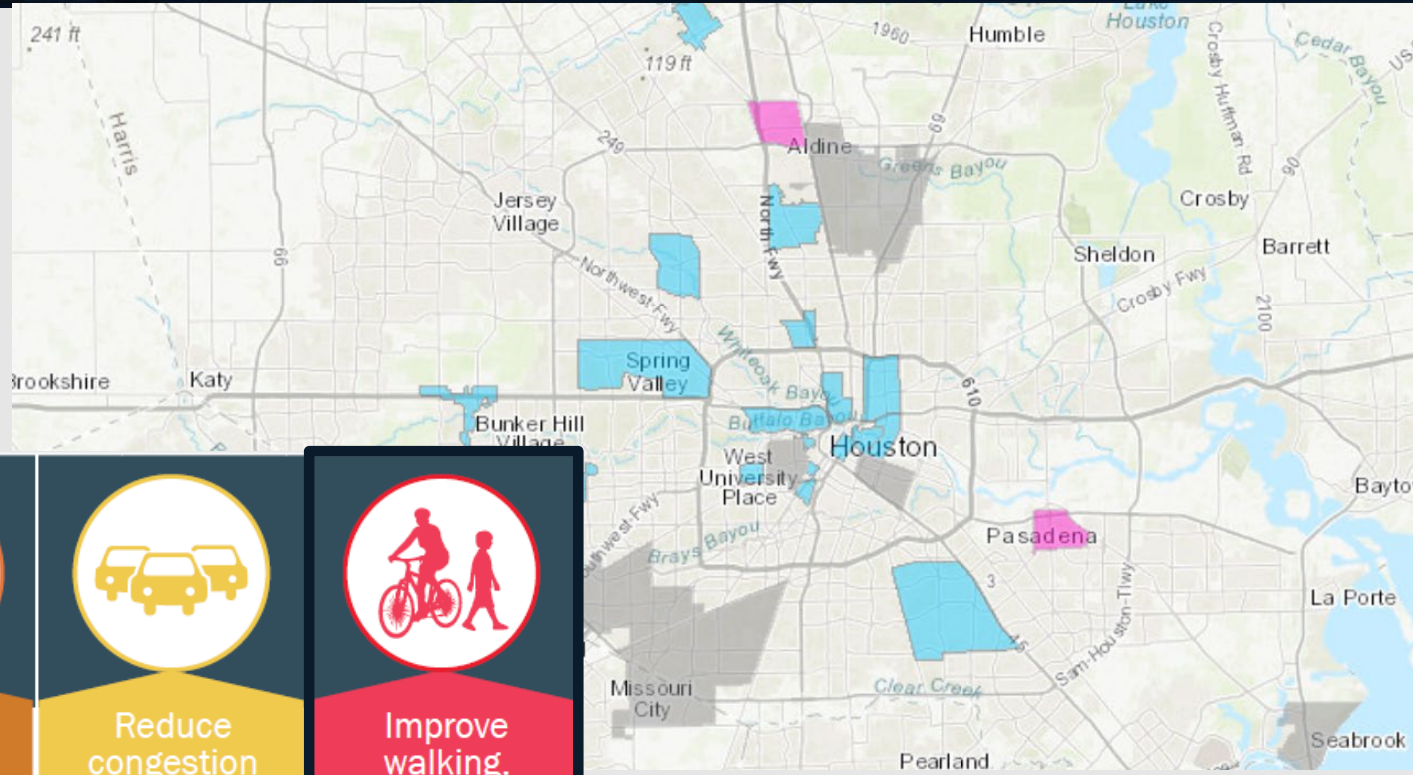


# TRANSPORTATION CORRIDOR PLANNING

Active Transportation



# Planning Studies



Reduce the number and severity of crashes



Increase economic activity



Reduce congestion and travel delays



Improve walking, bicycling, and access to transit

## ONGOING PUBLIC & STAKEHOLDER INVOLVEMENT

1<sup>ST</sup> PUBLIC MEETING

2<sup>ND</sup> PUBLIC MEETING

DATA COLLECTION

EVALUATION OF EXISTING CONDITIONS

ANALYSIS OF SHORT-TERM SOLUTIONS

LONG-TERM ACCESS MANAGEMENT STRATEGIES

FINAL REPORT

Planning Studies

- Livable Centers Studies
- Special District Studies
- Mobility Studies
- Access Management Studies

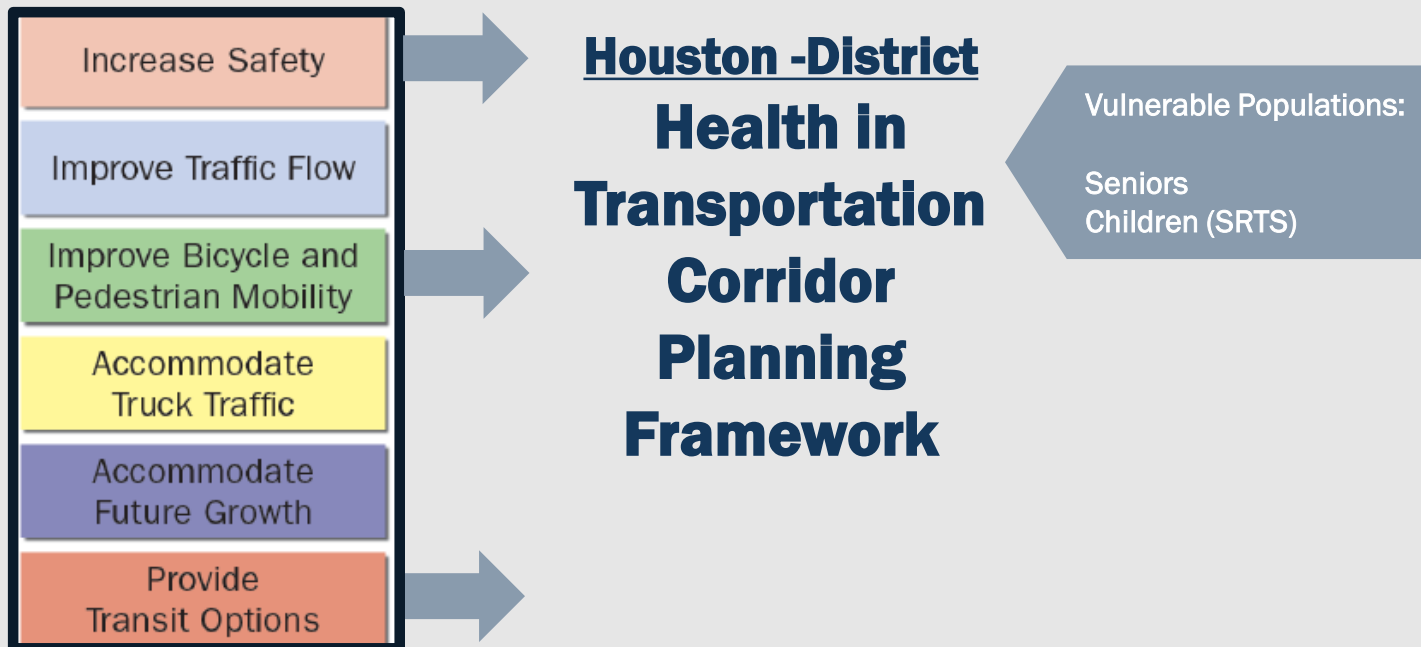
# Health in Transportation Corridor Planning Framework

