

# THE VISION

Published by the Houston-Galveston Area Council Transportation Department

Spring 2007

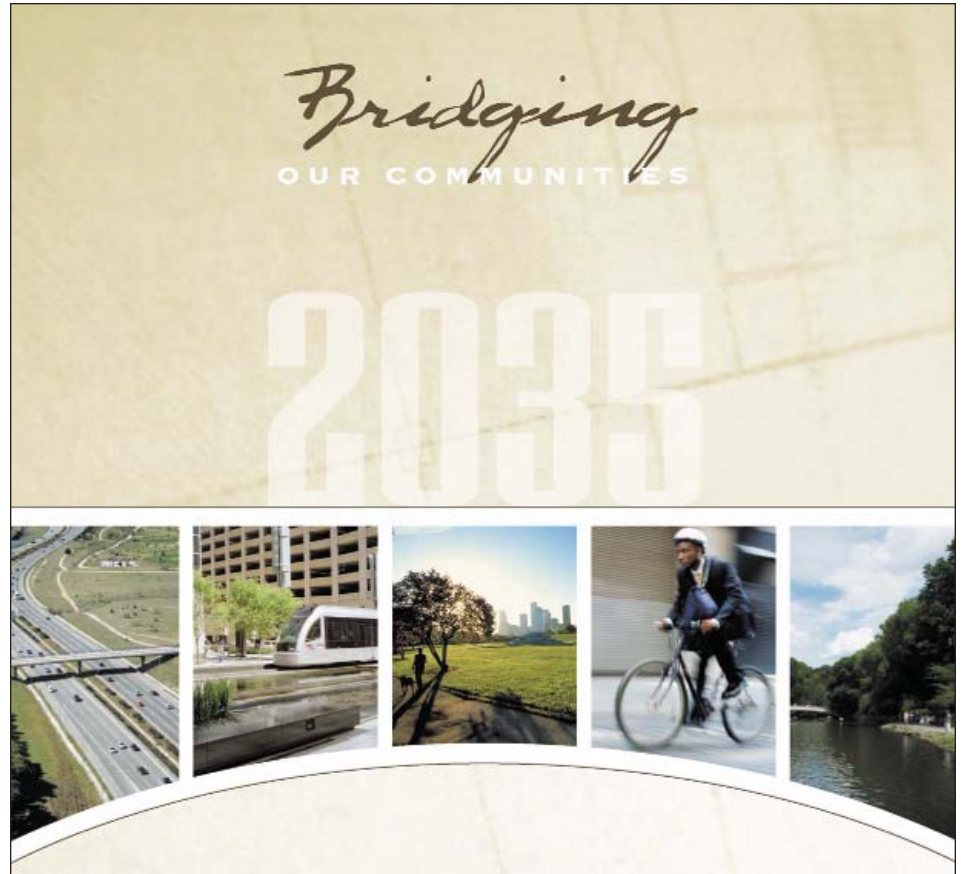
## 2035 Regional Transportation Plan

### Looking at Land Use

**O**ur region is going to add another 3.5 million residents by 2035, nearly doubling our current population. Yet, our roads and highways are already clogged, our air quality is consistently bad, and our green environment is disappearing. How are we to improve our living conditions while making room for all the newcomers? Answering these questions is what the 2035 RTP is all about.

Many of our transportation problems revolve around land use—not only how we use land, but where the different uses are found. Houston (and its residents) had grown up with the idea that it didn't matter how far away one lived from work or school or shopping. Since the 1950s, we've added highways and toll roads to our mix of roadways to let people move around. When congestion levels got bad, we simply build more roads.

For many years this response was fine, but today it no longer works. Even if we could afford to build as many as we needed, we could not build them fast enough. Besides, many of these needed roads are in areas already developed, where expansion is costlier and local opposition is strong.



Graphic: H-GAC

### Access Versus Mobility

In 2005, we asked people from around the region to share their ideas on how and where to grow (Envision Houston Region). Most participants said that along with building traditional subdivisions it was important to keep development out of flood plains, protect green areas and open spaces, and build new communities and retrofit existing ones so that living, working, and shopping are within walking distance from each other.

