Changing the Paradigm of Growth and Cities

Jay Blazek Crossley, Houston Tomorrow

Wednesday, October 28, 2015

Quality of Life

HOUSTON TOMORROW

Healthy

Quality of Life

HOUSTON TOMORROW

Healthy

Quality of Life

Happy

HOUSTON TOMORROW

Prosperous

Healthy

Quality of Life

Happy

HOUSTON TOMORROW

The world is changing

Donella Meadows, lead author of the *Limits to Growth* report, gives her paper "The Trade-Off between Agricultural Growth and Equity in the Third World" at the 1975 Woodlands Conference.

Houston

Photo: Jim Charlier, Charlier & Associates

2015 Population

by 1 mile grid cells

The 8-County Houston Region

Legend

- Bodies of Water
- 0 - 20
- 21 - 100
- 101 - 200
- 201 - 1000
- 1001 - 2000
- 2001 - 3500
- 3501 - 6000
- 6001 - 10000
- 10001 - 15000
- >15000

0 5 10 20 30 Miles

HOUSTON TOMORROW

2040 Population

by 1 mile grid cells

The 8-County Houston Region

Legend

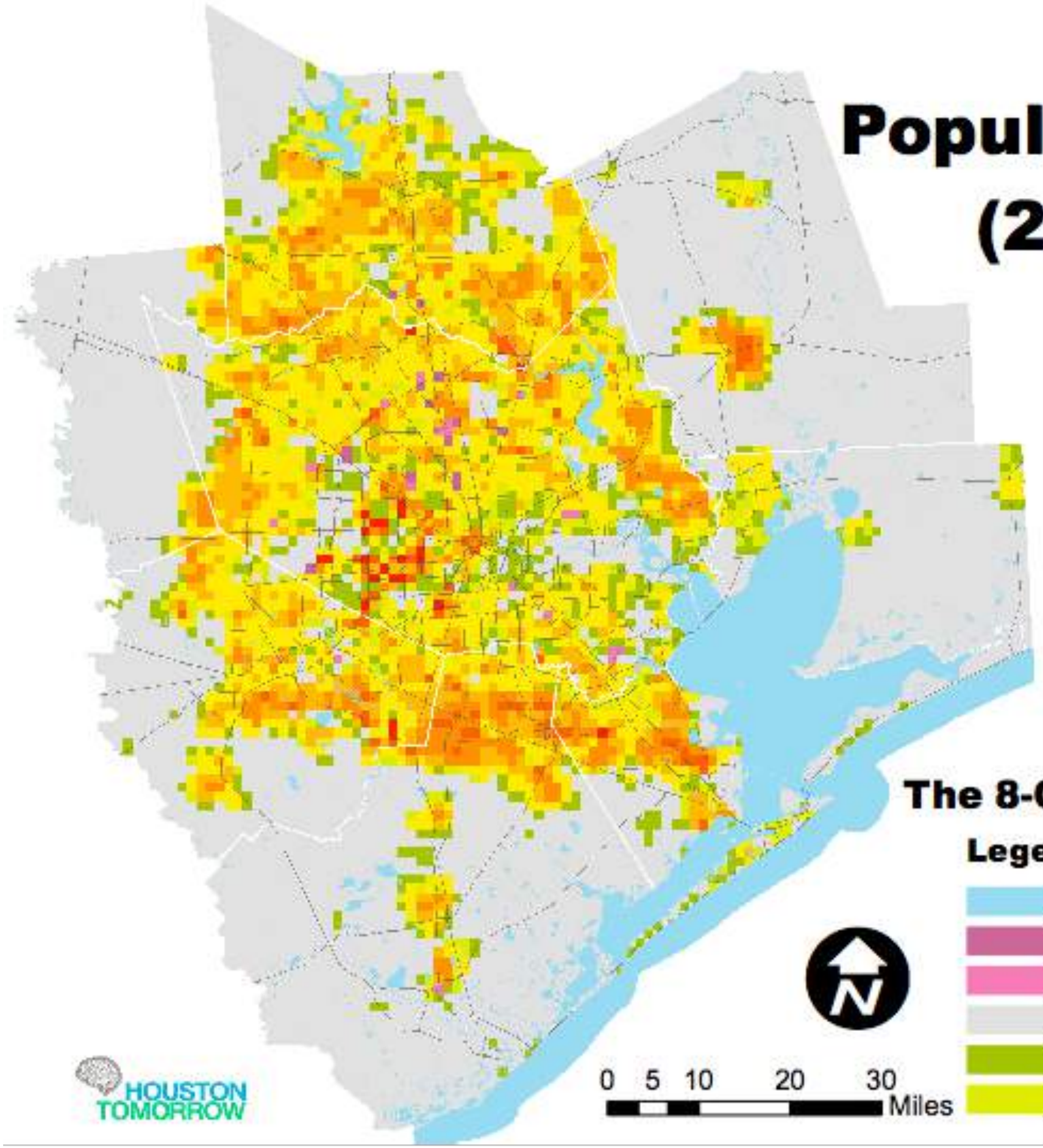
- Bodies of Water
- 0 - 20
- 21 - 100
- 101 - 200
- 201 - 1000
- 1001 - 2000
- 2001 - 3500
- 3501 - 6000
- 6001 - 10000
- 10001 - 15000
- >15000

0 5 10 20 30 Miles

HOUSTON TOMORROW

Population Growth (2015-2040)

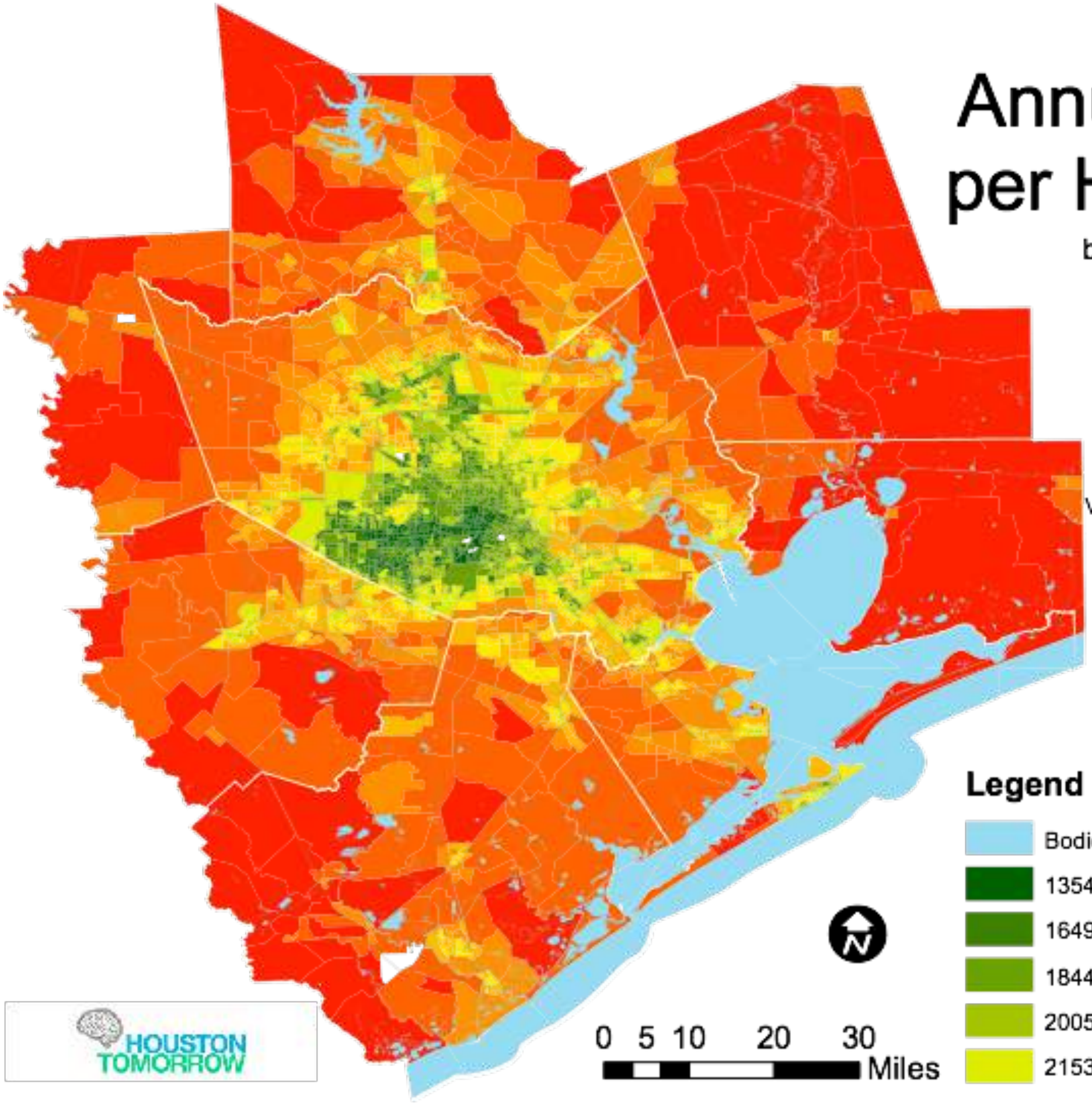
by 1 mile grid cells



Annual VMT's per Household

by Block Group

This map shows the average Annual Vehicle Miles Traveled for a household with the regional median income and average household size and number of commuters for the region.