## ■ Goal:

- Incorporate health outcomes from improvements in the built environment and improvements in safety and feasibility of pedestrian, bicycle and transit mobility (Active Transportation)

## ■ Planning Considerations:

- Outcomes from improvements in the built environment and improvements in safety and feasibility of pedestrian, bicycle and transit mobility
- Short-range, medium-range, and long-range infrastructure recommendations
- Mobility needs and priorities of seniors, as well as safe routes to school for children



Balanced portfolio of *transportation* choices supports *health*:

**Physical activity:** active transportation mobility choices

- Seniors
- Children (SRTS)

**Air Quality:** Reduction in VMT

- Safe Routes to School (SRTS) value of car idling reduction by converting school drop-offs by car to ped/bike trips
- Calculating the value of converting vehicle trips to ped/bike trips

**Safety**

- Injuries and deaths associated with ped/bike crashes
- Risk Factors

**Input into the Framework steps**

- Plug-in Survey
- Recommendations

**Case Study Report**

- Spring Branch Special District Study (urban area in the west side of Houston along I 10 )

# Health in Transportation Corridor Planning Framework

## Health in Transportation Corridor Planning Framework

Define  
Transportation  
Problems and  
Public Health  
Issues



Identify  
Transportation  
and Health Needs,  
Resources, and  
Priorities



Develop Goals  
and Objectives  
that Promote  
Health in the  
Community



Establish  
Evaluation Criteria  
that Include  
Public Health



Develop and  
Evaluate  
Alternatives  
and their  
Health Impacts



Identify  
Alternatives that  
Support Health in  
the Community



STEP 1: Spring Branch Special District Study

STEP 1 – 3, 6: Spring Branch Livable Centers Study

STEP 1- 3, 6: West Houston Mobility Study

### Spring Branch Livable Center Study

07/01/2017-12/31/2018

Step 5: Develop and Evaluate  
Alternatives and their Health Impacts

### Spring Branch Special District Study

05/01/2018-05/31/2020

Step 1: Define Transportation Problems  
and Public Health Issues

### West Houston Mobility Study

03/01/2012-10/31/2015

Step 6: Identify Alternatives that  
support Health in the Community



# Framework

- Spring Branch Livable Centers Study
- Spring Branch Special District Study
- West Houston Mobility Study

## Planning Studies

Ongoing Stakeholder and Public Involvement

Establish Evaluation Criteria that Include Public Health



Corridor Planning Studies

Data Identification

Data Needs & Data Collection

Refine Evaluation Criteria

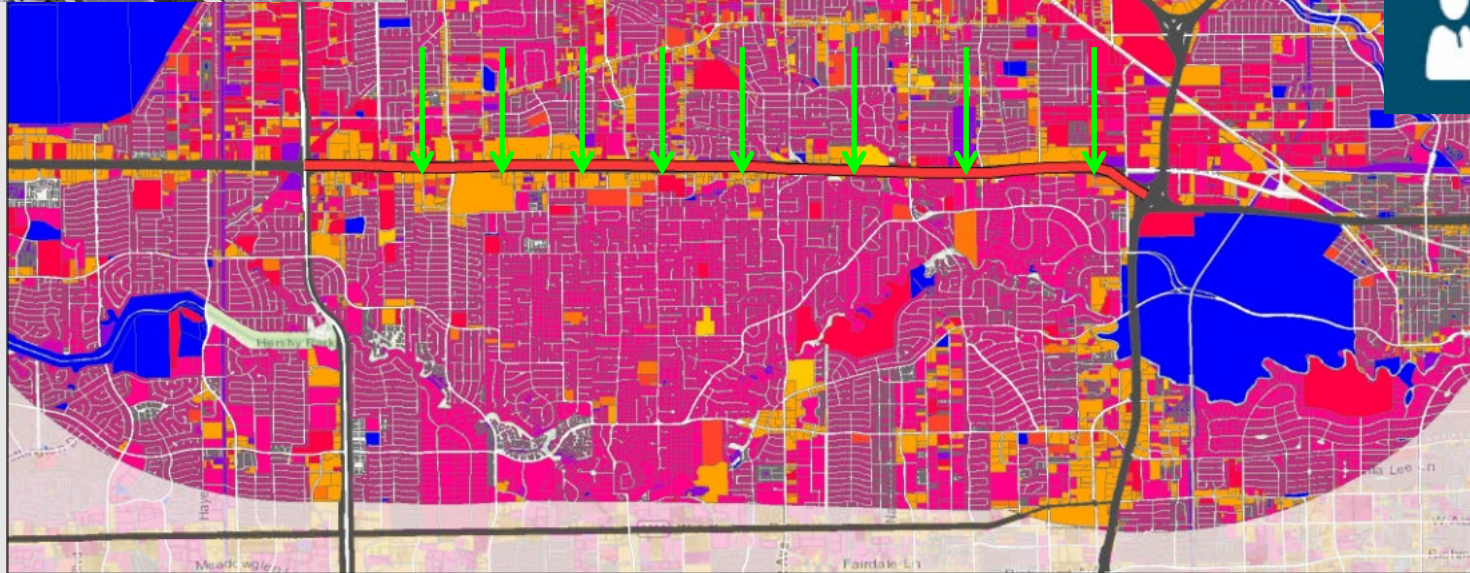
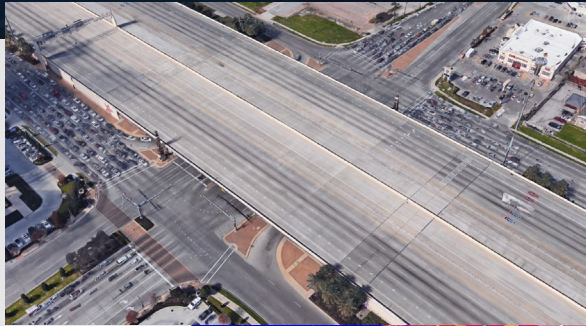
Evaluate Planning Studies

