

Where Affordable Housing and Transportation Meet in Houston

A joint report by

**LINK
HOUSTON**

and



RICE | KINDER
INSTITUTE FOR URBAN RESEARCH

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LINK Houston

LINK Houston is a 501 (c) (3) nonprofit organization that advocates for a robust and equitable transportation network so that all people can reach opportunity. We envision a world in which all people in Houston can easily access not only jobs, but also educational experiences, medical appointments, grocery stores, greenspace and other important destinations, regardless of their mode of transportation. To make that vision a reality, we support transformative and inclusive policies, systems, initiatives and infrastructure development that connect people to opportunity by transit, walking and biking. We move ideas into action through community engagement, research and shaping public policy.

Kinder Institute for Urban Research

The Kinder Institute for Urban Research is a multidisciplinary think-and-do tank housed at Rice University in central Houston, focusing on urban issues in Houston, the American Sun Belt and around the world. Through informed research, data and policy analysis, the Kinder Institute hopes to engage civic and political leaders to implement solutions to critical urban issues, including education, governance, housing, mobility and transportation, resilience and demographics.

Use of Terms

This report avoids the use of technical terminology as much as possible. Figures and tables enhance concise narrative. Phrasing in the report is present tense, in most cases. Direct questions to LINK Houston: www.linkhouston.org.

Disclaimer

LINK Houston is responsible for the facts and accuracy of Where Affordable Housing and Transportation Meet in Houston. The contents are believed to be accurate and rely on current information. Sources are cited.

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Executive Summary

Where Affordable Housing and Transportation Meet in Houston examines where affordable housing and high-quality, affordable transportation presently co-exist. This report provides policy recommendations to help government and nongovernment stakeholders in the City of Houston address affordability issues in the region. This report also aims to help individuals and families make well-informed decisions about where to live to minimize their expenses while accessing social and economic opportunity using quality, affordable transportation — walking on good sidewalks, biking on protected bikeways and riding frequent transit.

Houston faces a decreasing supply of affordable housing to buy and skyrocketing rents. Additionally, people living in the region continue to spend an exorbitant amount on transportation — reflected by increasing rates of vehicle ownership per household — which only compounds the growing affordability challenge. While local decision-makers and individuals tend to view housing and transportation separately, effectively addressing affordability for Houstonians means considering housing and transportation expenses together.

This report relies on the **Quality Affordable Transportation Index (QATi)**, a metric co-developed by LINK Houston and Rice University’s Kinder Institute for Urban Research, to determine where quality, affordable transportation exists today for people walking, biking and riding transit. The report also compares where affordable housing — of any type — occurs and identifies recommendations to improve both housing and transportation quality and affordability.

Additionally, LINK Houston formed the Affordable Housing + Transportation Task Force to collaborate with community members, housing stakeholders and transportation stakeholders to create the *Housing + Transportation Decision-maker Scorecard*, the *Counselor*

Facilitation Guide and *Individual Workbook: Considering Transportation in Your Housing Decision*. These assessment tools facilitate connections between future affordable housing investments and affordable, high-quality transportation options and guide individuals and families to consider transportation in their housing decisions.

Based on the research and observations in this report, only 44% of rental units in Houston are affordable to moderate-income households (i.e., a family of four in Houston in 2019 spending no more than \$1,907 per month on housing plus utilities) and only 1 out of 3 of those affordable dwellings is near high-quality, affordable transportation. To address affordability issues in Houston, we recommend the following steps to align housing and transportation development:

1. **Preserve and build affordable housing in areas with high-quality, affordable transportation.** Local government and other affordable housing stakeholders must create policies, incentives and resources to prioritize affordable housing developments and improvements in areas where people can access frequent and low-cost transportation. This requires housing stakeholders to coordinate activities and investments with transportation stakeholders.

2. **Increase opportunities to walk, bike and use transit near affordable housing.** Transportation stakeholders — transit officials, regional planning offices, special districts and local government — must prioritize sidewalk, bikeway and transit improvements in areas where affordable housing exists now and will expand in the future.
3. **Map and monitor affordable housing and affordable transportation to demonstrate and direct the beneficial impacts of policies and investments in affordability for residents.** Local governments in the Houston region need to lead in collecting, maintaining and publishing accurate, current data about affordable housing and transportation. Understanding the geographic intersection of housing and transportation helps to target investments, incentives and policies to preserve and develop affordable housing in locations that allow people to walk, bike and use transit, thus maximizing benefits to residents. The research team created the *Quality Affordable Transportation & Affordable Housing 2020 Map* as a starting point. The map enables affordable housing decision-makers and developers to identify locations where quality, affordable transportation exists today.
4. **Assess, compare and prioritize potential affordable housing sites to improve access to affordable transportation.** Housing stakeholders must consistently and thoroughly consider affordable transportation availability and quality to determine true housing affordability. This report provides the *Housing + Transportation Decision-maker Scorecard* as a resource for governments or developers to compare sites to better understand how to prioritize affordable housing investments near quality, affordable transportation.
5. **Develop resources to help people understand how housing and transportation impact overall affordability.** Family self-sufficiency and financial counselors must prompt their clients to contemplate location, travel options and transportation expenses in their housing decisions. In addition to directing families to prioritize housing options that score high on the Quality Affordable Transportation Index, this report provides two complementary tools to improve practices at the household level. The *Counselor Facilitation Guide: Considering Transportation in Decisions* provides housing, mobility, self-sufficiency and financial counselors with discussion prompts

regarding transportation expenses and housing decisions. The *Individual Workbook: Considering Transportation in Your Housing Decision* helps people to further understand their transportation needs, consider their goals and identify questions to guide their decision.

Houston stands at an inflection point. While local governments now hold funding for housing recovery and affordable transportation improvements, more and more households struggle to cover their basic needs. Stakeholders must tackle the affordable housing crisis and affordable transportation access together, not independently. Policymakers can lead by uniting planning and implementation of housing and transportation. Public, private and nonprofit stakeholders can prioritize investments to create more “Housed and Connected” areas and to educate individuals and families to consider location and transportation when deciding where to live. Truer affordability through housing and transportation will improve quality of life and economic resilience in all conditions, such as during and after disasters or disruptions such as the COVID-19 pandemic. Individuals and families will spend less time and money accessing opportunity. Employers will have a more stable employee pool. Every Houstonian will be able to live a fuller and productive life.

The final report and all tools are available on LINK Houston’s website, search for “Houston Housing + Transportation Affordability 2020”.

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“Affordability is key when we are looking at improving and expanding housing and transportation options. We have the capability to connect people to opportunities, jobs, education, and healthcare, which ultimately is a valuable investment in our neighborhoods. The health and success of our communities rely upon the decisions we make, affordable housing and transportation set the infrastructure for thriving neighborhoods.”

Sandra Rodriguez

President, Gulfport Super Neighborhood Council #27

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Introduction

Affordable housing and transportation in Houston

While Houston offers relatively affordable housing compared to other major metropolitan areas in the United States¹, recent research calls into question the overall affordability of it and other sprawling cities. Current policies encourage people to move farther away from job centers and create a need for car-dependency to access opportunity. Consequently, high vehicle ownership rates² and outsized household spending on transportation outweigh the savings on lower rent or mortgage.

Affordable housing costs no more than 30% of household income, regardless of the type of housing or ownership. Similarly, affordable transportation consumes no more than 15% of household income³. This report defines affordable transportation as walking, biking and using transit. Car-dependency results in increased expenses, including a monthly payment, fuel, insurance, parking and maintenance costs, creating financial challenges for low- and moderate-income families.

In Houston, the average household spends 25% of income on housing and 20% on transportation — right at the threshold of cost-burdened. The average moderate-income Houston household spends 31% of income on housing and 22% on transportation⁴.

These statistics are not surprising given half of all Houston households live in poverty or are Asset Limited, Income Constrained, Employed (ALICE) households — households in which members earn enough not to be in poverty yet struggle to pay all essential bills or save money for emergencies. Most low-wage jobs require working on-site, and people too often rely on aging vehicles that require unexpected and expensive maintenance⁵. Unreliable transportation reduces an employee's ability to arrive to work on time or at all.⁶

Improving affordable transportation will help the region pursue inclusive economic growth that further advances equity in housing, income, education and health.

Key Concepts

Low-, Moderate-Income. This report focuses on housing and transportation affordability for low-income households earning less than 80% of area median income, which in 2019 meant a family of four in Houston earning less than \$61,050. Moderate-income households earn between 80 and 120% of area median income, or between \$61,050 and \$91,600 for a family of four.

Affordable Housing. Housing of any type that consumes less than 30% of household income, including utilities — less than \$1,526 per month for a low-income family of four in Houston and less than \$1,907 for a moderate-income family. ***This report uses a broad definition of affordable housing, including naturally occurring affordable housing provided by the private market, nonprofit-provided housing and government-supported affordable housing programs and units.***

Affordable Transportation. Transportation of any type that consumes less than 15% of household income — less than \$763 per month for a family of four in Houston. ***People walking, biking or riding transit are relying on the deeply affordable forms of transportation in Houston and are the focus of this report.***

Cost Burdened. Moderately cost-burdened households spend more than 30% of income on housing, including utilities; severely cost-burdened households spend more than 50%. ***In Houston, 24% of renters and 9% of owners are severely cost-burdened.*** (Source: Joint Center for Housing Studies, “The State of the Nation’s Housing: 2019,” Harvard University, Cambridge, 2019.)



To address affordability issues in Houston, decision-makers face an array of choices related to planning, policy and investment of public dollars. Among their options are a combination of choices that could enhance connectedness and reinforce affordable housing and affordable transportation outcomes concurrently.

Emerging housing and transportation trends

Many local decision-makers default to pursuing housing and transportation issues independently. Nonetheless, local officials possess an unprecedented opportunity to change how affordable housing and transportation develop in Houston. The following paragraphs describe Houston's momentum in both housing and transportation.

Local governments in the Houston area received more than \$2 billion in federal funding for Hurricane Harvey recovery, particularly for housing repair and community resilience⁷. This funding will help address an affordable housing crisis that existed prior to the disaster. Gentrification, destruction of dwellings during repeated flooding events, and lack of building or repairing affordable housing dwellings continue to exacerbate the crisis.⁸

Housing and transportation programs and policies are most efficient and effective when developed concurrently because each has great influence on the other.

More Key Concepts

Non-drivers. Many Houstonians, about 3 out of 10, are infrequent or non-driving residents who rely on affordable transportation or chauffeuring (i.e., special travel to transport a non-driver), such as older adults, some people with a disability, children and adolescents, stay-at-home parents in single-car households and drivers who temporarily lack a working vehicle. (Source: T. Litman, "Evaluating Transportation Diversity," Victoria Transport Policy Institute, Victoria, 2018.)

Location Efficiency. People living near opportunities, such as work, school, health care, etc.

Equity. Personal equity means ensuring fair access to opportunities, which differs from ensuring the same access. Community equity in affordable transportation means ensuring every community has acceptable sidewalks, crosswalks, bikeways and public transit, which may require investing more in certain communities.

Recently, Houston witnessed increased support for affordable transportation options. In 2017, the Houston City Council approved the first Houston Bike Plan and began its implementation. The Houston Parks Board's Bayou Greenways 2020 initiative will bring 150 miles of trails and 3,000 more acres of green space to the region,⁹ providing a well-connected network of safe bike routes for Houstonians. In the 2019 Kinder Houston Area Survey, when asked, "How important for the future success of Houston do you believe is the development of a much-improved mass transit system?", 60% of respondents answered it was "Very Important."¹⁰ Houstonians further demonstrated support for public transit at the polls when voters overwhelmingly approved a \$3.5 billion bond referendum for METRONext, the Metropolitan Transit Authority of Harris County's (METRO) 20-year plan to improve public transit in the region.

In a positive step, the City of Houston included proximity to transit in its first round of Hurricane Harvey Community Development Block Grant — Disaster Recovery funding to ensure that long-term housing recovery is developed with transportation access in mind.

Public input collected through Mayor Sylvester Turner's Complete Communities¹¹ initiative, civic engagement concerning the North Houston Highway Improvement Project¹², the Houston-Galveston Area Council's High Capacity Transit Task Force¹³ and the city's 2019 study of factors impacting housing vulnerability and affordability all show demand for aligning affordable housing and affordable transportation.¹⁴ In addition, Midtown Redevelopment Authority's 2017 Affordable Housing Plan mentions the demand for transit and walking options. Furthermore, several Houston neighborhoods, like Third Ward and other historically Black or Latino communities close to downtown started addressing gentrification and affordability head-on through community land trusts and other means.¹⁵

Houston is changing. Many people want to walk, bike and ride transit to access opportunity¹⁶. The 2015 Plan Houston general plan and 2020 Resilient Houston strategy both prioritize affordable housing and transportation, citing specific goals and strategies that complement each other. When public sector decision-makers take actions that address both housing and transportation they increase the likelihood that plans and investments will be complementary.

The study supports data-informed decisions by public, nonprofit and private entities investing in housing and transportation to ultimately maximize the benefits to individuals, families and communities.

"Working with LINK Houston and the H + T Task Force gave me an opportunity to explain how I feel about independence. To a disabled person, independence is everything. The tools we developed will help with accessibility so physically impaired individuals can get around on their own in affordable ways."

