



TEXAS DEPARTMENT OF TRANSPORTATION

WELCOME!

STATE HIGHWAY 3 (SH 3) ACCESS MANAGEMENT STUDY

FROM BROOKGLEN DRIVE TO THE HARRIS/GALVESTON COUNTY LINE

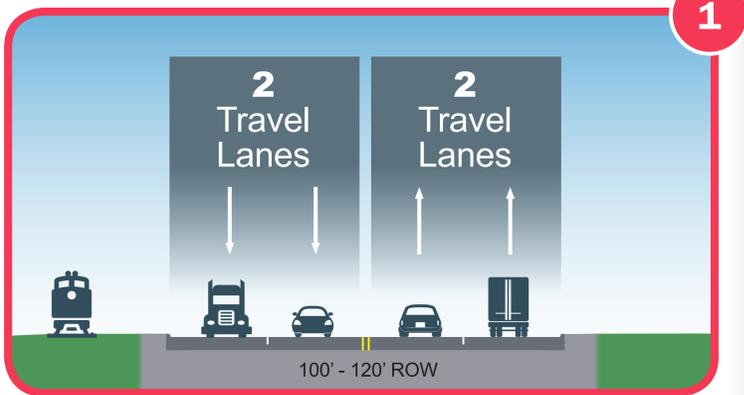
Why Am I Here?

- **Learn** about proposed improvements
- **Ask** questions
- **Provide** feedback

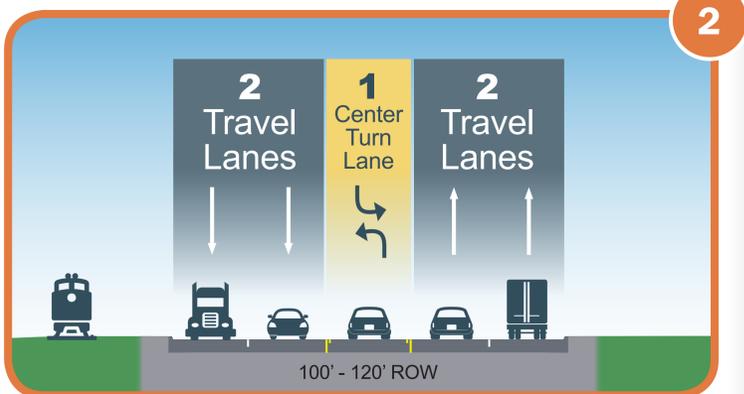
City of Webster Civic Center, 311 Pennsylvania Avenue

Existing Street Typical Sections

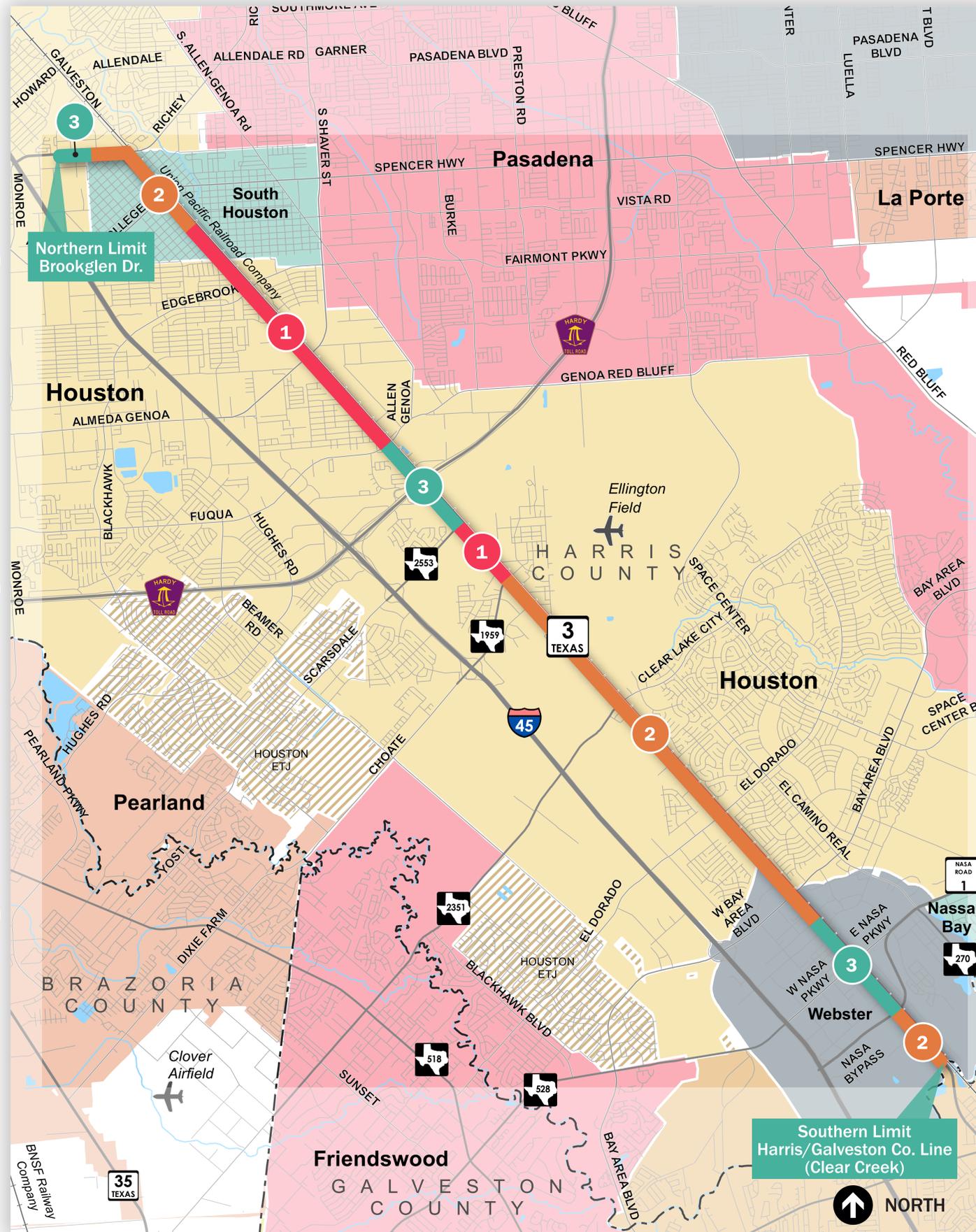
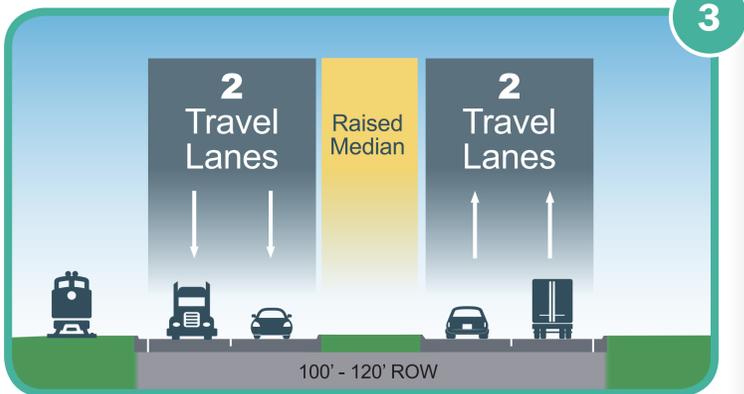
4-Lane with No Median