Legend

- Bodies of Water
- 13541 - 16489
- 16490 - 18446
- 18447 - 20058
- 20059 - 21529
- 21530 - 22988
- 22989 - 24403
- 24404 - 25747
- 25748 - 27259
- 27260 - 29226
- 29227 - 33707

0 5 10 20 30 Miles

HOUSTON TOMORROW

Center for Neighborhood Technologies Data

From the Housing + Transportation Index

13 County Houston region

Rural = <1000 people per sq mi, Suburban = 1000 - 3800, Urban = >3800, Superurban = >10,000

VMT

	Total VMT	Population	Average (VMT/Pop)	Households	Average (VMT/hh)
Rural	8,625,484,208	943,700	9,140.07	314,353	27,438.85
Suburban	16,535,835,446	2,022,407	8,176.31	686,570	24,084.70
Urban	21,821,332,815	3,068,860	7,110.57	1,056,980	20,644.98
Superurban	3,922,842,738	640,475	6,124.90	224,726	17,456.11

CO2 Levels

	Total CO2	Population	Average (CO2/Pop)	Households	Average (CO2/hh)
Rural	3,591,637.90	943,700	3.81	314,353	11.43
Suburban	6,947,956.08	2,022,407	3.44	686,570	10.12
Urban	8,994,428.43	3,068,860	2.93	1,056,980	8.51
Superurban	1,541,773.45	640,475	2.41	224,726	6.86

Housing + Transportation Costs %Income*

	Total ht%inc	Population	Average (ht%inc/Pop)	Households	Average (ht%inc/hh)
Rural	17,505,741	943,700	18.55	314,353	55.69
Suburban	38,021,288	2,022,407	18.80	686,570	55.38
Urban	50,488,407	3,068,860	16.45	1,056,980	47.77
Superurban	8,713,914	640,475	13.61	224,726	38.78

Livable Houston Initiative

All changes saved in Drive

Add layer | Share

Untitled layer

Styled by description

- Rural (3)
- Suburban (3)
- Superurban (3)
- Urban (3)