Edward C. Washington, Jr.
Representative, Opportunity Center
Houston Housing Authority



Research and Tools to Advance Practice in Houston

LINK Houston and Rice University's Kinder Institute for Urban Research partnered to conduct this practice-focused study that explores the definition, location and nexus of affordable housing and high-quality, affordable transportation in Houston today. High-quality, affordable transportation provides safe, accessible and connected sidewalks and bikeways as well as frequent and reliable public transit. The study supports data-informed decisions by public, nonprofit and private entities investing in housing and transportation to maximize the benefits to individuals, families and communities.

Comparing the Location of Affordable Housing and Transportation in Houston

This report helps government and nongovernment stakeholders in the City of Houston locate new affordable housing and preserve existing housing where quality, affordable transportation exists today. The information also can help individuals and families in Houston make well-informed decisions about where to live to minimize their housing and transportation expenses. Figure 1 depicts this paradigm using four color quadrants, which are also used in the comparison at the end of this section.

Background

LINK Houston coordinated the overall study, formed an Affordable Housing + Transportation Task Force (H + T Task Force) and facilitated the development of the tools described in detail later in the report. The Kinder Institute collected and analyzed geographic data about affordable housing and median gross rent. Both organizations worked together to create the Quality Affordable Transportation Index (QATi). The research answers five questions:

1. Where does affordable housing exist today?
2. Where does quality, affordable transportation for people walking, biking and using transit exist today?
3. What do we learn when overlaying the location of existing affordable housing and affordable transportation?
4. How can practices in locating and designing affordable housing change to improve affordability by leveraging affordable transportation?
5. How can we better counsel individuals and families to consider transportation in their housing decisions?

The research team explored questions 1, 2 and 3 using the best available data, created the Quality Affordable

Transportation Index (QATi), documented the methodology and findings in this report, and developed an online map showing the results.

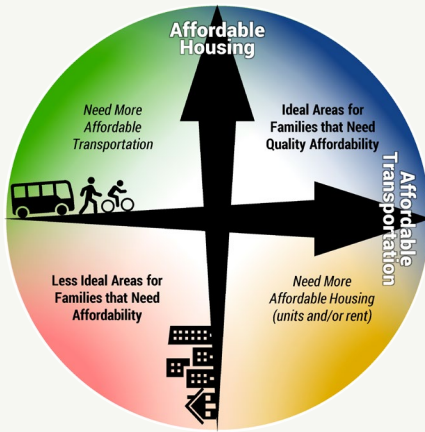
To address questions 4 and 5, the research team and H + T Task Force met three times in formal workshops and multiple times in mobile workshops to develop the following tools:

- *Housing + Transportation Decision-maker Scorecard*
- *Counselor Facilitation Guide*
- *Individual Workbook: Considering Transportation in Your Housing Decision*

The next three sections summarize the research findings: the location of affordable housing, the location of quality, affordable transportation and observations from comparing the locations of housing and transportation.

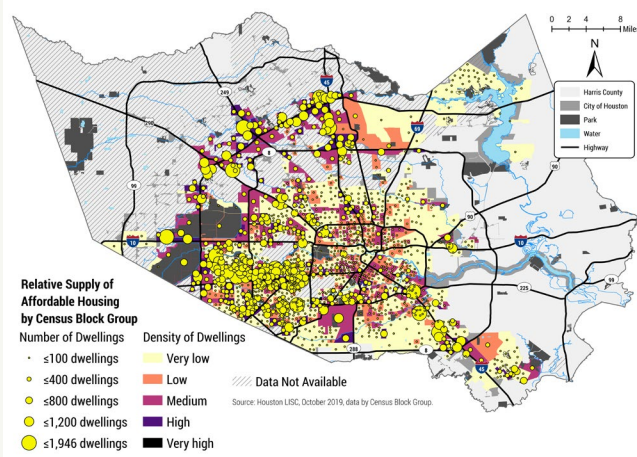
The Appendix contains more information on the research methodology and the H + T Task Force's process in developing the tools.

FIGURE 1 Affordable H + T Paradigm



The Affordable Housing plus Transportation Paradigm graphic depicts the relationship between where affordable housing is low and high and where affordable transportation is low and high. Overlaying both aspects results in four quadrants. **Blue “Housed and Connected”** areas show locations where affordable housing (i.e., number of housing dwellings and low median rent) and affordable transportation exist simultaneously and thus provide more quality affordability for low-income individuals and families. **Yellow “Costly but Connected”** areas show a shortage of affordable housing (i.e., number of dwellings is low and rent is high), but offer high-quality, affordable transportation, hence providing opportunity for more affordable housing programs and policies. **Green “Housed but Disconnected”** areas show locations with adequate affordable housing supply but offer less affordable transportation options. These areas provide opportunity for investments in sidewalks, bikeways and public transit to improve overall affordability. **Red “Costly and Disconnected”** show locations with affordable housing and affordable transportation shortages, making them less than ideal places for low-income individuals or families to live. While these areas may benefit from some affordable transportation investments to help individuals access jobs at refineries, ports or other industrial facilities, potential public health concerns exist that require consideration in regard to housing.

FIGURE 2 General Supply of Affordable Housing in Houston



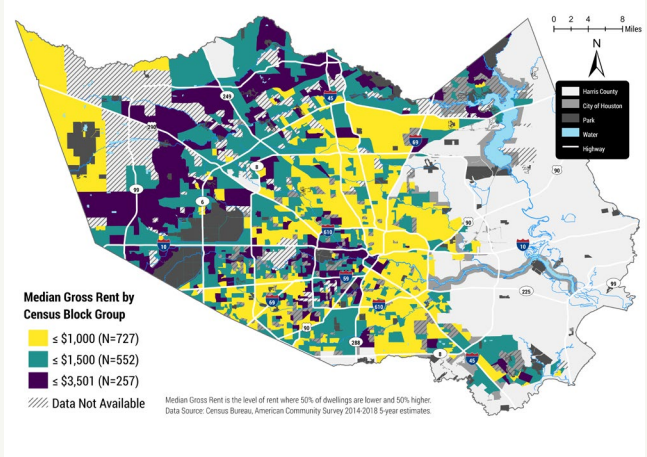
This map depicts the location of existing affordable housing dwellings in terms of dwelling count and dwellings per square mile in October 2019. Some affordable dwellings exist in nearly every census block group. Affordable housing concentrations exist along FM 1960 and State Highway 6 in northwest Harris County, in southwest Houston, and along Interstate Highway 45 South.

The Location of Affordable Housing in Houston

Of the 484,000 renter-occupied dwellings in the City of Houston, only 44% rate as affordable to moderate-income families, including all types of dwellings: public housing, private rentals (a moderate-income family of four in Houston in 2019 could spend no more than \$1,907 per month on housing plus utilities). About 1 out of 3 of those affordable dwellings is near high-quality, affordable transportation.¹⁷

Figure 2 maps the location of existing affordable housing dwellings in terms of dwelling count and dwellings per square mile in October 2019.

FIGURE 3 Median Gross Rent



This map depicts where median gross rent was relatively affordable in 2018. Gross rent is generally most affordable inside Beltway 8, except in Memorial City, near Uptown and River Oaks areas, and University Place. Rent is most affordable in the north, east, southeast, and southwest portions of Houston.

Figure 3 maps where median gross rent was relatively affordable in 2018. Gross rent includes all common monthly housing expenses such as utilities and is a useful view of true affordability.

Observations. The City of Houston contains areas with housing affordable to low-income households. Relatively few affordable dwellings of any type exist in areas with deeply affordable rent or mortgage, including inside the Interstate 610 Loop or to the east, northeast and north reaches of Houston.

The Appendix contains more information about affordable housing in Houston and larger maps.

The Location of Quality, Affordable Transportation in Houston

LINK Houston and the Kinder Institute created the Quality Affordable Transportation Index (QATi) to understand the general locations where people can find better conditions for walking, biking and riding transit. The index combines seven indicators about sidewalks, bikeways and transit.

Figure 4 illustrates the process to create the index and depicts the QATi result. Yellow areas show locations with affordable transportation that's relatively high in quality. Green areas show medium relative quality. Purple areas

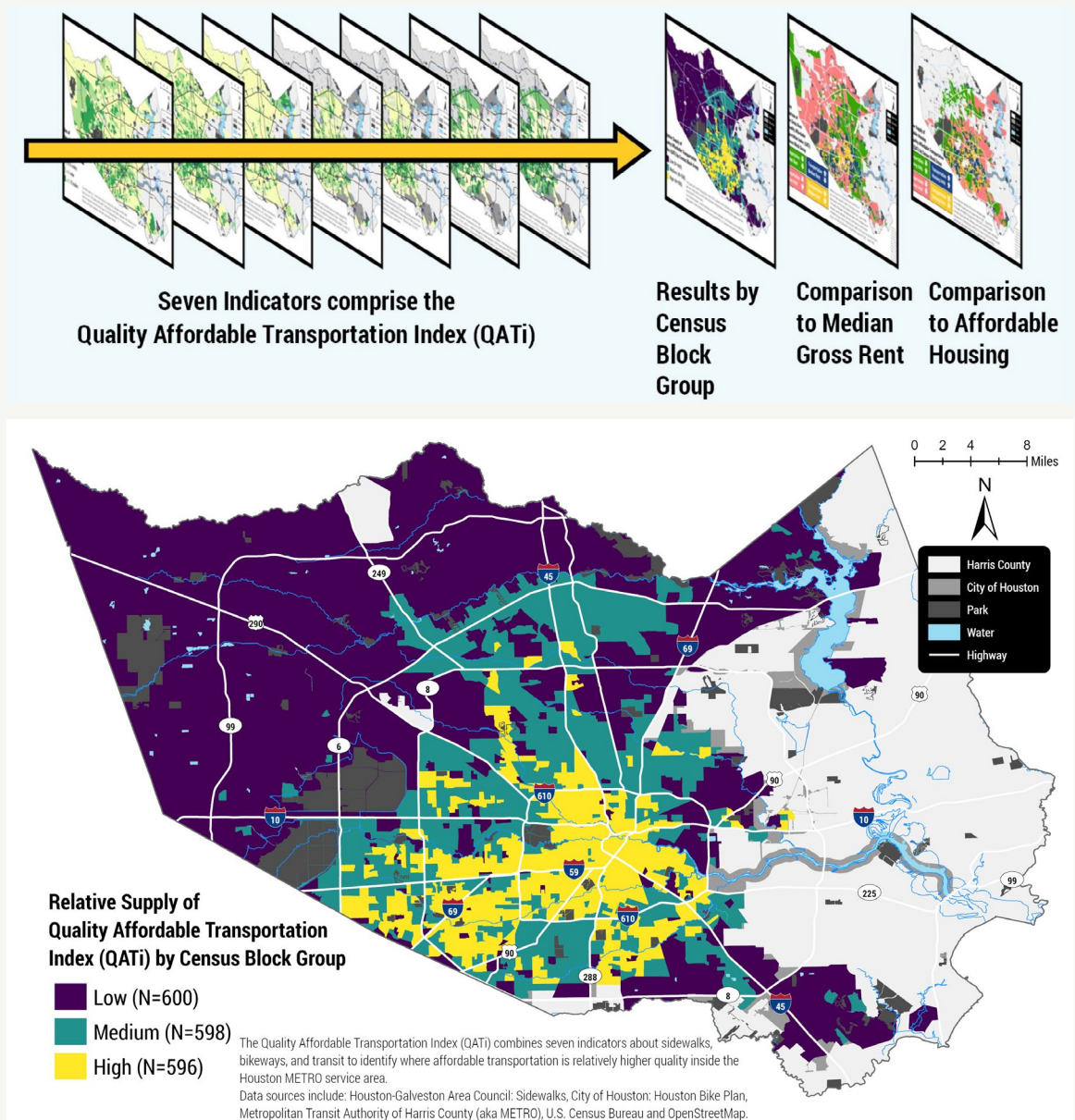
offer relatively little opportunity for people to feasibly walk, bike or ride transit to access opportunities outside of their home.

Most communities offer some sidewalks, bikeways and transit service, although the quality varies. The QATi represents the existing relative quality of walking, biking and transit and does not identify the preferences or aspirations of residents or communities. In addition, significant variations in quality often exist within a block group, such as the existence and condition of sidewalks varying from block to block. The QATi is a tool to help families and stakeholders understand where to look for better access to affordable transportation.

FIGURE 4 Quality Affordable Transportation Index (QATi)

Upper Image: The Quality Affordable Transportation Index layers seven variables together. This image depicts this process with seven small maps and an arrow. The resulting index presents the relative quality of transportation by census block group for people walking, biking, and riding transit.

Lower Image: This map depicts the results of the QATi index by census block group. Yellow areas show locations with affordable transportation that's relatively high in quality. Green areas show medium relative quality. Purple areas offer relatively little opportunity for people to feasibly walk, bike or ride transit to access opportunities outside of their home. Affordable transportation quality is most concentrated inside Interstate Highway Loop 610 and in southwest Houston.





