



# Speed Zone Study

## Engineering and Traffic Survey of Specified Streets within the City of Turlock

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*The Engineering & Traffic Surveys contained in this report were conducted, analyzed, and reported in accordance with the applicable provisions of the California Vehicle Code and California Manual on Uniform Traffic Control Devices for the purpose of establishing altered prima facie speed limits within the City of Turlock.*

*Completed August 5, 2014*

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This is to certify that the 2014 Engineering and Traffic Survey report for the City of Turlock, California is prepared in compliance with 2012 Manual of Uniform Traffic Control Devices (MUTCD) published by California Department of Transportation

August 5, 2014

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Michael G. Pitcock, P.E.  
Director of Development Services / City Engineer

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## I. Introduction

### ***Overview***

The state legislature, through the California Vehicle Code (CVC), has established prima facie (or default) speed limits as follows:

- 15 mph: Some railroad crossings, alleys, and uncontrolled/blind intersections
- 25 mph: Residential roadways, as defined by residential density, in school zones, around marked senior citizen facilities
- 55 mph: Undivided, two-lane roadways
- 65 mph: Divided, multi-lane roadways

These prima facie speed limits need not be posted on-site for enforcement purposes. In addition to those stated limits, most speed regulations support the principles of a basic speed law, which states:

*“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” (CVC §22350).*

### ***Altered Speed Limits***

The CVC does provide local agencies the ability to adopt legally-enforceable, altered prima facie speed limits when those changes:

- (1) are supported through an Engineering & Traffic Survey (Survey),
- (2) have been adopted by ordinance of the governing body, and
- (3) have been reflected in the signs posted on-site.

Altered speed limits allow local agencies to set appropriate speed limits based on a variety of factors unique to their own community. It is the City’s intent to establish reasonable and safe speed limits for all streets in Turlock to facilitate the safe and orderly movement of people, goods, and services in accordance with the provisions and requirements of State law.

### ***Speed Traps***

Altered speed limits that have not been established as specified in the CVC are classified as a “speed trap” and not enforceable with radar or Lidar (CVC §40802).

Each Survey has an expiration date of five, seven, or ten years depending on various conditions. A street segment with an altered speed limit and an expired Survey shall also be designated as a speed trap. A speed trap will not only result in contested speeding citations dismissed by a judge, but the law enforcement agency responsible for the citation, once notified of the speed trap status, can no longer provide speeding enforcement in the area (CVC §40801).

A Survey applies to a specific roadway section with start and end limits as defined by City staff. Local agencies can determine to approve them separately or together as part of a comprehensive report. City staff has determined that it is in the best interest of the public to revise all Surveys collectively, thereby focusing resources in one, concerted effort every few years, rather than continually updating them through an ongoing operation. This approach is also beneficially to law enforcement agencies and the court system, which can point to a specific document containing all current, relevant speed survey data.

Generally, the City can choose whether to keep the existing, prima facie speed limit on a particular street or go through the steps to alter it using the process described above. However, as a recipient of federal funding for roadway rehabilitation projects, the City is required to conduct Surveys on every non-local road as identified on the California Roadways Systems (CRS) map; these streets are also referred to as “federal-aid routes.” Agencies that use federal funds on street segments that have not be surveyed may be subject to a revocation of those funds, as well as subject to restrictions on future funding for a set period of time.

### ***Legal Requirements***

If the City of Turlock wishes to establish altered speed limits, they should be established based on the 85<sup>th</sup> percentile speed of the applicable Survey, rounded to the nearest 5 mph increment. There is an exception that a single, 5 mph reduction may be applied for specific reasons:

*If the speed limit to be posted has had the 5 mph reduction applied, then an E&TS [Survey] shall document in writing the conditions and justification for the lower speed limit and be approved by a registered Civil or Traffic Engineer*

The conditions or factors allowed for consideration when applying the speed limit reduction should involve:

*“(1) Prevailing speeds as determined by traffic engineering measurements,*

- (2) Accident records,
- (3) Highway, traffic, and roadside conditions not readily apparent to the driver,
- (4) Residential density [when specific density measurements are met],
- (5) Pedestrian and bicyclist safety.

Each Survey is automatically valid for a period of five years. However, since the City ensures that all police officers engaging in traffic enforcement have been properly trained on the use of either radar or laser equipment and that such equipment has been calibrated on a regular basis, each Survey becomes valid for seven years. If the City Engineer makes a determination that no significant changes have occurred within a specific section of roadway, then the Survey for that section of roadway may be valid for a period of ten years. No Survey shall be valid for a period longer than ten years.

### ***History***

On November 28, 2006, the Turlock City Council approved Ordinance No. 1077-CS, which amended Article 4-7-14 of the Turlock Municipal Code (TMC), thereby revising speed limits on most of the City's major roadways. These changes were reflected on-site through the modification of signs and pavement legends and notice of the revised speed limits were provided to all applicable law enforcement agencies in the region, as well as the Courts.

A few, additional Surveys were conducted since that time on an as-needed basis. For example, Surveys were prepared for portions of Fransil Ln., Fulkerth Rd., Washington Rd., and W. Main St. in support of expanding industrial operations within the Turlock Regional Industrial Park (TRIP). The results of these Surveys allowed City staff to modify the prima facie speed limits to account for surrounding factors.

The most recent alteration to the speed limit ordinance occurred on October 23, 2012.

### ***Realistic Speed Zoning***

The Automobile Club of Southern California has published a booklet, "Realistic Speed Zoning -- Why and How?" which is widely referenced by local agencies in the establishment of speed limits. The information provided below is taken from that publication and is included in this report for informational purposes:

*"Most citizens can be relied upon to behave in a reasonable manner as they go about their daily activities. Many of our laws reflect observations of the way reasonable people behave under most circumstances. Traffic regulations are*



*also based upon observations of the behavior of groups of motorists under various conditions. Generally speaking, traffic laws that reflect the behavior of the majority of motorists are found to be successful. Laws that arbitrarily restrict the majority of drivers, encourage wholesale violations, lack public support, and usually fail to bring about desirable changes in driving behavior. This is especially true of speed zoning.*

*Speed zoning is based upon several fundamental concepts deeply rooted in our American system of government and law:*

- 1. Driving behavior is an extension of social attitude, and the majority of drivers respond in a safe and reasonable manner as demonstrated by their consistently favorable driving records;*
- 2. The normally careful and competent actions of a reasonable person should be considered legal;*
- 3. Laws are established for the protection of the public, and the regulation of unreasonable behavior of the individual.*

*Public acceptance of these precepts is normally instinctive. However, the same public, when emotionally aroused in a specific instance, will invariably reject these fundamentals and rely instead on more comfortable and widely held misconceptions, such as:*

- 1. Speed limit signs will slow the speed of traffic;*
- 2. Speed limit signs will decrease the accident rate and increase safety;*
- 3. Raising a posted speed limit will cause an increase in the speed of traffic.*

*Any posted speed limit must be safer than a non-posted speed limit regardless of prevailing traffic and roadway conditions, and before-and-after studies consistently demonstrate that there are no significant changes in traffic speeds following the posting of new or revised speed limits. Furthermore, no published research findings have established any direct relationship between posted speed limits and accident frequency, although short-term reductions have resulted from saturation enforcement efforts directed at speed and other traffic law violations.*

*Police agencies rely on reasonable and well-recognized speed laws to control the unreasonable violator whose behavior is clearly out of line with the normal flow of traffic.*

### ***Why Are Realistic Speed Zones Desirable?***

*Realistic speed zones are of public importance for a variety of reasons:*

1. *They satisfy the requirements of the state law for establishing prime facie speed limits on public streets and highways;*
2. *They invite public compliance by conforming to the behavior of the majority and by giving a clear reminder to non-conforming violators;*
3. *They offer an effective enforcement tool to the police by clearly separating the occasional violator from the reasonable majority;*
4. *They tend to minimize current public antagonism toward police enforcement of obviously unreasonable regulations;*
5. *They inject an element of logic and reason into an otherwise arbitrary and often emotional issue;*
6. *They correctly serve to place responsibility for justifying so-called "tolerances" upon those administrative agencies that grant them;*
7. *They lend credence and acceptability to the widely posted admonition, "Speed Laws Strictly Enforced," at many city boundaries"*

## **II. Methodology**

### ***Definitions***

#### **85<sup>th</sup> Percentile Speed**

The speed at which 85% of the vehicles drove at or under during observation. This is also referred to as the “critical speed.” For example, if 100 vehicles were observed as part of the sample and their speeds sorted and ordered from high to low, with the 1<sup>st</sup> vehicle demonstrating the fastest speed, then the 16<sup>th</sup> car would represent the 85<sup>th</sup> percentile speed.

#### **Pace**

The 10 mph range of speeds containing the largest number of observations in a sample. In most cases the 85<sup>th</sup> percentile speed lies somewhere within the pace speed, usually near the middle to upper end of the range.

#### **Pace Percentage**

The percentage of the total group of vehicles with an observed speed contained within the pace. The higher the percentage, the more vehicles that are traveling at or around the same speed, which generally reduces the likelihood for accidents by removing speed variances.

#### **Range**

The total range of speeds observed during the field survey. For example, if the slowest vehicle observed was traveling 25 mph and the fastest vehicle observed was traveling 48 mph, then the range would be 25-48 mph. A large range of speeds, such as those in excess of 30 mph, is more troubling than smaller ranges, as large ranges indicate inconsistency with the general flow of traffic and an increased likelihood for collisions.

#### **Skewness Index**

The skewness index is calculated as a check on the adequacy of the spot speed survey, to determine if the speed check favors either fast or slow moving traffic. An index of 1.0 is a hypothetically perfect check. An index of less than 1.0 is slanted towards lower speeds and an index of greater than 1.0 towards higher speeds. A skewness of between 0.75 and 1.5 is generally considered to be representative of the observed vehicle speeds. The formula for the skewness index is as follows:

$$\text{S.I.} = 2 \times \frac{\text{P 93} - \text{P 50}}{\text{P93} - \text{P7}}$$

Where P 93, P 50, and P 7 are the 93rd, 50th and 7th percentile speeds respectively.

### ***Identifying Street Segments***

The basic purpose of this study was to analyze all assigned major, and collector streets in the City and to recommend appropriate speed limits for each of these streets consistent with the laws and practices of the State of California. The principal feature of the survey was a radar speed check, which will be described in the following section. Checks were made on these important streets at sufficient locations to insure that street sections having unique characteristics were individually surveyed.

### ***Conducting the Radar Checks***

As described in the preceding section, radar checks were made on street sections in which the traffic speeds, the traffic volumes, the street width, or other significant factors were different from an adjacent section. Thus, an important arterial may require speed surveys at several locations to account for changes in these factors whereas a less important street with consistency in these areas may be sufficiently surveyed with just one check. Each of the radar speed checks was made from an inconspicuously parked, vehicle utilizing city personnel. An effort was made to insure that the presence of the vehicle in no way affected the speed of the traffic being surveyed. Field information was recorded on forms and later coded for computer analysis. In order to obtain a significant sample in each location, either one or the other of two survey techniques was employed.

In highly concentrated areas the speeds of all available vehicles were recorded until approximately 100 samples had been taken whenever possible. Thus, the resultant calculations reflect the high volume and impeded traffic patterns of the street segment under observation.

Along sections of highway where traffic flows more freely, only the lead vehicle of bunches or vehicles traveling alone were recorded. The calculations derived from this

technique accurately demonstrate a balance among the speed, capacity and general use of a segment.

### ***Analysis of Data***

Copies of the computer analysis of the field data are contained in Appendix 1.

Observed conditions include the location of the spot speed survey, the direction of travel and vehicles surveyed, the date and day of the week and time of the survey. The existing speed limit, if posted, is noted along with the width of the street and the type of development (business, residential, Industrial, etc.) along the street.

Calculated values include the 50th percentile speed, the 85th percentile speed, the 10 mph pace speed, the percent of vehicles observed within the 10 mph pace speed, the range of speeds observed, the total number of vehicles observed, and the skewness index.

### ***Evaluation of Data and Speed Limit Recommendation Philosophy***

With all of the dry statistics inherent in the speed survey process, there is a great deal of judgment required, and to a certain extent, a philosophy implied during the establishment of speed limits. Speed limits should be reasonable and realistic regardless of what the numbers indicate. Reasonable limits are ones at which drivers would drive without enforcement and without signing. One cannot rely totally on this philosophy, however, as motorists tend to drive somewhat faster in residential districts away from their homes than residents on streets would prefer. In other words, motorists tend to be more concerned about speeds near their own homes and less concerned elsewhere. This is not so much a tendency to willfully break the law or to drive unsafely, but rather a reflection of human nature, the press of time and the use of high-performance vehicles. For this reason, speed limits on two-lane local residential streets tend to be somewhat further removed from the critical 85th percentile speed than those on multi-lane arterial and collector streets. This also points out a specific problem area in Turlock (and one which exists in many other cities): the continuing need for enforcement of the 25 mph speed limit in residential districts. It is not uncommon for the majority of motorists, even as high as 85 to 95 percent of all motorists being observed, to travel in excess of the 25 mph prima facie residential speed limit. This does not necessarily mean that the 25 mph limit is inappropriate, merely that the majority of motorists are driving imprudently.

Another attempt in the establishment of speed limits is to avoid frequent changes in the limit or relatively short lengths of a specific numerical limit. Speed limits which change every few blocks may accurately reflect prevailing driving conditions on the roadway but do not give motorists a fair chance at becoming totally aware of their lawful limit. In Turlock, this factor is especially prevalent. Due to growth and the transitional nature of much of Turlock's residential and industrial areas, the width of many of the associated roadways fluctuate drastically from narrow and unimproved to wide, improved segments. Often these variations in pavement width occur abruptly several times within relatively short distances.

### ***Accident Review***

Accidents are a factor of some importance in speed limit establishment. The location and severity of all reported traffic accidents are reviewed to determine locations of higher accident incidence. Before setting the final limits, the engineer must be aware of accident histories, accident problems and accident distributions.

### ***Driving the Streets***

A final field check of great significance involves the engineer driving each street surveyed while "floating" with prevailing traffic to determine the speed of traffic which is reasonable from the driver's viewpoint. The traffic engineer is equipped with the previously described data analysis and is particularly cognizant of the 85th percentile speed and the pace speeds. The driver evaluates the appropriateness of the 85th percentile and adds the perspective of human judgment to the speed limit setting process. Such factors as roadside development, driveways, parked vehicles, emergency shoulder areas, schools and playgrounds, areas frequented by pedestrians, horizontal and vertical alignment of the roadway, intersection visibility and control, and numerous other less tangible factors all go into the judgment producing a final recommended limit.

### III. Recommended Speed Limits

Figure 1 presents all recommended speed limits for the City of Turlock in graphic form.

PROPOSED CHANGES TO THE CITY OF TURLOCK SPEED LIMITS has been prepared in a format suitable for enactment by the City Council.

Discussion of Streets contains a narrative of the important points taken into consideration in the speed limit recommendations of each street surveyed during this study.

