



TEXAS DEPARTMENT OF TRANSPORTATION

# WELCOME!

## GULF FREEWAY PLANNING AND ENVIRONMENTAL LINKAGES (PEL) STUDY

I-45 SOUTH FROM I-69 / US 59 (DOWNTOWN) TO BELTWAY 8 SOUTH

### Purpose of the Meeting

- **Learn** about the study
- **Review** the study material
- **Submit** comments and feedback

**JULY 16, 2020**

# What is a PEL Study?

PEL Study = Planning and Environmental Linkages Study

## A PEL Study provides:



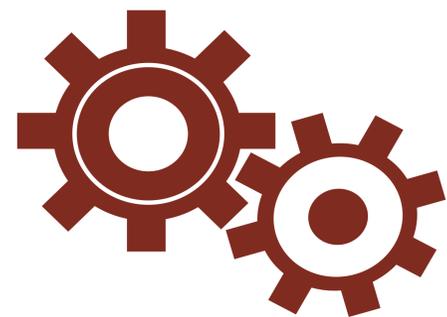
- An approach to decision making
- Early consideration of:
  - Environmental goals
  - Community goals
  - Economic goals

## A PEL Study can:



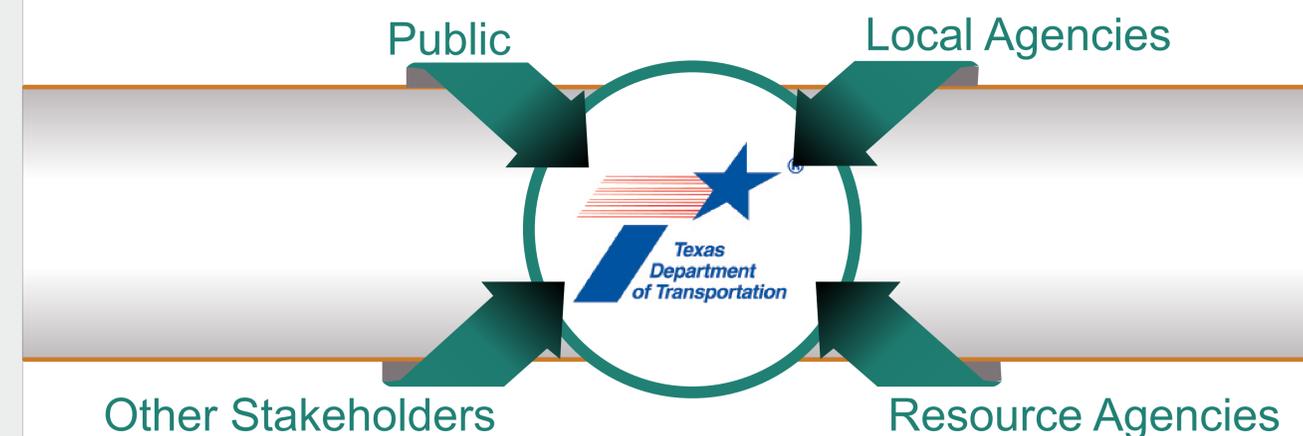
- Define project scope
- Develop project Purpose and Need
- Identify future projects
- Refine the range of viable alternatives
- Link planning to environmental issues which move into NEPA\*

## PEL Study benefits include:



- Promoting efficient and cost-effective solutions
- Minimizing duplication of effort
- Reducing delays in project implementation
- Open and frequent communication at all levels

## A PEL Study relies on stakeholder input:



\* The adoption of the PEL study into the NEPA process is subject to determination by Federal Highway Administration (FHWA).

# Study Area

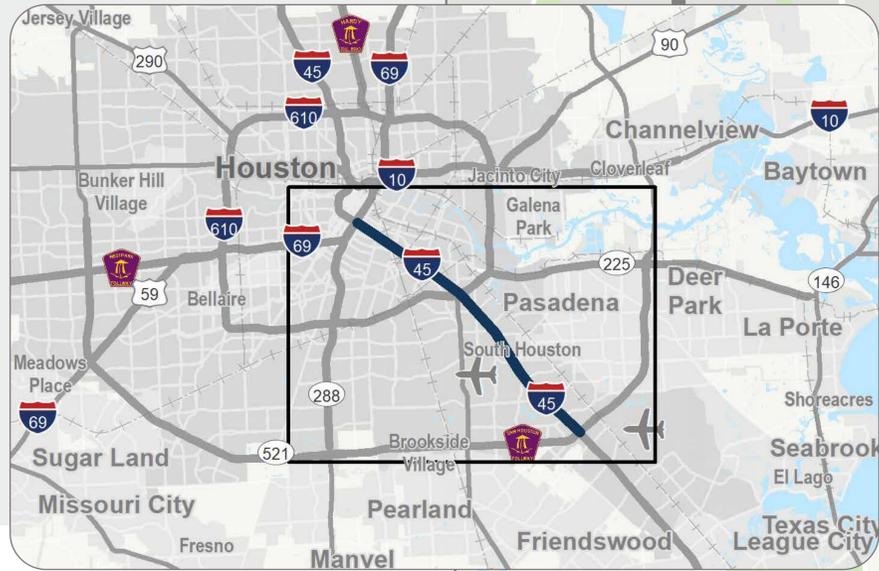
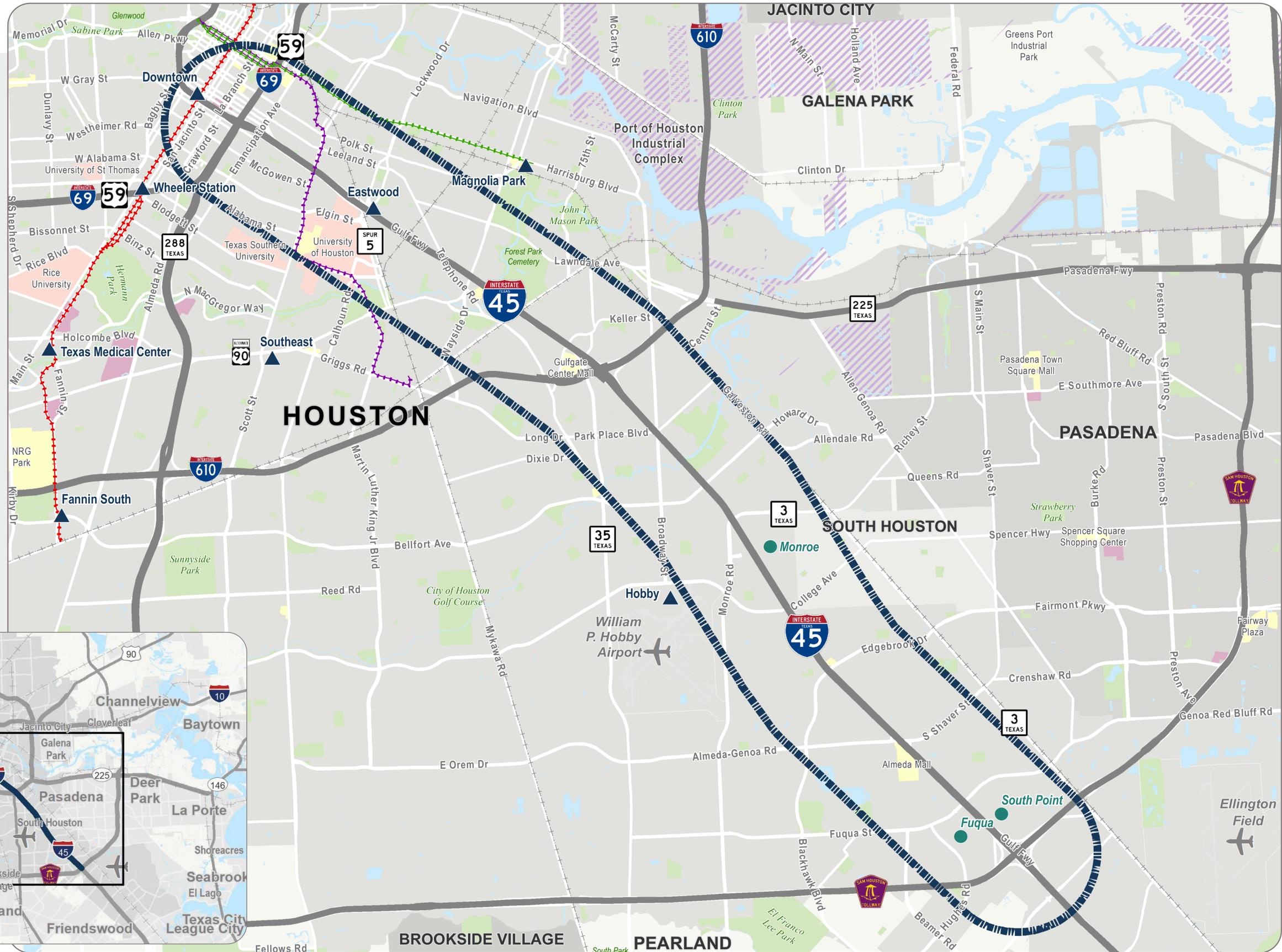
**Study Area**

**Land Use**

- Hospital
- Major Retail; Sports
- University/College
- Open Space
- Port of Houston
- Class I Railroad