Base map

Rural

Rural

Rural

Suburban

Superurban

Urban

Urban

Suburban

Superurban

Urban

Suburban

Conroe

Cleveland

Grangerland

Splendora

Trinity River National Wildlife Refuge

Moss Hill

Egypt

Magnolia

Patton Village

Pinehurst

The Woodlands

New Caney

Hardin

Hufsmith

Tomball

Porter

Kenefick

Spring

KINGWOOD

Eastgate

Dayton

Liberty

Ames

Huffman

Humble

Atascocita

Cypress

WILLOWBROOK

Bellville

Monaville

Burleigh

Moss Bluff

Crosby

Jersey Village

Sheldon

Barrett

Old River-Winfree

Mont Belvieu

Pattison

Highlands

Cove

Sealy

Brookshire

Katy

Houston

Channelview

Anahuac

Cinco Ranch

West University Place

Baytown

Mission Bend

Fulshear

Simonton

Pasadena

South Houston

La Porte

Meadows Place

Wallis

Orchard

Sugar Land

Richmond

Rosenberg

Greatwood

Pearland

Seabrook

Kemah

Lissie

East Bernard

Fresno

Friendswood

Webster

Smith Point

Sienna Plantation

Manvel

Bonus

Kendleton

Fairchilds

Alvin

Google

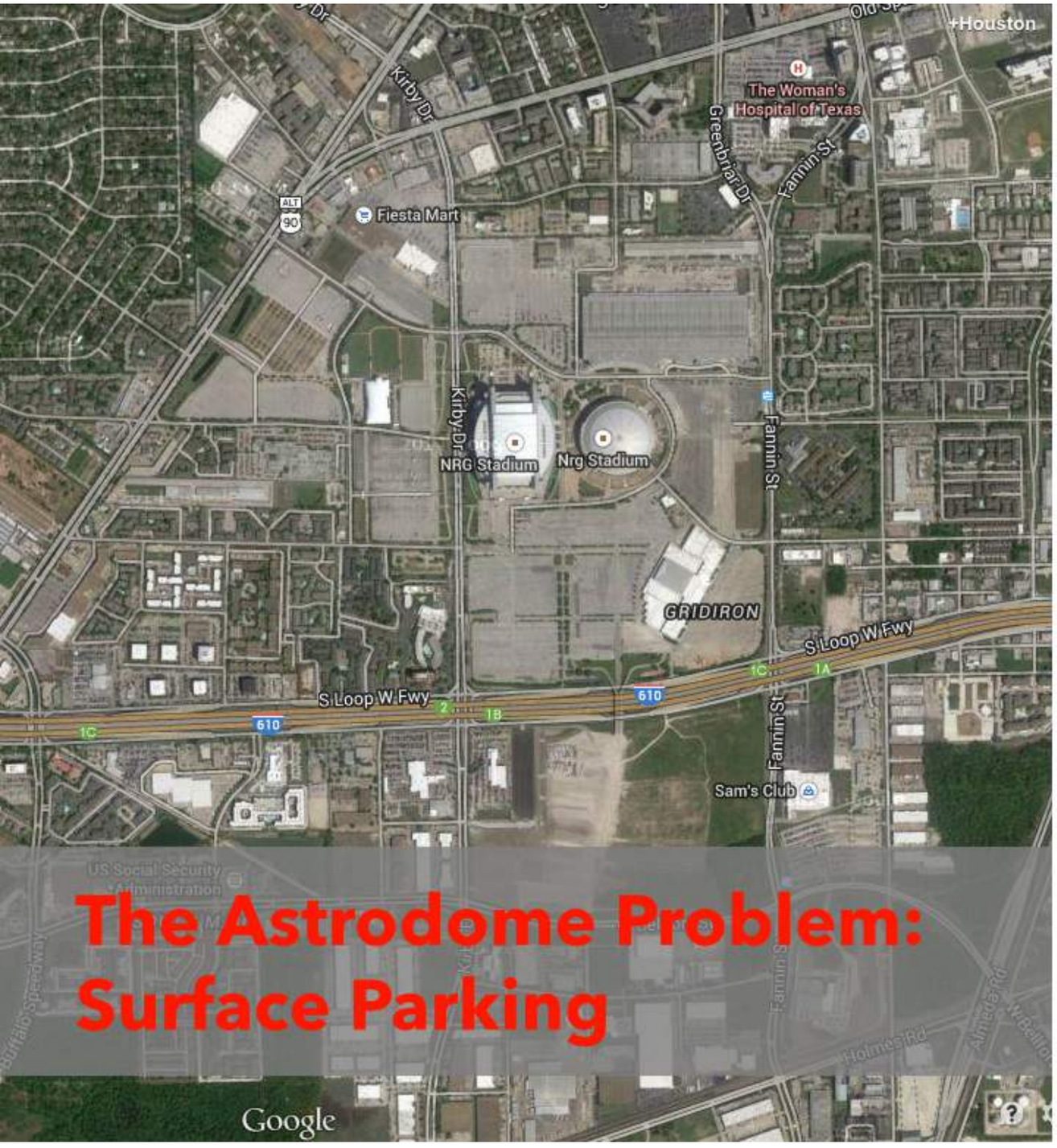
Map data ©2015 Google

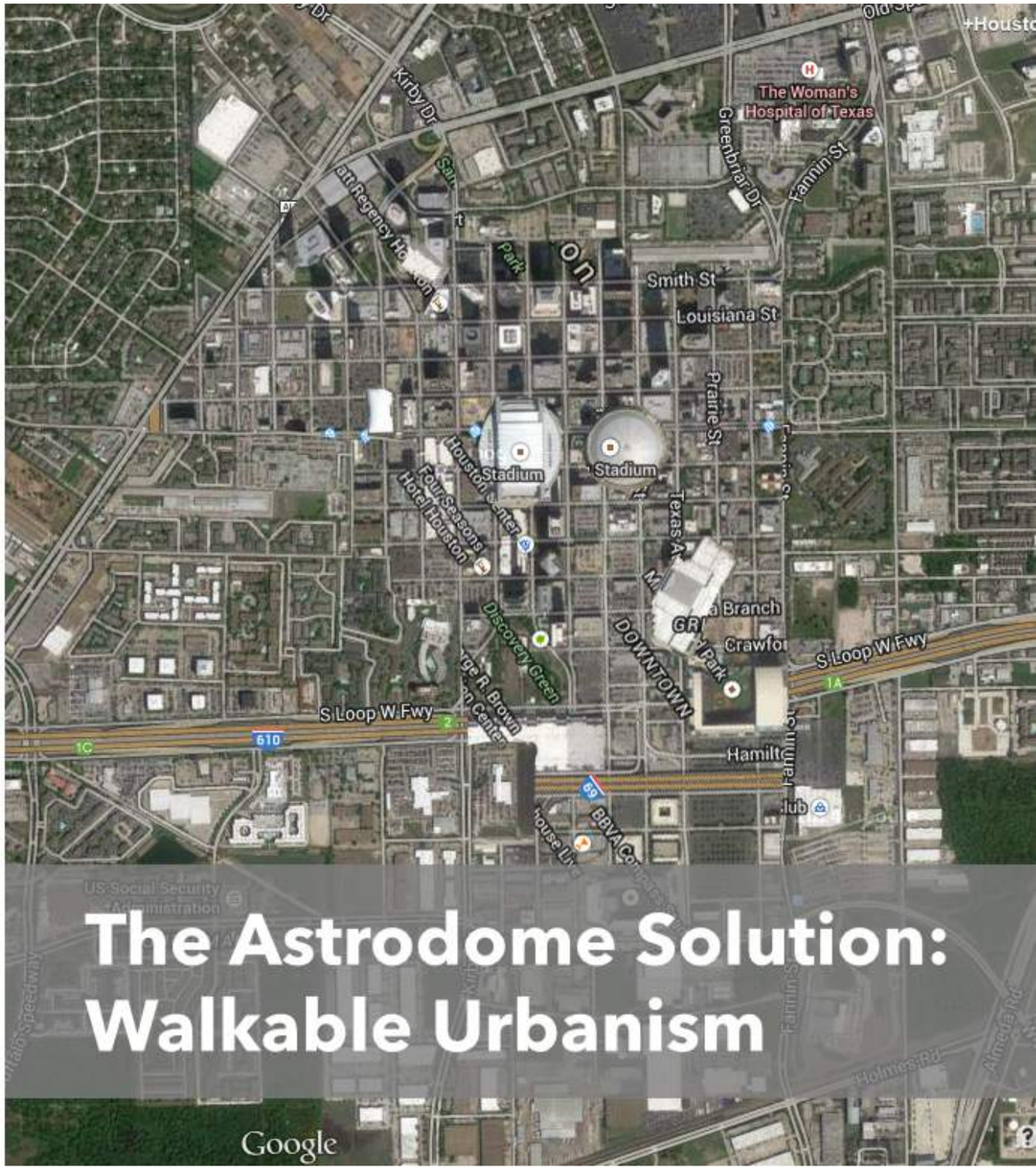
Terms

Greenspoint Mall

Paris

Bennar St
Interstate 45 Fwy HOV
Greenspoint Park Dr
Northchase Dr
Greenspoint
45
© 2010 Google
North Sam Houston


Kirby Dr
Fiesta Mart
The Woman's Hospital of Texas
Greenbriar Dr
Fannin St
NRG Stadium
Nrg Stadium
GRIDIRON
S Loop W Fwy
610
Sam's Club
The Astrodome Problem:
Surface Parking
Google


Kirby Dr
The Woman's Hospital of Texas
Greenbriar Dr
Fannin St
Smith St
Louisiana St
Prairie St
Stadium
DOWNTOWN
Discovery Green
S Loop W Fwy
610
The Astrodome Solution:
Walkable Urbanism
Google

Complete Streets

Complete Streets are safe, comfortable, and convenient for travel for everybody, regardless of age or ability - motorists, pedestrians, bicyclists and public transportation users.

What Complete Streets Is

- Context sensitive design that takes into account the safety and comfort of all users, regardless of age, ability, or mode of transport.
- A philosophy of designing, funding, and supporting streets to optimize the utility of the public right of way for the most people possible.
- A multimodal system that supports existing uses, existing communities, and reasonably plans for growth.

What Complete Streets Is Not

- A bike lane on every street
- Expensive
- Shopping experiences for the privileged.
- Difficult
- What we have done in Houston for a long time.

Thanksgiving 2014

City of Houston ADA transition plan?

"It is the policy of the City of Houston that the City will not discriminate on the basis of disability in its programs, services, or activities"

Current policy asks residents with disabilities to prove a mobility need before the city will install an adequate accessible transportation network for the particular route, unless new construction or street rebuilding is already occurring.

667

Vision Zero for the Houston region

Jay Blazek Crossley, Houston Tomorrow

August 25, 2015

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August 25, 2015

Ten largest Cities in the United States of America

		Traffic Fatalities			Per 100,000 (2014 pop)			Rank
	2014 Population	2014	2013	2012	2014	2013	2012	2013
New York City	8,491,079	269	293	275	3.1	3.5	3.2	1
Los Angeles	3,928,864		227	249		5.8	6.3	5
Chicago	2,722,389		131	145		4.8	5.3	3
Houston	**2,239,558**	**227**	**190**	**195**	**10.1**	**8.4**	**8.7**	**7**
Philadelphia	1,560,297	89	107		5.7	6.9		4
Phoenix	1,537,058	176	149		11.5	9.7		9
San Antonio	1,436,697	168	138		11.7	9.6		10
San Diego	1,381,069	82	71		5.9	5.1		6
Dallas	1,281,047	141	137		11	10.7		8
San Jose	1,015,785	52	42		5.1	4.1		2

In ranking 1 = safest city and 10 = most dangerous city

The Equation of Traffic Deaths

- Traffic Deaths / Vehicle Miles Traveled

x

- Vehicle Miles Traveled / Capita

x

- Total Population

=

- Traffic Deaths

The Equation of Traffic Deaths

- **Traffic Deaths / Vehicle Miles Traveled**

x

- Vehicle Miles Traveled / Capita

x

- Total Population

=

- Traffic Deaths

The Equation of Traffic Deaths

- Traffic Deaths / Vehicle Miles Traveled

x

- Vehicle Miles Traveled / Capita

x

- **Total Population**

=

- Traffic Deaths

The Equation of Traffic Deaths

- Traffic Deaths / Vehicle Miles Traveled

x

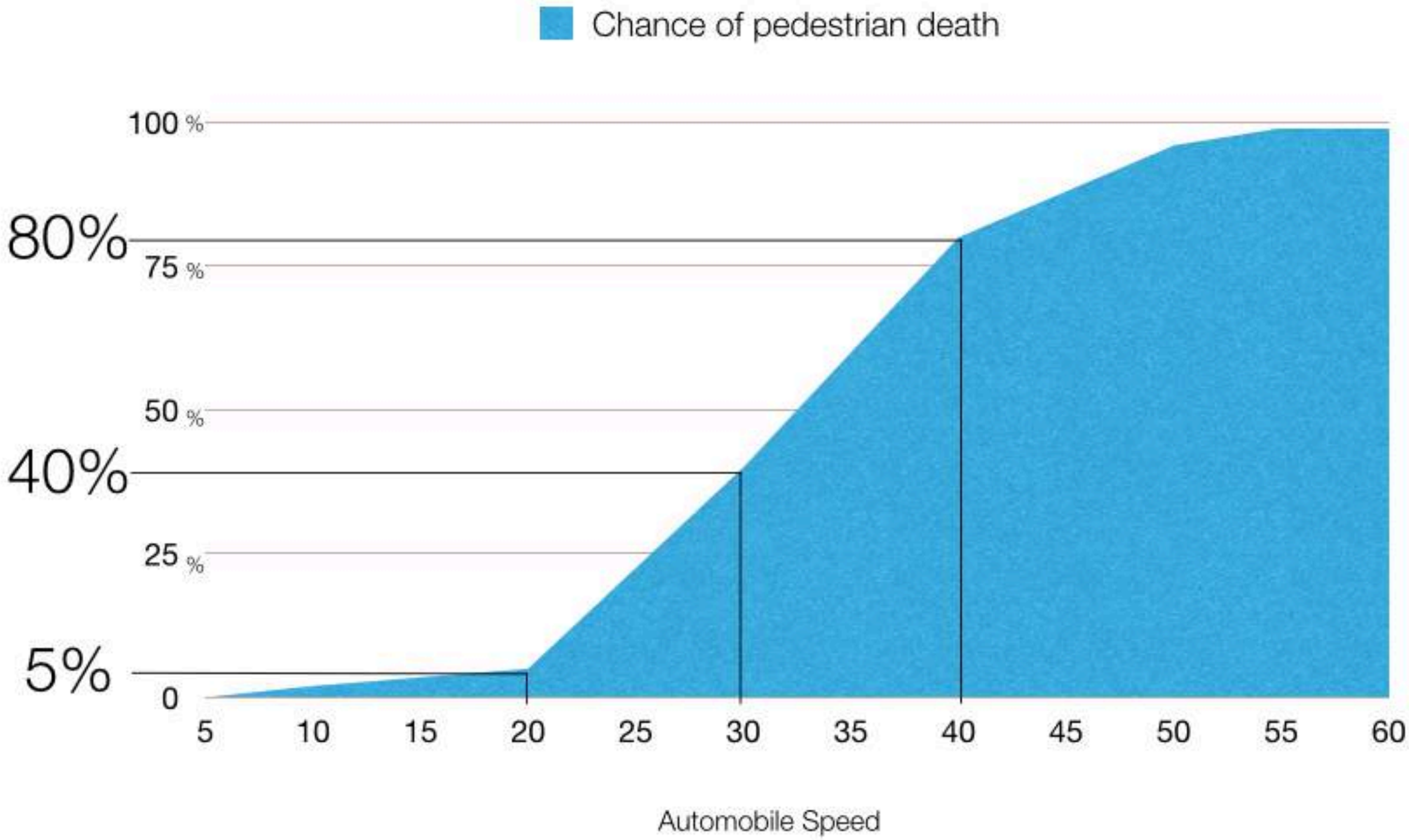
- **Vehicle Miles Traveled/Capita**

x

- Total Population

=

- Traffic Deaths


Chance of pedestrian death
100 %
80%
75 %
50 %
40%
25 %
5%
0
5
10
15
20
25
30
35
40
45
50
55
60
Automobile Speed

