



# CITY OF LODI

# COUNCIL COMMUNICATION

**AGENDA TITLE:** Amend Traffic Resolution by Approving Speed Limits on Elm Street, Lockeford Street, Mills Avenue Between Century Boulevard and Kettleman Lane, Pine Street, Tokay Street, and Woodhaven Lane

**MEETING DATE:** June 19, 1991

**PREPARED BY:** Public Works Director

**RECOMMENDED ACTION:** That the City Council amend the traffic resolution by approving speed limits on Elm Street, Lockeford Street, Mills Avenue between Century Boulevard and Kettleman Lane, Pine Street, Tokay Street, and Woodhaven Lane.

**BACKGROUND INFORMATION:** Public Works staff has recently updated engineering and traffic studies for 14 streets. These studies are performed following State of California Department of Transportation (Caltrans) guidelines in accordance with California Vehicle Code Section 40802. Based on the Vehicle Code Section 40802, in order to use radar enforcement, it is necessary to conduct engineering and traffic studies every five years on "non-local" streets. "Non-local" streets are the collector and arterial streets shown on the Federal Aid System Maps. The engineering and traffic studies include measurement of prevailing speeds by a radar survey, review of unexpected conditions to the driver and accident data. The speed limits for the 14 streets were previously adopted in July 1986.

There are eight streets that have no changes to existing speed limits and do not need City Council approval (see Table 1). On some of these streets, the number of accidents has decreased from the previous surveys. On those streets, the speed limit was reduced from the 85th percentile based on accident data and/or unexpected conditions. Staff felt this means that the existing speed limit is appropriate and therefore is continuing to maintain the speed limit below the 85th percentile. This occurred on four streets: Church Street between Lockeford Street and Turner Road, Central Avenue between Tokay Street and Railroad Avenue, Holly Drive, and Rutledge Drive.

In the past, City Council has not approved the speed limit based on the engineering and traffic survey on two streets. These streets are Tokay Street between Lower Sacramento Road and Ham Lane, and Mills Avenue between Century Boulevard and Kettleman Lane. They are posted at 25 mph and are not radar enforceable. Past experience has shown the 85th percentile speeds do not change even if the speed zones increase. An example of this is on Church Street between Kettleman Lane and Tokay Street. In 1986, when the posted speed limit was 30 mph, the 85th percentile speeds ranged between 35 and 37 mph. The current survey shows the 85th percentile speeds ranging between 35 and 37 mph even though the posted speed limit is 35 mph.

APPROVED: \_\_\_\_\_

THOMAS A. PETERSON  
City Manager



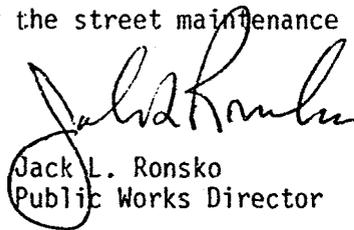
Traffic Resolution Amendment  
June 19, 1991  
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On Tokay Street, the 85th percentile speeds have remained the same everytime it has been surveyed. In 1986, they ranged from 33 to 38 mph; in 1989, they ranged from 34 to 41 mph; and now, they are between 34 and 39 mph. A variation of 1 mph is normal given the relatively small number of vehicles measured.

Similarly, on Mills Avenue, the 85th percentile speeds remained the same since the previous survey.

Staff requests that Council approve the speed limits indicated in Table 2. If Council changes the recommended limits, such changes will not be radar enforceable.

**FUNDING:** Funding to be provided by the street maintenance account.



Jack L. Ronsko  
Public Works Director

Prepared by Richard C. Prima Jr., Assistant City Engineer, and Paula J. Fernandez, Assistant Civil Engineer-Traffic

JLR/PJF/mt

Attachments

cc: - Police Chief  
Street Superintendent  
Assistant Civil Engineer-Traffic

Table 1

<u>Street - Segment</u>	<u>Posted Speed Limit</u>
Central Avenue	
Kettleman Lane - Tokay Street	30 mph
Tokay Street - Railroad Avenue	25 mph
Cherokee Lane	
South City Limit - Poplar Street	45 mph
Poplar Street - Vine Street	40 mph
Vine Street - Victor Road	35 mph
Victor Road - Pioneer Street	40 mph
Church Street	
Century Boulevard - Kettleman Lane	30 mph
Kettleman Lane - Tokay Street	35 mph
Tokay Street - Turner Road	30 mph
Cluff Avenue	
Lodi Avenue - Victor Road	35 mph
Victor Road - Turner Road	40 mph
Holly Drive	
Mills Avenue - Ham Lane	30 mph
Ham Lane - California Street	30 mph
Hutchins Street	
Harney Lane - Kettleman Lane	45 mph
Kettleman Lane - Tokay Street	35 mph
Tokay Street - Lockeford Street	30 mph
Lockeford Street - Holly Drive	25 mph
Lower Sacramento Road	
South City Limit - Turner Road	45 mph
Rutledge Drive	30 mph

#

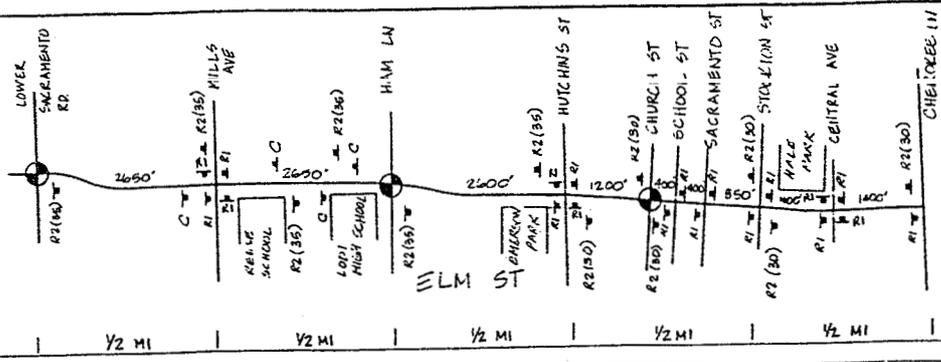
Table 2

<u>Street - Segment</u>	<u>Existing</u>	<u>Recommended</u>
Elm Street		
Lower Sacramento Road - Hutchins Street	35	35
Hutchins Street - Cherokee Lane	30	25
Lockeford Street		
Mills Avenue - Church Street	35	35
Church Street - Cherokee Lane	35	30
Cherokee Lane - East City Limit	35	35
Mills Avenue		
Century Boulevard - Kettleman Lane	25*	30
Pine Street		
Ham Lane - Beckman Road	30	30
Beckman Road - Cluff Avenue	40	35
Cluff Avenue - East City Limit	40	40
Tokay Street		
Lower Sacramento Road - Mills Avenue	25*	35
Mills Avenue - Ham Lane	25*	30
Ham Lane - Hutchins Street	30	30
Hutchins Street - Cherokee Lane	30	25
Woodhaven Lane	30	35

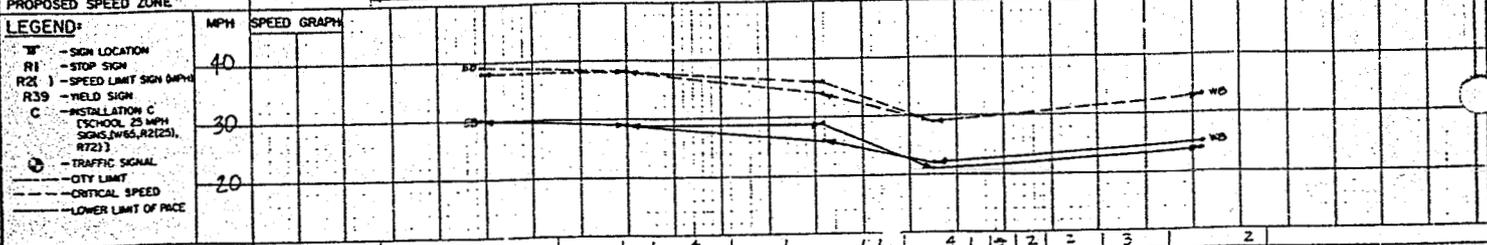
\*Not radar enforceable

**ENGINEERING AND TRAFFIC SURVEY**

SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE		1/2 MI				
ROADWAY WIDTH		64'	60'	56'		
NO. OF LANES				2		
MEDIAN (TYPE)				NONE		
TRAFFIC SIGNAL DATA		5-FACT	5-FACT	5-FACT	FIXED	FIXED
AVERAGE DAILY TRAFFIC		3800	6000	5600	4800	3500
OBS. SPEED - CRITICAL .85 <sup>th</sup> % W/D		30	30	34	29	33
- PACE (%)		30-40 (78)	29-39 (76)	28-36 (83)	22-32 (91)	25-35 (80)
- MEDIAN .50 <sup>th</sup> % W/D		34	33	30	26	29
EXISTING SPEED ZONE			35 MPH			30 MPH
PROPOSED SPEED ZONE			35 MPH			35 MPH



ACCIDENT PLOT	YR:	1989	1	1	4	1	1	1	4	2	2	3	2
	YR:	1990	1	1	2	2	1	2	2	2	1	1	2
ACCIDENT RATE - ACC/MILL. VEH.-MI			2.2		5.5		4.1		17.2	10.3	5.5	7.3	15.2

DR: P.J.F.  
 CH: L.P.  
 Date: 6/41

Approved By: \_\_\_\_\_  
 Public Works Director Date: \_\_\_\_\_



**CITY OF LODI**  
PUBLIC WORKS DEPARTMENT

**ELM ST**

**SPEED ZONE SURVEY**

June 1991

SPEED ZONE REPORT - Elm Street

◦ REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

◦ STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Ten radar surveys were performed and the 85th percentile speeds ranged from 29 to 39 mph as shown below:

<u>Elm Street Segment</u>	<u>Eastbound</u>	<u>Westbound</u>
Lower Sacramento Road - Hutchins Street	36-39 mph	34-38 mph
Hutchins Street - Cherokee Lane	29-33 mph	29-33 mph

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

The speed east of Hutchins Street was reduced based on high number of right angle accidents not apparent to the driver as discussed in the following section.

