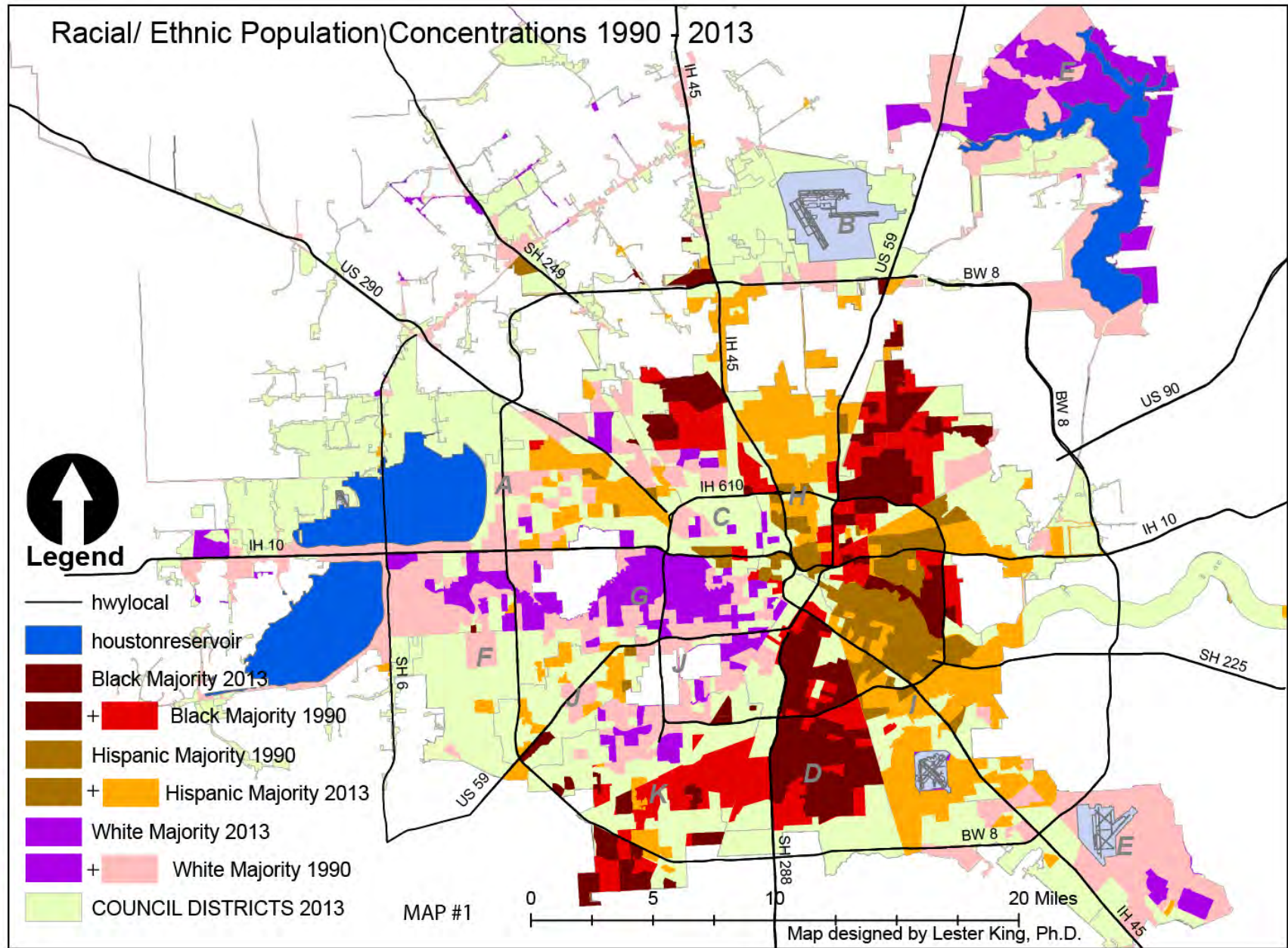
Figure 2: District Race/ Ethnicity Growth

- Figure 2 shows the average annual growth rate from 1990 – 2013 for each district (Next to district label on left of figure). It also shows the total growth for each racial/ethnic group by district.
- The average annual growth rate, based on the 23 year period, ranged from -0.03 (District I) to 3.21 (District E).
- Most districts lost considerable population among the White cohort between 1990 and 2013 except for District E. The largest lost was District F with 34, 264 persons.
- All Districts gained population from the Hispanic cohort between 1990 and 2013.
- Four districts lost population from the African American cohort (Districts C, H, I, D and B). The largest loss was in District I with 11,251 African American persons.



- In 1990, 40% of the population in Houston lived in areas that were predominately composed of a single ethnicity. For this analysis we used a threshold of over 75% African American, White or Hispanic to designate those communities. It is important to note that African American, Hispanic and White persons made up over 95% of the population in 1990 (93% in 2000 and 92% in 2013). **Therefore Houston's claim as an international city of many languages and cultures must be placed in reference to these big three combinations of White, African American and Hispanic, which make up 92% of the population today.** Houston is really a majority Hispanic City and we should recognize this fact sooner rather than later.
- The White cohort was the most concentrated group in 2013 with 60% living in areas that were predominately White. This is followed by the Black population with 38.5% of its numbers living in areas that were predominately Black. Hispanics trailed with only 18% of that cohort living in areas that were predominately Hispanic. This reflects the penetrating spread of the Hispanic community across Houston.
- From as far back as 1990, we see evidence that Houston's Inner Loop was racially segregated East vs West, with Black and Hispanic communities to the East of Hwy288 and US59 and the White cohort mainly to the West of that divide. The map clearly shows how highways (Hwy288, US45, US59) have played a role in establishing the boundaries for Houston's racially concentrated communities. Highway 288 firmly defines the western boundary for the African American community until it meets the 610 South Loop, where Main Street (US90) then takes over as the western border. Highway 59 forms the border between the African American and Hispanic communities. The White cohort concentration is bordered by Main Street (US90) to the East.
- By 2013, both the White and the Black communities have less persons living in the single-race areas. However from 1990 to 2013, the Black population living in predominately Black communities has declined by a small 35,000 persons. The White population living in predominately White communities has declined by a significant

250,000 persons. **The Hispanic community, on the other hand has grown in size and occupied new communities that can now be identified as Hispanic Communities.** These communities have grown by a massive 300,000 persons. This large growth is approximately equal to the losses of both the Black and the White communities combined. Houston is an Hispanic city and this growth trend is expected to continue.