**Light Rail Lines**

- Green
- Purple
- Red
- Bikeways
- Park & Rides
- Transit Centers

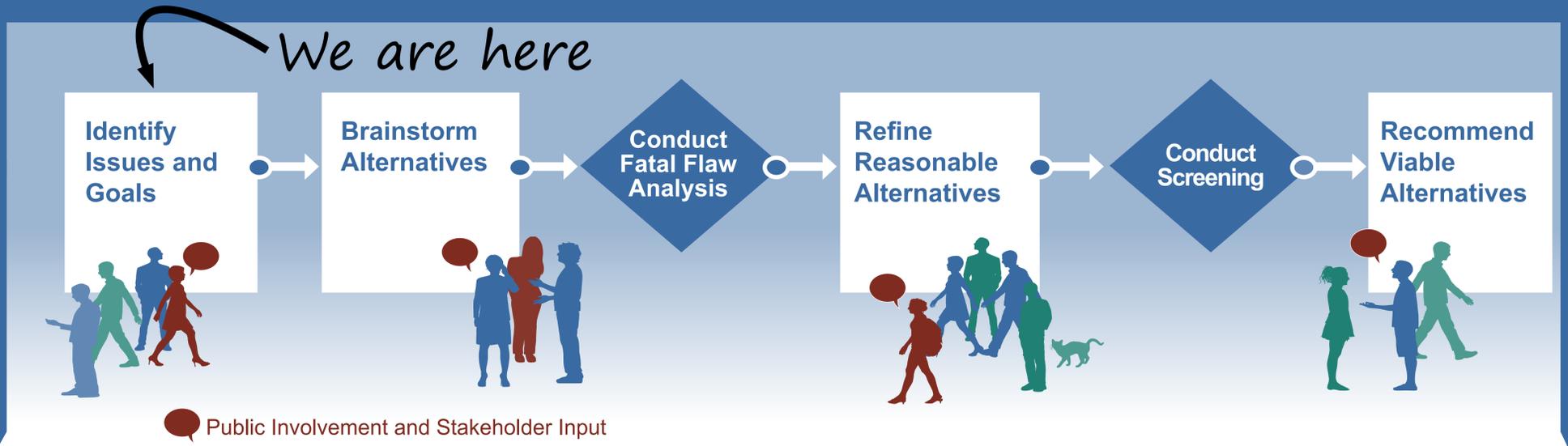




## Current Step

### PEL Study: Now - Spring 2023

Identify and prioritize possible solutions



## Future Steps (if build solutions are identified)

### Environmental Review Process

Refine projects to avoid, minimize, or mitigate environmental impacts

- Refine Purpose & Need from PEL Study, as needed
- Refine range of alternatives
- Compare alternatives and identify a preferred alternative
- Collaborate with agencies to determine mitigation efforts
- Complete environmental documents
- More public involvement
- Secure funding and incorporate into the Regional Plan

### Design and Land Acquisition

How are we going to make improvements?

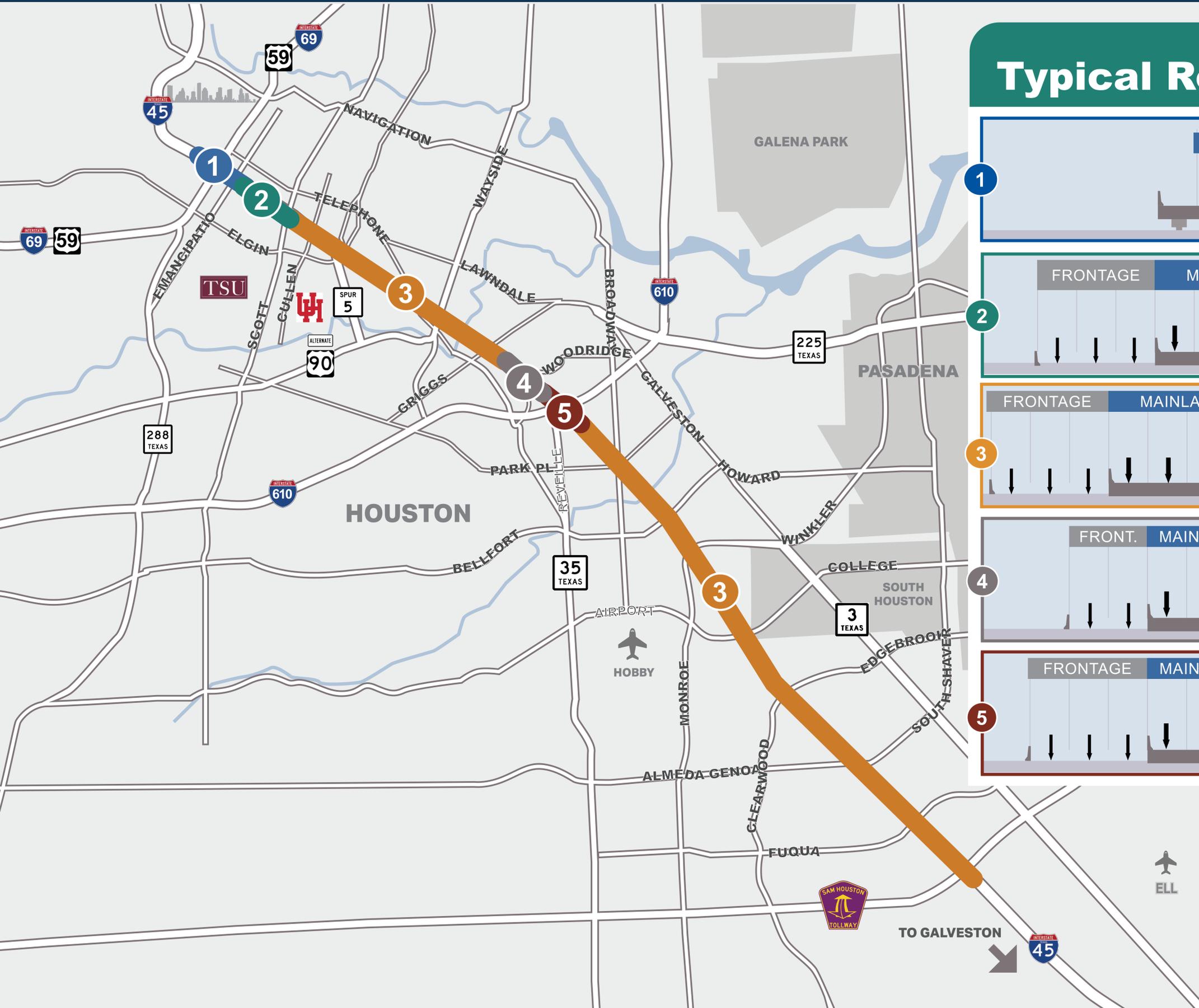
- Prepare detailed engineering and design
- Make utility adjustments
- Gather detailed field survey data
- Acquire right-of-way property if needed

### Construction

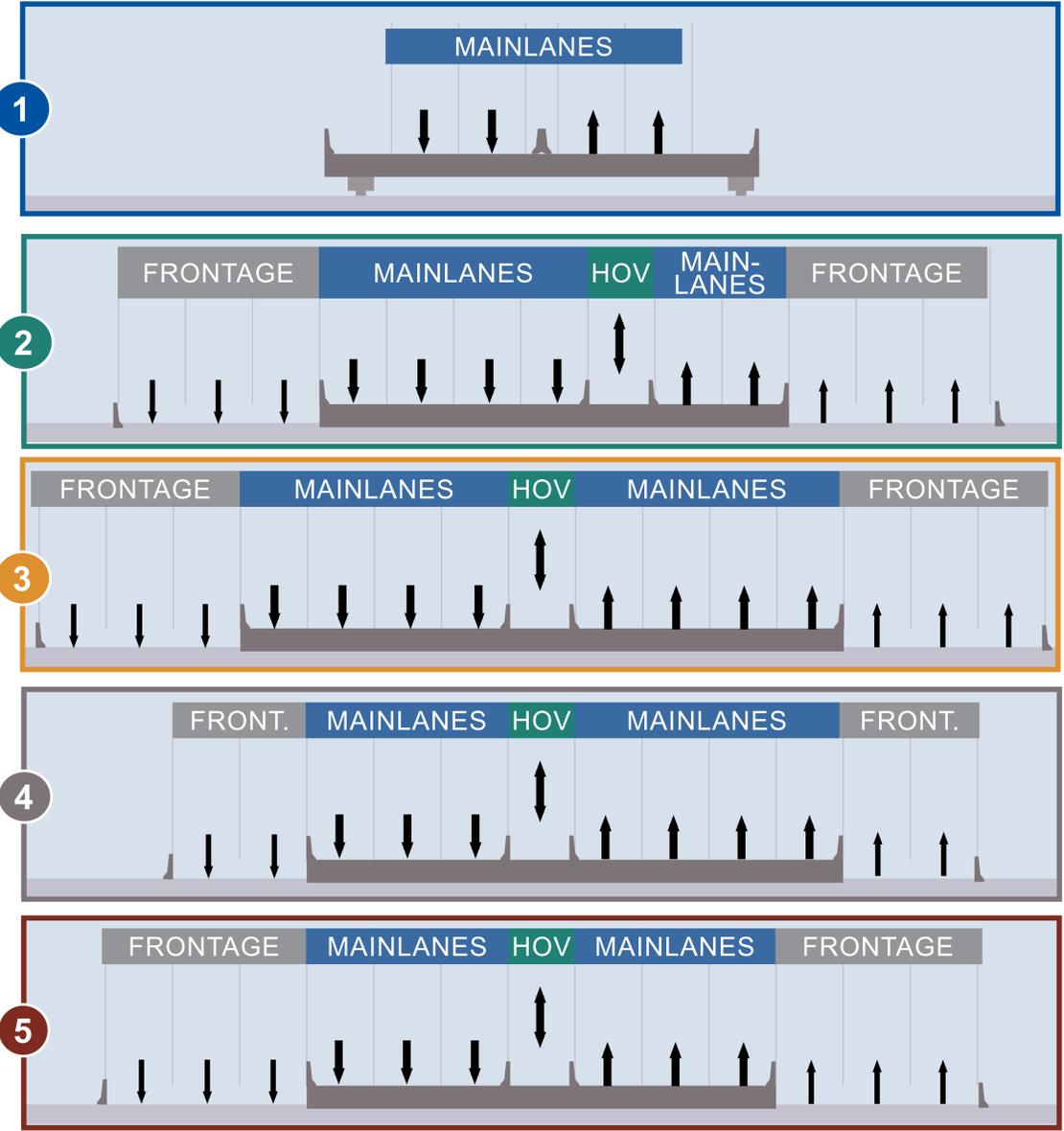
Build proposed improvements

- Staging & moving traffic
- Construction activities
- Opening of completed project