Accidents

Accident records of the two most recent years were considered in determining speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM) and ranged from 2.2 to 17.2 ACC/MVM. The average city-wide accident rate was 4.7 ACC/MVM.

The accident rates between Hutchins Street and Cherokee Lane were significantly higher than the average city-wide accident rate. The accident rates have also increased since the previous 1986 survey. The majority of the accidents occurred at the cross streets and were right angle accidents. This is an unexpected condition to the Elm Street motorists. For this reason, the speeds were further reduced below the 85th percentile speed.

o CONCLUSION

Lower Sacramento Road to Hutchins Street

Between Lower Sacramento Road and Hutchins Street, a posted speed limit of 35 mph is appropriate based on the 85th percentile speeds observed in the field, unexpected conditions, and the accident data.

Hutchins Street to Cherokee Lane

Based solely on the 85th percentile speeds observed in the field, the posted speed limit could be 25 mph or 30 mph between Hutchins Street and Cherokee Lane. However, due to the accident data and unexpected conditions, a posted speed limit of 25 mph is appropriate.

The existing and recommended speed limits are shown below:

<u>ELM STREET SEGMENT</u>	<u>EXISTING</u>	<u>RECOMMENDED</u>
Lower Sacramento Road - Hutchins Street	35 mph	35 mph
Hutchins Street - Cherokee Lane	30 mph	25 mph

Jack L. Ronsko  
Public Works Director



June 1991

SPEED ZONE REPORT - iockeford Street

- REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual .
- STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers , and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Twelve radar surveys were performed and the 85th percentile ranged from 32 to 37 mph as shown below:

<u>Lockeford Street Segment</u>	<u>Eastbound</u>	<u>Westbound</u>
Mills Avenue - Church Street	33-37 mph	34-37 mph
Church Street - Cherokee Lane	<b>32-38</b> mph	32-40 mph
Cherokee Lane - East City Limit	37 mph	35 mph

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

A portion of the north and south side of Lockeford Street between Sacramento Street and Cherokee Lane does not have sidewalk. It is not recommended to further reduce the speed limit due to sidewalk condition; however, it was considered in the overall recommendation. However, the speed east of Church Street was reduced based on the high number of right angle accidents not apparent to the driver as discussed in the following section.

June 1991

SPEED ZONE REPORT - Rutledge Drive

- REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

- STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Six radar surveys were performed and the 85th percentile speeds ranged from 32 to 36 mph.

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

Rutledge Drive is a residential street with a number of driveways the entire length. There are a few commercial driveways at the north end. Rutledge Drive also has horizontal curves and there's a high number of on-street parked vehicles. The combination of the curves and on-street parking can cause sight problems for residents exiting their driveways and motorists using the cross streets. This is not apparent to the Rutledge motorists. For this reason, reducing the speed limit is recommended.

Accidents

Accident records of the two most recent years were considered in determining the speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM).

SPEED ZONE REPORT - Rutledge Drive

Page 2

The current accident rate is 4.4 ACC/MVM which is quite lower than 13.9 ACC/MVM calculated in the 1986 survey for this street. The average city-wide accident rate is 4.7 ACC/MVM.

- **CONCLUSION** - Based on the 85th percentile speeds observed in the field, the posted speed limit could be 30 mph or 35 mph. Since Rutledge Drive has no width change or traffic control devices such as stop or yield signs to identify separate segments, it is best to choose one speed zone for the entire street. Due to the described conditions not readily apparent to the driver, and the previous high accident rate, the current posted speed limit of 30 mph is appropriate.

<u>Street</u>	<u>Posted Speed Limit</u>
Rutledge Drive	30 mph

Jack L. Ronsko  
Public Works Director



Accidents

Accident records of the two most recent years were considered in determining speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM) and ranged from 0 to 14.3 ACC/MVM. The average city-wide accident rate is 4.7 ACC/MVM. The accident rate was the highest between Church Street and Cherokee Lane and more than three times the average accident rate. The majority of the accidents occurred at the cross streets and were right angle accidents. This is an unexpected condition to the Lockeford Street motorists. For this reason, it is appropriate to further reduce the speed limit between Church Street and Cherokee Lane. There have been six pedestrian accidents in the past four years.

o CONCLUSION

Mills Avenue to Church Street

A posted speed limit of 35 mph is appropriate between Mills Avenue and Church Street based on the 85th percentile speeds observed in the field, unexpected conditions, and the accident data described above.

Church Street to Cherokee Lane

Based on the 85th percentile speeds observed in the field, described conditions not apparent to the driver, and accident data, the posted speed limit of 30 mph is appropriate between Church Street and Cherokee Lane.

Cherokee Lane to East City Limit

A posted speed limit of 35 mph is appropriate between Stockton Street and the east city limit in accordance with the 85th percentile speed, unexpected conditions and accident data.

The table below shows the recommended speed limits:

<u>LOCKEFORD STREET SEGMENT</u>	<u>EXISTING</u>	<u>RECOMMENDED</u>
Mills Avenue - Church Street	35 mph	35 mph
Church Street - Cherokee Lane	35 mph	30 mph
Cherokee Lane - East City Limit	35 mph	35 mph

Jack L. Ronsko  
Public Works Director



June 1991

SPEED ZONE REPORT - Mills Avenue - Century Boulevard to Kettleman Lane

- REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.
- STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists. and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Four radar surveys were performed and the 85th percentile ranged from **34** to **36** mph.

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to driven, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

Mills Avenue from Century Boulevard to Kettleman Lane has a number of driveways the entire length. It also has horizontal curves on the north end and a high number of on-street parked vehicles. The combination of the curves and on-street parking can cause sight problems for motorists exiting the cross streets or driveways. This is not apparent to the Mills Avenue motorists. For this reason, reducing the speed limit is recommended.

Accidents

Accident records of the two most recent years were considered in determining speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM). The accident rate was 8.5 ACC/MVM for this segment. The average city-wide accident rate was

SPEED ZONE REPORT - Mills Avenue - Century Boulevard to Kettleman Lane  
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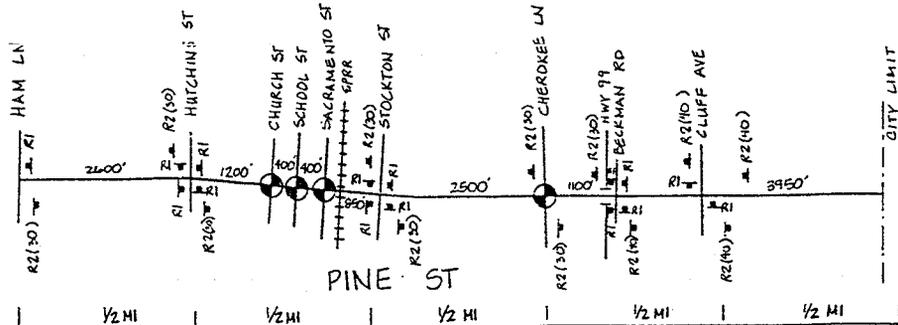
4.7 ACC/MVM. Since the accident rate is higher than the city-wide accident rate, it is recommended to reduce the posted speed limit as stated in the conclusion.

- ° **CONCLUSION** - Based on the 85th percentile speeds observed in the field, the posted speed limit could be 35 mph. However, due to the unexpected conditions and the high accident rate described above, the 30 mph is recommended. The existing posted speed limit is 25 mph; however, it is not radar enforceable.

