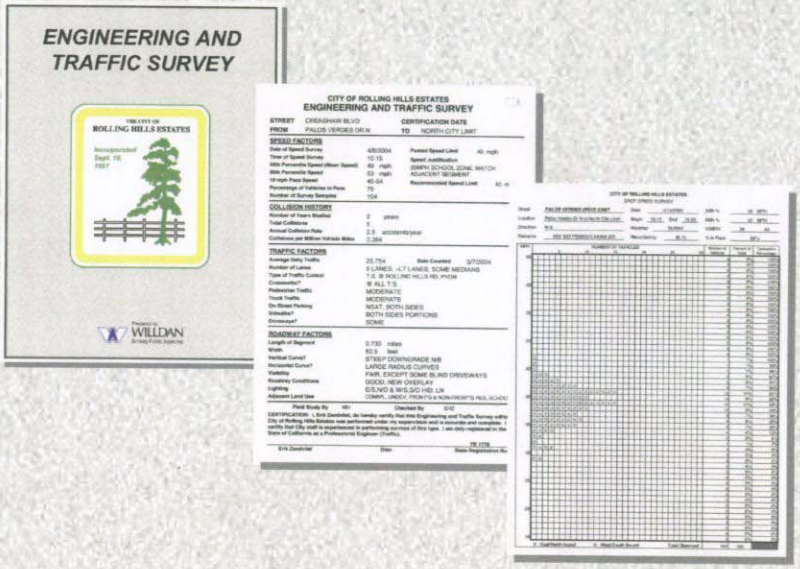
ENGINEERING AND TRAFFIC SURVEY

JULY 2004



FOR THE CITY OF ROLLING HILLS ESTATES

Prepared by:
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July 23, 2004

Mr. Sam Wise
Assistant City Engineer
City of Rolling Hills Estates
4045 Palos Verdes Drive North
Rolling Hills Estates, CA 90274

Subject: 2004 Engineering and Traffic Survey for Speed Zoning

Dear Mr. Wise,

As requested, Willdan has completed Engineering and Traffic Surveys to justify and update the posted speed limits along 15 street segments in the City of Rolling Hills Estates. These segments were last surveyed in 1997, and require an update to comply with the 7-year limitation set forth in the California Vehicle Code (CVC).

We are pleased to submit the enclosed Report that describes the E&T survey procedures and contains recommendations for posted speed limits on the City's arterial and collector street system. A summary of these recommendations is included in the Analysis. Supporting documentation for each speed zone recommendation is provided in the Appendices.

The Report was conducted in accordance with applicable provisions of the CVC, following procedures outlined in the California Department of Transportation (Caltrans) Traffic Manual. The Report is intended to satisfy the requirements of Section 40802 of the CVC to enable the continued use of radar for traffic speed enforcement.

We appreciate the opportunity to serve the City of Rolling Hills Estates and the assistance and cooperation afforded to us during the course of this study.

Very truly yours,

WILLDAN

Erik Zandvliet T.E.
Traffic Engineer

Enclosure

EZ:mhjmk (06-160)
E:14019/3005/R01 Rolling Hills Est E&T

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FOR THE
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INTRODUCTION

This Engineering and Traffic Survey is intended to be the basis for the establishment, revision, and enforcement of speed limits for selected streets within the City of Rolling Hills Estates. This Engineering and Traffic Survey presents recommended speed limits for 15 street segments in the City of Rolling Hills Estates. Engineering and Traffic Surveys are required by the State of California to establish intermediate speed limits on local streets and to enforce those limits using radar or other speed measuring devices. These surveys must be updated every 5,7 or 10 years to ensure the speeds reflect current conditions as dictated by the California Vehicle Code (CVC). The CVC also requires that the surveys be conducted based on the methodology required by the California Department of Transportation (Caltrans).

The survey was requested by the City for the proper posting of speed limits and to enable the Police Department to utilize radar or other electronic speed measuring devices for speed enforcement. CVC Sections 40801 and 40802 require Engineering and Traffic Surveys that verify the prima facie speed limit before enforcement by such a device is legal. The law further specifies that these surveys be conducted every 5 years. The surveys can be extended to 7 years provided the City's police officer(s) have completed a 24-hour radar operator course [CVC 40802(c)(2)(B)(i)(I)]. Additionally, some surveys may be extended to 10 years if a traffic engineer certifies that no changes in roadway or traffic conditions have occurred [CVC 40802 (c)(2)(B)(i)(II)]. These provisions assure that posted speed limits are kept reasonably current.

The Engineering and Traffic Surveys for the City were conducted in accordance with procedures outlined in the Caltrans Traffic Manual, as required by Section 627 of the California Vehicle Code. The Code further describes three elements of an engineering and traffic survey:

1. Measurement of prevailing speed;
2. Accident history; and
3. Roadway characteristics <u>not</u> readily apparent to the motorist.

Posted speed limits are established primarily to protect the general public from the reckless and unpredictable behavior of dangerous drivers. They provide law enforcement with a clearly understood method to identify and apprehend violators of the basic speed law (CVC Section 22350). This law states that "No person shall drive a vehicle on a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of the highway, and in no event at a speed which endangers the safety of persons or property." The posted speed limit gives motorists a clear warning of the maximum speed that is reasonable and prudent under typical driving conditions.

The basic fundamentals for establishing speed limits recognize that the majority of drivers behave in a safe and reasonable manner, and therefore, the normally careful and competent actions of a reasonable driver should be considered legal. Speed limits established on these fundamentals conform to the consensus that those who drive the highway determine what speed is reasonable and safe, not on the judgment of one or a few individuals. A radar speed study is usually used to record the prevailing speed of reasonable drivers.

Speed limits are also established to advise drivers of conditions which may not be readily apparent to a reasonable driver. For this reason, accident history, roadway conditions, traffic characteristics, and land use must also be analyzed before determining speed limits. Speed limit changes are usually made in coordination with physical changes in roadway conditions or roadside developments. Unusually short zones of less than one-half mile in length should be avoided to reduce driver confusion.

Additionally, it is generally accepted that speed limits cannot be successfully enforced without voluntary compliance by a majority of drivers. Consequently, only the driver whose behavior is clearly out of line with the normal flow of traffic is usually targeted for enforcement.

ELEMENTS OF THE ENGINEERING AND TRAFFIC SURVEY

The Caltrans Traffic Manual specifies the methodology to be used for completing Engineering and Traffic Surveys. This methodology includes an evaluation of current vehicle speeds, accident history and conditions not readily apparent to motorists. The basic elements of the Engineering and Traffic Survey are discussed in more detail as follows:

Speed Sampling

Existing vehicle speeds are surveyed by a certified radar operator with a calibrated radar unit in an unmarked vehicle. Speed samples are taken for each segment representing a statistically significant sample of current traffic. This data is then evaluated to identify the distribution of speeds. A key element in the evaluation is the identification of the 85th percentile speed. The 85th percentile speed is the speed at or below which 85 percent of the traffic travels. This threshold represents what is historically found to be a safe and reasonable speed for most drivers based on common roadway conditions. Therefore, a "basic speed limit" is established at the nearest 5-mile per hour (mph) increment at or below the 85th percentile speed. For example, if the 85th percentile speed is 48 mph, the basic speed limit is 45 mph. If the 85th percentile speed is 50 mph, the basic speed limit is 50 mph.

Collision History

Reported collisions are reviewed for each street segment to determine if there is a higher than average rate of collisions. A segment that has an above-average collision rate typically suggests conditions that are not readily apparent to motorists.

A summary of the collision rates for the 18 surveyed street segments is provided in Appendix B.

Conditions Not Readily Apparent To Motorists

Each street segment is field inspected to identify roadway conditions that may not be readily apparent to motorists. A determination is made whether any conditions are significant and warrant the recommendation of the speed limit lower than 5 mph below the basic speed limit. It is important to note that the State of California recommends exercising great care when establishing speed limits lower than 5 mph below the 85th percentile speed.

SURVEY CONDITIONS

SURVEY LOCATIONS

The procedures described below describe the criteria and methods used to survey selected streets within the City of Rolling Hills Estates. The specific location of the radar speed survey for each street segment was selected after considering the following:

1. Minimum stop sign and traffic signal influence.
2. Minimum visibility restrictions.
3. Non-congested traffic flow away from intersections and driveways.
4. Minimum influence from curves or other roadway conditions that would affect the normal operation of a vehicle.

DATA COLLECTION

Data of existing conditions was obtained including prevailing speed of vehicles, traffic collisions, visibility restrictions, and roadway conditions within the community. Speed data and field reviews were conducted at 18 locations during the month of March 2004.

Speed Data

Radar speed measurements were conducted at 18 locations during March. All surveys were conducted in good weather conditions, during off-peak hours on weekdays. The radar unit was operated from an unmarked vehicle to minimize any influence on driver behavior. Typically, a minimum sample size of 100 vehicles or the total samples during a maximum period of 2 hours were obtained for each segment. Traffic speeds in both directions were recorded for individual segments and separate surveys were made for divided roadways.

Collision Data

Collision data was obtained from the City's SWITRS electronic collision database. For this study, collision data was used from the latest 3 years of reported accidents from January 1, 1999 to December 31, 2001. The collision rates for the 15 segments are expressed in accidents per million vehicle miles (A/MVM). To calculate these rates, 24-hour traffic volumes were collected for each street segment. This information was then entered into the following formula to determine the collision rate:

$$R = \frac{Ax1{,}000{,}000}{tx365\frac{days}{year}xlxv}$$

A = Number of midblock collisions over time period
R = Collision Rate (accidents/million vehicle miles)
t = Time Period Covered (in years)
l = Length of Segment (miles)
v = Traffic Volume (average daily traffic)

The segment collision rate was then compared to the average statewide collision rate.

Field Review Data

A field review was conducted for each of the selected street segments in the City with consideration for the following factors:

1. Street width and alignment (design speed);
2. Pedestrian activity and traffic flow characteristics;
3. Number of lanes and other channelization and striping patterns;
4. Frequency of intersections, driveways, and on-street parking;
5. Location of stop signs and other regulatory traffic control devices;
6. Visibility obstructions;
7. Land use and proximity to schools;
8. Pedestrian and bicycle usage;
9. Uniformity with existing speed zones and those in adjacent jurisdictions; and
10. Any other unusual condition not readily apparent to the driver.

CRITERIA

Survey data was complied and analyzed to determine the recommended speed limit in accordance with several criteria contained in the Caltrans Traffic Manual. Some of the criteria used are:

A. The critical speed or 85th percentile speed is that speed at or below which 85 percent of the traffic is moving. This speed is the baseline value in determining what the majority of drivers believe is safe and reasonable. Speed limits set higher than the critical speed are not considered reasonable and safe. Speed limits set lower than the critical speed make a large number of reasonable drivers "unlawful," and do not facilitate the orderly flow of traffic.

B. The 10 mile per hour (mph) pace speed is the 10 mph increment that contains the highest percentage of vehicles. It is a measure of the dispersion of speeds across the range of the samples surveyed. An accepted practice is to keep the speed limit within the 10 mph pace while considering the critical speed and other factors that might require a speed lower than the critical speed.

C. The collision rate for each street segment is compared to average collision rates that can be reasonably expected to occur on streets and highways in other jurisdictions, in proportion to the volume of traffic per lane mile. These average collision rates have been developed by the State of California and are considered reasonable for use in the City of Rolling Hills Estates.

RESULTS AND RECOMMENDATIONS

The Engineering and Traffic Survey Forms, presented in Appendix A, illustrate results of a thorough evaluation of the available data and recommend a speed limit for each street segment surveyed. A complete summary of all recommendations is shown in Table 2. In each case, the recommended speed limit was consistent with the prevailing behavior as demonstrated by the radar speed measurements. Typically, a speed limit in the upper range of the 10-mile pace was selected unless an accident rate significantly higher than expected was discovered or roadway conditions not readily apparent to the driver were identified. Any segments with recommended speed limits greater than 5 mph below the critical speed are fully explained later in this report.