4-Lane with Center Turn Lane



4-Lane with Raised Median



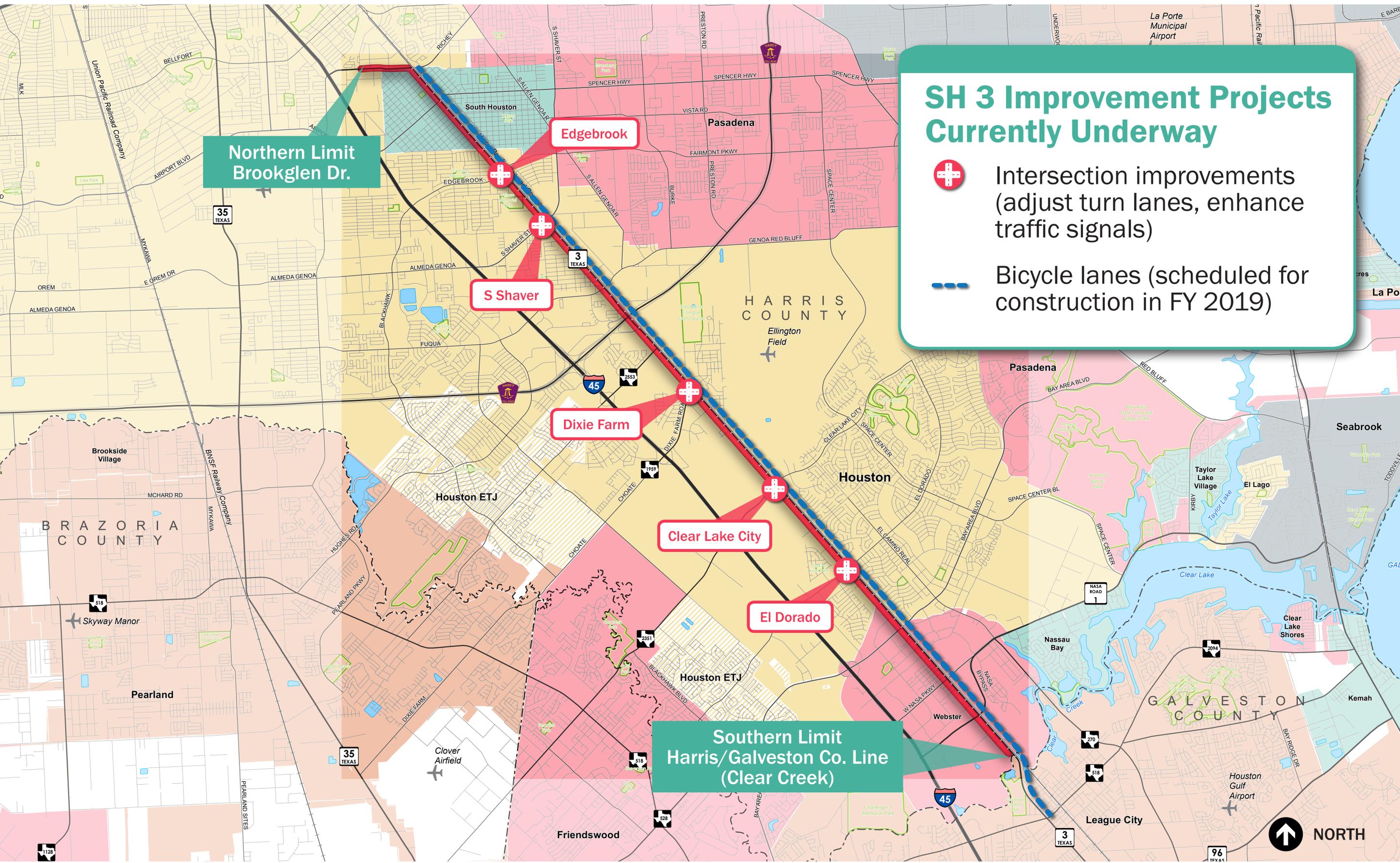
14-mile study corridor in Harris County that passes through portions of the cities of Houston, South Houston, and Webster