Jack L. Ronsko  
Public Works Director

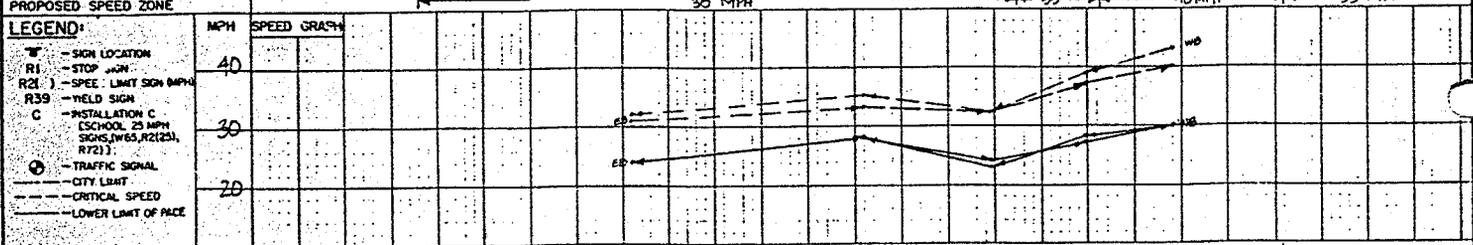
**ENGINEERING**

SEE NARRATIVE FOR BACKGROUND INFORMATION



**SPEED TABLE**

ROADWAY WIDTH	40'		50'		48'	
NO. OF LANES	2					
MEDIAN (TYPE)	NONE					
TRAFFIC SIGNAL DATA	Z-P FIXED (S)			Z-P ACT		
AVERAGE DAILY TRAFFIC	2000	3300	(5450) 7600	6500	3400	
OBS. SPEED - CRITICAL, 85 <sup>th</sup> %	WB	32	35	32	39	43
	EB	31	33	32	37	40
- PACE (%)	WB	24-34 (92)	28-38 (64)	23-33 (78)	28-38 (44)	30-40 (53)
	EB	24-34 (92)	28-38 (92)	24-34 (77)	27-37 (77)	30-40 (63)
- MEDIAN, 50 <sup>th</sup> %	WB	28	31	28	35	36
	EB	28	30	27	32	34



EXISTING SPEED ZONE	30 MPH		40 MPH		55 MPH	
PROPOSED SPEED ZONE	30 MPH					

ACCIDENT PLOT	YR: 1989	2	2	1	1	1	1	3	2	6	6	5	1	1	1	2	2
	YR: 1990	1	1	1	1	1	1	4	1	2	2	2	4	1	1	1	2
ACCIDENT RATE - ACC/MILL VEH-MI		11.1	9.1	13.5	6.0	7.3	4.7	7.1	4.8								4.8

Dr. **PJF**  
 Date: **6/7/91**

Public Works Director  
 Date: \_\_\_\_\_

**CITY OF LODI**  
 PUBLIC WORKS DEPARTMENT

**PINE ST**

**SPEED ZONE SURVEY**

June 1991

SPEED ZONE REPORT - Pine Street

◦ REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

◦ STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Feasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Ten radar surveys were performed and the 85th percentile speed ranged from 31 to 43 mph.

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

The speed between Stockton Street and Cherokee Lane was reduced based on the high number of right angle accidents not apparent to the driver as discussed in the following section.

Accidents

Accident records of the two most recent years were considered in determining speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM) and ranged from 3.3 to 14.7 ACC/MVM. The accident rate between Stockton Street and Cherokee Lane is more than three times higher than the city-wide average accident rate. The majority of the accidents occurred at the cross streets and were right angle accidents. This is an unexpected condition to the Pine Street motorists.

SPEED ZONE REPORT - Pine Street

Page 2

◦ CONCLUSION

Ham Lane to Beckman Road

The segment between Stockton Street and Cherokee Lane could be 30 or 35 mph based on the 85th percentile. However, due to the accident data described above, a posted speed limit of 30 mph is appropriate between Ham Lane and Beckman Road.

Beckman Road to Cluff Avenue

Staff recommends reducing the existing posted speed limit between Beckman Road and Cluff Avenue from 40 mph to 35 mph. The 85th percentile speed ranged from 37 to 39 mph and there are no unexpected conditions. This is a transition zone from the easterly higher limits to the westerly lower limits. This area is undergoing development which will further reduce the 40 mph segment in the future. The accident rate is about the same as the average city-wide accident rate.

Cluff Avenue to East City Limit

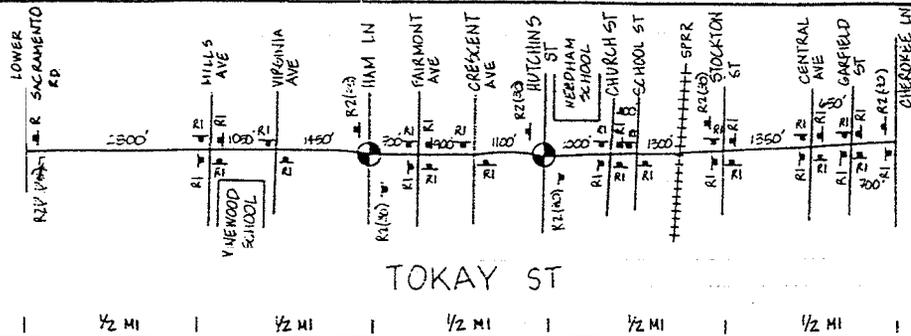
A posted speed limit of 40 mph is recommended between Cluff Avenue and the east city limit based on the 85th percentile, unexpected conditions, and accident data.

The recommended speed limits are shown below:

<u>PINE STREET SEGMENT</u>	<u>EXISTING</u>	<u>RECOMMENDED</u>
Ham Lane - Beckman Road	30 mph	30 mph
Beckman Road - Cluff Avenue	40 mph	35 mph
Cluff Avenue - East City Limit	40 mph	40 mph

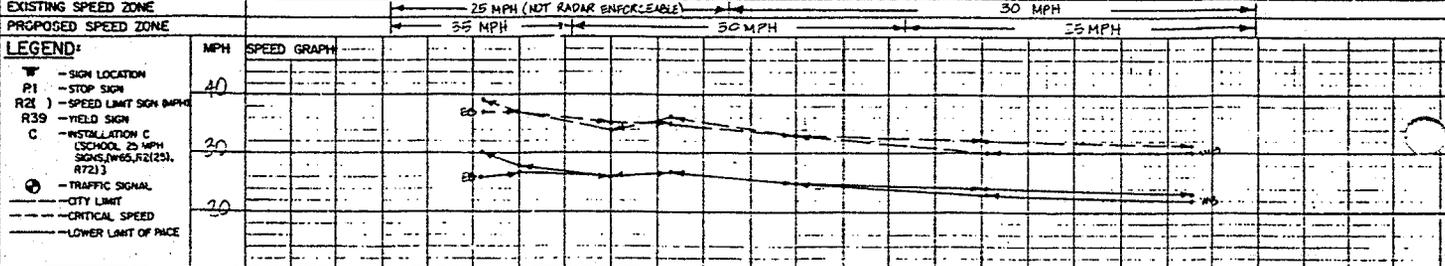
Jack L. Ronsko  
Public Works Director

**ENGINEERING AND TRAFFIC SURVEY**  
SEE NARRATIVE FOR BACKGROUND INFORMATION



**TOKAY ST**

SPEED TABLE		1/2 MI		1/2 MI		1/2 MI		1/2 MI		1/2 MI	
ROADWAY WIDTH		40'	40'	40'	40'	40'	40'	40'	40'	40'	40'
NO. OF LANES											
MEDIAN (TYPE)											
TRAFFIC SIGNAL DATA											
AVERAGE DAILY TRAFFIC		1700		2000		2000		2000		2000	2600
OBS. SPEED - CRITICAL, 85% WB		39	37	35	34	36		33		30	30
EB		37	37	34	35	35		32		32	31
- PACE (%) WB		30-40 (62)	30-38 (62)	30-37 (62)	30-36 (62)	30-35 (62)		29-35 (62)		28-33 (62)	27-32 (62)
EB		26-36 (62)	27-37 (62)	28-37 (62)	28-36 (62)	27-37 (62)		26-35 (62)		24-34 (62)	23-32 (62)
- MEDIAN, 50% WB		35	32	31	31	31		29		26	27
EB		31	31	30	30	31		29		28	27



ACCIDENT PLOT	YR:	1989	1	1	3	1	2	1	6	2	1	3	1	4	2	5	1
ACCIDENT RATE - ACC./MILL. VEH.-MI.		1.5	1.0	1.0	1.0	2.0	1.0	3.0	6.4	1.3	2.0	3.0	1.0	1.7	1.9	1.1	1.1

Of P3F  
 CA. [Signature]  
 Date 6/91

Division \_\_\_\_\_  
 Appr. \_\_\_\_\_  
 Approved By \_\_\_\_\_  
 Public Works Director Date \_\_\_\_\_

**CITY OF LODI**  
 PUBLIC WORKS DEPARTMENT

**TOKAY ST**  
**SPEED ZONE SURVEY**

June 1991

SPEED ZONE REPORT - Tokay Street

◦ REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

◦ STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Sixteen radar surveys were performed and the 85th percentile ranged from 30 to 39 mph as shown below:

<u>Tokay Street Segment</u>	<u>Eastbound</u>	<u>Westbound</u>
Lower Sacramento Road - Mills Avenue	37 mph	37-39 mph
Mills Avenue - Elm Lane	34-35 mph	34-36 mph
Elm Lane - Hutchins Street	33 mph	33 mph
Hutchins Street - Cherokee Lane	31-32 mph	30 mph

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

The speed east of Hutchins Street was reduced based on the high number of right angle accidents not apparent to the drivers as discussed in the following section.

