



Speed Zone Studies

In

Precinct 1, Hidalgo County, Texas

Conducted For

Precinct 1, Hidalgo County, Texas

Conducted by

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Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625

In Association with L&G Engineering

STATE OF TEXAS
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Speed Zone Studies: Precinct 1, Hidalgo County, Texas

1. INTRODUCTION

Precinct 1 of Hidalgo County, Texas has identified corridors within the precinct with insufficient or non-existent speed Zones.

Precinct 1 of Hidalgo County through L&G has contracted Ergonomic Transportation Solutions, Inc. (ETSI) to conduct speed Zone studies along multiple roadway corridors within the precinct and make recommendations for proper speed Zones that would enhance safety and mobility. This report presents the analysis to determine such speed limit Zones.

1.1 PURPOSE AND SCOPE

The purpose of this study is to analyze various roadway corridors within Hidalgo County Precinct 1 and make recommendations for speed limit Zones. Precinct 1, Hidalgo County has identified 19 corridors to be studied.

The following tasks are presented in this report:

- Collect spot speed data during off peak hours
- Conduct trial runs
- Observe existing traffic operations
- Collect available accident records
- Identify Sight Distance restrictions
- Identify existing posted speed limits
- Present recommended speed limit Zones

The 19 roadway corridors were each divided in logical Zones based on adjacent developments and cross street or driveway spacing.

In each logical Zone, ETSI conducted spot speed studies and/or trial runs. For Zones that appear to have very light traffic volumes (less than 500 vehicles per day) only trial runs were conducted, because the minimum 125 vehicle count required for proper spot speed study was not achievable within a reasonable amount of time.

Following are the 19 corridors/Zones and their respective scope:

1) Mile 15:
- Zone 1: Mile 6 W to Canal (Travel Time Runs Only)
- Zone 2: Canal to FM 1015 (Travel Time Runs + Spot Speeds)

2) Mile 15.5:
- Zone 1: Mile 6 W to FM 88 (Travel Time Runs Only)
- Zone 2: FM 88 to FM 1015 (Travel Time Runs + Spot Speeds)

3) Mile 12:
- Zone 1: Mile 6 W to FM 88 (Travel Time Runs Only)
- Zone 2: FM 88 to FM 1015 (Travel Time Runs + Spot Speeds)

4) Mile 12.5:
- Zone 1: Mile 6 W to FM 88 (Travel Time Runs + Spot Speeds)
- Zone 2: FM 88 to FM 1015 (Travel Time Runs + Spot Speeds)

5) Mile 11:
- Zone 1: Mile 6 W to FM 88 (Travel Time Runs + Spot Speeds)
- Zone 2: FM 88 to FM 1015 (Travel Time Runs + Spot Speeds)

6) Lott Rd:
- Zone 1: FM 493 to Midway (Travel Time Runs + Spot Speeds)

7) Mile 10:
- Zone 1: Mile 6 W to FM 88 (Travel Time Runs + Spot Speeds)
- Zone 2: FM 88 to Mario Ybarra Elementary (Travel Time Runs + Spot Speeds)
- Zone 3: Mario Ybarra Elementary School Zone (Travel Time Runs + Spot Speeds)
- Zone 4: Mario Ybarra Elementary to FM 1015 (Travel Time Runs + Spot Speeds)

8) Mile 16:
- Zone 1: Mile 6 W to FM 88 (Travel Time Runs Only)
- Zone 2: FM 88 to 0.3 Mile East of FM 88 (Travel Time Runs Only)
- Zone 3: 0.3 Mile EAST of FM 88 to FM 1015 (Travel Time Runs + Spot Speeds)

9) Mile 13:
- Zone 1: FM 88 to Mile 4 West Rd (Travel Time Runs Only)
- Zone 2: Mile 6 West Rd to FM 88 (Travel Time Runs + Spot Speeds)

10) Stites Rd:
- Zone 1: FM 493 to Midway (Travel Time Runs + Spot Speeds))

11) Walker Rd:
- Zone 1: FM 493 to Midway (Travel Time Runs Only)

12) Victoria Rd:
- Zone 1: Mile 10 North Rd to US 83 North Frontage Rd (Travel Time Runs + Spot Speeds)

13) Nittler Rd:
- Zone 1: FM 493 to FM 88 (Travel Time Runs + Spot Speeds)

14) Mile 13:
- Zone 1: FM 493 TO Mile 6 West Rd (Travel Time Runs + Spot Speeds)

15) Mile 12.5 (Roosevelt Rd):
- Zone 1: FM 493 to Elena Ave (M.A. Munoz Elementary School Zone) (Travel Time Runs + Spot Speeds)
- Zone 2: Elena Ave to FM 1423 (Val Verde Rd) (Travel Time Runs + Spot Speeds)

16) Mile 2 West Rd:
- Zone 1: Mile 8 North Rd to Mile 11 North Rd (Travel Time Runs + Spot Speeds)
- Zone 2: Mile 11 North Rd to Mile 13 North Rd (Travel Time Runs + Spot Speeds)
- Zone 3: Mile 13 North Rd to SH 107 (Travel Time Runs + Spot Speeds)

17) Mile 6 North:
- Zone 1: FM 491 (Texas Ave) to Rio Rico Rd (Travel Time Runs Only)
- Zone 2: Mercedes High School Speed Zone (Travel Time Runs Only)
- Zone 3: Rio Rico Rd to Mile 2.5 East (Travel Time Runs Only)

18) Goolie Rd:
- Zone 1: Mile 9 TO 2,800' North (Travel Time Runs Only)
- Zone 2: 2,800' North of Mile 9 to Sioux Rd (Travel Time Runs Only)
- Zone 3: Sioux Rd to Minnesota Rd (Travel Time Runs + Spot Speeds)

19) Sky Soldier Rd:
- Zone 1: Santiago Galvan to US 281 (Travel Time Runs Only)
- Zone 2: US 281 to Malone (Travel Time Runs + Spot Speeds)
- Zone 3: Malone to Baker (Travel Time Runs Only)

1.2 STUDY AREA

The study area covers 19 roadway corridors within Hidalgo County Precinct 1. They are described as follows:

1.2.1 Mile 15 Road – From Mile 6 Road West to FM 1015

Within the study corridor, Mile 15 Road is a two way, one lane per direction, undivided roadway. It has an asphalt pavement without shoulders. Within the boundary of our study area, Mile 15 Road serves as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the corridor.

Mile 15 was split into two study Zones:

- Zone 1's limits are from Mile 6 Road to the Canal
- Zone 2's limits are from the Canal to FM 1015.

Zone 1 has residential properties adjacent and accessing to the corridor, while Zone 2 is sparsely populated with access to the corridor mainly for agricultural properties.

Within Zone 1 the driveway density is over 50/mile and 6 intersections per mile. Sight distance restrictions were identified at various residential accesses, due to either overgrown vegetation or physical barriers such as walls. The existing posted speed limit in Zone 1 is 30 miles per hour (mph).

Within Zone 2 the driveway density is approximately 16/mile, lower than Zone 1. There is only one intersection within the Zone 2 limits, resulting in approximately 1 intersection per mile. The existing posted speed limit in Zone 2 is 30 miles per hour (mph).

1.2.2 Mile 15 ½ Road – From Mile 6 Road West to FM 1015

Within the study corridor Mile 15 1/2 Road is a two way, one lane per direction, undivided roadway. It is divided between two study Zones:

- Zone 1 runs from Mile 6 West Road to FM 88
- Zone 2 runs from FM 88 to FM 1015

Zone 1 is more populated than Zone 2 and the pavement structure is different. Power poles run along the south side of the entire corridor along both Zones.

Within Zone 1, the roadway is comprised of asphalt pavement without shoulders. The corridor serves as access to residential properties. There is an approximate driveway density of 30/mile and there are 2 intersections within this Zone, resulting in approximately 2 intersections per mile. There is no existing posted speed limit. Sight distance restrictions were identified at various residential accesses, due to either overgrown vegetation or physical barriers such as walls.

Zone 2 of Mile 15 ½ Road is a rough unpaved road, which is inaccessible by regular vehicle. It serves as access predominately to farms. The driveway density is approximately 5/mile, lower than that of Zone 1. There are 3 intersections within Zone 2, resulting in an approximate density of 2/mile. There is no posted speed limit along Zone 2.

1.2.3 Mile 12 Road – From Mile 6 West Road to FM 1015

Within the study corridor, Mile 12 Road is a two way, one lane per direction, undivided roadway. Mile 12 Road is asphalt pavement and does not have shoulders. Within the boundary of our study area, Mile 12 Road serves as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the corridor. Sight distance restrictions were not present.

Mile 12 Road is divided into two study Zones:

- Zone 1 from Mile 6 Road to FM 88
- Zone 2 from Fm 88 to FM 1015

Within the boundary of Zone 1 driveway spacing is approximately 18/mile and there are 3 intersections in Zone 1, resulting in a density of 3/mile. There is no posted speed limit in Zone 1.

Within Zone 2 driveway spacing is approximately 40/mile and there are 10 intersections within the Zone, resulting in a density of 5 intersections per mile. The existing posted speed limit is 30 miles per hour (mph) in the eastbound direction and 30 mph in the westbound direction.

1.2.4 Mile 12 ½ Road – From Mile 6 West Road to FM 1015

Within the study corridor, Mile 12 1/2 Road is a two way, one lane per direction, undivided roadway. Mile 12 1/2 Road is asphalt pavement and does not have shoulders on either side. It serves as access predominately to residential properties. Power poles are located on both the north and south side of the roadway along the entire segment.

This corridor was split into two study Zones:

- Zone 1 runs from Mile 6 West Road to FM 88
- Zone 2 runs from FM 88 to FM 1015.

Within the boundary of Zone 1, sight distance restrictions were identified at various residential accesses, due to either overgrown vegetation or physical barriers such as walls. Driveway density is approximately 75/mile and there are 10 intersections along the 1 mile length of Zone 1. There is an existing posted speed limit of 30 mph in the westbound direction and none in the eastbound.

Zone 2 is discontinuous from east of Puerto Vallarta Drive to Huatulco Street. Driveway density along this Zone is 14/mile and there are 10 intersections along Zone 2, resulting in a density of 5/mile. The existing posted speed limit is 30 miles per hour (mph) in both directions.

1.2.5 Mile 11 Road – From Mile 6 West Road to FM 1015

Mile 11 Road is a two way, one lane per direction, undivided roadway. Mile 11 Road is asphalt pavement and does not have shoulders. Within the boundary of our study area, Mile 11 Road serves as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the corridor.

The corridor is split into two study Zones:

- Zone 1 runs from Mile 6 West Road to FM 88
- Zone 2 runs from FM 88 to FM 1015.

Zone 2 is more populated than Zone 1, hence the divison.

Within Zone 1 the driveway density is 16/mile and there are 7 intersections, resulting in a density of 7/mile. Sight distance restrictions were identified at various residential accesses, due to either overgrown vegetation or physical barriers such as walls. The posted speed limit is 30 miles per hour (mph).

Within Zone 2 the driveway density is approximately 30/mile, greater than Zone 1. There are 10 intersections along the study Zone. The existing posted speed limit is 30 mph.

1.2.6 Lott Road

Lott Road is a two way, one lane per direction, undivided roadway. Lott Road is asphalt pavement and does not have shoulders. Within the boundary of our study area, Lott Road serves as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present. The driveway density is approximately 30/mile. There are 9 intersections along the study corridor, resulting in a density of approximately 6/mile. The existing posted speed limit is 30 miles per hour (mph).

1.2.7 Mile 10 Road – From Mile 6 West Road to FM 1015

Mile 10 Road is a two way, one lane per direction, undivided roadway. Mile 10 Road is asphalt pavement and does not have shoulders. Within the boundary of our study area, Mile 10 Road serves primarily as access to residential properties. Maria Ybarro Elementary School is located on the south east corner at the intersection of Mile 10 Road at Mile 4 West Road. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present along the entire study corridor.

Mile 10 was split into 4 study Zones:

- Zone 1 runs from Mile 6 West Road to FM 88
- Zone 2 runs from FM 88 to Mario Ybarra Elementary School
- Zone 3 runs along the Mario Ybarra Elementary School Zone
- Zone 4 runs from the end of the Mario Ybarra Elementary School Zone to FM 1015

Zone 1 primarily serves residential properties. Within Zone 1 the driveway density is 50/mile and there are 7 intersections. There is no existing posted speed limit.

Zone 2 also serves residences, but is less populated compared to Zone 1. The driveway density is approximately 50/mile and there are 3 intersections along this Zone. There is an existing posted speed limit of 30 mph in the eastbound direction and none in the westbound.

Zone 3 differs from the other Zones because it is a school Zone. The driveway density is approximately 50/mile and there is one intersection along the Zone. There is a 20 mph school Zone speed limit sign on the westbound direction, but none on the eastbound direction.

Zone 4 has a driveway density of approximately 16/mile. There are 3 intersections within the study area. There is no posted speed limit.

1.2.8 Mile 16 Road – From Mile 6 West Road to FM 1015

Mile 16 Road is a two way, one lane per direction, undivided roadway. Mile 16 Road is asphalt pavement and does not have shoulders on either side. Within the boundary of our study area, Mile 16 Road serves primarily as access to residential properties. A Walmart is located on the northeast corner of the intersection at Mile 16 Road at FM 88. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present.

This corridor was split into 3 study Zones:

- Zone 1 runs from Mile 6 West Road to Fm 88
- Zone 2 runs from FM 88 to 0.3 miles east of FM 88
- Zone 3 runs from 0.3 miles east of FM 88 to FM 1015.

These Zones operate differently due to their varying characteristics.

Zone 1 serves residential properties and has a driveway density of approximately 41/mile and there are 6 intersections within the 1 mile segment. There is no posted speed limit along this Zone.

Zone 2 primarily serves the Walmart on the northeast corner of FM 88 at Mile 16 North Road. It has 4 driveways giving it an approximate density of 12/mile and there are 2 intersections within this Zone. There is a posted speed limit of 30 mph in the westbound direction and none in the eastbound.

Zone 3 predominately serves agricultural properties. There are 7 driveways along the Zone, giving a density of approximately 4/mile and there are 4 intersections along the study area. There is an existing posted speed limit of 30 mph in both directions.

1.2.9 Mile 13 Road – From Mile 6 West Road to FM 88

Mile 13 Road is a two way, one lane per direction, undivided roadway. Mile 13 Road is asphalt pavement and does not have shoulders. Within the boundary of our study area, Mile 13 Road serves primarily as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present. At its intersection with FM 88, Mile 13 Road is staggered having the western portion 500 feet north of the eastern portion.

This corridor was split into two study Zones due to the discontinuous characteristic:

- Zone 1 runs from FM 88 to Mile 4 West Road
- Zone 2 runs from Mile 6 West Road to FM 88.

Zone 1 has a driveway density of 7/mile and there are 2 intersections within this Zone. There is no posted speed limit.

Zone 2 has a driveway density of approximately 20/mile and there are 5 intersections within this Zone. The posted speed limit is 30 miles per hour (mph).

1.2.10 Stites Road – From FM 493 to Midway Road

Stites Road is a two way, one lane per direction, undivided roadway. Stites Road is asphalt pavement and does not have shoulders on either side. Within the boundary of our study area, Stites Road serves primarily as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present. The driveway density is approximately 25/mile and there are 7 intersections. The existing posted speed limit is 30 miles per hour (mph).

1.2.11 Walker Road – From FM 493 to Midway Road

Within the study segment, Walker Road is a two way, one lane per direction, undivided roadway. Walker Road is asphalt pavement and does not have shoulders on either side. Within the boundary of our study area, Walker Road serves primarily as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance

restrictions were not present. The driveway density is approximately 30/mile and there are 7 intersections. There are no existing posted speed limit signs on the study segment.

1.2.12 Victoria Road – From Mile 10 North Road to US 83 Frontage Road

Within the study segment, Victoria Road is a two way, one lane per direction, undivided roadway. Victoria Road is asphalt pavement and does not have shoulders on either side. Within the boundary of our study area, Victoria Road serves primarily as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present. The driveway density is approximately 30/mile and there are 13 intersections. The existing posted speed limit is 30 miles per hour (mph).

1.2.13 Nittler Road – From FM 493 to FM 88

Nittler Road is a two way, one lane per direction, undivided roadway. It is asphalt pavement without shoulders. Within the boundary of our study area, Nittler Road serves primarily as access to farms. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present. The driveway density is approximately 5/mile and there are 2 intersections. The existing posted speed limit is 30 miles per hour (mph).

1.2.14 Mile 13 Road – From FM 493 to Mile 6 West Road

Within the study segment, Mile 13 Road is a two way, one lane per direction, undivided roadway. It is asphalt pavement without shoulders. Within the boundary of our study area, Mile 13 Road serves primarily as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the segment. Mile 13 Road is discontinuous 0.8 miles west of Mile 6 West Road due to a canal splitting the roadway. Sight distance restrictions were not present. The driveway density is 15/mile and there are 7 intersections. There is no posted speed limit on this study segment.

1.2.15 Mile 12 ½ Road (Roosevelt Road) – From FM 493 Road to FM 1423

Mile 12 ½ Road is a two way, one lane per direction, undivided roadway. It is asphalt pavement without shoulders. Mile 12 ½ Road serves primarily as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the corridor. Sight distance restrictions were not present.
This corridor is split into two study Zones:

- Zone 1 runs from FM 493 to Elena Avenue
- Zone 2 runs from Elena Avenue to FM 1423.

Zone 1 is 0.16 miles long with 8 driveways, giving a density of approximately 50/mile and there are 2 intersections within this Zone. This Zone covers the school Zone for Maria Alicia P Munoz Elementary School, which is located on the northwest corner of the intersection of Mile 12 ½ Road at FM 493. There are 20 mph posted school Zones signs.

Zone 2 has a driveway density of 20/mile and there are 9 intersections. The posted speed limit on this study segment is 30 miles per hour (mph).

1.2.16 Mile 2 West Road – From Mile 8 Road to SH 107

Mile 2 West Road is a two way, one lane per direction, undivided roadway. It is asphalt pavement without shoulders. Within the boundary of our study area, Mile 2 West Road serves primarily as access to residential properties and farms. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present.

This corridor was divided into 3 study Zones:

- Zone 1 runs from Mile 8 Road to Mile 11 Road
- Zone 2 runs from Mile 11 Road to Mile 13 Road
- Zone 3 runs from Mile 13 Road to SH 107.

The corridor was split due to the fact that there is widely varying characteristics between these Zones.

Within Zone 1 there is a driveway spacing of approximately 20/mile and 8 intersections. There is an existing posted speed limit of 40 mph in both directions.

Zone 2 has a driveway density of 45/mile and 6 intersections. This is Zone is more densely populated than Zone 1. There is an existing posted speed limit of 40 mph in both directions.

Zone 3 has a driveway density of approximately 10/mile. Zone 3 is sparsely populated compared to both Zones 1 and 2. There is an existing posted speed limit of 30 mph in the northbound direction and none in the southbound.

1.2.17 Mile 6 North Road – From FM 491 to Mile 2 ½ East Road

Mile 6 West Road is a two way, one lane per direction, undivided roadway. It is asphalt pavement without shoulders. Within the boundary of our study area, Mile 6 West Road serves primarily as access to residential properties. Mercedes High School is located near the study segment, south of Mile 6 North Road, between Florida Avenue and Rio Rico Road. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present.

The corridor is split into 3 study Zones:

- Zone 1 runs from FM 491 to Rio Rico Road
- Zone 2 runs along the Mercedes High School Speed Zone
- Zone 3 runs from Rio Rico Road to Mile 2 ½ Road.

Upon field investigation Zone 1 and 2 overlapped completely. For the purposes of this report we studied them as one, under Zone 2.

Zone 2 has a driveway density of 35/mile and 13 intersections. The existing school Zone posted speed limit is 20 mph.

Zone 3 has a driveway density of approximately 15/mile and 12 intersections. There is no existing posted speed limit on this roadway.

1.2.18 Goolie Road

Goolie Road is a two way, one lane per direction, undivided roadway. It is asphalt pavement without shoulders. Within the boundary of our study area, Goolie Road serves primarily as access to residential properties. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present.

This corridor was split into 3 study Zones for study purposes:

- Zone 1 runs from Mile 9 Road to 2800’ north of Mile 9 Road
- Zone 2 road runs from 2800’ north of Mile 9 Road to Sioux Road
- Zone 3 runs from Sioux Road to Minnesota Road

Zone 2 is different from Zones 1 and 2 because it has 2 90 degree turns along its route; therefore it has characteristics that merit separating it.

Zone 1 has a driveway density of approximately 35/mile and 1 intersection. There is an existing posted speed limit of 20 mph in the northbound direction and none on the southbound direction.

Zone 2 has a driveway density of 8/mile and 2 intersections. There is an existing posted speed limit of 20 mph in both directions.

Zone 3 has a driveway density of 30/mile and 8 intersections. There is an existing posted speed limit of 30 mph in both directions.

1.2.19 Sky Soldier Road

Sky Soldier Road is a two way, one lane per direction, undivided roadway. It is asphalt pavement without shoulders. Within the boundary of the study area, Sky Soldier Road serves primarily as access to residential properties and farms. Power poles are located on both sides of the roadway at various locations throughout the segment. Sight distance restrictions were not present.

The corridor was split into 3 study Zones for study purposes:

- Zone 1 runs from Santiago Galvan to US 281
- Zone 2 runs from US 281 to Malone Drive
- Zone 3 runs from Malone Drive to Baker Drive.

Zone 1 has a driveway density of approximately 26/mile and 2 intersections. There is no existing posted speed limit in either direction.

Zone 2 has a driveway density of approximately 22/mile and 3 intersections. The existing posted speed limit on this study segment is 40 miles per hour (mph) in both directions.

Zone 3 has a driveway density of approximately 5/mile and 2 intersections. There is no existing posted speed limit in either direction.

Exhibit 1 shows the general location of each corridor within Hidalgo County Precinct 1.

2.0 Speed Zone Study Analyses

In order to analyze and establish speed Zones, our report follows the methodology presented in the TxDOT Manual titled “Procedures for Establishing Speed Zones” and the Texas Manual on Uniform Traffic Control Devices (see excerpt in the appendix). The following principle areas were evaluated:

- Conduct Spot Speed data collection and Determine the 85th Percentile Speed
- Conduct Trial Runs
- Examine Crash Study Records
- Identify Additional Roadway Factors

2.1 Spot Speed Studies

Spot Speed studies were conducted from Tuesday January 23, 2018 through Thursday January 25, 2018.

2.1.1 Methodology

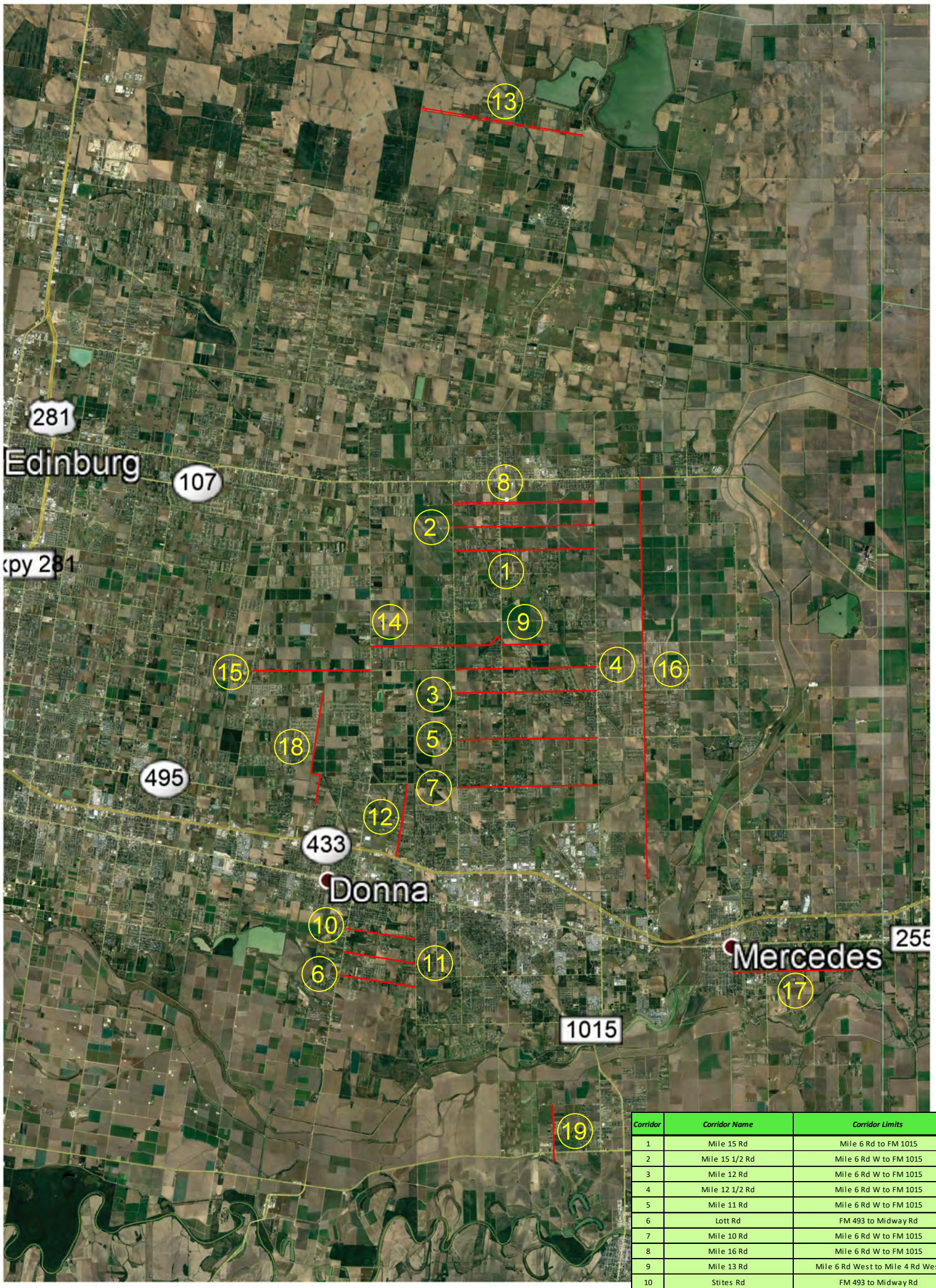
Based on TxDOT’s Manual titled “Procedures for Establishing Speed Zones” – Chapter 3, Section 2 the following criteria were used:

- Record at least 125 vehicles in each direction or,
- Record vehicles in both directions for a maximum of 2 hour period even if 125 vehicles have not been timed.
- Conduct spot speed study during off-peak hours (8:00 A.M. through 5:00 P.M.).
- Study under favorable weather conditions.
- Include only “free floating” vehicles.
- Study Location Midway between signals or 0.2 miles from any signal.
- Trial Runs were used when traffic volumes were too low.