Table 1, a Collation of Raw Radar Data, lists a survey locations and related calculations. The existing speed limit and the recommended speed limit (not necessarily indicative of the entire street) are shown in the two columns on the right hand side of the table.

Appendix 1 contains the Spot Speed Study computer analysis forms from the field radar observations.

**Recommended Speed Limits**

Location	Beginning	to	End
	<b>25</b>		
Alpha Road	East Avenue	to	Berkeley Avenue, S.
Arbor Way	Berkeley Avenue, N.	to	Quincy Road, N.
"B" Street	Lander Avenue	to	First Street, S.
Broadway, S.	Olive Avenue, E.	to	"D" Street
"C" Street	Lander Avenue	to	First Street, S.
Castleview Drive	Johnson Road, N.	to	Quincy Road, N.
Crowell Road	Paseo Belleza	to	Monte Vista Avenue, W.
"D" Street	Lander Avenue	to	First Street, S.
Delbon Avenue	Olive Avenue, N.	to	Colorado Avenue
Denair Avenue, N	Hawkeye Avenue, E.	to	North Avenue
El Capitan Drive	Berkeley Avenue, N.	to	Murphy Drive
"F" Street, E.	Golden State Boulevard, S.	to	Alpha Road
Fifth Street	Lander Avenue	to	"F" Street, W.
First Street, S.	Olive Avenue, E.	to	"F" Street, W.
Fullerton Drive	Geer Road	to	Fosberg Road
Georgetown Avenue	Del's Lane	to	Andre Lane
Heathernoel Way	Colorado Avenue	to	Berkeley Avenue, N.
Joett Drive	Fulkerth Road	to	Tully Road, N.
Kilroy Road, N.	Christoffersen Parkway, W.	to	Paseo Del Sol
Main Street, E.	Lander Avenue	to	E. Canal Drive
Marshall Street	Minaret Avenue, N.	to	Johnson Road, N.
McKenna Drive	Christoffersen Parkway, W.	to	Summerton Lane
Minnesota Avenue, E.	Olive Avenue, N.	to	Colorado Avenue
Minnesota Avenue, W.	Del's Lane	to	Geer Road
North Avenue	Geer Road	to	Olive Avenue, N.
Olive Avenue, W.	Lander Avenue	to	West Avenue North
Palm Street, N.	Olive Avenue, E.	to	Minaret Avenue, N.
Park Street	Soderquist Road, N.	to	First Street, N.
Peacock Drive	Berkeley Avenue, N.	to	Johnson Road, N.
Sebastian Drive	Quincy Road, N.	to	Daubenberger Road, N.
Springer Drive, E.	Olive Avenue, N.	to	Berkeley Avenue, N.
Tuolumne Road, W.	Golden State Boulevard, N.	to	Geer Road
West Avenue North	Park Street	to	Main Street, W.



"A" Street	Lander Avenue	to	First Street, S.
"F" Street, W.	Lander Avenue	to	Golden State Boulevard, S.
Berkeley Avenue, N.	Hawkeye Avenue, E.	to	East Avenue
Berkeley Avenue, S.	East Avenue	to	Ramson Drive
Broadway, N.	Front Street	to	Olive Avenue, E.
Canal Drive, W.	Broadway, N.	to	Geer Road
Chestnut Street	Grant Avenue	to	Canal Drive, W.
Colorado Avenue	Hawkeye Avenue, E.	to	East Avenue
Crowell Road	Monte Vista Avenue, W.	to	Tuolumne Road, W.
Denair Avenue, N.	E. Canal Drive	to	Hawkeye Avenue, E.
East Avenue	Golden State Boulevard, N.	to	Bell Street
Fosberg Road	Sunday Drive	to	Monte Vista Avenue, E.
Geer Road	Canal Drive, W.	to	Golden State Boulevard, N.
Georgetown Avenue	Walnut Road, N.	to	Del's Lane
Grant Avenue	Chestnut Street	to	Main Street, W.
Hedstrom Road	Geer Road	to	Colorado Avenue
Johnson Road, N.	Tuolumne Road, E.	to	East Avenue
Main Street, E.	Canal Drive, E.	to	Berkeley Avenue, N.
Main Street, W.	West Avenue South	to	Lander Avenue
Marshall Street	Golden State Boulevard, S.	to	Minaret Avenue, N.
Marshall Street	Johnson Road, N.	to	Daubenberger Road, N.
Minaret Avenue, N.	Main Street, E.	to	East Avenue
Minnesota Avenue, E.	Geer Road	to	Olive Avenue, N.
Minnesota Avenue, W.	Crowell Road	to	Del's Lane
Ninth Street	Lander Avenue	to	Linwood Avenue, E.
Olive Avenue, N.	Christoffersen Parkway, E.	to	Inspiration Way
Orange Street, S.	Main Street, W.	to	Montana Avenue
Palm Street, N.	Hawkeye Avenue, E.	to	Olive Avenue, E.
Panorama Avenue	Springer Drive, W.	to	Christoffersen Parkway, W.
Pedras Road	Golden State Boulevard, N.	to	Geer Road
Porsche Strasse	Monte Vista Avenue, W.	to	Walnut Road, N.
Quincy Road, N.	Marshall Street	to	East Avenue
Roberts Road	Golden State Boulevard, N.	to	Kilroy Road, N.
South Avenue	Lander Avenue	to	Tully Road, S.
Springer Drive, E.	Geer Road	to	Olive Avenue, N.
Springer Drive, W.	Crowell Road	to	Geer Road
Tuolumne Road, E.	Geer Road	to	Berkeley Avenue, N.
Twentieth Century Boulevard	Golden State Boulevard, N.	to	Geer Road
Walnut Road, N.	Monte Vista Avenue, W.	to	Golden State Boulevard, N.
Wayside Drive	Geer Road	to	Olive Avenue, N.
West Avenue South	Main Street, W.	to	Linwood Avenue, W.

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Atherstone Road	Golden State Boulevard, N.	to Tegner Road, N.
Berkeley Avenue, N.	Taylor Road, E.	to Hawkeye Avenue, E.
Canal Drive, E.	Geer Road	to Johnson Road, N.
Canal Drive, W.	Soderquist Road, N.	to Broadway, N.
Colorado Avenue	Taylor Road, E.	to Hawkeye Avenue, E.
Countryside Drive	Monte Vista Avenue, W.	to Tuolumne Road, W.
Daubenberger Road, N.	Tuolumne Road, E.	to East Avenue
Del's Lane	Monte Vista Avenue, W.	to Golden State Boulevard, N.
East Avenue	Bell Street	to Johnson Road, N.
Fifth Street	"F" Street, W.	to Linwood Avenue, E.
First Street, N.	Chestnut Street	to Olive Avenue, E.
Front Street	Golden State Boulevard, N.	to W. Canal Drive
Fulkerth Road	State Route 99	to N. Tully Road
Geer Road	Monte Vista Avenue, W.	to Canal Dive, W.
Golden State Boulevard, N.	Canal Drive, W.	to Main Street, W.
Golden State Boulevard, S.	Main Street, W.	to East Avenue
Hawkeye Avenue, E.	Colorado Avenue	to Waring Road
Lander Avenue	Main Street, W.	to South Avenue
Linwood Avenue, E.	Golf Road	to Lander Avenue
Linwood Avenue, W.	Lander Avenue	to West Avenue South
Main Street, W.	Kilroy Road, S.	to West Avenue South
Olive Avenue, E.	Canal Drive, E.	to First Street, N.
Olive Avenue, N.	Canal Drive, E.	to Christoffersen Parkway, E.
Quincy Road, N.	Tuolumne Road, E.	to Marshall Street
Soderquist Road, N.	Fulkerth Road	to Main Street, W.
Soderquist Road, S.	Main Street, W.	to Jordan Avenue
Spengler Way	Kilroy Road, S.	to Tegner Road, S.
Tegner Road, N.	Sandstone Street	to Taylor Road, N.
Tully Road, N.	Tuolumne Road, W.	to Canal Drive, W.
Tully Road, S.	Main Street, W.	to South Avenue
Tuolumne Road, W.	Countryside Drive	to Golden State Boulevard, N.
Walnut Road, N.	Main Street, W.	to Canal Drive, W.
Walnut Road, S.	Main Street, W.	to 2240 ft. North of Linwood Avenue, W.

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Canal Drive, E.	Johnson Road, N.	to Daubenberger Road, N.
Canal Drive, W.	Tully Road, N.	to Soderquist Road, N.
Christoffersen Parkway, W.	Golden State Boulevard, N.	to Kilroy Road, N.
Countryside Drive	Tuolumne Road, W.	to Fulkerth Road
Fulkerth Road	Tegner Road, N.	to State Route 99
Fulkerth Road	Tully Road, N.	to Golden State Boulevard, N.
Glenwood Avenue, E.	Lander Avenue	to Golf Road

Golden State Boulevard, N.	Fulkerth Road	to Canal Drive, W.
Golden State Boulevard, S.	East Avenue	to "F" Street, W.
Hawkeye Avenue, E.	Geer Road	to Colorado Avenue
Hawkeye Avenue, W.	Golden State Boulevard, N.	to Geer Road
Kilroy Road, S.	Main Street, W.	to Linwood Avenue, W.
Lander Avenue	South Avenue	to State Route 99
Linwood Avenue, W.	West Avenue South	to 1400 feet West of Walnut Road
Quincy Road, N.	Swan Park Drive	to Tuolumne Road, E.
Tegner Road, N.	Tuolumne Road, W.	to Monte Vista Avenue, W.
Tully Road, N.	Canal Drive, W.	to Main Street, W.
Tuolumne Road, E.	Berkeley Avenue, N.	to Waring Road
Walnut Road, N.	Taylor Road, W.	to Monte Vista Avenue, W.
Walnut Road, S.	2240 ft. North of W. Linwood Avenue	to Linwood Avenue, W.
Waring Road	Hawkeye Avenue, E.	to Tuolumne Road, E.

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Christoffersen Parkway, E.	Geer Road	to East City Limits
Christoffersen Parkway, W.	Kilroy Road, N.	to Geer Road
Dianne Drive	Main Street, W.	to Fulkerth Road
East Avenue	Johnson Road, N.	to Daubenberger Road, N.
Fransil Lane	Main Street, W.	to Fulkerth Road
Fulkerth Road	Washington Road, N.	to Tegner Road, N.
Geer Road	Taylor Road, W.	to Monte Vista Avenue, W.
Glenwood Avenue, W.	Linwood Avenue, W.	to Lander Avenue
Golf Road	First Street, S.	to State Route 99
Main Street, W.	Tegner Road, S.	to Kilroy Road, S.
Monte Vista Avenue, E.	Geer Road	to East City Limits
Monte Vista Avenue, W.	Tegner Road, N.	to Geer Road
Tegner Road, N.	Fulkerth Road	to Tuolumne Road, W.
Tegner Road, S.	Main Street, W.	to Linwood Avenue, W.

**50**

Golden State Boulevard, N.	Taylor Road, W.	to Fulkerth Road
Golden State Boulevard, S.	"F" Street, W.	to 1,100 feet south of W. "F" Street
Linwood Avenue, W.	1400 feet West of Walnut Road	to Tegner Road, S.
Walnut Road, S.	Linwood Avenue, W.	to Glenwood Avenue, W.

**55**

Linwood Avenue, W.	Tegner Road	to Washington Road, S.
Main Street, W.	Washington Road, S.	to Tegner Road, S.
Taylor Road, E.	Geer Road	to East City Limits
Taylor Road, W.	Golden State Boulevard, N.	to Geer Road
Washington Road, N.	Main Street, W.	to Fulkerth Road
Washington Road, S.	Main Street, W.	to Linwood Avenue, W.

## IV DISCUSSION OF STREETS

### ***"A" Street***

This area is surrounded by industrial development on both sides of the street for the entire length. Observations noted a very high number of on street parking, loading of commercial trucks, and at peak pedestrian times a significant number of pedestrian traffic. Railroad spur lines and parked railroad cars are located within the street. It is felt based on the 85<sup>th</sup> percentile speed of 32 mph, which includes a large amount of truck loading and on street parking of trucks; the **30 mph** speed limit is justified.

### ***Alpha Road***

Alpha Road is a residential street that runs diagonally northwest to southwest from East Avenue to Berkeley Avenue. Most of Alpha Street is comprised of improved construction, with no horizontal or a vertical curve throughout it's approximately one-half mile length. The setback distance of all residences run from good to excellent, and congestion is light. There are several senior citizen apartments located along Alpha Road near Bothun Road. The 85<sup>th</sup> percentile speed of 31 mph would normally justify the posting of a 30 mph speed limit. This limit is not believed to be indicative of the proper use of this street when considering its residential nature, senior citizen pedestrian activity, lack of sidewalks in many areas and elderly pedestrian walking within the street area. The city has installed traffic circles as a measure to mitigate the results higher volumes of traffic and reduce the impact to the residential neighborhood. A **25 mph** speed limit is recommended for the total length of the street.

### ***Arbor Way***

Arbor Way is a residential street that tends to be more pedestrian-oriented than the normal residential street, giving a higher priority to local Turlock Christian Elementary School with trees, lawns, sidewalks, on-street parking and bicycle traffic. The 85<sup>th</sup> percentile speed is 27 mph, 50<sup>th</sup> percentile speed is 21 mph, 10 mph pace speed is 16 to 25 mph. Because of land use and the fact that the road segment is too short to be posted into separate speed zones by itself, it is recommended that this speed limit be posted at **25 mph**

### ***Atherstone Road***

While Atherstone Road travels east & west through a small commercial district, the pavement is in good condition, the buildings are well set back, and the pavement is wide with marked bicycle lanes. A major change in this street occurs near its east end where the street ends abruptly. At this time little data supports lower the limits below this finding, after review and road testing this area a **35 mph** prima facie limit is warranted. The radar sample indicated a critical speed of 35 mph and the pace ranged from 27 to 36 mph.

### ***“B” Street***

This two-lane street is primarily surrounded by industrial property. From Lander Avenue to Fifth Street the industrial use and congestion is fairly heavy and the street is narrow with pavement of poor condition. Set back of buildings is close and congestion of autos, trucks, pedestrians and parking is fairly heavy. The 85th percentile speed was 28 mph, with an overall pace speed range from 19-28 mph. The segment from B Street 400 feet northeast of Lander widens somewhat and pavement is in better condition. Congestion is observed to be less intense, although autos, trucks, pedestrians and on-street parking are present. The radar sample indicated a marked raise in speeds. While on the surface, it would appear that two separate speed limits are indicated, upon actual observations while driving the street it is felt that northeast of B Street a **25 mph** posting is appropriate.

### ***Berkeley Avenue***

#### **N. Berkeley Avenue (E. Monte Vista Avenue to E. Taylor Road)**

This area of Berkeley Avenue is bounded on the east side by a grammar school and church. The west side and east side north of the church property area is composed of newer single-family residential homes. This section of street includes both bicycles lanes and traffic circles.