Accidents

Accident records of the two most recent years were considered in determining speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the

traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM) and ranged from 0 to 20.7 ACC/MVM. The average city-wide accident rate is 4.7 ACC/MVM.

The accident rate between Church Street and Stockton Street is amongst the highest rates for all the streets. It is more than four times the average accident rate. The majority of the accidents occurred at the cross streets and were right angle accidents. This is an unexpected condition to the Tokay Street motorists. For this reason, it is appropriate to further reduce the speed limit between Church Street and Cherokee Lane.

o CONCLUSION

Lower Sacramento Road to Mills Avenue

Based on the 85th percentile speeds observed in the field, unexpected conditions, and accident data, a 35 mph posted speed limit is appropriate on Tokay Street between Lower Sacramento Road and Mills Avenue.

Mills Avenue to Ham Lane

In reviewing the segment between Mills Avenue and Ham Lane, the posted speed limit could be 30 or 35 mph since the 85th percentile speeds ranged between 34 and 36 mph. As stated above, the speed limit should be established at the first five mile per hour increment below the 85th percentile. A 30 mph posted speed limit is appropriate between Mills Avenue and Ham Lane. A further reduction in speed limit is not needed due to unexpected conditions and accident data.

Ham Lane to Hutchins Street

A posted speed limit of 30 mph is appropriate between Ham Lane and Cherokee Lane based on the 85th percentile. It is not necessary to further reduce the speed due to unexpected conditions or accident data.

Hutchins Street to Cherokee Lane

Based on the 85th percentile speeds observed in the field, the posted speed limit could be 30 mph between Hutchins Street and Cherokee Lane. It is appropriate to further reduce the speed limit to 25 mph due to the described unexpected conditions and accident data.

As shown below, the segment between Lower Sacramento Road and Ham Lane is currently not radar enforceable:

SPEED ZONE REPORT - Tokay Street  
Page 3

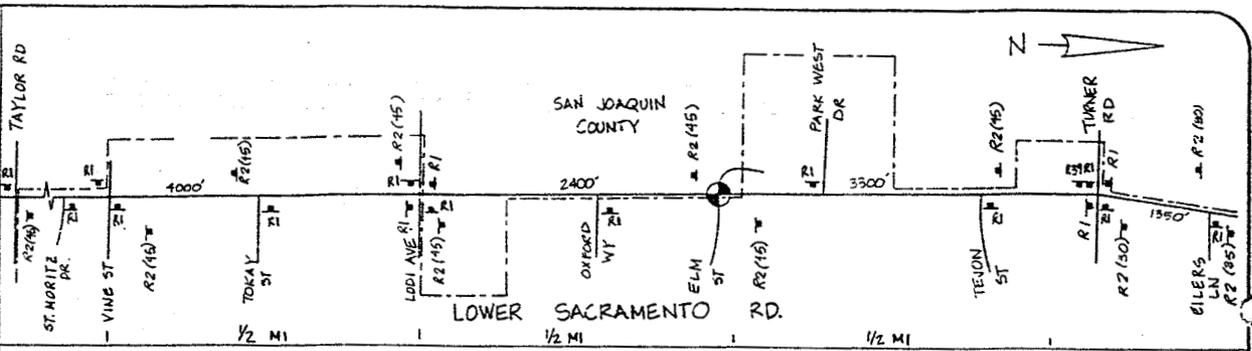
<u>TOKAY STREET SEGMENT</u>	<u>EXISTING</u>	<u>RECOMMENDED</u>
Lower Sacramento Road - Mills Avenue	25 mph*	35 mph
Mills Avenue - Ham Lane	25 mph*	30 mph
Ham Lane - Hutchins Street	30 mph	30 mph
Hutchins Street - Cherokee Lane	30 mph	25 mph

Jack L. Ronsko  
Public Works Director

\*Not radar enforceable

**ENGINEERING AND TRAFFIC SURVEY**

SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE		1/2 MI		1/2 MI		1/2 MI	
ROADWAY WIDTH	40'	60'	64'	32'	40'	32'	60'
NO. OF LANES	2 LWS + 2 NY LT LN		2		2 LWS + 2 NY LT LN		2
MEDIAN (TYPE)	NONE		NONE		NONE		2
TRAFFIC SIGNAL DATA	NONE		6φ ACT		NONE		2
AVERAGE DAILY TRAFFIC	12,500	(11,950)	11,400	12,400	10,000	(9,500)	8,700
OBS. SPEED - CRITICAL, 85 <sup>th</sup> %	SB	45	47	47	46	47	37
	NB	45	47	47	46	47	36
- PACE (%)	SB	34-46 (74)	37-49 (84)	37-49 (84)	38-48 (82)	38-48 (82)	29-37 (75)
	NB	37-47 (76)	39-49 (75)	39-49 (75)	38-48 (74)	38-48 (74)	28-38 (84)
- MEDIAN, 50 <sup>th</sup> %	SB	41	44	44	42	42	33
	NB	40	43	43	42	42	32
EXISTING SPEED ZONE	45 MPH		45 MPH		45 MPH		30 MPH
PROPOSED SPEED ZONE	45 MPH		45 MPH		45 MPH		35 MPH

LEGEND	MPH	SPEED GRAPH
— SIGN LOCATION		
R1 - STOP SIGN		
R2 ( ) - SPEED LIMIT SIGN 8MPH	50	
R39 - YIELD SIGN		
C - INSTALLATION C (SCHOOL 25 MPH SIGNS, W65, R212S, R212)	40	
⊙ - TRAFFIC SIGNAL		
— CITY LIMIT	30	
--- CRITICAL SPEED		
--- LOWER LIMIT OF PACE		

ACCIDENT PLOT	YR: 1989	1	1	1	3	1	2	1	2	3	1	2	1	1
	YR: 1990	2	1	1	1	1	1	1	1	1	1	1	1	1
ACCIDENT RATE - ACC./MILL. VEH.-MI.		2.0		1.5		1.5		2.6		1.2		1.2		

Dr. P.J.F.	Date	Revision	Appr.	Approved By	<b>CITY OF LODI</b> PUBLIC WORKS DEPARTMENT	<b>LOWER SAC RD / WOODHAVEN LN</b> SPEED ZONE SURVEY
Ch. [Signature]	Date	Revision	Appr.	Approved By		

June 1991

SPEED ZONE REPORT - Lower Sacramento Road/Woodhaven Lane

◦ REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

◦ STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Eight radar surveys were performed and the 85th percentile speeds ranged from 36 to 47 mph as shown below:

<u>Lower Sacramento Road/Woodhaven Lane Segment</u>	<u>Northbound</u>	<u>Southbound</u>
South City Limit - Turner Road	45-47 mph	45-47 mph
Turner Road - North City Limit	36 mph	37 mph

Unexpected n ions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

There are no unexpected conditions used to further reduce the speed limit.

Accidents

Accident records of the two most recent years should be considered when determining speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM) and ranged from 1.2 to 2.6 ACC/MVM. The average city-wide accident rate is 4.7 ACC/MVM.

◦ CONCLUSION

Lower Sacramento Road

Based on the 85th percentile speeds, unexpected conditions and accident data, a posted speed limit of 45 mph is appropriate on Lower Sacramento Road between the south city limit and Turner Road.

