

US 290 (NORTHWEST FWY)

FM 529 (Spencer Rd.) to IH 610 (North Loop)

Current Conditions

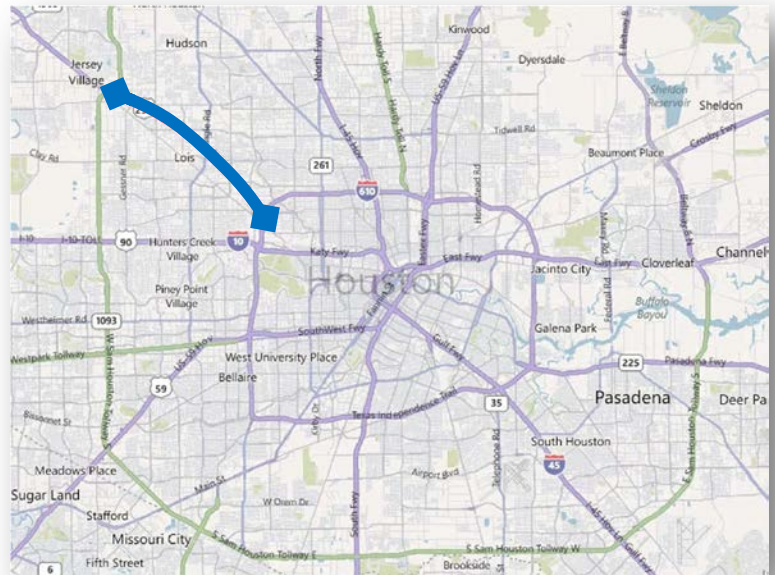
From FM 529 to IH 610, US 290 has three or four general purpose lanes in each direction and a one-way reversible High Occupancy Vehicle (HOV) lane in the middle. US 290 experiences heavy slowdowns inbound during the morning hours and outbound during the evening hours—following a traditional commute pattern.

- Segment Length: 9.2 miles.
- Road Type: 6- to 8-Lane Freeway.
- Annual Hours of Delay: 3,386,000.
- Texas Congestion Index: 1.74.
- Commuter Stress Index: 2.07.

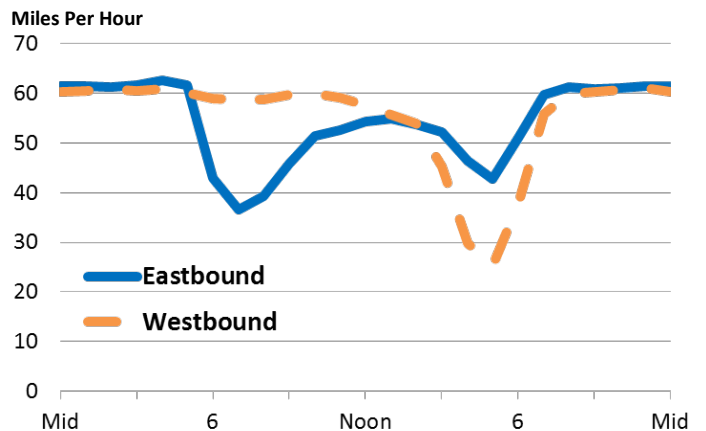
Possible Congestion Causes

IH 610 is the eastern terminus of US 290; thus all traffic to/from Northwest Houston headed for destinations south/east of this terminus point travel along this segment of US 290. Major residential and commercial development is causing this 6-lane facility to be over capacity during the peak periods. Possible causes of congestion in this segment include:

- High traffic volumes exceeding capacity.
- Major bottleneck at the interchange of Beltway 8 with US 290 due to limited number of lanes available to accommodate the weaving traffic.
- Large business centers and commercial activity, heavy truck centers/yards between Pinemont Drive and Fairbanks North Houston Road result in high traffic volumes entering and exiting the freeway causing additional weaving and slowdowns.
- Interchange of US 290 with IH 610 South/IH 10 causes backups and slowdowns due to traffic from IH 610 North Loop weaving left to go south on IH 610 West Loop and traffic from US 290



2010 Rank: 11	2013 Rank: 18
Annual Hrs of Delay/Mile:	369,000
Hrs of Congestion/Day:	9 Hours
Annual Cost of Delay:	\$74.0 Million
Average Daily Traffic:	185,000 Vehicles



weaving right to get to IH 10 East and IH 10 West.

- Until recently there were limited auxiliary lanes and narrow or no inside shoulders causing slowdowns near on/off ramps since the HOV lane was retrofitted.
- No inside or outside shoulder in certain sections of the segment.

Projects in Progress or Completed

Interchanges

Reconstruction of the inbound portion of the US 290/IH 610 interchange is underway using Proposition 12 funds.