The Safe Neighborhood Streets Bill

Houston Tomorrow analysis on SB1717 filed by Senator Rodney Ellis

March 25, 2015 - CONFIDENTIAL DRAFT - Not for circulation

Overall summary

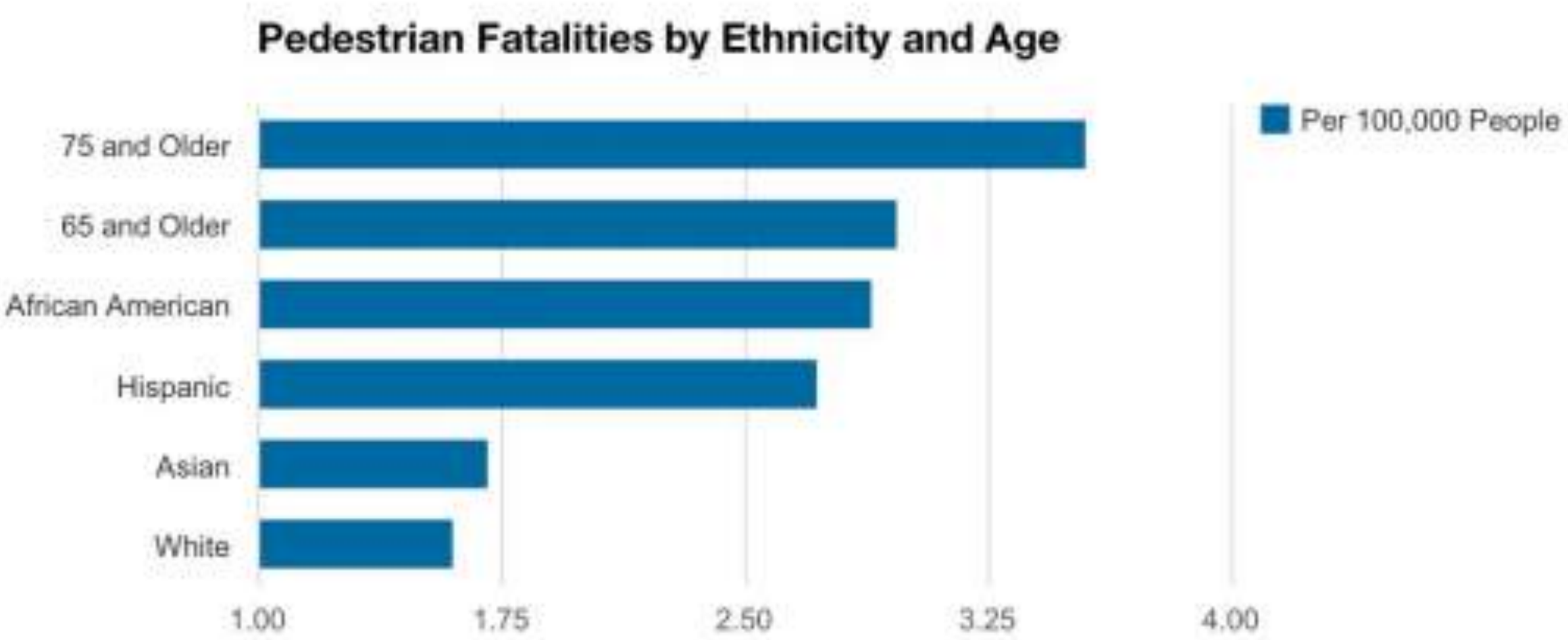
The prima facia or default speed limit on neighborhood residential streets in every corner of the Houston region should be 25 mph, instead of the current 30 mph required by state law. While the City of Houston would like to do this, current law would require posting new signs all over the city, a massive expense that wouldn't be necessary if SB 1717 becomes law.

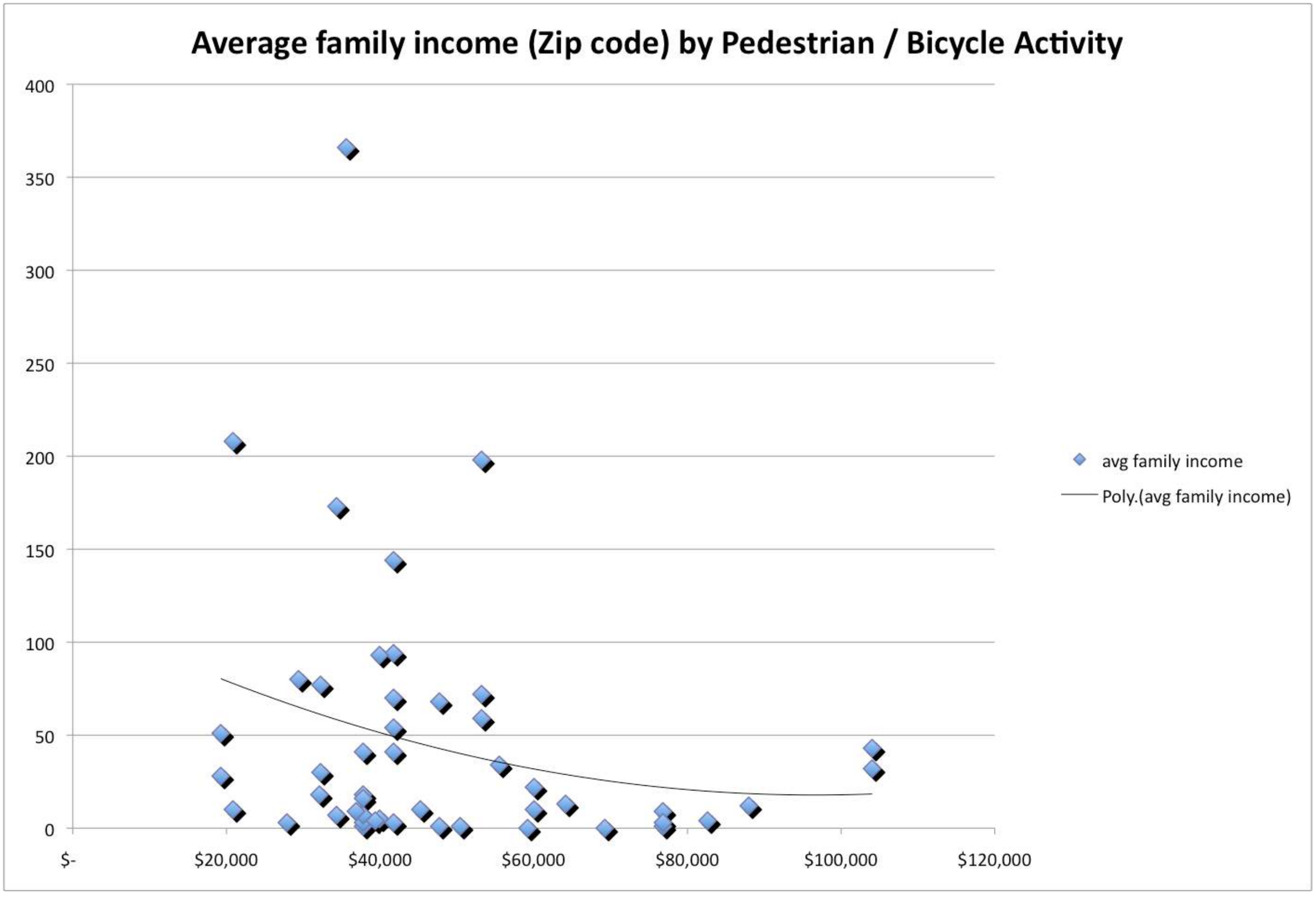
Texas cities have the option of setting lower speeds in certain areas with appropriate signage. Currently, the minimum speed is 25 mph. Along with lowering the prima facia limit from 30 to 25 mph, the legislature should also allow for cities to post signs and lower speed limits where appropriate to 20 mph. Cities could then design some streets for very slow automobile traffic, such as in a Neighborhood Greenways network or existing slow zones like West U.

A lower speed limit also allows engineers to design streets for lower speeds, encouraging people to drive their vehicles at the lower speeds intuitively.