Woodhaven Lane

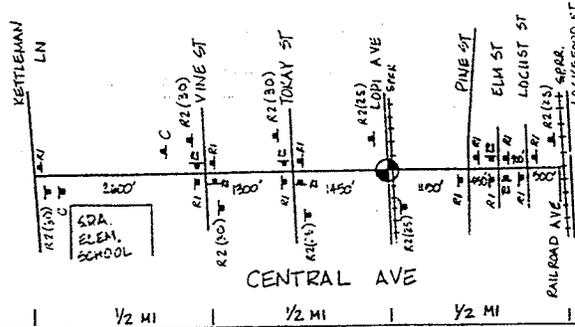
In reviewing the 85th percentile speeds on Woodhaven Lane, the posted speed limit **could** be 35 mph. It is not necessary to further reduce the posted speed limit due to unexpected conditions and accident data. The 85th percentile speeds have increased from 32-33 mph (1986 survey) to 36-37 mph (1991 survey). However, the increase in speeds is most likely due to the extension of Chestnut Street and the construction of the bridge over the Woodbridge Irrigation District canal. This work was completed in the fall of 1989. Staff recommends a 35 mph posted speed limit on Woodhaven Lane as shown below:

<u>LOWER SACRAMENTO ROAD SEGMENT</u>	<u>EXISTING</u>	<u>RECOMMENDED</u>
South City Limit - Turner Road	45 mph	45 mph
<u>WOODHAYEN LANE SEGMENT</u>		
Turner Road - North City Limit	30 mph	35 mph

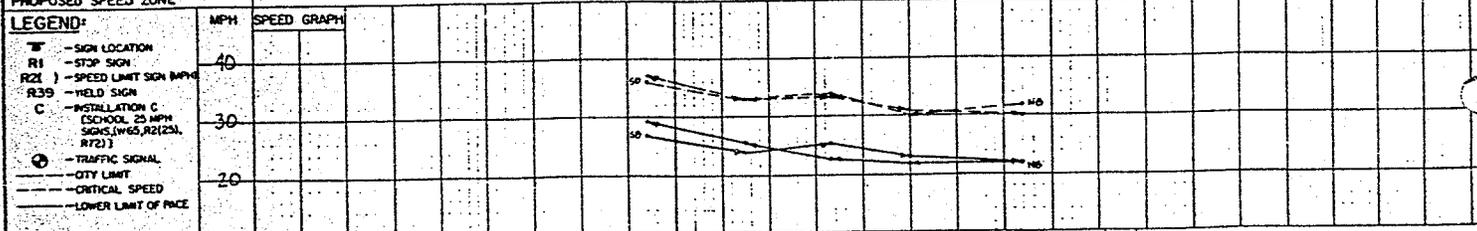
Jack L. Ronsko  
Public Works Director

**ENGINEERING AND TRAFFIC SURVEY**

SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE		56'					30'		40'			
ROADWAY WIDTH												
NO. OF LANES		2										
MEDIAN (TYPE)		NONE										
TRAFFIC SIGNAL DATA		26 ACT.										
AVERAGE DAILY TRAFFIC		4500		(4400)		1500						
OBS. SPEED - CRITICAL, 85 <sup>th</sup> %	50	36	33	32	31	30						
	ND	37	35	34	20	32						
- PACE (%)	50	27-37 (82)		24-31 (82)		25-35 (76)		23-34 (80)			22-32 (87)	
	ND	29-39 (72)		26-34 (82)		23-33 (74)		22-32 (78)			22-32 (77)	
- MEDIAN, 50 <sup>th</sup> %	50	31	30	29	27	26						
	ND	32	29	28	26	26						
EXISTING SPEED ZONE		30 MPH				25 MPH						
PROPOSED SPEED ZONE		30 MPH				25 MPH						



ACCIDENT PLOT	YR:	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	YR:												
ACCIDENT RATE - ACC./MILL. VEH.-MI.			6.5	10.1	5.5	4.2							

DR: P.J.F.  
 CL: [Signature]  
 Date: 6/91

Approved By: [Signature]  
 Public Works Director  
 Date: 6-12-91

**CITY OF LODI**  
 PUBLIC WORKS DEPARTMENT

**CENTRAL AVE**  
 SPEED ZONE SURVEY

June 1991

SPEED ZONE REPORT - Central Avenue

- REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.
- STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, can be determined a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Ten radar surveys were performed and the 85th percentile speeds ranged from 30 to 37 mph.

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

Central Avenue has diagonal parking from Vine Street to Flora Street. This can cause sight distance problems for cross street traffic and exiting vehicles. This hazard is not apparent to the Central Avenue motorists and reducing the speed limit is reasonable.

Accidents

Accident records of the two most recent years were considered when determining the speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM).

The accident rates have decreased throughout Central Avenue since the previous 1986 survey as shown below:

SPEED ZONE REPORT - Central Avenue  
Page 2

<u>Central Avenue Segment</u>	<u>3986 Survey</u>	<u>1991 Survey</u>
Kettleman Lane to Tokay Street	9.6 - 12.6	6.5 - 10.1
Tokay Street to Railroad Avenue	1.3 - 20.8	0 - 15.5

The reduction in accidents could mean the current speed limit is appropriate. This was a factor in reducing the speed limit below the 85th percentile in some segments as stated in the conclusion.

The average city-wide accident rate is 4.7 ACC/MVM. There have been four reported pedestrian accidents in the last two years on Central Avenue.

° CONCLUSION

Kettleman Lane to Tokay Street

Based on the 85th percentile, the posted speed could be 30 or 35 mph between Kettleman Lane and Tokay Street. A posted speed limit of 30 mph is appropriate for this segment based on the accident rate higher than average and the described conditions not readily apparent to the driver.

Tokay Street to Railroad Avenue

In reviewing the 85th percentile, the posted speed limit could be 30 mph between Tokay Street and Railroad Avenue. Due to the described unexpected conditions and higher than average accident rate between Tokay Street and Lodi Avenue, it is recommended to reduce the posted speed limit below the 85th percentile. Between Lodi Avenue and Railroad Avenue, the number of accidents has decreased. Staff feels the current 25 mph speed limit is an appropriate speed for this segment.

There are no changes from the existing posted speed limits as shown below:

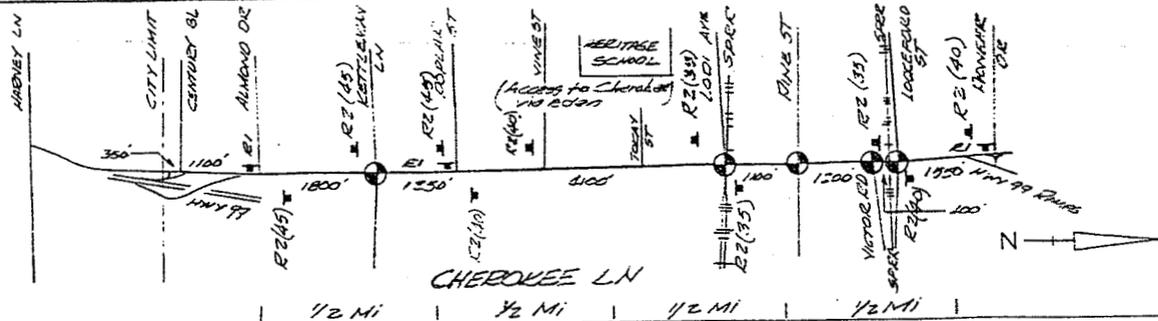
<u>Central Avenue Segment</u>	<u>Posted Speed Limit</u>
Kettleman Lane to Tokay Street	30 mph
Tokay Street to Railroad Avenue	25 mph

  
Jack L. Ronsko  
Public Works Director

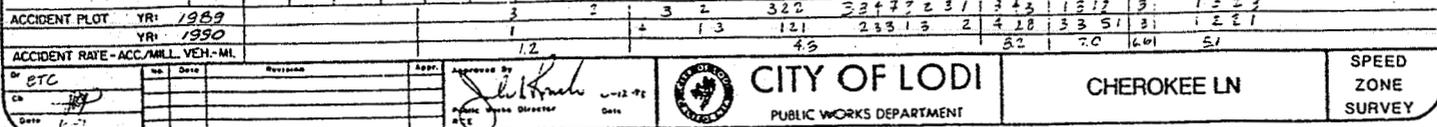


**ENGINEERING AND TRAFFIC SURVEY**

SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE		75' = (varies)		75' = (varies)	
ROADWAY WIDTH					
NO. OF LANES					
MEDIAN (TYPE)					
TRAFFIC SIGNAL DATA					
AVERAGE DAILY TRAFFIC		11,460	16,700	19,250	13,900
OBS. SPEED - CRITICAL, 85% NB		48	41	37	42
SB		47	41	37	33
- PACE (%) NB		33-47 (42)	38-48 (43)	37-39 (38)	32-42 (37)
SB		33-48 (66)	35-45 (80)	30-40 (35)	24-34 (29)
- MEDIAN, 50% NB		42	37	33	37
SB		42	37	30	40
EXISTING SPEED ZONE		55 MPH	45 MPH	35 MPH	40 MPH
PROPOSED SPEED ZONE		55 MPH	45 MPH	35 MPH	40 MPH



ACCIDENT PLOT	YR: 1989	3	2	3	2	322	33477	231	343	11312	3	1827
YR: 1990		1	3	13	121	233	13	2	4	18	33	51
ACCIDENT RATE - ACC/MILL. VEH.-MI.		12		43		32	7.0	661	51			

Dr. BTC  
 Date: 6-22  
 Approved By: [Signature]  
 Public Works Director  
 Date: 6-12-95  
**CITY OF LODI**  
 PUBLIC WORKS DEPARTMENT  
**CHEROKEE LN**  
 SPEED ZONE SURVEY

June 1991

SPEED ZONE REPORT - Cherokee Lane

◦ REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

◦ STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Twelve radar surveys were performed and the 85th percentile ranged from 33 to 48 mph as shown below:

<u>Street Segment</u>	<u>Northbound</u>	<u>Southbound</u>
South City Limit - Psplar Street	48 mph	44-47 mph
Poplar Street - Vine Street	41 mph	41 mph
Vine Street - Victor Road	35-37 mph	33-37 mph
Victor Road - Pioneer Drive	42 mph	45 mph

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

There are a number of commercial driveways on Cherokee Lane. Visibility from these driveways is often reduced due to the on-street truck parking and landscaped median. Although this effect was not quantified to further reduce the recommended speed limit, it was considered in the overall recommendation.