2 Motor Vehicle Lanes in each direction with two-way center turn lane or raised median in some segments

Railroad Parallel to SH 3 on the east side

24 signalized intersections

Important Considerations



SH 3 Improvement Projects Currently Underway

- Intersection improvements (adjust turn lanes, enhance traffic signals)
- Bicycle lanes (scheduled for construction in FY 2019)

STUDY PURPOSE AND GOALS



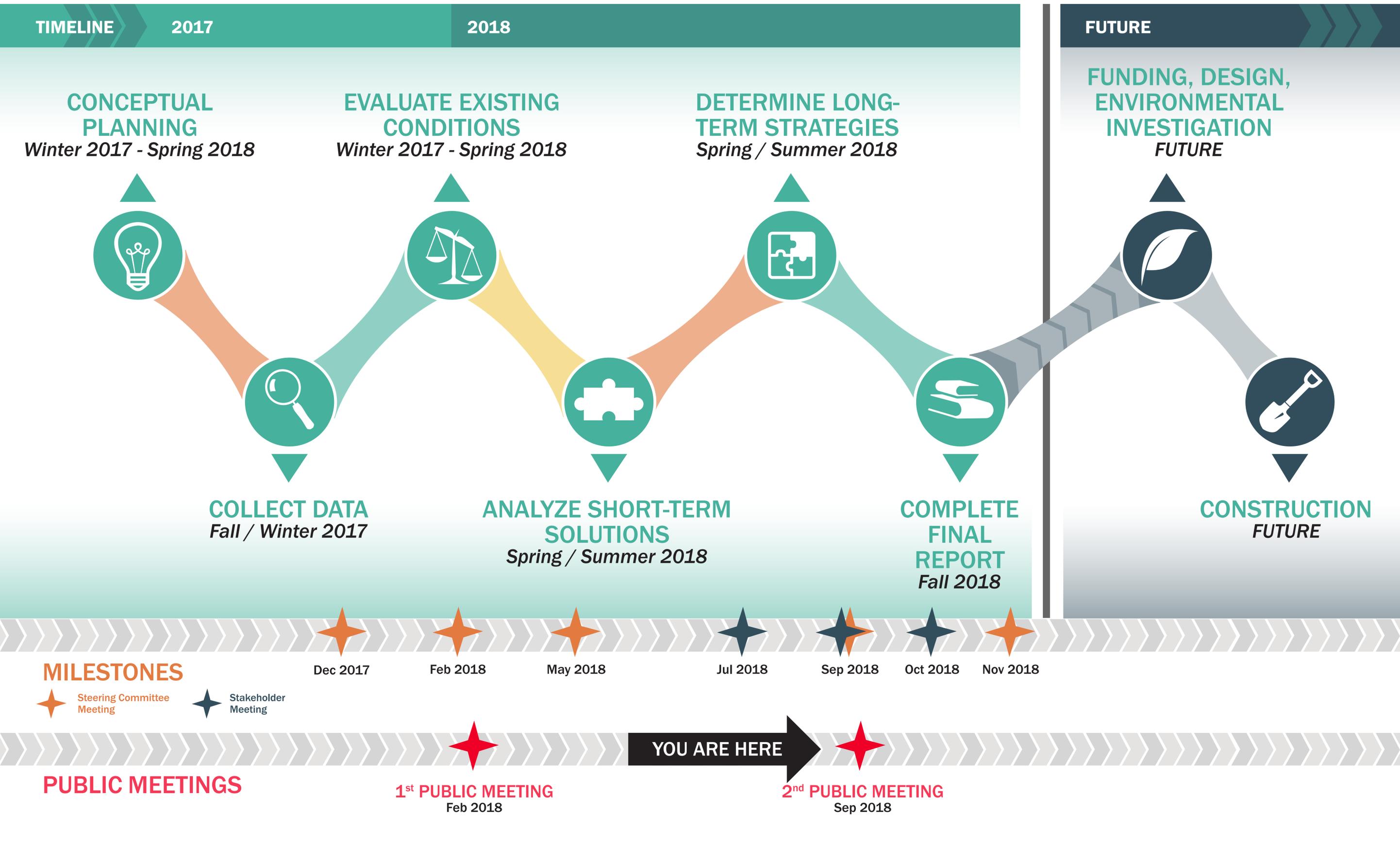
What Are We Trying to Do?