Detailed spot speed study sheets for each corridor are included in **Appendix A**.

The purpose of recording speeds is to determine the consensus of drivers as to the safe speed at a given location. The 85th percentile speed is considered the maximum safe speed for that location.

Exhibits 2.1 and 2.2 present the 85th percentile speed derived from these studies.



Corridor	Corridor Name	Corridor Limits
1	Mile 15 Rd	Mile 6 Rd to FM 1015
2	Mile 15 1/2 Rd	Mile 6 Rd W to FM 1015
3	Mile 12 Rd	Mile 6 Rd W to FM 1015
4	Mile 12 1/2 Rd	Mile 6 Rd W to FM 1015
5	Mile 11 Rd	Mile 6 Rd W to FM 1015
6	Lott Rd	FM 493 to Midway Rd
7	Mile 10 Rd	Mile 6 Rd W to FM 1015
8	Mile 16 Rd	Mile 6 Rd W to FM 1015
9	Mile 13 Rd	Mile 6 Rd West to Mile 4 Rd West
10	Stites Rd	FM 493 to Midway Rd
11	Walker Rd	FM 493 to Midway Rd
12	Victoria Rd	Mile 10 North Rd to US 83 Frontage Rd
13	Nittler Rd	FM 493 to FM 88
14	Mile 13 Rd	FM 493 to Mile 6 Rd West
15	Mile 12 1/2 Rd (Roosevelt Rd)	FM 493 to FM 1423
16	Mile 2 W Rd	Mile 8 North to SH 107
17	Mile 6 North Rd	FM 491 to Mile 2 1/2 East Road
18	Goolie Rd	Mile 9 Rd to Minnesota Road
19	Sky Soldier Rd	Santiago Galvan to Baker Street

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EXHIBIT 1

SPEED ZONE STUDY
LOCATION MAP

2.2 Trial Runs

Trial runs were conducted on Thursday, January 25, 2018 during off peak hours.

2.2.1 Methodology

The methodology for conducting Trial Runs followed Chapter 3 Section 4 of TxDOT Manual "Procedures for Establishing Speed Zones" "*A trial run is a drive through the speed Zoned section of roadway at the chosen speed(s) to determine if the speeds are appropriate for the area."*

The purpose of conducting "Trial Runs" is to see if the speed Zone has any irregularities.

Trial runs were completed on each study corridor. The results of the Trial Runs are presented in **Exhibits 2.1 and 2.2**.

2.3 Crash Records

Crash records for the study areas were provided to ETSI by L&G. Available records did not include any accidents along any of the study corridors. Thus crash records were considered not relevant to this study.

2.4 Identify Additional Roadway Factors

Additional Roadway Factors were considered in selecting speed limits. Chapter 3 Section 4 of TxDOT Manual "Procedures for Establishing Speed Zones" lists factors which may impact the speed limit:

- Narrow roadway pavement widths (20 feet or less, for example)
- Horizontal and vertical curves (possible limited sight distance)
- Hidden driveways and other developments (possible limited sight distance)
- High driveway density (the higher the number of driveways, the higher the potential for encountering entering and turning vehicles)
- Crash history along the corridor
- Rural residential or developed areas (higher potential for pedestrian and bicycle traffic)
- Lack of striped, improved shoulders (constricted lateral movement).

Additional Roadway Factors are presented in **Exhibits 3.1** through **3.19**.

3.0 Speed Zone Study Analyses Results & Recommendations

Results from the Speed Zone Study are summarized below.

3.1 Mile 15 Road

Zone 1:

Trial runs produced an average speed of 40 mph (rounded to the nearest 5 mph). There are posted speed limit signs in both directions showing 30 mph. Considering the type of roadway and the analysis results, the recommended speed limit is 40 miles per hour (mph) within the Zone 1

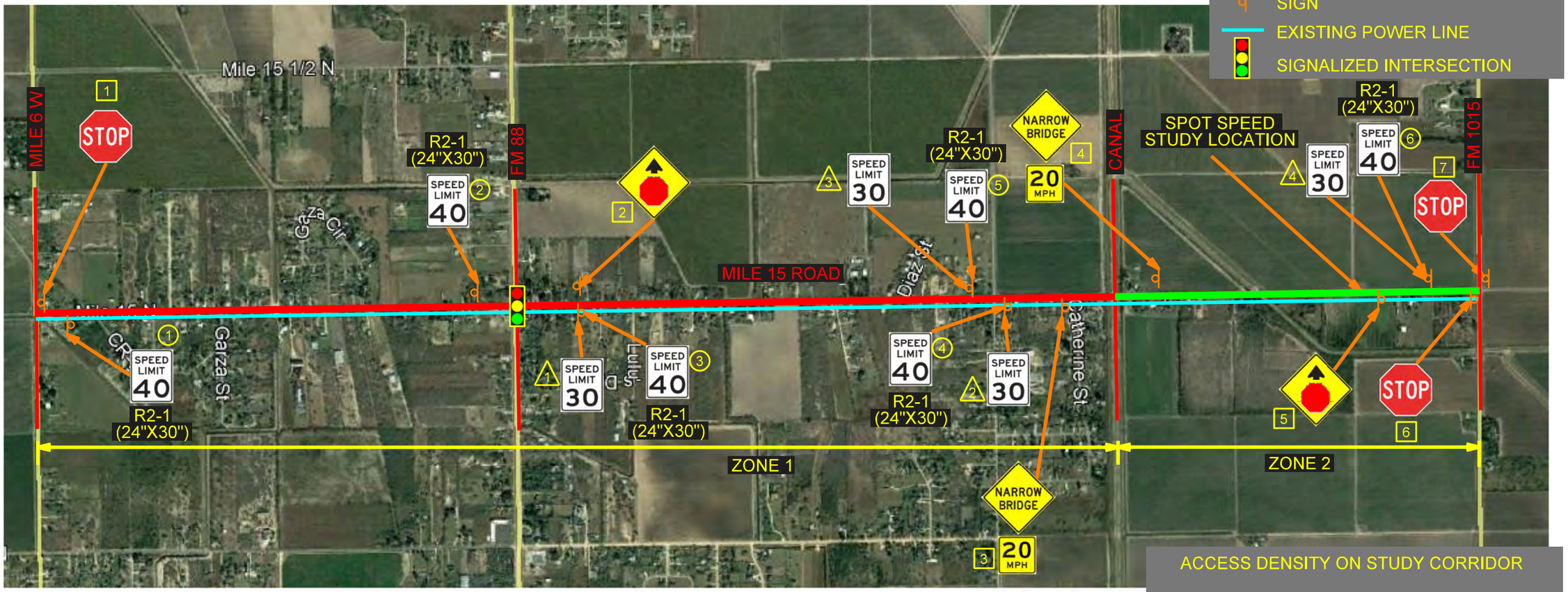
Zone 2:

A spot speed study was performed in Zone 2 on Mile 15 Road, approximately 1,000 feet west of its intersection with FM 1015. The results of the Speed Zone Study show that in Zone 2 the 85th percentile speed is 51 mph in the eastbound direction and 56 in the westbound direction. During the data collection 57 eastbound and 56 westbound vehicles were observed, this is less than ½ of the recommended data. Trial runs produced an average running speed of 45 mph.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 2 is 45 mph.

Exhibit 3.1 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY.
ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN
ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



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NOT TO SCALE

EXHIBIT 3.1

SPEED ZONE STUDY 1
MILE 15 ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Table 3.1 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	*Corridor Name*	*Corridor Limits*	*Internal Zone*	*Travel Direction*	*Overall Running Time*	*Segment Length (Miles)*	*Overall * Travel Speed*	*Running ** Speed*	*85th Percentile Speed*		
1	Mile 15 Rd	Mile 6 Rd to Canal	1	EB	233	2.25	**35**	**40**	**N/A**	**30**	**40**
				WB	254	2.25	**32**	**40**	**N/A**	**30**	**40**
		Canal to FM 1015	2	EB	75	0.76	**37**	**45**	**51**	**30**	**45**
				WB	78	0.76	**35**	**45**	**56**	**30**	**45**

Table 3.1 *Speed Zone Study Results for Mile 15 Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.2 Mile 15 ½ Road

Zone 1:

Trial runs produced an average running speed of 35 mph for both directions of Zone 1. Considering the type of roadway and the analysis results, the recommended speed limit in Zone 1 is 35 mph.

Zone 2:

A spot speed study was performed in Zone 2 on Mile 15 ½ Road, approximately 1000 feet west of its intersection with FM 1015. Considering the condition of Zone 2, a trial run was not performed. Results from the Speed Zone Study show the 85th percentile speed in Zone 2 is 29 mph in the eastbound direction and 31 mph in the westbound direction. A total of 6 vehicles were observed for the entire duration of the study period. The results of the 85th percentile speed cannot be considered as representing the typical speed. Posted speed limits were not observed along either Zone of Mile 15 ½ Road.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 2 is 30 mph.

Exhibit 3.2 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.2 shows the result of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	*Corridor Name*	*Corridor Limits*	*Internal Zone*	*Travel Direction*	*Overall Running Time*	*Segment Length (Miles)*	*Overall * Travel Speed*	*Running ** Speed*	*85th Percentile Speed*		
2	Mile 15 1/2 Rd	Mile 6 Rd W to FM 88	1	EB	143	1.00	**25**	**35**	**N/A**	**Not Existing**	**35**
				WB	149	1.00	**24**	**35**	**N/A**		**35**
		FM 88 to FM 1015	2	EB	**N/A**				**29**		**30**
				WB	**N/A**				**31**		**30**

Table 3.2 *Speed Zone Study Results for Mile 15 ½ Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

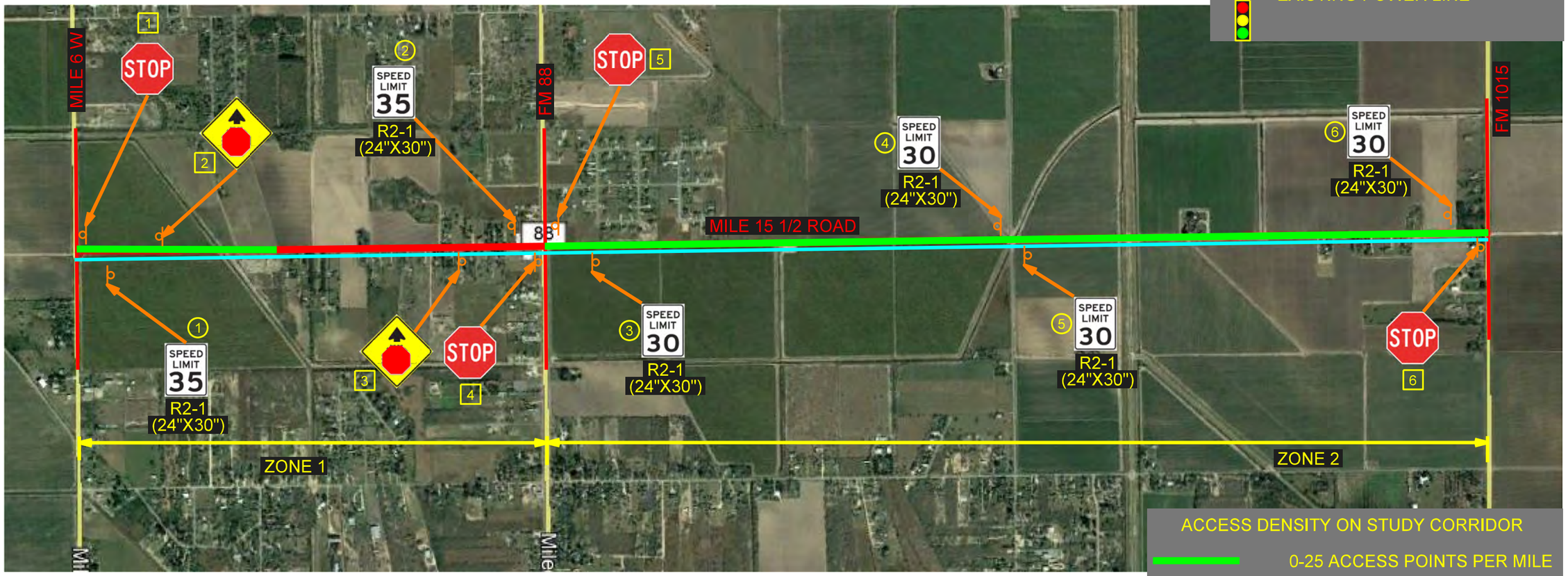
3.3 Mile 12 Road

Zone 1:

Trial runs along the segment produced an average running speed of 45 mph within Zone 1. Considering the type of roadway and the analysis results, the recommended speed limit in Zone 1 is 45 mph.

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY.
ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN
ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND
- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGN
- EXISTING POWER LINE



ACCESS DENSITY ON STUDY CORRIDOR
- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

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EXHIBIT 3.2
SPEED ZONE STUDY 2
MILE 15½ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Zone 2:

A spot speed study was performed in Zone 2 on Mile 15 Road at its intersection with De La Madrid Street. Results from the Speed Zone Study show the 85th percentile speed within Zone 2 as 37 mph in the eastbound direction and 39 mph in the westbound direction. Posted speed limits along Zone 2 show 30 mph in both eastbound and westbound directions; however the eastbound direction has a posted speed limit of 40 mph east of Mile 4 Road. Trial runs along the segment produced an average running speed of 35 mph within Zone 2.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 2 is 35 mph.

Exhibit 3.3 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.3 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
3	Mile 12 Rd	Mile 6 Rd W to FM 88	1	EB	135	1.00	**27**	**45**	**N/A**	**Not Existing**	**45**
				WB	104	1.00	**35**	**45**	**N/A**		**45**
		FM 88 to FM 1015	2	EB	276	2.00	**26**	**35**	**37**	**30**	**35**
				WB	272	2.00	**27**	**35**	**39**	**30**	**35**

Table 3.3 *Speed Zone Study Results for Mile 12 Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.4 Mile 12 ½ Road

Zone 1:

A spot speed study was performed at the intersection of Mile 12 ½ Road and Tasha Lee Drive in Zone 1. Speed Zone Study results show an 85th percentile speed of 43 mph in both eastbound and westbound directions. Trial runs produced an average running speed of 40 mph in both directions.

Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Zone 2:

A spot speed study was performed at the intersection of Mile 12 ½ Road and Big Valley Drive in Zone 2. The original scope indicated that Zone 2 would stretch from FM 88 to FM 1015, however Mile 12 ½ is discontinuous from east of Huatulco Street to Chapa North Road. Trial runs for Zone 2 were run from FM 88 to Mile 4 Road in both directions.

Speed Zone Study results show an 85th percentile speed of 42 mph in the eastbound direction and 44 mph within the westbound direction. Trial runs produced an average running speed of 35 mph in both directions.

Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Exhibit 3.4 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.4 shows the results of the speed Zone study.

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY.
ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN
ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND
- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGN
- EXISTING POWER LINE



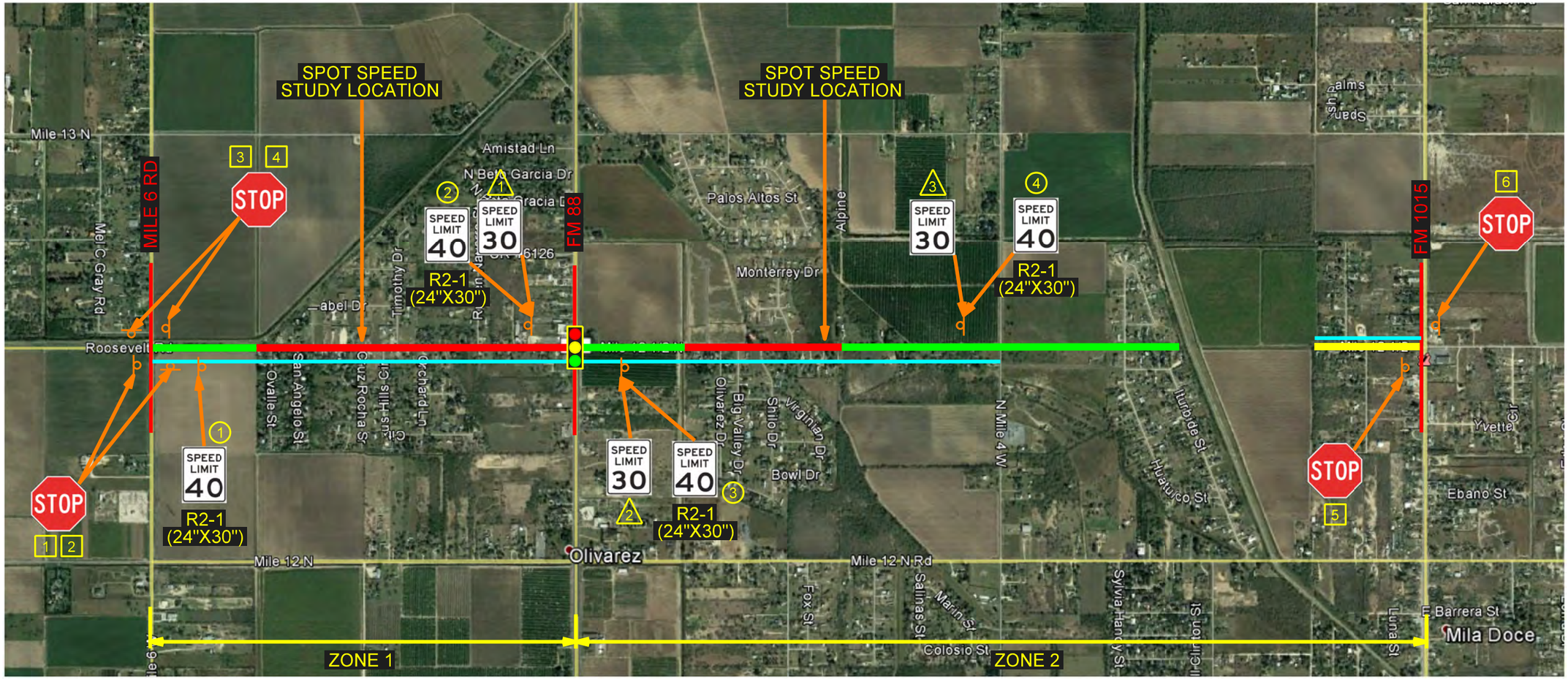
ACCESS DENSITY ON STUDY CORRIDOR
- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

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EXHIBIT 3.3

SPEED ZONE STUDY 3
MILE 12 ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
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LEGEND

- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.4

SPEED ZONE STUDY 4
MILE 12.5 ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
4	Mile 12 1/2 Rd	Mile 6 Rd W to FM 88	1	EB	122	1.00	**30**	**40**	**43**	**Not Existing**	**40**
				WB	109	1.00	**33**	**40**	**43**	**30**	**40**
		FM 88 to FM 1015	2	EB	111	1.00	**32**	**35**	**42**	**30**	**40**
				WB	113	1.00	**32**	**35**	**44**	**30**	**40**

Table 3.4 *Speed Zone Study Results for Mile 12 ½ Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.5 Mile 11 Road

Zone 1:

Spot Speed studies were performed along Mile 11 Road 1/3rd of a mile west of FM 88. Speed Zone Study results show the 85th percentile speed as 44 mph in the eastbound direction and 48 mph in the westbound direction. Trial runs along Mile 11 Road produced an average running speed of 35 mph in both directions.

Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Zone 2:

Spot Speed studies were performed along Mile 11 Road at the House of Recreation. Speed Zone Study results show the 85th percentile speed was 37 mph in the eastbound direction and 42 mph in the westbound direction. Trial runs along Mile 11 Road produced an average running speed of 35 mph in both directions.

Considering the type of roadway and the analysis results, the recommended speed limit is 35 mph.

Exhibit 3.5 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.5 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
5	Mile 11 Rd	Mile 6 Rd W to FM 88	1	EB	134	1.00	**27**	**35**	**44**	**Not Existing**	**40**
				WB	173	1.00	**21**	**30**	**48**	**30**	**40**
		FM 88 to FM 1015	2	EB	228	1.99	**31**	**35**	**37**	**30**	**35**
				WB	229	1.99	**31**	**35**	**42**	**30**	**35**

Table 3.5 *Speed Zone Study Results for Mile 11 Road*

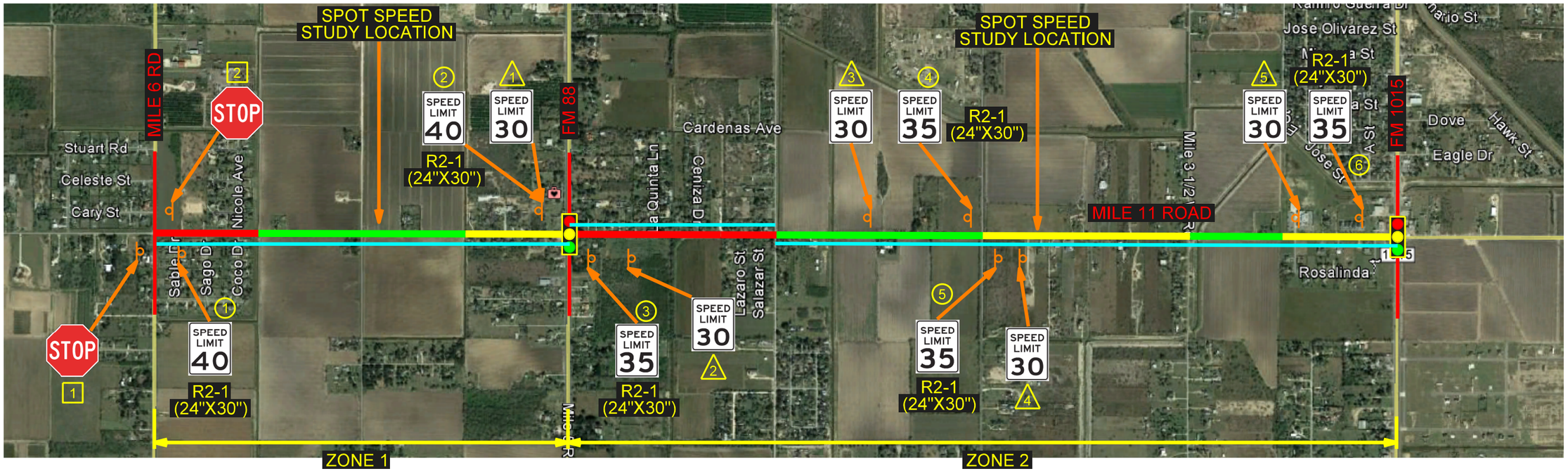
* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.6 Lott Road

A spot speed study was performed on Lott Road at East Balli Drive. Speed Zone Study results show the 85th percentile speed along the study segment as 56 mph in the eastbound direction and 44 mph in the westbound direction. Sample size of vehicles along this roadway totaled 103 vehicles for both directions combined. The 85th percentile speed is considered for recommendation purposes, but may not properly reflect the speed. Trial runs produced an average running speed of 40 mph east of Soderquist road and 20 mph west of Soderquist Road, given that pavement quality degrades to poor condition.

Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
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LEGEND

- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.5

SPEED ZONE STUDY 5
MILE 11 ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Exhibit 3.6 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.6 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
6	Lott Rd	FM 493 to Midway Rd	1	EB	182	1.64	**32**	**40**	**56**	**30**	**40**
				WB	197	1.64	**30**	**40**	**44**	**30**	**40**

Table 3.6 *Speed Zone Study Results for Lott Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.7 Mile 10 Road

Zone 1:

A spot speed study was performed along Mile 10 Road at All Valley Waste. Speed Zone Study results show an 85th percentile speed of 35 mph in the eastbound direction and 30 mph in the westbound direction. Trial runs along Mile 10 Road produced an average running speed of 35 mph.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 1 is 30 mph.

Zone 2:

A spot speed study was performed 1000 feet west of Mile 4 road. Speed Zone Study results show an 85th percentile speed was 33 mph in the eastbound direction and 37 mph in the westbound direction. Trial runs along Mile 10 Road produced an average running speed of 35 mph.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 2 is 35 mph.

Zone 3:

A spot speed study was performed 250 feet east of Mile 4 road. Speed Zone Study results show an 85th percentile speed was 33 mph in the eastbound direction and 37 mph in the westbound direction. Trial runs along Mile 10 Road produced an average running speed of 35 mph.

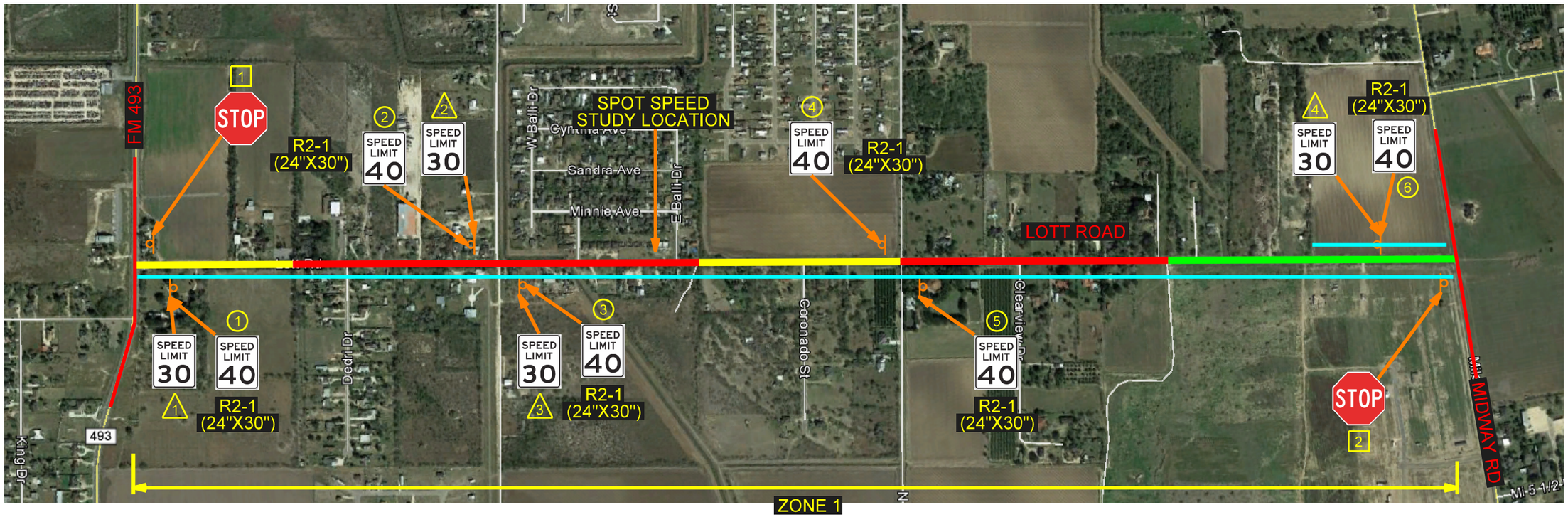
Considering the type of roadway and the analysis results, the recommended speed limit in Zone 3 is 35 mph.