The Legislature, in adopting Section 22358.5 of the California Vehicle Code (CVC), has made it clear that physical conditions, such as width, curvature, grade and surface conditions, or any other condition readily apparent to a driver, in the absence of other factors, would not be the basis for special downward speed zoning. In these cases, the basic speed law (CVC Section 22350) is sufficient to regulate such conditions.

The recommendations contained in this Report are intended to establish prima facie speed limits. They are not intended to be absolute for all prevailing conditions. All prima facie speed violations are actually violations of the basic speed law (Section 22350 of California Vehicle Code). This statute states that a person shall not drive a vehicle at a speed greater than is safe having regard for traffic, roadway, and weather conditions. A prima facie limit is intended to establish a maximum safe speed under normal conditions.

Table 2
Summary of Recommendations

No.	Street	From	To	Posted Speed Limit	Critical Speed	Recommended Speed Limit	Comments
1	CRENSHAW BLVD	PALOS VERDES DR N	NORTH CITY LIMIT	45	53	45	*
2	CRENSHAW BLVD	INDIAN PEAK ROAD	SILVER SPUR ROAD	45	47	45	1ST INCREMENT BELOW 85TH
3	DEEP VALLEY DRIVE	DRY BANK DRIVE	ROXCOVE DRIVE	25	30	25	*
4	DEEP VALLEY DRIVE	ROXCOVE DRIVE	SILVER SPUR ROAD	25	31	25	*
5	HAWTHORNE BLVD	INDIAN PEAK ROAD	SILVER SPUR ROAD	35	34	35	INCREMENT CLOSEST TO 85TH
6	HAWTHORNE BLVD	SOUTH CITY LIMIT	PALOS VERDES DR N	45	53	45	*
7	HAWTHORNE BLVD	PALOS VERDES DR N	NORTH CITY LIMIT	45	52	45	*
8	HIGHRIDGE ROAD	CREST ROAD	CRESTRIDGE ROAD	35	44	35	*
9	HIGHRIDGE ROAD	CRESTRIDGE ROAD	NORTH CITY LIMIT	35	40	35	*
10	INDIAN PEAK ROAD	CRENSHAW BLVD	CROSSFIELD DRIVE	40	46	40	*
11	INDIAN PEAK ROAD	CROSSFIELD DRIVE	HAWTHORNE BLVD	40	39	40	INCREMENT CLOSEST TO 85TH
12	SILVER SPUR ROAD	HAWTHORNE BLVD	DRY BANK DRIVE	35	38	35	1ST INCREMENT BELOW 85TH
13	SILVER SPUR ROAD	DRY BANK DRIVE	CRENSHAW BLVD	35	44	35	*
14	PALOS VERDES DR E	SOUTH CITY LIMIT	PALOS VERDES DR N	40	46	40	*
15	PALOS VERDES DR E	PALOS VERDES DR N	NORTH CITY LIMIT	40	42	40	1ST INCREMENT BELOW 85TH

* See "Segments with Special Conditions" Section for Comments

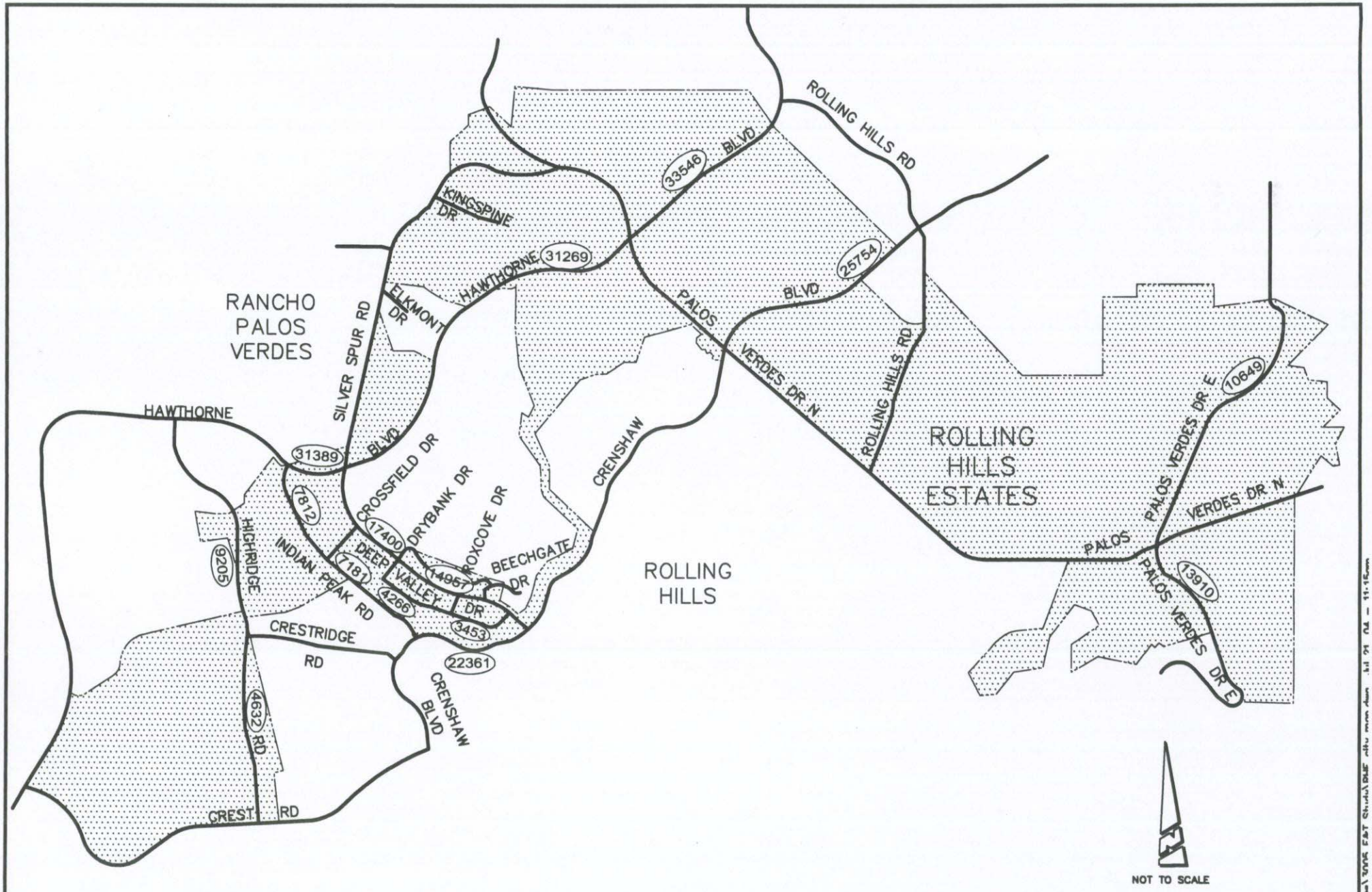

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FIGURE 1

CITY OF ROLLING HILLS ESTATES
ENGINEERING & TRAFFIC SURVEY
2004 AVERAGE DAILY TRAFFIC

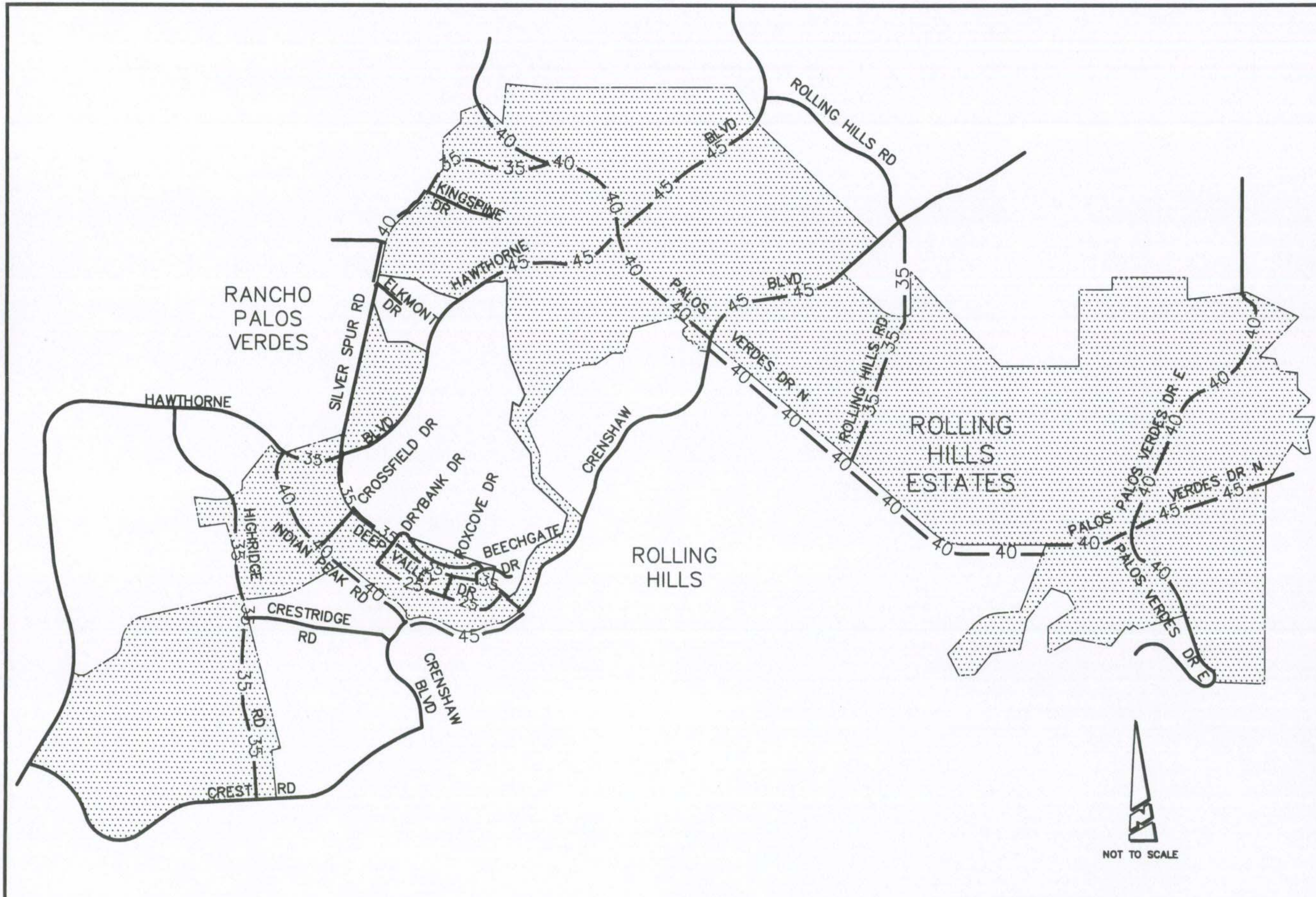

FIGURE 2

WILLDAN
SERVING PUBLIC AGENCIES
13191 CROSSROADS PARKWAY NORTH SUITE 405
INDUSTRY, CA 91746-3497

CITY OF ROLLING HILLS ESTATES
ENGINEERING & TRAFFIC SURVEY
2004 SPEED ZONES

SEGMENTS WITH SPECIAL CONDITIONS

The following segments surveyed had recommended speed limits that were 5 miles per hour (mph) or more below the critical speed due to conditions not readily apparent to the driver. Each segment is discussed below.

