



## MEMORANDUM

**To:** Traffic Study Files

**From:** Eric Bollich, P.E., PTOE  
South Austin Area Engineer  
Austin Transportation Department

**Date:** July 29, 2013

**Subject:** Speed Zone Investigation

**Location:** South Congress Avenue – Cesar Chavez Street to Live Oak Street



**Year(s) of Previous Investigation:** 1980, 2004

A speed zone investigation has been conducted by the Austin Transportation Department to determine an appropriate speed limit on South Congress Avenue between Cesar Chavez Street and Live Oak Street (the study segment). Figure 1 at the end of this document presents a map of the study area with existing and proposed speed limits along the study segment.

### Location Conditions

South Congress Avenue runs in a general north-south direction for a length of approximately 1.5 miles along the study segment. South of East Bouldin Creek, it is a four-lane, undivided major arterial with a continuous center turn lane and bicycle lanes. North of East Bouldin Creek, it transitions to a six lanes with a portion of the study segment bridging over Lady Bird Lake. The existing speed limit along the study segment is 35 mph with two reduced speed zones: one for Fulmore Middle School during peak school times (65 feet north of Johanna Street to Crockett Street) and one for a pedestrian area during special events (135 feet south of Nellie Street to 255 feet north of Annie Street). A 30 mph prima facie speed limit controls Congress Avenue north of Cesar Chavez within the central business district.

Various land uses and activities (shopping, dining, clubs, live music, churches, apartments, businesses, hotels, fire station, special events, Texas School for the Deaf, and Fulmore Middle School) create the demand for multi-modal traffic along the study segment.



The City of Austin completed the following roadway improvements in 2011 with the South Congress Improvement Project (SCIP) to facilitate the conversion of South Congress Avenue between Riverside Drive and Live Oak Street from an auto-centric to people-centric corridor:

- Bulb-outs
- Additional Crosswalks
- Additional Traffic Signals
- Pedestrian Hybrid Beacons
- Sidewalk repairs
- Uphill Bike Lanes
- Street Resurfacing
- ADA Improvements
- Consolidated Bus Stops
- Increased Parking Spaces

The number of parking spaces was increased by the conversion of front-in angle parking to back-in angle parking. The impetus for this parking strategy was to provide the following benefits:

- Drivers exiting parking spaces have improved visibility and field of vision to see oncoming motorists, bicyclists, and pedestrians.
- Passengers exiting parked cars are directed toward the sidewalk rather than to oncoming traffic.
- Trunks are located adjacent to sidewalks, improving safety of loading and unloading.
- Handicapped parking spaces can be placed adjacent to sidewalks.

Traffic signal timings were also changed to operate on shorter cycle lengths and a progression speed less than 35 mph to accommodate the people-centric nature of this segment.

### Traffic Data

Traffic speed and volume data were collected with tube counters for 24 hours in September 2012 and June 2013 to determine the appropriate posted speed limit south of Riverside Drive. Collecting data along a corridor with closely spaced signalized intersections will not capture accurate free-flow speed because of the stop delay associated with traffic signals. Due to these limitations, data were collected on the periphery of the study segment outside of the grid system. Volume data from July 2011 and speed data from January 2004 was used north of Riverside Drive.

Block Number	Location	Posted Speed Limit	85 <sup>th</sup> Percentile Speed		Daily Traffic Volumes
			NB	SB	
200	North of Barton Springs Road	35	37	39	28,559
1200	South of Academy Drive	35	35.1	32.8	22,947
2000	North of Leland Street	35	-	35.9	22,065
2100	South of Leland Street	35	37.3	-	

Traffic data indicates 85<sup>th</sup> percentile speeds reduce as drivers enter the segment between Academy Drive and Mary Street, which is controlled by traffic signals and pedestrian hybrid beacons spaced approximately every 350 feet. Field observations and travel runs support the data as most traffic within the grid system of the study segment was found to operate near 30 mph.

## Crash Data

Austin Police Department's crash database was reviewed to analyze documented crashes along the study segment south of Riverside Drive before and after improvements were installed.