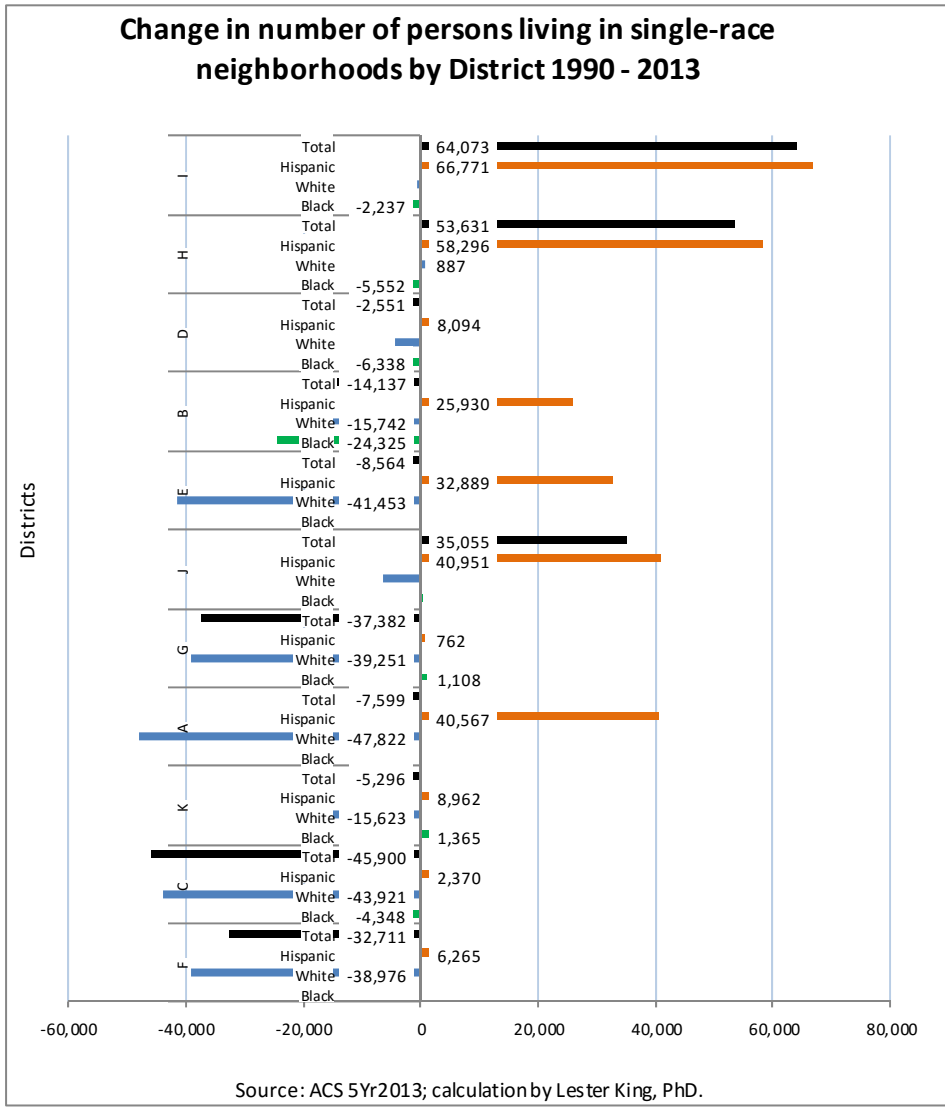
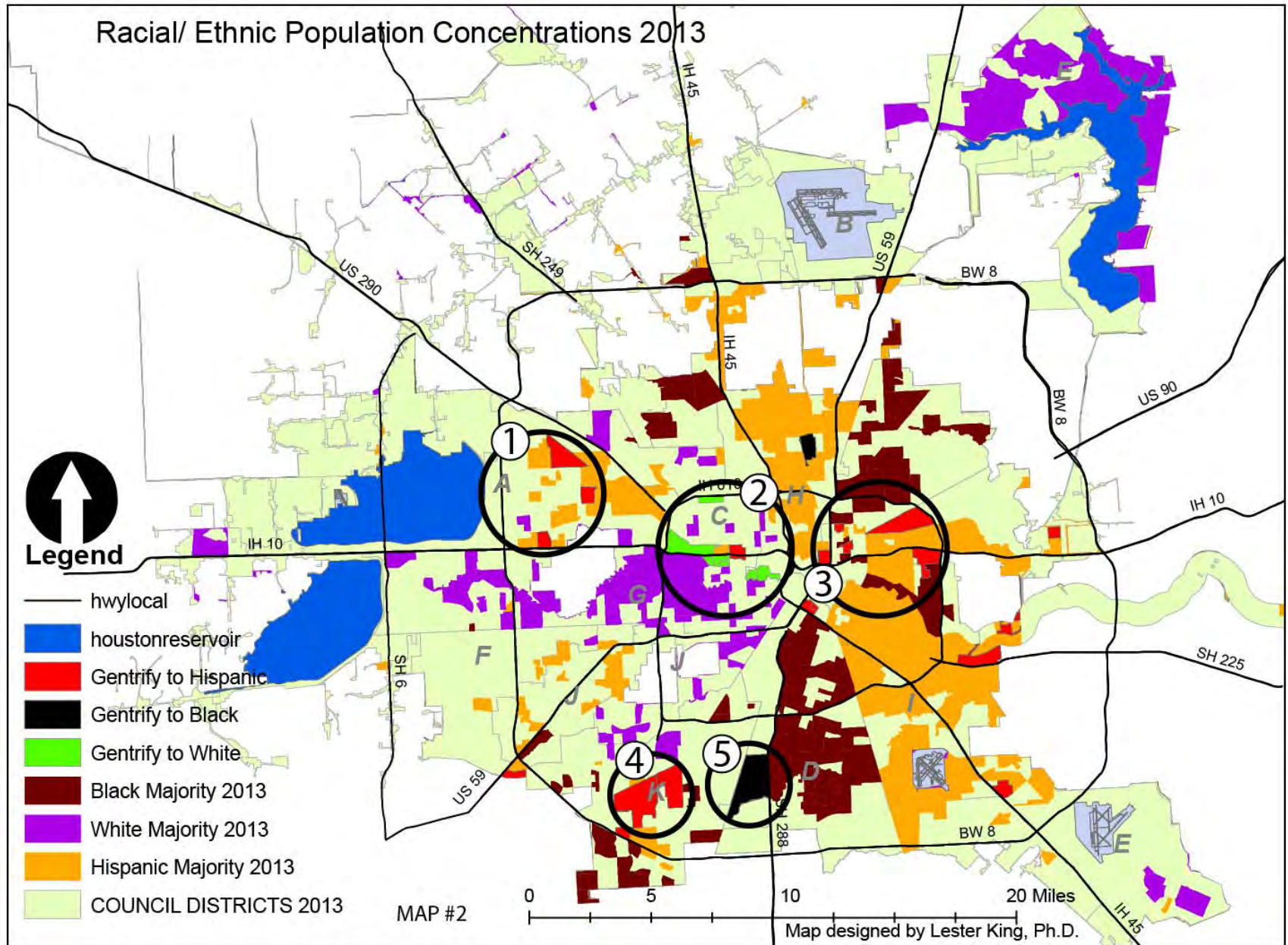