Segment #1 – Crenshaw Blvd – Palos Verdes Drive North to North City Limit

This segment is currently posted at 45 mph and has three through lanes in each direction with an ADT of 25,754 vehicles per day. The adjacent land use is rural, fronting & non-fronting residential, school zone,. and commercial properties. During the field review, light to moderate pedestrian activity from the adjacent school as well as moderate truck traffic were observed. The critical speed is 53 mph and would normally justify a 50 mph posted speed limit. However, due to the high collision rates, as well as the blind driveways and the school pedestrian traffic that may not be readily apparent to unfamiliar drivers as well as to maintain consistency with the posted speed limit in the adjacent segment to the south, the lower speed limit is prudent. It is recommended that the speed limit remain at 45 mph for the above reasons.

Segment #3 – Deep Valley Drive – Dry Bank Drive to Roxcove Drive

This segment is currently posted at 25 mph and has one through lane in each direction with an ADT of 4,266 vehicles per day. The adjacent land use is commercial properties. During the field review, heavy pedestrian traffic surrounding the adjacent shops and a public library were observed. The critical speed is 30 mph and would normally justify a 30 mph posted speed limit. However, due to the shopping and library pedestrian traffic, as well as the blind driveways that may not be apparent to unfamiliar drivers, the lower speed limit is prudent. It is recommended that the speed limit remain at 25 mph for the above reasons.

Segment #4 – Deep Valley Drive – Roxcove Drive to Silver Spur Road

This segment is currently posted at 25 mph and has one through lane in each direction with an ADT of 3,453 vehicles per day. The adjacent land use is commercial properties. During the field review, heavy pedestrian activity from the adjacent shops and post office, as well as unexpected blind driveways were observed that may not be readily apparent to the driver The critical speed is 31 mph and would normally justify a 30 mph posted speed limit. However, due to the shopping and postal pedestrian traffic, as well as the blind driveways that may not be apparent to unfamiliar drivers, the lower speed limit is prudent. It is recommended that the speed limit remain at 25 mph for the above reasons.

Segment #6 – Hawthorne Blvd – South City Limit to Palos Verdes Drive North

This segment is currently posted at 45 mph and has two through lanes in each direction with an ADT of 31,269 vehicles per day. The adjacent land use is undeveloped & non-fronting residential properties. During the field review, a steep downgrade with a runaway truck ramp was observed. The critical speed is 53 mph and would normally justify a 50 mph posted speed limit. However, due to the steep decline as well as to maintain consistency with the posted speed limit in the adjacent segment, the lower speed limit is prudent. It is recommended that the speed limit remain at 45 mph for the above reasons.

Segment #7 – Hawthorne Blvd – Palos Verdes Drive North to North City Limit

This segment is currently posted at 45 mph and has two through lanes in each direction with an ADT of 33,546 vehicles per day. The adjacent land use is equestrian, botanical gardens, undeveloped & non-fronting residential properties. During the field review, a steep downgrade and a park zone was observed. The critical speed is 52 mph and would normally justify a 50 mph posted speed limit. However, due to the steep decline as well as to maintain consistency with the posted speed limit in the adjacent segment, the lower speed limit is prudent. It is recommended that the speed limit remain at 45 mph for the above reasons.

Segment #8 – Highridge Road - Crest Road to Crestridge Road

This segment is currently posted at 35 mph and has two through lanes in each direction with an ADT of 4,632 vehicles per day. The adjacent land use is non-fronting residential properties with school and park zones. During the field review, a concrete path was observed on the west side of the roadway for pedestrians and bicycles. The critical speed is 44 mph and would normally justify a 40 mph posted speed limit. However, due to the proximity to school and park uses, pedestrian and bicycle traffic as well as to maintain consistency with the posted speed limit in the adjacent segment, the lower speed limit is prudent. It is recommended that the speed remain at 35 mph for the above reasons.

Segment #9 – Highridge Road – Crestridge Road to North City Limit

This segment is currently posted at 35 mph and has two through lanes in each direction with an ADT of 9,205 vehicles per day. The adjacent land use is non-fronting residential properties. During the field review, a park zone was observed as well as a concrete path for pedestrians and bicycles on the west side of the roadway. The critical speed is 40 mph and would normally justify a 40 mph posted speed limit. However, due to the proximity to school and park uses, pedestrian and bicycle traffic as well as to maintain consistency with the posted speed limit in the adjacent segment, the lower speed limit is prudent. It is recommended that the speed limit be remain at 35 mph for the above reasons.

Segment #10 – Indian Peak Road – Crenshaw Blvd to Crossfield Drive

This segment is currently posted at 40 mph and has one through lane in each direction with an ADT of 7,181 vehicles per day. The adjacent land use is commercial and undeveloped properties. During the field review, angled on-street parking was observed that requires drivers to back into the through lane to exit the parking spaces. The critical speed is 46 mph and would normally justify a 45 mph posted speed limit. However, due to the increased caution needed to back out of the angled parking spaces, the lower speed limit is prudent. It is recommended that the speed limit remain at 40 mph for the above reasons.

Segment #13 – Silver Spur Road – Dry Bank Drive to Crenshaw Blvd

This segment is currently posted at 35 mph and has two through lanes in each direction with an ADT of 14,957 vehicles per day. The adjacent land use is commercial property. During the field review, a moderate pedestrian traffic, the existence of a landscaped divider, and several driveways were observed. The critical speed is 44 mph and would normally justify a 40 mph posted speed limit. However, due to high pedestrian use, numerous blind driveways, uncontrolled turning movements as well as to maintain consistency with the posted speed limit in the adjacent segment, the lower speed limit is prudent. It is recommended that the speed limit remain at 35 mph for the above reasons.

Segment #14 – Palos Verdes Drive Ea. – South City Limit to Palos Verdes Drive No.

This segment is currently posted at 40 mph and has one to two through lanes in each direction with an ADT of 13,910 vehicles per day. The adjacent land use is rural, fronting residential properties. During the field review, a winding roadway with dirt shoulders, and blind driveways were observed that may not be readily apparent to the driver. The critical speed is 46 mph and would normally justify a 45 mph posted speed limit. However, due to the blind driveways and the narrow road with reduced visibility that may not be apparent to unfamiliar drivers, the lower speed limit is prudent. It is recommended that the speed limit remain at 40 mph for the above reasons.

APPLICABLE SECTIONS OF CALIFORNIA VEHICLE CODE

SECTION 1. Section 627 of the Vehicle Code is amended to read:

Section 627.

(a) *"Engineering and traffic survey,"* as used in this code, means a survey of highway and traffic conditions in accordance with methods determined by the Department of Transportation for use by state and local authorities.

(b) An engineering and traffic survey shall include, among other requirements deemed necessary by the department, consideration of all of the following:

(1) Prevailing speeds as determined by traffic engineering measurements.
(2) Accident records.
(3) Highway, traffic, and roadside conditions not readily apparent to the driver.

(c) When conducting an engineering and traffic survey, local authorities, in addition to the factors set forth in paragraphs (1) to (3), inclusive, of subdivision (b) may consider all of the following:

(1) Residential density.
(2) Pedestrian and bicyclist safety.

Basic Speed Law

22350. No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of, the highway, and in no event at a speed which endangers the safety of persons or property.

Speed Law Violations

Section 22351.

(a) The speed of any vehicle upon a highway not in excess of the limits specified in Section 22352 or established as authorized in this code is lawful unless clearly proved to be in violation of the basic speed law.

(b) The speed of any vehicle upon a highway in excess of the prima facie speed limits in Section 22352 or established as authorized in this code is prima facie unlawful unless the defendant establishes by competent evidence that the speed in excess of said limits did not constitute a violation of the basic speed law at the time, place and under the conditions then existing.

Prima Facie Speed Limits

Section 22352.

(a) The prima facie limits are as follows and shall be applicable unless changed as authorized in this code and, if so changed, only when signs have been erected giving notice thereof:

(1) Fifteen mph

A) When traversing a railway grade crossing, if during the last 100 feet of the approach to the crossing the driver does not have clear and unobstructed view of the crossing and of any traffic on the railway for a distance of 400 feet in both directions along such railway. This subdivision does not apply in the case of any railway grade crossing where a human flagman is on duty or a clearly visible electrical or mechanical railway crossing signal device is installed but does not then indicate the immediate approach of a railway train or car.

B) When traversing any intersection of highways, if during the last 100 feet of his approach to the intersection, the driver does not have a clear and unobstructed view of the intersection and of any traffic upon all of the highways entering the intersection for a distance of 100 feet along all such highways, except at an intersection protected by stop signs or yield right-of-way signs or controlled by official traffic control signals.

C) On any alley.

(2) Twenty-five mph

A) On any highway other than a state highway, in any business or residence district unless a different speed is determined by local authority under procedures set forth in this code.

(B) When approaching or passing a school building or the grounds thereof, contiguous to a highway and posted with a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. The prima facie limit shall also apply when approaching or passing any school grounds which are not separated from the highway by a fence, gate or other physical barrier while the grounds are in use by children and the highway is posted with a standard "SCHOOL" warning sign. For purposes of this subparagraph, standard "SCHOOL" warning signs may be placed at any distance up to 500 feet away from school grounds.

(C) When passing a senior center or other facility primarily used by senior citizens, contiguous to a street other than a state highway and posted with a standard "SENIOR" warning sign. A local authority is not required to erect any sign pursuant to this paragraph until donations from private sources covering those costs are received and the local agency makes a determination that the proposed signing should be implemented. A local authority may, however, utilize any other funds available to it to pay for the erection of those signs.

(3) Thirty-five miles per hour on any highway, other than a state highway, in any moderate density residential district, as defined in subdivision (b) of Section 22352.1, when posted with a sign giving notice of that speed limit, unless a different speed is determined by local authority under procedures set forth in this code. (applies to Town of Apple Valley only)

Increase of Local Limits

Section 22357.

(a) Whenever a local authority determines upon the basis of an engineering and traffic survey that a speed greater than 25 miles per hour (mph) would facilitate the orderly movement of vehicular traffic and would be reasonable and safe upon any street other than a state highway otherwise subject to a prima facie limit of 25 mph, the local authority may by ordinance determine and declare a prima facie speed limit of 30, 35, 40, 45, 50, 55 or 60 mph or a maximum speed limit of 65 mph, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe. The declared prima facie or maximum speed limit shall be effective when appropriate signs giving notice thereof are erected upon the street and shall not thereafter be revised except upon the basis of an engineering and traffic survey. This section does not apply to any 25 mph prima facie limit, which is applicable when passing a school building or the grounds thereof or when passing a senior center or other facility primarily used by senior citizens.

(b) This section shall become operative on the date specified in subdivision (c) of Section 22366.

If over 55 mph Maximum Speed for Designated Vehicles

Section 22406.

(a) No person may drive any of the following vehicles on a highway at a speed in excess of 55 mph:

(1) A motortruck or truck tractor having three or more axles or any motortruck or truck tractor drawing any other vehicle.
(2) A passenger vehicle or bus drawing any other vehicle.
(3) A school bus transporting any school pupil.
(4) A farm labor vehicle when transporting passengers.
(5) A vehicle transporting explosives.
(6) A trailer bus, as defined in Section 636.

(b) Any person who operates a commercial motor vehicle, as defined in Section 15210, upon a highway at a speed exceeding a maximum speed limit established under this code by 15 mph or more, is guilty of a misdemeanor. A violation of this subdivision shall be considered a "serious traffic violation," as defined in subdivision (i) of Section 15210, and shall be subject to the sanctions provided under Section 15306 or 15308, in addition to any other penalty provided by law.

Downward Speed Zoning

Section 22358.5.

It is the intent of the Legislature that physical conditions such as width, curvature, grade and surface conditions, or any other condition readily apparent to a driver, in the absence of other factors, would not require special downward speed zoning, as the basic rule of Section 22350 is sufficient regulation as to such conditions.

Boundary Line Streets

Section 22359.