Scenario	Annual Number of Crashes		
	Overall	Parking-Related (Total)	Parking-Related (Involving Bike or Pedestrian)
Before Installation (08/06 –07/11)	32.8	6.4	1.4
After Installation (08/11 –12/12)	21.9	5.6	0.7
<i>Reduction</i>	<i>(33%)</i>	<i>(13%)</i>	<i>(50%)</i>

Data indicates crashes have reduced after the installation of roadway improvements to accommodate the people-centric nature of the study segment.

North of Riverside Drive, seven documented crashes have occurred within the past 12 months; no discernible pattern from excessive speed is present.

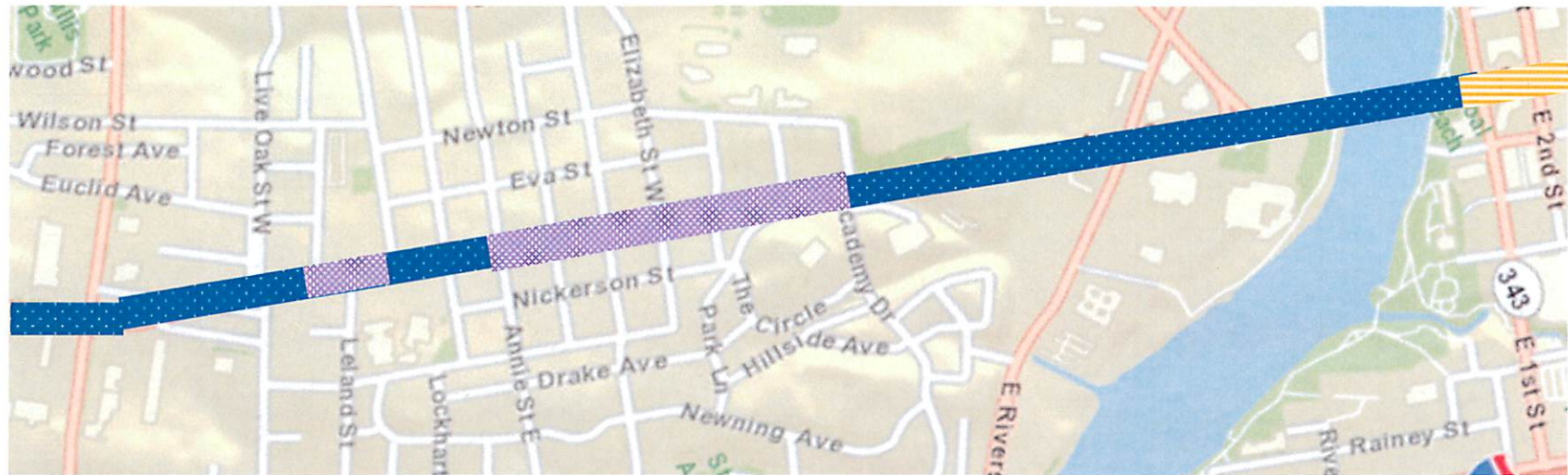
Date / Time	Direction		Weather	Light	Road	Injury	Comments
	At Fault	Other					
02/21/13 9:54 PM	SB	SB	Clear	Dark-Lighted	Dry	None	Vehicle 1 rear-ended Vehicle 2. DWI cited.
03/06/13 5:47 PM	SB	SB	Clear	Day	Dry	None	Vehicles 1 and 2 rear-ended Vehicle 3 stopped in traffic.
03/14/13 1:56 AM	SB	SB	Clear	Dark-Lighted	Dry	Minor	Vehicle 1 struck Vehicles 2 and 3. DWI cited.
4/14/13 2:25 AM	SB	SB	Clear	Dark-Lighted	Dry	Minor	Vehicle 1 struck pedicab on bridge and left scene.
4/15/13 8:17 AM	-	-	Clear	Day	Dry	Minor	Vehicle 1 rear-ended Vehicle 2. Inattention cited.
06/10/13 4:34 PM	SB	SB	Clear	Day	Dry	None	Vehicle 1 struck Vehicle 2 while avoiding stopped bus.
06/16/13 12:05 PM	-	-	Clear	Day	Dry	Minor	Vehicle 1 struck cyclists who had fallen off sidewalk.