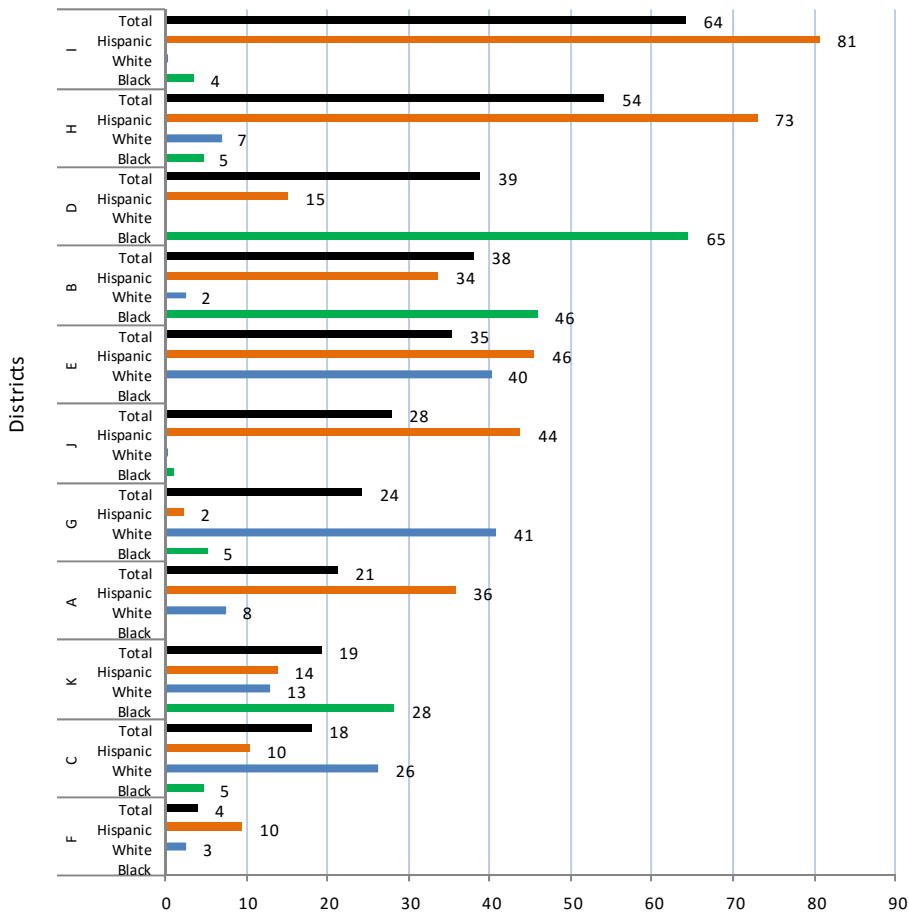
Figure 3: Change in persons living in single-race neighborhoods 1990-2013

- Figure 3 shows how Districts grew in single-race neighborhoods by 2013. The Hispanic communities increased by over 55,000 persons in each of Districts I and H by 2013. District J and A both had concentrations increased by over 40,000 persons.
- Map 2 Shows areas that were gentrified in Houston. For this analysis we defined gentrified as any area that previously had 75% or more of one ethnicity and changed to 50% or more of another ethnicity (See conclusion Pg.26). **Between 1990 and 2013, they were very few areas in Houston that became gentrified according to a change in race or ethnicity.**
- **Community 1** – District A, Spring Branch and Fair Banks area. This area has a few spots that gentrified from majority White to majority Hispanic.
- **Community 2** – District C, Washington Avenue, Forth Ward. This area has a few spots that gentrified from Black to White in the Fourth Ward area and from Hispanic to White in the Washington Avenue area. It is perhaps where the greatest examples of urban redevelopment in Houston can be found.
- **Community 3** – District B, Denver Harbor and Fifth Ward. The Hispanic community has gentrified some spots of District B which was previously a Black community.
- **Community 4** – District K, Central Southwest. This area is gentrified from Black to a Hispanic majority.
- **Community 5** – District D, Central Southwest. This area gentrified from majority Black in 1990 to majority Hispanic in 2000. By 2013 it is now majority Black again. Community 5 and 4 are examples of Hispanic population growth and Black community

redevelopment efforts meeting. Both of these communities are located in areas that are very low density and have a tremendous amount of vacant and underdeveloped land to build.



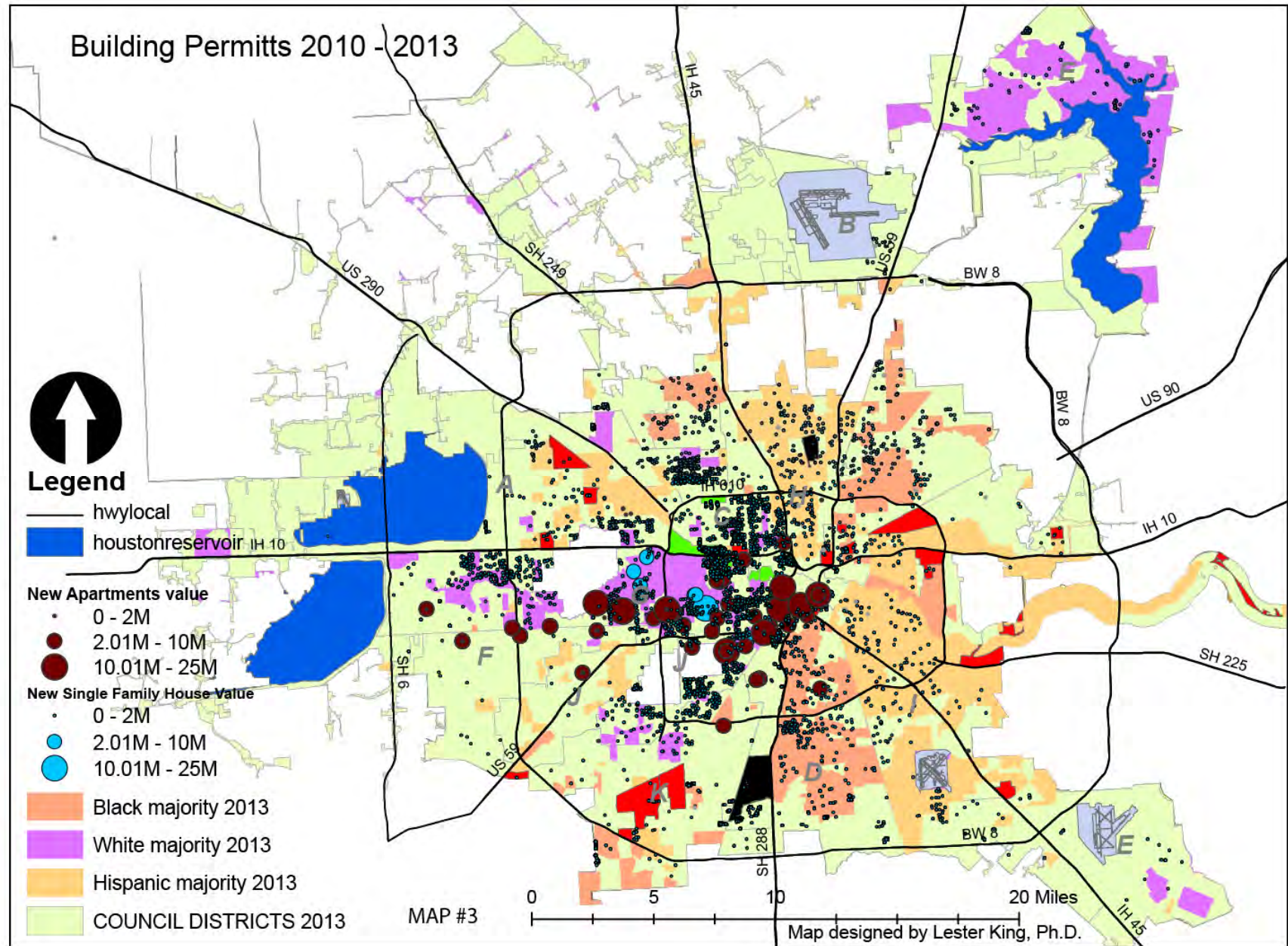
Percentage of persons living in single-race neighborhoods by District 2013



Source: ACS 5Yr2013; calculation by Lester King, PhD.