With respect to boundary line streets and highways where portions thereof are within different jurisdictions, no ordinance adopted under Sections 22357 and 22358 shall be effective as to any such portion until all authorities having jurisdiction of the portions of the street concerned have approved the same. This section shall not apply in the case of boundary line streets consisting of separate roadways within different jurisdictions.

Speedtrap Prohibition

Section 40801.

No peace officer or other person shall use a speedtrap in arresting, or participating or assisting in the arrest of, any person for any alleged violation of this code nor shall any speedtrap be used in securing evidence as to the speed of any vehicle for the purpose of an arrest or prosecution under this code.

Speedtrap

Section 40802.

(a) A "speedtrap" is either of the following:

(1) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

(2) A particular section of a highway with a prima facie speed limit that is provided by this code or by local ordinance under subparagraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within 5 years prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving object. This paragraph does not apply to a local street, road, or school zone.

(b)(1) For purposes of this section, a local street or road is defined by the latest functional usage and federal-aid system maps submitted to the federal Highway Administration, except that when these maps have not been submitted, or when the street or road is not shown on the maps, a "local street or road" means a street or road that primarily provides access to abutting residential property and meets the following three conditions:

(A) Roadway width of not more than 40 feet.

(B) Not more than one-half mile of a uninterrupted length. Interruptions shall include official traffic control devices as defined in Section 445.

(C) Not more than one traffic lane in each direction.

(2) For purposes of this section "School Zone" means that area of road contiguous to a school building or the grounds thereof, and on which is posted a standard "SCHOOL" warning sign, while children are going to or leaving the school wither during school hours or during the noon recess period.

(c)(1) When all the following criteria are met, paragraph (2) of this subdivision shall be applicable and subdivision (a) shall not be applicable:

(A) When radar is used, the officer issuing the citation has successfully completed a radar operator course of not less than 24 hours on the use of police traffic radar, and the course was approved and certified by the Commission on Peace Officer Standards and Training.

(B) When laser or any other electronic device is used to measure the speed of moving objects, the officer issuing the notice to appear has successfully completed the training required in subparagraph (A) and an additional training course of not less than 2 hours approved and certified by the Commission on Peace Officer Standards and Training.

(C)(i) The prosecution proved that the officer complied with subparagraphs (A) and (B) and that an engineering and traffic survey has been conducted in accordance with subparagraph (B) of paragraph (2). The prosecution proved that, prior to the officer issuing the notice to appear, the officer establish that the radar, laser, or other electronic device conformed to the requirements of subparagraph (D).

(ii) The prosecution proved the speed of the accused was unsafe for the condition present at the time of alleged violation unless the citation was for a violation of Section 22349, 22356, or 22406.

(D) The radar, laser, or other electronic device used to measure the speed of the accused meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration, and has been calibrated within the 3 years prior to the date of the alleged violation by an independent certified laser or radar repair and testing or calibration facility.

(2) A "speedtrap" is either of the following:

(A) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

(B)(i) A particular section of a highway or state highway with a prima facie speed limit that is provided by this code or by local ordinance under subparagraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within one of the following time periods, prior to the date of the alleged violation, and enforcement of speed limit involves the use of radar or any other electronic device that measures the speed of moving objects:

(I) Except as specified in subclause (II), 7 years.

(II) If an engineering and traffic survey was conducted more than 7 years prior to the date of the alleged violation, and a registered engineer evaluates the

section of the highway and determines that no significant changes in roadway or traffic condition have occurred including, but not limited to, changes in adjoining property or land use, roadway width, or traffic volume, 10 years.

(ii) This subparagraph does not apply to a local street, road, or school zone.

Speedtrap Evidence

Section 40803.

(a) No evidence as to the speed of a vehicle upon a highway shall be admitted in any court upon the trial of any person in any prosecution under this code upon a charge involving the speed of a vehicle when the evidence is based upon or obtained from or by the maintenance or use of a speedtrap.

(b) In any prosecution under this code of a charge involving the speed of a vehicle, where enforcement involves the use of radar or other electronic devices which measure the speed of moving objects, the prosecution shall establish, as part of its prima facie case, that the evidence or testimony presented is not based upon a speedtrap as defined in paragraph (2) of subdivision (a) of Section 40802.

(c) When a traffic and engineering survey is required pursuant to paragraph (2) of subdivision (a) of Section 40802, evidence that a traffic and engineering survey has been conducted within 5 years of the date of the alleged violation or evidence that the offense was committed on a local street or road as defined in paragraph (2) of subdivision (a) of Section 40802 shall constitute a prima facie case that the evidence or testimony is not based upon a speedtrap as defined in paragraph (2) subdivision (a) of Section 40802.

APPENDIX A
Street Segment Data

CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET CRENSHAW BLVD **CERTIFICATION DATE**

FROM PALOS VERDES DR N **TO** NORTH CITY LIMIT

SPEED FACTORS

Date of Speed Survey	4/8/2004	**Posted Speed Limit**	45 mph
Time of Speed Survey	10:15	**Speed Justification**	
50th Percentile Speed (Mean Speed)	49 mph	25MPH SCHOOL ZONE, MATCH ADJACENT SEGMENT	
85th Percentile Speed	53 mph		
10 mph Pace Speed	45-54	**Recommended Speed Limit**	45 mph
Percentage of Vehicles in Pace	75		
Number of Survey Samples	104		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	5
Annual Collision Rate	2.5 accidents/year
Collisions per Million Vehicle Miles	0.364

TRAFFIC FACTORS

Average Daily Traffic	25,754	**Date Counted**	5/7/2004
Number of Lanes	6 LANES, +LT LANES, SOME MEDIANS		
Type of Traffic Control	T.S. @ ROLLING HILLS RD, PVDN		
Crosswalks?	@ ALL T.S.		
Pedestrian Traffic	MODERATE		
Truck Traffic	MODERATE		
On-Street Parking	NSAT, BOTH SIDES		
Sidwalks?	BOTH SIDES PORTIONS		
Driveways?	SOME		

ROADWAY FACTORS

Length of Segment	0.730 miles
Width	83.5 feet
Vertical Curve?	STEEP DOWNGRADE N/B
Horizontal Curve?	LARGE RADIUS CURVES
Visibility	FAIR, EXCEPT SOME BLIND DRIVEWAYS
Roadway Conditions	GOOD, NEW OVERLAY
Lighting	E/S,N/O & W/S,S/O HID. LN
Adjacent Land Use	COMM'L, UNDEV, FRONT'G & NON-FRONT'G RES, SCHOOL

Field Study By MH **Checked By** EHZ

CERTIFICATION: I, Erik Zandvliet, do hereby certify that this Engineering and Traffic Survey within the City of Rolling Hills Estates was performed under my supervision and is accurate and complete. I certify that City staff is experienced in performing surveys of this type. I am duly registered in the State of California as a Professional Engineer (Traffic).

Erik Zandvliet 7/23/04 TE 1775

Erik Zandvliet **Date** **State Registration Number**

CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET CRENSHAW BLVD **CERTIFICATION DATE**

FROM INDIAN PEAK ROAD **TO** SILVER SPUR ROAD

SPEED FACTORS

Date of Speed Survey	4/8/2004	**Posted Speed Limit**	45 mph
Time of Speed Survey	11:10	**Speed Justification**	
50th Percentile Speed (Mean Speed)	42 mph	1ST INCREMENT BELOW 85TH	
85th Percentile Speed	47 mph		
10 mph Pace Speed	38-47	**Recommended Speed Limit**	45 mph
Percentage of Vehicles in Pace	67		
Number of Survey Samples	103		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	0
Annual Collision Rate	0 accidents/year
Collisions per Million Vehicle Miles	0.000

TRAFFIC FACTORS

Average Daily Traffic	22,361	**Date Counted**	5/6/2004
Number of Lanes	4 LANES, DIVIDED BY K-RAIL		
Type of Traffic Control	T.S. @ INDIAN PEAK, SILVER SPUR		
Crosswalks?	@ SILVER SPUR RD.		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	NSAT W/S, NPAT E/S		
Sidwalks?	E/S ONLY, NONE W/S		
Driveways?	NONE		

ROADWAY FACTORS

Length of Segment	0.380 miles
Width	83.5 feet
Vertical Curve?	STEEP DOWNGRADE N/B
Horizontal Curve?	MODERATE RADIUS CURVES
Visibility	FAIR
Roadway Conditions	GOOD
Lighting	@ SILVER SPUR RD INT ONLY
Adjacent Land Use	UNDEVELOPED, NON-FRONT'G RESIDENTIAL, NURSERY SCHO

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 7/23/04

Erik Zandvliet **Date** **TE 1775** **State Registration Number**

CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET DEEP VALLEY DRIVE **CERTIFICATION DATE**

FROM DRY BANK DRIVE **TO** ROXCOVE DRIVE

SPEED FACTORS

Date of Speed Survey	4/8/2004	**Posted Speed Limit**	25 mph
Time of Speed Survey	16:45	**Speed Justification**	
50th Percentile Speed (Mean Speed)	26 mph	BLIND DRIVEWAYS,	
85th Percentile Speed	30 mph	LIBRARY/BUSINESS PEDESTRIAN	
10 mph Pace Speed	22-31	**Recommended Speed Limit**	25 mph
Percentage of Vehicles in Pace	85		
Number of Survey Samples	103		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	1
Annual Collision Rate	0.5 accidents/year
Collisions per Million Vehicle Miles	1.235

TRAFFIC FACTORS

Average Daily Traffic	4,266	**Date Counted**	5/6/2004
Number of Lanes	2 LANES, UNDIVIDED		
Type of Traffic Control	YIELD @ DRY BANK		
Crosswalks?	@ ROXCOVE, MDWAY, DRY BNK		
Pedestrian Traffic	HEAVY		
Truck Traffic	NONE		
On-Street Parking	ON STREET, TIME LIMIT		
Sidwalks?	BOTH SIDES		
Driveways?	MANY		

ROADWAY FACTORS

Length of Segment	0.260 miles
Width	34-40 feet
Vertical Curve?	MODERATE DOWNGRADE E/B
Horizontal Curve?	SLIGHT CURVE
Visibility	FAIR
Roadway Conditions	FAIR
Lighting	AT INTERSECTION, MIDBLOCK
Adjacent Land Use	COMMERCIAL BOTH SIDES

Field Study By MH **Checked By** EHZ

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CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET DEEP VALLEY DRIVE **CERTIFICATION DATE**

FROM ROXCOVE DRIVE **TO** SILVER SPUR ROAD

SPEED FACTORS

Date of Speed Survey	4/8/2004	**Posted Speed Limit**	25 mph
Time of Speed Survey	16:00	**Speed Justification**	
50th Percentile Speed (Mean Speed)	28 mph	BLIND DRIVEWAYS, BUSINESS	
85th Percentile Speed	31 mph	PEDESTRIAN CROSSINGS	
10 mph Pace Speed	24-33	**Recommended Speed Limit**	25 mph
Percentage of Vehicles in Pace	86		
Number of Survey Samples	100		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	3
Annual Collision Rate	1.5 accidents/year
Collisions per Million Vehicle Miles	4.959

TRAFFIC FACTORS

Average Daily Traffic	3,453	**Date Counted**	5/6/2004
Number of Lanes	2 LANES, UNDIVIDED		
Type of Traffic Control	NONE		
Crosswalks?	@ ROXCOVE		
Pedestrian Traffic	HEAVY		
Truck Traffic	NONE		
On-Street Parking	ON STREET, TIME LIMIT		
Sidwalks?	BOTH SIDES		
Driveways?	MANY		