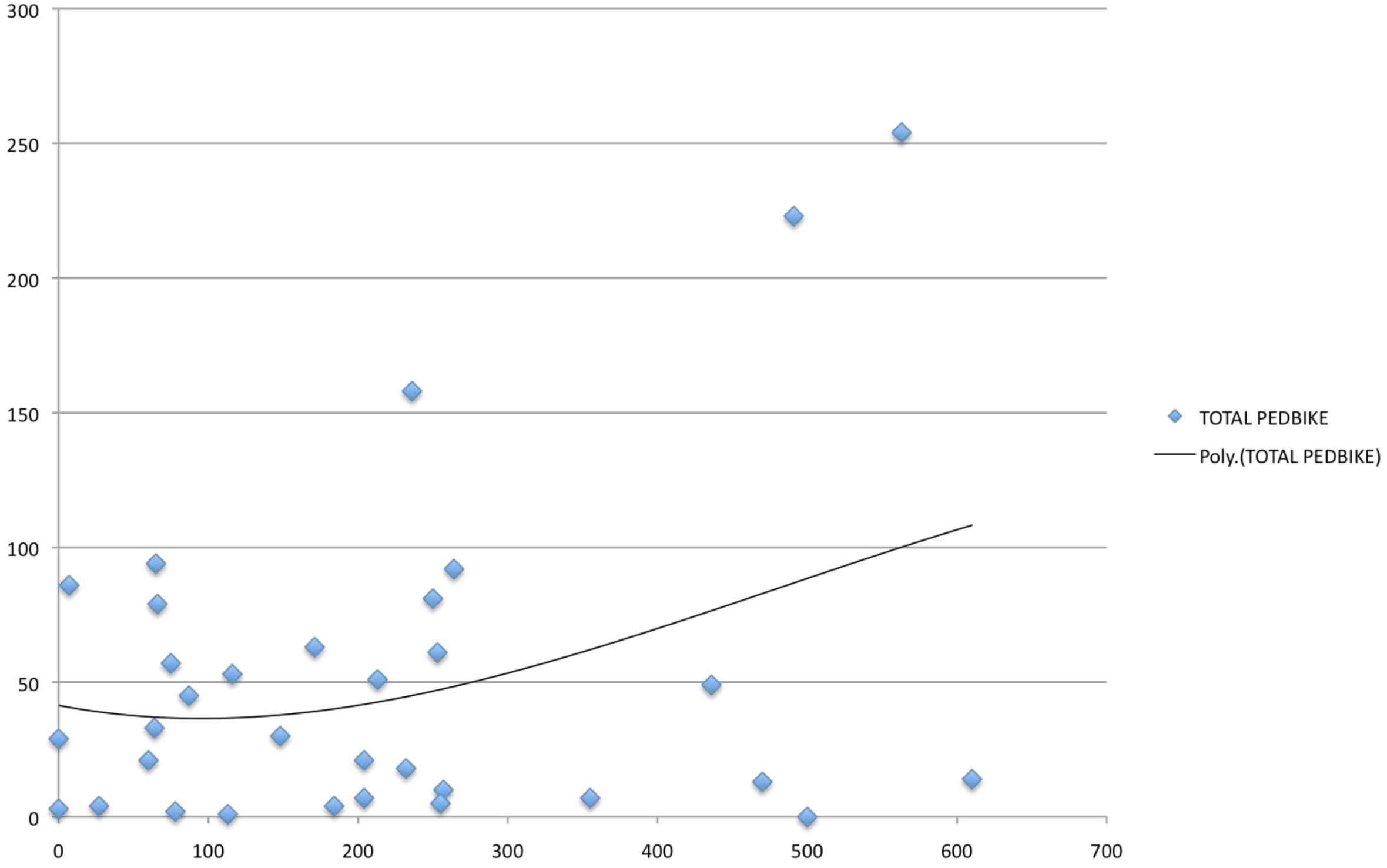
It may be appropriate for the Legislature to initially set this prima facia limit for certain cities, to then study the efficacy of the lower limit, and return to the issue for other cities and unincorporated areas in a future session.

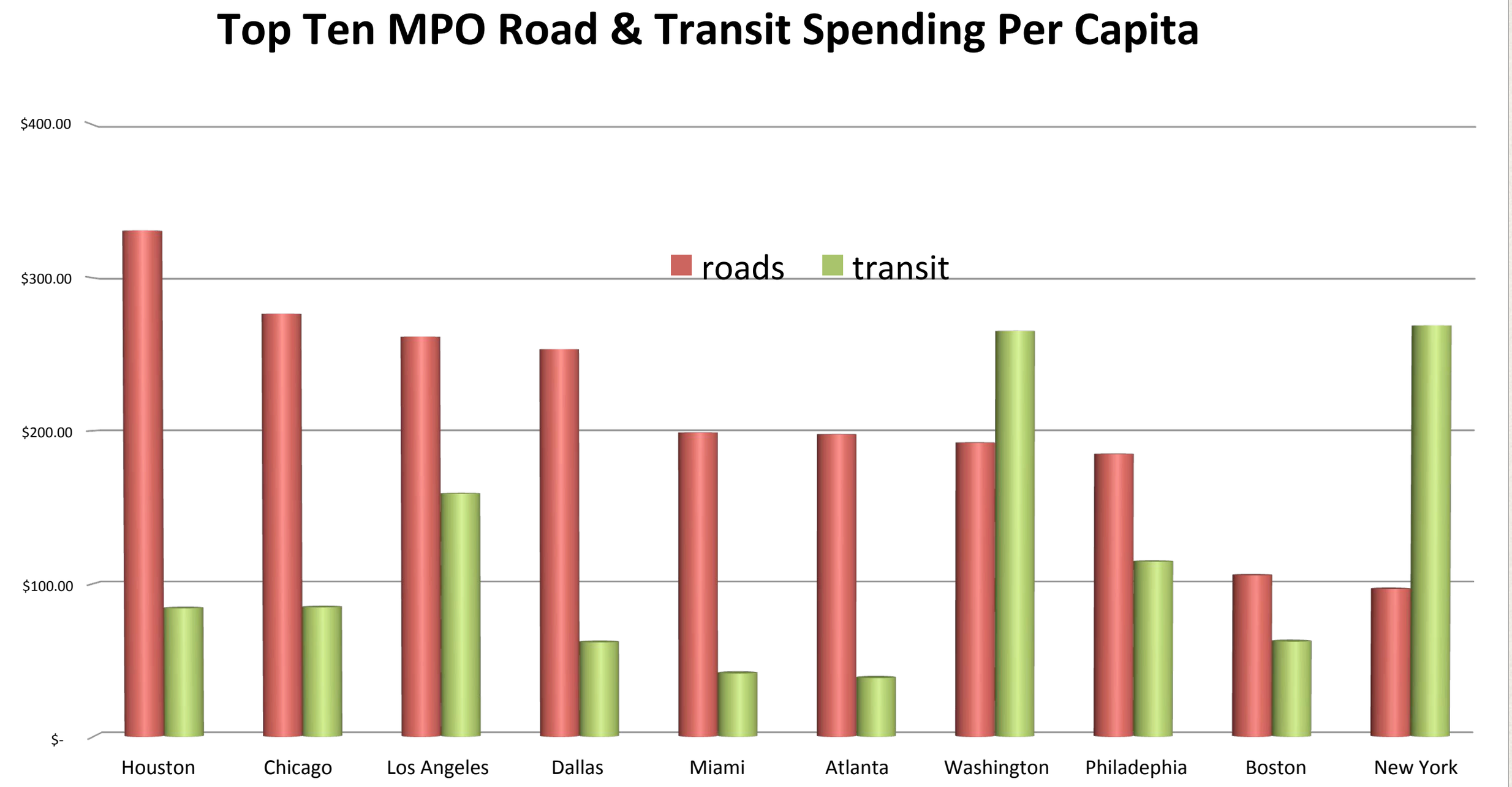
Pedestrian Safety Challenges for Communities of Color and Seniors




Average family income (Zip code) by Pedestrian / Bicycle Activity
400
350
300
250
200
150
100
50
0
$-
$20,000
$40,000
$60,000
$80,000
$100,000
$120,000
avg family income
Poly.(avg family income)

Pedestrian / Bicycle Activity vs. Auto traffic





Houston leads the nation's top cities in car spending

Both in terms of public expenditures and average personal cost

Numbers for Houston reflect 2013 - 2016 Transportation Improvement Plan expenditures per year.

HOUSTON COALITION FOR COMPLETE STREETS

Vision: Streets are safe for all users at all times throughout Houston

AARP

BikeHouston

richmondrail.org

Citizens' Transportation Coalition

HoustonTomorrow
An institute for research, education, and discussion

TEXAS A&M SYSTEM

hcil
Houston Center for Independent Living

HIVE Houston

GREATER EAST END DISTRICT

Neartown Association

TRANSITION HOUSTON

LISC Greater Houston

Neighborhood Centers Inc.

AIA Houston

HAUS PROJECT

Care for Elders
Leading ideas. Enhancing life.

Avenue
Community Development Corporation

WOW Roundabout
Washington On Westcott Roundabout Initiative, Inc.