Figure 4: Percentage of persons living in single-race areas by District

- The research provides evidence that the diversity in Houston can largely be explained by the tremendous growth in the Hispanic population.
- Over 50% of persons living in Districts I and H live in neighborhoods that are predominately Hispanic.
- In District D, 65% of the African Americans live in predominately African American neighborhoods. While in District B, 46% is the comparative number for African-Americans.
- Districts E and G have the largest concentration of persons from the White cohort in those districts living in predominately White neighborhoods.
- Map 3 Shows the distribution of building permits across the city between 2010 and 2014.
- Although there was building activity throughout the city, the majority of high end development was located in Districts C and G.
- **The High end development is almost exclusively occurring in areas that are majority White in Houston, Districts C and G.** This is also the area that can be termed the **West Inner Loop**.
- Since most of the development intensity is occurring in Districts C and G, which are primarily higher income and higher counts for the White cohort, this concentration ameliorates the threat of gentrification. The concentration of wealth in areas that contain few minorities cannot also contribute to gentrification.



Affordability

Housing affordability can be defined as relative, subjective, a product of family budget, a ratio, or residual. This would explain the gamut of definitions of housing affordability, but spending less than 30% of income on housing (Ratio standard) has taken the fore as the definition of affordability in the US (Stone, 2006). When comparing cities in the country with more than 250,000 people, **Houston ranks 26th for affordability, with 46% of median incomes going to housing combined with transportation costs.** Philadelphia was first with 33%; New York was 4th with 37%; Chicago was 14th with 42%; and Los Angeles was 51st with 52% of income going to housing and transportation cost (Center for Neighborhood Technology, 2010). This conflicts with Houston’s marketability as the affordable capital of the country.

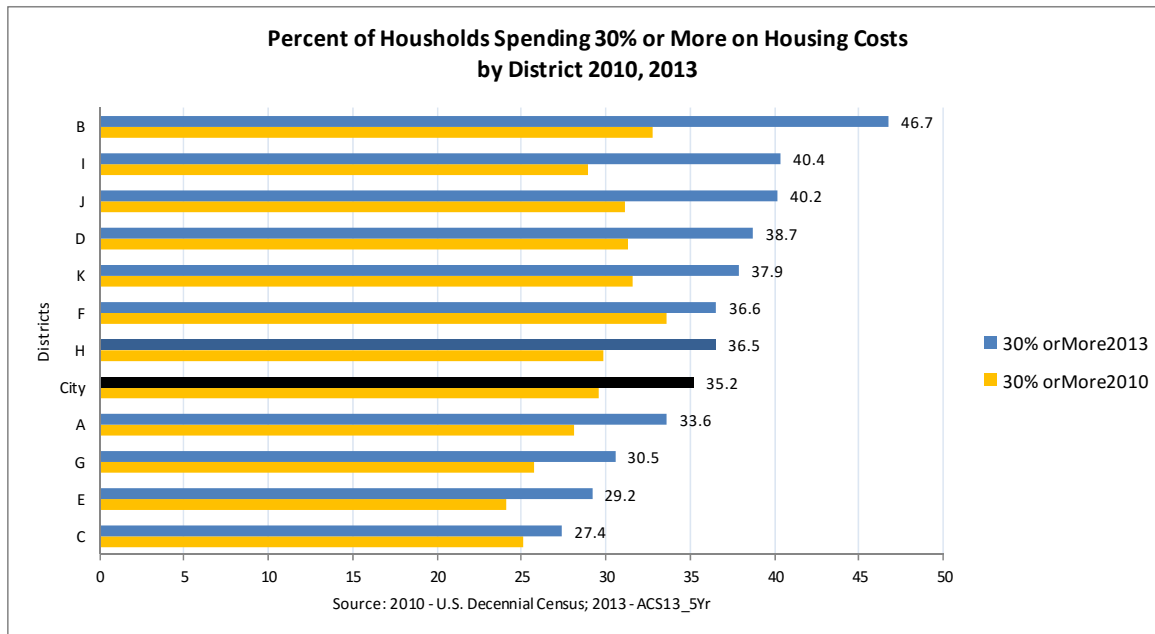


Figure 5: Housing Affordability

- In 2013, selling prices for homes in the Houston Metro region increased 10.2% over 2012 prices (Sarnoff, 2013). **Sales increased by 17.4% in Harris County, which is higher than a pre-recession record set in 2006** (Feser, 2014). The total amount of single-family home sales was \$20,891,392,084 in 2013 (HCAD, 2014). This activity and the much published rhetoric regarding Houston’s impressive growth after the recent recession may have been responsible for the rise in housing costs relative to incomes, when comparing increases between 2013 and 2010.

- The percentage of housing units in Houston where tenants spent more than 30% of their incomes on housing costs increased almost 50% in 2010 from 1990 levels. In

2010, 30% or 104,140 housing units cost tenants more than 30 percent of their incomes.

- **In 2013, 35.2% of households spent more than 30% of their incomes on housing costs, which is a 5% increase over 2010 levels.**

- District B had the largest percentage of unaffordable units with 46.7% of households spending more than 30% of their incomes on housing costs.

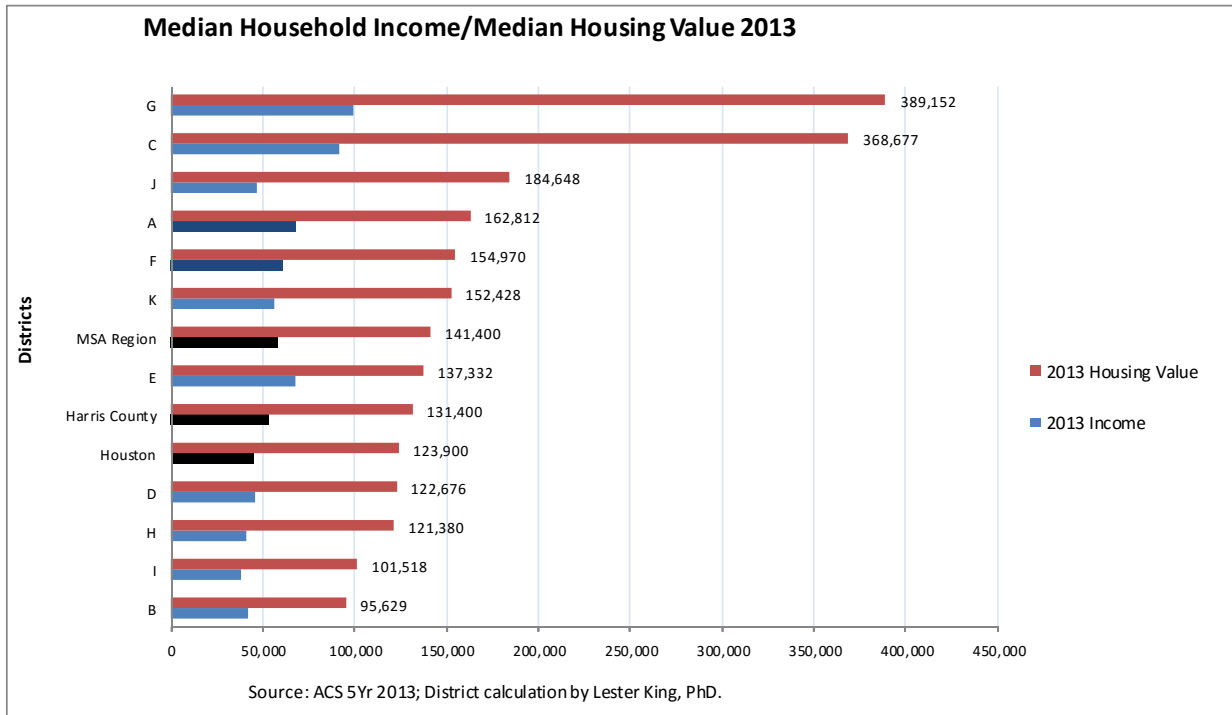


Figure 6: Median household income and Median housing value 2013

- The above figure shows that eight districts have median household incomes over \$50,000 in the City of Houston. Districts G and C continue to outpace the rest of the city as the most wealthy areas.

