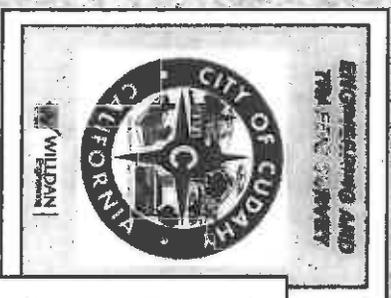


Engineering and Traffic Survey

August 2015

The image shows the title page of the survey report. It contains the following text:

ENGINEERING AND TRAFFIC SURVEY

FOR THE CITY OF CUDAHY

August 2015

Prepared by:

WILLDAN

Engineering

The image shows a table of contents page from the survey report. It lists the chapters and their corresponding page numbers. The table is as follows:

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FOR THE CITY OF



CUDAHY

Prepared by:



August 20, 2015

Mr. Michael Allen
Community Development Director
City of Cudahy
5220 Santa Ana Street
Cudahy, CA 90201-6024

Subject: 2015 Engineering and Traffic Survey

Dear Mr. Allen:

As requested, Willdan has completed an Engineering and Traffic Survey to justify and update the posted speed limits along 25 street segments in the City of Cudahy. These segments were last surveyed in 2007, 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 Manual on Uniform Traffic Control Devices (California MUTCD) dated November 2014, and as required by Section 627 of the California Vehicle Code. 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 Cudahy and the assistance and cooperation afforded to us during the course of this study.

Very truly yours,

WILLDAN



Vanessa Munoz, P.E., T.E.
Traffic Engineer



Enclosure

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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 Cudahy. This Engineering and Traffic Survey presents recommended speed limits for 25 street segments in the City of Cudahy. 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 or 7 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 Manual on Uniform Traffic Control Devices (California MUTCD) dated November 2014.

The survey was requested by the City for the proper posting of speed limits and to enable the Sheriff's 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 California Manual on Uniform Traffic Control Devices (California MUTCD) dated November 2014 and 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 not 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 California Manual on Uniform Traffic Control Devices (California MUTCD) dated November 2014 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 speed limit is established at the nearest 5-mile per hour (mph) increment to the 85th percentile speed, except as shown in the two options below.

Options:

1. The posted speed may be reduced by 5 mph from the nearest 5 mph increment of the 85th-percentile speed, in compliance with CVC Section 627 and 22358.5.
2. For cases in which the nearest 5 mph increment of the 85th-percentile speed would require a rounding up, then the speed limit may be rounded down to the nearest 5 mph increment below the 85th percentile speed, if no further reduction is used. Refer to CVC Section 21400(b).

If the speed limit to be posted has had the 5 mph reduction applied, then an E&TS shall document in writing the conditions and justification for the lower speed limit. The reasons for the lower speed limit shall be in compliance with CVC Section 627 and 22358.5

The following examples are provided to explain the application of these speed limit criteria:

- A. Using Option 1 above and first step is to round down: If the 85th percentile speed in a speed survey for a location was 37 mph, then the speed limit would be established at 35 mph since it is the closest 5 mph increment to the 37 mph speed. As indicated by the option, this 35 mph established speed limit could be reduced by 5 mph to 30 mph if conditions and justification for using this lower speed limit are documented in the E&TS.
- B. Using Option 1 above and first step is to round up: If the 85th percentile speed in a speed survey for a location was 33 mph, then the speed limit would be established at 35 mph since it is the closest 5 mph increment to the 33 mph speed. As indicated by the option, this 35 mph speed limit could be reduced by 5 mph to 30 mph if the conditions and justification for using this lower speed limit are documented in the E&TS.
- C. Using Option 2 above and first step is to round up: If the 85th percentile speed in a speed survey for a location was 33 mph, instead of rounding up to 35 mph, the speed limit can be established at 30 mph, but no further reduction can be applied.

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 25 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 5 mph or more below the basic speed limit. It is important to note that The California Manual on Uniform Traffic Control Devices (California MUTCD) dated November 2014 recommends exercising great care when establishing speed limits 5 mph or more below the basic speed limit.

SURVEY CONDITIONS

SURVEY LOCATIONS

The procedures described below describe the criteria and methods used to survey selected streets within the City of Cudahy. 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 25 locations during the months of May, June, and July 2015.

Speed Data

Radar speed measurements were conducted at 25 locations during May, June, and July 2015. 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.

Collision Data

Collision data was obtained from the State of California's Statewide Integrated Traffic Records System (SWITRS) electronic collision database. For this study, collision data was used from the latest 3 years of reported accidents from January 1, 2011 to December 31, 2013. The collision rates for the 25 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:

$$R = \frac{Ax1,000,000}{x365 \frac{days}{year} \times lxv}$$

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. The average statewide collision rates were obtained from 2011 Collision Data on California State Highways published by Caltrans.

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.

ANALYSIS

CRITERIA

Survey data was compiled and analyzed to determine the recommended speed limit in accordance with several criteria contained in The California Manual on Uniform Traffic Control Devices (California MUTCD) dated November 2014. 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. The "basic speed limit" is the nearest 5 mph increment to the 85th percentile speed.
- 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 Cudahy.

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 a collision rate significantly higher than expected was discovered or roadway conditions not readily apparent to the driver were identified. Any segments with recommended speed limits 5 mph or more below the basic speed limit 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 1 identifies the street segments with recommended changes in posted speed limits and Table 2 summarizes the recommendations for all surveyed segments.

**TABLE 1
STREET SEGMENTS WITH RECOMMENDED SPEED CHANGES**

No	STREET	FROM	TO	EXISTING	NEW	CHANGE
4	CLARA ST	SALT LAKE AVE	ATLANTIC AVE	25	30	INCREASE
6	CLARA ST	WILCOX AVE	RIVER RD	25	30	INCREASE
16	PATATA ST	ATLANTIC AVE	WILCOX AVE	25	35	INCREASE
20	SANTA ANA ST	SALT LAKE AVE	ATLANTIC AVE	25	30	INCREASE
22	SANTA ANA ST	WILCOX AVE	PARK AVE	25	30	INCREASE
23	WILCOX AVE	NORTH CITY LIMIT	CLARA ST	25	30	INCREASE
24	WILCOX AVE	CLARA ST	SANTA ANA ST	25	30	INCREASE
25	WILCOX AVE	SANTA ANA ST	PATATA ST	25	30	INCREASE

Table 2

Summary of Recommendations

No. Street	From	To	Posted Speed Limit	Critical Speed	Recommended Speed Limit	Comments	
1	ATLANTIC AVE	FLORENCE AVE	CLARA ST	35	36	35	CLOSEST TO 85 th SPEED
2	ATLANTIC AVE	CLARA ST	SANTA ANA ST	35	36	35	CLOSEST TO 85 th SPEED
3	ATLANTIC AVE	SANTA ANA ST	PATATA ST	35	39	35	CALIFORNIA MUTCD OPTION 2
4	CLARA ST	SALT LAKE AVE	ATLANTIC AVE	25	36	30**	*
5	CLARA ST	ATLANTIC AVE	WILCOX AVE	25	30	25	*
6	CLARA ST	WILCOX AVE	RIVER RD	25	37	30	*
7	ELIZABETH ST	SALT LAKE AVE	ATLANTIC AVE	25	29	25	CALIFORNIA MUTCD OPTION 2
8	ELIZABETH ST	ATLANTIC AVE	WILCOX AVE	25	28	25	CALIFORNIA MUTCD OPTION 2
9	ELIZABETH ST	WILCOX AVE	PARK AVE	25	29	25	CALIFORNIA MUTCD OPTION 2
10	LIVE OAK ST	SALT LAKE AVE	OTIS AVE	25	27	25	CLOSEST TO 85 th SPEED
11	LIVE OAK ST	OTIS AVE	ATLANTIC AVE	25	25	25	CLOSEST TO 85 th SPEED
12	LIVE OAK ST	ATLANTIC AVE	WILCOX AVE	25	27	25	CLOSEST TO 85 th SPEED
13	OTIS AVE	WALNUT ST	FLOWER ST	25	32	25	*
14	OTIS AVE	FLOWER ST	SALT LAKE AVE	25	27	25	CLOSEST TO 85 th SPEED
15	PARK AVE	ELIZABETH ST	SANTA ANA ST	NP	22	25	*
16	PATATA ST	ATLANTIC AVE	WILCOX AVE	25	38	35	CALIFORNIA MUTCD OPTION 2
17	SALT LAKE AVE	WALNUT AVE	OLIVE ST	35	42	35	*
18	SALT LAKE AVE	OLIVE ST	SANTA ANA ST	35	32	35	*
19	SALT LAKE AVE	SANTA ANA ST	PATATA ST	35	41	35	*

* See "Segments with Special Conditions" Section for Comments

** = 25 mph when children are present

NP= Not Posted

Table 2

Summary of Recommendations

No. Street	From	To	Posted Speed Limit	Critical Speed	Recommended Speed Limit	Comments
20 SANTA ANA ST	SALT LAKE AVE	ATLANTIC AVE	25	30	30	CLOSEST TO 85 th SPEED
21 SANTA ANA ST	ATLANTIC AVE	WILCOX AVE	25	31	25	*
22 SANTA ANA ST	WILCOX AVE	PARK AVE	25	35	30	*
23 WILCOX AVE	NORTH CITY LIMIT	CLARA ST	25	32	30**	CLOSEST TO 85 th SPEED
24 WILCOX AVE	CLARA ST	SANTA ANA ST	25	30	30	CLOSEST TO 85 th SPEED
25 WILCOX AVE	SANTA ANA ST	PATATA ST	25	36	30	*

* See "Segments with Special Conditions" Section for Comments

** = 25 mph when children are present

NP= Not Posted

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 #4 – Clara Street – Salt Lake Avenue to Atlantic Avenue

This segment currently posted at 25 mph and has 1 through lane in each direction with an ADT of 7,756 vehicles per day. The adjacent land uses are residential and a school. The critical speed is 36 mph and would normally justify a 35 mph posted speed limit. However, due to various hidden driveways that may not be apparent to unfamiliar drivers, a lower speed limit is prudent. It is recommended that the speed limit to be posted at 30 mph for the above reasons.

Segment #5 – Clara Street – Atlantic Avenue to Wilcox Ave

This segment currently posted at 25 mph and has 1 through lane in each direction with an ADT of 10,825 vehicles per day. The adjacent land uses are commercial, residential, and a school. The critical speed is 30 mph and would normally justify a 30 mph posted speed limit. However, due to various hidden driveways, moderate pedestrian traffic, multiple uncontrolled crosswalks, and speed bumps that may not be apparent to unfamiliar drivers, a lower speed limit is prudent. It is recommended that the speed limit remain at 25 mph for the above reasons.

Segment #6 – Clara Street – Wilcox Avenue to River Road

This segment currently posted at 25 mph and has 1 through lane in each direction with an ADT of 18,291 vehicles per day. The adjacent land uses are residential. The critical speed is 37 mph and would normally justify a 35 mph posted speed limit. However, due to various hidden driveways that may not be apparent to unfamiliar drivers, a lower speed limit is prudent. It is recommended that the speed limit to be posted at 30 mph for the above reasons.

Segment #13 – Otis Avenue – Walnut Street to Flower Street

This segment currently posted at 25 mph and has 1 through lane in each direction with an ADT of 10,775 vehicles per day. The adjacent land use is residential. The critical speed is 32 mph and would normally justify a 30 mph posted speed limit. However, due to uncontrolled crosswalks, various hidden driveways that may not be apparent to unfamiliar drivers and to maintain uniformity among adjacent street segments, a lower speed limit is prudent. It is recommended that the speed limit remain at 25 mph for the above reasons.

Segment #15 – Park Avenue – Elizabeth Street to Park Avenue

This segment currently has no posted speed limit and has 1 through lane in each direction with an ADT of 1,251 vehicles per day. The adjacent land use is residential with a school. The critical speed is 22 mph and would normally justify a 20 mph posted speed limit. However, since this segment qualifies as a residential street under CVC section 515 and section 22352 of the CVC sets a 25 mph speed limit on residential streets. It is recommended that the speed limit be posted at 25 mph for the above reasons.

Segment #17 – Salt Lake Avenue – Walnut Avenue to Olive Street

This segment currently posted at 35 mph and has 1 through lane in each direction with an ADT of 5,850 vehicles per day. The adjacent land use is residential. The critical speed is 42 mph and would normally justify a 40 mph posted speed limit. However, due to uncontrolled crosswalks, various hidden driveways that may not be apparent to unfamiliar drivers and to maintain uniformity among adjacent street segments, a lower speed limit is prudent. It is recommended that the speed limit remain at 35 mph for the above reasons.

Segment #18 – Salt Lake Avenue – Olive Street to Santa Ana Street

This segment currently posted at 35 mph and has 1 through lane in each direction with an ADT of 8,699 vehicles per day. The adjacent land uses are commercial and industrial. The critical speed is 32 mph and would normally justify a 30 mph posted speed limit. However, in order to maintain uniformity among adjacent street segments, a higher speed limit is prudent. It is recommended that the speed limit remain at 35 mph for the above reason.

Segment #19 – Salt Lake Avenue – Santa Ana Street to Patata Street

This segment currently posted at 35 mph and has 1 through lane in each direction with an ADT of 11,548 vehicles per day. The adjacent land uses are commercial and residential. The critical speed is 41 mph and would normally justify a 40 mph posted speed limit. However, due to horizontal curves, and to maintain uniformity among adjacent street segments, a lower speed limit is prudent. It is recommended that the speed limit remain at 35 mph for the above reasons.

Segment #20 – Santa Ana Street – Atlantic Avenue to Wilcox Avenue

This segment currently posted at 25 mph and has 1 through lane in each direction with an ADT of 7,606 vehicles per day. The adjacent land uses are commercial and residential. The critical speed is 31 mph and would normally justify a 30 mph posted speed limit. However, due to various hidden driveways and speed bumps that may not be apparent to unfamiliar drivers, a lower speed limit is prudent. It is recommended that the speed limit remain at 25 mph for the above reasons.

Segment #21 – Santa Ana Street – Wilcox Avenue to Park Avenue

This segment currently posted at 25 mph and has 1 through lane in each direction with an ADT of 2,956 vehicles per day. The adjacent land uses are residential and commercial. The critical speed is 35 mph and would normally justify a 35 mph posted speed limit. However, due to various hidden driveways that may not be apparent to unfamiliar drivers, a lower speed limit is prudent. It is recommended that the speed limit be posted at 30 mph for the above reasons.

