

# US 59/IH 69 (SOUTHWEST FWY)

Between **IH 610 W** (West Loop) & **Beltway 8** (Sam Houston Tollway)

## Current Conditions

US 59 Southwest Freeway between IH 610 (West Loop) and Beltway 8 (Sam Houston Tollway) is an 11- to 13-lane freeway with five or six general purpose lanes in each direction and a one-lane reversible high occupancy toll (HOT) lane in the middle. The Westpark Tollway runs roughly parallel to US 59 until it crosses at the Westpark Curve. Traffic on US 59 firmly follows a traditional inbound/morning and outbound/evening congestion pattern, though both directions experience slowdowns during the evening peak period.

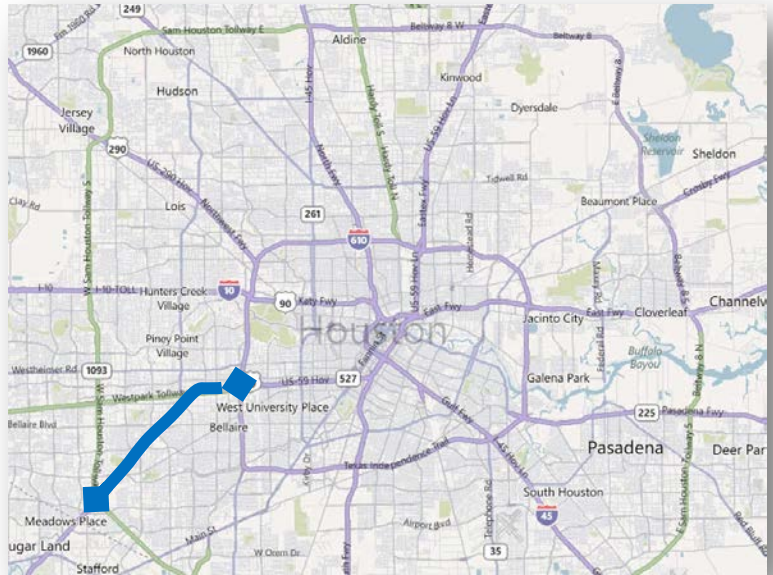
- Segment Length: 7.8 miles.
- Road Type: 11- to 13-lane divided freeway.
- Annual Hours of Delay: 2,424,000.
- Texas Congestion Index: 1.44.
- Commuter Stress Index: 1.67.

Intelligent Transportation Systems (ITS) infrastructure along this corridor includes:

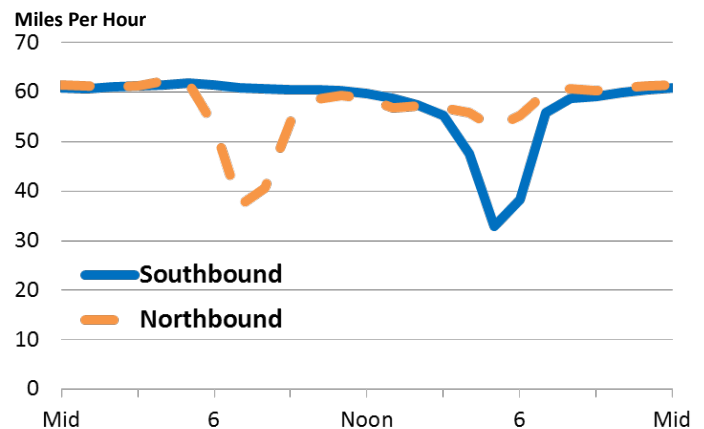
- Travel time monitoring system covering the entire segment.
- Eight CCTV cameras to aid incident management.
- Two dynamic message signs.
- Eight flow signals.

## Possible Congestion Causes

US 59 between IH 610 West Loop and Beltway 8 (Sam Houston Tollway) serves as a major route to many suburban communities including the City of Sugar Land which has grown from a small community to a large urban master planned community with all available amenities including shopping, restaurants, schools, and residential areas. This freeway segment also serves pass-through traffic for motorists traveling north towards downtown Houston and south to Victoria and beyond. This freeway has been



<b>2010 Rank: 20</b>	<b>2013 Rank: 24</b>
<b>Annual Hrs of Delay/Mile:</b>	<b>310,000</b>
<b>Congestion Time:</b>	<b>5 Hours</b>
<b>Annual Cost of Delay:</b>	<b>\$51.6 Million</b>
<b>Average Daily Traffic:</b>	<b>230,000 Vehicles</b>



re-designated to IH 69 and will serve as a major NAFTA trade route from Mexico to the Midwest.