- When Figure 6 is used to show the median housing value plotted against median incomes, we see that although District B is the most unaffordable district, the reason is because of the income status of residents, not the value of the housing.

- Housing values in Districts G and C extend more than 200% above the next highest District which is J.

- The figure also shows that the median housing values, within the City of Houston are below the median values for the surrounding county (Harris) and the surrounding metropolitan statistical area.

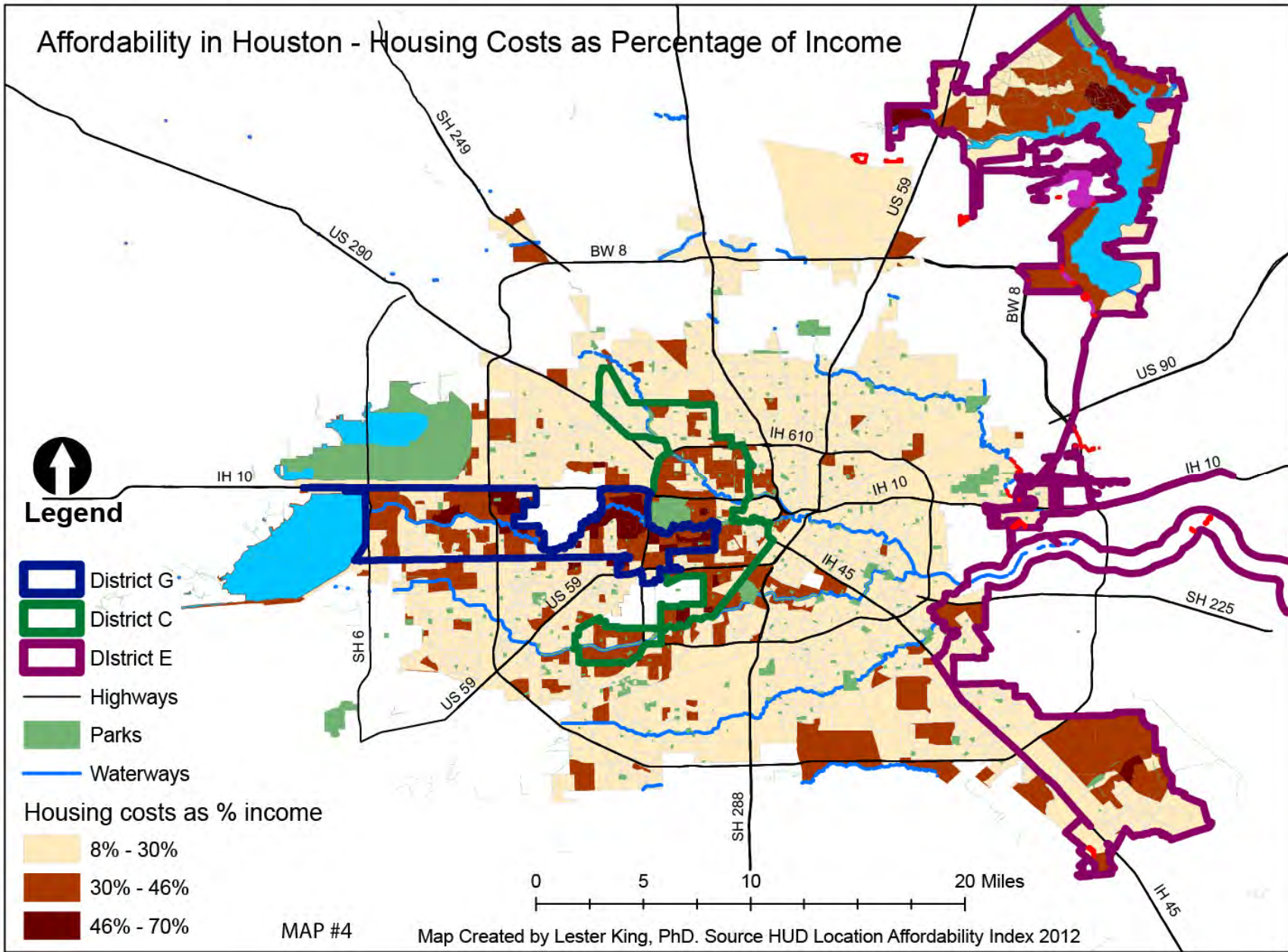
- The median household income in the City of Houston in 2013 was \$45,010, which is an increase of over \$2,500 from 2010 levels.



Map 4 shows the distribution of housing affordability across the City of Houston. Much of the city remains affordable in that households are spending less than 30% of their incomes on housing costs. However, the West Inner Loop where most development is concentrated is not affordable. Districts G, C, and E have large concentrations of areas where housing units are unaffordable. These areas are also Houston's most wealthy neighborhoods.

The map also shows that the most-wealthy neighborhoods are located along the Buffalo and Braes Bayous. This could be a sustainability issue unless homes in these areas are enhanced to be more resilient to flooding. Houston was initially developed at the intersection of the White Oak and Buffalo Bayous. Today, as the map depicts, the most valuable property has extended from the central city forming a band extending 15 miles outside of the city center and extends about 2 miles on either side of Buffalo Bayou. This area includes such well known places as River Oaks, Memorial, Galleria, Uptown and the Energy Corridor. A second expansion of wealthy property exists along Braes Bayou as well, from the Medical center into the Meyerland neighborhood. Development inside the Western side of Loop 610 connects these two Bayous and wealthy areas with other high-end communities of Bellaire, West University, Greenway Plaza, Upper Kirby, Museum District.

Again that familiar rhetoric heard in Houston about the best property being located "Inside the Loop", is challenged by our research on actual development patterns, which shows that the **West Inner Loop** is the truly sought after real estate. This map and those that follow, illustrate the importance of this research in highlighting the fact that from a social, economic and environment perspective, when most people refer to "Inside the Loop", they are really only considering the western half, bordered by Hwy288 and US59. The "Inside the Loop" rhetoric should perhaps be changed to "**the West Inner Loop**".