It turns out that many small changes in land use, such as mixing uses and

higher densities, can have large payoffs for transportation, the environment, and air quality. Nearly all participants included the idea that some areas should be more concentrated/denser where people can walk to shopping or work or be able to take good public transit to reach their destination. Of course not everyone will want to live in such an area, but by giving those who like it the option to do so, we are all better off.

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# 2035 RTP

## Looking at Land Use

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Access is the ability to reach your destination, mobility is the ability to move. The solution to our region's traffic woes is to keep access high while needing less mobility. If our distances are shorter, we can have more movement on foot, by trains and buses, or even carpools. That will keep more cars off the streets and from polluting the air. Livable Centers is a new initiative to attract projects that capitalize on the benefits of dense, mixed land uses with high transportation benefits.

### Mode Choice

While it is feasible to walk from downtown Houston to Midtown, very few people do so because it is more convenient to make that trip by car. Similarly, many would-be drivers take a commuter bus to work because it is more convenient than driving alone in rush hour. Mode choice is the ability to select



between two or more ways to travel conveniently to your destination, such as by foot, bus, boat, car, bicycle, or train.

Land use plays a big part in determining which mode choices are available. The low densities and single uses of traditional suburbs are less convenient to pedestrians or bus companies. In contrast, higher densities and mixed land uses tend to make other modes as convenient (if not more so) than the car. By connecting areas of high density with each other via transit helps many people access their destinations in a convenient and environmentally-friendly way.

METRO Solutions is the voter approved initiative to create new transit options in portions of the Houston region. Phase II is the next step in



Photos: H-GAC

expanding a rail and guided rapid transit backbone to the central core of the region. Transit stations typically attract higher densities and mixed land uses, and as such, it plays a large role in furthering the goals of the 2035 RTP.

### Other Issues

Through its seaports and airports, the Houston region captures a large portion of the nation's freight movement. Forecasts by the local shipping industry predict a 300% increase in volume of freight and goods movement through the region. Railroads are near or already at their capacity, and options of using freight rail lines for commuter

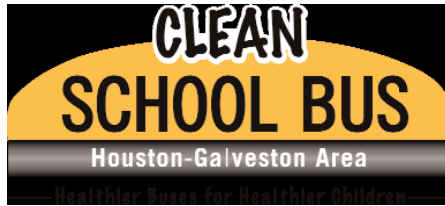


purposes would reduce capacities further. Truck lanes and restricted hours of truck operation on local highways are attempts to create safe coexistence between cars and trucks. Reducing the

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## Houston-Galveston Clean School Bus Program Fresh Air Friday

One of the newest programs at H-GAC is the Houston-Galveston Clean School Bus Program. Clean School Bus is part of the Houston-Galveston Area Emission Reduction Credit Organization (AERCO), a 501(c)3 non-profit entity housed at H-GAC.



The mission of the Clean School Bus program is to protect the health of children and their communities by helping school districts retrofit or replace aging, polluting school buses with newer, cleaner transportation technologies and to promote no-idling policies.

With more than 8,000 school buses in the Houston-Galveston area, the Clean School Bus program aims to reduce children's exposure to harmful diesel exhaust and to reduce the amount of air pollution created by diesel school buses. The program works through partners from business, education, transportation, and public health organizations to reach its mission and goals.

The Clean School Bus program serves the following counties: Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller. These counties are currently in non-attainment for air quality for air pollutant ozone.

Funding is available for school districts and private schools that apply. The Clean School Bus program provides funding through private party

donations and Supplemental Environmental Project funds (SEPs). In addition, applicants for these funds can apply to the Clean Vehicles program and work with H-GAC Buy to purchase new 2007 school buses or retrofit technology.

For more information, please visit [www.cleanschoolbushouston.org](http://www.cleanschoolbushouston.org) or contact Stephanie Lee at 713-993-4581.



On Friday, April 13, 2007 from 11 a.m. – 1 p.m., H-GAC will present the fourth annual Fresh Air Friday. The event features an outdoor picnic and concert to promote clean air programs and educate Houstonians on ways to reduce traffic congestion and improve mobility and air quality.

