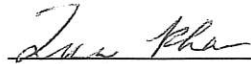


Engineering and Traffic Survey (E&TS)

Prepared by:



Andy Pham
Transportation Engineer
Office of Corridor Management (South)

Approved by:



Siew Mei Tan, P.E.
Senior Transportation Engineer
Office of Corridor Management (South)

12/10/19

DATE



Concurred by:

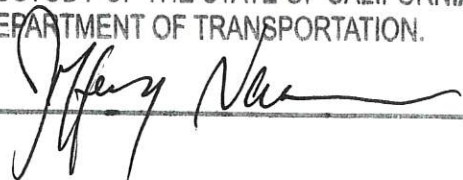


Rafael Molina, P.E., PMP
Chief
Office of Corridor Management (South)

12/10/2019

DATE

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I. BACKGROUND

This Engineering and Traffic Survey (E&TS) was conducted on Hawthorne Boulevard (State Route 107), from Pacific Coast Highway (State Route 1, PM 0) to Redondo Beach Boulevard (PM 4.801). The purpose of this E&TS is to update or revise the established speed limits as appropriate; the previous E&TS for the aforementioned limits was conducted in May 2009.

This E&TS consists of obtaining vehicle speed samples and field survey data necessary to complete the vehicle speed survey sheets, including recommendation of appropriate speed based upon but not limited to field observations, critical speed and accident history.

II. EXISTING CONDITIONS

A. GENERAL

Hawthorne Boulevard between Pacific Coast Highway (PCH) and Redondo Beach Boulevard is an urban area with a mix of retail, commercial, and residential land use. The route falls within the City of Torrance boundary from PCH (PM 0) to Artesia Boulevard (PM 4.696) and City of Redondo Beach boundary from Artesia Boulevard (PM 4.696) to Redondo Beach Boulevard (PM 4.801).

B. TYPE OF FACILITY

Northbound (NB) Hawthorne Boulevard has three through lanes from PCH (PM 0) to 240th Street (PM 0.107) and four through lanes from 240th Street (PM 0.107) to Redondo Beach Boulevard (PM 4.801). Southbound (SB) Hawthorne Boulevard has four through lanes from Redondo Beach Boulevard (PM 4.801) to Lomita Boulevard (PM 0.747) and three through lanes from Lomita Boulevard (PM 0.747) to PCH (PM 0). There are raised median islands, left-turn channelization and numerous driveways along the route. Parking is restricted along both sides of Hawthorne Boulevard, except from Lomita Boulevard (PM 0.840) to PCH (PM 0) in southbound direction.

C. TRAFFIC

The conventional highway carries a mix of residential, commuter, and through traffic. The 2017 Annual Average Daily Traffic (AADT) for the route ranges from 47,500 to 70,000 vehicles per day.

D. EXISTING SPEED ZONES

The existing posted speed limits for the route are as follows:

Limits		Speed Limit	
From (Postmile)	To (Postmile)	NB (MPH)	SB (MPH)
PCH (PM 0)	190 th Street (PM 3.672)	40	40
190 th Street (PM 3.672)	Redondo Beach Blvd. (PM 4.801)	35	35

MPH - Miles Per hour

E. ACCIDENT RATES

The accident rates from the Traffic Accident Surveillance and Analysis System (TASAS) for the three-year period between January 1, 2016 to December 31, 2018 for Hawthorne Boulevard are as follows:

Highway Segment (Postmile)		Accident Rate (Accidents/MVM)		Fatality Rate (Accidents/MVM)	
		Actual	Average	Actual	Average
Pacific Coast Highway (PM 0)	Redondo Beach Boulevard (PM 4.801)	1.48	1.25	0.012	0.008

MVM - Million Vehicle Miles

As seen from the table above, the accident rate on Hawthorne Boulevard is higher than the average rate for similar facilities.

F. ENFORCEMENT JURISDICTION

The City of Torrance and City of Redondo Beach Police Departments are the enforcement agencies within their respective city boundaries. The agencies use radar for speed enforcement.

G. SPEED ZONE FIELD DATA

Speed measurements were taken from October 25, 2018 to November 07, 2018. The results are shown in Attachment 1.

III. COMMUNITY INVOLVEMENT

This E&TS was shared with City of Torrance and City of Redondo Beach for review and comments. Both Cities concur with the recommendations.

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IV. CONCLUSIONS AND RECOMMENDATIONS-

Based on field speed measurements, the 85th Percentile and 10 MPH Pace Speeds are shown in the table below:

Location of Speed Measurements	85 th Percentile Speed		10 MPH Pace Speed	
	NB	SB	NB	SB
S/O Skypark Dr. (PM 0.350)	38	41	30-39	32-41
N/O Lomita Blvd. (PM 0.840)	39	39	31-40	31-40
Between 226 th St. & 227 th St. (PM 1.210)	41	46	33-42	36-45
N/O Center Way (PM 1.720)	40	42	33-42	33-42
N/O Del Amo Cir. (PM 2.500)	39	42	31-40	33-42
Between Garnet St. & Spencer St. (PM 2.700)	42	43	34-43	34-43
N/O Halison St. (PM 3.260)	44	45	35-44	33-42
Cadillac Court (PM 3.860)	40	39	31-40	30-39
N/O 182 nd St. (PM 4.260)	42	39	30-39	30-39
S/O Artesia Blvd. (PM 4.600)	41	40	29-38	31-40

Based on field speed measurements, review of collision history, roadway geometry, and adjacent land use, the recommended speeds are as follows:

Location of Speed Measurements	Existing Posted Speed		Proposed Speed	
	NB	SB	NB	SB
S/O Skypark Dr. (PM 0.350)	40	40	40	40
N/O Lomita Blvd. (PM 0.840)	40	40	40	40
Between 226 th St. & 227 th St. (PM 1.210)	40	40	40	40
N/O Center Way (PM 1.720)	40	40	40	40
N/O Del Amo Cir. (PM 2.500)	40	40	40	40
Between Garnet St. & Spencer St. (PM 2.700)	40	40	40	40
N/O Halison St. (PM 3.260)	40	40	40	40
Cadillac Court (PM 3.860)	35	35	35	35
N/O 182 nd St. (PM 4.260)	35	35	35	35
S/O Artesia Blvd. (PM 4.600)	35	35	35	35

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The average 85th percentile speeds between PCH and 190th Street are 40 mph in the NB direction and 42 mph in the SB direction. Even though the 85th percentile speeds are higher than 40 MPH at some locations, it is recommended that the 40 MPH speed limit be retained for this segment due to higher than average accident rates.

The average 85th percentile speeds between 190th Street and Redondo Beach Boulevard are 41 in the NB direction and 39 MPH in the SB direction. A speed limit of 35 MPH is recommended for this segment due to the factors below:

- This portion of highway serves mostly retail/business areas with closely spaced traffic signals, local streets and driveways.
- There is a vertical curve on the roadway profile north of 190th Street that may limit sight distance.
- There are many driveways/access points along the segment.

It is recommended to maintain the existing speed limits as noted above.

V. ATTACHMENTS

1. Vehicle Speed Survey Sheets
2. Speed Zone Survey Layout Sheet

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