Some causes for congestion in this segment include:

- High travel demand (traffic volumes), which extends beyond typical peak hours.
- Proximity to several other highly congested segments.
- Potential increase in truck traffic.

- Three major interchanges (Sam Houston Tollway, Westpark Tollway, and IH 610)
- Horizontal and vertical geometrics at the Westpark Curve cause slowdowns both inbound and outbound.
- Lack of auxiliary lanes between the Westpark Curve and the IH 610 interchange.

## **Projects in Progress or Completed**

### *US 59 Expansion*

The US 59 Southwest Freeway was completed in July 1961. In 1992, major reconstruction and expansion was completed from Shepherd to Beltway 8 to include eight lanes and one reversible HOV lane from the Westpark Curve to Beltway 8. Widening to ten lanes began in 1997 and was completed in 2003.

### *HOV/HOT Lanes*

The Southwest Freeway HOV lane was converted to a High Occupancy Toll (HOT) lane by METRO in spring 2012.

### *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.

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's 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.

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 the Central Business District subsidize all or part of their employees vanpool or transit commuting costs.

Twenty-five companies voluntarily participate 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 do not drive. 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 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). METRO also has light rail transit, the Red Line, along a 7.5-mile section serving Downtown, Texas Medical Center, and Reliant Center with 38,100 average daily boardings (weekday – FY2012).

The future University Line will connect the Hillcroft Transit Center located near the north end of the US 59 corridor to the Red Line at

Wheeler Station south of downtown Houston and extend eastward to the Eastwood Transit Center. When all lines of the Houston METRO Rail System Plan are completed, the University Line will also connect with the Uptown Line at the Bellaire Station, providing BRT or light rail access to the Galleria, and the Southeast Line at two stations around the University of Houston. The University Line is on hold while the project awaits approval for new funding sources.

### *Corridor Transit Service*

Along the US 59 Corridor, METRO has routes to downtown and local transit centers. Routes on US 59 Southwest Freeway into downtown include: Route 262 – Westwood, Route 265 – W. Bellfort, and Route 269 – Westwood/W. Bellfort in the late evening. Additionally, several park-and-ride lots provide support of transit activity in the corridor. The West Belfort Park-and-Ride, located at US 59 and Beltway 8 offers links on four different routes with access to the Texas Medical Center and downtown. The Westwood Park-and-Ride also offers four routes with links to the Texas Medical Center and downtown.

## **Planning Efforts to Date**

### *Direct Connectors & Auxiliary Lanes*

An auxiliary lane is planned at US 59 for the Fountainview entrance ramp west of IH 610. The project will provide greater throughput in times of congestion. Additionally, funding from the Mobility Investment Priorities project has been directed to the construction of three direct connectors (DCs) from US 59 to IH 610. Right-of-way acquisition, design, and engineering will use \$21.27 million for the DCs. The preliminary engineering is complete, though it is still waiting environmental clearance. The project is slated to let in 2015 or 2016.

### *Mobility Improvements to Significant Parallel Streets*

This early action feasibility study would identify mobility improvements along major streets in the US 59 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.

#### *2040 Regional Transportation Plan*

The Houston-Galveston Area Council (HGAC) is in the process of updating the current 2035 Regional Transportation Plan. The 2040 Regional Transportation Plan (RTP) is the framework for the Houston region's transportation system to the year 2040. It identifies the goals, strategies and priorities for meeting the region's transportation needs. The plan will help guide decisions regarding funding and investment for future transportation projects in the Houston-Galveston region. The updates to the 2040 plan will take place in three phases; Phases 2 and 3 are of significance to congested corridors. In Phase 2, the agency looks at revisions to the current congestion management process. In Phase 3, the region will finalize their investment priorities, which may include several of the congested corridors.

#### **Next Steps**

##### ***Mobility Response Team (MRT)***

The City of Houston Department of Public Works and Engineering and the Houston Police Department have formed a Mobility Response Team to help alleviate traffic congestion. The agencies locate traffic bottlenecks and HPD Mobility Response Officers are dispatched to provide traffic control at these hot spots. The implementation of this program should be directed at the most congested corridors in the Houston region, including US 59.

##### ***TSP/IP (Traffic Signal Performance Improvement Program)***

The City of Houston has developed the Traffic Signal Performance Improvement Program to monitor and assure quality and control at signals throughout the city. They ensure the city is

using the latest traffic data and equipment and the most recent technologies to produce new customized signal timings. They develop optimization plans for selected zones and respond to citizen complaints concerning signal timing and phasing. US 59 should be considered for the implementation of the TSP/IP where appropriate.

##### ***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 six 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.

##### ***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.