Traffic Management

Traffic management improvements that added auxiliary lanes and extended deceleration and acceleration lanes for Beltway 8 interchange traffic have been completed.

Frontage road improvements at various intersections have also been completed.

Incident Clearance

SAFEClear, the City of Houston's rapid clearance program, provides quick response and towing of crashed and disabled vehicles, reducing secondary crashes and congestion. More than 60 private contractor tow trucks rapidly respond to all incidents (approximately two-thirds of incidents were detected by the roving tow trucks and 90 percent were detected and cleared within 20 minutes by SAFEClear). However, effectiveness of this program was reduced in summer 2010 when City budget cuts caused a \$50 fee to be instituted for the previously free tows. Average incident clearance time (from tow authorization to clear) increased from 14 minutes in 2010 to 27 minutes in 2011.

TxDOT, METRO, and Harris County operate fewer than a dozen Motorist Assistance Program (MAP) pick-up trucks as a free assistance program to provide minor aid to stranded motorists. It also reduces traffic congestion and improves highway safety.

A heavy tow truck contract allows quick removal of large trucks. There is a policy that does not hold TxDOT liable for damage to products that are removed from the roadway in such an event.

Houston TranStar traffic and emergency management center is the coordination hub for all incidents. Traffic incidents are detected, verified, and the public is notified through its ITS

system. Dispatch and response is sent via coordination of the various agencies.

Travel Options

The Houston-Galveston Area Council's (H-GAC) Commute Solutions program funds, promotes, and provides administrative support to various commute alternative projects. The program provides public education to commuters and employers about available commuting options in the region and on the benefits of using alternative transportation modes. The Commute Solutions program also provides literature and public outreach on carpooling, vanpools, transit, guaranteed ride home, teleworking, alternate work schedules, and parking management.

Shared Commuting

NuRide is an online rideshare marketing program that provides ride matches and rewards users for recording their alternative commute trips (i.e., ridesharing, bus, rail, telecommute, walk, bike, and compressed work week). The H-GAC NuRide program is the nation's largest ridematching rewards program, with over 17,100 registered riders. Since its inception in June 2005, the program has resulted in 3.32 million fewer car trips, 79.42 million fewer miles driven, and the saving of 3.86 million gallons of gas.

Biking and walking trips account for 4.2 percent of alternative commute trips recorded on NuRide during 2011.

METRO operates the STAR Vanpool program serving more than 700 routes and is ranked as the second largest vanpool program nationally by passenger trips and the third largest vanpool program nationally by passenger miles in the 2011 APTA Fact Book.

Flexitime

Many employers offer flexible work schedules, with around 350 employers participating annually in the Flex in the City Program.



Incentive Driven TDM Programs

Many large companies in the Texas Medical Center, the Energy Corridor, and downtown subsidize all or part of their employees' vanpool or transit commuting costs.

Twenty-five companies are voluntarily participating in the Commute Champion Program enabling H-GAC to document emission reductions related to their commuter benefits. Additionally 38 companies and 17 local governments are participating in the Clean Air Champion Program in which they voluntarily provide information enabling H-GAC to document their proactive efforts to decrease emissions.

Teleworking

Approximately 2.9 percent of the trips recorded by the NuRide program are telecommutes.

Guaranteed Ride Home Programs

The GRH program provides emergency rides home to transit and rideshare users to address one of the main concerns of those who leave their car at home. All registered users of METRO bus and STAR vanpool riders, registered TREK Express users, and Fort Bend County Transit

users have access to three free rides home per calendar year.

Houston Area Transit Service

METRO provides local and express bus service via 97 routes, serving approximately 208,200 average daily boardings (weekday – FY 2012). METRO also operates 32 park-and-ride routes serving approximately 29,200 average daily boardings (weekday – FY2012).

There are also six transit services that have received funding through the Commuter and Transit Services Pilot Program, with a seventh service set to begin in February 2012.

Corridor Transit Service

METRO operates two park-and-ride lots (Pinemont & West Little York) along this section of US 290. METRO also operates five park-and-ride routes and two local bus routes along this section of US 290. Combined, they carry approximately 10,000 average daily boardings.

HOV/HOT Lanes

The Northwest Freeway HOV lane is being converted to a High Occupancy Toll (HOT) lane by METRO; opening is planned for spring 2013.

METRO HOT lanes are expected to stay in operation until interim managed lanes are built.