CAN DO Houston
Building Healthy Lives

SOCIAL AGENCY

Go Neighborhoods

Better Houston
a civic action forum

Catholic Charities
of the Archdiocese of Galveston-Houston

APAC
Area Planning Advisory Council
Harris County Area Agency on Aging

BLUEPRINTHOUSTON

ASLA TEXAS

TEXAS COASTAL WATERSHED PROGRAM

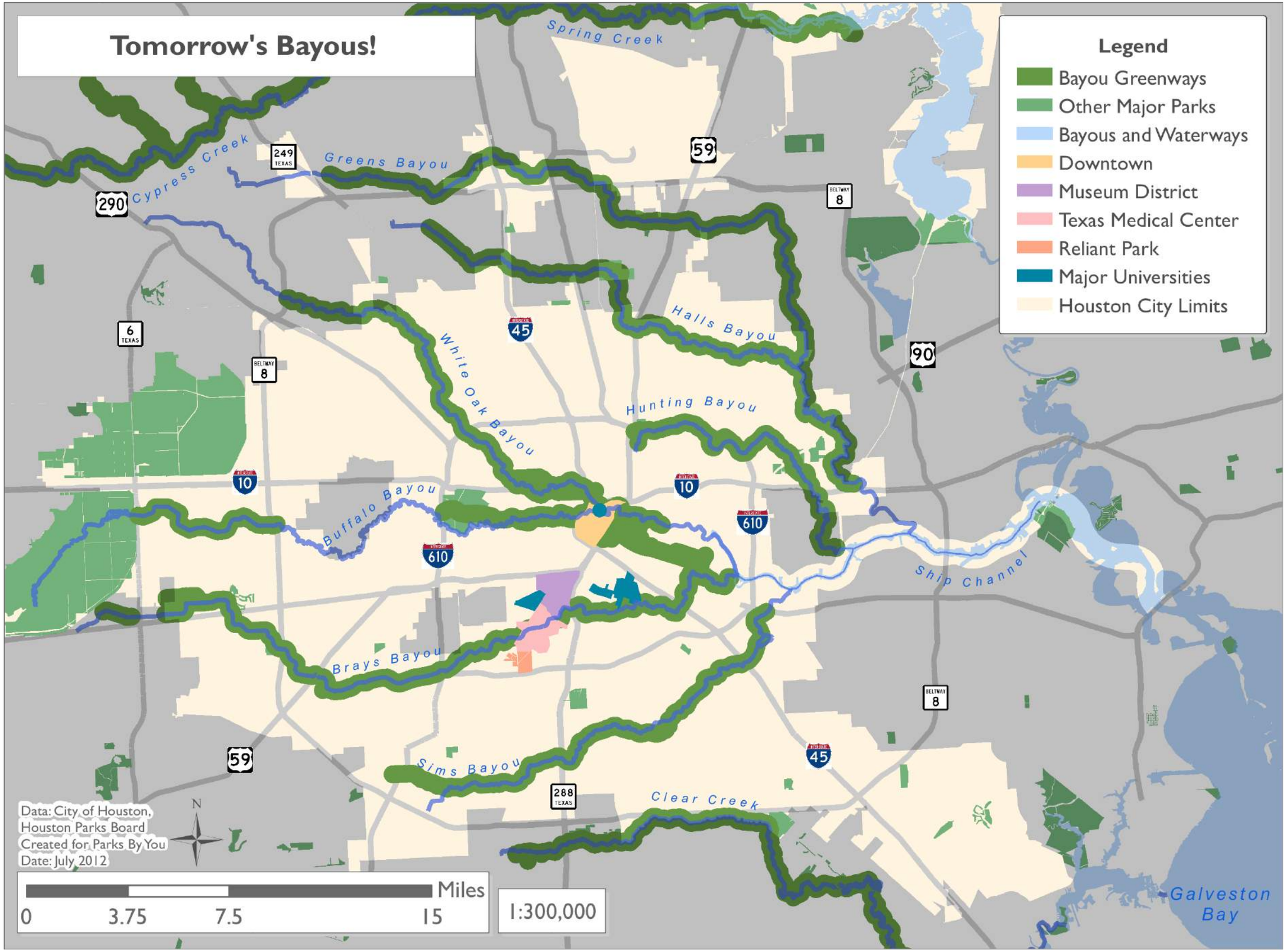
MUSEUM DISTRICT BUSINESS ALLIANCE

HOUSTON PARKS BOARD

CNU HOUSTON

ERjcc houston

Tomorrow's Bayous!



Neighborhood Greenways is a grid network of low traffic streets with simple, efficient improvements to design for 20 mph or less car speed and a complete pedestrian, bicycle, ADA network. Average costs are $250,000 per mile, several scales of magnitude less than most infrastructure projects in our region. In theory, 85% of the residents of Harris county could be connected to such a network for $400 million, optimizing our Bayou Greenways and other off road trails and taking care of serious equity concerns of investing heavily off network in ped bike infrastructure, & providing safety in every neighborhood.

Houston Neighborhood Greenways

Pilot Super Neighborhoods

The Elements of a
NEIGHBORHOOD GREENWAY

TRAFFIC CALMING DEVICES

Traffic calming devices, including speed bumps, bulb-outs, and traffic circles are provided to keep traffic at a safe speed along low-traffic residential streets. This helps to ensure that Neighborhood Greenways priorize bicyclists, pedestrians, and neighbohood residents while limiting high-speed cut-through traffic.

PEDESTRIAN IMPROVEMENTS

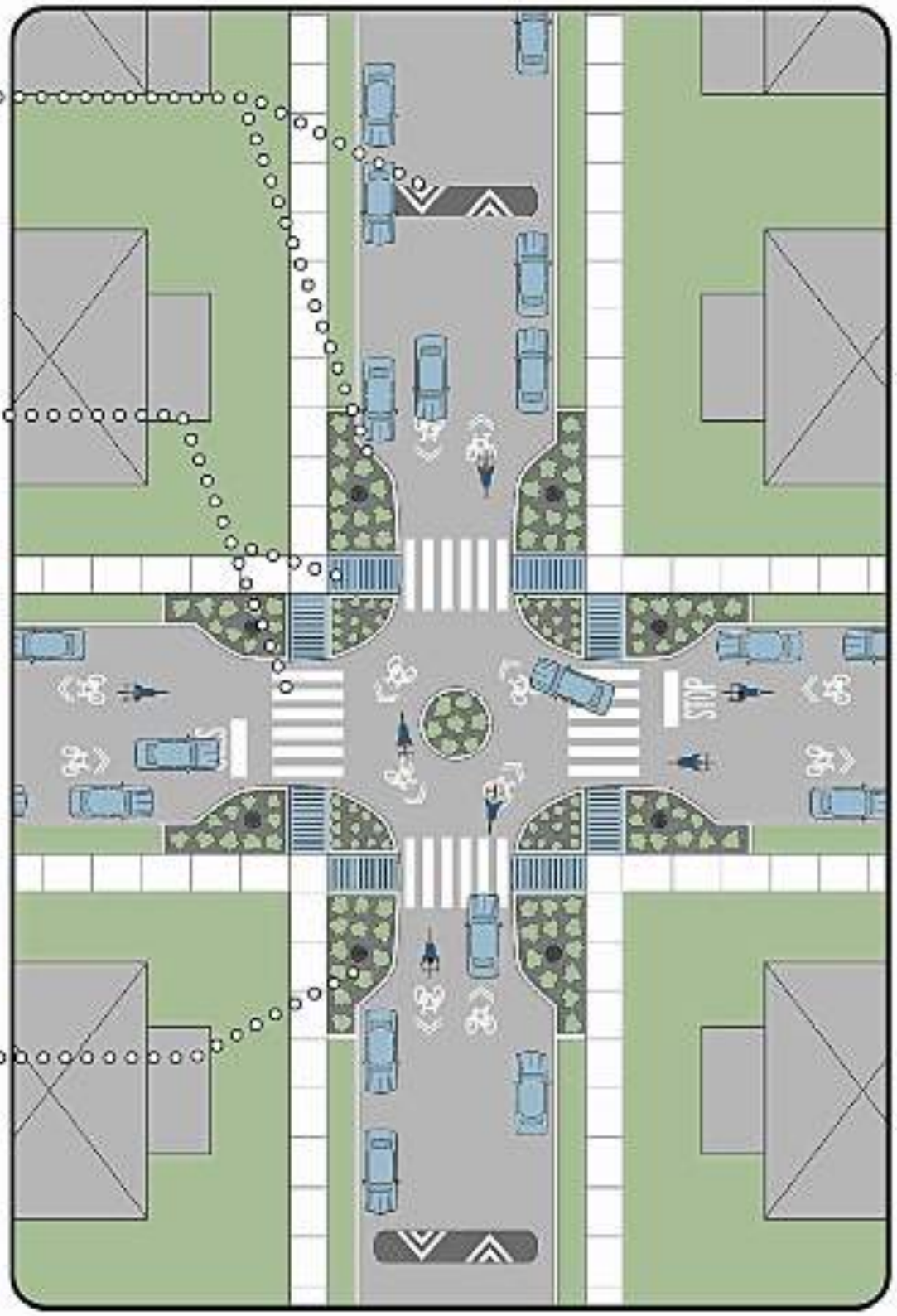
Improving the existing pedestrian infrastructure with new sidewalks, ADA ramps, high-visibility crosswalks, and shorter crossing distances helps to create a pedestrian environment that is safe for people of all ages and abilities.