- Improve corridor safety
- Reduce traffic congestion
- Improve multi-modal access: auto, transit, bicycles, and pedestrians
- Improve economic activity

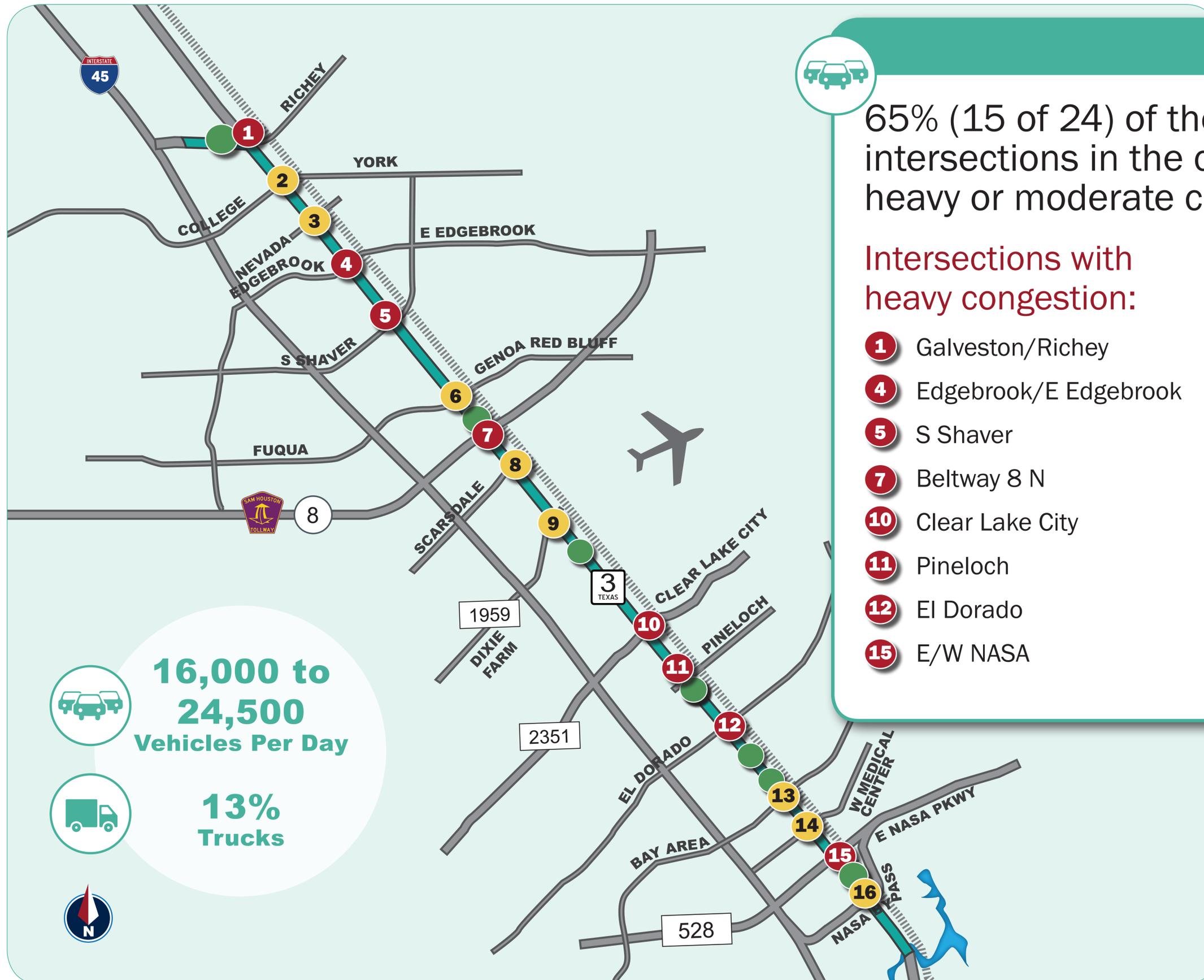


What Problems are We Trying to Address?

- Traffic congestion at intersections
- Higher than average crash rates
- Missing connections between travel modes



Existing Conditions: Traffic



65% (15 of 24) of the signalized intersections in the corridor experience heavy or moderate congestion.

Intersections with heavy congestion:

- 1 Galveston/Richey
- 4 Edgebrook/E Edgebrook
- 5 S Shaver
- 7 Beltway 8 N
- 10 Clear Lake City
- 11 Pineloch
- 12 El Dorado
- 15 E/W NASA

Intersections with moderate congestion:

- 2 College/York
- 3 Nevada
- 6 Fuqua/Genoa Red Bluff
- 8 Scarsdale
- 9 Dixie Farm/Challenger
- 13 Bay Area
- 14 W Medical Center
- 16 NASA Bypass