Zone 4:

A spot speed study was performed 1600 feet west of FM 1015. Speed Zone Study results show an 85th percentile speed was 48 mph in both directions. Trial runs along Mile 10 Road produced an average running speed of 35 mph.

There is a 20 mph school zone located within Zone 3. It is common practice that changes in speed from one speed zone to the next should not be greater than 15 mph. The recommended speed limit is 35 mph from the eastern end of Zone 3 to approximately 1,000 feet east to transition from the 20 mph school zone. Considering the type of roadway and the analysis results, the recommended speed limit in Zone 4 from 1,000 feet east of zone 3 to FM 1015 is 45 mph.

Exhibit 3.7 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
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LEGEND

- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.6

SPEED ZONE STUDY 6
LOTT ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Table 3.7 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	*Corridor Name*	*Corridor Limits*	*Internal Zone*	*Travel Direction*	*Overall Running Time*	*Segment Length (Miles)*	*Overall * Travel Speed*	*Running ** Speed*	*85th Percentile Speed*		
7	Mile 10 Rd	Mile 6 Rd W to FM 88	1	EB	181	1.00	**20**	**30**	**35**	**Not Existing**	**30**
				WB	175	1.00	**21**	**35**	**30**		**30**
		FM 88 to Mario Ybarra Elementary	2	EB	216	1.00	**17**	**35**	**33**	**30**	**35**
				WB	132	1.00	**27**	**35**	**37**	**Not Existing**	**35**
		Mario Ybarra Elementary School Zone	3	EB	55	0.25	**16**	**35**	**33**		**35**
				WB	58	0.25	**16**	**35**	**37**		**35**
		Mario Ybarra Elementary School Zone to 1,000 Feet East	4	EB	123	0.75	**22**	**35**	**48**		**35**
				WB	58	0.75	**47**	**35**	**48**		**35**
		1000 Feet East of Zone 3 to FM 1015		EB	123	0.75	**22**	**35**	**48**		**45**
				WB	58	0.75	**47**	**35**	**48**		**45**

Table 3.7 *Speed Zone Study Results for Mile 10 Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.8 Mile 16 Road

Zone 1:

Trial runs produced an average running speed of 40 mph in both directions of Zone 1. Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Zone 2:

Trial runs produced an average running speed of 40 mph in both directions of Zone 2. Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Zone 3:

A spot speed study was performed 1000 feet west of FM 1015. Results from the Speed Zone Study show an 85th percentile speed of 51 mph in the eastbound direction and 48 mph in the westbound direction. Trial runs produced an average running speed of 45 mph in both directions of Zone 3.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 3 is 45 mph.

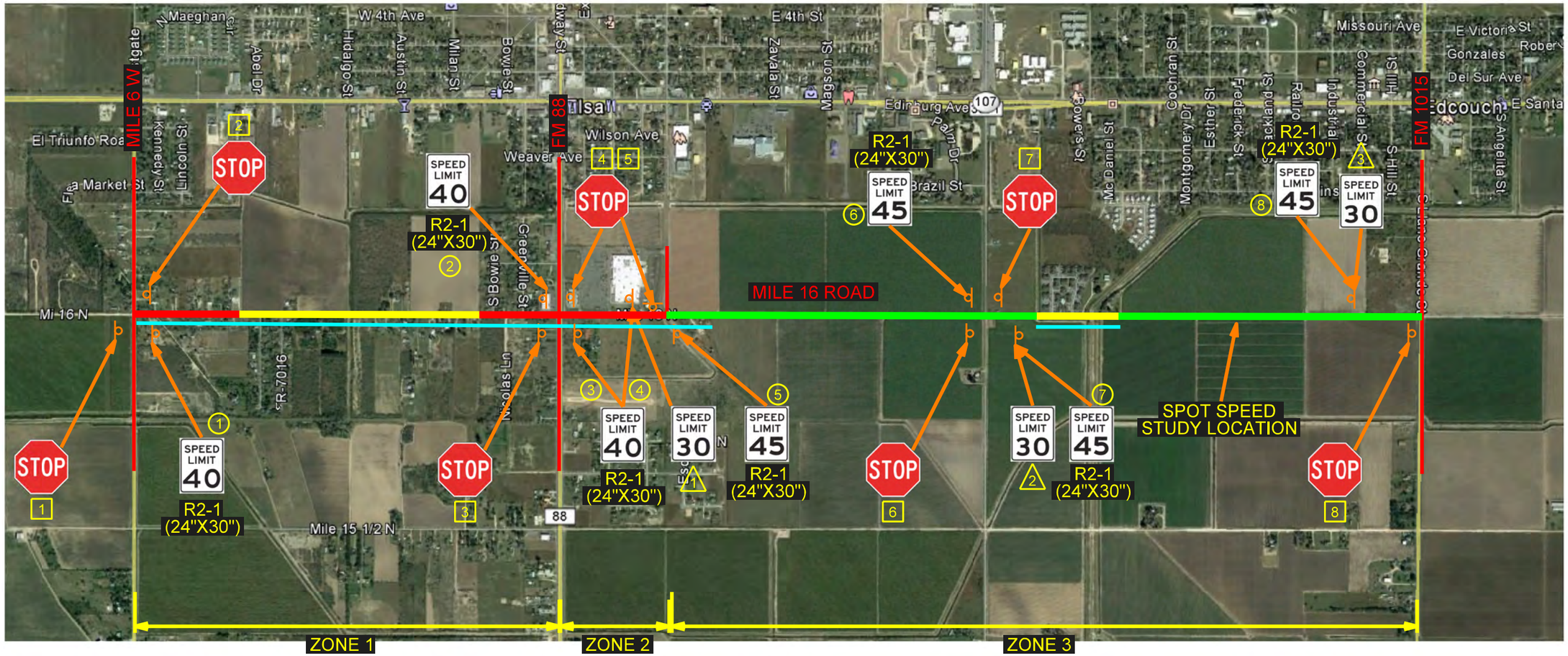
Exhibit 3.8 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.8 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	*Corridor Name*	*Corridor Limits*	*Internal Zone*	*Travel Direction*	*Overall Running Time*	*Segment Length (Miles)*	*Overall * Travel Speed*	*Running ** Speed*	*85th Percentile Speed*		
8	Mile 16 Rd	Mile 6 Rd W to FM 88	1	EB	154	1.00	**23**	**40**	**N/A**	**Not Existing**	**40**
				WB	127	1.00	**28**	**40**	**N/A**		**40**
		FM 88 to 0.3 Miles E of FM 88	2	EB	39	0.33	**30**	**40**	**N/A**		**40**
				WB	79	0.33	**15**	**40**	**N/A**	**30**	**40**
		0.3 Mi E of FM 88 to FM 1015	3	EB	175	1.70	**35**	**45**	**51**	**30**	**45**
				WB	167	1.70	**37**	**45**	**48**	**30**	**45**

Table 3.8 *Speed Zone Study Results for Mile 16 Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
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LEGEND

- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.8

SPEED ZONE STUDY 8
MILE 16 ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.9 Mile 13 Road

Zone 1:

Trial runs produced an average running speed along Zone 1 of 35 mph. Considering the type of roadway and the analysis results, the recommended speed limit in Zone 1 is 35 mph.

Zone 2

A spot speed study was performed along Mile 13 Road ½ mile east of Mile 6 West Road. Results from the Speed Zone Study show an 85th percentile speed in Zone 2 44 mph in the eastbound direction and 48 mph in the westbound direction. Data collected from the spot speed study was limited, 13 vehicles were observed during the study period. 85th percentile speed from this data set may not truly reflect the proper driving speed. Trial runs produced an average running speed along Zone 2 of 40 mph. Zone 2 has 2 steep curves within the study segment. Along these curves, trial runs indicate speeds of 20 mph. Posted warning signs are present in advance of the curves.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 2 is 40 mph.

Exhibit 3.9 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.9 shows the results of the speed Zone study.

Location					*Trial Runs*				*Spot Speed*	*Posted Speed Limit*	*Recommended Speed Limit*
Corridor	*Corridor Name*	*Corridor Limits*	*Internal Zone*	*Travel Direction*	*Overall Running Time*	*Segment Length (Miles)*	*Overall * Travel Speed*	*Running ** Speed*	*85th Percentile Speed*		
9	Mile 13 Rd	FM 88 to Mile 4 Rd West	1	EB	128	1.00	**28**	**35**	**N/A**	**30**	**35**
				WB	111	1.00	**32**	**35**	**N/A**	**30**	**35**
		Mile 6 Rd West to FM 88	2	EB	253	1.11	**16**	**40**	**44**	**Not Existing**	**40**
				WB	192	1.11	**21**	**40**	**48**		**40**

Table 3.9 *Speed Zone Study Results for Mile 13 Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

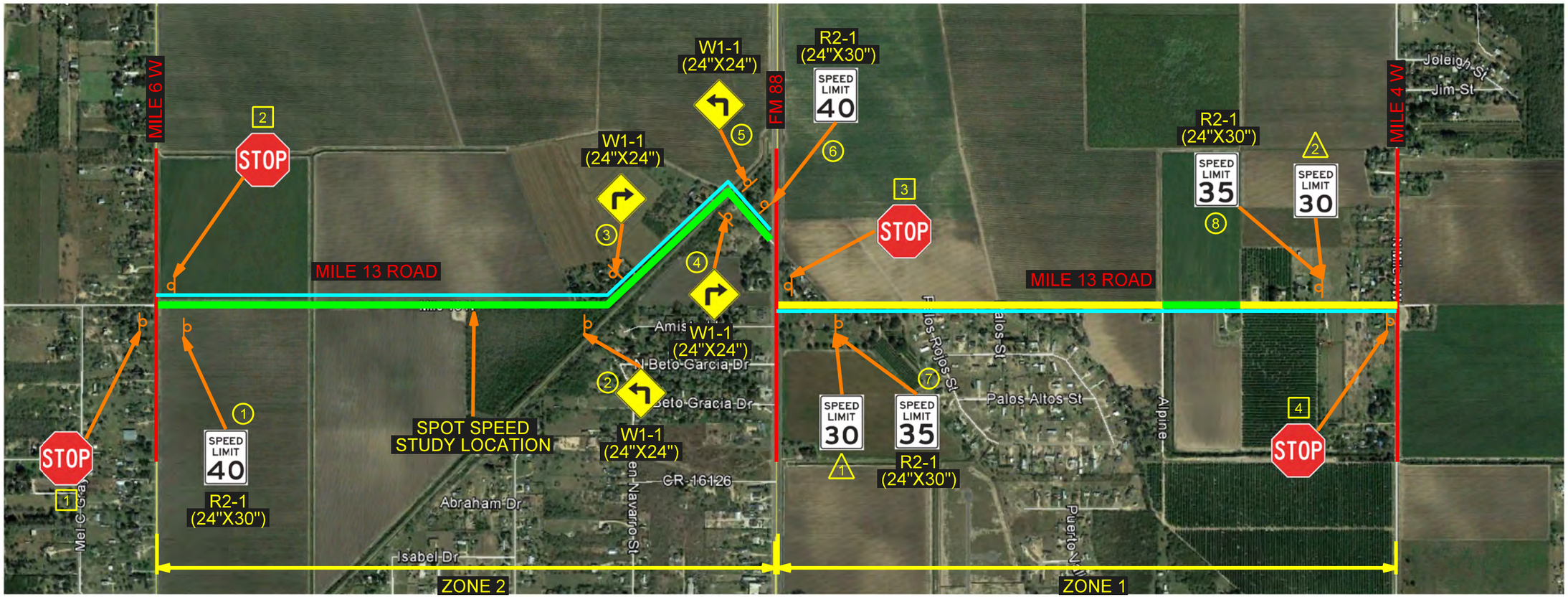
3.10 Stites Road

A spot speed study was performed at the intersection of Stites Road at Champion Drive. Results from the Speed Zone Study show the 85th percentile speed as 42 mph in both eastbound and westbound directions of the segment. Data collected from the spot speed study was limited, 74 vehicles were observed in total for both directions, during the study period. The 85th percentile spot speeds are considered in this report but may not truly reflect the proper driving speed. Trial runs produced an average running speed of 35 mph west of Victoria Road and 20 mph east of Victoria Road, due to poor pavement condition.

Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Exhibit 3.10 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.10 shows the results of the speed Zone study.



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND

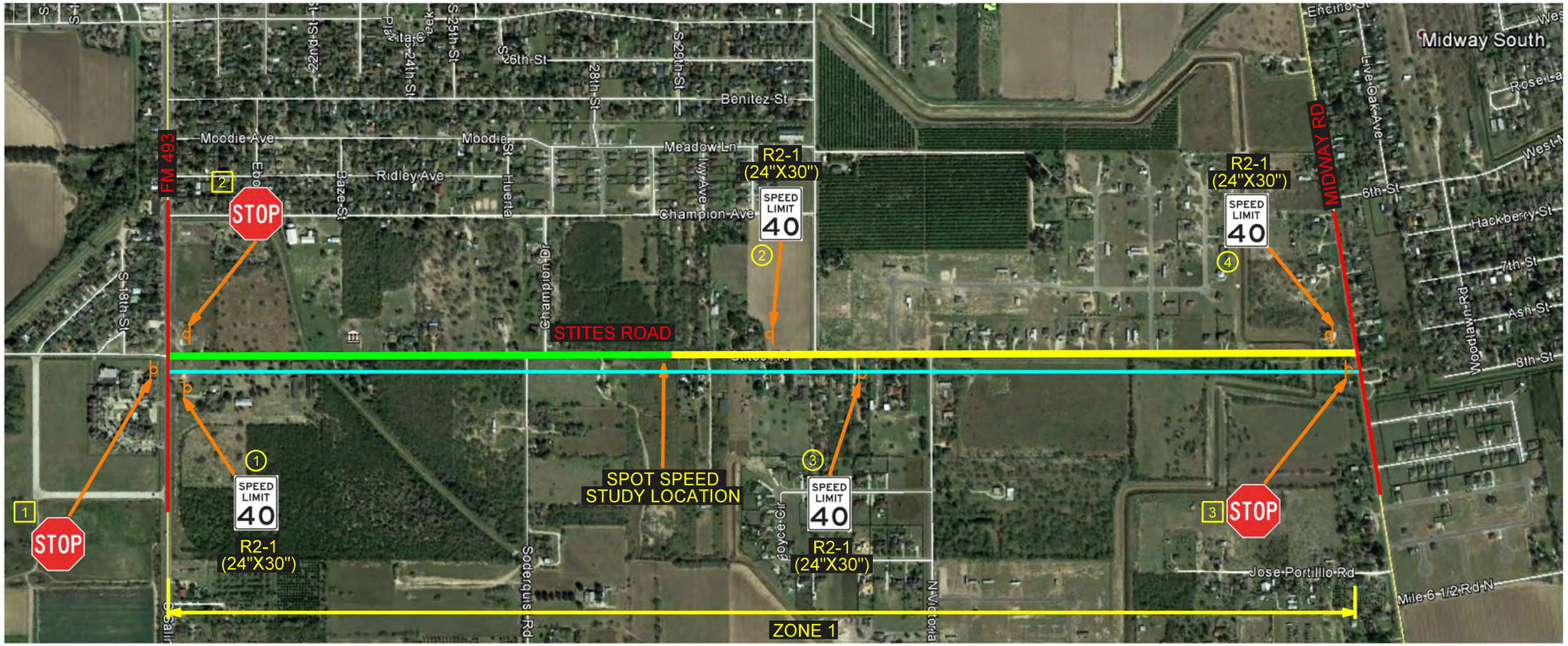
- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.9

SPEED ZONE STUDY 9
MILE 13 ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND

- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.10

SPEED ZONE STUDY 10
STITES ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
10	Stites Rd	FM 493 to Midway Rd	1	EB	209	1.47	**25**	**35**	**42**	**30**	**40**
				WB	248	1.47	**21**	**35**	**42**	**30**	**40**

Table 3.10 *Speed Zone Study Results for Stites Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.11 Walker Road

Trial runs along Walker Road produced an average running speed of 35 mph in both eastbound and westbound directions.

Considering the type of roadway and the analysis results, the recommended speed limit is 35 mph.

Exhibit 3.11 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.11 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
11	Walker Rd	FM 493 to Midway Rd	1	EB	226	1.56	**25**	**35**	**N/A**	**Not Existing**	**35**
				WB	208	1.56	**27**	**35**	**N/A**		**35**

Table 3.11 *Speed Zone Study Results for Walker Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.12 Victoria Road

A spot speed study was performed at the intersection of Victoria Road at Castillo Road. Results from the Speed Zone Study show the 85th percentile speed to be 45 mph in the northbound direction and 38 mph in the southbound direction. Trial runs along the corridor produced an average running speed of 40 mph in both directions.

Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Exhibit 3.12 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

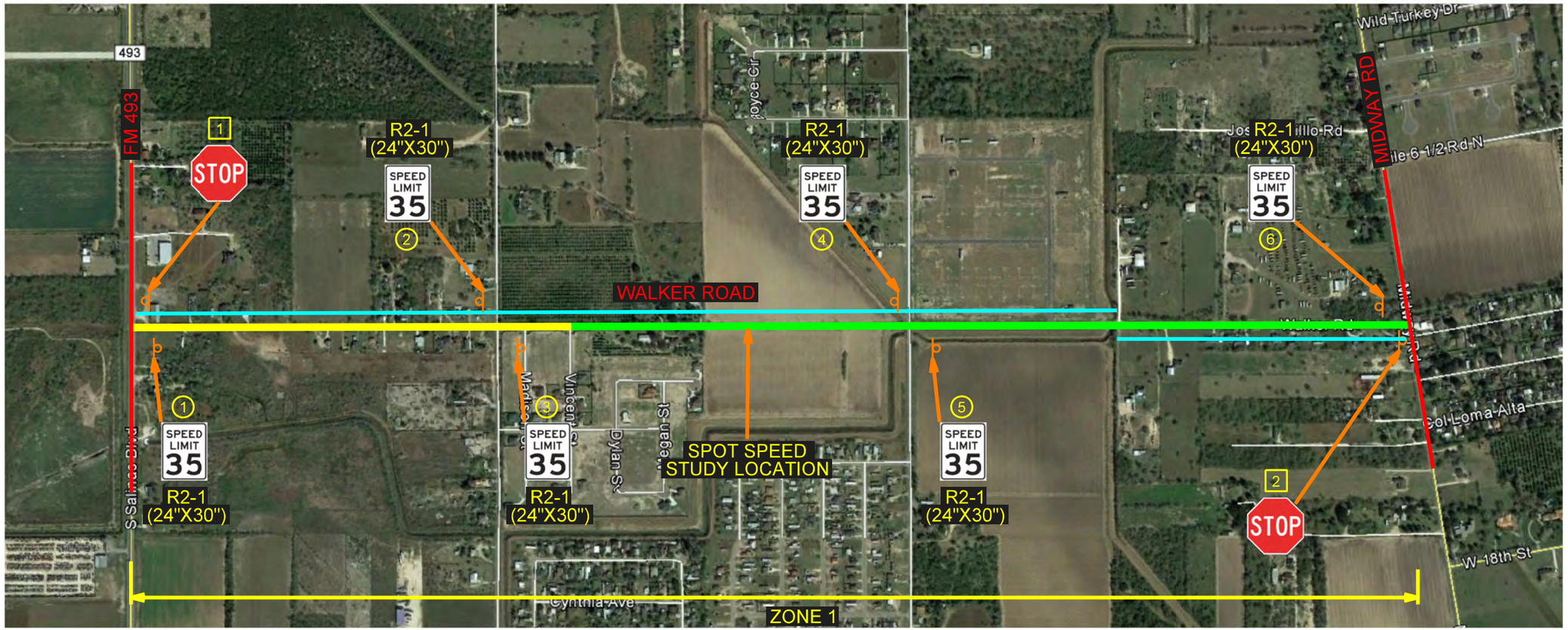
Table 3.12 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
12	Victoria Rd	Mile 10 North Rd to US 83 Frontage Rd	1	NB	155	1.57	**36**	**40**	**45**	**30**	**40**
				SB	144	1.57	**39**	**40**	**38**	**30**	**40**

Table 3.12 *Speed Zone Study Results for Victoria Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND

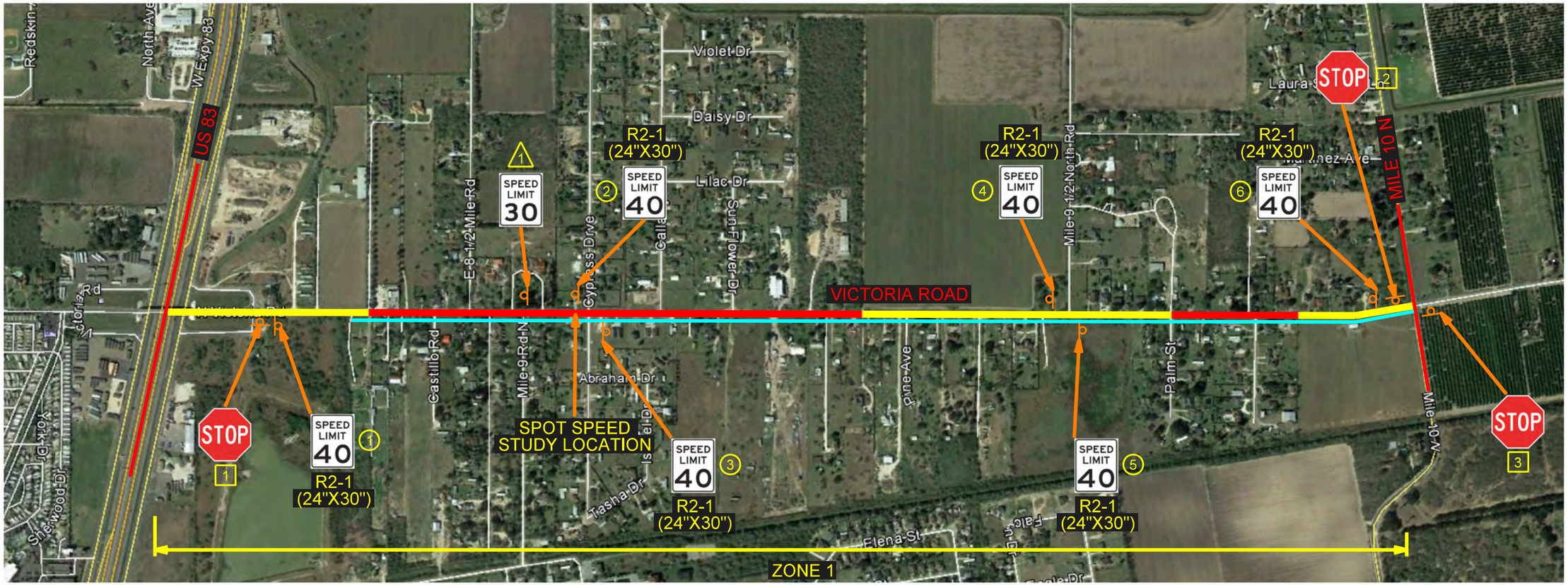
- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.11

SPEED ZONE STUDY 11
WALKER ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND

- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.12

SPEED ZONE STUDY 12
VICTORIA ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

3.13 Nittler Road

A spot speed study was performed approximately 1 ½ miles west of FM 88. Results from the Speed Zone Study show the 85th percentile speed to be 61 mph in the eastbound direction and 67 mph in the westbound direction. Data collected from the spot speed study was limited, 40 vehicles were observed for the total of both directions during the study period. The 85th percentile speed observed is considered in this study, however it may not truly reflect the proper driving speed. Trial runs produced an average running speed of 55 mph in both eastbound and westbound directions.

Considering the type of roadway and the analysis results, the recommended speed limit is 55 mph.

Exhibit 3.13 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.13 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
13	Nittler Rd	FM 493 to FM 88	1	EB	273	3.50	**46**	**55**	**61**	**30**	**55**
				WB	307	3.50	**41**	**55**	**67**	**30**	**55**

Table 3.13 *Speed Zone Study Results for Nittler Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.14 Mile 13 Road

A spot speed study was performed at the intersection of Mile 13 Road at Turner Drive. Results from the Speed Zone Study show the 85th percentile speed to be 32 mph in the eastbound direction and 46 mph in the westbound direction. Data collected for the spot speed study was limited, 23 vehicles were observed for the total of both directions during the study period. The data is too limited to be considered as a basis for recommendation. Trial runs produced an average running speed of 35 mph in both directions.

Considering the type of roadway and the analysis results, the recommended speed limit is 35 mph.