Segment #25 – Wilcox Avenue – Santa Ana Street to Patata Street

This segment currently posted at 25 mph and has 1 through lane in each direction with an ADT of 5,492 vehicles per day. The adjacent land uses are residential and industrial. The critical speed is 36 mph and would normally justify a 35 mph posted speed limit. However, due to hidden driveways that may not be apparent to unfamiliar drivers and to maintain uniformity among adjacent street segments, a lower speed limit is prudent. It is recommended that the speed limit be posted at 30 mph for the above reasons.

LEGISLATIVE REFERENCES

APPLICABLE SECTIONS OF CALIFORNIA VEHICLE CODE

SECTION 1. Section 627 of the Vehicle Code:

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, if any of the following conditions exist on the particular portion of highway and the property contiguous thereto, other than a business district:
 - a. Upon one side of the highway, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses of business structures.
 - b. Upon both sides of the highway, collectively, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures.
 - c. The portion of highway is longer than one-quarter of a mile but has the ratio of separate dwelling houses or business structures to the length of the highway described in either subparagraph (A) or (B).
 - (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.

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:

- (a) Fifteen miles per hour:
 - (1) When traversing a railway grade crossing, if during the last 100 feet of the approach to the crossing the driver does not have a 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.
 - (2) When traversing any intersection of highways, if during the last 100 feet of the driver's 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 those highways, except at an intersection protected by stop signs or yield right-of-way signs or controlled by official traffic control signals.
 - (3) On any alley.
- (b) Twenty-five miles per hour:
 - (1) 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.
 - (2) 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.
 - (3) 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 may erect a sign pursuant to this paragraph when the local agency makes a determination that the proposed signing should be implemented. A local authority may request grant funding from the Pedestrian Safety Account pursuant to Section 894.7 of the Streets and Highways Code, or any other grant funding available to it, and use that grant funding to pay for the erection of those signs, or may utilize any other funds available to it to pay for the erection of those signs, including, but not limited to, donations from private sources.

Increase of Local Speed Limits to 65 Miles Per Hour

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 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 miles per hour, the local authority may by ordinance determine and declare a prima facie speed limit of 30, 35, 40, 45, 50, 55 or 60 miles per hour or a maximum speed limit of 65 miles per hour, 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 mile per hour 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.

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.

Speed Trap 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 speed trap be used in securing evidence as to the speed of any vehicle for the purpose of an arrest or prosecution under this code.

Speed Trap

Section 40802.

- (a) A "speed trap" 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 five 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 one that is functionally classified as "local" on the "California Road System Maps," that are approved by the Federal Highway Administration and maintained by the Department of Transportation. When a street or road does not appear on the "California Road System Maps," it may be defined as a "local street or road" if it 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 of a mile of uninterrupted length. Interruptions shall include official traffic control signals 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 approaching or passing a school building or the grounds thereof that is contiguous to a highway and on which is posted a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. "School zone" also includes the area approaching or passing any school grounds that are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children if that highway is posted with a standard "SCHOOL" warning sign.
- (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 arresting officer 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 arresting officer has successfully completed the training required in subparagraph (A) and an additional training course of not less than two hours approved and certified by the Commission on Peace Officer Standards and Training.

- (C)(i) The prosecution proved that the arresting 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 arresting officer established 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 conditions 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 three years prior to the date of the alleged violation by an independent certified laser or radar repair and testing or calibration facility.
- (2) A "speed trap" 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), seven years.
 - (ii) If an engineering and traffic survey was conducted more than seven 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 conditions 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.

Speed Trap 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 speed trap 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 five 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 speed trap as defined in paragraph (2) subdivision (a) of Section 40802.

APPENDIX A

Street Segment Data

**CITY OF CUDAHY
ENGINEERING AND TRAFFIC SURVEY**

STREET Atlantic Ave
FROM Florence Ave

CERTIFICATION DATE 8/20/2015
TO Clara St

SPEED FACTORS

Date of Speed Survey	6/4/2015	Posted Speed Limit	35 mph
Time of Speed Survey	10:10	Speed Justification	
50th Percentile Speed (Mean Speed)	31 mph	CLOSEST TO 85TH SPEED	
85th Percentile Speed	36 mph		
Average Speed	31 mph		
10 mph Pace Speed	28-37		
Percentage of Vehicles in Pace	78	Recommended Speed Limit	35 mph
Number of Survey Samples	105		

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 4
Annual Collision Rate 1.33 accidents/year
Collisions per Million Vehicle Miles 0.345

TRAFFIC FACTORS

Average Daily Traffic 32,124 Date Counted 6/4/2015
Number of Lanes 4
Type of Traffic Control TS @ FLORENCE AVE, LIVE OAK ST & CLARA ST
Crosswalks? @ TS
Pedestrian Traffic MODERATE
Truck Traffic MODERATE
On-Street Parking WEST SIDE
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.330 miles
Width 74 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions FAIR
Lighting BOTH SIDES
Adjacent Land Use COMMERCIAL

Field Study By NS Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz

Vanessa Munoz
Date 8/20/15

TE 2341
State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Atlantic Ave **CERTIFICATION DATE** 8/20/2015
FROM Clara St **TO** Santa Ana St

SPEED FACTORS

Date of Speed Survey 6/4/2015 **Posted Speed Limit** 35 mph
Time of Speed Survey 10:30 **Speed Justification**
50th Percentile Speed (Mean Speed) 32 mph CLOSEST TO 85TH SPEED
85th Percentile Speed 36 mph
Average Speed 32 mph
10 mph Pace Speed 27-36
Percentage of Vehicles in Pace 78 **Recommended Speed Limit** 35 mph
Number of Survey Samples 103

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 1
Annual Collision Rate 0.33 accidents/year
Collisions per Million Vehicle Miles 0.091

TRAFFIC FACTORS

Average Daily Traffic 30,359 **Date Counted** 6/4/2015
Number of Lanes 4
Type of Traffic Control TS @ CLARA ST, ELIZABETH ST, & SANTA ANA ST
Crosswalks? @ TS
Pedestrian Traffic MODERATE
Truck Traffic MODERATE
On-Street Parking BOTH SIDES
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.330 miles
Width 74 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting BOTH SIDES
Adjacent Land Use COMMERCIAL, RESIDENTIAL

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* *TE 2341*
Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Atlantic Ave **CERTIFICATION DATE** 8/20/2015
FROM Santa Ana St **TO** Patata St

SPEED FACTORS

Date of Speed Survey 6/4/2015 **Posted Speed Limit** 35 mph
Time of Speed Survey 10:50 **Speed Justification**
50th Percentile Speed (Mean Speed) 33 mph CALIFORNIA MUTCD OPTION 2
85th Percentile Speed 39 mph
Average Speed 33 mph
10 mph Pace Speed 29-38
Percentage of Vehicles in Pace 69 **Recommended Speed Limit** 35 mph
Number of Survey Samples 117

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 3
Annual Collision Rate 1 accidents/year
Collisions per Million Vehicle Miles 0.196

TRAFFIC FACTORS

Average Daily Traffic 36,874 **Date Counted** 6/4/2015
Number of Lanes 4
Type of Traffic Control TS @ SANTA ANA ST, CECELIA ST, & PATATA ST
Crosswalks? @ TS
Pedestrian Traffic MODERATE
Truck Traffic MODERATE
On-Street Parking WEST SIDE
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.380 miles
Width 77 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting BOTH SIDES
Adjacent Land Use INDUSTRIAL, COMMERCIAL

Field Study By NS **Checked By** VM

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Vanessa Munoz *8/20/15* TE 2341
Vanessa Munoz Date State Registration Number

CITY OF CUDAHY
ENGINEERING AND TRAFFIC SURVEY

STREET Clara St
FROM Salt Lake Ave

CERTIFICATION DATE 8/20/2015
TO Atlantic Ave

SPEED FACTORS

Date of Speed Survey	5/12/2015	Posted Speed Limit	25 mph
Time of Speed Survey	14:30	Speed Justification	
50th Percentile Speed (Mean Speed)	31 mph	HIDDEN DRIVEWAYS	
85th Percentile Speed	36 mph		
Average Speed	31 mph		
10 mph Pace Speed	24-33		
Percentage of Vehicles in Pace	69	Recommended Speed Limit	30 mph
Number of Survey Samples	93		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	6	
Annual Collision Rate	2	accidents/year
Collisions per Million Vehicle Miles	1.039	

TRAFFIC FACTORS

Average Daily Traffic	7,756	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	TS @ ATLANTIC, T.H. SCHOOL, & OTIS, STOP @ SALT LAKE @ TS AND STOP		
Crosswalks?	MODERATE		
Pedestrian Traffic	LIGHT		
Truck Traffic	BOTH SIDES		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.680	miles
Width	40	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	FAIR	
Roadway Conditions	GOOD	
Lighting	SOUTH SIDE	
Adjacent Land Use	RESIDENTIAL, SCHOOL	

Field Study By	NS	Checked By	VM
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Vanessa Munoz
Vanessa Munoz

8/20/15
Date

TE 2341
State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Clara St **CERTIFICATION DATE** 8/20/2015
FROM Atlantic Ave **TO** Wilcox Ave

SPEED FACTORS

Date of Speed Survey	5/28/2015	Posted Speed Limit	25 mph
Time of Speed Survey	10:00	Speed Justification	HIDDEN DWYS, PED TRAFFIC, UNCONTROLLED X-WALKS, SPEED BUMPS
50th Percentile Speed (Mean Speed)	26 mph		
85th Percentile Speed	30 mph		
Average Speed	26 mph		
10 mph Pace Speed	21-30		
Percentage of Vehicles in Pace	83	Recommended Speed Limit	25 mph
Number of Survey Samples	100		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	5	
Annual Collision Rate	1.67	accidents/year
Collisions per Million Vehicle Miles	0.879	

TRAFFIC FACTORS

Average Daily Traffic	10,825	Date Counted	6/4/2015
Number of Lanes	2 WITH SPEED BUMPS		
Type of Traffic Control	TS @ ATLANTIC AVE, SCHOOL & WILCOX AVE		
Crosswalks?	@ TS AND MID BLOCK AT SCHOOL		
Pedestrian Traffic	MODERATE		
Truck Traffic	LIGHT		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.480	miles
Width	40	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	SOUTH SIDE	
Adjacent Land Use	COMMERCIAL, RESIDENTIAL, SCHOOL	

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* **TE 2341**
 Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Clara St CERTIFICATION DATE 8/20/2015
FROM Wilcox Ave TO River Road

SPEED FACTORS

Date of Speed Survey	5/14/2015	Posted Speed Limit	25 mph
Time of Speed Survey	11:25	Speed Justification	HIDDEN DRIVEWAYS
50th Percentile Speed (Mean Speed)	32 mph		
85th Percentile Speed	37 mph		
Average Speed	32 mph		
10 mph Pace Speed	28-37		
Percentage of Vehicles in Pace	80	Recommended Speed Limit	30 mph
Number of Survey Samples	113		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	6	
Annual Collision Rate	2	accidents/year
Collisions per Million Vehicle Miles	1.070	

TRAFFIC FACTORS

Average Daily Traffic	18,291	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	TS @ WILLCOX AVE & RIVER RD		
Crosswalks?	@ TS		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.280	miles
Width	44	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	NORTH SIDE	
Adjacent Land Use	RESIDENTIAL	

Field Study By NS Checked By VM

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Vanessa *8/20/15* TE 2341
 Vanessa Munoz Date State Registration Number

CITY OF CUDAHY
ENGINEERING AND TRAFFIC SURVEY

STREET Elizabeth St **CERTIFICATION DATE** 8/20/2015
FROM Salt Lake Ave **TO** Atlantic Ave

SPEED FACTORS

Date of Speed Survey	7/8/2015	Posted Speed Limit	25 mph
Time of Speed Survey	13:15	Speed Justification	
50th Percentile Speed (Mean Speed)	24 mph	CALIFORNIA MUTCD OPTION 2	
85th Percentile Speed	29 mph		
Average Speed	24 mph		
10 mph Pace Speed	20-29		
Percentage of Vehicles in Pace	72	Recommended Speed Limit	25 mph
Number of Survey Samples	109		

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 4
Annual Collision Rate 1.33 accidents/year
Collisions per Million Vehicle Miles 1.476

TRAFFIC FACTORS

Average Daily Traffic 4,671 Date Counted 7/9/2015
Number of Lanes 2 WITH SPEED BUMPS
Type of Traffic Control TS @ ATLANTIC AVE, STOP @ SALT LAKE AVE & OTIS AVE
Crosswalks? @ TS AND STOP - OTIS AVE
Pedestrian Traffic MODERATE
Truck Traffic LIGHT
On-Street Parking NORTH SIDE
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.530 miles
Width 35 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting NORTH SIDE
Adjacent Land Use RESIDENTIAL, SCHOOL & INDUSTRIAL

Field Study By KC Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* TE 2341
Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Elizabeth St **CERTIFICATION DATE** 8/20/2015
FROM Atlantic Ave **TO** Wilcox Ave

SPEED FACTORS

Date of Speed Survey 5/28/2015 **Posted Speed Limit** 25 mph
Time of Speed Survey 10:40 **Speed Justification**
50th Percentile Speed (Mean Speed) 24 mph CALIFORNIA MUTCD OPTION 2
85th Percentile Speed 28 mph
Average Speed 24 mph
10 mph Pace Speed 21-30
Percentage of Vehicles in Pace 81 **Recommended Speed Limit** 25 mph
Number of Survey Samples 100

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 6
Annual Collision Rate 2 accidents/year
Collisions per Million Vehicle Miles 2.299

TRAFFIC FACTORS

Average Daily Traffic 5,418 **Date Counted** 6/4/2015
Number of Lanes 2
Type of Traffic Control TS @ ATLANTIC AVE, STOP @ WILCOX AVE
Crosswalks? @ TS AND MID BLOCK
Pedestrian Traffic MODERATE
Truck Traffic LIGHT
On-Street Parking BOTH SIDES
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.440 miles
Width 56 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting NORTH SIDE
Adjacent Land Use RESIDENTIAL, SCHOOL

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* **Date** **State Registration Number** TE 2341