The spot speed study indicated 85th percentile speed to be 36 mph, the 50th percentile speed to be 33 mph, with a pace speed from 30-39 mph. Based upon the spot speed study results a **35 mph** zone is appropriate for this section of Berkeley Avenue.

**N. Berkeley Avenue (E. Monte Vista Avenue to E. Tuolumne Road)**

This area of Berkeley Avenue is bounded on the east and west side by residential homes and a church. Bike lanes are located on Berkeley Avenue with a private church school located on the northeast corner of Berkeley Avenue and Monte Vista Avenue.

The spot speed study indicated the 85th percentile speed to be 41 mph; the 50th percentile speed to be 39 mph, with a pace speed from 33-42 mph. Based upon the fact of the school being located at Berkeley Avenue and Monte Vista Avenue and the use of the bike lanes on Berkeley Avenue it is believed the existing 35 mph zone is appropriate for this section because of the lower pace speed, and the number of elementary school children. A **35 mph** speed limit is recommended to link the two sections of Berkeley Ave. from Monte Vista Ave. to Hawkeye Avenue with a single speed limit.

**N. Berkeley Avenue (E. Tuolumne Road to E. Hawkeye Avenue)**

This area of Berkeley Avenue is bounded on both sides by established residential homes. Bike lanes are located on Berkeley Avenue south to Hawkeye Avenue. The spot speed study indicated 85th percentile speed to be 40 mph, the 50th percentile speed to be 36 mph, with a pace speed from 32-41 mph.

A **35 mph** zone is recommended for this area based on vehicles entering from the subdivision area fronting the east side of Berkeley Avenue and vehicles heading southbound are coming into the residential area of the city. A **35 mph** speed limit is recommended to link the two sections of Berkeley Ave. from Monte Vista Ave. to Tuolumne Rd. and from Tuolumne Rd. to Hawkeye Avenue as a single speed limit.

**N. Berkeley Avenue (E. Hawkeye Avenue to East Avenue)**

The spot speed study taken along this segment of Berkeley Avenue north of Canal Drive indicated an 85th percentile speed of 33 mph with a pace speed of 25-34 mph.

Bike lanes are located along Berkeley Avenue from Main Street to Canal Drive with Berkeley Avenue being closed to traffic during regular school hours. Berkeley Avenue from Canal Drive to Marshall Street intersects Turlock High School. Multi-way stops are located at Berkeley Avenue & Canal Drive. Both high school and grammar school students travel Berkeley Avenue as a major pedestrian route to and from school. Additionally, Crane Park is located at the northwest corner of Berkeley Avenue and Canal Drive, and that to some degree increases pedestrian and recreational activities adjoining Berkeley Avenue.

Although the spot speed study indicates a 35 mph speed zone may be applicable for the type of uses that adjoin this section of Berkeley Avenue, traffic congestion, pedestrian walking within the roadway, and limited sight distance for drivers justifies the a **30 mph** speed zone from E. Hawkeye Avenue to East Avenue.

### **S. Berkeley Avenue (East Avenue to Ramson Drive)**

Berkeley Avenue in this segment runs between East Avenue south to Ramson Drive. The three quarter mile length varies in width; the pavement runs from fair to good, and there are several intersections protected with stop signs.

Surrounding land-use is mixed among new and established residential, Sunnyview Park, and some open property. Congestion varies from light to medium with on-street parking, children, and autos, during different times of the day.

Two spot speed surveys were taken in this stretch of S. Berkeley Ave, one indicating the 85th percentile speed through this area as 37 mph, 50th percentile speed at 32 mph with an overall pace speed range from 26-35 mph; the other showed the 85th percentile speed as 35 mph, 50th percentile speed at 31 mph with an overall pace speed range from 26-35 mph. However, due to the location of the park and past experience involving pedestrian / vehicle accidents within this area, it is recommended that the speed limit be retained at **30 mph**, and that careful attention be paid to enforcement of this speed limit during normal day light hours. This is especially important on Tuesdays, when this segment is used as part of the route to and from the sales market, located near East Avenue and Johnson Road.

### ***North Broadway***

#### **(Front Street to E. Olive Avenue)**

Although North Broadway is primarily a residential street, it does pass by the Stanislaus County Fairgrounds and also through a minor industrial area. Two radar speed surveys were conducted one radar survey indicated an 85th percentile speed of 28 mph and a 10 mph pace ranging from 20 to 29 mph the other sample survey showed an 85th percentile speed of 30 mph and a 10 mph pace ranging from 22 to 31 mph along this 40 foot wide street.

The homes along North Broadway are fairly well set back, and no significant mid-day congestion was noted. Broadway Park is located near the middle of this 0.9-mile segment, and a number of accidents have been recorded near the intersection of North Broadway and Canal Drive. A posting of **30 mph** is still warranted for the entire street.

### ***S. Broadway***

#### **(W, Main Street to “D” Street)**

S. Broadway along this area from W. Main St. to “A” St. for the most part includes commercial businesses on both the north and south side of the street. Additionally, S. Broadway south of “A” St. adjoins a mixture of residential, commercial and industrial uses and crosses the Union Pacific Railroad spur tracks at “B” ST. for most of its length. This portion of this street segment is located within the heart of the downtown business district with a substantial volume of pedestrian traffic. The street is also a two-lane roadway with a number of stop signs at intersections. Two speed surveys were taken along this segment of S. Broadway, the 85th percentile speed through this area was shown to be 22 mph, 50th percentile speed at 19 mph, with an overall pace speed range from 15-24 mph. . A posting of **25 mph** is warranted for the entire street.

### ***“C” Street***

#### **(Lander Ave. to S. First St.)**

This two-lane street is primarily surrounded by industrial property. From Lander Avenue to S. First Street the industrial use and congestion is fairly heavy and the street contains railroad spur tracks with pavement of poor condition. Set back of buildings is close and congestion of autos, trucks, pedestrians and parking is fairly heavy. The 85th percentile speed was 30 mph, with an overall pace speed range from 15-24 mph. Based on the radar sample and, upon actual observations while driving the street that are not readily apparent to a driver a **25 mph** zone is appropriate.

### ***Canal Drive***

Canal Drive is a major east/west arterial bisecting the city from 99 Freeway to the city limit at Daubenberger Road. Due to its varied construction and surrounding land use, radar samples were conducted at eight different locations.



From the samples and from visual observation it was determined that the portion of Canal Drive under study may be divided into five segments and posted accordingly:

### **E. Canal Drive (N. Johnson Road to N. Daubenberger Road)**

From N. Johnson Road to N. Daubenberger Road, the basic configuration of Canal Drive is similar to the previous segment. Radar sample indicated the 85th percentile at an average of 37 mph. The pace speed was demonstrated to range from 28 to 37 mph and traffic was observed to float at 35mph and above. Recommendation is the existing prima facie speed limit of **40 mph** is appropriate.

### **E. Canal Drive (Geer Road to N. Johnson Road)**

From Geer Road to N. Johnson Road, E. Canal Drive's four lanes pass through mixed land usage, ranging from residences, a park, schools, churches and businesses. There radar sample taken in this segment reflected 85th percentile at an average of 37 mph, and an average 50<sup>th</sup> percentile of 33 mph. While this speed appears acceptable under ideal conditions, the presence of schools, a park, and restricted sight distance, warrant a continued prima facie posting of **35 mph**.

### **W. Canal Drive (N. Broadway to Geer Road)**

Canal Drive along this area for the most part includes commercial business on both the north and south side of the street. Additionally, Canal Drive crosses the Union Pacific railroad tracks and adjoins the shopping center. The 85th percentile speed through this area was shown to be 33 mph. 50th percentile speeds at 28 mph, with an overall pace speed range from 24-33 mph.

Due to the curve in Canal Drive, the volume of vehicles entering and exiting shopping center, and the factor involving high volume train traffic across this area, a **30 mph** speed zone seems appropriate for this section.

### **W. Canal Drive (N. Soderquist Road to N. Broadway Avenue)**

This segment is wider, but the surrounding land-use combines multiple dwelling units, single-family residences, and some industry. The 85th percentile speed through this

area was shown to be 36 mph, 50th percentile speed at 33 mph, with an overall pace speed range from 28-37 mph. However, due to the presence of the Stanislaus Fairgrounds and its attraction of pedestrian traffic and past accident experience (at both Canal Drive & Soderquist Rd, and Canal Drive & Broadway Avenue), and the shortness of the segment, a **35 mph** zone is recommended.

### **W. Canal Drive (N. Tully Road to N. Soderquist Road)**

This segment of Canal Drive adjoins primarily Turlock Irrigation District canal on the north and a mixture of residential apartments and open land on the south side. Canal's two-lane pavement in this section is in fair to good condition, although the street varies from 24 to 40 ft. in width. The 85th percentile speed through this area was shown to be 42 mph, 50th percentile speed at 37 with an overall pace speed range from 32-41 mph. However, due to the length of the street and the eastbound introduction into more congested areas, it is felt that a **40 mph** speed zone in this area is more reasonable and prudent for conditions.

### ***Chestnut Street***

#### **(Grant Avenue to W. Canal Drive)**

Chestnut St. is a single-family residential street running east\west bound with multiple driveways. In this section it is actually an extension of Grant Ave. The spot speed study for Grant Ave. showed the 85<sup>th</sup> percentile speed is 28 mph, 10 mph pace speed is 19 to 28 mph. Therefore, a **30 mph** posting is felt to be prudent.

### ***Castlevue Drive***

#### **(N. Johnson Road to N. Quincy Road)**

The intent of street layout in this area of Turlock is to create neighborhoods which encourage pedestrian circulation, reduce auto dependency, and foster interaction among neighbors. Development patterns within this area provide, centralized open space features, tree lined streets, and access to surrounding uses, such as Bristol Park located on the south side of Castlevue Dr. The 85<sup>th</sup> percentile speed is 31 mph. Based on the parks pedestrian traffic and the short length of this street section not readily apparent to the driver, a **25 mph** speed zone is recommended.

## ***Christoffersen Parkway***

### **E. Christoffersen Parkway (Wellington to N. Olive Avenue)**

Christoffersen Parkway is a major four-lane east/west expressway bisecting the city. Two spot speed surveys indicate the 85th percentile speed through this area is approximately 47 mph. near Wellington St. but lowers down to 40 mph approaching the Olive Avenue intersection. The 50th percentile speed at 36 mph, with an overall pace speed range from 39-48 mph. Based upon the above information and the spot speed study and driving this portion of the roadway it is determined that the proper speed limit for this one mile portion of roadway should be **45 mph**.

### **E. Christoffersen Parkway (N. Olive Avenue to N. Geer Road)**

Christoffersen Parkway is a four-lane east/west expressway bisecting the city from Golden State Boulevard to Olive Avenue. Due to its width and surrounding sound walls, a sample was conducted between Geer Rd. and Fosberg Road. From the sample and from visual observation it was determined that the portion of the study may be posted just under the 85th percentile speed of 45 mph. The location of Dennis Earl Elementary School, the volume of pedestrian traffic crossing Christoffersen Parkway during non-school hours, along with the activities associated with the children sports and playground area (which may not be readily apparent to a driver) justify the existing **45 mph** speed zone.

### **W. Christoffersen Parkway (N. Geer Road to Crowell Road)**

Christoffersen Parkway is a four-lane east/west expressway bisecting the city. Due to its width and surrounding sound walls a sample was conducted between Geer Rd. and Crowell Rd. From the sample and from visual observation it was determined that the portion of the study may be posted just under the 85th percentile speed of 45 mph. The location of California State University Stanislaus, the volume of pedestrian traffic crossing Christoffersen Parkway during non-school hours, along with the activities associated with the University and the churches in the area (which may not be readily apparent to a driver) justify the existing **45 mph** speed zone.

### **W. Christoffersen Parkway (Crowell Road to N. Walnut Road)**

Christoffersen Parkway is a four-lane east/west expressway bisecting the city. Due to its width and Turlock Junior High School, a sample was conducted between Crowell Rd. and Walnut Avenue. From the sample and from visual observation, it was determined that the portion of the study may be posted just under the 85th percentile speed of 50 mph. The location of California State University Stanislaus, Turlock Junior High School, the volume of pedestrian traffic crossing Christoffersen Parkway during non-school hours, along with the activities associated with the University and the Junior High School in the area (that may not be readily apparent to a driver) justify the existing **45 mph** speed zone.

### **W. Christoffersen Parkway (N. Walnut Road to N. Kilroy Road)**

Christoffersen Parkway east of Kilroy Road is a full four-lane expressway. Newer single-family residences, a Junior High School and storm drainage basin are the major surrounding land uses. A spot speed study indicates the 85th percentile speed through this area is 45mph. The 50th percentile speed at 39 mph, with an overall pace speed range from 36-45 mph. Based upon the above information and the spot speed study, it is determined that the proper speed limit for this half mile portion of roadway should be **45 mph**. The posting of the 45 mph limit will keep the speed limit consistent with Christoffersen Parkway to the east city limits.

### **W. Christoffersen Parkway (N. Kilroy Road to N. Golden State Boulevard)**

Due to the location of Pitman High School, a two separate sample speed surveys were conducted. From the samples and from visual observation, it was determined that the portion of the study may be posted just under the 85th percentile speed of 43 mph. The location of Turlock Junior High School, the Turlock Sports complex, the volume of pedestrian traffic crossing Christoffersen Parkway during non-school hours, along with the activities associated with Pitman High School and the Sports Complex in the area (which may not be readily apparent to a driver) justify the existing **40 mph** speed zone.

## ***Colorado Avenue***

### **Colorado Avenue (E. Monte Vista Avenue to E. Taylor Road)**

Colorado Avenue from Monte Vista Avenue north to Taylor Road is a collector street with new and old residential land uses. A spot speed study showed the 85th percentile speed through this area to be 37 mph, 50th percentile speed at 33 mph, with an overall pace speed range from 28-37 mph. Newer residential use of surrounding land, the number of accidents at Colorado/Monte Vista intersection, and the closure of Colorado Avenue at Taylor Road, warrant the existing **35 mph** speed limit.

### **Colorado Avenue (E. Monte Vista Avenue to E. Hawkeye Avenue)**

Connecting East Main Street in midtown with Monte Vista Avenue to the north, the segment of this collector street that lies within Turlock is of multiple configurations. Always two lanes, the pavement widths and conditions, and the peripheral land uses vary considerably.

Between Hawkeye Avenue and East Main Street, on the west side of the street, is Dutcher Elementary School with a high bicycle rider usage. With increased vehicle parking congestion and local commercial business usages, it should be noted that within the last three years the number of vehicle and bicycle accidents has risen. A spot speed study indicates the 85th percentile speed through this area is 39mph. The 50th percentile speed at 35mph, with an overall pace speed range from 31-40 mph. Based upon the above information and the spot speed study, it is determined that the proper speed limit for this half mile portion of roadway should be **35 mph**.

### **Colorado Avenue (E. Hawkeye Avenue to East Avenue)**

Two spot speed surveys taken along this segment of Colorado Avenue south of E. Main St. indicated an 85th percentile speed of 32 and 37 mph with a pace speed of 23-32 and 29 - 38 mph.