Exhibit 3.14 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.14 shows the results of the speed Zone study.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
14	Mile 13 Rd	FM 493 to Mile 6 Rd West	1	EB	66	0.57	**31**	**35**	**32**	**Not Existing**	**35**
				WB	75	0.57	**27**	**35**	**46**		**35**

Table 3.14 *Speed Zone Study Results for Mile 13 Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND

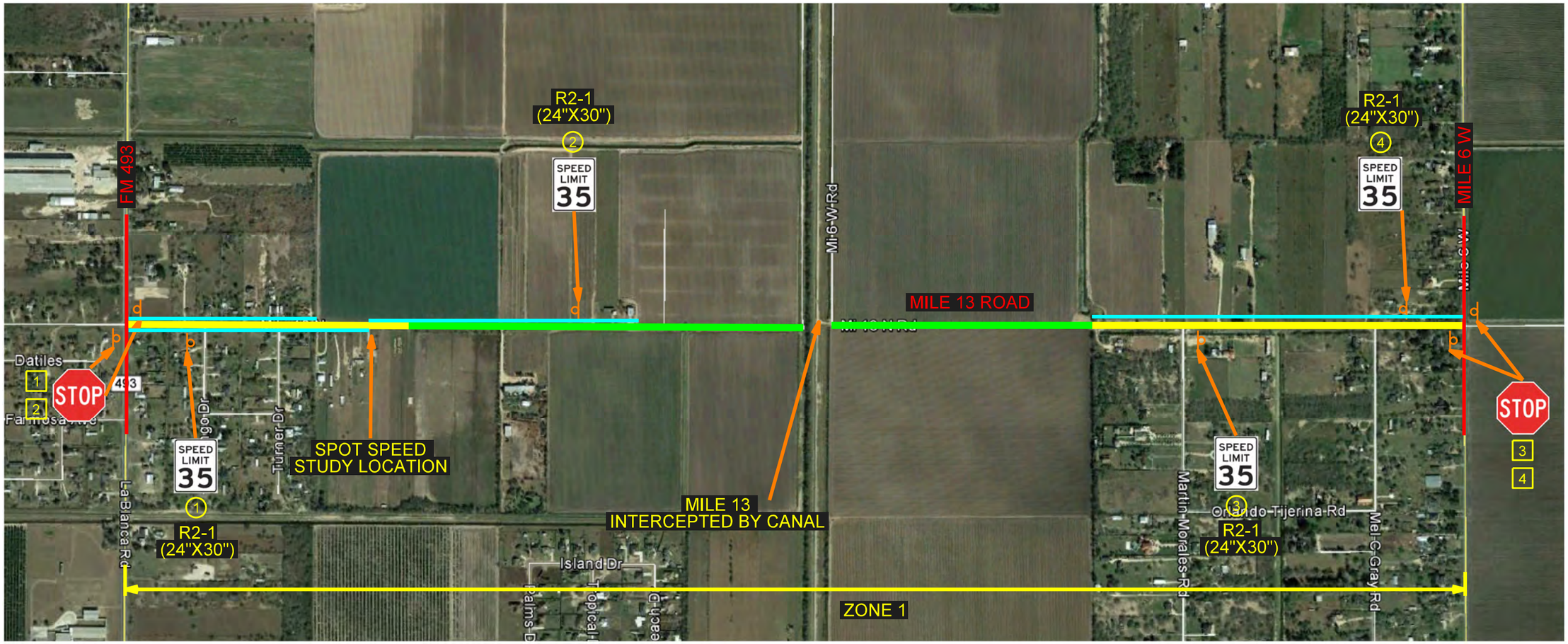
- (X) PROPOSED SIGN
- [X] EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.13

SPEED ZONE STUDY 13
NITTLER ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND

- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
- EXISTING POWER LINE

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EXHIBIT 3.14

SPEED ZONE STUDY 14
MILE 13 ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

3.15 Mile 12 ½ Road (Roosevelt Road)

Zone 1:

A spot speed study was performed at the intersection of Mile 12 ½ Road at Elena Avenue. Results from the Speed Zone Study show the 85th percentile speed within Zone 1 to be 37 mph in the eastbound direction and 35 mph in the westbound direction. Trial runs along the corridor produced an average running speed of 30 mph in both directions.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 1 is 35 mph.

Zone 2:

A spot speed study was performed at the intersection of Mile 12 ½ Road at Tweety Street. Results from the Speed Zone Study show the 85th percentile speed within Zone 2 the speed was 51 mph in the eastbound direction and 42 mph in the westbound direction. Trial runs along the corridor produced an average running speed of 30 mph in both directions.

There is a school zone adjacent to Zone 2, along Zone 1. It is common practice that changes in speed from one speed zone to the next should not be greater than 15 mph. It is recommended that the posted speed limit should be 35 mph from Elena Avenue to 1 mile west and 40 mph from 1 mile west of Elena to FM 1423.

Exhibit 3.15 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.15 shows the results of the speed Zone study.

Location					*Trial Runs*				*Spot Speed*		
Corridor	*Corridor Name*	*Corridor Limits*	*Internal Zone*	*Travel Direction*	*Overall Running Time*	*Segment Length (Miles)*	*Overall * Travel Speed*	*Running ** Speed*	*85th Percentile Speed*	*Posted Speed Limit*	*Recommended Speed Limit*
15	Mile 12 1/2 Rd (Roosevelt Rd)	FM 493 to Elena Avenue	1	EB	25	0.16	**22**	**30**	**37**	**20*** **	**35**
				WB	30	0.16	**19**	**30**	**35**	**20*** **	**35**
		Elena Avenue to 1 Mile West	2	EB	314	2.35	**27**	**30**	**51**	**30**	**35**
				WB	292	2.35	**29**	**30**	**42**	**30**	**35**
		1 Mile West of Elena Avenue to FM 1423		EB	314	2.35	**27**	**30**	**51**	**30**	**40**
				WB	292	2.35	**29**	**30**	**42**	**30**	**40**

Table 3.15 *Speed Zone Study Results for Mile 12 ½ Road (Roosevelt Road)*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

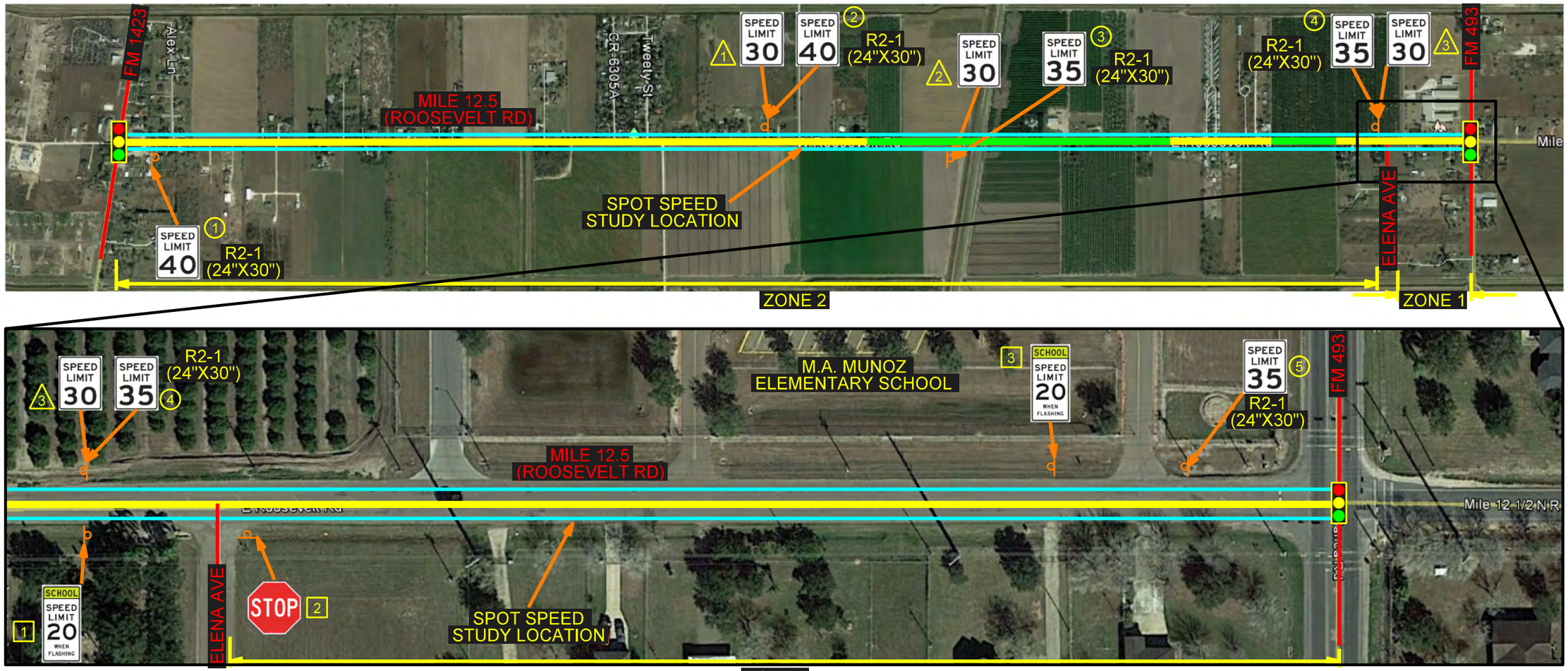
*** Posted Speed is for the school Zone that Zone 1 falls under. During off hours the recommended speed should be followed.

3.16 Mile 2 West Road

Zone 1:

A spot speed study was conducted along Mile 2 West Road 0.6 miles south of Mile 11 Rd. Results from the Speed Zone Study show the 85th percentile speed within Zone 1 is 50 mph in both the northbound and southbound directions. Trial runs produced an average running speed of 50 mph.

South of Mile 8 Road the posted speed limit is 30 mph, which constrains the speed limit increase. It is common practice that changes in speed from one speed zone to the next should not be greater than 15 mph. Considering the type of roadway and the analysis results, the recommended speed limit in Zone 1 is 40 mph from Mile 8 Road to 4,800 feet north and 50 mph from 4,800 feet north to Mile 11 Road.



ACCESS DENSITY ON STUDY CORRIDOR	
	0-25 ACCESS POINTS PER MILE
	25-50 ACCESS POINTS PER MILE
	50+ ACCESS POINTS PER MILE

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND	
(X) PROPOSED SIGN	SIGNALIZED INTERSECTION
[X] EXISTING SIGN TO REMAIN	SIGN
X EXISTING SIGN TO BE REMOVED	EXISTING POWER LINE

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EXHIBIT 3.15

SPEED ZONE STUDY 15
MILE 12.5 (ROOSEVELT ROAD)
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Zone 2:

A spot speed study was conducted along Mile 2 West Road ½ mile north of Mile 11 Road. Results from the Speed Zone Study show the 85th percentile speed within Zone 2 is 48 mph in the northbound direction and 51 mph in the southbound direction. Trial runs produced an average running speed of 45 mph. Zone 2 has a greater density of residential properties adjacent to the study segment, reducing driving speeds.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 2 is 45 mph.

Zone 3:

A spot speed study was conducted along Mile 2 West Road ¼ mile north of Mile 13 Road. Results from the Speed Zone Study show the 85th percentile speed within Zone 3 the speed was 51 mph in the northbound direction and 67 mph in the southbound direction. Data collected within Zone 3 for the spot speed study was limited, 37 vehicles were observed for the total of both directions during the study period. This data is considered for the recommendation, but may not truly reflect the proper driving speed. Trial runs produced an average running speed of 50 mph.

Considering the type of roadway and the analysis results, the recommended speed limit in Zone 3 is 50 mph.

Exhibit 3.16 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.16 shows the results of the speed Zone study.

Location					*Trial Runs*				*Spot Speed*		
Corridor	*Corridor Name*	*Corridor Limits*	*Internal Zone*	*Travel Direction*	*Overall Running Time*	*Segment Length (Miles)*	*Overall * Travel Speed*	*Running ** Speed*	*85th Percentile Speed*	*Posted Speed Limit*	*Recommended Speed Limit*
16	Mile 2 W Rd	Mile 8 North to 4,600 feet North	1	NB	361	3.00	**30**	**50**	**50**	**40**	**40**
				SB	261	3.00	**41**	**50**	**50**	**40**	**40**
		4,600 Feet North of Mile 8 to Mile 11		NB	361	3.00	**30**	**50**	**50**	**40**	**50**
				SB	261	3.00	**41**	**50**	**50**	**40**	**50**
		Mile 11 North Rd to Mile 13 North Rd	2	NB	219	2.00	**33**	**40**	**48**	**40**	**45**
				SB	172	2.00	**42**	**40**	**51**	**40**	**45**
		Mile 13 North Rd to SH 107	3	NB	302	3.51	**42**	**50**	**51**	**30**	**50**
				SB	281	3.51	**45**	**50**	**67**	**Not Existing**	**50**

Table 3.16 *Speed Zone Study Results for Mile 2 West Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

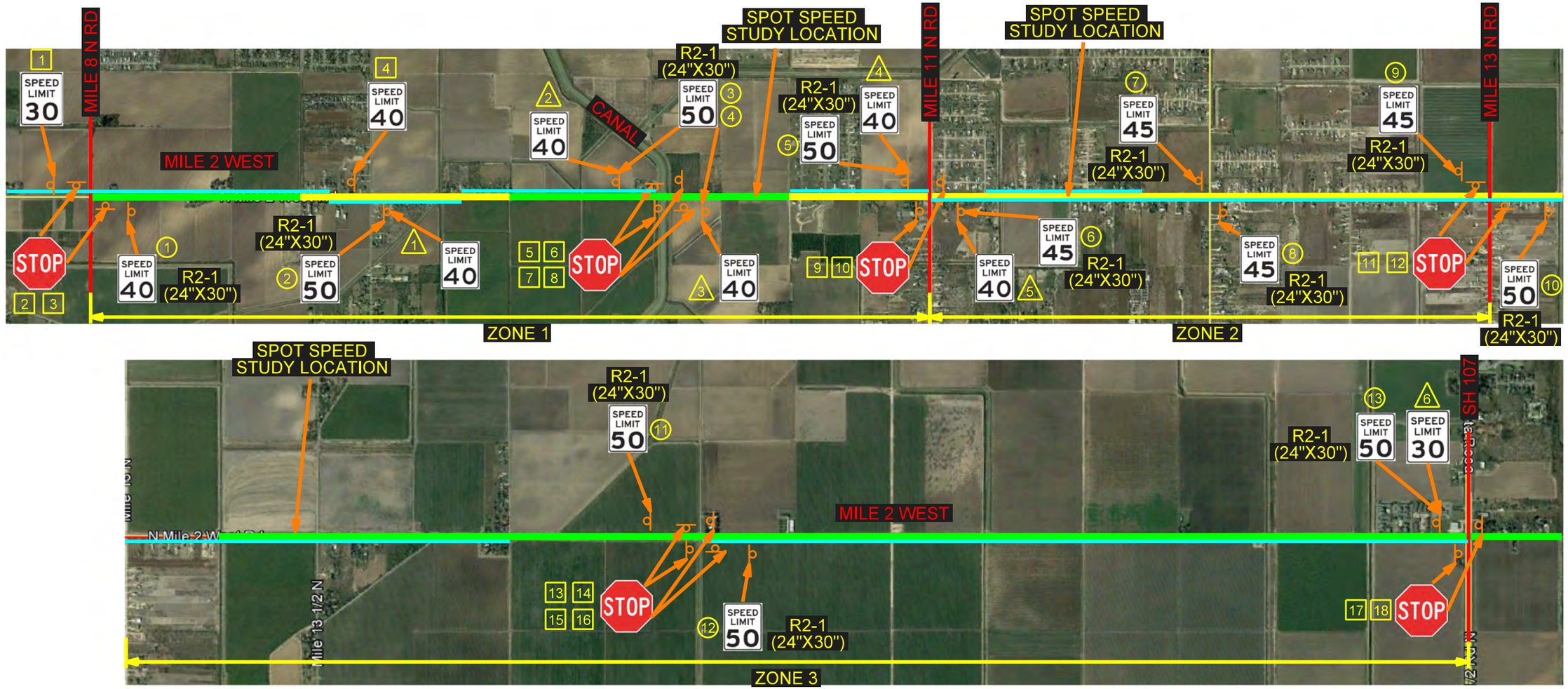
3.17 Mile 6 North Road

Upon field investigation, Zone 1 and Zone 2 overlap entirely and the data is presented under Zone 2.

Zone 2:

Results of the Speed Zone Study show that trial runs produced an average running speed of 20 mph within Zones 1 and 2. Zones 1 and 2 are within a school Zone and also have densely populated residences adjacent to the roadway, limiting the safe driving speed.

Considering the type of roadway and the analysis results, the recommended speed limit in both Zones 1 and 2 is 20 mph.



ACCESS DENSITY ON STUDY CORRIDOR

- 0-25 ACCESS POINTS PER MILE
- 25-50 ACCESS POINTS PER MILE
- 50+ ACCESS POINTS PER MILE

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND

- (X) PROPOSED SIGN
- [X] EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- SIGNALIZED INTERSECTION
- SIGN
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EXHIBIT 3.16

SPEED ZONE STUDY 16
MILE 2 WEST RD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Zone 3:

Results of the Speed Zone Study show that trial runs produced an average running speed of 35 mph within Zone 3.

Considering the type of roadway and the analysis results the recommended speed limit in Zone 3 is 35 mph.

Exhibit 3.17 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.17 shows the results of the speed Zone study.

Location					*Trial Runs*				*Spot Speed*	*Posted Speed Limit*	*Recommended Speed Limit*
Corridor	*Corridor Name*	*Corridor Limits*	*Internal Zone*	*Travel Direction*	*Overall Running Time*	*Segment Length (Miles)*	*Overall * Travel Speed*	*Running ** Speed*	*85th Percentile Speed*		
17	Mile 6 North Rd	FM 491 to Rio Rico Rd	1	EB	N/A						
				WB	N/A						
		Mercedes High School Speed Zone	2	EB	149	0.72	**17**	**20**	**N/A**	**20**	**20**
				WB	137	0.72	**19**	**20**	**N/A**	**20**	**20**
		Rio Rico Rd to Mile 2.5 East Rd	3	EB	264	2.02	**27**	**35**	**N/A**	**Not Existing**	**35**
				WB	284	2.02	**26**	**35**	**N/A**		**35**

Table 3.17 *Speed Zone Study Results for Mile 6 North Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.18 Goolie Road

Zone 1:

Trial runs produced an average running speed of 35 mph within Zone 1. Considering the type of roadway and the analysis results, the recommended speed limit is 35 mph.

Zone 2:

Trial runs produced an average running speed of 35 mph within Zone 2. Zone 2 is bounded by 2 steep curves which limit driving speed. Considering the type of roadway and the analysis results, the recommended speed limit is 30 mph.

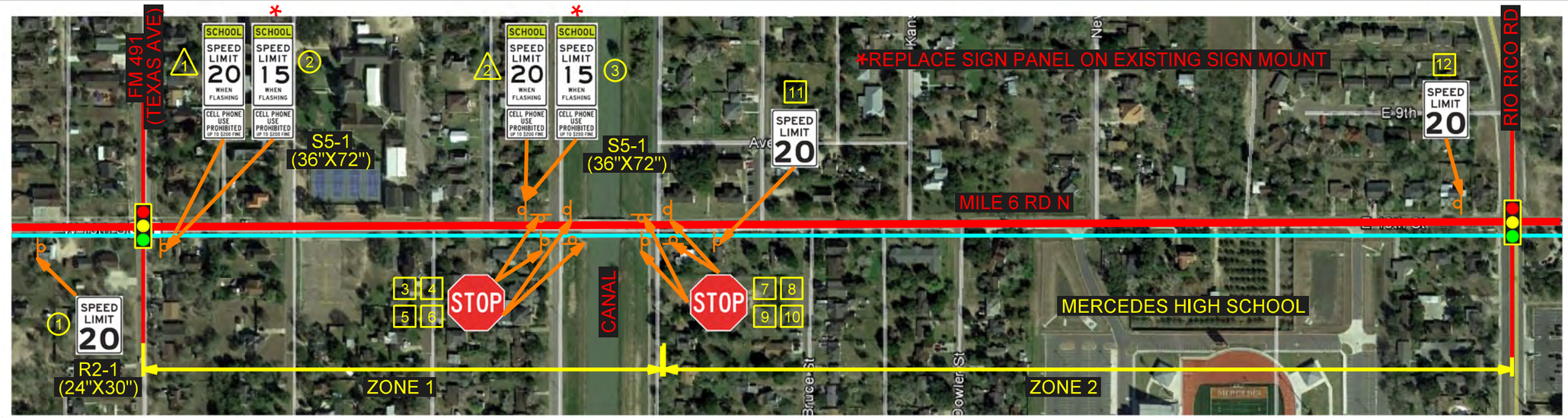
Zone 3:

A spot speed study was performed at the intersection of Goolie Road at El Dora Road. Results of the Speed Zone Study show the 85th percentile speed to be 48 mph in the northbound direction and 37 mph in the southbound direction within Zone 3. Trial runs produced an average running speed of 35 mph within Zone 3.

Considering the type of roadway and the analysis results, the recommended speed limit is 35 mph.

Exhibit 3.18 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.18 shows the results of the speed Zone study.





ACCESS DENSITY ON STUDY CORRIDOR	
0-25 ACCESS POINTS PER MILE	
25-50 ACCESS POINTS PER MILE	
50+ ACCESS POINTS PER MILE	

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND	
PROPOSED SIGN	SIGNALIZED INTERSECTION
EXISTING SIGN TO REMAIN	SIGN
EXISTING SIGN TO BE REMOVED	EXISTING POWER LINE

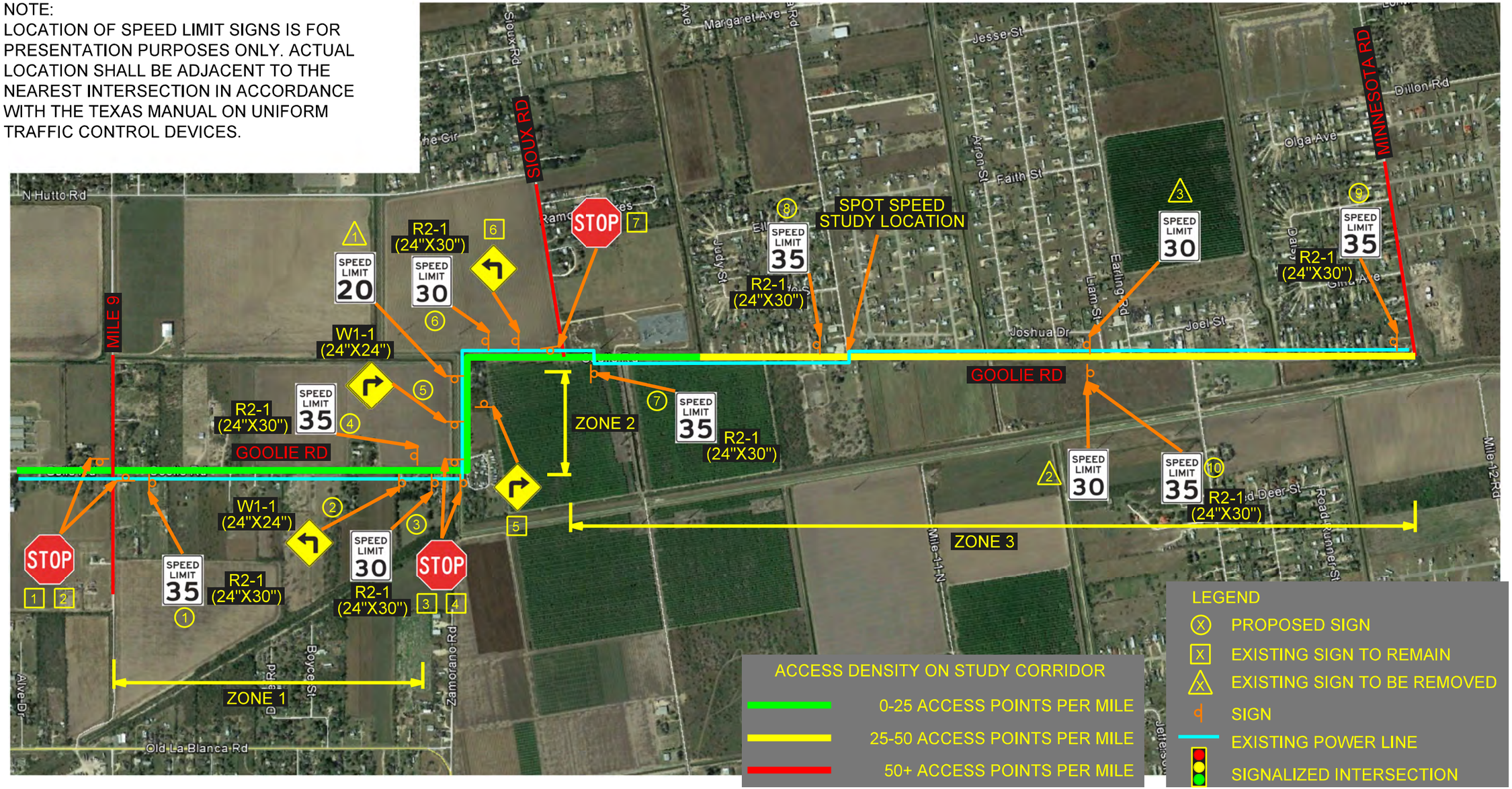
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NOT TO SCALE

EXHIBIT 3.17

SPEED ZONE STUDY 17
MILE 6 ROAD NORTH
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

NOTE:
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EXHIBIT 3.18

SPEED ZONE STUDY 18
GOOLIE ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
18	Goolie Rd	Mile 9 Rd to 2800' North of Mile 9	1	NB	53	0.53	**36**	**35**	**N/A**	**Not Existing**	**35**
				SB	50	0.53	**38**	**35**	**N/A**	**Not Existing**	**35**
		2800' North of Mile 9 to Sioux Rd	2	NB	68	0.48	**25**	**30**	**N/A**	**Not Existing**	**30**
				SB	73	0.48	**23**	**30**	**N/A**	**20**	**30**
		Sioux Rd to Minnesota Rd	3	NB	158	1.52	**35**	**35**	**48**	**30**	**35**
				SB	185	1.52	**29**	**35**	**37**	**30**	**35**

Table 3.18 *Speed Zone Study Results for Goolie Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

3.19 Sky Soldier Road

Zone 1:

Trial runs produced an average running speed of 40 mph in both northbound and southbound directions. Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Zone 2:

A spot speed study was performed 500 feet south of Malone Drive. Results from the Speed Zone Study show the 85th percentile speed to be 42 mph in the northbound direction and 46 mph in the southbound direction of Zone 2. Data collected for the spot speed study was limited, 15 vehicles were observed for the total of both directions during the study period. The limited data is not considered for the recommended posted speed limit. Trial runs produced an average running speed of 40 mph in both northbound and southbound directions

Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Zone 3:

Trial runs produced an average running speed of 40 mph in both northbound and southbound directions. Considering the type of roadway and the analysis results, the recommended speed limit is 40 mph.

Exhibit 3.19 presents the existing roadway corridor including existing sign inventory and recommendations for locating new speed limit signs.

Table 3.19 shows the results of the speed Zone study.