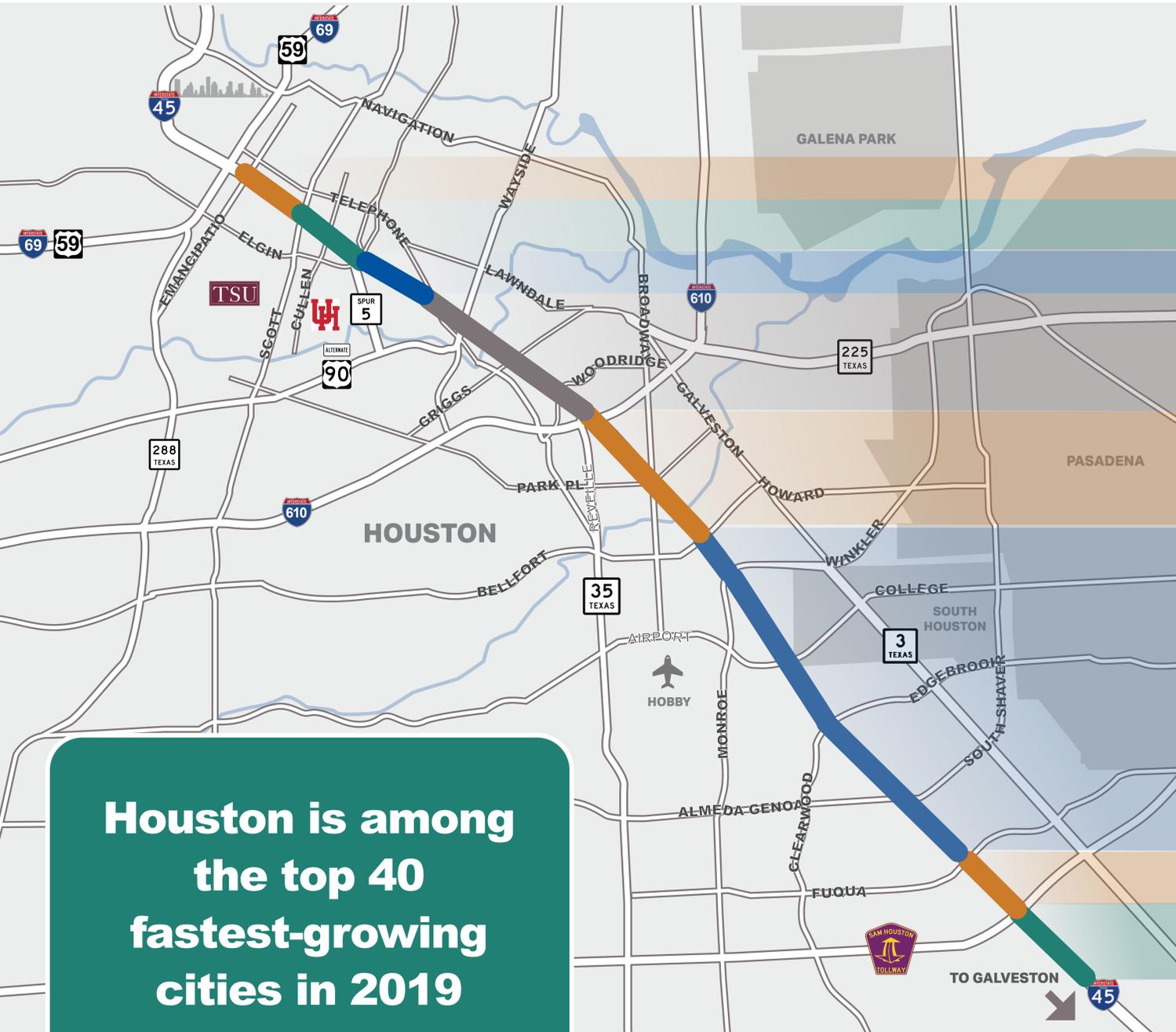
# Gulf Freeway Existing Travel Lanes



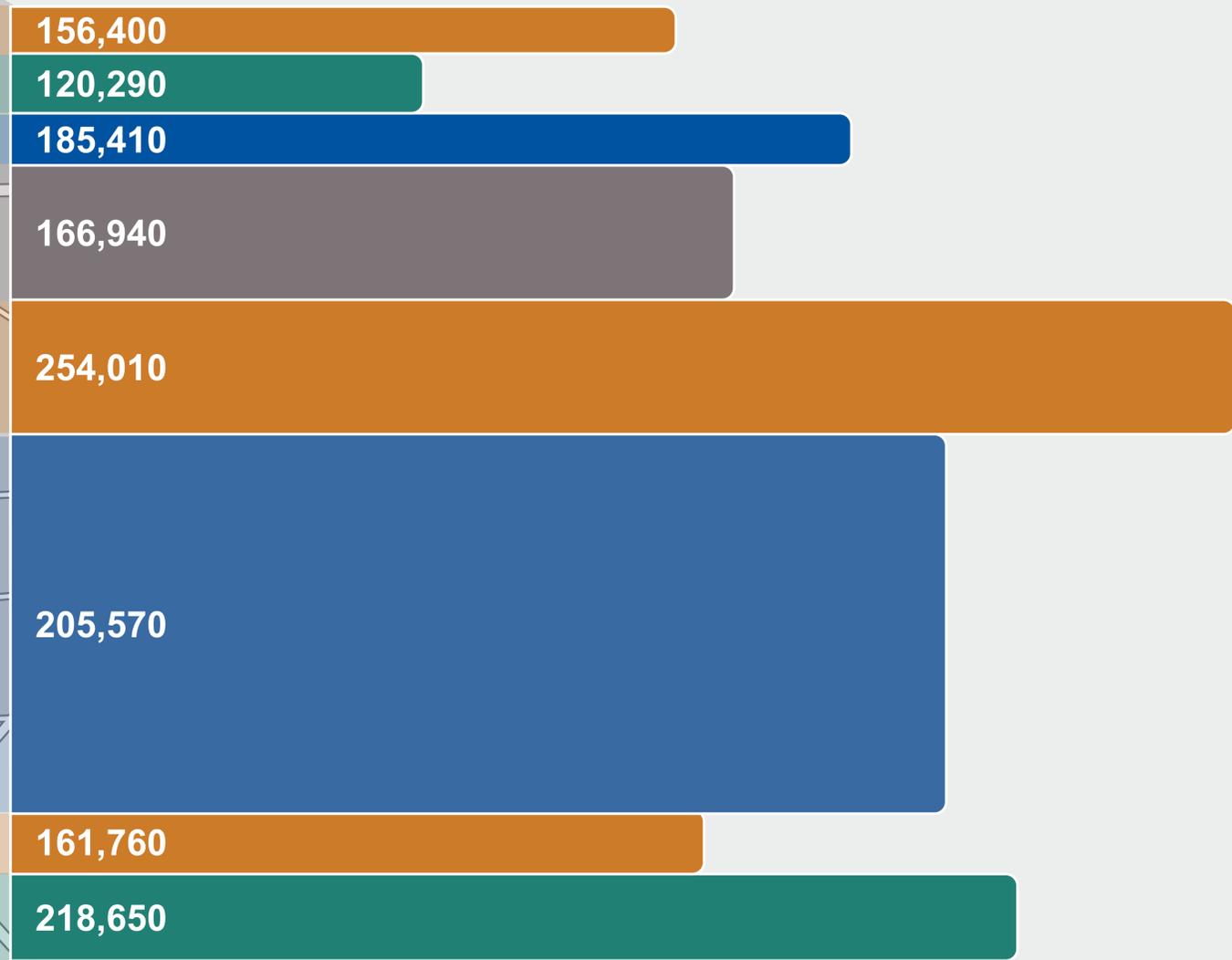
## Typical Roadway Sections



# 2019 Daily Traffic Volumes



Vehicles per Day (VPD) - Both Directions



**Houston is among the top 40 fastest-growing cities in 2019**

By 2045, the Houston-Galveston Area Council is expecting ...