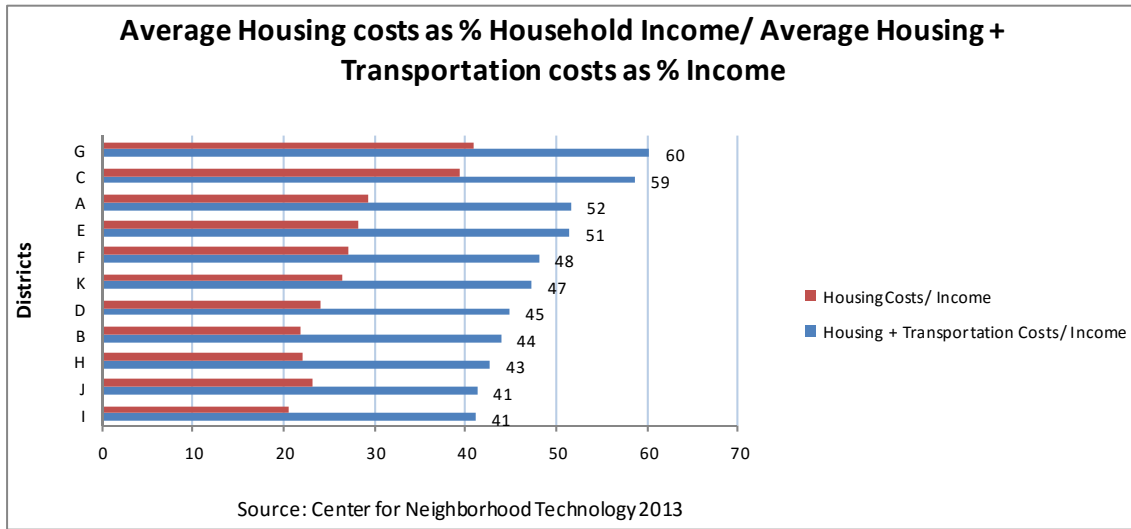
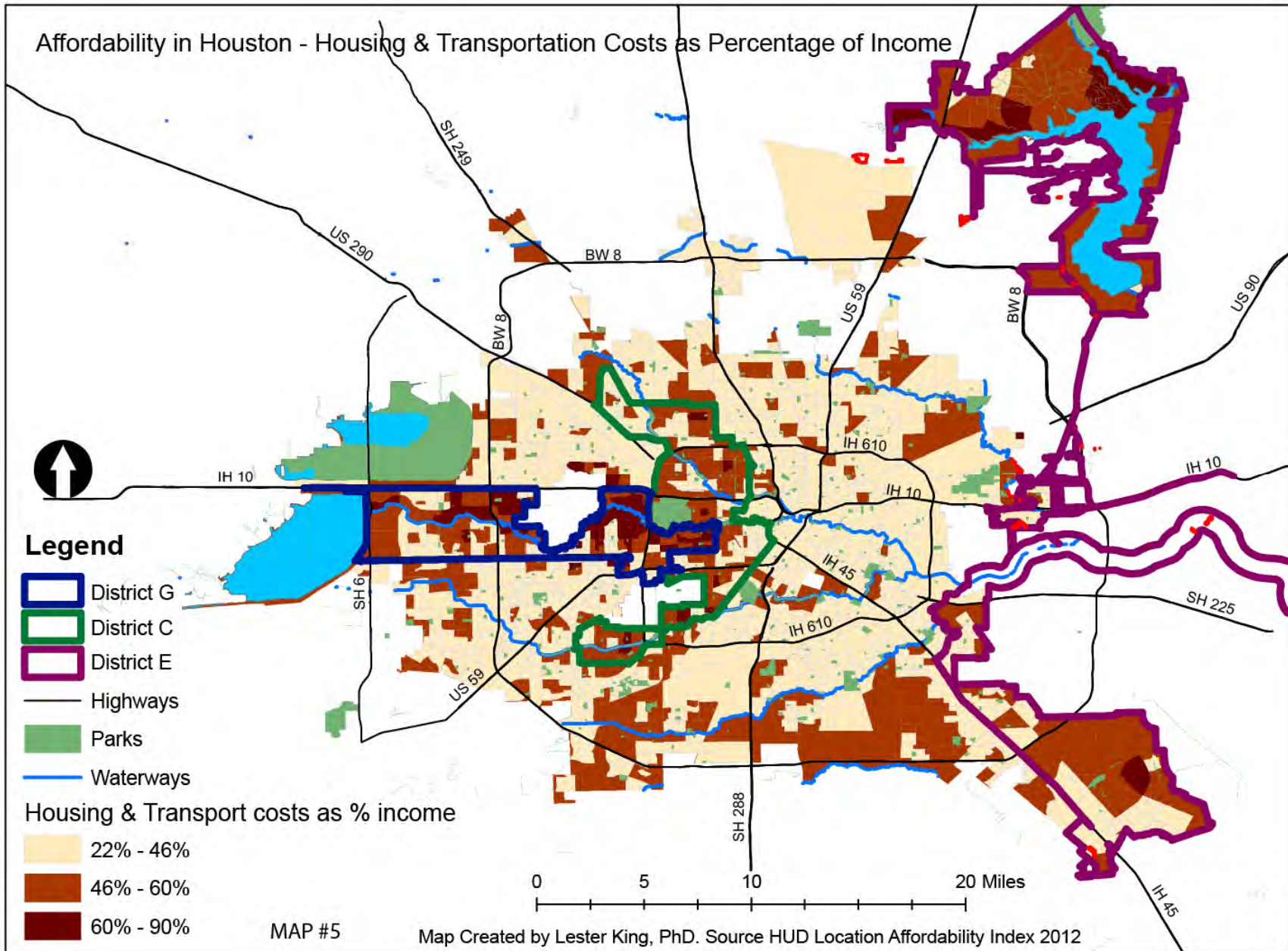


Figure 7: Housing + Transportation costs/ Income

- Half of the Districts in Houston fall below the federal suggested standard of no more than 46% of incomes going to combined Housing and transportation costs. **Districts D, B, H, I and J can be considered the most affordable districts in Houston.**

- When transportation costs are added to housing costs as a percentage of income, many areas along the periphery of the city also become less affordable. M shows that the cost of living increases tremendously for many areas in the south of the city, when transportation costs are considered.

- The average resident in District G spends 60% of their income on Housing and Transportation costs. District C closely follows this lead with 59% of income being the average contribution.



Quality of Life

Places where we want to encourage a high level of accessibility, and hence frequency of use such as parks should be no more than ¼ mile walking distance from residences (Ewing, 1999). Houston ranked 32nd among the 63 largest cities in the country for pedestrian activity and incentives to walking (Walkscore, 2012).