## **Recommendation**

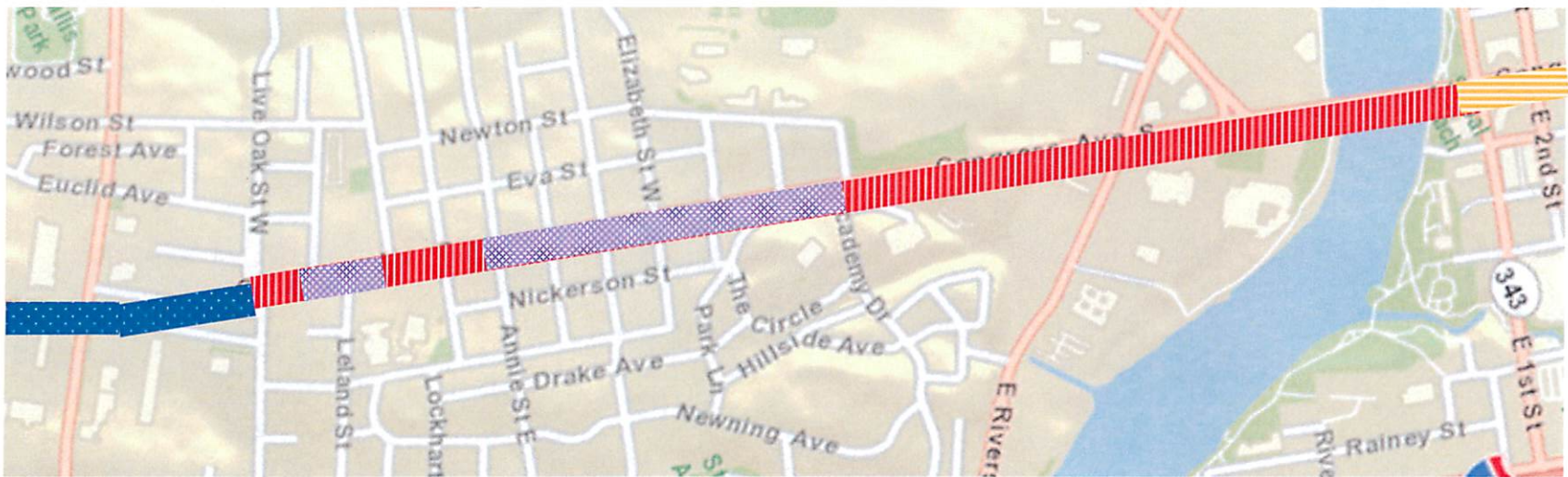
Previous documented speed studies for the study segment were completed in 1980 and 2004. Since that time, the context of South Congress Avenue has changed to a people-centric corridor accommodating multi-modal traffic. Based on my analysis of the location information and traffic data, the speed limit on South Congress Avenue between Riverside Drive and Live Oak Street should be established at 30 mph. Existing reduced speed zones within this segment should remain at 20 mph.

*Procedures for Establishing Speed Zones*, published by the Texas Department of Transportation in 2006, provides information and procedures necessary for establishing speed zones and advisory speeds on roadways. It allows engineering judgment to consider speed limits greater than 5 mph but less than 10 mph from the measured 85<sup>th</sup> percentile speed. The last measured 85<sup>th</sup> percentile speeds north of Barton Springs Road were 37 mph and 39 mph. The segment represented by these speeds – Riverside Drive to Cesar Chavez Street – is less than a half-mile in length. North of Cesar Chavez, the 30 mph prima facie speed limit is appropriate and not under consideration for change. For the purpose of speed limit continuity between Riverside Drive and Cesar Chavez Street, the speed limit on South Congress Avenue along this segment should also be established at 30 mph.

## EXISTING



## PROPOSED



Existing 20 MPH (Time Limited – Reverts to 30 MPH when not operational) (Purple line with dotted pattern)



**Figure 1: S Congress Ave Study Area**