Evaluate Infrastructure Projects

Refine MPO Evaluation Criteria

- MPO Benefit Tools
  - Emissions Benefit
  - Delay Benefit
  - Safety Benefit
- Health Cost Savings
- Questionnaire for seniors and safe routes to school

# 3-Mile Buffer around 1 10 W Corridor



Identify  
Transportation  
and Health Needs,  
Resources, and  
Priorities



## Legend

Study Area

### Land Use Type

Commercial

Gov/Med/Edu

Industrial

Multiple

Other

Parks/Open Spaces

Residential

Undevelopable

Unknown

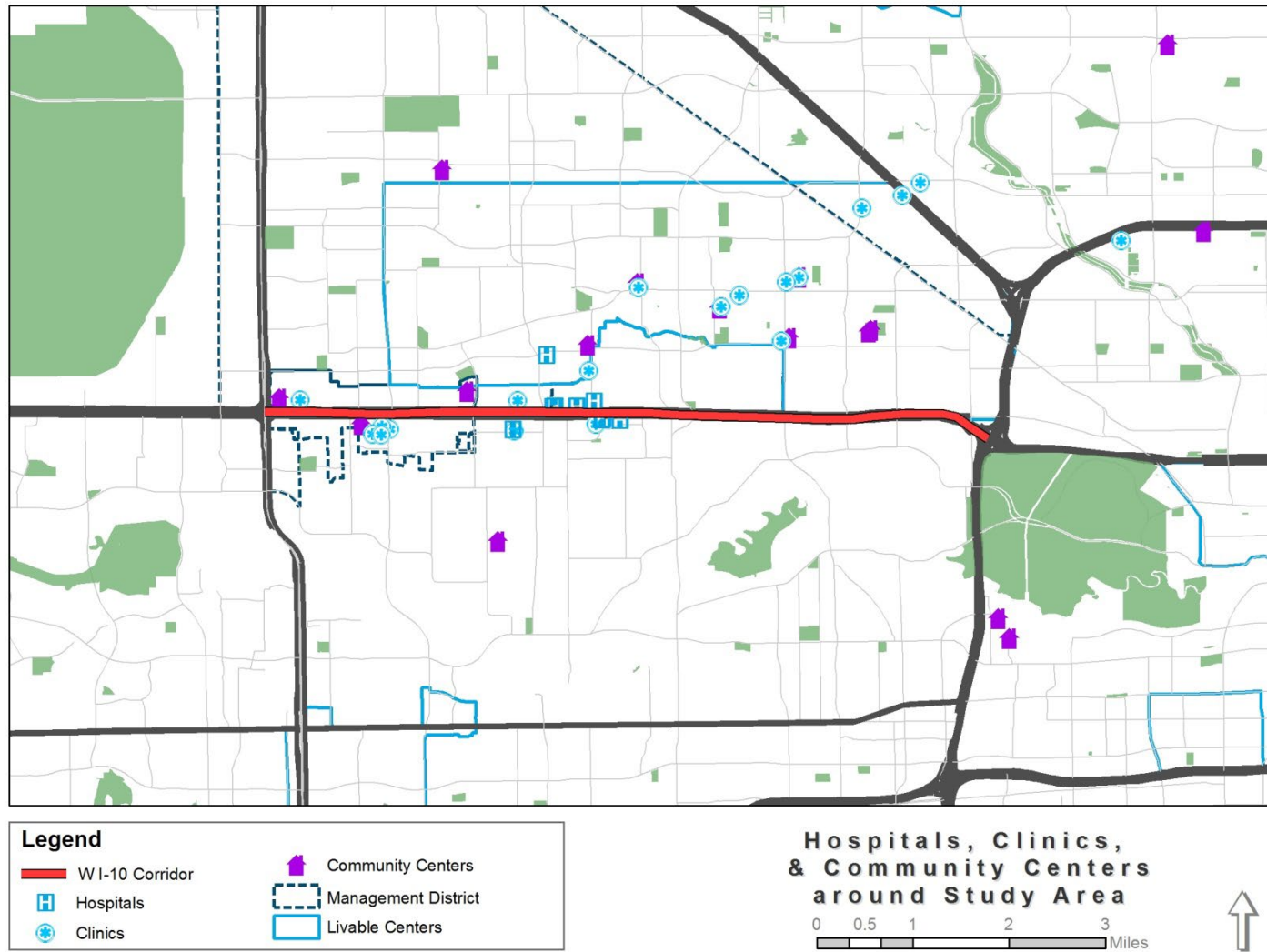
Vacant Developable (includes Farming)