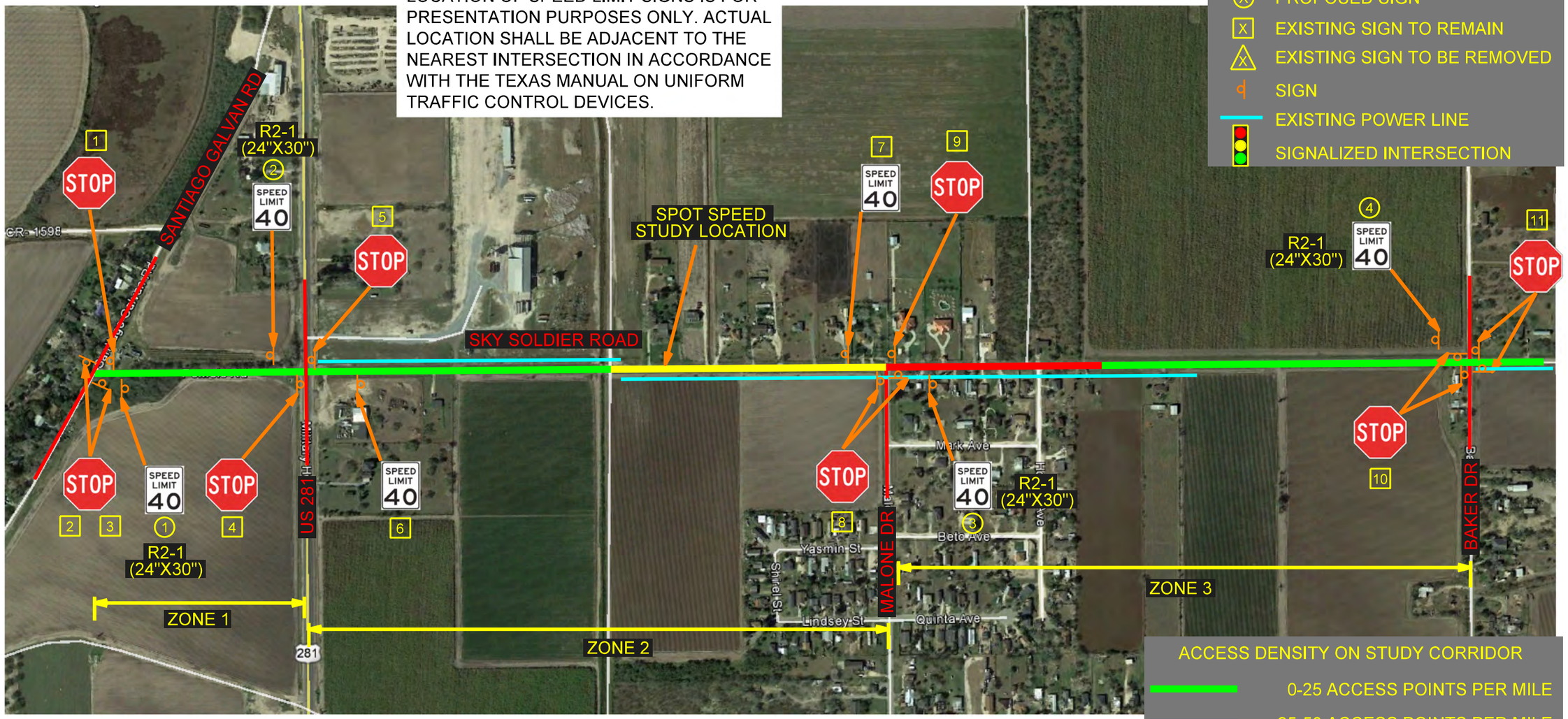
Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed		
19	Sky Soldier Rd	Santiago Galvan to US 281	1	NB	30	0.18	**22**	**40**	**N/A**	**Not Existing**	**40**
				SB	27	0.18	**24**	**40**	**N/A**		**40**
		US 281 to Malone Dr	2	NB	63	0.50	**29**	**40**	**42**	**40**	**40**
				SB	67	0.50	**27**	**40**	**46**	**40**	**40**
		Malone Dr to Baker Street	3	NB	61	0.50	**30**	**40**	**N/A**	**Not Existing**	**40**
				SB	63	0.50	**29**	**40**	**N/A**		**40**

Table 3.19 *Speed Zone Study Results for Sky Soldier Road*

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

** Running Speed – The speed over a specified section of highway that is the distance divided by the running time. The average of all traffic, or a component therof, is the summation of distances divide by the summation of running times (excluding stop times) rounded off to the nearest 5 mph.

NOTE:
LOCATION OF SPEED LIMIT SIGNS IS FOR PRESENTATION PURPOSES ONLY. ACTUAL LOCATION SHALL BE ADJACENT TO THE NEAREST INTERSECTION IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



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EXHIBIT 3.19

SPEED ZONE STUDY 19
SKY SOLDIER ROAD
EXISTING ROADWAY INVENTORY & PROPOSED SIGN LOCATIONS

Exhibits 2.1 and 2.2 summarizes the results of the Speed Zone Study and the recommended posted speed limit for each segment and Zone.

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit	Summary of Signs									
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed			R2-1 (24"x30") 20 mph	R2-1 (24"x30") 30 mph	R2-1 (24"x30") 35 mph	R2-1 (24"x30") 40 mph	R2-1 (24"x30") 45 mph	R2-1 (24"x30") 50 mph	R2-1 (24"x30") 55 mph	W1-1 (24"x24") Curve Warning Sign	W3-1 (30"x30") Stop Ahead Sign	S5-1 (36"x72") School Speed Zone Sign
1	Mile 15 Rd	Mile 6 Rd to Canal	1	EB	233	2.25	35	40	N/A	30	40				6						
				WB	254	2.25	32	40	N/A	30	40										
		Canal to FM 1015	2	EB	75	0.76	37	45	51	30	45										
				WB	78	0.76	35	45	56	30	45										
2	Mile 15 1/2 Rd	Mile 6 Rd W to FM 88	1	EB	143	1.00	25	35	N/A	Not Existing	35		4	2							
				WB	149	1.00	24	35	N/A		35										
		FM 88 to FM 1015	2	EB	N/A				29		30										
				WB	N/A				31		30										
3	Mile 12 Rd	Mile 6 Rd W to FM 88	1	EB	135	1.00	27	45	N/A	Not Existing	45			4		2					
				WB	104	1.00	35	45	N/A		45										
		FM 88 to FM 1015	2	EB	276	2.00	26	35	37	30	35										
				WB	272	2.00	27	35	39	30	35										
4	Mile 12 1/2 Rd	Mile 6 Rd W to FM 88	1	EB	122	1.00	30	40	43	Not Existing	40				4						
				WB	109	1.00	33	40	43	30	40										
		FM 88 to FM 1015	2	EB	111	1.00	32	35	42	30	40										
				WB	113	1.00	32	35	44	30	40										
5	Mile 11 Rd	Mile 6 Rd W to FM 88	1	EB	134	1.00	27	35	44	Not Existing	40			4	2						
				WB	173	1.00	21	30	48	30	40										
		FM 88 to FM 1015	2	EB	228	1.99	31	35	37	30	35										
				WB	229	1.99	31	35	42	30	35										
6	Lott Rd	FM 493 to Midway Rd	1	EB	182	1.64	32	40	56	30	40				6						
				WB	197	1.64	30	40	44	30	40										
7	Mile 10 Rd	Mile 6 Rd W to FM 88	1	EB	181	1.00	20	30	35	Not Existing	30		2	4		2					
				WB	175	1.00	21	35	30		30										
		FM 88 to Mario Ybarra Elementary	2	EB	216	1.00	17	35	33	30	35										
				WB	132	1.00	27	35	37	Not Existing	35										
		Mario Ybarra Elementary School Zone	3	EB	55	0.25	16	35	33		35										
				WB	58	0.25	16	35	37		35										
		Mario Ybarra Elementary School Zone to 1,000 Feet	4	EB	123	0.75	22	35	48		35										
				WB	58	0.75	47	35	48		35										
		1000 Feet East of Zone 3 to FM 1015		EB	123	0.75	22	35	48		45										
				WB	58	0.75	47	35	48		45										
8	Mile 16 Rd	Mile 6 Rd W to FM 88	1	EB	154	1.00	23	40	N/A	Not Existing	40				4	4					
				WB	127	1.00	28	40	N/A		40										
		FM 88 to 0.3 Miles E of FM 88	2	EB	39	0.33	30	40	N/A		40										
				WB	79	0.33	15	40	N/A	30	40										
		0.3 Mi E of FM 88 to FM 1015	3	EB	175	1.70	35	45	51	30	45										
				WB	167	1.70	37	45	48	30	45										
9	Mile 13 Rd	FM 88 to Mile 4 Rd West	1	EB	128	1.00	28	35	N/A	30	35			2	2				4		
				WB	111	1.00	32	35	N/A	30	35										
		Mile 6 Rd West to FM 88	2	EB	253	1.11	16	40	44	Not Existing	40										
				WB	192	1.11	21	40	48		40										
10	Stites Rd	FM 493 to Midway Rd	1	EB	209	1.47	25	35	42	30	40				4						
				WB	248	1.47	21	35	42	30	40										
											Study 1-10 Total	0	6	16	28	8	0	0	4	0	0

* Overall Travel Speed – "The speed over a specified section of highway that is the distance divided by the overall travel time. The average for all traffic, or a component therof, is the summation of distances divided by the summation of overall travel times, inclusive of stop times.

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*** Posted Speed is for the school Zone that Zone 1 falls under. During off hours the recommended speed should be

( ) Replace Existing Sign Panel on Existing Sign Mount.

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EXHIBIT 2.1

SPEED ZONE STUDY
SUMMARY OF RESULTS

Location					Trial Runs				Spot Speed	Posted Speed Limit	Recommended Speed Limit	Summary of Signs									
Corridor	Corridor Name	Corridor Limits	Internal Zone	Travel Direction	Overall Running Time	Segment Length (Miles)	Overall * Travel Speed	Running ** Speed	85th Percentile Speed			R2-1 (24"x30") 20 mph	R2-1 (24"x30") 30 mph	R2-1 (24"x30") 35 mph	R2-1 (24"x30") 40 mph	R2-1 (24"x30") 45 mph	R2-1 (24"x30") 50 mph	R2-1 (24"x30") 55 mph	W1-1 (24"x24") Curve Warning Sign	W3-1 (30"x30") Stop Ahead Sign	S5-1 (36"x72") School Speed Zone Sign
11	Walker Rd	FM 493 to Midway Rd	1	EB	226	1.56	25	35	N/A	Not Existing	35			6							
				WB	208	1.56	27	35	N/A		35										
12	Victoria Rd	Mile 10 North Rd to US 83 Frontage Rd	1	NB	155	1.57	36	40	45	30	40				6						
				SB	144	1.57	39	40	38	30	40										
13	Nittler Rd	FM 493 to FM 88	1	EB	273	3.50	46	55	61	30	55							4		2	
				WB	307	3.50	41	55	67	30	55										
14	Mile 13 Rd	FM 493 to Mile 6 Rd West	1	EB	66	0.57	31	35	32	Not Existing	35			4							
				WB	75	0.57	27	35	46		35										
15	Mile 12 1/2 Rd (Roosevelt Rd)	FM 493 to Elena Avenue	1	EB	25	0.16	22	30	37	20***	35			3	2						
				WB	30	0.16	19	30	35	20***	35										
		Elena Avenue to 1 Mile West	2	EB	314	2.35	27	30	51	30	35										
				WB	292	2.35	29	30	42	30	35										
		1 Mile West of Elena Avenue to FM 1423		EB	314	2.35	27	30	51	30	40										
				WB	292	2.35	29	30	42	30	40										
16	Mile 2 W Rd	Mile 8 North to 4,600 feet North	1	NB	361	3.00	30	50	50	40	40				1	4	8				
				SB	261	3.00	41	50	50	40	40										
		4,600 Feet North of Mile 8 to Mile 11		NB	361	3.00	30	50	50	40	50										
				SB	261	3.00	41	50	50	40	50										
		Mile 11 North Rd to Mile 13 North Rd	2	NB	219	2.00	33	40	48	40	45										
				SB	172	2.00	42	40	51	40	45										
		Mile 13 North Rd to SH 107	3	NB	302	3.51	42	50	51	30	50										
				SB	281	3.51	45	50	67	Not Existing	50										
17	Mile 6 North Rd	FM 491 to Rio Rico Rd	1	EB	N/A							1		4							(2)
				WB	N/A																
		Mercedes High School Speed Zone	2	EB	149	0.72	17	20	N/A	20	20										
				WB	137	0.72	19	20	N/A	20	20										
		Rio Rico Rd to Mile 2.5 East Rd	3	EB	264	2.02	27	35	N/A	Not Existing	35										
				WB	284	2.02	26	35	N/A		35										
18	Goodie Rd	Mile 9 Rd to 2800' North of Mile 9	1	NB	53	0.53	36	35	N/A	Not Existing	35		2	6					2		
				SB	50	0.53	38	35	N/A	Not Existing	35										
		2800' North of Mile 9 to Sioux Rd	2	NB	68	0.48	25	30	N/A	Not Existing	30										
				SB	73	0.48	23	30	N/A	20	30										
		Sioux Rd to Minnesota Rd	3	NB	158	1.52	35	35	48	30	35										
				SB	185	1.52	29	35	37	30	35										
19	Sky Soldier Rd	Santiago Galvan to US 281	1	NB	30	0.18	22	40	N/A	Not Existing	40				4						
				SB	27	0.18	24	40	N/A		40										
		US 281 to Malone Dr	2	NB	63	0.50	29	40	42	40	40										
				SB	67	0.50	27	40	46	40	40										
		Malone Dr to Baker Street	3	NB	61	0.50	30	40	N/A	Not Existing	40										
				SB	63	0.50	29	40	N/A		40										
											Study 11-19 Total	1	2	23	13	4	8	4	2	2	0
											Project Totals	1	8	39	41	12	8	4	6	2	(2)

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EXHIBIT 2.2

SPEED ZONE STUDY
SUMMARY OF RESULTS

APPENDIX A

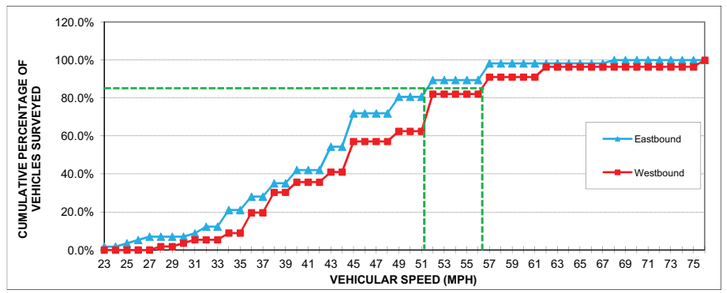
Spot Speed Study Forms

Hidlago County Precinct 1

Spot Speed Survey - 1/25/2018 on Mile 15 N Road Zone 2
From 8:00 AM To 10:00 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
23	1		1	0	1.8%	0.0%
24			1	0	1.8%	0.0%
25	1		2	0	3.5%	0.0%
26	1		3	0	5.3%	0.0%
27	1		4	0	7.0%	0.0%
28		1	4	1	7.0%	1.8%
29			4	1	7.0%	1.8%
30		1	4	2	7.0%	3.6%
31	1	1	5	3	8.8%	5.4%
32	2		7	3	12.3%	5.4%
33			7	3	12.3%	5.4%
34	5	2	12	5	21.1%	8.9%
35			12	5	21.1%	8.9%
36	4	6	16	11	28.1%	19.6%
37			16	11	28.1%	19.6%
38	4	6	20	17	35.1%	30.4%
39			20	17	35.1%	30.4%
40	4	3	24	20	42.1%	35.7%
41			24	20	42.1%	35.7%
42			24	20	42.1%	35.7%
43	7	3	31	23	54.4%	41.1%
44			31	23	54.4%	41.1%
45	10	9	41	32	71.9%	57.1%
46			41	32	71.9%	57.1%
47			41	32	71.9%	57.1%
48			41	32	71.9%	57.1%
49	5	3	46	35	80.7%	62.5%
50			46	35	80.7%	62.5%
51			46	35	80.7%	62.5%
52	5	11	51	46	89.5%	82.1%
53			51	46	89.5%	82.1%
54			51	46	89.5%	82.1%
55			51	46	89.5%	82.1%
56			51	46	89.5%	82.1%
57	5	5	56	51	98.2%	91.1%
58			56	51	98.2%	91.1%
59			56	51	98.2%	91.1%
60			56	51	98.2%	91.1%
61			56	51	98.2%	91.1%
62		3	56	54	98.2%	96.4%
63			56	54	98.2%	96.4%
64			56	54	98.2%	96.4%
65			56	54	98.2%	96.4%
66			56	54	98.2%	96.4%
67			56	54	98.2%	96.4%
68	1		57	54	100.0%	96.4%
69			57	54	100.0%	96.4%
70			57	54	100.0%	96.4%
71			57	54	100.0%	96.4%
72			57	54	100.0%	96.4%
73			57	54	100.0%	96.4%
74			57	54	100.0%	96.4%
75			57	54	100.0%	96.4%
76		2	57	56	100.0%	100.0%

Eastbound 85 percentile speed is 51 mph **Westbound 85 percentile speed is 56 mph**

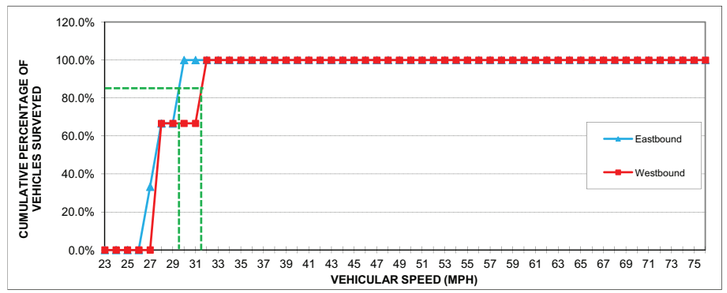


Hidalgo County Precinct 1

1/25/2018 on Mile 15 1/2 N Road Zone 2
From 10:15 AM To 12:15 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
23			0	0	0.0%	0.0%
24			0	0	0.0%	0.0%
25			0	0	0.0%	0.0%
26			0	0	0.0%	0.0%
27	1		1	0	33.3%	0.0%
28	1	2	2	2	66.7%	66.7%
29			2	2	66.7%	66.7%
30	1		3	2	100.0%	66.7%
31			3	2	100.0%	66.7%
32		1	3	3	100.0%	100.0%
33			3	3	100.0%	100.0%
34			3	3	100.0%	100.0%
35			3	3	100.0%	100.0%
36			3	3	100.0%	100.0%
37			3	3	100.0%	100.0%
38			3	3	100.0%	100.0%
39			3	3	100.0%	100.0%
40			3	3	100.0%	100.0%
41			3	3	100.0%	100.0%
42			3	3	100.0%	100.0%
43			3	3	100.0%	100.0%
44			3	3	100.0%	100.0%
45			3	3	100.0%	100.0%
46			3	3	100.0%	100.0%
47			3	3	100.0%	100.0%
48			3	3	100.0%	100.0%
49			3	3	100.0%	100.0%
50			3	3	100.0%	100.0%
51			3	3	100.0%	100.0%
52			3	3	100.0%	100.0%
53			3	3	100.0%	100.0%
54			3	3	100.0%	100.0%
55			3	3	100.0%	100.0%
56			3	3	100.0%	100.0%
57			3	3	100.0%	100.0%
58			3	3	100.0%	100.0%
59			3	3	100.0%	100.0%
60			3	3	100.0%	100.0%
61			3	3	100.0%	100.0%
62			3	3	100.0%	100.0%
63			3	3	100.0%	100.0%
64			3	3	100.0%	100.0%
65			3	3	100.0%	100.0%
66			3	3	100.0%	100.0%
67			3	3	100.0%	100.0%
68			3	3	100.0%	100.0%
69			3	3	100.0%	100.0%
70			3	3	100.0%	100.0%
71			3	3	100.0%	100.0%
72			3	3	100.0%	100.0%
73			3	3	100.0%	100.0%
74			3	3	100.0%	100.0%
75			3	3	100.0%	100.0%
76			3	3	100.0%	100.0%

Eastbound 85 percentile speed is 29 mph **Westbound 85 percentile speed is 31 mph**

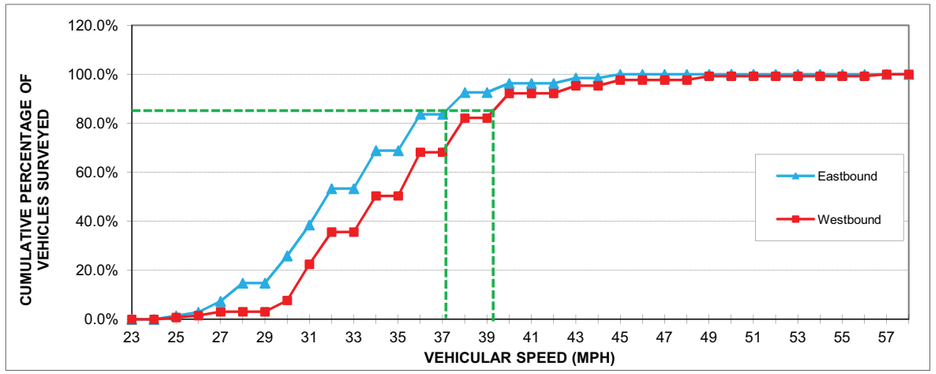


Hidalgo County Precinct 1

Spot Speed Survey - 1/23/2018 on Mile 12 Road Zone 2 from 3:30 PM to 5:30 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
23			0	0	0.0%	0.0%
24			0	0	0.0%	0.0%
25	2	1	2	1	1.5%	0.8%
26	2	1	4	2	3.0%	1.6%
27	6	2	10	4	7.4%	3.1%
28	10		20	4	14.8%	3.1%
29			20	4	14.8%	3.1%
30	15	6	35	10	25.9%	7.8%
31	17	19	52	29	38.5%	22.5%
32	20	17	72	46	53.3%	35.7%
33			72	46	53.3%	35.7%
34	21	19	93	65	68.9%	50.4%
35			93	65	68.9%	50.4%
36	20	23	113	88	83.7%	68.2%
37			113	88	83.7%	68.2%
38	12	18	125	106	92.6%	82.2%
39			125	106	92.6%	82.2%
40	5	13	130	119	96.3%	92.2%
41			130	119	96.3%	92.2%
42			130	119	96.3%	92.2%
43	3	4	133	123	98.5%	95.3%
44			133	123	98.5%	95.3%
45	2	3	135	126	100.0%	97.7%
46			135	126	100.0%	97.7%
47			135	126	100.0%	97.7%
48			135	126	100.0%	97.7%
49		2	135	128	100.0%	99.2%
50			135	128	100.0%	99.2%
51			135	128	100.0%	99.2%
52			135	128	100.0%	99.2%
53			135	128	100.0%	99.2%
54			135	128	100.0%	99.2%
55			135	128	100.0%	99.2%
56			135	128	100.0%	99.2%
57		1	135	129	100.0%	100.0%
58			135	129	100.0%	100.0%

Eastbound 85 percentile speed is 37 mph **Westbound 85 percentile speed is 39 mph**

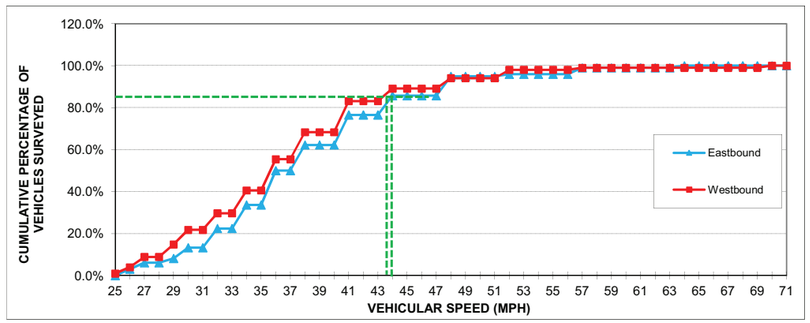


Hidalgo County Precinct 1

Spot Speed Survey - 1/24/2018 on Mile 12 1/2 Road Zone 1
From 8:00 AM To 10:00 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
25		1	0	1	0.0%	1.0%
26	3	3	3	4	3.1%	4.0%
27	3	5	6	9	6.1%	8.9%
28			6	9	6.1%	8.9%
29	2	6	8	15	8.2%	14.9%
30	5	7	13	22	13.3%	21.8%
31			13	22	13.3%	21.8%
32	9	8	22	30	22.4%	29.7%
33			22	30	22.4%	29.7%
34	11	11	33	41	33.7%	40.6%
35			33	41	33.7%	40.6%
36	16	15	49	56	50.0%	55.4%
37			49	56	50.0%	55.4%
38	12	13	61	69	62.2%	68.3%
39			61	69	62.2%	68.3%
40			61	69	62.2%	68.3%
41	14	15	75	84	76.5%	83.2%
42			75	84	76.5%	83.2%
43			75	84	76.5%	83.2%
44	9	6	84	90	85.7%	89.1%
45			84	90	85.7%	89.1%
46			84	90	85.7%	89.1%
47			84	90	85.7%	89.1%
48	9	5	93	95	94.9%	94.1%
49			93	95	94.9%	94.1%
50			93	95	94.9%	94.1%
51			93	95	94.9%	94.1%
52	1	4	94	99	95.9%	98.0%
53			94	99	95.9%	98.0%
54			94	99	95.9%	98.0%
55			94	99	95.9%	98.0%
56			94	99	95.9%	98.0%
57	3	1	97	100	99.0%	99.0%
58			97	100	99.0%	99.0%
59			97	100	99.0%	99.0%
60			97	100	99.0%	99.0%
61			97	100	99.0%	99.0%
62			97	100	99.0%	99.0%
63			97	100	99.0%	99.0%
64	1		98	100	100.0%	99.0%
65			98	100	100.0%	99.0%
66			98	100	100.0%	99.0%
67			98	100	100.0%	99.0%
68			98	100	100.0%	99.0%
69			98	100	100.0%	99.0%
70		1	98	101	100.0%	100.0%
71			98	101	100.0%	100.0%

Eastbound 85 percentile speed is 43 mph **Westbound 85 percentile speed is 43 mph**

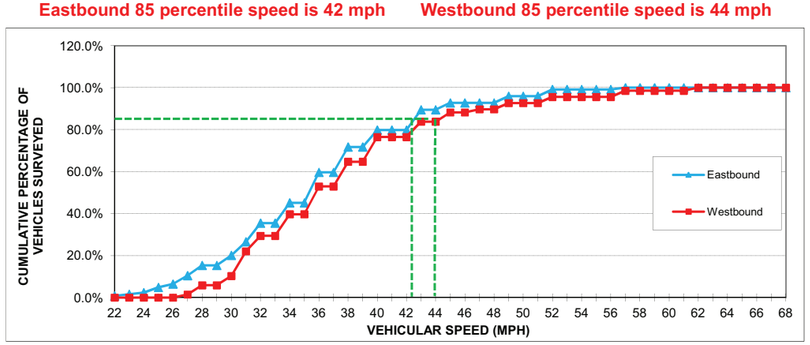


Hidlago County Precinct 1

Spot Speed Survey - 1/23/2018 on Mile 12 1/2 Road Zone 2
From 3:00 PM To 5:00 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
22	1		1	0	0.8%	0.0%
23	1		2	0	1.6%	0.0%
24	1		3	0	2.4%	0.0%
25	3		6	0	4.8%	0.0%
26	2		8	0	6.5%	0.0%
27	5	1	13	1	10.5%	1.5%
28	6	3	19	4	15.3%	5.9%
29			19	4	15.3%	5.9%
30	6	3	25	7	20.2%	10.3%
31	8	8	33	15	26.6%	22.1%
32	11	5	44	20	35.5%	29.4%
33			44	20	35.5%	29.4%
34	12	7	56	27	45.2%	39.7%
35			56	27	45.2%	39.7%
36	18	9	74	36	59.7%	52.9%
37			74	36	59.7%	52.9%
38	15	8	89	44	71.8%	64.7%
39			89	44	71.8%	64.7%
40	10	8	99	52	79.8%	76.5%
41			99	52	79.8%	76.5%
42			99	52	79.8%	76.5%
43	12	5	111	57	89.5%	83.8%
44			111	57	89.5%	83.8%
45	4	3	115	60	92.7%	88.2%
46			115	60	92.7%	88.2%
47		1	115	61	92.7%	89.7%
48			115	61	92.7%	89.7%
49	4	2	119	63	96.0%	92.6%
50			119	63	96.0%	92.6%
51			119	63	96.0%	92.6%
52	4	2	123	65	99.2%	95.6%
53			123	65	99.2%	95.6%
54			123	65	99.2%	95.6%
55			123	65	99.2%	95.6%
56			123	65	99.2%	95.6%
57	1	2	124	67	100.0%	98.5%
58			124	67	100.0%	98.5%
59			124	67	100.0%	98.5%
60			124	67	100.0%	98.5%
61			124	67	100.0%	98.5%
62		1	124	68	100.0%	100.0%
63			124	68	100.0%	100.0%
64			124	68	100.0%	100.0%
65			124	68	100.0%	100.0%
66			124	68	100.0%	100.0%
67			124	68	100.0%	100.0%
68			124	68	100.0%	100.0%