ROADWAY FACTORS

Length of Segment	0.240 miles
Width	40 feet
Vertical Curve?	NONE
Horizontal Curve?	SHARP CURVE EAST END
Visibility	GOOD
Roadway Conditions	FAIR
Lighting	AT INTERSECTION, MIDBLOCK
Adjacent Land Use	COMMERCIAL BOTH SIDES

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Erik Zandvliet 7/23/04

Erik Zandvliet **Date** **TE 1775**
State Registration Number

CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET HAWTHORNE BLVD **CERTIFICATION DATE**

FROM INDIAN PEAK ROAD **TO** SILVER SPUR ROAD

SPEED FACTORS

Date of Speed Survey	4/14/2004	**Posted Speed Limit**	35 mph
Time of Speed Survey	10:35	**Speed Justification**	
50th Percentile Speed (Mean Speed)	30 mph	CLOSEST TO 85TH	
85th Percentile Speed	34 mph		
10 mph Pace Speed	25-34	**Recommended Speed Limit**	35 mph
Percentage of Vehicles in Pace	84		
Number of Survey Samples	100		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	11
Annual Collision Rate	5.5 accidents/year
Collisions per Million Vehicle Miles	2.182

TRAFFIC FACTORS

Average Daily Traffic	31,389	**Date Counted**	5/7/2004
Number of Lanes	4 LANES, WITH MEDIAN AND LT LANES		
Type of Traffic Control	T.S. @ INDIAN PEAK, SILVER SPUR		
Crosswalks?	@ ALL T.S.		
Pedestrian Traffic	HEAVY		
Truck Traffic	MODERATE		
On-Street Parking	ON STREET, TIME LIMIT		
Sidwalks?	BOTH SIDES		
Driveways?	MANY		

ROADWAY FACTORS

Length of Segment	0.220 miles
Width	80 feet
Vertical Curve?	NONE
Horizontal Curve?	LARGE RADIUS CURVE
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	ON SOUTH SIDE ONLY
Adjacent Land Use	COMMERCIAL, HIGH SCHOOL NEARBY

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 7/23/04

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CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET HAWTHORNE BLVD **CERTIFICATION DATE**

FROM SOUTH CITY LIMIT **TO** PALOS VERDES DR N

SPEED FACTORS

Date of Speed Survey	4/14/2004	**Posted Speed Limit**	45 mph
Time of Speed Survey	09:25	**Speed Justification**	
50th Percentile Speed (Mean Speed)	46 mph	STEEP GRADE, MATCH ADJACENT SEGMENT	
85th Percentile Speed	53 mph		
10 mph Pace Speed	44-53	**Recommended Speed Limit**	45 mph
Percentage of Vehicles in Pace	61		
Number of Survey Samples	107		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	5
Annual Collision Rate	2.5 accidents/year
Collisions per Million Vehicle Miles	0.359

TRAFFIC FACTORS

Average Daily Traffic	31,269	**Date Counted**	5/7/2004
Number of Lanes	4 LANES, WITH MEDIAN AND LT LANES		
Type of Traffic Control	T.S. @ PALOS VERDES DR N		
Crosswalks?	@ PALOS VERDES DR N		
Pedestrian Traffic	NONE		
Truck Traffic	MODERATE		
On-Street Parking	ON STREET, TIME LIMIT, RED CB		
Sidwalks?	NONE		
Driveways?	FEW		

ROADWAY FACTORS

Length of Segment	0.610 miles
Width	80 feet
Vertical Curve?	STEEP DOWNGRADE N/B
Horizontal Curve?	LARGE RADIUS CURVES
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	AT PVDN INTERSECTION ONLY
Adjacent Land Use	UNDEVELOPED SUBURBAN

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 7/23/04 TE 1775

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CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET HAWTHORNE BLVD **CERTIFICATION DATE**

FROM PALOS VERDES DR N **TO** NORTH CITY LIMIT

SPEED FACTORS

Date of Speed Survey	4/14/2004	**Posted Speed Limit**	45 mph
Time of Speed Survey	08:20	**Speed Justification**	
50th Percentile Speed (Mean Speed)	48 mph	STEEP DECLINE, MATCH ADJACENT SEGMENT	
85th Percentile Speed	52 mph		
10 mph Pace Speed	43-52	**Recommended Speed Limit**	45 mph
Percentage of Vehicles in Pace	71		
Number of Survey Samples	119		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	8
Annual Collision Rate	4 accidents/year
Collisions per Million Vehicle Miles	0.510

TRAFFIC FACTORS

Average Daily Traffic	33,546	**Date Counted**	5/7/2004
Number of Lanes	4 LANES, WITH MEDIAN AND LT LANES		
Type of Traffic Control	T.S. @ ROLLING HILLS RD, PVDN		
Crosswalks?	@ ALL T.S.		
Pedestrian Traffic	LIGHT		
Truck Traffic	MODERATE, 25MPH SPEED LMT		
On-Street Parking	ON STREET		
Sidwalks?	W/S N OF HOWLETT PARK		
Driveways?	FEW		

ROADWAY FACTORS

Length of Segment	0.640 miles
Width	80 feet
Vertical Curve?	STEEP DOWNGRADE N/B
Horizontal Curve?	NONE
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	AT INTERSECTIONS ONLY
Adjacent Land Use	SUBURB, NON-FRONTING RESIDENTIAL

Field Study By MH **Checked By** EHZ

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CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET HIGHRIDGE ROAD **CERTIFICATION DATE**

FROM CREST ROAD **TO** CRESTRIDGE ROAD

SPEED FACTORS

Date of Speed Survey	6/2/2004	**Posted Speed Limit**	35 mph
Time of Speed Survey	17:00	**Speed Justification**	
50th Percentile Speed (Mean Speed)	39 mph	SCHOOL/PARK PEDS AND BIKES, MATCH ADJ. SEGMENT	
85th Percentile Speed	44 mph		
10 mph Pace Speed	35-44	**Recommended Speed Limit**	35 mph
Percentage of Vehicles in Pace	65		
Number of Survey Samples	106		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	0
Annual Collision Rate	0 accidents/year
Collisions per Million Vehicle Miles	0.000

TRAFFIC FACTORS

Average Daily Traffic	4,632	**Date Counted**	5/6/2004
Number of Lanes	4 LANES, UNDIVIDED, WITH LT LANES		
Type of Traffic Control	T.S. @ CREST; STOP: CRESTRIDGE, WHITLEY COLLINS		
Crosswalks?	@ ALL T.S. AND STOPS		
Pedestrian Traffic	HEAVY		
Truck Traffic	NONE		
On-Street Parking	NSAT; TIM LMT B/S, SCHL LOAD'G		
Sidwalks?	Y E/S; W/S CONC BIKE PATH		
Driveways?	NONE		

ROADWAY FACTORS

Length of Segment	0.640 miles
Width	54 feet
Vertical Curve?	MODERATE DOWNGRADES N-S/B
Horizontal Curve?	NONE
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	SOME @ INTER'S, MIDBLOCK
Adjacent Land Use	NON-FRONTING RESIDENTIAL, SCHOOL, PARK

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 11/23/04 TE 1775

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CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET HIGHRIDGE ROAD **CERTIFICATION DATE**

FROM CRESTRIDGE ROAD **TO** NORTH CITY LIMIT

SPEED FACTORS

Date of Speed Survey	4/14/2004	**Posted Speed Limit**	35 mph
Time of Speed Survey	13:40	**Speed Justification**	
50th Percentile Speed (Mean Speed)	36 mph	SCHOOL/PARK PEDS AND BIKES, MATCH ADJ. SEGMENT	
85th Percentile Speed	40 mph		
10 mph Pace Speed	32-41	**Recommended Speed Limit**	35 mph
Percentage of Vehicles in Pace	79		
Number of Survey Samples	104		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	1
Annual Collision Rate	0.5 accidents/year
Collisions per Million Vehicle Miles	0.354

TRAFFIC FACTORS

Average Daily Traffic	9,205	**Date Counted**	5/7/2004
Number of Lanes	4 LANES, UNDIVIDED, WITH LT LANES		
Type of Traffic Control	STOP @ TERRACE DR, CRESTRIDGE		
Crosswalks?	@ ALL STOPS		
Pedestrian Traffic	MODERATE		
Truck Traffic	NONE		
On-Street Parking	NSAT E/S, TIME LIMIT W/S		
Sidwalks?	Y E/S; W/S CONC BIKE PATH		
Driveways?	NONE		

ROADWAY FACTORS

Length of Segment	0.420 miles
Width	54-82 feet
Vertical Curve?	MODERATE DOWNGRADE S/B
Horizontal Curve?	LARGE RADIUS CURVES
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	SOME @ INTER'S, MIDBLOCK
Adjacent Land Use	NON-FRONTING RESIDENTIAL

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 7/23/04

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CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET INDIAN PEAK ROAD **CERTIFICATION DATE**

FROM CRENSHAW BLVD **TO** CROSSFIELD DRIVE

SPEED FACTORS

Date of Speed Survey	4/8/2004	**Posted Speed Limit**	40 mph
Time of Speed Survey	12:25	**Speed Justification**	
50th Percentile Speed (Mean Speed)	40 mph	ANGLED PARKING BACKING INTO	
85th Percentile Speed	46 mph	STREET, MATCH ADJ. SEGMENT	
10 mph Pace Speed	35-44	**Recommended Speed Limit**	40 mph
Percentage of Vehicles in Pace	70		
Number of Survey Samples	106		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	1
Annual Collision Rate	0.5 accidents/year
Collisions per Million Vehicle Miles	0.454

TRAFFIC FACTORS

Average Daily Traffic	7,181	**Date Counted**	5/7/2004
Number of Lanes	2 LANES, + 2WY LT LANES, SOME MEDIANS		
Type of Traffic Control	T.S. @ CRENSHAW, CROSSFIELD, THEATER PKG LOT		
Crosswalks?	@ ALL T.S.		
Pedestrian Traffic	MODERATE		
Truck Traffic	MODERATE		
On-Street Parking	NSAT SS; ANG'L N/S,E/O CRSSFLD		
Sidwalks?	S/S CONC BIKE; N/S WO PKG		
Driveways?	(1) EACH SIDE		

ROADWAY FACTORS

Length of Segment	0.420 miles
Width	38-60 feet
Vertical Curve?	STEEP DOWNGRADE W/B
Horizontal Curve?	LARGE RADIUS CURVE
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	AT INTERSECTIONS ONLY
Adjacent Land Use	UNDEVELOPED S/S, COMMERCIAL N/S, NURSERY SCHOOL

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 7/23/04 TE 1775

Erik Zandvliet **Date** **State Registration Number**

CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET INDIAN PEAK ROAD **CERTIFICATION DATE**

FROM CROSSFIELD DRIVE **TO** HAWTHORNE BLVD

SPEED FACTORS

Date of Speed Survey	4/8/2004	**Posted Speed Limit**	40 mph
Time of Speed Survey	13:10	**Speed Justification**	
50th Percentile Speed (Mean Speed)	35 mph	CLOSEST TO 85TH	
85th Percentile Speed	39 mph		
10 mph Pace Speed	29-38	**Recommended Speed Limit**	40 mph
Percentage of Vehicles in Pace	83		
Number of Survey Samples	103		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	4
Annual Collision Rate	2 accidents/year
Collisions per Million Vehicle Miles	1.754

TRAFFIC FACTORS

Average Daily Traffic	7,812	**Date Counted**	5/6/2004
Number of Lanes	4 LANES, + 2WY LT LANES		
Type of Traffic Control	T.S. @ CROSSFIELD, HAWTHORNE		
Crosswalks?	@ ALL T.S.		
Pedestrian Traffic	MODERATE		
Truck Traffic	LIGHT		
On-Street Parking	N/S LIMITED, NSAT; S/S NSAT		
Sidwalks?	YES N/S; 500' EO HWTH S/S		
Driveways?	FEW S/S; SEVERAL N/S		