## Current Land Use

0 0.5 1 2 3 Miles



# Medical Facilities & Community Centers around 1 10 W Corridor

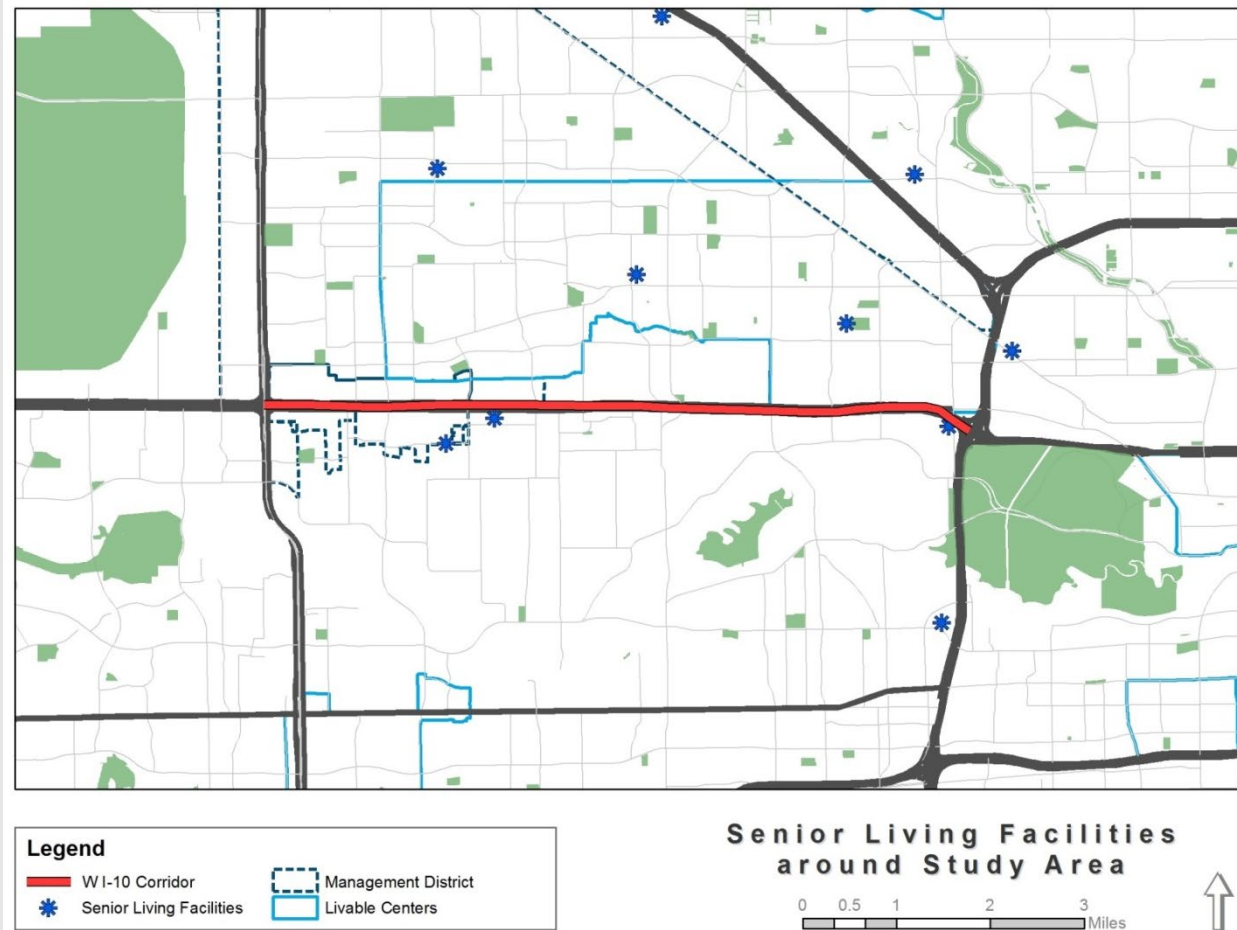


Access to a wide range of services including medical facilities.

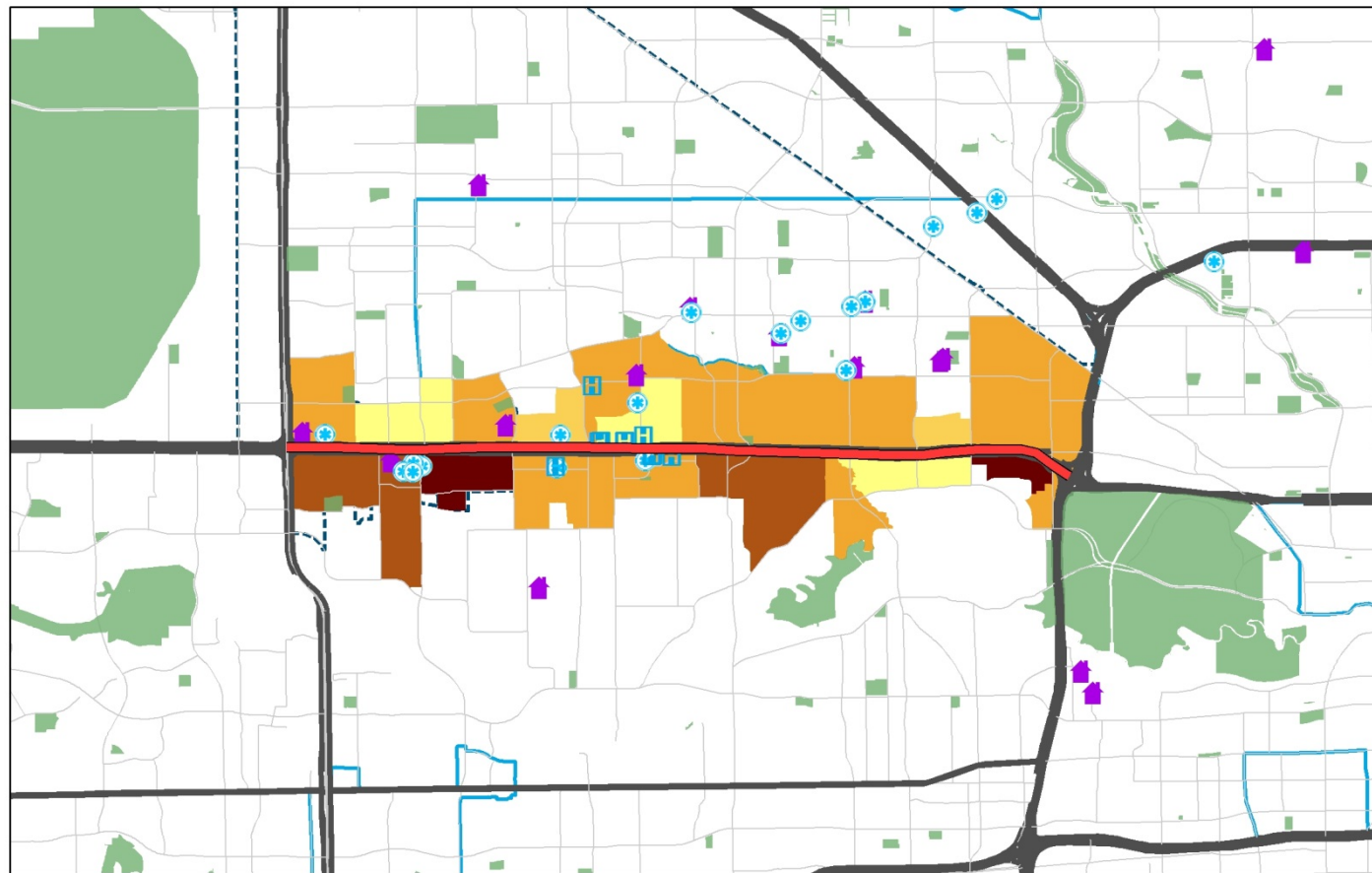


## ■ Planning Considerations:

- **Transit dependent**
  - Need to improve **transportation options** for seniors
  - Needed **infrastructure improvements** near transit stops
- **Vulnerable Population**
  - underserved and **under-connected** senior community