Eastbound 85 percentile speed is 42 mph **Westbound 85 percentile speed is 44 mph**

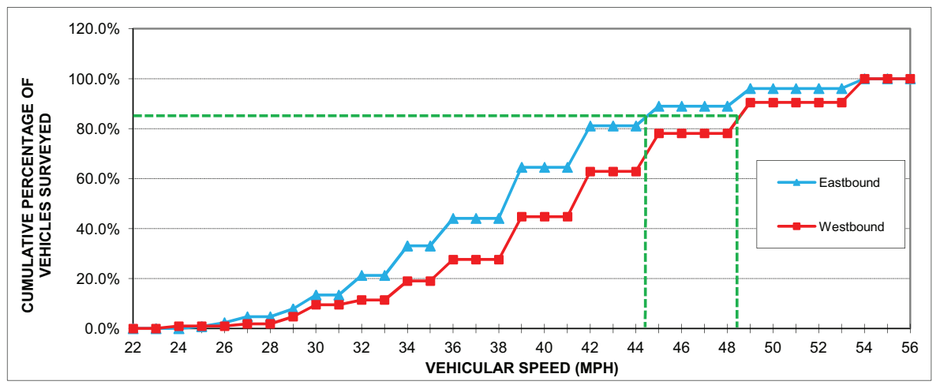


Hidalgo County Precinct 1

Spot Speed Survey - 1/23/2018 on Mile 11 Road Zone 1
From 3:30 PM To 5:30 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
22			0	0	0.0%	0.0%
23			0	0	0.0%	0.0%
24		1	0	1	0.0%	1.0%
25	1		1	1	0.8%	1.0%
26	2		3	1	2.4%	1.0%
27	3	1	6	2	4.7%	1.9%
28			6	2	4.7%	1.9%
29	4	3	10	5	7.9%	4.8%
30	7	5	17	10	13.4%	9.5%
31			17	10	13.4%	9.5%
32	10	2	27	12	21.3%	11.4%
33			27	12	21.3%	11.4%
34	15	8	42	20	33.1%	19.0%
35			42	20	33.1%	19.0%
36	14	9	56	29	44.1%	27.6%
37			56	29	44.1%	27.6%
38			56	29	44.1%	27.6%
39	26	18	82	47	64.6%	44.8%
40			82	47	64.6%	44.8%
41			82	47	64.6%	44.8%
42	21	19	103	66	81.1%	62.9%
43			103	66	81.1%	62.9%
44			103	66	81.1%	62.9%
45	10	16	113	82	89.0%	78.1%
46			113	82	89.0%	78.1%
47			113	82	89.0%	78.1%
48			113	82	89.0%	78.1%
49	9	13	122	95	96.1%	90.5%
50			122	95	96.1%	90.5%
51			122	95	96.1%	90.5%
52			122	95	96.1%	90.5%
53			122	95	96.1%	90.5%
54	5	10	127	105	100.0%	100.0%
55			127	105	100.0%	100.0%
56			127	105	100.0%	100.0%

Eastbound 85 percentile speed is 44 mph **Westbound 85 percentile speed is 48 mph**

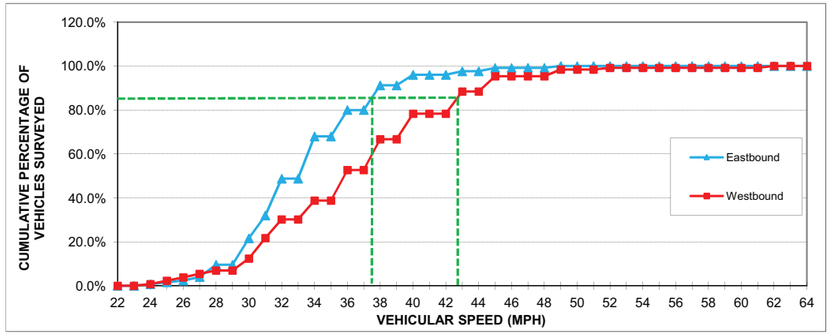


Hidlago County Precinct 1

Spot Speed Survey - 1/23/2018 on Mile 11 Road Zone 2
From 1:30 PM To 3:30 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
22			0	0	0.0%	0.0%
23			0	0	0.0%	0.0%
24	1	1	1	1	0.8%	0.8%
25	1	2	2	3	1.6%	2.3%
26	1	2	3	5	2.4%	3.9%
27	2	2	5	7	4.0%	5.4%
28	7	2	12	9	9.6%	7.0%
29			12	9	9.6%	7.0%
30	15	7	27	16	21.6%	12.4%
31	13	12	40	28	32.0%	21.7%
32	21	11	61	39	48.8%	30.2%
33			61	39	48.8%	30.2%
34	24	11	85	50	68.0%	38.8%
35			85	50	68.0%	38.8%
36	15	18	100	68	80.0%	52.7%
37			100	68	80.0%	52.7%
38	14	18	114	86	91.2%	66.7%
39			114	86	91.2%	66.7%
40	6	15	120	101	96.0%	78.3%
41			120	101	96.0%	78.3%
42			120	101	96.0%	78.3%
43	2	13	122	114	97.6%	88.4%
44			122	114	97.6%	88.4%
45	2	9	124	123	99.2%	95.3%
46			124	123	99.2%	95.3%
47			124	123	99.2%	95.3%
48			124	123	99.2%	95.3%
49	1	4	125	127	100.0%	98.4%
50			125	127	100.0%	98.4%
51			125	127	100.0%	98.4%
52		1	125	128	100.0%	99.2%
53			125	128	100.0%	99.2%
54			125	128	100.0%	99.2%
55			125	128	100.0%	99.2%
56			125	128	100.0%	99.2%
57			125	128	100.0%	99.2%
58			125	128	100.0%	99.2%
59			125	128	100.0%	99.2%
60			125	128	100.0%	99.2%
61			125	128	100.0%	99.2%
62		1	125	129	100.0%	100.0%
63			125	129	100.0%	100.0%
64			125	129	100.0%	100.0%

Eastbound 85 percentile speed is 37 mph **Westbound 85 percentile speed is 42 mph**

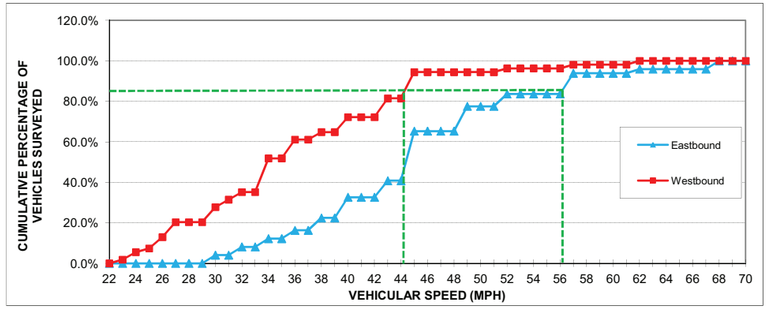


Hidlago County Precinct 1

Spot Speed Survey - 1/24/2018 on Lott Road Zone 1
From 1:20 PM To 3:20 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
22			0	0	0.0%	0.0%
23		1	0	1	0.0%	1.9%
24		2	0	3	0.0%	5.6%
25		1	0	4	0.0%	7.4%
26		3	0	7	0.0%	13.0%
27		4	0	11	0.0%	20.4%
28			0	11	0.0%	20.4%
29			0	11	0.0%	20.4%
30	2	4	2	15	4.1%	27.8%
31		2	2	17	4.1%	31.5%
32	2	2	4	19	8.2%	35.2%
33			4	19	8.2%	35.2%
34	2	9	6	28	12.2%	51.9%
35			6	28	12.2%	51.9%
36	2	5	8	33	16.3%	61.1%
37			8	33	16.3%	61.1%
38	3	2	11	35	22.4%	64.8%
39			11	35	22.4%	64.8%
40	5	4	16	39	32.7%	72.2%
41			16	39	32.7%	72.2%
42			16	39	32.7%	72.2%
43	4	5	20	44	40.8%	81.5%
44			20	44	40.8%	81.5%
45	12	7	32	51	65.3%	94.4%
46			32	51	65.3%	94.4%
47			32	51	65.3%	94.4%
48			32	51	65.3%	94.4%
49	6		38	51	77.6%	94.4%
50			38	51	77.6%	94.4%
51			38	51	77.6%	94.4%
52	3	1	41	52	83.7%	96.3%
53			41	52	83.7%	96.3%
54			41	52	83.7%	96.3%
55			41	52	83.7%	96.3%
56			41	52	83.7%	96.3%
57	5	1	46	53	93.9%	98.1%
58			46	53	93.9%	98.1%
59			46	53	93.9%	98.1%
60			46	53	93.9%	98.1%
61			46	53	93.9%	98.1%
62	1	1	47	54	95.9%	100.0%
63			47	54	95.9%	100.0%
64			47	54	95.9%	100.0%
65			47	54	95.9%	100.0%
66			47	54	95.9%	100.0%
67			47	54	95.9%	100.0%
68	2		49	54	100.0%	100.0%
69			49	54	100.0%	100.0%
70			49	54	100.0%	100.0%

Eastbound 85 percentile speed is 56 mph **Westbound 85 percentile speed is 44 mph**

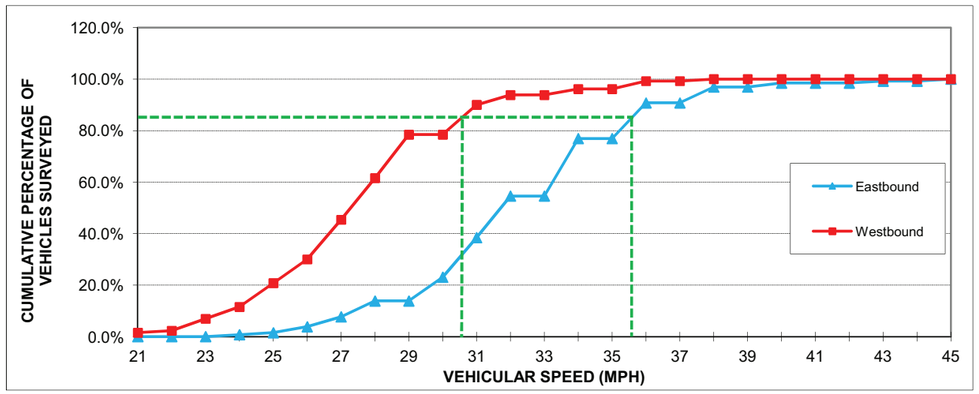


Hidlago County Precinct 1

Spot Speed Survey - 1/23/2018 on Mile 10 Road Zone 1
From 7:35 AM To 8:30 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
21		2	0	2	0.0%	1.5%
22		1	0	3	0.0%	2.3%
23		6	0	9	0.0%	6.9%
24	1	6	1	15	0.8%	11.5%
25	1	12	2	27	1.5%	20.8%
26	3	12	5	39	3.8%	30.0%
27	5	20	10	59	7.7%	45.4%
28	8	21	18	80	13.8%	61.5%
29		22	18	102	13.8%	78.5%
30	12		30	102	23.1%	78.5%
31	20	15	50	117	38.5%	90.0%
32	21	5	71	122	54.6%	93.8%
33			71	122	54.6%	93.8%
34	29	3	100	125	76.9%	96.2%
35			100	125	76.9%	96.2%
36	18	4	118	129	90.8%	99.2%
37			118	129	90.8%	99.2%
38	8	1	126	130	96.9%	100.0%
39			126	130	96.9%	100.0%
40	2		128	130	98.5%	100.0%
41			128	130	98.5%	100.0%
42			128	130	98.5%	100.0%
43	1		129	130	99.2%	100.0%
44			129	130	99.2%	100.0%
45	1		130	130	100.0%	100.0%

Eastbound 85 percentile speed is 35 mph **Westbound 85 percentile speed is 30 mph**

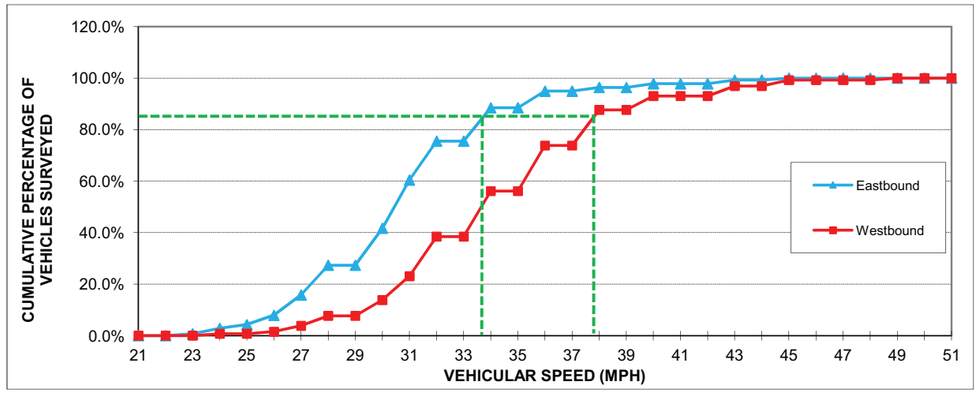


Hidalgo County Precinct 1

Spot Speed Survey - 1/23/2018 on Mile 10 Road Zone 2
From 10:00 AM To 11:20 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
21			0	0	0.0%	0.0%
22			0	0	0.0%	0.0%
23	1		1	0	0.7%	0.0%
24	3	1	4	1	2.9%	0.8%
25	2		6	1	4.3%	0.8%
26	5	1	11	2	7.9%	1.5%
27	11	3	22	5	15.8%	3.8%
28	16	5	38	10	27.3%	7.7%
29			38	10	27.3%	7.7%
30	20	8	58	18	41.7%	13.8%
31	26	12	84	30	60.4%	23.1%
32	21	20	105	50	75.5%	38.5%
33			105	50	75.5%	38.5%
34	18	23	123	73	88.5%	56.2%
35			123	73	88.5%	56.2%
36	9	23	132	96	95.0%	73.8%
37			132	96	95.0%	73.8%
38	2	18	134	114	96.4%	87.7%
39			134	114	96.4%	87.7%
40	2	7	136	121	97.8%	93.1%
41			136	121	97.8%	93.1%
42			136	121	97.8%	93.1%
43	2	5	138	126	99.3%	96.9%
44			138	126	99.3%	96.9%
45	1	3	139	129	100.0%	99.2%
46			139	129	100.0%	99.2%
47			139	129	100.0%	99.2%
48			139	129	100.0%	99.2%
49		1	139	130	100.0%	100.0%
50			139	130	100.0%	100.0%
51			139	130	100.0%	100.0%

Eastbound 85 percentile speed is 33 mph **Westbound 85 percentile speed is 37 mph**

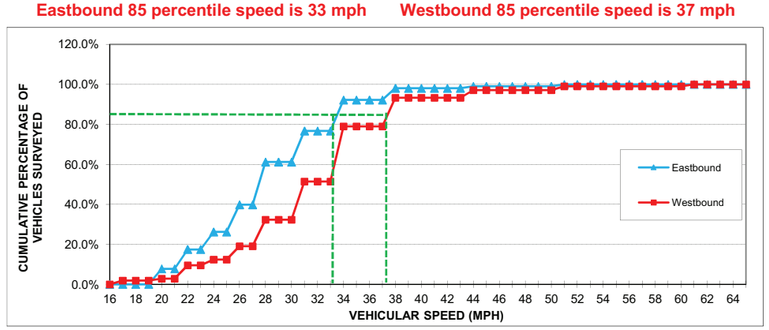


Hidalgo County Precinct 1

Spot Speed Survey - 1/23/2018 on Mile 10 Road Zone 3
From 10:00 AM To 12:00 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
16			0	0	0.0%	0.0%
17		2	0	2	0.0%	1.9%
18			0	2	0.0%	1.9%
19			0	2	0.0%	1.9%
20	8	1	8	3	7.8%	2.9%
21			8	3	7.8%	2.9%
22	10	7	18	10	17.5%	9.5%
23			18	10	17.5%	9.5%
24	9	3	27	13	26.2%	12.4%
25			27	13	26.2%	12.4%
26	14	7	41	20	39.8%	19.0%
27			41	20	39.8%	19.0%
28	22	14	63	34	61.2%	32.4%
29			63	34	61.2%	32.4%
30			63	34	61.2%	32.4%
31	16	20	79	54	76.7%	51.4%
32			79	54	76.7%	51.4%
33			79	54	76.7%	51.4%
34	16	29	95	83	92.2%	79.0%
35			95	83	92.2%	79.0%
36			95	83	92.2%	79.0%
37			95	83	92.2%	79.0%
38	6	15	101	98	98.1%	93.3%
39			101	98	98.1%	93.3%
40			101	98	98.1%	93.3%
41			101	98	98.1%	93.3%
42			101	98	98.1%	93.3%
43			101	98	98.1%	93.3%
44	1	4	102	102	99.0%	97.1%
45			102	102	99.0%	97.1%
46			102	102	99.0%	97.1%
47			102	102	99.0%	97.1%
48			102	102	99.0%	97.1%
49			102	102	99.0%	97.1%
50			102	102	99.0%	97.1%
51	1	2	103	104	100.0%	99.0%
52			103	104	100.0%	99.0%
53			103	104	100.0%	99.0%
54			103	104	100.0%	99.0%
55			103	104	100.0%	99.0%
56			103	104	100.0%	99.0%
57			103	104	100.0%	99.0%
58			103	104	100.0%	99.0%
59			103	104	100.0%	99.0%
60			103	104	100.0%	99.0%
61		1	103	105	100.0%	100.0%
62			103	105	100.0%	100.0%
63			103	105	100.0%	100.0%
64			103	105	100.0%	100.0%
65			103	105	100.0%	100.0%

Eastbound 85 percentile speed is 33 mph **Westbound 85 percentile speed is 37 mph**

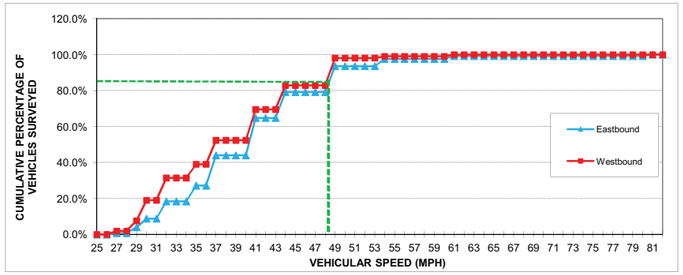


Hidalgo County Precinct 1

Spot Speed Survey - 1/23/2018 on Mile 10 Road Zone 4
From 1:00 PM To 3:00 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
25			0	0	0.0%	0.0%
26			0	0	0.0%	0.0%
27	1	2	1	2	0.8%	1.9%
28			1	2	0.8%	1.9%
29	4	6	5	8	4.0%	7.6%
30	6	12	11	20	8.8%	19.0%
31			11	20	8.8%	19.0%
32	12	13	23	33	18.4%	31.4%
33			23	33	18.4%	31.4%
34			23	33	18.4%	31.4%
35	11	8	34	41	27.2%	39.0%
36			34	41	27.2%	39.0%
37	21	14	55	55	44.0%	52.4%
38			55	55	44.0%	52.4%
39			55	55	44.0%	52.4%
40			55	55	44.0%	52.4%
41	26	18	81	73	64.8%	69.5%
42			81	73	64.8%	69.5%
43			81	73	64.8%	69.5%
44	18	14	99	87	79.2%	82.9%
45			99	87	79.2%	82.9%
46			99	87	79.2%	82.9%
47			99	87	79.2%	82.9%
48			99	87	79.2%	82.9%
49	18	16	117	103	93.6%	98.1%
50			117	103	93.6%	98.1%
51			117	103	93.6%	98.1%
52			117	103	93.6%	98.1%
53			117	103	93.6%	98.1%
54	5	1	122	104	97.6%	99.0%
55			122	104	97.6%	99.0%
56			122	104	97.6%	99.0%
57			122	104	97.6%	99.0%
58			122	104	97.6%	99.0%
59			122	104	97.6%	99.0%
60			122	104	97.6%	99.0%
61	2	1	124	105	99.2%	100.0%
62			124	105	99.2%	100.0%
63			124	105	99.2%	100.0%
64			124	105	99.2%	100.0%
65			124	105	99.2%	100.0%
66			124	105	99.2%	100.0%
67			124	105	99.2%	100.0%
68			124	105	99.2%	100.0%
69			124	105	99.2%	100.0%
70			124	105	99.2%	100.0%
71			124	105	99.2%	100.0%
72			124	105	99.2%	100.0%
73			124	105	99.2%	100.0%
74			124	105	99.2%	100.0%
75			124	105	99.2%	100.0%
76			124	105	99.2%	100.0%
77			124	105	99.2%	100.0%
78			124	105	99.2%	100.0%
79			124	105	99.2%	100.0%
80			124	105	99.2%	100.0%
81	1		125	105	100.0%	100.0%
82			125	105	100.0%	100.0%

Eastbound 85 percentile speed is 48 mph **Westbound 85 percentile speed is 48 mph**

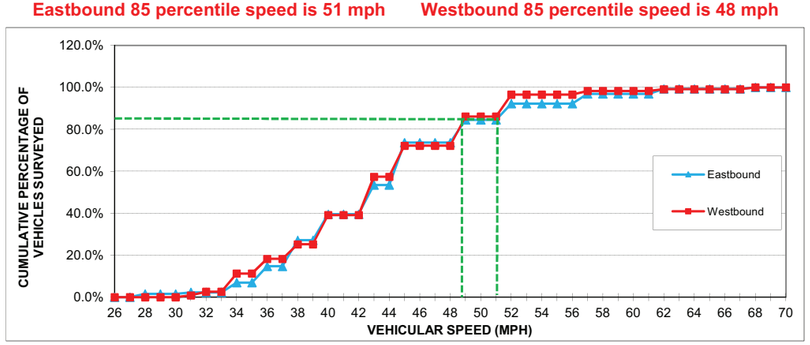


Hidalgo County Precinct 1

Spot Speed Survey - 1/25/2018 on Mile 16 Road Zone 3
From 1:07 PM To 3:07 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
26			0	0	0.0%	0.0%
27			0	0	0.0%	0.0%
28	2		2	0	1.6%	0.0%
29			2	0	1.6%	0.0%
30			2	0	1.6%	0.0%
31	1	1	3	1	2.3%	0.9%
32		2	3	3	2.3%	2.6%
33			3	3	2.3%	2.6%
34	6	10	9	13	7.0%	11.3%
35			9	13	7.0%	11.3%
36	10	8	19	21	14.7%	18.3%
37			19	21	14.7%	18.3%
38	16	8	35	29	27.1%	25.2%
39			35	29	27.1%	25.2%
40	16	16	51	45	39.5%	39.1%
41			51	45	39.5%	39.1%
42			51	45	39.5%	39.1%
43	18	21	69	66	53.5%	57.4%
44			69	66	53.5%	57.4%
45	26	17	95	83	73.6%	72.2%
46			95	83	73.6%	72.2%
47			95	83	73.6%	72.2%
48			95	83	73.6%	72.2%
49	14	16	109	99	84.5%	86.1%
50			109	99	84.5%	86.1%
51			109	99	84.5%	86.1%
52	10	12	119	111	92.2%	96.5%
53			119	111	92.2%	96.5%
54			119	111	92.2%	96.5%
55			119	111	92.2%	96.5%
56			119	111	92.2%	96.5%
57	6	2	125	113	96.9%	98.3%
58			125	113	96.9%	98.3%
59			125	113	96.9%	98.3%
60			125	113	96.9%	98.3%
61			125	113	96.9%	98.3%
62	3	1	128	114	99.2%	99.1%
63			128	114	99.2%	99.1%
64			128	114	99.2%	99.1%
65			128	114	99.2%	99.1%
66			128	114	99.2%	99.1%
67			128	114	99.2%	99.1%
68	1	1	129	115	100.0%	100.0%
69			129	115	100.0%	100.0%
70			129	115	100.0%	100.0%

Eastbound 85 percentile speed is 51 mph **Westbound 85 percentile speed is 48 mph**