Planning Efforts to Date

US 290 Program

The US 290 Program is an improvement project for the US 290 corridor that includes the reconstruction of US 290 and construction of the Hempstead Tollway. The vision of the program includes:

- Freeway capacity reconstruction and widening from IH 610 to FM 2920 to create five/six general-purpose lanes in each direction from IH 610 to just west of SH 6, plus auxiliary lanes where appropriate, and two- or three-lane frontage roads in each direction throughout the corridor.
- Hempstead Tollway – Two managed toll lanes each way from IH 610 to the proposed SH 99/Grand Parkway.
- Two non-tolled frontage road lanes in each direction to be reconstructed along the Hempstead Tollway from IH 610 to Beltway 8.
- US 290 METRO HOV operations moved to the Hempstead Tollway managed toll lanes.
- Proposed high-capacity transit corridor located along the Hempstead Tollway.
- H-GAC Commuter Rail study and Gulf Coast Rail District Hempstead Corridor commuter rail feasibility analysis.
- Bicycle and pedestrian improvements.

However, funding issues have forced a phased and interim implementation of the program. In 2012, HCTRA and TxDOT entered into a partnership that will build all US 290 program projects from IH 610 to SH 99. Interim implementation will reconstruct mainlanes, frontage roads, and reversible managed lanes along US 290. To date, construction is underway or expected to start in 2013 for the following projects:

- Partial reconstruction of the IH 610/US 290 interchange including the US 290/

IH 610 North Loop direct connector to IH 10 and the direct connector from IH 10 to outbound US 290 and the IH 610 North Loop eastbound.

- Reconstruct six mainlanes, three reversible grade separated managed lanes in the middle, two 2-lane express lanes/direct connectors from/to IH 10, two 2-lane frontage roads, and grade separation from west of 34th street to west of IH 610.
- Construct eight main lanes, two 2-lane collector distributors, three reversible managed lanes, two 2-lane frontage roads, and grade separations near Beltway 8 between West Little York and FM 529.
- Construct two 3-lane frontage roads along Beltway 8 over the Union Pacific Railroad and Hempstead Road.
- Reconstruct and widen to eight mainlanes, three reversible managed lanes in the middle, two 2-lane frontage roads, and grade separation from east of West Little York to west of Pinemont Drive.
- Reconstruct and widen to eight mainlanes, three reversible managed lanes in the middle, two 2-lane frontage roads, and grade separation from west of Pinemont Drive to west of 34th Street.

Construction on other segments between FM 529 and SH 99 along US 290 is expected to begin between 2013 and 2017.

Additionally, the Gulf Coast Rail District is studying the feasibility of a commuter rail system on the existing Union Pacific Railroad line which runs parallel to Hempstead Road.

Next Steps

Purchase Right-of-Way near the US 290/Beltway 8 Interchange

Providing \$78 million in funds for right-of-way purchase as an early action would allow the planned construction to move forward at a faster pace. Construction funding from Proposition 12 bonds for this segment has been authorized by the Texas Transportation Commission and

H-GAC. This funding will allow construction of mainlanes with auxiliary lanes, two 2-lane frontage roads, grade separations from west of FM 529 to east of West Little York, and construction of two three-lane frontage roads along Beltway 8 over the Union Pacific Railroad and Hempstead Road. This project will alleviate congestion by eliminating this bottleneck but is only one component of the corridor plan.

Support for Aggressive Incident Management

The Motorist Assistance Program has operated a few vehicles to assist with minor repairs and stalled vehicles for 20 years. SAFEClear, the City of Houston's rapid clearance program that implemented performance driven tow services (tow trucks have to reach incident site in 6 minutes), has been very successful since 2005 in reducing incident clearance times and improving safety. Crash reductions of between 10 percent and 15 percent were reported for the first four years of the program. Recent funding cuts have mandated that motorists have to pay for the tow, and the tows have been made optional. The number of tows has, therefore, been reduced by 60 percent to 70 percent. Dedicated funding resources or a different operating strategy should be found for programs such as SAFEClear to advance incident management strategies.

Regional stakeholders are in the process of exploring new and different funding sources and

operating strategies for a region-wide incident management program.

Feasibility Study for Implementation of Active Traffic Management Strategies

Improving the operation of the existing freeway allows the greatest return on the roadway investment. A study should be conducted to identify freeway locations that can benefit from operational treatments such as dynamic rerouting, dynamic traveler information, and variable speed limits.

Evaluation of Travel Option Strategies

A feasibility study to examine potential benefits and implementation strategies for travel options in the corridor should be conducted. These strategies include, but are not limited to, flex-time, carpooling, and employer sponsored vanpooling, transit, and parking incentives.

Mobility Improvements to Significant Parallel Streets

This early action feasibility study would identify mobility improvements along major streets in the US 290 corridor in order to create viable alternate routes. These mobility improvements would include capacity increases (where possible) and operational treatments including active traffic management strategies such as signal re-timing, dynamic rerouting using improved surface streets, and traveler information.