**1.3M**  
more jobs

**3.9M**  
more people

**1.2M**  
increase in people age 65+

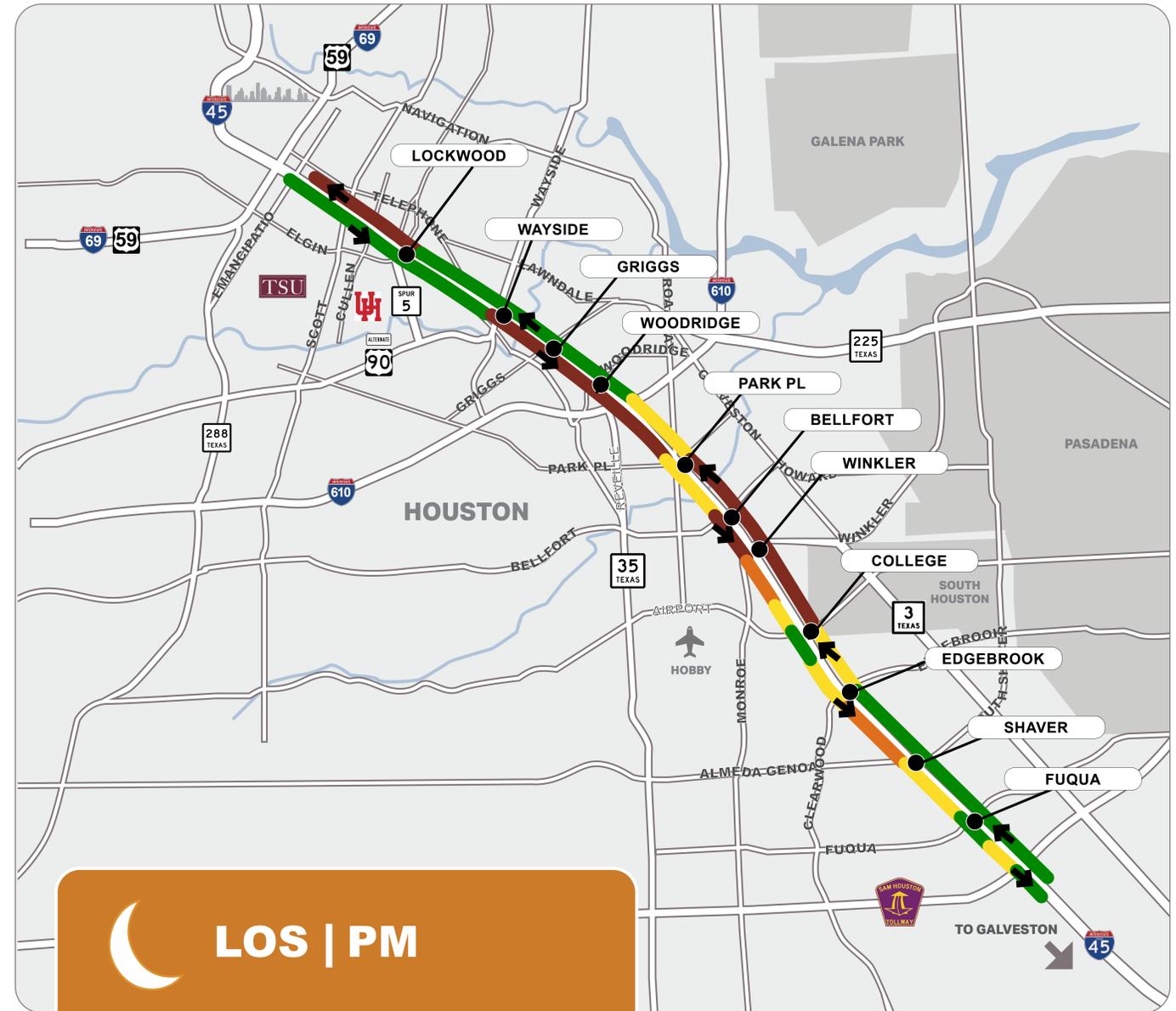
**40%**  
increase in travel demand

**5%**  
slowdown in driving speeds

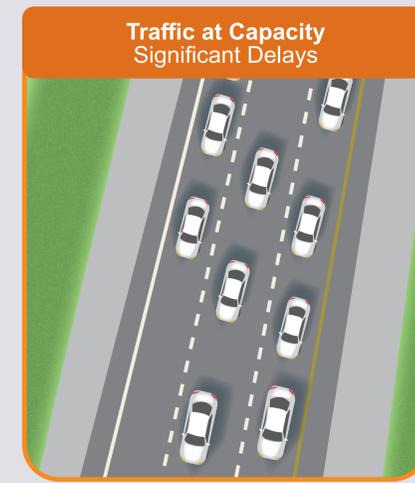
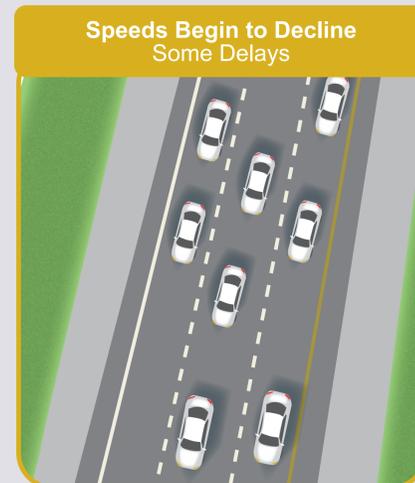
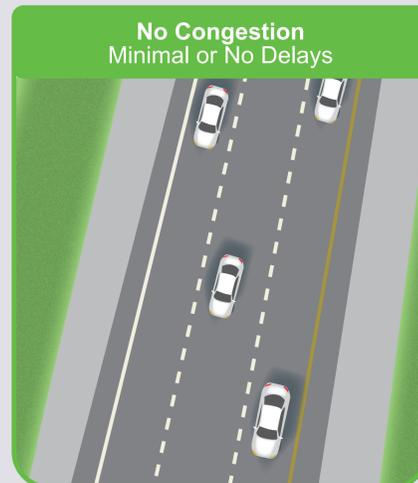
**700K**  
more hours of travel delay

Source: H-GAC Regional Mobility Plan (2045)