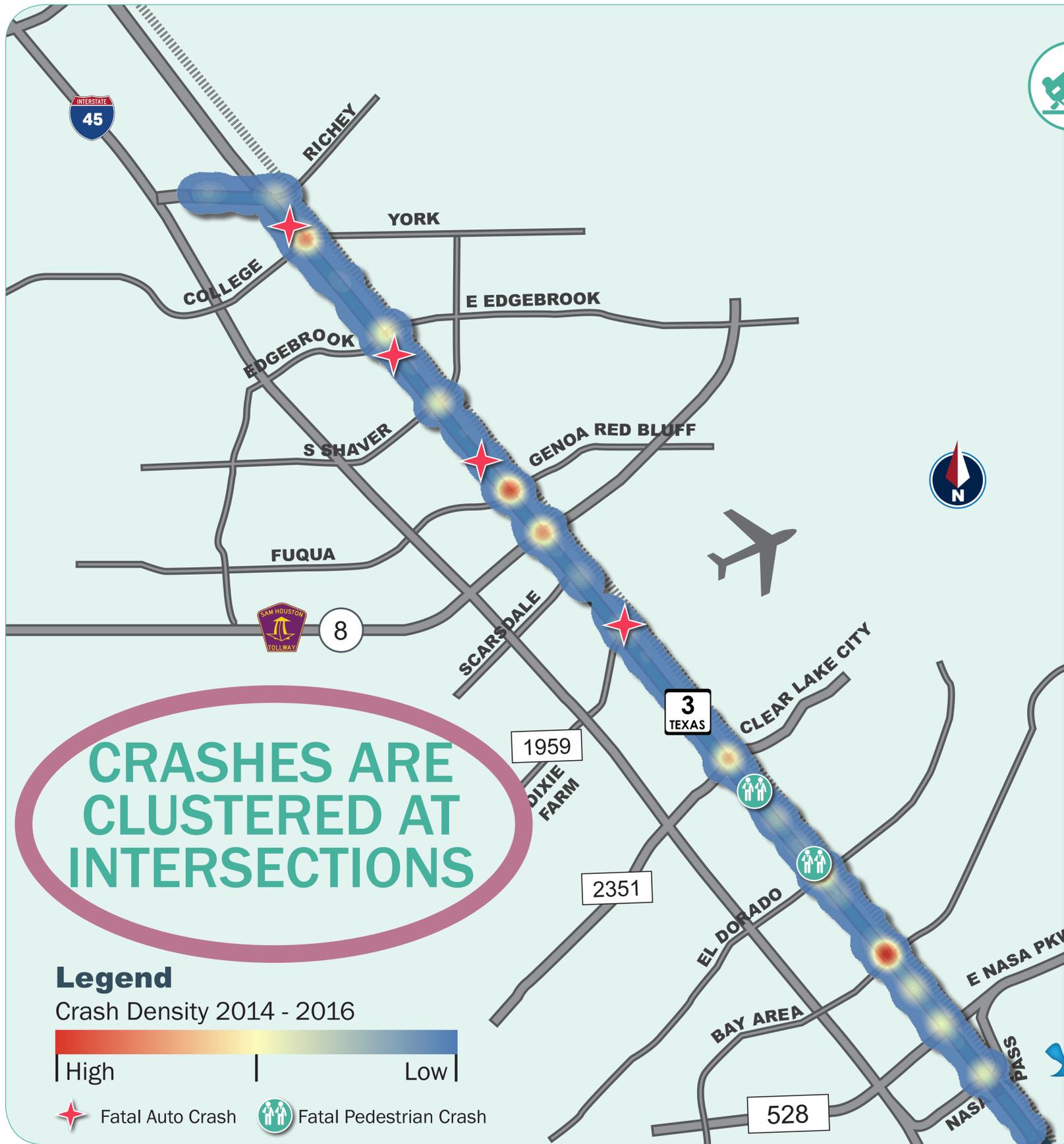
16,000 to 24,500 Vehicles Per Day

13% Trucks

Legend

- Low congestion at intersection
- Moderate congestion at intersection
- Heavily congested intersection
- # Intersection number

Existing Conditions: Safety



On SH 3 from 2014 - 2016 there have been...

1,127
Total Crashes



Or, on average
one crash per day

134
Injury Crashes



Or, on average
four crashes per month
involve injuries



9
Crashes
Involve a
Bicycle or
Pedestrian



6
Fatal
Crashes
4 + 2
Involve Autos Involve Peds

The above statistics represent the total number of crashes on SH 3

The average crash rate on SH 3 is higher than the statewide average crash rate

We can do
Better!



Public Participation Summary

- 51 members of the public attended
- More than 100 online engagement survey participants
- Majority of the public meeting attendees supported improvements along SH 3

*Public Meeting held on February 27, 2018

Online Engagement Survey - Priority Ranking

Top 3 Roadway Priorities

- Improve Traffic Flow
93 ranked
- Reduce Delay at Signals
85 ranked
- Improve Safety
75 ranked

Top 3 Pedestrian and Bicycle Priorities

- Add Sidewalks
73 ranked
- Improve Railroad Crossings
62 ranked
- Add Bicycle Paths & Lanes
75 ranked