SIGNED BIKE/PED. NETWORK

Clear signage is provided so that pedestrians and bicyclists are aware of the various neighborhood destinations within biking and walking distance. This wayfinding system helps to direct all users to the safest route for traveling between destinations.

STORMWATER MANAGEMENT

Stormwater-cleaning bioswales are installed within the traffic calming bulb-outs to naturally retain and treat stormwater runoff. This helps to reduce neighborhood flooding while also reducing the contanination of the natural waterways the existing stormwater system drains into.



What a Neighborhood Greenway might mean for Houston

Curb extensions at intersections, continuous good sidewalks, speed bumps, stop sign rerouting to allow continuous bicycling, way finding signs, sharrows, safe crossings at major streets, lower speed limit

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Developing the two mile Harold Neighborhood Greenway in Neartown would cost around $500,000

Rail-supportive areas

Central Business District

Uptown/Galleria

Greenway

Universities

Gulfton

Med Center

Rail-supportive areas

45,000 weekday boardings
7.5 miles long

Central Business District

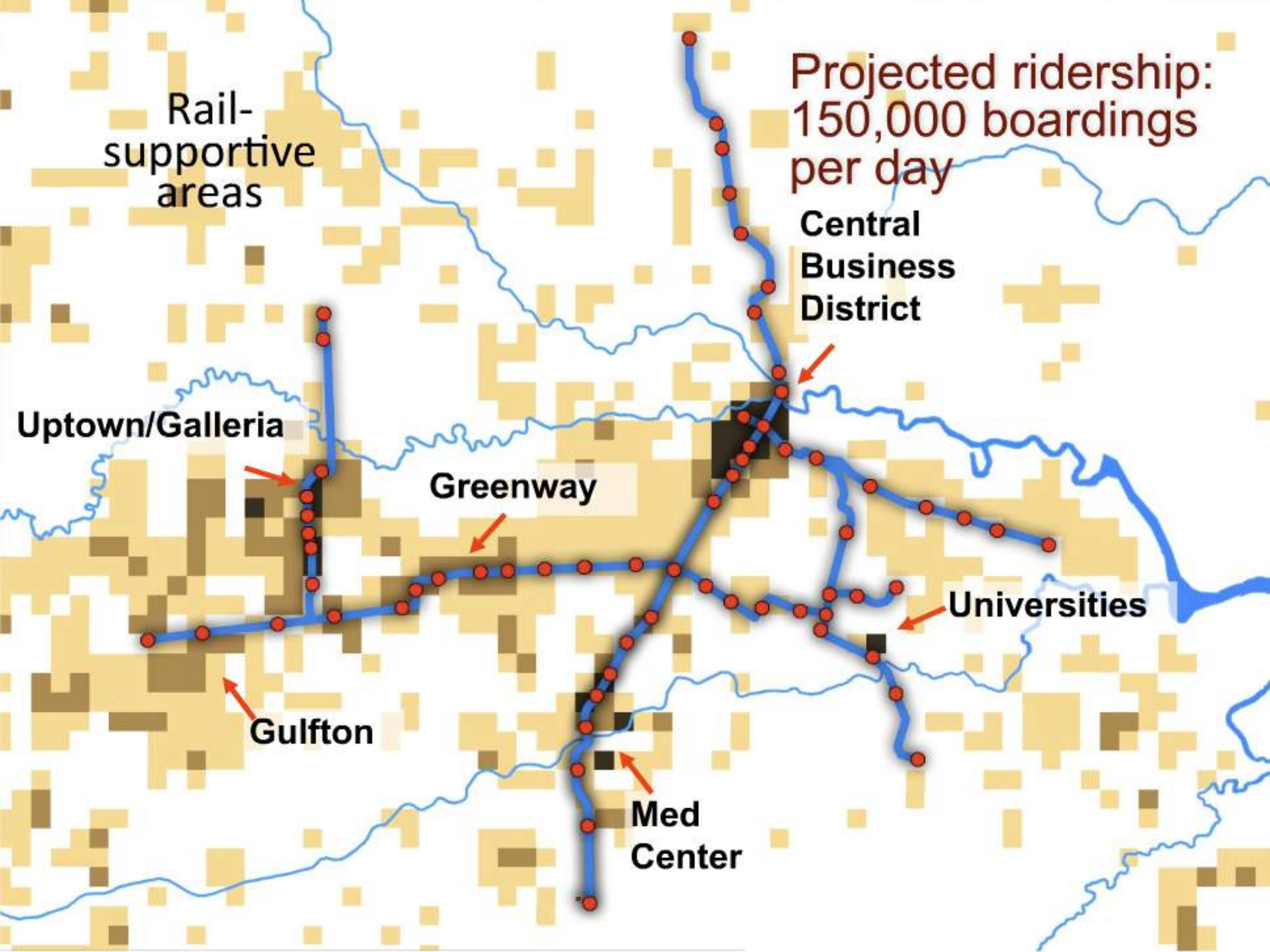
Uptown/Galleria

Greenway

Universities

Gulfton

Med Center


Rail-supportive areas
Projected ridership: 150,000 boardings per day
Central Business District
Uptown/Galleria
Greenway
Universities
Gulfton
Med Center

Top 25 job centers in the 13-county Houston region

- 5-mile radius
- 10-mile radius
- 15-mile radius

5 miles:
37% of all residents
63% of all jobs
All on 4% of the land

10 miles:
71% of all residents
85% of all jobs
10% of land area

15 miles:
88% of all residents
94% of all jobs

Only 6% of the jobs and 12% of the people are outside the purple area

HOUSTON TOMORROW

Population and Jobs within 1, 5, 10, 15, 20 miles of the Top 25 Job Centers in the Houston region

75% of all jobs in the 8-county region

59% of all residents live within 5 miles

Legend

- Top 25 Job Centers
- Harris County
- Counties
- MajorRoads
- Water
- 1 mile
- 5 miles
- 10 miles
- 15 miles
- 20 miles

Population and Jobs within 1, 5, 10, 15, 20 miles of the Top 25 Job Centers in the Houston region

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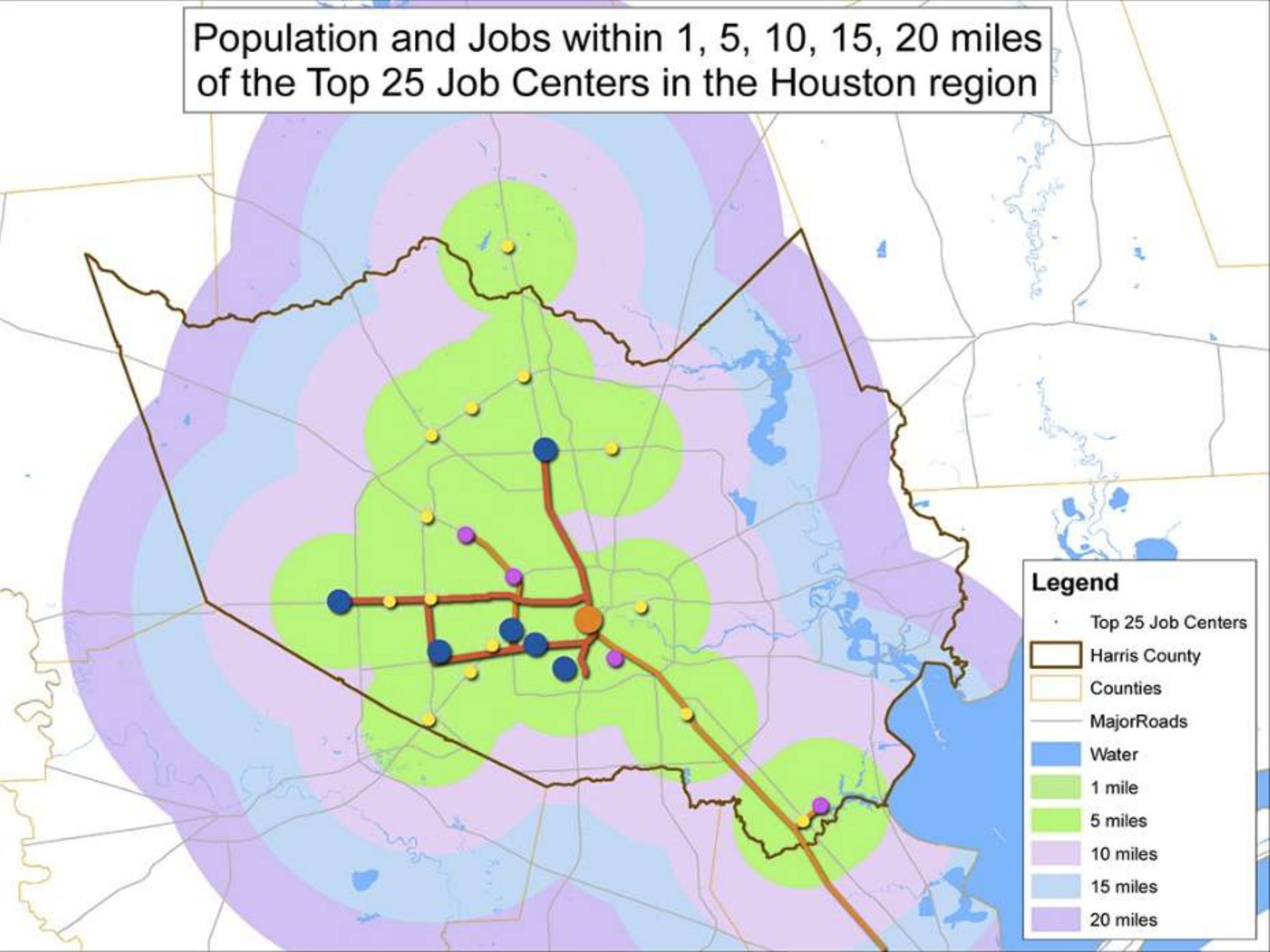