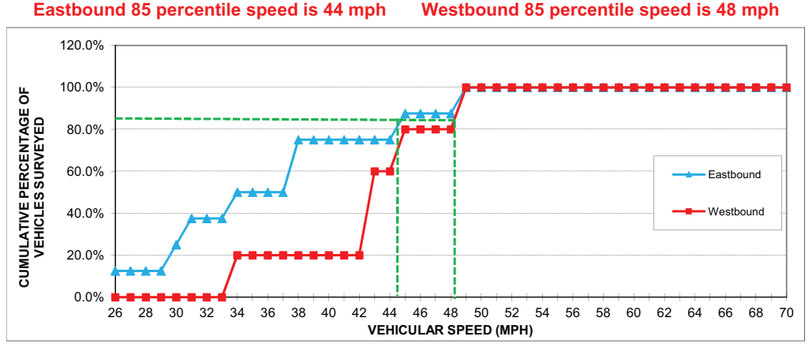


Hidalgo County Precinct 1

Spot Speed Survey - 1/24/2018 on Mile 13 Road Zone 2
From 7:00 AM To 9:00 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
26	1		1	0	12.5%	0.0%
27			1	0	12.5%	0.0%
28			1	0	12.5%	0.0%
29			1	0	12.5%	0.0%
30	1		2	0	25.0%	0.0%
31	1		3	0	37.5%	0.0%
32			3	0	37.5%	0.0%
33			3	0	37.5%	0.0%
34	1	1	4	1	50.0%	20.0%
35			4	1	50.0%	20.0%
36			4	1	50.0%	20.0%
37			4	1	50.0%	20.0%
38	2		6	1	75.0%	20.0%
39			6	1	75.0%	20.0%
40			6	1	75.0%	20.0%
41			6	1	75.0%	20.0%
42			6	1	75.0%	20.0%
43		2	6	3	75.0%	60.0%
44			6	3	75.0%	60.0%
45	1	1	7	4	87.5%	80.0%
46			7	4	87.5%	80.0%
47			7	4	87.5%	80.0%
48			7	4	87.5%	80.0%
49	1	1	8	5	100.0%	100.0%
50			8	5	100.0%	100.0%
51			8	5	100.0%	100.0%
52			8	5	100.0%	100.0%
53			8	5	100.0%	100.0%
54			8	5	100.0%	100.0%
55			8	5	100.0%	100.0%
56			8	5	100.0%	100.0%
57			8	5	100.0%	100.0%
58			8	5	100.0%	100.0%
59			8	5	100.0%	100.0%
60			8	5	100.0%	100.0%
61			8	5	100.0%	100.0%
62			8	5	100.0%	100.0%
63			8	5	100.0%	100.0%
64			8	5	100.0%	100.0%
65			8	5	100.0%	100.0%
66			8	5	100.0%	100.0%
67			8	5	100.0%	100.0%
68			8	5	100.0%	100.0%
69			8	5	100.0%	100.0%
70			8	5	100.0%	100.0%

Eastbound 85 percentile speed is 44 mph **Westbound 85 percentile speed is 48 mph**

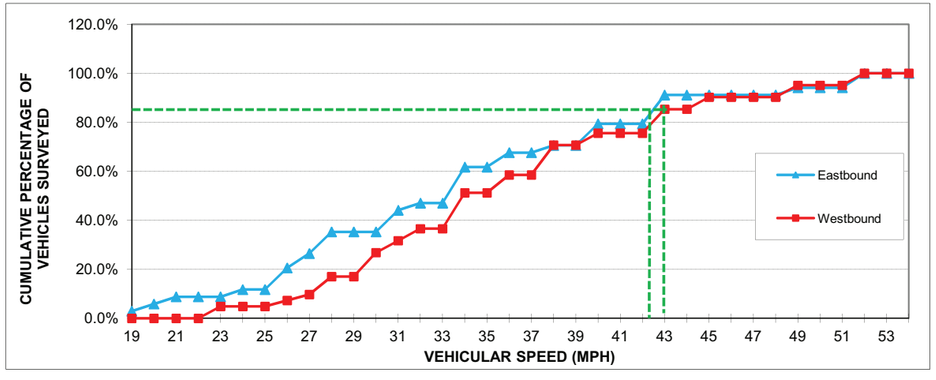


Hidalgo County Precinct 1

Spot Speed Survey - 1/23/2018 on Stites Road Zone 1
From 9:24 AM To 11:24 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
19	1		1	0	2.9%	0.0%
20	1		2	0	5.9%	0.0%
21	1		3	0	8.8%	0.0%
22			3	0	8.8%	0.0%
23		2	3	2	8.8%	4.9%
24	1		4	2	11.8%	4.9%
25			4	2	11.8%	4.9%
26	3	1	7	3	20.6%	7.3%
27	2	1	9	4	26.5%	9.8%
28	3	3	12	7	35.3%	17.1%
29			12	7	35.3%	17.1%
30		4	12	11	35.3%	26.8%
31	3	2	15	13	44.1%	31.7%
32	1	2	16	15	47.1%	36.6%
33			16	15	47.1%	36.6%
34	5	6	21	21	61.8%	51.2%
35			21	21	61.8%	51.2%
36	2	3	23	24	67.6%	58.5%
37			23	24	67.6%	58.5%
38	1	5	24	29	70.6%	70.7%
39			24	29	70.6%	70.7%
40	3	2	27	31	79.4%	75.6%
41			27	31	79.4%	75.6%
42			27	31	79.4%	75.6%
43	4	4	31	35	91.2%	85.4%
44			31	35	91.2%	85.4%
45		2	31	37	91.2%	90.2%
46			31	37	91.2%	90.2%
47			31	37	91.2%	90.2%
48			31	37	91.2%	90.2%
49	1	2	32	39	94.1%	95.1%
50			32	39	94.1%	95.1%
51			32	39	94.1%	95.1%
52	2	2	34	41	100.0%	100.0%
53			34	41	100.0%	100.0%
54			34	41	100.0%	100.0%

Eastbound 85 percentile speed is 42 mph **Westbound 85 percentile speed is 42 mph**

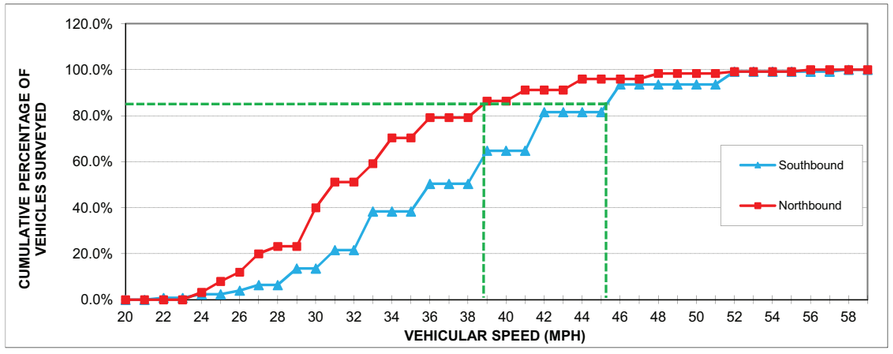


Hidalgo County Precinct 1

Spot Speed Survey - 1/23/2018 on Victoria Road Zone 1
From 7:30 AM To 7:58 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound
20			0	0	0.0%	0.0%
21			0	0	0.0%	0.0%
22	1		1	0	0.8%	0.0%
23			1	0	0.8%	0.0%
24	2	4	3	4	2.4%	3.2%
25		6	3	10	2.4%	8.0%
26	2	5	5	15	4.0%	12.0%
27	3	10	8	25	6.4%	20.0%
28		4	8	29	6.4%	23.2%
29	9		17	29	13.6%	23.2%
30		21	17	50	13.6%	40.0%
31	10	14	27	64	21.6%	51.2%
32			27	64	21.6%	51.2%
33	21	10	48	74	38.4%	59.2%
34		14	48	88	38.4%	70.4%
35			48	88	38.4%	70.4%
36	15	11	63	99	50.4%	79.2%
37			63	99	50.4%	79.2%
38			63	99	50.4%	79.2%
39	18	9	81	108	64.8%	86.4%
40			81	108	64.8%	86.4%
41		6	81	114	64.8%	91.2%
42	21		102	114	81.6%	91.2%
43			102	114	81.6%	91.2%
44		6	102	120	81.6%	96.0%
45			102	120	81.6%	96.0%
46	15		117	120	93.6%	96.0%
47			117	120	93.6%	96.0%
48		3	117	123	93.6%	98.4%
49			117	123	93.6%	98.4%
50			117	123	93.6%	98.4%
51			117	123	93.6%	98.4%
52	7	1	124	124	99.2%	99.2%
53			124	124	99.2%	99.2%
54			124	124	99.2%	99.2%
55			124	124	99.2%	99.2%
56		1	124	125	99.2%	100.0%
57			124	125	99.2%	100.0%
58	1		125	125	100.0%	100.0%
59			125	125	100.0%	100.0%

Southbound 85 percentile speed is 45 mph **Northbound 85 percentile speed is 38 mph**

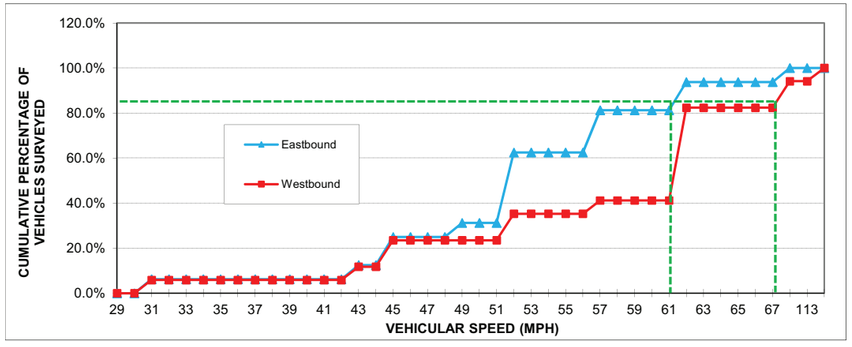


Hidalgo County Precinct 1

Spot Speed Survey - 1/25/2018 on Nittler Road Zone 1
From 3:30 PM To 5:30 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
29			0	0	0.0%	0.0%
30			0	0	0.0%	0.0%
31	1	1	1	1	6.3%	5.9%
32			1	1	6.3%	5.9%
33			1	1	6.3%	5.9%
34			1	1	6.3%	5.9%
35			1	1	6.3%	5.9%
36			1	1	6.3%	5.9%
37			1	1	6.3%	5.9%
38			1	1	6.3%	5.9%
39			1	1	6.3%	5.9%
40			1	1	6.3%	5.9%
41			1	1	6.3%	5.9%
42			1	1	6.3%	5.9%
43	1	1	2	2	12.5%	11.8%
44			2	2	12.5%	11.8%
45	2	2	4	4	25.0%	23.5%
46			4	4	25.0%	23.5%
47			4	4	25.0%	23.5%
48			4	4	25.0%	23.5%
49	1		5	4	31.3%	23.5%
50			5	4	31.3%	23.5%
51			5	4	31.3%	23.5%
52	5	2	10	6	62.5%	35.3%
53			10	6	62.5%	35.3%
54			10	6	62.5%	35.3%
55			10	6	62.5%	35.3%
56			10	6	62.5%	35.3%
57	3	1	13	7	81.3%	41.2%
58			13	7	81.3%	41.2%
59			13	7	81.3%	41.2%
60			13	7	81.3%	41.2%
61			13	7	81.3%	41.2%
62	2	7	15	14	93.8%	82.4%
63			15	14	93.8%	82.4%
64			15	14	93.8%	82.4%
65			15	14	93.8%	82.4%
66			15	14	93.8%	82.4%
67			15	14	93.8%	82.4%
68	1	2	16	16	100.0%	94.1%
113			16	16	100.0%	94.1%
114		1	16	17	100.0%	100.0%

Eastbound 85 percentile speed is 61 mph **Westbound 85 percentile speed is 67 mph**

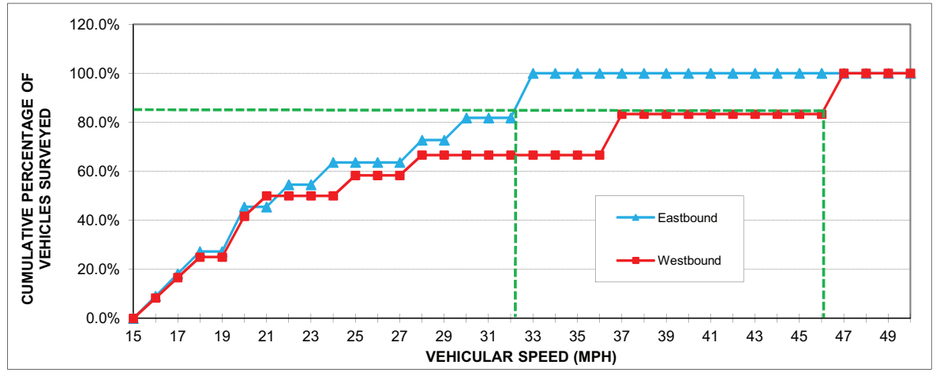


Hidlago County Precinct 1

Spot Speed Survey - 1/24/2018 on Mile 13 Road Zone 1
From 9:30 AM To 11:30 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
15			0	0	0.0%	0.0%
16	1	1	1	1	9.1%	8.3%
17	1	1	2	2	18.2%	16.7%
18	1	1	3	3	27.3%	25.0%
19			3	3	27.3%	25.0%
20	2	2	5	5	45.5%	41.7%
21		1	5	6	45.5%	50.0%
22	1		6	6	54.5%	50.0%
23			6	6	54.5%	50.0%
24	1		7	6	63.6%	50.0%
25		1	7	7	63.6%	58.3%
26			7	7	63.6%	58.3%
27			7	7	63.6%	58.3%
28	1	1	8	8	72.7%	66.7%
29			8	8	72.7%	66.7%
30	1		9	8	81.8%	66.7%
31			9	8	81.8%	66.7%
32			9	8	81.8%	66.7%
33	2		11	8	100.0%	66.7%
34			11	8	100.0%	66.7%
35			11	8	100.0%	66.7%
36			11	8	100.0%	66.7%
37		2	11	10	100.0%	83.3%
38			11	10	100.0%	83.3%
39			11	10	100.0%	83.3%
40			11	10	100.0%	83.3%
41			11	10	100.0%	83.3%
42			11	10	100.0%	83.3%
43			11	10	100.0%	83.3%
44			11	10	100.0%	83.3%
45			11	10	100.0%	83.3%
46			11	10	100.0%	83.3%
47		2	11	12	100.0%	100.0%
48			11	12	100.0%	100.0%
49			11	12	100.0%	100.0%
50			11	12	100.0%	100.0%

Eastbound 85 percentile speed is 32 mph **Westbound 85 percentile speed is 46 mph**

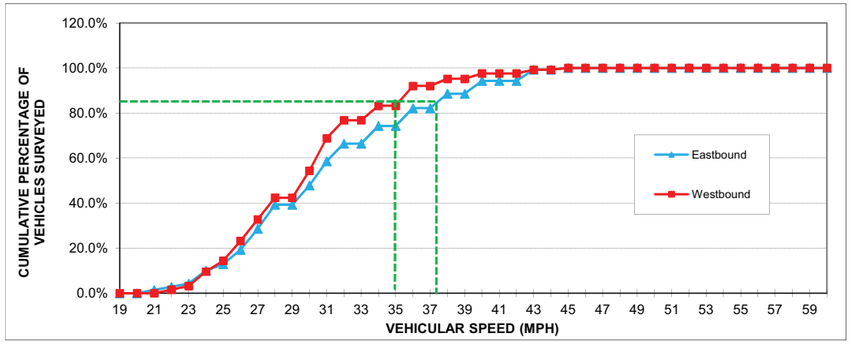


Hidlago County Precinct 1

Spot Speed Survey - 1/24/2018 on Mile 12 1/2 Road (Roosevelt Road) Zone 1
From 9:40 AM To 11:30 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
19			0	0	0.0%	0.0%
20			0	0	0.0%	0.0%
21	2		2	0	1.4%	0.0%
22	2	2	4	2	2.9%	1.6%
23	2	2	6	4	4.3%	3.2%
24	8	8	14	12	10.0%	9.6%
25	4	6	18	18	12.9%	14.4%
26	9	11	27	29	19.3%	23.2%
27	13	12	40	41	28.6%	32.8%
28	15	12	55	53	39.3%	42.4%
29			55	53	39.3%	42.4%
30	12	15	67	68	47.9%	54.4%
31	15	18	82	86	58.6%	68.8%
32	11	10	93	96	66.4%	76.8%
33			93	96	66.4%	76.8%
34	11	8	104	104	74.3%	83.2%
35			104	104	74.3%	83.2%
36	11	11	115	115	82.1%	92.0%
37			115	115	82.1%	92.0%
38	9	4	124	119	88.6%	95.2%
39			124	119	88.6%	95.2%
40	8	3	132	122	94.3%	97.6%
41			132	122	94.3%	97.6%
42			132	122	94.3%	97.6%
43	7	2	139	124	99.3%	99.2%
44			139	124	99.3%	99.2%
45	1	1	140	125	100.0%	100.0%
46			140	125	100.0%	100.0%
47			140	125	100.0%	100.0%
48			140	125	100.0%	100.0%
49			140	125	100.0%	100.0%
50			140	125	100.0%	100.0%
51			140	125	100.0%	100.0%
52			140	125	100.0%	100.0%
53			140	125	100.0%	100.0%
54			140	125	100.0%	100.0%
55			140	125	100.0%	100.0%
56			140	125	100.0%	100.0%
57			140	125	100.0%	100.0%
58			140	125	100.0%	100.0%
59			140	125	100.0%	100.0%
60			140	125	100.0%	100.0%

Eastbound 85 percentile speed is 37 mph **Westbound 85 percentile speed is 35 mph**

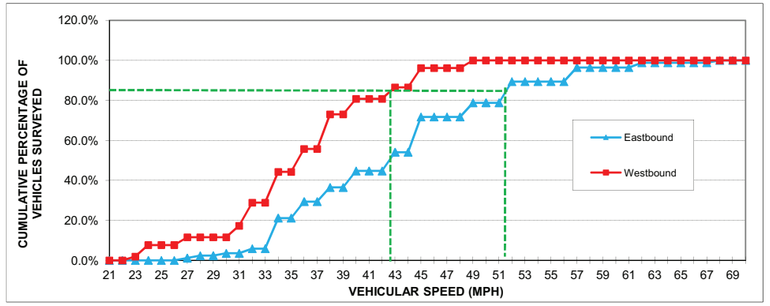


Hidlago County Precinct 1

Spot Speed Survey - 1/25/2018 on Mile 12 1/2 Road Zone 2 (Roosevelt Road)
From 8:50 AM To 10:50 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
21			0	0	0.0%	0.0%
22			0	0	0.0%	0.0%
23		1	0	1	0.0%	1.9%
24		3	0	4	0.0%	7.7%
25			0	4	0.0%	7.7%
26			0	4	0.0%	7.7%
27	1	2	1	6	1.2%	11.5%
28	1		2	6	2.4%	11.5%
29			2	6	2.4%	11.5%
30	1		3	6	3.5%	11.5%
31		3	3	9	3.5%	17.3%
32	2	6	5	15	5.9%	28.8%
33			5	15	5.9%	28.8%
34	13	8	18	23	21.2%	44.2%
35			18	23	21.2%	44.2%
36	7	6	25	29	29.4%	55.8%
37			25	29	29.4%	55.8%
38	6	9	31	38	36.5%	73.1%
39			31	38	36.5%	73.1%
40	7	4	38	42	44.7%	80.8%
41			38	42	44.7%	80.8%
42			38	42	44.7%	80.8%
43	8	3	46	45	54.1%	86.5%
44			46	45	54.1%	86.5%
45	15	5	61	50	71.8%	96.2%
46			61	50	71.8%	96.2%
47			61	50	71.8%	96.2%
48			61	50	71.8%	96.2%
49	6	2	67	52	78.8%	100.0%
50			67	52	78.8%	100.0%
51			67	52	78.8%	100.0%
52	9		76	52	89.4%	100.0%
53			76	52	89.4%	100.0%
54			76	52	89.4%	100.0%
55			76	52	89.4%	100.0%
56			76	52	89.4%	100.0%
57	6		82	52	96.5%	100.0%
58			82	52	96.5%	100.0%
59			82	52	96.5%	100.0%
60			82	52	96.5%	100.0%
61			82	52	96.5%	100.0%
62	2		84	52	98.8%	100.0%
63			84	52	98.8%	100.0%
64			84	52	98.8%	100.0%
65			84	52	98.8%	100.0%
66			84	52	98.8%	100.0%
67			84	52	98.8%	100.0%
68	1		85	52	100.0%	100.0%
69			85	52	100.0%	100.0%
70			85	52	100.0%	100.0%

Eastbound 85 percentile speed is 51 mph **Westbound 85 percentile speed is 42 mph**

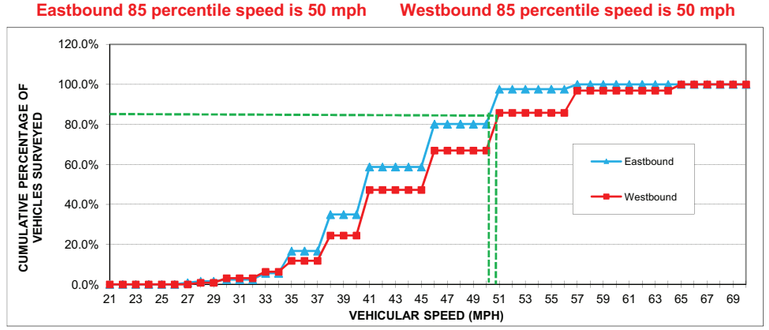


Hidlago County Precinct 1

Spot Speed Survey - 1/24/2018 on Mile 2 Road Zone 1
From 4:00 PM To 6:00 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
21			0	0	0.0%	0.0%
22			0	0	0.0%	0.0%
23			0	0	0.0%	0.0%
24			0	0	0.0%	0.0%
25			0	0	0.0%	0.0%
26			0	0	0.0%	0.0%
27	1		1	0	0.8%	0.0%
28	1	1	2	1	1.6%	0.8%
29			2	1	1.6%	0.8%
30	1	3	3	4	2.4%	3.1%
31			3	4	2.4%	3.1%
32			3	4	2.4%	3.1%
33	4	4	7	8	5.6%	6.3%
34			7	8	5.6%	6.3%
35	14	7	21	15	16.7%	11.8%
36			21	15	16.7%	11.8%
37			21	15	16.7%	11.8%
38	23	16	44	31	34.9%	24.4%
39			44	31	34.9%	24.4%
40			44	31	34.9%	24.4%
41	30	29	74	60	58.7%	47.2%
42			74	60	58.7%	47.2%
43			74	60	58.7%	47.2%
44			74	60	58.7%	47.2%
45			74	60	58.7%	47.2%
46	27	25	101	85	80.2%	66.9%
47			101	85	80.2%	66.9%
48			101	85	80.2%	66.9%
49			101	85	80.2%	66.9%
50			101	85	80.2%	66.9%
51	22	24	123	109	97.6%	85.8%
52			123	109	97.6%	85.8%
53			123	109	97.6%	85.8%
54			123	109	97.6%	85.8%
55			123	109	97.6%	85.8%
56			123	109	97.6%	85.8%
57	3	14	126	123	100.0%	96.9%
58			126	123	100.0%	96.9%
59			126	123	100.0%	96.9%
60			126	123	100.0%	96.9%
61			126	123	100.0%	96.9%
62			126	123	100.0%	96.9%
63			126	123	100.0%	96.9%
64			126	123	100.0%	96.9%
65		4	126	127	100.0%	100.0%
66			126	127	100.0%	100.0%
67			126	127	100.0%	100.0%
68			126	127	100.0%	100.0%
69			126	127	100.0%	100.0%
70			126	127	100.0%	100.0%

Eastbound 85 percentile speed is 50 mph **Westbound 85 percentile speed is 50 mph**

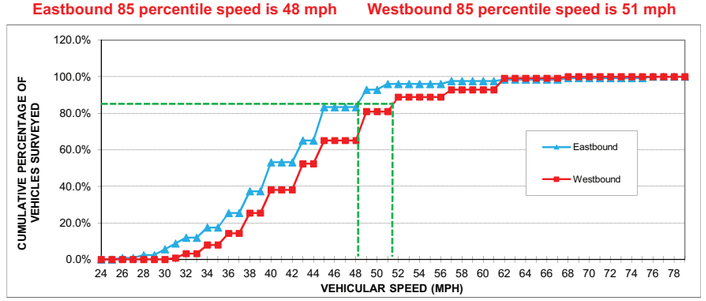


Hidalgo County Precinct 1

Spot Speed Survey - 1/24/2018 on Mile 2 West Road Zone 2
From 4:15 PM To 6:15 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
24			0	0	0.0%	0.0%
25			0	0	0.0%	0.0%
26	1		1	0	0.8%	0.0%
27			1	0	0.8%	0.0%
28	2		3	0	2.4%	0.0%
29			3	0	2.4%	0.0%
30	4		7	0	5.6%	0.0%
31	4	1	11	1	8.7%	0.8%
32	4	3	15	4	11.9%	3.2%
33			15	4	11.9%	3.2%
34	7	6	22	10	17.5%	7.9%
35			22	10	17.5%	7.9%
36	10	8	32	18	25.4%	14.3%
37			32	18	25.4%	14.3%
38	15	14	47	32	37.3%	25.4%
39			47	32	37.3%	25.4%
40	20	16	67	48	53.2%	38.1%
41			67	48	53.2%	38.1%
42			67	48	53.2%	38.1%
43	15	18	82	66	65.1%	52.4%
44			82	66	65.1%	52.4%
45	23	16	105	82	83.3%	65.1%
46			105	82	83.3%	65.1%
47			105	82	83.3%	65.1%
48			105	82	83.3%	65.1%
49	12	20	117	102	92.9%	81.0%
50			117	102	92.9%	81.0%
51	4		121	102	96.0%	81.0%
52		10	121	112	96.0%	88.9%
53			121	112	96.0%	88.9%
54			121	112	96.0%	88.9%
55			121	112	96.0%	88.9%
56			121	112	96.0%	88.9%
57	2	5	123	117	97.6%	92.9%
58			123	117	97.6%	92.9%
59			123	117	97.6%	92.9%
60			123	117	97.6%	92.9%
61			123	117	97.6%	92.9%
62	1	8	124	125	98.4%	99.2%
63			124	125	98.4%	99.2%
64			124	125	98.4%	99.2%
65			124	125	98.4%	99.2%
66			124	125	98.4%	99.2%
67			124	125	98.4%	99.2%
68	1	1	125	126	99.2%	100.0%
69			125	126	99.2%	100.0%
70			125	126	99.2%	100.0%
71			125	126	99.2%	100.0%
72			125	126	99.2%	100.0%
73			125	126	99.2%	100.0%
74			125	126	99.2%	100.0%
75			125	126	99.2%	100.0%
76	1		126	126	100.0%	100.0%
77			126	126	100.0%	100.0%
78			126	126	100.0%	100.0%
79			126	126	100.0%	100.0%

Eastbound 85 percentile speed is 48 mph **Westbound 85 percentile speed is 51 mph**