**CITY OF CUDAHY
ENGINEERING AND TRAFFIC SURVEY**

STREET Elizabeth St **CERTIFICATION DATE** 8/20/2015
FROM Wilcox Ave **TO** Park Ave

SPEED FACTORS

Date of Speed Survey	5/28/2015	Posted Speed Limit	25 mph
Time of Speed Survey	13:00	Speed Justification	CALIFORNIA MUTCD OPTION 2
50th Percentile Speed (Mean Speed)	25 mph		
85th Percentile Speed	29 mph		
Average Speed	25 mph		
10 mph Pace Speed	21-30		
Percentage of Vehicles in Pace	87	Recommended Speed Limit	25 mph
Number of Survey Samples	93		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	1	
Annual Collision Rate	0.33	accidents/year
Collisions per Million Vehicle Miles	1.264	

TRAFFIC FACTORS

Average Daily Traffic	2,491	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	STOP @ PARK AVE & WILCOX AVE		
Crosswalks?	@ PARK AVE		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.290	miles
Width	36	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	NORTH SIDE	
Adjacent Land Use	RESIDENTIAL	

Field Study By NS Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* TE 2341
Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Live Oak St **CERTIFICATION DATE** 8/20/2015
FROM Salt Lake Ave **TO** Otis Ave

SPEED FACTORS

Date of Speed Survey	7/8/2015	Posted Speed Limit	25 mph
Time of Speed Survey	13:50	Speed Justification	
50th Percentile Speed (Mean Speed)	25 mph	CLOSEST TO 85TH SPEED	
85th Percentile Speed	27 mph		
Average Speed	24 mph		
10 mph Pace Speed	20-29	Recommended Speed Limit	25 mph
Percentage of Vehicles in Pace	85		
Number of Survey Samples	98		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	2	
Annual Collision Rate	0.67	accidents/year
Collisions per Million Vehicle Miles	3.119	

TRAFFIC FACTORS

Average Daily Traffic	1,464	Date Counted	7/9/2015
Number of Lanes	2 WITH SPEED BUMPS		
Type of Traffic Control	TS @ OTIS AVE, STOP @ BEAR AVE & SALT LAKE AVE		
Crosswalks?	@ TS		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.400	miles
Width	40	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	SOUTH SIDE	
Adjacent Land Use	RESIDENTIAL	

Field Study By KC Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz

8/20/15

Date

TE 2341

State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Live Oak St CERTIFICATION DATE 8/20/2015
FROM Otis Ave TO Atlantic Ave

SPEED FACTORS

Date of Speed Survey 7/8/2015 Posted Speed Limit 25 mph
Time of Speed Survey 14:40 Speed Justification
50th Percentile Speed (Mean Speed) 22 mph CLOSEST TO 85TH SPEED
85th Percentile Speed 25 mph
Average Speed 22 mph
10 mph Pace Speed 18-27
Percentage of Vehicles in Pace 92 Recommended Speed Limit 25 mph
Number of Survey Samples 106

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 2
Annual Collision Rate 0.67 accidents/year
Collisions per Million Vehicle Miles 1.203

TRAFFIC FACTORS

Average Daily Traffic 3,893 Date Counted 7/9/2015
Number of Lanes 2 WITH SPEED BUMPS
Type of Traffic Control TS @ OTIS AVE & ATLANTIC AVE, STOP @ FLORA AVE
Crosswalks? @ TS
Pedestrian Traffic MODERATE
Truck Traffic LIGHT
On-Street Parking BOTH SIDES
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.390 miles
Width 40 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting SOUTH SIDE
Adjacent Land Use RESIDENTIAL

Field Study By KC Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* Date
Vanessa Munoz State Registration Number TE 2341

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Otis Ave **CERTIFICATION DATE** 8/20/2015
FROM Walnut St **TO** Flower St

SPEED FACTORS

Date of Speed Survey	5/12/2015	Posted Speed Limit	25 mph
Time of Speed Survey	13:00	Speed Justification	UNCONTROLLED X-WALK, HIDDEN DWYS, AND UNIFORMITY OF ADJ. SEGMENTS
50th Percentile Speed (Mean Speed)	28 mph		
85th Percentile Speed	32 mph		
Average Speed	28 mph		
10 mph Pace Speed	23-32		
Percentage of Vehicles in Pace	80	Recommended Speed Limit	25 mph
Number of Survey Samples	106		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	0	
Annual Collision Rate	0	accidents/year
Collisions per Million Vehicle Miles	0.000	

TRAFFIC FACTORS

Average Daily Traffic	10,775	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	TS @ LIVE OAK ST @TS AND FLOWER ST		
Crosswalks?	MODERATE		
Pedestrian Traffic	LIGHT		
Truck Traffic	BOTH SIDES		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.160	miles
Width	38	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	WEST SIDE	
Adjacent Land Use	RESIDENTIAL	

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* *TE 2341*

Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Otis Ave CERTIFICATION DATE 8/20/2015
FROM Flower St TO Salt Lake Ave

SPEED FACTORS

Date of Speed Survey 5/12/2015 Posted Speed Limit 25 mph
Time of Speed Survey 13:30 Speed Justification
50th Percentile Speed (Mean Speed) 24 mph CLOSEST TO 85TH SPEED
85th Percentile Speed 27 mph
Average Speed 24 mph
10 mph Pace Speed 21-30
Percentage of Vehicles in Pace 84 Recommended Speed Limit 25 mph
Number of Survey Samples 100

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 0
Annual Collision Rate 0 accidents/year
Collisions per Million Vehicle Miles 0.000

TRAFFIC FACTORS

Average Daily Traffic 11,235 Date Counted 6/4/2015
Number of Lanes 2
Type of Traffic Control TS @ CLARA ST, STOP @ OLIVE ST, & SALT LAKE AVE
Crosswalks? @ TS AND STOP
Pedestrian Traffic LIGHT
Truck Traffic LIGHT
On-Street Parking BOTH SIDES
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.260 miles
Width 38 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting WEST SIDE
Adjacent Land Use RESIDENTIAL, COMMERCIAL, INDUSTRIAL

Field Study By NS Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* TE 2341
Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Otis Ave **CERTIFICATION DATE** 8/20/2015
FROM Flower St **TO** Salt Lake Ave

SPEED FACTORS

Date of Speed Survey	5/12/2015	Posted Speed Limit	25 mph
Time of Speed Survey	13:30	Speed Justification	
50th Percentile Speed (Mean Speed)	24 mph	CLOSEST TO 85TH SPEED	
85th Percentile Speed	27 mph		
Average Speed	24 mph		
10 mph Pace Speed	21-30		
Percentage of Vehicles in Pace	84	Recommended Speed Limit	25 mph
Number of Survey Samples	100		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	0	
Annual Collision Rate	0	accidents/year
Collisions per Million Vehicle Miles	0.000	

TRAFFIC FACTORS

Average Daily Traffic	11,235	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	TS @ CLARA ST, STOP @ OLIVE ST, & SALT LAKE AVE		
Crosswalks?	@ TS AND STOP		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.260	miles
Width	38	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	WEST SIDE	
Adjacent Land Use	RESIDENTIAL, COMMERCIAL, INDUSTRIAL	

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* **TE 2341**
 Vanessa Munoz **Date** State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Park Ave **CERTIFICATION DATE** 8/20/2015
FROM Elizabeth St **TO** Santa Ana St

SPEED FACTORS

Date of Speed Survey	7/9/2015	Posted Speed Limit	NP mph
Time of Speed Survey	12:40	Speed Justification	RESIDENTIAL STREET PER CVC 515 AND CVC 22352
50th Percentile Speed (Mean Speed)	20 mph		
85th Percentile Speed	22 mph		
Average Speed	20 mph		
10 mph Pace Speed	15-24		
Percentage of Vehicles in Pace	96	Recommended Speed Limit	25 mph
Number of Survey Samples	73		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	0	
Annual Collision Rate	0	accidents/year
Collisions per Million Vehicle Miles	0.000	

TRAFFIC FACTORS

Average Daily Traffic	1,251	Date Counted	7/9/2015
Number of Lanes	2 WITH SPEED BUMPS		
Type of Traffic Control	STOP @ ELIZABETH ST & SANTA ANA ST		
Crosswalks?	@ STOP		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.160	miles
Width	40	feet
Vertical Curve?	NONE	
Horizontal Curve?	YES	
Visibility	FAIR	
Roadway Conditions	GOOD	
Lighting	WEST SIDE	
Adjacent Land Use	RESIDENTIAL, SCHOOL	

Field Study By KC **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* **TE 2341**
 Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Patata St **CERTIFICATION DATE** 8/20/2015
FROM Atlantic Ave **TO** Wilcox Ave

SPEED FACTORS

Date of Speed Survey 5/28/2015 **Posted Speed Limit** 25 mph
Time of Speed Survey 15:00 **Speed Justification**
50th Percentile Speed (Mean Speed) 33 mph CALIFORNIA MUTCD OPTION 2
85th Percentile Speed 38 mph
Average Speed 33 mph
10 mph Pace Speed 30-39
Percentage of Vehicles in Pace 72 **Recommended Speed Limit** 35 mph
Number of Survey Samples 109

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 0
Annual Collision Rate 0 accidents/year
Collisions per Million Vehicle Miles 0.000

TRAFFIC FACTORS

Average Daily Traffic 4,034 **Date Counted** 6/4/2015
Number of Lanes 2
Type of Traffic Control TS @ ATLANTIC AVE, STOP @ WILCOX AVE
Crosswalks? @ TS
Pedestrian Traffic LIGHT
Truck Traffic MODERATE
On-Street Parking BOTH SIDES
Sidewalks? NORTH SIDE
Driveways? NORTH SIDE

ROADWAY FACTORS

Length of Segment 0.230 miles
Width 40 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility FAIR
Roadway Conditions FAIR
Lighting BOTH SIDES
Adjacent Land Use INDUSTRIAL, RAILROAD

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* TE 2341
Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Salt Lake Ave CERTIFICATION DATE 8/20/2015
FROM Walnut Ave TO Olive St

SPEED FACTORS

Date of Speed Survey	6/4/2015	Posted Speed Limit	35 mph
Time of Speed Survey	11:30	Speed Justification	
50th Percentile Speed (Mean Speed)	36 mph		HOR. CURVE, HIDDEN DWYS, AND
85th Percentile Speed	42 mph		UNIFORMITY OF ADJ. SEGMENTS
Average Speed	36 mph		
10 mph Pace Speed	33-42		
Percentage of Vehicles in Pace	77	Recommended Speed Limit	35 mph
Number of Survey Samples	109		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	1	
Annual Collision Rate	0.33	accidents/year
Collisions per Million Vehicle Miles	0.743	

TRAFFIC FACTORS

Average Daily Traffic	5,850	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	STOP @ OLIVE ST, CLARA ST, FLOWER ST, & LIVE OAK ST		
Crosswalks?	NONE		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	NORTH SIDE		
Sidewalks?	NORTH SIDE		
Driveways?	NORTH SIDE		

ROADWAY FACTORS

Length of Segment	0.210	miles
Width	36	feet
Vertical Curve?	NONE	
Horizontal Curve?	YES	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	NORTH SIDE	
Adjacent Land Use	RESIDENTIAL	

Field Study By NS Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* Date

Vanessa Munoz State Registration Number TE 2341

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Salt Lake Ave **CERTIFICATION DATE** 8/20/2015
FROM Olive St **TO** Santa Ana St

SPEED FACTORS

Date of Speed Survey	7/9/2015	Posted Speed Limit	35 mph
Time of Speed Survey	11:45	Speed Justification	ADJACENT SEGMENT UNIFORMITY
50th Percentile Speed (Mean Speed)	27 mph		
85th Percentile Speed	32 mph		
Average Speed	27 mph		
10 mph Pace Speed	24-33		
Percentage of Vehicles in Pace	80	Recommended Speed Limit	35 mph
Number of Survey Samples	108		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	0	
Annual Collision Rate	0	accidents/year
Collisions per Million Vehicle Miles	0.000	

TRAFFIC FACTORS

Average Daily Traffic	8,699	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	STOP @ SANTA ANA ST & OTIS AVE		
Crosswalks?	NONE		
Pedestrian Traffic	LIGHT		
Truck Traffic	MODERATE		
On-Street Parking	EAST SIDE		
Sidewalks?	EAST SIDE		
Driveways?	EAST SIDE		

ROADWAY FACTORS

Length of Segment	0.390	miles
Width	34	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	EAST SIDE	
Adjacent Land Use	INDUSTRIAL, COMMERCIAL	

Field Study By KC **Checked By** VM

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Vanessa Munoz *8/20/15* **TE 2341**
Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Salt Lake Ave
FROM Santa Ana St

CERTIFICATION DATE 8/20/2015
TO Patata St

SPEED FACTORS

Date of Speed Survey	6/4/2015	Posted Speed Limit	35 mph
Time of Speed Survey	13:00	Speed Justification	HORIZONTAL CURVE, AND UNIFORMITY OF ADJ. SEGMENTS
50th Percentile Speed (Mean Speed)	37 mph		
85th Percentile Speed	41 mph		
Average Speed	37 mph		
10 mph Pace Speed	33-42		
Percentage of Vehicles in Pace	84	Recommended Speed Limit	35 mph
Number of Survey Samples	106		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	0	
Annual Collision Rate	0	accidents/year
Collisions per Million Vehicle Miles	0.000	

TRAFFIC FACTORS

Average Daily Traffic	11,548	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	STOP @ ARDINE ST, & SANTA ANA ST, TS @ PATATA ST		
Crosswalks?	@ TS AND ARDINE ST		
Pedestrian Traffic	LIGHT		
Truck Traffic	MODERATE		
On-Street Parking	NONE		
Sidewalks?	NORTH SIDE		
Driveways?	NORTH SIDE		

ROADWAY FACTORS

Length of Segment	0.640	miles
Width	33	feet
Vertical Curve?	NONE	
Horizontal Curve?	YES	
Visibility	GOOD	
Roadway Conditions	FAIR	
Lighting	NORTH SIDE	
Adjacent Land Use	INDUSTRIAL, RESIDENTIAL	

Field Study By	NS	Checked By	VM
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Vanessa Munoz
Vanessa Munoz

8/20/15
Date

TE 2341
State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Santa Ana St **CERTIFICATION DATE** 8/20/2015
FROM Salt Lake Ave **TO** Atlantic Ave