Public Identified Intersections with Traffic Issues



Corridor Improvements



Install raised medians where practical



Install new pavement markings



Install centerline rumble strips or traffic buttons on undivided segments



Install advance street name signs



Install new sidewalks



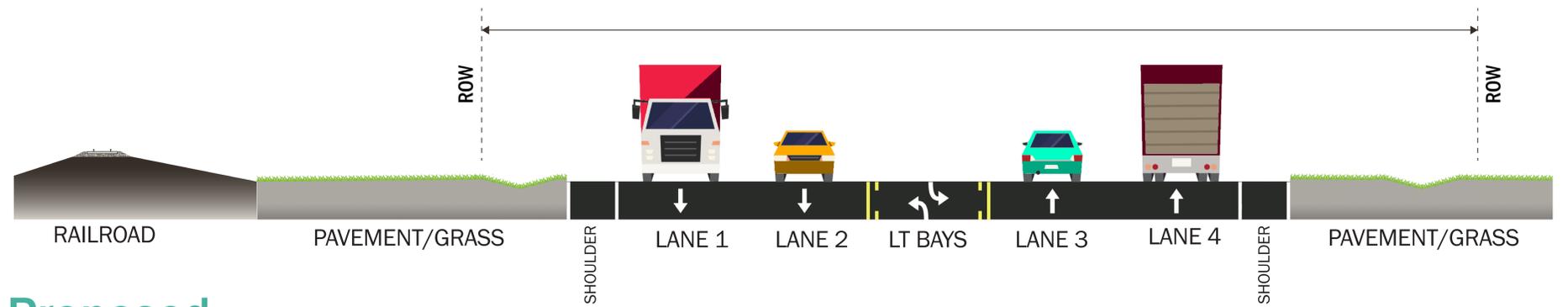
Perform speed zone study



Install continuous lighting where it does not exist

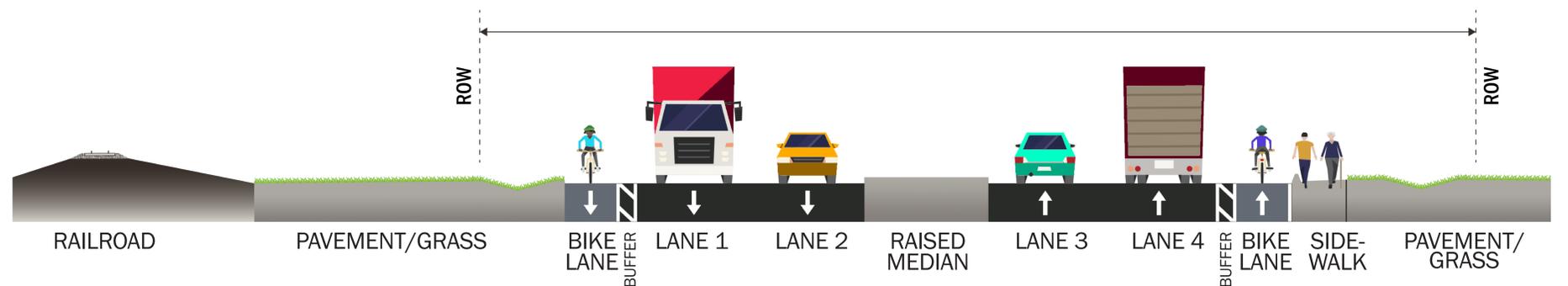
Existing

Street Typical Section



Proposed

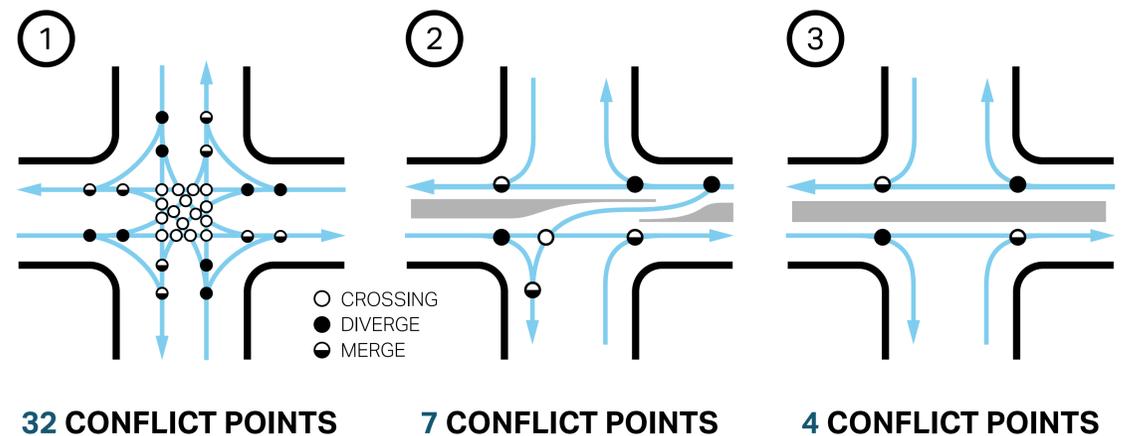
Street Typical Section



* Bike lane scheduled for construction in FY 2019

Reducing Conflict Points

Reducing conflict points can potentially reduce crashes. By adding medians in appropriate places, the proposed improvements can potentially reduce the number of conflict points on the corridor by 80%.