Bike lanes are located along Colorado Avenue from E. Main Street to E. Canal Dr. with Colorado Avenue having a high volume of vehicle and pedestrian to traffic during regular school hours. Colorado Avenue from Canal Drive to Marshall Street adjoins Turlock High School on the east side. Multi-way stops are located at Colorado Avenue & Canal Drive and Colorado Ave. and E. Marshall St. Both high school and grammar school students travel Colorado Avenue as a major pedestrian route to and from school. Additionally, Crane Park is located at the northeast corner of Colorado Avenue and Canal Drive, and that to some degree increases pedestrian and recreational activities adjoining Colorado Avenue.

Although the spot speed study indicates a 35 mph speed zone may be applicable for the type of uses that adjoin this section of Colorado Avenue, traffic congestion, pedestrian walking within the roadway, and limited sight distance for drivers justifies the existing 30 mph speed zone. It is recommended that the existing **30 mph** speed zone remain from E. Hawkeye Ave. to East Avenue.

### ***Countryside Drive***

#### **Countryside Drive (W. Monte Vista Avenue to W. Tuolumne Road)**

Countryside Dr. South of W. Monte Vista Ave. is a full four-lane major street with a landscape median expressway. Commercial businesses with multiple drive entrances and a few vacant parcels define the surrounding land uses. A spot speed study indicates the 85th percentile speed through this area is 35mph. The 50th percentile speed at 29mph, with an overall pace speed range from 25-34 mph. A high number of accidents have occurred at the drive entrance into Safeway/Target Stores. Based upon the above information and the spot speed study, it is determined that the proper speed limit for this half mile portion of roadway should be reduced to **35 mph**.

#### **Countryside Drive (W. Tuolumne Road to Fulkerth Road)**

Countryside Dr. South of W. Tuolumne Rd. is a full four-lane major street with a landscape median. Commercial businesses with multiple drive entrances and a few vacant parcels define the surrounding land uses. A spot speed study indicates the 85th percentile speed through this area is 42 mph. The 50th percentile speed at 36 mph, with an overall pace speed range from 32-41 mph. Based upon the above information and the spot speed study, it is determined that the proper speed limit for this half mile portion of roadway should be **40 mph**.

### ***Crowell Road***

#### **Crowell Road (W. Christoffersen Parkway to Paseo Belleza)**

This section of N. Crowell Road is primarily a two-lane collector street with newer residential development located on both sides of the street. At first glance a 25 mph speed limit would seem appropriate based on the spot speed study alone. Since a 25 mph speed zone is located just immediately South of Christoffersen Parkway, extending the 25 mph is appropriate. The 85th percentile speed through this area was shown to be 27 mph, the 50th percentile speed at 23 mph with an overall pace speed range from 18-27 mph For this reason, and the addition of a number of intersecting intersections, a **25 mph** speed zone is warranted.

### **Crowell Road (W. Christoffersen Parkway to W. Monte Vista Avenue)**

Crowell Road is a residential street running north from Monte Vista Avenue to Paseo Belleza. On the west side of Crowell Road, the surrounding land-use is a mixture of dense residential apartment and residential development. On the east side is California State University Stanislaus along most of the street and multiple dwelling units near Zeering Road to the north. This street is used very heavily for parking and is used by pedestrians crossing from the apartments to the university. Although the 85th percentile speed through this area was shown to be 32 mph, the 50th percentile speed at 27 mph with an overall pace speed range from 23-32 mph, there are numerous driveways along Crowell Road, congestion from pedestrians, traffic, and parked vehicles is heavy throughout this section. Thus it is recommended that the existing **25 mph** speed zone should be retained.

### **Crowell Road (W. Monte Vista Avenue to W. Tuolumne Road)**

Crowell Road is a residential street running south from Monte Vista Avenue to Tuolumne Road. Bike lanes are located on Crowell Road from Georgetown Avenue to Tuolumne Road with Walter Brown Elementary School being located at the southwest corner of Crowell Road and Monte Vista Avenue. Crowell Road narrows down considerably from Monte Vista Avenue to Georgetown Avenue (28 ft), with this route being one of the major elementary student pedestrian routes to and from school. Also, approximately 200 students cross Crowell Road on their way to and from school in this segment.

The 85th percentile speed through this area was shown to be 36 mph, 50th percentile speed at 31 mph, with an overall pace speed range from 27-36 mph.

Due to the above reasons, a **30 mph** speed zone is recommended for this section of Crowell Road.

### ***“D” Street***

This two-lane street is primarily surrounded by industrial property. From Lander Avenue to First Street the industrial use and congestion is fairly heavy and the street is 40 foot width with pavement of poor condition. Set back of buildings is close and congestion of autos, trucks, pedestrians and parking is fairly heavy. The 85th percentile speed was 31 mph, with an overall pace speed range from 20-29 mph. The segment from Fifth Street congestion is observed to be less intense, although autos, trucks, pedestrians and on-street parking are present. The radar sample indicated approximately the same speeds. Upon actual observations while driving the street it is felt that D Street a **30 mph** posting is appropriate.

### ***Daubenberger Road***

#### **(E. Tuolumne Road to East Avenue)**

On the west side of Daubenberger Road land-use is primarily single-family residential development. On the east side of Daubenberger Road the land is open farmland with residential development occurring at the northeast of Hawkeye Avenue and Daubenberger Road. Two studies were conducted. The first one near E. Tuolumne Rd. showed the 85th percentile speed through this area to be 4242 mph, 50th percentile speed at 37 mph with an overall pace speed range from 32-41 mph. The second one south of Volk Road indicated the speeds through this area to be the same. Basically, vehicular usage is very similar throughout both radar sample pace speeds being within the same approximate speeds. Therefore, due to residential use and varying widths of pavement, it is recommended that the existing **35 mph** speed limit be posted for Daubenberger Road from Tuolumne Road to East Avenue.

### ***Delbon Avenue***

#### **(N. Olive Avenue to N Colorado Avenue)**

Delbon along this area for the most part includes Emanuel Medical Center and commercial medical businesses on both the north and south side of the street. This



street segment is located within the heart medical business district with a substantial volume of pedestrian and vehicle traffic. The street is also a two-lane roadway with a multi-way stop signs at both intersections. Speed survey was taken along this segment, the 85th percentile speed through this area was shown to be 26 mph, 50th percentile speed at 122 mph, with an overall pace speed range from 18-27 mph. . A posting of **25 mph** is warranted for the entire street.

### ***Del's Lane***

#### **(W. Monte Vista Avenue to N. Golden State Boulevard)**

Del's Lane near W. Monte Vista Ave. is currently undergoing various phases of land development improvement. The homes along this primarily residential collector, front a 50-foot wide pavement with bicycle lanes.

Walter Brown Elementary School is located .25 miles to the west, south of Georgetown Avenue. California State University Stanislaus is located at the extreme north of Dels Lane. Bicycle lanes are located on Dels Lane with a high elementary and college student usage. Three radar samples reflected a 35 to 37 mph 85th percentile speed. A posting of 40 mph is felt to be unrealistic because of the age of pedestrians and bicycle traffic accidents at Dels Lane and Pedras Road at Donnelly Park, near the traveled roadway. Therefore, the existing **35 mph** posting is felt to be prudent.

### ***N. Denair Avenue***

#### **N. Denair Avenue (Canal Drive to E. Hawkeye Avenue)**

On both sides of N. Denair St., the surrounding land-use is a mixture of dense residential apartment and residential development. On the east side is Turlock Irrigation District main offices which accounts for the very heavily for parking and is used by pedestrians crossing from the apartments to walk along E. Canal Dr. The 85th percentile speed through this area was shown to be 31 mph, the 50th percentile speed at 27 mph with an overall pace speed range from 22-32 mph, there are numerous driveways along Crowell Road, and congestion from pedestrians, traffic, parked vehicles is heavy throughout this section. Recommendation is to post a **30 mph** speed zone.

### **N. Denair Avenue (E. Hawkeye Avenue to North Avenue)**

This segment of N. Denair Avenue is significantly different than the southern portion with a substantially greater number of single family residences, the pavement is in good condition, the houses are well set back, and the pavement is 40 feet wide. A major change in this street occurs near the E. Hawkeye Ave. intersection where the street curves. Reviewing accident history near Hawkeye Ave. and road testing this area indicates a **25 mph** prima facie limit is warranted. The radar sample indicated a critical speed of 31 mph and the pace ranged from 23 to 32 mph.

### ***Dianne Drive***

#### **(West Main Street to Fulkerth Road)**

Dianne Drive is primarily rural along this section and encompasses a more heavily agricultural area. Pavement is of fair condition although of fairly narrow 24-foot width. In most areas roadway width does not allow for adequate on street parking so few vehicles were parked along the shoulder. Because of the narrowing of the roadway near the TID canal, observations while driving the street (not readily apparent to the driver) A five mile per hour lowering of the speed zone is justified. Based on the 85th percentile speed of 50 mph and an overall pace speed range from 40-49 mph, the existing a **45 mph** limit is appropriate for the area.

### ***East Avenue***

East Avenue, running east from Golden State Boulevard to the city limit, is a semi-rural road that is comprised of two segments. At first glance, the entire street seems to be one unit and the casual observer would not note the divergence of use, west and east of Bell Street.

#### **East Avenue (N. Golden State Blvd to Bell Street)**

From N. Golden State Blvd to Bell Street, East Avenue is varied in width, but is primarily approximately 48 feet wide. The surrounding property is mixed between residences and businesses with the emphasis upon the latter. Of the vehicles sampled in the radar survey, the 85th percentile was demonstrated at 34 mph and the 10 mph pace ranged from 27-36. This segment is recommended to be posted at **30 mph** to account for

congestion and pedestrians crossing to roadside businesses and high school/elementary students crossing East Ave. on their way to and from school activities.

### **East Avenue (Bell Street to N. Johnson Road)**

From Bell Street east to Johnson Road, the roadway becomes less congested and based on the 85th percentile speed a **35 mph** is recommended.

### **East Avenue (N. Johnson Road to N. Daubenberger Road)**

The extension of Turlock city limits to Daubenberger Road, over the years increased residential development on the north side of East Avenue indicates a change in the nature of traffic on this section of roadway. Currently this section of East Avenue is posted at 45 mph. The radar sample indicates an 85th percentile speed of 49 mph.

It is felt that because of the change in nature of East Avenue from agriculture to residential development on the north side, and the higher congestion of traffic near the sales yard at the Intersection of Johnson Road and East Avenue, the existing **45 mph** posting is prudent.

### ***El Capitan Drive***

#### **(N. Berkeley Avenue to Murphy Drive)**

El Capitan Drive is a low traffic volume single-family residential street running east/west bound with multiple driveways. The spot speed study showed the 85<sup>th</sup> percentile speed is 31 mph, 50<sup>th</sup> percentile speed is 26 mph, 10 mph pace speed is 21 to 30 mph. Although this street is classified as a collector street, it operates as a minor residential street. Based on the lack of sidewalks and the poor condition of the roadway, a **25 mph** posting is felt to be prudent.

### ***"F" Street***

#### **"E. F" Street (S. Golden State Blvd. to Alpha Road)**

E. "F" St. is a single family residential street running east and west with a multiple driveways. This area is an older neighborhood lacking sidewalks and street lighting. The spot speed study showed the 85<sup>th</sup> percentile speed through the area to be 25. Therefore, an appropriate post shall be **25 mph**.

### **"W. F" Street (Lander Avenue to S. Golden State Boulevard)**

This two-lane street is primarily surrounded by industrial property, although some houses are located near Golden State Boulevard on the southeast side. From Lander Avenue to Fifth Street the industrial use and congestion is fairly heavy and the street is narrow with pavement of only fair to good condition. Set back of buildings is close and congestion of autos, trucks, pedestrians and parking is fairly heavy. The 85th percentile speed was 31 mph, with an overall pace speed range from 19-28 mph. The segment from Fifth Street northeast to Golden State Boulevard widens somewhat and pavement is in better condition. Congestion is observed to be less intense, although autos, trucks, pedestrians and on-street parking are present. Observations while driving the street indicates the existing **30 mph** posting is appropriate.

### ***Fifth Street***

#### **Fifth Street (Lander Avenue to "F" Street)**

This area is surrounded by industrial development on both sides of the street for the entire length. Observations noted a very high number of on street parking, loading of commercial trucks, and at peak pedestrian times a significant number of pedestrian traffic. Railroad spur lines and parked railroad cars are located within the street. It is felt since this industrial area includes a large amount of truck loading and on street parking of trucks; the existing **25 mph** speed limit is justified.

#### **Fifth Street ("F" Street to E. Linwood Avenue)**

A mixture of residential, industrial, and open parcels surrounds this section of Fifth Street. Street widths vary from narrow, to being fully developed near the Linwood Avenue intersection. The 85th percentile speed through this area was shown to be 37 mph, 50th percentile speed at 32 mph, with an overall pace speed range from 29-38 mph. Although Fifth Street is a collector street under the general plan, existing traffic

volumes are low. The existing posting of **35 mph** is appropriate for this portion of the street.

### ***First Street***

#### **N. First Street (Chestnut Street to E. Olive Avenue)**

First Street adjoins the Union Pacific Railroad tracks on the north side and commercial shopping on the south side for most of its length. This street is located within the downtown business district with minor volumes of pedestrian traffic. The street is also a two-lane roadway with a number of stop signs at intersections. The 85th percentile speed through this area was shown to be 37 mph, 50th percentile speed at 31 mph, with an overall pace speed range from 28-37 mph.

Base n two speed survey samples the 85th percentile speed and overall lack of reported accidents in the area **35 mph** zone is justified.

#### **S. First Street (E. Olive Avenue to W. "F" Street)**

As in the prior segment First Street adjoins the Union Pacific Railroad tracks on the north side and commercial shopping on the south side until it reaches "A" St. then single family homes are along the south side for most of its length.

The 85th percentile speed through this area was shown to be 27 mph, 50th percentile speed at 23 mph, with an overall pace speed range from 18-27 mph.

Because of the nature of the street, the adjoining commercial businesses and the volume of pedestrian traffic near E. Main Street, the existing **25 mph** zone is appropriate.

### ***Fosberg Road***

#### **(E. Monte Vista Avenue to Sunday Drive)**

Fosberg Road is a mixture of open land storm drainage basin and residential properties, with 40 ft. of pavement width from Monte Vista Avenue to Taylor Road. The 85th percentile speed through this area was shown to be 32 mph, 50th percentile speed at

28 mph, with an overall pace speed range from 24-33 mph. Because of the high-density residential apartments, the high volume of on-street parking and number of pedestrians crossing Fosberg Road traveling to Christoffersen storm basin, it is prudent to leave the existing **30 mph** speed limit on Fosberg Road.