SPEED FACTORS

Date of Speed Survey 6/4/2015 **Posted Speed Limit** 25 mph
Time of Speed Survey 13:50 **Speed Justification**
50th Percentile Speed (Mean Speed) 27 mph CLOSEST TO 85TH SPEED
85th Percentile Speed 30 mph
Average Speed 27 mph
10 mph Pace Speed 22-31
Percentage of Vehicles in Pace 90 **Recommended Speed Limit** 30 mph
Number of Survey Samples 105

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 4
Annual Collision Rate 1.33 accidents/year
Collisions per Million Vehicle Miles 0.934

TRAFFIC FACTORS

Average Daily Traffic 10,571 **Date Counted** 6/4/2015
Number of Lanes 2
Type of Traffic Control TS @ ATLANTIC AVE, STOP @ SALT LAKE AVE
Crosswalks? @ TS
Pedestrian Traffic LIGHT
Truck Traffic LIGHT
On-Street Parking BOTH SIDES
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.370 miles
Width 56 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting NORTH SIDE
Adjacent Land Use COMMERCIAL, RESIDENTIAL

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* *TE 2341*
Vanessa Munoz Date State Registration Number

**CITY OF CUDAHY
ENGINEERING AND TRAFFIC SURVEY**

STREET Santa Ana St **CERTIFICATION DATE** 8/20/2015
FROM Atlantic Ave **TO** Wilcox Ave

SPEED FACTORS

Date of Speed Survey	6/4/2015	Posted Speed Limit	25 mph
Time of Speed Survey	14:20	Speed Justification	
50th Percentile Speed (Mean Speed)	28 mph	HIDDEN DRIVEWAYS, SPEED HUMPS	
85th Percentile Speed	31 mph		
Average Speed	28 mph		
10 mph Pace Speed	23-32		
Percentage of Vehicles in Pace	89	Recommended Speed Limit	25 mph
Number of Survey Samples	101		

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 2
Annual Collision Rate 0.67 accidents/year
Collisions per Million Vehicle Miles 0.632

TRAFFIC FACTORS

Average Daily Traffic 7,606 Date Counted 6/4/2015
Number of Lanes 2 WITH SPEED BUMPS
Type of Traffic Control TS @ ATLANTIC AVE, STOP @ WILCOX AVE
Crosswalks? @ TS
Pedestrian Traffic LIGHT
Truck Traffic LIGHT
On-Street Parking BOTH SIDES
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.380 miles
Width 36 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility FAIR
Roadway Conditions FAIR
Lighting BOTH SIDES
Adjacent Land Use RESIDENTIAL, COMMERCIAL

Field Study By NS Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* TE 2341
Vanessa Munoz Date State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Santa Ana St CERTIFICATION DATE 8/20/2015
FROM Wilcox Ave TO Park Ave

SPEED FACTORS

Date of Speed Survey	6/4/2015	Posted Speed Limit	25 mph
Time of Speed Survey	14:55	Speed Justification	
50th Percentile Speed (Mean Speed)	30 mph	HIDDEN DRIVEWAYS	
85th Percentile Speed	35 mph		
Average Speed	30 mph		
10 mph Pace Speed	25-34		
Percentage of Vehicles in Pace	77	Recommended Speed Limit	30 mph
Number of Survey Samples	101		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	1	
Annual Collision Rate	0.33	accidents/year
Collisions per Million Vehicle Miles	1.103	

TRAFFIC FACTORS

Average Daily Traffic	2,956	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	STOP @ WILCOX AVE & PARK AVE		
Crosswalks?	@ PARK AVE		
Pedestrian Traffic	LIGHT		
Truck Traffic	LIGHT		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.280	miles
Width	36	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	BOTH SIDES	
Adjacent Land Use	RESIDENTIAL, COMMERCIAL	

Field Study By NS Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz

8/20/15

Date

TE 2341

State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Wilcox Ave **CERTIFICATION DATE** 8/20/2015
FROM North City Limit **TO** Clara St

SPEED FACTORS

Date of Speed Survey	6/4/2015	Posted Speed Limit	25 mph
Time of Speed Survey	9:00	Speed Justification	
50th Percentile Speed (Mean Speed)	28 mph	CLOSEST TO 85TH SPEED	
85th Percentile Speed	32 mph		
Average Speed	28 mph		
10 mph Pace Speed	22-31		
Percentage of Vehicles in Pace	83	Recommended Speed Limit	30 mph
Number of Survey Samples	100		

COLLISION HISTORY

Number of Years Studied	3	years
Total Collisions	2	
Annual Collision Rate	0.67	accidents/year
Collisions per Million Vehicle Miles	0.481	

TRAFFIC FACTORS

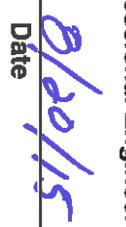
Average Daily Traffic	15,808	Date Counted	6/4/2015
Number of Lanes	2		
Type of Traffic Control	TS @ LIVE OAK ST & CLARA ST		
Crosswalks?	@ TS		
Pedestrian Traffic	MODERATE		
Truck Traffic	LIGHT		
On-Street Parking	BOTH SIDES		
Sidewalks?	BOTH SIDES		
Driveways?	BOTH SIDES		

ROADWAY FACTORS

Length of Segment	0.240	miles
Width	54	feet
Vertical Curve?	NONE	
Horizontal Curve?	NONE	
Visibility	GOOD	
Roadway Conditions	GOOD	
Lighting	WEST SIDE	
Adjacent Land Use	RESIDENTIAL, SCHOOL	

Field Study By NS Checked By VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

  Date 8/20/15 State Registration Number TE 2341

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Wilcox Ave **CERTIFICATION DATE** 8/20/2015
FROM Clara St **TO** Santa Ana St

SPEED FACTORS

Date of Speed Survey 6/4/2015 **Posted Speed Limit** 25 mph
Time of Speed Survey 9:20 **Speed Justification**
50th Percentile Speed (Mean Speed) 26 mph CLOSEST TO 85TH SPEED
85th Percentile Speed 30 mph
Average Speed 26 mph
10 mph Pace Speed 21-30
Percentage of Vehicles in Pace 76 **Recommended Speed Limit** 30 mph
Number of Survey Samples 100

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 2
Annual Collision Rate 0.67 accidents/year
Collisions per Million Vehicle Miles 0.516

TRAFFIC FACTORS

Average Daily Traffic 11,060 **Date Counted** 6/4/2015
Number of Lanes 2
Type of Traffic Control TS @ CLARA ST, STOP @ ELIZABETH ST & SANTA ANA ST
Crosswalks? @ TS AND STOP
Pedestrian Traffic MODERATE
Truck Traffic LIGHT
On-Street Parking BOTH SIDES
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.320 miles
Width 44 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting WEST SIDE
Adjacent Land Use RESIDENTIAL, COMMERCIAL

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* **Date** **TE 2341**
Vanessa Munoz State Registration Number

CITY OF CUDAHY ENGINEERING AND TRAFFIC SURVEY

STREET Wilcox Ave **CERTIFICATION DATE** 8/20/2015
FROM Santa Ana St **TO** Patata St

SPEED FACTORS

Date of Speed Survey 6/4/2015 **Posted Speed Limit** 25 mph
Time of Speed Survey 9:40 **Speed Justification**
50th Percentile Speed (Mean Speed) 30 mph **HIDDEN DRIVEWAYS AND**
85th Percentile Speed 36 mph **UNIFORMITY OF ADJ. SEGMENTS**
Average Speed 30 mph
10 mph Pace Speed 25-34
Percentage of Vehicles in Pace 72 **Recommended Speed Limit** 30 mph
Number of Survey Samples 114

COLLISION HISTORY

Number of Years Studied 3 years
Total Collisions 2
Annual Collision Rate 0.67 accidents/year
Collisions per Million Vehicle Miles 0.950

TRAFFIC FACTORS

Average Daily Traffic 5,492 **Date Counted** 6/4/2015
Number of Lanes 2
Type of Traffic Control STOP @ SANTA ANA ST, CECELIA ST & PATATA ST
Crosswalks? @ STOP
Pedestrian Traffic LIGHT
Truck Traffic MODERATE
On-Street Parking BOTH SIDES
Sidewalks? BOTH SIDES
Driveways? BOTH SIDES

ROADWAY FACTORS

Length of Segment 0.350 miles
Width 40 feet
Vertical Curve? NONE
Horizontal Curve? NONE
Visibility GOOD
Roadway Conditions GOOD
Lighting BOTH SIDES
Adjacent Land Use RESIDENTIAL, INDUSTRIAL

Field Study By NS **Checked By** VM

CERTIFICATION: I, Vanessa Munoz, do hereby certify that this Engineering and Traffic Survey within the City of Cudahy was performed under my supervision and is accurate and complete. I am duly registered in the State of California as a Professional Engineer (Traffic).

Vanessa Munoz *8/20/15* TE 2341
Vanessa Munoz Date State Registration Number

Radar Speed Distribution Forms

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6-4-15 DAY: THURSDAY TIME PERIOD : 10:10AM TO 10:25AM

LOCATION: 7624 ATLANTIC AVENUE

SPEED (MPH)	TOTAL VEHICLES SURVEYED		TOTAL
	NB	SB	VEHICLES
70			0
69			0
68			0
67			0
66			0
65			0
64			0
63			0
62			0
61			0
60			0
59			0
58			0
57			0
56			0
55			0
54			0
53			0
52			0
51			0
50			0
49			0
48			0
47			0
46			0
45	X		1
44			0
43			0
42	X		1
41			0
40			0
39	X		1
38			0
37	X	X	6
36	X	X	7
35	X	X	7
34	X	X	8
33	X	X	15
32	X	X	10
31	X	X	7
30	X	X	6
29	X	X	7
28	X	X	9
27	X	X	5
26	X	X	5
25	X	X	6
24	X	X	3
23	X		1
22			0
21			0
20			0
	54	51	105

LIMITS (BTN): FLORENCE AVE TO CLARA STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 35 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .33 MILES

ACCIDENT HISTORY: 4.00 In 3 Years **NUMBER OF LANES:** 2 EACH DIRECTION

ACCIDENT RATE: 0.34 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.04 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: - MPH **DEVELOPMENT:** _____

ADT: 32124

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>36.2</u>	<u>34.8</u>	<u>35.6</u>	M.P.H.
50TH %:	<u>32.2</u>	<u>30.5</u>	<u>31.4</u>	M.P.H.
15TH %:	<u>28.3</u>	<u>26.1</u>	<u>27.1</u>	M.P.H.
10 MPH PACE:	<u>28 - 37</u>	<u>25 - 34</u>	<u>28 - 37</u>	M.P.H.
% IN PACE:	<u>87%</u>	<u>84%</u>	<u>78%</u>	
% OVER PACE:	<u>2%</u>	<u>12%</u>	<u>3%</u>	
% UNDER PACE:	<u>11%</u>	<u>4%</u>	<u>19%</u>	
ARITHMETIC MEAN:	<u>32.24</u>	<u>30.45</u>	<u>31.37</u>	M.P.H.
SAMPLE VARIANCE:	<u>14.71</u>	<u>17.89</u>	<u>16.91</u>	
STANDARD DEVIATION:	<u>3.84</u>	<u>4.23</u>	<u>4.11</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.27</u>	<u>0.35</u>	<u>0.16</u>	
STD. ERROR OF THE MEAN:	<u>0.52</u>	<u>0.59</u>	<u>0.40</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6-4-15 DAY: THURSDAY TIME PERIOD : 10:30AM TO 10:45AM

LOCATION: **7736 ATLANTIC AVENUE**

SPEED (MPH)	TOTAL VEHICLES SURVEYED	TOTAL		VEHICLES
		NB	SB	
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54		0	0	0
53		0	0	0
52		0	0	0
51		0	0	0
50		0	0	0
49		0	0	0
48		0	0	0
47		0	0	0
46		0	0	0
45		0	0	0
44	X	0	1	1
43		0	0	0
42	X	0	1	1
41		0	0	0
40	X X	0	2	2
39	X X	1	1	2
38	X X	2	0	2
37	X X X	1	2	3
36	X X X X X X X X X X	4	6	10
35	X X X X	1	3	4
34	X X X X X X X X	4	3	7
33	X X X X X X X X X X X X	7	4	11
32	X X X X X X X X X X X X	5	5	10
31	X X X X X X X X X X X X	6	5	11
30	X X X X X X X X	3	4	7
29	X X X X X X X X X X	6	3	9
28	X X X X X X X	4	2	6
27	X X X X X X	3	2	5
26	X X X X X	2	2	4
25	X X X X	1	2	3
24	X X	0	2	2
23	X X	2	0	2
22		0	0	0
21	X	1	0	1
20		0	0	0
		53	50	103

LIMITS (BTN): CLARA STREET TO SANTA ANA STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 35 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .33 MILES

ACCIDENT HISTORY: 1.00 In 3 Years **NUMBER OF LANES:** 2 EACH DIRECTION

ACCIDENT RATE: 0.09 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.04 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: _____ MPH **DEVELOPMENT:** _____

ADT: 30359

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>35.1</u>	<u>37.1</u>	<u>36.1</u>	M.P.H.
50TH %:	<u>31.0</u>	<u>32.3</u>	<u>31.7</u>	M.P.H.
15TH %:	<u>27.0</u>	<u>27.6</u>	<u>27.2</u>	M.P.H.
10 MPH PACE:	<u>27 - 36</u>	<u>28 - 37</u>	<u>27 - 36</u>	M.P.H.
% IN PACE:	<u>81%</u>	<u>74%</u>	<u>78%</u>	
% OVER PACE:	<u>8%</u>	<u>10%</u>	<u>11%</u>	
% UNDER PACE:	<u>11%</u>	<u>16%</u>	<u>12%</u>	
ARITHMETIC MEAN:	<u>31.04</u>	<u>32.32</u>	<u>31.66</u>	M.P.H.
SAMPLE VARIANCE:	<u>15.54</u>	<u>21.08</u>	<u>18.46</u>	
STANDARD DEVIATION:	<u>3.94</u>	<u>4.59</u>	<u>4.30</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.29</u>	<u>0.42</u>	<u>0.18</u>	
STD. ERROR OF THE MEAN:	<u>0.54</u>	<u>0.65</u>	<u>0.42</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6-4-15 DAY: THURSDAY TIME PERIOD: 10:50AM TO 11:15AM