Observations. Concentrated areas of relatively higher-quality affordable transportation exist inside the Interstate 610 Loop and radiate outward along certain major street corridors to the southeast, southwest and in some areas of the north-northwest reaches of Houston. Affordable transportation appears with lower quality and lesser availability beyond Beltway 8, except to the southwest. People walking have to navigate an inconsistent sidewalk network in widely varying states of repair.¹⁸ The presence of protected bikeways remains geographically concentrated in limited areas of Houston, even after major

bike network expansion efforts by the City of Houston and Harris County. High-quality, local transit (i.e., daily service) emerges in greater concentration inside the 610 Loop and in certain communities and along certain major local streets out to Beltway 8. While major, 24-hour job centers offer high concentrations of transit stops and frequent service, some transit riders live in communities that justify more transit stops, routes and service frequency based on potential riders seeking more-affordable travel options.

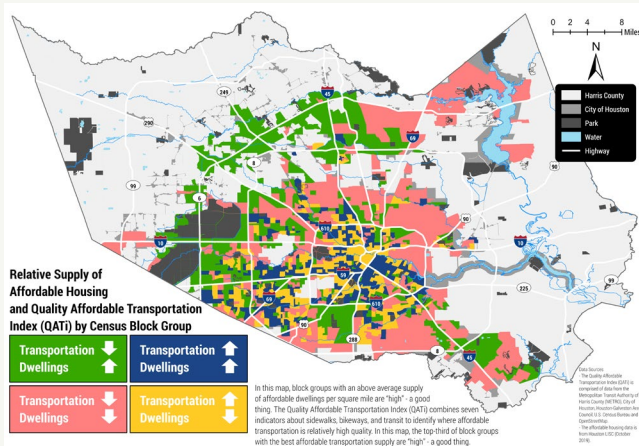
The Appendix contains more information about the index and larger maps.



“The foresight and hard work that has been put into our human-centric, multimodal mobility options in recent years has become clear during COVID-19 as Houstonians have been pouring out onto the many miles of contiguous greenway paths, seeking refuge in the safe territories of open spaces and the natural world while our hustle and bustle has been paused. Houstonians on foot, bicycles, strollers, wheelchairs, electric scooters and micro-mobility whizzy things are all convening on 6-foot-wide paths in between and through neighborhoods of diversity and mixed-income strata. It has been a saving grace to be able to move around in the daylight and open air during these dark times. These are the paths we should widen, expand and multiply. This is our future.”

Trevor Reichman
Near Northside Resident

FIGURE 5 Comparison of Affordable Housing Supply and QATi



This map overlays affordable dwelling density with the QATi index. Affordable dwellings include any type of housing, both owned and rented. The map uses the four colors previously described in relation to the Affordable Housing plus Transportation Paradigm. The Blue "Housed and Connected", the best areas for families needing affordability, are concentrated in pockets to the north of downtown, the east and southeast, and southwest.

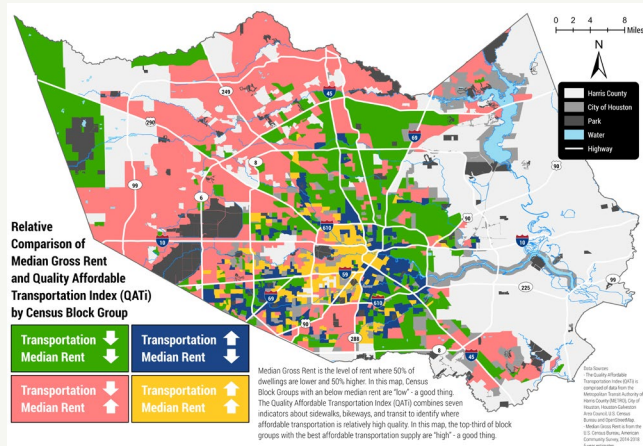
Comparing Geographic Concentrations of Affordable Housing and Transportation

The maps in this section overlay affordable housing and affordable transportation. In both maps, colors depict four categories of census block groups. The observations point out locations to target housing and transportation improvements. Based on the mapping analysis, the research team found only 1 out of 3 affordable housing dwellings exist near high-quality, affordable transportation options such as sidewalks, bikeways and frequent public transit.¹⁹

Figure 5 overlays affordable dwelling density with the QATi. Affordable dwellings include any type of housing, both owned and rented. Figure 6 overlays median gross rent with the QATi.²⁰ In both comparisons, the research team analyzed each census block group and assigned one of four designations:²¹

- **Blue "Housed and Connected"** areas show locations where affordable housing (i.e., number of housing dwellings and low median rent) and affordable transportation exist simultaneously and thus provide more quality affordability for low-income individuals and families.

FIGURE 6 Comparison of Median Gross Rent and QATi.



This map overlays median gross rent with the QATi index. The map, again, uses the same four quadrant paradigm. Based on rent and QATi, the Blue "Housed and Connected" areas are especially concentrated on the east side and southwest reaches of Houston.

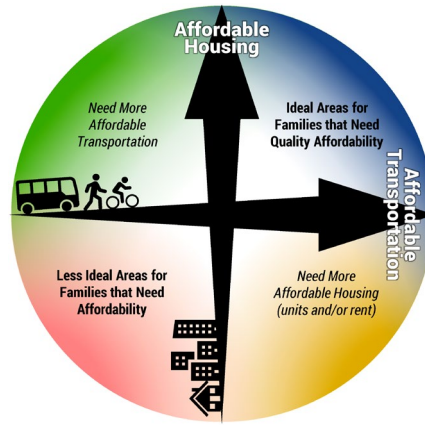
- **Yellow "Costly but Connected"** areas show a shortage of affordable housing (i.e., number of dwellings is low and rent is high), but offer high-quality, affordable transportation, hence providing opportunity for more affordable housing programs and policies.
- **Green "Housed but Disconnected"** areas show locations with adequate affordable housing supply but offer less affordable transportation options. These areas provide opportunity for investments in sidewalks, bikeways and public transit to improve overall affordability.
- **Red "Costly and Disconnected"** show locations with affordable housing and affordable transportation shortages, making them less than ideal places for low-income individuals or families to live. While these areas may benefit from some affordable transportation investments to help individuals access jobs at refineries, ports or other industrial facilities, potential public health concerns exist that require consideration in regard to housing.

Three key observations result from comparing the affordable housing supply and median rent to the Quality Affordable Transportation Index. These observations relate to the Affordable Housing + Transportation Paradigm. The Appendix contains larger maps.

Opportunities exist to encourage people to locate strategically to reduce household expenses on transportation. The **Housed and Connected** areas present ideal locations to live if feasible and desirable given each family's unique circumstance. Housing, family self-sufficiency and financial counselors can harness this information to motivate clients to identify current expenses and transportation goals relative to their housing and other decisions. Most counselors and coaches lack materials connecting transportation and housing costs and their combined impact on household finances.

Priority areas for improving affordable transportation. Based on analyzing affordable housing dwellings supply, rent and transportation, the following two Houston areas need affordable transportation improvements²²:

- Figure 5 identifies concentrated **Housed but Disconnected** areas in the western reaches of Houston between Interstate 610 Loop and State Highway 6, where median rent is marginally affordable, to housing at-risk of becoming unaffordable and where distance from jobs, education and health care is far.
- Figure 6 identifies concentrated **Housed but Disconnected** areas in communities in the southeast, northeast and northern reaches of Houston (i.e.,



Affordable H + T Paradigm

inside the 610 Loop on the east side and outside the 610 Loop to the southeast and north).

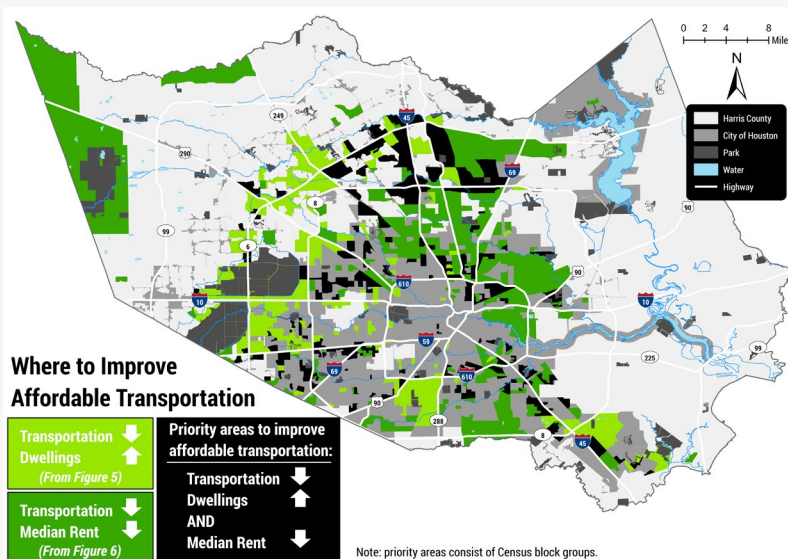
- Figure 7 combines the green **Housed but Disconnected** areas from both comparison maps. Census block groups colored black depict areas needing sidewalks, bikeways and transit improvements to and from existing affordable housing (i.e., these block groups have a low supply of quality, affordable transportation but a relatively high supply of affordable housing dwellings and low rent).

Priority areas for improving affordable housing.

The comparison analysis in both maps identifies specific clusters of census block groups where housing policies, incentives and other resources may have the most beneficial impact because affordable transportation exists there today:

- In Figure 5 and 6, **Costly but Connected** areas exist inside the 610 Loop in the western half of Houston and outside the 610 Loop along a few major local street corridors to the northwest, west or southwest.
- In Figure 5 and 6, **Housed and Connected** areas exist inside the 610 Loop in the eastern half of Houston, outside the 610 Loop in southwest Houston, and extending outward along a few major local street corridors to the north and northwest.

FIGURE 7 Where to Improve Affordable Transportation



This map combines the green **Housed but Disconnected** areas from both comparison maps. Census block groups colored black depict areas needing sidewalks, bikeways and transit improvements to and from existing affordable housing (i.e., these block groups have a low supply of quality, affordable transportation but a relatively high supply of affordable housing dwellings and low rent). This specific subset of census block groups are scattered around Houston mostly outside the Interstate Highway 610 Loop.

Recommendations to Align Housing and Transportation Decision-making

To ensure that housing is truly affordable and accessible to opportunities, local decision-makers must align affordable housing and affordable transportation assets and investments, tackling the issues together, not independently. As this study found, only 44% of rental units in Houston are affordable to moderate-income households (i.e., a family of four in Houston in 2019 spending no more than \$1,907 per month on housing plus utilities) and only 1 out of 3 of those affordable dwellings is near high-quality, affordable transportation options such as sidewalks, bikeways and frequent public transit. To maximize the benefits of affordable housing, government, nonprofit and private stakeholders in Houston must include access to affordable transportation in every policy and development related to affordable housing. Here are recommendations and tools to align housing and transportation development:

Preserve and build affordable housing in areas with high-quality, affordable transportation. Local government and other affordable housing stakeholders must create policies, incentives and resources to prioritize affordable housing developments and improvements in areas where people can access multimodal, timely, practical, dignified, accessible, safe and low-cost transportation options. This requires housing stakeholders to coordinate activities and investments with transportation stakeholders.

Increase opportunities to walk, bike and use transit near affordable housing. Transportation stakeholders — transit officials, regional planning offices, special districts and local government — must prioritize sidewalk, bikeway and transit improvements in areas where affordable housing exists now and will expand in the future.

Map and monitor affordable housing and affordable transportation to demonstrate and direct the beneficial impacts of policies and investments on affordability for residents. Local governments in the Houston

region need to lead in collecting, maintaining and publishing accurate, current data about affordable housing and transportation. Understanding the geographic intersection of housing and transportation helps to target investments, incentives and policies to preserve and develop affordable housing in locations that allow people to walk, bike and use transit, thus maximizing benefits to residents. The research team created the *Quality Affordable Transportation & Affordable Housing 2020 Map* as a starting point. The map enables affordable housing decision-makers and developers to identify locations where quality, affordable transportation exists today.

Assess, compare and prioritize potential affordable housing sites to improve access to affordable transportation. Housing stakeholders must consistently and thoroughly consider affordable transportation availability and quality to determine true housing affordability. This report provides the *Housing + Transportation Decision-maker Scorecard* as a resource for govern-



ments or developers to compare sites in order to better prioritize affordable housing investments near quality, affordable transportation.

Develop resources to help people understand how housing and transportation impact overall affordability. Family self-sufficiency and financial counselors must prompt their clients to contemplate location, travel options and transportation expenses in their housing decisions. In addition to directing families to prioritize

housing options that score high on the Quality Affordable Transportation Index, this report provides two complementary tools to improve practices at the household level. The **Counselor Facilitation Guide: Considering Transportation in Decisions** provides housing, mobility, self-sufficiency and financial counselors with discussion prompts regarding transportation expenses and housing decisions. The **Individual Workbook: Considering Transportation in Your Housing Decision** helps people to further understand their transportation needs, consider their goals and identify questions to guide their decision.

Houston stands at an inflection point. While local governments now hold funding for housing recovery and affordable transportation improvements, more and more households struggle to cover their basic expenses. Stakeholders must tackle the affordable housing crisis and affordable transportation access together, not independently. Policymakers can lead by uniting the planning and implementation of housing and transportation. Public, private and nonprofit stakeholders can prioritize investments to create more “Housed and Connected” areas and educate individuals and families to consider location and transportation when deciding where to live. Truer affordability through housing and transportation will improve quality of life and economic resilience. Individuals and families will spend less time and money accessing opportunity. Employers will have a more stable employee pool. Every Houstonian will be able to truly live a fuller and productive life.