Accidents

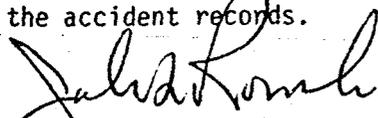
Accident records of the two most recent years were considered in determining the speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM).

The accident rate ranged from 1.2 to 8.2 ACC/MVM. The average city-wide accident rate is 4.7 ACC/MVM.

- CONCLUSION - The following posted speed limits are appropriate:

<u>Cherokee Lane Segment</u>	<u>Posted Speed Limit</u>
South City Limit - Poplar Street	45 mph
Poplar Street - Vine Street	40 mph
Vine Street - Victor Road	35 mph
Victor Road - Pioneer Street	40 mph

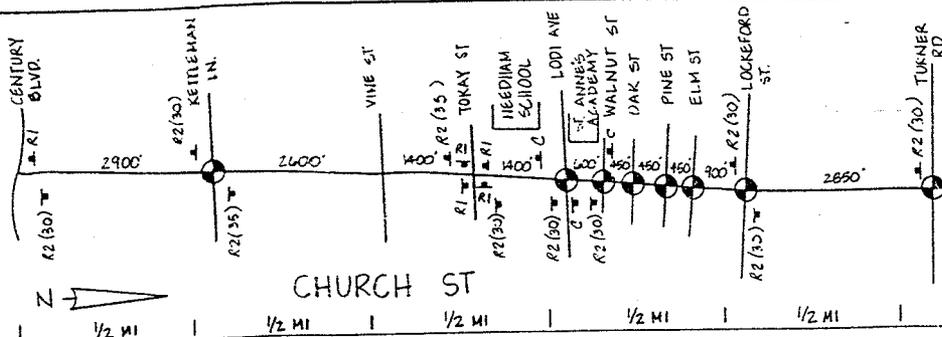
There are no changes from the existing posted speed limit. The recommended posted speed limits are based on the 85th percentile speeds observed in the field and the described conditions not apparent to the drivers. It is not recommended to further reduce the speed zones due to the accident records.

  
Jack L. Ronsko  
Public Works Director



**ENGINEERING AND TRAFFIC SURVEY**

SEE NARRATIVE FOR BACKGROUND INFORMATION



**SPEED TABLE**

ROADWAY WIDTH	20'-44"	30'	30'-44"	55'
NO. OF LANES	2	2	2	2
MEDIAN (TYPE)	NONE	NONE	20'ACT	60'ACT
TRAFFIC SIGNAL DATA			FIXED	
AVERAGE DAILY TRAFFIC	5900	6400	(7800)	9200 (7850) 6500 (5200) 3900
OBS. SPEED - CRITICAL .85 <sup>th</sup> % SB	35	34	36	34
NB	34	36	37	33
- PACE (%) SB	26-36 (76)	26-36 (83)	28-39 (81)	26-36 (84)
NB	25-35 (76)	25-35 (73)	28-38 (81)	27-37 (82)
- MEDIAN, 50 <sup>th</sup> % SB	31	30	32	29
NB	30	30	31	30
EXISTING SPEED ZONE	30 MPH	30 MPH	35 MPH	30 MPH
PROPOSED SPEED ZONE	30 MPH	30 MPH	35 MPH	30 MPH

**LEGEND:**

- ⊠ - SIGN LOCATION
- RI - STOP SIGN
- R21 - SPEED LIMIT SIGN (MPH)
- R35 - YIELD SIGN
- C - INSTALLATION C (SCHOOL 25 MPH SIGNS, W65, R2(25), R7(2))
- ⊙ - TRAFFIC SIGNAL
- - CITY LIMIT
- - CRITICAL SPEED
- - LOWER LIMIT OF PACE



ACCIDENT PLOT	YR:	1909	2	1	2	1	1	1	1	4	2	2	1	1	5	3	2	1	1
	YR:	1940	1	1	2	2	1	1	1	3	4	4	1	3	2	1	2	1	1
ACCIDENT RATE - ACC/MILL. VEH.-MI			5.9							6.6	5.2	5.1	4.1	4.1	7.4		5.4		

Of P.C.F.   
 Date: 1/9/41   
 Approved By: [Signature]   
 Public Works Director   
 Date: 6-12-41



**SPEED ZONE SURVEY**  
CHURCH ST

June 1991

SPEED ZONE REPORT - Church Street

◦ REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

◦ STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Twelve radar surveys were performed and the 85th percentile ranged from 33 to 37 mph as shown below:

<u>Street Segment</u>	<u>Northbound</u>	<u>Southbound</u>
Century Boulevard - Kettleman Lane	34-36 mph	34-35 mph
Kettleman Lane - Tokay Street	37 mph	34-36 mph
Tokay Street - Turner Road	33-35 mph	33-35 mph

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

Some of the west side does not have sidewalk from Century Boulevard to Kettleman Lane. With the combination of parked vehicles and pedestrians, this could cause an unsafe condition. This is not readily apparent to drivers traveling southbound.

There are a number of cross streets and apartment complex driveways on Church Street between two roadway segments - Century Boulevard and Kettleman Lane, and Lockeford Street and Turner Road. These roadway segments also have high on-street parking demand. This can cause sight problems which are unexpected to Church Street motorists. For this reason, it is recommended to further reduce the speed limit.

### Accidents

Accident records of the two most recent years were considered in determining the speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM). The accident rates ranged from 0 to 17.4 ACC/MVM. The average city-wide accident rate is 4.7 ACC/MVM. The speeds were reduced further due to accident data for two roadway segments - Century Boulevard to Kettleman Lane and Lockeford Street to Turner Road. The current accident rate between Kettleman Lane and Century Boulevard is 5.9 ACC/MVM which is higher than the city-wide accident rate. The accident rate between Lockeford Street and Turner Road has decreased from 13.4 ACC/MVM (1986 survey) to 5.4 ACC/MVM (1991 survey) but is still slightly higher than the city-wide accident rate. The majority of the accidents occurred at the intersections and were right angle accidents. This is an unexpected condition to the Church Street motorists.

It should be noted the reduction in accidents could mean the current speed limit is appropriate. This was also a factor in reducing the speed limit below the 85th percentile between Lockeford Street and Turner Road.

### o CONCLUSION

#### Century Boulevard to Kettleman Lane

Based on the 85th percentile speeds observed in the field, the posted speed limit could be 30 or 35 mph from Century Boulevard to Kettleman Lane. However, considering the described conditions not readily apparent to the driver and the accident data, a posted speed limit of 30 mph is appropriate.

#### Kettleman Lane to Tokay Street

Reviewing both the prevailing speeds and unexpected conditions, a posted speed limit of 35 mph is appropriate for the street segment from Kettleman Lane to Tokay Street. The speed limit was not further reduced due to accident records.

#### Tokay Street to Lockeford Street

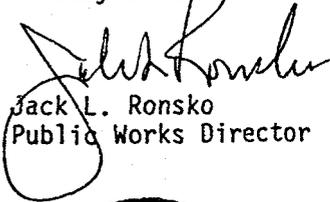
A posted speed limit of 30 mph is appropriate between Tokay Street and Lockeford Street based on the 85th percentile. A 30 mph speed limit is also appropriate for signal timing purposes in this segment.

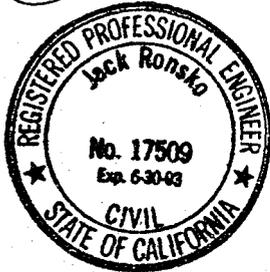
Lockeford Street to Turner Road

From Lockeford Street to Turner Road, the 85th percentile is 35 mph. The speed **was** not further reduced based on the unexpected conditions described above. There **was** reduction in accidents from the previous survey as mentioned above and for this reason, the existing speed limit appears to be appropriate. A posted speed limit of 30 mph is appropriate for this section.

