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Speed Zone Study for Isla Vista Drive Between State Highway 96 and Mar Bella Parkway

Background

Location: Isla Vista Drive between State Highway 96 and Mar Bella Parkway in League City, Texas (See Exhibit A and Figure 1 for aerial of study corridor).



Figure 1 Aerial of Study Corridor

Existing Conditions

- **Roadway Type Designated in the 2018 City of League City Major Thoroughfare Plan:** Collector
- **Number of Lanes:** Two lane undivided - one lane in each direction



Figure 2 Cross Section of Study Corridor

- **Roadway Type:** Concrete with curb and gutter
- **Segment Length:** 1.56 miles
- **Posted Speed Limit:** 25 mph
- **Traffic Volume:** Average Daily Traffic Volume - 3123
- **Land Use:** Residential

Data Collection

- **Data Collection Methods:**
 - Spot Speed and Traffic Volume were collected by Public Works Department between 9/11/24 to 9/13/24 (Provided in **Exhibit B**).
 - Crash data was obtained from the TxDOT Crash Records Information System (C.R.I.S.) for a study period between 2019 and 2024 (Provided in **Exhibit C**).
- **Data Collection Location:** Isla Vista Dr

Methodology

The following section provides guidelines and standards from the Manual on Uniform Traffic Control Devices, 11th Edition (MUTCD) to ensure that speed zones are appropriate and effective.

Standard:

Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering study that has been performed in accordance with traffic engineering practices. The engineering study shall consider the roadway context.

Guidance:

Among the factors that should be considered when conducting an engineering study for establishing or reevaluating speed limits within speed zones are the following:

- A. Roadway environment (such as roadside development, number and frequency of driveways and access points, and land use), functional classification, public transit volume and location or frequency of stops, parking practices, and pedestrian and bicycle facilities and activity;*
- B. Roadway characteristics (such as lane widths, shoulder condition, grade, alignment, median type, and sight distance);*
- C. Geographic context (such as an urban district, rural town center, non-urbanized rural area, or suburban area), and multi-modal trip generation;*
- D. Reported crash experience for at least a 12-month period;*
- E. Speed distribution of free-flowing vehicles including the pace, median (50th-percentile), and 85th-percentile speeds; and*
- F. A review of past speed studies to identify any trends in operating speeds.*

When the 85th-percentile speed is appreciably greater than the posted speed limit, and the roadway context does not support setting a higher speed limit, the engineering study should consider whether changes to geometric features, enforcement, and/or other speed-reduction countermeasures might improve compliance with the posted speed limit. A similar approach should be used if the results of past speed studies indicate that the 85th-percentile speed has consistently increased.

On urban and suburban arterials, and on rural arterials that serve as main streets through developed areas of communities, the 85th-percentile speed should not be used to set speed limits without consideration of all factors described above.

Data Analysis

The 85th percentile speed for the westbound and eastbound approach of the study stretch on Isla Vista Dr was determined from the spot speed data collected. A summary of the 85th percentile data collected is provided in **Table 1**.

Table 1 85th Percentile Speed Data

Isla Vista Dr	Westbound	Eastbound
85 th Percentile Speed	35 mph	36 mph

- Crash Data Analysis:** From the data extracted, a total of 11 intersection related crashes had occurred along the study corridor during the study period of 2019 to 2024. There were four recorded crashes (Crash ID 17624136, 18472524, 18537757 and 18814684) with speed mentioned as one of the contributing factors to the crash. One crash involved a pedalcyclist (Crash ID 19672917) and one involved a pedestrian (Crash ID 19963366).
- Intersection Sight Distance Analysis:** Limited sight distance due to roadway geometry (horizontal curves) and landscaping.

Findings and Recommendations

A speed study was conducted on Isla Vista Drive between SH 96 and Mar Bella Parkway. The existing speed limit on the study corridor is 25 mph.

The study found that the 85th percentile speed, which represents the speed below which 85 percent of the traffic volume flows, was 36 mph. This indicated that the posted speed limit was significantly lower than the typical driving speed.

While increasing the speed limit to align more closely with the 85th percentile speed was considered, the roadway context presented safety concerns due to the nature of crashes along the corridor, sight distance issues, and roadway geometry (horizontal curves).

Therefore, the study recommends increasing the speed limit on Isla Vista Drive between SH 96 and Mar Bella Parkway from 25 mph to 30 mph to balance the need to accommodate observed traffic speeds with the existing safety concerns.