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Legend

- Top 25 Job Centers
- Harris County
- Counties
- MajorRoads
- Water
- 1 mile
- 5 miles
- 10 miles
- 15 miles
- 20 miles

The concept:

multiple centers organized into collaborative economic clusters that form sustainable networks of access, mobility, and green infrastructure

Strategies:

- **Protect the ecostructure**
- **Enhance regional connections**

Dallas/Ft. Worth

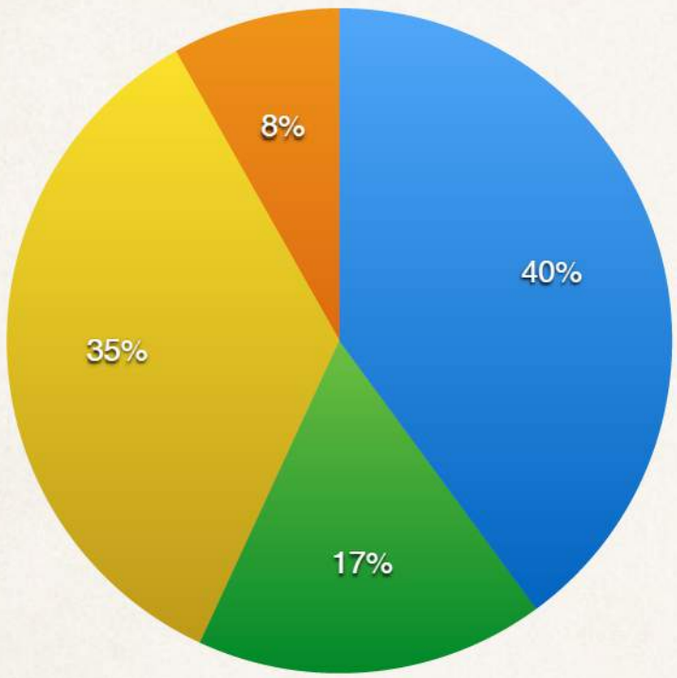
Austin

Houston

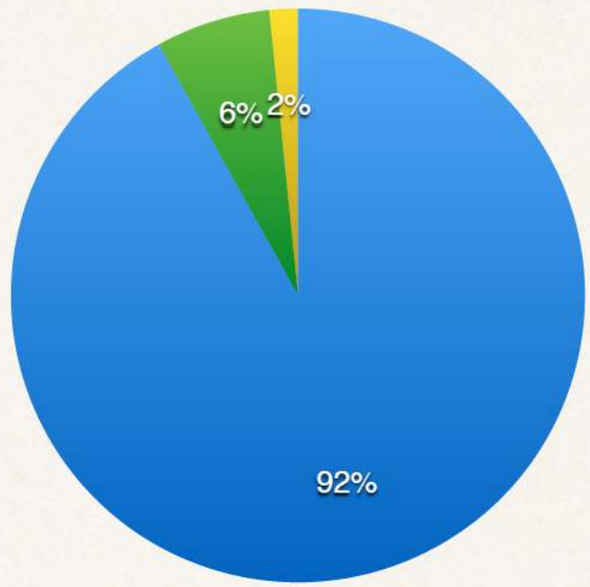
San Antonio

America 2050

6.3 million people of the 13-County Houston region



65 County Judges and Commissioners of the 13-County Houston region



3 Female

62 Male

- White
- Black
- Hispanic
- Asian & Other

65 County Judges and Commissioners of the Houston region

57 white males, 3 white females, 4 black males, 1 hispanic man

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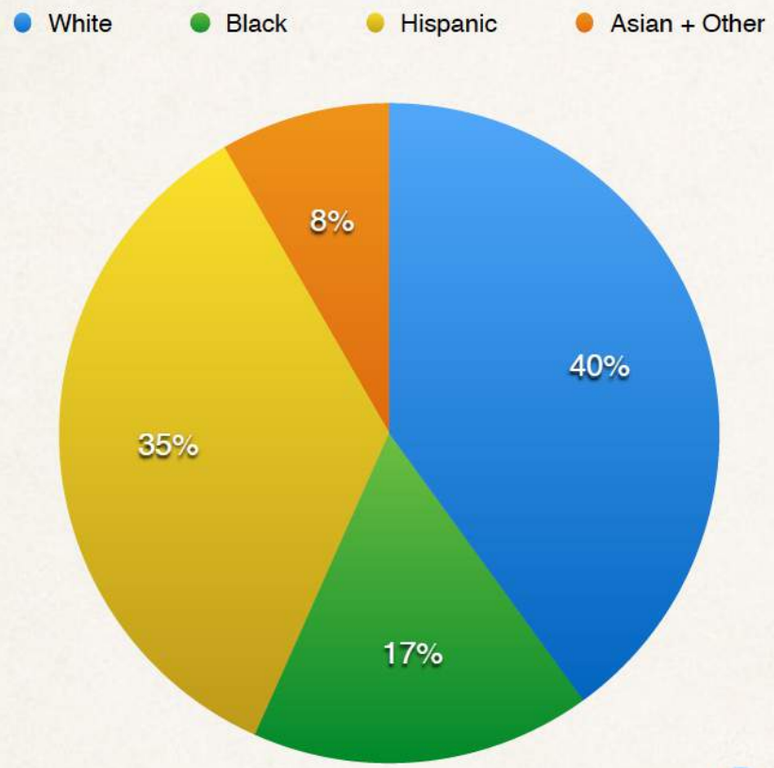
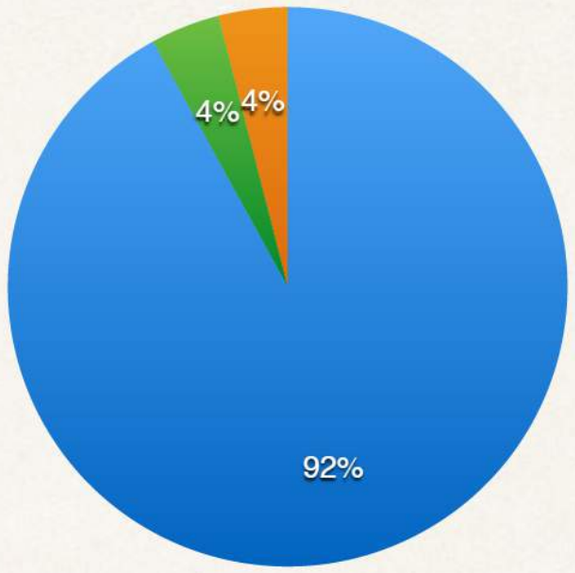
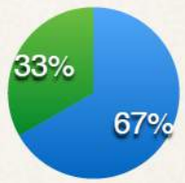
2.4 million white people, 2.1 million latino people, 1 million black people, 1/2 million asian + other people, slight majority female







3 Female

25 Male

H-GAC Transportation Policy Council

23 White men, 1 African American man, 1 Indian American man, 2 White women, 1 Latina woman

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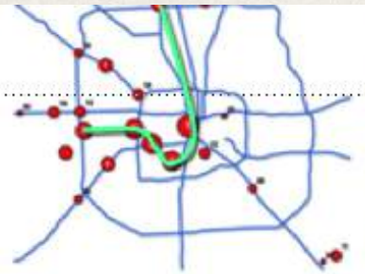
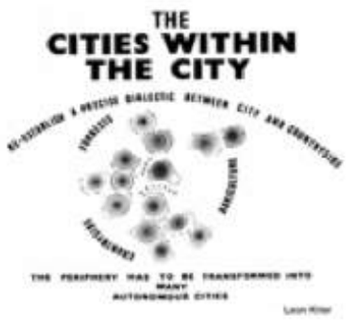
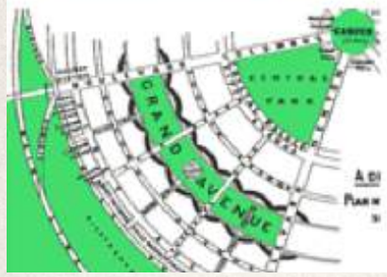
2.4 million white people, 2.1 million latino people, 1 million black people, 1/2 million asian + other people, slight majority female







Houston Tomorrow

Our mission is to improve the quality of life for all the people of the Houston region

You're into that. Sign up for newsletter at houstontomorrow.org. We need your help at donate.houstontomorrow.org