LOCATION: 8333 ATLANTIC AVENUE

SPEED (MPH)	TOTAL VEHICLES SURVEYED										NB	SB	TOTAL VEHICLES
70											0	0	0
69											0	0	0
68											0	0	0
67											0	0	0
66											0	0	0
65											0	0	0
64											0	0	0
63											0	0	0
62											0	0	0
61											0	0	0
60											0	0	0
59											0	0	0
58	X										0	1	1
57											0	0	0
56											0	0	0
55											0	0	0
54											0	0	0
53											0	0	0
52											0	0	0
51	X										1	0	1
50											0	0	0
49											0	0	0
48											0	0	0
47											0	0	0
46											0	0	0
45	X	X									0	2	2
44											0	0	0
43											0	0	0
42											0	0	0
41	X	X									1	1	2
40	X	X									1	1	2
39	X	X	X								2	2	4
38	X	X	X	X							2	3	5
37	X	X	X	X	X	X	X	X	X		4	6	10
36	X	X	X	X	X	X	X	X	X		3	4	7
35	X	X	X	X							2	2	4
34	X	X	X	X	X	X	X	X	X	X	8	4	12
33	X	X	X	X	X	X					2	5	7
32	X	X	X	X	X	X	X	X	X		2	7	9
31	X	X	X	X	X	X					4	4	8
30	X	X	X	X	X	X	X	X	X	X	8	3	11
29	X	X	X	X	X	X					7	1	8
28	X	X	X	X	X						4	1	5
27	X	X	X	X							3	2	5
26	X	X	X								2	1	3
25	X	X	X	X							3	2	5
24	X										0	1	1
23											0	0	0
22	X										1	0	1
21	X	X									2	0	2
20	X	X									2	0	2
											64	53	117

LIMITS (BTN): SANTA ANA STREET TO PATALA STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 35 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

ACCIDENT HISTORY: 3.00 In 3 Years **ROAD CONDITION:** GOOD

ACCIDENT RATE: 0.2 Acc/MVM **ROAD SEGMENT LENGTH:** .38 MILES

EXPECTED RATE: 2.04 Acc/MVM **NUMBER OF LANES:** 2 EACH DIRECTION

PROPOSED SPEED LIMIT: 35 MPH **STREET WIDTH (Ft.):** _____

ADT: 36874 **DATA COLLECTION METHOD:** RADAR

DEVELOPMENT: _____

	NORTHBOUND	SOUTHBOUND	NORTHBOUND-SOUTHBOUND	
85TH %:	<u>37.1</u>	<u>40.0</u>	<u>38.5</u>	M.P.H.
50TH %:	<u>31.3</u>	<u>34.1</u>	<u>32.6</u>	M.P.H.
15TH %:	<u>25.6</u>	<u>28.2</u>	<u>26.6</u>	M.P.H.
10 MPH PACE:	<u>28 - 37</u>	<u>30 - 39</u>	<u>29 - 38</u>	M.P.H.
% IN PACE:	<u>69%</u>	<u>75%</u>	<u>69%</u>	
% OVER PACE:	<u>11%</u>	<u>9%</u>	<u>10%</u>	
% UNDER PACE:	<u>20%</u>	<u>15%</u>	<u>21%</u>	
ARITHMETIC MEAN:	<u>31.33</u>	<u>34.09</u>	<u>32.58</u>	M.P.H.
SAMPLE VARIANCE:	<u>30.70</u>	<u>32.20</u>	<u>33.02</u>	
STANDARD DEVIATION:	<u>5.54</u>	<u>5.67</u>	<u>5.75</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.48</u>	<u>0.61</u>	<u>0.28</u>	
STD. ERROR OF THE MEAN:	<u>0.69</u>	<u>0.78</u>	<u>0.53</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 5-12-15 DAY: TUESDAY TIME PERIOD: 2:30PM TO 3:30PM

LOCATION: 4123 CLARA STREET

SPEED (MPH)	TOTAL VEHICLES SURVEYED			TOTAL VEHICLES		
	EB	WB	TOTAL	EB	WB	TOTAL
70				0	0	0
69				0	0	0
68				0	0	0
67				0	0	0
66				0	0	0
65				0	0	0
64				0	0	0
63				0	0	0
62				0	0	0
61				0	0	0
60				0	0	0
59				0	0	0
58				0	0	0
57				0	0	0
56				0	0	0
55				0	0	0
54				0	0	0
53				0	0	0
52				0	0	0
51				0	0	0
50				0	0	0
49				0	0	0
48				0	0	0
47				0	0	0
46				0	0	0
45	X			0	1	1
44				0	0	0
43	X	X		2	0	2
42				0	0	0
41				0	0	0
40				0	0	0
39				0	0	0
38	X	X	X	1	2	3
37	X	X	X	X	X	5
36	X	X	X	X	X	5
35	X	X	X	X		4
34	X	X		2	0	2
33	X	X	X	X	X	5
32	X	X	X	X	X	7
31	X	X	X	X	X	10
30	X	X	X	X	X	8
29	X	X	X	X	X	6
28	X	X	X	X		5
27	X	X	X	X	X	8
26	X	X	X	X	X	6
25	X	X	X	X		6
24	X	X	X			3
23	X	X	X	X		5
22				0	0	0
21				0	0	0
20				0	0	0
				52	41	93

LIMITS (BTN): SALT LAKE AVENUE TO ATLANTIC AVENUE

OBSERVATION POINT:

POSTED SPEED LIMIT: 25 MPH

COMMENTS:

ACCIDENT HISTORY: 6.00 In 3 Years

ACCIDENT RATE: 1.04 Acc/MVM

EXPECTED RATE: 2.21 Acc/MVM

PROPOSED SPEED LIMIT: 25 MPH

ADT: 7756

OBSERVER: WILLIAM

WEATHER: SUNNY

ROAD SURFACE: DRY

ROAD CONDITION: GOOD

ROAD SEGMENT LENGTH: .68 MILES

NUMBER OF LANES: 1 EACH DIRECTION

STREET WIDTH (Ft.):

DATA COLLECTION METHOD: RADAR

DEVELOPMENT:

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>36.1</u>	<u>35.1</u>	<u>35.7</u>	M.P.H.
50TH %:	<u>31.4</u>	<u>29.8</u>	<u>30.7</u>	M.P.H.
15TH %:	<u>26.8</u>	<u>24.4</u>	<u>25.7</u>	M.P.H.
10 MPH PACE:	<u>27 - 36</u>	<u>23 - 32</u>	<u>24 - 33</u>	M.P.H.
% IN PACE:	<u>73%</u>	<u>76%</u>	<u>69%</u>	
% OVER PACE:	<u>15%</u>	<u>24%</u>	<u>26%</u>	
% UNDER PACE:	<u>12%</u>	<u>0%</u>	<u>5%</u>	
ARITHMETIC MEAN:	<u>31.42</u>	<u>29.76</u>	<u>30.69</u>	M.P.H.
SAMPLE VARIANCE:	<u>20.13</u>	<u>26.39</u>	<u>23.33</u>	
STANDARD DEVIATION:	<u>4.49</u>	<u>5.14</u>	<u>4.83</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.39</u>	<u>0.64</u>	<u>0.25</u>	
STD. ERROR OF THE MEAN:	<u>0.62</u>	<u>0.80</u>	<u>0.50</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 5-28-15 DAY: THURSDAY TIME PERIOD : 10:00AM TO 10:30AM

LOCATION: CLARA STREET

SPEED (MPH)	TOTAL VEHICLES SURVEYED			TOTAL	
	EB	WB	VEHICLES	VEHICLES	
70			0	0	
69			0	0	
68			0	0	
67			0	0	
66			0	0	
65			0	0	
64			0	0	
63			0	0	
62			0	0	
61			0	0	
60			0	0	
59			0	0	
58			0	0	
57			0	0	
56			0	0	
55			0	0	
54			0	0	
53			0	0	
52			0	0	
51			0	0	
50			0	0	
49			0	0	
48			0	0	
47			0	0	
46			0	0	
45			0	0	
44			0	0	
43			0	0	
42			0	0	
41			0	0	
40			0	0	
39	X		0	1	
38			0	0	
37	X		0	1	
36			0	0	
35	X		0	1	
34	X		0	1	
33	X	X	0	2	
32	X	X	0	2	
31	X	X	1	2	
30	X	X	2	5	
29	X	X	1	4	
28	X	X	1	2	
27	X	X	2	6	
26	X	X	7	9	
25	X	X	5	3	
24	X	X	7	5	
23	X	X	9	2	
22	X	X	4	1	
21	X	X	7	1	
20	X	X	4	2	
			50	50	100

LIMITS (BTN): ATLANTIC AVENUE TO WILCOX AVENUE

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .48 MILES

ACCIDENT HISTORY: 5.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0.88 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: _____ MPH **DEVELOPMENT:** _____

ADT: 10825

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>26.8</u>	<u>31.8</u>	<u>29.8</u>	M.P.H.
50TH %:	<u>24.0</u>	<u>27.6</u>	<u>25.8</u>	M.P.H.
15TH %:	<u>21.2</u>	<u>23.4</u>	<u>21.7</u>	M.P.H.
10 MPH PACE:	<u>21 - 30</u>	<u>24 - 33</u>	<u>21 - 30</u>	M.P.H.
% IN PACE:	<u>90%</u>	<u>80%</u>	<u>83%</u>	
% OVER PACE:	<u>2%</u>	<u>8%</u>	<u>11%</u>	
% UNDER PACE:	<u>8%</u>	<u>12%</u>	<u>6%</u>	
ARITHMETIC MEAN:	<u>23.98</u>	<u>27.58</u>	<u>25.78</u>	M.P.H.
SAMPLE VARIANCE:	<u>7.45</u>	<u>16.62</u>	<u>15.18</u>	
STANDARD DEVIATION:	<u>2.73</u>	<u>4.08</u>	<u>3.90</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.15</u>	<u>0.33</u>	<u>0.15</u>	
STD. ERROR OF THE MEAN:	<u>0.39</u>	<u>0.58</u>	<u>0.39</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 5/14/15 DAY: THURSDAY TIME PERIOD : 11:25AM TO 11:48AM

LOCATION: 5131 CLARA STREET

SPEED (MPH)	TOTAL VEHICLES SURVEYED	TOTAL		VEHICLES
		EB	WB	
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54		0	0	0
53		0	0	0
52		0	0	0
51		0	0	0
50		0	0	0
49		0	0	0
48		0	0	0
47		0	0	0
46		0	0	0
45		0	0	0
44		0	0	0
43	X X	2	0	2
42	X	1	0	1
41		0	0	0
40	X	1	0	1
39	X X X X	0	4	4
38	X	0	1	1
37	X X X X X X X X	3	6	9
36	X X X X X X	2	4	6
35	X X X X X X X X X X	7	4	11
34	X X X X X X X X	3	5	8
33	X X X X X X X X X X X X X X	7	8	15
32	X X X X X X X X X X	6	5	11
31	X X X	1	2	3
30	X X X X X X X X X X	3	7	10
29	X X X X X X X X	6	3	9
28	X X X X X X X X	5	3	8
27	X X X X	3	1	4
26	X	0	1	1
25	X X	0	2	2
24	X	0	1	1
23	X X X X X X	1	4	5
22	X	1	0	1
21		0	0	0
20		0	0	0
		52	61	113

LIMITS (BTN): WILCOX AVENUE TO RIVER ROAD

OBSERVATION POINT:

POSTED SPEED LIMIT: 25 MPH

COMMENTS:

ACCIDENT HISTORY: 6.00 In 3 Years

ACCIDENT RATE: 1.2 Acc/MVM

EXPECTED RATE: 2.21 Acc/MVM

PROPOSED SPEED LIMIT: 25 MPH

ADT: 18291

OBSERVER: WILLIAM

WEATHER: SUNNY

ROAD SURFACE: DRY

ROAD CONDITION: GOOD

ROAD SEGMENT LENGTH: .28 MILES

NUMBER OF LANES: 1 EACH DIRECTION

STREET WIDTH (Ft.):

DATA COLLECTION METHOD: RADAR

DEVELOPMENT:

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>36.9</u>	<u>36.6</u>	<u>36.7</u>	M.P.H.
50TH %:	<u>32.3</u>	<u>32.1</u>	<u>32.2</u>	M.P.H.
15TH %:	<u>27.8</u>	<u>27.5</u>	<u>27.6</u>	M.P.H.
10 MPH PACE:	<u>28 - 37</u>	<u>28 - 37</u>	<u>28 - 37</u>	M.P.H.
% IN PACE:	<u>83%</u>	<u>77%</u>	<u>80%</u>	
% OVER PACE:	<u>8%</u>	<u>8%</u>	<u>8%</u>	
% UNDER PACE:	<u>10%</u>	<u>15%</u>	<u>12%</u>	
ARITHMETIC MEAN:	<u>32.35</u>	<u>32.07</u>	<u>32.19</u>	M.P.H.
SAMPLE VARIANCE:	<u>19.45</u>	<u>19.36</u>	<u>19.25</u>	
STANDARD DEVIATION:	<u>4.41</u>	<u>4.40</u>	<u>4.39</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.37</u>	<u>0.32</u>	<u>0.17</u>	
STD. ERROR OF THE MEAN:	<u>0.61</u>	<u>0.56</u>	<u>0.41</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 5/28/15 DAY: THURSDAY TIME PERIOD: 10:40AM TO 11:40AM

LOCATION: **4840 ELIZABETH STREET**

SPEED (MPH)	TOTAL VEHICLES SURVEYED										TOTAL VEHICLES		
											EB	WB	VEHICLES
70											0	0	0
69											0	0	0
68											0	0	0
67											0	0	0
66											0	0	0
65											0	0	0
64											0	0	0
63											0	0	0
62											0	0	0
61											0	0	0
60											0	0	0
59											0	0	0
58											0	0	0
57											0	0	0
56											0	0	0
55											0	0	0
54											0	0	0
53											0	0	0
52											0	0	0
51											0	0	0
50											0	0	0
49											0	0	0
48											0	0	0
47											0	0	0
46											0	0	0
45											0	0	0
44											0	0	0
43											0	0	0
42											0	0	0
41											0	0	0
40											0	0	0
39											0	0	0
38											0	0	0
37											0	0	0
36											0	0	0
35											0	0	0
34											0	0	0
33	X										0	1	1
32											0	0	0
31	X	X	X	X	X						2	3	5
30	X	X									0	2	2
29	X	X	X	X	X						3	3	6
28	X	X									0	2	2
27	X	X	X	X	X	X					5	2	7
26	X	X	X	X	X	X	X	X	X		4	7	11
25	X	X	X	X	X	X	X	X	X	X	2	10	12
24	X	X	X	X	X	X	X	X	X		8	2	10
23	X	X	X	X	X	X	X	X	X	X	6	6	12
22	X	X	X	X	X						4	2	6
21	X	X	X	X	X	X	X	X	X	X	8	5	13
20	X	X	X	X	X	X	X	X	X	X	8	5	13
											50	50	100