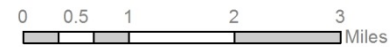
# Senior Population around I 10 W Corridor



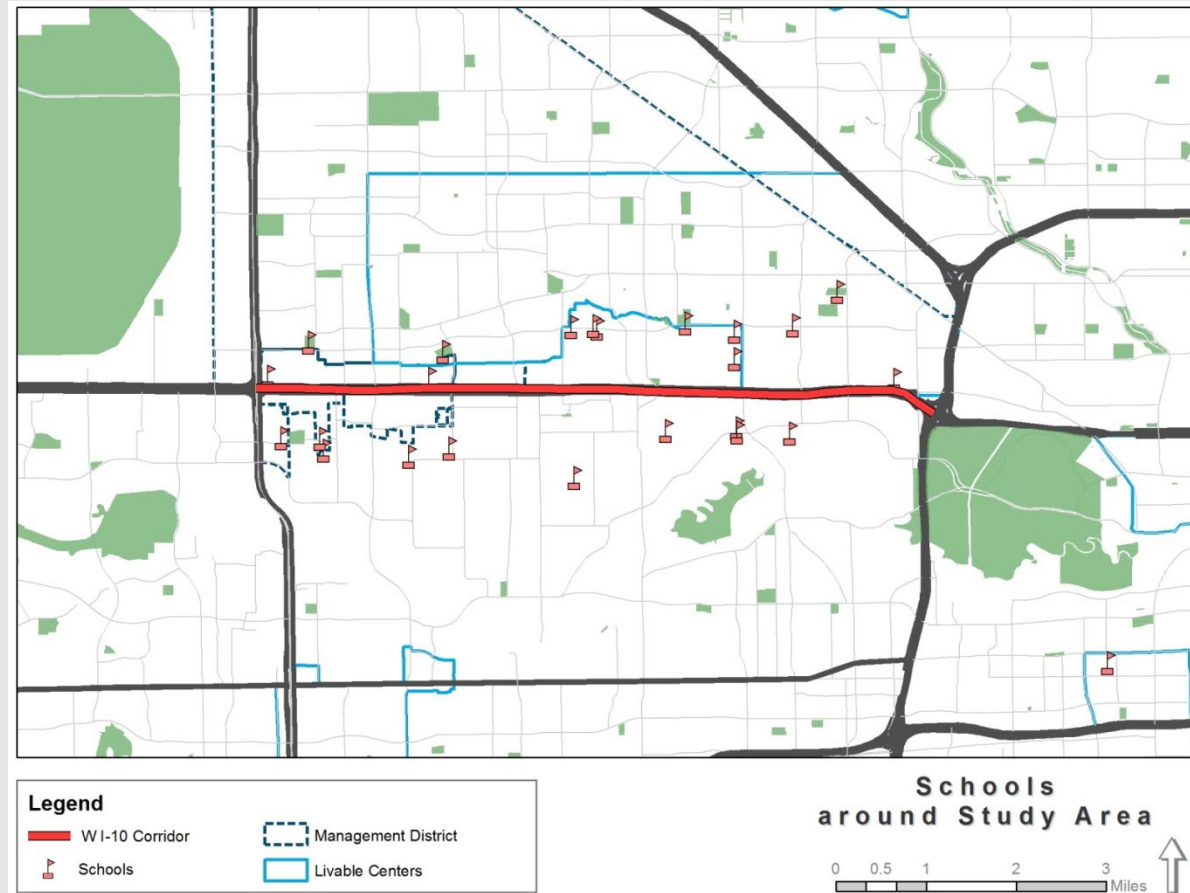
## Legend

WI-10 Corridor	Community Centers	Age over 65-yr	103 - 234
Hospitals	Management District	37 - 65	235 - 359
Clinics	Livable Centers	66 - 102	360 - 651

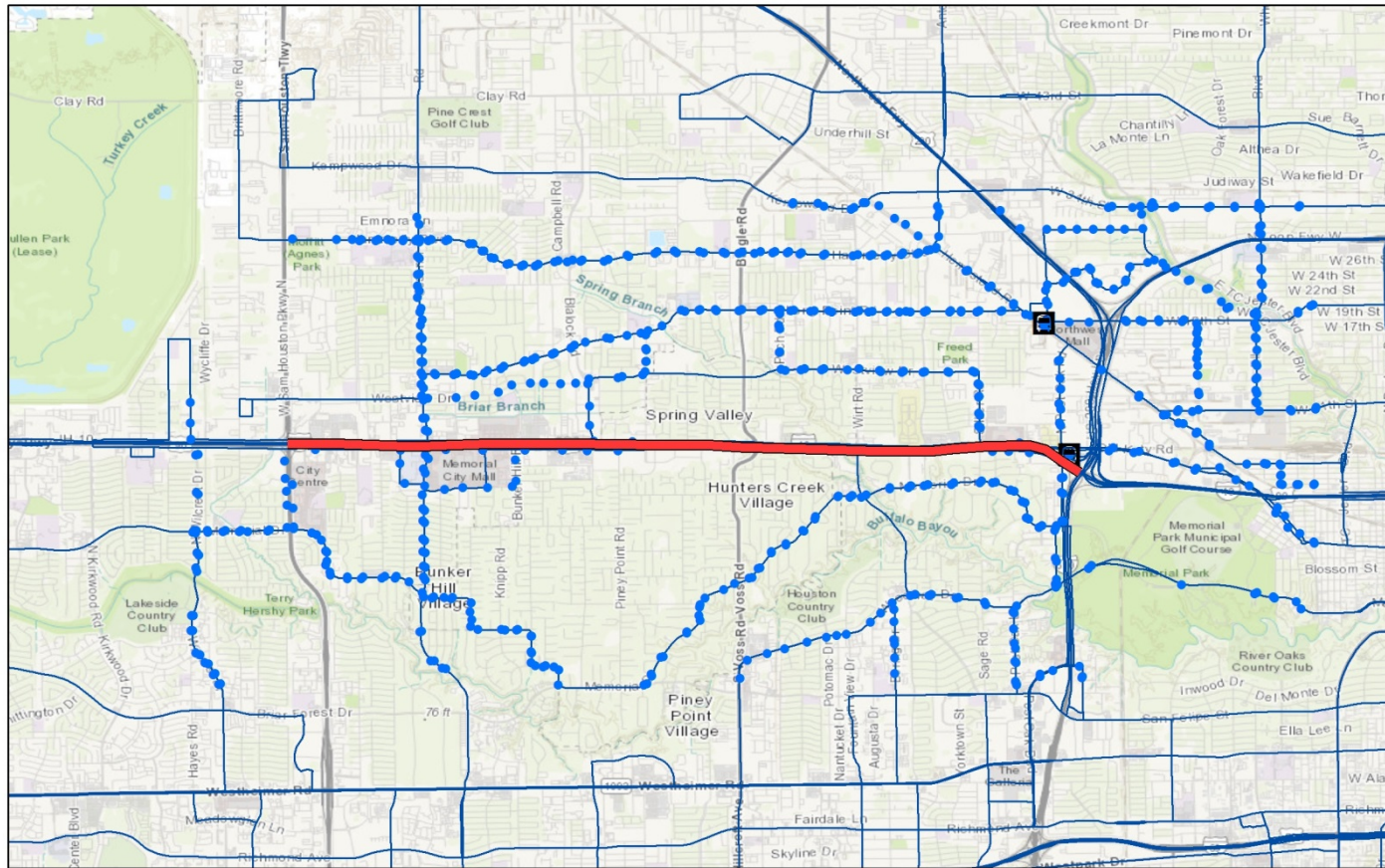
Population over 65-yr  
along Study Area