### ***Fransil Lane***

Fransil Lane from West Main Street to Fulkerth Road is a mixture of industrial and open land usage. The street width varies from 25 feet to 42 feet depending upon where street improvements have been installed. The street is in relatively good condition towards Main Street, with relatively new pavement work being completed. The 85th percentile speed demonstrated was 50 mph with a pace speed range from 41 to 50 mph. . Based on conditions not readily apparent to the driver such as the narrow canal bridge, limited sight distance for residents leaving their homes a **45 mph** zone is felt to be appropriate.

### ***Front Street***

This two-lane street is primarily surrounded by industrial property, although some houses are located near Almond Avenue. From Canal Drive to Golden State Boulevard the industrial use and congestion is fairly light. The street is narrow with pavement poor to fair condition. Set back of buildings is close and congestion of autos, trucks, pedestrians and parking is fairly light, except when certain events occur at the Stanislaus County Fairgrounds. The study shows the 85th percentile speed at 41 mph, with an overall pace speed range from 30-49 mph. The segment from Canal Drive northwest to Golden State Boulevard widens somewhat and the pavement is in better condition. It is felt because of the nature of the street, the adjoining commercial businesses, and the volume of pedestrian traffic during Stanislaus County Fairground events, the existing **35 mph** zone is appropriate.

### ***Fulkerth Road***

#### **Fulkerth Road (N. Washington Road to N. Tegner Road)**

This segment of Fulkerth Rd. is primarily rural and encompasses a more heavily agricultural area except for the southeast corner of Fulkerth Rd. and N. Washington Rd.

where the Blue Diamond plant is located. Pavement is of good condition although of fairly narrow 24-foot width. In most areas roadway width does not allow for adequate on street parking so few vehicles were parked along the shoulder. Based on limited sight distances blocked by crops at intersections the 85th percentile speed of 49 mph and an overall pace speed range from 38-47 mph, a **45 mph** limit is appropriate for the area.

### **Fulkerth Road (N. Tegner Road to N. Tully Road)**

Fulkerth Road, like so many streets within Turlock, is in a period of transition. The surrounding land-use is mixed between open and residential property. Pavement is an 80 ft curb-to-curb width. Spot speed study was completed which indicated the 85th percentile speed through this area to be 41 mph, 50th percentile speed at 34 mph, with an overall pace speed range from 35-44 mph. The primary use of the street is an entrance to Turlock from the 99 Freeway, and west of the 99 Freeway. Based on the existing spot speed survey, the existing **40 mph** zone is felt to be appropriate.

### **Fulkerth Road (N. Tully Road to Golden State Boulevard)**

A mixture of residential housing and commercial businesses surrounds this section of Fulkerth Road. Roadway width is fully developed four lane arterial with a continuous turn lane. The 85th percentile speed through this area was shown to be 42 mph, 50th percentile speed at 37 mph, with an overall pace speed range from 34-43 mph. Fulkerth Road is a major four lane roadway under the general plan, the existing traffic volumes are substantial. The existing posting of **40 mph** is appropriate for this portion of the street.

### ***Fullerton Drive***

Fullerton Drive is a mixture of residential properties, with 40 ft wide pavement from Geer Road. Fullerton Dr. has two sharp curves in the area between Geer Rd. and Fosburg Road. The 85<sup>th</sup> speed was shown to be 28 mph, 50th percentile speed at 23 mph, with an overall pace speed range from 15-24 mph. Due to the high-density residential apartments, high volume of on-street parking and a number of pedestrians along Fullerton Road, it is prudent to leave a **25 mph** speed limit on Fullerton Drive.

### ***Geer Road***

**Geer Road (Monte Vista Avenue to Taylor Road)**

Geer Road is difficult to categorize. Surrounding land use is mixed among residences, businesses, apartments and the University.

North of Monte Vista Avenue, Geer Road's 80-foot wide pavement passes by California State University Stanislaus. The radar sample indicated a critical speed of 46 mph, 50th percentile speed at 40 mph, with an overall pace speed range from 37-46 mph.

Southbound traffic is posted at 45 mph, which does seem to be a reasonable amount of time to advise drivers of changing traffic patterns around Sunbird Drive, and with the limited sight distance for drivers entering Geer Road from Sunbird Drive. Northbound traffic is also currently posted at 45 mph.

Based upon the two radar samples taken along this length of roadway, the existing **45 mph** zone is appropriate from Taylor Road south to Monte Vista Avenue.

**Geer Road (Monte Vista Avenue to Golden State Boulevard)**

South of Monte Vista Avenue to Canal Drive, the cosmopolitan nature of Geer Road becomes evident. Three radar samples were conducted in locations chosen to reflect overall use of the street. The 85th percentiles ranged from 37 to 35 mph. Based on the 85th percentile speed of 37 mph and other spot speed studies that indicated a pace speed of 28 - 37 mph, a high degree of pedestrian and vehicle traffic congestion, and numerous unexpected driveways during peak travel times, a **35 mph** prima facie limit is appropriate.

From Canal Drive south to Golden State Boulevard the congestion on Geer Rd. increases considerably, as the pavement approaches its Golden State Boulevard terminus. Based on the 85th percentile speed of 30 mph, it is recommended that this 0.1 mile segment be posted at **30 mph**.

***Georgetown Avenue*****Georgetown Avenue (N. Walnut Road to Del's Lane)**

This street is a two-lane street with bike lanes that encompass a residential area and a major elementary school. The segment from Del's Ln. to N. Crowell Rd, indicated an 85<sup>th</sup> percentile speed of 35mph and the segment from Del's Ln. to Andre Ln. the 85<sup>th</sup> speed was shown to be 30 mph, 50th percentile speed at 24 mph, with an overall pace



speed range from 19-28 mph. High volumes of student pedestrian cross traffic are routed along this area during and after school times. Based on the nature of the streets, a **30 mph** speed limit is recommended.

### **Georgetown Avenue (Del's Lane to Andre Lane)**

The intent of street layout in this area of Turlock is to create neighborhoods which encourage pedestrian circulation, reduce auto dependency, and foster interaction among neighbors. Development patterns within this area provide, centralized open space features, tree lined streets, and access to surrounding uses, such as Gettysburg Park. The 85<sup>th</sup> percentile speed is 30 mph. Based on the parks pedestrian traffic and the short length of this street section not readily apparent to the driver, a **25 mph** speed zone is recommended

### ***Glenwood Avenue***

#### **E. Glenwood Avenue. (Lander Avenue to Golf Road)**

This section of the street is narrow, with a width of 20 ft. It is two lanes with both new residential development and open agricultural land uses. The street connects both Lander Avenue on the west and Golf Road on the east. The critical speed indicated by the spot speed study was 45 mph. A **40 mph** speed limit is recommended, based on the narrow nature of the roadway, and numerous driveways that a driver would not normally expect.

#### **W. Glenwood Avenue (W. Linwood Avenue to Lander Avenue)**

This section of the street is a moderately wide street of 40 ft, two lanes with industrial, commercial and open agricultural land uses. The street connects both Lander Avenue on the southeast and Linwood Avenue on the northwest. The critical speed was indicated by the spot speed study of 46 mph. Because of the curve located near the Linwood Avenue intersection and the concentration of driveways, a **45 mph** speed limit is recommended.

### ***Golden State Boulevard***

Viewed in its entirety, Golden State Boulevard is seen to follow a logical progression entering through and exiting the City of Turlock. In the center of town by Central Park, traffic is moderately to heavily congested. Moving away from town center in either direction, the patterns free up, permitting a faster flow of traffic. Six segments were noted along Golden State Boulevard. From northwest to southeast they are discussed with recommendations as follows.

### **N. Golden State Boulevard (W. Taylor Road to W. Monte Vista Avenue)**

This beginning segment is constructed to very high standards with four lanes of pavement divided by a wide median. Two radar samples were taken, both indicating 85th percentile speeds near 50 mph. Near the intersections of Monte Vista Ave. / Golden State Boulevard and Tuolumne Rd. / Golden State Boulevard, a number of severe accidents not readily apparent to the driver have been recorded. With an appropriate warning that a lower limit is forthcoming for southeast-bound traffic, the maximum **50 mph** speed limit should be posted.

### **N. Golden State Boulevard (W. Monte Vista Avenue to Fulkerth Road)**

This segment is constructed to very high standards with four lanes of pavement divided by a wide median. Two radar samples were taken, both indicating 85th percentile speeds near 50 mph. Near the intersection of Tuolumne Road / Golden State Boulevard and Golden State Boulevard / Fulkerth Road, a number of severe accidents have been recorded. With an appropriate warning that a lower limit is forthcoming for southeast-bound traffic, the maximum **50 mph** speed limit should be posted.

### **N. Golden State Boulevard (Fulkerth Road to w. Canal Drive)**

Southeast of Fulkerth Road, the pavement changes to four lanes divided by a continuous two-way left turn lane. The 85<sup>th</sup> speed was shown to be 42 mph, 50th percentile speed at 38 mph, with an overall pace speed range from 33-42 mph. The current posting of **40 mph** is warranted due to the width of roadway and greater congestion.

### **Golden State Boulevard (W. Canal Drive to East Avenue)**

The main business district along Golden State Boulevard starts at Canal Drive and continues to approximately 100 feet south of East Avenue. Traffic becomes fairly congested, particularly in front of Central Park. The 85<sup>th</sup> speed was shown to be 36 mph, 50<sup>th</sup> percentile speed at 32 mph, with an overall pace speed range from 28-37 mph. The flow of vehicles was observed to concentrate around 36 mph, depending upon turning movements and signal phases. A **35 mph** speed limit is recommended from W. Canal Dr. to East Avenue.

### **S. Golden State Boulevard (East Avenue to W. "F" Street)**

One hundred feet southeast of East Avenue / Golden State Boulevard again frees up. Although not quite as wide, 76 feet as the downtown section, the peripheral land use becomes more industrial and the congestion created by cross traffic becomes much less a factor. Although the radar sample indicated a 44 mph 85<sup>th</sup> percentile, this is considered to be a bit fast for the traffic entering the business district and the high number injury accidents (not readily apparent to the driver); It is therefore suggested that a existing **40 mph** posting remain southeast of East Avenue to "F" Street.

### **S. Golden State Boulevard (W. "F" Street to 1,100 feet south of W. "F" Street))**

Finally, Golden State Boulevard exits the City of Turlock southeast of "F" Street via a wide, sweeping bridge over the Union Pacific tracks. The 85<sup>th</sup> speed was shown to be 52 mph, 50<sup>th</sup> percentile speed at 47 mph, with an overall pace speed range from 44-53 mph. This segment is currently posted at **50 mph** and no change is recommended.

### ***Golf Road***

Golf Rd. travels north & south through a semi rural residential and agricultural district, the pavement is in good condition, the houses are well set back, and the pavement is 22 feet wide. A major change in this street occurs near the First Street intersection where the street curves abruptly. This curve and the high rate of speed of vehicles may contribute to a number of accidents over past years. Although at this time little data supports this finding, reviewing and road testing this area indicates a **45 mph** prima facie limit is warranted. The radar sample indicated a critical speed of 45 mph and the pace ranged from 37 to 46 mph.

## ***Grant Avenue***

While Grant Avenue does travel north & south through a residential district, the pavement is in good condition, the houses are well set back, and the pavement is 40 feet wide. A major change in this street occurs near the Chestnut Street intersection where the street curves abruptly. This curve and the high rate of speed of vehicles may have contributed to a number of accidents over past years. Although at this time little data supports this finding, reviewing and road testing this area indicates a **30 mph** prima facie limit is warranted. The radar sample indicated a critical speed of 32 mph and the pace ranged from 23 to 32 mph.

## ***Hawkeye Avenue***

### **W. Hawkeye Avenue (N. Golden State Boulevard to Colorado Avenue)**

This portion of Hawkeye Avenue runs from Golden State Boulevard, to Olive Avenue and consists of an 80-foot width consisting of 4 travel lanes, parking, continuous left turn lane and bike lanes. At the northeast corner of Geer Road is Crowell Elementary School and located farther east is Turlock Junior High School.

The rest of Hawkeye Avenue in this area consists of small commercial and residential homes. Bike lanes are included within the street and student pedestrians heavily use the street. There were four radar samples taken in this section the 85th percentile speed of approximately 42 mph and an overall pace speed range from 33-42 mph. Based on the location of bicycle lanes, from driving the street, and from the radar sample, a **40 mph** speed limit is recommended.

### **E. Hawkeye Avenue (Colorado Avenue to Waring Road)**

Surrounded by residential property Hawkeye Avenue's 85th percentile speed through this area was shown to be 36 mph, 50th percentile speed at 32 mph, with an overall pace speed range from 28-37 mph. East of Quincy Road, pace speed speeds rose slightly, with an overall pace speed range from 30-39 mph. While the pace speed is slightly higher in this area a **35 mph zone** is recommended, which take into account the newer development and existing residential areas.

### ***Heathernoel Way***

#### **(Colorado Avenue to N. Berkeley Avenue)**

This street is a two-lane residential street which encompasses a single family residential area. The 85<sup>th</sup> speed was shown to be 33 mph, 50<sup>th</sup> percentile speed at 26 mph, with an overall pace speed range from 21-30 mph. Higher volumes of student pedestrian cross traffic are routed along this area during and after school times headed to Harold Markley Park. Based on the nature of the streets, with six interesting streets (not readily apparent to the driver) within a short distance a lowering to **25 mph** speed limit is recommended.

### ***Hedstrom Road***

Hedstrom Road from Geer Road to Olive Avenue is a minor collector street; 46 feet wide with residents located on adjacent sides. A number of streets enter onto Hedstrom Road with commercial property located at Geer Road and a church playground at Olive Avenue. The 85<sup>th</sup> percentile speed is 32 mph, with a pace speed range of 23 to 32 mph. Because of the number of driveways, intersections, and a playground near Olive Avenue the existing **30 mph** speed limit is recommended.

### ***Joett Drive***

#### **(Fulkerth Road to N. Tully Road)**

Joett Drive is a residential street that tends to be more pedestrian-oriented than commercial streets, giving a higher priority to landscaped park, tree lawns, sidewalks, on-street parking and bicycle traffic. In recent years there have been a number of vehicle drivers speeding around the curves located near Sunnyview Park, resulting in accidents. The 85<sup>th</sup> percentile speed is 27 mph, 50<sup>th</sup> percentile speed is 22 mph, a pace speed is 16 to 25 mph. Because of land use; past fatal accident and the fact that the road segment is too short to be posted into separate speed zones by itself, it is recommended that this speed limit remain posted at **25 mph**.

## ***Johnson Road***

### **N. Johnson Road (E. Canal Drive to East Avenue)**

North of East Marshall Street there are numerous residences and an elementary school, while south of East Marshall land-use is primarily residential. Both spot speed studies north and south of Marshall Street showed the 85th percentile speed to be 34 mph and the 50th percentile speed at 30 mph. Johnson Road is a two lane street with bike lanes and the intersections are protected with stop signs. However, not readily apparent to the driver is congestion can be fairly heavy, due to the school, residential use, automobiles, pedestrians and children. Because of land use and the fact that the road segment from Marshall Street to East Avenue is too short to be posted by itself, it is recommended that this speed limit be lowered to **30 mph**.