The final report and all tools are available on LINK Houston's website, search for “Houston Housing + Transportation Affordability 2020”.



“My work in Sunnyside is to advocate, educate and empower some population groups: residents, to seek better and more affordable housing per low-income; households and immigrants, with problems stemming from inadequate housing, insufficient unaffordable housing that crosses racial and ethnic lines and touches families from many income levels. Housing is a keystone system connected to many other elements of individuals’ daily life, from education to transportation and environmental changes to neighborhoods in Sunnyside. It would be good to discuss with multi-family apartment managers ways for them to share information about affordable transportation, like METRO, in their welcome packs for new tenants. Many people don’t know what options are available to them. Working with LINK Houston made me think outside the box, share ideas and experiences with others, and really see how housing and transportation fit together.”

Debra Walker

President, Sunnyside Community Redevelopment Organization

Appendix

The Appendix contains the following documentation:

1. General recommendation applicability
2. Additional detail from the research
 - a. Detail about the location of affordable housing in Houston
 - b. Detail about the Quality Affordable Transportation Index (QATi)
 - c. Larger maps comparing housing and transportation locations
3. Documentation of the process to develop the tools, information about each tool
4. Overview of and access to each Tool
 - a. Decision-maker Scorecard
 - b. Counselor Facilitation Guide: Considering Transportation in Your Housing Decision
 - c. Individual Workbook: Considering Transportation in Your Housing Decision
 - d. Online map, “Quality Affordable Transportation & Affordable Housing 2020”

1. General Recommendation Applicability

Table 1 summarizes the roles different actors can play to improve affordability through housing and transportation efforts, whether through their work, for their own family or for others.

TABLE 1 General Recommendation Applicability

Category of Stakeholder	Type of Stakeholder	Increase opportunities to walk, bike or use transit near affordable housing	Preserve and build affordable housing in areas where affordable transportation is high quality	Consistently map and monitor affordable housing and affordable transportation	Use the Decision-maker Scorecard to compare and prioritize sites for affordable housing development and improvement	Assist Individuals and Families to Consider Transportation in Housing Decisions
Individuals, Families, & Community	First-time homebuyers					✓
	Renters who are moving					✓
	People moving to Houston					✓
	Community leaders	✓	✓	✓	✓	✓
	Tenant leaders				✓	✓ (leader)
Private & Non-Profit	Affordable housing funders, lenders or developers		✓ (leader)		✓ (leader)	
	Affordable housing operators				✓ (leader)	✓ (leader)
	Counselors & coaches (i.e., housing, self-sufficiency, financial)			✓		✓ (leader)
	Community development corporations	✓	✓ (leader)	✓	✓ (leader)	✓
	Nonprofits: advocacy or organizing		✓	✓		✓
	Business associations	✓		✓	✓	
	Employers					✓
Government	City of Houston Departments	✓ (leader)	✓ (leader)	✓ (leader)	✓ (leader)	✓
	Harris County Departments	✓ (leader)	✓ (leader)	✓ (leader)	✓ (leader)	✓
	State of Texas Agencies	✓	✓			✓ (leader)
Quasi Government	Houston Housing Authority		✓ (leader)	✓	✓ (leader)	✓ (leader)
	Houston Land Bank		✓	✓	✓	
	Management Districts or Tax Increment Reinvestment Zones	✓ (leader)			✓	
	Houston METRO	✓ (leader)		✓ (leader)	✓	
	Houston Bikeshare	✓ (leader)		✓		
	Houston ISD (and other districts)	✓		✓	✓	✓

This table summarizes the roles different actors can play to improve affordability through housing and transportation efforts, whether through their work, for their own family or for others. The table presents 21 types of stakeholders for housing and transportation, placed in four groups. Each of the five recommendations from the study are a column. Each stakeholder is marked with a checkmark if the corresponding recommendation is likely to apply. In addition, some stakeholders are designated as a "leader" for a particular recommendation.

2. Additional Detail from the Research

The following three sections provide larger maps and some additional detail from the research.

Detail about the Location of Affordable Housing in Houston

Affordable Housing Supply

Affordable housing dwellings are rental-market properties that are affordable to low- and moderate-income households. Some are affordable because of government subsidy or income-restricted programs and some are naturally occurring affordable housing. These dwellings can be any type of structure (e.g., single-family units, townhomes, condominiums, multiplexes or apartments). Figure 8 maps affordable housing dwelling count and density (i.e., dwellings per square mile) by census block group as of October 2019.

Houston Local Initiatives Support Corporation (Houston LISC) provided the data. Houston LISC is the local office of the Local Initiatives Support Corporation, the nation's largest community development support organization. Houston LISC developed the dataset. The general steps to create the data: (1) identify available rental units with

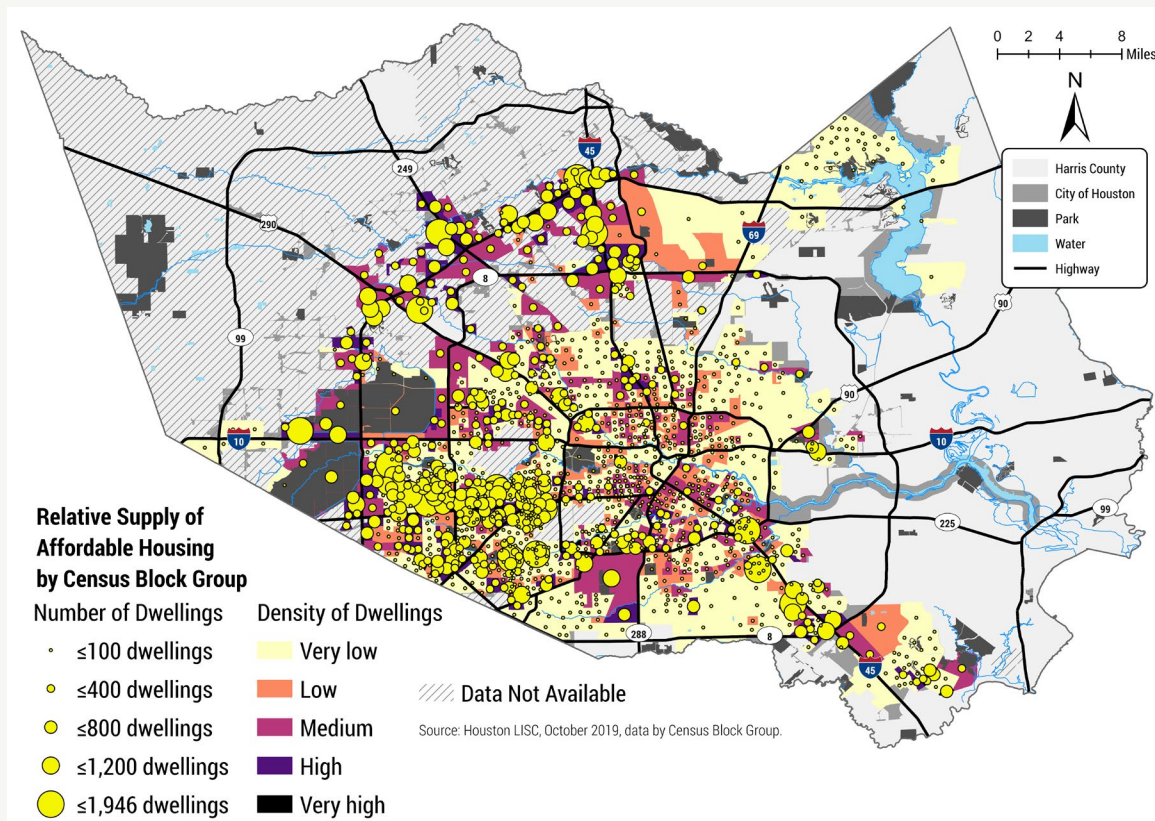
rent rate by address, (2) mark rental units as affordable given certain rent thresholds and (3) identify the number of total affordable units at an address by cross-referencing Harris County Appraisal District property records. Houston LISC's affordable-rent thresholds are based on the number of bedrooms (i.e., one-bedrooms listed under \$1,000, two-bedrooms listed under \$1,300, etc.), 2019 Area Median Income for a family of four (\$76,313) and a proprietary method for identifying true affordability for low-income families. Houston LISC focuses on the City of Houston, which is why the map above is limited to census block groups that substantially intersect the City of Houston city limits.

Median Gross Rent

The U.S. Census Bureau derives median gross rent based on responses to the American Community Survey, which is conducted each year. Gross rent includes all common monthly housing expenses, including utilities, and is a useful view on true affordability:

Gross rent provides information on the monthly housing cost expenses for renters. Gross rent is the contract rent plus the estimated average monthly cost

FIGURE 8 Supply of Affordable Housing in Houston as of October 2019 (larger map)



A larger version of the same map in the body of the report. This map depicts the location of existing affordable housing dwellings in terms of dwelling count and dwellings per square mile in October 2019. Some affordable dwellings exist in nearly every census block group. Affordable housing concentrations exist along FM 1960 and State Highway 6 in northwest Harris County, in southwest Houston, and along Interstate Highway 45 South.

of utilities (electricity, gas and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials that result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment. ... When the data is used in conjunction with income data, the information offers an excellent measure of housing affordability and excessive shelter costs. The data also serve to aid in the development of housing programs to meet the needs of people at different economic levels and to aid agencies in determining policies on fair rent... **Median Gross Rent divides the gross rent distribution into two equal parts: one-half of the cases falling below the median gross rent and one-half above the median.**²³

Figure 9 is a map depicting where median gross rent is more and less affordable in block groups inside the Harris County portion of the METRO service area.

Area Median Income Required to Afford Median Rent

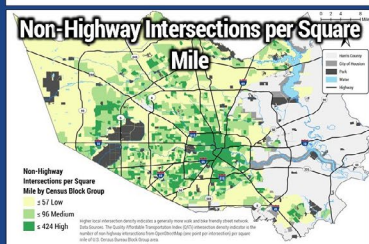
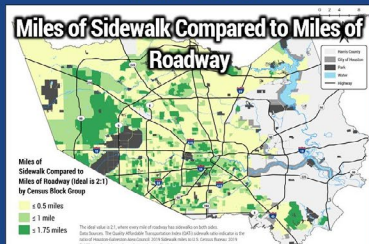
In 2018, the average household in the City of Houston included 3 people.²⁴ The area median income for a family of three in 2019 in the greater Houston region was \$68,688.²⁵ Figure 10 illustrates the percent of area median income a family of three needs to earn to afford median gross rent without using more than 30% of their income. In other words, yellow areas are where families that earn about 50% of area median income, or about \$34,300, can afford to rent.

FIGURE 11

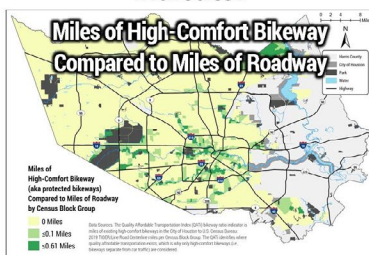
QATi Indicator Overview

The Seven Indicators of the Quality Affordable Transportation Index (QATi)

Likely Better Walking Indicators



Likely Better Biking Indicator

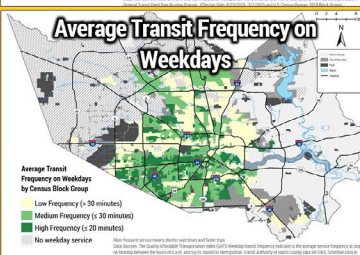
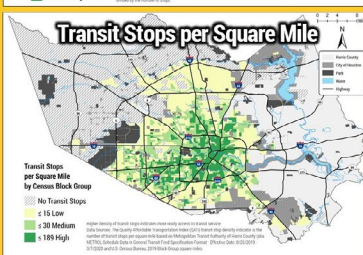
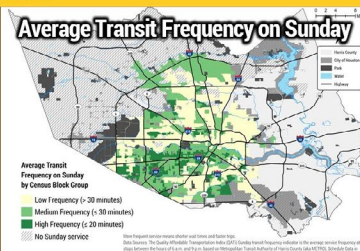
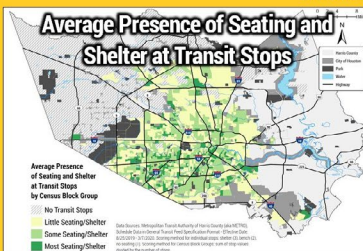


The Quality Affordable Transportation Index (QATi) combines seven indicators about sidewalks, bikeways, and transit to identify where affordable transportation is relatively higher quality inside the City of Houston generally.

These maps illustrate the relative quality of affordable transportation—darker colors indicate relatively higher supply, quality, or concentration.

Note: Data was not available for all Census Block Groups for all indicators.

Likely Better Transit Indicators



This graphic illustrates the overall concept and construction of the QATi. The graphic includes a small map of each of the seven indicators. The maps illustrate the relative quality of affordable transportation with darker colors indicating relatively higher supply, quality or concentration of affordable transportation. The index includes two indicators related to walking, one indicator related to likely better biking, and four indicators of likely better transit service.