Proposed Improvements: Intersection

Intersection Improvements

-  Upgrade existing traffic signals
-  Implement signal coordination
-  Add or extend turn lanes
-  Improve railroad crossings for vehicles, bicycles, and pedestrians

SH 3 Corridor Travel Time Savings During the Afternoon Peak Hour

- Up to 15% reduction in the southbound (peak direction)
- Up to 2% reduction in the northbound (off-peak direction)

Intersections with Reduced Congestion due to Improvements



Legend

-  Low congestion at intersection
-  Moderate congestion at intersection
-  Study corridor

Potential Improvement Opportunities

1. Pedestrian railroad crossing
2. Boulevard with bike lanes and medians
3. Rails-with-trails concept
4. Landscaping
5. Buffered bike lanes
6. Shared-use path/trail
7. Transit bus
8. Autonomous shuttle
9. Commuter rail





Next Steps

- Review public and stakeholder feedback
- Refine improvements as applicable
- Present updates to steering committee
- Study's completion (Fall 2018)



Please send any questions or comments to:

Address:

Public Information Office
P.O. Box 1386
Houston, Texas 77251-1386
Phone: (713) 802-5076

Email:

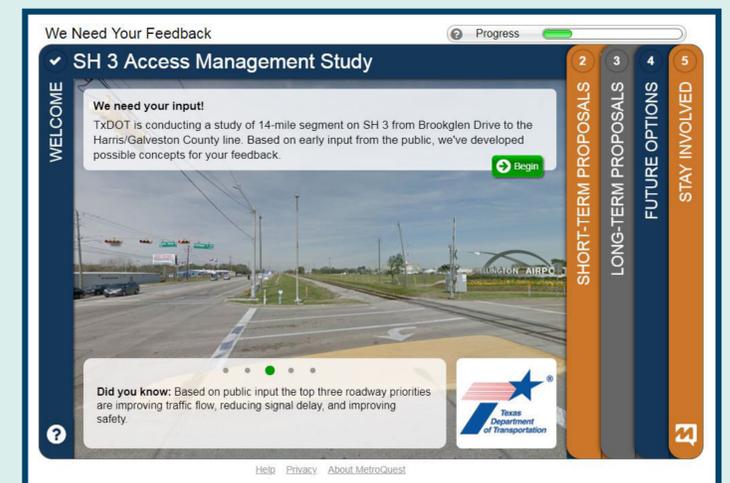
SH3AccessManagement@txdot.gov

Website:

Go to: bit.ly/sh3accessmanagement

We Need Your Help!

Take the online survey here and then share with others



Online survey is available on the SH 3 project web page. Official comment period ends October 10, 2018.



You can also scan this Quick Response (QR) code with your phone/tablet to access



Once completed:

Please help us gain more feedback and share the link via email or social media! The official survey comment period will be open through October 10, 2018.



- Fill out the online survey here;
- Or, use your phone to fill out the survey at:
bit.ly/sh3accessmanagement;
- Or, access the survey immediately by scanning this Quick Response (QR) code with your phone or tablet reader.