### **N. Johnson Road (E. Canal Drive to E. Hawkeye Avenue)**

North of East Canal Drive the street is residential, with a grammar school. The west side of the street had on-street parking that has been eliminated to allow the installation of bike lanes. Sidewalks are located in a few areas, but for the most part they do not exist. During school arrival and departure times, student pedestrian and bicycle traffic is heavy.

Spot speed studies showed the 85th percentile speed to be 36 mph and the 50th percentile speed at 32 mph. As with the southern section, congestion can be fairly heavy due to the school, residential use, automobiles, pedestrians and children. It is recommended that this speed limit be established at **30 mph**.

### **N. Johnson Road (E. Tuolumne Road to E. Hawkeye Avenue)**

North of Hawkeye Ave. the land use is primarily residential. The spot speed studies between Hawkeye Ave. and Tuolumne Road showed the 85th percentile speed to be 37 mph and the 50th percentile speed at 33 mph. Johnson Rd. is constructed with bike lanes and intersections are protected with stop signs. Because of land use, the fact that it is the main commute route for student pedestrian traffic, and the road segment from Hawkeye Ave. and Tuolumne Rd. is too short to be posted by itself, it is recommended the existing **30 mph** posting be established.

## ***Kilroy Road***

### **N. Kilroy Road (W. Christoffersen Parkway to Paseo Del Sol)**

This street is a two-lane street with bike lanes that encompass a residential area, Pitman High School, and the city sports complex. The 85<sup>th</sup> speed was shown to be 27 mph, 50th percentile speed at 22 mph, with an overall pace speed range from 18-27 mph. High volumes of student pedestrian cross traffic are routed along this area during and after school times. South of Christoffersen Parkway the street is residential in nature, with homes located on both sides of the street. Based on the nature of the streets, a **25 mph** speed limit is recommended.

### **S. Kilroy Road (W. Main Street to Spengler Way)**

Kilroy Road in this area has experienced a fair amount of new construction and industry. The street was recently paved and its width varies due to curb and gutter placements, with minor traffic congestion at peak commute travel times. On street parking during daylight hours is very congested, with high volume accidents at the Main St. intersection. Spot speed studies showed the 85th percentile speed to be 40 mph, 50th percentile speed of 33 mph, and pace speed ranged from 30-39 mph. Therefore, it is recommended that the speed limit remain **40 mph**.

### **S. Kilroy Road (Spengler Way to W. Linwood Avenue)**

Kilroy Road is primarily rural along this section, and encompasses a more heavily agricultural area. Pavement is in poor condition and narrow width. No parking was noted along this segment of roadway. Based on the 85th percentile speed of 41 mph and an overall pace speed range from 27-36 mph, the existing **40 mph** limit is appropriate for the area from Linwood Avenue to Spengler Way.

## ***Lander Avenue***

### **S. Lander Avenue (W. Main Street to South Avenue)**

Lander Avenue is primarily a four-lane arterial that runs north and south from West Main Street to the city limit. Two radar samples, plus visual observation, demonstrate

functional usage divided into two distinct segments. From West Main Street south to South Avenue, the surrounding property is comprised of high intensity businesses. Based on the on pace speed of 23-32 mph, the existing **35 mph** speed limit is felt to be appropriate.

### **S. Lander Avenue (South Avenue to US 99 Freeway))**

South of South Avenue to the city limits, the congestion eases and the surrounding land use becomes less dense. The intersections give excellent visibility and the businesses are set fairly well back from the street. The 85th percentile of the radar sample in this segment indicated a critical speed of 38 mph, which is consistent with the observed flow of traffic. This segment is currently posted at 40 mph. and the speed limit should remain **40 mph**.

### ***Linwood Avenue***

#### **E. Linwood Avenue (Golf Road to Lander Avenue)**

This first segment of Linwood Avenue passes through primarily existing residential property, including minor open agricultural property. The first spot speed sample taken near Golf Road, indicated 85th percentile speed to be 36 mph, with a 50th percentile speed of 32 mph. Pace speed ranged from 28-37 mph. The second sample spot speed study taken near Ninth St., showed the 85th percentile speed to be 35 mph, a 50th percentile speed of 31 mph, and pace speed ranged from 27-36 mph. The final sample survey taken between Lander Ave. and Ninth St. showed the 85th percentile speed to be 35 mph, a 50th percentile speed of 31 mph, and pace speed ranged from 29-38 mph. A quick view the existing **35 mph** limit is appropriate.

#### **W. Linwood Avenue (Lander Avenue to West Avenue South)**

A spot speed study was conducted between Lander Avenue and West Avenue. The study indicated the 85th percentile speed to be 36 mph, the 50th percentile speed to be 31 mph, and the pace speed range from 27-36 mph. The surrounding land usage includes two schools, commercial businesses and single-family residences. It is felt that the pace speed of 35 mph is more indicative of this area, due to the narrow roadway



eastbound leading into a more congested traffic and pedestrian area. Therefore, the existing **35 mph** speed limit is appropriate.

### **W. Linwood Avenue (West Avenue South to 1400 ft west of S. Walnut Road)**

Linwood Avenue is comprised of commercial, industrial and residential homes along this section of roadway. Pavement is of fair condition, although of fairly narrow width near Walnut Road. No parking was noted along this segment of roadway. Based on the 50th percentile speed of 39 mph and an overall pace speed range from 33-42 mph, the existing 40 mph limit is appropriate for the area from West Avenue to Walnut Road. Because of the increased elevation of the Linwood Avenue overpass, it is not readily apparent to eastbound drivers that they are entering a more congested area with two elementary school and increased pedestrian traffic. West of Walnut Road the street becomes less congested with street intersections, on-street parking, truck usage and industrial functions. Due to the reasons mentioned above, a continuance of the **40 mph** speed zone is appropriate.

### **W. Linwood Avenue (1400 feet west of Walnut Road to 1400 feet west of Kilroy Road)**

A second spot study, taken between Walnut Road and Kilroy Road showed the 85th percentile speed to be 52 mph. This portion of Linwood Avenue is primarily agricultural usage with a street width of 28 ft. A posting of a **50 mph** speed limit is appropriate based on driving review of the roadway and the increase in the number of accidents at the Walnut Road and Linwood Avenue intersection.

### ***East Main Street***

#### **E. Main Street (E. Canal Drive to N. Berkeley Avenue)**

Running diagonally from southwest to northeast, the segment included in this study begins at Canal Drive and terminates at Berkeley Avenue. A residential collector, East Main Street is 40 feet wide at this point, and posted for **30 mph**. Radar sample was taken, which indicated 85th percentile speed of 32 mph. Due to the high volume of traffic and residential nature of the street, no change is recommended. Rather, it is recommended that enforcement procedures be concentrated upon this segment to ensure safe and reasonable use.

### **E. Main Street (Lander Avenue to E. Canal Drive)**

Quaint, warm, old fashioned, are words used to describe Turlock's downtown business district from Lander Ave. to Canal Drive. People coming from more urban areas enjoy being surrounded by wide sidewalks and narrow street pattern with diagonal parking. The history of downtown is well cared for older architecture, and unique signage. Radar sample was taken, which indicated 85th percentile speed of 20 mph. A **25 mph** speed limit is based on the radar spot study and nature of the street section.

### ***West Main Street***

West Main Street is a major arterial located in the southwest quadrant of the city. A high volume street, it provides access to the downtown area directly from Highway 99 and outlying rural areas. A progressive decrease in speed limits due to increased density and traffic congestion, and decreased observed speeds, is felt to be appropriate.

### **W. Main Street (S. Washington Road to S. Kilroy Road)**

West Main St. running east from Washington Rd. to Kilroy Rd. is a semi-rural two lane road that is comprised of two segments. At first glance, the entire street seems to be one unit and the casual observer would not note the divergence of use of industrial and trucking businesses. From Tegner Rd. east the street is varied in width, but is primarily approximately 48 feet wide. The surrounding property is mixed between open farmland and businesses with the emphasis upon the latter. Of the vehicles sampled in the radar survey, the first survey between Washington Rd. and Tegner Rd. the 85th percentile was demonstrated at 53 mph and the 10 mph pace ranged from 45-54. This segment is recommended to be posted at **55 mph**. Farther east between Tegner Rd. and Kilroy Rd. the 85th percentile was 46 mph and the 10 mph pace ranged from 38-47. This segment is recommended to be posted at **45 mph** to account for increasing vehicle congestion and roadside industrial businesses.

### **W. Main Street (S. Kilroy Road to West Avenue South)**

At West Ave., the radar sample indicated a 36 mph critical speed. The posting of **35 mph** is warranted from Kilroy Road to West Avenue for several reasons.

A 35 mph limit for the west side of the freeway and a 35 mph limit for the east side of the freeway seem appropriate by radar sample, both of these sections would be too short to allow a driver sufficient time and distance to adjust his speed. Eastbound traffic approaching the freeway interchange should reduce speed to prepare for increased traffic near the movie theater and the freeway ramps.

East of Soderquist Road, the presence of an established business district, pedestrians and school children warrant a **35 mph** posting.

### **W. Main Street (West Avenue South to Lander Avenue)**

From West Avenue to Lander Avenue the pavement narrows to two lanes through a residential neighborhood. The radar sample indicated a 33 mph 85th percentile speed. A **30 mph** posting is recommended to reflect the residential use of the surrounding property, the number of unexpected driveways, and the increase of vehicle and pedestrian traffic congestion. The segment from Laurel Street to Lander Avenue, although wider and commercially oriented, is too short to increase the recommended limit.

### ***Marshall Street***

#### **Marshall Street (S. Golden State Boulevard to N. Minaret Avenue)**

This street is being reviewed due to continued complaints concerning speed of vehicles and the increased amount of accidents taking place at the Marshall Street and Center Street intersection. The radar sample for this section of street indicated the 85th percentile speed to be 32 mph, a 50th percentile speed of 28 mph, and pace speed ranged from 24-33 mph. This street is currently posted at 30 mph, it is recommended that this section of Marshall Street be posted at **30 mph**, due to past accident history and the residential housing within the area.

#### **Marshall Street (N. Minaret Avenue to N. Johnson Road)**

Marshall Street is a one-mile street connecting Minaret Street and Johnson Road. The radar sample taken along this street indicated 85th percentile speed to be 31 mph, a 50th percentile speed of 27 mph, and pace speed ranged from 23-32 mph. Nevertheless, due to the short segment, mixed usage of the surrounding property by

residences, and church and school property, a **25 mph** zone is appropriate. Continued enforcement efforts of the 25 mph speed limit are necessary along this city street.

### **Marshall Street (N. Johnson Road to N. Daubenberger Road)**

On Marshall Street from (Johnson Road to Daubenberger Road, the pavement portion varies from a 20 foot width (unimproved areas) to a 40 foot width (improved areas). Adjacent land usage is primarily residential, with a few open land parcels. The 85th percentile speed was 35 mph, with a pace speed range from 26 to 35 mph. Due to the eastbound narrow road width, lack of sidewalks and heavy congestion during sales yard on Tuesdays, a **30 mph** speed limit is felt appropriate.

### ***McKenna Drive***

#### **(W. Christoffersen Parkway to Summerton Lane)**

This street is located in the north central part of Turlock; the street width includes on street parking. This residential neighborhood is integrated with an elementary school and park, all of which are linked and served by an internal and perimeter open space system. The open space system provides a network of bicycle and pedestrian trails that connect residential neighborhoods and public facilities. Because of the location of the elementary school emphasis is placed on pedestrian, bicycle, and public transportation options. North of W. Springer Dr.: 85<sup>th</sup> percentile speed is 25 mph, 50<sup>th</sup> percentile speed is 2821 mph, 10 mph pace speed is 16 to 25 mph. South of Springer Dr. the 85<sup>th</sup> percentile speed is 31 mph, 50<sup>th</sup> percentile speed is 28 mph, 10 mph pace speed is 25 to 34 mph. The street is not long enough to split into two separate speed zones, on street parking, numerous driveways, and the spot speed surveys, a **25 mph** speed zone is recommended.

### ***N. Minaret Avenue***

#### **(E. Main Street to East Avenue)**

Minaret Avenue from West Main Street to East Avenue is 54 feet wide with both business and residential properties located on adjacent sides. Bike lanes are installed along this entire section, with Crane Elementary School and the library adjoining Minaret Avenue. The 85th percentile speed is demonstrated to be 36 mph, with a 10

mph pace speed of 27 to 36 mph. A **30 mph speed** limit is recommended based on the location of Crane School, the library and high volumes of pedestrian traffic in the area.

## ***Minnesota Avenue***

### **W. Minnesota Avenue (Crowell Road to Del's Lane)**

As with the other section of Minnesota Avenue, adjacent land use is residential homes. The 85th percentile speed was 30 mph, with a pace speed range from 20 to 29 mph. Due to the residential nature of the street, traffic congestion near Del's Lane, a **30 mph** speed limit is recommended.

### **W. Minnesota Avenue (Del's Lane to Geer Road)**

From Del's Lane to Geer Road the street is 40 feet wide, with residential development adjacent to it, except near its intersection with Geer Road. The 85th percentile speed was 24 mph, with a pace range of 16 to 25 mph. The City has installed a number of speed humps, chokers and traffic circles along this area to help reduce speed and encourage through traffic to use other arterial streets for east/west through traffic movement. Therefore, a **25 mph** speed limit is recommended from Crowell Road to Geer Rd.

### **E. Minnesota Avenue (Geer Road to N. Olive Avenue)**

As with the other section of Minnesota Avenue, adjacent land use is residential with some commercial development near Geer Road. The 85th percentile speed was 35 mph, with a pace speed range from 27 to 36 mph. Due to the residential nature of the street, traffic congestion near Geer Rd, a 35 mph speed limit is considered too high. It is therefore recommended that the speed limit remain the same at **30 mph**.

### **E. Minnesota Avenue (N. Olive Avenue to Colorado Avenue)**

Recommendation is for this short segment to remain a **25 mph** speed zone from Olive Avenue to Colorado Avenue, due to the low volume of traffic, no sidewalks and school

pedestrian traffic at the location of the Seventh Day Adventist School and the narrow width of pavement.

## ***Monte Vista Avenue***

### **W. Monte Vista Avenue (N. Tegner Road to N. Walnut Road)**

Monte Vista Avenue is a major east/west arterial street for the north side of Turlock. There are basically four segments of Monte Vista Avenue that are within this study. The first, starting at Tegner Road and ending at Walnut Road, travels through new commercial and residential land with four lanes divided by a solid median or a continuous left turn lane. Two radar samples were taken both were represented of the following. The radar sample demonstrated the 85th percentile speed to be 45 mph, a 50th percentile speed of 38 mph, pace speed ranged from 34-43 mph. Traffic flows well around 45 mph and little past accident history exists for this segment of new roadway, except at the Golden State Blvd. / W. Monte Vista Ave. intersection. Due to the number of accidents, it is recommended that the speed limit remain at **45 mph**.