# Existing Traffic Operations



## Level of Service (LOS) Rating Scale



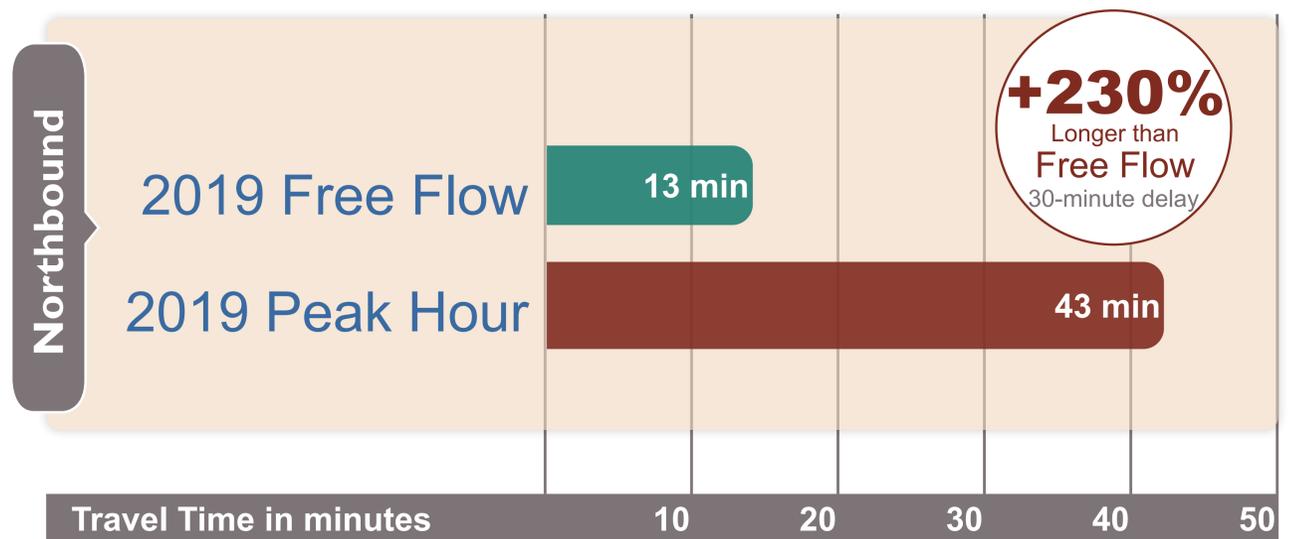
# Gulf Freeway Travel Times

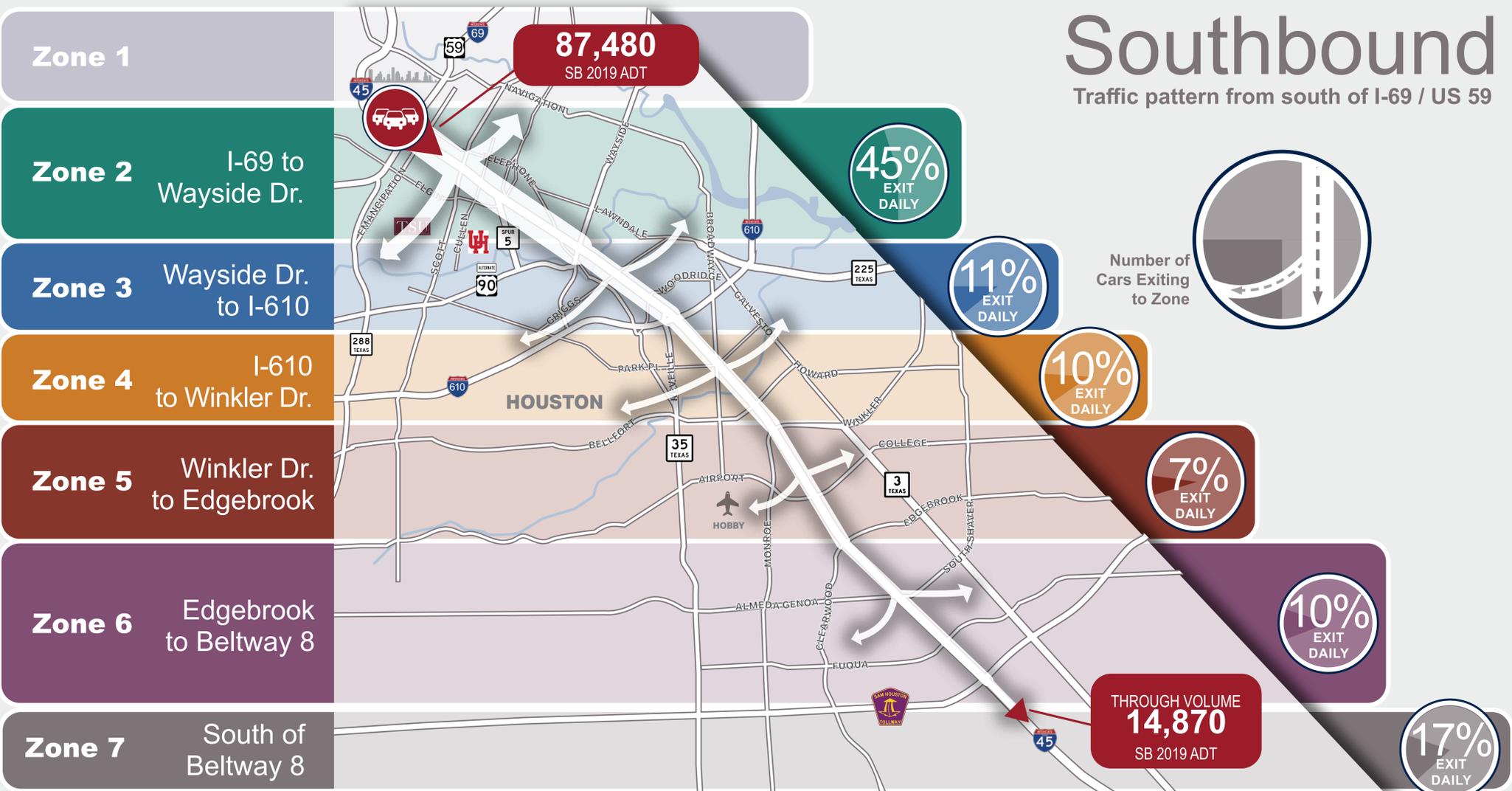
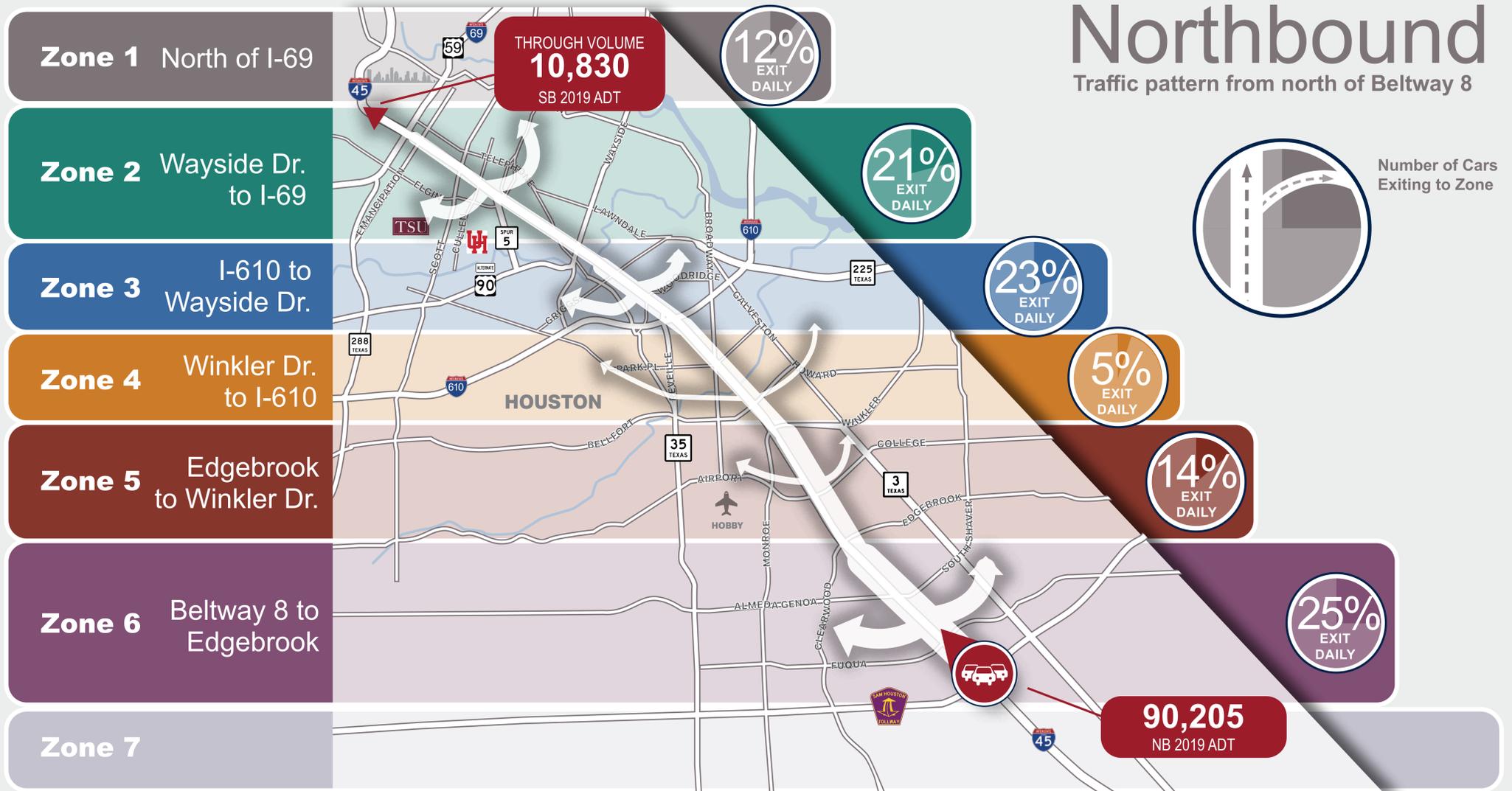


AM



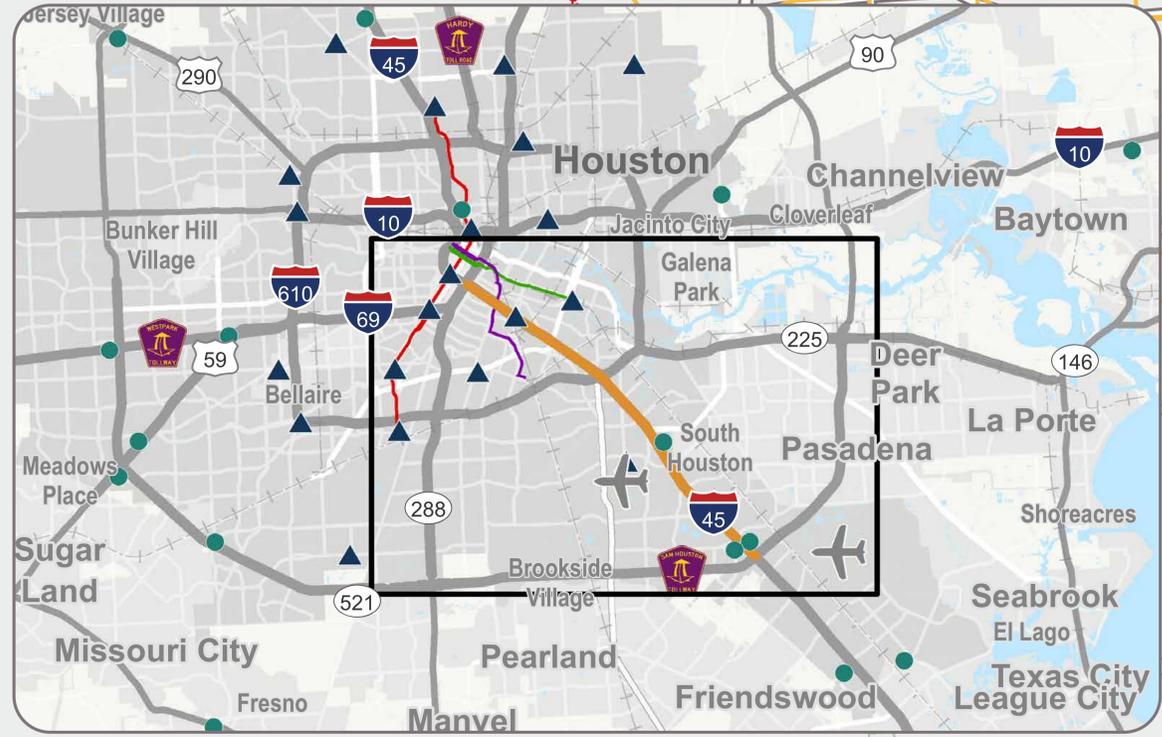
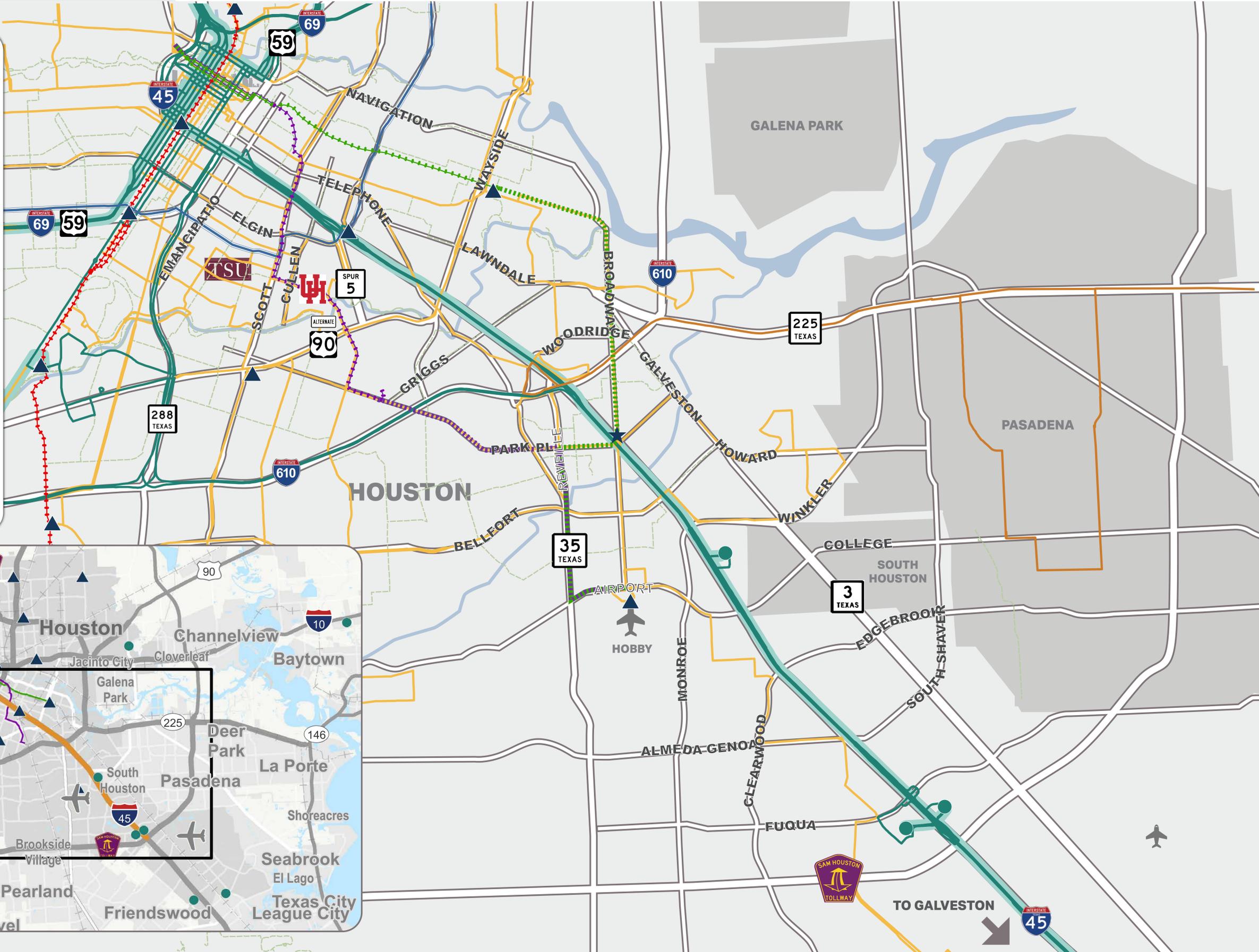
PM