LIMITS (BTN): ATLANTIC AVENUE TO WILCOX AVENUE

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .44 MILES

ACCIDENT HISTORY: 6.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 2.3 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: 25 MPH **DEVELOPMENT:** _____

ADT: 5418

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>26.8</u>	<u>28.5</u>	<u>27.7</u>	M.P.H.
50TH %:	<u>23.7</u>	<u>25.0</u>	<u>24.3</u>	M.P.H.
15TH %:	<u>20.5</u>	<u>21.5</u>	<u>21.0</u>	M.P.H.
10 MPH PACE:	<u>21 - 30</u>	<u>21 - 30</u>	<u>21 - 30</u>	M.P.H.
% IN PACE:	<u>80%</u>	<u>82%</u>	<u>81%</u>	
% OVER PACE:	<u>4%</u>	<u>8%</u>	<u>6%</u>	
% UNDER PACE:	<u>16%</u>	<u>10%</u>	<u>13%</u>	
ARITHMETIC MEAN:	<u>23.68</u>	<u>25.00</u>	<u>24.34</u>	M.P.H.
SAMPLE VARIANCE:	<u>9.24</u>	<u>11.27</u>	<u>10.59</u>	
STANDARD DEVIATION:	<u>3.04</u>	<u>3.36</u>	<u>3.25</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.18</u>	<u>0.23</u>	<u>0.11</u>	
STD. ERROR OF THE MEAN:	<u>0.43</u>	<u>0.47</u>	<u>0.33</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 5/28/15 DAY: THURSDAY TIME PERIOD: 1:00PM TO 1:50PM

LOCATION: 5207 ELIZABETH STREET

SPEED (MPH)	TOTAL VEHICLES SURVEYED			TOTAL VEHICLES
	EB	WB		
70				0
69				0
68				0
67				0
66				0
65				0
64				0
63				0
62				0
61				0
60				0
59				0
58				0
57				0
56				0
55				0
54				0
53				0
52				0
51				0
50				0
49				0
48				0
47				0
46				0
45				0
44				0
43				0
42				0
41				0
40				0
39				0
38				0
37				0
36				0
35				0
34				0
33				0
32				0
31	X	X	X	3
30	X	X	X	8
29	X	X	X	9
28	X	X	X	8
27	X	X	X	6
26	X	X	X	9
25	X	X	X	9
24	X	X	X	6
23	X	X	X	8
22	X	X	X	9
21	X	X	X	9
20	X	X	X	9
	50	43	93	

LIMITS (BTN): WILCOX AVENUE TO PARK AVENUE

OBSERVATION POINT:

POSTED SPEED LIMIT: 25 MPH

COMMENTS:

ACCIDENT HISTORY: 1.00 In 3 Years

ACCIDENT RATE: 1.26 Acc/MVM

EXPECTED RATE: 2.21 Acc/MVM

PROPOSED SPEED LIMIT: MPH

ADT: 2491

OBSERVER: WILLIAM

WEATHER: SUNNY

ROAD SURFACE: DRY

ROAD CONDITION: GOOD

ROAD SEGMENT LENGTH: .29 MILES

NUMBER OF LANES: 1 EACH DIRECTION

STREET WIDTH (Ft.):

DATA COLLECTION METHOD: RADAR

DEVELOPMENT:

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>28.4</u>	<u>28.8</u>	<u>28.6</u>	M.P.H.
50TH %:	<u>24.7</u>	<u>25.6</u>	<u>25.1</u>	M.P.H.
15TH %:	<u>21.0</u>	<u>22.3</u>	<u>21.6</u>	M.P.H.
10 MPH PACE:	<u>21 - 30</u>	<u>22 - 31</u>	<u>21 - 30</u>	M.P.H.
% IN PACE:	<u>84%</u>	<u>91%</u>	<u>87%</u>	
% OVER PACE:	<u>2%</u>	<u>0%</u>	<u>3%</u>	
% UNDER PACE:	<u>14%</u>	<u>9%</u>	<u>10%</u>	
ARITHMETIC MEAN:	<u>24.70</u>	<u>25.56</u>	<u>25.10</u>	M.P.H.
SAMPLE VARIANCE:	<u>12.66</u>	<u>9.68</u>	<u>11.35</u>	
STANDARD DEVIATION:	<u>3.56</u>	<u>3.11</u>	<u>3.37</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.25</u>	<u>0.23</u>	<u>0.12</u>	
STD. ERROR OF THE MEAN:	<u>0.50</u>	<u>0.47</u>	<u>0.35</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 5/12/15 DAY: TUESDAY TIME PERIOD: 1:00PM TO 1:15PM

LOCATION: **7517 OTIS AVENUE**

SPEED (MPH)	TOTAL VEHICLES SURVEYED	otis aver		TOTAL VEHICLES
		NB	SB	
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54		0	0	0
53		0	0	0
52		0	0	0
51		0	0	0
50		0	0	0
49		0	0	0
48		0	0	0
47		0	0	0
46		0	0	0
45		0	0	0
44		0	0	0
43		0	0	0
42		0	0	0
41		0	0	0
40		0	0	0
39		0	0	0
38	X	1	0	1
37	X	0	1	1
36	X	1	0	1
35	X	0	1	1
34	X X X	1	2	3
33	X X X	1	2	3
32	X X X X X X X	3	4	7
31	X X X X X X	4	2	6
30	X X X X X X	4	2	6
29	X X X X X X X X X X X X	4	9	13
28	X X X X X X X X X	6	3	9
27	X X X X X X X X X X X X X	3	11	14
26	X X X X X X X	0	7	7
25	X X X X X X X X X X X X X	7	7	14
24	X X X X	1	3	4
23	X X X X X	4	1	5
22	X X X X X	4	1	5
21	X X X X X X	6	0	6
20		0	0	0
		50	56	106

LIMITS (BTN): WALNUT STREET TO FLOWER STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .16 MILES

ACCIDENT HISTORY: 0.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: - MPH **DEVELOPMENT:** _____

ADT: 10775

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>31.5</u>	<u>31.4</u>	<u>31.5</u>	M.P.H.
50TH %:	<u>27.0</u>	<u>28.1</u>	<u>27.6</u>	M.P.H.
15TH %:	<u>22.6</u>	<u>24.8</u>	<u>23.7</u>	M.P.H.
10 MPH PACE:	<u>21 - 30</u>	<u>24 - 33</u>	<u>23 - 32</u>	M.P.H.
% IN PACE:	<u>78%</u>	<u>89%</u>	<u>80%</u>	
% OVER PACE:	<u>22%</u>	<u>7%</u>	<u>9%</u>	
% UNDER PACE:	<u>0%</u>	<u>4%</u>	<u>10%</u>	
ARITHMETIC MEAN:	<u>27.02</u>	<u>28.07</u>	<u>27.58</u>	M.P.H.
SAMPLE VARIANCE:	<u>18.39</u>	<u>10.21</u>	<u>14.21</u>	
STANDARD DEVIATION:	<u>4.29</u>	<u>3.20</u>	<u>3.77</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.37</u>	<u>0.18</u>	<u>0.13</u>	
STD. ERROR OF THE MEAN:	<u>0.61</u>	<u>0.43</u>	<u>0.37</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 5/12/15 DAY: TUESDAY TIME PERIOD : 1:30PM TO 2:05PM

LOCATION: 7617 OTIS AVENUE

SPEED (MPH)	TOTAL VEHICLES SURVEYED	otis aver		TOTAL VEHICLES
		NB	SB	
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54		0	0	0
53		0	0	0
52		0	0	0
51		0	0	0
50		0	0	0
49		0	0	0
48		0	0	0
47		0	0	0
46		0	0	0
45		0	0	0
44		0	0	0
43		0	0	0
42		0	0	0
41		0	0	0
40		0	0	0
39		0	0	0
38		0	0	0
37		0	0	0
36		0	0	0
35		0	0	0
34	X	0	1	1
33	X	0	1	1
32	X	0	1	1
31		0	0	0
30	X	0	1	1
29	X X X X X X	5	1	6
28	X X X X X	4	1	5
27	X X X X X	3	2	5
26	X X X X X X X	1	6	7
25	X X X X X X X X X X X X X	8	5	13
24	X X X X X X X X	3	5	8
23	X X X X X X X X X	3	6	9
22	X X X X X X X X X X X X X X X	8	8	16
21	X X X X X X X X X X X X X X	8	6	14
20	X X X X X X X X X X X X X X	7	6	13
		50	50	100

LIMITS (BTN): FLOWER STREET TO SALT LAKE AVENUE

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .26 MILES

ACCIDENT HISTORY: 0.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: _____ MPH **DEVELOPMENT:** _____

ADT: 11235

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>26.9</u>	<u>27.5</u>	<u>27.2</u>	M.P.H.
50TH %:	<u>23.8</u>	<u>24.0</u>	<u>23.9</u>	M.P.H.
15TH %:	<u>20.7</u>	<u>20.5</u>	<u>20.6</u>	M.P.H.
10 MPH PACE:	<u>21 - 30</u>	<u>21 - 30</u>	<u>21 - 30</u>	M.P.H.
% IN PACE:	<u>86%</u>	<u>82%</u>	<u>84%</u>	
% OVER PACE:	<u>0%</u>	<u>6%</u>	<u>3%</u>	
% UNDER PACE:	<u>14%</u>	<u>12%</u>	<u>13%</u>	
ARITHMETIC MEAN:	<u>23.78</u>	<u>24.02</u>	<u>23.90</u>	M.P.H.
SAMPLE VARIANCE:	<u>9.07</u>	<u>11.37</u>	<u>10.13</u>	
STANDARD DEVIATION:	<u>3.01</u>	<u>3.37</u>	<u>3.18</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.18</u>	<u>0.23</u>	<u>0.10</u>	
STD. ERROR OF THE MEAN:	<u>0.43</u>	<u>0.48</u>	<u>0.32</u>	M.P.H.

FILENAME: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 5/28/15 DAY: THURSDAY TIME PERIOD : 3:00PM TO 3:55PM

LOCATION: 300 PATALA STREET

SPEED (MPH)	TOTAL VEHICLES SURVEYED	otis aver		TOTAL VEHICLES
		EB	WB	
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54		0	0	0
53		0	0	0
52	X	0	1	1
51		0	0	0
50		0	0	0
49		0	0	0
48		0	0	0
47		0	0	0
46		0	0	0
45		0	0	0
44	X	1	0	1
43	X	0	1	1
42	X X	1	1	2
41		0	0	0
40	X X X	0	3	3
39	X X X X X X X X	5	4	9
38	X X X X	1	3	4
37	X X X	1	2	3
36	X X X X X	3	2	5
35	X X X X X X X X	2	6	8
34	X X X X X X X X	6	2	8
33	X X X X X X X X X X X X	7	5	12
32	X X X X X X X X X X X X	8	4	12
31	X X X X X X X X X X	5	4	9
30	X X X X X X X X	4	4	8
29	X X X	2	1	3
28	X X X X	2	2	4
27	X X X	1	2	3
26	X	0	1	1
25	X X X X	2	2	4
24	X X	1	1	2
23	X	0	1	1
22	X X	1	1	2
21	X	0	1	1
20	X X	0	2	2
		53	56	109

LIMITS (BTN): ATLANTIC AVENUE TO WILCOX AVENUE

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .23 MILES

ACCIDENT HISTORY: 0.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: - MPH **DEVELOPMENT:** _____

ADT: 4034

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>37.3</u>	<u>39.2</u>	<u>38.3</u>	M.P.H.
50TH %:	<u>32.8</u>	<u>32.7</u>	<u>32.8</u>	M.P.H.
15TH %:	<u>28.3</u>	<u>26.3</u>	<u>27.2</u>	M.P.H.
10 MPH PACE:	<u>30 - 39</u>	<u>30 - 39</u>	<u>30 - 39</u>	M.P.H.
% IN PACE:	<u>79%</u>	<u>64%</u>	<u>72%</u>	
% OVER PACE:	<u>4%</u>	<u>11%</u>	<u>7%</u>	
% UNDER PACE:	<u>17%</u>	<u>25%</u>	<u>21%</u>	
ARITHMETIC MEAN:	<u>32.77</u>	<u>32.73</u>	<u>32.75</u>	M.P.H.
SAMPLE VARIANCE:	<u>18.72</u>	<u>38.82</u>	<u>28.78</u>	
STANDARD DEVIATION:	<u>4.33</u>	<u>6.23</u>	<u>5.36</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.35</u>	<u>0.69</u>	<u>0.26</u>	
STD. ERROR OF THE MEAN:	<u>0.59</u>	<u>0.83</u>	<u>0.51</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6/4/15 DAY: THURSDAY TIME PERIOD: 11:30AM TO 12:00PM

LOCATION: 7522 SALT LAKE AVENUE

SPEED (MPH)	TOTAL VEHICLES SURVEYED	otis aver		TOTAL VEHICLES
		NB	SB	
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54		0	0	0
53		0	0	0
52		0	0	0
51		0	0	0
50	X	0	1	1
49		0	0	0
48	X	1	0	1
47	X	0	1	1
46		0	0	0
45	X X X	2	1	3
44	X	0	1	1
43	X X	0	2	2
42	X X X X	0	4	4
41	X X X	1	2	3
40	X X X X X X	3	3	6
39	X X X X X X X X X X X X	4	8	12
38	X X X X X X X X X X X X X X X X	7	9	16
37	X X X X X X X X X X X X X X	8	5	13
36	X X X X X X X X X X	5	4	9
35	X X X X X X X X X X	4	5	9
34	X X X X X X X X X X	5	3	8
33	X X X X	4	0	4
32	X X X X	4	0	4
31	X X	1	1	2
30	X	0	1	1
29		0	0	0
28		0	0	0
27		0	0	0
26	X	1	0	1
25	X X X	3	0	3
24	X X	2	0	2
23		0	0	0
22		0	0	0
21		0	0	0
20	X X X	0	3	3
		55	54	109