ROADWAY FACTORS

Length of Segment	0.400 miles
Width	60 feet
Vertical Curve?	SLIGHT DOWNGRADE W/B
Horizontal Curve?	SLIGHT CURVE
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	ON SOUTHSIDE ONLY
Adjacent Land Use	UNDEVELOPED S/S, COMMERCIAL N/S

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 7/23/04

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CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET SILVER SPUR ROAD **CERTIFICATION DATE**

FROM HAWTHORNE BLVD **TO** DRY BANK DRIVE

SPEED FACTORS

Date of Speed Survey	4/8/2004	**Posted Speed Limit**	35 mph
Time of Speed Survey	14:10	**Speed Justification**	
50th Percentile Speed (Mean Speed)	34 mph	1ST INCREMENT BELOW 85TH	
85th Percentile Speed	38 mph		
10 mph Pace Speed	29-38	**Recommended Speed Limit**	35 mph
Percentage of Vehicles in Pace	78		
Number of Survey Samples	101		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	1
Annual Collision Rate	0.5 accidents/year
Collisions per Million Vehicle Miles	0.207

TRAFFIC FACTORS

Average Daily Traffic	17,400	**Date Counted**	5/7/2004
Number of Lanes	4 LANES, WITH MEDIAN AND LT LANES		
Type of Traffic Control	T.S. @ CROSSFIELD, PENNINSULA CTR., HAWTHORNE		
Crosswalks?	@ ALL T.S.		
Pedestrian Traffic	MODERATE		
Truck Traffic	LIGHT		
On-Street Parking	ON STREET, TIME LIMIT		
Sidwalks?	BOTH SIDES		
Driveways?	SEVERAL		

ROADWAY FACTORS

Length of Segment	0.380 miles
Width	79 feet
Vertical Curve?	MODERATE DOWNGRADE E/B
Horizontal Curve?	LARGE RADIUS CURVE
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	ON CENTER DIVIDER MEDIAN
Adjacent Land Use	COMMERCIAL BOTH SIDES, HIGH SCHOOL NEARBY

Field Study By MH **Checked By** EHZ

CERTIFICATION: I, Erik Zandvliet, do hereby certify that this Engineering and Traffic Survey within the City of Rolling Hills Estates was performed under my supervision and is accurate and complete. I certify that City staff is experienced in performing surveys of this type. I am duly registered in the State of California as a Professional Engineer (Traffic).

Erik Zandvliet 7/23/04 TE 1775

Erik Zandvliet **Date** **State Registration Number**

CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET SILVER SPUR ROAD **CERTIFICATION DATE**

FROM DRY BANK DRIVE **TO** CRENSHAW BLVD

SPEED FACTORS

Date of Speed Survey	4/8/2004	**Posted Speed Limit**	35 mph
Time of Speed Survey	15:05	**Speed Justification**	
50th Percentile Speed (Mean Speed)	38 mph	HIGH PEDS, TURNING MVMTS, MATCH ADJ. SEGMENT	
85th Percentile Speed	44 mph		
10 mph Pace Speed	33-42	**Recommended Speed Limit**	35 mph
Percentage of Vehicles in Pace	67		
Number of Survey Samples	100		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	5
Annual Collision Rate	2.5 accidents/year
Collisions per Million Vehicle Miles	0.898

TRAFFIC FACTORS

Average Daily Traffic	14,957	**Date Counted**	5/6/2004
Number of Lanes	4 LANES, WITH MEDIAN AND LT LANES		
Type of Traffic Control	T.S. @ CRENSHAW, BEECHGATE, DRY BANK		
Crosswalks?	@ ALL T.S.		
Pedestrian Traffic	MODERATE		
Truck Traffic	MODERATE		
On-Street Parking	ON STREET, TIME LIMIT S/S		
Sidwalks?	BOTH SIDES		
Driveways?	SEVERAL		

ROADWAY FACTORS

Length of Segment	0.510 miles
Width	78 feet
Vertical Curve?	SLIGHT DOWNGRADE E/B
Horizontal Curve?	SLIGHT CURVE
Visibility	GOOD
Roadway Conditions	GOOD
Lighting	ON CENTER DIVIDER MEDIAN
Adjacent Land Use	COMMERCIAL BOTH SIDES

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 7/23/04 TE 1775

Erik Zandvliet **Date** **State Registration Number**

CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET PALOS VERDES DR E **CERTIFICATION DATE**

FROM SOUTH CITY LIMIT **TO** PALOS VERDES DR N

SPEED FACTORS

Date of Speed Survey	4/14/2004	**Posted Speed Limit**	40 mph
Time of Speed Survey	14:30	**Speed Justification**	
50th Percentile Speed (Mean Speed)	42 mph	NARROW STREET, BLIND DRIVEWAYS, REDUCED VISIBILITY	
85th Percentile Speed	46 mph		
10 mph Pace Speed	38-47	**Recommended Speed Limit**	40 mph
Percentage of Vehicles in Pace	81		
Number of Survey Samples	108		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	0
Annual Collision Rate	0 accidents/year
Collisions per Million Vehicle Miles	0.000

TRAFFIC FACTORS

Average Daily Traffic	13,910	**Date Counted**	5/7/2004
Number of Lanes	2-4 LANES, UNDIVIDED		
Type of Traffic Control	T.S. @ PVDN		
Crosswalks?	@ T.S.; 2-MIDBLOCK XINGS		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	B/S ON DIRT SHOULDERS		
Sidwalks?	DIRT SHOULDERS		
Driveways?	MANY		

ROADWAY FACTORS

Length of Segment	0.620 miles
Width	46-10 feet
Vertical Curve?	MODERATE DOWNGRADE N/B
Horizontal Curve?	LARGE RADIUS CURVES
Visibility	FAIR
Roadway Conditions	GOOD
Lighting	AT PVDN INTERSECTION ONLY
Adjacent Land Use	SUBURBAN, FRONTING RESIDENTIAL, EQUESTRIAN

Field Study By MH **Checked By** EHZ

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Erik Zandvliet 7/23/04 TE 1775

Erik Zandvliet **Date** **State Registration Number**

CITY OF ROLLING HILLS ESTATES
ENGINEERING AND TRAFFIC SURVEY

STREET PALOS VERDES DR E **CERTIFICATION DATE**

FROM PALOS VERDES DR N **TO** NORTH CITY LIMIT

SPEED FACTORS

Date of Speed Survey	4/14/2004	**Posted Speed Limit**	40 mph
Time of Speed Survey	15:15	**Speed Justification**	
50th Percentile Speed (Mean Speed)	39 mph	1ST INCREMENT BELOW 85TH	
85th Percentile Speed	42 mph		
10 mph Pace Speed	34-43	**Recommended Speed Limit**	40 mph
Percentage of Vehicles in Pace	86		
Number of Survey Samples	107		

COLLISION HISTORY

Number of Years Studied	2 years
Total Collisions	0
Annual Collision Rate	0 accidents/year
Collisions per Million Vehicle Miles	0.000

TRAFFIC FACTORS

Average Daily Traffic	10,649	**Date Counted**	5/7/2004
Number of Lanes	2-4 LANES, UNDIVIDED, MEDIAN AT PVDN		
Type of Traffic Control	T.S. @ PVDN		
Crosswalks?	@ T.S.		
Pedestrian Traffic	LIGHT		
Truck Traffic	MODERATE AT NORTH END		
On-Street Parking	NPAT		
Sidwalks?	DIRT SHOULDERS		
Driveways?	SEVERAL		

ROADWAY FACTORS

Length of Segment	1.010 miles
Width	33-66 feet
Vertical Curve?	MODERATE DOWNGRADE N/B
Horizontal Curve?	SHARP @ N END; MOD RADIUS
Visibility	FAIR
Roadway Conditions	GOOD
Lighting	AT PVDN INTERSECTION ONLY
Adjacent Land Use	SUBURB, NON-FRONTING RESIDENTIAL, COMMERCIAL, GOLF

Field Study By MH **Checked By** EHZ

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Erik Zandvliet — Date — TE 1775 (State Registration Number)

Radar Speed Distribution Forms

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***CRENSHAW BLVD***	Date	4/8/2004	50th %	49 MPH
Location	Palos Ver. Dr. No. to No. City Limit	Begin	10:15 End 10:40	85th %	53 MPH
Direction	N-S	Weather	CLOUDY	10MPH	45 54
Remarks	AT HIDDEN LANE	Recorded by	M. H.	% in Pace	75%

MPH	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25 / 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
	O	1	1%	100%
		0	0%	99%
	X	1	1%	99%
	X	1	1%	98%
60	X X	2	2%	97%
	X X	2	2%	95%
		0	0%	93%
	O X	2	2%	93%
	X	1	1%	91%
55	O	1	1%	90%
	X X X O	4	4%	89%
	O X X X O O	6	6%	86%
	O X O X X X O O	8	8%	80%
	O X X O O	5	5%	72%
50	X X X X X X X X X O	11	11%	67%
	X X O X O O X O O O O	11	11%	57%
	X O X X O O X O O	9	9%	46%
	X X O X X O O O O	9	9%	38%
	X X X O O O O	7	7%	29%
45	X O O X O X O O	8	8%	22%
	O X O O	4	4%	14%
	X O O	3	3%	11%
	O X O	3	3%	8%
	X	1	1%	5%
40	O O	2	2%	4%
	O	1	1%	2%
	X	1	1%	1%
		0	0%	0%
		0	0%	0%
35		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
30		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	104	100	

CITY OF ROLLING HILLS ESTATES
SPOT SPEED SURVEY

Street	***CRENSHAW BLVD***	Date	4/8/2004	50th %	42 MPH
Location	Indian Peak Rd to Silver Spur Rd	Begin 11:10	End 11:40	85th %	47 MPH
Direction	N-S	Weather	CLOUDY	10MPH	38 47
Remarks	500' No of Indian Peak Rd	Recorded by	M. H.	% in Pace	67%

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55	X	1	1%	100%
	O	1	1%	99%
	O X	2	2%	98%
	X	1	1%	96%
		0	0%	95%
50	O X X	3	3%	95%
	X X	2	2%	92%
	O O X	3	3%	90%
	X X X X X X	6	6%	87%
	O O O O X X	6	6%	82%
45	O O X O O X X X X X	10	10%	76%
	O O O X X X X X X	9	9%	66%
	O O O O O X X	7	7%	57%
	O O O X X X	6	6%	50%
	X X X	3	3%	45%
40	O O O O O X X X X	9	9%	42%
	O O O X X X X	7	7%	33%
	O O O O O X	6	6%	26%
	O O O O O X	6	6%	20%
	O O X X	4	4%	15%
35	O O O X	4	4%	11%
	O	1	1%	7%
	O O X	3	3%	6%
	X X	2	2%	3%
		0	0%	1%
30	X	1	1%	1%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound; 0 - West/South Bound; Total Observed	103	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***DEEP VALLEY ROAD***	Date	4/8/2004	50th %	26 MPH
Location	Dry Bank Drive to Roxcove Drive	Begin	16:45 End 17:15	85th %	30 MPH
Direction	E-W	Weather	CLOUDY	10MPH	22 31
Remarks	200' W/O ROXCOVE DR	Recorded by	M. H.	% in Pace	85%