- Mobility Goal:
  - Make walking and bicycling to school safer and more accessible for children and their parents
- Planning Considerations:
  - Need to improve
  - **route to school**
    - Visibility
    - Infrastructure
    - ADA compliance



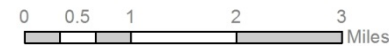
# Transit Facilities around 1 10 W Corridor



## Legend

- W I-10 Corridor
- Bus Stops
- METRO Bus Service
-  Transit Centers

## METRO Bus Service

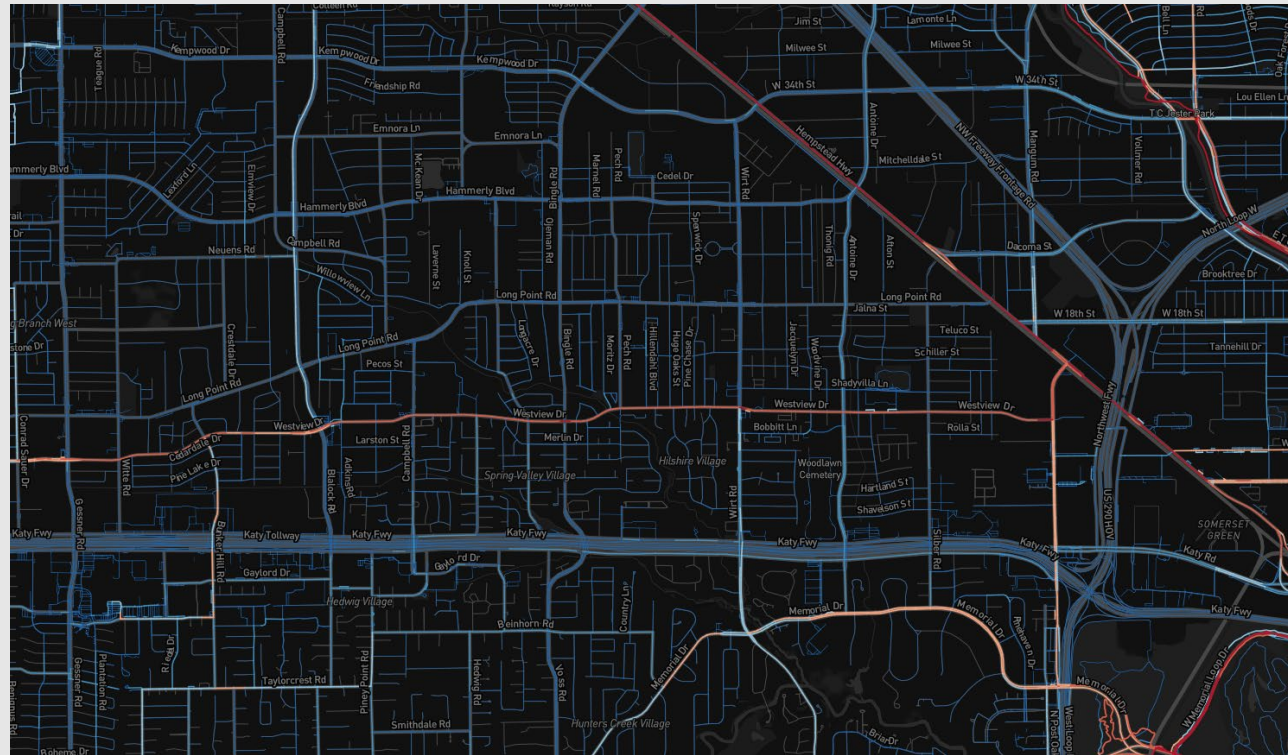




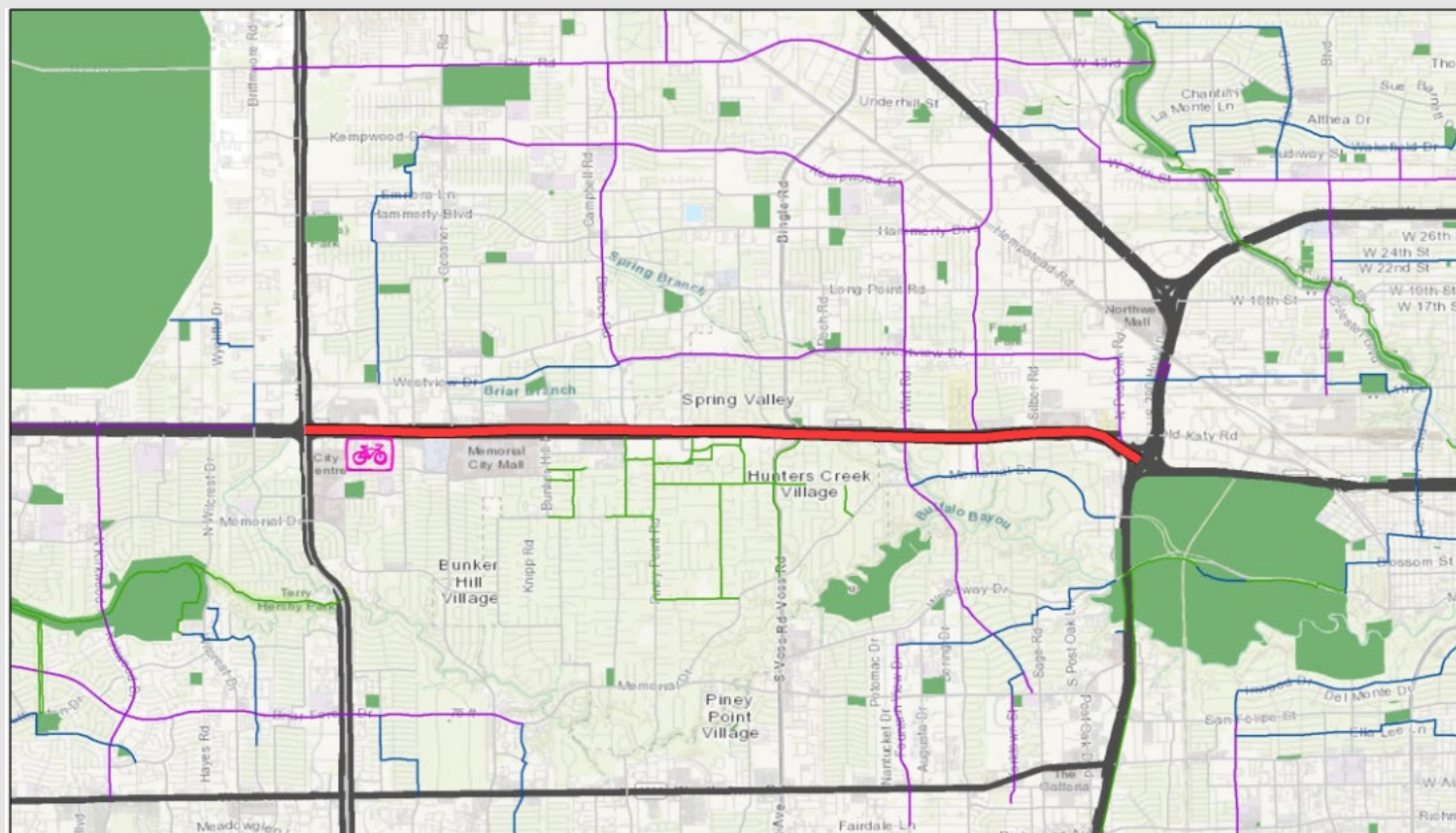
- TxDOT purchased Strava dataset

## Considerations:

- Detailed user data for bicycle and runner counts
  - use the STRAVA APP
  - level of magnitude estimates for these users now
- Surrogate for all users
- Usefulness
  - Planning, design, traffic, permitting and benefit estimation



# Bicycle Infrastructure



## Legend

- W I-10 Corridor
- Bicycle Stations
- Park

## Bike Facilities

- Existing Bike Lane
- Existing Shared Use Path/Trail
- Existing Signed Shared Roadway

## Existing Bike Facilities



## Core Group Meeting

- Kick-off Meeting
- Scope of Work
- Follow-up meetings

## Spring Branch Meeting:

- Kick-off Meeting
- Scope of Work
- Steering Committee meetings
- Seniors Workshop
- Safety Workshop
- Developed plug-in survey for seniors

### Participants

- Ped/Bike Group
- Transit Group
- Seniors Group
- Safety & Access Mgt

### Core Group

- H-GAC
- City of Houston
- METRO
- Bike Houston

### Work Group

- SBMD
- HPB
- HGAC
- Local Leaders

Define  
Transportation  
Problems and  
Public Health  
Issues