Fresh Air Friday will bring Houstonians out of their offices and into Hermann Square Park (behind City Hall) to enjoy fresh air, food from downtown restaurants, prize giveaways, and live music, featuring The Lost Boys and The Zydeco Dots. The event will showcase clean air programs that promote the use of alternative fuels, clean-engine technology and commute alternatives.

For more information, visit [www.cleanairaction.org](http://www.cleanairaction.org).

### What's Next?

#### SH 6 Access Management Study - Open Houses

- April 3, 2007 - Wolfe Elementary, 502 Addicks-Howell Road, Houston, TX 77079
- April 5, 2007 - Elkins High, 7007 Knights Ct., Missouri City, TX 77459

#### Fresh Air Friday: A Picnic in the Park

- April 13, 2007 - Herman Square park, Houston, TX 77002

#### Advancing the Choice

- June 27, 2007 - Stafford Center, 10505 Cash Rd., Stafford, TX 77477

#### Commute Solutions Leadership Awards & Luncheon

- August, 2007 (TBA) - Downtown Aquarium, 401 Bagby St., Houston, TX 77002

#### Regional Safety Conference - 2007

- October 18, 2007 - University of Houston Hilton, 4800 Calhoun St., Houston, TX 77204

For more information visit [www.h-gac.com/transportation](http://www.h-gac.com/transportation)

## Subregional Planning and Visioning

The eight-county Houston-Galveston region will experience a surge of over 3 million new residents over the next 30 years, with one million coming in the next decade. One consequence of adding an additional three million residents is that vehicle travel will almost double. Transported goods are expected to triple over the next 30 years.

Although transportation investments will be great, they will not be sufficient to keep pace with demand. Given the region's projected growth pattern, with dispersed housing and jobs concentrated in a few activity centers, congestion will surely worsen on the region's highways and principal arterials. As congestion rises in rapidly growing suburban areas, local governments will struggle to find the resources to finance new facilities, expand existing ones and maintain what is already on the ground.

This scenario points to the need for a coordinated approach to planning for future growth and development that links land use and transportation plans. It is particularly important in emerging activity centers where there is an opportunity to lay the groundwork for future plans and policies that will result in a more efficient transportation system and communities that reflect the goals of local residents. Later this year, the Houston-Galveston Area Council will launch a program to assist interested local governments in developing plans and policies to respond to forecasted future growth. The program will also work with local governments to develop strategies

and tools for realizing the local vision and to coordinate these efforts among adjacent regions.

This planning proposal continues the work of Envision Houston Region, an innovative public outreach effort designed to promote dialogue between the public and policymakers regarding the future growth and development of

down" deeper into these values and explore the implications on the transportation system. This work will in turn be used in the development of the regional transportation plan.

Envision Houston Region was an excellent starting point for regional dialogue regarding land use and transportation issues. The subregional



Photos: H-GAC

the eight-county Houston-Galveston region. One of the outcomes of the Envision Houston Region outreach effort was the development of a set of "shared" values or common themes derived from the public workshops. These values included the desire for housing and jobs that are closer together, more travel options, and distinct town centers. These values provide the framework of the regional transportation plan. The proposed subregional planning effort will "drill

analysis is the next step in the process. This work will lead to the development of locally derived and endorsed plans to address growth. It will put local governments and their citizens in the driver's seat in mapping out what they want for their communities and what they will look like in 30 years. The anticipated result is plans that address local growth issues and transportation investments that result in reduced congestion, more travel alternatives and improved air quality.

## 2035 Regional Growth Forecast

The H-GAC Forecasting Group has developed the 2035 Regional Growth Forecast of population and employment. Over 5 million people live in the Houston-Galveston region today. By 2035 the region is forecasted to grow to 8.8 million people and more than 4 million jobs. Accommodating such growth is impossible without comprehensive regional transportation planning.