### **W. Monte Vista Avenue (N. Walnut Road to Geer Road)**

The second segment of Monte Vista Avenue from Walnut Avenue to Geer Road changes from a four lane, divided by a raised median. University of California Stanislaus fronts most of the north side, while residences and businesses are located on the south. Two radar samples was taken; The radar sample indicated an average 85th percentile speed to be 44 mph, a 50th percentile speed of 39 mph, and pace speeds ranged from 34-43 mph. Continuation of the existing 45 mph speed limit would be appropriate. A speed limit of **45 mph** is recommended.

### **E. Monte Vista Avenue (Geer Road to East City Limits)**

The third and fourth segment of Monte Vista Avenue runs from Geer Road to Olive Avenue and from Olive Avenue to Berkeley Avenue. A radar speed sample taken along Geer Road to Olive Avenue showed the 85th percentile speed to be 43 mph, a 50th percentile speed of 38 mph, and pace speeds ranged from 35 - 44 mph. It is recommended that this speed limit be left at **45 mph**.

## ***Ninth Street***

### **(Lander Avenue to E. Linwood Avenue)**

On Ninth Street from "F" Street to Linwood Avenue, the pavement portion varies from a 20 foot width (unimproved areas) to a 40 foot width (improved areas). Adjacent land usage is primarily residential, with a few open land parcels. The 85th percentile speed was 35 mph with a pace speed range from 28 to 37 mph. A **30 mph** speed limit is felt appropriate, due to the narrow road width and lack of sidewalks.

## ***North Avenue***

### **(Geer Road to N. Olive Avenue)**

North Avenue is a one-mile street connecting Geer Road and North Olive Avenue. The radar sample taken along this street indicated the 85th percentile speed to be 27 mph, a 50th percentile speed of 23 mph, and pace speed ranged from 20-29 mph. Nevertheless, due to the short segment, mixed usage of the surrounding property by residences, and church and school property, the current 25 mph posting is recommended. Continued enforcement efforts of the **25 mph** speed limit are necessary along this city street.

## ***Olive Avenue***

### **E. Olive Avenue (E. Canal Drive to N. First Street)**

East Olive Avenue is primarily a congested business street with numerous vehicle accidents, although some residences do front the northern end of this 0.5 mile segment. The pavement is four lanes and 56 feet wide. The radar survey indicated that vehicles were traveling at a critical speed of 38 mph, with a demonstrated pace speed ranging from 31-40 mph. Because of the vehicle congestion during daylight travel times and the number of vehicle accidents, a **35 mph** speed limit is recommended.

### **N. Olive Avenue (E. Canal Drive to Wayside Drive)**

Four radar surveys were conducted on North Olive Avenue to determine traffic speeds on the street and two separate recommendations resulted. From Canal Drive to the school property line north of Wayside Drive, the pavement is fairly narrow and the primary land use is residential. Although the radar sample indicated the 85th percentile at 39 mph, some portions of this segment contain sight restrictions in the form of trees and insufficient residence setbacks, to warrant a posting greater than 35 mph. In order to discourage a premature increase in speed, it is recommended that the **35 mph** limit be left at the school property line at Hawkeye Avenue.

### **N. Olive Avenue (Wayside Drive to E. Christoffersen Parkway)**

From the school property line to E. Christoffersen Parkway, the pavement width varies and the number of lanes alternate between two and four. The radar samples indicated a critical speed of 39 mph. One segment could be reasonably posted at 40 mph, but it is rather short and sandwiched between two segments that should be posted at 35 mph, due to their residential nature and narrowness of pavement. Therefore, it is recommended that the entire portion of North Olive Avenue from the school property line at Hawkeye Avenue to E. Christoffersen Parkway be left posted at **35 mph**. Additionally, at the northern end of Olive Avenue, Dennis Earl Elementary School functions with school activities involving student pedestrian traffic during all daylight hours. . The radar sample taken along this street indicated 85th percentile speed to be 36 mph, a 50th percentile speed of 32 mph and pace speed ranged from 28-37 mph. A posted speed limit of **30 mph** from Christoffersen Parkway to Taylor Rd. is appropriate.

### ***S. Orange Street***

#### **(W. Main Street to Montana Avenue)**

Orange Street is a three quarter-mile street connecting West Main Street and Montana Avenue. The radar sample taken along this street indicated 85th percentile speed to be 34 mph, a 50th percentile speed of 29 mph and pace speed ranged from 25-34 mph. Due to past Injury accidents At Main St., High St, Columbia St, Angelus St., limited driver sight distances at intersections, mixed usage of the surrounding property by residences, church, and school property, a **30 mph** zone is appropriate. A enforcement effort of the 30 mph speed limit is necessary along this city street.



## ***Palm Street***

### **N. Palm Street (E. Hawkeye Avenue to E. Canal Drive)**

On N. Palm Street from E. Hawkeye Avenue to E. Canal Drive, the pavement portion varies from a 26 foot width (unimproved areas) to a 40 foot width (improved areas). Adjacent land usage is primarily multifamily and single family residential, with a few open land parcels. The 85th percentile speed was 32 mph with a pace speed range from 25 to 34 mph. A **30 mph** speed limit is felt appropriate, due to the narrow road width and lack of sidewalks

### **N. Palm Street (E. Canal Drive to E. Olive Avenue)**

This portion of the street passes through an area of N. Palm St. changing from residential to retail commercial development. Current radar indications show the 85th percentile speed to be 32 mph, a 50th percentile speed of 28 mph, and a pace speed ranged from 25-34 mph. Based on the current data of 85<sup>th</sup> percentile speeds of 32 and the increased traffic congestion near the commercial development, it is recommended that this section be set at a **30 mph** speed limit.

### **N. Palm Street (E. Olive Avenue to N. Minaret Street)**

N. Palm St. along this area from W. Main St. to S. Minaret St. for the most part includes commercial businesses on both the east and west side of the street. This portion of this street segment is located within the heart of the downtown business district with a substantial volume of pedestrian traffic. The street is also a two-lane roadway with a number of stop signs at intersections. Speed survey were taken along this segment of S. Broadway, the 85th percentile speed through this area was shown to be 19 mph, 50th percentile speed at 15 mph, with an overall pace speed range from 15-24 mph. . A posting of **25 mph** is warranted for the entire street

## ***Panorama Avenue***

### **(W. Springer Drive to W. Christoffersen Parkway)**

On the west side of Panorama Avenue, land-use is primarily single-family residential development. On the east side of Panorama Avenue the land is open, with a proposed Elementary School and a drainage/park basin. The spot speed study showed the 85th percentile speed through this area to be 28 mph, 50th percentile speed at 25 mph, with an overall pace speed range from 20-29 mph. Basically, vehicular usage is very similar throughout the area. Due to residential use and school grounds/park usage, it is recommended that a **30 mph** speed limit be posted for Panorama Ave. from Springer Drive to Christoffersen Parkway.

### ***Park Street***

#### **(Soderquist Rd to Broadway)**

This street is a two-lane residential street which encompasses a single family residential area. The 85<sup>th</sup> speed was shown to be 39 mph, 50th percentile speed at 24 mph, with an overall pace speed range from 19-28 mph. Higher volumes of student pedestrian cross traffic are routed along this area during and after school times. Based on the nature of the streets, a **25 mph** speed limit is recommended.

### ***Peacock Drive***

#### **(N. Berkeley Ave to N. Johnson Road)**

The intent of street layout in this area of Turlock is to create neighborhoods which encourage pedestrian circulation, reduce auto dependency, and foster interaction among neighbors. Development patterns within this area shall provide multiple through routes, centralized open space features, tree lined streets, and access to surrounding uses. This approach to neighborhood design fosters neighborhood unity and cohesiveness that forms a community with a high quality of vehicle and pedestrian identity. The 85<sup>th</sup> percentile speed is 32 mph, 50<sup>th</sup> percentile speed is 27 mph, 10 mph pace speed is 24 to 25 mph. Based on the higher pedestrian traffic and the short length of this street section not readily apparent to the driver, a **25 mph** speed zone is recommended.

### ***Pedras Road***

#### **(N. Golden State Boulevard to Geer Road)**

A fairly minor east/west street, Pedras Road carries traffic from Divanian Drive past Donnelly Park to Geer Road. Two lanes and 40 feet wide along the park, it narrows somewhat west through the horizontal curve and remains fairly narrow to Divanian Drive.

The radar sample along the park demonstrated a 34 mph critical speed. Due to the presence of young children crossing the street to the park, a speed limit of 30 mph is recommended. Since the remaining segment is too short to post differently, a **30 mph** recommendation is made throughout Pedras. Emphasis should be placed upon enforcement of this limit.

### ***Porsche Strasse***

#### **(W. Monte Vista Avenue to N. Walnut Road)**

Porsche Strasse is a single-family residential street running north/south bound with multiple driveways. Commercial land usages and a senior citizen housing development exist on the south end. The intersection at W. Monte Vista Avenue has experienced a number of severe accidents. The 85<sup>th</sup> percentile speed is 34 mph, 50<sup>th</sup> percentile speed is 29.27 mph, 10 mph pace speed is 24 to 33 mph. A **30 mph** recommendation is made throughout Porsche Strasse. Emphasis should be placed upon enforcement of this limit.

### ***N. Quincy Road***

#### **N. Quincy Road (Swan Park Drive to E. Tuolumne Road)**

#### **N. Quincy Road (E. Tuolumne Road to Marshall Street)**

Quincy Road is a one-mile street connecting East Tuolumne Road and East Avenue. The averages of the radar samples taken along this street indicates 85<sup>th</sup> percentile speed to be 35 mph, a 50<sup>th</sup> percentile speed of 31 mph, pace speed ranged from 27 - 36 mph. There is mixed usage of the surrounding property by residences, church and school property, and driving the street indicated a **35 mph** as being appropriate.

## **N. Quincy Road (Marshall Street to East Avenue)**

This last portion of Quincy Road extends from East Marshall Street to East Avenue. The radar sample demonstrated the 85th percentile speed to be 32 mph, a 50th percentile speed of 28 mph, pace speed ranged from 22-31 mph. Peripheral land use is mixed between residential and some open land. The pavement is narrow, in fair condition, and little room exists for passing vehicles. During Tuesday's sales yard activity on street pedestrian and vehicle traffic volume increases significantly. Therefore, a **30 mph** posting is appropriate.

## ***Roberts Road***

### **(N. Golden State Boulevard to N. Kilroy Road)**

Roberts Road is a residential street which tends to be more pedestrian-oriented than commercial, giving a higher priority to street landscape, trees, lawns, sidewalks, on-street parking, and bicycle traffic to Pitman High School. This residential street consists of two travel lanes and on street parking. The 85<sup>th</sup> percentile speed is 35 mph, 50<sup>th</sup> percentile speed is 28 mph, 10 mph pace speed is 23 to 32 mph. Therefore, a **30 mph** posting is appropriate.

## ***Ruble Road***

This dead end portion of the street passes through an area that is going through changes from open farm land, estate residential development, to commercial/industrial development. The roadway is only 16 foot wide, with an irrigation ditch located on the north side. Current radar indications show the 85th percentile speed to be 38 mph, a 50th percentile speed of 29 mph, and a pace speed ranged from 23-32 mph. Based on the current data and the increased development, it is recommended that this section of Ruble Road be lowered to **30 mph**.

## ***Sebastian Drive***

### **(N. Quincy Road to N. Daubenberger Road)**

The intent of street layout in this area of Turlock is to create neighborhoods which encourage pedestrian circulation, reduce auto dependency, and foster interaction

among neighbors. Development patterns within this area provide, centralized open space features, tree lined streets, and access to surrounding uses. The 85<sup>th</sup> percentile speed is 31 mph. Based on the pedestrian traffic and the short length of this street section not readily apparent to the driver, a **25 mph** speed zone is recommended.

## ***Soderquist Road***

### **N. Soderquist Road (Fulkerth Road to W. Canal Drive)**

On the west side of Soderquist Road is open storm drain basin use with residential development, and on the east side of this section of street is the Stanislaus County Fairgrounds. Combined with the 85<sup>th</sup> percentile speed of 42 mph, a 50<sup>th</sup> percentile speed of 37 mph, it is felt that the radar sample does not reflect the true safe speed while driving along this segment, or while Stanislaus County Fair and Summerfair Park activities are taking place. It is therefore recommended that this section of Soderquist Avenue remain at **35 mph**.

### **N. Soderquist Road (W. Canal Drive to West Main Street)**

This section of street increases with numerous residences and a cemetery along the west side. Also located along this section is Osborn Elementary School at Main Street and Soderquist Road. The street includes two bike lanes and two traffic lanes. Congestion was noted to be light, with adequate setback of houses and along some areas no fronting driveways. With the 85<sup>th</sup> percentile speed of 34 mph and a 50<sup>th</sup> percentile speed of 30 mph, the existing speed limit of **35 mph** is appropriate.

### **S. Soderquist Road (W. Main Street to Jordan Avenue)**

The radar sample demonstrated the 85<sup>th</sup> percentile speed to be 34 mph, a 50<sup>th</sup> percentile speed of 29 mph, pace speed ranged from 26-35 mph. Peripheral land use is mixed between industrial, residential and some open land. The pavement is in fairly good condition, and it is felt that the existing **35 mph** posting is appropriate.

## ***South Avenue***

South Avenue runs through mixed land uses of residences, businesses and an elementary school. Nearly a mile long and 40 feet wide, the 85th percentile speed was found to be 32 mph. A 30 mph posting would more accurately reflect the existence of the school, lack of sidewalks and residential area. The existing **30 mph** posting is reasonable.

### ***Spengler Way***

This two-lane street is primarily surrounded by industrial property. From S. Kilroy Rd. to S. Tegner Rd. the industrial use and congestion is fairly light and the street is wide with pavement of good condition. Set back of buildings is back from the frontage and congestion of autos, trucks, pedestrians and parking is fairly light. The 85th percentile speed was 35 mph, with an overall pace speed range from 25-34 mph. The segment includes a reverse curve with little street parking are present. Upon actual observations while driving the street it is felt that D Street a **30 mph** posting is appropriate.

### ***Springer Drive***

#### **W. Springer Drive (Crowell Road to Geer Road)**

Springer Drive is a mixture of residential properties, with 48 ft of pavement width from Crowell Road to Geer Road has a number of sharp curves. The 85<sup>th</sup> speed was shown to be 34 mph, 50th percentile speed at 28 mph, with an overall pace speed range from 25-34 mph. Because of the high-density new residential homes, high volume of on-street parking and the number of pedestrians near elementary school and park, it is prudent to install a **30 mph** from Crowell Rd. to Geer Rd.

#### **E. Springer Drive (Geer Road to N. Olive Avenue)**

E. Springer Drive is a residential street which tends to be more pedestrian-oriented, giving a higher priority to street landscape, trees, lawns, sidewalks, on-street parking, and bicycle traffic to Dennis Earl Elementary School. This residential street consists of two travel lanes, bicycle lanes and on street parking. The 85<sup>th</sup> percentile speed is 32 mph, 50<sup>th</sup> percentile speed is 27 mph, 10 mph pace speed is 23 to 32 mph. Therefore, a **30 mph** posting is appropriate.