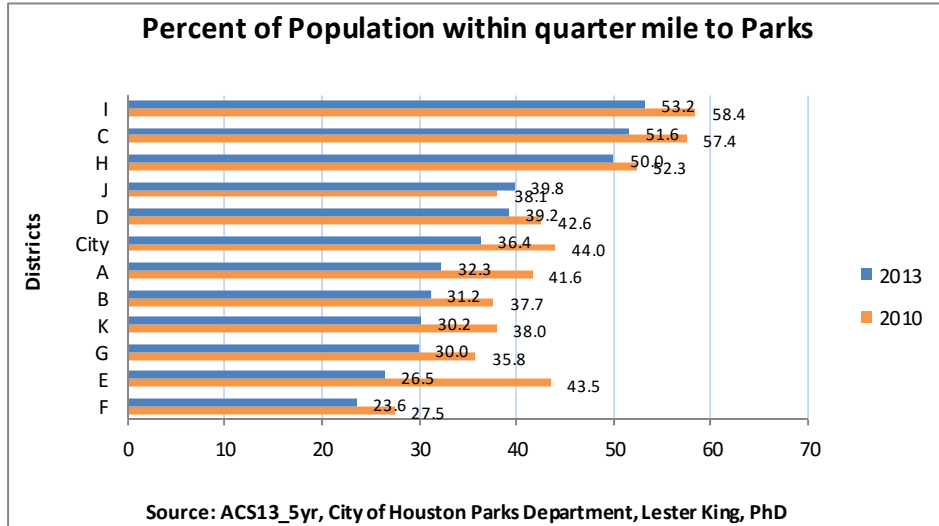
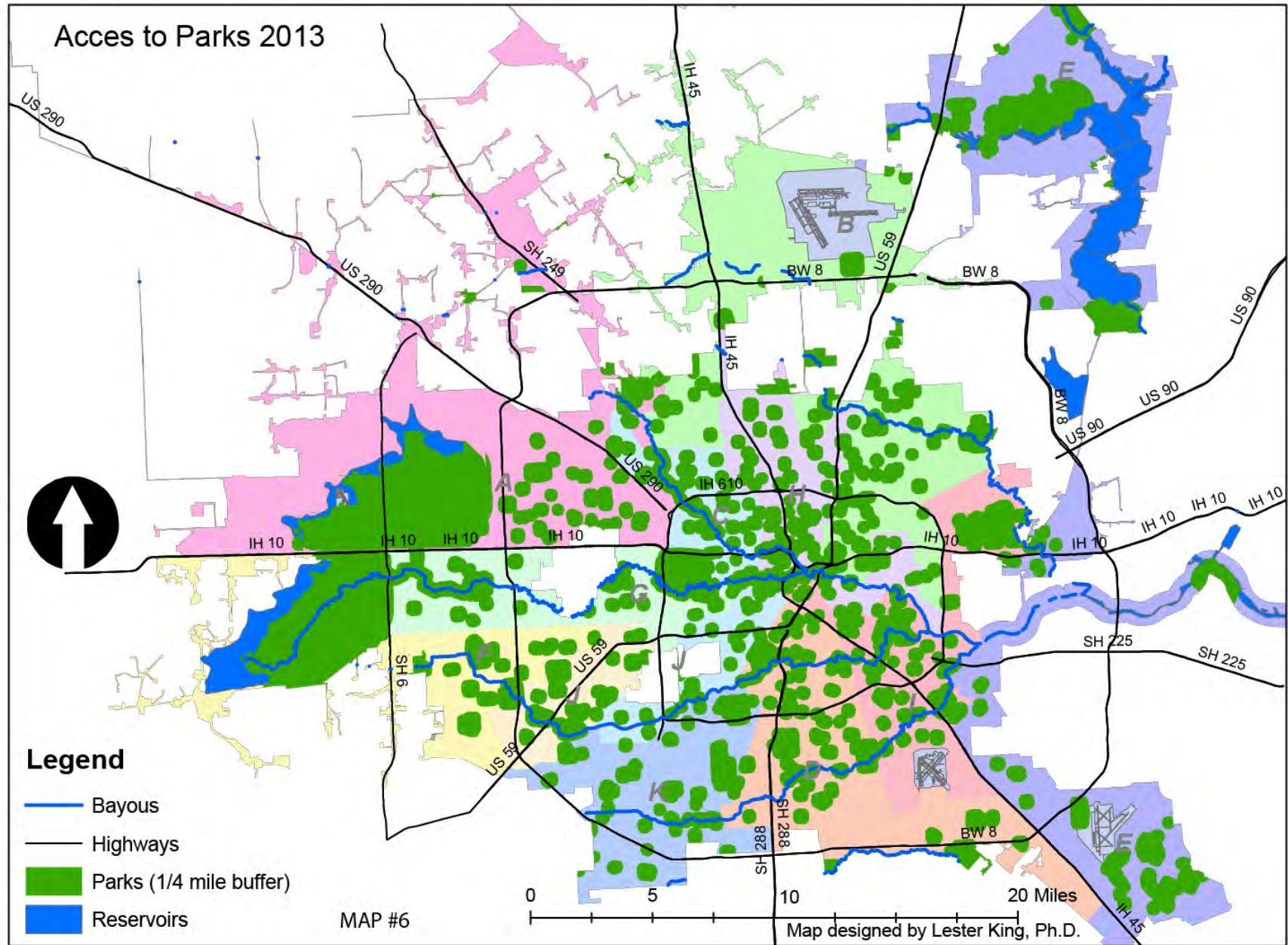


Figure 8: Percent of population within quarter mile to parks

the City. Using the 2013 population for Houston as 2,134,716.24, this yields approximately 50 persons served by each park acre. Houston’s population is expected to reach 2,694,524 persons by 2020 and adding 1,500 acres to the park inventory will yield a total of 44, 104 acres over the next 5 years. **By 2020, there will be 61 persons served for every park acre.** Although the total park performance will still decrease after the addition of the 1,500 acres to the park inventory, the Bayou Greenways 2020 project is an excellent addition to Quality of Life in the city. Additional options for increasing the park inventory in Houston should also be pursued by elected officials.

Parks

- Per capita access to parks will decline in Houston since park acquisition is not scheduled to increase commensurate with the population growth. **Between 2010 and 2013 park access per capita dropped by 3.6%.**
- Five districts lead the city in park access, those districts are I, C, H, J and D. District I has the largest percentage of persons within a quarter mile walking distance to parks with 53.2%. However this percentage dropped by 5 points since 2010.
- The Bayou Greenways 2020 project, managed by the Houston Parks Board is a \$212 million initiative to add 80 new miles of continuous trails and 1,500 acres of new parkland along most of the Bayous running through Houston. Voters approved \$100 million in bonds funding for this project in 2012.
- Our analysis was conducted on the 42,604 acres of parkland in



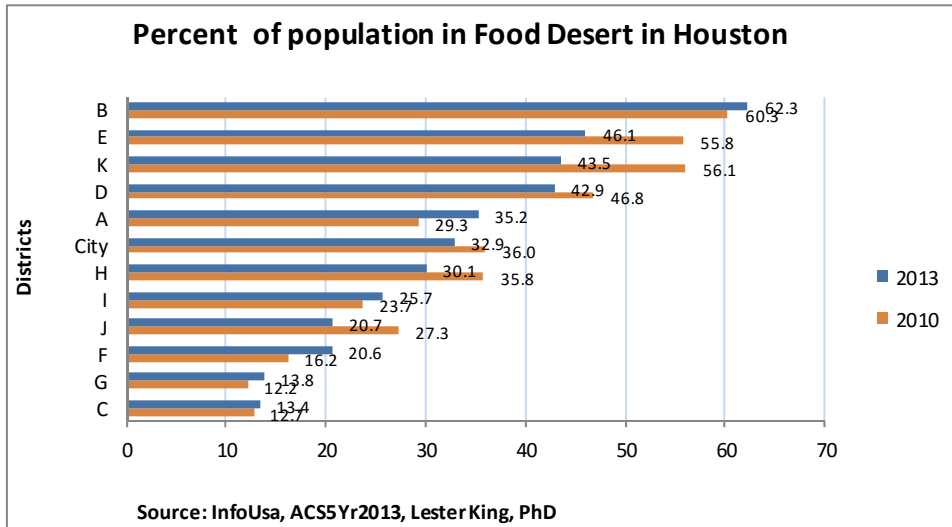


Figure 9: Percent of population in Food Desert

2013.