# Public Transportation and Bicycle Network

- Bikeways
- Transit Centers
- Park & Rides
- METRO Light Rail Lines**
- Green
- Purple
- Red
- METRO Bus Routes**
- Local Service
- Park and Ride Service
- Proposed Rapid Transit**
- Green Line Extension
- Purple Line Extension
- Green/Purple Line Extension
- University Line BRT
- Proposed Regional Express
- Proposed Transit Center
- Harris County Transit**
- Baytown / La Porte Shuttle



## Houston METRO (1,2)

- 1** Intersecting light rail - Purple Line
- 10** Lower-frequency local bus routes
- 6** High-frequency local bus routes
- 3** Free downtown shuttle routes
- 6** Park & Ride routes
- 5** Transit Centers and Park & Rides



## Harris County Transit (1,2)

- 1** Local bus route

(1) These routes either operate along Gulf Freeway, along adjacent roadways within the study area, or make connections at Transit Centers or Park & Ride lots in the study area.

(2) Due to the large number of downtown transit connections, bus routes that operate between downtown and locations outside of the study area are excluded.

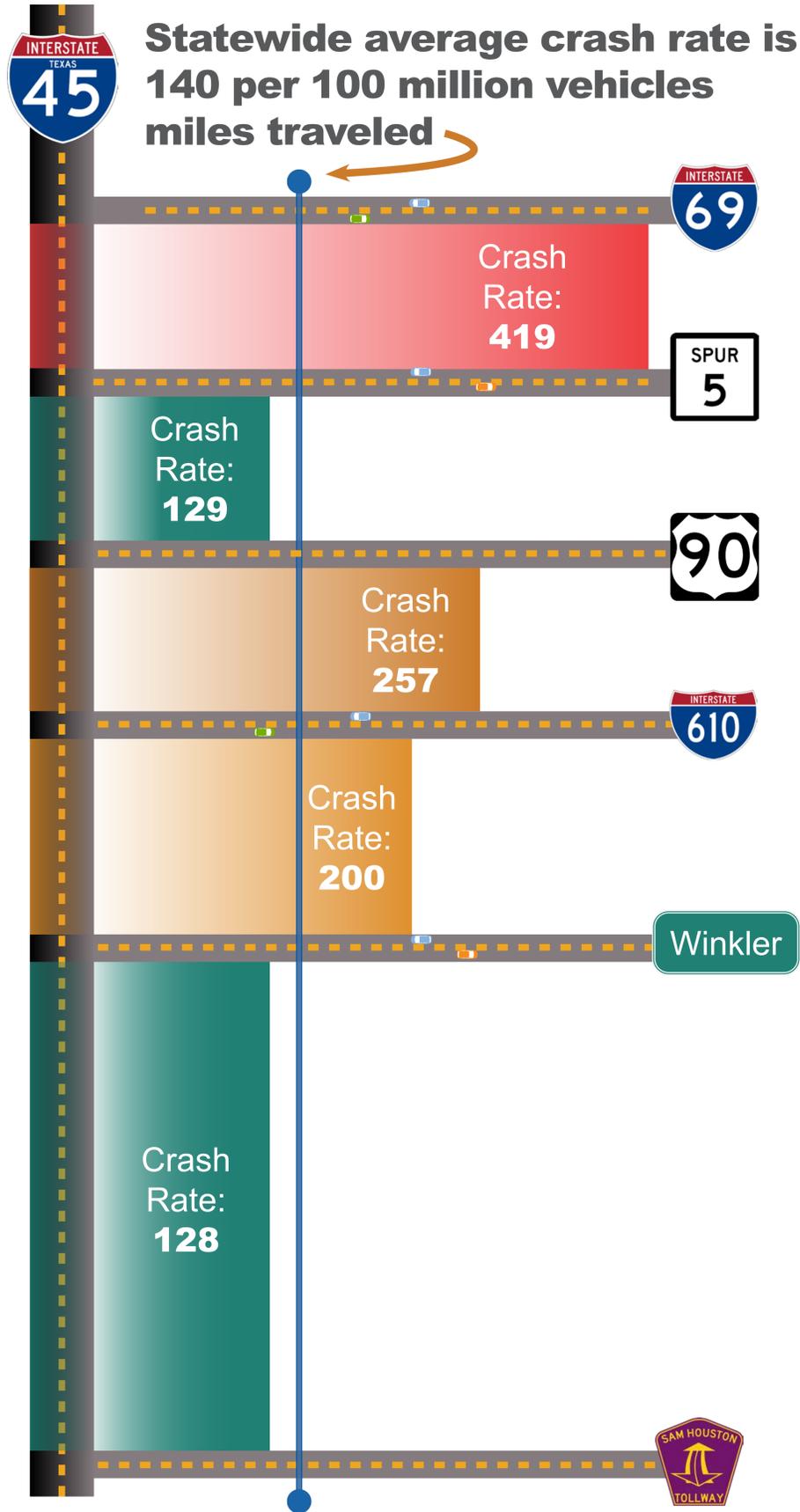


## METRONext Plan

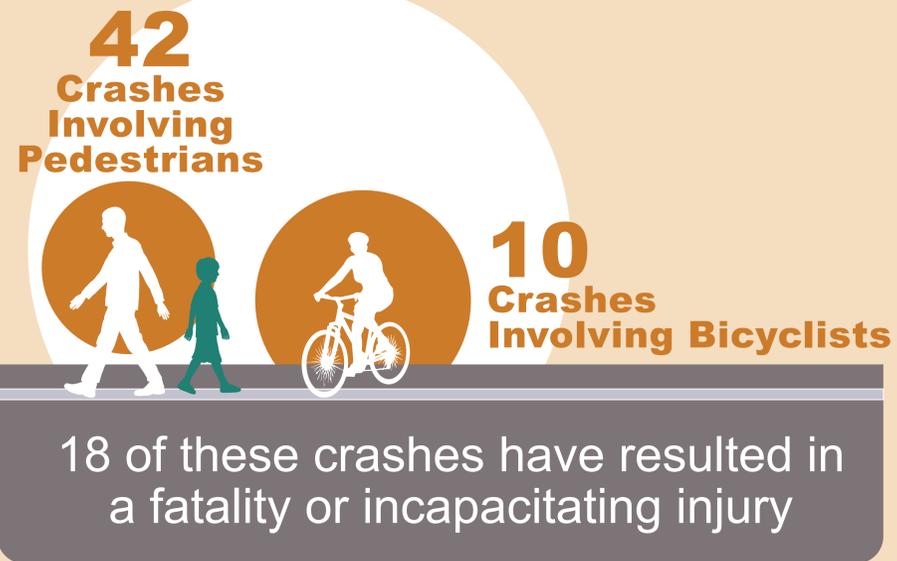
- Extension of Green and Purple Light Rail Lines to Hobby Airport
- New Regional Express Bus Service along Gulf Freeway
- New Bus Rapid Transit (BRT) Line along University Corridor
- Improve Hobby & Wheeler Transit Centers (TC); New TC at Park Place



*TxDOT does not have jurisdiction over public transportation provided on the study corridor.*