# Results from Community Outreach: NW Transit Connector

## TxDOT seeking community input on area bike-trail projects

February 13, 2019 by [Landan Kuhlmann](#) — 1 Comment

Feb. 28 is the deadline for public input on three proposed bike trail projects that would have a direct impact on cyclists and pedestrians in the area, most notably the Heights.

Texas Department of Transportation spokesperson Emily Black said there have been ongoing conversations about multiple local projects – a Memorial Park Pedestrian connector, a Heights/MKT trail connector and a Northwest Transit Center connector – since a neighborhood group reached out to TxDOT with ideas in early 2018. Proposed projects were submitted to the Houston-Galveston Area Council for consideration in October 2018.

**“These specific community needs were identified and relayed to TxDOT by a citizens group, so we decided to move forward with the projects,”** Black said. “The proposed projects connect to existing trails to make walking and biking a safer, more convenient alternative mode of transportation.”



**Bike trail**

Develop Goals  
and Objectives  
that Promote  
Health in the  
Community





# NW Transit Connector

**Project Name:**  
**North West Transit Center**

**0.21 mi:**  
**Future High Speed Rail Terminal**

**Identify Alternatives that Support Health in the Community**



**0.17 mi:**  
**Concentra Urgent Care**

**0.06**  
**Bus Stop**  
**Route 39 & 84**

**0.39 mi:**  
**The Awty International School**

**METRO NW**  
**Transit Center**

## Legend

- School
- Existing Shared Use Path
- Proposed Project
- METRO Bus Stop
- METRO Bus Route
- Apartment Complex
- Existing Bike Lane
- Golf Course