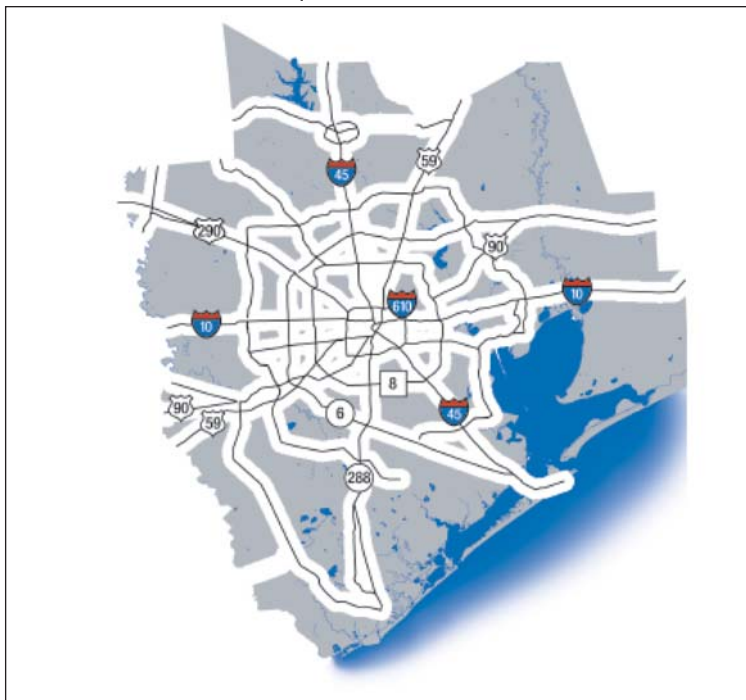
Historically, the development in the region has been tied to major transportation routes. This trend is expected to continue: by 2035, 80% of residents and 92% of jobs will be located within two

miles of the nearest highway. Compared with 2005, this represents a slight decrease in the percentage for population and practically no for employment.

The 2035 Regional Growth Forecast will be available soon at [www.h-gac.com/forecast](http://www.h-gac.com/forecast). For more information contact [forecast@h-gac.com](mailto:forecast@h-gac.com).



Major Corridors 2035



Graphic: H-GAC

Defined Area	Population (1,000s)		Employment (1,000s)	
	2005	2035	2005	2035
Inside 2-mile buffer	4,373	6,932	2,367	3,730
	84%	80%	93%	92%
Outside 2-mile buffer	841	1,752	175	340
	16%	20%	7%	8%
Total	5,214	8,684	2,542	4,069

## Regional Telework Program

H-GAC's Commute Solutions Program in partnership with the Energy Corridor Management District hosted the IH-10 Energy Corridor Telework Roundtable and luncheon on March 22nd to address some of these traffic issues. The event sponsored by the Energy Corridor Management District offered teleworking as a solution to human resources professionals of employers located in the Energy Corridor area. Teleworking refers to working at home or another location on a full or part time basis.

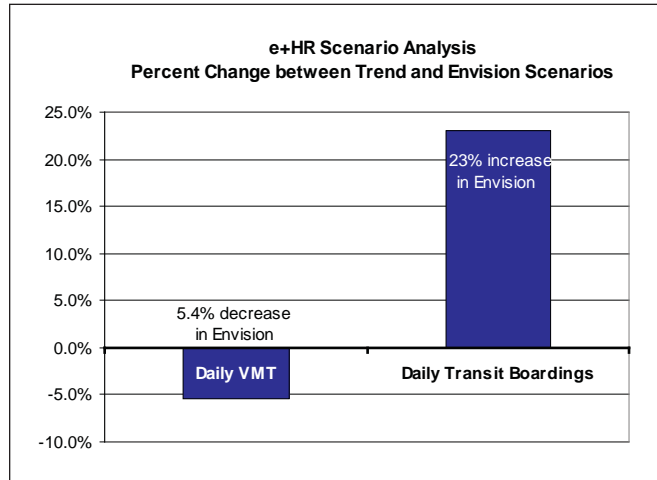
Guest Speaker, Kay Carr, Senior Vice President of Information Services and Chief Information Officer at St. Luke's Episcopal Health System, shared success stories about their Telework Program, which includes increased productivity, employee retention and increased morale among their participating staff. Clark Martinson, General Manager of the Energy Corridor Management District, also discussed his personal experiences with teleworking. Mr. Martinson shared similar viewpoints about increased productivity and employee morale. Shelley Whitworth, Air Quality Program Manager of H-GAC's Commute Solutions Program discussed the importance of offering teleworking to employees and the air quality benefits of the program.