TABLE

2

Quality Affordable Transportation Index (QATi) Indicator Details

Category	Indicator Name	Note	Source(s)	Calculation
Walk	Miles of Sidewalk Compared to Miles of Roadway	The ideal ratio is 2:1, where every mile of roadway has sidewalks on both sides.	- 2019 Sidewalks, Houston-Galveston Area Council - 2019 Roads, TIGER/Line, U.S. Census Bureau	$Miles\ of\ sidewalk \div centerline\ miles\ of\ roadway$
Walk	Non-Highway Intersections per Square Mile	High local intersection density indicates a generally more walk and bike friendly street network.	- 2019 OpenStreetMap (derived non-highway intersection points) - 2019 Block Group, TIGER/Line, U.S. Census Bureau	$Number\ of\ non-highway\ intersections \div square\ miles$
Bike	Miles of High-Comfort Bikeway per Square Mile	Only high-comfort bikeways are included as they are higher quality, generally separate from cars.	- 2018 Houston Bikeways, Existing, Houston Bike Plan, City of Houston - 2019 Roads, TIGER/Line, U.S. Census Bureau	$Miles\ of\ existing\ high-comfort\ bikeway \div centerline\ miles\ of\ roadway$
Transit	Average Presence of Seating and Shelter at Transit Stops	Shelter and seating are important to many transit riders. Transit stops were scored as follows: shelter (3), bench (2) and no seating (1).	<i>All four transit indicators are derived from the same sources:</i> - METRO Schedule Data in General Transit Feed Specification Format - Effective Date: 8/25/2019 - 3/7/2020 - 2019 Block Group, TIGER/Line, U.S. Census Bureau <i>Note: ArcGIS Pro and Better Bus Buffers were used to process and analyze both data sources to create the indicators.</i>	$Sum\ of\ transit\ stop\ values \div number\ of\ transit\ stops$
Transit	Transit Stops per Square Mile	Higher density of transit stops indicates more ready access to transit service.		$Number\ of\ transit\ stops \div square\ miles$
Transit	Average Transit Frequency on Sunday	More frequent service means shorter wait times and faster trips. Not all stops have service on weekend days. All-purpose transit riders rely on transit to access opportunities any day of the week.		$Average\ Sunday\ frequency\ at\ transit\ stops\ between\ 6\ a.m.\ and\ 9\ p.m.$
Transit	Average Transit Frequency on Weekdays	More frequent service means shorter wait times and faster trips.		$Average\ Monday\ frequency\ at\ transit\ stops\ between\ 6\ a.m.\ and\ 9\ p.m.$

This table provides some additional detail about each indicator in the QATi index, including the category (as in walk, bike, or transit), indicator full name, notes, source, and calculation method.

Detail about the Quality Affordable Transportation Index (QATi)

LINK Houston and the Kinder Institute created a Quality Affordable Transportation Index (QATi) to identify a composite view of the general location of quality, deeply affordable transportation in Houston. The QATi leverages existing data to objectively identify where the quality of walking, biking and transit is higher relative to all other parts of the city (and for block groups in Harris County in METRO's service area).

The Quality Affordable Transportation Index (QATi) combines seven indicators about sidewalks, bikeways and

transit to identify where affordable transportation is relatively higher-quality inside the City of Houston. Figure 11 contains a small map of each indicator. The maps illustrate the relative quality of affordable transportation based on each indicator. Darker colors indicate relatively higher supply, quality or concentration of affordable transportation.

The research team selected indicators based on the best available data about sidewalks, intersections, bikeways, transit stops and transit services. Walking and biking are important modes in and of themselves but are especially critical to enabling safe, quality access to transit

services. Transit services are the backbone of the longer-distance affordable transportation network. The objective for QATi was to identify the area of relative quality compared to all other parts of the City of Houston. Therefore, the primary statistical tool used was to transform each indicator value into a normalized percentile rank (with decimal points as necessary). In lay terms, changing whatever value was present into a 1-100 percentile ranking as compared to all other geographic areas with data for the same indicator. The percentile rank reveals how high or low the indicator was for a location in comparison to all others. Higher values mean higher relative quality and/or supply of affordable transportation for each indicator. The QATi rating of a



block group is the average of all seven indicators, each given equal weight as each is important. The result is a QATi rating of each block group. Higher values mean higher relative quality for making trips affordably without using a car. Table 2 provides some additional detail about each indicator.

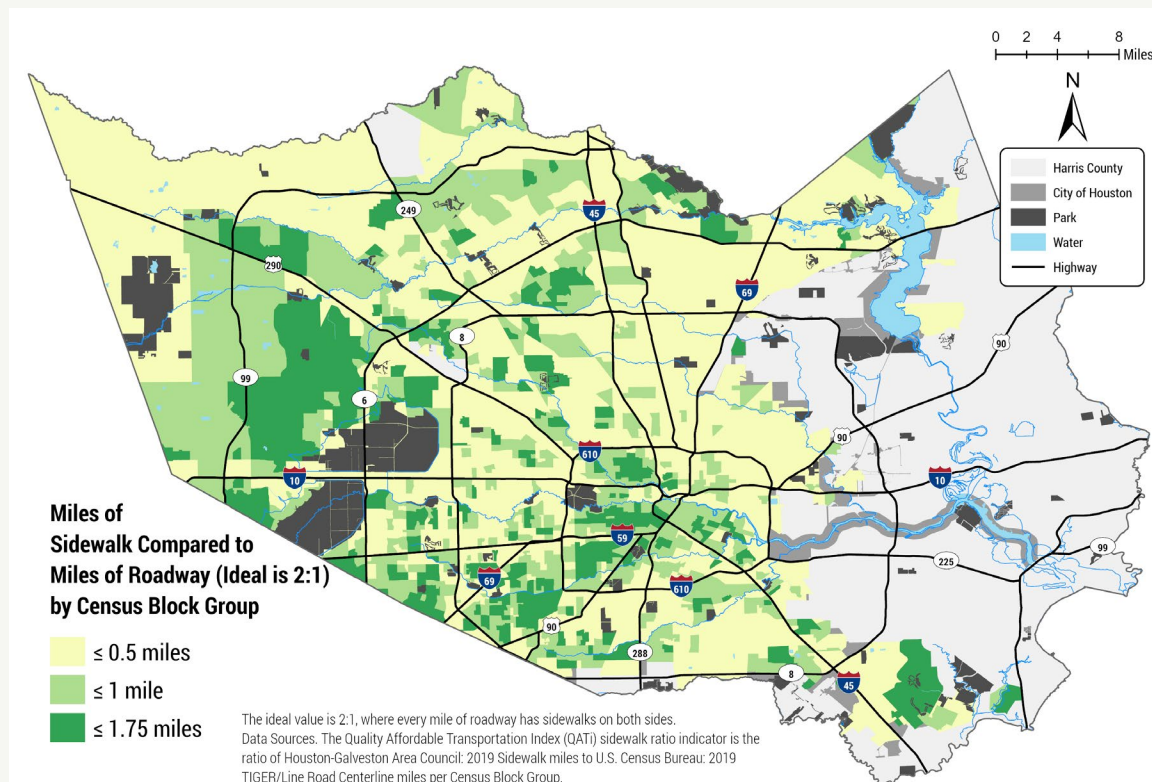
All seven indicators are from publicly available sources typically updated each year, enabling a periodic update to the index and research to understand how the region is changing and how

transportation and housing stakeholders have worked to improve outcomes.

The following seven figures each depict the relative concentration of a QATi indicator.

FIGURE 12

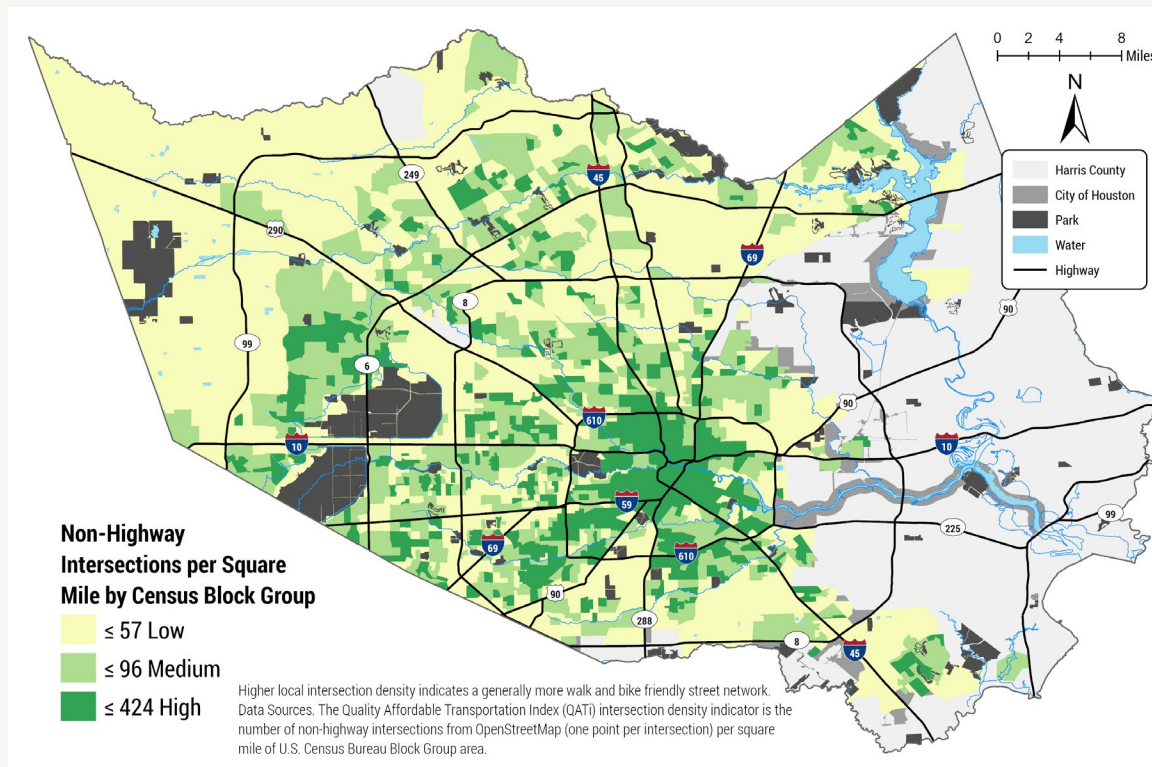
QATi Indicator 1. Miles of Sidewalk Compared to Miles of Roadway



The ideal ratio is 2:1, where every mile of roadway has sidewalks on both sides. Sidewalks are generally more present in the western half of Houston inside the Interstate Highway 610 Loop and to the southwest.

FIGURE 13

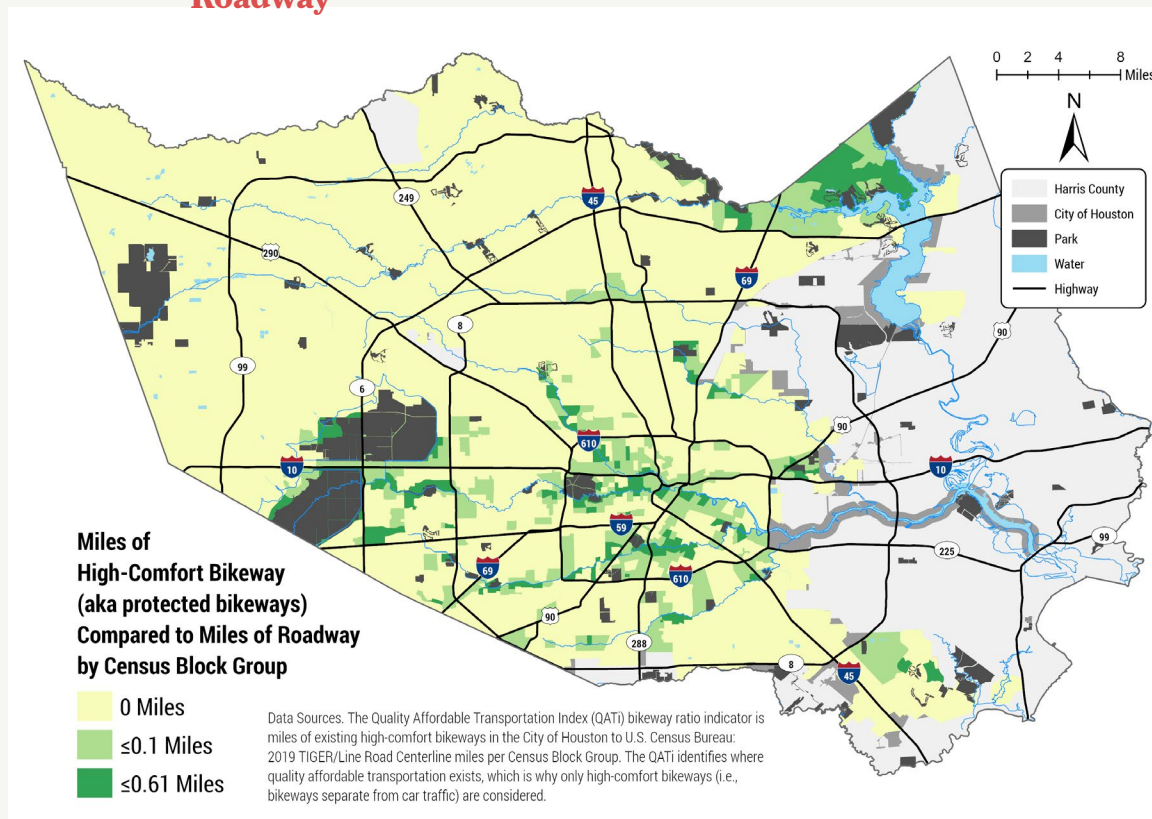
QATi Indicator 2. Non-Highway Intersections per Square Mile



High local intersection density indicates a generally more walk and bike friendly street network. Grid street networks tend to have the highest intersection density and are most walkable, such areas are concentrated inside the Interstate Highway 610 Loop.