0 0.125 0.25 0.5 0.75 1 Miles

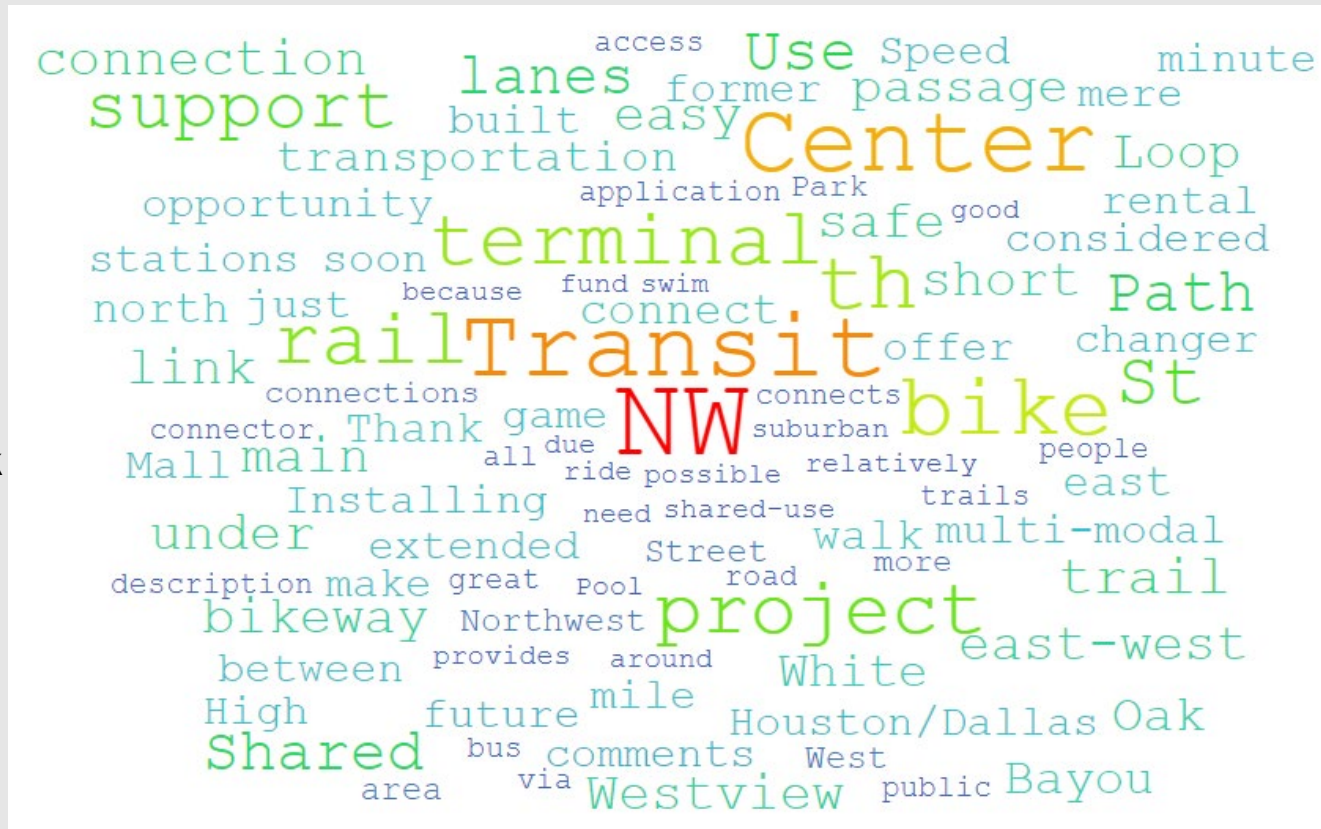


- Mobility Goal:

- Access to a range of Transportation options

## Planning Considerations:

- Additional Destinations
  - Need to improve transportation options
    - Afton Pool
    - W 11th Street Park
  - Needed infrastructure improvements near transit stops







**Pedestrians don't  
come with airbags.**

Slow down and watch for pedestrians.



## Health

### Safety

#### Coordination & Partnership:

- COH Vision Zero
- TxDOT Vision Zero 2050
- Traffic Safety Coalition in the Houston District
- FHWA: Pedestrian Safety Action Plan
- FHWA: RSA – Intersection Audits COH

### Progress: To Date

- Data Collection
- Stakeholder and Public Engagement
- Questionnaire Tool – Seniors
- Secured funding for Off-street ped/bike facility connecting to NW Transit Center

### Next Steps

- Evaluate Alternatives in Previous Planning Studies
- Refine MPO Evaluation tools: Safety, Delay, Emission (VMT red., Idling)
- Develop Health related inputs for MPO Evaluation tools
- Childhood Obesity COH – Choices (Harvard Univ.)

#### Questionnaire Tool

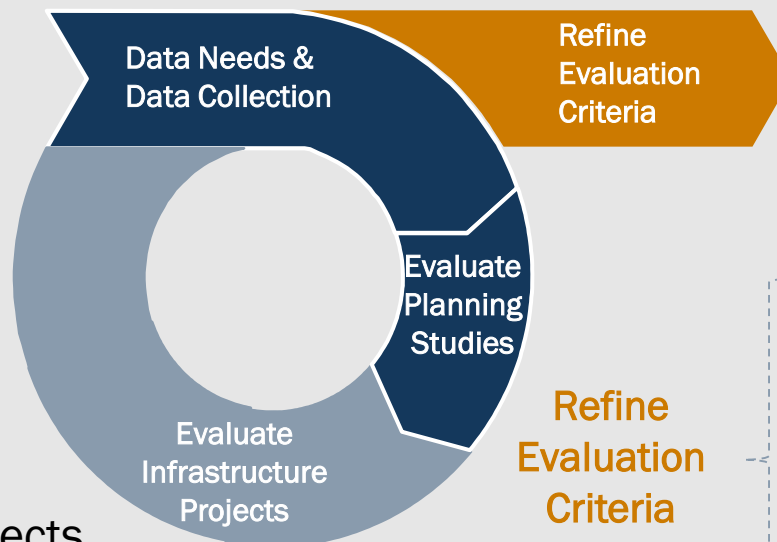
- SRTS

## Planning Studies

- Spring Branch Livable Centers Study
- Spring Branch Special District Study
- West Houston Mobility Study

## Evaluate Proposed Infrastructure Projects

- Proposed projects
- MPO Methodology
- Plug-in Survey



Refine  
Evaluation  
Criteria

Refine  
Evaluation  
Criteria

- MPO Benefit Tools
  - Emissions Benefit
  - Delay Benefit
  - Safety Benefit
- Health Cost Savings



# Example: MPO Tool

Project Information			
Name:	Montrose - Accessibility to Transit		Data entered by the sponsors
Application ID Number:			HGAC regional travel demand model data provided by HGAC
Sponsor ID Number (CSJ, etc.):	N/A		Data populated/calculated based on inputs
Project County	Harris		Benefits calculated by the template
Proposed Improvements Information			
Year Open to Traffic? (Must be >=2021)	2021		
Type of Improvement	Paved Shoulder/Shared Use path		
Facility Type	Freeway		
Average Roadway Speed (mph)	39		
Service Life of Project	12		
Daily Travel Demand			
Number of New Daily Users in Year Open to Traffic	353		
Average One way Trip Length	5		
2018 Peak Period Traffic Volume	103,444		
2025 Peak Period Traffic Volume	103,439		
2045 Peak Period Traffic Volume	117,134		
OUTPUTS			
Benefit Results			
Discounted NOx Benefits @ 7% (2018 \$)	\$2,215.29		
Discounted VOC Benefits @ 7% (2018 \$)	\$108.33		
Total Emissions Benefit Results			
Discounted Emissions Benefits @ 7% (2018 \$)	\$2,323.62		
Emissions Reductions (Life of Project = 12)			
NOx Emission Reductions (tons/year)	1.35		
VOC Emission Reductions (tons/year)	0.26		

# Questions?

**Ana Ramirez**

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**TxDOT-Houston District**