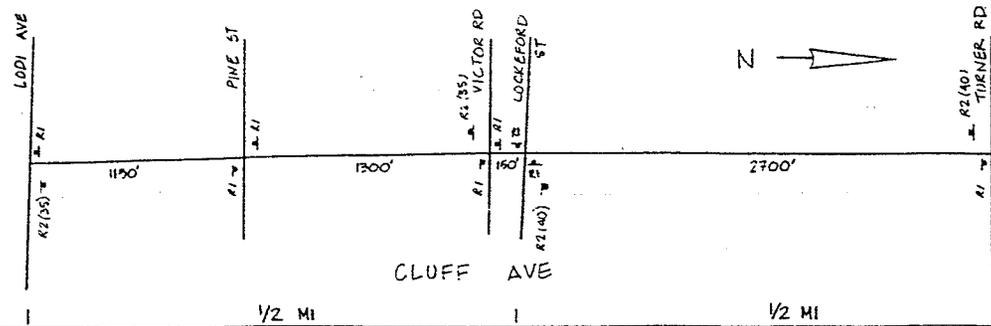
There are no changes to existing speed zones as **shown** below:

<u>Church Street Segment</u>	<u>Posted Speed Limit</u>
Century Boulevard - Kettleman Lane	30 mph
Kettleman Lane - Tokay Street	35 mph
Tokay Street - Turner Road	30 mph

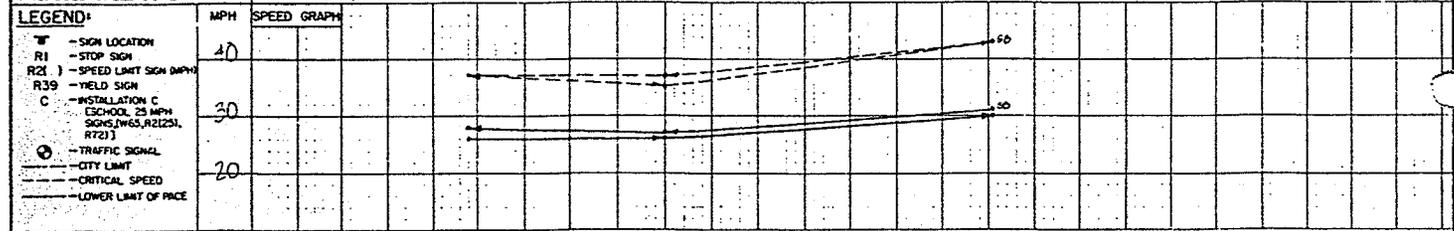
  
Jack L. Ronsko  
Public Works Director



**ENGINEERING AND TRAFFIC SURVEY**  
SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE		1/2 MI		1		1/2 MI	
ROADWAY WIDTH		28'	VARIES	48'	38'		
NO. OF LANES				2			
MEDIAN (TYPE)				NONE			
TRAFFIC SIGNAL DATA				N/A			
AVERAGE DAILY TRAFFIC			1900	6000	(4000)	3200	
OBS. SPEED - CRITICAL, 85 <sup>TH</sup> %	30	37	32	43			
	NB	37	35	43			
- PACE (%)	50	20-30(66)	27-37(80)	31-41(57)			
	NB	26-36(70)	26-36(70)	30-40(50)			
- MEDIAN, 50 <sup>TH</sup> %	30	30	32	36			
	NB	31	30	35			
EXISTING SPEED ZONE		25 MPH		40 MPH			
PROPOSED SPEED ZONE		35 MPH		40 MPH			



ACCIDENT PLOT	YR: 1987	3	1	1	1
	YR: 1990				
ACCIDENT RATE - ACC./MILL. VEH.-MI.		3.5	5.0		

DR: <i>RJF</i>	DATE: _____	APPROVED BY: <i>[Signature]</i>	DATE: <i>12-81</i>	<b>CITY OF LODI</b> PUBLIC WORKS DEPARTMENT	<b>CLUFF AVE</b> SPEED ZONE SURVEY
CD: <i>[Signature]</i>	DATE: _____	PUBLIC WORKS DIRECTOR: <i>[Signature]</i>	DATE: _____		

June 1991

SPEED ZONE REPORT - Cluff Avenue

◦ REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

◦ STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Six radar surveys were performed and the 85th percentile ranged from 35 to 43 mph.

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

There are no unexpected conditions that were used to further reduce the speed limits.

Accidents

Accident records of the two most recent years were considered in determining the speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM). The accident rates ranged from 1.1 to 5.9 ACC/MVM on Cluff Avenue.

SPEED ZONE REPORT - Cluff Avenue  
Page 2

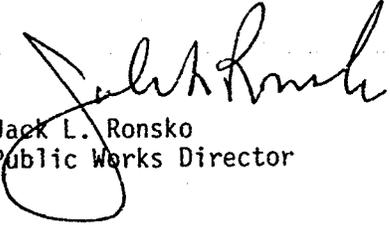
- ° CONCLUSION - Based on the 85th percentile speeds observed in the field, the posted speed limit could be 35 mph from Lodi Avenue to Victor Road and 40 mph from Victor Road to Turner Road. The speed limit was not further reduced due to accident records or conditions not apparent to the driver. The following existing posted speed limits are appropriate:

Cluff Avenue Segment

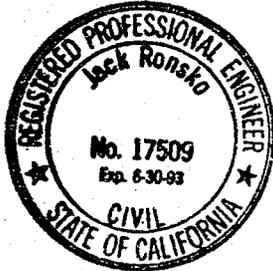
Posted Speed Limit

Lodi Avenue to Victor Road  
Victor Road to Turner Road

35 mph  
40 mph

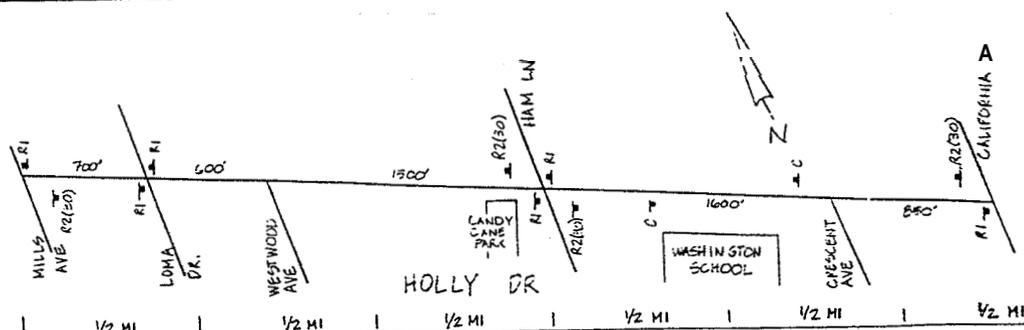


Jack L. Ronsko  
Public Works Director

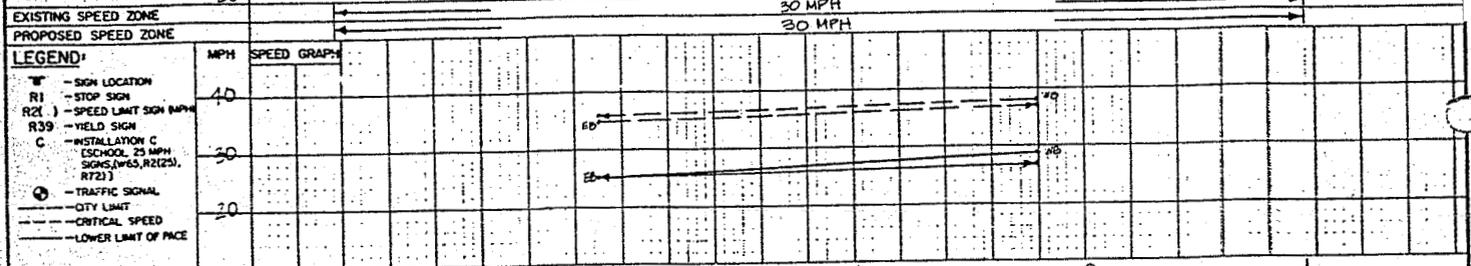


**ENGINEERING AND TRAFFIC SURVEY**

SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE	
ROADWAY WIDTH	44' 36' 39' 44'
NO. OF LANES	2
MEDIAN (TYPE)	NONE
TRAFFIC SIGNAL DATA	N/A
AVERAGE DAILY TRAFFIC	800 1600 1100
OBS. SPEED - CRITICAL, 85% WB	35 37
ED	36 38
- PACE (%) WB	25-35 (60) 29-39 (46)
ED	26-35 (76) 27-37 (62)
- MEDIAN, 50% WB	29 32
ED	30 31



ACCIDENT PLOT	YR: 1989	YR: 1990	ACCIDENT RATE - ACC/MILL VEH.-MI	26
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Dr. P.J.F.	City of Lodi	Public Works Department	HOLLY DR	SPEED ZONE SURVEY
Approved By: <i>[Signature]</i>	City of Lodi	Public Works Department		

June 1991

SPEED ZONE REPORT - Holly Drive

◦ REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.

◦ STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Four radar surveys were performed and the 85th percentile speeds ranged from 35 to 38 mph.

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

There are no unexpected conditions that were used to further reduce the speed limits.

Accidents

Accident records of the two most recent years were considered in determining speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM) and ranged from 0 to 8.6 ACC/MVM. The average city-wide accident rate is 4.7 ACC/MVM. The accident rates from the previous 1986 survey ranged between 0 and 23.0 ACC/MVM. The reduction in accidents could mean the current speed limit is appropriate. This was a factor in reducing the speed limit below the 85th percentile in some segments as stated in the conclusion.