FIGURE 14

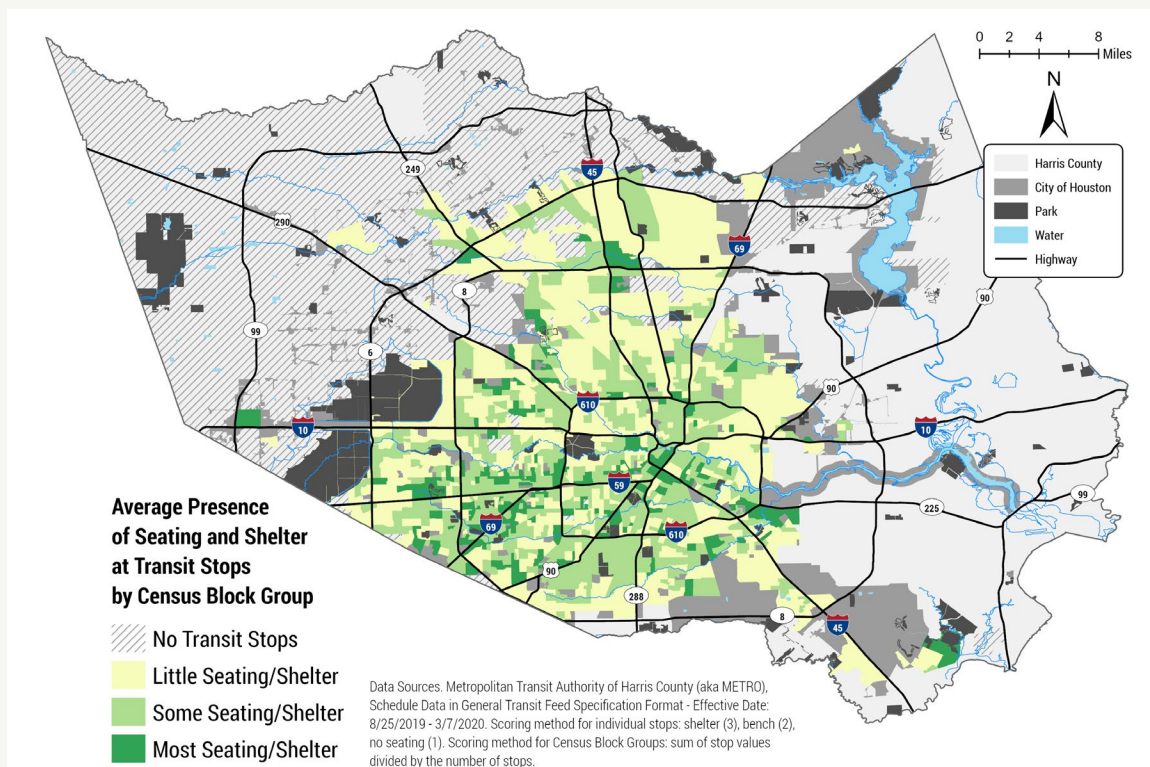
QATi Indicator 3. Miles of High-Comfort Bikeway Compared to Miles of Roadway



This map depicts census block groups with high-comfort bikeways, which are the only type of bikeways included as they are higher quality, generally separate from cars. High-comfort bikeways in Houston generally correspond to major bayous, with a few other such facilities connecting between bayous and prominent job centers.

FIGURE 15

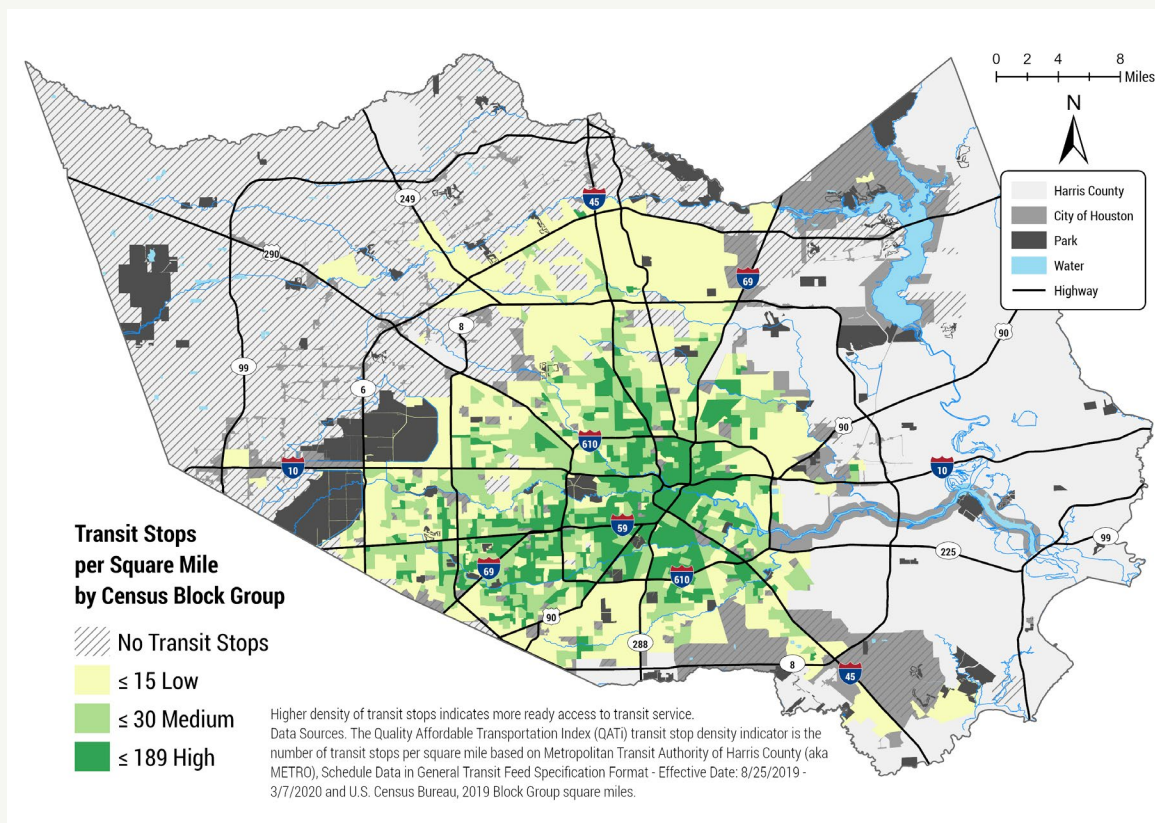
QATi Indicator 4. Average Presence of Seating and Shelter at Transit Stops



This map is 1 of 4 of transit indicators in the index. Shelter and seating are important to many transit riders. Transit stops were scored as follows: shelter (3), bench (2) and no seating (1) and averaged per census block group. Arterial local streets, such as Westheimer, Richmond, and Main, have generally better seating and shelter amenities at transit stops.

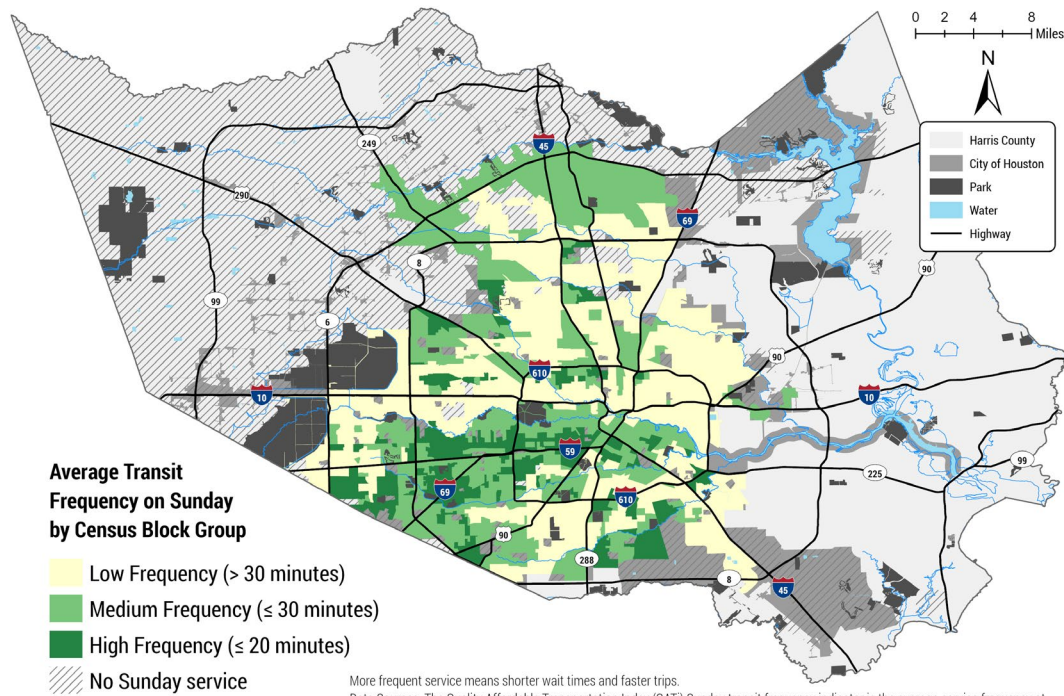
FIGURE 16

QATi Indicator 5. Transit Stops per Square Mile



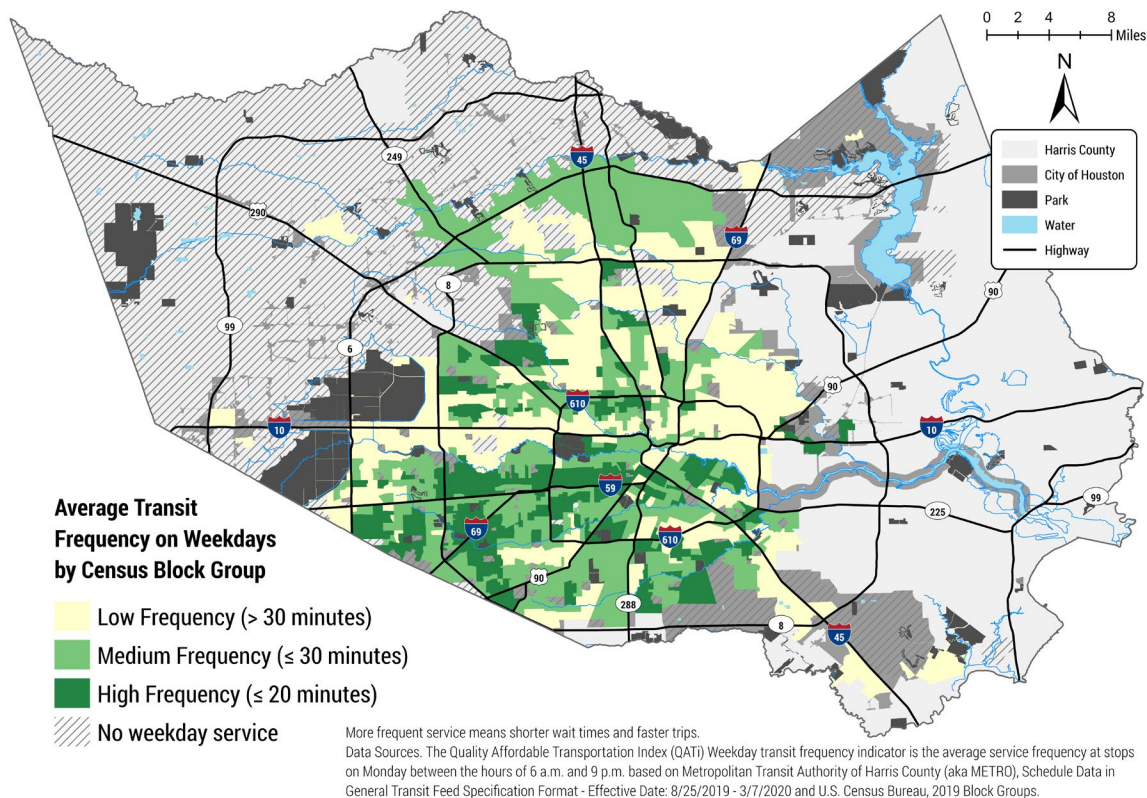
This map is 2 of 4 of transit indicators in the index. Higher density of transit stops indicates more ready access to transit service. Similar to seating and shelter quality, the density of transit stops themselves follows minor and major arterial streets on which transit operates, however the density of stops reveals more broad transit coverage due to the majority of stops being sign-posts only.

FIGURE 17

QATi Indicator 6. Average Transit Frequency on Sunday

This map is 3 of 4 of transit indicators in the index. Service frequency on Sundays is less geographically expansive than on weekdays. Westheimer and Bissonnet are two examples of street corridors with persistently high-frequency service.

FIGURE 18

QATi Indicator 7. Average Transit Frequency on Weekdays

This map is 4 of 4 of transit indicators in the index and depicts where transit is generally more frequent on weekdays. Weekday services are frequent along more street corridors than on weekends.