## ***Taylor Road***

### **(N. Golden State Boulevard to East City Limits)**

The radar sample demonstrated the 85th percentile speed to be 50 mph, a 50th percentile speed of 48 mph, pace speed ranged from 45-54 mph. Peripheral land use is mixed between residential and some open land. The pavement is narrow and is in fair condition, but little room exists for passing vehicles. Because of past accident history and limited driver sight distance, multi-way stops are located at Walnut Road, Crowell Road, and a traffic signal at Geer Road. It is therefore felt, that a **55 mph** posting is appropriate for this section of roadway.

## ***Tegner Road***

### **S. Tegner Road (W. Main Street to W. Linwood Avenue)**

Tegner Road from West Main Street to the south city limits is a mixture of industrial and open land usage. The street width varies from 25 feet to 42 feet depending upon where street improvements have been installed. The street is in relatively good condition towards Main Street, with relatively new pavement work being completed. The 85th percentile speed demonstrated was 52 mph with a pace speed range from 40 to 49 mph. It is felt that because of the moderate on street parking of truck, trailers and cars, the location of the railroad tracks, and the transition of street widths, that a **45 mph** speed limit would be prudent.

### **N. Tegner Road (Fulkerth Road to W. Tuolumne Road)**

North of Fulkerth Rd. the land-use is primarily agricultural with a few homes on the west side. North of Tuolumne Road on the east side is Atch Pedretti baseball fields, and further north the roadway curves westward and intersects Monte Vista Avenue with a number of commercial businesses. This spot speed study was taken between Fulkerth Road and Atch Pedretti Sports complex. The 85<sup>th</sup> percentile is 46 mph, 50<sup>th</sup> percentile is 40 mph, 10 mph pace speed is 37-46 mph. Based on the spot speed study and lack of past accident history the recommendation is the roadway retain the 45 mph speed zone.

**N. Tegner Road (W. Tuolumne Road to W. Monte Vista Avenue)**

Next to Atch Pedretti baseball fields, during events congestion can be fairly heavy due to automobiles, pedestrians, and children. Spot speed studies showed the 85<sup>th</sup> percentile speed to be 44 mph, the 50<sup>th</sup> percentile speed at 37 mph, 10 mph pace speed is 29-38 mph. Based on the 85<sup>th</sup> percentile speed, baseball field land use and the fact that the road segment is narrow with a number of commercial businesses, staff recommends that the speed limit between Tuolumne Rd. and W. Monte Vista Ave. staff recommends the set limit be set at **40 mph**.

**N. Tegner Road (Sandstone Street to N. Taylor Road)**

This area of N. Tegner Road is bounded on the east side by established residential homes, and open vacant property on the west side with a commercial trucking firm. No homes or driveways enter onto this section of Kilroy Road. A narrow canal bridge is located at the north end of Kilroy Road. The 85<sup>th</sup> percentile speed was 40 mph, 50<sup>th</sup> percentile speed at 33 mph and the 10 mph pace speed at 33-42 mph. A **40 mph** speed zone is recommended.

***Tully Road*****N. Tully Road (W. Tuolumne Road to W. Canal Drive)**

This portion of the street passes through an area of Tully going from residential to retail commercial development. Current radar indications show the 85<sup>th</sup> percentile speed to be 36 mph, a 50<sup>th</sup> percentile speed of 32 mph, and a pace speed ranged from 27-36 mph. Based on the current data of 85<sup>th</sup> percentile speeds from 36 to 40 and the increased traffic congestion near the commercial development, it is recommended that this section of Tully Road be set at a **35 mph** speed limit.

**N. Tully Road (Canal Drive to West Main Street)**

South of Canal Drive, Tully Road opens up into a wider road with peripheral land use primarily industrial and residential development. There are, however, some businesses,



residential development and a motel near West Main Street. Radar samples taken north of Main Street showed the 85th percentile speed to be 39 mph, a 50th percentile speed of 33 mph, and a pace speed ranged from 29-38 mph. Based on the radar sample, driving of the street, and little traffic congestion a **40 mph** speed limit is recommended.

### **S. Tully Road**

South Tully Road is primarily open or industrial, running south from West Main Street. It crosses the TSRR tracks and curves around to South Avenue. The radar sample indicated a critical speed of 35 mph, but restricted sight distance around the curve, between the tracks, and the freeway underpass, warrants an overall posting of **35 mph**.

### ***Tuolumne Road***

#### **W. Tuolumne Road (Countryside Drive to N. Golden State Boulevard)**

This area of W. Tuolumne Rd. is bounded on the south side by established residential homes, and open vacant property on the north side, with a gated single-family residential homes entrance. No homes or individual residential driveways enter onto this section. Due to numerous accidents in the past at the Golden State Blvd. intersection, staff believes a reduction of vehicle speed entering this intersection is justified. The 85<sup>th</sup> percentile speed at 42 mph, 50<sup>th</sup> percentile speed at 37 mph and the 10 mph pace speed at 32-41 mph. AThe existing **35 mph** speed zone is recommended.

#### **W. Tuolumne Road (N. Walnut Road to Geer Road)**

Tuolumne Road is a collector street that travels on the west side of Turlock to the city limits on the east area out of town. From Tully Road to the traffic signal at Geer Rd., four radar indicated an 85th percentile speed of approximately 28 mph. Located on the north side of Tuolumne Road are commercial businesses and a large number of residential homes. On the south side of this portion of Tuolumne Road is planned development of residential homes. Based on the radar sample, the continued use of traffic circles, speed humps and other traffic claiming measures, as well as this being a route to school for Walter Brown Elementary students, it is recommended that the speed limit be **30 mph**.

### **E. Tuolumne Road (Geer Road to N. Berkeley Avenue)**

Tuolumne Rd. increases in traffic congestion before entering the heavily commercial property at Geer Road. Here, the 85th percentile speed is 34 mph, a 50th percentile speed of 31 mph, and a pace speed ranged from 28-37 mph. A fairly consistent mixture of residential property and commercial property extends to Meadow Lark Drive. Moderate congestion, including trucks, autos, pedestrian and autos parking on the street were noted. Based on the traffic congestion located near Geer Road, and past accident history at Geer Rd. an Olive Avenue intersections, a **30 mph** speed limit would better represent the existing traffic conditions.

East of Colorado Avenue, the street narrows, and land use is continuing residential with a curve located just east of Wellerman Way. Due to inhibited sight distance, the reduced setback of buildings and homes to the street, and the shortness of the street, a **30 mph** speed limit is appropriate.

The cumulative recommendation for Tuolumne Ave creates a **30 mph** speed limit for the total length of Tuolumne Road from N. Golden State Blvd. to N. Berkeley Avenue.

### **E. Tuolumne Road (Berkeley Avenue to 600 ft. east of Daubenberger Road)**

Surrounded by residential property, Tuolumne Road's 85th percentile speed through this area was shown to be 38 mph, 50th percentile speed at 34 mph, with an overall pace speed range from 30-39 mph. While the 85th percentile speed is higher in this area, a separate **40 mph zone** is recommended.

### ***Twentieth Century Boulevard***

#### **(N. Golden State Blvd. to Geer Road)**

Twentieth Century Boulevard is a one-half mile street running east/west from Golden State Boulevard to Geer Road. Primary peripheral land-use combines fronting and non-fronting mobile home parks, apartments, and single-family residences. The radar sample taken in this segment indicated a 85th percentile speed to be 35 mph, a 50th percentile speed of 29 mph, and the pace speed ranged from 25-34 mph. Based on

the current data and the increased development,, it is recommended that this section of Twentieth Century Boulevard remain at a **30 mph** speed limit.

## ***Walnut Road***

### **N. Walnut Road (W. Main Street to W. Canal Drive)**

Walnut Road south of Canal Drive is fronted on the east by the U.S. 99 freeway and to the west by open land with light industrial uses. The 85th percentile was demonstrated at 42 mph and the pace speed ranged from 33 to 42 mph. The street is in relatively good condition and is 28 feet wide, however, restricted sight distance conditions occur around curves and driveway openings at buildings. Therefore, a **35 mph** posting is felt to be prudent and is recommended.

### **N. Walnut Rd. (W. Taylor Road to W. Monte Vista Avenue)**

N. Walnut Road from Taylor Road to Monte Vista Avenue is a mixture of residential and open land usage. The street width varies from 36 feet to 80 feet depending upon where street improvements have been installed. The street is in relatively good condition towards Taylor Road to Christoffersen Parkway, with relatively new pavement work being completed. Turlock Junior High school is located on the west side of the street at the Christoffersen Parkway intersection. During student commute times, a large number of student pedestrian traffic and vehicle turning traffic occurs. The city has installed "25 mph when children are present" signs to reflect the need to slow vehicle traffic during this period. The portion of the street north of Christoffersen Parkway is approximately a 100 foot width, with a center landscaped median. Open land is located on a portion of the west side near the elementary school. The 85th percentile speed demonstrated was 42 to 36 mph with a pace speed range from 35 to 44 mph. Because of the moderate on street parking cars, the transition of street widths, and pedestrian traffic along sections of the roadway without sidewalks, a **40 mph** speed limit would be prudent.

### **N. Walnut Road (W. Monte Vista Avenue to S. Golden State Boulevard)**

Walnut Rd in this area is a collector street that travels on the north side of Turlock at Monte Vista Ave. south to Golden State Blvd. On the north side of Walnut Rd. is a large

number of residential homes. On the south side of this portion of Tuolumne Road are commercial businesses and residential homes. Based on the radar sample and the development of homes, traffic circles, speed humps and other traffic claiming measures, along with this being a route to school for Walter Brown Elementary students, it is recommended that the speed limit be **30 mph**.

The radar sample taken on Walnut Road along this segment indicated an 85<sup>th</sup> percentile speed of 30 mph with a pace speed range from 22 to 31 mph.

### **S. Walnut Road (W. Main Street to 2240 ft north of Linwood Avenue)**

Two segments exist with this section of Walnut Road. One section is from West Main Street to south of the Freeway 99 underpass, connecting Walnut Road with Tully Road. The surrounding land-use is primarily industrial.

The radar sample indicated the 85<sup>th</sup> percentile speed to be 42 mph, the 50<sup>th</sup> percentile speed to be 36 mph, and a pace speed ranged from 30-49 mph. The radar sample indicated the 85<sup>th</sup> percentile speed is within the 10 mph pace speed range. Based on the restricted sight distance and the wide variance of speeds, traffic congestion and accidents at the W. Main St. intersection it is felt the existing **35 mph** speed limit is appropriate.

### **S. Walnut Road (2240 ft north of W. Linwood Avenue to W. Linwood Avenue)**

South to Linwood Avenue, the street becomes more open with a reduced number of driveways. The Waste Water Quality plant is located on the east side of the street and new industrial construction has developed on the east side. The radar sample indicated the 85<sup>th</sup> percentile speed at 42 mph, a 50<sup>th</sup> percentile speed of 39 mph, and a pace speed ranged from 36-45 mph. Based items a driver may not be readily aware the location of the fire department trucks exiting onto the street, and the curve of the street near the railroad tracks within this area, a **40 mph** speed limit is recommended.

### **S. Walnut Road (W. Linwood Avenue to W. Glenwood Avenue)**

This portion of the street passes through an area that is going through changes from open land, to residential development, to commercial development. Current radar indications show the 85<sup>th</sup> percentile speed to be 49 mph, a 50<sup>th</sup> percentile speed of 41

mph, and a pace speed ranged from 35-44 mph. Based on the current data and the increased development, it is recommended that this section of Walnut Road be lowered to **50 mph**.

### **Waring Road (E. Hawkeye Avenue to E. Tuolumne Road)**

In order to create a pedestrian and rural estate scale streetscape, this development of unique street standards for Turlock, which includes a narrow road, will hopefully result in slower traffic speeds and more attention to the street's relation to parking, sidewalks, and residential homes. Street design features include provision for on-street parking, sidewalks, and planters. The City has received numerous complaints concerning vehicle speeds in this area. The 85<sup>th</sup> percentile speed is 43 mph, 50<sup>th</sup> percentile speed is 33 mph, 10 mph pace speed is 32 to 41 mph. Additionally, the higher density of driveways near the area ¼ mile north of Hawkeye Ave. justifies a 5 mph reduction. Based on this information, a posted speed limit of **40 mph** can be justified on this portion of Waring Rd.

### ***N. Washington Road***

#### **N. Washington Road (W. Main Street to Fulkerth Road)**

N. Washington Rd. (W. Main Street to Fulkerth Rd.) is a mixture of industrial and open land usage. The street width varies from 25 feet to 80 feet depending upon where street improvements have been installed. The street is in relatively good condition, with relatively new pavement work being completed. The 85<sup>th</sup> percentile speed demonstrated was 53 mph with a pace speed range from 44 to 53 mph. Because of the moderate on street parking of truck, trailers and cars, the location of the railroad tracks, and the transition of street widths, that a **55 mph** speed limit is recommended.

#### **S. Washington Road (W. Main Street to W. Linwood Avenue)**

S. Washington Rd. (W. Main Street to W. Linwood Ave.) is a mixture of industrial and open land usage. The street width varies from 25 feet depending upon where street improvements have been installed. The street is in relatively fair condition, with relatively new pavement work at certain locations. The 85<sup>th</sup> percentile speed demonstrated was 59 mph with a pace speed range from 43 to 52 mph. Because of the

moderate use of trucks, trailers and cars, the location of the railroad tracks, and the transition of street widths, that a **55 mph** speed limit is recommended

### ***Wayside Drive***

This street is primarily residential with a mixture of single family and multiple dwelling units. The street is one-half mile in length, with two paved lanes of fairly wide width. The street is used as a main route to school for both elementary and junior high students. The radar sample indicated a relatively high rate of speed along this street with an 85th percentile speed at 30 mph, a 50th percentile speed of 25 mph, and the pace speed ranged from 21-30 mph. Based on the nature of the street, the number of multi-family homes, the student pedestrian traffic and the radar sample, it seems appropriate to leave the existing **30 mph** speed limit.

### ***West Avenue North***

This street is primarily residential single family dwelling units. The street is one-half mile in length, with two paved lanes of fairly wide width. The radar sample indicated a relatively high rate of speed along this street with an 85th percentile speed at 27 mph, a 50th percentile speed of 22 mph, and the pace speed ranged from 18-27 mph. Based on the nature of the street, the number of multi-family homes, the student pedestrian traffic and the radar sample, it seems appropriate to leave the existing **25 mph** speed limit.

### ***West Avenue South***

West Avenue South is 26 feet wide with residences located on adjacent sides from West Main Street to Jordan Avenue, and a mixture of open land and residences from Jordan Avenue to Linwood Avenue. Two radar samples were taken demonstrating an 85th percentile speed of 36 mph and a pace speed range of 28 to 37 mph. Based on the nearness of houses, fences and the overall lack of sidewalks, a **30 mph** speed limit seems prudent for the length of West Avenue South from West Main Street to Linwood Avenue.