LIMITS (BTN): WALNUT AVENUE TO OLIVE STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 35 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .21 MILES

ACCIDENT HISTORY: 1.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0.74 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: 35 MPH **DEVELOPMENT:** _____

ADT: 5850

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>40.5</u>	<u>43.2</u>	<u>42.0</u>	M.P.H.
50TH %:	<u>35.4</u>	<u>37.5</u>	<u>36.4</u>	M.P.H.
15TH %:	<u>30.3</u>	<u>31.7</u>	<u>30.9</u>	M.P.H.
10 MPH PACE:	<u>32 - 41</u>	<u>34 - 43</u>	<u>33 - 42</u>	M.P.H.
% IN PACE:	<u>82%</u>	<u>83%</u>	<u>77%</u>	
% OVER PACE:	<u>5%</u>	<u>7%</u>	<u>8%</u>	
% UNDER PACE:	<u>13%</u>	<u>9%</u>	<u>15%</u>	
ARITHMETIC MEAN:	<u>35.40</u>	<u>37.46</u>	<u>36.42</u>	M.P.H.
SAMPLE VARIANCE:	<u>24.65</u>	<u>31.05</u>	<u>28.64</u>	
STANDARD DEVIATION:	<u>4.97</u>	<u>5.57</u>	<u>5.35</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.45</u>	<u>0.57</u>	<u>0.26</u>	
STD. ERROR OF THE MEAN:	<u>0.67</u>	<u>0.76</u>	<u>0.51</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6/4/15 DAY: THURSDAY TIME PERIOD: 1:00PM TO 1:35PM

LOCATION: 8240 SALT LAKE AVENUE

SPEED (MPH)	TOTAL VEHICLES SURVEYED	otis aver		TOTAL VEHICLES
		NB	SB	
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54	X	0	1	1
53		0	0	0
52		0	0	0
51		0	0	0
50		0	0	0
49		0	0	0
48		0	0	0
47		0	0	0
46	X	1	0	1
45	X	1	0	1
44	X	0	1	1
43		0	0	0
42	X X X X	3	1	4
41	X X X X X	1	4	5
40	X X X X X X X X	5	3	8
39	X X X X X X X X X X X X X X	6	8	14
38	X X X X X X X X X	4	5	9
37	X X X X X X X X X X X X X X X X X X	9	9	18
36	X X X X X X X X X X X X X X X X X X	9	6	15
35	X X X X X X X X X X X X X	6	6	12
34	X X X	1	2	3
33	X	1	0	1
32	X X X	2	1	3
31	X	1	0	1
30	X X X X X	3	1	4
29	X X X	2	1	3
28	X X	1	1	2
27		0	0	0
26		0	0	0
25		0	0	0
24		0	0	0
23		0	0	0
22		0	0	0
21		0	0	0
20		0	0	0
		56	50	106

LIMITS (BTN): SANTA ANA STREET TO PATALA STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 35 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .64 MILES

ACCIDENT HISTORY: 0.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: - MPH **DEVELOPMENT:** _____

ADT: 11548

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>40.5</u>	<u>41.5</u>	<u>41.0</u>	M.P.H.
50TH %:	<u>36.6</u>	<u>37.4</u>	<u>37.0</u>	M.P.H.
15TH %:	<u>32.6</u>	<u>33.4</u>	<u>33.0</u>	M.P.H.
10 MPH PACE:	<u>33 - 42</u>	<u>34 - 43</u>	<u>33 - 42</u>	M.P.H.
% IN PACE:	<u>80%</u>	<u>88%</u>	<u>84%</u>	
% OVER PACE:	<u>4%</u>	<u>4%</u>	<u>4%</u>	
% UNDER PACE:	<u>16%</u>	<u>8%</u>	<u>12%</u>	
ARITHMETIC MEAN:	<u>36.59</u>	<u>37.44</u>	<u>36.99</u>	M.P.H.
SAMPLE VARIANCE:	<u>14.54</u>	<u>15.27</u>	<u>14.92</u>	
STANDARD DEVIATION:	<u>3.81</u>	<u>3.91</u>	<u>3.86</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.26</u>	<u>0.31</u>	<u>0.14</u>	
STD. ERROR OF THE MEAN:	<u>0.51</u>	<u>0.55</u>	<u>0.38</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6/4/15 DAY: THURSDAY TIME PERIOD: 1:50PM TO 2:10PM

LOCATION: 4443 SANTA ANA STREET

SPEED (MPH)	TOTAL VEHICLES SURVEYED										otis aver		TOTAL VEHICLES
											EB	WB	
70											0	0	0
69											0	0	0
68											0	0	0
67											0	0	0
66											0	0	0
65											0	0	0
64											0	0	0
63											0	0	0
62											0	0	0
61											0	0	0
60											0	0	0
59											0	0	0
58											0	0	0
57											0	0	0
56											0	0	0
55											0	0	0
54											0	0	0
53											0	0	0
52											0	0	0
51											0	0	0
50											0	0	0
49											0	0	0
48											0	0	0
47											0	0	0
46											0	0	0
45											0	0	0
44											0	0	0
43											0	0	0
42											0	0	0
41											0	0	0
40											0	0	0
39											0	0	0
38											0	0	0
37											0	0	0
36											0	0	0
35	X										1	0	1
34											0	0	0
33	X										1	0	1
32	X	X									1	1	2
31	X	X	X								1	2	3
30	X	X	X	X	X						5	1	6
29	X	X	X	X	X	X	X	X	X		10	3	13
28	X	X	X	X	X	X	X	X	X	X	9	9	18
27	X	X	X	X	X	X	X	X	X	X	8	8	16
26	X	X	X	X	X	X	X	X	X		5	7	12
25	X	X	X	X	X	X	X	X	X		5	8	13
24	X	X	X	X	X						1	6	7
23	X	X	X								1	2	3
22	X	X	X								1	2	3
21	X	X	X								1	2	3
20	X	X	X	X							2	2	4
											52	53	105

LIMITS (BTN): SALT LAKE AVENUE TO ATLANTIC AVENUE

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .37 MILES

ACCIDENT HISTORY: 4.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0.93 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: - MPH **DEVELOPMENT:** _____

ADT: 10571

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>30.4</u>	<u>28.8</u>	<u>29.7</u>	M.P.H.
50TH %:	<u>27.4</u>	<u>26.0</u>	<u>26.7</u>	M.P.H.
15TH %:	<u>24.4</u>	<u>23.2</u>	<u>23.7</u>	M.P.H.
10 MPH PACE:	<u>24 - 33</u>	<u>22 - 31</u>	<u>22 - 31</u>	M.P.H.
% IN PACE:	<u>88%</u>	<u>91%</u>	<u>90%</u>	
% OVER PACE:	<u>2%</u>	<u>2%</u>	<u>4%</u>	
% UNDER PACE:	<u>10%</u>	<u>8%</u>	<u>7%</u>	
ARITHMETIC MEAN:	<u>27.38</u>	<u>25.98</u>	<u>26.68</u>	M.P.H.
SAMPLE VARIANCE:	<u>8.56</u>	<u>7.25</u>	<u>8.32</u>	
STANDARD DEVIATION:	<u>2.92</u>	<u>2.69</u>	<u>2.88</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.16</u>	<u>0.14</u>	<u>0.08</u>	
STD. ERROR OF THE MEAN:	<u>0.41</u>	<u>0.37</u>	<u>0.28</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6/4/15 DAY: THURSDAY TIME PERIOD : 2:20PM TO 2:45PM

LOCATION: 4853 SANTA ANA STREET

SPEED (MPH)	TOTAL VEHICLES SURVEYED										otis aver		TOTAL
											EB	WB	VEHICLES
70											0	0	0
69											0	0	0
68											0	0	0
67											0	0	0
66											0	0	0
65											0	0	0
64											0	0	0
63											0	0	0
62											0	0	0
61											0	0	0
60											0	0	0
59											0	0	0
58											0	0	0
57											0	0	0
56											0	0	0
55											0	0	0
54											0	0	0
53											0	0	0
52											0	0	0
51											0	0	0
50											0	0	0
49											0	0	0
48											0	0	0
47											0	0	0
46											0	0	0
45											0	0	0
44											0	0	0
43											0	0	0
42											0	0	0
41											0	0	0
40	X										0	1	1
39											0	0	0
38											0	0	0
37											0	0	0
36	X										0	1	1
35											0	0	0
34	X	X									1	1	2
33	X	X									1	1	2
32	X	X	X								2	1	3
31	X	X	X	X	X						4	2	6
30	X	X	X	X	X	X	X	X	X		6	6	12
29	X	X	X	X	X	X	X	X	X	X	5	7	12
28	X	X	X	X	X	X	X	X	X	X	5	9	14
27	X	X	X	X	X	X	X	X	X	X	6	5	11
26	X	X	X	X	X	X	X	X	X	X	6	5	11
25	X	X	X	X	X	X	X	X	X		6	4	10
24	X	X	X	X	X	X					4	4	8
23	X	X	X								1	2	3
22	X										1	0	1
21	X	X									1	1	2
20	X	X									2	0	2
											51	50	101

LIMITS (BTN): ATLANTIC AVENUE TO WILCOX AVENUE

OBSERVATION POINT:

POSTED SPEED LIMIT: 25 MPH

COMMENTS:

ACCIDENT HISTORY: 2.00 In 3 Years

ACCIDENT RATE: 0.63 Acc/MVM

EXPECTED RATE: 2.21 Acc/MVM

PROPOSED SPEED LIMIT: 25 MPH

ADT: 7606

OBSERVER: WILLIAM

WEATHER: SUNNY

ROAD SURFACE: DRY

ROAD CONDITION: GOOD

ROAD SEGMENT LENGTH: .38 MILES

NUMBER OF LANES: 1 EACH DIRECTION

STREET WIDTH (Ft.):

DATA COLLECTION METHOD: RADAR

DEVELOPMENT:

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>30.6</u>	<u>31.5</u>	<u>31.0</u>	M.P.H.
50TH %:	<u>27.3</u>	<u>28.0</u>	<u>27.6</u>	M.P.H.
15TH %:	<u>23.9</u>	<u>24.5</u>	<u>24.2</u>	M.P.H.
10 MPH PACE:	<u>24 - 33</u>	<u>23 - 32</u>	<u>23 - 32</u>	M.P.H.
% IN PACE:	<u>88%</u>	<u>90%</u>	<u>89%</u>	
% OVER PACE:	<u>2%</u>	<u>8%</u>	<u>6%</u>	
% UNDER PACE:	<u>10%</u>	<u>2%</u>	<u>5%</u>	
ARITHMETIC MEAN:	<u>27.25</u>	<u>28.00</u>	<u>27.62</u>	M.P.H.
SAMPLE VARIANCE:	<u>10.31</u>	<u>11.39</u>	<u>10.88</u>	
STANDARD DEVIATION:	<u>3.21</u>	<u>3.37</u>	<u>3.30</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.20</u>	<u>0.23</u>	<u>0.11</u>	
STD. ERROR OF THE MEAN:	<u>0.45</u>	<u>0.48</u>	<u>0.33</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6/4/15 DAY: THURSDAY TIME PERIOD : 2:55PM TO 3:25PM

LOCATION: **5157 SANTA ANA STREET**

SPEED (MPH)	TOTAL VEHICLES SURVEYED										otis aver		TOTAL
											EB	WB	VEHICLES
70											0	0	0
69											0	0	0
68											0	0	0
67											0	0	0
66											0	0	0
65											0	0	0
64											0	0	0
63											0	0	0
62											0	0	0
61											0	0	0
60											0	0	0
59											0	0	0
58											0	0	0
57											0	0	0
56											0	0	0
55											0	0	0
54											0	0	0
53											0	0	0
52											0	0	0
51											0	0	0
50											0	0	0
49											0	0	0
48											0	0	0
47	X										0	1	1
46											0	0	0
45											0	0	0
44											0	0	0
43	X										1	0	1
42											0	0	0
41											0	0	0
40											0	0	0
39	X	X	X								1	2	3
38	X	X	X								1	2	3
37	X	X									0	2	2
36	X	X	X	X							4	0	4
35	X	X									2	0	2
34	X	X	X	X							2	2	4
33	X	X	X	X	X	X					5	2	7
32	X	X	X	X	X						4	2	6
31	X	X	X	X	X	X	X				6	2	8
30	X	X	X	X	X	X	X				4	3	7
29	X	X	X	X	X	X	X	X			2	6	8
28	X	X	X	X	X	X	X	X	X		5	5	10
27	X	X	X	X	X	X	X	X	X	X	4	7	11
26	X	X	X	X	X	X	X	X	X	X	5	5	10
25	X	X	X	X	X	X					3	4	7
24	X	X									1	1	2
23	X	X									1	1	2
22	X										0	1	1
21	X										0	1	1
20	X										0	1	1
											51	50	101

LIMITS (BTN): WILCOX AVENUE TO PARK AVENUE

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .28 MILES

ACCIDENT HISTORY: 1.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 1.1 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: 25 MPH **DEVELOPMENT:** _____

ADT: 2956

	EASTBOUND	WESTBOUND	EASTBOUND+WESTBOUND	
85TH %:	<u>34.9</u>	<u>34.7</u>	<u>34.9</u>	M.P.H.
50TH %:	<u>30.6</u>	<u>29.4</u>	<u>30.0</u>	M.P.H.
15TH %:	<u>26.2</u>	<u>24.0</u>	<u>25.1</u>	M.P.H.
10 MPH PACE:	<u>25 - 34</u>	<u>25 - 34</u>	<u>25 - 34</u>	M.P.H.
% IN PACE:	<u>78%</u>	<u>76%</u>	<u>77%</u>	
% OVER PACE:	<u>18%</u>	<u>14%</u>	<u>16%</u>	
% UNDER PACE:	<u>4%</u>	<u>10%</u>	<u>7%</u>	
ARITHMETIC MEAN:	<u>30.57</u>	<u>29.36</u>	<u>29.97</u>	M.P.H.
SAMPLE VARIANCE:	<u>17.77</u>	<u>26.85</u>	<u>22.41</u>	
STANDARD DEVIATION:	<u>4.22</u>	<u>5.18</u>	<u>4.73</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.35</u>	<u>0.54</u>	<u>0.22</u>	
STD. ERROR OF THE MEAN:	<u>0.59</u>	<u>0.73</u>	<u>0.47</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6/4/15 DAY: THURSDAY TIME PERIOD : 9:00AM TO 9:15AM