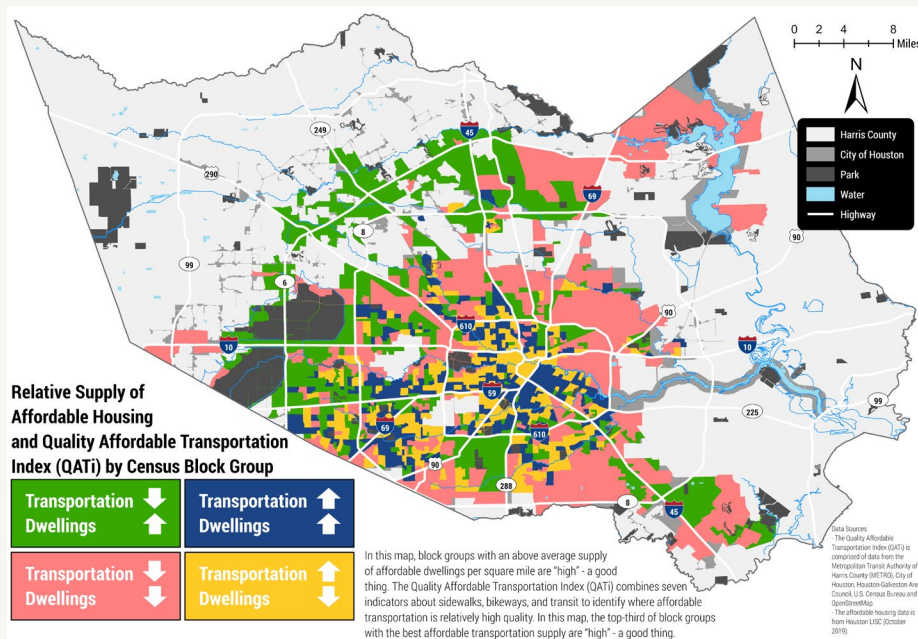
Larger Maps Comparing Housing and Transportation Locations

Figure 19 compares the relative density of affordable housing supply and quality, affordable transportation index (i.e., the walk/bike/transit supply) by census block group.

Figure 20 compares relative median gross rent and quality, affordable transportation index by census block

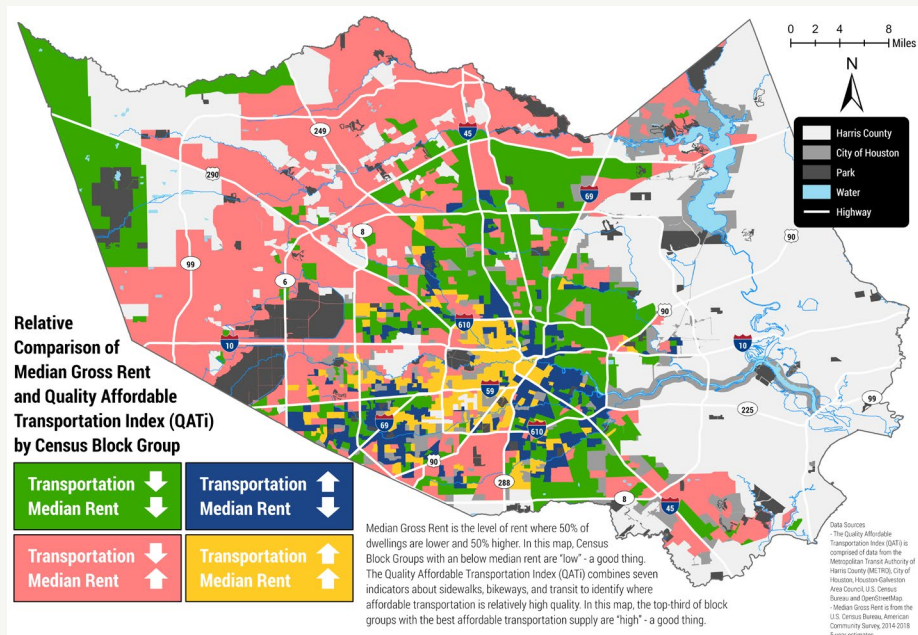
group. Please note that in this map the arrows for median rent point in opposite directions from affordable housing supply in the previous map because median rent being low is good, whereas housing supply being high is good. *The meaning of the four colors are similar for both maps, blue is always the High Affordable Housing + High Affordable Transportation areas.*

FIGURE 19 Comparison of Affordable Housing and QATi (larger map)



A larger version of the same map in the body of the report. This map overlays affordable dwelling density with the QATi index. Affordable dwellings include any type of housing, both owned and rented. The map uses the four colors previously described in relation to the Affordable Housing plus Transportation Paradigm. The Blue "Housed and Connected", the best areas for families needing affordability, are concentrated in pockets to the north of downtown, the east and southeast, and southwest.

FIGURE 20 Comparison of Median Gross Rent and QATi (larger map)



A larger version of the same map in the body of the report. This map overlays median gross rent with the QATi index. The map, again, uses the same four quadrant paradigm. Based on rent and QATi, the Blue "Housed and Connected" areas are especially concentrated on the east side and southwest reaches of Houston.

3. Documentation of the Process to Develop the Tools

LINK Houston recognizes the importance of research to grassroots community organizing. When aligned with community leadership and rooted in the Jemez Principles of Democratic Organizing²⁶, data-driven research and academic partnerships can significantly advance the achievement of environmental justice. Research projects at times are not planned, funded or conducted with community guidance and with a commitment to environmental justice principles. LINK Houston acknowledges that, absent the community control of research initiatives, the production of knowledge could be harmful to communities. Research without the alignment of community furthers the cultures of colonial mentality, exploitation and extraction that the organization fully resists. The 11 principles of community-based participatory research and projects guide our work, including our research and project collaborations with external partners.²⁷ This report is documentation for one such study, the partnership in this case being LINK Houston and Rice University's Kinder Institute for Urban Research.

LINK Houston's development of the Decision-maker Scorecard and Housing Counseling resources was deeply embedded in community values, aspirations and need. As such, the methodological design for the development of both tools centered on meaningful community participation from start to finish. Participatory methodologies to evaluate and develop programs are based on several key principles. The evaluation should involve and be useful to the program's end users and be context-specific, rooted in their concerns, interests and problems. It should respect and use the knowledge and experience of these key stakeholders and favor collective methods of knowledge generation. In the process, the evaluator should share power with stakeholders and continuously and critically examine their own attitudes, ideas and behaviors.²⁸ Drawing on these principles of meaningful participatory evaluation, LINK Houston deliberately designed a research and development process that allowed stakeholders to actively engage in the development of these tools.

The principal process to develop both tools was iterative stakeholder engagement in workshops. LINK Houston organized an Affordable Housing + Transportation Task Force and facilitated workshops in an iterative process of stakeholder engagement and feedback. The aim of the



workshops was to draw on the experiences of the group to ground the tools in the values and context-specific concerns of individuals' lived experience and practice-focused stakeholders. Rather than impose LINK Houston's own values onto the tools, it was vital that the tools arise from the values and concerns of stakeholders.

Careful participant selection was vital to gather a socio-economically and demographically diverse group of stakeholders. A stakeholder map was created, looking at a broad base of individuals and organizations to strategically invite to the workshops. This included local government housing stakeholders, nonprofit housing developers and advocates, researchers and equity advocates. Individuals with lived experiences participated, representing a diverse array of neighborhoods, communities of color and focus populations (e.g., individuals with disabilities, individuals who have lived in subsidized affordable housing and transit riders). Task force members participating on their own time received compensation for transit passes to/from workshops, childcare and a livable rate of \$15 per hour for their time. All workshops included a meal for all participants. These measures ensured individuals could attend without financial repercussions.

Developing the Decision-maker Scorecard

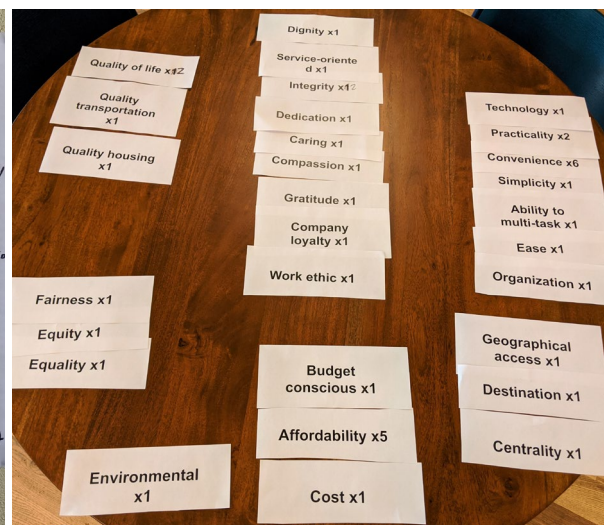
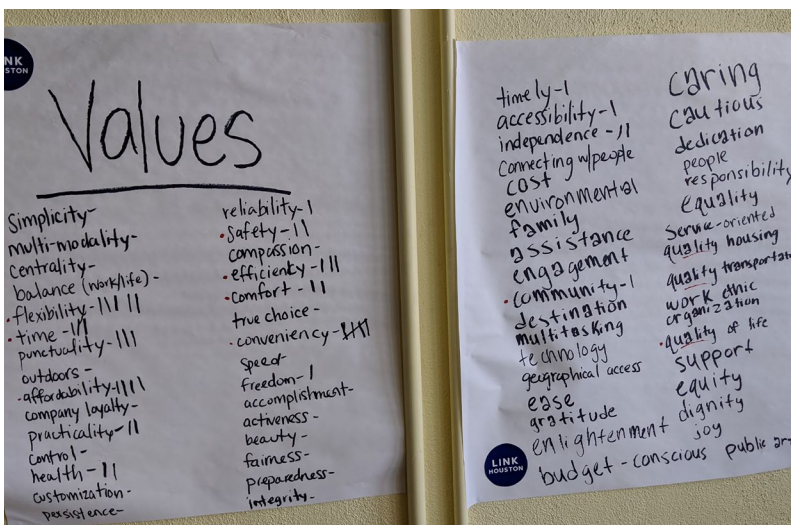
The Decision-maker Scorecard was developed to improve walking, biking and transit access based on emergent values identified by the H + T Task Force as fundamental for quality transportation. This was so that developers using the scorecard would evaluate the quality of their housing developments based on values and goals shared by Houstonians who walk, bike or use transit by choice or need: what they need, what they want so that they can travel in dignity and security to opportunities outside their home.

To do this, participatory methods elicited core values from the participants in a first workshop. In break-out groups of four, participants each together completed an activity wherein they told the “story” of their journey to the workshop. A second participant would then draw out the “facts” of the “story.” The third would then identify the “feelings” mentioned in the “story.” Finally, the fourth member was asked to identify the “values” that went into the travel choices. Each member of each group of four took a turn sharing their story, regardless of how they traveled to the workshop, and hearing their group members draw out observations, annotating discussion on index cards. All the values identified were then read out to the group at large and written verbatim onto large sheets of paper. The most often mentioned “values” were selected and each small group of four was given one or several related values to brainstorm. They were asked to brainstorm how their value(s) would or could be realized in practical ways at a neighborhood scale, street scale and finally at the individual scale (i.e., someone headed to their first destination of the day). Participants annotated their discussions on sticky notes and on posters.

LINK Houston used these values and brainstorm notes as the basis for what would later become the decision-maker scorecard. After the workshop, LINK Houston staff undertook a “silent sorting” procedure in which all 66 values that had been identified through values “stories” were printed out and laid around the office space. These were then sorted into subgroups by the staff in silence, with each person placing the values where they thought they belong, until group consensus was reached. The final groupings became the basis for the topics of the tool: geographical access, travel options, time, dignity/practicality, accessibility, safety, user cost, health and environment, and community and equity.



H + T Task Force members were encouraged to experience different transportation situations themselves. At the end of the first workshop, participants were asked to take a different mode of transport and report back their experience(s) before or at the second workshop. Participants were given pre-loaded Metro cards and offered practical advice and “bus buddies”. This exercise aimed to expand the experience of the group and make them conscious of different barriers to transportation that they had not considered or had learned to take for granted. Then, prior to the second workshop, LINK Houston facilitated a “mobile workshop” to show the transportation experience of a family living in an affordable housing unit. The group started at an affordable unit (where the workshop was held), and took a route imagining they were attempting to complete daily errands (i.e., walk a child to day care, walk another child to school, take the bus to work, and on the reverse course later in the day stop for groceries) by walking and using public transit. In this way, participants embodied the pathways taken by low-income families and were made more empathetic to the problems the scorecard aims to tackle.





Feedback was taken from the participants at every stage of the development process and integrated into the final tools. At the second workshop, participants were invited to give their feedback on the emerging rubric and to adjust the groupings of values and goals that the staff had made. Participants also were asked for input on the layout, design and format of the tools, to make sure they meet end-user needs. LINK Houston revised the emerging scorecard after the workshop and arranged to partner with BakerRipley for three pilot mobile workshops from

the nonprofit's campuses in Gulfton, Southeast Houston and Greater Greenspoint. Staff collected real-time feedback and incorporated it into a proposed final draft of the scorecard. At the third and final workshop, a nearly final draft was presented to the group and final feedback was gathered.