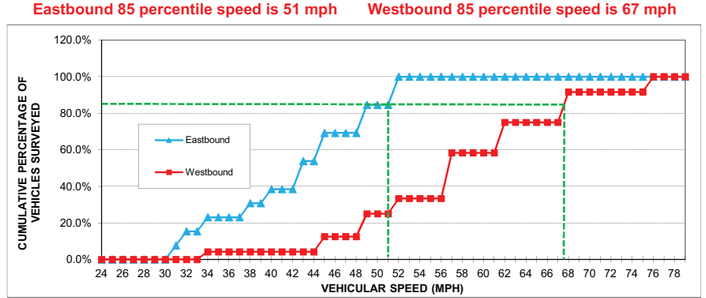


Hidalgo County Precinct 1

Spot Speed Survey - 1/25/2018 on Mile 2 Road Zone 3
From 9:15 AM To 11:15 AM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
24			0	0	0.0%	0.0%
25			0	0	0.0%	0.0%
26			0	0	0.0%	0.0%
27			0	0	0.0%	0.0%
28			0	0	0.0%	0.0%
29			0	0	0.0%	0.0%
30			0	0	0.0%	0.0%
31	1		1	0	7.7%	0.0%
32	1		2	0	15.4%	0.0%
33			2	0	15.4%	0.0%
34	1	1	3	1	23.1%	4.2%
35			3	1	23.1%	4.2%
36			3	1	23.1%	4.2%
37			3	1	23.1%	4.2%
38	1		4	1	30.8%	4.2%
39			4	1	30.8%	4.2%
40	1		5	1	38.5%	4.2%
41			5	1	38.5%	4.2%
42			5	1	38.5%	4.2%
43	2		7	1	53.8%	4.2%
44			7	1	53.8%	4.2%
45	2	2	9	3	69.2%	12.5%
46			9	3	69.2%	12.5%
47			9	3	69.2%	12.5%
48			9	3	69.2%	12.5%
49	2	3	11	6	84.6%	25.0%
50			11	6	84.6%	25.0%
51			11	6	84.6%	25.0%
52	2	2	13	8	100.0%	33.3%
53			13	8	100.0%	33.3%
54			13	8	100.0%	33.3%
55			13	8	100.0%	33.3%
56			13	8	100.0%	33.3%
57		6	13	14	100.0%	58.3%
58			13	14	100.0%	58.3%
59			13	14	100.0%	58.3%
60			13	14	100.0%	58.3%
61			13	14	100.0%	58.3%
62		4	13	18	100.0%	75.0%
63			13	18	100.0%	75.0%
64			13	18	100.0%	75.0%
65			13	18	100.0%	75.0%
66			13	18	100.0%	75.0%
67			13	18	100.0%	75.0%
68		4	13	22	100.0%	91.7%
69			13	22	100.0%	91.7%
70			13	22	100.0%	91.7%
71			13	22	100.0%	91.7%
72			13	22	100.0%	91.7%
73			13	22	100.0%	91.7%
74			13	22	100.0%	91.7%
75			13	22	100.0%	91.7%
76		2	13	24	100.0%	100.0%
77			13	24	100.0%	100.0%
78			13	24	100.0%	100.0%
79			13	24	100.0%	100.0%

Eastbound 85 percentile speed is 51 mph **Westbound 85 percentile speed is 67 mph**

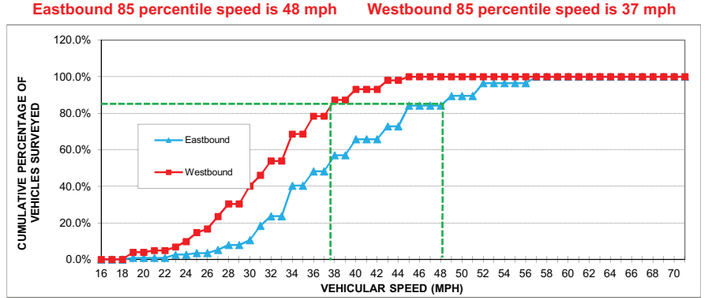


Hidalgo County Precinct 1

Spot Speed Survey - 1/24/2018 on Goolie Road Zone 3
From 3:50 PM To 5:50 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
16			0	0	0.0%	0.0%
17			0	0	0.0%	0.0%
18			0	0	0.0%	0.0%
19	1	4	1	4	0.9%	3.9%
20			1	4	0.9%	3.9%
21		1	1	5	0.9%	4.9%
22			1	5	0.9%	4.9%
23	2	2	3	7	2.6%	6.9%
24		3	3	10	2.6%	9.8%
25	1	5	4	15	3.5%	14.7%
26		2	4	17	3.5%	16.7%
27	2	7	6	24	5.3%	23.5%
28	3	7	9	31	7.9%	30.4%
29			9	31	7.9%	30.4%
30	3	10	12	41	10.5%	40.2%
31	9	6	21	47	18.4%	46.1%
32	6	8	27	55	23.7%	53.9%
33			27	55	23.7%	53.9%
34	19	15	46	70	40.4%	68.6%
35			46	70	40.4%	68.6%
36	9	10	55	80	48.2%	78.4%
37			55	80	48.2%	78.4%
38	10	9	65	89	57.0%	87.3%
39			65	89	57.0%	87.3%
40	10	6	75	95	65.8%	93.1%
41			75	95	65.8%	93.1%
42			75	95	65.8%	93.1%
43	8	5	83	100	72.8%	98.0%
44			83	100	72.8%	98.0%
45	13	2	96	102	84.2%	100.0%
46			96	102	84.2%	100.0%
47			96	102	84.2%	100.0%
48			96	102	84.2%	100.0%
49	6		102	102	89.5%	100.0%
50			102	102	89.5%	100.0%
51			102	102	89.5%	100.0%
52	8		110	102	96.5%	100.0%
53			110	102	96.5%	100.0%
54			110	102	96.5%	100.0%
55			110	102	96.5%	100.0%
56			110	102	96.5%	100.0%
57	4		114	102	100.0%	100.0%
58			114	102	100.0%	100.0%
59			114	102	100.0%	100.0%
60			114	102	100.0%	100.0%
61			114	102	100.0%	100.0%
62			114	102	100.0%	100.0%
63			114	102	100.0%	100.0%
64			114	102	100.0%	100.0%
65			114	102	100.0%	100.0%
66			114	102	100.0%	100.0%
67			114	102	100.0%	100.0%
68			114	102	100.0%	100.0%
69			114	102	100.0%	100.0%
70			114	102	100.0%	100.0%
71			114	102	100.0%	100.0%

Eastbound 85 percentile speed is 48 mph **Westbound 85 percentile speed is 37 mph**



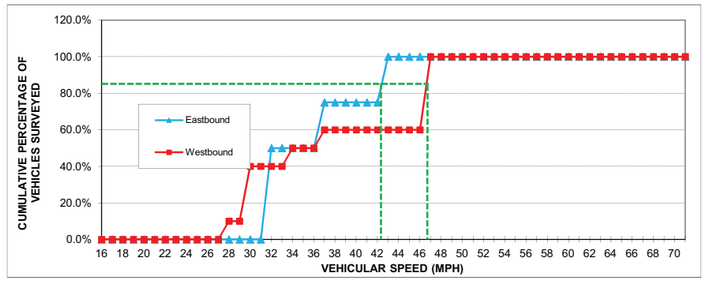
Hidalgo County Precinct 1

Spot Speed Survey - 1/25/2018 on Sky Soldier Road Zone 2

From 10:30 AM To 12:30 PM

Vehicle Mean Speed (mph)	Number of Vehicles Surveyed		Cumulative Total of Vehicles Surveyed		Cumulative Percent of Vehicles Surveyed	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
16			0	0	0.0%	0.0%
17			0	0	0.0%	0.0%
18			0	0	0.0%	0.0%
19			0	0	0.0%	0.0%
20			0	0	0.0%	0.0%
21			0	0	0.0%	0.0%
22			0	0	0.0%	0.0%
23			0	0	0.0%	0.0%
24			0	0	0.0%	0.0%
25			0	0	0.0%	0.0%
26			0	0	0.0%	0.0%
27			0	0	0.0%	0.0%
28		1	0	1	0.0%	10.0%
29			0	1	0.0%	10.0%
30		3	0	4	0.0%	40.0%
31			0	4	0.0%	40.0%
32	2		2	4	50.0%	40.0%
33			2	4	50.0%	40.0%
34		1	2	5	50.0%	50.0%
35			2	5	50.0%	50.0%
36			2	5	50.0%	50.0%
37	1	1	3	6	75.0%	60.0%
38			3	6	75.0%	60.0%
39			3	6	75.0%	60.0%
40			3	6	75.0%	60.0%
41			3	6	75.0%	60.0%
42			3	6	75.0%	60.0%
43	1		4	6	100.0%	60.0%
44			4	6	100.0%	60.0%
45			4	6	100.0%	60.0%
46			4	6	100.0%	60.0%
47		4	4	10	100.0%	100.0%
48			4	10	100.0%	100.0%
49			4	10	100.0%	100.0%
50			4	10	100.0%	100.0%
51			4	10	100.0%	100.0%
52			4	10	100.0%	100.0%
53			4	10	100.0%	100.0%
54			4	10	100.0%	100.0%
55			4	10	100.0%	100.0%
56			4	10	100.0%	100.0%
57			4	10	100.0%	100.0%
58			4	10	100.0%	100.0%
59			4	10	100.0%	100.0%
60			4	10	100.0%	100.0%
61			4	10	100.0%	100.0%
62			4	10	100.0%	100.0%
63			4	10	100.0%	100.0%
64			4	10	100.0%	100.0%
65			4	10	100.0%	100.0%
66			4	10	100.0%	100.0%
67			4	10	100.0%	100.0%
68			4	10	100.0%	100.0%
69			4	10	100.0%	100.0%
70			4	10	100.0%	100.0%
71			4	10	100.0%	100.0%

Eastbound 85 percentile speed is 42 mph **Westbound 85 percentile speed is 46 mph**



APPENDIX B

Photos

1 Mile 15 Road



Mile 15 Road facing EB at Spot Speed Study Location, Zone 2



Mile 15 Road Facing WB at Spot Speed Study Location, Zone 2

2 Mile 15 ½ Road



Mile 15 ½ Rd Facing WB at Spot Speed Study Location



Mile 15 ½ Rd Facing EB at Spot Speed Study Location

3 Mile 12 Road



Mile 12 Rd facing EB at De La Madrid



Mile 12 Road Facing WB at De La Madrid

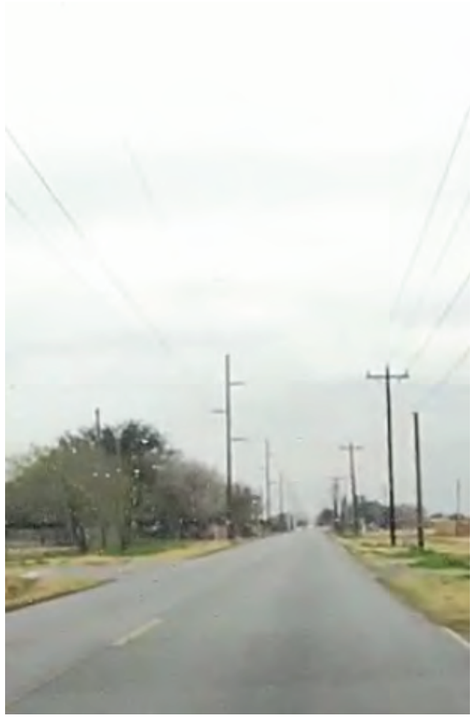
4 Mile 12 ½ Road



Mile 12 ½ Road at Tasha Lee Lane Facing EB



Mile 12 ½ Road at Big Valley Facing EB

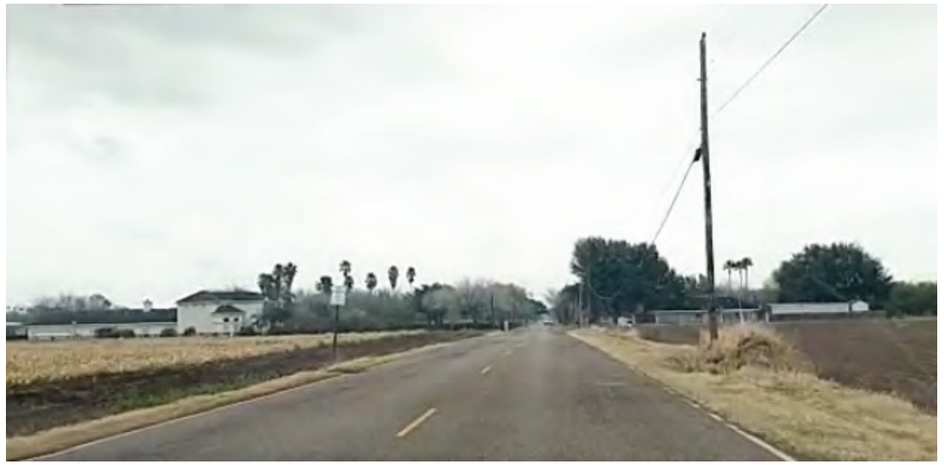


Mile 12 ½ Road at Big Valley Facing WB



Mile 12 ½ Road at Tasha lee Lane Facing WB

5 Mile 11 Road



Mile 11 Road 1/3 mile west of FM 88, Zone 1 Facing EB



Mile 11 Rd Facing EB at House of Restoration Zone 2



Mile 11 Road 1/3 Mile West of FM 88, Facing WB Zone 1

6 Lott Road



Mile 11 Rd facing WB at House of Restoration Zone 2



Lott Road facing WB at East Bali Drive



Lott Road facing EB at East Bali Drive

7 Mile 10 Road



Mile 10 Road facing EB at All Valley Waste, Zone 1



Mile 10 Road at Mario Ybarra Elementary, Facing EB Zone 3



Mile 10 Road facing EB at dirt driveway, zone 2



Mile 10 Road at Speed Zone 4 Study Location, Facing EB



Mile 10 Road Facing WB at Spot Speed Study Location Zone 4



Mile 10 Road at Mario Ybarra Elementary Facing WB, Zone 3



Mile 10 Road at Dirt Driveway Facing WB, Spot Speed Study Location Zone 2



Mile 10 Road at All Valley Waste, Facing WB, Zone 1

8 Mile 16 Road



Mile 16 Road at Spot Speed Study Location, Facing EB



Mile 16 Road at Spot Speed Study Location, Facing WB



Mile 13 Road facing EB at Spot Speed Study Location

9 Mile 13 Road



Mile 13 Road facing WB at Spot Speed Study Location



Stites Road facing WB at Champion Drive



Stites Road facing EB at Champion Drive

11 Walker Road – No Spot Speed Study Performed



Victoria Road facing NB at Castillo

12 Victoria Road



Victoria Road facing SB at Castillo

13 Nittler Road



Nittler Road Facing EB at Spot Speed Study Location



Nittler Road at Spot Speed Study Location Facing WB

14 Mile 13 Road



Mile 13 Road facing EB at Turner Road



Mile 13 Road facing WB at Turner Road

15 Mile 12 ½ Roosevelt Road



Mile 12 ½ Road Facing EB at Spot Speed Location



Mile 12 ½ Road facing WB at spot speed location

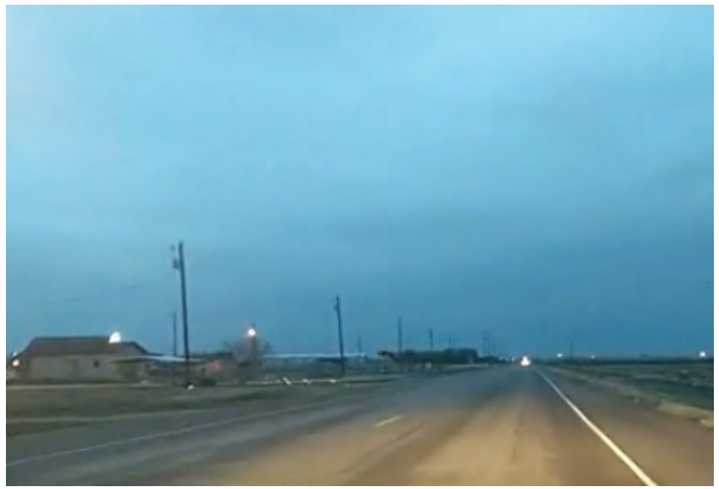


Mile 12 ½ Road facing EB at Elena Avenue Zone 1 Speed Study Location

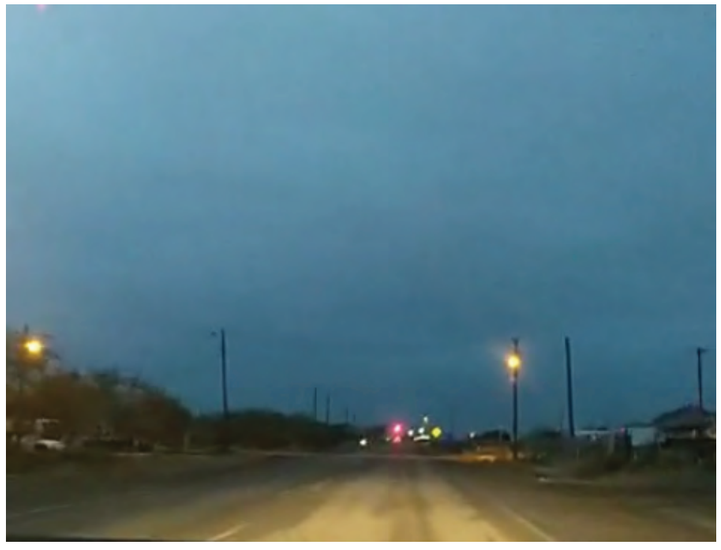


Mile 12 ½ Road facing WB at Elena Avenue Zone 1 Speed Study Location

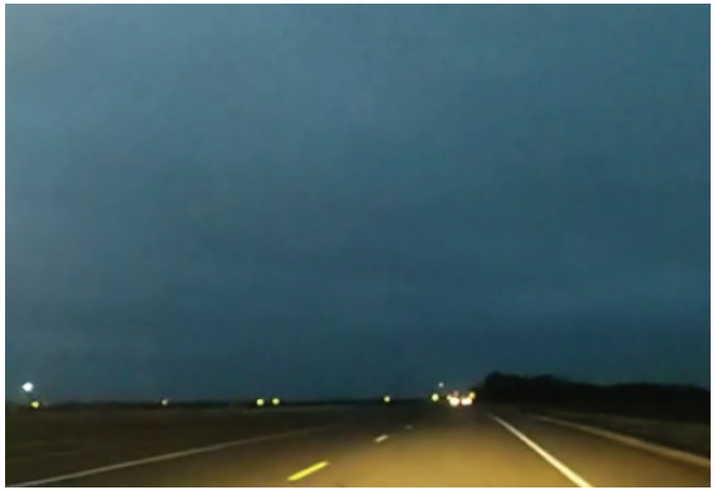
16 Mile 2 West Road



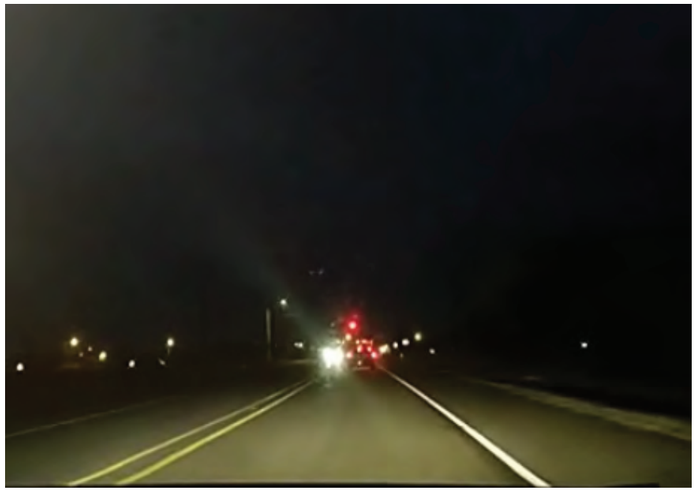
Mile 2 West facing SB at zone 3 Spot Speed Study Location



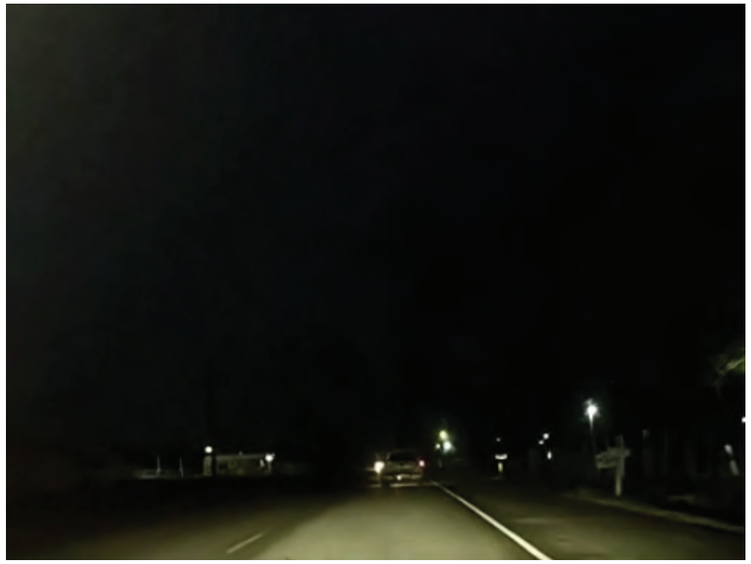
Mile 2 West facing SB at Zone 2 Spot Speed Study Location



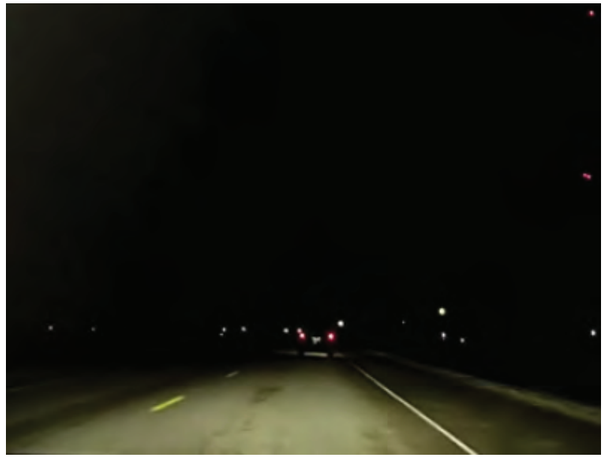
Mile 2 West Facing SB at Zone 1 Spot Speed Study Location



Mile 2 West Road Facing NB at Zone 1 Spot Speed Study Location



Mile 2 West Road Facing NB at Zone 2 Spot Speed Study Location



Mile 2 West Road Facing NB at Zone 3 Spot Speed Study Location

17 Mile 6 North Road – No Spot Speed Study Performed

18 Goolie Road



Goolie Road facing NB at El Dora Road



Goolie Road facing SB at El Dora Road

19 Sky Soldier Road



Sky Soldier Road facing SB at Zone 2 Spot Speed Study Location



Sky Soldier Road Facing NB at Zone 2 Spot Speed Study Location

APPENDIX C

TMUTCD Excerpt

Excerpt from the Texas Manual on Uniform Traffic Control Devices

Section 2B.13 Speed Limit Sign (R2-1)

Standard:

01 **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 include an analysis of the current speed distribution of free-flowing vehicles.**

02 **The Speed Limit (R2-1) sign (see Figure 2B-3) shall display the limit established by law, ordinance, regulation, or as adopted by the authorized agency based on the engineering study. The speed limits displayed shall be in multiples of 5 mph.**

03 **Speed Limit (R2-1) signs, indicating speed limits for which posting is required by law, shall be located at the points of change from one speed limit to another.**

04 **At the downstream end of the section to which a speed limit applies, a Speed Limit sign showing the next speed limit shall be installed. Additional Speed Limit signs shall be installed beyond major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable.**

05 **Speed Limit signs indicating the statutory speed limit shall be installed at entrances to the State and, where appropriate, at jurisdictional boundaries in urban areas.**

Option:

06 The Maximum Legal Speeds (R2-4cT) sign (see Figure 2B-3) may be used at the entrances to the State.

Support:

07 In general, the maximum speed limits applicable to rural and urban roads are established:

A. Statutorily – a maximum speed limit applicable to a particular class of road, such as freeways or city streets, that is established by State law; or
B. As altered speed zones – based on engineering studies.

08 State statutory limits might restrict the maximum speed limit that can be established on a particular road, notwithstanding what an engineering study might indicate.

Option:

09 If a jurisdiction has a policy of installing Speed Limit signs in accordance with statutory requirements only on the streets that enter a city, neighborhood, or residential area to indicate the speed limit that is applicable to the entire city, neighborhood, or residential area unless otherwise posted, a CITYWIDE (R2-5aP), NEIGHBORHOOD (R2-5bP), or RESIDENTIAL (R2-5cP) plaque may be mounted above the Speed Limit sign and an UNLESS OTHERWISE POSTED (R2-5P) plaque may be mounted below the Speed Limit sign (see Figure 2B-3).

Guidance:

10 *A Reduced Speed Limit Ahead (W3-5) sign (see Section 2C.38) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 10 mph, or where engineering judgment indicates the need for advance notice to comply with the posted speed limit ahead.*

11 *States and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review, such as the addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the configuration of bicycle lanes, changes in traffic control signal coordination, or significant changes in traffic volumes.*

12 *No more than three speed limits should be displayed on any one Speed Limit sign or assembly.*

13 *When a speed limit within a speed zone is posted, it should be within 5 mph of the 85th-percentile speed of free-flowing traffic.*

Support:

14 The Traffic Control Devices Handbook contains criteria on the spacing of speed limit signs (see Section 1A.11).

Guidance:

15 *Speed studies for signalized intersection approaches should be taken outside the influence area of the traffic control signal, which is generally considered to be approximately 1/2 mile, to avoid obtaining skewed results for the 85th-percentile speed.*

Support:

16 Advance warning signs and other traffic control devices to attract the motorist's attention to a signalized intersection are usually more effective than a reduced speed limit zone.

Guidance:

17 *An advisory speed plaque (see Section 2C.08) mounted below a warning sign should be used to warn road users of an advisory speed for a roadway condition. A Speed Limit sign should not be used for this situation.*

Option:

18 Other factors that may be considered when establishing or reevaluating speed limits are the following:

A. Road characteristics, shoulder condition, grade, alignment, and sight distance;
B. The pace;
C. Roadside development and environment;
D. Parking practices and pedestrian activity; and
E. Reported crash experience for at least a 12-month period.

19 Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.

20 A changeable message sign that changes the speed limit for traffic and ambient conditions may be installed provided that the appropriate speed limit is displayed at the proper times.

21 A changeable message sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with a Speed Limit sign.

Guidance:

22 *If a changeable message sign displaying approach speeds is installed, the legend YOUR SPEED XX MPH or such similar legend should be displayed. The color of the changeable message legend should be a yellow legend on a black background or the reverse of these colors.*

Support:

23 Advisory Speed signs and plaques are discussed in Sections 2C.08 and 2C.14. Temporary Traffic Control Zone Speed signs are discussed in Part 6. The WORK ZONE (G20-5aP) plaque intended for installation above a Speed Limit sign is discussed in Section 6F.12. School Speed Limit signs are discussed in Section 7B.15.