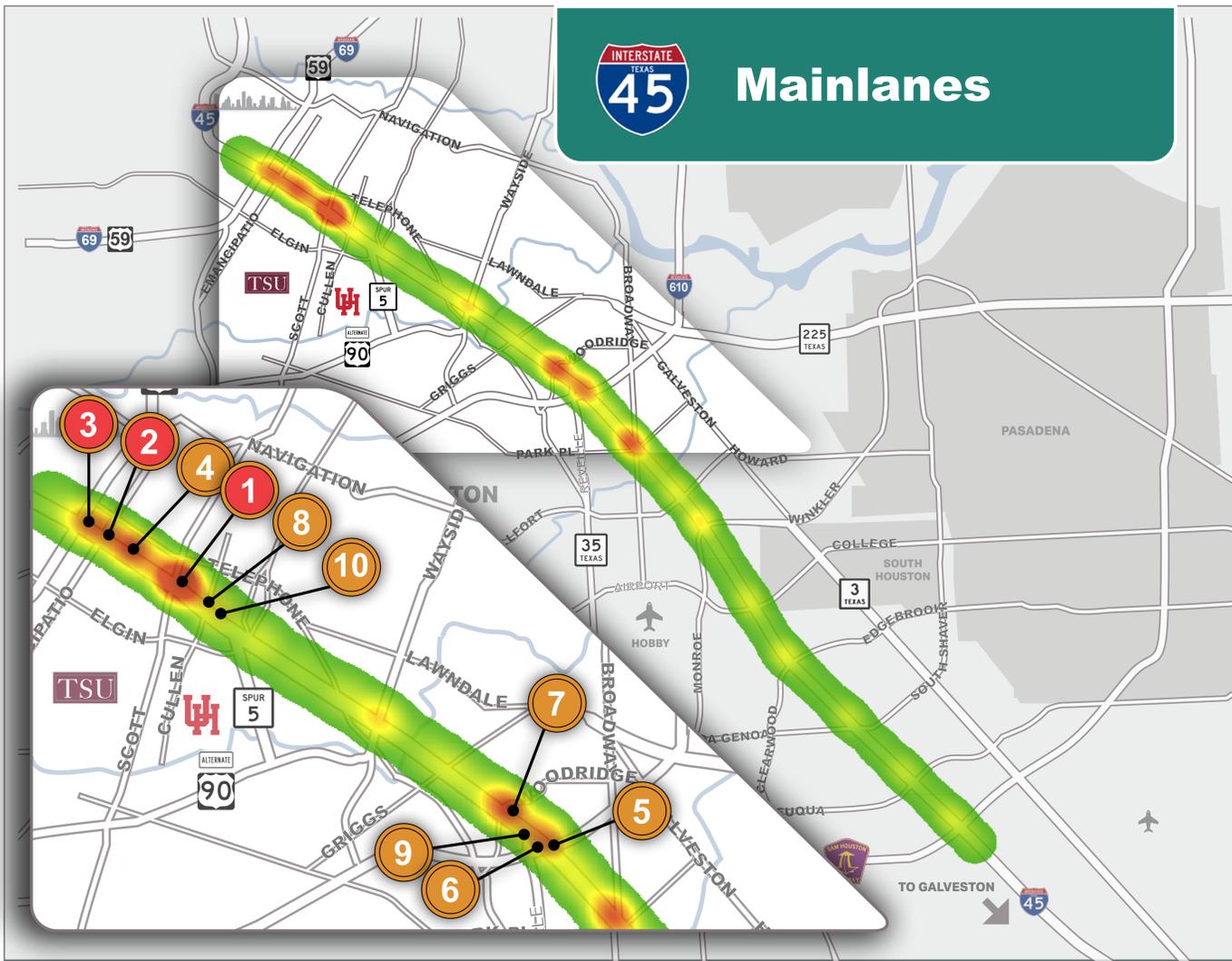
## On Gulf Freeway from 2014 to 2018 there have been....



**We can do Better!**

Statistics represent the total number of crashes on Gulf Freeway (I-45S) mainlanes and frontage roads

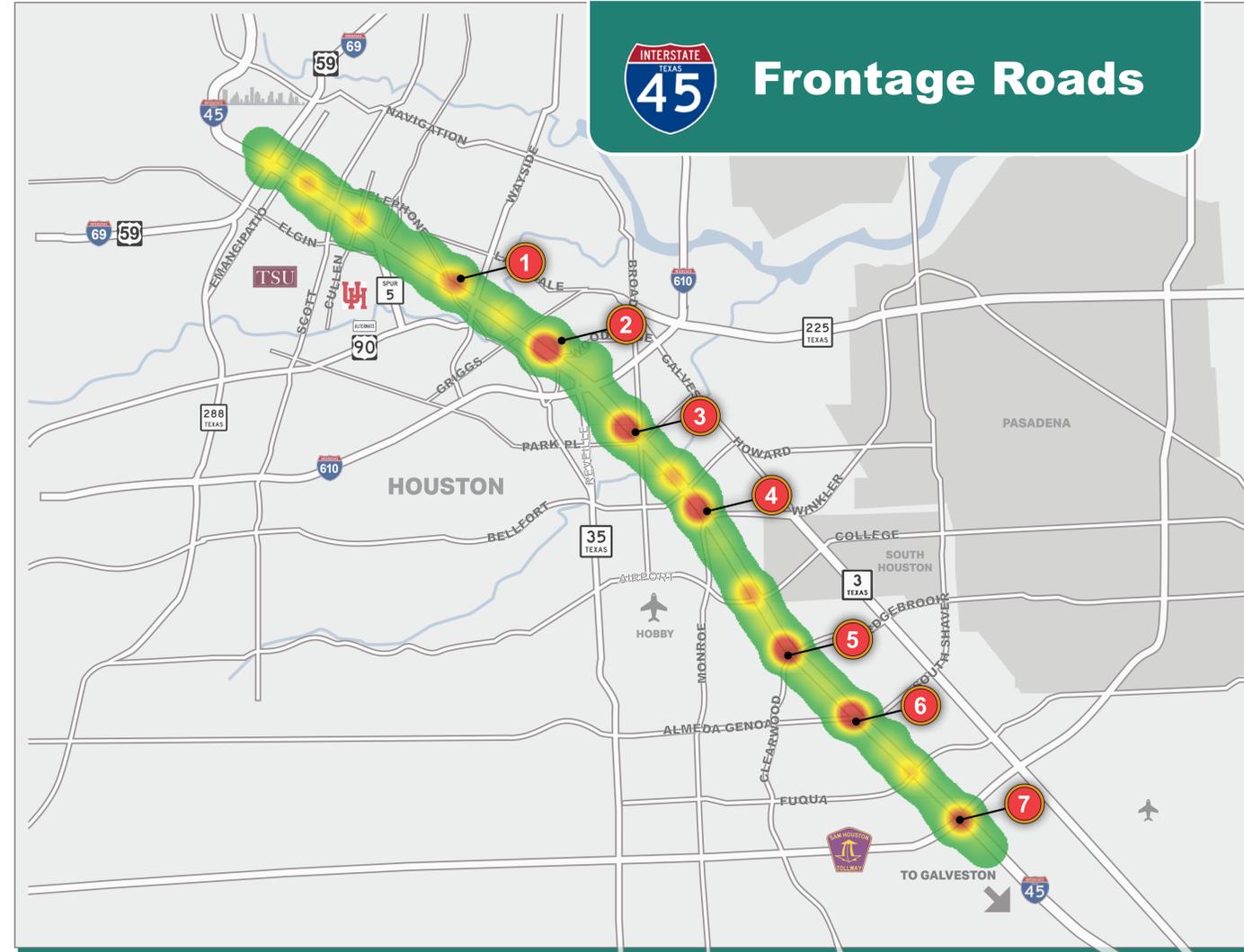
# Crash Locations on Gulf Freeway



## INTERSTATE TEXAS 45 Mainlanes

**Top 10 Mainlane Crash Rate Locations (2014-2018)**

- |                                      |   |
|--------------------------------------|---|
| 1 NB I-45S on-ramp from Scott St.    | 6 SB I-45S on-ramp from connector from I-610 EB to I-45SB |
| 2 NB I-45S off-ramp to US 59 SB      | 7 NB I-45S on-ramp from I-610 EB                          |
| 3 NB I-45S on-ramp from US 59 SB     | 8 NB I-45S on-ramp from Cullen Blvd.                      |
| 4 NB I-45S off-ramp to US 59 EB      | 9 SB I-45S off-ramp to connector from I-45S to I-610      |
| 5 NB I-45S off-ramp to Woodridge Dr. | 10 NB I-45S on-ramp from Spur 5                           |



## INTERSTATE TEXAS 45 Frontage Roads

**Frontage Road Crash Hot Spot Locations (2014-2018)**

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| 1 Wayside Dr.                     | 5 Clearwood Dr. / Edgebrook Dr. |
| 2 Woodridge Dr.                   | 6 Almeda Genoa Rd. / Shaver St. |
| 3 Broadway St. / Park Place Blvd. | 7 Beltway 8                     |
| 4 Monroe Blvd. / Winkler Dr.      |                                 |

N.B.: To better isolate unusually high crash rates for the purpose of identifying locations with the potential for safety design improvements, Top 10 Crash Rate Locations are controlled for daily traffic volumes and roadway length. For this reason, they may not align with the locations with the highest density of total crashes.

## Most Bottlenecks

Houston has the most freight bottlenecks in Texas, and 6 of the top 50 bottlenecks nationwide

## Port Access

Serious congestion accessing and exiting Port Houston cargo terminals, with domino effects on nearby roadways

## 2X Freight Growth

Statewide truck tonnage is forecasted to nearly **double** by 2045, rising from 2.2 billion tons in 2016 to 4.0 billion tons

## 6<sup>th</sup> Worst

2019  
Congested roadway in TX  
Previously 11<sup>th</sup> worst in 2018

**Truck%**  
of daily traffic

**8%**  
North  
of I-610

**4%**  
South  
of I-610

Sources: Texas Freight Mobility Plan (2018), I-45 Freight Corridor Plan (2016), TTI Most Congested Roadways in Texas (2019)

# What are the Corridor Considerations?

**Constraints are factors that influence the transportation solutions that can be considered.**

## Hazardous Materials



Inventory hazardous materials sites, as these locations may pose challenges for future projects.

## Parks & Public Land



Identify parks and public lands.

## Water Crossings



Bodies of water are sensitive environmental resources that must be identified. Aside from minor drainage channels, water crossings along the Gulf Freeway include Brays Bayou and Sims Bayou.

## Historic Properties



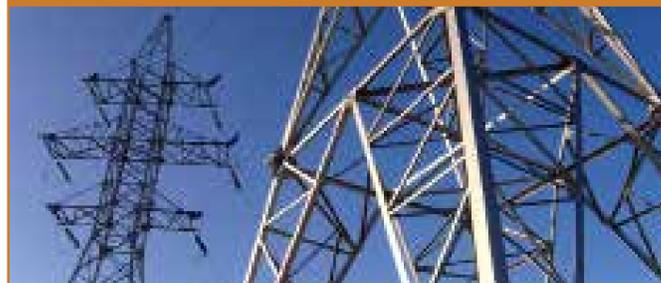
Within the study area there are historical markers and properties that are listed on the National Register of Historic Places that must be inventoried.

## Archaeological Sites



Similar to historic resources, archaeological resources are protected by law. These resources must be inventoried.