Developing the Housing Counselor Resources

The Housing Counselor Resources were developed by LINK Houston in collaboration with all interested members of the H + T Task Force in a similar series of the three

workshops. The housing counseling focused workshops were scheduled conveniently so anyone interested in contributing to both tools could do so. Like the Scorecard, LINK Houston developed the resources through extensive consultation with a variety of carefully selected participants. Some participants were also members of the Scorecard workshops and alongside full-time affordable housing counselors who were specifically selected for their expertise. All HUD approved counseling agencies local to Houston were invited to par-



ticipate. Job counselors from SERjobs, family self-sufficiency counselors from the Houston Housing Authority and OnTheRoad lending also participated throughout the process.

In the initial counseling workshop, participants were asked to share their experience of housing counseling. They were asked about the primary concerns of their clients, how location enters into counseling conversations and how transportation enters into the conversation. This was followed by a group discussion of the ways in which people could be helped to consider transportation when making decisions on housing. Participants also were asked to send any exemplar materials to LINK Houston.

The second workshop drew directly on the group's experience to form the housing counseling tools. The aim of the workshop was to develop open-ended, judgment-free questions to ask clients in order to prompt a thorough self-examination of transportation habits and needs and how this could influence housing choices. Two key lines of questioning were identified: economic costs of transportation and personal routine and priorities. Participants also spoke of the importance of framing the questions correctly. The language of "goals" was identified as being useful to housing counselors to embody the

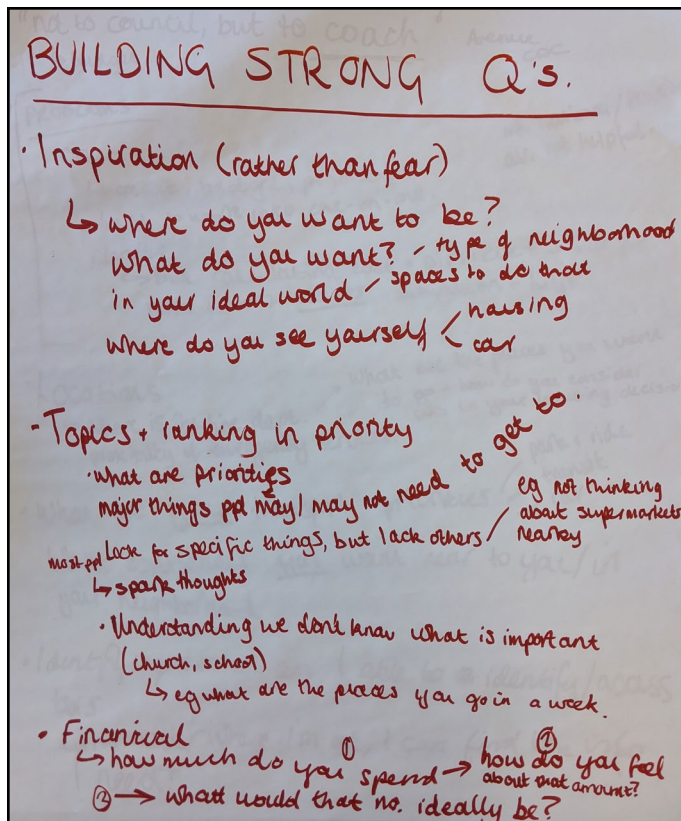


possibilities of the future rather than focusing on present restrictions for clients. Break-out groups were formed in order to delve into emerging questions.

One group talked about the economic costs, a second group discussed priorities and a third worked with a member of LINK Houston to discuss the most useful format for the counseling materials. This included a discussion of who the tool may be for, the type of questions to ask and the style of prompts to give. The decision to develop resources for both the counselors and clients to take away was taken directly from suggestions made by the group, which identified the need to have a wide array of information to present to clients. That way, clients could identify their own aspirations for considering transportation in their housing decisions. Time restrictions were also identified as a key barrier to incorporating in-depth transportation discussions, which counselors decided could be overcome by creating an individual workbook for clients to take home. The type of questioning was heavily influenced by the format of the Scorecard, which was deemed to provide necessary prompts for considering values and goals. Housing counselors reported that clients have so many things to consider when choosing housing that without prompts they may struggle to think through the many different possible needs.

LINK Houston staff used the wealth of information, opinions and direction from the counseling contingent of the H + T Task Force to craft full drafts of both the counselor facilitation guide and individual workshop. LINK Houston hosted a third workshop, which was complemented with follow-up phone calls and emails to ensure all participants had a variety of settings in which to express their ideas.

The final counselor tools are a direct product of the highly inclusive process between the research team and members of the H + T Task Force.



4. Overview of and Access to each Tool

Contact LINK Houston with any questions or inquiries regarding the tools: www.linkhouston.org or info@linkhouston.org. The final report and tools are available on LINK Houston's website, search for "Houston Housing + Transportation 2020". Some tools are available in both English and Spanish; other languages may be available upon request.

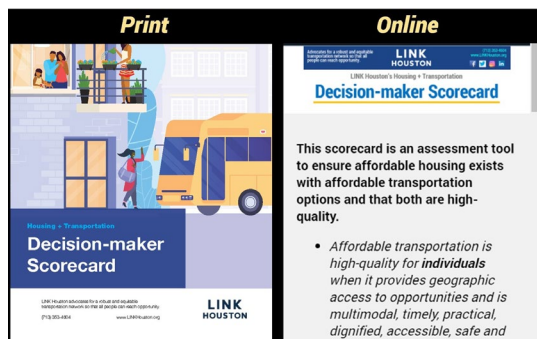
H + T Decision-maker Scorecard

The scorecard allows a government or non-profit developer to better understand a potential site's proximity to opportunities, quality of the affordable infrastructure, and functionality of the facility for people walking, biking, or using transit. The goal of the scorecard is to ensure that in the future affordable housing exists with affordable transportation options and that both are high-quality.

Use Housing + Transportation Decision-maker Scorecard to improve practice at your organization by:

- Selecting better sites through early consideration of the quality of affordable transportation.
- Increasing functionality of affordable housing by evaluating and implementing transportation improvements.

The scorecard is available in Excel spreadsheet format in English, printed booklet format in English and Spanish, and online survey format in English and Spanish.



Affordable transportation is high-quality for individuals when it provides geographic access to opportunities and is multimodal, timely, practical, dignified, accessible, safe and low cost.

Affordable transportation is high-quality for neighborhoods when it improves health, the environment, community conditions and advances equity.



Counselor Facilitation Guide: Considering Transportation in Decisions

This guide, developed by the H + T Task Force, provides a template for housing counselors, mobility counselors, self-sufficiency counselors and financial coaches to prompt individuals and families to consider location, travel options and transportation expenses in their housing decisions.

The 2-page guide is available in print in English and Spanish.

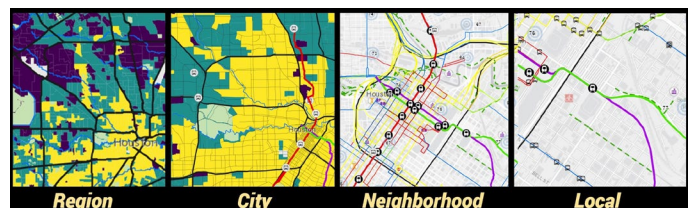
Individual Workbook: Considering Transportation in Your Housing Decision

This individual workbook helps people to further understand their transportation expenses, consider their goals and identify questions to guide their decisions. Individuals and families finding housing in a location that also meets their transportation goals improves their quality of life — potentially reducing how much time and money they will spend going places.

The workbook is available in printed booklet format in English and Spanish.

Quality Affordable Transportation & Affordable Housing 2020 Map

The research team created this online map as a starting point. Understanding the geographic intersection of housing and transportation is necessary to target investments, incentives and policies to preserve and develop affordable housing for people to walk, bike and use transit. The map enables affordable housing decision-makers and developers to identify locations where quality, affordable transportation exists today. LINK Houston's website contains hyperlinks to an online storymap, full interactive map and the underlying data (search for "Houston Housing + Transportation 2020").



Endnotes

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H. Leighton, "When factoring annual salaries into the cost of living in a city, Houston was among the least affordable in Texas, according to Indeed data," 13 September 2019. [Online]. Available: <https://kinder.rice.edu/urbanedge/2019/09/13/is-houston-affordable-live-average-salaries>. [Accessed 25 February 2020].
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C. Barrington-Leigh and A. Millard-Ball, "Global trends toward urban street-network sprawl," Proceedings of the National Academies of Sciences of the United States of America, vol. 117, no. 4, pp. 1941-1950, 14 January 2020.
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- 6 *In many cities, low-income residents live far from available jobs, and employers can't find people to fill open positions. Economists call this "spatial mismatch"—a mismatch between where jobs are located and where job seekers live, which can cause high unemployment rates and lead to longer spells of joblessness.*
Urban Institute, "Too Far from Jobs: Spatial Mismatch and Hourly Workers," 21 February 2019. [Online]. Available: <https://www.urban.org/features/too-far-jobs-spatial-mismatch-and-hourly-workers>. [Accessed 14 November 2019].
- 7 A. Ortiz, "City of Houston Housing Department Rolls Out \$1.17 Billion Program For Harvey Recovery," 14 January 2019. [Online]. Available: <https://www.houstonpublicmedia.org/articles/shows/houston-matters/2019/01/14/317945/city-of-houston-housing-department-rolls-out-1-17-billion-program-for-harvey-recovery/>. [Accessed 15 October 2019].
- 8 Houston's supply of affordable housing has been decreasing. Harvard University's *State of the Nation's Housing: 2019* report found the greater Houston region experienced a 30 percent decline in low-rent units from 2011 to 2019. The most substantial growth in rental units was in the \$1,000 to \$1,800 range from 2005 to 2015 in the great Houston region (Walker 2017). In addition, Houston has experienced rapid population growth and cities with rapid population increase tend to have less affordable housing over time (Freddie Mac 2019). Further, Houston saw extensive construction of multifamily units in the second half of the 20th century and those aging multifamily complexes are the core of the existing affordable housing stock that is at risk of demolition. Houston has seen redevelopment in some existing communities, which improves the average age of housing stock, but the new housing is "generally unaffordable to lower-income residents"; this phenomenon is known as gentrification and often results in people being displaced from their community (Walker 2017). A 2018 Kinder Institute report explored gentrification in Houston from 1990 to 2016 and found the rate of gentrification increased over the period, especially in the last decade (Choudary 2018).
Joint Center for Housing Studies, "The State of the Nation's Housing: 2019," Harvard University, Cambridge, 2019.
K. Walker and K. Shelton, "Taking Stock: Housing Trends in the Houston Area," Rice University, Houston, 2017.
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- 9 Houston Parks Board, houstonparksboard.org/about/bayou-greenways-2020
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W. Choudary, J. Wu and M. Zhang, "Neighborhood Gentrification across Harris County: 1990 to 2016," Rice University, Houston, 2018.

D. Nostikasari and K. Shelton, "Transit Adjacent Development and Neighborhood Change in Houston," Rice University, Houston, 2019.

- 16 *With more diversity and with baby boomers aging-out of the labor market and thereby out of commuting, more residents are beginning to seek out communities that are walkable and with easy access to transit. The more we understand how people travel through our region, the more we can do to improve our infrastructure to better serve the needs of our people and the environments they live in.*

Greater Houston Community Foundation, "Understanding Houston," January 2020. [Online]. Available: <https://www.understandinghouston.org/>. [Accessed 2020 January].

- 17 The percent of affordable dwellings inside Census block groups in the top-third for transportation based on the Quality Affordable Transportation Index.
- 18 Local government regulation puts the burden to create and maintain sidewalks on property owners (i.e., government does not consistently view sidewalks as essential infrastructure). Longtime owners do not have to repair, maintain (or it's not enforced) and many earlier subdivisions did not require or offer sidewalks.
- 19 The percent of affordable dwellings inside Census block groups in the top-third for transportation based on the Quality Affordable Transportation Index.
- 20 In Figure 5, Census block groups with above average supply of affordable housing units per square mile are "high". "high" — a good thing below median gross rent are "low" — a good thing. Transportation is "high" — a good thing — if the Census block group is in the top-third based on the QATi results.
- 21 The Appendix contains more detailed information about the comparative analyses. Please note that neither LINK Houston nor the Kinder Institute are explicitly advocating for specific changes in specific communities. The intent of the information is to highlight general opportunities based on existing conditions using the best available data. People's preference and desire to create better affordable housing and transportation likely vary significantly from area to area.

- 22 LINK Houston's *Equity in Transit: 2018 Report* included a Transportation Equity Demand Index (TEDI) based on 15 indicators. That index identified four high-demand concentrations in Houston where transit improvements were justified to advance equity and were feasible to operate. Some portions of those four geographic concentrations of demand for equitable transit improvements also overlap with Housed but Disconnected areas in this study. Meaning, some areas of Houston may justify affordable transportation improvements based on both the 2018 study's TEDI findings and this study's QATi and affordable housing comparison findings. Specifically, parts of Gulfton and Sharpstown in Southwest Houston, Spring Branch, and rather large areas of southeast, east, and northeast reaches of Houston. Affordable transportation improvements should include seven-day, 15-minute frequency transit service; transit stop amenities like bus shelters and benches; high-comfort bikeways; and more and better sidewalks.

LINK Houston, "Equity in Transit: 2018 Report," LINK Houston, Houston, 2018. [Online]. Available: <https://linkhouston.org/reports-briefings/equity-in-transit-report/>.

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