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## SPEED ZONE STUDY FOR BALLPARK WAY BETWEEN CALDER DRIVE AND SOUTHBOUND INTERSTATE HIGHWAY 45 FRONTAGE ROAD

### INTRODUCTION

The purpose of this study is to evaluate the existing speed limit on Ballpark Way between Calder Drive and Southbound Interstate Highway 45 Frontage Road and determine the appropriate speed limit for given roadway conditions. This report presents existing conditions, data collection, analysis, study findings and recommendations of the study.

### EXISTING CONDITIONS

Ballpark Way is a three-lane roadway consisting of one lane in each direction and a center two-way left-turn lane. The posted speed limit on the study corridor is 25 mph. **Figure 1** and **Exhibit A** shows an aerial of Ballpark Way.



Figure 1 Aerial of Ballpark Way, City of League City, Texas

Ballpark Way is classified as a Collector in the 2018 League City Major Thoroughfare Plan. The default speed limit for a Collector based on the League City General Design and Construction Standards Manual is 35 mph.

## DATA COLLECTION

Data collection for the speed zone study included site investigation, traffic volume and spot speed data and crash data.

### SPOT SPEED DATA

Traffic volume and spot speed data was collected on May 14<sup>th</sup> and June 17<sup>th</sup> 2024 by Public Works Department of City of League City. The traffic volume and spot speed data collected are provided in **Exhibit B**.

### CRASH DATA

Crash data on Ballpark Way in the study section was obtained from the TxDOT Crash Records Information System (C.R.I.S.) for a study period between 2019 and 2024. From the data extracted, a total of 29 intersection related crashes had occurred at the intersection of Brookport Drive and Ballpark Way. Intersection related crashes are typically removed from speed zone study related crash studies. Additionally, speeding was not mentioned as a contributing factor for any of the recorded crashes. The crash data extracted for the study is provided in **Exhibit C**.

## ANALYSIS – 85<sup>th</sup> Percentile Speed

The 85<sup>th</sup> percentile speed is the speed at or below which 85% of drivers are traveling on a road segment. The AASHTO recommends using the 85<sup>th</sup> percentile speed as a starting point for setting speed limits. The use of the 85<sup>th</sup> percentile speed to determine the speed limit is supported for the following reasons:

- It is a good indicator of what drivers perceive to be a safe and reasonable speed. When the speed limit is set at or below the 85<sup>th</sup> percentile speed, most drivers are likely to comply.
- It promotes uniform traffic flow. When most drivers are traveling at or below the speed limit, there is less variation in speed between vehicles, which can lead to safer driving conditions.
- It can help to reduce the number and severity of crashes.

The 85<sup>th</sup> percentile speed for the westbound and eastbound approach of the study stretch on Ballpark Way was determined from the spot speed data collected. A summary of the 85<sup>th</sup> percentile data collected is provided in **Table 1**.

*Table 1 85th Percentile Speed Data*

Ballpark Way	Westbound	Eastbound
85 <sup>th</sup> Percentile Speed	41 mph	41 mph

The average 85<sup>th</sup> percentile speed observed on the study section of Ballpark Way is 41 mph. Since the posted speed limit (25 mph) is lower than the 85<sup>th</sup> percentile speed, it is recommended to increase the

speed limit to 35 mph to reduce the dispersion of driver speeds on the study stretch. City of League City Major Thoroughfare Plan (2018) designates Ballpark Way as a collector street. Revising the speed limit to 35 mph will make the speed limit consistent with the default speed assigned to a collector based on the City Design Standards.

#### STUDY FINDINGS AND RECOMMENDATIONS

Based on engineering judgment, existing conditions, and findings of the speed zone study, it is recommended to increase the speed limit on Ballpark Way from 25 mph to 35 mph.