LOCATION: **7313 WILCOX AVENUE**

SPEED (MPH)	TOTAL VEHICLES SURVEYED	otis aver		TOTAL VEHICLES
		NB	SB	
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54		0	0	0
53		0	0	0
52		0	0	0
51		0	0	0
50		0	0	0
49		0	0	0
48		0	0	0
47		0	0	0
46		0	0	0
45		0	0	0
44	X	1	0	1
43	X	1	0	1
42		0	0	0
41		0	0	0
40		0	0	0
39		0	0	0
38		0	0	0
37		0	0	0
36		0	0	0
35	X X X	3	0	3
34	X X X X X	4	1	5
33	X X X	2	1	3
32	X X X	2	1	3
31	X X X X X X X X	6	2	8
30	X X X X X X X X X X	2	7	9
29	X X X X X X X X X X X X	7	5	12
28	X X X X X X X X	3	5	8
27	X X X X X X X X X	4	5	9
26	X X X X X X X X X X X	6	5	11
25	X X X X X X X	2	5	7
24	X X X X X X X	3	4	7
23	X X X X X X	1	5	6
22	X X X X X X	3	3	6
21	X	0	1	1
20		0	0	0
		50	50	100

LIMITS (BTN): WALNUT STREET TO CLARA STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .24 MILES

ACCIDENT HISTORY: 2.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0.48 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: - MPH **DEVELOPMENT:** _____

ADT: 15808

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>34.1</u>	<u>30.1</u>	<u>32.4</u>	M.P.H.
50TH %:	<u>29.3</u>	<u>26.9</u>	<u>28.1</u>	M.P.H.
15TH %:	<u>24.5</u>	<u>23.6</u>	<u>23.8</u>	M.P.H.
10 MPH PACE:	<u>26 - 35</u>	<u>22 - 31</u>	<u>22 - 31</u>	M.P.H.
% IN PACE:	<u>78%</u>	<u>92%</u>	<u>83%</u>	
% OVER PACE:	<u>4%</u>	<u>6%</u>	<u>16%</u>	
% UNDER PACE:	<u>18%</u>	<u>2%</u>	<u>1%</u>	
ARITHMETIC MEAN:	<u>29.32</u>	<u>26.88</u>	<u>28.10</u>	M.P.H.
SAMPLE VARIANCE:	<u>21.69</u>	<u>9.82</u>	<u>17.10</u>	
STANDARD DEVIATION:	<u>4.66</u>	<u>3.13</u>	<u>4.14</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.43</u>	<u>0.20</u>	<u>0.17</u>	
STD. ERROR OF THE MEAN:	<u>0.66</u>	<u>0.44</u>	<u>0.41</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6/4/15 DAY: THURSDAY TIME PERIOD: 9:20AM TO 9:35AM

LOCATION: **800 WILCOX AVENUE**

SPEED (MPH)	TOTAL VEHICLES SURVEYED										otis aver		TOTAL
											NB	SB	VEHICLES
70											0	0	0
69											0	0	0
68											0	0	0
67											0	0	0
66											0	0	0
65											0	0	0
64											0	0	0
63											0	0	0
62											0	0	0
61											0	0	0
60											0	0	0
59											0	0	0
58											0	0	0
57											0	0	0
56											0	0	0
55											0	0	0
54											0	0	0
53											0	0	0
52											0	0	0
51											0	0	0
50											0	0	0
49											0	0	0
48											0	0	0
47											0	0	0
46											0	0	0
45											0	0	0
44											0	0	0
43											0	0	0
42											0	0	0
41											0	0	0
40											0	0	0
39											0	0	0
38											0	0	0
37											0	0	0
36	X										1	0	1
35											0	0	0
34	X										1	0	1
33	X	X	X	X	X	X					3	3	6
32	X	X	X								1	2	3
31	X	X	X	X	X	X					4	3	7
30	X	X	X	X							2	2	4
29	X	X	X	X	X	X	X				6	3	9
28	X	X	X	X	X	X					4	3	7
27	X	X	X	X	X	X					6	1	7
26	X	X	X	X	X	X					3	4	7
25	X	X	X	X	X	X					5	3	8
24	X	X	X	X	X						2	4	6
23	X	X	X	X	X	X	X	X			3	8	11
22	X	X	X	X	X						2	4	6
21	X	X	X	X	X	X	X	X			4	7	11
20	X	X	X	X	X						3	3	6
											50	50	100

LIMITS (BTN): CLARA STREET TO SANTA ANA STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .32 MILES

ACCIDENT HISTORY: 2.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0.52 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: - MPH **DEVELOPMENT:** _____

ADT: 11060

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>31.0</u>	<u>29.5</u>	<u>30.3</u>	M.P.H.
50TH %:	<u>26.8</u>	<u>25.4</u>	<u>26.1</u>	M.P.H.
15TH %:	<u>22.6</u>	<u>21.2</u>	<u>21.9</u>	M.P.H.
10 MPH PACE:	<u>22 - 31</u>	<u>21 - 30</u>	<u>21 - 30</u>	M.P.H.
% IN PACE:	<u>74%</u>	<u>78%</u>	<u>76%</u>	
% OVER PACE:	<u>12%</u>	<u>16%</u>	<u>18%</u>	
% UNDER PACE:	<u>14%</u>	<u>6%</u>	<u>6%</u>	
ARITHMETIC MEAN:	<u>26.82</u>	<u>25.36</u>	<u>26.09</u>	M.P.H.
SAMPLE VARIANCE:	<u>16.35</u>	<u>15.99</u>	<u>16.55</u>	
STANDARD DEVIATION:	<u>4.04</u>	<u>4.00</u>	<u>4.07</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.33</u>	<u>0.32</u>	<u>0.17</u>	
STD. ERROR OF THE MEAN:	<u>0.57</u>	<u>0.57</u>	<u>0.41</u>	M.P.H.

FILENAME:

ENGINEERING AND TRAFFIC SURVEY

CITY OF CUDAHY

DATE: 6/4/15 DAY: THURSDAY TIME PERIOD: 9:40AM TO 10:15AM

LOCATION: WILCOX AVENUE

SPEED (MPH)	TOTAL VEHICLES SURVEYED	otis aver		TOTAL
		NB	SB	VEHICLES
70		0	0	0
69		0	0	0
68		0	0	0
67		0	0	0
66		0	0	0
65		0	0	0
64		0	0	0
63		0	0	0
62		0	0	0
61		0	0	0
60		0	0	0
59		0	0	0
58		0	0	0
57		0	0	0
56		0	0	0
55		0	0	0
54		0	0	0
53		0	0	0
52		0	0	0
51		0	0	0
50		0	0	0
49		0	0	0
48		0	0	0
47		0	0	0
46		0	0	0
45		0	0	0
44	X X	2	0	2
43		0	0	0
42	X X	0	2	2
41		0	0	0
40	X X X X X X	4	2	6
39		0	0	0
38	X X	0	2	2
37	X X	2	0	2
36	X X	0	2	2
35	X X	0	2	2
34	X X X X X X X X X X	8	4	12
33	X X X X X X	4	2	6
32	X X X X X X X X	4	4	8
31	X X X X X X X X X X	4	6	10
30	X X X X X X	0	6	6
29	X X X X X X X X X X X X	6	6	12
28	X X X X X X X X	6	2	8
27	X X X X X X	4	2	6
26	X X X X X X X X X X X X	6	4	10
25	X X X X	2	2	4
24	X X	0	2	2
23	X X	2	0	2
22	X X X X	2	2	4
21	X X	2	0	2
20	X X X X	0	4	4
		58	56	114

LIMITS (BTN): SANTA ANA STREET TO PATALA STREET

OBSERVATION POINT: _____ **OBSERVER:** WILLIAM

POSTED SPEED LIMIT: 25 MPH **WEATHER:** SUNNY

COMMENTS: _____ **ROAD SURFACE:** DRY

_____ **ROAD CONDITION:** GOOD

_____ **ROAD SEGMENT LENGTH:** .35 MILES

ACCIDENT HISTORY: 2.00 In 3 Years **NUMBER OF LANES:** 1 EACH DIRECTION

ACCIDENT RATE: 0.95 Acc/MVM **STREET WIDTH (Ft.):** _____

EXPECTED RATE: 2.21 Acc/MVM **DATA COLLECTION METHOD:** RADAR

PROPOSED SPEED LIMIT: _____ MPH **DEVELOPMENT:** _____

ADT: 5492

	NORTHBOUND	SOUTHBOUND	NORTHBOUND+SOUTHBOUND	
85TH %:	<u>36.0</u>	<u>35.7</u>	<u>35.9</u>	M.P.H.
50TH %:	<u>30.4</u>	<u>30.1</u>	<u>30.3</u>	M.P.H.
15TH %:	<u>24.9</u>	<u>24.6</u>	<u>24.7</u>	M.P.H.
10 MPH PACE:	<u>25 - 34</u>	<u>26 - 35</u>	<u>25 - 34</u>	M.P.H.
% IN PACE:	<u>76%</u>	<u>68%</u>	<u>72%</u>	
% OVER PACE:	<u>14%</u>	<u>14%</u>	<u>16%</u>	
% UNDER PACE:	<u>10%</u>	<u>18%</u>	<u>12%</u>	
ARITHMETIC MEAN:	<u>30.45</u>	<u>30.14</u>	<u>30.30</u>	M.P.H.
SAMPLE VARIANCE:	<u>29.16</u>	<u>28.85</u>	<u>28.78</u>	
STANDARD DEVIATION:	<u>5.40</u>	<u>5.37</u>	<u>5.36</u>	M.P.H.
VARIANCE OF THE MEAN:	<u>0.50</u>	<u>0.52</u>	<u>0.25</u>	
STD. ERROR OF THE MEAN:	<u>0.71</u>	<u>0.72</u>	<u>0.50</u>	M.P.H.

FILENAME:

APPENDIX B

Collision Rates

**Table 3
Collision Rates**

No. Street	From	To	Midblock Collisions (3 Years)	ADT*	Approx. Length of Segment (mi)	Calculated Accident Rate (Acc/MVM**)	Statewide Accident Rate*** (Acc/MVM)
1 ATLANTIC AVE	FLORENCE AVE	CLARA ST	4	32,124	0.33	0.35	2.04
2 ATLANTIC AVE	CLARA ST	SANTA ANA ST	1	30,359	0.33	0.09	2.04
3 ATLANTIC AVE	SANTA ANA ST	PATATA ST	3	36,874	0.38	0.20	2.04
4 CLARA ST	SALT LAKE AVE	ATLANTIC AVE	6	7,756	0.68	1.04	2.21
5 CLARA ST	ATLANTIC AVE	WILCOX AVE	5	10,825	0.48	0.88	2.21
6 CLARA ST	WILCOX AVE	RIVER RD	6	18,291	0.28	1.07	2.21
7 ELIZABETH ST	SALT LAKE AVE	ATLANTIC AVE	4	4,671	0.53	1.48	2.25
8 ELIZABETH ST	ATLANTIC AVE	WILCOX AVE	6	5,418	0.44	2.30	2.21
9 ELIZABETH ST	WILCOX AVE	PARK AVE	1	2,491	0.29	1.26	2.21
10 LIVE OAK ST	SALT LAKE AVE	OTIS AVE	2	1,464	0.40	3.12	2.21
11 LIVE OAK ST	OTIS AVE	ATLANTIC AVE	2	3,893	0.39	1.20	2.21
12 LIVE OAK ST	ATLANTIC AVE	WILCOX AVE	10	4,317	0.54	3.92	2.21
13 OTIS AVE	WALNUT ST	FLOWER ST	0	10,775	0.16	0.00	2.21
14 OTIS AVE	FLWOER ST	SALT LAKE AVE	0	11,235	0.26	0.00	2.21
15 PARK AVE	ELIZABETH ST	SANTA ANA ST	0	1,251	0.16	0.00	2.21
16 PATATA ST	ATLANTIC AVE	WILCOX AVE	0	4,034	0.23	0.00	2.21
17 SALT LAKE AVE	WALNUT AVE	OLIVE ST	1	5,850	0.21	0.74	2.21
18 SALT LAKE AVE	OLIVE ST	SANTA ANA ST	0	8699	0.39	0.00	2.21
19 SALT LAKE AVE	SANTA ANA ST	PATATA ST	0	11,548	0.64	0.00	2.21
20 SANTA ANA ST	SALT LAKE AVE	ATLANTIC AVE	4	10,571	0.37	0.93	2.21

**Table 3
Collision Rates**

No. Street	From	To	Midblock Collisions (3 Years)	ADT*	Approx. Length of Segment (mi)	Calculated Accident Rate (Acc/MVM**)	Statewide Accident Rate*** (Acc/MVM)
21 SANTA ANA ST	ATLANTIC AVE	WILCOX AVE	2	7,606	0.38	0.63	2.21
22 SANTA ANA ST	WILCOX AVE	PARK AVE	1	2,956	0.28	1.10	2.21
23 WILCOX AVE	NORTH CITY LIMIT	CLARA ST	2	15,808	0.24	0.48	2.21
24 WILCOX AVE	CLARA ST	SANTA ANA ST	2	11,060	0.32	0.52	2.21
25 WILCOX AVE	SANTA ANA ST	PATATA ST	2	5,492	0.35	0.95	2.21

APPENDIX C

Survey Equipment

SURVEY EQUIPMENT USED

The radar equipment used to collect speed measurements for this survey were a Falcon Hand-Held traffic Radar unit and a Road Runner Hand-Held traffic Radar unit. Both radar units are manufactured by Kustom Signals Inc. of Lenexa, Kansas. The calibration of each unit was checked before each series of measurements were taken. Tests of the units were conducted in accordance with the manufacturer's specifications. The Falcon Hand-Held Traffic Radar, SN# FF10, was last calibrated on March 25, 2015 by RHF Inc., and the Road Runner Hand-Held Traffic Radar, SN# RR22, was last calibrated on March 25, 2015 RHF Inc.



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