MPH	NUMBER OF VEHICLES (5 10 15 20 25 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
50		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
45		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
40		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
35		0	0%	100%
	O	1	1%	100%
	X	1	1%	99%
	X	1	1%	98%
	O O O O X	5	5%	97%
30	O O O O X X X X	8	8%	92%
	O X X O O O X O X X X X X X	14	14%	84%
	O O X O X O X X	8	8%	71%
	O O X X X O O X X	9	9%	63%
	O O O O O X O X	8	8%	54%
25	O O O X X X O X X O X O O O	14	14%	47%
	O O O X X X X O X	9	9%	33%
	O X O O O X O X X	9	9%	24%
	O X X O	4	4%	16%
	X X X O	4	4%	12%
20	O X O	3	3%	8%
	X O	2	2%	5%
	O	1	1%	3%
	O	1	1%	2%
		0	0%	1%
15	X	1	1%	1%
	X - East/North bound 0 - West/South Bound Total Observed	103	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***DEEP VALLEY ROAD***	Date	4/8/2004	50th %	28 MPH
Location	Roxcove Drive to Silver Spur Rd	Begin	16:00 End 17:40	85th %	31 MPH
Direction	E-W	Weather	CLOUDY	10MPH	24 33
Remarks	Roxcove Drive crosswalk, E-leg	Recorded by	M. H.	% in Pace	86%

MPH	NUMBER OF VEHICLES (5 10 15 20 25 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
50		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
45		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
40		0	0%	100%
	X	1	1%	100%
		0	0%	99%
		0	0%	99%
		0	0%	99%
35	X	1	1%	99%
	X	1	1%	98%
	O O O X	4	4%	97%
	X X X X X X	6	6%	93%
	O O O X O O X	7	7%	87%
30	X O O X O X X O X O O O X X	14	14%	80%
	X X X X X X X X O X X O X X O X	16	16%	66%
	X O O O O X	6	6%	50%
	X X X O X O	6	6%	44%
	O X O O O O O O X O X	11	11%	38%
25	O O O O O O O X O X	10	10%	27%
	O O X O O X	6	6%	17%
	O X X	3	3%	11%
	O X	2	2%	8%
	O X O O O X	6	6%	6%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	100	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***HAWTHORNE BOULEVARD***	Date	4/14/2004	50th %	30 MPH
Location	Indian Peak Road to Silver Spur Road	Begin	10:35 End 11:00	85th %	34 MPH
Direction	N-S	Weather	SUNNY	10MPH	25 34
Remarks	MIDWAY	Recorded by	M. H.	% in Pace	84%

MPH	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25 / 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
50		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
45		0	0%	100%
		0	0%	100%
		0	0%	100%
	O	1	1%	100%
	O	1	1%	99%
40		0	0%	98%
	O X	2	2%	98%
		0	0%	96%
	O	1	1%	96%
	X O O O O O	6	6%	95%
35		0	0%	89%
	O X O O O O O	7	7%	89%
	X X X X O O X	7	7%	82%
	X O X O X X X	7	7%	75%
	O X X O X O X X X X X	11	11%	68%
30	O X O O O O X X X	9	9%	57%
	X X X O X O X O O O O O O X X X	16	16%	48%
	X O O O X X X X	8	8%	32%
	X X X X X	5	5%	24%
	X O O O O X O X	8	8%	19%
25	O O O O O X	6	6%	11%
	X O X	3	3%	5%
	X	1	1%	2%
	O	1	1%	1%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	100	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***HAWTHORNE BOULEVARD***	Date	4/14/2004	50th %	46 MPH
Location	So City Limit to Palos Verdes Dr N	Begin	9:25 End 10:15	85th %	53 MPH
Direction	N-S	Weather	SUNNY	10MPH	44 53
Remarks	MIDWAY	Recorded by	M. H.	% in Pace	61%

MPH	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25 / 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
	X	1	1%	100%
		0	0%	99%
60	X X	2	2%	99%
	O	1	1%	97%
	O X	2	2%	96%
	O X	2	2%	94%
	X	1	1%	93%
55	X	1	1%	92%
	O X	2	2%	91%
	O O X X X X X	7	7%	89%
	X X X	3	3%	82%
	O O O X X X X	7	7%	79%
50	O O X X	4	4%	73%
	O O O O O X X X X	9	8%	69%
	O O O O O X X X	8	7%	61%
	O X X	3	3%	53%
	O O O X X X	6	6%	50%
45	O O O O X X X	7	7%	45%
	O O O O X X X X X X X	11	10%	38%
	O X X	3	3%	28%
	O O O X X X	6	6%	25%
	O O X X X	5	5%	20%
40	O O O	3	3%	15%
	O O O X X X	6	6%	12%
	O O X	3	3%	7%
	O O	2	2%	4%
		0	0%	2%
35		0	0%	2%
	O	1	1%	2%
		0	0%	1%
	O	1	1%	1%
		0	0%	0%
30		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	107	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***HAWTHORNE BOULEVARD***	Date	4/14/2004	50th %	48 MPH
Location	Palos Verdes Dr N to North City Limit	Begin	8:20 End 8:55	85th %	52 MPH
Direction	N-S	Weather	CLOUDY	10MPH	43 52
Remarks	150' NO OF HOWLETT PARK DWY	Recorded by	M. H.	% in Pace	71%

MPH	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25 / 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
	X	1	1%	100%
		0	0%	99%
		0	0%	99%
60	O	1	1%	99%
		0	0%	98%
	O X	2	2%	98%
	O O X X	4	3%	97%
	O	1	1%	93%
55	O	1	1%	92%
	O O X X	4	3%	92%
	O X O O	4	3%	88%
	O X O O X O X	7	6%	85%
	O X X O O X X X X O O O O	14	12%	79%
50	X O O O X O O X X O O	11	9%	67%
	O O X X X X X O X X	10	8%	58%
	X O O X X O O	7	6%	50%
	X O X X O O X X	8	7%	44%
	X O X O O X O	7	6%	37%
45	O O O X O O	6	5%	31%
	O O X O O X X O	8	7%	26%
	X O X O O X	6	5%	19%
	O O O	3	3%	14%
	O O X O	4	3%	12%
40	X O O X	4	3%	8%
	O O	2	2%	5%
		0	0%	3%
		0	0%	3%
		0	0%	3%
35	X	1	1%	3%
	O	1	1%	3%
		0	0%	2%
	O	1	1%	2%
	O	1	1%	1%
30		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	119	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***HIGHRIDGE ROAD***	Date	6/2/2004	50th %	39 MPH
Location	Crest Road to Crestridge Road	Begin	17:00 End 18:20	85th %	44 MPH
Direction	N-S	Weather	SUNNY	10MPH	35 44
Remarks	1500' S/O CRESTRIDGE DR	Recorded by	M. H.	% in Pace	65%

MPH	NUMBER OF VEHICLES (5 10 15 20 25 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
50		0	0%	100%
	O O O X	4	4%	100%
	X O O X	4	4%	96%
		0	0%	92%
	X X	2	2%	92%
45	X X X	3	3%	91%
	O X X O O O X X X	9	8%	88%
	X X O X X O O X O X	10	9%	79%
	O X X X X O	6	6%	70%
	X O O O O O X	7	7%	64%
40	O O X X X O O O	8	8%	58%
	X X	2	2%	50%
	O X O O O O O O X	9	8%	48%
	X X O O X X X O O	9	8%	40%
	X O O X	4	4%	31%
35	O X X X X	5	5%	27%
	O O O X O O X X	8	8%	23%
	O O X O O O O O O	9	8%	15%
	O X	2	2%	7%
	O	1	1%	5%
30	O	1	1%	4%
	O X X	3	3%	3%
		0	0%	0%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	106	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***HIGHRIDGE ROAD***	Date	4/14/2004	50th %	36 MPH
Location	Crestridge Road to North City Limit	Begin	13:40 End 14:05	85th %	40 MPH
Direction	N-S	Weather	SUNNY	10MPH	32 41
Remarks	1000' N/O CRESTRIDGE RD	Recorded by	M. H.	% in Pace	79%

MPH	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25 / 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
50		0	0%	100%
		0	0%	100%
	X	1	1%	100%
	X	1	1%	99%
		0	0%	98%
45		0	0%	98%
	X X	2	2%	98%
	X X X O	4	4%	96%
	X O X	3	3%	92%
	O O X	3	3%	89%
40	X O X O O	5	5%	87%
	O O O O X O X O O O	10	10%	82%
	X X O X X O O O X	9	9%	72%
	X X O X O X	6	6%	63%
	O X O O O O X X X X O X O O	14	13%	58%
35	O O O X O X X X X	9	9%	44%
	X X X X O O X X X O O	11	11%	36%
	O X O O O X O O	8	8%	25%
	O O O O X O X	7	7%	17%
	O	1	1%	11%
30	X	1	1%	10%
	O O	2	2%	9%
	X O X	3	3%	7%
		0	0%	4%
	X X	2	2%	4%
25		0	0%	2%
	X	1	1%	2%
	X	1	1%	1%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	104	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***INDIAN PEAK ROAD***	Date	4/8/2004	50th %	40 MPH
Location	Crenshaw Blvd to Crossfield Dr	Begin	12:25 End 12:45	85th %	46 MPH
Direction	E-W	Weather	CLOUDY	10MPH	35 44
Remarks	500' E/O CROSSFIELD	Recorded by	M. H.	% in Pace	70%

MPH	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25 / 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
	X	1	1%	100%
		0	0%	99%
55		0	0%	99%
		0	0%	99%
		0	0%	99%
	X O	2	2%	99%
	X X	2	2%	97%
50	X X X	3	3%	95%
	X	1	1%	92%
	X X	2	2%	92%
	X X X O O	5	5%	90%
	X X X	3	3%	85%
45	X X O O	4	4%	82%
	X X	2	2%	78%
	X O O O X O X O X X	10	9%	76%
	X X O	3	3%	67%
	O O X O X O X X O X X X	12	11%	64%
40	X O O X O O O O X O O O	12	11%	53%
	X O O X X X X O X O X	11	10%	42%
	O X X X X O O X	8	8%	31%
	O O O O	4	4%	24%
	O O O O X O	6	6%	20%
35	X X O O O O	6	6%	14%
	X O	2	2%	8%
	O	1	1%	7%
	O	1	1%	6%
	O O O O	4	4%	5%
30	X	1	1%	1%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	106	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***INDIAN PEAK ROAD***	Date	4/8/2004	50th %	35 MPH
Location	Crossfield Dr to Hawthorne Blvd	Begin	13:10 End 13:40	85th %	39 MPH
Direction	E-W*	Weather	CLOUDY	10MPH	29 38
Remarks	E/O HAWTHORNE-MIDWAY	Recorded by	M. H.	% in Pace	83%

MPH	NUMBER OF VEHICLES (5 10 15 20 25 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
50		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
45	X	1	1%	100%
		0	0%	99%
		0	0%	99%
	O O O	3	3%	99%
	O X	2	2%	96%
40	X O O O O X X	7	7%	94%
	O O X X	4	4%	87%
	O X O O X O	6	6%	83%
	O O O X O O X X X X X	11	11%	78%
	O O X X O O X X	8	8%	67%
35	O X X O X X O X O X O	11	11%	59%
	O X O X X X X X X X	10	10%	49%
	X X O X X O O O X	9	9%	39%
	X O O O O O O X X X	10	10%	30%
	O X X O X X	6	6%	20%
30	O O O O O O X X	8	8%	15%
	X O O O X X	6	6%	7%
	O	1	1%	1%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	***X - West/South bound** ***0 - East/North Bound**	Total Observed	103	100

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***SILVER SPUR ROAD***	Date	4/8/2004	50th %	34 MPH
Location	Dry Bank Drive to Hawthorne Blvd	Begin	14:10 End 14:50	85th %	38 MPH
Direction	E-W*	Weather	CLOUDY	10MPH	29 38
Remarks	N/O CROSSFIELD-MIDWAY	Recorded by	M. H.	% in Pace	78%