° CONCLUSION - Based on the 85th percentile speeds observed in the field, the posted speed limit could be 35 mph on Holly Drive.

Due to accident data, it is recommended to reduce the speed limit below the 85th percentile speed. Since the accidents have decreased, it is felt the 30 mph is appropriate.

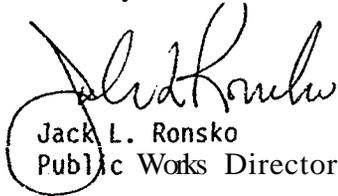
It is not recommended to further reduce the speed limit due to unexpected conditions.

Street

Posted Speed Limit

Holly Drive,

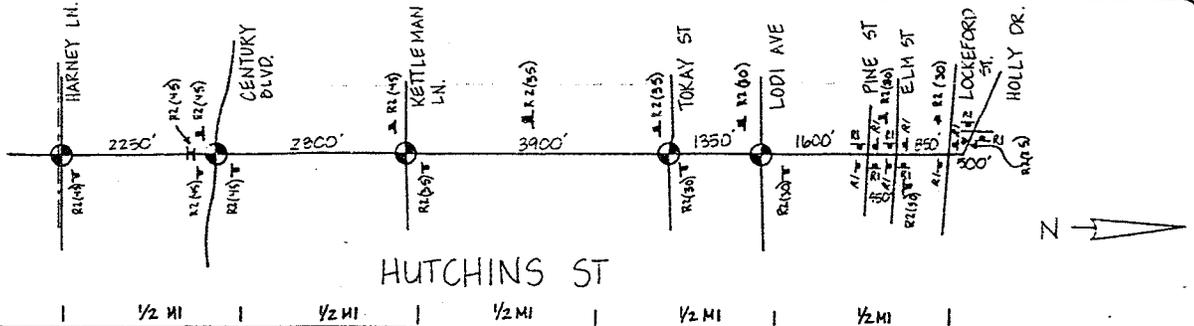
30 mph

  
Jack L. Ronsko  
Public Works Director

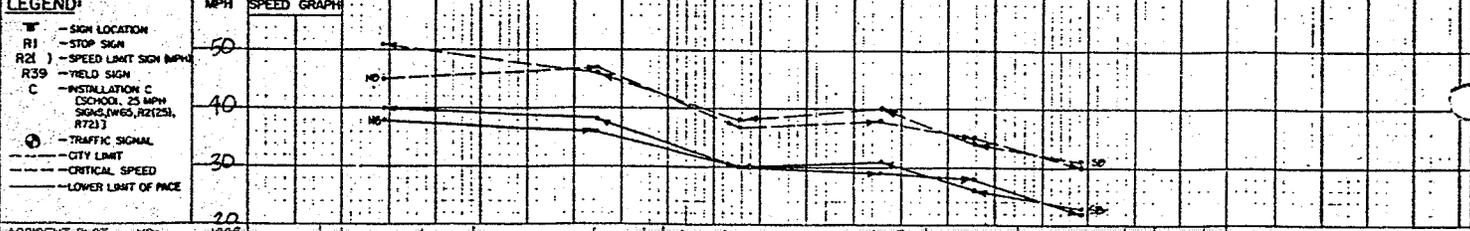


**ENGINEERING AND TRAFFIC SURVEY**

SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE		1/2 MI	1/2 MI	1/2 MI	1/2 MI	1/2 MI
ROADWAY WIDTH		84'		50'-56'		40'
NO. OF LANES		4		2 + 2 WY LT LANE		2
MEDIAN (TYPE)		RAISED CONCRETE (R.C.)		NONE		NONE
TRAFFIC SIGNAL DATA		8φACT	8φACT	8φACT	2φACT	8φACT
AVERAGE DAILY TRAFFIC		13000	14500	17800 (12,100)	10800	10000 (6750) 3500
OBS. SPEED - CRITICAL, 85% SD		51	46	38	40	34
ND		45	47	37	38	31
- PACE (%)	SD	40-90 (62)	38-48 (74)	30-40 (90)	31-41 (80)	26-36 (66)
ND		38-48 (72)	36-46 (67)	30-40 (93)	29-39 (77)	28-38 (84)
- MEDIAN, 50% SD		45	42	34	35	32
ND		41	42	34	31	27
EXISTING SPEED ZONE		45 MPH		35 MPH		30 MPH
PROPOSED SPEED ZONE		45 MPH		35 MPH		30 MPH



ACCIDENT PLOT	YR: 1989	1	1	1	1	1	1	1	2	0	8	1	2	21	6
	YR: 1990	3	1	2											
ACCIDENT RATE - ACC/MILL VEH.-MI		2.0		0.9		2.0		0.5		7.2		9.5		12.2	

Dr. PJF  
 Date 6/9  
 City of Lodi Public Works Department  
 Hutchins St  
 Speed Zone Survey

June 1991

SPEED ZONE REPORT - Hutchins Street

- REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual.
- STUDY

Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are prevailing speeds, unexpected conditions to drivers, and accident records.

Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgement may indicate the need for a further reduction of five miles per hour.

Twelve radar surveys were performed and the 85th percentile ranged from 30 to 51 mph as shown below:

<u>Hutchins Street Segment</u>	<u>Northbound</u>	<u>Southbound</u>
Harney Lane - Kettleman Lane	45-47 mph	46-51 mph
Kettleman Lane - Tokay Street	37-38 mph	38-40 mph
Tokay Street - Lockeford Street	30-35 mph	31-34 mph
Lockeford Street - Holly Drive	Due to curve, unable to measure	

Unexpected Conditions

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway *design speed*, safe stopping *sight* distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

There are no unexpected conditions used to further reduce the speed limit.

Accidents

Accident records of the two most recent years were considered in determining the speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM) and ranged from 0.5 to 12.2 ACC/MVM. The average city-wide accident rate is 4.7 ACC/MVM.

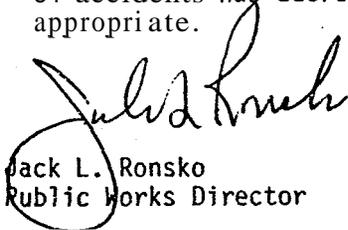
SPEED ZONE REPORT - Hutchins Street  
Page 2

- CONCLUSION - Based on the 85th percentile speeds observed in the field, unexpected conditions and accident data, staff recommends the following speed limits:

<u>Hutchins Street Segment</u>	<u>Posted Speed Limit</u>
South City Limit - Kettleman Lane	45 mph
Kettleman Lane - Tokay Street	35 mph
Tokay Street - Lockeford Street	30 mph
Lockeford Street - Holly Drive	25 mph

Due to the street configuration, speed surveys cannot be performed between Lockeford Street and Holly Drive. Since the accident rate is below the average rate, the current 25 mph posted speed limit is appropriate.

In the segment between Tokay Street and Lodi Avenue, the 85th percentile speeds were 34 mph southbound and 35 mph northbound. This segment is a transition between the 30 mph and 35 mph speed zones. Since the number of accidents has decreased, it was felt the existing 30 mph is appropriate.

  
Jack L. Ronsko  
Public Works Director





RESOLUTION NO. 91-116

=====

RESOLUTION OF THE LODI CITY COUNCIL  
AMENDING TRAFFIC RESOLUTION 87-163, AND THEREBY APPROVING SPEED LIMITS ON ELM  
STREET, LOCKEFORD STREET, MILLS AVENUE BETWEEN CENTURY BOULEVARD AND KETTLEMAN  
LANE, PINE STREET, TOKAY STREET, AND WOODHAVEN LANE

=====

RESOLVED, that the City Council of the City of Lodi does hereby amend Traffic Resolution  
No. 87-163, Section 7 - Speed Limits, to approve speed limits on the following streets:

<u>Street - Segment</u>	<u>Existing</u>	<u>Recommended</u>
◦ Elm Street Hutchins Street - Cherokee Lane	30	25
◦ Lockeford Street Church Street - Cherokee Lane	35	30
◦ Mills Avenue Century Boulevard - Kettleman Lane	25	30
◦ Pine Street Beckman Road - Cluff Avenue	40	35
◦ Tokay Street Lower Sacramento Road - Mills Avenue	25	35
Mills Avenue - Ham Lane	25	30
Hutchins Street - Cherokee Lane	30	25
◦ Woodhaven Lane	30	35

=====

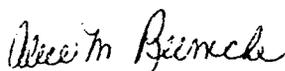
Dated: June 20, 1991

**i hereby certify that Resolution No. 91-116 was passed and adopted by the Lodi City  
Council in an adjourned regular meeting held June 20, 1991 by the following vote:**

Ayes : Council Members - Pinkerton, Sieglock and Hinchman  
(Mayor)

Noes : Council Members - Pennino

Absent: Council Members - Snider

  
Alice M. Reimche  
City Clerk