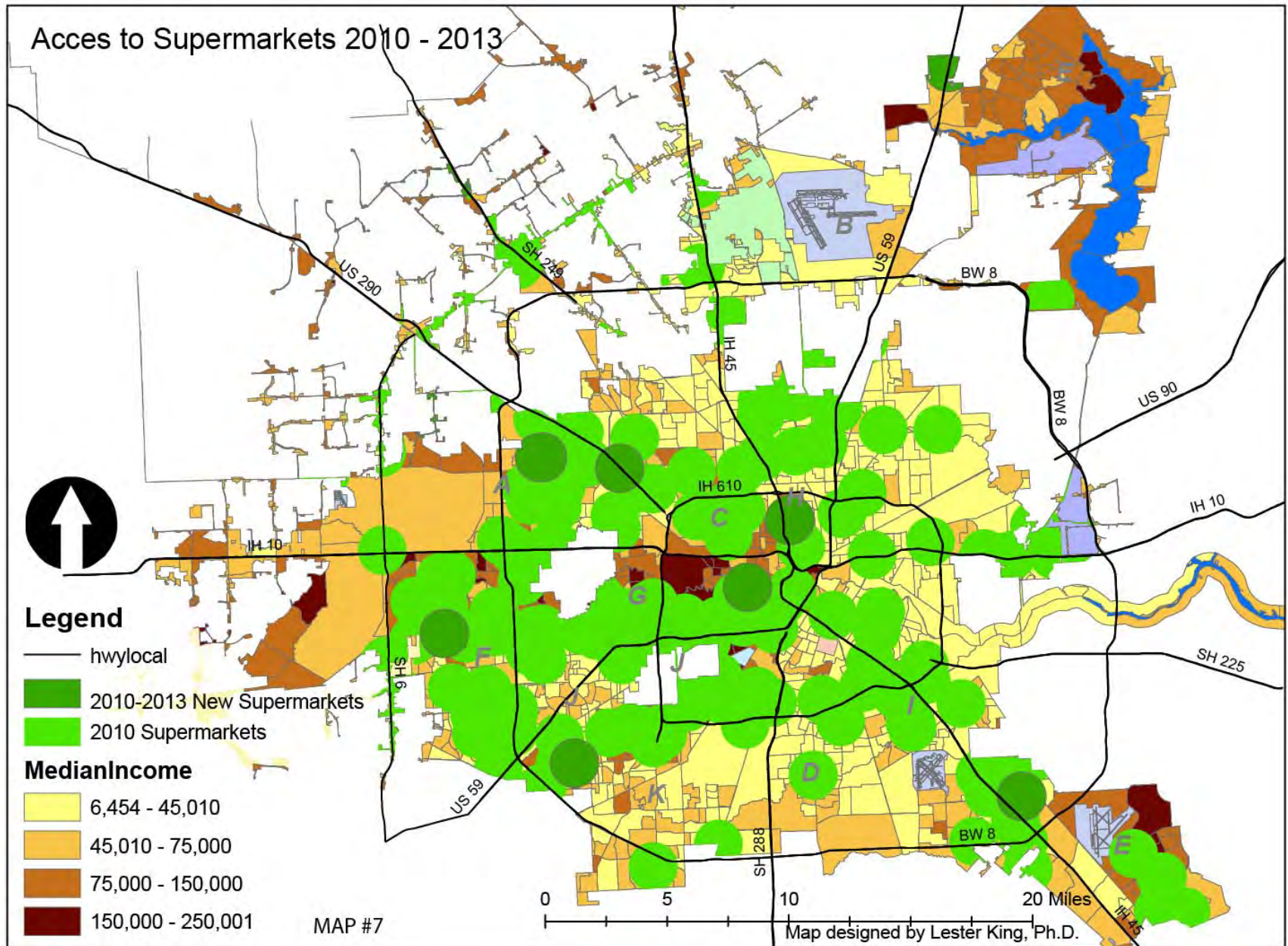
- The food deserts map shows the 1 mile radius around each supermarket representing good access in this study. Between 2010 and 2013 supermarket expansion occurred at different areas throughout the city. However, The Central Third Ward area, East, and North East of the city remain without adequate access to supermarkets.
- The area in yellow on the map represents places below the median household income. Gold – Dark Brown represents about median household incomes. From the map, we see that there are more above median income areas along the southern edge of the city in Districts C and K; and along the North-western stretch not currently covered with adequate access to supermarkets. District E also has a substantial concentration of above median wage earners not covered.
- Districts K and D and District E can all support more adequate supermarket access, based on increasing concentrations of income and people.

Food deserts

- In 2010 there were about 723,000 persons living in a food desert accounting for 36% of the population. By 2013, this number has been reduced to 702,000, which is a 3% drop in percentage to 33% of the population. The total population in Houston increased by 38,000 persons city-wide during this same period.

- **A major contributor to the food desert decrease was the addition of 15 supermarkets across the city between 2011 and 2013.**

- The figure above shows that five districts have above average food desert sizes in terms of population affected. Districts B, E, K and D continue to lead the city in food desert size. These four are now joined by District A, which has had a 6% increase in the size of its food desert between 2010 and



CONCLUSION

In this report we presented actual development patterns showing concentration of development investment in the **'West Inner Loop'**. Based on our analysis, there is no factual basis for continuing to refer to the *'Inner Loop'* of Houston as the most coveted real estate. Council Districts C and G contain the **West Inner Loop** and Houston's most coveted real estate.

Gentrification is defined by some as the displacement of lower income persons by higher income persons. Other definitions of gentrification, discretely apply the phenomena only to the displacement of lower income minorities by higher income persons from the majority population. In our report we defined gentrification as the displacement of any one race/ethnicity by another race/ethnicity. This approach was preferred for two reasons. (1) Houston is a Majority-Minority city. While the white cohort only constitutes 26% of the population, most of the city leadership is from this cohort. Therefore the white minority have the economic capability to displace the Hispanic majority, which complicates the intended definition of gentrification being the displacement of minorities. (2) Many Houstonians from the traditional minority classes (Hispanic, Black) continue to voluntarily live in neighborhoods segregated by their own race/ethnicity. Therefore **race may be a stronger indicator than income to identify places where Hispanic and Black persons have been displaced**. Districts D and B maintain a majority Black populace. **The Third Ward community in District D shows no significant signs of gentrification**. Districts I and H have become majority Hispanic.

Houston has recently been termed one of the biggest examples of a multicultural city. Our research shows clearly that **Houston is in fact a majority 'Hispanic city'**. The Hispanic community should perhaps be integrated more into the fabric of Houston's leadership. This would increase the level of social capital coming from this large group. Hispanics constitute 44% of the population in Houston, which is almost twice as many people as any other group. All other ethnicities and cultural groups (Asian, African, etc.) only constitute 7% of the population.

Recent increases in home values by the county government conflict with Houston's marketability as an affordable destination. The county government's increase in assessment value is based in part on the market value of comparable sales. The market value is in turn based on speculative demand, which is driven by expected increases in population growth. The prevailing rhetoric of Houston gaining 3.5 million people by 2035 is both incorrect and may be a contributing factor to damage wealth retention among the middle class in Houston. This is because the 3.5 million people are not forecasted for the City of Houston municipal boundaries (665 sqml), but for the region, which consists of 8 counties and covers a massive (7,978 sqml). **The City of Houston is only projected to grow by 896,000 by 2035**. The majority of the 3.5 million people forecasted to move to our region are expected to live in the suburban communities outside of the City of Houston. **Therefore while it may seem strategically attractive to market the city as a major growth hub expecting 3.5 million people, the City may be indirectly eroding its affordability and middle class wealth base, since land values are increasing to meet the needs of 3.5 million people, who are in fact not moving here at all.**

We need to find more ways to add more park land to our inventory. **The Bayou Greenways 2020 project is an excellent program**. It however needs to be supplemented with other ways to add badly needed parkland for Houstonians. On the good side, **the grocery industry and city leaders are working diligently on bringing more supermarkets to the city**, which decreases the size of the food desert. More needs to be done in Districts K, D and E since these are communities plagued by under development.

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