MPH	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25 / 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
50		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
	O	1	1%	100%
45		0	0%	99%
	O O O	3	3%	99%
	O O	2	2%	96%
		0	0%	94%
	O O	2	2%	94%
40	X O	2	2%	92%
	X O	2	2%	90%
	X X X X O O O O	8	8%	88%
	X O O	3	3%	80%
	X X X X O O O O O O O	11	11%	77%
35	X X X X X X O O O	9	9%	66%
	X X X X X O O O O	9	9%	57%
	X X X X X X X X O O O O	12	12%	49%
	X X X O O	5	5%	37%
	X X O O	4	4%	32%
30	X X X X X X X X O O O O	12	12%	28%
	X X X O O O	6	6%	16%
	X X O O	4	4%	10%
	X X O O O	5	5%	6%
		0	0%	1%
25	X	1	1%	1%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	***X - West/South bound** ***0 - East/North Bound**	Total Observed	101	100

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***SILVER SPUR ROAD***	Date	4/8/2004	50th %	38 MPH
Location	Dry Bank Drive to Crenshaw Blvd	Begin	15:05 End 15:45	85th %	44 MPH
Direction	E-W	Weather	CLOUDY	10MPH	33 42
Remarks	400' w/o TWN&CNTRY/BEECHGATE	Recorded by	M. H.	% in Pace	67%

MPH	NUMBER OF VEHICLES (5 10 15 20 25 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
55		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
	O X	2	2%	100%
50		0	0%	98%
	O O X	3	3%	98%
	O X	2	2%	95%
	O O O	3	3%	93%
	O O	2	2%	90%
45	O X	2	2%	88%
	O O O X	4	4%	86%
	O O O X	4	4%	82%
	O O X X X X	6	6%	78%
	O O O O O O X	7	7%	72%
40	O X X	3	3%	65%
	O O O O O O X X	8	8%	62%
	O O O X X X X	7	7%	54%
	O O O O X X X X X	9	9%	47%
	O O O O O X X X	8	8%	38%
35	O O X X X X X X X X	10	10%	30%
	O O X X	4	4%	20%
	O O X X X	5	5%	16%
	X X X X X X	6	6%	11%
	O X X X	4	4%	5%
30		0	0%	1%
	X	1	1%	1%
		0	0%	0%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	100	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

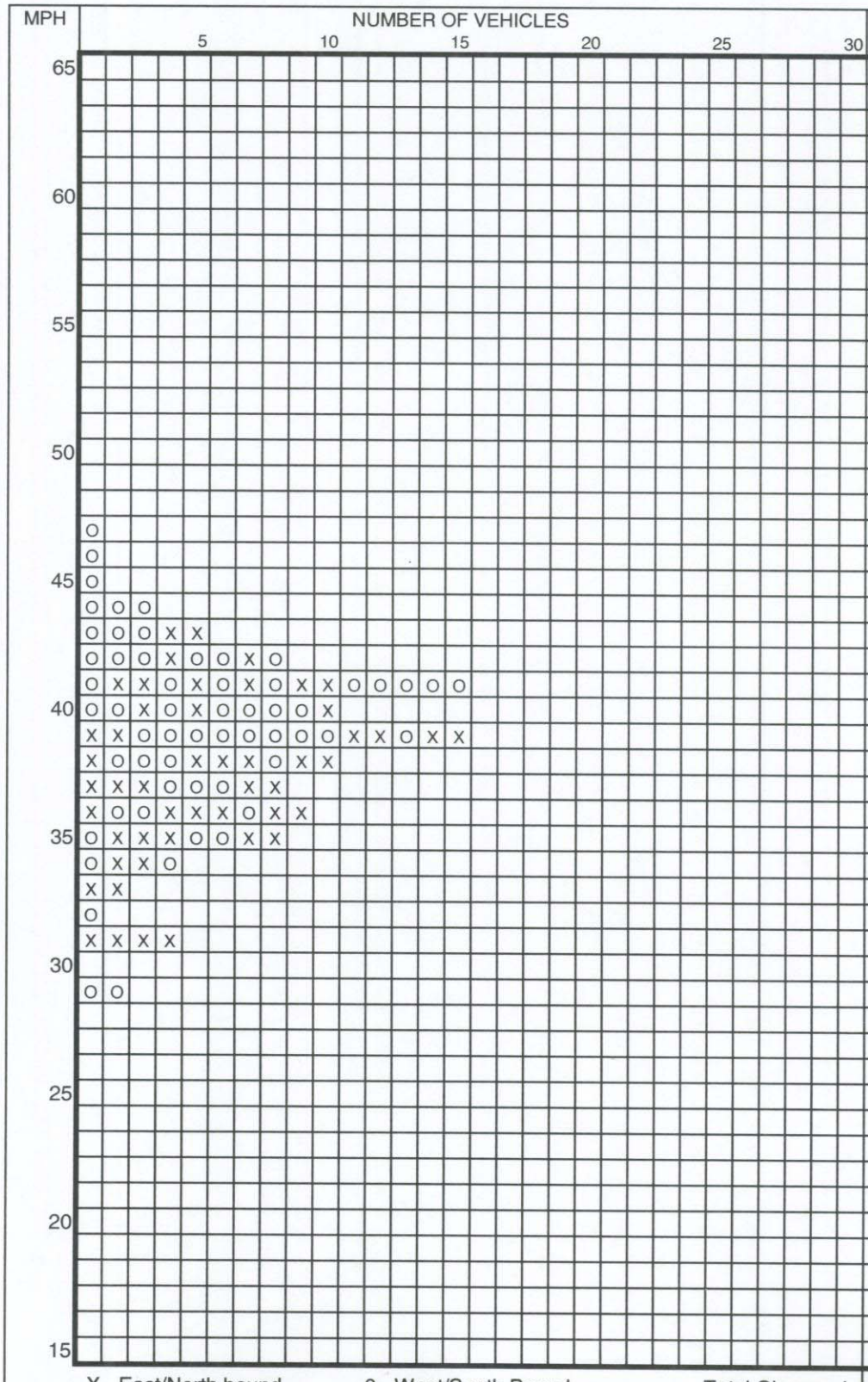
Street	***PALOS VERDES DRIVE EAST***	Date	4/14/2004	50th %	42 MPH
Location	So City Limit to Palos Verdes Dr N	Begin	14:30 End 15:05	85th %	46 MPH
Direction	N-S	Weather	SUNNY	10MPH	38 47
Remarks	ACROSS FROM HARBOR SIGHT DR	Recorded by	M. H.	% in Pace	81%

MPH	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25 / 30)	Number of Vehicles	Percent of Total	Cumulative Percentage
65		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
60		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
		0	0%	100%
	O	1	1%	100%
55		0	0%	99%
		0	0%	99%
		0	0%	99%
		0	0%	99%
	O	1	1%	99%
50	X X X	3	3%	98%
	O O	2	2%	95%
	O O	2	2%	94%
	X X O O	4	4%	92%
	O X X X O O O O O X	10	9%	88%
45	O O X X X O	6	6%	79%
	O O O X O X X X	8	7%	73%
	X O X X O O O X X X	10	9%	66%
	X O O O O X O X X X O X O O O	15	14%	56%
	X X X O O O X X X	9	8%	43%
40	X O O X O X O O X O	10	9%	34%
	X X X O O X O O X X	10	9%	25%
	X X X X O	5	5%	16%
	O O	2	2%	11%
	O X O O X	5	5%	9%
35	X	1	1%	5%
		0	0%	4%
	O O	2	2%	4%
	X	1	1%	2%
		0	0%	1%
30	O	1	1%	1%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
25		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
20		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
		0	0%	0%
15		0	0%	0%
	X - East/North bound 0 - West/South Bound Total Observed	108	100	

CITY OF ROLLING HILLS ESTATES

SPOT SPEED SURVEY

Street	***PALOS VERDES DRIVE EAST***	Date	4/14/2004	50th %	39 MPH
Location	Palos Verdes Dr N to North City Limit	Begin	15:15 End 15:50	85th %	42 MPH
Direction	N-S	Weather	SUNNY	10MPH	34 43
Remarks	500' S/O PENNSYLVANIA DR	Recorded by	M. H.	% in Pace	86%



Number of Vehicles	Percent of Total	Cumulative Percentage
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
0	0%	100%
1	1%	100%
1	1%	99%
1	1%	98%
3	3%	97%
5	5%	94%
8	7%	90%
15	14%	82%
10	9%	68%
15	14%	59%
10	9%	45%
8	7%	36%
9	8%	28%
8	7%	20%
4	4%	12%
2	2%	8%
1	1%	7%
4	4%	6%
0	0%	2%
2	2%	2%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
0	0%	0%
Total Observed 107	100	

X - East/North bound 0 - West/South Bound

APPENDIX B
Collision Rates

Table 3
Collision Rates

No.	Street	From	To	Midblock Collisions (2 Years)	ADT*	Approx. Length of Segment (mi)	Calculated Accident Rate (Acc/MVM**)	Statewide Accident Rate*** (Acc/MVM)
1	CRENSHAW BLVD	PALOS VERDES DR N	NORTH CITY LIMIT	56	25,754	0.73	0.36	1.95
2	CRENSHAW BLVD	INDIAN PEAK ROAD	SILVER SPUR ROAD	19	22,361	0.38	0.00	2.10
3	DEEP VALLEY DRIVE	DRY BANK DRIVE	ROXCOVE DRIVE	10	4,266	0.26	1.24	3.05
4	DEEP VALLEY DRIVE	ROXCOVE DRIVE	SILVER SPUR ROAD	10	3,453	0.24	4.96	3.05
5	HAWTHORNE BLVD	INDIAN PEAK ROAD	SILVER SPUR ROAD	24	31,389	0.22	2.18	3.35
6	HAWTHORNE BLVD	SOUTH CITY LIMIT	PALOS VERDES DR N	10	31,269	0.61	0.36	1.85
7	HAWTHORNE BLVD	PALOS VERDES DR N	NORTH CITY LIMIT	5	33,546	0.64	0.51	1.85
8	HIGHRIDGE ROAD	CREST ROAD	CRESTRIDGE ROAD	91	4,632	0.64	0.00	2.55
9	HIGHRIDGE ROAD	CRESTRIDGE ROAD	NORTH CITY LIMIT	81	9,205	0.42	0.35	2.55
10	INDIAN PEAK ROAD	CRENSHAW BLVD	CROSSFIELD DRIVE	6	7,181	0.42	0.45	3.05
11	INDIAN PEAK ROAD	CROSSFIELD DRIVE	HAWTHORNE BLVD	6	7,812	0.40	1.75	3.05
12	SILVER SPUR ROAD	HAWTHORNE BLVD	DRY BANK DRIVE	91	17,400	0.38	0.21	3.35
13	SILVER SPUR ROAD	DRY BANK DRIVE	CRENSHAW BLVD	16	14,957	0.51	0.90	3.35
14	PALOS VERDES DR E	SOUTH CITY LIMIT	PALOS VERDES DR N	2	13,910	0.62	0.00	3.05
15	PALOS VERDES DR E	PALOS VERDES DR N	NORTH CITY LIMIT	165	10,649	1.01	0.00	3.05

Engineering and Traffic Survey
City of Rolling Hills Estates

APPENDIX C
Survey Equipment

SURVEY EQUIPMENT USED

The radar equipment models used to collect speed measurements for this survey is an MPH K15-K Hand-Held Traffic Radar manufactured by MPH Industries, Inc., of Owensboro, Kentucky and/or the Genesis VersaPak Hand-Held traffic Radar manufactured by Decatur Electronics, of Decatur, Illinois. The calibration of the unit was checked before each series of measurements were taken. Tests of the unit were conducted in accordance with the manufacturer's specifications. The MPH K15-K Hand-Held Traffic Radar was last calibrated on July 1, 2003, by R.H.F, Inc. and the Genesis VersaPak Hand Held Traffic Radar was last calibrated on December 27, 2003, by R.H. F, Inc.

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