## Utilities



Identify major utility lines in the study corridor (e.g., transmission lines, oil and gas pipelines).

## Multi-Modal



Existing bicycle, pedestrian, and transit facilities must be identified and inventoried.

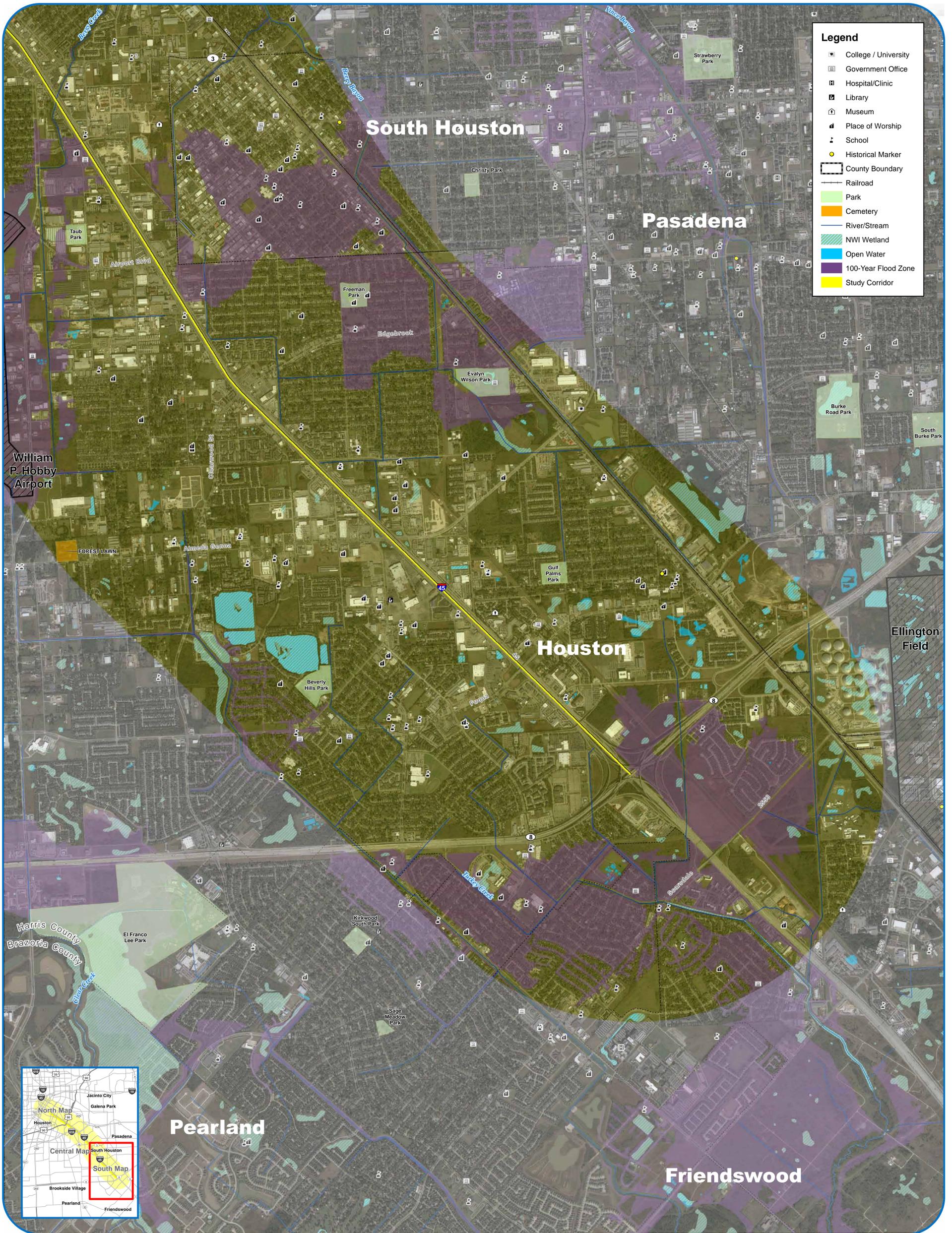
## Communities

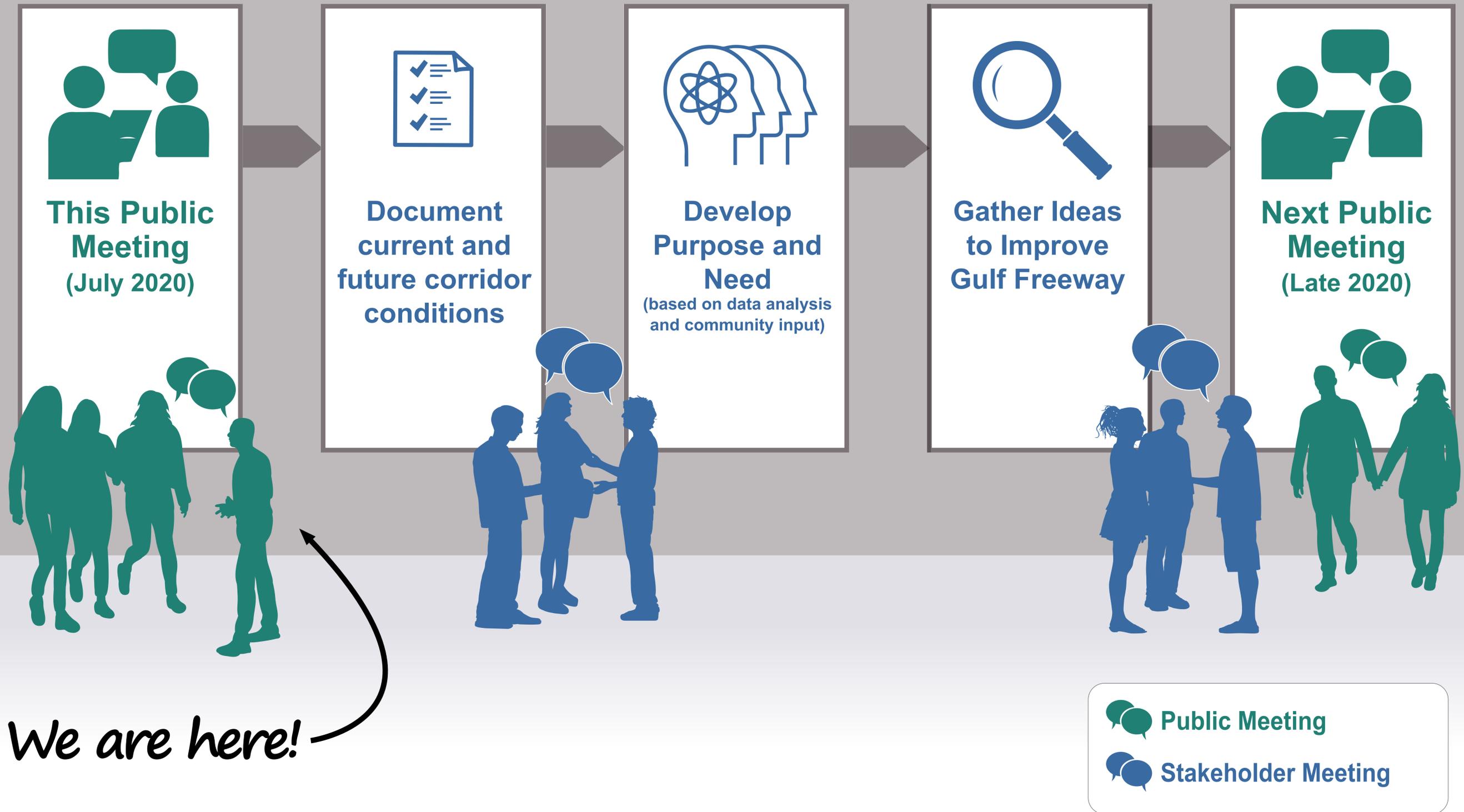


Identify land use, neighborhoods, and communities within the Gulf Freeway corridor.



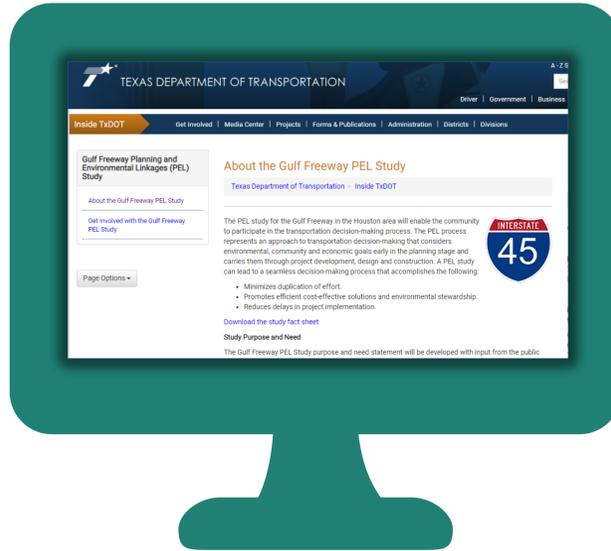






## 1 See website for more information:

- Gulf Freeway PEL Study Fact Sheet
- Published Study Materials
- Latest News & Events
- Participation Opportunities



[www.txdot.gov](http://www.txdot.gov)

Key word search:

Gulf Freeway PEL Study  
or

<https://www.txdot.gov/inside-txdot/gulf-freeway-pel-study.html>

or scan the QR code on your mobile device



## 2

### Take the online survey



## 3

### Written Comments

Download the comment card from the website and submit by:

Email:

[hou-piowebmail@txdot.gov](mailto:houstonwebmail@txdot.gov)

Mail:

TxDOT Houston District  
Attn: Director of Project Development  
P.O.Box 1386  
Houston, Texas 77251-1386



Or, visit the study website and click on the “Contact Us” button

<https://www.txdot.gov/inside-txdot/gulf-freeway-pel-study.html>



Comments must be received or postmarked by Friday, July 31, 2020, to be included in the Virtual Public Meeting Summary Report.