For more information on the Commute Solutions Regional Telework Program, please contact Ch'rese Jackson, Sr. Transportation Planner at 713-993-2487 or visit [www.commutesolutionshouston.org](http://www.commutesolutionshouston.org).

# The Land Use-Transportation Connection: The Envision Scenario

Most of us rely solely on our cars to get from place to place – even for simple trips near our homes. Why do we rely so heavily on our cars? Our climate and auto-oriented culture certainly contribute to this state of affairs, as do the lack of sidewalks, bicycle facilities and transit services in many areas. However, the most obvious answer to the question is that we rely on our cars because we have no other choice. Perhaps the most significant barrier to increasing travel choices is that our land use patterns generally do not support alternative modes of travel.

The greater the distance between where we live, work and play, the fewer our travel choices. Walking and bicycling are not attractive options to most of us for long trips. Transit service outside of dense urban areas or major activity centers is generally sporadic, if available at all. Indeed, the only way to make alternatives to automobile travel a greater part of the region’s transportation equation is to concentrate more people, jobs and activi-



Graphic: H-GAC

ties in areas with good sidewalks, bike-ways and transit service.

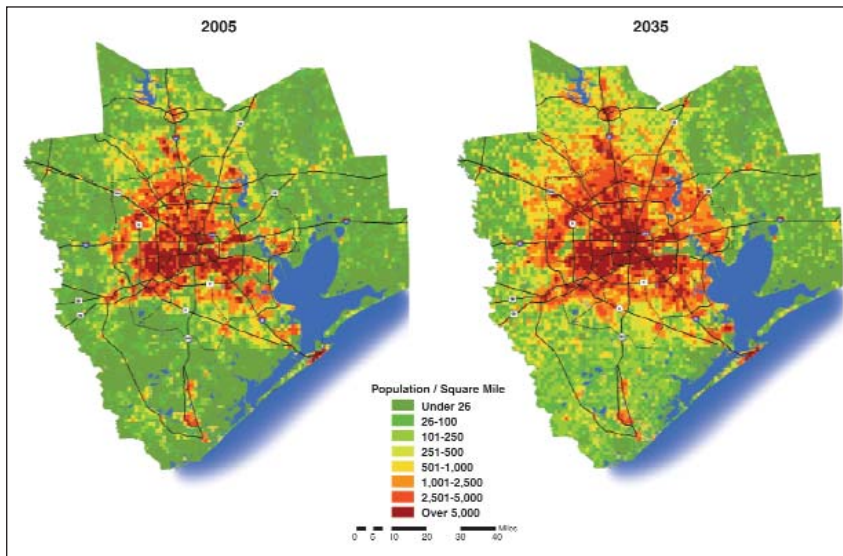
H-GAC, through the Envision Houston Region process, posed the question of “is there a different way to shape our future?” Scenarios are used in transportation planning to examine a range of possible future land use forecasts and evaluate the feasibility of transportation choices based on differences in transportation demand generated by the different land use forecasts.

The trend land use scenario, traditionally used as the basis for the RTP and transportation planning, assumes that the

land use and employment patterns that we see today will continue into the future. One of the outcomes of Envision Houston Region was a series of participant created alternate land use scenarios.

The Envision scenario redirects a portion of future growth to planned transit corridors and into emerging centers and reduces new development in the flood-plains. The scenario also assumes that it will take time for these changes to take effect and thus places a starting year of 2015, rather than 2005, in the model. Through the year 2015, the trend scenario forecasts are used.