Corridor Implementation and Cost

SH 3 Access Management Study Preliminary Cost Estimates*

	Primary Funding Source	Quantity	Unit**	Unit Cost	TxDOT	Harris County	City of Houston	City of South Houston	City of Webster	Others	TOTALS
					Cost	Cost	Cost	Cost	Cost	(In Millions)	
SHORT-TERM	INTERSECTION IMPROVEMENTS***				\$66,000		\$66,000				\$8.74
	Traffic signal timing and synchronization	24	EA	\$5,500	\$66,000		\$66,000				
	CORRIDOR-WIDE IMPROVEMENTS***				\$6,535,760	\$357,500	\$526,240				
	Add / modify raised median	65,000	SY	\$77	\$4,504,500	\$250,250	\$250,250				
	Add / extend left-turn lanes	1	LS	\$275,000	\$192,500	\$41,250	\$41,250				
	Add pavement markings (all types, including removal and installation)	1	LS	\$1,254,000	\$1,065,900	\$62,700	\$125,400				
	Add centerline rumble strips (where there is no raised median, from Richey to Harris/Galveston County Line)	1	LS	\$38,500	\$32,725	\$1,925	\$3,850				
	Add edgeline rumble strips (on each side, from Richey to Harris/Galveston County Line, in segments where speed limit is 45 MPH or more)	1	LS	\$27,500	\$23,375	\$1,375	\$2,750				
	Add truck loons (to facilitate midblock U-turns)	15	EA	\$44,000	\$660,000						
	Replace signage (existing old signs, and signs impacted by proposed improvements)	50	EA	\$660	\$14,190		\$18,810				
	Add signage (Next Intersection/Signal, Intersection Lane Use, Do Not Enter at median left-turn pockets, U-turns, etc.)	150	EA	\$660	\$42,570		\$56,430				
	Add / adjust guard fence	1	LS	\$27,500			\$27,500				
BARRICADES, SIGNS, TRAFFIC CONTROL	24	MO	\$16,500	\$346,200	\$18,750	\$31,060					
MOBILIZATION (at 10% of Total Cost)	1	LS	\$794,750	\$694,800	\$37,630	\$62,330					
TOTAL FOR SHORT-TERM IMPROVEMENTS					\$7,642,800	\$413,900	\$685,600				
MEDIUM-TERM	INTERSECTION IMPROVEMENTS***				\$3,680,000		\$3,795,000				\$14.65
	Traffic signal replacement	18	EA	\$345,000	\$2,415,000		\$3,795,000				
	Traffic signal modification	5	EA	\$115,000	\$575,000						
	Bridge widening on SH 3 (at channel crossing north of Clear Lake City Blvd.)	1	EA	\$690,000	\$690,000						
	CORRIDOR-WIDE IMPROVEMENTS***				\$1,231,650	\$39,675	\$1,883,700	\$322,000	\$483,000		
	Consolidate driveways	23	EA	\$39,675	\$714,150	\$39,675	\$158,700				
	Add dowel-in continuous curb (to define driveways, etc.)	5,000	LF	\$35	\$172,500						
	Add right-turn lanes	1	LS	\$575,000	\$345,000		\$230,000				
	Add illumination in deficient areas	5	MI	\$460,000			\$1,495,000	\$322,000	\$483,000		
	PEDESTRIAN / BICYCLE IMPROVEMENTS***				\$1,452,335		\$19,665				
	Add sidewalks	10,000	SY	\$69	\$690,000						
	Stormwater drainage improvements (ditch cleaning / reshaping due to sidewalk and driveway-related improvements, etc.)	1	LS	\$57,500	\$57,500						
Add ADA accessible curb ramps / pads	1	LS	\$172,500	\$172,500							
Add intersection pavement markings	1	LS	\$34,500	\$14,835		\$19,665					
Add dowel-in slotted curb (between bike lane and sidewalk)	15,000	LF	\$35	\$517,500							
BARRICADES, SIGNS, TRAFFIC CONTROL	24	MO	\$17,250	\$204,130	\$1,270	\$182,780	\$10,330	\$15,490			
MOBILIZATION (at 10% of Total Cost)	1	LS	\$1,332,103	\$656,810	\$4,090	\$588,110	\$33,230	\$49,850			
TOTAL FOR MEDIUM-TERM IMPROVEMENTS					\$7,224,900	\$45,000	\$6,469,300	\$365,600	\$548,300		
LONG-TERM*****	PEDESTRIAN IMPROVEMENTS AT RAILROAD CROSSING*****				\$4,472,000		\$5,928,000				\$700.45
	Gates, signals, signs, sidewalks, planking, and other required treatments	13	EA	\$800,000	\$4,472,000		\$5,928,000				
	URBAN DESIGN IMPROVEMENTS***						\$22,750,000	\$4,900,000	\$7,350,000		
	Landscaping - trees, bushes, top soil, sodding, grass seeding, irrigation	14	MI	\$765,000			\$6,961,500	\$1,499,400	\$2,249,100		
	Street Lighting	14	MI	\$925,000			\$8,417,500	\$1,813,000	\$2,719,500		
	Signage - placemaking signs	14	MI	\$25,000			\$227,500	\$49,000	\$73,500		
	Light utility modification (minor)	14	MI	\$525,000			\$4,777,500	\$1,029,000	\$1,543,500		
	Maintenance (minor)	14	MI	\$260,000			\$2,366,000	\$509,600	\$764,400		
	Urban design guidelines		Policy								
	Management district		Policy								
	Building / Street frontage alignment		Policy								
	Transit oriented development district around future multi-modal transit		Policy								
RAILS WITH TRAILS / SHARED USE PATH***						\$2,957,500	\$637,000	\$955,500			
10-foot wide shared use path	13	MI	\$350,000			\$2,957,500	\$637,000	\$955,500			
LOW SPEED CONNECTED AND AUTOMATED VEHICLE SHUTTLE SERVICE									\$500,000		
Three vehicles for lease to cover entire corridor	1	LS	\$500,000						\$500,000		
COMMUTER RAIL *****									\$650,000,000		
Conceptual capital cost for a line from Downtown Houston to Galveston. Continuing operations may be \$12M annually	50	MI	\$13,000,000						\$650,000,000		
TOTAL FOR LONG-TERM IMPROVEMENTS / OPPORTUNITIES					\$4,472,000		\$31,635,500	\$5,537,000	\$8,305,500	\$650,500,000	

NOTES:

- * DISCLAIMER: These are planning-level cost estimates, they are subject to change. Funding and construction coordination will be required among TxDOT, the various entities listed above, as well as future potential partners (e.g., UPRR).
- ** Abbreviations: LS - Lump Sum; LF - Linear Feet; SY - Square Yards; MI - Mile; EA - Each; MO - Month
- *** Joint funding may occur for several improvements including traffic signals, illumination, pedestrian improvements at railroad crossings, rails with trails and shared use path among any other potential partnerships.
- **** Additional study and public involvement will be required for the long-term improvement / opportunities, they are beyond the scope of this study.
- ***** The cost of pedestrian improvements at railroad crossings vary depending on treatment type.
- ***** Commuter rail cost is a conceptual-level estimate, Source: Source: Regional Commuter Rail Connectivity Study, dated 9/5/2008 by H-GAC. Cost will differ depending on utilized technology, infrastructure, operations, and potential partnerships.
- ***** Cost estimates are based on unit costs as of September 2018 from various sources, primarily TxDOT. Contingencies have been included in all costs.