The results of the Envision scenario show that changes in land use can have large impacts on mobility. The Envision scenario shows a 5.4% reduction in daily vehicle miles traveled (VMT) compared to the trend forecast. This level of reduction in VMT translates to nearly \$8.2 billion dollars a year in travel time savings. Additional benefits include a 23% increase in transit boardings and the accompanying air quality benefits that this increase in transit usage would bring. This type of scenario modeling can provide a much better picture of the relationship and outcomes of land use and transportation decisions. H-GAC plans to continue expanding its scenario modeling capabilities in future RTPs to help local governments respond to the challenges of growth while maintaining our region’s quality of life.



Graphic: H-GAC

Population Density 2005 - 2035

# A Letter from the Transportation Director Houston-Galveston Area Council

## 2006 - The Land Use Connection

Over the last several years, the Houston-Galveston Area Council, its transportation partners, and the region's policymakers have discussed the linkages between land use, transportation, economic development, and the environment. This discussion began in earnest in 2005 with the launch of Envision Houston Region. That work was completed in 2006 with a series of forums that focused on the policy implications of alternative land use scenarios and their impacts on the environment and infrastructure systems.

Comments from the Envision Houston Region participants show that land use choices have direct impacts on the ability of the region's transportation agencies to deliver a variety of travel choices to commuters. While the connection between land use and transportation may seem straightforward, complexity lies in understanding the impacts of specific land use patterns and what kinds of transportation systems they will ultimately support.

Understanding these relationships is one of the cornerstones of the 2035 Regional Transportation Plan that will be completed in the coming months. H-GAC invites the public to join us in this discussion. Public meetings on the development of the 2035 RTP will be held in different locations throughout the month of May. The meetings will focus on the impacts of future growth on the regional transportation system.



**Alan C. Clark**

Transportation Director  
Houston-Galveston Area Council

### Upcoming Meetings

#### H-GAC Board of Directors

April 17 ..... 10:00 A.M.  
May 15 ..... 10:00 A.M.  
June 19 ..... 10:00 A.M.

#### Transportation Policy Council

April 27 ..... 9:30 A.M.  
May 18 ..... 9:30 A.M.  
June 22 ..... 9:30 A.M.

#### Technical Advisory Committee

April 11 ..... 9:30 A.M.  
May 9 ..... 9:30 A.M.  
June 13 ..... 9:30 A.M.

#### Regional Air Quality Planning Committee

April 26 ..... 1:30 P.M.  
May 31 ..... 1:30 P.M.  
June 28 ..... 1:30 P.M.

All meetings, unless otherwise noted, are held at the H-GAC conference rooms on the second floor at 3555 Timmons, Houston, Texas 77027. In compliance with the Americans with Disabilities Act, H-GAC will provide for reasonable accommodations for persons attending H-GAC functions. Requests should be received at least 24 hours prior to the function. For additional meeting information call 713-627-3200.

### THE VISION Staff

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We encourage your comments at any time.  
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The Houston-Galveston Area Council (H-GAC) is a voluntary association of local governments and local elected officials in the 13-county Gulf Coast Planning Region. The Gulf Coast Planning Region consists of Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, and Wharton counties. Organized in 1966, H-GAC provides a forum for the discussion of area-wide concerns, promoting regional cooperation through comprehensive planning and services to local governments.

## 2035 RTP

### Looking at Land Use

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volume of cars on roadways helps goods reach their markets.

The problems experienced in the mass exodus due to Hurricane Rita have renewed the focus on emergency evacuation. A special task force has made recommendations for better inter-agency organization, contraflow lanes on freeways, and a coordinated leadership response to future crisis situations. The 2035 RTP incorporates many of these improvements.



The Houston region, and Harris County in particular, have the unfavorable distinction of ranking as one of the worst areas in the nation with respect to safety on roadways, including drunk driving fatalities. The Regional Safety Council brought leaders from diverse industries together to address this growing problem and created a list of priorities for improving safety conditions.

The draft of the 2035 RTP will be available to the public for comment in April. For further information, please visit [www.h-gac.com/transportation](http://www.h-gac.com/transportation) or [www.2035plan.org](http://www.2035plan.org).

Graphic: H-GAC